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PACIFIC RURAL PRESS

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PIERCE GRAPE—(*syn. Isabella Regia*)—A CALIFORNIA VARIETY.

The Pierce Grape.

We give upon this page an engraving of a cluster of grapes of a variety which has been grown in this State for the last 12 years or more, but which is this year for the first time authoritatively introduced to public sale.

We first saw the grape in October, 1879, and in the RURAL on the 18th of that month, described its origin. Mr. J. P. Pierce of Santa Clara had been for several years a grower of Isabella grapes for this market, growing his vines upon high trellises in arbor form. Some time previous to 1879, Mrs. Pierce noticed that the children were bringing in a peculiar grape which attracted their attention by its large berries and heavy clusters. Upon their pointing out the cane from which these were obtained, it was found that one of the branches of an Isabella vine was bearing this new style of fruit, while other canes bore the usual Isabellas. The cane was marked, and buds taken therefrom were afterward inserted in other stock, where they grew freely and fruited heavily, producing the same grape which had attracted attention at first. It was the fruit of one of these grafted vines that Mr. Pierce brought for our inspection in October, 1879, and which we then described as follows:

The new grape, which must, we believe, be set down as a sport from the Isabella, retains the characteristic aroma, flavor and bloom of its parent, but instead of the medium-sized, oval berries of the Isabella, as it grows in this State, we have in the new grape, large, perfectly round berries, forming a much more compact and heavier cluster than the old Isabella. The variety having shown its fixedness by a number of propagations, Mr. Pierce deems it entitled to a name, and so called it "Isabella Regia"—a royal sort of an Isabella, which indeed it is. It is certainly a remarkable fruit, being much superior to the old Isabella as grown on the same grounds. It is fitted by its size of berry (and we measured several of the largest which were 15-16ths of an inch in diameter), to attain a leading place as a table fruit. We predict for it great popularity when it shall be grown in marketable quantities.

This prediction proved true. For several years Mr. Pierce resolutely held to his intention not to allow any one to have the variety, but afterward he gave cuttings to a few parties under promise not to distribute it. In some way this promise did not hold water, and finally the variety was offered for sale without authorization under such imitative names as "Isabella regina," "Royal Isabella," etc., instead of the name Isabella regia, which Mr. Pierce gave the variety and which was published with his consent in our issue of Oct. 18, 1879. Not only was this clandestine work done, but we believe that some parties went so far as to claim other origin for the variety than that described above.

Perhaps the public description of the grape next later than our original mention at the date given above was the following, by Prof. E. W. Hilgard, in one of his early viticultural reports:

Isabella Regia.—A remarkable giant-leaved and very prolific variety, or rather sport, of the Isabella, produced by Mr. J. P. Pierce of Santa Clara. The berries like the leaves are of extraordinary size and when ripe the fruit is exceedingly sweet and strongly aromatic. It is, therefore, acceptable as a showy, perfumed table grape, much liked by some, but readily surfeiting those who are accustomed to the *vinifera* grapes. The berries are too soft for shipment to any distance, but, all things considered, keep fairly.

We have been thus explicit about the history of this grape because of its authorized introduction and sale this season by the California Nursery Co. of Niles, Alameda county. This company, in view of the confusion of names brought about as described above, has decided to give the grape the name of its originator and now introduce it as the "Pierce grape" and in their catalogue for 1891 92 give the following description:

"The Pierce" (New). A sport from Isabella, originating some 12 years ago with Mr. J. P. Pierce, of Santa Clara. The foliage is remarkably large, and the vine an exceedingly strong grower and prolific bearer. The berries, like the leaves, are of extraordinary size, twice as large as those of its parents, black with light bloom, and when ripe are exceedingly sweet, delicious and slightly aromatic, the pulp readily dissolving. Mr. Pierce has had it in cultivation under every condition, and it has remained constant, showing no indication of running back to the parent. The entire crop of two acres has been shipped to San Francisco by Mr. Pierce for the past six years under the name of *Isabella Regia*, and always realizes the highest market price. We have arranged with Mr. Pierce for the exclusive right to propagate and distribute this valuable new grape, and now offer it for the first time.

The engraving on this page represents well the cluster and form of berry of the variety, but is reduced considerably from the size which it attains under favorable conditions. The grape should find a place in all collections and can no doubt be profitably produced for local markets, subject to such limitations as regulate the demand for all Eastern grapes on this coast.

THERE are 208,749 railroad bridges in the United States, spanning 3213 miles.



NEW HYBRID BEGONIA—PERLE HUMFELD.—See page 8.

CORRESPONDENCE.

Correspondents are alone responsible for their opinion.

Napa Valley Notes.

EDITORS PRESS:—Probably in no former year was there nearly as much dry-sowing of grain—wheat, barley and oats—as this fall, in this county. This is the case in no one particular locality, but this seeding has been general. So now, after the two or three gentle rains we have had, many fields are quite green with the tender plants. Whether this dry-sowing will eventuate in crops that shall be quite weedy, we shall note next summer and fall.

Twenty years ago, no farmer here thought of plowing before the rains had started the foul seeds that are always so numerous in our soil, even if rains held off till New Year's. But this fall, farmers were well along with their last season's work, and became uneasy over the long-deferred rains.

Disc cultivators and cutaway harrows are becoming very popular with our farmers, and numbers of them were used in seeding this fall. Other improved farm implements are being used, the old-fashioned, long-used ones being discarded. The consequence is, better work done, at less expense, with less labor.

To-day we are having our first real heavy rain. With the three or four inches that have previously fallen, this will make excellent plowing, and will cause the seed now in the ground to forge rapidly ahead. Farmers look for a prosperous season in 1892, expecting good crops and fair prices; in fact, farmers seem in better spirits than for several years.

Not so with grape-growers, however. Prices this fall were low, and there is slow sale for wine at low figures. Those who can hold for better prices are doing so. Some of our smaller wine-makers are combining in order to further their interests and to shield themselves from other combinations which would keep prices down.

Many vineyards in the valley are succumbing to phylloxera in whole or in part. Some men are uprooting healthy vines, for the reason that there has been so little profit in grape growing of late years. Consequently the area to vines is annually decreasing, for not every one whose vines are destroyed by phylloxera replants, either to resistant or nonresistant stocks.

Orchardists in many localities are well along with their pruning, and will have their work well in hand when spring comes. Pruning was commenced this year much earlier than usual. The outlook for fruit growing is excellent and the tendency is to plant more and more as year succeeds year.

Pasturage is very short. In fact there is little or none at all on our hillsides, which are almost as brown as in October. Stock therefore have to be fed if they are to be kept in even fair condition. The present storm will probably soon make the hills green, but the season has so far advanced that good pasture will last but a comparatively short time. This and the fact that the amount of hay stored in the county is limited, causes advancing prices for feedstuff. Better prices prevail for hay and grain than for several years.

Floating Cobwebs.

In a recent number of the PRESS allusion was made by a correspondent to large quantities of spider web floating in the air and appearing in fields. The theory was advanced that these floating webs first started from the tules where a peculiar variety of spider had its habitat. That may be true in part, but not all the spider webs we see floating in the air during the fall of the year, or, indeed, at other times, come from the locality mentioned.

The appearance of these floating webs and of large fields, often far distant from tules, almost covered with interlacing silken threads, spun by these busy insects, has puzzled many, or at least caused much wonder as to the cause. They are to be seen in the early morning particularly, probably because the dew thereon brings them into greater prominence.

Evidently these webs are spun by a minute gossamer spider, not often seen except by close observation, their color so nearly resembling the soil. But now and then they may be seen sailing through the air, spinning their slender webs as they go. That there must be myriads of them to spread so many lines is evident; and it is also apparent that they do much at night.

Another variety of spider—the one that spins among the grass and on shrubbery a closely woven square web—is a very reliable weather prophet. When these webs are seen in any considerable number, on any morning, laden with thickly clustering diamonds of purest water, one may be very sure of a fair day.

The study of spiders in all their variety, their habits, methods of working, is very interesting, and even a casual observer may learn much concerning them. What use they subserve in the economy of nature is a question that must have been asked by many an amateur entomologist, but has been far more often asked than answered. That they were not made in vain we may rest assured. The Creator has displayed as much care in forming the tiniest of these insects as on larger creations of His skillful handiwork, for each one is perfect in all its formation, and each is endowed with instinct that seems almost human, and with skill that excites the wonder of the most casual observer. R.

Napa, Dec. 19, 1891.

THE FIELD.

A Living on Eight and One-half Acres of Good Land.

EDITORS PRESS:—We frequently read in agricultural papers what can be, and what has been done on ten acres of land. Some of these statements, no doubt, are very near correct, while others border on fiction and were written more to be read than to be practiced. Persons reading such should try and draw the line where one begins and the other leaves off.

I have no doubt but many persons from reading such articles have attempted to make a living on ten acres, and made a sad failure. We see the results, every little while of farmers—no, I will say persons—attempting to make a success of working 160, 500 and 1000 acres.

Now, whose fault is it that these persons have not made a success, and who is going to point out the mistakes and warn them of dangerous ground?

If you employ a person to erect a building for you, and he proves a failure, destroys your lumber, and you find out he cannot saw a stick of firewood properly, you would hardly want to give him a certificate as a carpenter and joiner. If a person has an opportunity to farm, and proves a total failure, why should he be called a farmer?

The cultivation of the soil and gathering of crops has been termed menial employment, and the more menial, the less brains required. A good many persons thought it was only necessary to have a good bank account to become a successful farmer.

I would like to compile the experience of some of these many farmers that have come under my observation. I think it would make interesting reading, and a book little less thick than Webster's unabridged.

I would like to see a competent committee appointed by the Supervisors of every county, to make a thorough examination of every farm, and place a plain sign in front of any farm entitled to it "farmer," and leave the others blank, so we could easily see what per cent of farmers we had.

I think such a system would act as an incentive, and furnish the unlucky ones a place where they could go and compare notes, and possibly detect their mistakes and failures. I like to study the methods of the unsuccessful as well as the successful, for it is by this method that we gain information.

I have had in view for a long time one of these successful farmers, unpretentious in his ways but not lacking in public spirit. I want to tell you, and hundreds of others, in a plain way just what this farmer is doing on only 8½ acres of land. On account of native modesty, he does not care to have his name paraded before the public. I will say he is 43 years of age, has been married 18 years, has three girls and five boys, and intends to give them a good business and useful education. He has a one-story, hard-finished house (cost $1200), with seven rooms and painted. His barn is a combination of barn and hop-kiln (cost $1500), under which he keeps his two horses, two cows, wagons and tools. In the loft or second floor he has hay, grain and potatoes enough to last until the next crop comes in. Keeps two or three pigs, chickens for family use, and makes the family butter. Has one ranch wagon, one spring or family and one buggy. He cultivates five acres of hops, and the other 3½ acres are occupied with buildings and fruit trees. He employs only one man, five months in the year, at $1 per day and board, except hop-picking. The rest of the work is done by himself and family, all being workers.

This little place was purchased in 1869 for $1150, and I wondered at the time how he expected to make a living from it, there being only a small cabin on it. In 1890 he sold a little over $3500 worth of hops; in 1891, $1500. This year, from 90 cherry trees, he sold $450 worth; 100 Bartlett pears, $450 worth; 50 peaches and 10 apricots, $100 worth. His county and State taxes were $38; levee tax, $90. He has a little money loaned out and no debts!

This is not written with the view of attempting to show anything marvelous or to show that it is the greatest income ever got out of 8½ acres of land. I have had land that produced me nearly $2000 per acre, but it would not be good sense to quote such results against a yearly income. In this case, I wanted to show what pluck and perseverance, combined with good intelligence, can do toward producing thrift.

I think I hear some of the men say that they have 160 acres, more or less, and it takes most of the year's income to square the grocery, drygoods and meat bills—that they are tired of seeing it paraded before the public what great things have been done on ten acres. These thrifty farmers do not usually have a whole year's grocery or meat bill to pay when the crop is sold.

It is an unpleasant task to talk to or lecture persons about their failures, while they will listen for hours about their success. The two words, industry and economy, play an important part in the career of every household.

When you pay your store bill insist on its being itemized to the most trivial article. Then scrutinize it carefully and see how many articles on the bill you could produce at home or go without. First count the number of hams, even if they are "our taste;" the pounds of lard, dozens of eggs, pounds of raisins, gallons of vinegar, and vegetables, that are on the wrong side of the ledger. A piece of land that will not produce some or all of these articles should be abandoned to the owls and coyotes.

There is but little land in the State that will not produce alfalfa where water can be had, yet how few farms have one, two or three acres of alfalfa for cows, pigs and chickens?

I did not start out with the intention of discussing this thrift question, and I have merely touched on some of the most important features, for if justice is done it will admit of a wide range. I am not above criticism, and take some of these remarks to myself. I could write a very readable and somewhat amusing account of my early struggles in farming and continue it up to the present time.

But few persons like to write up their history and parade it over their signatures. I have not accomplished anything thus far that would read well in a book without the addition of a good deal of romance, and until I do I prefer to leave some of my light under the traditional bushel.

The owners of the 8½ acres are young, full of hope and vigorous, and are fully determined they will equalize matters so at home that when they go to town to buy headgear that they will purchase as many bonnets as they do hats.

I hope it will not be considered necessary, to carry out some of these suggestions, that a person must be penurious, small and niggardly.

Thrift first—liberality second. D. FLINT.

Sacramento.

Wheat in Washington.

When the great adaptablity of Oregon, and especially the Willamette Valley, as a wheat growing section is recalled, and the wealth that is annually returned for this staple product, it is not difficult to understand why the average farmer devotes himself heart and soul to wheat growing. Wheat is worth to day 90½ cents. This is of course an exceptional year as to prices, and wheat has not been as near a dollar a bushel for a long time, but it always brings good returns in Oregon for anything like good, honest cultivation of the soil.

Hon. N. G, Balock, of Walla Walla, president and executive commissioner of the Washington world's fair commission, has issued in the form of a bulletin, some interesting facts about wheat growing.

"I have endeavored to ascertain the cost of production per bushel and the profits per acre. In doing this I took three successive crops which averaged thirty-three bushels to the acre. All work was done by contract, the plowing, seeding, harrowing and harvesting being paid for by the acre and the threshing by by the bushel. The plowing cost $1.25 per acre; harrowing and seeding, 90 cents per acre; harvesting and heading, $1.50 per acre; threshing, 6 cents per bushel. This made the cost per bushel a little over 19 cents. I then added interest on the value of the land for two years and counted the cost of production at 29 cents. As the three crops sold in the field for an average of 55 cents per bushel, I counted the profits at $8.28 per acre for each crop."

At 90 cents per bushel this profit would have been something handsome.

It is generally considered that from September 15 to December 1 is the best time for seeding, though wheat sown in the summer, and at any time in the winter or early spring, will ripen at the same time, and in Oregon it is not strange to know of wheat being sowed in every month in the year. This is an advantage which the Eastern farmer, limited in his seeding time, can throughly appreciate.—*Albany Herald.*

Asparagus Culture.

The first point looking toward success, is in the selection of varieties, or perhaps strains, and the Conover's Colossal, when carefully selected, is very hard to improve on; but the most of the seed ordinarily sold has been allowed to degenerate. The Palmetto is a strain that is highly recommended by some. However, taking it all in all, the Barr's Mammoth seems to be the most desirable market strain; being of large size and comparatively new, it has not had as much opportunity to degenerate as other older kinds. The best should always be selected.

Propagation.

Sow seed early in the spring in beds or drills, and give good, clean cultivation. For the best results keep it growing as fast as possible all the time.

When plants are one year old thin to 12 or 14 inches by 2½ to 3 feet, and give good cultivation, with an abundance of good stable manure well forked in. If one does not wish to wait for seed to grow, plants can be bought cheaply and one year's time gained, which should be set out as directed above, setting the crowns not over two inches under the surface, if wanted for early crop, and if wanted early, plant in warm, sandy land, so the plants will start early in spring. Sandy, alkali land should be good for them, as they require salt in those parts of the country where it is not furnished by natnre.

As to profits. I went into the wholesale markets in Los Angeles and was told that the early crop was worth at wholesale, to ship, from 15 to 18 cents per pound; from that price it ranges down to 4 or 5 cents a pound. At this price the early cuttings should bring $125 per cutting per acre, and the cutting could be done on an average of once a week. This would beat oranges or cabbages, or almost anything else.—*A. B. Eells in Santa Ana Blade.*

HORTICULTURE.

State Horticultural Society.

The regular monthly meeting of the State Horticultural Society was held at 220 Sutter street, December 18th. Prof. E. W. Hilgard presided. In the absence of Prof. E. J. Wickson, Emory E. Smith acted as Secretary. C. F. Wyer of Winters, Dr. H. D. Lathrop of East Oakland and G. W. Hinclay of Winters were elected members. The Board of Directors recommended that $50 of the Society's funds be donated toward the erection of the proposed Matthew Cooke monument, and a resolution was passed authorizing the appropriation of the money. The committee reported the receipt of $5 toward this worthy object from N. W. Blanchard of Santa Paula.

The following letter was read from G. W. Hinclay, relating to the Botan plum, and also inclosed letters from J. T. Lovett of Little Silver, N. J., and Porter Bros. Company of Chicago, relating to the same subject:

Mr. Hinclay's Letter.

DEAR SIR:—I notice in some paper that the State Horticultural Society will hold a special meeting tomorrow. I would be very much pleased to be present, but my health is such that I cannot at present. No doubt you know that I have taken quite an interest in the subject ever since the Society (several months ago) took into consideration the propriety of changing the applied name of Abundance to another more suitable. I think it was a wise proceeding on the part of the Society, for I have long known that the name of Abundance was an applied name to a Japanese class of plums called Botan. Now, if the specious name of Abundance was applied by a nurseryman for the sole purpose of facilitating the sale of trees, I think your Society will be only performing one of the acts for which it was organized if they at once change it to a more suitable and appropriate name. I expect, should I live, to raise them in considerable quantities. Not knowing of any name more appropriate, I sent some to Chicago under the name of Mikado, believing as I did that I was doing nothing that was either wrong or selfish. I never have taken very kindly to the name of Abundance, and the name of Botan did not indicate any particular variety. In order to more enlighten your committee on nomenclature, I have written to Mr. Lovett, stating to him not to write me anything except what I could be free to use in the settlement of this controversy. Please introduce the letters. G. W. HINCLAY.

Winters, Cal.

Mr. Lovett's Letter.

Mr. G. W. Hinclay—DEAR SIR: Your esteemed favor of the 12th inst. received and noted. We will supply you 200 Abundance plum trees, the genuine sort, budded on plum, 1 yr. old, good trees, at $15 per 100; budded on peach, at $12 per 100.

The Abundance is a Japanese plum. We received it from a California seedsman nearly ten years ago, and it proved so valuable in the nursery rows, and its name being unknown, we gave it the name of Abundance because it was so very fine and yielded so abundantly. We have since learned that this plum is known in some parts of the country as the "Yellow-Fleshed Botan." As there are, however, so many varieties of plums known as Botan, such as the Sweet Botan, Late Botan, Early Botan, Red Botan, Yellow Botan and Yellow-Fleshed Botan, we are loath to abandon the name of Abundance for this very valuable plum. There is also a number of varieties of Japanese plums known as Botankio with prefixes and suffixes of Early, Red, Yellow, Late, etc., which are also called Botan by some. In fact, the Japanese plums familiarly known as Botan are becoming so mixed up and muddled that when you say Botan you hardly know what is meant; just as in California, when you say Chinaman, you do not know *which* Chinaman or what particular Chinaman. The truth of it is that in Japan the name of Botan is given to a certain *class of plums* and not to a *particular variety*. We think the term applies to the shape of the fruit, but are not sure, just as in this country we have the prunes, consisting of many varieties.

You are free to use this letter in any proper way you wish. Hoping it will give you the desired information, we remain yours truly,

J. T. LOVETT CO.

Little Silver, N. J., Nov. 19, 1891

Porter Bros'. Letter.

G. W. Hinclay, Esq.—DEAR SIR: Goodell car 16,242 sold here yesterday. Your apricots were very ripe; the boxes sold at 80 cents; half-crates at 90 cents.

Goodell car 16,256 sold here to-day. Your apricots in like condition, and sold at 90 cents to 95 cents. Mikado plums were in good order, and we bought the box in at $2 ourselves, so that we could examine same thoroughly. We find them to be a very fine plum, and we think if they come in earlier and are shipped a little greener than this fruit was shipped, that they would arrive here in fine shape and bring a good price. It looks to us like a very desirable plum, as it is not only handsome, but also has an excellent flavor. We hope you will have plenty of them within a year or two, as we believe you can get a fancy price for same.

Hoping to hear from you again soon with notice of further consignments, we remain,

Chicago, July 2, 1891. PORTER BROS. CO.

The subject of changing the name of the Abundance plum and attemnt at renaming the grape known as Isabella Regia (the Pierce grape) was reported back to the Committee on Nomenclature, and the president was requested to appoint the committee, which had not yet been done.

Mr. Wyer of Winters spoke upon the dried-

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fruit question and outlined a proposition to establish a sample room in San Francisco, where all of the growers could send sample boxes of their fruit for buyers to examine and make purchases, thus doing away with at least one set of middlemen,

The following committee was appointed to report at the January meeting upon the feasibility of the scheme: C. F. Wyer, Leonard Coates, B. M. Lelong, E. W. Maslin and C. H. Allen.

Howard Overacker spoke upon the use of pumps for irrigation orchards, and said that he was going to put in an experimental plant for that purpose. The subject of planting young trees where old trees had stood, was discussed at length, and a number of cases in which the plan had proven a failure, were cited, especially in the planting of apricots and English walnuts, where oak trees had previously stood. It was suggested that in orchard, when trees were blown down or grubbed out for any reason, that before planting another tree in the same place, the ground should be thoroughly fertilized with well-rotted manure, and dressed with bone dust to supply the qualities which the old tree had removed. It was generally conceded that, owing to the difference in the feeding of the roots, young orchards could safely be started in growing vineyards. The disposition of prunings in the orchard was freely discussed by a number of the members, as was the pruning of the different varieties of trees. In pruning small orchards, the thumb and finger were declared to be the very best implement that could be used. Frank Kimball spoke of the growing and fruiting of trees at unusual seasons, and cited a case, on his own ranch at National City, of Red June apples, which were perfected in September.

E. W. Maslin spoke in behalf of the new Foreign Fruit Marketing Company, which is being organized by the State Board of Trade.

B. N. Rowley exhibited a box of figs, packed by M. Denicke of Fresno, which were declared to be the best flavored and finest appearing White Adriatic figs that had ever been shown in California. A fine box of Robe de Sergent prunes was exhibited by Leonard Coates. Specimens of the Buff North Carolina apple were exhibited by James Shinn. A box of Isabella Regia (the Pierce grape) was also exhibited. The following olives were exhibited by C. H. Allen: Atro Rubens or Vialacea, Macrocarpa, Nigrina, Oleo Rubra, Pendulina, Picholine, Redding's Picholine.

EMORY E. SMITH,
Sec'y pro tem.

Pruning Moorparks.

The possibility of improving the bearing of Moorpark apricot trees by severe pruning is mentioned from time to time, and experiments with the method are still being conducted. The theory seems to be questionable, because in regions where apricots have been most closely pruned, as for example in Southern California, the Moorpark has been practically abandoned as unprofitable. Even when pruned closely twice a year, the Moorpark is shy and uncertain in Southern California, as elsewhere.

Interesting data on this question is likely to be gained this year from the Santa Clara valley. At the meeting of the Campbell Horticultural Society, December 15th, Pres. McGlincy stated that as an experiment, when the fruit was off, he had severely pruned his Moorpark apricots, and hoped it would prove beneficial. This variety is known as a shy bearer, and if by summer pruning, the trees can be made to bear, it will prove a good thing for orchardists; but if not, the days of Moorparks will be numbered, for people will graft them into something from which they can hope, with reasonable assurance that they will obtain an annual crop.

It is not at all unlikely that the Moorpark apricots through this portion of the valley will be very heavily pruned, and the experiment made, to see if they are under all conditions persistently shy bearers.

THE APIARY.

Comb Honey vs. Extracted Honey.

EDITORS PRESS:—An oft repeated question is, Which pays best, comb or extracted honey?

One apiarist will tell you that comb honey can be produced the cheapest, all things considered. He will enumerate the many points for successful comb honey production, and prove to you that comb honey will pay better than extracted. Another apiarist will tell you that there is more money in extracted honey, and to the common bee-keeper he wonders which is right.

Well, in my opinion they are both right; the location and the bee-keeper is the answer. If they are situated near a good market, with superior shipping facilities, and the honey location is good, comb honey will pay the best. As a general rule, one man can attend to more bees when running for comb honey. Comb honey when put up in a neat, attractive package, will sell itself and not go begging for a market. But comb honey requires very delicate handling, and in isolated regions where there are bad roads it would pay best to run for extracted honey; so you see, the location must decide this point.

If I were going to a new country and intended establishing myself in the bee business, I would try and have the apiary that was nearest my home market run exclusively for comb honey, while the out, or isolated apiaries, I would run for extracted honey; but if there should come a poor honey season and my home apiary should only partly fill up the section boxes, then I would extract all the honey and would therefore secure part of a honey crop anyway.

A person who buys a pound of extracted honey secures more honey than a person who buys a pound of comb honey, because one-eighth or one-tenth is wax.

If a good article of extracted honey is produced it can as readily be disposed of as comb honey.

Extracted honey if it candies can soon be reduced to the liquid form again; but if comb honey candies it will have to be melted, as no way has yet been devised for reliquifying honey in the comb.

A great many persons prefer candied honey, and in every neighborhood will be found persons who will buy the candied honey in preference to all other kinds. For myself, I think it is quite a treat occasionally to have some candied honey.

The honey gathered from manzanita crystallizes quicker than any other kind that I know of; if it is to be extracted, it must be taken out in a few days after being capped over. Water-cress honey also candies quickly.

Quite a point in extracting is, that it has a great tendency to discourage swarming, and in some seasons this is indeed a great thing.

A few eastern apiarists think that the use of the honey extractor is ruining the honey and bee business; that it tends to lower prices too much, and that there will soon be such an overproduction that nothing will be realized from the honey business. Nonsense! I don't think that there was ever an over-production of any kind of food, or ever will be.

What is needed is a systematic system of distribution, and a thorough building up of home markets. It is marvelous the amount of honey that can be sold annually in a small city of 2,500 inhabitants, if the right system of building up home markets is adopted.

Extracted honey is growing more in favor every day, and is being extensively used in various ways. I was reading a few days ago that the editor of the *American Bee Journal*, visited the buyer of a fancy bakery, and the buyer informed him that his purchases of extracted honey for 1891, amounted to $13,000, and we presume that there are hundreds of other bakeries in our land, who use equally as much if not more.

No doubt the analysis of honey, of different countries, would be interesting to readers of the PRESS; following is the analysis given in Blythe's "Foods, their Analysis and Compositions." (See page 129 Analysis made by Dr. Brown.)

COMPOSITION OF HONEY OF VARIOUS COUNTRIES.

	English.	Welsh.	Normandy.	Germany.	Greek.	Lisbon.	Jamaica.	California.
Water expelled at 100 degrees	19.10	16.40	15.50	19.11	19.80	18.80	19.46	17.90
Water expelled at a much higher temperature and loss	7.60	6.56	4.95	11.00	7.80	6.66	7.58	8.13
Levulose	36.60	37.20	38.88	33.14	40.00	37.26	33.19	37.85
Dextrose	36.50	39.70	42.50	36.58	32.20	34.96	35.21	36.01
Cane Sugar	Doubtful.	.....	.....	.....	.....	1.20	2.30	.....
Wax pollen and insoluble matter	Trace.	Trace.	Trace.	Trace.	1.05	1.90	2.10	Trace.
Ash	.15	.14	.17	.17	.15	.14	.26	.11

The one given is not an exhaustive analysis, however, for, in addition to what is given, honey contains minute organic acids, alkaloidal and bitter principles possibly derived from the pollen; small quantities of mineral matter, and invariably minute quantities of alchol, all of which are included in the two last horizontal columns of the table, but it suffices to show that 75 to 80 per cent of extracted honey is saccharine matter or sugar."—*Blythe.*

A German apiarist, testing the crystallization of honey, sampled up several bottles; part of them was placed in a dark room and part in a room exposed to light. That which was in the light room candied in a short time, while that in the dark room remained in the liquid form indefinitely. Still I think if that which was placed in the light room was kept at the same temperature as that in the dark room, it would not have candied either. If honey be kept at a temperature of 90°, it will not candy, whether in a light or dark room; 86° is the melting point of glucose sugar-crystals. All lower temperatures hasten crystallization; the less water honey contains the slower the crystallization, while its entire absence prevents candying altogether.

Extracted and comb honey should be stored in a dry, warm room. Comb honey should be kept in darkness in order to retain its delicate whiteness and keep from fading. Honey should never be kept in a dark place, as it will soon ferment and its delicate aroma is soon destroyed and it is unfit for use.

The production of comb and extracted honey in the Pacific States and Territories is still in its infancy. The honey resources of California, Nevada, Colorado and Arizona are just beginning to be developed.

Alfalfa is the honey plant destined to lead in all irrigated districts.

What was once regarded as a desert and worthless land is now being made to "blossom as the rose." The new systems of irrigation and the boring of artesian wells have accomplished these beneficial and marvelous results.

Aside from the irrigated alfalfa tracts, there are in Arizona and Colorado vast tracts of wild bee pasturage, the principal honey plants among this wild pasture being the mesquite and cacti.

Mesquite is said to yield a honey superior to alfalfa. One man describes it as being as clear as water and of an exquisite flavor. The cacti is also very prolific of honey. A bee-keeper in Arizona reports gathering a teaspoonful of unripe nectar from a single flower.

Grizzly Flats, Cal. S. L. WATKINS.

THE WORLD'S HONEY PRODUCERS.—The largest beekeeper in the world is Mr. Harbison of this State, who has 6000 hives, producing 200,000 pounds of honey yearly. In Greece there are 30,000 hives, producing 3,000,000 pounds of honey; in Denmark 80,000, producing 2,000,000; in Russia 110,000, producing the same; in Belgium 200,000, producing 5,000,000; in Holland 240,000, producing 6 000,000; in France 950,000, producing 23,000,000; in Germany 1,450,000 and in Austria 1,550,000, each producing 40,000,000 pounds of honey. But in the United States there are 2,900,000 hives, belonging to 70,000 beekeepers, and producing 62,000,000 pounds of honey yearly.—*Californian.*

SWINE YARD.

Inoculation for Hog Cholera.

The experiment at Ottawa, Ill., to test the value of inoculation as a preventive for hog cholera has now progressed sufficiently to allow a statement of facts, which will settle one of the points at issue, and probably the only one which can now be determined from this test. The report shows that 55 hogs were purchased (instead of 60, as originally proposed) and divided into three lots. Eighteen were inoculated by Mr. Cadwell, who was instructed by Mr. Billings, and who strictly followed the latter's method; 18 were inoculated by Dr. Schroeder, according to the method used by the Bureau of Animal Industry, and 19 were not inoculated and were held to determine whether the animals had been exposed to disease previous to inoculation, and whether the inoculated animals resisted the disease better than those which had not been inoculated. The inoculations were made on Nov. 28th, and the two inoculated lots were then put in the same inclosure, the animals not inoculated being kept by themselves. One of the hogs inoculated by Mr. Cadwell, according to Billings' method, was sick and refused its feed on Dec. 8th, and on the morning of Dec. 10th, it was found dead. On Dec. 11th, another hog inoculated by Mr. Cadwell died, and on Dec. 13th, two more hogs inoculated by Mr. Cadwell were found dead. None of the hogs inoculated according the method of the Bureau of Animal Industry had died at the time the last report was received.

As the first died 12 days after inoculation, the second 13 days after inoculation, and the third and fourth 15 days after inoculation, and as the hogs not inoculated are all well, and none of those inoculated by the Bureau have died, it is conclusively shown that the disease was caused by the inoculation made by Mr. Cadwell. All of the inoculated hogs were exposed to these animals in which the disease developed from the inoculation, and as a sufficient time had not elapsed for them to receive any protection, it would not be surprising if there should be a considerable percentage of loss in each of the inoculated lots. This premature exposure, of course, prevents any positive information being obtained from this experiment as to whether there is any marked degree of protection conferred by inoculation.

The results already obtained demonstrate the the danger of spreading the disease by inoculation, and particularly by the method used and recommended by Mr. Billings. This danger has been indicated by other inoculations made in Nebraska and Illinois, but it has never before been so clearly and incontestably proved.

In this connection, the following report made Dec. 1, 1891, by ex-Governor Robert W. Furnas, the statistical agent of the Department of Agriculture for Nebraska, is especially significant, as inoculation has been extensively practiced in that State under the immediate supervision of Mr. Billings. This report says:

"I will assume to say that the loss to farmers of hogs by 'swine disease' has never been so great as for the month of November. It has covered more territory and proved more fatal, especially in the eastern part of the State. All say: 'It is not cholera, but more akin to scarlet fever or pneumonia.' It seems to have shown new and more uncontrollable characteristics; has made its appearance on farms where never before known; among hogs raised on the farm with no known chance of having been communicated, and where best care has always been exercised. Farmers say, 'simply mysterious,' and abide results as philosophically as possible."

BERKSHIRE MEETING.—The American Berkshire Association will hold its 16th annual meeting at Springfield, Ill., Jan. 21, 1892. This Association, the oldest for recording the smaller breeds of improved live stock, deservedly continues its popularity with the breeders of that excellent breed of swine.

FRUIT MARKETING.

Distribution by Growers.

EDITORS PRESS:—Thanks for the clipping (if thanks are due to the clipping, I leave you to judge) from the New York paper which thinks our plan for cooperative fruit selling chimerical.

The motive for the animus on the part of the writer is apparent when one looks on the other side of the page and sees the advertisements of the *commission* merchants.

Evidently the writer believes in the text—"Thou canst not serve both God and Mammon," so he serves Mammon, which is his privilege, but his interests are not California's interest, and while his item may be a good sop for his patrons, the commission men, it in no way indicates a relief for the betterment of results calculated toward a juster distribution of return to the grower.

He invites me to come to New York next summer and visit the auction room. I have visited the auction rooms of New York and London, and besides any observations that I have made, have a personal, practical experience with the "modus operandi" of the auction room. I know the potency of a recognized "wink" by the auctioneer, and of the "combine" among the "peanut" men, and I wot that the writer of the article does, too.

What material difference may be conjured up in an auctioneer appointed by and for the growers, and in one by and for the commission men, and for "Peanuts"?

No, friend! One hundred or even five hundred venders cannot handle the great fruit crop of California, but 100 or even 50 will do as a *sample*, and if the 50 succeed, they will be multiplied to thousands, see?

What nourishing and health-giving food product is sold to the consumer in New York at 8 cents per pound? And yet the California fruit-growers sold hundreds of tons of dried peaches and apricots at 4 and 5 cents per pound. Cannot the growers find a retail market at 8 and 10 cents per pound among the densely populated centers of the large Eastern cities? Surely they can, and realize a much greater net return, and in addition, build up a market vastly greater than otherwise possible.

Does the writer know that there are no apricot growers in the world that receive less for their apricots than do the California growers? Why should they continue to receive less? Shall it be in order to accommodate *The Fruit Trade Journal*, the Eastern commission men and "Peanuts"?

Given the trial of say 50 venders at the start, and if these succeed, and shortly, "the multiplicity of details, and the necessity of the employment of an army of the most skilled and intelligent labor to properly handle car upon car of constantly perishing fruit," will be mastered by the employees of the growers as well as by the men now doing this work in their own interests, and when the trial shall have been made and found successful, you may keep your "multiplicity of detail" and welcome to you, but the grower will learn that his interests can be served best by selling to the consumer at a lower rate and at the same time receive for his product an equitable return.

Sacramento, Dec. 20. D. LUBIN.

EXPORTING APPLES TO EUROPE is becoming one of the most important features of the trade. Up to the first week in November, 555,000 barrels had been shipped from New York since the season began. Last year, 195,164 barrels were sent abroad.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST, by addressing the publishers.

The Master's Desk.

S. W. DAVIS, W. M. S. G. OF CALIFORNIA.

"Happy New Year" are the first words found on the Master's Desk this week. What a world of recollections and suggestions these oft-heard words bring! How many times we have spoken them and had them addressed to us! But it seems to me, with each succeeding year, these words have a newer and a deeper significance. When we have left the threshold of youth, and enter upon the duties of manhood and womanhood, we find the New Years coming upon us so rapidly, and each one so filled with care and responsibility, that we may well stop at the dawn of the first day of the year, and exclaim in sincerity, "Happy New Year." How I wish that simple exclamation would make *A Happy New Year* to every member of our noble Order, to all the readers of the RURAL, and to the good and true men and women everywhere! How I wish the world could, in all that pertains to society, be happy for at least one year! But alas! It is easy to say be happy; not so easy thus to be. The New Year will come, whether or not we want it. It will be "Happy New Year" to us, largely as we make it, or try to make it so. Disappointment, sickness, sorrow, death, may come to many of us. Certain it is to come to some of us; and though such are not to bring happiness, yet there is a happiness that comes of resignation—a happiness that comes to all who have intelligently, honestly and faithfully done their duty. There is happiness in the association of the good and true. Nowhere are they to be found in larger numbers or in more sincere association than in the Grange. In the councils of that fraternity, we find the family neighborhood reunion.

The father and the mother, the sister and the brother, the hired man and the orphan, all find pleasant companionship in the Grange. Those whose hearts have been saddened, and those whose minds have been troubled, will in the Grange find sympathy and pleasure. Why not, then, as we leave the Old Year behind, gladly welcome the New Year? Why not, through the influences and the opportunities which the Grange guarantees, make the year 1892 the happiest one of all, not alone for self, but also for friend, neighbor and the stranger? Let us profit by the past, study during the present, so that we enjoy and be useful in the future. To all, A Happy New Year! To the Grange in California and elsewhere, a thrice-successful Happy New Year! That it may be so, will depend largely on your efforts, confiding readers.

See that your subordinate Grange pays its dues to the State Grange up to Dec. 31, 1891. Send the name of the Master and Secretary, with postoffice address, as soon as they are installed, and your Grange will *at once* get the annual word for 1892. If you don't do this, don't blame the Master or Secretary of the State Grange if the word is not forthcoming.

"Act, act in the living present. Heart within. God o'erhead."

Who will do most for the Order in California? By their deeds we will know them.

The holidays are gone; now for the plow, the harrow, the pruning knife, the hoe, and to know how to use these tools join the Grange.

The Christmas number of the RURAL was a good Grange paper. We were sorry so much good Grange news had to go over, and hope that hereafter such will not be the case with the letters and correspondence sent to the Grange Department. Send in the Grange news, for we all want to hear from you.

Don't take La Grippe, but take the Grange grip. It is taught in every subordinate Grange.

The Michigan State Grange has just adjourned. We are glad to see that Bros. Luce and Woodman and Sister Woodman were in attendance to do and dare for the Grange. They know how to do both.

Prepare to receive the new word! You know how to prepare!

The Chinese, that odd people, require four things of a good woman, viz.: "That virtue dwell in her heart; that modesty shine on her forehead; that gentleness flow from her lips, that work employ her hands." While we may disagree with these people across the ocean on most things, who can seriously object to their estimate of a good woman? Perhaps their requirement of the work the hands should do is greater than we would have it, but none-the-less the hands of a good woman will always find employment.

Much has been written on "How to Save the Boys." The New Year is here, and with it many boys will start for themselves. The best way to save all the boys, old as well as young, is to make home the best place on earth.

See how much, not how little, you can do for the Order. Every effort helps. You may be a humble member, but that matters not—help. We are all humble members. Official station only honors those who bring honor to the office. Better not hold an office than to bring no honor to that office. If you would have the honors of an office you must honor that office. But whether officer or member do your full share for the Grange. You will not, at the close of 1892, regret any effort put forth for the Grange.

The National Grange souvenir proclamation has been kindly received by the PRESS and the Order everywhere.

The Executive Committee of the California State Grange will meet at the office of the Secretary, 220 Market St., San Francisco, Cal., at 10 A. M. on Wednesday, January 13th, 1892. Members of the Order and others having business before the committee, will take due notice of said meeting. The ways and means of upbuilding the Grange will be considered, and suggestions to the better and quicker accomplishment of that work will be kindly and thankfully received. E. W. Davis, Chairman.

During the week a kind and highly appreciated fraternal letter from Bro. J. H. Brigham, the W. M., and also one from Bro. John Trimble, the W. Sec'y of the National Grange, were received. Thanks, brothers. Do it often.

Two Rock Grange.

EDITORS PRESS:—Two Rock Grange failed to hold a meeting on Dec. 3d, date of first regular meeting in December, which accounts for the list of officers not being sent before. We elected our officers Dec. 17th, as per list enclosed. There was a general change except the Lecturer and Chaplain. The Worthy Lecturer was retained, that he might become more proficient, or that he had filled the office with such honors that it was deemed best not to let him go. Our Worthy Chaplain—as we are taught in the Declaration of Purposes, "the office should seek the man"—is the proper man in the right place.

Master-elect, Bro. Denman, was an efficient Assistant Steward and I believe he will handle the gavel with as great honor as he did the pruning hook.

Bro. Martin—well, if he handles the emblem of his newly assigned station, as he did the gavel, *no* enemy will enter and rob the orchard or vineyard or steal the owl from his pole. If any of the State officers should visit Two Rock Grange, be sure you have the proper signal and correct pass, or you can never get by Bro. Martin and his big owl.

Your humble servant, the defeated Secretary, who has been at the Secretary's desk more than half of the time since Two Rock Grange was organized, needs no comments. Although as I am a *retired*—What did I say—I mean a *defeated* Secretary, I will never forget the PRESS or hesitate to ask for subscriptions.

Those newly elected officers will be placed in their respective places and started to work on Jan. 7th. The State Lecturer will be invited to install the officers. We will confer the third and fourth degrees and have the usual Harvest Feast.

Remember that the latch-string of Two Rock Grange hangs on the outside and within reach of all good Patrons.

La Grippe is raging through this vicinity, but so far no one is in serious danger. More rain is needed to start the grass and make plowing better.

Wishing the PRESS firm a Happy New Year, I am J. C. PURVINE,
Sec'y Two Rock Grange.

WE have in hand an interesting communication from John Minto of Salem, Or., on the Question of "Forest Preservation."

Woodbridge Grange.

EDITORS PRESS—Enclosed find list of officers for '92, elected by Woodbridge Grange. This is the busy seeding time with the farmers, when plows and harrows are brought out, and although they do not run day and night, it is told of some that lanterns are required to make the first few rounds in the morning.

Good horses and poor horses all have to work at this season. All kinds of plows, good and bad, are kept going, and it is some extra occasion if the Granger stops operations to attend the Grange. However, Woodbridge Grange mustered a fair attendance December 15th for conferring degrees. The usual Harvest Feast was spread in the lower hall of Grangers' Building, which we have lately purchased, and a general good time was had. Installation will take place Tuesday, January 5th. Meeting at 10 o'clock, with basket lunch. Yours fraternally,

N. VESPER WILLIAMS, Sec'y.
Camp McKee, Dec. 20th.

Kibesillah Grange.

EDITORS PRESS: — Our Grange has changed its meetings from the 1st and 2d Saturdays to the 1st Saturday of every month at 8 P. M.

Our last meeting was a very lively and enjoyable one. We were pleased to see the pleasant face of Bro. Dashiells in our midst, after so long an absence.

Balloting for our new officers was the work for the evening. They will be duly installed at the first regular meeting in January. We cordially invite all friends and hope they will be present at our January meeting, as we intend to hold open Grange during the installation of officers.

Brothers and sisters, we wish you all success and a "Happy New Year." Fraternally, ANNA ROBERTS.

California at the World's Fair.

The Southern California World's Fair Association has received the following letter from J. M. Samuels, Chief of the Department of Horticulture:

"The size of the court assigned to California is 88x270 feet. The error occurred, no doubt, in Mr. Fish's letter as regards space. As you will notice, this will give to California 24,000 square feet within the walls of the horticultural building. Besides, there will be allowed to her several thousand feet of table space for an exhibit of her fruits, which as yet cannot be definitely allotted until more of the States have made application. Northern California will have her proportion of the space, provided application is made from that part of the State for it. I doubt, however, if an exhibit of citrus fruit trees will be made from north of the Tehachapi pass. Therefore, Southern California will have this fine court to herself.

"You will notice that this is much more than California's share of available space at the command of the Horticultural Department, and may call for some protests from competing sources. I am personally of the opinion, however, that your State will use much more than the usual energy in making exhibits, and it is especially desired that the horticultural display at the World's Columbian Exposition be as fine as it is possible to make it.

"I have now a plan in hand which will no doubt enable the exhibitors from Southern California to make an almost unlimited exhibit of citrus and ornamental trees. The Landscape Department at the World's Fair grounds has assigned to the Department of Horticulture for the purpose of displaying fine specimens of plants, the grounds surrounding all the large buildings, provided we shall give them a list of such trees and plants as can be set in a short space of time. Therefore, if you will furnish the Department with a list of citrus fruit trees, pepper trees, desert palms, eucalyptus, olives, conifers of any kind or any other trees that would be rare in this latitude, and especially ornamental, I will try and find space for them on the grounds.

"These trees can no doubt be labeled, if desired, as from individuals or from the Southern California Horticultural Society, and whenever any one goes on the grounds, they can see from the small tags attached to these trees the source from which they were contributed. This will be a good opportunity to have your State advertise its horticultural resources. As you understand, this offer will be made to other States, and the ones that will report definitely what they wish to exhibit will have space allotted to them as long as it lasts. Those tardy in applying will have themselves to blame if they fail to obtain as much as they think they are entitled to.

"Mr. Fish made application for five acres of wooded land on the wooded island or some other outdoor space at my suggestion. I stated to him, however, that it would be very doubtful if that amount could be secured for his State. This space surrounding the other buildings, however, gives an opportunity to comply with his requests if the above conditions are complied with. The grounds will have black soil placed on them and be put in proper condition for planting shrubs and trees, but the exhibitor will be required to carry out the detail work."

A Northern California Association.

The *Sutter County Farmer* has the following: The Horticultural Society has set the ball rolling for having a Northern California World's Fair Association formed. The northern counties can better afford to join themselves together in this great work and make an exhibit collectively at the Columbian Exposition in 1893 at Chicago than for each county to separately exhibit her products there. The secretary of the society will notify each Board of Supervisors in all counties north of San Francisco to appoint five delegates from their respective counties to meet at Yuba City on February 17th and discuss the advisability of such organization. This will be the proper way to get at it, and the matter should be thoroughly discussed in all the northern and central portions of the State and some action taken on the same.

Government Wants a Big Tree.

The Tulare *Citizen* has the following: Postmaster Eckles of this place has received an official communication from Washington City, from the office of Hon. Horace A. Taylor of the Department of Government Management and Control of the World's Exhibition at Chicago, stating that it is the wish of the Secretary of the Interior to secure a section of one of the celebrated big trees of California (to be taken from Sequoia National Park, if practicable to do so), as a part of the exhibit at the Columbian Exposition. They state that the tree would be placed in a central locality in the Government building, and the interior of it furnished in a novel and attractive manner.

They are desirous of ascertaining the approximate cost of preparing a 30-foot section in suitable form and transporting it to the railroad. They also contemplate taking one or more thin sections, sawed entirely across the tree, for ceiling. As this exhibit comes from the National Park, and is to be placed in the Government building, it is entirely proper that the Government should defray the expense, yet it would make Tulare county the best advertised county in the United States outside of Cook county, Illinois. The Presidential visit to Tulare's big stump may have had something to do in bringing this matter to the front. It would be well for the City Board of Trade, through Mr. Eckles, to volunteer their assistance to further this enterprise.

The Olive at Pomona.

EDITORS PRESS:—Although there cannot be many persons who still believe that the olive tree is regularly tapped for oil, yet fruit-growers even know but little of its capabilities in the virgin soil and genial climate of California. Experience with young olive orchards here has proved that the tree comes into bearing as soon as the Navel orange tree and that it does not require expensive machinery nor workmen from abroad to convert the product into oil and pickles, as is generally supposed.

Growers in this vicinity have been busy during the past three or four weeks making their olives into pickles, and they may now be obtained at the stores at $1.20 per gallon; but in a few weeks they will all be consumed and no more to be had till the new crop comes in. People are inquiring how long it will be before there are olives enough produced to last the year round. The object-lessons from the young-bearing groves in this section will cause a large acreage to be planted the ensuing season. JOHN S. CALKINS.

Pomona, Cal

THE GREAT DAM ACROSS THE COLORADO RIVER.—The great dam across the Colorado river at Austin, Texas, is now making substantial progress. This dam will be, when completed, 1150 feet long, 60 feet high and 18 feet wide at the top. The upstream face is of limestone and is vertical; the downstream face is of granite, and the interior is rubble masonry of small stone and cement. The dam is intended to utilize the power of the Colorado river. The water power will run the electric light plant, furnish power for the electric railroads and for pumping the water supply of the city, and leave a surplus of some 13,000 horse power for the use of factories. It is about two miles above the city of Austin and the natural conditions are very favorable, as the river there runs between high bluffs and the bed is of rock, so that very little excavation is required to find a solid foundation. It will be the largest power dam yet built in this country. The estimated cost of the dam is about half a million dollars.

FLORIDA ORANGES DIRECT TO ENGLISH MARKETS.—We learn from a Florida paper that E. L. Goodsell, the New York merchant, is working up direct shipment of oranges from Florida to English ports, claiming that the cost of freight and commission to that market would be about 15c per box in addition to cost of marketing in New York. He places the cost in New York at 45c per box and in English markets at 60c per box—in both cases plus 10 per cent commissions. By shipping from September to December, a time may be struck when the European markets are bare of Mediterranean fruit.

FARMERS' ALLIANCE.

Our Alliance Edition contains, additional to this page, Alliance news which subscribers can receive WITHOUT EXTRA COST, by applying for the same

Official Circular from State President F. A. & I. U.

To the Farmers' Alliance of the State of California, Greeting:

BRETHREN:—It seems to me that the time has arrived when I should again speak to the members of this great brotherhood throughout the Pacific Coast, and warn them against the schemes of certain parties to attempt to force Congress to guarantee the bonds of the Nicaragua Canal scheme. Some time ago, there was organized in San Francisco what is known as the "Traffic Association." It purported to have been organized for the purpose of obtaining some relief from the robbery practiced upon the producers of this coast by the grasping railroad monopolies entering this State from the East, and so far as it worked on this line, it had our hearty support. But this Association had no more than fairly organized when it was switched off upon the Nicaragua Canal scheme, and they appointed a committee to inquire into the matter, and said committee reported favorable to the bonds being issued by the Government, and their report was adopted by the Association, thus changing the object and intent of the Association from one to give us relief from the pirate railroad corporations to an institution to boom the Nicaragua Canal, and they now threaten to inflict upon us a petition for that purpose. Don't sign any such petition! We have placed ourselves on high ground upon this question and we mean to stand there until we get relief. In the letter to the Chamber of Commerce, I used this language: "About the end of President Arthur's term, he entered into a treaty with Nicaragua to guarantee the protection of the canal, but before the treaty was ratified, Cleveland was inaugurated and he promptly withdrew it. Warner Miller and others then came before Congress for a charter, pledging themselves that the Government would not be asked for any assistance to build it. The charter was granted upon these terms, which I believe they had no more authority to grant, without an agreement to defend the Territorial integrity of the States where such interests lie, than they had to grant a charter to build a railroad from Paris to Berlin.

"They are now willing to take the Government into partnership upon the same old terms—that it should furnish the means and the corporation pocket the profits. Congress also chartered a 'Construction Company' to build the canal. This, I suppose, is a kind of 'Credit Mobilier' or 'Contract and Finance Company,' which you have probably heard about before, chartered for the purpose of dividing the profits among three or four of the principal stockholders. But Miller and others say there is no risk to run by the Government. If this is so, let them put up their private means, of which they have sufficient to build the canal without any aid from the Government. But suppose $100,000,000 would not complete the work, then they would no doubt ask the Government to take a second lien, as in the Pacific railroads, and the money given them by the Government would be used to corrupt the members of Congress as in the former case, and the courts would step in and declare the corporation did not owe the Government anything until the bonds were due, and in the end I fear the United States would have to pay the bonds and interest, as in the Pacific railroads." In my message to the State Alliance, I used this language: "I placed the Alliance on the highest grounds in the Nicaragua Canal letter to the Chamber of Commerce, viz., That the people of this nation had voted their last subsidy to great corporations for the purpose of controlling commerce, or hatching out a new brood of millionaires; that if the Government desires to invest $100,000,000 in this enterprise it must *own the canal* and run it in the interests of the people." In my letter to the *Bankers' Magazine*, Sept. 15th, 1891, I used this language: "The people of this great country have voted their last subsidy to build up monopolies who oppress them with the very gifts so generously bestowed. We believe hereafter when the people furnish the means for the construction of these great public highways, they should own and control them, and run them in the interest of the people.

"We have already built all the great public highways to the Pacific Coast, and paid for them by taxation, and they are now used to oppress the very people who made the donation, and are pressing us to the wall with their thieving rates of fares and freights, and while we subsidize the steamships with thousands of dollars every year, they enter into combinations to rob the producers. The Pacific Mail, after receiving subsidies from the Government, receives bribes from Huntington & Co. of $700,000 a year to keep up the freights and fares by sea. This amount, in addition to the subsidies, we pay every year in the enhanced price of freights. This canal would be a great benefit to the Pacific if two things were done, and only a curse without them—the ownership of the canal by the people and the abolition of the tariff restrictions on the ports of the Pacific States. If these two things are *not done*, it will make Victoria the large seaport of the Pacific Coast and enrich the British Empire at our expense, and the great merchants and manufacturers of San Francisco can have the privilege of laying back and getting rich off each other by trading jack-knives. No! you may depend upon it that the Farmers' Alliance will never assist in building up any more private corporations to oppress them. If it can be built upon the conditions indicated, the Farmers' Alliance will give it their hearty support." From these quotations from public letters and documents, it is plain to be seen where we stand. We don't intend to go into partnership with any more private corporations to build up the great public highways of commerce, especially where we furnish all the money, and the private corporations get all the turkey. This is what made us so sick. We did expect this Traffic Committee would at least try to give us some relief, but as soon as they are fairly under way they bring in their Canal doctors, and after examining the patient, feeling the pulse, they shake their heads. "Bad case, very bad case. You are very sick," and proceed to prescribe another dose of government bonds. I tell you gentlemen, this is what has made us sick. The very thing we complain of, and we don't propose to take another dose of the same medicine, even if we have to change the doctors. Let us see how this partnership business has worked where we have tried it. We went into partnership with Jay Gould, Sidney Dillon, Russell Sage and Oakes Ames & Co. of the Union Pacific Railroad. We furnished all the money to build the roads, and enough additional in lands and bonds to make all of them millionaires, from thirty to eighty times over, and how do these virtuous partners treat us now- They boldly proclaim their intention not to refund any of the money stolen from their partner, and even refuse any kind of a settlement unless we give them one hundred years at 1½ per cent interest. This gang has built up about 56 outside corporations, and as long as they pay dividends, their partner is not "in it" with them, but as soon as the stock is worthless, and pays nothing, these virtuous pards vote all the stock to their partner, and then (as in the Oregon Short Line), they will gobble up the bonds, and vote as directors that their partner shall guarantee the payment of interest from the earnings of the old Union Pacific.

They receive money into one hand as a private corporation, and pay it into the other as a contractor with their silly old partner. Thus the whole thing seems to be a species of thimble-rigging, with this difference from the old style—the "little joker" is always found under the thimble. It makes no difference which thimble you lift up, it is there. But you may say that this Canal Co. will have Government directors to look after our interests. Why, bless your innocent souls, we have had five directors in the Union Pacific board for over 27 years, say about 75 in all. Have you ever heard of them? Can you name a dozen? Can you name as many as God required to save Sodom from destruction? We occasionally hear of one who did not like to report "all right." But you will soon hear that he was "persuaded" to sign. There was one honest man on that board; his name was C. H. Snow, and he made a report March 5, 1869; but he was so lonely that he was "bounced" the first opportunity. The partnership in the Central Pacific was more infamous if possible. A committee appointed to investigate its affairs reports it rotten to the core. The Pattison Committee reported that if the road had been honestly conducted, they could have paid off the Government debt of about $70,000,000, and received a dividend of six per cent upon the capital invested, and reduced the freights and fare $140,000,000 in the last 20 years. If this is so, and probably it is, that corporation has robbed the producers of this State of $140,000,000, and their partner of as much more. But I have no time to follow up this matter at present, and, in conclusion, will say that the record of our partnership with these corporations constitutes the blackest history ever written in any country, not excepting Warren Hastings in India. In that case he robbed an alien race, in this it was our own people. If the people of this State want more light on this subject, I stand ready to give it.

The time has arrived when the great industrial classes are tired of their allegiance to a clique who are ever ready to boom any legislation in the interests of the rich and against the common good. Already their mutterings of discontent are heard upon the plains of Kansas, and the wheat-fields of the Dakotas and Minnesota, from the corn-fields of Illinois, Indiana and Iowa, as well as from the Pacific Coast. The stability and prosperity of this nation depend upon the honesty of the masses. You would not look to the ward politicians, or the boodlers of the last Legislature, or the courts who turn them loose after they are in the clutches of the law to maintain the purity of this Government. You would not go to the gilded palaces of those who revel in their ill-gotten wealth, but to the farm-laborers, the manly workman at the forge, the lathe and the bench, and the great middle classes to maintain the power and purity of this great Government.

Now I say to this Canal Committee don't make the mistake of ignoring the modest wishes of the people. They do not ask the confiscation of the ill-gotten gains of any corporation, but we do demand a fair deal in the future, and we intend to have it, and we are on the skirmish line now, and will not permit the enemy to entrench themselves behind additional bulwarks in the shape of Nicaragua Canal Bonds.

MARION CANNON,
Ventura, Cal, Dec. 21st. State President.

Money as a Measure of Value.

[Written for the RURAL PRESS.]

Value as a thing does not exist. Value is a relation between human want and supply. Its increase is in proportion to increase of want or diminishment of supply. Nothing on this earth has or can have an absolutely stable value (in its relations to mankind), because human want, supply and the relation between them are continually changing; and as value in anything is simply the outcome of these three elements, it must vary with their variations.

As value is a relation (or, one might say, the result of relationship), and as all relations are continually changing, more or less, the phrase "fixed standard of value" is devoid of sense. There cannot be any "fixed" standard of value, with one important exception to be soon noted. Money cannot be a standard or "fixed measure" any more than anything else. It is as idle to talk about "money" being a measure of value as to talk about potatoes being a measure of value.

Here, now, is one additional point to be borne in mind: There is a difference between money applied to the purchase of commodities and money applied to the extinguishment of debt.

The real value of money is what you can get for it. That is the only standard of value there ever was or ever will be for money.

There are two purposes for which money may be used, and only two: 1. For the purchase of commodities. 2. For the payment of debt. If we could always get the same amount of any commodity for the same denomination of money, then money might be said to have a "fixed value," or to be a "fixed measure of value." But we know that the amount of any commodity which we can get continually varies, consequently the real value of the dollar (or piece of money) continually varies, so far as the purchase of commodities is concerned. But, on the other hand, if we can always extinguish the same amount of debt with a certain piece of money, then that piece of money has a stable value for the payment of debt. It is a "fixed measure" for this latter purpose, and this only. So the value of money may be at once unstable and stable, depending upon the use to which the money is put. But now it is again necessary for us to have a care. If the piece of money is to have a stable value for the payment of debt, the denomination imprinted upon its face must be the only "standard" of its value for the payment of debt—that is, of the amount of debt which it will extinguish, no matter what the money may cost the debtor when he buys it with produce. If the value of a piece of one kind of money is to be fixed by comparison with another kind, and the ratio between them is subject to change, then all the value of the piece is unstable. It has, hence, no stability of value whatever.

F. P. COOK.

A WRETCHED DEED.—The severity of the famine in Russia will be aggravated by the wretched deeds of conscienceless greed. The cable brings accounts of a consignment comprising 1,800,000 pounds of barley flour which was purchased from the dealers in Libau with a view of regulating the price of wheat in the St. Petersburg market, as well as to afford relief to the famine sufferers. An investigation proved that the entire consignment was adulterated with chalk dust and other substances. They comprised such a large proportion of the consignment that the use of the alleged flour would constitute a very dangerous menace to the health if not the lives of those who partook of it. If a strong paternal government is good for anything it ought to be able to hang all who may be detected in such infernal villainy.

ANOTHER CONSIGNMENT FROM MR. KOEBELE. By the Australian steamer, which arrived on Saturday, Mr. Lelong received a large consignment of predaceous insects, sent from New Zealand by Albert Koebele, who is now searching for beneficial insects in foreign countries, as our readers already know. The present consignment included about 20 different species of insectivorous beetles, mostly of the ladybird families, which he found eating various scales and woolly aphis. The insects have been forwarded to Mr. Coquillett at Los Angeles for culture and colonization. Mr. Koebele believes his captures will be found to be as effective in their several ways as has the Vedalia cardinalis.

ELECTRICITY IN BREWING.—It is considered by a writer in the *Brewers' Journal* that the application of the electric light would tend to increase the amount of yeast formed during the concluding processes of fermentation in the brewery.

Farmers' Institute at Fowler.

The managers of the Fresno County Farmers' Institute, to be held at Fowler, Jan. 7, 1892, have prepared a program, which appears below. The Selma *Irrigator* says: The whole time of the session is to be given to the subject of raisin culture, including the important topic of marketing the crop. It seems necessary to urge the necessity of some effort to effect a change in the present existing state of affairs if the past far-famed prosperity of Fresno Co. is to continue. Not only the fruit-growers, but business men of all classes, are financially interested, and it is expected that a large audience will be present.

The committee have secured the services of N. W. Motheral of Tulare, whose experience of late has fitted him to deliver an address that shall point out the way in which farmers may cooperate to their own advantage. Full time is allowed for discussion, and no vine-grower in the county should willfully absent himself from that meeting.

Program.

MORNING SESSION—10 A. M.

Called to order by.....Pres'dent Laird
Music.....Pianist
Invocation.....Rev. M. Giffen
Song.....Fowler Choir
Address of welcome.....Mr. Giffen
Response to address of welcome.....Mrs. Lizzie Fowler
Reading of minutes.....Secretary
Paper on best varieties and cultivation of raisin grapes.....J. H. LaRue
Paper on vine pruning.....J. H. Harding

AFTERNOON SESSION—1:30 P. M.

Music.....Fowler Choir
Roll-call, responded to by quotations.....Institute
Paper on curing and packing of raisins, Mrs. A. D. Barling

RECESS.

Music.....Fowler Choir
Address on marketing fruit.....N. W. Motheral

EVENING SESSION—7 P. M.

Music.....Fowler Choir
Reports of committees.....
Paper on "Duties and Responsibilities of Members," Mrs. M. B Stewart.
Music.....
Recitation.....Miss Nellie Boyd
Lecture.....
Music.....

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING DEC. 22, 1891.

465,690.—VEHICLE SHAFTS—J. R. Brought, Mojave, Cal.

465,755.—WEATHER STRIP—S. R. Deacon, Electric, Cal.

465,464.—FIRE ESCAPE—E. W. Dixon, Forest Grove, Or.

465,615.—REFRIGERATOR CAR—E. T. Earl, Los Angeles, Cal.

465,530.—HOOK—R. L. Kirby, Pomeroy, Wash.

465,624.—HYDROCARBON BURNER—J. R. Morse, Los Angeles, Cal.

465,490.—MUSICAL INSTRUMENT—A. Olson, Mishawaka, Or.

465,491.—TRACTION WAGON STEERING APPARATUS—J. B. Osborne, Daggett, Cal.

465,566.—EXTENSION JOINT FOR URINALS—Jas. Shepard, S. F.

465,769.—STEAM ENGINE—C. W. Tremain, Portland, Or.

465,570.—SPEEDING AND REVERSING GEAR—F. E. Tremper, S. F.

465,738.—EXCAVATOR—J. H. L. Tuck, S. F.

465,741.—HAIR-WORKING MACHINE—G. A Williams, San Diego, Cal.

The following brief list by telegraph, for Dec. 29, will appear more complete on receipt of mail advices:

California—Hans C. Behr, San Francisco, instrument for measuring units of work done by a machine; Frank C. Collvile, Oakland, electric annunciator; William A. Brown, San Francisco, wrapping machine; Henry Elliott, Los Angeles, lock; C. I. Hall, San Francisco, valve for hydraulic elevators; Adam Heberer, Alameda, steam boiler; James L. Henderson, Alameda, motive engine; Charles B. and T. D. Hunt, Winters, truck; Alden B. Kelbara, Oakland, and C. Young, Sacramento, metallic packing; John C. Look, San Jose, car coupling; George E. Woodbury, San Francisco, ore concentrating machine.

Arizona—Wm. H. Ayres and H. Schroeder, Whipple Barracks, bow and stringed instruments

Oregon—Jonathan W. Hunt, Kirby, memorial burial tablet and indicator.

Washington—Caleb D. Page, Tacoma, dumping trap.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

KLAMATH LANDS NOT OPEN.—An important decision was handed down in the Interior Department, Monday, being the case of Phineas D. Holcomb, involving an application to make homestead entry within the Klamath River Indian Reservation. Secretary of the Interior Noble in his opinion says: "It is clear that it was not the intention of Congress to restore these lands to the mass of public domain to be disposed of under the direction of the public land laws. By the order of the Secretary of the Interior of February 25, 1889, the Commissioner was directed to refuse all entries or filings attempted to be made within the boundaries of the reservation above named, and by an executive order of October, 1891, the tract was included in the Hoopa Valley Reservation.

THE LUSK FAILURE.—A meeting of the creditors of A. Lusk & Co. was held Monday. A statement was read showing that the company's liabilities amounted to $695,000. The assets are at present unavailable, with the exception of $75,000, which can be raised at once. The sentiment of the creditors was in favor of allowing the company to resume business, as it was thought that if time were given, a portion of the firm's indebtedness would be lifted.



The Opening Year.

Your hand, New Year since we must comrades be
Through the strange circles of the seasons four!
Plodding in lonely paths 'mid drifting snow
When days are dark, and whirling tempests roar
Will your strong guiding arm be 'round me pressed?
And when the ice-bars melt, and warm blue streams
Laugh in the sun, and leap toward the sea,
Will you, then, share my happy spring-time dreams—
The waking songs that birds and poets know?
And when red roses burn on bended sprays,
And lovers roam through shadowy woodland ways,
Will you keep kindly pace? and last when brown
Lie the sweet fields, and faded leaves come down,
And we are tired, both, and fain to rest—
Will you be friends with me, still true and near?
Then take my hand and heart, dear comrade year.

—MADELINE S. BRIDGES, in *The Ladies' Home Journal.*

Love's Pain.

[Written for the RURAL PRESS by C. P. N.]

A very hard and painful thing is this,
That hearts ask sympathy from none but they
Who sweetly yield us love they would not stay;
Who love us tenderly with such a bliss
As we drink deep through word and look and kiss;
And yet that those we know in this sweet way,
Love shrinks from paining with our wan—arrayl
That love from self should sympathy dismiss!

Yet we our every ill with love must share,
Else love is grieved. In seeking not her own
She tramples peace when bought at other's loss.
Strange reasoning of love, that she would bear
Her own life's constant round of trials alone,
Yet grieved be if love share not his cross!

The Shape of Her Dress.

[Written for the RURAL PRESS by MRS. C. P. STETSON.]

Does this title strike the woman reader or the man reader, if there be any, as something strange?

Probably not, and yet if it were "the Shape of her Skin," there is a perceptible absurdity. What shape *could* her skin be, but the shape of her body, which it is made to cover. The skin by itself is nothing; it is only a covering, and its beauty and value depend on its perfect fulfilment of use.

To consider the skin by itself as having an individual existence and shape of its own is preposterous.

And the dress?

Ah! that is different. A dress is a thing in itself, having a most decided individual existence, and a shape more surprising than any natural form. It quite surpasses Nature, for her shapes are all the result of special use, and the shape of a dress is not only without use, but against use, not only having no relation to the form it is meant to cover, but contradicting and injuring it.

The dress which I last heard of as having a "shape," was a piece of exquisite organdie muslin, soft, fine and sheer, with a large but delicate pattern, in gentle colors, a most beautiful fabric.

I turned to plead with the happy possessor that she have it so made as to do justice to its beauty, that the pattern might show freely in broad, soft, changing folds, with the lovely, rippling flow a figured fabric has over limbs in motion.

Oh, yes! she was going to have it made with a plain, full skirt—over this, and she showed me a heavy sateen which was to line it.

As well put feathers over a coat of mail—butterfly wings on a turtle! How could that dream muslin show for anything over a heavy, close-fitting garment of sateen.

I ventured to remark on this, but she re buked me. She must have the sateen underneath, or the dress would have no "shape!"

"But *you* are the shape," said I, "it will have your shape, and has no business to have any other."

No, she did not agree. Her own shape she did not wish to show, and the dress must have some shape of its own to cover hers.

It was a little instance and common enough, almost universal, but what vistas of ignorance and poverty it opens up! Ignorance of all laws of truth and harmony, use and relation, poverty of that unconscious daily beauty, which is our natural right, and we do not even know it.

We are content to live in fat or meager, unwholesome, ill-made bodies, which are a burden and a mask to the spirit, instead of the perfect vehicle of thought and feeling they should be.

We are content to cover those poor bodies, thankfully hiding their known deficiencies and supposed uncleanness, with garments which cruelly injure our physical use and happiness, and give the lie to every motion of the soul.

We are content to live in these poor bodies and poor dresses, in houses as bad as either; houses brainless and beautyless, neither of perfect use as habitations nor of any satisfying loveliness as the outermost shell of the human creature.

We are content, partly because we know no better, and partly because we have not yet learned the relation between circumstance and conduct. We do not know that beauty and goodness and truth are one.

We think it makes no difference what shape our dress is, our body, or our house—only the soul. But the soul lives in these things, and should manifest itself freely through all three.

Debarred this, ignored, opposed, outraged, the soul shrinks back, and is daily and hourly crushed and hurt by its ignominious coverings. It is so plain to see! If our bodies were those perfect and ready servants that they should be, our impulses toward doing right would not be so checked and hampered as they are now.

The soul suffers constantly from the inability of the body to perform its behests. Once given a body beautiful from full and perfect use, and we should find it far easier to grow nobly upward than we do now; and if the body were so perfect, how we should revolt from these imperfect clothes!

To have the swift and graceful movement of free limbs tied down by close-bound skirts, the full breaths of mighty lungs held in by immovable waists and bands, all the marvelous changing expression of that image of God given the lie by the shape of a dress forsooth! We would not bear it.

Once the human body fully won and worn, and with such garments as befit our princedom, then our houses would become fair and perfect also, be they large or small.

You can not wear lies on your outside and not feel it in your soul. Fancy an angel in a fashionable dress! It is the bitterest mockery to put this live immortal creature, crown and fruit of the ages, into the tangled upholstery of modern dress.

The eyes of love should shame us when that immortal passion stirs a heart that can not beat for the stays that crush it.

Our baby's hands should shame us when their clinging fingers wander amazedly among the senseless curves and folds and trimmings that he must not disarrange nor soil.

Think of a hen saying to her chickens, "Go away, you'll muss my feathers."

Every hampered step and clumsy movement that we make should shame us. To think of this divine body, God made and made like God, being unable to perform its simplest movements well because of the swaddling clothes we wear; unable to express its high, free spirit because of the false, ignoble "shape" of these things we hide in.

This question of human clothes is more than economic, more than hygienic, more than artistic, more even than specifically "moral;" it is a question which closely concerns the soul-life and soul-growth of the world—a thing of mighty import to us all.

Can we not try to study it, we women? looking at the subject with new eyes, from a new standpoint, as a matter not of stooping, but of noblest duty.

The fashioning of a body to clothe and serve the human soul was a great task; and the fashioning of garments to clothe the body and express both body and soul is a great task also.

We need noble artists to teach us how to rightly dress, and we need all of us to patiently and reverently study the subject, that we may be clothed as becomes our rank—the immortals.

LESS WINE DRINKING AT DINNERS.—It is an undoubted fact that the serving of many and heavy wines at large dinners, is gradually becoming a thing of the past, writes George W. Childs in the January *Ladies' Home Journal.* Of course, I do not mean that wines are no longer served, for they are, and will continue to be, so long as civilized men consider them a feature of dinners. But I do mean that of the varieties of wine, there are fewer, of the quantities, less, and of the qualities, lighter, than was the custom ten years ago. Were I preparing for a large dinner for men—which is always, from the nature of things, more heavily wined than an ordinary "mixed" dinner—I should not think it in the least degree necessary to order anything like the same amount or assortment of wines that would have been imperative a few years ago. And in confirmation of the statement that the qualities of the wines served are becoming lighter, the simple fact that at the average English dinner table, port wine has been almost entirely superseded by claret, may be cited. It is also becoming a very ordinary thing at English dinners to meet prominent men who do not drink wines of any kind, and in our country this is also becoming more and more a fact. Of course, a dinner must have fluids; the best of solids require some liquids with which to relish them, and a dinner would be but wasted energy and material without them. But I think it is no longer imperative to serve wines, or, at least, we can serve with them some other beverage which will be of equal pleasure to the constantly increasing set of people who find that wining and dining together is rather too heavy a combination for their comfort.

THE lovers are wandering amid the flowers. She has just plucked off the petals of a rose. "You see," he remarked, "even the flowers tell I love you." "Now I am going to ask one if you will be faithful to me." "Do; do you know I'd like to see how that turns out myself."

Rural Bathrooms and Bathtubs.

[Written for the RURAL PRESS by MRS. J. HILTON.]

You have all heard of the party who was insulted when told by their hostess whom they had just come to see: "there," pointing to a door, "is the bathroom." She supposed that a bath would be the first thing they would want after a long, dusty ride, but they took it as a reflection upon their cleanliness. I have met a good many people that I should be slow to mention the bathroom to, mainly because they had had such poor facilities for bathing more than the face and hands during their life time, that it would be almost a penance for them to bathe all over more than once a month or so.

It has always seemed strange to me that farmers almost invariably leave out the bath room when building a house, the very ones who need a good bath every day, for plowing, pitching hay, grain and straw, is all very dusty work. And the farmers wives who toil at sweeping, cooking, hoeing in the garden and such work, instead of being able to go into a private room and have a good wash, must needs go without, or else lug into their bedrooms a horrid round tub that it is impossible to get more than a third of the body into at once, or else take a sponge bath with the risk of spattering their nice clean floor. Some say it is such a trouble to heat water to carry into a bath tub even if I had it. Well, it would be, if you had to heat and carry in three or four pails full of hot water. But let me tell you how a friend managed. She had said to her men folks everytime they built a house or added an addition, "be sure and allow for a bathroom, it does not have to be more than six by eight but a larger one would be nicer." Do you think she ever got one? No, not she, not that way; they would put on a lot of fancy fixings on the front poarch, but a six by eight bathroom, oh! no, that would cost too much.

A Homemade Bathroom.

She possessed her soul with patience and when everything was propitious she got her bathroom; and don't she enjoy it.

Her back porch was the whole length of the house and about ten feet wide; on that porch was a movable cupboard four by six, that was not used except for a few things that could be stored elsewhere. One day the oldest boy had a vacation and when asked by his mother if he would help her to make a bathroom, he laughingly assented, provided she would find the material. She explained her plan; by taking off one side and end of the cupboard and putting the end that had the door in that it would make one side 10 feet long, the six foot side would do for one end and the wall of the house would make the needed other side and a couple of boards would finish out the end still left on the cupboard, thus making a room six by ten, and seven feet high. What was to be done with the top, as the boards that had been on the top were now too short and it would not be nice to leave it all open. They found two long strips of board and some old matting and covered it over as neatly as possible, and then the tub was the next affair to get. An old horse trough that leaked too badly to use but that happened to be about the length and width of a bathtub, was brought up to the house, all rough places taken off and the seams corked up with strips of cloth. A thick coat of linseed oil and yellow ochre which is only six cts. per pound, was put thickly over the bottom and wherever the cracks were, inside and out, and left to dry for two weeks. As there was a plug hole in the end of the tub, a corresponding one was bored in the wall. The tub was set up on two oil can cases, and a tin spout, made from a piece of an oil can, was pushed through the wall and fastened to the end of the tub. Hooks were fastened inside the room in convenient places for the clothing. A pin cushion fastened to the wall, a sardine box with a cake of soap within it was fastened on the wall just in handy reach of the bather when in the tub, and a towel and wash rag hung on one of the hooks, and there she was, all rigged out.

How to Bathe With a Pailfull of Water.

One hot day after everything was ready for use and being in perspiration from hoeing in the garden, she decided that a good hot bath just then would be very much like a turkish bath. Feeling too tired to make up more fire and heat water to fill the tub, and seeing that she had a kettle full of water too hot to bear her hands in, she decided that she would do like the Japanese lady did that she had been reading about a short time before, only instead of sitting on the floor she would sit in the bathtub and the water could run out onto the ground outside. So she filled an old pail with the hot water, set it within the tub, fastened the door, disrobed and sat down in the tub, first putting a woolen cloth in the tub where she intended to sit, with the pail between her feet, then took her bath. I hold that it is much more cleanly to wash that way than to immerse the whole body in the water at once, for with the wet cloth well soaped and rubbed over the face, chest and arms, then comparatively clean water is always in the pail or can, to wash off the soap and dust from the whole body, and it can be used very much hotter than when the whole body is immersed. That kind of a bath never weakens like a full immersion in hot water, and the main saving is in time, 15 or 20 minutes being long enough for disrobing, bathing and dressing.

Anyone who has a room suitable but no tub, a four foot box wide enough to sit in and use the arms freely and so that the water splashed will fall within the box, will be just as good for that kind of bath as a longer one. I have seen boot boxes that would do finely if they were calked up and painted as directed above, and they are so much more satisfactory than a round tub that I know that it would pay for the trouble of fixing them. Even if you must use your bedrooms for a bathroom fix the box and nail leather handles on the ends and it will be as easy to carry as a tub and you will enjoy it much better.

Los Alamos, Cal.

John Wanamaker's Wife.

The wife of the Postmaster General is her own housekeeper, and when it is remembered that her duties include the management of four homes, some appreciation of the systematization which accomplishes such management may be experienced, writes Alice Graham McCollin in an interesting sketch of Mrs. John Wanamaker in the January *Ladies' Home Journal.* One of these homes is in Philadelphia, where the family spend the early winter, the months of November and December. The rest of the winter season is given to Washington, where they have a second beautiful home. The summer is divided between "Lindenhurst," a magnificent house and estate about fifteen miles from Philadelphia, and "Lilenmyn Cottage," a smaller country house at Cape May Point, which gets its rather peculiar but entirely original name, from the diminutives of the daughters of the house—Lillie and Minnie. The house in Washington contains a fine art gallery, which must be taken as an evidence of its mistress' devotion to fine paintings and statuary. For dramatic representations Mrs. Wanamaker cares little, but music, in the form of either concert or opera, finds her always a delighted and attentive listener. She is a most enthusiastic Wagnerite, explaining her love for this school of music by her inheritance of German blood from her mother.

In appearance she is most pleasing. Her face, though not strictly beautiful, is a most charming and delightful one, and her expression while usually grave and preoccupied, is constantly broken by smiles, which brighten her gray eyes and display a charming mouth of beautiful teeth. She is of medium height, and weighs perhaps one hundred and forty pounds. Her figure is plump and pretty, and her gowns, which are usually gray, black or dark purple in color, always fit it perfectly. Her hair is brown, and by its utter absence of gray tries still further with her appearance to conceal the fact of her grandmotherhood. She wears it twisted high on her head and in a light curly wave over her brow.

She is most generous and kind to her friends of whom she has a great number, and is fond of taking them with her on trips and journeys of great and small length, always entirely at her own expense. They are never given an opportunity to spend any money on these occasions, but also, they are never allowed to see or feel the cost of their entertainment. It is perhaps characteristic of her, that her generosities, like her duties are, accomplished quietly, unostentatiously, far from the sight of men, but that they are all performed, both duties and charities, her happy busy life, and the number of people who call her blessed, are evidence.

"Ethel," said Lionel Bertram Jones, as he dropped his slice of bread in the plate with a noise that set the canary in the gilt cage overhead chirping merrily. "Ethel, I have something to say to you." They had been married four weeks, and the time had not arrived when she did all the saying. "Do you remember the day on which I proposed to you?" "Yes," she replied, I will never forget it." "Do you remember," he went on, as he abstractedly drilled a hole in the loaf with the point of a carving knife, "how, when I rang the bell, you came to the door with your fingers sticky with dough, and said you thought it was your little brother who wanted to get in?" "Yes." "Oh, Ethel! How could you? How could you?" "How could I what," she responded, as a guilty look crept into her face. "How could you make me the victim of such a bluff?"

WOMEN PROFESSORS.—A two hours' discussion took place November 20th, before the Academic Senate of the University of Zurich, on the admission of women as professors. The committee of the Senate, constituting a majority of the same, then moved "That it is at present inopportune to permit women to enter the corps of teachers at the University." The opposition made the counter motion, "That there is no reason why women should not be suffered to form a part of the University Corps." The ensuing discussion resulted in a vote of nineteen to ten in favor of the first motion. The rector of the University was in favor of the second motion, but, as presiding-officer, could not vote. Further, one professor sent his written vote in favor, which was not accepted. So large an affirmative vote shows a remarkable advance.

"What does Good Friday mean?" asked one schoolboy of another. "You had better go home and read your Robinson Crusoe," was the withering reply.

Grand Words to a Noble Friend.

Among the letters received by the poet Whittier on the recent occasion of his eighty-fourth birthday, was the following from Oliver Wendell Holmes, the poet's old friend and contemporary:

My Dear Whittier:—I congratulate you on having climbed another glacier and crossed another crevasse in your ascent of the white summit which already begins to see the morning twilight of the coming century. A life so well filled as yours has been cannot be too long for fellow-men and women. In their affections you are secure, whether you are with them here or near them in some higher life than theirs. I hope your years have not become a burden, so that you are tired of living. At our age we must live chiefly in the past—happy is he who has a past like yours to look back upon.

It is one of the felicitous incidents—I will not say accidents—of my life that the lapse of time has brought us very near together, so that I frequently find myself honored by seeing my name mentioned in connection with your own. We are lonely, very lonely, in these last years. The image which I have used before this in writing to you recurs once more to my thought. We are on deck together, as we began the voyage of life two generations ago. A whole generation passed, and the succeeding one found us in the cabin with a goodly company of coevals. Then the craft which held us began going to pieces, until a few of us were left on the raft pieced together of its fragments; and now the raft has at last parted, and you and I are left clinging to the solitary spar, which is all that still remains afloat of the sunken vessel.

I have just been looking over the headstones in Mr. Griswold's cemetery, entitled "The Poets and Poetry of America." In that venerable receptacle, just completing its half-century of existence—for the date of the edition before me is 1842—I find the names of John Greenleaf Whittier and Oliver Wendell Holmes next each other, in their due order, as they should be. All around are the names of the dead—too often of forgotten dead. Three which I see there are still among those of the living—Mr. John Osborne Sargent, who makes Horace his own by faithful study, and ours by scholarly translation; Isaac McLellan, who was writing in 1830, and whose last work is dated 1886, and Christopher P. Cranch, whose poetical gift has too rarely found expression. Of these many dead, you are the most venerated, revered and beloved survivor; of these, few living the most honored representative. Long may it be before you leave a world where your influence has been so beneficent, where your example has been such inspiration, where you are so truly loved, and where your presence is a perpetual benediction. Always affectionately yours, OLIVER WENDELL HOLMES.

Chaff.

"WHAT are you reading, my dear?" "A letter from mother, pa." What does she say?" "Oh, nothing." "H'm! Are you sure it's from your mother, my dear."

"YES, she's pretty and amiable and all that, but she's awfully lazy; her mother can't get her to do anything." "Dear me, and she's one of the leaders of the Society of the Helping Hand."

WIFE—Your overcoat is all over mud. Husband—It fell last night when I was coming home. Why didn't you keep a firmer hold of it? Because I had it on at the time.

Curio Dealer—Here's a skeleton of George Washington's pet cat. Collector—I don't want one so large. What's this small one? Curio Dealer—That's the skeleton of the same cat when it was a kitten.

SHE—Would you believe it? That vicious little Mrs. Weston has taught her baby to call its father "Grandpa." He—What did she do that for? She—So that Weston shall not forget that he is old enough to be her father.

MOTHER—I'm afraid that husband of yours neglects you dreadfully, my dear. He's always at his club when I call. Daughter—Yes, mamma, but he's at home all other times, I assure you. Strange to say, the old lady didn't think any the better of him even then.

SERVANT GIRL (to census taker)—Mind you put down in your book that I am the 11th girl missus has had since the beginning of the year. Census Collector—That's no business of mine! Servant Girl—Very likely; but I want everybody to know what sort of a hole this is to live in.

AN old bachelor says that giving the ballot to women would not amount to anything practically, because they would keep denying they were old enough to vote until they got to be too old to take any interest in politics.

TWO Polish peasants happen to meet. "Tell me, did you know that Naida's cow was dead?" "Good heavens! But you are not going to tell him the news as blunt as that?" "No, I shall prepare him. First I am going to tell him that his mother has died; then I can break the news about the cow."

CAUGHT.—"Any letters this morning, Mary?" "Nothing but a post-card, ma'am." "Whom is it from, Mary?" "And did you think I'd be reading it, ma'am," said the girl, with an injured air. "Perhaps not, but any one who sends me a message on a post-card is stupid and impertinent, that's all?" "You'll excuse me, ma'am," said the servant, loftily, but that's a nice purty way to be talkin' about your own mother!"

YOUNG FOLKS' COLUMN.

How Snap Helped His Mistress Out of Trouble.

[Written for the RURAL PRESS by CAROLINE E. SANDERS.]

Terese Totham was the name of a little girl whose playmates always called Twinkle Totty, perhaps because her brown eyes twinkled with merriment, and she was altogether such a happy, joyous child that she seemed twinkling all over with fun and glee. But there came one sad day when her bright eyes were full of tears, and instead of sparkling with happiness, she appeared quiet and melancholy, and the worst part was, that it was only the day before Christmas. For weeks before, she had been almost dancing with delight in anticipation of the pleasure in store for her, not only the nice presents she would surely receive and the happy time she always had at home, but then, too, her mamma had said she might invite her Sunday-school class to take dinner with her, a half-dozen little girls with whom she was quite intimate.

"And now to think it is all spoilt, Snap," said she to her dog as he came and stood beside her near the fire. Snap, whose right name was Sardanapulus, given to him by her papa, because he would always cry unless he had a soft bed, wagged his tail in a quiet, sympathetic sort of a way, and looked up in her face as much as to say, "I understand all about it."

"I do believe Snappy," she continued "that mamma thinks you are to blame though she would not hurt my feelings by saying so." At these words, Snap stopped wagging his tail and gave a little whine as though his feelings too were wounded by such an insinuation, "but we can guess who is at the bottom of it though Poll sits there in her cage blinking her eyes and pretending not to see anything, just as she always does before she flies down on your back. But suppose you go hunt for it," she added, as she opened the hall door.

Off started the dog, barking furiously and smelling around under all the trees and shrubs, but after making the circle of the garden, he returned empty-handed, as it were.

The trouble was this: That morning at the breakfast table, Mrs. Totham announced that her purse had mysteriously disappeared. She had left it lying on her bureau, intending to start out immediately after breakfast to do her Christmas shopping. "It contained all the money I had reserved for that purpose," said she, "so if it is not found, I can buy no presents or have any guests here that day." Poor little Terese felt her heart sink, for she knew it must be as her mamma had said, for her papa had only his salary to support them and would not go beyond it. They did not for a moment suspect their faithful Mina, their only servant, who had lived with them since before Terese's birth, and the hall door was kept locked so that no one from the outside could have taken it. Knowing Snap's mischievous propensities when a puppy, and that he had not as fully overcome them as his little mistress thought he had, Mrs. Totham had, before she mentioned her loss, searched every nook and corner where he would have probably hidden it, but it was nowhere to be found, and, as she had said, "it really seemed a most unaccountable thing." So the day passed on and a shadow of gloom appeared to have gathered around the usually cheerful little household.

"Mamma," said Terese, softly, as she came and stood beside her the latter part of the day. "Mamma, I never thought before how sad it was for children who have to spend Christmas just like any other day, and I want to ask you if I may take some of my books and toys to our washerwoman's little girls, for I heard her tell Mina the other day that there would be no Christmas at their home."

"Yes, dear," replied her mamma, "and I hope this will be a lesson you will never forget: To always remember the poor, and most especially upon the birthday of our dear Saviour, who said when here upon earth: 'The poor ye have always with you.' And now you see, daughter, how some good can come from every seeming misfortune if but met in the right way."

"Yes, mamma; for if everything had gone on as usual, I do not believe I should have thought of poor Dinah's children."

When Terese returned from her errand of mercy, she had forgotten all her own disappointment in the enjoyment of giving so much happiness to others. A snowstorm had come up and the wind blew so hard that her umbrella could not keep it from flying in her face and all over her; but she was well wrapped up, and the sharp, frosty air made both her and Snap feel bright and merry, so as she came up the garden walk, her mother, who had been standing at the window watching for them, said to herself with a smile: "My little Twinkle is happy again."

"What does Snap see in the tree, dear? What is he barking at?" she asked, as she threw open the window.

"I cannot see anything, mamma," she replied, then "Oh yes, yes, yes; Oh come quick, mamma, do just only look! Isn't that too good!" and with many more such wild exclamations, she danced around the tree with Snap barking at her heels in a great state of excitement, so that it was several minutes before Mrs. Totham could understand what it was all about. There, behold, from the end of a branch which reached nearly to her room window hung her lost purse!

Of course, the robbery was soon traced to Miss Polly, the parrot, who it was remembered was out of her cage when the window was opened to air the room. No one evinced quite so much joy as Snap, no doubt because he was so glad to clear himself from all suspicion, while Polly sat on her perch looking very glum and downcast at being detected in her mischief.

Affection of the Horse.

[Written for the RURAL PRESS by FREDDIE GUNDRUM.]

I would like the readers of the RURAL PRESS to know how affectionate colts and horses may sometimes be, and not only the great affection, but also the great intelligence they exhibit.

I heard a gentleman tell my father the following story: He had a mare and a two-year-old colt, not her own, which had been companions all spring and summer in a lot which contained a barn.

About the middle of October, the mare was wounded and blood-poisoning set in and she became very sick. She was in the barn and the colt stayed close by. The colt was fed hay and grain, and what time it could spare from eating, it remained close by its elder companion. After the sick animal had become very bad, and not having lain down for five days, she laid down, but could not rise again.

Several men helped her upon her feet, and she started out in the large lot. After going some thirty rods, she stumbled and fell to rise no more.

After lying there for some time, she gave a very loud and shrill neigh, and the owner, who stood by the sick animal, saw immediately the colt rush out of the barn and come to its companion as fast as its legs could carry it. It came close and put its nose up to the older animal's face, and it seemed to quiet her distress. The colt stayed around awhile and then returned to the barn for food, but soon the mare would give that same shrill call, and the colt would run to the sufferer. This was repeated for 36 hours, the sick animal all the time growing worse and beyond help.

Now when the colt would start for food and water, the mare would give that signal and the colt immediately returned.

The colt now began to show still deeper affection by licking the mare's face and not leaving her again all day, refusing to either go for food or water.

The owner carried food and water to the colt while it remained by the side of its sick companion. When it became very tired, it would lie down directly in front of the sick animal, with its head to hers, keeping up its caresses. These caresses seemed to ease the sufferings, and when the dying companion seemed to suffer the greatest, the colt was the more vigorous with its caresses. This scene continued until death relieved her.

Some people may learn a lesson from this show of affection and sympathy manifested by dumb animals.

Escondido, San Diego Co., Cal.

GOOD HEALTH.

Heart Disease.

"Yes," said an eminent physician, "heart disease is common; it is, perhaps, much more frequent than is generally realized, if you take into consideration all the forms of heart disease. The heart, like other organs, is the seat of a large number of diseases, and the expression, 'heart disease' is as indefinate as the term skin disease; it may have a score of different meanings. I am inclined to believe that heart diseases are more common than they formerly were," he continued. "This is due to the great nervous and physical strains which attend our modern modes of living. But it is a great wonder that the heart is not more frequently the seat of disease than it is when we consider its delicate mechanism, its ceaseless labor, and I might add, the abuse to which it is subjected. The heart is one of the most exquisitely constructed machines that can be conceived of. With its four chambers, its four sets of valves, and supplying its own motive power, it toils constantly, faithfully, for its three-score years and ten without rest, without repair, responding to every demand, however unreasonable, until, finally exhausted by labor or degenerated by disease, it is no longer capable of carrying on its function. It falters, then resumes its work, falters again as if to warn its host that he must be less exacting; again resumes and again falters, until, sooner or later, the last point of endurance is reached and it ceases to beat.

A Tired Heart.

"Did you ever hear of 'a tired heart'? No one ever thinks that the heart may become fatigued. But it is true, and frequently the fact. The heart is just as liable to suffer from fatigue as is any other muscle in the body. I have never seen it mentioned in the books, but the condition may be recognized almost as positively as any other abnormal state of the organ. A positive diagnosis cannot be made at once in most cases, because of the resemblance of the physical conditions to those present in dilation of the heart. But under rest and proper treatment the heart returns to its normal condition in a comparatively short time, which is almost an impossibility in the case of a dilated heart. Not a few cases of so-called nervous 'prostration' are nothing more than fatigue of the heart.

"Life would be prolonged by a little more attention to the heart; by paying a little respect to the most faithful servant we ever have. A good deal of good might be done, also, if parents would teach their children the danger of overtaxing the heart. They should teach them to stop and rest a few moments during their play when they are able to feel the violent throbbing of their hearts against the chest-wall."

WHERE QUICK EYES AND A CLEAR HEAD IS NEEDED.—When a railroad company, says the Philadelphia *Record*, handles as many million tons of coal annually as the Reading does, the question of weighing it becomes a matter of some importance. Skill and long experience have solved the problem, however, and the bulk of the vast coal tonnage of the leading coal-carrying road in the country is weighed on four scales, and then they are not crowded. The weight of the empty car is marked in chalk on the outside. As the car approaches, a clerk takes the number of the car and its weight, the weigher calls out the gross weight, and the difference is the weight of the coal. The cars run as fast as ten miles an hour across the scale, and it is very seldom that one has to be stopped and brought back for reweighing, although that is done when the weigher is at all uncertain about his figures. The men at the scales can generally tell within a hundred pounds or so what a car contains. As soon as they see the class of car coming, they know the number of tons it contains, and have the scale so prepared that only the hundredweights need be adjusted while the car is moving over it. Expert officials of the company can tell at a glance what each class of cars should contain, and if, in looking over the weight sheet, any car appears either too heavy or too light, it is brought back and reweighed.

INCREASING USE OF PATENT MEDICINES.—Thirty years ago the revenue from patent medicines in Great Britain was $210,000. It now amounts to many millions annually.

DOMESTIC ECONOMY.

Why Lobsters and Crabs Turn Red.

"What makes lobsters and crabs turn red when they are boiled?" said the observant fish man, in reply to a question. "Well, strictly speaking, they don't. The lobster or the crab is just as red before it is put in hot water as it is afterward, only it is subdued by a mingling of blue in its make up that gives it a grayish-blue appearance. The blue and red of a live lobster or crab are pigments in the shell. As long as they are there together, the red becomes gray. But both of these pigments are not fast colors. The blue won't wash, but the red is there to stay. If it were possible to keep lobsters or crabs alive for any length of time in the sun, the blue would fade out as quickly as the same color does out of a cheap flannel suit, and the shells would be a vivid red, as if they had been boiled. It is not an uncommon thing to catch live lobsters and crabs, more frequently the latter, that are entirely red. It has been determined, however, that this eradication of the blue pigment is the result of disease. Live red crabs and lobsters are never put on the market. So the reason a crab or a lobster turns red, as the saying is, when it is boiled, is because the hot water instantly washes the fugitive blue coloring matter out of the shell and leaves only the fast red. It does not take long boiling to change the color. If you were to rescue a lobster from its hot bath two seconds after it is submerged, you would find it as red as if it had been boiled for an hour."—*N. Y. Sun.*

CELERY OMELET.—Two eggs, two tablespoons milk, two tablespoons chopped celery, salt and pepper to taste. Beat the yolks till thick, add milk, celery and seasoning. Beat the whites stiff, and fold and cut them into the yolks. Cook in hot buttered pan till brown underneath. Place in the oven till dry on top. Fold over and turn out.

BAKED FISH.—After cleaning the fish thoroughly, let it stand in salt water for two or three hours. Rub it well, inside and out, with pepper. Make a dressing of breadcrumbs, one tablespoonful of butter, a small onion chopped fine, pepper and salt to suit the taste. Stuff the fish with this dressing, and tie or sew up. Put it in the pan, with water enough to cover. Sprinkle it over with flour, and put in a small piece of butter. Bake slowly one hour. Garnish with hard-boiled eggs.

EGGS FOR SUPPER.—Take a little nicely flavored brown gravy, and put it into a shallow piedish which has been well buttered. Place it in the oven, and let it remain until it boils, then take it out and break into it as many eggs as will lie side by side together. Sprinkle seasoned breadcrumbs over all, and place the dish again in the oven until the eggs are set. Have ready one or two rounds of toast. Take the eggs up carefully with a slice, lay them on the toast, pour the gravy over all, and serve hot.

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The Week.

As we go to press, the heaviest storm of the winter is at work on the Pacific Coast. High winds, accompanied by copious rainfall, cover the territory from Central California northward, and the indications are for southward extension, until the whole State is well moistened. The rainfall is still short of the normal figure at most California points, but the deficiency is rapidly decreasing. Those who have taken a hopeful view of the season have so far the laugh on the pessimists, and propose to keep it, if nature will do her duty. Everything is now wet enough for work, and a little warmth will put every one "up to the eyes in clover," as the saying is.

We hope our readers will not forget to send something good to the citrus fair, which will open in Auburn, January 11th. We have not seen a full copy of the premium-list, but we understand it will have awards for all good horticultural things. We hope next week to give the RURAL something of a citrus and foothill flavor to harmonize with the great event at Auburn. If our correspondents have something juicy of this kind to put into it, send it along quick!

Develop the Waterways.

We are glad to see that propositions for improving our watercourses and supplementing them with navigable canals where necessary are attracting more attention than formerly. The truth of the claim that water is the natural protection against the extortion of rail-owners should be made the most of, has always been acknowledged in a perfunctory manner, but, like other truths, it is of little account until men begin to act upon it. Just now the time seems to be auspicious for a more thorough discussion than has yet been had, also for adopting plans of action involving State and Governmental appropriation and assumption of individual obligations, which shall result in facilities for water traffic wide-reaching and effective.

We doubt if there is a State with such extensive means of internal navigation which makes so little use of them as California. It has been shown that instead of improving our watercourses we have allowed them to be seriously injured by mining debris, and that we have in fact much worse rivers, for all purposes to which rivers may be put, than we had in the early days of our history. This is certainly a course quite at variance with the procedure of other commonwealths in which rivers have been guarded from encroachment and improved notably. It is certainly time to wake up on this subject; to see to it that the rivers are not further injured under any pretext whatever, and at the same time arrange for their improvement and development for internal navigation.

There should be general and systematic action on this subject, including little streams and sloughs reaching from our bays into productive regions, and including also great schemes for bringing the most remote interior valley points into water communication with tide-water wherever there is water to float a barge and land rich enough to fill it with produce. Of course, all this perhaps cannot be done in a generation, but fortunately some very great undertakings can be accomplished within a reasonable time and with a reasonable expenditure of funds. Why should the great Santa Clara valley and its thriving city of San Jose be dependent for outlet of its produce upon three lines of rail all owned by one company, while a short canal would make it a port upon one of the grandest bays in the world?

It is fortunate that the great San Joaquin valley is awakening to the fact that its vast industries and splendid future should not be corralled by one single track railway. Other railways are talked of, it is true, and there should be others, and yet the possibility of water traffic nearly the whole length of the valley is within reach at quite a moderate cost. We have been interested in reading a good article on this subject in the Fresno *Central Californian* of Dec. 26. It speaks at length of the productive capacity of the region, to show that a waterway composed of rivers, sloughs and canals, could be made profitable as a business enterprise. It then outlines a plan by which the work could be accomplished, as follows:

The canal is a public enterprise, and we believe should be built and maintained at public expense. San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern counties should unite in building and operating the canal, and thus secure the greatest possible benefits to the citizens of these counties. A tax should be levied upon all the taxable properties of the six counties to construct and equip the canal, and a Board of Directors, consisting of one member from each county and one at large, to be elected by the people, should manage the traffic. Rates can then be fixed so as to derive a revenue barely sufficient to meet operating expenses, and low freight charges would be permanently guaranteed to the people of this valley. Estimating the cost of building the canal at $6500 per mile, and its total length from Stockton to Bakersfield at 220 miles, it would require $1,430,000 to construct it. The taxable property in the six counties above named is upward of $156,000,000. A direct tax of 92 cents on the $100 valuation would yield $1,435,000 in a single year, or enough to build the entire canal; but there are other favorable circumstances to be considered, the first of which is that the river channel can be used with slight improvement from near Stockton to Firebaugh's, a distance of say 75 miles. Any expense necessary for the improvement of the river channel should be covered by Congressional appropriation, and in all probability would be. Then there would remain only 130 miles of canal to be actually constructed, allowing for 15 miles of deep water in Tulare lake. Twenty-five miles more between the lake and the river would only require the deepening of the present channel of Fresno slough, so that the actual expense of constructing the canal would not in all probability amount to more than 120 miles at $6500 per mile, or a total of $780,000. A direct tax of 50 cents on the $100 valuation in the six counties would yield this amount. To make the tax as light as possible, however, it might be advisable to collect only one-fifth each year for a term of five years. That the people of the six counties to be benefited would voluntarily tax themselves for this purpose we believe goes without question, hence the *Central Californian* will advocate making the great San Joaquin valley canal a public enterprise.

We do not undertake to say that this would be the best way to carry out such an undertaking, that is a matter for consideration. At the same time, the figures, which we take it for granted are reasonably accurate, show that it would not be a difficult matter to make the whole San Joaquin valley independent of railway dictation and extortion, which is now the chief barrier to its progress. Such subjects as that taken up by our Fresno contemporary should be inquired into by all public journals and public-spirited individuals. This question of relief by water for extortionate railway charges will yield to discussion and to cooperative action, and such force should not be denied it.

Riverside Growers' Trust.

We gave, in a previous issue of the RURAL, an outline of a discussion among Riverside orange-growers looking to co-operative fruit selling. At later meetings the proposition seems to have taken definite form, and according to last week's Riverside *Press*, a number of growers have formed a corporation under the laws of the State, styled "The Riverside Orange Trust," each stockholder being allowed but one share for each acre of bearing orange orchard of which he is owner. The shares are placed at the nominal value of $10. Each shareholder signs a contract of sale of his entire crop to this corporation, which proceeds to market them to the best advantage. At the end of the season, the price realized for each different variety is averaged and each stockholder receives the same price for the same grade and quality of fruit. At the time the fruit is delivered, the corporation, having arranged a bank credit, will pay each stockholder for his fruit, as follows:

For Seedlings, $1; Navels and Bloods, $2; Mediterranean Sweets and Paper rind St. Michaels, $1.50; half-cash, balance when collected.

This corporation has entered into a contract for three years with the Griffin & Skelley Company, to pack and sell their oranges, this firm having agreed not to buy or sell oranges during that time on their own account, nor to handle oranges for any one else outside the corporation, without the latter's consent.

E. F. Kingman has been appointed secretary. His salary will be paid by the stockholders, and he will have a desk in the office of the agents, inspect all correspondence relating to sale or disposition of fruit, and act as an accountant generally, in the interests of the stockholders.

The sale of stock this year has been limited to 500 shares, representing 500 acres of orange orchards, or about 400 carloads. This is being rapidly taken up, over 300 shares having been subscribed for the first week. It is expected that the balance will be taken within the next ten days.

We have given this outline of the plan adopted by the Riverside growers in order that the large number of our readers who are now contemplating cooperative action, may compare their methods with those they have been contemplating. We propose that the RURAL PRESS shall be a sort of clearing house of information of this kind. Where many are thinking and acting toward similar ends, it is very desirable that each should have the advantage of the bright thoughts and shrewd plans of all. The idea of producers cooperation is old, but the application of it to our local conditions is new, and should receive the widest and most careful consideration and discussion.

IMPLEMENTS BURNED.—We are glad to know that Baker & Hamilton had a good amount of insurance upon their warehouse at Sacramento which was recently destroyed by fire. The contents of the warehouse were wagons, reapers, buggies, scrapers—in fact, all kinds of agricultural implements, barbed wire, rope, etc., aggregating a value something like $80,000, which some accounts say was fully insured.

New Hybrid Begonia.

[Written for the RURAL PRESS by W. A. T. STRATTON of Petaluma.]

The illustration gives a fair idea of this beautiful plant, the new hybrid begonia Perle Humfeld. The color of the leaf is a deep dense green, heavily dotted with silvery spots. In habit it is of vigorous growth, the larger pointed leaves displaying their silvery markings in a most attractive and novel form; entirely distinct from any other variety in cultivation. The foliage is remarkably large for this class of begonias, often measuring ten inches in length by six inches in breadth. Indeed, no begonia of recent years claims so many points of interest as this new variety, being rapid of growth, easily grown, and brilliant and attractive in foliage.

The variety belongs to the hybrid Rex class. A few years ago, hybrid Rex begonias were unknown. We only had the flowering begonias and the Rex class, but by hybridizing the Rex and the flowering varieties, a more hardy class has been produced, partaking of the character of the Rex in foliage, and with the upright habit and flowering character of the latter.

In the hybridizing or crossing of these sorts the *Begonia discolor* was produced, which may really be considered the most valuable break in the hybridizer's work; and from *Discolor*, fertilized by various flowering varieties, nearly all the beautiful hybrids of recent years have been produced.

They all have beautiful, attractive foliage, many of them as beautifully zoned as Rex sorts, and as many of them also have fine flowers, it is not saying too much in their praise to assert that no conservatory, however extensive it may be in its appointments, is complete without a collection of these autocrats of all foliaged begonias.

Their culture is simple and easy. The soil should be a light, rich, silky loam. The term "silky loam" is a trade phrase, so to speak, to indicate a soft, delicate texture. The roots being fine and tender, must have a soil suited to their wants, to insure success. To simply grow them is quite different from growing them in their perfection.

Many persons are in the habit of collecting loam from under forest trees for their begonias, as if this was leaf loam. It is a mistaken idea. There is no leaf loam in California of good quality that I have ever seen. Our long, dry summers seem to destroy all the nutrition in these decayed leaves, and though it may be of value to mix with soil that may be too heavy, to aid in making a light loam, I much prefer the more practical way of using fine, sandy loam and well decomposed manure in equal parts.

Hybrid begonias do not enjoy the hot, blazing sunshine. They require warmth and shade to get the best results, and in contrast to the Rex varieties, that demand a moist atmosphere, the hybrids require a dry one.

As a window plant, they may be grown most successfully, but they should not be exposed to draughts of air. In fact, no plant, unless it be of a cast-iron constitution, can withstand the alternate changes of the extremes of hot and cold air, so commonly experienced in window plants. Give them a reasonably good care, and no class of tender plants in cultivation will give more real pleasure for the labor than the hybrid Rex begonias.

A Manly Compliment.

EDITORS OF THE PRESS:—Wishing you most sincerely a happy and a prosperous New Year, I further congratulate you on the PACIFIC RURAL PRESS having arrived at manhood. As an infant and a boy, it has always had a manly way of its own. Its decorous deportment, its cleanly habits and entire absence of the disagreeable which characterizes so many boys of the press, has given it a character of which it may be proud, and has attracted the attention of the thoughtful and progressive.

During the time I have been acquainted with the PRESS, I do not recollect a word in it that could offend the most fastidious, and while it has been careful not to offend, it has had an opinion of its own, which, when opportunity called, has been expressed forcibly and clearly. I am only sorry that I have not been able to encourage the boy according to his merits, and now that he is a man, we will look for all of the manhood that was predicted by the boy, and sincerely hope that new friends, true friends, grander hopes and more glorious victories await the deserving efforts of the PACIFIC RURAL PRESS and its painstaking, untiring corps of editors and managers. Respectfully and fraternally yours,

J. W. MACKIE.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

Another Irrigation Convention.

The discussion of irrigation topics seems to be the order of the day. Hardly had the echoes of the Salt Lake Congress died away before preparations were made for holding another convention in Montana, to be confined to delegates from that State alone. This gathering will take place on the 7th of January, and 194 delegates have been chosen from various portions of the State.

The idea of holding State and Territorial Conventions for the consideration of irrigation matters is a good one. While the entire arid region is interested in a general way in irrigation development, yet each locality has peculiarities of its own and interests of diverse character. It by no means follows that what is applicable to one section is suitable to all. Hence the desirability, before holding further meetings such as that at Salt Lake, of first having preliminary local conventions, where local needs may be discussed, and some definite form of action decided upon. Then, when a plan has been outlined, it will be time to hold another National Convention, the delegates to which shall attend with a distinct idea in their minds of the best course to pursue, and of all the detail that is desirable to carry out.

While the recent convention at Salt Lake did well in enunciating the broad principle of the desirability of allowing each State and Territory to deal with the reclamation of the arid lands within its borders, this proposition had not been sufficiently discussed beforehand to allow of the formulation of any distinct plan for carrying out the scheme. In fact the delegates to the Congress did not appear to have any very clear idea as to the details. They were unanimous as to the broad principle of union to the States and Territories, but beyond that they did not go.

But before any measure looking to the carrying out of their plans can be adopted, the public will demand the fullest details of the entire scheme of reclamation, and to meet this demand a great deal of work must be done. It is to be hoped that the Montana Convention will formulate some suitable plan and then open the subject for discussion.

Irrigation in Placer County.

A plan is on foot to supply water for irrigation in a portion of Placer county, where it is believed better results can be obtained from the cultivation of the soil with that aid than when sole dependence is placed upon the rainfall. From the published accounts, it appears that the proposition is to sell perpetual water rights upon the basis of the miner's inch of flow. Five hundred dollars is the amount asked for each inch, the purchaser being given ten years in which to complete payment, in the meantime paying six per cent interest thereon. In addition, $7.50 a year is to be charged for the cost of delivering the water to the purchaser. This makes a payment of $37.50 annually for each inch delivered.

A miner's inch, perpetual flow, is sufficient, according to the practice that obtains in Southern California, where the greatest economy in the use of water is enforced, to irrigate from four to eight acres of land. On the assumption that one inch to six acres is a fair average, there would therefore be an annual tax of $6.25 an acre to be met by the irrigator.

When the full payment of $500 an inch shall have been made by the irrigator, the interest charge ceases, but at the same time it is only fair to include in the expense of irrigation the same rate of interest on the $500 invested. At the rate of an inch to six acres, the water right would cost $83.33 an acre. The owner of a 20-acre farm would therefore find himself under the necessity of paying $1666 for the privilege of paying annually in interest and charges for delivering water a further sum of $125 annually.

When this proposition is contrasted with the district system, the benefit of the Wright law becomes apparent. Under that law, the average cost of supplying water rights is some $8 an acre, instead of $83. The annual expense for delivering the water is but a few cents an acre, and the irrigator owns his own water, instead of being compelled to contribute to the funds of some corporation or individual who has established a monopoly of the sources of supply. If the would-be irrigators of Placer county will look into the matter a little, they will soon see that their best interests will be subserved by the district system, rather than by the one proposed.

Reclamation in Lassen County.

The Union Land and Stock Company, a Sacramento concern, are engaged in reclaiming the barren wastes of Madeline plains, says the Reno *Gazette*. They commenced the construction of a dam in Squaw valley (Red Rock creek) two years ago, and carried it to a height of 30 feet last fall. They now propose to build it to a height of 70 feet. At that height, it will back the water up to an average depth of 45 feet and cover about 640 acres. This is known as dam No. 1. They have just completed a dam four miles south of dam No. 1. It has a retaining wall 35 feet wide at the bottom and is built to a height of 10 feet; from this on it was run up 15 feet higher, tapering to six feet on top. The system includes three dams—the third will make a reservoir that covers 500 acres to a depth of 30 feet. The two reservoirs will furnish water sufficient to irrigate 50,000 acres of as fine land as ever the sun shone on. From reservoir No. 2 a canal has already been constructed, nine feet wide at the bottom and 16 feet on top, around the canyon to the valley below, and the plains of Madeline will blossom into one of the most promising sections in the near future.

Desert Possibilities.

A man in Southern California who thoroughly understands lemon culture, and who has succeeded in successfully curing California lemons, so that they rank with the best in the markets of the world, says that a lemon grove which is as it should be, will pay $1000 net per acre every year, says the Bakersfield *Californian*. Certain conditions are requisite. No frost, of course, but above and beyond that, a dry, even temperature is absolutely essential.

There are little nooks all along the edges of the Mojave desert clear along its course, as far as to the Colorado river, where a small amount of water can be had; where there is no frost and, if located with the proper exposure, no wind; where surely that dry serenity of atmosphere, in which lemons do so much delight, is the condition every day in every year.

One of the loveliest oases in the wide, wide world has been built right out of sand in the desert of the Smoky valley in Nevada, by piping a very small stream of water from Kingston canyon. A traveler on his weary way through all the aridness of Smoky valley comes suddenly upon this dainty little green gem and declares it the Garden of Eden. And truly it is, for everything grows and peace and balminess reign. Yet the thrifty housewife, to whom credit for this oasis is due, has never thought of lemons—perhaps she never saw one—but raises splendid vegetables and a few posies.

That water is sufficient for several acres—ten, perhaps, with a Riverside economy in its use—and if lemons are lemons, as we are led to believe, in the 20 years the good old lady has lived there, she has lost $200,000 by not being in lemons.

In what is called the Mojave desert, mountain chains are not continuous, but are more as though the chain had been broken into links and strewn at random in dreary wastes of sand and cacti. Yet it is likely that near the head of the principal canyon in each mountain link, quite an amount of water can be found, and in that same canyon, or reasonably near it, are generally little valleys which, if watered, would prove exceedingly fertile.

A good lemon man and the Mojave desert ought to get together.

Congressional Aid Asked.

Senator Dolph has introduced a bill to aid the several States and Territories to reclaim the arid lands within their boundaries. It provides for the loaning by the United States of funds to States or Territories for the purpose of assisting the construction of reservoirs, wells and all other works to be used for the development, conservation and furnishing of water supply for irrigation and in aid of agriculture. Loans are to be made in any sum not exceeding $2,500,000 in any one year to a single State or Territory, nor exceeding a grand total of $10,000,000 to any one State or Territory. The terms provide for the issue by the State or Territory of irrigation bonds of the denomination of $500 each, redeemable in five years and maturing in 50 years and bearing interest at the rate of one per cent per annum, to be deposited with the United States Treasurer, and the Secretary of the Treasury is to issue thereon United States notes in the amount of the par value of the bonds, the said notes to be legal tender.

Whether Congress can be induced to pass any such bill as this remains to be seen; but the view taken of the proposition even in the sections that are most vitally interested cannot be said to be very encouraging. While all are convinced that some action by the General Government should be taken, there is a wide spread skepticism as to whether the public sentiment of that portion of the country where the necessity for irrigation is not felt can be brought to support any such measure as that proposed by Senator Dolph.

So far as the security behind such a loan as that proposed is concerned, there could be nothing better. If the matter be honestly conducted, and the money loaned be economically applied to the construction of works for the irrigation of arid land, that land will become at once, upon being supplied with water, the best security possible for the repayment of any reasonable loan that may be made. The average cost of supplying water need not, except in exceptional cases, exceed $10 an acre. There is an abundance of testimony to the effect that lands that are so arid as to be absolutely without value, become, upon being supplied with water, worth from $25 to $250 an acre. Perhaps a fair average would be $50. A loan to the extent of $10 upon such land, therefore, is certainly well secured, and there can be little reason to fear any default in its payment.

If this fact can be emphasized so strongly that the public will endorse such a proposition as this, well and good. To do this, however, will require a vast amount of labor and much time. The entire subject of irrigation is such a mystery to nine-tenths of the people of this country that to educate them upon the subject will require the most persistent effort for an extended period. In the meantime, and until such education shall have been completed, it must be confessed even by the most ardent friend of irrigation that the outlook for obtaining legislation of the character referred to is not particularly encouraging.

A Great San Diego Enterprise.

The opening of the Linda Vista and Otay Irrigation Districts in San Diego county has been brought about by the development of the Mt. Tecarte Water System, by which 100,000 acres of these mesa lands, extending from the Sweetwater river on the north to the Mexican border line on the south, are to be reclaimed.

Len B. Harris, Jr., the mining engineer, gives the *Chronicle* the following particulars of the great work done in the neighborhood of those districts:

"It was thought impossible to float the mesa lands until within a few years back, when it was found by a party of investigators, of which I was one, that the Cottonwood river might be diverted from its course through Lower California, and made to cover over 100,000 acres. Surveys proved that the water of the Cottonwood could be brought through Dalzura Pass, distant 30 miles from San Diego to Jamul valley, and thence by way of Janal Meca into San Diego itself, if necessary. This led to the planning out of the Mount Tecarte system.

"The pioneers were: J. F. Sinks, Vice-President of the San Diego Bank of Commerce; J. W. Young, H. P. Whitney, G. H. Mulfield, D. D. Maynard, T. E. Pope, S. J. Sieb, and several others. Surveys were projected and work commenced four years ago. Cottonwood river has a summer depth of 18 inches, and in winter runs a torrent.

"A cut has been made through Dalzura Pass, 1000 feet long and 20 feet deep. Another important work is now being done, and within a year or so the great undertaking will be completed."

At the junction of Pine Valley and Cottonwood creeks a dam will be constructed 100 feet high and 450 feet on the crest. A reservoir covering 800 acres, and containing 6,000,000,000 gallons, is to be built. The cement used is obtained at Jamul at a comparatively trifling cost. From the dam a flume, 15 miles long, will extend to Jamul creek, terminating at Dalzura Pass, where an elevation of 1450 feet is reached. The flume will cost at the rate of $10,000 a mile. At Dalzura the water will be diverted into ditches, and conveyed over three districts (including Otay and Linda Vista) of a total acreage of 95,000, with a reserve capacity of many thousand more. But the marvelous usefulness of the almost exhaustless system does not end here. At the west terminus of the Otay mesa the branching waters leap over a chasm of 300 feet, developing a horse-power of 1500, which may be used to operate factories or electric dynamos. The system in its totality also includes the supplying of San Diego with drinking water.

The total cost of the work will be $1,000,000, and the recently formed district will vote bonds sufficient to cover this sum.

Notes of Irrigation Progress.

The temporary setback caused to the Madera district by the discovery of a technical error in the confirmation proceedings has only had the effect to emphasize the determination of the friends of the district system to persevere and perfect their organization. They are as enthusiastic as we, and if any have hoped they would be discouraged, that hope is not well founded.

Suit has been commenced to dissolve the Selma district. The parties who have exhausted legal technicalities in retarding the progress of this district will come into court and allege the delay caused by themselves as reason why the district should be broken up. This is a rather peculiar method of procedure, to say the least.

The directors of the Tule River district held a meeting recently at Woodville for the purpose of deciding on the dimensions of the proposed canal. Engineer Newman was instructed to survey the line and report on the cost. If the price is suitable and meets with the approval of the directors, operations will be commenced at once, and the ditch will be carried through Porterville to Woodvillle and beyond that point. The Irrigation District embraces 18,000 acres of land, which, when irrigable will become very valuable.

The supervisors of Los Angeles county have granted the petition for the organization of the Glendora district, and have set January 13th as the date for the election.

A bill of exceptions has been filed by the plaintiff in the Elsinore District case, recently decided against them. A notice of intention to move for a new trial was also filed on the grounds of insufficiency of the evidence to justify a decision, and that the decision was against law, and errors in law occurring at the trial and excepted to by the plaintiffs.

The South Riverside Land & Water Company advertises for bids for the construction of a large amount of pipe lines, tunnels, etc.

Irrigating Grain.

Among countries where irrigation is generally practiced, California stands alone in the unwillingness of her farmers to make use of the irrigating canal in producing wheat. For some reason impossible to define, they have a deep-rooted opposition to this innovation, and even where there is an abundance of water running to waste, that could be utilized upon the wheat field at small expense, they prefer to sit idly by and see their grain suffer from lack of moisture rather than undertake the small trouble and expense of supplying from the irrigating canals the needed water.

The farmers of Colorado, Utah, Arizona and other portions of the arid region are held down by no such fancy and governed by no such stupidity as this. They were quick to see the benefit of the application of water to their grain lands, and it has become a general practice with them, wherever practicable. The result is that they have become independent of the vicissitudes of the climate and reap good harvests regularly regardless of the rainfall.

In speaking of irrigating grain, it must not be supposed that application of water to the growing crop is meant, except under unusual circumstances. In this case, the irrigation is best done before the crop is planted. If water be applied subsequently, in most soils a crust will form upon the surface which cannot be broken without damaging the young plants, and harm rather than benefit will result.

By giving the soil a thorough saturation, however, before plowing, and by plowing deeply, a seed-bed may be prepared that, with the aid of the rain that is certain to fall, will produce a good crop even though the precipitation be much less than the amount usually regarded as necessary to mature grain.

Perhaps a little personal experience of the writer upon this point may be of benefit, as it explains his earnest belief in the advisability of using water in the grain field wherever practicable. He found himself some time since in control of a ranch in the south upon which was a tract of about 20 acres which had been regularly cropped with grain until it had become apparently exhausted. The last owner of the place had for several successive seasons not obtained enough from it to pay the cost of seed and plowing. This latter process, by the way, had been done so faultily that at a depth of three or four inches a hard, almost impervious crust had been formed, through which it was impossible that the roots of the grain should penetrate, and which also prevented the moisture from saturating the soil to any depth. Only by thoroughly soaking the field could it be plowed as it ought to be. Near at hand was an irrigating canal, in which, during the fall and winter, the water ran to waste. The experiment of irrigating for grain was determined upon. Shallow furrows were accordingly struck out at intervals of 20 to 25 feet across the field in both directions, and into these the water was turned. It was allowed to run slowly for two or three days until every foot of the surface had been covered and thoroughly soaked, until, in fact, the field was so soft that a man would "mire down" in it anywhere. After thus being saturated, the water was shut off, and in about two days' time the soil was dry enough to plow. The clevis was set so that the plow was sunk almost to the beam, and such a stirring up was given to that worn-out field as it had never had up to that time. The neighbors frequently halted to laugh at the poor greenhorn who was spending so much time and taking so much trouble in the preparation of his little grain field, and they kindly informed him that he was a fool for his pains, and that he would not get enough back to pay for the seed. But he persevered, and when the field had been thoroughly plowed barley was planted, and it was then left to its own devices. That barley grew as if bewitched. Never had such a stand been seen in the neighborhood, and when it was harvested there were four great stacks that had more grain in them than any 80 acres in the same locality produced without irrigation. In a word, it was a triumphant success.

The irrigation of grain may be practiced on a large scale fully as profitably as on so small a one as the case just noted. Down in Kern county last year wheat was irrigated at a cost of less than ten cents an acre, and the result was a harvest larger by a hundred per cent than the average. Wherever grain-growers have had the enterprise to make use of the water running to waste in the irrigating canals, they have been amply rewarded. Why more of them do not thus insure the certainty of a good crop is a mystery that passes comprehension.

Steam Power Irrigation.

There appears to be a widespread belief that the only successful method of obtaining a supply of water for irrigation upon a scale of any importance is by the use of ditches wherein the water flows by gravity from the source of supply says the *Chronicle*. The proposition to utilize pumps operated by steam or other power is uniformly discouraged, and the idea has been sedulously fostered that the expense of such a method of irrigating will far exceed the benefits to be derived and will be much greater than the cost of water supplied in the ordinary manner.

One of the reasons for this belief or for encouraging people to entertain it is not far to seek. Were the pump system generally adopted

where it is practicable, the occupation of a great many canal companies would be seriously injured, and the business of selling water for 10 to 50 times more than it costs would suffer serious curtailment. Hence nothing has been left unsaid which would tend to discourage experiment in this direction.

Despite the opposition and discouragement, however, several successful experiments have been carried out in providing a supply of water by steam pumps, and others are now underway. One of the latest is reported from Butte county, where a similar enterprise now under successful operation has encouraged the construction of still another pumping plant, consisting of a 25-horse power engine and an eight-inch centrifugal pump by which water will be raised from a well and distributed over the orchards and vineyards of the Rio Bonito Company. Similar efforts in the same neighborhood have shown this method of irrigation to be reasonable in cost and in every way successful.

From the southern portion of the State come reports of similar success in pumping water. Mention was made some time since of the remarkable success of such an experiment at Yuma, where water was raised from the Colorado river. Now a similar enterprise has been commenced at The Needles, where a plant will be put in to irrigate a large tract on the high mesa above the same river. The advantage of such a plan is obvious. In order to obtain water by gravity in localities like this, where the river has only a small grade and the banks are high, it would be necessary to go a long distance up stream and construct a canal many miles in length, which would be a constant source of expense to keep in repair. The interest alone on the first cost of such a canal would much more than pay the expense of operating a pumping plant sufficient to supply all the water needed.

The San Bernardino *Times-Index* reports the experience of an irrigator in that valley who has pumped water to irrigate a large tract of land for a number of years. He obtains his water from a surface-well 18 feet in depth, and with an engine and plant, costing not to exceed $1000, is able to pump, when required, 50 inches of water under a four-inch pressure, night and day, continuously. He has found the cost of this water to be much less than the cost of water taken from ordinary irrigating ditches, where a number of miles of ditches have to be built and kept in repair.

In the San Joaquin valley there are many cases where settlers, unable to obtain water from the companies controlling the canals, except at exorbitant prices, have put in pumping plants with invariable success. They have set a good example, which, were it more generally followed, would have a salutary effect in more ways than one.

Tree and Vine Growths in New Mexico.

G. O. Shields of Eddy, New Mexico, sends us a list of measurements of growth in Pecos valley, New Mexico, a region which is now being settled up under irrigation auspices. The figures may be interesting to our readers as indicative of what that new country can do, and also for comparison with growths in other parts of the county.

The following table shows growths made by various fruit trees, grapevines, etc., during the past summer.

Tree or Vine.	Growth in Feet.	Inches.
Raisin grape	16	9
Apple	4	9
Pear	4	8
Plum	5	9½
Cherry	1	8½
Crab Apple	1	9
Mulberry	1	8
Black Locust	8	7
Apple	3	11
Apricot	5	8
Peach	3	9
Box Elder	6	1
Mulberry	7	8
Lombardy Poplar	6	2
Castor Bean	8	4
Peach	7	2
Cottonwood	16	3
Osage Orange	14	7
Native Willow	16	5
Pecan	6	2
Black Walnut	4	11
Plum	8	1
Mulberry	6	4

Witt Bros. have several cottonwoods, nine years old, that are 62 to 64 inches in circumference and over 60 feet high. Mr. Hogg has a peach tree three years old from the seed that is 3½ inches in diameter and 17 feet 5 inches high. He has a cottonwood four years old that is 28 inches in circumference. Mr. Gilbert has a pecan tree six years old that is 24 inches in circumference and 23 feet high. He has a black walnut tree three years old from the seed that is 12 inches in circumference, 11 feet 10 inches high, and that bore several walnuts this year. Maynard Sharpe of Eddy has two peach trees two years old from the seed that bore and matured seven peaches this year. He has one apple tree two years old from the seed that bore three apples the past season.

OREGON HORTICULTURAL SOCIETY.—The Seventh annual meeting of the Oregon State Horticultural Society will be held in the City Council Chamber of Portland, Oregon, on Tuesday and Wednesday, January 12 and 13, 1892. A very attractive program has been prepared, and the attendance should be large.—Dr. J. R. CARDWELL, Portland, President, and E. R. LAKE, Portland, Secretary.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

PALERMO ORANGE NOTES.—Cor. Oroville *Mercury:* W. J. Grier is entitled to the honor of shipping the first box of oranges East this winter from Palermo. They were shipped in style, too, with different colored tissue wrappers bearing the inscription: "From the Orange Grove of W. J. Grier, Palermo, Butte Co., California." They were sent to his brother, T. J., at Lead City, Dakota. Palermo's older orange groves are loaded with oranges this winter, and present a beautiful appearance to passers-by, as their golden globes flash from the network of dark-green leaves.

THE WHEAT CROP.—Biggs *Argus:* We have made inquiry among a number of farmers, both on the adobe sections and the red lands, in regard to the condition of the wheat crop, and all are well satisfied with the crop showing at present. The rains have not fallen altogether satisfactorily, but the intervals between the showers during the last month have been short, and the first sprouted wheat, instead of rotting as was first feared, has continued to grow, although retarded somewhat, and will come out all right. All the grain has now sprouted and is growing nicely, and with a reasonable amount of rain from now on, this section will raise its usual abundant crop. The open season has enabled the farmers to get in more grain than usual, probably more than has ever been planted during any one season before, and with a fair showing for good prices next year, bright prospects are in store.

THE FORESTRY STATION.—Chico *Enterprise:* W. S. Lyon, botanist of the Forestry Commission has been visiting the Chico station, and we are told has made some arrangement for some work being done. A part of the ground is to be prepared for some seeds to be planted this winter. Several rare plants and trees have been received from Australia, and the Commission will plant seeds of several different varieties of trees including the broad-leaved wattle, a native of Australia, the bark of which is said to be a good substitute for oak tanbark.

RIO BONITO ORCHARDS.—Oroville *Register:* In this vicinity there are six miles of continuous orchards. The lowest of these is the Reed & Johnson orchard of 550 acres, Hatch & Rock, 1650 acres; Alexander & Hammon, 300; Hatch & Rock, upper place, 220 acres; W. Treat, 160 acres; M. Goldman, 31 acres; Mr. Preble, 20 acres; Rio Bonito Colony Co., 80 acres; Marion Biggs, Jr., 50 acres; R. A. Moore, 40 acres; John Beall, 30 acres; A. Goldman, a second tract, 30 acres, and two other 20-acre tracts. This gives a total of 3176 acres. More trees will be set out this winter, but the number we did not ascertain. This gives over 300,000 trees, however, on the west side of the Feather river in what is known as the Rio Bonito country. The trees all look in fine order and have a splendid growth.

Colusa.

WILD HOGS.—Sites Cor. Colusa *Herald:* There is quite a number of wild hogs in the hills near this place. Not long since, Jas. Kennedy killed one that dressed about 300 pounds.

PECANS.—*Herald:* J. R. Farris has gathered his pecan crop and is enthusiastic over the adaptability of our soil and climate for this valuable nut. A few years ago a couple of bushes were sent him from Texas and he set them out, and again took them up and transplanted them, and yet they flourished. The tree has a long root similar to the walnut.

Fresno.

RAISIN SHIPMENTS.—Fresno *Expositor:* The total amount of freight shipments from this county in 1891 is enough to make one carload of ten tons every half hour the whole year, day and night. This is an enormous quantity. The most valuable article is raisins, footing nearly 28,000,000 pounds. Mere figures are apt to confuse, rather than give an idea of the exact number, when the number is large. In the raisin crop of Fresno county this year, there were 1,376,795 boxes of 20 pounds each. These boxes, laid end to end like bricks, would build a wall ten miles long and 40 boxes high. The same boxes, stood on end, would form 80 columns, each column overtopping the highest mountain in the world. Laid end to end, they would form two lines from the top of the Sierras to the top of the Coast mountains, and enough boxes would be left to form a string from Fresno to Modesto. Last year the number of boxes was 873,220. The gain from last year is 503,575 boxes, or a gain of 57 per cent. this is an enormous gain, in the face of the injury to the raisins from the hot wave in July.

Humboldt.

APPLE TREES CONDEMNED.—Eureka *Standard:* Horticultural Commissioner J. D. Barber visited Ferndale and condemned a large number of apple trees. The diseased trees came from a nursery in Oregon, and were being delivered by W. A. Gilmore. They were infected by the wooly aphis. Mr. Barber served notice on the agent to either disinfect or destroy the trees or ship them out of the county within 10 days, the agent agreeing before witnesses to comply fully with Mr. Barber's instructions.

Kern.

LARGE ACREAGE SEEDED TO GRAIN.—Delano *Courier:* J. P. Stewart has now at work 62 head of stock on the Harrelson ranch. One hundred and ten acres of grain is being seeded each day, and the work will be continued till the total area of 4400 acres is seeded.

Lake.

TREE PLANTING. — Lakeport *Avalanche:* Messrs. Krumm and Fisher, who bought land of Frank Gibson, on Glenwood ranch, are just beginning the work of putting in 20 acres, each, of prunes. This, with that already planted by Mr. Gibson, makes a block of 60 acres for 1891 and 1892, by the three parties. The former gentlemen will also put out ten acres of other orchard. Other orchards on the ranch make in all 155 acres of prune and other trees. Marshall Arnold also has 20 acres of the same tract, the planting of which has just begun.

Los Angeles.

THE ORANGE CROP.—L. A. *Californian:* In the early part of the season, California indulged in an aspiration rather than an estimate, that the orange crop might reach 6000 carloads. The shipments last year were 4600 cars, and the increase was only about 30 per cent. Many new trees had been coming into bearing, and many young orchards that bore lightly last year should produce more this year; then all the old orchards had been taken excellent care of, and here was more ground for hopefulness. The present crop hinges on these facts: The budded varieties generally are bearing a good crop; the seedlings a light one. The seedlings are large trees which often bear 15 boxes each, while the budded varieties are much smaller, with proportionately less surface, and four or five boxes is a good crop per tree. The young orchards will run at only half a box to one or two boxes per tree. The ratio of budded to seedling trees in the whole section is perhaps ten to one. The crop of San Bernardino county will be larger than it was last year, by a very considerable amount. The same is true of Orange county, although the increase will be smaller. The same will apply to San Diego, Ventura and Santa Barbara. The deficit will therefore fall on Los Angeles county, which last year produced 2200 carloads, and the year before, 781. Here is where most of the seedlings come from. Then the wind of last week knocked off, say 300 cars, mostly in Los Angeles county. These are about all the facts. The *Citrograph* says the season will turn out 5200 cars. Spencer K. Sewell puts the crop at 3000 cars, alleging that Los Angeles county will fall back to the figures of the year before last, and that the increase in the other counties will not be very large. The Southern Pacific people estimate the crop at 4500 to 5000 cars.

IMPORTING FLORIDA ORANGE TREES.—Pomona *Progress:* The importation of orange trees from Florida has brought thus far this season over $1000 into the hands of the Southern Pacific Railroad Agent in Pomona for freights. In two days last week J. A. Driffill paid $1450 in freight on lemon trees.

Napa.

ASYLUM ORCHARD.—Napa *Register:* Six or seven men, employes of the asylum, who are on that portion of the Asylum farm known as "the Spencer tract," have been for some time engaged in grubbing out oak and other trees, most of them of comparatively small growth, on the hillside toward the southern line of the above named tract. Already some 50 acres have been cleared of trees and shrubs and plows started. All the land grubbed will be turned over this winter. In all, 75 or 100 acres of virgin soil will be put under cultivation. As soon as convenient, this land will be planted to prune, apricot and other fruit trees, Dr. Gardner intending to raise all the fruit the Asylum will require, fresh or dried, on the farm. The soil on the tract mentioned is, for the greater part, of good depth, and that it is productive is evidenced by the rank growth of trees and shrubs to be seen on every hand. In many places the decayed vegetation of countless years makes this land well adapted to the purpose to which it will be put.

Orange.

GRAIN CROP.—Newmark & Edwards estimate the grain crop of Los Angeles and Orange as follows: Wheat thrashed 364,588 sacks and barley 1,106,269 sacks. Wheat averaged 133⅓ pounds per sack, making a total of 486,000 centals (or hundredweight); average value, $1.40 per cental. Total valuation, $680,400. Barley averaged about 110 pounds to the sack, making the total centals 2,216,895, at a valuation of 90 cents per cental, equals say $1,095,200. Corn is a very difficult grain to get data on, being shelled and marketed from the field, or held in cribs till spring, as may suit the farmer's convenience. Grain in public warehouses and mills, Los Angeles county, Dec. 1, 1891: Wheat, 207,120 centals; barley, 377,600 centals. Orange county: Wheat, 12,000 centals; barley, 75,000 centals. The wheat raised in this and Orange county is principally red (called white Russian), Defiance and Scotch Fife, being less liable to rust than Australian. The Los Angeles Farming and Milling Company raise much fine Australian on their ranches in San Fernando valley. Four cargoes of wheat have been made up in these counties. Two by Spreckels Brothers, loaded at San Pedro. The balance of the wheat not needed for seed is now principally in the hands of three local mills.

San Bernardino.

A LARGE CITRUS GROVE.—Riverside *Press and Horticulturist:* A thousand-acre orange and lemon grove is to be planted in South Riverside by an association of gentlemen under the name of the Orange and Lemon Grove Company.

San Diego.

FARM NOTES.—Ducoo Cor. *San Diegan:* It rained .65 of an inch Dec. 19: This makes a total of 1.14 inches for the season. The mountains were white with snow this morning. Farmers are rejoicing and teams are in demand. Plowing will be commenced in every direction now, as the ground is in fine condition. There is already nearly 1000 acres in wheat and barley that were sown dry. Deputy Bug Hunter Smith of Escondido has been doing this valley lately and has found several orchards infested with San Jose scale, and in every case the owner has dug the trees up and burned them or has applied an effective remedy.

Shasta.

TO BEGIN PLANTING.—Anderson *Enterprise:* Fruit-tree planting will soon begin in this neighborhood, and while there will be many thousand trees planted, we think the number will fall short of each of the last three preceding years, which were exceedingly heavy years of planting.

Solano.

THE FRUIT-GROWERS' ASSOCIATION.—Dixon *Tribune:* The fruit-growers of Solano and Yolo counties living in the neighborhood of Winters have organized an association with the following officers: G. W. Thissell, Pres.; Wm. Baker, Vice-Pres.; C. F. Wyer, Sec'y and Treas. Meetings will be held on the second and fourth Saturdays of each month. Many of our orchardists are novices in the business, and will be glad to avail themselves of the opportunity of profiting by the experience of these successful horticulturists.

BARNHART FARM NOTES.—Cor. Dixon *Tribune:* From present indications, the coming season will be all that the lowland farmers could desire. This idea prevails generally, and all the tule farmers in both Solano and San Joaquin counties are seeding vast areas of land in anticipation of a dry season. Seventy head of mules were sent over to Stockton recently to assist in preparing ground for sowing. All the land sown lies in or adjacent to the tules. Four scrapers were also sent over to strengthen the levees along the banks of the San Joaquin. The nine eight-mule teams which were sent away are hardly missed from the number still at work here. More than 80 head of animals are still at work on the levees, which have grown broader and higher until they now look like small-sized mountain ranges. Still, Manager Barnhart is not satisfied. He intends to continue the work, weather permitting, until nothing short of a cloudburst can make an impression on the embankments. The grain is already springing up fresh and green all over the broad plains, and in a few more weeks they will be thickly carpeted with growing wheat and barley.

Sonoma.

SEBASTOPOL PACKING CO.—Sebastopol *Times:* The Sebastopol Packing Co. held a meeting Dec. 21st, at which was received 10 per cent of the $20,000 subscribed. The meeting was well attended, with signs of growing interest. The proper steps were taken, and articles of incorporation filed with County Clerk Juilliard. The ground for the cannery has been purchased by the Directors from John A. Brown, and is located east of the Winery of the Santa Rosa road.

HOP CULTURE.—Healdsburg *Enterprise:* Jno. McMinn, Secretary of the Sonoma County Hop-Growers' Association, furnishes a list of hop-growers in Guerneville, Healdsburg and Santa Rosa districts, with the number of bales produced by each for the current year. In Guerneville district, A. McPeak is credited with 42 and R. S. Drake with 80 bales—a total of 122. Healdsburg is credited with 13 growers, ranging from 33 bales produced by J. T. Sheehan to 155 bales by M. Redding—a total of 993 bales for the district. In Santa Rosa district, 45 individuals and firms are named, ranging from 2 to 520 bales, R. Peterson being credited with the latter number, Ah Sam, a Chinese, standing second with 405 bales, Joseph Purrington third with 400 bales; and the district foots up 6259 bales, an aggregate of 7285 bales for the three districts mentioned. The same authority reports 23 new hop yards started, covering an aggregate of 361 acres, Farmer and Peterson standing at the head of the list with 75 acres, John Peterson following with 40 acres, C. Y. Caldwell and Miller and Purrington with 30 acres each and S. Gillmon with 25 acres. There has been no disease in the Sonoma hop fields, and the product commands an extra price.

Tulare.

PRICES OF RAISINS. — Hanford *Journal:* There is a great difference between reports from different parties, of prices ruling in the East for raisins. Several persons residing in Eastern towns have written to relatives here that California raisins are selling there at from 25 to 30 cents per pound. While these statements are arriving from individuals out of the trade, a gentleman who had consigned his goods to a certain firm to be sold, received word from said firm that they were "just in receipt of a letter from Chicago which states that three cars of choice London layers from Fresno were sold last week at $1.10 and $1.15 per box for three-crown; also a copy of an auction sale in Philadelphia of 2000 boxes of London layers carried over from last year in cold storage, and sold by the agents there at 50 cents per box, which would not cover freight and warehouse charges. All these things go to show that the market is in a horrible condition, etc." The grower who received this letter informs us that he believes that the main cause

of the difference in price between the producer and the consumer is the lack of distribution of the California raisin crop. Nearly all the raisins are sent to one of five cities—New York, Chicago, Boston, Philadelphia or St. Louis. There is a consequent glut in the raisin market in these cities, and the goods are sold at prices ruinous to the producers, and the middlemen get the big profits. Lack of proper distribution is one of the principal causes of the low prices of raisins this year, and the remedy therefore should be and is a subject of earnest discussion among the horticulturists.

BUTTER SCARCE.—*Journal:* Butter is a very scarce article in Hanford now. A great deal of the milk from the dairies hereabout goes to the Hanford cheese factory. Farmers who make butter find no difficulty in securing city patrons who agree to take butter the year round, and pay remunerative prices therefor. There is a call for more butter milking in this vicinity, as a large amount of this product is shipped in here annually to meet the demand.

CANAL WORK.—The Tulare Lake Canal Company, of which ex-Mayor Pond of San Francisco is president, Mr. Turnbull is vice-president, and in which C. W. Clarke, a large landowner of this county, is interested, have just finished building a dam, which cost about $2500, across Tulare river, four miles from the lake, and now a canal, which is 36 feet wide and is to be 10 miles long, is in course of construction. This canal will irrigate some 50,000 acres when completed, and will supply with water for irrigation what was Atwell's island, in Tulare lake, in the '70s.

LEVEE BUILT.—Hanford, Dec. 21: The Kings river levee, which redeems from overflow about 11,000 acres of rich agricultural lands on the south side of Kings river and north of this city, was completed last Sunday. It is a little over 14½ miles in length and varies in height from 3½ to 10 feet. I. N. Weight of Tulare was the contractor and it took on an average 250 horses and 100 men to complete the work in 80 days.

Ventura.

STARCH FACTORY RUNNING.—Cor. Ventura *Free Press:* The Hueneme Starch Factory started up in full blast on Dec. 21st, and is now chewing up murphies worse than any Irish paddy. Potatoes are not coming in very fast just at present, owing, we suppose, to the fact that few know that the factory is started. Mr. J. E. Borchard, who was the prime mover of the project of building the factory, hauled the first 660 sacks of potatoes, but as they are capable of handling 100 sacks per day, these will not last long. J. B. Alvord has followed suit and will deliver 500 sacks more.

ARIZONA.

FRUIT CULTURE IN SALT RIVER VALLEY.—Gen. E. S. Gill of Phoenix in *Orange Belt:* The first fig orchard of any consequence was planted in 1887. It consists of sixty acres, and on an adjoining ranch eighty acres were planted the next season. Since then, additions have been made on these two ranches and others until now there are over 500 acres planted to figs in the valley. Our soil and climate seem to be especially adapted to the successful cultivation of the fig, and I may add, the raisin grape. The soil contains an unusual amount of saccharine matter and as a consequence the figs are very sweet and luscious. The skin is thin and tender, and there is no necessity for dipping in lye to cut it, as is the case in most of the fig-growing districts of the Mediterranean. All that is required to put them in first-class condition for the market is a little bleaching. Two crops a year can be relied on, and in some seasons three and even four crops can be produced. Raisin culture is also new with us, but the work already done shows that we will produce a very superior quality of raisins, equal to the best from the famous El Cajon district in San Diego county. This is owing to the great amount of sugar in the grape. For the same reason we cannot produce good light wines, but there is no question that Salt River valley grapes will produce a very superior article of port, sherry and burgundy. The oldest orange orchard in the valley will be three years old in February. Over 500 acres were planted to oranges last year, and twice that acreage will be planted this season. The success of orange-growing, particularly on the foothill lands, is now assured, as well as the growing of figs, raisins and the deciduous fruits, Apricots, especially, do well all over the valley.

NEVADA.

CATTLE NOTES.—Reno *Gazette*, Dec. 10, W. S. Bailey, while in Smith's valley, Lyon county, bought 400 head of cattle—100 head of beef for his market here and in Virginia and 200 stock cattle for his Churchill county ranch. He says the people of Mason Valley are holding public meetings to discuss the building of a creamery, and have about decided to build one. Mr. Bailey is going to put a 500-cow creamery on his Churchill county place, and has the lumber on the ground to build it. Mr. Bailey has been trying the experiment of dehorning old cows to be fattened for beef, and is highly pleased with the result. He says he dehorned 100 head with great success. He says three men can run 100 through a chute in a day and do the job. Mr. Bailey is thoroughly convinced that old cows feed better and take on fat more readily, make better beef and in every way are more satisfactory by being dehorned. He says there are fully 2000 head of beef being fed in Mason Valley and about the same number in Churchill county. J. M. Tunnell came up from San Francisco after the two steers fattened by Louis Dean, which were shipped to that city where they will be fed until just before Christmas and then taken to the shambles by Mark Straus of the Bay City Market. Dean sold them to C. W. Welby for $500 and Straus bought them of Welby. They are twin brothers of the Shorthorn family and weigh in the neighborhood of 3000 pounds each.

BEEF CATTLE.—Reno *Gazette,:* A careful estimate of all the cattle this side of the mountains, foots 22 680, divided up as follows: Ruby valley, 880; Clover valley, 600; Paradise valley, Owens river and all points north of Winnemucca, 2000; Lovelocks, 2000; Mason valley, 2000; Antelope valley, 400; Carson sink, 1500; Truckee meadows, 8000; Barney Horn, 800; Honey lake, 4500. Besides these, there are about 2500 in Shasta valley; looks as if San Francisco butchers would have to pay for beef before spring. Beef is selling now at Omaha for 11½ and 12 cents. Washington has none; Oregon is short; Arizona will not contribute any considerable number to the market, and it looks decidedly encouraging for the feeders this year. The *Gazette* will be greatly disappointed, if beef is not worth 7 or 7½ cents before the close of February.

Better Horses for California.

The interest is manifestly increasing over the State among good, intelligent farmers and breeders for a larger class of good, heavy horses and fine single and double carriage teams. Whoever has large draft or fine carriage horses to sell finds a ready market at good prices, while small, inferior and unreliable stock will not sell at any price worth raising. If the farming community in general would pay more attention to breeding to good imported pure-bred registered stallions the improvement in the horse industry would soon be felt throughout the State in the price of horses, and no enterprise well followed will increase the prosperity of any section more than producing the best kinds of coach and draft horses that always sell at paying prices in any market. Eastern horses of ordinary quality are shipped here and sold at good prices on account of the demand for kind, reliable, well-bred stock for general use. They can be as well or better raised in California by using only good sires as to pay transportation and profit to bring them from the East. Importers and dealers are now introducing in this State several kinds of breeds of excellent merit and proven endurance in the Eastern States, and having no superiors. Holbert & Conger of Los Angeles, importers and dealers, showed some grand Shire draft horses and the great German coach horse Adonis, at our last State Fair, and we learn are now receiving at their stables in Los Angeles, two carloads of Shires, Cleveland Bays and German coach stallions—all imported this season direct from Europe, and among the very best that could be bought. This firm is the first to introduce the celebrated German and Oldenburg coach horse on the Pacific Coast. Their German coach stallion Adonis, sold to Mr. Sperry of Stockton, is rapidly making a State reputation for the best coach type. With this importation they have two younger ones of much quality and character—a raven black and mahogany bay, as well as Superior Clevelands and Grand Shires, all registered full bloods in Europe and America. We are satisfied no successful breeder can make a mistake in using this kind of stallions to the exclusion of all grades and scrubs.

The growth and development of the Pacific Slope will certainly demand as good horses for coach, carriage and draft uses, as are now produced for sporting purposes.

Scientific Examination of Soils.

We have received a copy of Wahnschaffes' "Examination of Soils," published by Henry Carey Baird of Philadelphia. It is a compilation of the various methods of mechanical and chemical analyses as pursued by German chemists, and includes some of the appliances devised by Prof. Hilgard of our State University. It does not include, however, the important contributions made to a knowledge of the subject by French chemists, and is therefore deficient as a general review of the subject. The publication is not adapted to the use of farmers, but is a text-book for consultation in the laboratory, and should be included in all book collections for such purposes. It is sent postpaid for $1.50 by the publishers.

Early Treasures.

EDS. PRESS:—To-day I picked on the Asylum Farm, near this city, fine samples of our favorite California poppy (*Eschscholtzia*) in full bloom, with many buds clustering about them. These are the *avant couriers* of the grand army of wild-flowers that will come trooping on in a month or two. This is very early for these flowers to bloom in this valley. Have they been noted in bloom elsewhere by any of your readers, I wonder, this winter?

Also the same day I gathered fresh sprays of Maidenhair fern (*Adiantum*), coffee fern, (*Pteris Andromæ dafolia*), the pretty "Lace fern" and the common "Polypodium." R.

Napa, Dec. 26.

WHY PLANTS GROW ERECT.—Why trees or other plants grow erect has never yet been definitely determined. It has been supposed to have some relation to the action of light. Certainly, a plant usually growing erect turns toward any opening for light in a dark cellar, but when there is no light, they grow erect. Dr. Maxwell S. Masters has recently called attention to some cases in an English coal mine 1000 feet deep. Some props made from green posts pushed out into growth, and though in absolute darkness they were perfectly erect. They were perfectly blanched.

AN INGENIOUS INVENTION is an orange peeler that removes the coat without cutting the inner skin. It is claimed that 1000 oranges may be peeled without soiling finger or glove, or losing a drop of juice. The peeler is a piece of wire, nickel-plated, very much in the shape of a button-hook, but with a tiny blade let into the inner bend of the hook. When the point of the hook is drawn into the fruit it slides between the pulp and the peel without danger of entering either, while the blade divides the peel easily and rapidly, after which it may be removed without trouble.

WINTER BUTTER.

To meet with ready sale at good prices butter must not only be sweet but rich in flavor.

To the dairyman and farmer a satisfactory color is an item of great importance, and there have been many preparations put on the market for this purpose.

The Improved Butter Color, made by Wells, Richardson & Co., Burlington, Vt., is far ahead of all other colors, in shade, strength, and purity. It is free from taste or smell, absolutely without sediment, and gives the natural shade produced by good June pasturage. The manufacturers offer to mail free enough of this preparation to color sixty pounds of butter on receipt of six cents in stamps. We hope all the butter-making readers of the RURAL PRESS who do not use the Improved, will take advantage of this generous offer.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

CEDAR GROVE STOCK FARM.

Mr. J. T. Mock, of Danville, Ky., says: "I can cheerfully recommend Quinn's Ointment to all horsemen as the very best remedy in use. Would not be without it." For Curbs, Splints, Spavins, Windpuffs, or any enlargements, give it a trial. Sample box 25 cents, silver or stamps. Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

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Should this paper be received by any subscriber who does not want it, *or beyond the time he intends to pay for it*, let him not fail to write us *direct* to stop it. A postal card (costing one cent only) will suffice. We will not knowingly send the paper to any one who does not wish it, but if it is continued, through the failure of the subscriber to notify us to discontinue it, or some irresponsible party requested to stop it, we shall positively demand payment for the time it is sent. LOOK CAREFULLY AT THE LABEL ON YOUR PAPER.

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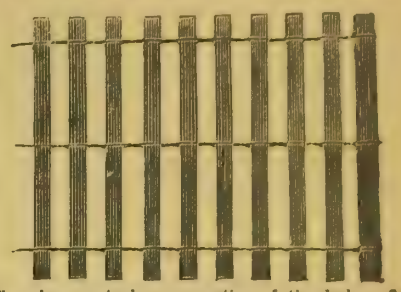
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The regular Annual Meeting of the Stockholders of the Grangers' Bank of California, for the election of Directors for the ensuing year, will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 12th day of January, 1892, at one o'clock, P. M.

For Grangers' Bank of California,
ALBERT MONTPELLIER,
San Francisco, Dec. 14, 1891. Cashier and Manager.

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FOR THE HALF YEAR ENDING DECEMBER 31, 1891, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on Term Deposits, and four and one-half (4½) per cent per annum on Ordinary Deposits, payable on and after SATURDAY, January 2, 1892.

GEORGE TOURNY, Secretary.

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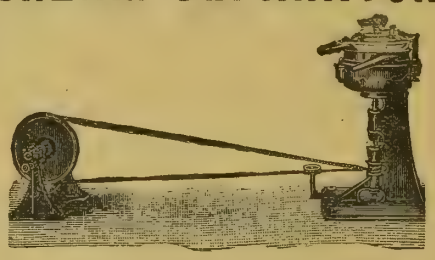
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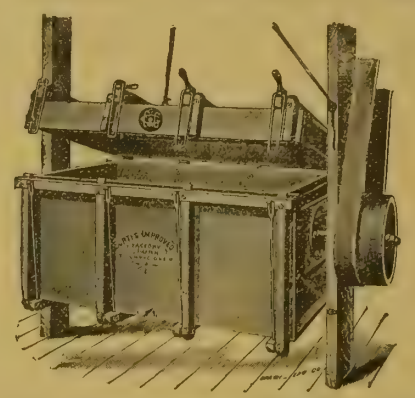
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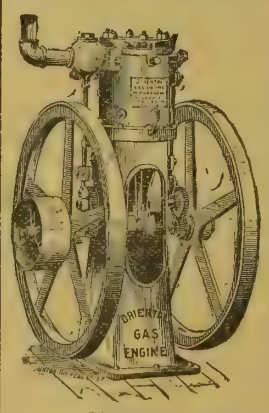
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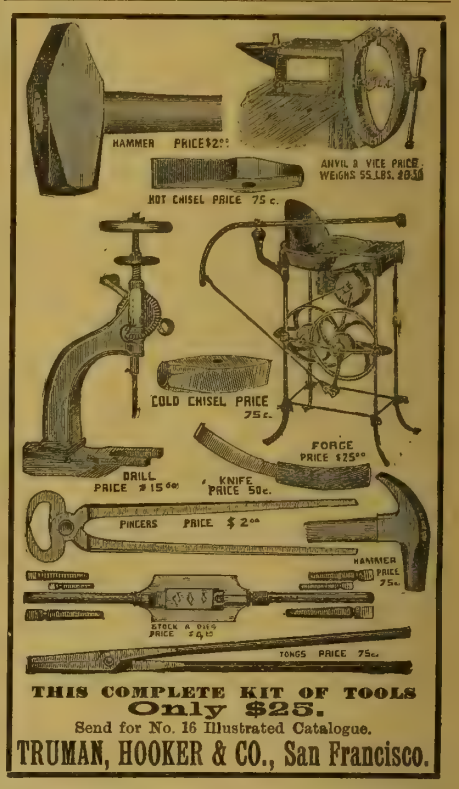
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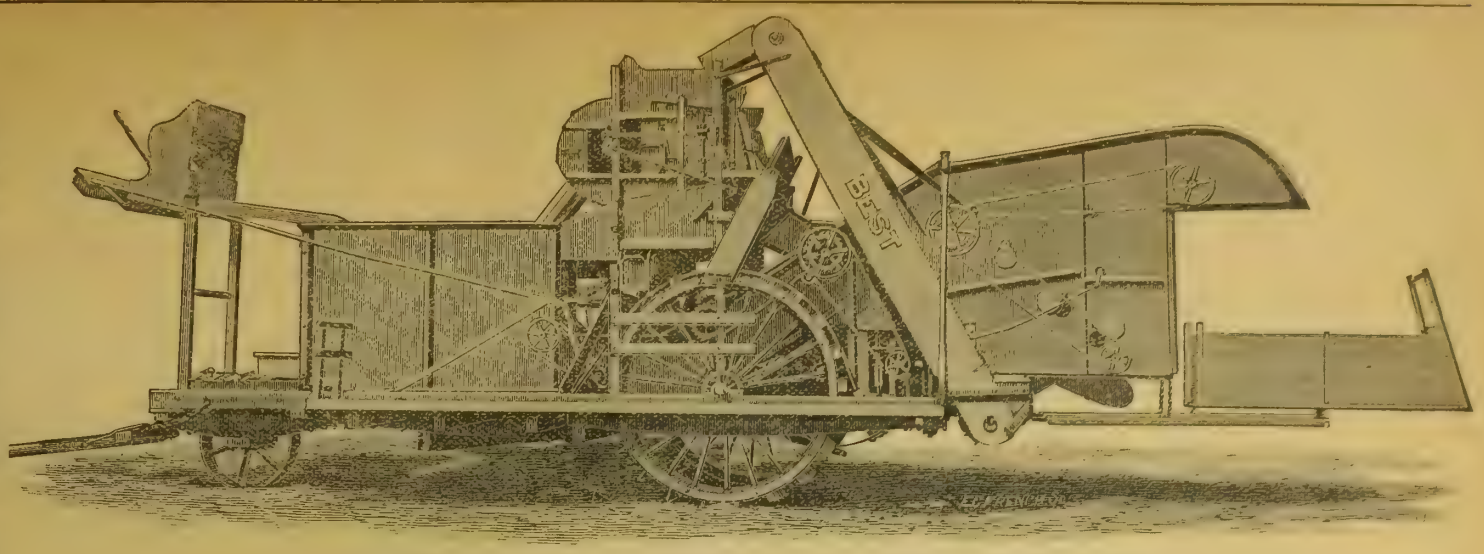
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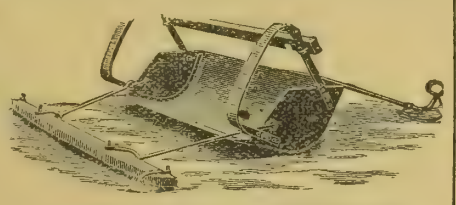
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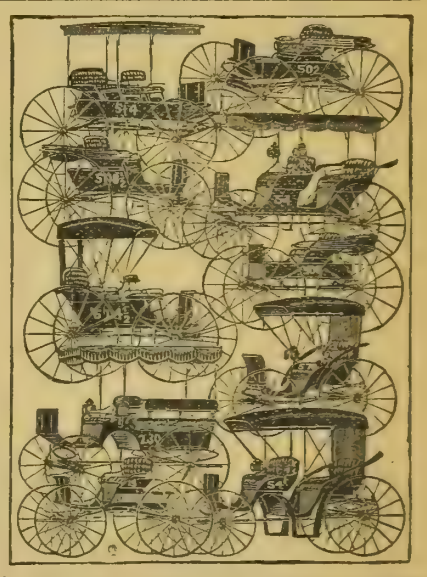
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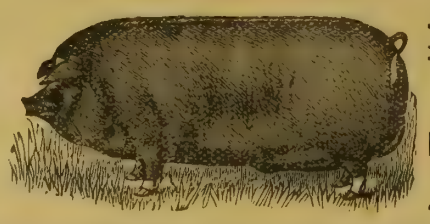
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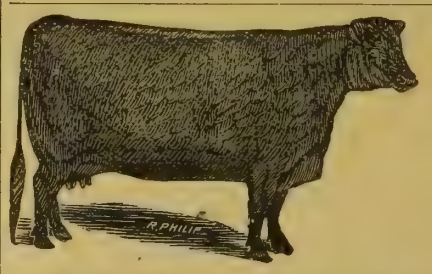


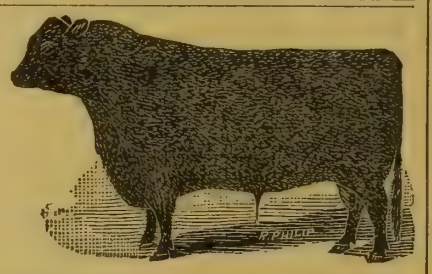


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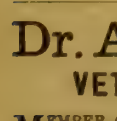
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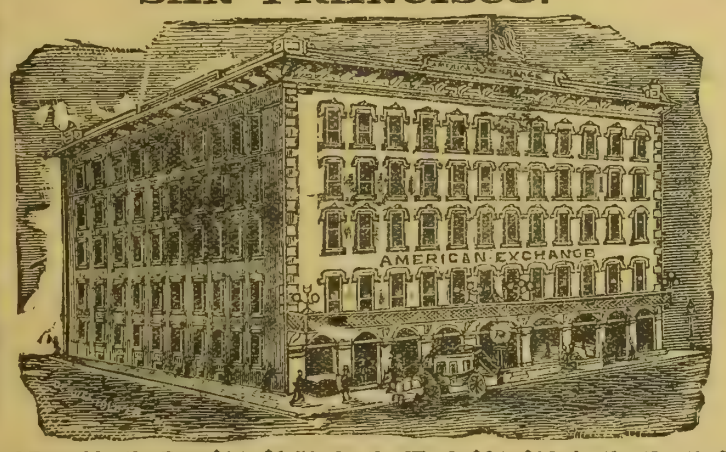
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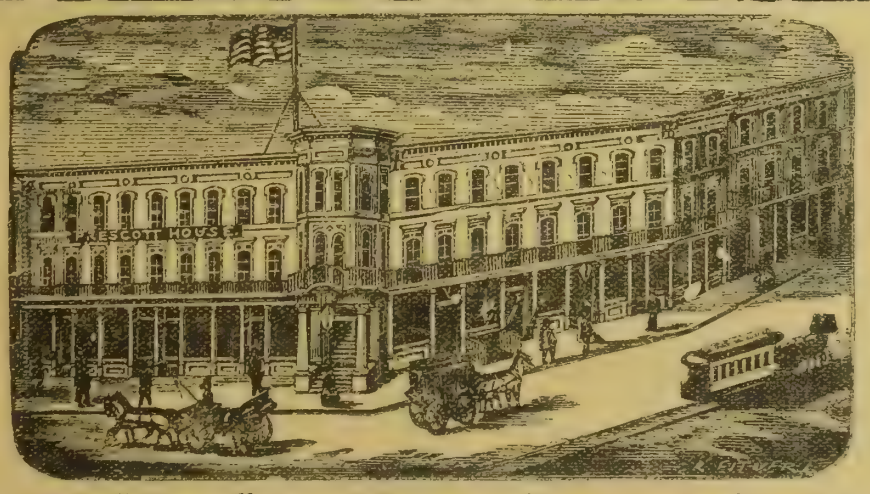
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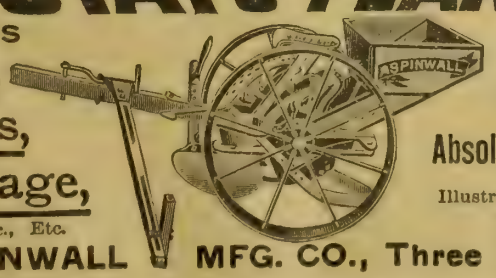
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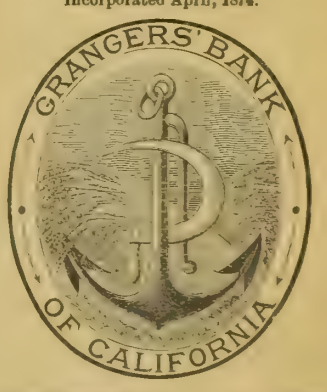
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Dec. 29, 1891.

The year goes out on a stronger market, excepting for orchard products, than usually obtain. The causes that have operated to bring this about, have been touched on from time to time in this department, and therefore are familiar to those who keep informed on the market. Rains following cold north winds have brought a genuine cheerful feeling to the trade, for with favorable weather from now on, we will have large crops of farm products. This feeling is emphasized by the rains having held off well into winter, which is accepted as a forerunner of a longer continuance in the spring and summer months. The grain market has held to strong prices, particularly wheat. The Eastern and European markets for wheat have fluctuated only slightly.

Foreign Grain Review.

LONDON, Dec. 28.—*Mark Lane Express*: Only a fractional business was done in English wheats. The Board of Agriculture reports the crop of inferior quantity and quality. In many districts an abnormal proportion of grain has been shed in the fields. Foreign wheat and flour sold slowly and generally at a decline. Barley, corn and oats declined, but the absence of Russian supplies has given them a tendency to revive. At to-day's market prices of best English wheats were maintained; ordinary grades and corn were steady; malt and foreign wheats dropped 6d; flour was unchanged.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May.
Thursday	....	.....	8s8 d	.....	.....	.....
Friday	....	....	....	.....	.....	.....
Saturday	....	.....	.....	.....	.....	.....
Monday	8s8¾d	8s7¾d	8s8 d	8s8 d	8s8 d	8s8¼ d
Tuesday	....	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	43s9d	43s6d	43s	Firm, inactive.
Friday	....	....	....	
Saturday	....	....	....	
Monday	43s9d	43s6d	43s9d	Inactive.
Tuesday	....	....	....	

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per cental:

Day.	Dec.	Jan.	Feb	March.	April.	May.
Thursday	177	177½	177½	181	....	180⅛
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	175½	175½	177½	179½	181½	178
Tuesday	....	....	....	....	....	....

Eastern Wool Market.

NEW YORK, Dec. 27.—Wool sales at New York are light, being 286,000 pounds of domestic and 165,000 pounds of foreign. Holiday week is us ally a quiet one here; besides, our assortments have been pretty well overhauled. New England had an encouraging week, with values well maintained. At the moment there is evidence of a disposition to work into economical foreign stock, but as yet it has caused no feeling of weakness among holders, and it is believed that after the first of the year the offering of domestic will be brightened up by desirable round parcels that can and are expected to come from the interior. California wool is solid, though the movement is light. Boston Sold 3,000,000 pounds of domestic, and 600,000 pounds of foreign. A large proportion of business was in fleeces and high grade wools. In addition to the free sales manufacturers carried away many samples of important lines.

Dried Fruit Review

NEW YORK, Dec. 27.—A good-sized line of sacked peaches brought 6c, the price being an inducement. Sacked prunes are unvaried from the counts last noted. Several cars of Three Crown raisins in sacks were sold at 4¾c, the top price for extras being 5c. Two Crown brought 3¾c. Boxes are dull and unsettled, loose and layers are quoted about alike in actual sales. Buyers could be approached better if the East had some trustworthy estimate of the unmarketed raisins on the Coast. As it is they are all inclined to magnify the primal holdings and will keep up the "hand to mouth policy" of buyers until something definite can be disclosed. A favorable point in the situation is the wine consumption at a good end of the season. Apricots are weaker.

Hops.

NEW YORK, Dec. 27.—Hops are quoted strong, with confidence: the world's markets are all favorable: exports are active: almost 4,000 bales go out this week, making for the season thus far 37,000; at the same time last year, 15,500; best State, 21½c; Pacific, 22c; special lines are held above; there is an effort to hold regular future sales on Change.

Local Markets.

WHEAT

	Buyer Season.		Buyer 1891.		Seller 1891.	
	H.	L.	H.	L.	H.	L
Thursday.	188½	188½	181⅝	181⅝	....	....
Friday	....	....	....	....	....	....
Saturday	....	....	...	....	....	....
Monday	187⅝	187½	....	....	....	....
Tuesday	...	....	...	....	....	....

BARLEY

	Buyer Season.		Seller 1891.		Buyer 1891.	
	H.	L	H.	L.	H.	L.
Thursday	115½	115½	....	....	111⅛	111
Friday	....	....	....	....	...	....
Saturday	....	....	....	....	....	....
Monday	114⅛	114½	....	....	111	110¾
Tuesday	....	....	....	....	....	....

BAGS—The rains have created a stronger tone to the bag market, although so far as we know there are no changes to report in quotations. Hand-sewed standard-sized are quoted at 6¾@7c for June-July delivery.

BARLEY—The local market has held to fairly steady prices. The demand for feeding continues large, owing to more outdoor work. In futures, trading on Call has been light. The following are the reported sales on Call:

Morning Session.—Buyer 1891, 400 tons, $1.10¾. Buyer season, 600 tons, $1.13½; 300, $1.13⅜; 900, $1.13⅞; 400, $1.13⅜. Seller season, 100 tons, $1.07 ½ ctl. Afternoon Session.—Buyer season, 300 tons, $1.13⅜; 500, $1.13½; 600, $1.13⅜. Buyer 1891, 500 tons, $1.10¾; 100, $1.10⅝; 400, $1.10. Seller 1891, 700 tons, $1.10½ ⅌ ctl.

BUTTER—While dealers report light stocks and only a moderate demand, yet owing to rains and improving pastures, they are not disposed to let a buyer go if a slight concession will do for a bait.

CHEESE—The market has a weak and somewhat irregular tone. The stock here is light, as is the demand. Receipts, it is claimed, will soon begin to come forward more freely.

EGGS—Judging by increasing receipts from the southern part of the State, feed is improving, which if the case, Californian will soon supply the demand, when prices will rule lower.

FLOUR—Concessions are still in order for round parcels. Bakers are taking more flour from Eastern Oregon and Eastern Washington. They buy it for making a certain kind of strong bread.

WHEAT—The sample market is reported slow, but firm. In futures, trading is light, barely enough to justify reporting. The followlng are the reported sales made on to-day's Call:

Morning Session.—Buyer 1891, 200 tons, $1.80. Buyer season, 1200 tons, $1.86; 2400, $1.85⅞ ⅌ ctl. Afternoon Session,—Buyer season, 900 tons, $1.86; 400, $1.86¼ ⅌ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Dec. 29th, were as follows:

Flour, qr. sks	155,871	Bran, "	11,543
Wheat, ctls	531,803	Buckwheat "	....
Barley, "	19,804	Middlings, sks	3,365
Rye "	156	Chicory, bbls	115
Oats "	10,642	Hops, bls	168
Corn "	4,238	Wool, "	151
*Butter "	354	Hay, tons	1,411
do bxs	25	Straw "	121
do bbls	....	Wine, gals	151,290
do kegs	8	Brandy, "	60,560
do tubs	....	Raisins, bxs	1,668
do ½ bxs	23	Honey, cs	28
†Cheese, ctls	302	Peanuts, sks	386
do bxs	....	Walnuts, "	68
Eggs, doz	21,800	Almonds, sks	286
do "Eastern	72,840	Mustard, sks	....
Beans, ctls	2,072	Flax, sks	....
Potatoes, sks	27,302	Popcorn, sks	25
Onions, "	918	Broom corn, bbls	....

*Overl'd —— ctls. †Overl'd 531 ctls.

Deep Water Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to Dec 27. '90	July 1, '91 to Dec. 27, '91.
Flour, ½ sks	125,814	250,842
Wheat, ctls	559,399	930.799
Barley, ctls	9',391	26,805
Oats, ctls	177.581	271,595
Wool, bales	5,745	5,626
Hops, bls	333	336
Rye, sks	....	2,839
Potatoes, sks	42 421	19,471

Cereals.

The strength of the wheat market at home and abroad has created no little surprise in certain quarters, but to the bulls it has not proved a surprise, for they expected the year to go out on strong markets, which they argued would more than likely bring better prices in the spring. While this may probably prove correct, yet the fact must not be lost sight of that the spring markets for shipments from this coast will depend largely on the crop prospects abroad. A ship leaving this port consumes from four to five and one-half months on passage, which would bring spring shipment arrivals outward, into European new-crop season. The list of vessels on the way to this port is gradually growing smaller, as it is to Oregon and also to Puget Sound ports. The exports (flour reduced to wheat) from this port since July 1, 1891, aggregate about 500,000 tons. The vessels in port now loading will take out an addition of about 150,000 tons. The bulk of this has been provided for.

Generous and well-distributed rainfalls in the valleys and on the foothills, with heavy deposits of snow on the mountain ranges, will encourage farmers in the belief that we are to have a propitious season, and acting on it, they will unquestionably put in large crops of grain.

The barley market has held strong. The light receipts and continued good demand cause the bears to confine their operations to cross orders and fictitious sales, so as to try and break prices. The receipts from Oregon continue light.

Oats hold up well, notwithstanding the North is sending to us unusually large quantities. So far this season, the increased receipts from up North aggregate about 5000 tons. The supply of Californian is light.

Corn is essentially unchanged. The demand and receipts appear to be about evenly balanced.

Rye is slow and easy.

Feedstuff

For ground feed, the demand, which was quite active, is now slow, owing to rains causing dairymen and stock-feeders to look for a decided improvement soon in pastures. Receipts of bran are large, and with any falling off in the demand prices will shade off.

The receipts of hay are light, but as feeders confine their purchases to actual requirements, the market does not strengthen, but on the contrary it is easier for poorer grades.

Live Stock.

The market has a stronger tone for bullocks, with a slight advance obtainable. Cold weather has stimulated the consumption, which has also been aided by fewer fruits and vegetables. Mutton sheep are firm. Lambs and calves are scarce. Hogs are essentially unchanged.

Fruit.

Receipts of oranges are increasing, causing prices to shade off. The quality not being of the best, buyers bid lower for those not fully ripe. Ripe oranges move off freely.

Limes and lemons are quiet at steady prices.

Although pears are in light supply yet the market is barely steady.

Persimmons move off slowly at unchanged prices.

Northern counties and Oregon are sending to us liberal supplies of apples. The more choice varieties, if not defective, meet with quick sales at quotations. The low prices and an absence of other fruits have a stimulating effect on consumption. The receipts clean up well.

For raisins the market is quiet and will probably continue so until the spring trade opens here and at the East. Low prices have caused them to go into more general distribution than ever before, which has laid the groundwork for large demands in future.

Dried fruits are slow. All forced selling is met by lower bids from buyers. The latter appear disposed to wait until they can form a better idea how the spring trade is likely to be before venturing, except at lower prices, on the market. Holders, as a rule, are not offering, seemingly preferring to hold for one or two months. They believe that the market cannot go much worse, but may do better.

Vegetables.

Cold winds have given way to heavy rains, which with clear skies will cause more attention to gardening. The truck market is poorly supplied, although the southern part of the State continues to send us green peas, etc., but in small quantities.

Onions are firm and higher for the more choice good keepers.

Potatoes have a stronger tone for good keepers free from worms and other defects. Oregon is beginning to send us more liberal supplies. The rains will lessen the receipts of Californian.

Miscellaneous.

From reliable advices up to Dec. 29, the following summary tonnage movement is compiled:

	1891.	1890	In port. 1891.	In port. 1890.	
San Francisco	282,392	294,812	*131,325	*47,092	
San Diego	21,008	12,678	5,149		21,262
San Pedro	5,612	7,478	....		
Oregon	53,106	35,368	46,412		
Puget Sound	25,375	41,937	....	....	68,354
Totals	387,493	392,273	182,886		

*Engaged for wheat, 1891, 92,455 1890, 44,710

The statistics of produce exports from this port compiled by the *Commercial News*, from July 1st to Dec. 25, are as follows:

	1891.	1890.
Wheat, ctls	7,812,619	5,286,788
Flour, bbls	523,741	542,000
Barley, ctls	754,703	166,376

Poultry, while reported unchanged, shows a stronger tone, with an advance obtainable for the more choice.

Honey is quiet, as is beeswax.

In beans there is nothing new to report. It looks very much as if a quiet movement is on foot to corner supplies.

Hops continue to steadily advance. On this coast there are very few unsold.

For wool the market is reported firmer, but the absence of assortments is against sellers.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. TUESDAY, December 29, 1891.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 10	Extra, City Mills	5 40 @ 5 50
Butter	2 20 @ 2 65	Do Country Mills	5 25 @ 5 50
Pea	2 35 @ 2 65	Superfine	3 40 @ 3 65
Red	1 90 @ 2 05	**NUTS—JOBBING.**	
Pink	1 70 @ 1 95	Walnuts, Cal. lb	7 @ —
Small White	2 25 @ 2 55	Do Choice	8 @ 9½
Large White	2 10 @ 2 45	Do paper shell	9 @ —
Lima	1 65 @ 2 25	Do Chili	7½ @ 9
Wld Peas, blk eye	1 50 @ 1 75	Almonds, sft shl.	11½ @ —
Do green	1 90 @ 2 10	Paper shell	13 @ —
Do Eastern do	2 60 @ 2 80	Hard Shell	6 @ 7½
Do Nlles	1 35 @ 1 45	Brazil	6½ @ 8
split	4 @ —	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 20	Peanuts	3½ @ 5
Do good to choice	32½ @ —	Filberts	11½ @ 14
Do Giltedged	35 @ —	Hickory	7 @ 8
Do Creamery rolls	35 @ —	Chestnuts	11½ @ 16
Do do Giltedge	36 @ —	**ONIONS.**	
Eastern	18 @ 30	Silver Skin	60 @ 1 20
Cal. pickled	25 @ 23¾	**POTATOES.**	
CHEESE.		Early Rose, sks	30 @ 50
Cal. choice mild	13 @ —	Peerless	35 @ 65
Do fair to good	11 @ —	Burbank Seedling	35 @ 55
Do gilt edged	14 @ —	Do do Salinas	90 @ 1 15
Young America	12 @ 15	Sweet's	2 50 @ 3 00
EGGS.		Garnet Chiles	40 @ —
Cal. ranch, doz.	37½ @ —	River Reds	30 @ 45
Do do selected	42 @ —	**POULTRY AND GAME.**	
Do store	25 @ 35	Hens, doz	5 00 @ 7 00
Eastern	25 @ 35	Roosters, old	5 00 @ 7 00
FEED		Do young	5 50 @ 8 00
Bran, ton	16 50 @18 50	Broilers, small	3 50 @ —
Feedmeal	26 00 @ —	Do large	5 00 @ —
Gr'd Barley	24 00 @27 00	Fryers	5 50 @ 6 50
Middlings	20 00 @22 00	Ducks	6 00 @ 9 50
Oil Cake Meal	25 00 @27 00	Geese, pair	2 00 @ 2 50
Manhattan Food ⅌ cwt.	7 50	Turkeys, Gob'r.	16 @ 18
HAY.		Turkeys, Hens	16 @ 18
Wheat, per ton	14 00 @ —	Do Dressed	18 @ 21
Do choice	15 50 @ —	Manhattan Egg Food ⅌ cwt	11 50 @ —
Wheat and Oats	13 00 @ —	**PROVISIONS.**	
Wild Oats	12 00 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Cultivated do	12 50 @ —	Medium	11 @ —
Barley	11 00 @ —	Light	12½ @ —
Alfalfa	10 00 @ —	Lard	9 @ 11
Clover	12 00 @ —	Cal. Sm'k'd Beef	11½ @ —
Straw bale	50 @ 60	Hams, Cal salt'd	10 @ —
GRAIN, ETC.		do Eastern	12½ @ —
Barley, feed, ctl	1 07½ @ —	**SEEDS.**	
Do Choice	1 12½ @ —	Alfalfa	7 @ 8
Do Brewing	1 12½ @ —	Clover, Red	10 @ —
Do do Choice	1 15 @ —	White	17½ @ —
Do do Giltedge	1 20 @ —	Flaxseed	2 50 @ 2 80
Do Chevalier	1 20 @ 1 45	Hemp	3½ @ 4½
Do do Giltedge	1 48½ @ 1 52½	Mustard, yellow	2 80 @ 3 00
Buckwheat	2 00 @ 2 25	do Brown	3 00 @ 3 25
Corn, White	1 35 @ —	**WOOL.**	
Yellow, large	1 26½ @ 1 31½	**SPRING, 1891.**	
Do small	1 33½ @ 1 38½	Humb't & Men'cino	20 @ —
Oats, milling	1 45 @ —	Sac'to valley	16 @ —
Feed, Choice	1 42½ @ —	Free Mountain	19 @ —
Do good	1 35 @ —	S Joaquin valley	13 @ —
Do fair	1 30 @ —	do mountain	18 @ —
Surprise	1 50 @ —	Cala'v & F'th'll	16 @ —
Black Cal	1 60 @ 1 95	Oregon Eastern	14 @ —
Do Oregon	1 45 @ 1 60	do valley	21 @ —
Gray	1 32½ @ 1 41½	So'n Coast, def	11 @ —
Rye	1 75 @ 1 80	So'n Coast, free	13½ @ —
Wheat, milling. Gilt edged	1 85 @ —	**FALL, 1891.**	
Do Choice	1 83½ @ —	San Joaquin	9 @ 12
Do fair to good	1 80 @ —	Mountain	10 @ 15
shipping, cho'ce	1 80 @ —	Humb't & Men'cino	14 @ 18
Do good	1 78½ @ —	**HONEY.**	
Do fair	1 75 @ —	White Comb, 2-lb	10 @ 13
Common	1 71½ @ —	do do 1-lb frame	12 @ 14
Sonora	1 71½ @ 1 80	White extract'd	6½ @ 7
HOPS.		Amber do	5½ @ 6½
1891 Choice to Ex.	20½ @ 21½	Beeswax, lb	22½ @ —
Fair to Good	14½ @ —		

Live Stock.

HOGS.		Third quality	4 @ —
Light, ⅌ lb, cents	4½ @ —	Bulls and thin Cows	2 @ 3
Heavy	4 @ —	**VEAL.**	
Stock Hogs	3½ @ —	Small	7 @ —
BEEF.		Large	6½ @ —
Stall fed	6½ @ —	**MUTTON.**	
Grass fed, extra	6 @ —	Wethers	8 @ 9
First quality	5½ @ —	Ewes	7 @ 8
Second quality	4½ @ —	Lamb	9 @ —
		Do Spring	12½ @ 18

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	7 @ 7½
Sun-dried, ¼'s, com'on	2½ @ 3½	Sun-dr, pl'd, prime, bl.	10 @ 11
Do do prime	3½ @ 4	Do do choice	11 @ 12
Do do choice	4 @ 4½	Do do fancy	12 @ 13
Do sliced, common	3½ @ 4	Evap, peeled, in boxes, choice	15 @ —
Do do prime	4 @ 4½	Do do fancy	16 @ 17
Do do choice	4½ @ 5½	**PEARS.**	
Evap. bleached, ring. 50-lb boxes	7 @ 8	Sun-dried, quarters	3 @ 4½
APRICOTS.		Do sliced	4 @ 5
Sun-dried, unbl. com.	3 @ 4	Evap, sliced, in boxes	6 @ —
Do do prime	5 @ 5½	Do ring do	10½ @ —
Do do choice	6 @ 6½	**PLUMS.**	
Do bleached, prime	7 @ —	Pitted, sun-dried	4½ @ —
Do do choice	7½ @ —	Do evap. boxes, choice	— @ —
Do do fancy	8½ @ 9½	Do do do fancy	— @ —
Evap. choice, in boxes	9½ @ 10	Unpitted	2 @ 2½
Do fancy, do	10 @ 10½	**PRUNES.**	
FIGS.		Cal. French, ungraded	5 @ 5½
Sun-dried, black	3 @ 3½	Do graded, 60 to 100	5½ @ —
Do white	3½ @ —	Do do 40 to 60	6½ @ 7½
Do do washed	— @ —	Fancy sell for more money.	
Do do fancy	— @ —	**RAISINS.**	
Do do pressed	— @ —	London Layers, choice ⅌ bx	$1 50 @ —
Smyrna boxes	— @ —	Do fancy, do	1 75 @ —
Do sacks	— @ —	Layers, ⅌ bx	1 25 @ —
GRAPES.		Loose Muscatels, common, ⅌ bx	1 00 @ —
Sun-dried, stemless	3 @ 3½	Do choice, do	1 20 @ 1 30
Do unstemmed	2½ @ 3	Do fancy, do	1 50 @ —
NECTARINES.		Unstem'ed Muscatels, in sacks, ⅌ lb	4 @ 5
Red, sun-dried	3½ @ 5	Stemmed do do	5 @ 5½
Do Evap., in boxes	6 @ —	Seedless do do	6 @ —
White, sun-dried	5 @ 6½	Do do ⅌ 20-lb bx	1 15 @ —
Do evaporated	6½ @ 7	Sultanas, unbl, bxs	1 15 @ 1 40
PEACHES.		Do bleached, in bxs	1 30 @ 1 60
Sun-dried, unpeeled, common, bleached	3½ @ —	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	
Do do prime, do	4½ @ —		
Do do choice, do	5½ @ —		
Do do fancy	6 @ 6½		
Evap, unpe'l'd, choice	6 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. TUESDAY, December 22, 1891.

Limes, Mex	5 50 @ 6 50	Do Lady Apples	1 00 @ —
Lemons, box	1 50 @ 4 00	Grapes	50 @ 75
Do Sicily	5 50 @ 7 00	Do Black	75 @ 1 25
Oranges, Winter small box	50 @ 1 25	Pears, box	35 @ 75
Do Seedlings		DoWinter Nellis	75 @ 1 25
River ide	2 00 @ 2 50	Beets, sk	— @ 1 00
Los Angeles	1 25 @ 1 75	Carrots, sk	50 @ —
Do Navels—		Okra, dry, lb	15 @ —
Los Angeles	2 00 @ 3 00	Parsnips, ctl	— @ 1 25
Riverside	2 00 @ 3 50	Peppers, dry, lb	12 @ 20
Duarte	2 50 @ 3 50	Turnips, ctl	50 @ —
Apples, box	40 @ 75	Cabbage, 100 lbs	55 @ 65
Do choice	1 00 @ 1 25	Garlic, lb	3 @ 4½
Do extra choice	1 50 @ —	Squash, Mrft, tn	6 00 @ 9 00
		Pumpkins, ton	7 00 @ -

Lessons in Volapük.

The International Language of the Entire World.

LESSON 12.

THE REFLEXIVE VERB AND THE IMPERSONAL VERB.

The *reflexive* form applies to active verbs only, and is expressed by suffixing the pronoun OK to the proper person of the verb, or by using the personal pronouns, instead of *ok*, for the first and second persons, in which event these pronouns are declined thus:

Flapobok or flapob obi, I strike myself.
Flapolok or flapol oli, you strike yourself.

Flapomok, he strikes himself—*regular flapom omi*, which means only he strikes *him* (some one other than himself.)

Reciprocity is expressed by the adverb BALVOTO when the reciprocity would be expressed in English by "each other," or by KO BALVOTO when the English would be "with each other," or by BALIM LEN VOTIM when the English would be "of each other;" thus:

Hetoms balvoto, they hate each other,
Golobs ko balvoto, we go with each other.
Tikols balim len votim, you think of each other.

The *impersonal* form is always the third person, and may be either active or passive. It adds the indefinite pronoun OS to the verb root; thus:

Tötos, it thunders. Etötos, it has thundered.
Pasagos, it is said. Pesagos, it has been said.

Exercises.

Uts kels hetoms balvoto binoms badik—Om it no kidom jiblodi obik, ab jiblod omik e obik kidofs balvoto—Man e vom at tikoms gudiko balim len votim e vipoms binön fiens—Cils et golobs ko balvoto al dom fatela omsik lä flum al givön ome flolis svidik kelis laboms in nams omsik; no li-logol otis?—It otötos no ob nob len dom olik—Jipul obik elemof plo of buki ab.elemof magis e flolis plo blod smalik ofik—Yagoms nimis in fot nöka obsik—Li-vlpol lemön jevali et keli elogobs len lom fiena obik?—Pasagos das man e vom at laboms cilis balsebal, lul omas binoms jipuls e mäl puls; cils et lödoms in dom ot ko nefs tel e jinels fol.

These children ought to kiss each other and think of each other as brothers and sisters—Children, it is not well to strike each other; it is better to kiss each other—They have been walking together and have come to (at) your house to see your grandfather—Think of one another in the most friendly manner and you will be good boys and girls—The man who teaches himself goodness will not teach his friends badness—Who says that it did not thunder in the forest by the river shore? The chair under the table is the one which your little boy can have—Let us go together to your sister's house to see her books and pictures—Which animal will you buy, a horse, a dog or a cat? The boys who live in the house in front of the forest hate each other and teach each other to be bad.

This series of twenty lessons was begun in the PACIFIC RURAL PRESS of Oct. 10, 1891. Those desiring assistance in the systematic study of the language will be put in the way of obtaining it without cost by addressing A. L. Bancroft, *Cifet* for California, 303 Sutter St., San Francisco.

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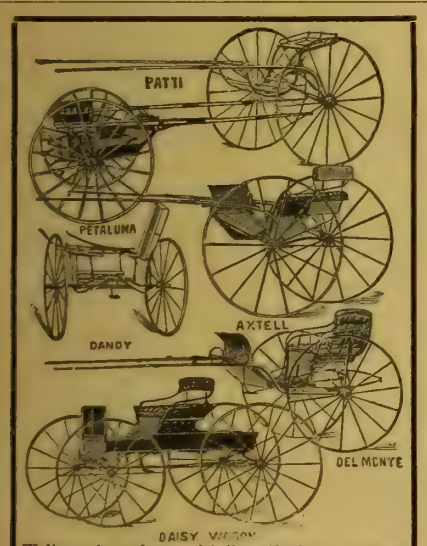
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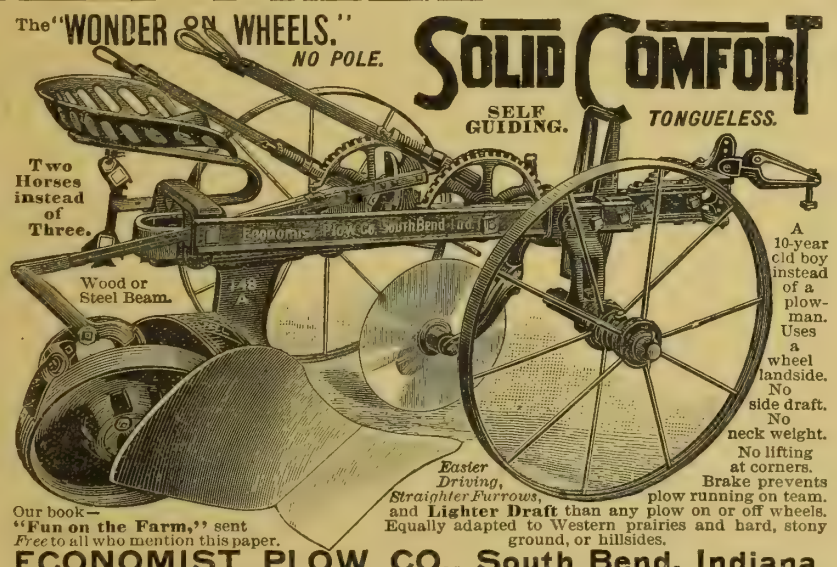
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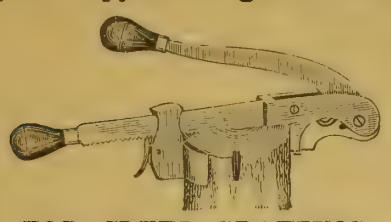
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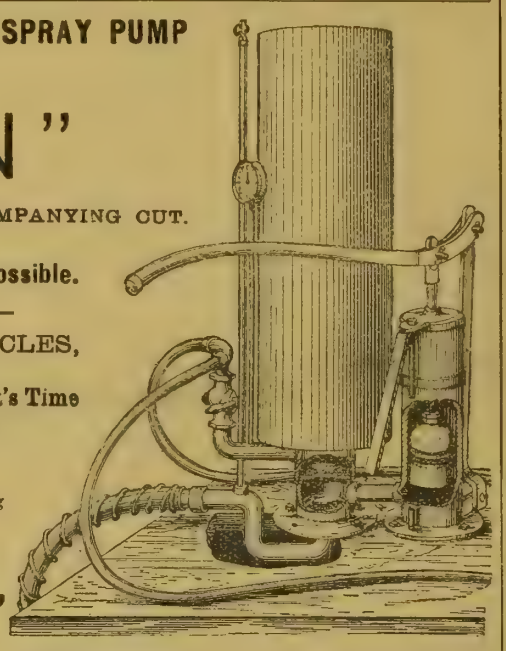
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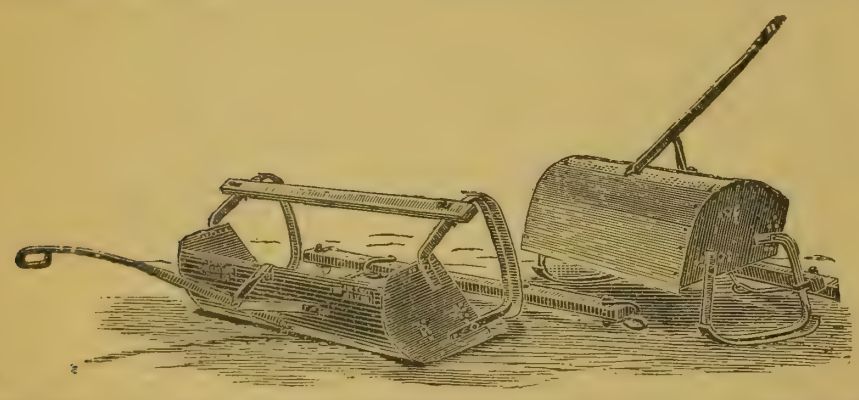
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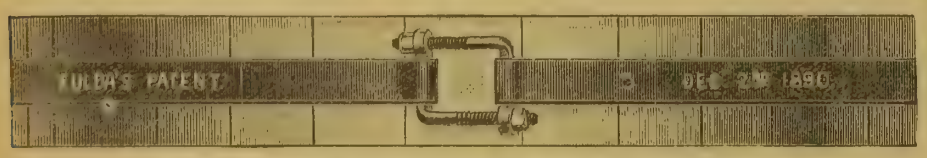
FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

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J. W. SCHMITZ, Supt. Miller & Lux.

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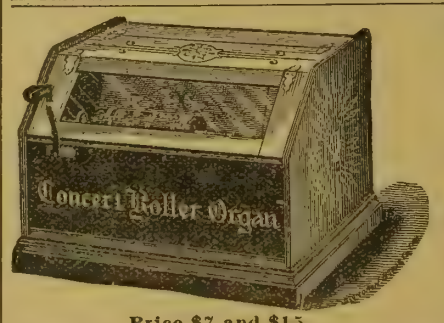
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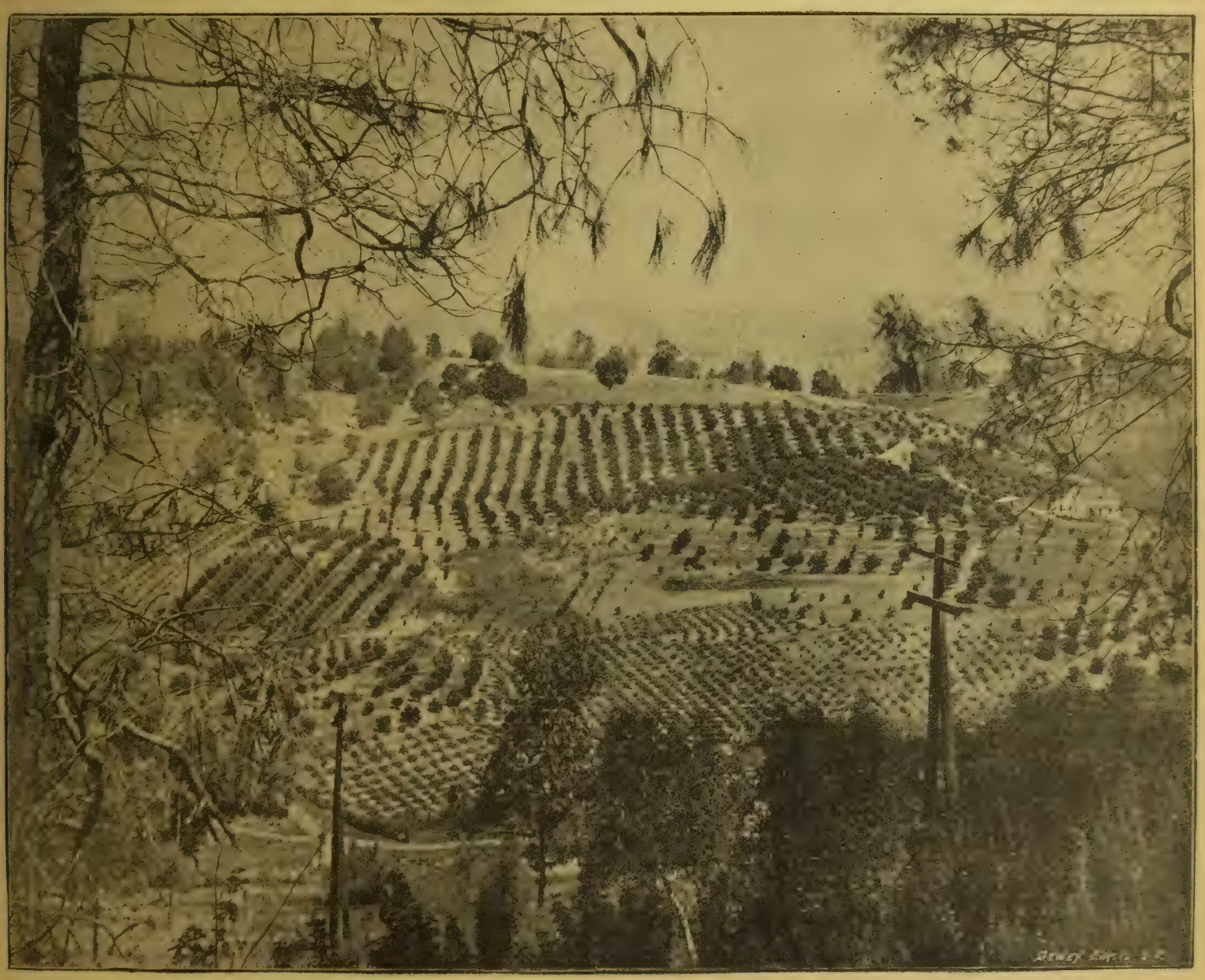
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PACIFIC RURAL PRESS

Vol. XLIII.—No. 2. SAN FRANCISCO, SATURDAY, JANUARY 9, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.



A REPRESENTATIVE FOOTHILL SCENE—WARM SLOPES COVERED WITH PRODUCTIVE TREES AND VINES.

A Fruit Scene in the Foothills.

To emphasize the RURAL'S interest in the holding of the Citrus Fair next week at Auburn, the "gem of the foothills," we publish in this issue two large engravings representative of foothill development in the horticultural line. These views are from recent photographs by W. R. Nutting, and as photo-engravings they bear upon their face the evidence of actuality. Perhaps handsomer views could be had, for the foothill region is one of exceptional picturesqueness, but our selection was from an industrial point of view as befits an industrial journal. We wish to show what is being done in the foothills, that others upon uneven lands in suitable climate may emulate the gratifying progress which is shown forth.

Upon page 25 may be found a broad view of a warm hillside terraced for fruit planting, with the trees planted and the irrigating furrows drawn. We have been fortunate in securing a careful article descriptive of this terracing from a gentleman well known as a fruit grower and agricultural engineer, who himself supervised the work. This view and the accompanying description will be found suggestive to many of our readers.

Upon this page the view is a typical one of foothill orchard and vineyard-growing, the scene in this instance being in Placer county. The branches of the Digger pine thrown across the sky, the slopes of the distant hills, the natural growth of timber on the uncultivated portions, are all characteristic of the foothills as nature made them. Amid such environment lies the improved slopes of the foothill fruit planter, the rows irregularly disposed to suit the contour, the large and small trees of successive plantings, the grower's plain but comfortable habitation and outbuildings—all these are comprised in a glimpse of foothill development, such as the visitor can obtain from the car windows or from the buggy seat along the pleasant roadways in the foothills.

There is something about foothill situations which the valley orchardist does not enjoy. There is a characteristic quality in the fruit which men may argue about, and that we will not discuss. There is, however, in the foothills a warmth of soil unknown in the valleys; there is a play of colors in the landscape which the artist cannot approach without the charge of exaggeration, an inspiring breadth of view, an exhilarating tone in the air—all of which are characteristic of the foothills, captivating visitors and turning their thousands to investment and progress.

It is not the season to see the foothills in their beauty. A month or more hence, when the fruit trees bloom and the wild flowers show forth their hues, and thence onward, until fruits ripen, the foothill visitor revels in natural loveliness. But there will be visible at Auburn, next week, something which will appeal to the industrial mind more forcibly

(Concluded

THE APIARY.

Notes on Bee Culture.

EDITORS PRESS:—The honey crop of Ventura county averages $60,000 a season.

Sweet clover is one of Utah's best honey plants.

Of the various industries in Colorado this last season, none have made more rapid progress than bee culture.

By the color and aroma of honey, an experienced bee-keeper can tell the plant from which it was gathered.

Bee culture is one of the most fascinating pursuits known; added to this, it cultivates observation and study, and furnishes one of the purest sweets known.—*American Bee Journal.*

Mr. Parker Barrows of Eagle Valley, Oregon, finds that bees do remarkably well there, 200 pounds being the product of a single colony.

According to the *Nebraska Bee-Keeper*, August is the best month in the year for bee-keepers there—more honey and more swarms in that month than any other.

Fruit and bee culture should go together; every fruit-raiser and farmer should have a few stands. They aid greatly in the fertilization of all fruit bloom.

In handling bees the less mashed the better, the scent of the poison angers the others, and peaceable bees are made cross.

G. M. Doolittle of Baroclino, N. Y., reports in *American Bee Journal*, that for the last 20 years he has averaged $1000 per season with his bees. He did not report the number of colonies that he keeps, but I think he generally has between 50 and 200 colonies.

How is the California toyan or holly propagated? I have planted the seeds two or three times, but never succeeded in getting a solitary plant to grow. I have also tried transplanting, but did not succeed.

I should be pleased to learn how to make toyan seed germinate.

When bees are seen carrying out almost fully developed brood, it is a sign that starvation is threatening them, or that the moth worms are at work. Beginners many times suppose that their bees have a disease of some kind, at this wholesale carrying out of brood; but the above mentioned facts are the real cause.

Mr. W. M. Bomberger, in an essay read at the Iowa State Convention, states: "You never saw a lazy or stupid person succeed with bees. The bee fever may sometimes get into the system of a lazy person, but after the first serious attack it leaves him in a sevenfold worse state. The successful bee keeper is an industrious person; a mechanic, a botanist, a good salesman and rarely a scamp. He gets all these truths from the hive. He can even get his religion from it."

I once wrote and asked a Monterey Co. apiarist, if he considered greasewood much of a honey plant. He replied as follows:

"There are two plants called greasewood; neither of them being honey plants. One is a bitter, aromatic plant, like artemesia or wormwood, in odor and taste, but with finely cut leaves. It covers whole mountain sides here in Southern California. It is called "old man" and "sage brush" but it is no more sage than a hog is a sheep. Indians put it on cuts to stop bleeding; it grows in tufts or bunches; some grow three or four feet high. The other kind of greasewood grows more like a bush; has wide leaves, and resembles a kind of chaparral. Both are plentiful here. I never knew bees to work on either, but have known them to starve right near it."

Now is the time of the year for bee keepers to read up on bee culture; to find out all the best and most profitable methods of running an apiary; the best hive to use, and how it is constructed; transferring, and how it is done; how to raise queen bees, and how to introduce them; this is very valuable, every apiarist should understand queen-rearing, and have his apiary composed of populous colonies of desirable races of bees, to know how to make and use comb foundation; he should also study up and read about queen-excluding honey-boards, proper spacing of frames, best section boxes and section cases, dividing and artificial swarming, the production of comb and extracted honey, and many other items of vast importance.

S. L. WATKINS

Grizzly Flat, Cal.

Beehives and Honey Sections.

EDITORS PRESS:—The Californians don't like to pay 30 cents for a section of honey, but prefer it to the 15c, 25c and 50c, and would like that 15c made a 10c size, which is hardly possible. The modern hives are all built for the 1 lb. (4¼x4¼x1⅞) section, which is the favorite size in the East. This makes a small square chunk of honey that the consumer pays 25c for in the East with reluctance. The 2 lb. section (5¼x6¼x2) is a size that is not adapted to any hive, while a size the double of it is not in the market. To accommodate my local California trade, I have made a 15c size (4⅜x4⅜x1⅞). This size gives a larger surface to the comb, and, with seven to the case, permits of a follower on the dove-tailed hive, which the old 1⅞ [illegible] not.

For my 25c size I have made my sections 6¼ [illegible] by 1⅞ wide. Three of these go [illegible] seven across, with room for follower. This size section has a larger surface than the old 5¼x6¼x2 inch 2 lb. section that sells for 30c, and still it can be sold for 25c, as it is ⅛ thinner.

The average Californian will buy 50c worth of honey just as quickly as he will the 1 lb. 15c piece of honey, and it is therefore policy to sell all you can in that shape. There is no section on the market that holds that amount, so I have had them made 6¼ inches high 8¼ long by 1⅞ wide. These sections lay on the long side in the super—two lengthways and seven across. All of the sections are made to fit the improved dove-tail hive and each case has a follower, and wedges to key up the sections tight.

It has taken no small amount of calculating to get all the parts just right, and to any one that desires to make these "California sections," I would add: Don't write to me for measurements, but send to the Clipper Gap Beehive Factory, Clipper Gap, Cal., where mine are made and get a sample hive complete at a cost but little above what the rough lumber would cost you. As the outside measures of all the supers are the same, a case of 50c, 25c and 15c can all be put on one hive if desired, and changed to the 15c size when the season is near the close, or each size can be run on separate hives.

E. H. SCHAEFFLE.

Mountain Bloom Apiary, Murphy's Cal., Dec. 29, 1891.

FRUIT MARKETING.

Fruit Production and a Market.

[C. C. THOMPSON of Pasadena before Pomological Society of Southern California.]

How shall we market our fruit? There is no industry on the Pacific Coast which is so great and important as the production of tree fruits, and the deciduous varieties seem to be the ones which interest the most, as the conditions are such that they can be grown in nearly all localities. Certain localities are better adapted to some varieties, possibly, than others; but let that be as it may, there is still room for vast amounts to be produced, and the future is going to demonstrate this fact, so that the question naturally arises: What are we going to do with it all? It seems to be a great question, but if properly handled can be worked out to the satisfaction of the producers. To do this, it will be necessary for the growers to sell more directly to the consumers.

As matters now stand, fruit goes through so many hands before it reaches the consumer that the price is so high that the consumption is very much lessened from what it should be; in fact, so high that but a few of the wealthier people can buy. When we travel through the country in the East, where we expect the largest consumption of our fruits, we find but a very few as compared to the total output. When we look into the matter, we find that the course which is pursued tends to lessen the use of our fruits rather than increase it. We may commence right at home and look at the character of the fruit that is kept on our fruit-stands. Much of it, but of course not all, is a class of inferior goods bought at a small price. Then, because it can be bought cheap and retailed at an exorbitant price, only a few can buy; consequently, it lays day after day until it is hardly fit for use. On the other hand, if people could get the same fruit fresh at a reasonable price and in a fresh condition, there would be a chance for the consumption to be largely increased. This application is not only true here, but in nearly all other places where our fruits are sold.

When I went East, a few years ago, in the city of Portland, Maine, I tried to buy some dried peaches, going to all the leading groceries but without success. I was told that if I should buy I would not do so a second time, as they were so bitter as to be unfit to eat—that they would taste as if they had been steeped in hop water. I do not know where they were in the habit of getting their goods, but I presume from some of the Eastern peach districts where they plant and grow the bitter kind. However, I bought a can of peaches, and sure enough they were very small and bitter, and of such a character as our canneries would not buy at all. Undoubtedly they were Eastern packed goods. That city is not the exception, for there are many places where they know but little about the superior quality of California fruit.

Do we believe that the present production is sufficient to glut the United States? If we do, we cannot have much courage to go forward and plant orchards, as we are now doing, for this country is only in its infancy in this as well as in many other things. We must go to work and make it a paying business. It seems to me there are many growers who put but little value on their fruit; growers will often sell at most any price offered, which at best is poor policy. It has a bad influence on the market. Unless we are growing fruit for what there is in it, we had better have no more than we can make use of in our homes.

The first thing to do is to value our fruits and then go to work to get the value out of them. While there are many ways to do this, they are all valuable to us and we had better recognize them. About the first thing for every one to do is to fix themselves for drying, and after the fruit is ready for market, we should have a well-organized fruit exchange. I see no reason why this course cannot be made profitable, at least no insurmountable obstacle. I am well aware that to handle dried fruits so far from an Eastern market, takes time and considerable money, and that there is quite a risk attending it. Therefore, those who buy our fruits must necessarily have a good margin and I know of no one who can take this risk better than those who produce the goods, for they have not the capital invested that the buyers have.

Then again, the plan of shipping green fruits and selling at auction in Chicago, as has been practiced in the northern part of the State, has been a source of considerable profit to the growers and should be encouraged here, as I see no particular reason why we have not equally as good facilities. If we were sending a few carloads each week from Southern California points, we would soon stimulate the market and strengthen prices. As it is, our canning establishments are very meagre as compared to even small production at the present time, and they are able to get sufficient supplies by buying only the very best. If we are to live and continue in the business as it is now, we might as well discontinue planting new orchards. This, however, we cannot afford to do. We must formulate some cooperative plan whereby we can handle our own business—do our own canning, drying, buying and selling. When such a scheme is broached, the first we hear is, "Oh, the producers cannot or will not stick together; that has been tried and proven a failure." Admitting this to be so, it does not prove that it necessarily must be the result always. While in some cases the business undertaken has not been carried on for a great length of time by the promoters of the enterprise, yet by being taken by other parties it has proven a great benefit to those who first started it, by opening up the way and making a market for their produce.

Cooperation on the part of the producers has worked a great benefit to them in many instances, and that is the greatest thing needed at the present time. Combine against those whom we supply with our productions! No; we don't mean this! While the producer is combined against by every institution under the sun, we have no protection; we have no voice in the matter at all. We take what is given us and we are not expected to say a word. Why? Because we are not expected to have anything more than an ordinary existence. The pleasures of life a producer is not expected to enjoy. "He ain't that kind of a fellow. No, he would not know what to do with it if he had it. He could not use it; he has no time for that. He must stay in the field and plow and cultivate from sun to sun; yes, from daylight until dark. That is good enough for him. We also combine against him; we are the fellows who can put on the style. We can enjoy the pleasures of life. We know how to do it."

Now, friends and producers, one and all, who is it that may enjoy life, too? It is the producer, the son of toil; for from his hand comes everything under the sun. Combine against those who stand ready to take our produce or the production of our hands! No; but we must study our interests! There must be some unity of action. We must look after our own business. There must be some organization among us. Let us have united action and then we will prosper.

We nearly all claim to be protectionists, but at the same time we do but very little toward protecting ourselves. We meet together year after year and talk over things pertaining to our business and neglect the very important one of how shall we organize ourselves that we may market our fruits to the best advantage?

A Foothill Peach Tree.

A peach tree is a very common sight in Placer county, but the one described in this article is *the* peach tree and should be classed as one of the seven wonders of the county. It is on the ranch of H. B. Gaylord, two and a quarter miles from Auburn. It is five years old and has borne four crops of fruit. In June, 1886, three trees were noticed in front of the residence, and just to see what they would do, were left to grow as they were. The winter of '86 and '87 they remained green all winter. In December, 1886, the largest one was taken to the Citrus Fair at Sacramento, not with a view of taking any premium, but just to show what Placer county climate and soil could do. This tree was 2½ inches in diameter and six feet high. What became of it is not known. Of the other two, one had been budded to nectarines, the fruit of which took the first premium at the District Fair in Auburn, in 1890. The other still remains where it first sprouted. It is now 25 feet high and measures 2 feet and 3 inches in circumference at the ground. Twenty-one inches from the ground four branches start out, measuring respectively 16, 15, 13 and 9 inches in circumference. The following is the number of boxes of peaches taken from the tree and the amount received therefor: 1888, 17 boxes at 75 cents per box, $12.75; 1889, 26 boxes at 70 cents per box, $18 20; 1890, 23 boxes at $1 per box, $23; 1891, 40 boxes at 40 cents per box, $16. Total, 106 boxes, $69.95. The tree is a seedling from the Salway, but is a much finer flavored peach. When such trees can be raised from the seed, we can see no use of budding. As the name suggests, it is a Challenge tree, and we challenge any one to beat it.—*Auburn Republican.*

FARMERS' INSTITUTES.

The Institute Work in Wisconsin.

We have received a copy of Bulletin 5, Wisconsin Farm Institutes, which outlines the meetings of 1891 in that State. It is edited by W. H. Morrison, the able superintendent of Wisconsin Institutes. In it we find much relating to the progress of the Institute effort, and we shall reproduce a few paragraphs.

At one of the meetings, ex-Governor Hoard said: "Everywhere I go, every successful man in farming recognizes the great value, force and strength of these Farmers' Institutes, which shall take hold of the farmers and unite them in an intelligent study of that which maketh for peace and righteousness and a better reward of agricultural effort.

"Now, these things are in the line of intense common sense. I would not give a fig for any sense that is not common enough to be down where I live. We have watched and prayed and worked for these Institutes, that they might make the waste places of our beloved State to blossom as the rose, and they have helped to do it. They have done a vast amount of good, because they have brought us together, and when we come together, we warm and cheer each other, don't we? When men come together and honestly, patiently and intelligently think with one another concerning the things that interest them so much, they are bound to help one another. My friends, the Institute work of our State is a blessed work if we can keep it along this line.

"We want to hold right steadily in the conduct of the Institutes to the technical work of the farm. We don't want to dabble in politics, we don't want to mix up in religion, we don't want to mix up with anything on earth, but stick to this. Give to me a larger judgment of my duty as a farmer, and how to encompass the problems of my work, and then I will bless the Institutes. The judgment of men is enhanced and enlarged and benefited by rubbing together. You know the old-fashioned saying in Vermont when they go sleigh-riding and the boys and girls all tumble into the sleigh. 'Lay the brands close if you want a good fire.' You need that motto here in the Institute work; we need it in the State. There is no man that needs to range up alongside of his neighbor more than the farmer, and may God bless him in his efforts in that direction."

The Institutes and the University.

Prof. W. A. Henry, in speaking of the Departments of Agricultural Instruction at the University, said:

"The third feature of our unique system is the spread of agricultural knowledge throughout the whole community, through the medium of the Farmers' Institutes. The Institute is just as much a part of the University and the Agricultural Department as the Experiment Station, or the teaching of agricultural studies within the college walls. Every person who attends an Institute is a student of the University as much as though he had registered with us at Madison. The Institute system is based upon the idea that knowledge should be as free as air and water, and that our farmers are anxious and willing to avail themselves of everything that is useful and will help them to better follow their vocation. Many years ago the farmers began coming together each winter for the purpose of discussing agricultural questions and making themselves better farmers and better citizens. These gatherings were under the name of Grange meetings, Farmers' Clubs, meetings of various State organizations such as the State Agricultural Society, the State Dairymen's Association, etc. Each of these filled its mission and has done a great work, but the Institute, managed as it is from the University as a central point, gathers together all the great agricultural forces of the State into harmony, and carries more information and distributes it better than was ever before possible.

"When first started, there were those who expressed the opinion that, though popular for a time, the Farmers' Institutes would soon die out, and there are those within our borders today who still believe it short-lived. From the first I have affirmed the contrary, basing my reasons upon my knowledge of Wisconsin farmers and human nature in general, and I have seen no cause to change my opinion. When the horticulturist ceases to care for horticulture, when the horseman ceases to care for the horse, when the stockman's eyes grow dull as he listens to some practical paper on the care and management of our domestic animals; when men are so well posted in the growing of farm crops that no better methods can be employed and no larger yields obtained; when the owner of 160 acres of good Wisconsin soil is content to doze over the winter fire and care for nothing outside his boundary fences, then there will be no demand for the Farmers' Institutes in Wisconsin; but until such a time comes, the Institute has its place among our educational factors. My only fear is that interference may come from those who would rather farmers should not gather in meetings of this kind, and grow intelligent in the discussion of all things that work for and against them; or, perhaps trouble may come through the jealousy and enmity of a few who would rule where they cannot rule."

HORTICULTURE.

Citrus Fair at Auburn.

The California State Citrus Fair for the counties outside of the Sixth Congressional District will be held at Auburn, Cal., during one week, commencing Jan. 11, 1892.

There will be awarded $2500 cash premiums. The Southern Pacific Company will return exhibits free of charge on presentation to the agent at Auburn of a certificate from the Superintendent of the Fair that the property has been on exhibition and has not changed hands. Wells, Fargo & Co. will also transport exhibits at special rates.

Premium List—Open to Producers Only.

CLASS 1—COUNTY EXHIBITS.—First premium, $250; second, $150; third, $100; fourth, $50.

CLASS 2—BUDDED ORANGES.—Largest and best exhibit budded oranges grown by exhibitor—First premium, $200; second, $100; third, $75; fourth, $50; fifth, $25.

CLASS 3—BUDDED ORANGES.—Best 12 budded oranges grown by exhibitor—First premium, $10; second, $9; third, $8; fourth, $7; fifth, $6; sixth, $5; seventh, $4; eighth, $3; ninth, $2; tenth, $1.

CLASS 4—SEEDLING ORANGES.—Best exhibit of seedling oranges by producer—First premium, $100; second, $75; third, $50; fourth, $25.

CLASS 5—SEEDLING ORANGES.—Best 12 seedlings shown by exhibitor—First premium, $10; second, $9; third, $8; fourth, $7; fifth, $6; sixth, $5; seventh, $4; eighth, $3; ninth, $2; tenth, $1.

CLASS 6.—Best two standard boxes budded oranges packed for market—First premium, $15; second, $10.

CLASS 7.—Best two standard boxes seedling oranges packed for market—First premium, $15; second, $10.

CLASS 8—LEMONS.—Best display of lemons—First premium, $50; second, $30; third, $20; fourth, $10.

CLASS 9—SHADDOCKS AND PUMALOS.—Best display of Shaddocks and Pumalos—First premium, $5; second, $3; third, $2.

CLASS 10—OLIVES.—Largest and best display of olives—First premium, $25; second, $15; third, $10.

CLASS 11—PICKLED OLIVES.—Best display of pickled olives—First premium, $20; second, $10.

CLASS 12—OLIVE OIL.—Best display of olive oil, First premium, $30; second. $25; third, $15; fourth, $10.

CLASS 13—PERSIMMONS.—Best exhibit of persimmons—First premium, $5; second, $3; third, $2.

CLASS 14—POMEGRANATES.—First premium, $5; second, $3; third, $2.

CLASS 15—RAISINS.—Best display of raisins—First premium, $100; second, $75; third, $50; fourth, $25.

CLASS 16—PRUNES.—Best display of dried prunes—First premium, $40; second, $25; third, $10.

CLASS 17—PRUNES.—Best dried prunes—First premium, $10; second, $5.

CLASS 18—FIGS.—Best display—First premium, $25; second, $20; third $15; fourth, $10.

CLASS 19—DRIED FRUITS.—Best general exhibit—First premium, $50; second, $30; third, $20; fourth, $10.

CLASS 20—PRESERVED AND CANNED.—Best exhibit by other than packers—First premium, $15; second, $10; third, $5.

CLASS 21—NUTS.—Best general exhibit—First premium, $25; second, $15; third, $10.

CLASS 22—NURSERY STOCK.—Best exhibit grown by exhibitor, to include seedling and other stock—First premium, $25; second, $10.

CLASS 23—APPLES.—Best exhibit of apples by producer—First premium, $25; second, $20; third, $15; fourth, $10.

CLASS 24.—PEARS.—Best exhibit of pears by producer—First premium, $10; second, $5; third, $3; fourth, $2.

CLASS 25.—Most artistic exhibit, $50.

Rules and Regulations.

1. All exhibits must be in position and readiness for examination by 12 o'clock noon, Tuesday, January 2d, and no premiums will be paid on any article on exhibition unless properly entered on the books of the General Superintendent before that time, and properly placed in position in the place assigned them for exhibition.

2. All exhibitors must obtain a card with number on from entry clerk to agree with exhibit. This card must be kept in a conspicuous place on or near the exhibit.

3. No article or exhibit entered for premium can be removed before the close of the fair without permission of the Superintendent.

4. Competitors must be producers.

3. Free cartage in Auburn for all exhibits.

Officers.

G. W. Hancock, Director; Wm. B. Gester, General Superintendent (to whom exhibits and correspondence should be addressed at Auburn). Advisory Committee—Fred C. Miles, D. W. Lubeck, W. B. Lardner.

Diseased Trees.

During the past week or two, State inspectors have seized and condemned a large number of diseased fruit trees, imported from the East, aggregating in value about $5000. The first of the recent seizures took place at Auburn, where a carload of disease-infected trees arrived. They were found to be infected with several diseases entirely new to California, and were condemned as a preventive against the spread of the contagion. The cost of the trees was about $2000.

A few days ago, 12 large cases of these Eastern trees arrived at Mountain Vineyard, where they were examined by one of the inspectors and found to contain the deadly curculio. This insect principally infects plum, prune and apricot trees. The entire 12 cases were condemned and seized, after being held in quarantine for a short time.

At San Jose, two carloads of trees were quarantined, and they have since been condemned. The cost of the trees seized at Mountain Vineyard and San Jose was about $3000. Several more seizures have also been made in the southern part of the State.

"I have received any number of protests from Eastern nurserymen," said Secretary Lelong of the State Board of Horticulture yesterday, "but I pay no attention to them. The introduction of these infected trees into California would imperil our fruit-growers' interests, and the county boards and inspectors are keeping a vigilant outlook for every carload that comes here. The Eastern men acknowledge that their trees are infected either with the 'yellows,' a disease of the Eastern peach, or with the curoulio, but they claim that these diseases could not develop in this State, on account of the climate. This is an error, however, as experience has taught us, and we propose to continue to wage war against every lot of infected trees brought into this State."—*Chronicle.*

Humboldt Fruit Farms.

EDITORS PRESS:—A short time ago, several capitalists from Eureka came to Blocksburg and inspected the Casterlain ranch. The result of their trip was a joint-stock company with a capital of $32,000 purchased 320 acres of land, and operations have already begun, to convert this tract into an orchard. This winter the intention is to put out 40 acres prunes and five acres apples. I understand that Mr. Casterlain will place the balance of his ranch on the market, in 40 and 80 acre tracts.

There is a movement on foot in Blocksburg that will be of great benefit to this section, but I will reserve it for my next letter. The proposition to bond the county for roads is progressing. It is evident that there is a proportion of our people who don't want roads, and the way they take to confuse the issue (but few men have come out in print against roads) is to yell "railroad." In case the railroad appears, will it not make more travel for the wagon roads?

For one, I am of the opinion that it is in order for the obstructionists to rise and explain. When the time comes, they will fight a railroad worse than they do now good wagon roads; but with good wagon roads and new industries started, the "iron horse" will take care of himself.

What I will have to say may be uninteresting to your readers in a section where the people have traveled the road we are just getting ready to set out on. To those I will say, you can aid us by your own experience and advice, and let Humboldt profit by it, and I know of no better channel of reaching us than through the pages of the PRESS, as it has many readers in this county. I refer to the converting our grazing lands into fruit farms.

I will take, for example, the "Martin Ranch," and what I have to say will apply to any tract of land suitable to fruit-raising. This tract contains about 500 acres, and is at present leased for farming. It is well supplied with water by numerous springs, and, besides, there are two large creeks—one on either side, which can be brought on the land—in fact, one creek is at present used for irrigating.

This place is very level for hill land, and slopes gently toward the south and west, and the soil is well adapted to fruit culture.

One can see at a glance this farm is well adapted to any kind of crops, but nearly all of this class of land is well watered and has the other qualities that will force it to the front. One can form a company or partnership, or they can form a joint stock company, as they may choose.

The first thing is to get a practical man that understands the business to assume the management. At present, there are about 70 acres under cultivation, and they should plant at least 30 acres in fruit per year.

Expenses must be curtailed in every possible way. What I mean is, two dollars does not want to be expended when one could be made to do the work. My idea would be to lease the place as soon as the company gets possession, for, because you are using 30 acres for fruit, it is no reason why you should let 400 or 500 acres lie idle. And before the trees are planted, it is much better if the land could have been farmed a couple of years previously, so as to be in a high state of cultivation, so that the weeds would be destroyed, and in future it would take much less work to keep it in order.

Now, it will take considerable hay and grain, vegetables, etc., for the teams and the families working planting trees. I would try to have the renter furnish these instead of paying cash rent. Every year the orchards are encroaching on the grain-fields. Let it be so stated in the lease that an amount of land shall be broken up each year equal to the amount planted in fruit trees.

It will be easier to rent to advantage here, as a flour mill will be in operation within two miles and the market for produce would be assured.

In this way, you could have your land cultivated ready to plant your trees and your vegetables, potatoes, horse-feed, furnished you free of cost; so much for not allowing the outside land remaining idle. From the time the trees are planted until they bear, one could plant corn, beans, tomatoes, potatoes and different berry bushes. This should not be rented, as you want to know who is working among your young trees. ED. ROBERTSON.

Bridgeville, Cal.

Peach Culture in the Kern Delta.

A few weeks ago, we gave an interesting essay on the peach in the Sacramento valley, and we are glad now to present a view of the same grand fruit from the southern end of the great valley of California. We quote from the Bakersfield *Echo* as follows:

Kern county horticulturists have not yet definitely settled on what general variety of fruit to raise for market, and are by no means a unit in favor of any one kind. Even in the matter of peaches, our orchardists are not of one mind as to the best peach to depend on for a steady marketable peach. The soft peach, that depends on a local market (or at least short transportation) has its friends, who, of course, think it is the ne plus ultra on account of its tremendous size when grown on Kern county land (some claiming that a bushel of them will fill a barrel); and as it is very attractive and showy, has been propagated longer and more extensively than later varieties and crosses that have required years of careful training and experiment to bring them to their best. The limits of this article will not permit us to go into the details of each and every variety of the peach family, but for the general reader, we think it sufficient to here make mention of only the two general varieties—the soft peach represented by the Orange Cling, and the later and more solid shipping peach represented by the late George Cling. With the former variety, nearly every orchardist in the county has had some experience, and knows what our soil will do in perfecting that fruit. The wonderful size and beautiful perfection of this sort of peach have become such an old story with old residents that nowadays an Orange Cling weighing a pound avoirdupois is no curiosity whatever, and a man to carry off the palm must bring one to the front that can tip the beam at 24 ounces. It is difficult indeed for Eastern people who have never seen a peach that weighed over ten ounces to believe that a California peach tree could survive the birth and perfection of a 16-ounce peach, but our ordinary orchards perform the feat every summer, and never crack a smile. This fruit is very rich, juicy, well flavored, a rosy orange when ripe, and an orchard of this ripened fruit will rival the beauty of the famous orange orchards of Florida.

These two are set out as seedlings, about 20 feet apart each way, and the second year after setting out will average 650 pounds of marketable fruit per acre. The third year the fruit is much improved in quantity and quality, and the tree has nearly reached its prime, yielding about three times as much fruit as the year previous. About the sixth year the trees are up to their speed, yielding an average of 280 boxes (20 pounds per box) per acre, the selling price of which, actually received, was $40 to $45 per ton, or $125 per acre. The seventh year of the orchard showed 16,000 boxes on the original 20 acres, or 800 boxes per acre, which, at the prevailing market price (50 cents per box), yielded the owner a return of $400 per acre. But besides the ripe fruit shipped, the same orchard also furnished four tons of first quality dried peaches, which sold for 11 cents per pound, or $880 more to the credit of 20 acres of Kern land.

This year (1891) the orchards fairly outdid themselves, one 25-acre tract producing 24,000 boxes of first-class ripe peaches, and enough second quality fruit for 25 barrels of as fine peach brandy as a native Kentuckian could wish for.

With more and better railroad facilities, such as refrigerator cars and rapid transit, the Kern county soft peaches can be put on any of the markets of the country, and by their superior excellence as a table fruit, can dictate terms beside any other peach on earth.

The most perfect representative of our late peaches is the Late George Cling, a variety maturing in September, after all the other varieties are dead and buried, and as a general thing, has the market to itself. This variety of the peach family has had a remarkable history as to its propagation and ultimate perfection, this county finally answering all the requirements, and bringing the Late George to a greater degree of perfection than any other part of the United States, other parts of California not excepted. About seven years ago, a nurseryman by the name of Taylor, came to Kern county with a new kind of peach, almost in despair of ever finding soil and climate, both adapted to his pet variety of fruit, which he had brought with him. One or two of Bakersfield's citizens took hold of the experiment, resolved to give it a fair trial under the firm conviction that Kern county could perfect any fruit that a sensible man ought to raise. Without a single hitch anywhere, these began to thrive from the start, and the second year produced a few specimens of a fruit that was destined to be second to none as a money producer. Several counties of California had previously the same Late George Cling, but in every case, failure of some sort resulted. In some cases "curl leaf" attacked the trees; in others, the fruit positively refused to take on a healthy ripening color, but rather resembled a sickly, half-baked pancake; in still other cases the trees passed into a decline, followed by a speedy death. As a last resort, Kern county soil and climate were tried, and the results are given below.

In 1885, the first of these trees were set out near Bakersfield on the ordinary soil (river wash) on prepared ground, 20 feet apart, and from the very start their growth was steady and rapid. The third season the fruit showed what the climate would do toward its proper ripening, and the fourth year the crop was sold on the ground in September for $250 an acre.

In the table below may be seen the figures showing the actual results, accomplished in one of the Kern county orchards, of the Late George Cling variety. We could have used the higher figures reached by another orchard, but we choose rather to strike a happy medium and be somewhat conservative rather than quote the largest results. The following figures are on a basis of ten acres:

Cost of land at $75 an acre	$ 750
Preparing ground and setting out trees	400
First year's irrigation and cultivation	200
Second year's irrigation and cultivation	100
Third year's irrigation and cultivation	100
Fourth year's irrigation and cultivation	100
Cost of picking fruit	90
Total expense	$1,640
Fruit sold on the trees at $41.65 per ton, 60 tons	$2,500
After deducting all expense	1,640
Profit on ten acres, besides paying for land	$ 860
Profit on each acre	$ 86

In 1890, this same orchard, with the slight expense of cultivation and irrigation, yielded a cash return of $3600, or $360 an acre. In 1891, the same tract yielded over 96 tons of first-class marketable fruit.

Besides the market for ripe fruit in boxes, there still remains the constantly growing demand for dried fruit and canned peaches. These two articles are rapidly coming to the front, and then it will make no difference to an orchardist whether he ships a single box of ripe fruit or not, for he can either can or dry every peach raised on his trees. As an instance of this matter of dried peaches, one of our peach-growers dried 7000 pounds of peaches from a six-year-old orchard, which was not quite three per cent of the years crop, and sold the dried fruit at 11 cents per pound.

Kern county will produce any fruit in the peach line that the American palate may demand, and it has been repeatedly proven that they are brought to a greater degree of perfection here than elsewhere. Now the test question is: What is the best variety? We may answer, to the best of our observation and experience, as the managers of a State Fair in Georgia did when asked why the first prize was given to an exhibitor of a razor-backed hog: "A hog to take the cake in Georgia must be able to outrun a crow—that is, he must be the animal best adapted to the country." We verily believe that, for all purposes, the Late George Cling is the peach best adapted to Kern county.

Placer County Fruit Shipments.

In view of the holding of the Citrus Fair in Placer county, it is specially interesting to note the following statistics, just published in a pamphlet by the Placer county Board of Trade. During the two seasons of 1890 and 1891, the following shipments of green fruits from Placer county were made from the several stations noted:

	1890—lbs.	1891—lbs.
Newcastle	9,000,000	11,786,360
Penryn	1,500,000	4,905,438
Loomis	800,000	1,237,640
Colfax	800,000	537,000
Auburn	800,000	506,585
Totals	12,900,000	18,973,023

The Placer county shipments for 1890 were nearly one-fifth of the total fresh deciduous fruit shipments of the whole State, or nearly one-tenth of the total fresh-fruit shipments, both citrus and deciduous, from California during that period.

The Placer county shipments for 1891 show the enormous increase of 47 per cent over those of 1890.

THE BEAN BELT.—Ventura county claims the honor of being the most prolific bean-growing section in the world. The Los Alamos *Central* says that one ranch of 2200 acres has produced 1030 tons of Lima beans this year. It took 31,000 sacks to hold the crop, and they will fill about 103 cars, on the average of 10 tons to the car. This will make eight or nine solid trains of beans. But this is only from one ranch. The railroad company expects to handle 1500 carloads of beans on the Ventura division this year, which, at $22 per ton if shipped East, means $133,000 in their cash account.

WILL PROTECT HIS OWN BRAND.—It is announced from San Jose that J. E. Gordon has declined to fill an order from a big firm in France for $30,000 worth of dried prunes. His reason for refusing is that the firm wished the prunes shipped in bulk, so they could be packed and placed on the market under a French label. Mr. Gordon says he will sell no prunes in this way, but all the product disposed of by him must bear his own brand and show that they came from the Santa Clara valley.

A LUMBER COMBINE.—Reports are again current of the collection of the largest lumbering interests and outfits of this State and Southern Oregon into a combine with English capital.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST, by addressing the publishers.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The Grange is a secret organization. It has a local, a county, a State and a National organization. It is strictly a farmers' fraternity. Inquire about it, study its Declaration of Purposes and its Constitution, and then join the nearest subordinate Grange. If there is none in your vicinity, send for documents and instructions to A. T. Dewey, 220 Market St., San Francisco, Cal.

It is Happy New Year, so bring out all your good resolutions.

If you were asked by a young man about to engage in farming, what line of farming he should pursue, how would you answer? The hop grower, the fruit grower, the wheat grower, the sheep raiser, the cattle man, the grape grower, the poultry man, the dairy man the swine raiser, the horseman, each would advise to engage in the other man's business, and yet none of them are quite willing to follow the advice given. Perhaps they agree with the adage, "'Tis better to bear the ills we have than flee to those we know not of." And after all, the life of the farmer compares most favorably with that of any other vocation. He generally enjoys good health; a good name; has plenty to eat; comfortable, but not stylish clothes, and a superabundance of employment. The farmer hardly knows what it is to be "out of a job." There are hundreds of young men who claim to want a "steady job." To all such, let me recommend "a farm of your own."

The new word is obtainable by those Granges square on the books. Ask and ye shall receive, seek and ye shall find—the *A. W.*

Look out for oleomargarine! A dealer in San Francisco has been arrested for selling bogus butter.

The following question has come to me: "Is there anything in the Master's Instructions, or in the Fourth Degree Ritual, or in the Digest, or in the Constitution and By-laws, or in the Declaration of Purposes, which is in any way or at any time to be held above a Fourth Degree member in good standing?" To which I answer: "I know of nothing except the A. W., and that is to be given under proper conditions and circumstances to the Fourth Degree members."

Question 2. What is the meaning of "Week's Notice" where it occurs in Art. 8, State Grange By-laws? Answer: "It means just seven days."

Question 3. What is the meaning of "Three black balls shall reject and one shall cause the application to lay over one week?" Answer to this is found on page 60, paragraph 23, known as Decision 69 of the National Grange. To be found in Digest of 1890.

Question 4. Shall the Master announce the result of all ballots and other votes of the Grange? Answer: Yes.

Question. How far ought the Master of a subordinate Grange go in maintaining order in the Grange? Answer: The Master is required to exercise the supreme authority with which he is invested in maintaining order in the Grange, and in enforcing obedience to the Constitution and laws of the Order. He must first know the laws, else he cannot enforce them.

The season of installations!

Hard times, these, on the poultry yard and larder.

Four hundred and twenty-nine Patrons received the seventh degree of the Order of Patrons of Husbandry, at Springfield, Ohio, at the last session of the National Grange. Who will say that the Grange is languishing? And who will dare say we do not have "Our Four Hundred"?

Bro. Past Master Flint makes a good hit when he says: "When you pay your store bill, insist on its being itemized to the most trivial article." This is correct. If our Worthy brother, who always hits the nail, will allow, we would add: "When you buy, keep an itemized account yourself, even if you pay the cash, but assuredly so if you buy on time." Better pay as you go—that is Grange doctrine.

The "Journal of Proceedings" of the 25th annual session of the National Grange, held at Springfield, Ohio, is at hand. In a short time a copy will be in the possession of every subordinate Grange in California. It is my wish that the Lecturer will at once inform himself of the work of the National Grange, then at each meeting of his subordinate Grange, read so much of the proceedings as will interest and instruct the membership. Don't be tedious; don't be too anxious to read too much at one meeting, but select such points and such reports as will most benefit your membership. Remember, the Grange is a National organization, and in the proceedings of the National Grange, you find a record of what is said and done for the entire organization. The broadest view of the fraternity is had from the National Grange. Try to get good from the thoughts recorded in this journal for your Grange and for yourself.

You have read the stories of the Mound-Builders. If history teaches aright, and there are many evidences—mostly circumstantial, it is true—that it does, they were a thoughtful and industrious people. There was much method in their labor. Nor were they devoid of some degree of architecture. That they were over-industrious is manifest from the great amount of work they did to accomplish the end they had in mind. It has often occurred to me that if the members of our Order would but put forth half the effort the original Mound-Builders expended, that we would have architectural monuments, beautiful and strong, in the name of subordinate Granges, far more useful, far more honorable and far more enduring than were the structures of the original Mound-Builders. Isn't it worth our while as an Order, isn't it worth your time and labor as a member of that Order, to build monuments in every county and town in our State, that will redound to our credit while we live, and to the benefit of humanity when we are gone? Let us, as an Order, whose entire membership are soil-tillers, begin the work of Grange—Mound-Building.

From State Lecturer.

[J. D. HUFFMAN, Lodi, Cal., L. S. G. of Cal.]

Sec'y State Grange—DEAR BRO.: I am feeling able to-day for the first time in three weeks to write you. For that space of time I have been confined to my bed with pneumonia, and this is now only the third day I have been up or you would have heard of me among the Granges somewhere ere this. I would suggest that the subject for discussion at the last meeting in January and the first meeting in February of the subordinate Granges be the "Free Delivery of the Mails in Country Districts," and forward a petition, if favorable to it, to the Legislative Committee of the National Grange, John Trimble, Washington, D. C. * * * Fraternally, J. D. HOFFMAN.

[Many will regret to hear of the Worthy Lecturer's illness. We wish him speedy restoration to good health and strength.—EDS. PRESS.]

We Should Pull Together.

EDITORS PRESS:—How many tillers of the soil realize the full meaning of the words, "In Union there is Strength?" I am reminded of these words by talking up the Grange a little among my neighboring fruit growers and asking the question, "What papers do you take?" and am surprised at the total indifference manifested by so many, both toward the Grange and in regard to their reading matter. They seem to be more interested in the latest divorce case or murder trial, or slogging match, than in the problem how to further the interests and improve the condition of the farmer; yet one and all growl at the small returns for their products, curse the commission merchant and transportation companies and swear a blue streak at Congress and the State Legislature, but do nothing to better their condition. If the farmers of this State could only realize their power united and would unite and pull together, what couldn't they accomplish? Suppose, for instance, every farmer in the State was a Granger, and it was understood by all political parties that the Grangers would scratch the name of every candidate for a legislative office known to be indifferent to the wants and needs of the farmer. Would not they think the second time before allowing the "boss" to put Pat O'Flaherty on the ticket because he could control the French vote, or Hans Pantosky because he had the American vote in his vest pocket. Yes, they would ask themselves, and very seriously, if the pesky Grangers would swallow Pat and Hans. Divil a bit av it. Then, knowing certain defeat was the doom of such men, they would name for the place plain John Black or William Brown, men known to be in sympathy with the farmer, because they know what every man should know, that when the farmer is doing well the whole country is prosperous.

Well now, why is it this is not done? Why, because the farmers do not pull together, and if any one suggests Grange to them as one of the remedies, or Farmers' Alliance as another, they say. "Oh, I've voted my regular party ticket straight all my life and can't go back on it now;" (without knowing why they do) and as a consequence are supporting a lot of foreign rabble that in their native land would be either in the poor house, or jail (where they properly belong) and who care and know less about the laws of, or about framing new laws for, our country, than any farmer's ten year old boy.

I can't understand why any farmer of ordinary sense or with any feeling of patriotism should allow this thing to go on when if we would remember that in union there is strength, and unite by all coming into the Grange, and read in addition to a daily paper some good agricultural paper, and insist that good men and women be elected to office; laws would then be made and the government conducted in the interest of the whole people, including the farmer; rates of transportation would be placed on a just basis; the railroads would not be having a surplus of two or three millions each year while the farmers were figuring out a loss; officers would work for their salaries and would themselves get the money for their labor, instead of the political boss; useless commissions would be abolished and the members of those retained would earn their pay and get it; taxes would be reasonable and we would live more on the principles of "live and let live.

A GROWLING GRANGER

Vacaville, Jan. 1st.

FARMERS' ALLIANCE.

Our Alliance Edition contains, additional to this page Alliance news which subscribers can receive WITHOUT EXTRA COST, by applying for the same

The Womans' Alliance.

The National Womans' Alliance was organized at Topeka, Kansas, Sept. 27, 1891. The objects of the association is to establish a bureau for the better education of women on social and political questions, and to develop a better state, mentally, morally and financially, with the full and unconditional use of the ballot. The following is their Declaration of Purposes:

In view of the great social, industrial and financial revolution now dawning upon the civilized world, and the universal demand of all classes of our American citizens for equal rights and privileges on every vocation of human life, we, the industrial women of America, declare our formation of this organization as follows, viz.:

1st. To study all questions relating to the structure of human society, in the full light of modern invention, discovery and thought.

2d. To carry out into practical life the precepts of the golden rule.

3d. To recognize the full political equality of the sexes.

4th. To aid in carrying out the principle of cooperation in every department of human life to its fullest extent.

5th. To secure the utmost harmony and unity of action among the sisterhood, in all sections of our country.

6th. To teach the principles of international arbitration, and, if possible, to prevent war.

7th. To discourage in every way possible the use of all alcoholic liquors as a beverage, or the habitual use of tobacco or other narcotics injurious to the human system.

In the Valley.

The Alliance meetings held at the different points during the present month throughout the county mainly have been very successful; but unfavorable weather interfered with some meetings, and at the Monson appointment there was no place to hold a meeting, as the schoolhouse had been shut against the Alliance. At several points in Mussel Slough district, large and attentive audiences were in attendance, and very flattering reports are received as to the results of the meetings.

At Tulare, last Saturday evening, the attendance was small, on account of the heavy rain, which prevented many who would otherwise have attended. Mr. Clapp, however, delivered a very able address, and handled the financial and other questions in a way that showed he knew what he was talking about and how to talk. He showed by indisputable argument that in the contraction of the currency, legislation had been influenced by, and in the interest of the speculators and "financiers" of the nation, to the detriment of the industrial class and the legitimate business interests of the whole country.

Jas. McClellan, our County Lecturer, followed Mr. Clapp with an able speech, which was clear, logical and to the point. Such plain and practical talks as this, if heard by the masses, would have the effect to put them to think for themselves, in which event the future is safe.—*Tulare Valley Citizen.*

Calaveras County Alliance.

EDITORS PRESS:—Our County Alliance met on January 2d at G. A. R. hall. Owing to the fact that State Lecturer J. S. Gilbert was to be with us, there was an enthusiastic lot of farmers gathering in Burson as early as eight o'clock, and by ten, the hour for meeting, the hall was filled with "hayseed." The following resolutions adopted will tend to show how each one felt on the Alliance question, each and every member voting for their adoption:

To officers and delegates of Calaveras County Alliance:

We, your Committee on Resolutions, do beg to report as follows:

Resolved, That we extend to Bro. Gilbert, State Lecturer, our sincere thanks for his attendance upon our County Alliance, his advice and instructions, and wish him success in his work.

Resolved, That this County Alliance do most heartily indorse the action of the California State People's Party Convention, and the platform as a whole.

Resolved, That this County Alliance appreciate the benefits derived from the State Business Agency, and consider that it should on no account be abandoned, even if funds have to be raised in some way to pay its expenses over and above the commission now charged.

After all business was transacted the Alliance adjourned, each member more fully resolved to work with all his might and to encourage others to join with us in this work.

A MEMBER.

Burson, January 2, 1892.

The Campaign of Education.

No period in the history of the country has witnessed such an upheaval of public sentiment as the great movement of the Farmers' Alliance. For many years the Patrons of Husbandry have educated a large class of the producers in the essential principles of political economy, but for some cause that is not necessary to mention it failed to stir up the foundations of the structure of political organizations as is seen at the present. Whether this movement shall continue to mold public sentiment and control the policy of government is for it to determine. The element of strength up to the present has been the justice of its demands, and so long as we shall continue on the line of "equal rights to all, special favors to none," it will continue to grow and spread its broad principles from center to circumference of this mighty country.

But will it continue in this line? Will the conservative element be able to control its movements and demands? or will it be side-tracked by its enemies, by being induced to leave the successful and tried ways, and sacrifice the vantage ground of just and equitable position on all the issues of the day? We judge the future by the past; knowing that history is apt to repeat itself, and that nothing but eternal vigilance is the price of liberty. We believe in our country and our countrymen. We believe that a large majority of the members of our Order have the good of the masses at heart, and will continue to so shape its sentiments as to continue to receive the commendation of all lovers of justice.—*Alliance Mint.*

THE CALIFORNIA FARMER is successor to the *Farmers' Alliance* and *California* in Los Angeles. Our friend and old subscriber to the RURAL PRESS H. C. Dillon, esq., remains as president of the publishing company, and Mr. Burton will be the editor and business manager, making a good strong team.

THE State Executive Committee will not meet again in San Francisco until Tuesday, April 12th.

A GREAT LOSS.—Rev. M. M. Bovard, D. D., president of the University of Southern California, and one of the best-known Methodist clergymen on the coast, died December 30th of a lingering illness.



TERRACING FOR FRUIT GROWING—AN INTERESTING PHASE IN THE DEVELOPMENT OF THE FOOTHILL REGION.

Terracing for Fruit Growing.

Written for the RURAL PRESS, by P. W. BUTLER, of Penryn.

There is a strip of country on the east and north of the San Joaquin and Sacramento valleys, that extends their entire length, known as the "thermal belt." It lies in the first foothill lands that rise out of the valleys and is only a few miles in width. There is less frost here than in the valleys; and above, the cold steadily increases until the summit of the Sierras is reached. In this region a great variety of fruit can be grown of superior quality.

Many of the hillsides, however, are too steep to be planted to orchards in the ordinary manner, but during the last few years some of them have been terraced and planted to oranges and early peaches with results that are highly satisfactory. Both the fruits require abundant water, but the land on which the trees are grown must have perfect drainage. They will then produce fruit large in size, and in great quantity, and it will ripen earlier than where less water can be used, as I have noticed for some years the finest fruit and the first to ripen was always from trees that stood near water ditches on hillsides. The ground thrown over in terracing gives depth of loosened soil that makes a rapid and healthy growth of tree and fruit, that it is thought fully compensates for the cost of the work. The terracing gives picturesque beauty to the country, of the highest order known to practical horticulture, thereby creating a value beyond intrinsic comparison. Newcastle, with an altitude of 1356 feet, is in a direct line 6 miles northeast from Rocklin—altitude 249 feet. Loomis and Penryn being between the two places, and all on the line of the Central Pacific Railroad, the land rising at the rate of over 100 feet to the mile. Sacramento can be seen from each of these towns and is distant from Rocklin 22 miles.

A ridge of land beginning at Newcastle runs west some two or three miles when it curves toward the south for several miles, abruptly terminating west of Rocklin, and very near the town. A large portion of the land lying north and west of Rocklin, Loomis and Penryn, between the top of the ridge and the railroad, belongs to the individual members of the Placer County Citrus Colony. The sides of this ridge are being terraced by their owners and planted to oranges, from plans made by me, and the work in part has been done under my supervision. In the spring of 1888 the work was begun on a spur of land projecting from the ridge, containing 10 acres. This lies west from Penryn two and a half miles, northwest from Loomis equally distant, and in plain view from either place. Near the base of this hill, and at the point of central approach, is a cottage house, neatly built of split granite, that is now being used as a club house, for the Colony Club. Beginning just below this house I built a zigzag avenue up the centre of the spur to the top, on a regular grade of twenty inches to the rod. This makes an easy carriage road, the steepness of the hill being overcome by the continuous curving. After the terraces were made I paved the gutters on the upper sides of the avenue, changing to the opposite side at each curve. Pipes were laid across the road as the gutter changed sides, four inch pipe being used on the upper turn, increasing to eight inch pipe at the lower crossing, as in a rainfall the water is greater in quantity at the base than at the top of the terraces. From the highest part of this spur that was to be planted I began the terraces on each side of the avenue, the first being only a few rods in length, increasing with each terrace until the base was reached. The terraces terminate at the side of the avenue and have a grade of two and a half inches to the rod for the running of water in irrigating. The terrace step was made level with a bank slope of 45 degrees, varying according to the steepness of the hillside. The width of the terraces as measured on the slope, was about 25 feet on an average, but only from 12 to 20 feet was the width of the level part. Sidehill plows were used in making the terraces, and they were run back and forth until the work was nearly done, when it was finished with shovels, some dirt having to be taken from high points to low places in wheelbarrows. Recent experience, however, has made me familiar with an implement called a "V" which, following the plow does the leveling much more cheaply. This implement should be made especially for this work, which I cannot describe in this article. The trees were planted 18 feet apart in the row, and near the edge of the terrace, that they might stand centrally over the greatest depth of loosened soil.

Orange trees in this section should be planted in March, that they may become well rooted before summer, when the heat is liable to check their growth if planted late. Since planting this orchard I have been nearly all the time in Southern California, and have frequently visited the orchards of Riverside, Pomona and Redlands, and I find the trees on these terraces are as large, as vigorous, as healthy, and as uniform in size, as any in the favored sections of the south, that are of the same age and were of the same size when planted.

Among the visitors to this orchard when first planted were some English gentlemen. They were so impressed with the picturesque beauty of the place, and the surrounding country, that they purchased land adjoining, and in the spring of 1890 began to terrace and plant the hillside south of the terrace planted in 1888. Continuing last spring, they now have nearly one mile in length of the hill slope terraced and planted, and many more acres are to be planted in the neighborhood during the coming season. These terraces are irrigated by several lines of pipes laid from the top running down the face of the hill to the bottom. The distance between these lines of pipe is 330 feet. The pipes are laid under the ground, with faucets attached and coming to the surface, just at the base of each bank. Each terrace can thus be supplied with water by the opening of a faucet, and the trees can be irrigated for a distance of 330 feet, when another line of pipe is reached, this continuing along the entire length of the orchard. Near the center of this planted tract is an avenue that runs diagonally over the face of the ridge to Clover Valley. I have made a paved gutter on the upper side of this avenue, into which runs all surplus water when irrigating, and all that may accumulate on the terraces from heavy rains. A deep furrow is plowed at the base of each terrace to conduct this water to the gutter.

Many Englishmen have already located here, some of whom are gentlemen of abundant means, who have brought their families, have built substantial houses, and have come to stay. Others have purchased land which they are having improved, and will come themselves as soon as they can arrange to leave their present callings. With their national thrift, they prefer to have their country homes where a good income can be derived from their investment, rather than have their country residences in some suburban town of San Francisco, where no income is ever expected, as in the Oakland or Santa Cruz highlands that overlook the towns, as the foothills here overlook the valley and the Capital City of Sacramento.

These terraces as they lie on the face of the curving ridge that encircles the sloping valley, are like "pictures hung on the wall" to travelers on the C. P. R. R. as they pass through the towns of Penryn, Loomis and Rocklin, and to the people who live in the vicinity they are a constant source of pleasure. When the face of this ridge from the Newcastle line to Rocklin becomes converted into terraced orange orchards, as the owners purpose doing in a few years; and when the trees attain good size, and come into bearing, they will present scenes of unique beauty unequaled by anything similar in the country.



His Work.

[Written for the RURAL PRESS by ISABEL DARLING.]

He had lingered long in that quiet place,
Where the shaded light from the window came
With caressing softness, and one warm ray
Of the outer brilliance stole in to lay
Close within the calmness a hint of flame,
Like the hidden fire in the steady gaze
That was seeking his from that pictured face.
Though the name of the artist he never knew,
A soft mist came over his restless eye.
"It is grand! It is great!" he said with a sigh.
"It is better than I can do."

Full across the stillness an organ spoke,
Swelling on and on in its solemn strength.
All the earth seemed ringing as heaven rings
With the glad, free joy that the spirit brings.
Till the distance shrank into space at length,
And the music quivered to silence; then
The regret came back to his heart again.
Through his voice again a deep sadness grew,
As the twilight shadows a summer sky.
"It is grand! It is great!" he said with a sigh.
"It is better than I can do."

Then a child with quiet and downcast look,
And uncertain steps, fluttered softly near.
From all beauty, from music alike shut in,
And shut out from knowledge of human sin,
No ambition brought him remorse or fear;
Not a power seemed his, but the power to feel.
Yet his mute, rebukingly sad appeal
Drew this soul that hoped and could learn regret,
Till it filled with tenderest pity, yet
By the power of spirit to *feel*, alone,
Could the helpful wish of his heart be known.
As all sight and sound he translated then,
He forgot the contests of other men.
Till they *felt* the way to each other's thought,
Till the deaf could speak, and the child had caught
The first hint of beauty it ever knew,
Brought within the sight of the inner eye.
It was grand! It was great! He forgot to sigh
To do better than other men do.

A Man's Complaint.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

I had a thousand friends, as all well knew,
Yet my one enemy alone was true
Unto his post, at last, when I took ill,
With little left worth naming in my will.

I'd caught a cold, and so I coughed and sneezed,
And, all in all, I felt like I'd been squeezed
Through a clothes-wringer—body, purse and lands,
And limp and helpless hung my empty hands.

I'd shot my Touser, thinking he was mad;
And then my old gray mare a mule colt had;
I'd sent a rake kind greeting, and I'd sent
My old-time friend, I'd sue him for back rent.

Business was slack and bills came in too fast,
And to cap all, a stealthy Arctic blast
My orchard struck just as the fruit had set;
That was the sorest part of my regret.

My lands had been my mainstay, and my trade
Had in its revenue no showing made
Compared with that of my wide blooming fields,
Which brought some thousands in their yearly yields.

Then, too, my fav'rite horse, Black Ben, had found
Strychnine somewhere, and lay dead on the ground
One morning, when I went to have a ride,
A little weak, but with my usual pride.

That was too much, and hence my old-time smile
Was put aside, so I might frown awhile.
I stormed and raged then at my friends and foes,
And gave an airing unto all my woes.

My storehouse had been burnt, my cat was lost,
And my broad lands lay blacken'd by the frost;
My friends, too, shunned me with a studied care,
But my old foe yet meets me everywhere.

Woman at the World's Fair.

The meeting of the Women's Press Association, held in this city on Monday of last week, showed a larger attendance than usual. In addition to several other papers of interest, Mrs. James R. Deane, of the Board of Managers of the World's Fair for California, who has recently returned from Chicago, gave a very interesting address on work done and to be done for and by women in connection with the coming Exposition. As this address partakes of an official character, and refers especially to what is expected of the women of California in this connection, it will no doubt be of much interest to the readers of the PRESS. We give it in full:

An Exposition that is generally known as a World's Fair is usually held by a nation with the primary object of exhibiting its own resources. Having the great advantage of holding the Exposition within its own limits, it opens it with real or apparent generosity to the competition of the world, this advantage always being in favor of the nation holding said Exposition. When I visited the Paris Exposition, I was astonished at its magnificence, its size and its importance. On our return to California, we were met by reporters who wished to interview one of our party on the feasibility of holding an Exposition in America. I confess I heard the proposition with misgivings. My reflections were that such a scheme would be no trifling undertaking, but a gigantic and stupendous affair, and I felt we could not even faintly hope to in any way equal the grand Exposition we had visited.

Since then, I have materially changed my views, and, ladies, I now feel assured that our Exposition in 1893 will far exceed and excel anything that has ever been attempted in the way of a World's Exposition.

I will now state a few facts that will bear out my assertion by comparison. The enclosed grounds of the Paris Exposition were just 96 acres in extent. Jackson Park and the Midway Pleasaunce combined—both of which will be occupied and covered with buildings—contain 760 acres. There were 73 acres under roof at the Paris Exposition, while the main buildings alone in Chicago will cover over 110 acres. The total cost of the Paris Exposition was $8,500,000; the cost of our Exposition will be fully $17,000,000—just twice the amount of that of Paris. That this is not overestimated you can readily perceive, when the cost of the buildings alone is over $11,000,000. Now, it will not only be in money expended or in quantity of ground used that we shall excel the Paris Exposition, but our superiority will be seen in the size and beauty of the buildings themselves.

The main building, known as the Manufacturers' building, is more than one-third of a mile long and one-eighth of a mile wide. This building consists of three arches—the main or center arch has a span carried by single girders 388 feet wide and rising 200 feet in the air. You could take the largest building in the Paris Exposition—that known as Machinery Hall—and place it under the center arch, and it would seem to be lost in the space. The width of this Machinery Hall was 363 feet, and, ladies, when I entered that hall I was much affected by its size and expansion. Its immensity seemed so profound and extensive that its space seemed almost illimitable. Judge, then, the effect which this building of the Chicago Exposition will have on those who enter and gaze awe-stricken on its space and perfection of finish.

I cannot well continue this comparison because the plan and scope of the Chicago Exposition are more extensive and greater than those of any other similar exhibition ever held. The Exposition will also include a great Electrical building, in which which will be housed the Electrical exhibits of the world. There was no building of this kind at the Paris Exposition. Then there will be another great department that was not exhibited at Paris. This will be known as the Department of Transportation. Under its roof will be exhibited every known vehicle used for transportation of human beings and merchandise—steam, horse, cable, and electrical cars, carriage, wagon, bicycle, tricycle, ships of war, merchantmen, canal boats and pleasure boats, also balloons and air ships. Another extensive structure will be the Agricultural building, attached to which will be the buildings of forest and forestry products, a Dairy building and Brewers' building. Another building which Paris had not, and which our Exposition will furnish, is that devoted to mines and mining machinery. Another great department, of which there were no exhibits at Paris, will be the exhibit of *live stock*. This exhibit alone covers 55 acres of ground. In addition to the necessary stalls for the animals, they purpose erecting a circular exhibition building for the daily showing of the animals in the center, while around, seats will be provided for the comfort and convenience of the spectators.

The Woman's Building.

Now another feature presents itself, one in which our greater interest is centered, and that is the "Woman's Building." The size of this structure is 400x200 feet. Its architect is a woman. The cheering and pleasant report that to a young California girl, a San Franciscan, had been awarded the prize for the life-size figures that will decorate the roof of the Woman's building certainly will do much to call forth the talent in that direction, which we know is only awaiting the opportunity of development. We trust that this award will arouse the laudable emulation among our young artists, in wood-carving, painting, sculpture and art needlework, etc., in providing decorations for the Woman's building.

My dear friends, you can have but a faint estimate of what is expected of California by the older States. I believe many of them credit us with having something like "Aladdin's lamp" or other of the genii that were so prompt in carrying out the wishes of their owners or masters. While so much is expected, I might say dreaded, by our colleagues, it is not a little mortifying to know that so little is being done. In nearly all of the Eastern and Central and Southern States the National Commissioners and the Lady Managers are made a part of the State Commission. In California we do not yet know who are to be on the State Commission other than the seven gentlemen who now constitute that honorable body. Again, in States where no appropriations have been made by the Legislatures, the Lady Managers have organized World's Fair Associations, have entered into communication with the different towns in their States and have succeeded in arousing an enthusiasm in woman's work that will be a prominent factor in the success of the exhibition. In States where appropriations have been made, a certain percentage has been devoted to the work of women, thus recognizing its importance and necessity in their State exhibit. When we reflect that this organization of a Board of Lady Managers is the first instance in the history of nations where women were called by the Government to take part in a grand undertaking such as this Columbian Exposition will be, and that our success, not only as exhibitors but as governors or directors in our department, will be but another acknowledgment of woman's executive ability; that, as a competitor, woman's work ranks with man's work, I am certain it will prove to all the other nations of the world that in America man and woman are on an equal plane as to intelligence and ability.

Another great point to be considered in connection with this World's Fair is that it has been an impetus in many States and will be, I trust, here in California for woman to enter into many employments that have been supposed to belong exclusively to men. I speak of this with especial regard to agricultural employments, even that of stock-raising. One of the most intelligent and active of the ladies on the Board of Lady Managers is the owner and manager of one of the finest stock yards in the Union. Again another lady, one of the Chicago Board, is fully competent by experience to act as pilot in the Great Lake system, by no means an easy task.

Now, dear friends, I fear I have already taxed your indulgent patience; but I must add my exhortation to one and all for our own dear State and the woman work therefrom, that not one in this intelligent audience could or can fail to interest the friends that have influence and power to further our work; I say it without arrogance, that so much is expected of California that it is absolutely necessary that the women of California should be alive to the importance of the occasion.

It is incumbent on us, the women of San Francisco, to make the effort that is needed to make our work a success, and where San Francisco leads, our sister cities and towns will readily fall into the ranks. The Woman's Building must have its quota from California women in the decoration, furnishing and finishing. The building, through the kindness of the Director-General and the Chief of Construction, is now fast approaching completion, without the necessary detail of finish. In this detail, the States will, I know, show much rivalry, and California must not be in the minority.

At the first meeting of the Board of Lady Managers, I was called upon to respond to what might be expected of California. I stated that California would be equaled by few, and excelled by none, in the exhibit of Woman's work. Now, dear friends, I hope you will see that I was not a vain boaster in making this statement. In this dear State, the garden spot of the world, is material sufficient and varied enough to make in itself a World's Fair Exhibition. I appeal to each and all of you to make this her especial work and arouse in all of your friends—woman friends—the true faculty that will be certain to make our work a success. If it be possible, the State commission will, I know, give a certain percentage of the State appropriation to be used for furthering this great department of our exhibit. That it will be judiciously expended is, of course, a foregone conclusion. Our neighbors of Oregon and Washington are doing good work, and are not nearly as afraid to compete with us as they were a few years ago. Two columns of granite go from Washington to the Woman's Building. Oregon sends woods for building as well as for ornament. Montana, Dakota, Wyoming, Idaho, Utah and Nevada all have earnest and energetic women, and while we know that none can excel California, if the effort be made, still, if nothing is undertaken, nothing will be accomplished. I thank you very much for giving me this opportunity to address you on this subject. If I have wearied you, attribute it to my zeal for this great work. The women of California have an enviable position in this Exposition, and you, I am certain, will be among those whose children will speak with pride when they speak of California's success in the World's Fair in 1893.

Chaff.

MRS. LUSHINGFON—Why, Henry, you've been drinking too much again! Mr. Lushington—No'm dear, you're mishtaken. Only reason why I can't walk sh'raight ish I got new pair shoes thish afternoon, an they're tight. I'm perf'ly shober.

As Sheridan was entering court one day, carrying his books and briefs in a green bag, according to the custom of the time, some of his brother barristers thinking to play a joke on him urged some boys to ask him if he had old clothes for sale in his green bag. "Oh, no!" instantly replied Sheridan, "they are all new suits."

FREDDY (carefully rubbing the bloom from his bunch of grapes)—Say Mr. Youngbee, do these grapes powder? Mr. Youngbee, (*fiance* of Freddy's auntie)—Why, no, my boy; what made you think of that? Freddy—Cause this rubs off just as the pink does from auntie's cheeks.

"I THINK we shall have to try again," remarked the photographer, as he critically examined the negative; "the expression is too stern and forbidding." "The negative is all right," said the customer, picking up his hat; "all I wanted was a protrait to send to my wife's aunt. She is thinking of visiting us this summer."

A Country Home in California.

[Written for the RURAL PRESS by CLARA S. BROWN.]

We all know that there are real homes, and homes in name only; that no amount of money can create a pleasant abiding place if the true spirit of domesticity is not there, and that the majority of dwellings are not so satisfying to their occupants as they might easily be made.

Country people, more than residents of cities, need to find the pleasures of life in their homes, for they cannot turn to the diversions that are daily offered their metropolitan friends. Yet, as a general thing, city houses are more carefully equipped with all that makes a home agreeable than a farmer's dwelling is. Too often the building which shelters a farmer's family is the last thing on the place to be considered, other than to make sure that it is rain-proof. This was especially so in the era from which California is now emerging, when immense grain fields and small, whitewashed shanties represented country life.

Now is the time of small holdings, highly cultivated, and adorned by a neat and often artistic cottage, which may easily be converted into an ideal home. It was my privilege to visit such a place not long ago, and as it shows what is within the bounds of possibility, even for people of very moderate means, and is the home of a contributor to the RURAL PRESS, I venture to attempt a description of it.

The family came to California ten years ago and bought thirteen acres of fruit land near what is now a good sized town. Every rod of it was straight way improved, and beside the rude little building then on the place pepper trees were planted. From time to time, as means afforded, rooms were added, until now the house is a two-story building shaped like a Greek cross. The pepper trees are enormous, and beneath their shade swing two inviting hammocks. Roses and vines cover the porches and cling to the sides of the house.

Near by is a large rose garden, full of choicest varieties. Beyond is soon to be a tennis court, that the indulgent father has spared the ground for. Peach, pear, apple, quince, walnut, orange and apricot trees, corn, pampkins, etc., cover the ranch, besides vegetables and berries, that the city housekeeper who buys out of a wagon covets. You see, it is pleasant outside. Come in with me and go the rounds of the rooms. It is not a plastered house; the walls were first covered with heavy sheathing paper, and over that a pretty pattern has been laid. We will walk into the parlor first.

Here is a cherry fireplace with redwood mantle made in the house by the carpenter. On each side of it are cupboards, wherein we see magazines filed away. In the niche at the right, shelves have been built and draped with felt, and they are filled with books. We see the best authors represented there, and some are this year's books. On the top shelf stands a great pot-pourri jar of Royal Worcester ware. Some of the roses that bloomed outside are preserved there. On the floor is a neat ingrain carpet. At the windows are light drapery curtains. In one corner stands a fine organ, another is occupied by a comfortable lounge and cushions. Rocking chairs are there of course, for what American house is without them?

Peeping into the bedroom which opens from the parlor, we see that it is furnished with a pretty set and has all the toilet conveniences. The large dining-room has corner cupboards and a side table of home manufacture. Here are more books—lots of them—on shelves covered by a cretonne curtain. A lounge gives the housewife a chance for rest in the intervals of her domestic duties. Over it is a wall-pocket containing newspapers and the five leading monthlies.

The sunniest corner is a literary nook, if I may so term it. At the pigeon-holed desk, in a big chair, the lady of the house writes her letters and prepares her articles for the press, for, like "Maid of All Work," she can get a good dinner and write a good poem or recount her experiences for the benefit of other women.

In the kitchen the thoughtful farmer has rigged up a hose connection with the pump outside, which saves many a lift and keeps the hot water tank on the stove full all the time.

"Mother's room" has a white-draped toilet table—more home work—and another shelf of books. It is furnished for comfort, and has, like all othe other bedrooms, pretty curtains, shams, etc.

The space under the stairs in the front hall is utilized for a closet and drawers, where bedding is packed away and piece-bags and other indispensables can be found when wanted.

The front chamber belongs to the young lady daughter, is her own special domain, and has been fitted up by her in blue and white. Odd pieces of furniture, yet harmonizing, were collected for this room. A common table and mirror is by draperies transformed into a thing of beauty. There is a large divan covered with chintz and an open stove. In one corner is a set of shelves for the young girls' own books and papers. So many knick-knacks and dainty belongings are scattered about the room that the daughters of rich parents like to visit it and declare that they have nothing equal to it. Sometimes, on a rainy day, the whole family is invited up here and entertained by the patter on the roof as they read or sew.

The little daughter is also the proud possessor of a room to herself. Grandpa gave her the pretty three-quarter bedstead, and all have lent a hand in the adornment of the room. She

has her book-case, too, and takes great care of it. Her dolls and playthings are here, and a blackboard with crayons hanging on the wall amuses her for many an hour, as she has a bent for drawing. Another room belongs to the young man of the house and is not slighted, as the quarters occupied by boys often are. He has dainty curtains and toilet draperies and all his pet possessions are gathered here.

An unfinished room is used for sewing, and has many things neatly piled away in it.

Do you need to be told that the members of this family have been taught to think and are well informed on the topics of the day? It is one of the happiest and most intellectual households that I know. There is such unity of purpose and mutual good will that the mother, who is quite an invalid, says she does not mind not being able to go into society, her own family is so interesting. She takes the cooking upon herself, not being able to do heavier work, and it is good to see how fully her efforts are appreciated. No compliments are so dear to to the housewife's heart as those given her by her own family, and in this home, praise is freely bestowed.

A visit to such a place confirms one's belief that life may be made even more enjoyable in the country than in the city, especially in the climate of California, where one may spend many happy and healthful hours out of doors each month in the year.

"La Marechale."

Gen. Booth, of the Salvation Army, has appointed his eldest daughter to succeed him at his death as the supreme commander of that great organization. His eldest son has long been "Chief of Staff," and according to English ideas would have been his father's natural successor; but Gen. Booth has made his choice among his large family of children (all of whom are in the Army) according to ability, not according to sex. The General gives his reasons very briefly. "Women are the best rulers," he says. "If you refer to the capacity shown on several occasions by Queen Victoria, you will agree with me that she acted while her advisers were seeking how to act. I am arranging that the work of saving human souls may go on after my death. All title deeds will be transferred to my daughter's name."

Mrs. Katherine Lente Stevenson tells in the *Union Signal* a pretty story of this eldest daughter, "La Marechale."

"Catherine Booth has been commander of the forces in France and Switzerland ever since she went into those countries. Arthur Clibborn was for years her chief of staff. To be associated with a woman of her mind and soul could mean but one thing to the man blessed by such comradeship; and in this instance the man was not only noble enough to love so great a woman, but was also noble enough to win her love. So discreetly, however, was the courtship carried on, that the Training Home and all the French officers were astonished beyond measure when the marriage was announced.

"When General Booth was approached in the matter, he felt a little delicacy—remnant of the old education—as to whether Colonel Clibborn would continue to serve under his own wife, and asked him if he would take command henceforth of the French forces.

"Colonel Clibborn drew himself up to his fullest height and said: 'General, I have been proud to serve under Catherine Booth through these years. Our marriage can in no way alter our positions. She is still La Marechale, and I am her chief of staff.'

"And on her marriage day, fearing lest her devoted people should miss the beloved name, he, at his own request, took her name while giving her his own. Thus they are Mr. and Mrs. Booth Clibborn. Commissioner Tucker, who afterward married Miss Emma Booth, followed the example of his brother-in-law."

THE PRESERVATION OF BOOKS.—The paper on books which have survived for two or three centuries, is a very different article from the book paper of to-day. The paper upon which books were printed 300 years ago, was honestly made and durable. No strong chemicals were employed in its preparation. Neither wood, pulp nor clay entered into its composition. It was made by hand and of honest rags, mostly linen; cotton was little used in those days. It was made to last and it has lasted, and will continue to last until most of the book paper of the present day has crumbled to pieces by reason of its inherent decay, induced by the strong acids, the fiberless wood and dusty clay used in its manufacture. The most of the books of to-day, notwithstanding their strong and in every way, superior binding, will hardly hold together a century. Two hundred years hence a book printed during the present century will be something rare indeed. Both the printing and writing ink now used possess a far less enduring quality than that used 150 years ago.

A MINISTER was recently visiting an old woman in his parish. On the center of the table in the room in which they sat was a large, thick, family Bible with which was bound up the Apocrypha. The minister happened to say, "That's a very big Bible you've got, Mrs. Brown." "An' nae wonner it's big, sir," was the reply; "it's got an apothecary in the inside o't."

"Do you believe in fate, Pat?" "Sure an' hwat would we sthand on without 'em?"

YOUNG FOLKS' COLUMN.

The Dog Who Did, and the Boy Who Didn't.

EDITORS PRESS:—I have long been accustomed to write "pieces" for my little girl to recite in school. She liked so well to have something "bran new" for herself, something she was sure no other girl would have; and she often suggested the subject of my lines. Once she said she wanted something about a dog, "with lots of bow wow in it." Trying to please her, the following lines were evolved, and to our surprise, "took" wonderfully in the schoolroom. I have never had them printed, I thought them such a "ragged rhyme;" but they have proved so popular, I venture to send them to you. Some other mother may like to use them. A great deal depends on the way the lines are recited. The dog must get growlier and growlier, and the boy be very jovial and defiant, till the last, when the crying must be well simulated, knuckles in eyes. —A. C. T.

CHARACTER REPRESENTED. 1 Boy, 1 Dog.

Scene—A California Walnut Ranch, about 11 P. M., by Moonlight.

"Bow, wow, wow!"
Said the Dog.
"What's up now?"
Said the Dog.
"If you don't act right,
I'll bark and I'll bite.
"Bow, wow, wow!"
Said the Dog.

"Ho, ho, ho!"
Said the Boy,
"You don't know,"
Said the Boy.
"I can throw stones,
Will break your bones."
"Ho, ho, ho!"
Said the Boy.

"Gr-row! Bow, wow!"
Said the Dog.
"I don't allow,"
Said the Dog,
"Any meddlers here;
So you'd better clear.
Gr-row! Bow, wow!"
Said the Dog.

"Ho, ho, ho!"
Said the Boy.
"Is that so?"
Said the Boy.
"Just see this nice meat.
Come, don't you want to eat?
Ho, ho, ho!"
Said the Boy.

"Gr-r-ow, gr-ow, gr-ow!"
Said the Dog.
"I've made a vow,"
Said the Dog,
"Whenever I dine,
'Tis with friends of mine.
Gr-r-ow! wow, wow!"
Said the Dog.

"Ho, ho, ho!"
Said the Boy.
"Let you know,"
Said the Boy.
"There nuts I'll get,
So don't you fret.
Ho, ho ho!"
Said the Boy.

"Gr-gr-row-gr-ow!"
Said the Dog.
"Out of this now!"
Said the Dog.
"I jump and I bite;
We have a big fight!"
Gr-gr-r-ow-gr-ow!"
Said the Dog.

"Boo-oo-oo!"
Said the Boy.
"Ouch! That'll do!"
Said the Boy.
"I'll go straight home,
And never more roam.
Boo-oo-oo!"
Said the Boy.

An Unbidden Guest.

Mr. Marks stood beside the beautiful Christmas tree to light the tapers, when into the parlor came King Hal, shaking his head angrily and uttering loud—

"Baa, baa, baa, baa."

The little ones screamed loudly. The tree was overturned.

"Donny, call King Hal. Some one has left the back gate open," said Mrs. Marks.

Donny called in a faint voice, "shee-e-e-py, shee-e-e-py."

King Hal heard the voice. He listened, then with a farewell "ba-a-a," rushed through the open doors into the kitchen to find his young master that he loved.

The quarrelsome sheep was penned in a small, strong pen.

"You've spoiled my good time. I don't love a cross lamb," said Donny sadly, when King Hal "ba-a-a-d" after him an affectionate "ba-a-a."

Mr. and Mrs. Marks were busy straightening the limbs of the battered tree.

"Donny," called Mrs. Marks, "did you bar King Hal's prison door tight?"

"Yes, mother," replied Donny.

"I'm sorry, son, but your lamb has grown so unruly that it isn't safe to allow him liberty. He was a pretty lamb, milk white and peaceable. He hasn't forgotten his master, for all he is so ugly an' savage with other people."

"It pays to treat even dumb animals kindly. Even contrary King Hal obeys Donny because he loves the master who is kind to him," said Mr. Marks.

In ten minutes the tree was righted and lighted and King Hal forgotten by every one save Donny.

In his small, strong pen King Hal dismally "ba'ad."

He was in prison upon a glad, bright day.

In a comfortable fold twenty peaceable, quiet sheep enjoyed pleasant quarters and an extra lick of salt.

A little before dinner was quite ready to serve, Donny, with three little boys, carried to King Hal a biscuit.

"I love him, poor, naughty sheep. If he was good he needn't be shut up; but he doesn't know that he is naughty," said Donny, weeping because King Hal must be imprisoned.—ELLA GUERNSEY.

Kitty's Bedspread.

If you have a friend, old or young, who keeps some special chair or cushion or warm corner for a pet kitten's use, give her a little washable embroidered bedspread—or should we say nest-spread—with which to protect and also decorate the cushion, and see how pleased she will be and how soon kitty will learn to know that it is her own property. At least she will if she is as intelligent as our kitty. We gave her a little scarlet nest-cloth about 21 inches square. She soon learned to know and claim it wherever it was. She was never allowed on a bed, and, after her first few attempts, had never offered to jump on one; but one day in her absence, her little scarlet cloth was accidentally mislaid—thrown on the foot of the white bed. Soon kitty came pattering in, tired and sleepy, went to her nest in the corner. Something was not right. She walked over it, turned 'round and 'round, and at last jumped down and considered the matter. Suddenly, her sleepy little eyes brightened as her glance rested on the bed. She gave one glad bound and there she was, curled up in a little ball right in the middle of her cloth, purring and singing, and in less than "two winks" was fast asleep—and who could disturb her? But what best proved her intelligence was that she always claimed the cloth wherever it was, on the bed or off, and never disturbed the bed unless it was there, much as she loved to cuddle down on it. So much for a "cat story."

A pretty spread for this purpose is made of blue denim, light side up, with blue hems turned over from the under side. At the edge of the hem is a row of feather stitching worked with scarlet zephyr, and "Only two winks for a cat nap" is outlined on the blue-gray center. One of dark-red flannel worked with light-gray would be pretty.—*Jewel Alstead.*

DOMESTIC ECONOMY.

Old Coats Made Useful.

[Written for the RURAL PRESS by CLARA S. BROWN.]

This cold weather makes one hunt up warm wraps. Does any one in the family need a new jacket? And is there an old coat hanging somewhere, outgrown or shiny on the back or a little moth-eaten? Why, then, you've only got to buy a pattern and do a little cleaning and fitting in order to evolve from that discarded coat a very respectable garment. I know, for I'm wearing a jacket produced in that way. It is of fine French diagonal, with trimmings of velvet, and really looks very nice. The coat from which it was made was worn so seldom that moths got into it and ate little holes that spoiled it for the owners's wear, but they were not in the smaller pieces that were cut to fit me. It is a job to rip up a coat, but patience will do it. Then the threads must be picked out and if the material is dirty, it should be washed in five cents' worth of soap bark, hung on the line without wringing and pressed while damp. The wrong side of the goods used in men's clothes is often pretty, and, if the coat is worn very shiny on the right side, it may be turned. Procure a stylish pattern, but not a fussy one, studying well what you have to do with before you buy it. There is such a diversity of jackets at the present time that you can surely find a pattern which can be cut from your material.

When the wrap is done nobody in the world will ever recognize "that old coat."

Sundries for the Farmer's Tea.

Those farmers' wives who do not care to see fried steak and boiled potatoes appear on their supper tables, know well that to provide a substantial yet dainty evening meal is something of a problem. Let me offer my sister housewives a few receipts for dishes that find favor in the sight of my farmer after his evening "chores" are done.

Those who make a practice of always having a ham in the house, will find it may be used to advantage in almost numberless ways. One of the simplest and best that I know of is—

Creamed Ham.—Cut cold boiled ham into very thin slices. Put a teaspoonful of butter and half a cupful of cream over the fire, and when very hot put in the ham. Dust with pepper, add the beaten yolk of one egg, and serve instantly.

Ham Croquettes.—The commonest error in making this dish is failure to chop the ham sufficiently fine. Take equal parts of cold boiled ham and rice and chop and *beat* together until it forms a perfectly smooth mass. Season highly with pepper and sage; add a raw egg and a few spoonfuls of cream. It should be as soft as you can conveniently handle. Then form into small oblong rolls, dust lightly with flour, and fry in deep lard.

Potatoes may be warmed over in many dainty ways, and housewives are too apt to restrict themselves to frying and stewing, as the only simple and available ones.

Potato Klosse.—Is a German dish, very good and easily made. Beat a sufficient quantity of boiled potatoes to a perfectly smooth pulp; add salt, pepper, a generous lump of butter, a little minced parsley, and one well-beaten egg. Give the mixture a good beating, and then drop, a tablespoonful at a time, into plenty of boiling fat. Drain carefully and serve very hot, garnished with parsley.

Escalloped potatoes.—Slice cold boiled potatoes and place in a buttered pieplate, seasoning with salt and pepper. Melt three tablespoonfuls of butter in half a cupful of rich milk, sprinkle part of it over the potatoes, put them in a hot oven, and baste every few minutes until you have used all the milk.

Potato Olives.—Are a little more elaborate, but repay one for the trouble of preparing. Pare the potatoes and cut them into the shape of olives; drop into boiling, salted water, and cook until tender, but quite unbroken. Drain them carefully, then dip each one into beaten egg, and roll in a mixture composed of fine bread crumbs, half the quantity of grated cheese, a little minced parsley, and salt and pepper. Fry in deep fat, drain, and serve hot as possible. A delicious dish with which to serve these potato olives is

Blanquette of Chicken.—Cut into bits the chicken left from yesterday's dinner. Make a very nice, white sauce, using plenty of butter, chicken stock, and, if you have it, cream; add also a teaspoonful of lemon juice. Now put in the chicken and let it boil gently for a few minutes. Season well, add the beaten yolk of one egg, cook just one minute longer, and serve.

These dishes will be found choice enough for "company" teas; but what is good enough for company is none too good for the daily fare of those nearer and dearer than any visitor could be.—LINA DALTON *in Country Gentleman.*

MOCK OYSTER SOUP.—Save the giblets of chickens, and turkey gizzards, livers, hearts, necks and feet. Skin the feet, by dipping in boiling water, when the outside will slip off readily. Put the giblets to boil in one quart of cold water, with one onion, and one carrot cut small. When very tender, take from the kettle, cut in pieces the size of a large oyster, add two tablespoonfuls of butter, one cup of sweet cream, salt and pepper to season. When ready to serve, add gradually, so that it may not curdle, one well-beaten egg. Do not let the soup boil after adding the latter. Stir well, and serve at once. This soup is delicious. Water, from time to time, should be added to the giblets, so that there will be a quart before adding the cream.

CHICKEN PIE.—Cut chicken in neat joints, wash, and stew until tender. When putting on to stew, add one-fourth of a pound of fat salt pork. When tender, take from the kettle, remove the bones, chop the pork, and return to the kettle. Add salt and pepper to season, stew half an hour; when cold pour into pie pans lined with crust; cover with perforated top crust, and bake until brown. A bowl of gravy should be reserved to serve with chicken pie. To this add a tablespoonful of flour, mixed until smooth in a little cold water, one beaten egg, pepper, and a tablespoonful of butter. Serve very hot, a spoonful over each piece of chicken pie.

SCALLOP TURNIP.—Cut yellow turnips in half-inch pieces, boil and drain. Place in an earthen baking-dish, season with dots of butter, salt and pepper, and cover with a thin layer of bread or cracker crumbs. Fill the dish in this manner, the last layer being crumbs. Over all pour a cup of sweet milk or cream. Bake until brown. Serve hot.

CABBAGE SALAD.—Shred half of a white cabbage fine, dress with two tablespoonfuls of melted butter, four of vinegar, salt, pepper, and one teaspoonful of made mustard. Served with slices of stale bread, put in the oven and served hot, and with cheese.

THE HUMAN BREATH will not remove mountains, but it has power sufficient to raise objects which have considerable weight. It will not scatter a regiment of soldiers, nor uproot trees as the fables sometimes tell us with pictorial illustrations. Yet it contains a surprising amount of leverage, which is evidenced by the lond report which a paper bag filled with the breath will produce when smashed between the hands. The following experiment demonstrates the elementary power of the human breath still more forcibly: Take a large bag of good, heavy paper, lay it on the table and cover the closed end of it with several books—is Webster Unabridged and a family Bible, for instance—then blow into the bag, filling or inflating it with air, and you will soon see that it will overthrow the books, *i. e.*, remove a small mountain.

PACIFIC RURAL PRESS

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SAN FRANCISCO:
Saturday, January 9, 1892.

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[NEW THIS ISSUE.]

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Spading Harrows—H. C. Shaw Plow Works.
Spray Pumps, Plows, Etc.—Allison, Neff & Co.
Plows—Oliver Chilled Plow Works.
Spiral Riveted Pipe—The Geo. F. Eberhard Co.
Sale of Brood Mares—Killip & Co.
Seeds—Sevin Vincent & Co.
Prune Trees, Figs, Etc.—P. W. Treat, Davisville.
Harrows—Keystone Mfg. Co., Sterling, Ill.
Spraying Machinery—R. S. Chapman.
Thoroughbred Jacks—L. U. Shippee, Stockton.
Imported Stallions—Theo. Skillman, Petaluma.
Proposals for Tunnel—Edward M. Boggs, Banning.
Trees, Vines, Etc.—Ellwanger & Barry, Rochester, N. Y.
Ear-Marking Label—C. H. Dana, West Lebanon, N. H.
Hop and Vineyard Wire—California Wire Works.
Pecan Trees—Mrs. J. Hutchinson, Fillmore.
Pecan Trees—Texas Pecan & Seed Co., Fort Worth, Texas.
Agricultural Implements—John Caine, Stockton.

See Advertising Columns.

The Week.

We have had an occasional day or two which seemed to promise that the normal had floored the exceptional, and that warmth with alternating sunshine and rainfall, the usual traits of a California winter, had regained sway. We have had too much frost, and will market fewer oranges. We are also waiting for better growth of grass and for the earlier wild flowers. It is true that rain enough has fallen in most places to admit of field work, and perhaps that will do for a time. If rains were followed by warmth instead of chill, all would feel better, and they are waiting for it.

Congress is actively at work, and many measures of interest to this coast are being introduced. We expect to find room for outlines of this work in our next issue. This week, thought turns naturally to the great winter event in the upper half of the State—the Citrus Fair at Auburn, to which allusions are made in other columns. Everything indicates the full success of the Fair, and a gala time in the rich region which will give it shelter.

Announcement.

On the first day of the new year the proprietorship of the PACIFIC RURAL PRESS was transferred from the firm of Dewey & Co. to an incorporated company, which has assumed the title of the Dewey Publishing Co. In the firm by which the paper was established in 1871, and by which it has since been published continuously, Mr. A. T. Dewey and Mr. W. B. Ewer were equal partners. In the incorporated company, each of these gentlemen holds a one-third interest, and the other third is held by Mr. Alfred Holman, who, as general manager, assumes the active administration of the business. By way of introducing Mr. Holman to the patrons of the RURAL, it may be said that he comes from the editorship and general management of the chief newspaper of Washington—the *Post-Intelligencer* of Seattle—and that prior to his connection with that journal, he was for many years with the Portland *Oregonian*.

The patrons of the paper should know that the incorporation has no other purpose than mere business convenience. There will be no revolution in the character of the paper, though it is hoped very shortly to add to it some features that will commend themselves to the public. Of the designed improvements, it is perhaps as well not to make promises, but it is hoped that the efficiency of the paper will be increased and that it will continue to receive from the public the favor which has attended its course during the twenty-one years of its existence.

The firm of Dewey & Co., Patent Agents, composed of A. T. Dewey, W. B. Ewer and Geo. H. Strong, is not included in the incorporation and will continue to be conducted as heretofore under the name of Dewey & Co., Patent Agents.

DESSERT PRUNES.—The finest processed prunes of California production which we have seen up to this time are those of which Felix Gillet of Nevada City has sent us a sample. In fact, we never saw better from anywhere. They are of good size, handsome appearance, tender in skin and substance, and of most delicious flavor. They are peerless, so far as our knowledge goes, for eating out of hand as a dessert prune, and we should think that very large quantities of such prunes could be sold at remunerative prices, if handsomely packed and wisely marketed. While it is undoubtedly true that the great bulk of the California prune crop should be the sun-dried stewing prune for which the State has already achieved great fame, there is opportunity for the production also of dessert prunes to meet a different demand; and because the fruit growers have often declared so strongly in favor of the sun-dried as against the processed prune, it does not at all mean that those who can succeed in the latter product should be discouraged from proceeding in that direction. We are glad to see such splendid fruit of this kind from Mr. Gillet.

THE EASTERN EDITORS.—An unusually large and representative excursion of Eastern press people will visit California next week. The party is expected to reach Auburn Jan. 13th for breakfast, and San Francisco the evening of the same day. On Jan. 14th the association will begin its meetings in this city. It is expected to spend about a week in the State, visiting Los Angeles and southern points on the homeward journey. A cordial welcome will be tendered them everywhere.

The Barley Outlook.

EDITORS PRESS:—In your issue of Dec. 9th you give under grain reports a statement of amount of barley received from Washington and Oregon from July 1 to Dec. 6th. Can you give me the amount of barley received from the north from Dec. 1, 1890, to June 1, 1891, a statement I should very much like to get? There does not seem to be a likelihood of receiving any such quantity this year as last from that source. Last year the consumption of barley from December to June was nearly 1,300,000 ctls., in addition to the amount received from the north, and at high figures; and wheat being cheap, a large quantity of that cereal was used as a feed grain. This year, with wheat and corn high and scarce, with a prospect of larger exports of barley, with abundance of ships, lower freights and a scarcity of wheat, with large overland planting and renewed activity in railroad building in the new year, with close selection of brewing grades on account of the tariff on foreign barley, with diminished receipts from the north and no other feed grain as a substitute, the amount on hand does not seem excessive and prices ought to improve before long. With a carry over of 1,004,457 ctls. in June, 1890, the price a month or two later in midharvest was higher than to-day's prices, and at a time when corn and wheat were cheap. With seven months' consumption and exports to come out of present stock before new grain is received in quantity, and with no other feed grain to cheapen the price of barley, it is difficult to see why prices remain so low in comparison with last year at same time.

We have had less than an inch of rain for the season and drying winds have absorbed it all, so that no grass or volunteer has started. Should dry weather continue through the winter, most of the stock in the southern part of the State would be needed at home.—C. E. HOAR, *San Fernando, Los Angeles Co., Cal.*

The receipts of barley from up north (Oregon and Washington) aggregated in 1890, 52,717 centals, and in 1891, 213,442 centals. It is quite generally claimed that the receipts from up north will continue light throughout this season.

In examining the condition and influences on the market, it is well to compare the outward shipments for the past three years, which were in centals as follows:

	1889.	1890.	1891.
Great Britain	352,962	44,811	274,098
New York	295,424	90,536	166,567
Hawaiian Islands	138, 53	165,568	172,8 2
Australia	30,934	14,504	.....
Elsewhere	14,570	23,755	6,936
South America	.....	.....	115,205
Cape Verde Islands	.....	.....	82,152
Canary Islands	.....	.....	69,550
Totals	832,843	339,174	837,390

Our correspondent's argument in favor of an advance in barley prices seems well established and agrees quite closely with statements made in our Annual Review, a year ago this month. Such a view seems also to be held by many, and the disposition to put in barley seems quite general, especially at this time at the South, where barley sowing is done earlier than at the North.

The Transcontinentals.

The modern "transcontinentals" bid fair to be as greatly deprecated as the old "continentals" are adored. It is rumored now that there are signs of schism in the transcontinental association of railroads which may shake the ill-starred combine to its foundations. The Northern Pacific objects to differential plums which the association puts in the Canadian Pacific pudding, and if the N. P. kicks forcibly enough, it may knock over the association. The California Traffic Association looks with complacent interest upon this quarrel of the members of the combine, which prevents competition in overland freighting, and is more apt to pour turpentine than oil upon the wounds of the contestants. Joy to competition, misery to combination—these things hold the keys to the prosperity of Pacific Coast producers.

This "transcontinental association" has a most aggravating way of dealing with applications from our producers for more decent overland rates. This dispatch is a case in point:

CHICAGO, January 5.—A meeting of the transcontinental roads was held to-day to consider a proposition to reduce the rate on oranges from California points. The recent frosts in Southern California so damaged the orange crop that shippers united in requesting the railroads to reduce the rate from the present basis of $1.25 to 90 cents per hundred pounds, One road objected to the reduction, and the request could not be granted, although all the other lines were willing to do so.

This is an old trick. So long as there is one kicker no fair proposition can go through. All the members of the association have to do is to talk sweetly and elevate the anticipations of the petitioners, but be sure that one small fellow will object and declare he won't play. If they take turns at the single blackball, they can all talk sweetly on all propositions nearly all the time. In this way the public is hoodwinked and imposed upon, and after having its opposition silenced by sweet words, finds at last that it gains nothing after all. It is time some "differentials" or other kind of internal strife knocked the thing to pieces. It is apparently impregnable from the outside—as things now are.

A Fruit Scene in the Foothills.

(*Continued from page 21.*)

than the natural beauties, and that is the unrivaled variety and excellence of the foothill productions. By attending such a fair, one can gain comprehensive and comparative knowledge, which could hardly be otherwise obtained so well, even by long and patient journeyings. The various prominent regions of Placer will participate, as will other foothill counties up and down the Sierra line. Valley and coast of the upper half of the State will also be represented. We trust that the people may show appreciation of the important event by a large attendance. Auburn is a very hospitable town. It has the advantage of large hotel power, which will insure comfortable accommodations. Let there be a grand assembly to participate in a splendid event.

FRADULENT FRUIT FAILURES.—It is reported that often swindlers start in just before the holidays, fit up and stock fruit stands, and obtain considerable fruit on time from the wholesalers, sell out what they can, sell out the stand for what they can get and disappear, or as the phrase goes, "skip out." When the collector for the wholesaler goes around he finds a new proprietor who knows nothing of him or his bill This year three cases are mentioned. They bought in the aggregate $2500 worth of fruit and the sellers obtain nothing. One merchant takes rather a philosophical view of the matter, for he said to a *Chronicle* reporter: "These are premeditated tricks and generally occur at this time of the year, after large quantities of fruit, etc., have been bought for the holidays. There seems to be no law in these matters to protect the merchants, who have to pocket their losses while the fradulent fruit dealer gets away with the boodle."

QUERIES AND REPLIES.

Fruit on Hardpan Soils.

EDITORS PRESS:—What does experience prove about the use of land containing hardpan for planting orchards, providing the soil above the hardpan is good enough to give the young trees a good start? Is there any danger of damage to trees or crop when the trees grow older? If so, what remedy should be applied?—E. S. WILLIKES MACDONALD, *Aptos.*

This is a subject which has been quite fully discussed in our columns in past times. Experience proves that trees in such situations grow well for a certain time, and then often fail. The chief dangers are two: First, the danger of trees being overturned by high winds, if they have to extend their roots above a layer of hardpan, which is quite near the surface; second, the danger of drouth from the drying out of this thin surface layer of soil which the roots occupy, because being precluded from downward extension.

The remedy is breaking through the hardpan, providing the hardpan is thin and is underlaid by a stratum of pervious soil. This breaking up of hardpan is generally done with dynamite, a cartridge being exploded in a hole in the excavation made for each tree. It is also done on a small scale by boring through the hardpan with a post-hole augur or otherwise, but the powder-blasting is best and cheapest.

Be sure that your situation has hardpan underlaid by gravel, or at least a loose stratum. If you have a shallow soil underlaid by hardpan and tight clay below it, don't plant fruit at all. Our book on "California Fruits," in the chapter on "Preparing Land for Orchard and Vineyard," discusses this question fully.—EDS. PRESS.

Cement Artesian Piping.

EDITORS PRESS:—I have seen something in your paper of a new (to me) process of putting down wells, using cement instead of pipe. As I wish to have a well bored soon, I would be glad to obtain some information on the subject—whether the method can be used in sandy soil, whether it makes as good a well as where pipe is used, and what the cost? We have to go about 175 feet to get water. If some of your correspondents will give the desired information, they will greatly oblige.—W. L. JOHNSON, *Rochester, San Bernardino Co.*

If any readers have experimental knowledge on this subject, we should like to have it for publication.

Killing Stumps.

EDITORS PRESS:—I would like to inquire through the RURAL PRESS if there is any certain process, by applying substances to the stumps of blue gums, that will surely kill the roots the first year.—T. N. WARNER.

We know of none. Prescriptions which we have tried have failed. If any reader can speak from actual experience, we shall be glad to listen and try it for ourselves.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

Saving Water.

One of the greatest objections urged against the organization of irrigation districts in some localities is the assertion that all the available sources of supply have been appropriated or utilized and that there is no water left that can be availed of for the irrigation of new areas. No greater mistake was ever made. It is entirely within bounds to say that of the flow of all the streams used for irrigation in the entire State not more than one-tenth of the aggregate finds its way upon the soil for the benefit of growing crops. In at least six months of the year no use whatever is made of the water, and during that period, which includes the winter and early spring, the flow of these streams is from ten to a hundred fold greater than in the season when irrigation is practiced. All this water runs to waste, and the capacity of a given stream for irrigating, is measured entirely by the minimum flow of the dryest season. Reasoning upon this basis and without regard to the immense amount of water running to waste during the winter, there is some foundation for the assertion that there is no further available supply.

But going a little further and taking up up the consideration of the possibility and feasibility of preserving a portion or all of the wasted water for use in the dry season, a field for enterprise is found that is practically unlimited. The storage reservoir is the solution of the difficulty, and until enough of these have been constructed to conserve the entire winter flow of all the streams and supply all the lands that require irrigation it is idle to claim that all the sources of supply have been monopolized.

Many who have not investigated the subject appear to believe that the construction of reservoirs involves a vast expenditure, and that water cannot be obtained in that manner except at an outlay that cannot be borne by ordinary farming lands. It seems to be generally believed that a reservoir must be something immense, involving large expenditure and a great amount of labor. Few have so far been undertaken in this State except on some such scale as the Bear Valley or Sweetwater enterprises. But it is a mistake to suppose that small reservoirs cannot be economically and readily constructed for the supply of small as well as large areas. In Colorado much more appears to have been done in this line than in this State, and what may be called individual reservoirs for the storage of winter water are being built all over that State. The cost of such structures need not be large. Thus, one is mentioned in a Colorado paper that has a simple earthen bank by which a reservoir covering ten acres of land to a depth of 10 to 16 feet was constructed at a cost of only $2000. The amount of water stored is sufficient, it is calculated, to supply 500 acres of land, or an average of only $4 an acre.

Another reservoir for irrigation on a large scale covers 800 acres and the entire cost was $20,000, while water enough for 30,000 acres is stored. This is a cost of less than 70 cents an acre; yet the water is derived from a stream that was supposed to have been entirely appropriated. A portion only of what had hitherto run to waste was thus saved at a small outlay and the large amount of 30,000 acres brought under cultivation.

These instances afford a hint of what may easily be done in California. There is no lack of reservoir sites in all the irrigated regions, nor is there any lack of water now going to waste that can be stored for future use. It is only a question of enterprise and time until all these sources shall be fully utilized.

Florida Converted.

That the gospel of irrigation is spreading is shown by the amount of space devoted to the subject by agricultural journals all over the country. Scarcely a number of this class of periodicals can be perused without finding therein more or less extended reference to the desirability of irrigation and to the results accomplished by this great aid to agriculture. The orange growers of Florida are falling into line with others who have for years prided themselves upon their immunity from the necessity of irrigating, but are now awakening to the fact that what was once regarded by many as an onerous burden is in reality the greatest boon. "Of late years," says a writer in the Florida *Agriculturist*, "owing to the drouths of 1889 and 1890, people all over the State have been turning their attention quite generally to the subject of irrigation. We have always prided ourselves in measuring biceps with our rival, California, 'that if our soil was a trifle light and did require a little fertilizer' our yearly outlay for manures was far below her inevitable irrigation tax. But though we need not mortify ourselves by admitting irrigation or fertilization as absolutely indispensable to us, we have believed that with artesian wells or surface water ponds and pumping engines an economical irrigating plant serves as a certain insurance policy to the owner of a valuable bearing grove which he may never have need of for years but which he can hardly afford to think of being without. While water can be most economically distributed in ditches so far as it will flow, distributing itself evenly and automatically with a minimum of evaporation, water-tight conduits are indespensable for conveying it any considerable distance from the source. One favorite method here with flowing wells, is to lay pipes the same size as the wells with hydrants 100 feet or so apart on all the elevations, knolls and ridges. A stream flowing along the summit of a low sand ridge will subirrigate in most soils from 20 to 30 feet on either side and with clay subsoil very much farther."

The writer then describes a machine invented in that State by which cement pipes are made and laid in the ground at a single operation, and which after "setting" will withstand a pressure of 20 pounds to the square inch, and in time one of 60 pounds. This pipe is much more durable than iron and when once laid it is claimed will last practically forever.

It is gratifying to find the example that has been set by California thus followed, and we gladly welcome Florida to the ranks of the irrigators. It is especially gratifying to note that they have seized at the outset, the most advanced ideas upon the subject, and by the use of pipes and hydrants are prepared to take every advantage of the economical use of water in the same manner that has been evolved in this State.

The Bear Valley Dam.

Another of the periodical and entirely uncalled-for attacks has been made upon the Bear Valley dam, and the charge has been published broadcast by telegraph that there was such imminent danger of a repetition of the Johnstown disaster that the authorities had been appealed to to protect the people living in the section alleged to be exposed to danger, says the *California Irrigationist*. To read the harrowing dispatches sent out by evidently subsidized correspondents, one would be justified in supposing that the dam was in a crumbling condition, already tottering to its ruin and threatening destruction to life and property.

The writer, happily, is personally familiar with all the facts in the case. He has visited the dam in company with expert engineers, has lived in the section supplied with water by it, has known its history intimately ever since Frank Brown made his first trip into the mountains to investigate the feasibility of its construction, and has not a cent's worth of interest one way or the other. All the interest the *Irrigationist* has in the matter is the common interest of love of fair play and hatred of underhand and lying methods. Hence we assume to speak from an entirely unprejudiced standpoint.

There are a few well-known facts about this matter which we propose to give all the emphasis possible.

The Bear Valley dam has stood for seven years, most of the time with the full volume of water behind it. It has been exposed to storm, ice and wind, and even earthquake, but it stands to-day just as firm as when the last stone was laid, and just as it will stand till the crack of doom.

Those who inspired the lying dispatch referred to in the foregoing, lay great stress upon the demand that the waste-weir be so arranged that falling or floating timber may pass readily through it. At least one of the men who inspired the attack knows of his own personal knowledge that in the channel, or neck of the lake above the dam, there are now and always have been, booms stretching from shore to shore, made of timbers securely fastened together, and attached to either bank, which make it absolutely impossible for any floating object, tree, or anything else to approach the dam nearer than several hundred yards. They know, too, that a sufficient number of men is kept at the dam, day and night, and always have been, to handle any floating objects that might injure the dam and to guard against any "spontaneous" explosions or other "accidents" that might bring about the flood that would unquestionably not be unwelcome to some. Everything of this sort is well guarded against.

But above all, and affording ample security to those timid souls whose fears have been played upon by designing persons, is the fact, the absolute fact, that if the dam were to give way, little or no danger could be caused in the valley of the Santa Ana or anywhere else. In the first place, a narrow, steep and tortuous canyon extends for 18 miles below the dam. Were the water in the lake unrestrained, it could not pass down that canyon, met at every turn, as it would be, by obstacles and obstructions, in volume sufficient to cause damage when the open plain was reached. Just at the mouth of the canyon, and as soon as the mountains are left, the river-bed or wash spreads out to a width of 1½ or 2 miles, with high banks and a sandy bed. When the water turned loose from the dam reaches this place, it would spread out over these miles of sand, and could not by any possibility be more than three or four feet deep, while the banks on either side are 15 to 40 feet high. How much damage could result?

But it is idle to say more, and it would be unnecessary to say anything at all, were it not that the dispatches sent out are certain to mislead those who are not well posted—that, in fact, being their apparent object. The people who are most familiar with the Bear valley dam are the ones who feel the greatest security in living below it, and they will corroborate every word we have said.

In the name of all that is decent and honest, these attacks upon an enterprise that has done more for Southern California than any other one influence, ought to be suppressed, and it is the duty of every honest newspaper to lend its aid in putting an end to aspersions that are as unfounded as they are contemptible.

How to Build a Dam.

The chief cause of failure in dams of all kinds is the faulty construction of the foundation, says the Denver *Field and Farm*. Just as a house will fall by reason of a weak foundation, which may be crushed under the weight of the walls, so a dam gives way by the gradual loosening of the foundation, caused by the flow of water through leaks. Earth dams above three feet high are sure to be washed away at some time, if they do not sink gradually by the certain percolation of water through the bottom. The weight of a bulk of water three times as large as a rock will move the rock bodily, as if it were wood, and the difference of specific gravity is overcome by the height of the water over the heavier obstacle. A very small torrent will roll large bowlders along its course with ease, and this enormous force of water must always be provided for in all hydraulic work. Dams should be made of timber or stone. For a safe and simple form of timber dam, the foundation should be rock or hardpan of gravel, and the mudsills on the lower tier should be bedded in broken rock, pounded down firmly with a 15-pound sledge. The sills are saddled, and the cross-ties laid upon them are notched to rest upon the saddles, and two-inch pins should be put through both of the logs. Where the foundation is shelving rock, 1½-inch iron pins should be put down into the rock at least a foot, to prevent sliding. But the sliding force is almost neutralized in this form of dam by the weight of water, which lies upon the sheeting. The tiers of timber are built up and saddled, and notched. A plank sheeting is put down to the solid foundation above the first sill, end is spiked with eight-penny spikes firmly. The sheeting is filled to the foundation as close as possible, and hydraulic cement concrete is bedded in front of it, to make a tight joint. No leaks will ever trouble a dam founded in this way. The rafters should be strong enough to bear any weight of water which the stream may carry doubled. If the highest flood known is five or ten feet above the usual level, it is easy to estimate the strength of the rafter required, and then double the number of them, putting them no more than two feet apart, if the sheeting is of one-inch board doubled. If any error is made, it is the cheapest to err upon the safe side, as the cost of more material will be much less than that of a new dam, and perhaps a mill that may go with it. An apron should be put in front of the dam, to receive the overflow; this throws the weight of the water on the face of the dam, and balances so much of the pressure on the upper sides. An earth dam may be made safe by sheet piling driven to rock or hardpan or clay, in the center of the excavation. A dam should never be built on surface soil, but the center should be placed on solid ground. As the earth is put in, it should be well packed by driving oxen or horses back and forth, or by ramming it well. This prevents settlement when the water is let in above it. The ends of an earth dam should be protected with sheet piling at least two feet higher than the overflow at the center, and the overflow should pass over solid plank flooring, spiked to timbers well bedded down on the top and both sides of the dam. This will prevent washing of the top. A masonry dam should be built on a foundation of concrete, laid on solid rock, over piles driven close together, and both sides protected by sheet piling. The piles should be left to protrude into the concrete foundation. Except for water works, there should be no outlet in the bottom of the dam; but the work should be of the most solid character. A waste channel for overflow should be made on the top large enough to carry off any possible flood, and the ends of the dam should be carried up with solid masonry as high as may ever be needed to prevent cutting out of the ends by the flood. A large dam should be constructed regardless of expense to secure safety in every direction, and the small details of construction are very often the most important parts of the work. Any person who might, under any circumstances, build a masonry dam in hollow shell form, and fill it with dirt, or leave earth banks on either side of the dam, should be confined in an asylum for imbecility. No doubt, considering the vast importance of securing unquestionable safety to the unsuspecting public whose lives may be endangered, all persons practicing as hydraulic engineers should be licensed only after exhaustive examination by competent men. If a veterinary surgeon or a physician—who could scarcely kill a hundred persons by the mistakes of a lifetime—must be properly licensed before he can practice, how much more should an engineer be, upon whose mistakes thousands of lives may impend? Every sensible man is convinced that a dam, like any other engineering work, must be built in accordance with the principles of construction. It is easy to figure exactly the force which a dam may ever be called upon to resist, and manage the construction in such a way as to provide an excess of strength and permanence, and we give it herewith.

Progress in Arizona.

Arizona has been facetiously referred to for years as the "land of the cactus and horned toad," but if the present ratio of irrigation progress is maintained, some other phrase will have to be selected to do justice to the situation. Canal enterprises are under way in many places, and thousands of acres of arid land are being reclaimed, having lain fallow since their original cultivators perished thousands of years ago.

At Gila Bend the Citrus canal has been finished and water was turned into it a week ago. The first day the water ran down 15 miles to a depth of 30 inches, and this without any dam in the river, says a local paper. The heading of the canal is in solid rock, and the canal passes through a tunnel 15 feet long, at the mouth of which the headgate is set. Owing to this and a solid cement wall below, the highest flood cannot affect the canal. The canal is eight feet wide on the bottom, with two feet fall to the mile. There are 6000 acres of the finest fruit land in Arizona reclaimed by the completion of this magnificent waterway. Most of the land is owned by members of the company who will plant the larger part of it to citrus fruits at once—in fact, they have men and teams at work now clearing and plowing the land.

Articles of incorporation of the Rio Verde Canal Company have been recorded at Phœnix. The company is the one that is having the route surveyed to take a canal out of the Verde, to irrigate a large body of land north of Phœnix. The authorized capital stock of the company is $3,000,000, divided into 30,000 shares of the par value of $100 each, of which 8000 shares is treasury stock, and will be issued only upon the affirmative concurring vote of at least two-thirds of the stock. The government of the corporation will be vested in a board of nine directors. The incorporators are: Frank L. Stetson, Martin Ring, Chas. F. Baker, William H. J. Pearce, M. J. Galpin, Chas. P. Silloway and Chas. A. Bicknell. The principal place of business of the company will be at the city of Phœnix.

The Yuma pumping and Irrigation Co. have kept a considerable force of men and teams at work for the past two months in clearing and preparing their extensive tracts of land for the next year's crop, says the *Times*. It is understood that 40 acres have been put in garden order and will be devoted wholly to vegetables, while several hundred acres are ready for the planting of trees and vines, already ordered. Pumping was suspended about two weeks ago, but is again to be resumed at once and kept up until the soil is put in proper condition for planting. It is reported that the company propose to add a number of new pumps to their plant, thereby increasing their facilities for effectual service.

Among the homestead locators on the Algodones grant, several have commenced substantial improvements. Edwin Mayes and R. S. Hatch have purchased a large-sized centrifugal pump in partnership for their ranches, and expect to have it in position within a month and be ready to irrigate at least 30 or 40 acres for next season's crop. Mr. Mayes has ordered an architect to draught plans for a neat and substantial brick residence.

One of the most important canal enterprises now being undertaken in Arizona is that proposed by the Santa Cruz Water Storage Company with headquarters at Tucson. The promoters of the enterprise are principally English capitalists, and it therefore has the advantage of ample financial resources, and is certain to be carried forward successfully. When the canal is completed, it will cover many thousand acres in Southern Arizona, and afford employment and homes for a populous and wealthy community.

Irrigation in Washington.

As a rule, we of the Pacific coast are accustomed to regard the states to the north of California as favored with such an abundant rainfall that there is no necessity for a resort to irrigation in those sections. Indeed, the popular idea of the rainfall of Oregon and Washington, is that if anything, it is a little superabundant. But this idea would appear to be erroneous, since extensive irrigation enterprises are now under way in both the States named. The most recent enterprise proposed is that of some Portland capitalists, who propose to divert water from the Walla Walla river for the irrigation of an extensive body of arid mesa lands near the town of Wallula, in Eastern Washington. These parties have filed a claim on 1000 cubic feet of water per second in the river mentioned and propose also to construct a masonry diverting dam 35 feet high. It is said they intend to commence operations at once and get the water on the land as soon as possible.

In the Yakima valley a novel question has arisen in relation to certain extensive irrigation enterprises now under way. There is in that valley a large Indian reservation through which flow streams whose waters have been used by white settlers outside the reservation for many years for irrigation. Recently an enterprise was put on foot for the reclamation of some 70,000 acres of arid land, but this has aroused the determined opposition of the Indian agent, and he has made complaint to the officials at Washington. The grounds of this complaint are novel. It appears that an old treaty gave the Indians the right to fish in the streams bordering on the reservation, and the agent

claims to believe that if any more water is diverted for irrigation the fishing privilage will become worthless. The water of two streams are involved; those of the Yakima river itself and those of the Ahtanum, a tributary of that stream. Along the latter are many white settlers who have used its water for years for irrigation without molestation, and it appears have been the means of putting thousands of dollars into the pockets of the reservation Indians in the shape of wages for labor performed on the irrigated farms.

Such eminent predecessors of the present Indian agent, as Father Wilbur and General Milroy, says the Portland *Oregonian*, in discussing this novel phase of irrigation failed to see any danger to the Indians' rights in this use of the creek water for irrigation, and the principle is the same as that involved in the diverting of a part of the Yakima river for the purpose of irrigating some 70,000 acres. In the opinion of the present agent, the settlers along the Ahtanum have no rights to the waters of that stream, and he says he has instructions to prosecute all who violate the treaty obligations; but while the appropriations of the water for irrigation purposes have practically left the main stream of the Ahtanum dry during the irrigation season, he recognizes that to enforce the strict letter of the treaty in this respect would ruin the farmers along the creek, and he has in consequence taken no action. In his opinion, the proper solution of the question would be the making of another treaty and the purchase by the Government of the water franchise from the Indians. As to the waters of the Yakima, and the appropriation by the irrigation company, the agent considers the question still more serious. He has sent plans of the dam and canal to the Commissioner, and as he is of the opinion that the canal would carry off practically all the water in the river, he has recommended that the company be restricted in this respect. From the tone of the local paper it is evident that the people, whose hopes are centered upon the great irrigation work in progress, do not believe the fishing rights and privileges of the Indians are in any such danger as assumed by their agent. It is possible that some of them suspect him of too great zeal, since they have never before been scared at the taking of water for irrigating. It has been going on for years, and now and then a fish, which perhaps the Creator and the Indian bureau intended for a siwash dinner, has actually turned his nose into the farmers' ditch, and gone flapping along the corn rows until caught and fried by the thrifty housewife. If the Indians are entitled to all the water of all the streams that border their reservations, in order that they may not be deprived of a single fish that might be sustained in full banks and caught from the siwash side of the river, then the enterprise of the white man in his neck of the woods should be pulled off at once. It is a question of much more than local importance, and should not be hastily settled by an ex parte construction of the old treaty. Common sense would lead one to think that no treaty was ever intended to interfere with the white man's plowing on one side of a stream, while the Indian fished on the other. The white man's side of the river has been idle and unproductive too long already.

It seems scarcely possible that there can be but one conclusion to this matter. It is not to be believed that the privilege of catching fish in a stream will prevent the utilization of its water for irrigation; to do so would violate every economic principle and would be an injustice to the white settlers of the Yakima valley that would not be tolerated.

Pumping Water.

W. S. Green, the Colusa county apostle of irrigation, publishes a statement over his signature that water can be furnished the Sacramento river lands cheaper than almost anywhere in the State by means of large pumps on on a barge. It will justify a pump that will throw 75,000 gallons a minute. 15,000 gallons can be thrown over the levee for 10 cents, and 20,000 can be thrown into such sloughs as Sycamore and Cheney for 10 cents, and thrown fast enough to prevent waste. Land a mile or more back can be watered cheaply. With such a plant on the river, land will be worth $20 an acre more money. Mr. Green is consulting with farmers who desire to irrigate with the view of setting operations on foot for putting in one or more pumping plants. It may be added that this is no experimental idea, but has been successfully tested in many places in the arid region.

A Novel Recommendation.

The Grand Jury of San Bernardino county, in its report filed a short time since, made a recommendation upon the subject of irrigation storage reservoirs which has the merit of novelty, whatever may be said of the legality of the action proposed. The recommendation is as follows: "A matter of great importance to this county, demanding immediate attention, is our storage-reservoir system. We therefore recommend that the Board of Supervisors pass an ordinance to the effect that the plan and specifications for all dams now in course of construction, or that may hereafter be constructed, in San Bernardino county, for the impounding of water in a quantity sufficient to be a menace to life and property, shall be submitted to the Board of Supervisors, who shall obtain for such plans and specifications the approval of one or more competent engineers."

Work in the Districts.

Next Wednesday the election will be held for the organization of the Glendora district, in Los Angeles county. The people interested seem practically unanimous and little opposition is expected.

Engineers J. D. Browne and assistants are at work again on the line of the Kern and Tulare district canal. They started in at the point of diversion from the river, and are making a very careful survey, says the Bakersfield *Echo*. Measurements are made every few feet and the data obtained from which the exact amount of earth to be moved can be estimated. Their progress was necessarily slow now, for they are working in the roughest country encountered along the whole route. When a few miles more are passed the open plains will be reached and then they can get along much more rapidly. One of the directors informed an *Echo* reporter, a few days ago, that the prospect for a sale of the district bonds was improving. Several Eastern institutions are considering the matter, and if the survey now being made shows conclusively that the canal can be built for the amount of the bonds, a sale is likely to follow in the near future. The directors rest easy on this contingency, feeling certain that their estimate of the cost was properly made. But should their expectations of a sale fail to materialize, they have other prospects. Construction companies have already offered to do the work and take the bonds for pay. Such an arrangement would amount to the same as a sale of the bonds, except that it would, to some extent, shut off competition for the work. But when the new estimate of cost is made and these builders have made their bid, it can easily be told whether their figures are too high.

The director referred to says that instead of being discouraged, they feel very sanguine that the work will soon be under headway. The confidence in these securities is all the while growing stronger, and no great length of time can elapse before there is a demand for them.

A visit to Perris reveals the fact that that colony is in a prosperous condition. Water from the Bear Valley system is flowing on the tract, says the San Bernardino *Times-Index*. Within the last three months, 25 new houses have been built, and within the last year and a half, the population has doubled. The Santa Fe is building a fine new depot at an expense of $5000. Plans have been completed for two or three new brick blocks. The contracts have been let for laying steel distributing pipe lines to carry water upon the entire district at a cost of $50,000. Within the last 30 days the land sales have footed up to upward of $250,000. A vast amount of land is being sown to barley and wheat and preparations are being made for extensive orchard planting this spring. Land is now being sold with water right in the irrigation district at from $40 to $100 per acre.

The irrigation districts already formed in San Diego county cover 150,000 acres of land, says the Escondido *Times*. Allowing 40 acres to the family that would accommodate 25,000 families, and estimating an average of four to a family, it means a population of 100,000, independent of towns. But it has been demonstrated that a family can make a living on ten acres, with water; hence the territory mentioned is capable of supporting a population of 400,000. Apply this to the Escondido valley, we would have fully 5000 population outside of the town, which would contain fully as many more, owing to its commanding position concerning a large outside tributary country.

It is believed that the Oakdale canal can be completed to a few miles west of Oakdale for $15,000, including dam and everything, says the Oakdale *Leader*. One firm in Oakdale has offered to advance $5000, and one or two other men living in the town have agreed to advance a proportionate share. Now, will those farmers who fought the district do as much? One man said on the street the other day that he had $1000 invested in the Oakdale canal, and he would rather lose it all than to see a district organized. If that be the case, the work last Monday resulted in a gain of several thousand dollars to the farmers, and it looks as if they could afford to render financial assistance to this great enterprise. Fifteen thousand dollars is required; probably $6000 can be raised in Oakdale. Will the farmers who represent 8000 acres of land raise the remaining $9000? Let us see if they will work as actively in the interest of the Oakdale canal, as they did against the district proposition.

The Dinuba *Dispatch* says: In disbursing the district moneys, it is a source of business satisfaction to know that nearly every dollar is spent in the district. It does not go to China or Italy, but is laid out right here in the district, where the money is raised. Since the formation of the district in August, 1888, $52,673 have been expended, viz.: Labor, $15,000; supplies, $2763; boarding the men, $1459; hay and grain, $5510; lumber, $3254; advertising and printing, $2057; law, $5533; per diem of directors and committee expenses, $3235; office supplies, $307; sundries, safe, office furniture, $3010; salaries, $7508; surveying, $2206; recording, abstracts, etc., $883.

The Alta district has bought a section of canal already built and needed by the district, paying for the same in bonds at par.

ENTOMOLOGICAL.

Aphis-Proof Apple Trees.

Readers of the RURAL have been often reminded of the Australian method of circumventing woolly aphis by growing trees on resistant stocks. Some of the stocks used in Australia have been brought to this State, but, so far as we know, no one has yet adopted the Australian method on a commercial scale. The following interesting allusion to the subject we find in the Adelaide *Garden and Field* for November, for which we are indebted to Mr. W. C. Grasley of Adelaide. It is from an essay on the apple by Mr. W. Kelly, Chairman of the Branch Council of the Bureau of Agriculture of that colony:

In this district several varieties of fruit-bearing trees can be grown to perfection, and perhaps none more so than the apple. Unfortunately an insect known as the woolly aphis infests it, and has its home here. That insect penetrates to the roots, and, lodging there, sucks the life sap of the tree. In its safe retreat, that insect defied the skill of the orchardist in his efforts to eradicate it, and the cultivation of the apple has suffered in consequence. It has, however, been discovered that there are two varieties of apples—the Winter Majetin and Northern Spy—which are blight proof. The insect will not touch these trees, and the knowledge of that fact enables the growers to cope somewhat successfully with that pest.

This is a matter of first importance to persons who intend to cultivate the apple, for unless the stocks are blight-proof, growers cannot expect to succeed. Respectable nurserymen and other practical growers now graft every variety of apple on blight-proof stocks. It was thought by some that by gathering the fruit of the Winter Majetin and Northern Spy when fully ripe, and sowing the seed, they would obtain blight-proof plants. The result, however, proved disappointing, inasmuch as a large proportion of the seedlings were not proof against blight. It could not be expected that they would, for seedling plants partake more or less of the character of their parents. If the blight-proof trees were grown in the orchard with other varieties of the apple, the pollen of one plant would be wafted by the wind or carried by bees or birds to the stigma of another. The seedlings would possess some of the constitutional qualities of both male and female plants, and in consequence of cross fertilization, could not possess blight-proof properties.

Root-grafting is the only effectual way of getting over the difficulty. That is done by grafting scions of the Winter Majetin or Northern Spy on portions of the root of the same trees. The roots are cut up into short pieces, taking care that each has a few small fibers. The grafted roots are planted in the nursery, and the following season are again grafted, but this time with scions of the variety of apple intended to form the tree—[and at least six inches above the surface of the soil.—SEC.] By this method of double grafting, not only the roots, but a portion of the stock are rendered blight proof. The following season the young trees are fit for planting where intended to remain.

There are many methods of grafting, but the principle is the same in all. With roots and young stocks split-grafting is the simplest and best, and is generally adopted. The joining is made by cutting and carefully fitting the bark of the graft to the bark of the stock. Between the bark and sapwood of trees there is always a layer of cellular tissue, which is called cambium, and it is in this layer that grafting and budding are generally effected. In fact, it is essential that the cambium layer of both stock and graft be placed in contact, and when that is done, the vital force of the cambium cells soon effects a union of the two. To prevent disarrangement, a tie of soft texture is bound round the graft to keep the lips of the wound together, and then soil is placed around and above the tie to exclude air and light.

Our Gift to Australia.

It has previously been noted in the RURAL that Prof. Riley arranged some months ago to send to the colonies something in exchange for the *Vedalia cardinalis*, the Australian insect which has proved of such incalculable value in this State. The following interesting notes we take from the Adelaide *Garden and Field* for November:

An attempt has been made to introduce from California the Raphidia (very useful predatory insects) into New Zealand, to act against the codlin moth, a pest which is causing severe loss in many districts of the colony. Mr. Koebele was kind enough to transmit 25 boxes of Raphidia to Mr. R. Allen Wight of Auckland to experiment with. They were all in the pupa stage, except one larva, which arrived alive and well; and although the results were not so good as might have been wished, the fact of the usefulness of Raphidia against the codlin moth was fully and satisfactorily proved. The Raphidia is an insect of the order Neuroptera, and it is one of the most active and voracious of that order, which is distinguished for these qualities. When this larva arrived, after its long fast, it was given a codlin moth larva, which it at once attacked with considerable fury and devoured, although it was nearly as large as itself, and as soon as it recovered from its gorged condition, it attacked and killed several more, evidently taking a pleasure in so doing. The insect was kept in confinement for some months, during which it destroyed considerable numbers of codlin moth larvæ, and also fed freely upon the woolly apple aphis; but it did not appear willing to tear open the cocoons of the moth larvæ to get at their contents.

Dreading the severity of the New Zealand winter for the insects conveyed from so warm a country as California, Mr. Wight sent a few of them to Mr. French of Melbourne to be acclimatized there, considering also that the unavoidable dangers of the hemispheric change would be better avoided in the Australian climate; and being obliged to leave home for a considerable time, he was compelled to turn those remaining out, to take their chance in a sheltered situation in the orchard, and nothing more has ever been seen of them, although it is not improbable that they may yet be in existence, and increasing. The larva of Raphidia is admirably formed to prey on that of the codlin moth. Its body is very flat, and it runs very quickly both forward and backward. It has a large and very flat head, fitted with a formidable pair of nippers, with which it seizes its prey, and the whole insect could not be better formed for the purpose of creeping under the scales of bark, and into those crevices where the moth larvæ secrete themselves when about to pupate. Of course it is impossible, with so little experience of one specimen, to say whether it would attack and devour the same prey upon which it lived in captivity if it had been at liberty, and had a choice of victims, and it certainly seemed willing to feed upon the aphides that were placed with it; but Mr. Koebele, who has watched its habits closely in California, says that it is by far the most useful insect among the many which attack the moth, and, in fact, the only very effectual one, and the propriety of its introduction wherever the codlin moth is, cannot be doubted.

METEOROLOGICAL.

Pacific Coast Weather for December.

The weather of the month commenced with a disturbance central, over British Columbia, the storm trough extending southward through Nevada into southeastern California, and with rain general as far south as the lower San Joaquin valley. Clearing weather prevailed on the 2d, but on the 3d a storm approached the upper California coast that moved northeastward, and gave general precipitation to the entire slope, including Southern California.

On the 4th, a high pressure area advanced over California and Oregon, and gave low temperatures to the interior for several days, frosts occurring at San Francisco, Sacramento and Needles, on the 5th, at San Francisco, San Diego and Los Angeles on the 6th, and at San Francisco and San Diego on the 7th.

On the evening of the 6th a disturbance was apparent on the upper coast that intensified as it moved eastward, resulting in rains and high winds from Northern California, Nevada, and Utah northward by the evening of the 8th. Clearing conditions prevailed on the 9th, and generally fair weather on the 10th and 11th; but on the latter date there was a fall in the air pressure over Southern California and a rising air pressure over the interior of the slope, with a depression manifesting itself on the upper coast and forcing the high area southward, which conditions resulted in violent north winds over Southern Nevada and extreme Eastern and Southern California on the 11th and 12th; the disturbance to the north passed eastward over the upper country and gave light rains as far south as Northern California, on the 13th.

On the evening of the 15th a storm approached the upper coast and by the 16th the rain area had spread southward over northern California. On the 18th a disturbance came in toward Washington and by the evening of the 19th there was a storm trough extending along the entire slope and general rains and snow falling in all sections. The evening of the 20th saw a disturbance central over Washington, and again on the 22nd, both storms giving rains or snows as far southward as extreme northern California, and the latter storm diverging southward gave scattering rains in the southern portion of northern California on 23rd and snows to Nevada and Utah. The coldest day, from eastern Washington and Oregon southward, was on the 25th when the temperature fell below zero in eastern Oregon and Nevada, and below the freezing point in nearly all portions of California except on the immediate coast. By the evening of the 25th a disturbance in the north attracted southerly winds giving warmer weather, and this storm proved to be the most severe of the season, the reduced air pressure at Port Angeles falling to 29.10 inches by 3 P. M. of 26th, causing general precipitation to fall in all portions of the slope by the evening of the 27th, and giving high winds to all but the lower California stations, the wind reaching a maximum velocity of 33 miles per hour at Fort Canby, Wash.

The 28th saw another storm entering the upper country, with precipitation as far south

as Southern California, and the development of a decided storm in Nevada, with high winds over the interior. The month closed with a disturbance on the upper coast and precipitation general north of Central California. There were therefore a total of 11 storms that advanced from the ocean and affected the weather of the Pacific States, not including the branch storms that developed from troughs extending southward into the interior.

The month can be classed as having been decidedly stormy and extreme in its conditions. The rains of the month were as follows: Olympia, 13.6; Portland, 11.4; Roseburg, 12.0; Spokane, 3.0; Walla Walla, 1.8; Baker City, 4.0; Red Bluff, 3.8; Sacramento, 3.3; San Francisco, 5.6; Fresno, 4.0; Keeler, 0.3; Los Angeles, 2 0; San Diego, 1 3; Carson City, 5.6; Winnemucca, 1.7; Helena, 0.4; Salt Lake, 2.2; Tucson, 0.2; and Yuma, no rain. This is a deficiency of 1.4 inches in the Sacramento valley, and from 0.9 to 1.5 in Southern California, but an excess of 1.7 at Fresno and 0.5 at San Francisco, compared to the December fall. In the western portions of Washington and Oregon there was a general excess of from over three to nearly six inches. There were five inches of snow on the ground at the close of the month at Spokane, 15 inches at Baker City, one inch at Red Bluff, from 4 to 36 inches in the mountains north of Red Bluff, from 43 to 108 inches on the summit of the Sierras in Eastern California, six inches at Carson City, four at Winnemucca, and three at Salt Lake City.

The month was from three to six degrees warmer than usual in the eastern portions of Washington and Oregon, and in western Montana, and nearly the normal in the western portions of Washington and Oregon. In California, Nevada, Arizona and Utah the mean temperature was from four to six degrees below the normal, being four degrees below throughout California, except on the coast where it was from one to two degrees below, and from four to six degrees below in the interior.

ROBERT E. KERHAM,
Chief of Division.

PLOWING BY NIGHT.—A plan has been adopted by the farmers of Colusa county to gain time by plowing at night, as a means of accelerating fall plowing. The plan is to use a steam plow which can be run day and night over the level farms at the rate of eight miles an hour. It has a traction engine, and tears up the ground in strips 21 feet wide, doing its work much more evenly and thoroughly than the old horse plows. The same appliances are used for combined harvesters and thrashers in the proper season. The engine is equipped with locomotive headlights for night work, and they throw a light in the path in front of the machine. Additional lights throw their rays on the plows, which are placed in a row obliquely from the direction of progress, enabling the machine to turn sharp corners. Ordinarily, an engineer, a fireman and a man to look after the plow can operate this labor-saving device, which plows about 160 acres a day, running continuously, at a cost of 12½ cents per acre, including wear and tear of machinery. Team-plowing could not be carried on for less than 75 cents an acre. The ability to work at night enables a farmer to rush his work when he is pressed for time. The main objection to running at night is the difficulty encountered in having two different crews to run the machine, one by day and the other by night. If anything goes wrong during the day, the night engineer usually falls heir to the difficulty, which the other frequently neglects and makes no effort to repair the damage.

JUNE BUTTER IN JANUARY.

The butter-maker whose butter at this season is equal in color and flavor to that of June is the one who gets the best prices.

The color can be gained easily by using Wells, Richardson & Co.'s Improved Butter Color, and as looks make a great difference in the way butter tastes to the consumer, the flavor will be all right if this color is used. Butter-makers should remember that no other make equals W., R. & Co.'s color in strength, natural shade, and freedom from taste and odor. Butter buyers and commission merchants recommend their patrons to use it, as they know it is always the same strength and shade, thus making butter in which it is used uniform in color the year round. If you are using a weak or inferior color, why not change to the best?

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough If already a subscriber, please show the paper to others.

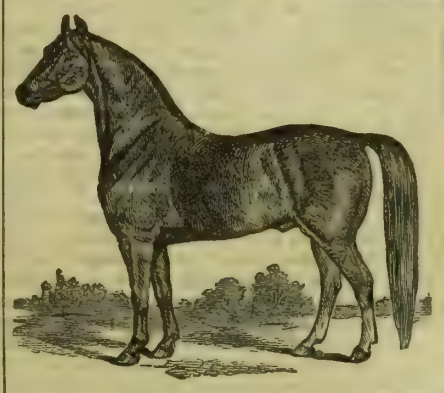
A UNIVERSITY CHAIR OF LABOR.—The first chair of labor ever instituted in Europe was decreed by the Paris Municipal Council, last July. Henry Reville has been named as professor.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

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Choice Brood Mares!

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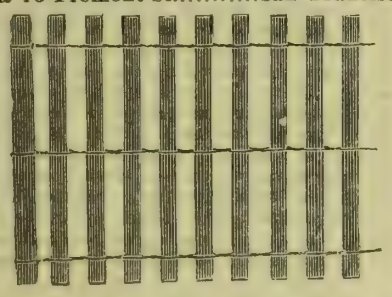
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The German Savings and Loan Society,
526 California Street.

FOR THE HALF YEAR ENDING DECEMBER 31, 1891, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on Term Deposits, and four and one-half (4½) per cent per annum on Ordinary Deposits, payable on and after SATURDAY, January 2, 1892.

GEORGE TOURNY, Secretary.

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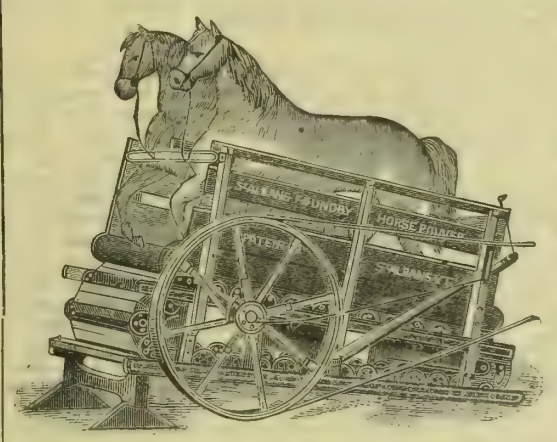
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The only Horse-Power that we sell with our De Laval Separators and guarantee the whole outfit to give entire satisfaction.

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Fly-Wheel Walking Beam for Pumping Large Quantities of Water

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NEWS FROM ANOTHER PLANET.

IF you were told that there was a machine that would sow any garden seed, from beans down to celery, in either hills or rows, sow fertilizers, cover, roll down, and mark out the next row, all at one operation, what would you say?

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You ought to see it. It is a new one of the famous **"PLANET JR."** machines, which no well-regulated farmer ever tries to get along without. There are other novelties described in our 1892 general catalogue, now ready. Write for it.

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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

NURSERY SHIPMENTS.—Biggs *Argus:* One has only to call at the depot nowadays to note the importance of the nursery business in this section. Almost a continual string of wagons loaded with stock have been loading cars since Dec. 24th, and thousands of trees are being shipped right along. We took occasion to examine a carload of June buds, and we found every tree perfect in shape and not a poor root among them. One carload just shipped contained about 20,000 June buds. The nurserymen will make big returns this year.

SPLENDID ORANGES.—Biggs *Argus:* While at the residence of A. M. Pitts Saturday afternoon, our attention was called to the splendid crop of oranges now hanging on the trees in the dooryard. There are 19 trees in all, a number of them budded trees and just beginning to bear. These trees were well laden with large fruit, but the trees that attracted special attention were five or six large seedlings, whose branches were simply overloaded. In fact, we noticed that several limbs were broken from the excessive weight. On one tree, we judged that there must have been at least 1000 large oranges, and Mrs. Pitts informed us that several hundred had been picked from the same tree. We have seen no larger or more thrifty trees anywhere in California, nor have we tasted finer flavored oranges elsewhere than those grown by Mr. Pitts. The land surrounding Biggs will grow splendid oranges, and, a few years hence, will show hundreds of acres in orange trees.

Contra Costa.

FARM NOTES FROM THE RIVER ISLANDS.—Tyler Island Cor. Antioch *Ledger:* Contractor J. D. Wightman and his gang are busy at Voorman camp building the dairy-house and barns for a large butter-making company that has leased a tract of 2000 acres from H. Voorman on Tyler Island, which lies between Bouldin Island and Andrews Island. On the north and west it is bounded by Giorgiona slough, on the east by Snodgrass slough, and on the south by the North Mokelumne river. The island is virgin soil, never having been considered large enough to pay for reclaiming till taken hold of by its present owner, who is a San Francisco millionaire. Around the borders of the island is a strip of land about three chains wide that appears as though it was formed by the washing in and lodging of slickens. It abounds in trees of various varieties and a heavy undergrowth of blackberries. In summertime here can be found thousands of tons of wild berries. This strip is the higher part of the island, and by far the firmest, as the rest is old regulation peat, and grown up to tules of such height that a horseman is easily lost, and a man on foot can only get out by good luck. These are to be burned as soon as the rains have wet the peat soil sufficient to insure against its also being burned.

THOROUGH CULTIVATION.—Martinez *Gazette*: Alhambra valley has a State reputation for productiveness, but it is not only its rich soil and the warm thermal belt in which it is situated that causes such a generous yield, but because these great advantages are supplemented by a system of cultivation so thorough that all the moisture and nutrition in the ground goes directly to the support of the plant. The Alhambra orchards and vineyards, now under the charge of Mr. John Muir, afford a splendid example of what intelligent cultivation can accomplish. Four or five times during the season the ground is thoroughly cultivated until it becomes as fine and friable as possible. No moisture is lost by evaporation and the crops proclaim the generous attention they receive. The fruit and grapes are not only very superior in size and quality, but the yield is enormous. This season there has been shipped from the vineyards including those packed, 560 tons of grapes, all bringing the highest market prices. Of course many other vineyardists also understand and practice thorough cultivation, but we mention this in stance because we have the figures to illustrate so fully the profits resulting from the system.

Lassen.

LARGE HOGS.—Susanville *Mail:* S. G. Alexander of Antelope Valley butchered ten hogs lately, the combined weight of which was 1670 pounds, or an average of 167 pounds each. They were Poland China stock and less than eight months old, and there ought to be money in raising them.

Los Angeles.

WALNUT STATISTICS.—Downey *Champion:* Through the courtesy of their secretary, Mr. J. A. Montgomery, we are enabled to give the names of members of the Los Nietos and Ranchito Walnut-Growers' Association, number of sacks of walnuts each had, the weight, and also amount of money each received for the same. Their aggregate receipts were as follows: Walnuts, sacks, 6619, 702,649 pounds, $58,020.

TREE PLANTING.—*Progress:* Seth Richards will add 4000 more orange trees to his mammoth orchard at North Pomona. George Rhorer will plant 2000 lemon trees on the Sycamore tract, northeast of Pomona. H. Mosgrove of Los Angeles has given orders to begin preparations for planting 2200 orange trees on his land in the southeastern part of Pomona. E. T. Fenton, recently from Ann Arbor, Mich., is about to plant six acres to White Adriatic figs. John D. Cason has already bought 1000 lemon trees for planting. S. N. Androus will do much more orange planting next spring. It is thought that over 25 acres of olives will be planted here in March. J. E. Packard will do a lot more planting of lemon and orange trees this season. J. A. Packard will set out about 1800 more orange trees at his Lordsburg ranch. John Woy has contracted for 14,000 trees (mostly citrus) from J. A. Driffill, to be planted for Crawford Bros., east of Pomona. T. D. Holladay is going to plant 25 acres to oranges, walnuts and deciduous fruits, for a friend.

PROFIT IN LEMONS.—Pomona *Progress:* Duarte has a 15-year-old lemon tree that has yielded 24 boxes of lemons since January, 1891, and each box sold at an average price of $2.10. A few have brought $3.70 a box. The total cash earned by the tree in one year is put at $57. Lemon culture never had such consideration in horticultural journals as now. There is no question that the lemon will prove to be one of the best paying trees we have. The new methods of curing them are bringing California lemons up to the standard of the imported article, and the growers begin to understand the art of making lemons marketable. The fruit comes along at all seasons of the year, and people who are fortunate enough to possess a lemon orchard have realized that they have a bonanza.

Merced.

A LARGE AREA TO BE RECLAIMED.—Los Banos *Enterprise:* The prospects of the Sunset Irrigation District seem favorable. A survey has been commenced, and an assessment has been made on the stock. This canal will open to cultivation over 400,000 acres of productive land, which is at present worthless, except for sheep-grazing, on account of having no water. This canal will irrigate one of the largest districts in the state, and the capital stock will be $2,000,000.

Monterey.

SAN BENITO COLT STAKES.—Salinas City *Index:* The San Benito Agricultural Association has made arrangements for trotting colt stakes, open to Monterey and San Benito counties, as follows: Two-year-old stakes, for foals of 1891; trotting, two in three; to be decided in 1893. Entrance, $50; $10 upon nomination, $10 July 1, 1892, $10 July 1, 1893, $20 thirty days prior to race; added money, $100. Three-year-old stakes; trotting, three in five; to be decided in 1892. Entrance, $50; $10 upon nomination, $15 July 1, 1892, and $25 thirty days prior to race; added money, $100. The third payment of $100 is due January 1, 1892, on the futurity stakes for foals of 1890. All stakes divided into four moneys, and entries close January 15, 1892.

Orange.

COLD WEATHER AND FRUIT.—Santa Ana *Blade*, Dec. 30: A visit has been made to the various lemon and orange orchards in the vicinity of this city and Tustin and Orange. This valley for the past three or four days has been visited by an unprecedented cold snap of weather, and it was to ascertain whether any great amount of injury has been sustained, that inquiries were made. From all sources it was generally stated that although at two o'clock last Saturday morning the thermometer showed 26 degrees above zero, yet there was hope that the green fruit and young trees might pass the ordeal unscathed. As in the case where the ground is wet, or where water has been allowed to stand around the trees, no damage has been sustained in such places. The water takes up the ice and thus protects the tree and fruit.

Placer.

ACTIVE PLOWING.—Lincoln Cor. Newcastle *News:* Farmers are having a good season for plowing and seeding. A large acreage will be sown in western Placer.

Sacramento.

HOP NOTES.—*News:* Growers are beginning to prepare for the coming season. Those using temporary poles are hauling them from the field, and the yards generally are being cleared of old vines. Many fields will this year be provided with a permanent system of trellising, cedar poles and wire or twine being used. This, together with the many improvements already planned for new kilns, drying rooms and necessary conveniences, is indicative of the prosperous condition of the hop farmers and the faith they have in the future of the industry. In three or four weeks the active work in the yards will commence, and there will be no cessation until 1892 hops are in the bale. January will be taken advantage of by growers in making the necessary additions, improvements and changes in their buildings.

San Bernardino.

PREVENTING DAMAGE BY FROST.—Redlands *Facts:* The *Southern Californian* of Fallbrook, San Diego Co. describes a method in vogue in that section to prevent damage by frost in vineyards and orchards when the weather seems to be threatening. The plan commonly adopted is the construction of heaps of brushwood, say of prunings and surplus vine cuttings, at certain intervals around or within the vineyard area. To increase the density of the smoke, pieces of turf, green weeds and tar are added, when available, and by this means too, the consumption of brushwood is economized. The object is to disseminate the smoke as thoroughly as possible through the orchard or vineyard, and it is thought that its effect is both to prevent frost from setting and to save the vegetation from damage by too sudden contact with the sun's rays after the freeze.

OUR BIG FREEZE.—Redlands *Citrograph*, Jan. 2: The past two weeks have averaged about the coldest ever experienced in this section. The lowest thermometrical measurement was on Saturday morning last. Reports were promptly received here of temperatures ranging from 19 to 26 degrees from the different orange-growing localities. Redlands reports from 23 to 26 degrees, the lowest being on the low ground next the river, as was to be expected. Riverside reports the lowest, 19 degrees as the coldest and 26 degrees for the highest. The damage done to the growing crop will not be very heavy—not nearly so much as was at first feared. The crop will not be reduced more than 20 per cent, and it is hoped that this estimate is too high. * * * The losses in nursery stock are more serious. There are many places in Redlands and Highlands where the nursery stock escaped all injury; others lost heavily, some nurserymen placing their loss at a very high percentage. As is usual, the frost ran in belts or waves, with no apparent reasons to be deduced. This big freeze, as it will long be called, emphasizes the fact that there are even in Southern California, many places where orange-growing is hazardous and should be indulged in with caution. It also marks places that possess peculiar advantages by reason of exemption from killing frosts. Take it all in all, this spell of cold weather lends force to the fact that orange-growing is a marked success in this great valley. We have just passed through the heaviest freeze that has visited this section since white man's occupancy. No bearing trees have been killed. Very few have been frost-bitten enough to set them back, even. The young trees are slightly injured, and some seedbed stock is killed. The damage to the ripening crop is not so great as was done by the winds, and we will yet ship almost as big a crop as that of last year. The orange grower can take courage and go forward. Frost belts have again been defined, and they can be avoided. The situation is full of hope, and we look to see orange-planting in suitable localities go forward with renewed and increased vigor. The lesson of the frost will be heeded.

Santa Barbara.

BENEFITS OF DEEP PLOWING.—Santa Maria *Times:* Our land is not new any more. It is entirely subdued. It will not fire vegetation as it used to do. It needs stirring up to bring a good crop. We have very rich land here but it is just like it is everywhere else on earth; continued cropping without putting anything back wears it out. It might really be well to put on a little manure but still, the sign is hardly right to talk on that subject, and as we have only used from two to four inches of top soil, just break it up good and deep and it will produce just as well or better than ever before. Our farmers are not all 50 years behind the times, and those who are not, are making a success of their calling. Our beangrowers appreciate deep plowing. Those who have gone into summer crops and diversified farming have crawled out of the old ruts and it pays just as well to plow for wheat as for any other crop. There is one vital point which our beangrowers and other advocates of deep plowing have learned, and that is that deep plowing should be done early in the season, and as the summer advances, they cultivate shallower and shallower, thus attracting and holding the moisture close to the surface late in the season. Now that we have had a good rain and farming will commence in earnest, we would suggest to put the plows down, you cannot go too deep. It will make more wheat, more corn, more and better grain of every kind. It will make more beans, more fruit, more money. It will bring you more satisfaction, comfort and happiness than you will get out of a whole lifetime of the old style so-called "California scratching."

Santa Clara.

VINEYARD NOTES.—Cupertino Cor. S. J. *Mercury:* Edward Le Quesne is digging his vineyard up, he having planted the ground occupied by the vines to prunes. This is only one of many instances where vines are being dug out to give place to fruit trees. Among those who have become disgusted with the prevailing low prices for grapes and wine, I might mention John Stilling, who has planted olives among his vines; both Ed and Will Stilling, who have planted theirs to fruit; J. W. Stewart; the parties who purchased the Spedding place, and several others. Taking these facts into consideration, that while the acreage has not been increased by 100 acres in the past three or four years several hundred acres have been uprooted, the wine product of this county will be materially reduced, and though C. J. Wetmore says this county has 4,000,000 gallons of wine this year the writer would like to lay a wager with him that the cellars do not contain 3,000,000 gallons of wine of this year's crop. So if his estimate of other counties is as reliable, why the sooner the office he fills is abolished the better. Again he puts this year's vintage at 14,600,000 gallons, while two well-known growers of this county who traveled through the wine-producing counties placed it at about 4,000,000 gallons less. If this decrease continues, which from present appearance it must for several years before it can recover even if an impetus was given to this industry in the near future, as it would necessitate some four years before the vines would give any return, it seems pretty evident that some of those palatial wine cellars of San Francisco will remain idle for the necessary wine to fill them, or else be turned to some other purpose, perhaps to the manufacture of bogus wine, and this is one thing that the Viticultural Commission should try to prevent.

Solano.

PRUNING IN ORDER.—Rockville Cor. Dixon *Tribune:* Pruning is now in full swing, and the orchards present a winter appearance. The weather has been very propitious for pruning operations so far, and as a sequence, work is in advance of previous years. Indications augur well for a good crop next year, and, according to reports, a higher figure will be realized for fruit next season.

Sonoma.

CHERRY CULTURE.—Petaluma Cor. S. F. *Call:* Henry W. Hammel, who has a fine ranch on the Garden Valley road, about seven miles northwest of Petaluma, has turned his attention quite extensively to cultivation of the cherry, recognizing the superior quality of his locality for the growth of this fruit. He says: "Acting upon this thought, three years ago I set out 20 acres of the Royal Ann or white cherry. Last year I planted 20 acres more, and this year I calculate to put out about 600 trees. What I consider as phenomenal is there are no 'short' or 'half' crops. Of course the yield some years will be larger than others, but every year produces well." Mr. Hammel contends that the cherry can be successfully cultivated in but few localities, and his particular section forms one of the prominent few.

Sutter.

A THRIFTY TREE.—Yuba City *Farmer:* An orange tree in the yard of J. K. P. Elwell in Yuba City has a full yield of large ripe oranges of this season's crop, and hanging among them are a number of oranges of the previous year in a good state of preservation. On the same tree is a lemon branch in full bearing, with ripe fruit and also beautiful blossoms. The tree presents a very striking appearance.

Tulare.

ORCHARD ITEMS.—Hanford *Sentinel:* Many corporations in which outside capital has taken stock have been formed, among which we may mention the Bannar Vineyard Co., which has 320 acres of vineyard; the Grangeville Orchard and Vineyard Co., of 160 acres; the Sunset Vineyard Co., of 200 acres; the Gordon Vineyard Co., of 240 acres; the Del Monte Vineyard Co., of 171 acres; the Armona Orchard and Vineyard Co., 320 acres, and others, in all of which San Francisco capital is interested. There have been many large tracts of fine land set to fruit during the year, some of them in half-section pieces, but still the small tracts planted are of such a number as to popularize the small holding idea. The plowing up of land heretofore devoted to pasturage and meadow has made hay and feed scarce, hence hay has been given a good market, and the alfalfa meadow has been made a source of profit for hay this year far in excess of any previous period, one average alfalfa field yielding $25 per acre net for hay and still a good pasture for the winter left. Many farmers who have planted young vineyards last winter have raised an abundant crop of corn between the rows. Others have planted beans and other crops, and in this manner the land has been made to pay the expenses of the first year to vines. The yield of the raisin vines this season was most abundant, old vines well cultivated yielding 90 to 100 pounds of green fruit to the vine, equal to 30 pounds of cured raisins.

MINERAL FRUIT KING CO.—Visalia *Delta:* It was stated in last week's *Delta* that the 660-acre ranch owned by Richard Chatten, has been sold to a syndicate of San Jose fruitgrowers, headed by Geo. A. Fleming. The purchasers of the ranch have organized the Mineral King Fruit Co., and have filed articles of incorporation in the County Clerk's office. The objects of the corporation are to do a general fruit business. Two hundred acres of the ranch will be planted to fruit trees this winter.

TOBACCO GROWING.—Visalia *Times:* George Birkenhauer says growing tobacco in California is an entirely different matter from what it is in the Eastern States. An experienced tobacco grower in Pennsylvania would have many things to unlearn before he could make a success in California. The seed can be secured at the Agricultural Department at Washington. About 6000 plants should be put out on an acre of ground. The seed should be sown in a hot bed about the first of February, and if the plants are large enough, should be transplanted in May. As to whether he thinks tobacco can be successfully grown in the Tulare valley, Mr. Birkenhauer says he is strong enough in the faith to put out 20 acres this year. He has orders for a large number of plants, that will be planted out by other people.

A LARGE ORCHARD.—Visalia *Times:* Richard Chatten closed the sale of his ranch, four miles east of town, consisting of 660 acres, to George A. Fleming, Charles Fleming, W. L. Woodrow, T. Wood, T. W. Hobson, T. S. Whipple, E. B. Lewis and C. K. Fleming. All these are prominent business men of San Jose. They will begin at once and plant 200 acres to fruit this spring, mostly prunes. What is known as the Jacobs fruit ranch, now owned by the Fleming Fruit Company of Chicago, adjoins the Chatten property, just purchased, on the east, and contains 440 acres. This ranch has 60 acres of six-year-old trees, consisting of peaches, apricots and pears, with a few acres of assorted varieties. There is also growing in the nursery on the ranch, olives, figs, navel

oranges, 39 kinds of apples, 24 kinds of pears, etc., making 150 different kinds of fruit, besides the finest collection of roses of the greatest variety. The old orchard on this ranch, planted by James Houston some 25 years ago, has been neglected for some years until recently. It is now bearing well, thus dispelling the idea that the orchards in this country are short lived. The Broder ranch, purchased about a year ago by George A. Fleming and others, contains 240 acres, and is already in fruit. The three ranches contain a total of 1340 acres, and will all be in fruit at an early day. The companies contemplate extensive improvements, in drying houses, fruit-packing houses, and probably a cannery. These will be constructed as rapidly as needed. In a conversation with George A. Fleming, he stated that they intend planting a great variety of peaches, so as to have fruit ripening at all times of the fruit season. He says trees here make as great a growth in three years as they do in five years in any other place he has seen. "In selecting soil for fruit purposes, tree soil is the best. Soil which produces the oak will produce any other tree. Plant anything that goes East, and you get the same freight rates as San Jose or Los Angeles. Southern California is shipping large quantities of vegetables East, for which the freight is very low. Cabbages, cauliflowers, asparagus, lettuce, onions, radishes, etc., would be a good paying winter crop here for shipment East."

SELMA APPLES.—*Enterprise*: Lately we had occasion to mention the fine specimens of Red Warrior apples grown by Prof. Sanders and the remarkable growth of wood from a March bud of the same variety of tree. On Dec. 30th, A. C. Eberhard, who lives one mile east of Selma, sold a wagonload of as fine apples as can be grown anywhere to A. F. Brown. The fruit is of large size, without a blemish of any kind and entirely free from that enemy to apple and pear culture in many localities, the codlin moth. Last month Mr. LaGrange brought a load of fine pearmains to town from his place north of Selma. The fruit was of superior excellence. Mr. Barieau has raised as fine apples on his place near town as are to be had anywhere, no matter where grown. These are noticeable instances among many that could be cited to prove that apples of fine quality can be grown here, and corrects the general impression that the climate of the valley is too tropical for best results in the growth of this fruit. The excellence of the fruit noted is no doubt largely due to the elevation of the valley and the abundance of water.

GOOD YIELD OF CORN.—Hanford *Sentinel:* S. F. Deardoff brought in specimen ears of corn raised on his "alkali salt grass sod" which he broke up and planted to raisin grapes last winter. The stand of vines is nearly perfect, and at the last cultivation last summer, he planted corn between the grape rows. The ears he brought in averaged 19 rows on each cob and 50 kernels to the row, making 950 kernels to the ear. Two ears had over 1000 kernels on, or an increase from the planting of ten hundred fold. There is no doubt but industrious application to corn raising in Lucerne would develop one of the best corn-producing sections in the United States.

Ventura.

MANIPULATION OF WALNUTS.—*Free Press:* A well-known walnut grower of this county was talking about walnuts the other day and went on to tell how the market was worked to the grower's detriment. "At the sale of the Los Neitos walnuts this fall," said he, "two buyers were in the field from Los Angeles. One of them represented a house which usually tries to get in on every product, and the other was a young man representing most of his own capital. The young man outbid the other on a forty car-load lot, by a fraction of a cent a pound, and he was given the walnuts. The other man, in order to teach those growers a lesson, went home and sent word East and to those in the business, not to buy walnuts as there was a big stock and prices would fall down. As a result the purchaser of the nuts could not dispose of his buy, and as he was unable to make the proper advance the Los Neitos growers are still in posession of their crop. Of course this is not a usual case, but it goes to show how unprincipled some commission men can get."

CROP STATISTICS.—Ventura *Free Press:* The following is the amount of grain raised in Ventura during the year 1891: Beans, 1800 carloads; barley, 450,000 ctls.; wheat, 50,000 ctls.; corn, 30,000 ctls.; potatoes, 300 carloads; walnuts, all varieties, 10 carloads; apricots, dried, 40 carloads; prunes, dried, 5 carloads.

Yolo.

WANTS COYOTES EXTERMINATED.—Woodland *Democrat*: At the annual meeting of the Yolo Co. Wool-Growers Association at Esparto, on December the 26th, G. W. Scott made some very interesting remarks. He pointed out the good the Association had accomplished, and predicted that the 280 coyotes which it has been instrumental in slaying, if left unmolested, would by this time have increased to one thousand. He said if they were not wholly exterminated, they would destroy chickens, turkeys, geese and hogs as well. He pointed out that sheep-raising is becoming a paying industry, and every year the percentage of lambs saved is growing larger. In conclusion, Mr. Scott urged the members to stand by the Association until the work of exterminating the coyotes is completed.

POULTRY YARD.

Capons in California

EDITORS PRESS:—I should think the finest capons in the world could be raised in California. From what I learn of the climate, I should judge that in a large portion of the State, chickens can be hatched successfully under hens most any month in the year. If this is so, it is especially desirable, as one could then have capons maturing at all months in the year, and thus be in a position to supply markets continually, which is not done now. At present, capons are only to be found in markets during the late winter and early spring months, but there is a demand for them the year around which should be supplied.

From the fact of my having sent so many caponizing instruments to California, I should judge the work was receiving considerable attention there, and that the practice was gradually being adopted. One man writes me from there that he caponized 500 cockerels last year with perfect success, and sold them at very profitable prices in San Francisco.

In performing the work, it is almost impossible to prevent having more or less slips; perhaps one bird in 10 or 15 would be about the way they would run. While the slips are not quite so valuable as the capons, and do not grow to quite so large a size, yet their size and value far exceeds that of the common chicken, and they find a quick sale. Capons in the climate of New England require from 10 to 12 months from date of hatch to develop their full weight and reach their best condition, but with the climate that is to be found in California, I should think that they would grow more rapidly, especially during the winter months, and be in condition for market by the time they were eight months old. It is the cold and damp weather that we have East that retards the growth of all our poultry, and this element does not exist in many parts of California. To those people who have never practiced caponizing, I would say that the operation is of the most simple nature, and, with the proper tools, can be performed by a boy ten years old. Of course it is like everything else, the more one does the faster he can do it, but so far as requiring any experience to do the work, it is entirely unnecessary, as the tools now made do it perfectly and only need to be guided. California certainly offers exceptionally fine opportunities to raise magnificent capons, and every one who keeps poultry there should caponize their birds, whether they intend them for market or home consumption.

GEORGE Q. DOW.

North Epping, N. H.

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DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION, 532 CALIFORnia St., corner Webb, branch, 1700 Market St., cor. Polk. For the half year ending with December 31, 1891, a dividend has been declared at the rate of five and four-tenths (5 4-10) per cent per annum on term deposits, and four and one-half (4½) per cent per annum on ordinary deposits, free of taxes, payable on and after SATURDAY, January 2, 1892. LOVELL WHITE, Cashier.

ANNUAL MEETING.

The regular Annual Meeting of the Stockholders of the Grangers' Bank of California, for the election of Directors for the ensuing year, will take place at the office of the Bank, in the City of San Francisco, State of California, on Tuesday, the 12th day of January, 1892, at one o'clock, P. M.

For Grangers' Bank of California,
ALBERT MONTPELLIER,
San Francisco, Dec. 14, 1891. Cashier and Manager.

WANTED Horticulturist. Practical Horticulturist of California experience can have steady employment on one of the largest fruit farms in San Diego County, consisting of Oranges, Lemons, Olives, Apricots and Grapes. Only competent, wide-awake parties need apply. Address, with references, E. M. FRANK, 215 California Street, San Francisco, or F. F. ADAMS, Fallbrook, Cal.

RAISIN GROWERS, ATTENTION!

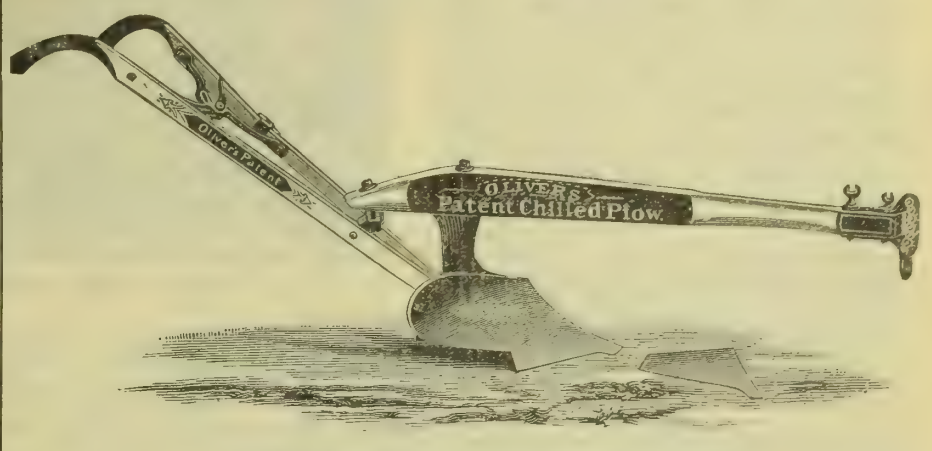
POSITION WANTED AS FOREMAN ON A RAISIN farm, by a married man with five years experience in growing and packing raisins. Wife can take charge of packing department, being a first-class packer. Prefer taking position January 1, 1892, but can come at any time desired. Best of reference given as to capacity, honesty, etc. For particulars, address C. N., Box A this office.

"DEAD LOCK" GOPHER TRAPS are best. Price 25c apeice, or $2 per doz. delivered. L. F. WHITE & SON, Pomona, Cal.

This Refers
To An Article

Of acknowledged superiority in any capacity and under all conditions. The plow is a very important article on the farm, and those who select wisely will accept none but the Oliver Chilled Plow, as it has neither peer nor competitor

FOR ORCHARD AND VINEYARD WORK



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Plows have reached a larger sale, have proved more popular and given better satisfaction than any other plows on the face of the globe.

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OLIVER CHILLED PLOW WORKS,

37 MARKET STREET, SAN FRANCISCO, CAL.

A FEW KNOCK-DOWNS

Stock-taking last week has turned up a good many bargains where we have too much goods of a kind, or too little to keep it on the regular list, or out of style and reduced to close them out.

Our stock must be kept all O. K., at whatever sacrifice. 1891 goods and overstock must give way to new stock.

Over 100,000 Blood's, Turney's, Warren's, or Baylis' best sewing needles at 2½ cents a paper, 40 for $1.00, all sizes except 6; also 4 to 8, 1 to 5, 5 to 10, and 3 to 9 mixed darners or yarn needles at same price.

Large or small coat, dress or other buttons, real value is from 15 cents to $1.00 per dozen, go now at 2½, 5, 10 per dozen, or 25 to 35 per gross, assorted to suit. Mostly black, late styles, but we have over 2000 gross and shall let them go at any price

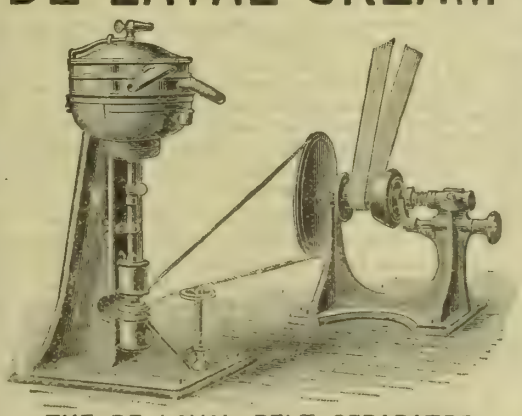
SWISS embroidery, 2, 2½, 3, 3½-inch edging, beautiful and costly, has sold at 25 to 50, now 12½ cents, and narrow ones at 5 cents. Fancy linen splashers (samples) and other linens at 50 cents on the dollar. Button-hole twist, assorted (3 black), 25 in a box at 37 cents. Sewing silk, 100-yard spools, assorted (3 black), 65 cents dozen. Ladies' handkerchiefs, several 100 dozen at one-half price, fine goods.

10,000 articles we have not room to tell about. Order a few by mail or express if not ready for a large order by freight. Add for postage. Ask for complete list. Address

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Is the Largest Illustrated and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 3 mos. or $2.40 a year (till further notice). DEWEY & CO., Publishers, 220 Market Street, San Francisco.

Redlands, San Bernardino Co.

We give herewith a view of one of the prettiest hotels in Southern California. Its location for salubrity and view is not exceeded by any other hotel or private residence in all the State. The view therefore is more extensive, more picturesque and grander than we have ever seen from any other locality. It is finished and furnished after the best taste of modern art and style, and has recently been put in complete order and is now, we believe, open for visitors and permanent boarders. This hotel is most beautifully located, just out of the business center of Redlands, with which it is connected by a street railroad. There is no need of ascending to the roof to get a view; but, standing upon the balcony, which it will be seen from the finely executed view we give of the hotel, the observer may look westward 20 or 30 miles and see before him the most beautiful valley in California, gently falling away to the west, with a fringe of grand old mountains snow-covered a part of the year, and shutting in the valley from the north, while the southern edge is bordered with irregular, broken hills, beautiful in contour, throughout the same extent. The valley itself is beautifully studded here and there with pretty little cities and villages, surrounded with grove after grove of orange trees, which are just now changing their deep green to a beautiful golden color, and contrasting strangely with the snow-covered mountains on the right. Turning now to the north and east, the observer beholds Old San Bernardino and its companion giant, "Old Baldy," both at this time covered with their winter mantle of snow, and rising far above all surrounding heights. We know of no other place on the broad continent where a view can be obtained so mixed with grandeur and beauty, or capable of so thrilling the soul with such pleasant delights of semitropical scenery and mountain grandeur. The panorama is one which it is worth a journey across the continent to behold and rest the eyes upon for even the briefest period.

The Town of Redlands

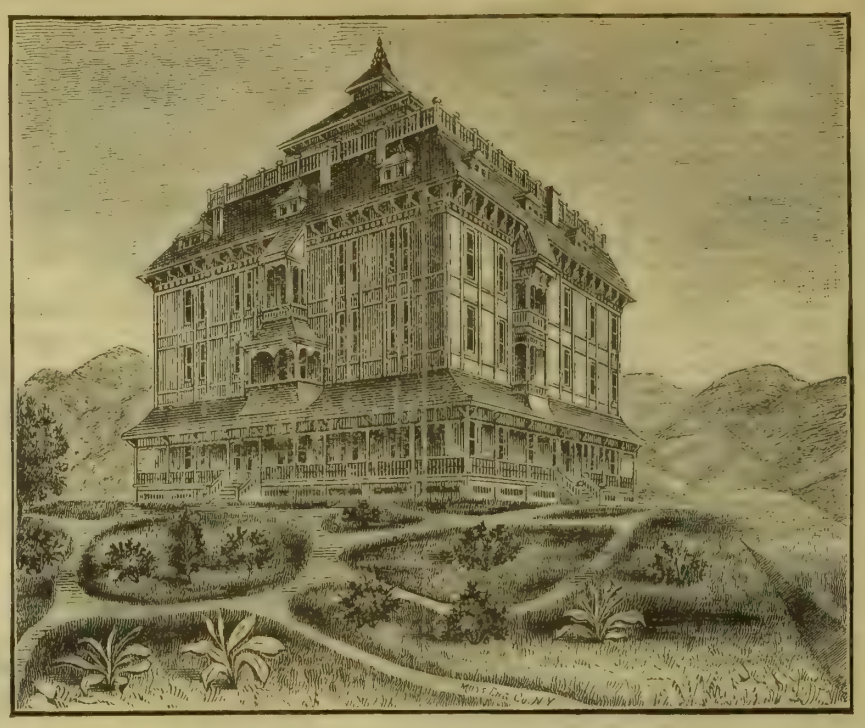
Is located at the foot of a range of mountains, upon an extensive mesa, reaching out into a gradually descending plain, which extends to the basin of the Santa Ana river. Its elevation and surroundings are such as to render it much more free from frost than perhaps any other locality in the State. Probably no other town in the southern portion of the State can show an equal amount of prosperity. It is, perhaps, the only one which has never gone back from the boom times of three or four years ago. Like all others of the orange-growing localities in Southern California, it felt the boom and profited by it. But when the boom came to an end in other localities, Redlands kept right along with its steady legitimate growth and improvements, and has continued to do so until the present day. There are several reasons for this result. First, it has the best, largest and most unobjectionable water facilities in the State. It derives its water from

The Bear Valley Reservoir,

Which is fed directly from the snow upon the mountains by which it is surrounded. Before the dam was built, the site of the reservoir and its feeders were practically dry in the summer. Hence no riparian rights were either invaded or threatened. On the contrary, all the water, which is stored up in that reservoir during the winter, is gradually drawn off in the summer, and by its seepage from the many thousands of acres which it serves to irrigate, its helps keep up a fuller supply of water in the rivers below it, and is therefore a blessing even to those who are not directly benefited by it. Were the water with which the Bear valley reservoir is filled not restrained and held at that point for convenient use, nearly every gallon would find its way to the sea in the early summer, before irrigation becomes necessary and thus be lost for all utility. This reservoir is, we believe, the largest artificial irrigator on the continent.

A Senseless Excitement

Appears to be studiously kept up for some reason or other, nobody knows why, in regard to the safety of this dam, and appeals are periodically made against the danger to be apprehended from its breaking away. The writer is personally familiar with the locality, and with all the particulars connected with the construction of the dam. He has also conversed freely not only with Mr. F. E. Brown, under whose direction it was constructed, but also with other engineers who have visited it, and who are familiar with all its details. The dam has now stood firmly for seven years, with nearly a full volume of water behind it. It has also been exposed to storm, ice and even earthquake, without manifesting the least sign of weakness; and to prevent any possibility of accident, competent men are kept day and night within a few feet of it, ready and fully prepared to guard against any possible danger from floating objects which might injure it, and to reduce its volume of water promptly, should there appear to be any necessity for so doing. These parties are also in telegraphic communication with all the settlements below, the nearest of which is some 25 miles or more distant. This distance, the extremely rocky nature and sinuosity of the natural channel it would have to take, with all the other precautions constantly attended to, ought to put a stop to such unnecessary attacks and efforts to keep



TERRACINA HOTEL, REDLANDS, CAL.

people in dread of what is really an impossible occurrence. This body of water is the bottom fact which has made it possible to convert Redlands and most of the country around it from a brown and cheerless desert to one of the most beautiful and fertile spots in all California. But to return to the town for which this notice is more especially intended, and which, also is far out of the way any body of water could possibly take from the source indicated, we may remark that

The Growth of Redlands Has Been Really Phenomenal,

And it has been accomplished without any, or at least but very little, of the noise and bluster that has been required to build up most other towns in California. Not only Redlands itself, but the country and neighboring towns around it, have been built up by the steady energy, determination, push, influence and money of a few of its leading citizens. Of course even such energy and enterprise would have failed had not the location, soil and water employed been utilized as chief factors in the enterprise. Never has Redlands realized greater improvements or made more rapid strides in everything which combines to make a town or city than it has during the past six months of comparative rest in most localities in the State. During the past summer, 14 brick blocks have been built there, containing 28 large rooms for stores; in addition to which, no less than 138 residences have been built, ranging in value from five to twenty thousand dollars each. The total value of these improvements has been set down at from $475,000 to $500,000. And still, with all this activity in building, we have a letter before us from a friend who desires to locate in Redlands, who assures us that he has thus far been unable to find a house into which he can move his belongings. The average of new land improved keeps equal pace with the improvements above noted. During the past year of 1891, no less than 1300 acres have been set out with orange trees. The year before, 1200 were improved, and the year previous to that, 1889, numbered 1300 trees. The total acreage improved up to the present time is set down as 45,000 acres! These figures have been communicated to us by a private and reliable correspondent but a few days since.

Schools, Churches, Hotels and Other Public and Semipublic Buildings

Keep equal pace with all mention of progress. Three banks have already been established and note a good run of business. The two papers published in Redlands—*The Citrograph* and *The Facts*, will not suffer in appearance or in management with any similar papers in the State. The *Orange Belt*, for circulation at Allesandro, is also published in Redlands, but, we presume, will soon make a move to its own proper locality. That place, as well as Redlands, and which was founded chiefly by Redlands people, appears to be growing too fast for the carpenters and builders to keep up. The town is also

Well Supplied With Railways.

Both the Southern Pacific and the Santa Fe roads have for some time been running several trains into or through the town every day. The place is, of course, connected with the outside world by telegraph by both the Western Union and the Postal telegraph lines. A telephone company also supplies the city with excellent local service. There is a large number of important business corporations which make Redlands their headquarters. We have hitherto neglected to say that Redlands is and has been, for over a year, an incorporated city. A list of various branches of business carried on in the city, which lies before us, numbers 181. The population of the city numbers 5000, with an expectancy of double that number inside of five years from this date. The city contains many beautiful and costly residences, and more of that class are constantly being built. Much attention is paid to beautifying the city with shade and ornamental trees, both along the streets and about the dwellings. The people who constitute this beautiful and phenomenal city are of the most desirable class, and no town of its size in this or any other State can boast of better society. Although we have more than filled the space which can properly be allotted to this notice, the subject is very far from being exhausted.

GOOD HEALTH.

A 'Home" for Cancer Patients.

In view of the alarming increase in this city of the dreadful malady known as cancer, and the want of adequate facilities for the proper care and protection of those who come here for treatment, several of our philanthropic citizens, many ladies among them, have for some time been looking about for a place and also for means for the establishment of a "Home," where those thus afflicted might find shelter and proper home comforts, while under treatment for cure, or while suffering the tortures which are inseparable from the more advanced condition of this malady, under which no treatment can save, but merely ameliorate sufferings which can end only in death. Such a home is especially needed in this city, which is the natural and most convenient resort for treatment of those on this coast who are afflicted with this malady.

Those interested in this humane work have finally met with the fullest success at the hands and through the favor of a most worthy and active association of benevolent ladies known as the "King's Daughters." This association has recently been placed in possession of the building owned by the city and occupied by the Old People's Home up to the time that, through the benevolence of Mrs. Charles Crocker, that association came into possession of their new quarters on Pine street.

The "King's Daughters" have refitted and refurnished this building, and made of it a most homelike and comfortable dwelling place for invalids, for which purpose the city allowed them the use of the premises.

On looking around for inmates for their new Home, their inquiries naturally led them to consider the condition and needs of the large and increasing number of those unfortunates who are afflicted with the generally supposed incurable malady of cancer. Pursuing their inquiry in this direction, they soon became acquainted with the fact that that class of invalids were greatly in need of just such a place, as they had to offer. They moreover were made well cognizant of a further fact of which they only previously had dim knowledge—that cancer patients were being successfully treated in this city, and restored to health without the use of either plaster or the knife, or any other treatment which entailed pain or suffering beyond that which was inherent in the malady itself.

After full inquiry and consultation, it was determined to devote a portion of their rooms to patients undergoing such treatment, and to install the practitioner, Mrs. C. A. Cook of 224 Post street, who is the discoverer and dispenser of that benign treatment, in charge of such patients.

Within one week after the rooms were ready, five patients, each with a nice cosy room, were enjoying the accommodations offered, and the treatment, all of whom are now doing well, with every prospect of an early and complete cure. Several other rooms will soon be occupied by the same class of invalids.

It Is One of the Most Remarkable Facts Connected with medical practice, that, of all other maladies, this one alone is regarded by the profession as absolutely incurable. Such an opinion has been held by them so long that it has become chronic, and seems to be an inborn idea with the profession, and quite as ineradicable from the minds of a majority of physicians as is the malady itself from the bodies of their patients by their mode of treatment.

If the work so well begun by the good "King's Daughters" should result in eradicating this nonprogressive and false idea from the minds of our conservators of health, they will have accomplished a work which will entitle them to a monument higher and more beautiful than any such structure ever yet erected; for it will any such structure ever yet erected; for it will lead to the saving of more lives from terrible deaths than have been sacrificed by all the great military heroes in whose memory the chief of all the great monuments of earth have been erected.

The "King's Daughters" constitutes one of the leading benevolent associations in the country, and is doing an immense amount of good. They number over 1000 in this State and fully 30,000 in the Union. They have State and National organizations, by which the work of each society is known to all the others. Through this organization, the work of this society will in time be made known throughout the Union, and the good news, which will soon be made evident in this city, that cancer is curable, will in time reach the stricken victims everywhere and lead to a movement which will eventually place the San Francisco treatment within the easy reach of every city and town in the Union—and the world as well.

Yes, the Remedy Is a Secret One,

And so was Koch's; yet the "regulars" from all over the world rushed to Berlin to get the secret remedy, learn its mode of application, and take it to their homes for trial. No matter if it was a failure. The principle involved was all the same. A medical *man* of high standing was the discoverer. In the present case the discoverer is a *woman* of humble practice. But what of the secrecy. All that is asked for is a medical investigation to prove either that the remedy is what is claimed for it or that it is a swindle. The doctor invites the test. If no competent medical authority in this city will take up the glove, is it not fair to suppose that they dare not do so? If they dare not do it, can any but a sinister motive be the hindrance? If the faculty refuse to investigate, the work which has now begun will soon speak for itself and settle the matter to the satisfaction of all reasonable persons.

But, further, with regard to the secrecy of the remedy, our healer may lack science, nay, she may be even selfish, if you please, holding the knowledge of a remedy for private gain, when the scientific professional would give the same to the world. Such things are a minor consideration and should have no weight whatever when the lives of thousands are at stake. The facts, which are within the reach of every one, are that scores of cancer sufferers in this city are constantly receiving *permanent* relief by purely constitutional treatment, without the use of the knife or caustics. The most of these cases have been pronounced unmistakable cancer by leading physicians and surgeons, and many have submitted to previous surgical operations, without any beneficial result. This assertion is made with due regard to its import, and proof will be presented to any one interested, by the writer, whose initials are well known in this city. With these facts in view, which are well known to hundreds of our citizens, it would seem that the theories and antiquated ethics of the doctors are entirely unworthy of consideration. W. B. E.

Lectures at the Stanford University.

Professor John Henry Comstock will give a special course of instruction, by means of lectures and laboratory work, in the study of insects at the University, beginning January 4, 1892, and continuing three months.

This course will be free and open to any person interested in the subject who will do the work required, whether a member of the University or not.

In addition to this general course, the week beginning February 15th will be devoted to a series of popular lectures on the insects injurious to fruit in California, and to other matters important to the fruit growers of the State.

At the same time a series of lectures on fruit-growing will be given by Mr. Emory E. Smith of San Francisco, Secretary of the State Floral Society and a Director of the State Horticultural Society.

All persons interested are cordially invited to be present at these lectures.

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Palo Alto, Cal. President.

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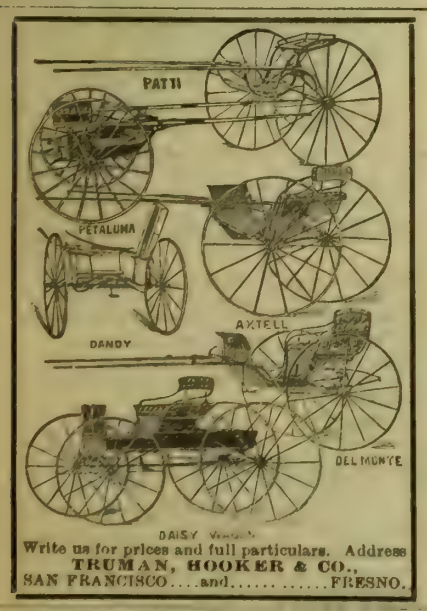
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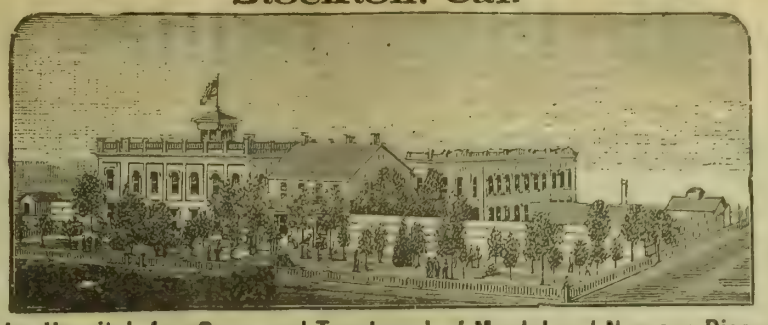


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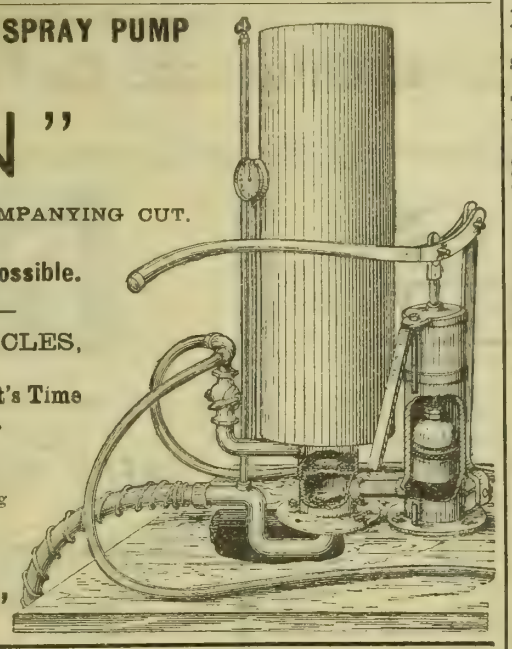
REFERENCES: Dr. L. C. Lane, Dr. W. H. Mays (late Superintendent of State Asylum at Stockton), Dr. Robert A. A. McLean, Dr. I. S. Titus, Dr. R. H. Plummer, San Francisco; Dr. E. H. Woolsey, Surgeon S. P. Co. and Oakland Hospital; Dr. W. S. Thorne, San Jose; Dr. G. A. Shurtleff (late Superintendent State Insane Asylum), Napa.

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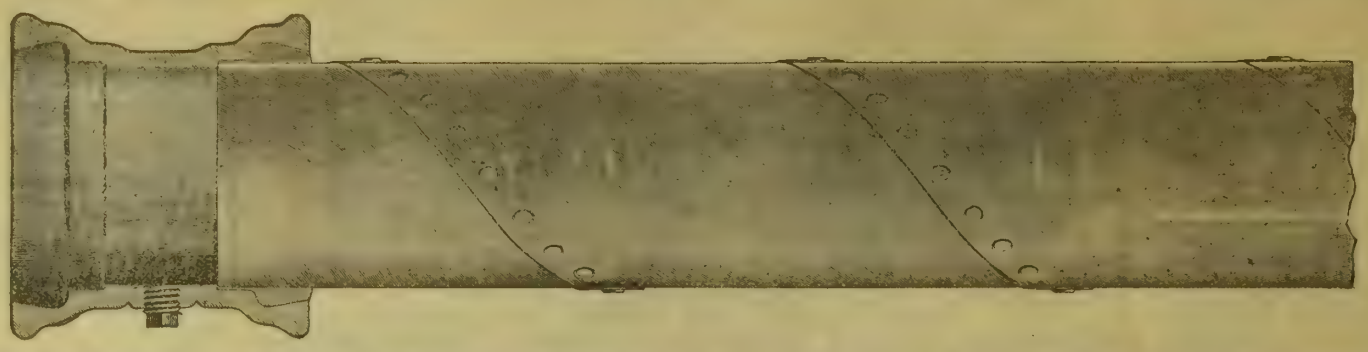
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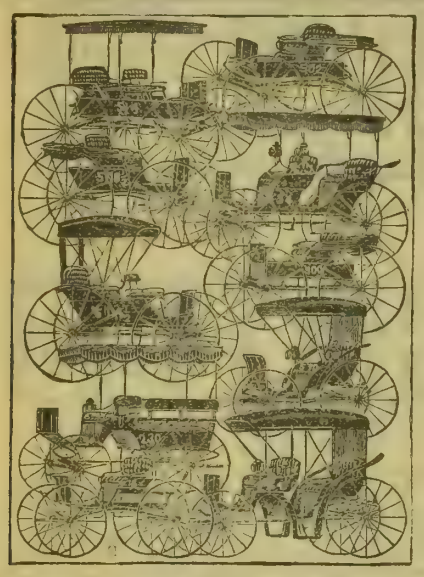
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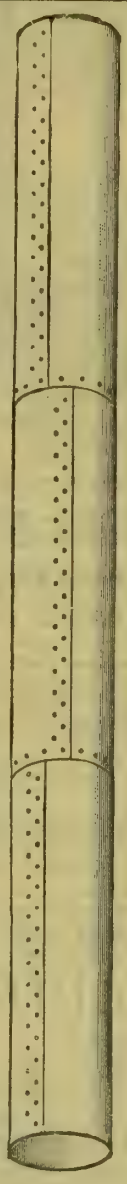
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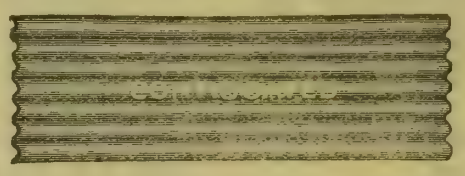
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THE VINEYARD.

The Queen Isabella Grape.

EDITORS PRESS:—Referring to the article on this grape in the issue of your paper of the 2d inst., I would beg to make a few remarks.

That the Pierce Grape is a sport of the Isabella there can be no doubt, and when you state that "you believe some parties went so far as to claim other origin for the variety than that described," you are not mistaken, for I have done so myself, but I can prove that I am entitled to such a claim.

In 1878 I moved on to the vineyard "Fontenay Vineyard," where I have resided ever since. Shortly after taking possession, a friend of mine, living at the time in Santa Clara, called my attention to the famous Isabella grape as grown by Mr. Pierce. I suggested that he procure me some cuttings, but being met with the remark that Mr. Pierce would dispose of none, the matter dropped.

The following year, while my men were picking ordinary Isabellas for market, I noticed some extra fine ones. I immediately hunted up the matter and found the vine. It was trained on a trellis some three feet from the ground, and branched off at about 18 inches, the cane on one side bearing the ordinary Isabella, while the other bore the fancy ones. The vine at the time was at least 10 or 12 years old. I sent a box of my grapes to my friend, who pronounced them fully equal to Mr. Pierce's. I also took a sample bunch to Mr. C. A. Wetmore, at the time Chief Viticultural Officer, who suggested that I should call them the Queen Isabella, the name which they have borne ever since.

I have tried reproduction by cuttings and by grafts, as have also many of my friends and neighbors to whom I gave cuttings, and in every case have we succeeded in reproducing the Queen. A year or two later, I discovered no less than three other vines, each one of which had a "sport" producing the same Queen Isabella. There can be no question about their being "sports," for in each case they branch off some distance (at least one foot) from the ground.

Mr. Albert Montpellier, manager of the Grangers' Bank, can testify to this fact, for, several years ago, while paying me a visit, I showed him the original vine, loaded at the time with the finest fruit. He was so struck with the sight that he asked me for some cuttings; and in order that there should be no mistake, he took from his pocket a new cambric handkerchief, and tearing it into strips, he marked the cane which bore the fancy or "Queen Isabella." He also took a bunch of these grapes, which he had photographed and lithographed, and then preserved it in alcohol, and he no doubt has it to this day.

I do not pretend that the "Pierce" grape did not originate with Mr. Pierce, but I do claim that it also originated with me; and I see no necessity for giving the identical grape more than one name, and the one in question being beyond a doubt an Isabella, "Queen Isabella" or Isabella Regia seems to me the more appropriate.

My grapes have been selling in the San Francisco market for several years at from 7½ to 15 cents per pound, when other varieties were selling at from 1 to 3 cents.

HENRY MEL.

Glenwood, Santa Cruz Co.

[We are pleased to have this statement from so well known a vine grower. It shows the existence of another Isabella sport, and there may be, of course, an indefinite number of such sports. The State Horticultural Society has shown some disposition to look into this matter, and we trust it will do so during the next ripening season.

As we understand Mr. Mel's position, he does claim that his grape is identical with Mr. Pierce's, not that the question of origin is at all involved; that both are independent sports from Isabella and are like each other. Now, are there others?—EDS. PRESS.]

A Plan to Improve the Sacramento.

SACRAMENTO, Jan. 5.—Before the Board of Supervisors to-day, a letter from John Doherty, a civil engineer of Oakland, was read, in which it was stated that the building of the levee past Washington, on the Yolo side of the river, will cause this city to be flooded. Doherty lived here ten years and says he knows what he is talking about. The writer observes that the Supervisors should call the attention of farmers and miners to the fact that, until the Sacramento river is made navigable, they have no basis on which to found an argument. The river being nearly level, with only a fall of six feet between Sacramento and San Francisco, no locks would be required, and no levees should be built close to the banks of the river. It should be cleaned out to an even grade and the material spread on the low ground. Sacramento would then become a mart of commerce and would enter on a career of prosperity. A few ships in the Sacramento would start new life, and San Francisco would be the greatest produce market on the coast. The letter continues to the effect that the Boards of Supervisors of the counties having interest in the navigation of the river should take whatever steps are necessary to secure the appropriation necessary to improve it.

THE FIELD.

Farmers, Plant Alfalfa!

EDITORS PRESS:—We read every few days the great yield and profit of growing alfalfa, yet how few farmers have enough for chickens and pigs to feed on. Why this is, is one of the puzzling questions that I cannot satisfactorily answer. It grows without irrigation on all bottom lands, and will produce well on most all kinds of land with irrigation. Every farmer with common intelligence that has been in this State two years that reads newspapers must know something about this ancient plant. Not planting alfalfa cannot be on account of expense, for all you have to do is to plow deep and make mellow and sow about 20 or 25 lbs. to the acre, with or without other crops, and harrow lightly. The seed is usually worth from six to ten cents per lb.

I have seen a fine stand from seed sown in October before the rains set in. I usually plant in January or February. Some claim the frost will kill the tender plant, and will not plant until April or May. It depends a good deal on what kind of land it is desired to plant on. If low bottom land that holds moisture late, it can be planted in June and make a good stand. I have been handling alfalfa since 1858, and I have not satisfied myself that frost kills it, except in rare cases.

We have become so accustomed to alfalfa up and down the Sacramento, American and Cosumnes rivers that we would hardly know how to do without it. Most all cattle and dairy men use it, and especially for family cows in the city. Alfalfa hay is seldom below six dollars per ton; usual price seven to eight, and now it is worth from twelve to thirteen.

On account of break in levees a great acreage was drowned out last year, and now they are bringing it in from Nevada by the carload. Teams that are not worked too hard will do well on alfalfa without grain.

By getting a good stand, that is, plants close together, the hay will be finer and much better. If the plants or crowns are far apart, the stocks will be large and coarse as willow sticks.

It takes the best kind of judgment to cure alfalfa in good shape. It requires close watching to see when it is ready to rake, bunch and stack. To do this too soon makes musty hay, undesirable and distasteful to stock. Waiting too long makes it too dry, the leaves fall from the stocks and much is wasted.

Alfalfa can be cut three or four times, according to location and intention of grower. We usually cut twice and then save the third cutting for seed, which is worth more than all the hay. The straw or chaff from thrashing is almost as good as the hay to feed to stock, cattle or horses.

When the plant first comes up in the spring, it is very watery and rank, and stock are not as fond of it as in May, June and July, when it is very fattening.

I have never measured the field from which I thrashed the seed, but should say it would yield from 300 to 500 pounds to the acre.

How inviting it looks to ride in the country when all other grass has dried up, and see a few acres of alfalfa with its green contrasted with the dry stubble fields. Every farmer that can get water from ditch or windmill, should have a few acres, to look upon as an oasis when everything about him has dried up.

When my eldest brother was out here to make me a visit in 1871, it was rather a dry year and being from the New England States he was not used to such a long spell without rain. I had a ten acre alfalfa field, and when it got too dry and dusty for him he would take his cane and walk down to the field and from top of the levee take a long look, and renew his faith and hope in California climate and soil.

On his return he would say "well, Daniel, if everything fails you, and you lose hope, just go down and look at your alfalfa field."

It is said that hay is the most valuable crop grown. A large wheat farmer told me the other day, that if he had not plowed a furrow and let all his land volunteer and cut for hay, he would have made $10,000 more than he did make by plowing and growing wheat.

Farmers that have no alfalfa, try my suggestions and if they prove good, send me a pound of gilt edged Jersey butter and a dozen of Light Brahma hen fruit. If false, send me your compliments and say I did not know what I was writing about.

Sacramento. D. FLINT

MILL FOR MARTINEZ.—It is announced the vast milling and warehousing interests of Carquinez straits are to be increased by the removal of Horace Davis & Co.'s Golden Gate Mills to a site which has been donated by the village of Martinez. We hope it is true. The dreary waste of tules in front of Martinez has always seemed to us an undesirable environment for the town and to have it covered with a milling plant will be a great help to the region in many ways.

SUTTER COUNTY WILL BE THERE.—The Supervisors of Sutter county have appropriated $100 toward making an exhibit at the State Citrus Fair in Auburn, next week. It is proposed to make as good a general display as time will permit.

Transplanting Old Orange Trees.

Many people of limited experience in orange culture seem to think that an orange tree cannot be moved with any degree of safety after it has reached a bearing age.

This is an erroneous idea, as men can be found in most any community who have tried the experiment and met with very satisfactory results.

Two years ago I had some experience in this line, and met with such good success that I should not hesitate to move trees of most any reasonable size and age when convenience or necessity require their removal from one place to another. I moved nearly fifty orange trees, ranging from five to ten years old, some of them fully fifteen feet in height and six inches in diameter at the trunk; most of them had been bearing for several years. During a warm spell in May, I cut them back to about six feet in height, or where I could reach conveniently with saw and shears. The lateral branches were also cut back so as to leave a somewhat symmetrical head, although mostly composed of bare stubs; this also gave me a good chance to remove all the dead branches that had accumulated about the center of the tree, where the dense foliage had shut out the light and air. These trees were removed for two good reasons. In the first place' they were scattered among deciduous trees where they caused considerable unnecessary labor to care for them when the deciduous trees were dormant; and more than that they were needed to fill some blank spaces in another orange grove of about the same age. After getting them all cut back and removing the brush, I proceeded to dig the holes for their new home. These holes were made from five to six feet across and about three feet deep, and a furrow plowed along the side in readiness for the water when it was needed. The work of pruning and digging holes occupied several days, and by this time the trees had somewhat recovered from their severe shock and were in better shape to stand the root cutting which must necessarily follow.

To accomplish this a circular trench was dug around the root of the tree, about three feet from the trunk, and the roots, whether large or small, were severed with saw or shears, as fast as they were uncovered. When a sufficient quantity of earth had been removed the tree would careen to one side so that the tap root could be cut, and the tree would be ready to move. Our Lugonia soil is a sandy loam, which long experience has proved to be admirably adapted to the culture of citrus fruits, and from its nature would not adhere to the roots of the trees, which were still as heavy as two men cared to lift from the hole and place on a sled which was drawn up to receive them. After covering the roots with a blanket to protect them from sun and wind, they were drawn to the holes prepared for them, and let down carefully to the proper depth, which we consider a little lower than they originally stood. They were then moved into line with the other trees, and the holes filled about two-thirds full of dirt and a stream of water turned in to settle the earth firmly about the roots.

Two or three days after this the holes were filled nearly full of earth, the water turned in again, and with occasional irrigations and cultivations they soon began to put forth sprouts, and produce canes several feet in length the first season. The next season some of them produced a few fine specimens of oranges.

The proportion of loss was very small, as but three or four out of the whole number failed to grow, and I am satisfied that trees thus handled, and properly cared for afterward, will commence to bear again in two years, and in several years more will so far regain their size as to differ but little, if any, from the surrounding trees.—C. H. LATHROP *in Orange Belt.*

PALO ALTO HORSE SALE.—An advertisement in another column announces the sale of some Palo Alto horses—brood mares of distinguished ancestry and honorable associations. Good long notice is given, as the sale will not occur until Feb. 24. Catalogues are now ready at Killip & Co.'s, and should be carefully studied over. This may be a chance to get good blood at very favorable figures.

WE wish to direct the special attention of horsemen and those interested in the breeding of draft and carriage stallions to the ad. of Theo. Skillman, the well-known importer, which appears in this issue of the RURAL. Mr. Skillman celebrated the advent of the new year by placing on exhibition and for sale at his stables in Petaluma a new and meritorious importation of stallions—the pick of Europe. None better have ever been seen in the State.

Jacks and Jennys.

In the light of history and experience for ages, the most reliable beast of burden has been the mule. The closer relations which are being fostered between the United States and the South American Republics are giving an impetus to the breeding of jacks, jennys and mules. Quite a number of our most enterprising ranchers and farmers have seized upon the advantages of this enterprise, and have quite extensive breeding establishments for jacks and jennys. The largest of these on the Pacific Coast is owned by L. U. Shippee, Esq., of Stockton, Cal. His first importation was of the most royal blood that can be found in Kentucky. He has added to it from time to time from the most fashionable strains until he has a herd that is equal to any in the United States. He has recently bred some jacks that weighed over 1300 pounds and were over 15 hands high, for which he received a long price. His herd having now increased to over 50, he has concluded to put upon the market a few, and therefore would at once open negotiations with any one who wishes to purchase any of this royal blood in jacks and jennys. His advertisement appears in this issue of the RURAL PRESS.

PECANS.—We acknowledge receipt of a fine sample of pecan nuts from Herbert Post, manager of the Texas Pecan & Seed Co. of Fort Worth, Texas. The nuts are the famous "Texas Thin Shell Pecan," and are very large and delicious. Mr. Post reports a very fine crop of seed pecan nuts this year, and his sample shows it. An advertisement will be found in another column.

WHEN IN TULARE patronize E. D. CASTLE'S livery and feed stables.

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NEAR TULARE, CALIFORNIA.

BEST CHANCE NOW OFFERED.

All in the Wonderful Artesian Belt or New Tulare Irrigation District.

Within one mile (southwesterly) of Tulare City limits, 160 acres. Will be sold as a whole or in five-acre homestead (or villa) lots.

Seven miles southwest of Tulare, 480 acres, principally good for grain, alfalfa, vineyard, fruit, nuts, etc.

A good, flowing, never-failing artesian well of clear, healthful water; large reservoir; two-story, eight-room, well built house; large barn and other convenient buildings; several acres of orchard and of alfalfa.

Will sell as a whole or in lots to suit. Title perfect. All surrounded and subdivided with wire fence. Residence has a garden, shrubbery and plenty of shade trees attached to it. Terms, one-fourth cash and balance in easy payments to suit purchasers.

Also, 160 acres less than two miles south of the 480 acres, of equally good but unimproved land, bound also to be greatly advanced in price.

Examine this land and improvements and be ready to bid it off at a bargain.

Auction in Tulare City, Saturday, Feb. 27, 1892. Place and hour of sale to be announced later.

Write or call on E. M. DEWEY, Tulare City, or A. T. DEWEY, No. 12 Front St., S. F.



MAKES THE BEST BREAD

IN 15 MINUTES.



I suffered severely with face neuralgia, but in 15 minutes after application of ST. JACOBS OIL was asleep; have not been troubled with it since.

No return since 1882. F. B. ADAMS, Perry, Mo.

"ALL RIGHT! ST. JACOBS OIL DID IT."

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

T. PHILLIPS, Simi, Ventura Co., Cal. Pure Bred Percheron Horses for sale.

COTATE RANCH BREEDING FARM, Page's Station, S. F. & N. P. R. R. P. O., Penn's Grove, Sonoma Co., Cal. Wilfred Page, Manager. Breeders of Short Horn Cattle, English Draft Horses, Spanish Merino Sheep and Berkshire Swine.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

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M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

H. P. MOHR, Mount Eden, Alameda Co., Cal., breeder and importer of Registered Clydesdale Horses, Holstein-Friesian Cattle and Berkshire Pigs. Young stock always on hand and for sale. Correspondence solicited.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

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WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

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GALT POULTRY YARDS, Galt, Sac. Co., Cal. Pure bred Fowls, Pekin Ducks, Belgian Hares, etc.

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DEER MOUNT POULTRY YARDS, Lock Box 283, St. Helena, Cal. S. C. White Leghorns, Toulouse Geese and Pekin Ducks.

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FRANK BULLARD, Woodland, Cal., importer and breeder of thoroughbred Spanish Merino Sheep. Premium band of the State. Choice rams and ewes for sale.

ANDREW SMITH, Redwood City, Cal.; see adv't.

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WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

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Brood Mares, Colts and Fillies.



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(Sold on Account of Ill Health.)

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Full catalogues giving breeding, registry, etc., together with breeding of stallions, for reference, may be had upon application to the undersigned, 22 Montgomery street, San Francisco, Cal.

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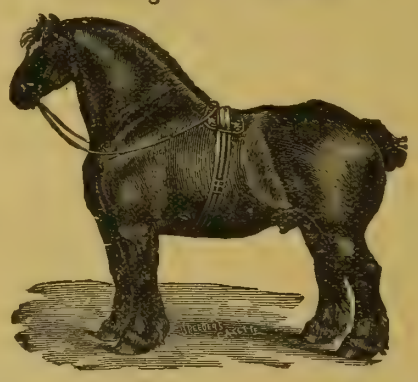
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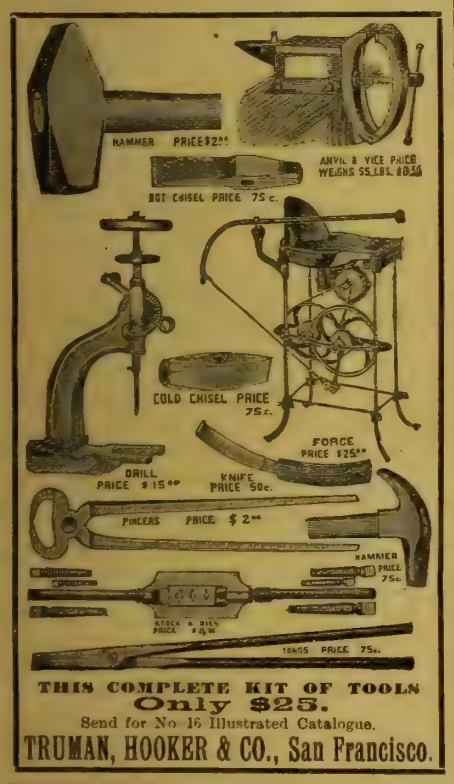
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NET SURPLUS over everything	278 901 10

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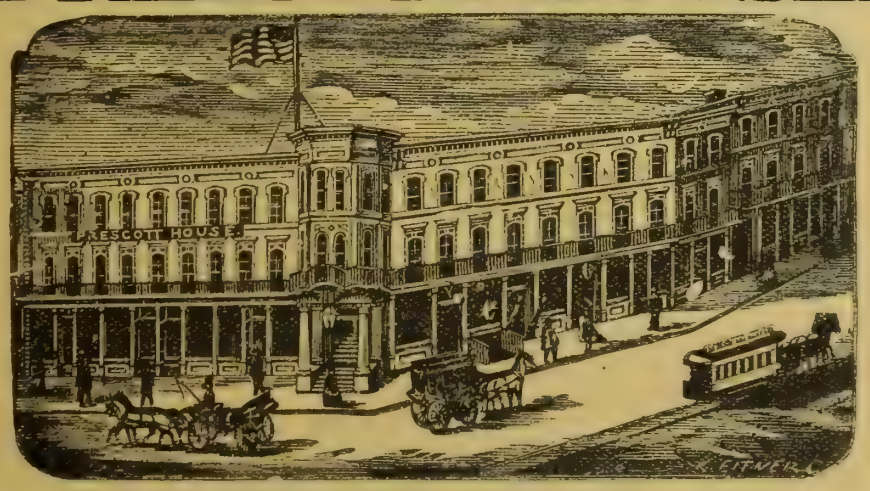
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 6, 1892.

We have fairly entered the new year, yet it may take at least a fortnight before business resumes its normal condition. Money is in good supply, with the rate of interest favoring first-class borrowers. Rains and cloudy weather are working to the interest of farmers who are pushing outdoor work. Eastern and foreign wheat markets shaded off slightly, but toward the close the tone is stronger. The following is to-day's cablegram:

LIVERPOOL, Jan. 6.—Wheat—Firm. California spot lots, 8s 6¼d; off coast, 43s; just shipped, 43s 3d; nearly due, 43s 3d; cargoes off coast, quiet; on passage, steadier; Mark Lane wheat, quiet; French country markets, quiet.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May
Thursday	....	8s7⅜ d	8s7½ d	8s7 d	8s7 d	8s8½ d
Friday	....	....	....	....	....	....
Saturday	....	8s7 d	....	8 6 d	8s6 d	8s6 d
Monday	....	8s6½ d	8s5⅝ d	8s6 d	8s6½ d	8s7½ d
Tuesday	....	8s6 d	8s5 d	8s5½ d	8s5 d	8s5 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	43s	43s	43s	Steadier.
Friday	....	....	....	....
Saturday	43s3d	43s3d	43s3d	Rather firmer.
Monday	43-3d	43s3d	43s3d	Steadily held.
Tuesday	43s	43s3d	43-3d	Inactive.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per cental:

Day.	Jan.	Feb	March.	April.	May.
Thursday	176	178	180	....	178½
Friday	....	....	....	....	....
Saturday	174⅝	176⅜	178½	....	176
Monday	173½	175½	177⅛	175½	176½
Tuesday	174½	176½	178	177½	177½

NEW YORK, Jan. 6.—Wheat—$1.05 for January, $1.06 for February, 1.07¼ for March, $1.07½ for April, $1.07 for May and $1.05¼ for June.

CHICAGO, Jan. 6.—Wheat—95½ for May.

Foreign Grain Review.

LONDON, Jan. 4.—*Mark Lane Express*: English wheat is selling at a decline since Christmas. Foreign wheat sold slowly. December, on the average, was firm. To-day, English wheats were firm. Foreign wheat showed no improvement. Barleys are steady, with steady and improved retail demand. Oats, firm. Indian corn in favor of buyers.

Foreign Hop Market.

Mark Lane Express, Dec. 21: There are only a few growths of 1891 hops left in the hands of planters, and for these the bids are gradually increasing. The principal trade in the Borough is between merchants and brewers, and owing to the shortening of supplies values are very firm, with a tendency to increased price. Old hops are in better demand and there is a slight improvement in values. Holders, however, are not very willing to sell, the present prices being considered too low. Continental hops are too dear on the other side to admit of much exportation to this country, but there is a good deal of inquiry here for medium and moderately priced sorts. New York State and California hops are in more demand, and the prices for these are gradually advancing.

Eastern Wool Markets.

NEW YORK, Jan. 1.—*Bradstreet's* says: The wool markets are quiet, as is generally the case during the closing week of the year. Manufacturers are not buying heavily unless large concessions are made in their favor. Values, are on the whole, steady and firm. The year closed with prices generally on a much firmer basis than did 1890. The indications point to a more active market during the first few months of 1892. Fleeces are still quiet, with very little business reported in them. Texas wools are moving well compared with the demand for other grades. A large sale is reported in California wool, but aside from this nothing of importance has been done. There is a good, steady demand for Territories. Cheviot manufacturers are free buyers of pulled wools. Stocks are much lighter than they were a year ago. Australian wools have sold better. Wools from the new clip are now on the market, and lots from the last London sales are coming forward. The new wools are not as fine as those of the last clip, being more burry and tender. Carpet wools are inactive.

BOSTON.—Dec. 31.—The *American Wool and Cotton Reporter*, in its annual review of the wool market, shows the stocks of wool unsold in the principal markets of the United States, including Boston, New York, Philadelphia, Chicago, San Francisco, St. Louis, Galveston, Troy, Hartford, Providence, San Antonio and Milwaukee, as follows. Total, 79,314,233 pounds; same time last year, 65,920,822. Adding to the foregoing figures the estimated amounts in other markets and concealed supplies, and wool in pullers' hands, they will make the total supply 106,414,233 pounds, against 92,861,682 pounds one year ago—an increase of 13,552,351 pounds. The prices for domestic wool during the year on an average, have declined about 2c per lb., and Australian and other foreign wools, fully 1c. During the greater part of the year, an unusually large amount of foreign wool, notably Australian, has been sold in the American markets, which displaced an equal amount of domestic fleeces, which were for a long period, conspicuously inactive and accumulating in quantity.

NEW YORK, Jan. 3.—Wool has no noted change in values; the trade for 1891 did not pan out in large profits. It was the lowest quoted year on record. Quick turns of stock at times made fair money, but holders who persistently waited for "the next deal" are not in the best of spirits. Still, the outlook is favorable. Stocks are not heavy, and as there are indications that manufacturers' wants will be steady, there is not the usual pressure to sell which is usual at this period. The surplus Australian stock of Boston largely belongs to mills that have been experimenting, and successfully, too, upon a production of high grade cloth. The Boston *Wool Trade Record* makes an estimate of 2@4c falling off, compared with Jan. 1, 1891. The sales add up $150,800,000, against $151,600,000. Last year's stock of domestic amounted to 29,500,000 lbs, against 24,700,000 lbs. The stock of Australian was 1,904,000 lbs, 677,500 lbs more than on Jan. 1, 1891.

Dried Fruits.

NEW YORK, Jan. 3.—Unpeeled peaches are weak; sacks, prime to choice, 6@7c. These should obtain a motion as the season advances, as there seems to be no stock of competing Southern.

Prunes are quiet and easy; five sizes sacks, 7c. The recent rates for special sizes are now extreme, even in grocery lots.

Not much new business in raisins, but the holiday week's consumption may soon develop some replenishing demand. It is well asserted that New England towns and smaller Eastern points have sold their first purchases down low. Two-crown bags, 3¾@4c; three-crown, 4½@4¾c; boxes, loose, are quoted at $1@1.10, with sales. For layers there is no demand.

Apricots are slow and cheap. Choice sacks bring 8c; common, 6½c; boxes, 9½@10. No old lots of importance are in the way.

CHICAGO, Jan. 6.—The market for California dried fruits is brightening up after the holiday slowness, so that a moderate business is already reported. Prunes are in good demand. Good clean full 2 and 3 Crown raisins in bags are in steady demand. Dried grapes remain slow of sale. The trade in apricots is very good, sack lots preferred. There is said to be a sharp demand for fancy peaches.

Hops.

NEW YORK, Jan. 3.—Hops seldom show such buoyancy at the close of the year. Cables are all strong; the home demand is liberal, though largely confined to the interior at this moment, with 20 cents paid for 1000 only prime. The prospects are generally bright for the new year. State, common to choice is quoted at 18@22½c; Pacific, 18@23c, high grades closing strong; California olds, 5@7c. The exports for the week were 3100 bales.

NEW YORK, Jan. 6.—The aggregate amount of hops drawn from all foreign sources by England leaves no burdensome supply there, and the chances are that many more bales will be wanted from America before the end of the season, unless Germany does more in the future than up to date. There have been exported this season to date nearly 40,000 bales from New York and 8000 bales from other ports, which are far above the average of preceding years.

Miscellaneous.

NEW YORK, Jan. 3.—Honey is firm, at 7@7¼c.

Lima Beans—Spot, $1.75@1.80 per bushel. The quality, size and cleanly condition of this crop is helpful to sales.

Local Markets.

WHEAT

	Buyer Season. H.	L.	Buyer 1892. H.	L.	Seller 1892 H.	L
Thursday	187⅝	186⅝	....	....	....	....
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	186⅜	185⅝	....	....	165	154⅝
Tuesday	186⅜	185⅜	....	....	....	....

BARLEY

	Buyer Season. H.	L.	Seller Season H.	L.	Buyer 1892 H.	L.
Thursday	114⅝	114	....	....	107	107
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	114⅝	113⅞	....	....	111	110¾
Tuesday	115½	114⅝	108½	108	....	....

BAGS—The market shows more strength, with holders asking 7 to 7¼ cents for June-July delivery.

BARLEY—The market, which has held weak and dull, shows a stronger tone at the close. In futures, trading shows a fair degree of activity. The following are to-day's reported Call Board sales:

Morning Session: January—100 tons, $1.11. Buyer season—100 tons, $1.15⅛; 100 tons, $1.15 ₩ ctl.

BUTTER—The spot supply is light, yet the market does not respond much. Improving pastures and strong probabilities of increasing receipts of butter at an early day keep buyers offish. There has been and continues to be a large consumption of oleomargarine and butterine.

CHEESE—The market is weak, notwithstanding receipts are light.

EGGS—Receipts are increasing, and as the holiday consumption is over, dealers look for a gradual sinking in prices to set in toward the last of this month.

FLOUR—The market is barely steady at unchanged quotations.

WHEAT—The sample market has held to steady prices. Dealers and others report a slow demand from buyers, with holders showing no disposition to let go at concessions. In futures, trading has been light. The following are to-day's Call Board sales:

Morning Session: Buyer season—200 tons, $1.87; 300, $1.87⅛; 100, $1.87 ₩ ctl.

Market Information.

Predictions of Big Crops Up North.

Palouse (Wash.) *Gazette*: The Palouse hills are moistened so thoroughly that big crops next year are as certain as the rising of the sun. Heavy rains have been falling the last few weeks everywhere from Texas Ferry to Tekoa and from Alki to Uniontown. Old settlers say that there hasn't been so much moisture for half a dozen years, and never such good prospects for crops this early in the season. In the western part of the county, about Endicott and Pampa, the moisture goes down 18 or 20 inches, while in the eastern half, from Diamond to the Idaho line, the soil is damp 25 or 30 inches from the surface. When spring opened last year, the total rainfall of the winter was not more than two-thirds of what it has been this fall up to the present time, and yet crops were good, except in a few localities. When it is known that the greatest fall usually comes during the months of January, February and March, an opinion may be formed of the condition in which the ground will be next spring.

Stocks of Grain.

Geo. A. Abel, official inspector of the Produce Exchange Call Board, reports the following stocks of grain, etc., in the city Call Board warehouse:

Tons.	Dec. 1.	Dec. 31.
Wheat	6,016	4,827
Barley	17,486	17,955
Oats	5,378	5,034
Corn	2,263	3,350
Bran	678	1,210

At the close of December, 1890, the stocks were as follows: Wheat, 6464tons; barley, 9338, oats, 1510; corn, 3210; bran, 30.

The receipts in December, 1891, were 107,766 tons wheat, 5817 barley, 2178 oats, 2968 corn and 3158 bran.

The stock of wheat, Dec. 31, 1891, in all Call Board warehouses, was as follows:

	Tons.
San Francisco	4,927
Stockton	54,154
Port Costa	94,105
Total	153,086

Cereals.

Advices from all parts of the State report active outdoor work. It is very generally claimed that there will be an increased acreage seeded to all kinds of grain, particularly wheat and barley. Some counties report that while the land has not been wet to any great depth, yet it is sufficient to meet all present requirements. With favorable spring weather there will be a very large crop outturn this year. Oregon and Washington advices report that the weather so far could not have been improved.

Wheat, in the sample market, continues lifeless. This inactivity is due largely to holders not pressing their grain on the market, and also to shippers wishing to clean up before entering in on new business. The quick dispatch given to vessels has seldom if ever before been equaled. It is now claimed that with a continuance in the present rate of loading vessels, the supply in this State will be cleaned up before three months pass by. It now looks as if we will enter the crop season of 1892-93 with a smaller carry over than at any time within the history of the grain trade of this State.

Eastern mail advices report that the outward movement of wheat was never before equaled. Wheat is going out at the rate of 5,000,000 or 6,000,000 bushels a week. For the week ending with Dec. 19th, the eastbound shipments from Chicago aggregated 120,000 tons, against 80,000 tons for the corresponding week in 1890. The enormous volume of the grain movement is further indicated by the fact that at last advices no less than 125 miles of track at Chicago were filled with loaded cars, and that the Burlington road alone had 2200 cars waiting to discharge.

Barley in the sample market has held fairly steady, with a stronger closing reported. The consumption in this State continues very heavy, notwithstanding a reported falling off in the demand from dairy and range stock feeders. It now looks as if we will have a small stock to carry over into the season of 1892-93. Receipts from up north continue light.

Oats do not appear to be pressing the market so hard, and with a relaxation in shipments from up north to this port, there ought to be a rally in prices. The demand for feeding is said to be fairly steady.

Corn is essentially unchanged. Receipts and demand are about on a par.

Buckwheat is firm, but rye is weak and heavy under a light call.

Feedstuff

For ground feed the market is essentially unchanged for feedmeal, and also ground barley, but for bran and middlings the demand shows signs of shading off.

Light receipts of hay and light supplies to draw from cause a fairly firm market at unchanged quotations. The demand for feeding range stock is easing up, but for work animals and stock fattening for market, the inquiry is about as heretofore reported.

Live Stock.

Mutton sheep are marked up. Offerings are light. Bullocks are fairly steady. With improving pastures there will be less disposition to sell at present prices. Calves are firmer. Hogs move off at steady prices.

Fruit.

Pears are going out. Quotations are more or less nominal.

Grapes are hardly worth quoting, owing to poor supplies and an almost nominal demand.

Receipts of apples from northern counties and up north continue quite free, but the consumptive demand, which is increasing and enlarging, cleans up the market for the more choice tart good-keepers. Choice to extra choice apples from Humboldt, Siskiyou, Oregon and Washington meet with a quick market at $1.50@$2.00 for full-sized boxes. Of course the poorer kinds and defective sell for less money.

Persimmons meet with a steady demand at 50c.@$1.00 a box.

In citrus fruits the market shows continued weakness, due largely to many forced consignments of wind-blown. After this rush is over it is quite reasonable to conclude that better prices will obtain, particularly when shipments eastward can be made at a profit, which will be soon after Florida's large crop is disposed of. Limes and lemons are a shade easier.

Raisins are fairly steady. It now looks as if the Eastern market will soon begin to show more life. So far as we can learn raisins have gone quite generally into consumption, and that stocks in all distribution centers are light. Many look for a fairly active spring call, which will clean up supplies and permit our entering the new crop this season with almost bare markets.

In dried fruits there is absolutely nothing new to report. Dealers continue to express confidence in the future. This belief is grounded on confirmed advices of large distributions throughout the East and also on this Coast, which have caused low stocks. With orders to replenish stocks for the spring trade, it is thought that the surplus now on this Coast will be cleaned up. Choice to fancy dried fruits of all kinds are said to be more strongly held, with an advance asked for some lines.

Vegetables.

The market continues poorly supplied with garden truck. Rains and favorable weather are favorable for gardening purposes. Unless we have unusually cold weather in this month, the season for truck farm stuff will open early.

Freer receipts of onions and a sluggish demand have caused onions to shade off.

Potatoes show a slightly stronger tone for the better keepers. Receipts are only fair, while the demand appears to be increasing. The quantity of wormy and otherwise defective potatoes put on the market was never before equaled.

Miscellaneous.

From reliable advices up to Jan. 6, the following summary tonnage movement is compiled:

	1892.	1891.	In port. 1892.	In port. 1891.
San Francisco	280,093	281,241	*119,255	*62,580
San Diego	20,174	14,085	3,319	
San Pedro	7,544	7,478	1,453	19,223
Oregon	49,515	31,716	40,312	
Puget Sound	21,880	28,010	....	.....
Totals	579,206	382,530	164,339	81,803

*Engaged for wheat, 1892, 83,992 1891, 53,262

The statistics of produce exports from this port compiled by the *Commercial News*, from July 1st to Dec. 28, are as follows:

	1891.	1890.
Wheat, ctls	7,812,619	5,286 788
Flour, bbls	523.741	542,000
Barley, ctls	754,703	166,376

Poultry is generally higher, owing to light receipts.

Hops are in light supply. To meet their requirements both brewers and shippers are forced to pay more money.

Wool is well cleaned up. It now looks as if better prices will rule soon. This will be enlarged on in our annual review, to be published this month.

Honey is dull.

Grass seeds are in good demand at firm prices.

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 6, 1891.

BEANS AND PEAS.			
Bayo, ctl	1 75	@	2 10
Butter	2 20	@	2 65
Pea	2 35	@	2 65
Red	1 90	@	2 05
Pink	1 75	@	2 05
Small White	2 25	@	2 55
Large White	2 10	@	2 45
Lima	1 65	@	2 25
Fld Peas, bk eye	1 50	@	1 75
Do green	1 90	@	2 10
Do Eastern do	2 60	@	2 80
Do Nlies	1 35	@	1 45
Split	4	@	—
BUTTER.			
Cal. Poor to fair, ₩	15	@	30
Do good to choice	32½	@	—
Do Giltedged	35	@	—
Do Creamery rolls	35	@	—
Do do Giltedge	36	@	—
Eastern	18	@	30
Cal. pickled	25	@	23½
CHEESE.			
Cal. choice mild	13	@	—
Do fair to good	11	@	—
Do gilt edged	14	@	—
Young America	12	@	15
EGGS.			
Cal. ranch, doz	35	@	—
Do do selected	40	@	—
Do store	25	@	—
Eastern	25	@	35
FEED			
Bran, ton	16 50	@	18 50
Feedmeal	26 00	@	—
Gr'd Barley	24 00	@	27 00
Middlings	20 00	@	22 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food ₩ cwt	7 50		
HAY.			
Wheat, per ton	14 00	@	—
Do choice	15 50	@	—
Wheat and Oats	13 00	@	—
Wild Oats	12 00	@	—
Cultivated do	12 50	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	12 00	@	—
Straw bale	50	@	60
GRAIN ETC			
Barley, feed, ctl	1 07½	@	—
Do Choice	1 12½	@	—
Do Brewing	1 12½	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 20	@	—
Do Chevalier	1 20	@	1 45
Do do Giltedge	1 48½	@	1 52½
Buckwheat	2 00	@	2 25
Corn, White	1 35	@	—
Yellow, large	1 26½	@	1 31½
Do small	1 33⅜	@	1 38⅜
Oats, milling	1 45	@	—
Feed, Choice	1 42½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 60	@	1 95
Do Oregon	1 45	@	1 60
Gray	1 32½	@	1 41½
Rye	1 60	@	—
Wheat, milling.			
Gilt edged	1 85	@	—
Do Choice	1 83½	@	—
Do fair to good	1 80	@	—
Shipping, cho'ce	1 80	@	—
Do good	1 78½	@	—
Do fair	1 75	@	—
Common	1 71½	@	—
Sonora	1 71½	@	1 80
HOPS.			
1891 Choice to Ex.	21	@	22
Fair to Good	16½	@	—

FLOUR.			
Extra, City Mills	5 40	@	5 50
Do Country Mills	5 25	@	5 50
Superfine	3 40	@	3 65
NUTS—JOBBING.			
Walnuts, Cal. ₩	7	@	—
Do Choice	8	@	9½
Do paper shell	9	@	—
Do Chilli	7½	@	9
Almonds, sft shl.	11½	@	—
Paper shell	13	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	12	@	14
Do large	15	@	17½
Peanuts	3½	@	5
Filberts	11½	@	14
Hickory	7	@	8
Chestnuts	11½	@	12
ONIONS.			
Silver Skin	50	@	1 00
POTATOES.			
Early Rose, ctl	30	@	50
Peerless	35	@	65
Burbank Seedling	40	@	65
Do do Salinas	90	@	1 15
Sweet's	2 00	@	3 00
Garnet Chiles	40	@	—
River Reds	30	@	45
POULTRY AND GAME.			
Hens, doz	6 00	@	9 00
Roosters, old	6 00	@	7 50
Do young	6 50	@	9 50
Broilers, small	4 50	@	—
Do large	5 50	@	—
Fryers	6 50	@	—
Ducks	6 00	@	9 50
Geese, pair	1 75	@	2 50
Turkeys, Gobl'r.	12	@	14
Turkeys, Hens	13	@	16
Do Dressed	15	@	18
Manhattan Egg Food ₩ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, ₩	9½	@	—
Medium	11	@	—
Light	12½	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	7	@	8
Clover, Red	10	@	—
White	17½	@	—
Flaxseed	2 50	@	2 80
Hemp	3½	@	4½
Mustard, yellow	2 80	@	3 00
do Brown	3 00	@	3 25
WOOL.			
SPRING, 1891			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	18	@	—
Cala'v & F'th'll	16	@	—
Oregon Eastern	1a	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	13	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22½	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 6, 1891.

Limes, Mex	5 50	@	6 50
Do Cal	75	@	1 00
Lemons, box	1 25	@	3 50
Do Sicily	5 50	@	7 00
Oranges, Winter small box	50	@	1 00
Do Seedlings Riverside	1 75	@	2 25
Los Angeles	1 25	@	1 75
Do Navels— Los Angeles	1 75	@	2 75
Riverside	2 00	@	3 50
Duarte	2 00	@	3 50
Apples, box	40	@	75
Do choice	1 00	@	1 25
Do extra choice	1 50	@	2 00
Do Lady Apples	75	@	1 25
Grapes	40	@	1 00
Pears, box	50	@	1 25
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	12	@	20
Turnips, ctl	50	@	—
Cabbage, 100 lbs	60	@	70
Garlic, lb	3	@	4½
Squash, Mrft, tn	7 00	@	9 00
Pumpkins, ton	7 00	@	

Live Stock.

HOGS.			
Light, ₩ lb, cents	4½	@	—
Heavy	4	@	—
Feeders	5½	@	—
Stock Hogs	3	@	—
BEEF.			
Stall fed	6½	@	—
Grass fed, extra	6	@	—
First quality	5½	@	—
Second quality	4½	@	—
Third quality	4	@	—
Bulls and thin Cows	2	@	3
VEAL.			
Range, heavy	4½	@	5
" light	6	@	8
Dairy	7	@	8
MUTTON.			
Wethers	9	@	9½
Ewes	8½	@	9
Lamb, yearling	9	@	—
Do Fall	12½	@	13

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING DEC. 29, 1891.

466,146.—BOW FOR STRINGED MUSICAL INSTRUMENTS—Ayres & Schroeder, Whipple, Barracks A. T.

466,214.—INSTRUMENT FOR MEASURING THE UNITS OF WORK DONE BY MACHINES—H. C. Behr, S. F.

466,014.—NUT LOCK—Brasnahan, Richardson & Fritschi, Suisun, Cal.

466,075.—WRAPPING MACHINE—W. A. Brown, S. F.

466,063.—ELECTRIC ANNUNCIATOR—F. C. Colville, Oakland, Cal.

465,974.—LOCK—H. Elliott, Los Angeles, Cal.

466,231.—VALVE FOR HYDRAULIC ELEVATORS—C. I. Hall, S. F.

465,861.—FIRE EXTINGUISHER.—C. D. Harsin, Stockton, Cal.

465,929—STEAM BOILER—A. Heberer, Alameda, Cal.

466,237.—MOTIVE ENGINE—J. L. Henderson, Alameda, Cal.

466,073.—TRUCK—Hunt & Ball, Winters, Cal.

466,074.—MEMORIAL BURIAL TABLET—J. W. Hunt, Kirby, Or.

466,170.—METALLIC PACKING—Kilborn & Young, Oakland, Cal.

465,987.—CAR COUPLING—John C. Look, San Jose, Cal.

465,878.—DUMPING TRAP—C. D. Page, Tacoma, Wash.

466,256—VINEYARD BRUSH BURNER—Jas. Porteous, Fresno, Cal.

465,979.—ORE CONCENTRATOR—G. E. Woodbury, S. F.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

IMPROVEMENTS IN SUGAR MANUFACTURE.—**It is said that recent improvements that have been made in the manufacture of sugar from the sorghum plant deprives the sugar of an objectionable flavor which it has previously had. It is also claimed that by the new process the yield is materially increased. The new process is thus, in part, described: "Alcohol is mixed with the sorghum syrup, and after treatment the former is recovered by redistillation, so that there is no appreciable loss. In the use of five barrels of alcohol, only a quart or so was lost. The sugar is nearly white, and it is strong in saccharine qualities—above 90 degrees."**

THE SELF-PURIFICATION OF RIVERS.—**Professor von Pettenkofer has been studying the Iser River, which flows through Munich, carrying the city's sewage. He says that five miles below the city there is not a trace of the pollution which finds its way into the river. Some observers have thought that the self-purification of rivers is due to deposition of sediment. Dr. von Pettenkofer, however, maintains that the real agent at work in purifying the Iser river is the oxygen of the air which is absorbed by or dissolved in the water.**

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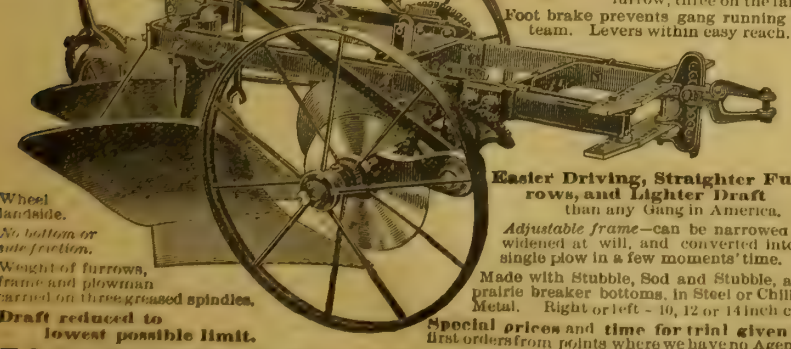
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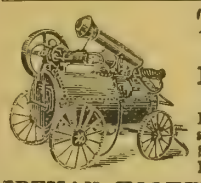
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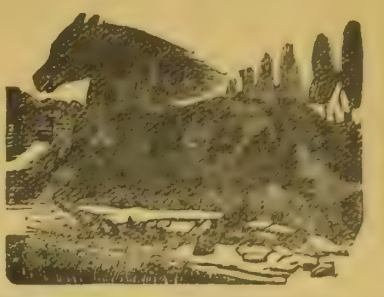
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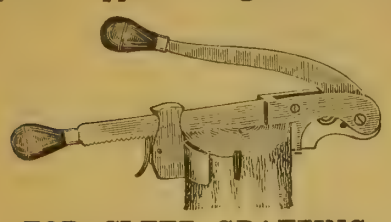
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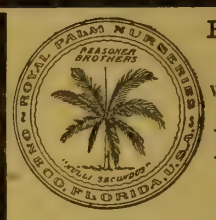
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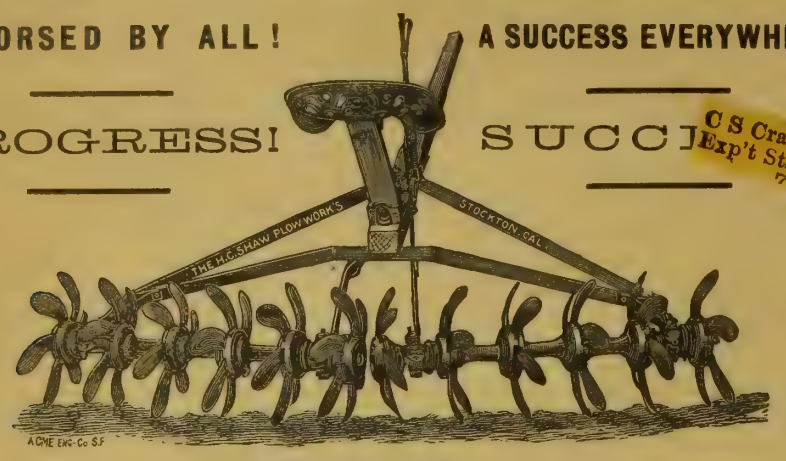
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TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH

SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cult vator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

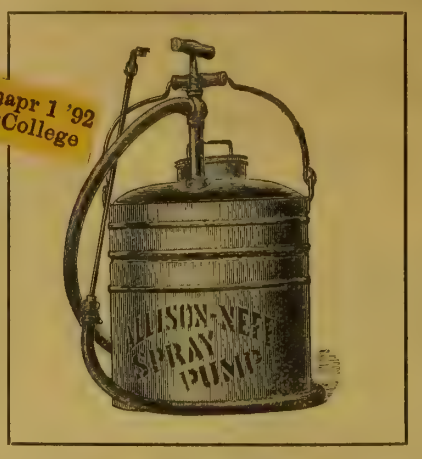
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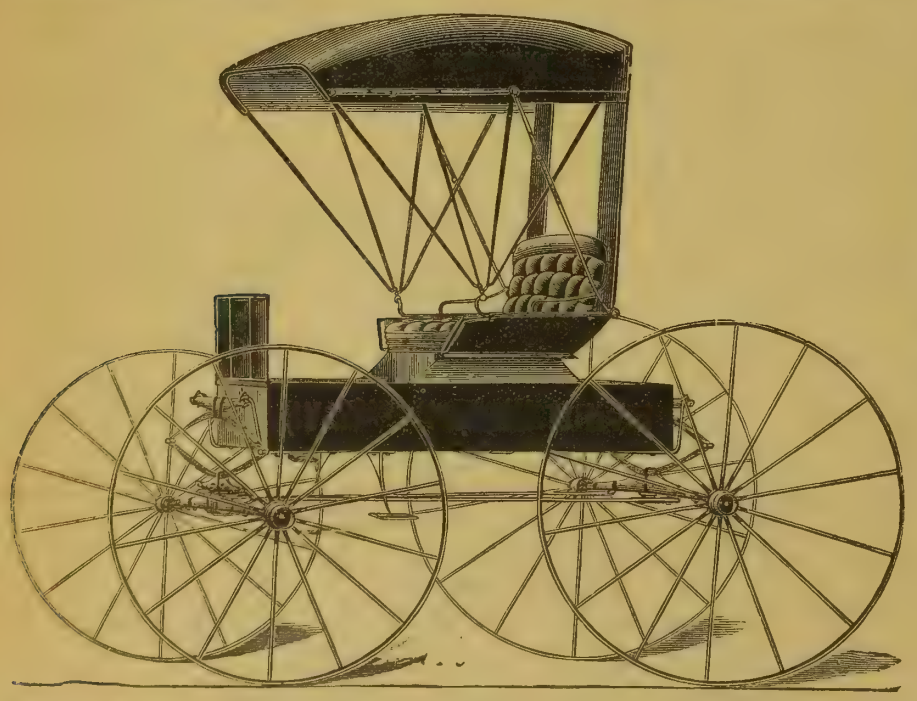
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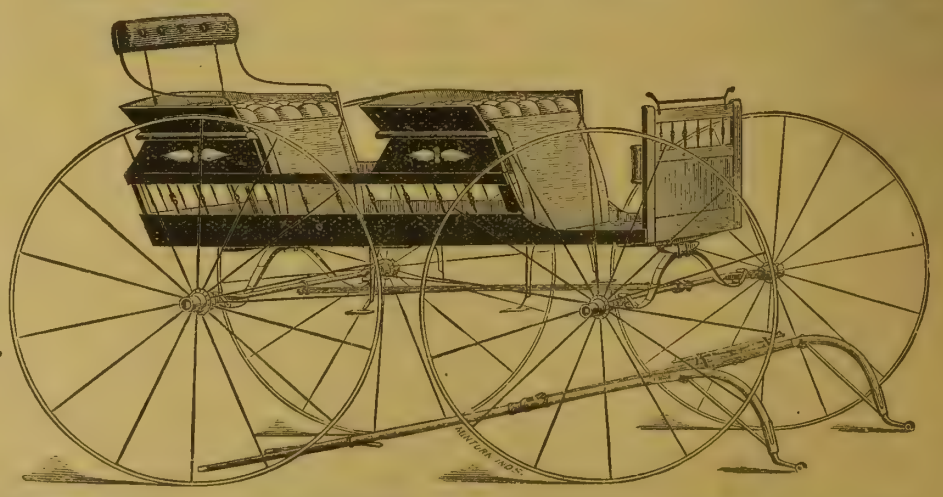
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PACIFIC RURAL PRESS

Vol. XLIII.—No. 3. SAN FRANCISCO, SATURDAY, JANUARY 16, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

A Great Aqueduct for Irrigation.

We are doing many original things in irrigation engineering in California. Some of our reservoir dams are, we understand, the greatest of their kind in the world and involve novel principles and methods of construction. Some of our flumes, which conduct water both for mining and irrigation, are peerless for ingenuity in location and ways of building and support. Still, for grand irrigation works California doffs her hat to India and the California irrigating purse shrinks when compared with the British Government treasure-houses which have been freely opened to bring water upon the arid wastes of Southern Asia. It is fortunate that we have hitherto been able to make such commendable progress in irrigation with a comparatively small expenditure of money, and that the development of such respectable areas of our lands have not been forced to wait upon the Government for a large investment of public money. It is fortunate, too, that a much greater expansion of our irrigated area is still within the reach of private capitalists and co-operative effort among private land owners. It may be in the years to come when the improvement of the greater arid regions of the interior shall be reclaimed by irrigation that public works rivalling those of India may be a necessity, but meantime we go along with our little dams and ditches and pipe lines and produce results per acre which the Government, with its vast expenditure in India, cannot approach.

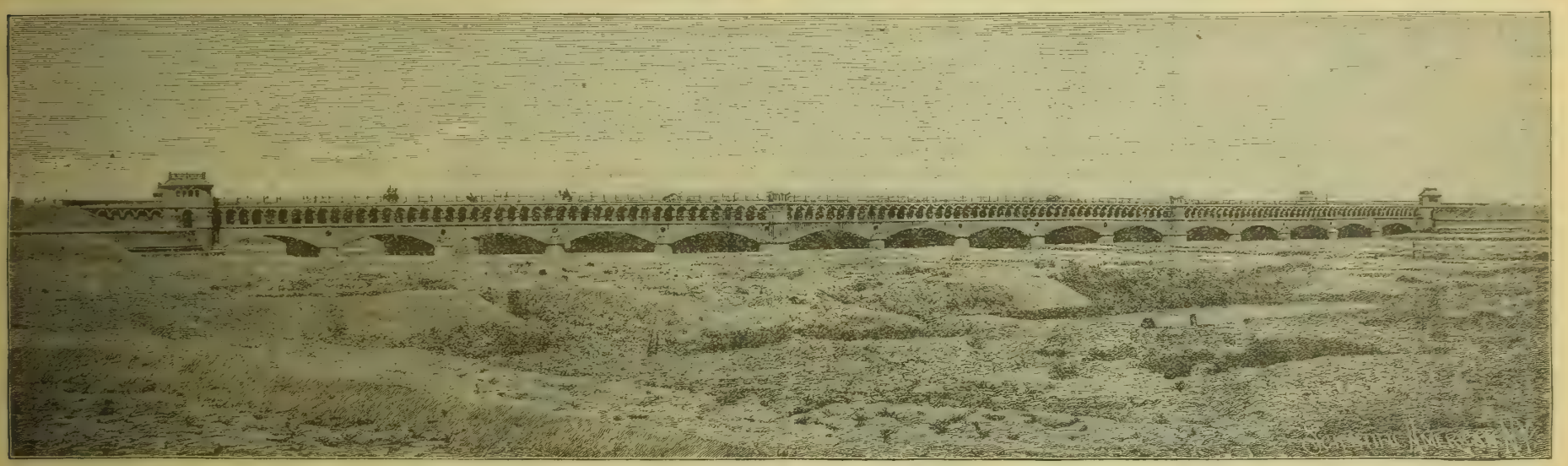
Still great public works for irrigation are of much interest to our people, and for this reason we present in this issue engravings and text description of one of the largest irrigation works of its kind in the world which has been but recently completed. We are indebted for the facts to *Engineering*, an English journal.

The structure is known as the Nadrai aqueduct. The lower Ganges canal, whose water this aqueduct carries over the Kali Naddi, was designed as an extension of the irrigation scheme of the Upper Ganges canal, conceived and constructed by Sir Proby Cautley about the time of the mutiny, and was opened in the year 1876. In the year 1888–89, the Lower Ganges canal had 564 miles of main line and 2050 miles of minor distributaries, and irrigated 519,022 acres of crops. From this it will be seen how important a line of irrigation this canal constitutes, and how urgent the reconstruction of the aqueduct was. The new aqueduct replaces one of much smaller size, viz., five spans of 35 feet, which was damaged by a high flood in October, 1884, and completely destroyed by another high flood in July, 1885.

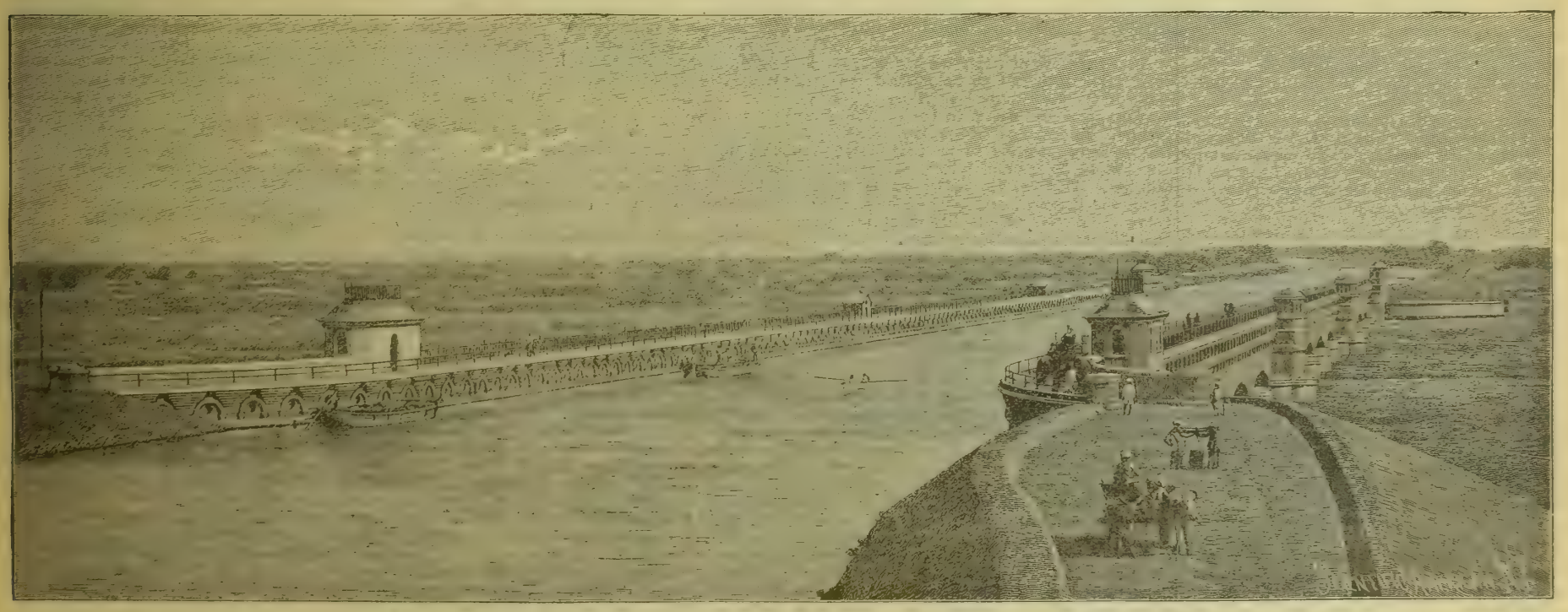
The Kali Naddi, for the greater part of the year, is a very insignificant stream some 50 feet in width only, but on the date mentioned, it was swollen into a river a mile wide and in places 25 feet deep.

In addition to the construction of the Nadrai aqueduct, all the railway and road bridges below it were also destroyed, and many villages swept away.

The proportion of the foundation to the superstructure of the new Nadrai aqueduct can be gathered from the fact that three-fourths of the expenditure of money and time were consumed by what is now hidden below ground.



THE NADRAI AQUEDUCT—PANORAMIC VIEW OF THE DOWNSTREAM SIDE.



A GOVERNMENT IRRIGATION WORK IN INDIA—THE NADRAI AQUEDUCT—PERSPECTIVE VIEW LOOKING UP THE CANAL.

The foundations consist of 268 circular brick cylinders or wells, as they are always called in India, all sunk 55 feet below the river bed. There are 15 bays of 60 feet, divided into three groups of five each by abutment piers. The abutment piers consist of a double row of 12-feet wells, spaced two feet apart, and the ordinary piers of a single row of 20-feet wells similarly spaced.

The wells are all sunk through a stratum of stiff yellow clay, averaging 15 feet thick, into a substratum of pure sand. The wells are all hearted with hydraulic lime concrete filled in

(*Concluded on page 49.*)

CORRESPONDENCE.

Corres ondents are alone responsible for their opinion.

The Paternal Plan of Colonization.

TO THE EDITOR:—Pioneer life is generally surrounded by hardships. These are especially onerous when removed from friends and embarking in a new industry upon high-priced land. These circumstances generally surround those now starting in the fruit business. To reduce them to the minimum, the plan has been inaugurated of planting large tracts under expert superintendence. Colonists pay installments as needed for cultivation, remain at present occupation, and complete payments and assume possession when trees come into full bearing. Sometimes, the paternal plan is carried still further by encouraging more substantial building by supplying bricks at cost. Sometimes, promoters bond the land on long time from the owner, contract for planting, arrange with colonists to pay installments to meet current expense, pay for land from proceeds of crop, then turn over tract to shareholders in subdivisions already agreed upon. Sometimes, they arrange for payment of land in easy installments, and the promoter collects his charges for cultivation from proceeds of first crop.

Several plans of this nature are in very successful operation at Madera, Fresno Co., and seem particularly attractive to Eastern investors. It is pretty certain that a large orchard can be brought to bearing under some such plan at half what it will cost individuals to care for a like area in ten acre tracts. Then, if proper selection and management is secured, nine of every ten colonists will have a better orchard than they would have raised themselves.

Dangers.

The man who spends the savings of years for a future home should have them as secure as a good savings bank. To make this certain, the financial standing of the promoters should be beyond question, and their judgment in choice of land, location and fruits should be thoroughly endorsed. Granted that these points are solid, and no plan of settlement of a new fruit region can offer similar advantages. Colonists can afford to pay rates that allow large margins to promoters. In San Joaquin valley are many tracts suitable for such enterprises where land and water can be had for $50 to $100 per acre, with annual cost of maintenance of ditch added unless in Wright Irrigation District. Then we buy subject to a first mortgage for water of $5 to $50 per acre, owing to nature of land and system of irrigation. Cost of rooted vines vary from $5 to $15 per acre; of trees from $10 to $30. These estimates would not include extremely close planting and famine prices such as ruled for prune trees last spring. Mr. Hatch contracted for the most thorough system of cultivation at about $10 per year, but his land was very mellow and he did not irrigate. This adds greatly to growth of weeds and cost of cultivation.

Of these firms now advertising one charges $90 per acre in four installments, for cultivation for first three years, and deducts $200 per acre from net proceeds of crops for land. Another charges $75 for three years cultivation, and $125 per acre for land. Cultivation and interest on land payable in semiannual installments. Interest six per cent. Land to be paid for in five annual installments, the first payable in advance.

A Point for Land Holders Contemplating Subdivision.

Many hesitate because there is danger that sales will progress slowy, the land be left idle on their hands, but so cut up as to make former industries not practical. Again, they dislike the installment plan because courts have ruled that party once in possession cannot be removed until last installment is delinquent.

To promote sales, secure good prices and insure disposal of whole tract, some modification of the paternal plan offers many advantages, but requires work of a good solicitor, the same as life insurance business does. Such are meeting with very good success in the East, when backed by proper credentials.

One firm has in two years planted and disposed of 3060 acres and started on another tract of 2000 acres. Another firm has been working in Pennsylvania through a local agent there, and expects 40 families of actual settlers in September. Such development is good basis for the growth of a town. It is far better to see them grow as trade demands, than wrong end first, as so many have been started. This plan insures disposal of the entire tract and immediate development, thus enhancing values of adjacent property.

The small land holder, who develops his own property, usually needs some income from the time when his labor is not required at home. In a section settled by others in like circumstances, there are no employers. To find work he leaves home. Possibly he can only get work when most needed at home. If compelled to borrow money, it is at a disadvantage. The paternal plan meets these objections, and by supplying work for those who need, makes subdivisions of other lands in vicinity practical. Under this system, improvements like the far-famed Magnolia Avenue of Riverside are made to contribute vastly to values. Considering advantages of large purchases, economy in planting and cultivation, advantages of expert superintendence, convenience of the installment system, payable as needed for development, chances for laying out and planting in such a way as to greatly increase attractions at little cost, we believe that the Paternal System of Colonization, under proper restrictions, has come to stay. FRANK S CHAPIN

AGRICULTURAL ENGINEER

Drainage in Irrigated Districts.

The newspapers in irrigation districts seem to be overcoming their horror of saying anything about the needs of drainage. The Fresno *Expositor* of last week has the following: Twenty years ago, if a meeting of the citizens had been called to discuss a means for draining the soil of Fresno county, the men taking part in the meeting would have been considered crazy. The long reaches of plains, bounded only by the horizon, were so dry and parched that they seemed able to drink an ocean dry and still be thirsty for more. Little did any one then suppose that the miles and miles of arid prairie, shimmering with heat, ever would need drainage.

The years that have elapsed have brought a change. And the change in the landscape, and the physical condition of the plains between King's river and the San Joaquin, has been as great as the change which the agency of man has been instrumental in bringing about for any country in the world.

Although the plains 20 years ago were so parched that it did not seem that they ever could become filled with water, and it was necessary to dig wells 50 to 100 feet deep, yet now it is all different.

A recent meeting of the Farmers' Institute in this county devoted nearly an entire day to a discussion of the problem of draining the lands in the irrigated districts. It was an all-important problem, and it received the consideration it was entitled to. But it was somewhat strange, after all, that it should become so soon necessary to drain the plains which less than a generation ago were dry and parched. Yet such is the case. The work of man has brought about this change. It is attributable to his agency and to no other. It is not known that such a great physical change was ever before accomplished, in many times the space of years, by the works of man.

It was done unintentionally. In fact, no one supposed that it ever could be done. The canals were built from King's river leading the waters out on the plains, and work of irrigation was commenced on a small scale, and from that small beginning, it grew to the large proportions which it now has attained into.

The vineyards, the orchards and the gardens grew and flourished, and the desert was transformed into profitable possessions.

But while this was being done, there were not many who ever thought how soon the soil, to its very foundations, would be filled with water.

After the work of irrigation had gone on for some years it begun to be noticed that the water in the deep wells was rising. Year by year it approached nearer to the surface of the ground. In digging wells, instead of going 50 feet for water, it came to be that water was found at 40, 30, 20, and later it was reached in still less. This was because the soil was filling. From the bedrock, perhaps hundreds of feet below the surface, it was becoming full from one side of the plains to the other.

As might be well expected, in course of time, in the low places in the plains, the water began to appear on the surface, and to stand in pools. At first, when these low places began to appear damp, it was called sub-irrigation. When the water appeared on the surface it was called ponds.

The change was slow and gradual. But it has been complete. In many of the vineyards that have long been irrigated, the water is so near the surface that irrigation is no longer necessary. By digging a few feet water is reached.

In more places than one, where certain parts of vineyards are low, windmills may be seen at work pumping water up into the canals so that it may flow away. This reverses the process of a few years ago, when windmills were employed to pump water on land, not to pump it off. Then there was a scarcity, now there is a superabundance, and it is desirable that it flow on to other districts.

Thus it can be seen that the drainage problem in Fresno county is not a theoretical one, but a practical need. The Farmers' Institute gave much consideration to the matter. If the country were all level and smooth, it would not be so necessary to drain the land, but, as it is, the water settles in the low places, while the more elevated portions are comparatively dry.

From the nature of the country it will not be a very difficult matter to construct outfall canals and ditches to carry off the surplus water. The plains between the San Joaquin and Kings rivers are considerably higher than either of these streams, and the water can be drained either way. It also can be drained westward into Mussel slough, Cole slough and the other swales in that region.

So there is no great difficulty in the way of carrying out the drainage problem, but the work must, in course of time, be considerable.

HORTICULTURE.

The Lemon in California.

James P. Jones, one of the Horticultural Commissioners of San Diego county, has written for the San Diego *Union* an essay on the lemon, from which we take the following, which will interest all who are thinking of the lemon in the different parts of the State. He says:

When a person has determined that he will plant a lemon grove, the first thing that will present itself to his mind after securing the land will be what variety shall he plant, and on what stock shall they be budded, and much of his after-success will depend upon the answer to this question. There is hardly a variety of lemon grown which is not the favorite of some one.

Many will tell you to plant the Eureka, while it is well known that it is a tree of straggling growth and of scant foliage. Such a tree does not give proper protection from frost in winter or from sunburn in summer. There are other objections. The fruit has a very bitter rind, and is often coarse and overgrown. Its best quality is its early and prolific bearing.

What is known as the Sicily lemon is grown from seed from fruit imported from Sicily, hence the name, and as many varieties are grown under the same general name, they will not do to tie to. A safe procedure would be to take buds from a tree, no matter what the name, if in fruit, curing and growth it meets your ideal.

The Villa Franca, the favorite Florida variety, is a tree of much promise, it being a medium as to growth, foliage and early fruiting between the Eureka and the Lisbon. It is a new variety here, having fruited but two years in Southern California. The rind of this lemon, though sweet, is rather coarse and thick, but this is characteristic of the lemon on all young trees, and will probably be cured as the trees attain age.

The Lisbon lemon tree was imported from Portugal, and has been thoroughly tested, and seems to meet the requirements better than any other. The tree is a vigorous grower, and attains a large size; does not fruit much until the third year. Its habit is to put on wood rapidly. Trees are often found 10 to 12 feet in height, and well proportioned at that age, giving abundant limb surface for the immense crops that are to follow. The only objection that is urged against this tree is, that it is very thorny, and it is claimed by persons well qualified to judge that about 25 per cent of the fruit is made unsalable by thorning.

I recall a young gentleman from Los Angeles county who set 20 acres to seedling oranges, with the intent to bud them to lemons. Before doing so, however, he came to San Diego county, as he said, to talk with me about varieties, and to look at bearing groves planted to different kinds. After visiting all points where information was to be had, or lemon groves seen, he came to me and said: "I believe you are right. I shall bud to the Lisbon, thorns or no thorns. I believe there will be more profit with the Lisbon, even if one-fourth are unfit for market."

The fruit is oblong rather than roundish, very uniform in size, rind thin and sweet, cures perfectly, and is the best keeper grown. As to thorns, prune them off. This will require labor, but, believe me, it will be time well spent.

Several seedling varieties have been propagated in this county, viz., the Agnes, by Frank Kimball, and the Bonnie Brae, by H. M. Higgins. Of the Agnes, it may be said that the quality of the fruit is hard to excel, but its shape (being in form much like the orange) spoils it for market purposes.

The Bonnie Brae is the most beautiful lemon grown. Its rind is smooth as a kid glove, and so very thin that many think it cannot be shipped to distant markets. I am not prepared to accept their judgment as final. I feel very much like an importer of citrus fruits did whom I met at the southern district State Citrus Fair, and that is, that the appearance of the fruit will sell it in any market of the world, and that I would take them to that market, even though I were obliged to ship in egg-boxes or those made on a similar plan.

There is one more lemon that I shall consider here—the Belaire Premium. This lemon originated in Florida, and in form is the most perfect of any known. I have one tree, sent me by a friend, which has fruited a little for two years. The tree is perfectly thornless, but not a very vigorous grower; rind rather thick and coarse, but sweet; acid very strong and of excellent flavor. A lemonade made from it will retain its quality for 24 hours, if kept cool.

The question of budding stock for the lemon is of great importance, and lays at the very foundation of this industry, but there is no question involved in the growing of the fruit in which opinions differ so widely.

I should favor the wild sour Florida orange stock on which to bud the lemon were it not that this stock is often affected with what is known as twig and leaf scab, and while this malady is never found above the bud, when budded to the orange, it is a well established fact that it does go above the bud when budded to the lemon, often enveloping the whole tree, fruit included. I am informed by Dr. Claflin, of Riverside, who spent months in Florida last winter traveling over the state in the interest of citrus culture, that in several lemon groves he found this trouble, and that the fruit visited from those groves could not be sold and was an entire loss to the growers. In justice to the sour stock I should say that this malady has not appeared on sour seedlings grown in Southern California, though the seeds were imported from Florida.

Refering again to budding stock, some Florida growers are taking the rough lemon stock, budding to sweet orange, and after the stalk from the bud is of sufficient size budding with the variety of lemon they wish to propagate. This method leaves a piece of sweet orange wood in the stock between the sour root and the lemon. It is claimed that this method is a counter to the bitter, sour flavor that possibly might be imparted from the sap from the sour root.

The best results as to growth which I have seen, has been from budding the lemon on grape fruit stock, but I am not advised as to the longevity of that stock and would not care to recommend it, though I think experiments in that direction might lead to happy results.

I think it preferable to bud the lemon on some kind of sour stock, and would state as a reason that most sweet stock is subject to foot rot (or Mala de Goma) to some extent. While sour seems exempt, I do not think it difficult to determine why Florida growers bud the wild sour stock with the sweet before budding to the lemon, and the reason given to effect quality of fruit is not the true one as the twig and leaf blight or scab never gets above where the sweet orange bud is inserted, it is reasonable to suppose that the section of the sweet wood between the sour root and the lemon bud will be ample protection, and hence its use.

As to cultivation it cannot be too thorough. There is a tendency to have irrigation take the place of cultivation, but the practice is not to be encouraged. A medium amount of water and a thorough stirring of the soil after each application is the correct thing and trees so treated will be far ahead of those where the water is allowed to run along the rows for several days chilling and souring the ground and often causing foot rot and gumming. A good illustration of what can be done with a minimum amount of water aided by thorough culture and mulching can be seen on Point Loma at the grove of Frank Jennings. Last season the trees received about 21 gallons apiece, but the growth exceeded other groves in what is believed to be a favored locality where the ground was kept saturated.

Perhaps the distance apart which lemon trees should be planted is of some importance, and in setting by the equilaterial triangle method at 25 feet apart will give 79 trees to the acre, and for a tree which attains the size usual to the Lisbon or Villa Franca, is plenty close, while 20 feet apart will give ample room for the Eureka or Bonnie Brae. The question is often asked, "Shall I attempt to grow anything between the trees?" I say, understandingly, "yes, almost any hoed crop. But you should return to the soil by the use of fertilizers all and even more nutriment than is abstracted by the crop removed." I think it a good plan to plant a peach tree between the lemons; both can be irrigated with little extra trouble and as the peach is past its prime in ten years, they can be removed at any time when the lemons need the room, and will in the mean time pay all the expenses of preparation of ground and culture of both trees and leave a margin on the right side of the ledger besides.

The Guava in California.

[An essay read by L. E. ALLEN, of San Diego county, at the Marysville Fruit Growers' Convention.]

Unlike the orange or lemon, the guava is still in almost its natural or wild state, only being improved as nature improves all fruit, by change of climate, soil, or crossed by bees, etc. In all our leading horticultural papers, magazines, pamphlets, etc., we find the orange and lemon receiving the utmost attention of our most able horticulturists, and seemingly these fruits have nearly attained perfection, while the guava is left to make its way into our homes and market as best it can, unaided, unimproved and neglected by man.

As to the origin of the guava, I can do no better than to quote from the United States report: "Best authorities agree that tropical and subtropical America is the original home of the guava. The fact remains, however, that the cattley guava was first introduced into England from China in 1820, though it is possible that this species and yellow cattley, or Chinese guava, was first carried from Brazil to China before their introduction into European hothouses.

"The common guava (*Psidium guavave*) was first introduced into Florida by Col. H. V. Snell, in 1847, and the original trees are still standing, or rather their roots, as the tops have been frosted down several times. The guava of this species is now common all over South and Middle Florida in endless varieties, size, shape and vigor, pear-shaped, apple-shaped, large, small, pink, yellow and white-fleshed, with flavor like that of strawberry to that of sawdust and vinegar; full of seed and almost entirely seedless."

The varieties of guava are numerous, and many of them have not been introduced into the United States. The one most common in Southern California is the cattley guava (*Psidium cattleyanum*), or strawberry guava,

so called because of its strong resemblance in flavor and odor to a ripe strawberry. It is also called the hardy guava, as it will endure more frost than most other varieties. It is an evergreen with small, thick, glossy leaves, resembling the camellia; flowers white and not very conspicuous, and are borne at the axis of the leaves. Fruit commences to ripen in September, and continues for six months in the most sheltered localities, although the bulk of the crop is harvested in about four months. The fruit is eaten and prepared in almost every conceivable way, and is very delicious whether eaten fresh from the bush or sliced with cream and sugar, preserved or made into strawberry shortcake, pies or puddings.

But its crowning excellence, and that which will make it most valuable as an article of commerce, is found in the delicious jelly made from the ripe fruit. It is not only world-famed for its excellence as a table delicacy, but possesses medicinal properties, being highly valued by singers and public speakers as a voice clearer. A fine wine is also made from it.

We find the so-called strawberry guava of San Diego county of many varieties, differing in color, form and flavor and ranging in size from two inches in diameter to those so small and seedy as to be entirely worthless, though grown on the same soil and produced from same seed. I believe the guava is susceptible of as much improvement as any other fruit, and much can be done in this line by planting only seed from the finest and largest fruit, also by thorough cultivation, careful pruning and culling out imperfect plants and those which produce inferior fruit, thereby avoiding the possibility of hybridizing by bees or scattering of seed by birds.

Florida is said to contain hundreds of varieties unnamed, and most of them worthless. Because of chance seedlings from those introduced by Mr. Snell, and our carelessness, there is danger of producing the same condition here. By using the same care that has been exercised in the orange and lemon, I expect a guava will be produced as much superior to those we now have as the Navel orange or Eureka and Bonnie Brae lemon is superior to a worthless seedling.

We also have from Florida the *Psidium pyriferum* or pear guava—plants of large growth, a light green and resembling that of the apple, but larger, pear-shaped and when ripe of a beautiful yellow color, fine for eating, etc.

So far as my experience goes, am not favorably impressed with it, as it is too tender for our occasional frosts and takes too long to mature its fruit, and is also a shy bearer. We have plants five years old large enough to produce 100 pounds of fruit. Some of them have none at all, others a few, much of it only about half grown.

The guava thrives best on a sandy loam, but will adapt itself to any soil and prove satisfactory; requires about the same amount of water and cultivation as the orange, but unlike the orange it needs no treatment for scale or other injurious pests, is free from disease and always produces a good crop.

And as for profit, I believe the guava will compare favorably with and surpass any other fruit, not excepting the orange or lemon, when we take into consideration the small amount of care required, ease of cultivation, together with the certain and bountiful crops and early age at which it begins to yield returns. To illustrate: Suppose we take one acre of ground ready to plant.

We put guavas eight feet apart each way, or 680 plants to the acre, at $40 per thousand cost $27 20; planting, $25; care first year, $25; water, $3.50; care and water second year, $28.50; cost of plants, care and water for two years, $109 20.

At the end of the second year, we will have harvested a small crop. The plants should yield at least 25 cents each, $170; packing and marketing, $40; net income, $130; expenses for the two years, $109. Profit for the first two years, $21.

The inquiry is frequently made: "What are we to do with our fruit? We have no market; it is too far to ship East. The weather is too warm," etc. We can only answer by comparison. We have no home market for peaches, prunes, apricots, etc., but hope that as soon as we have fruit enough to support a cannery, one will be built. So with the guava.

Much could be said on this subject, but as it belongs to the question of "How to market," we will leave it for others. However, will add, our Eastern friends are ready for all our various fruits, if only properly put up and placed in their markets.

POINTS ON PEANUTS.—The following paper on Peanuts, written by J. B Rea of El Cajon, was read before the County Horticultural Convention in December: I have been requested to give my method with peanuts. The best soil is a light, sandy loam. Time to plant, when the ground is warm, same time that corn is planted. Plant seed 18 inches by three feet. If the soil is not naturally moist, it must be thoroughly irrigated and cultivated before planting. Cultivate till vines interfere—never touch a vine with hoe, shovel or cultivator. This rule is imperative for best results. Never hill or draw dirt to the vines. Irrigating and disturbing vines after they are up causes muddy nuts which are impossible to make bright afterward. My plan of harvesting to save fodder, which is about equal to good clover hay, is as follows: Put a knife on the two hind cultivator teeth—take all other teeth out—drive the horses astride the row. The knife cuts the taproot of the vine. Leave the vine in the row for two or three days, then put two or three rows together for two or three days till cured. Then haul to barn or storehouse and pick nuts off by hand. The nuts are then put into a wire cylinder and turned around till polished bright, when they are sacked. Although my method is not as expeditious as harvesting by a machine, the fodder is of such good quality as to more than compensate for the extra time. My yield was 40 sacks of 40 pounds to the sack, or 1600 pounds to the acre, worth 3 cents per pound—making $48 per acre.

Destroying Surface Roots of the Fig.

COLUSA, CAL.

TO THE EDITOR:—I have an item from parties near Oroville, who are cultivating the White Adriatic fig, and their experience is that they get much better fruit by plowing deep, and tearing up and destroying all the surface roots on their trees.

I am growing several hundred trees of this fig, and this experience is so adverse to practice and theories I have always heard advocated on this line, that I thought you might throw some light on it through the PRESS.

Fig roots go down very deep, and many of them spread a few inches from the surface. What use the surface roots serve in the formation of fruit, I am not advised. It's been supposed they serve a useful purpose.

FIG GROWER.

[Will the advocates of this practice enlighten us?—EDS.]

THE FIELD.

The Hop Crop of the Pacific Coast.

A short time ago we gave a few notes on the hop crop of the Pacific coast in advance of the census bulletin on that subject. It may interest our hop-growing readers to examine a little more in detail into the results of the census examination of the subject:

In the United States only 17 States now report the production of hops for market. Of these only five produce 100,000 pounds or more each, and may be considered important hop-growing States from a commercial point of view. These are California, New York, Oregon, Washington and Wisconsin. Of the 39,171,270 pounds of hops grown in the United States in the census year 1890, the five States named produced 38,965,920 pounds, or 99.48 per cent.

The following statement shows the acreage and product of each of these five States in the order of production:

States.	Acres.	Pounds.
New York	6,670	20,063,029
Washington	5,113	8,313,780
California	3,974	6,547,338
Oregon	3,130	3,613,726
Wisconsin	967	428,547
Totals	49,854	38,965,920

The averages per acre of the United States and the five hop-producing States are as follows:

	Pounds.
The United States	780
California	1,618
Washington	1,616
Oregon	1,155
New York	547
Wisconsin	443

The 12 other States reported a production of only 205,350 pounds, or 0 52 per cent. These 12 States reported only about o e-twenty-third of the amount produced in the single county of Otsego, N. Y.

The Pacific coast States, California, Oregon and Washington, show, respectively, the following increase in product and its percentage as compared with the census reports of 1880:

	Pounds.	Per Cent.
California	5,103,261	353.39
Oregon	3 339,355	1,378.79
Washington	7,610,003	1,082.08

New York and Wisconsin show a decrease in the same period as follows:

	Pounds.	Per Cent.
New York	1,565,902	7.24
Wisconsin	1,538,280	78.21

The hop acreage of the three Pacific coast States has in like manner increased as follows:

	Acres.
California	2,855
Oregon	2,836
Washington	4,579

In the same time, New York and Wisconsin have decreased in acreage respectively 2402 and 3472 acres. Fifty thousand two hundred and twelve acres of land in the United States were devoted to the cultivation of hops in the year 1890 (census year 1890), an increase of 3412 acres in ten years.

It will be observed that this increase of acreage is by no means proportionate with the increase in the crop for the same period. The increase in the quantity of hops grown is 47.56 per cent, while the increase in acreage is only 7.29 per cent. The discrepancy between production and area is readily accounted for, by the fact that in the States of New York and Wisconsin, where the average yield per acre is small, ranging from 443 to 547 pounds, many growers have retired from the business, and hence the acreage has been largely reduced. New York has fallen off from 39,072 to 36,670 acres in the past ten years, and Wisconsin from 4439 to 967 acres during the same period. Thus, in these two States, there is a decrease of 5874 acres since the census of 1880, and the decrease is still continuing. On the other hand, an enormous increase in the product is shown in California, Oregon and Washington, where the average yield per acre is very large, ranging from 1155 pounds in Oregon to 1626 in Washington, and 1648 in California. These two elements, increase in acreage where the average is great and decrease where it is small, account for the result shown.

The variations in yield in hop-growing localities are frequently very great, and in some States the uncertainties of the crop have been so marked that its cultivation is nearly abandoned. Twenty years ago, the States of Maine, Massachusetts, Michigan, New Hampshire, Vermont and Wisconsin produced annually ten times the quantity they now produce. Wisconsin ten years ago ranked second only to New York in hop production, but in that period it has been left far behind by the Pacific States, and now ranks as the fifth, producing less than 500,000 pounds, against about 2,000,000 in 1879 and 4,500,000 in 1869.

Ten counties in the United States produce over 1,000,000 pounds of hops each. These counties being the most important localities of the hop growing industry, the following analyses of the statistics reported from them will be of interest. The acreage and amounts respectively produced by them are given as follows, the counties stated in the order in which they rank as producing counties:

Counties.	State.	Acres.	Pounds.
Otsego	New York	7,749	4,698,637
Madison	New York	6,956	4,094,440
Oneida	New York	6,002	3,704,341
Pierce	Washington	2,191	3,699,671
King	Washington	1,768	3,238,075
Schoharie	New York	5,563	3,148,885
Sacramento	California	963	2,134,606
Sonoma	California	1,646	1,263,610
Marion	Oregon	974	1,169,657
Franklin	New York	2,930	1,106,123

The aggregate production of these ten counties is 28,258,095 pounds, grown upon 36,142 acres, or 72.14 per cent of the entire hop crop of this country from 71.98 per cent of acreage.

The following table exhibits the average yields per acre of these counties, as compared with their respective State averages and with the average of the United States, they being arranged in rank according to production per acre, the signs indicating the quantity above or below the State or United States averages, respectively:

Counties.	State.	Average per acre.	Compared with State average.	Compared with United States average.
Sacramento	California	2,217	*569	*1,437
King	Washington	1,831	*205	*1,051
Pierce	Washington	1,689	*63	*909
Sonoma	California	1,208	—440	*428
Marion	Oregon	1,201	*46	*421
Oneida	New York	617	*70	—163
Otsego	New York	608	*59	—174
Madison	New York	589	*42	—191
Schoharie	New York	566	*19	—214
Franklin	New York	378	—169	—402

*Denotes plus.

It will be observed that the average yield per acre is enormously greater in the Pacific States than elsewhere. This fact tends to but one result—the gradual abandonment of hop-farming east of the Mississippi and its rapid increase on the Pacific Slope. New York, however, still remains the greatest hop-producing State.

Honey Dew on Hop Plants.

TO THE EDITOR:—In your issue of Nov. 28, 1891, your Corvallis correspondent makes me say at the Harrisburg Farmers' Institute: "The excrement of the hop lice falling on the leaves of the hop occasions a condition favorable for the growth of mold, etc."

What I really did say was that "*honey dew secreted by the lice* at work on the under side of the leaves and falling on top of the leaves below occasions a condition favorable to the growth of mold, the so-called 'hop blight.'"

Will you kindly make the correction in the columns of your paper? F. L. WASHBURN.

Sugar Beet Growing in Pajaro Valley.

The *Pajaronian* of Watsonville gives a review of the cost and returns from sugar beet crops in the Pajaro valley, during the last season. The editor says by way of introduction:

Although these are some of the most favorable instances, yet the average is not far behind, and it is difficult to find a farmer who did not make more from his beets this year than from any other summer crop. The average yield for 1891, as shown by the Western Beet Sugar Co.'s books, is between 13 and 14 tons per acre, which is $5 per ton—the average price paid by the company—gives a return of $65 to $70 per acre. The cost of production, not including rent of land, varies from $2 to $3 per ton, or from $26 to $40 per acre. It is, perhaps, impossible to give the exact average profit per acre for the season, as so much of the work is done by the farmers and their estimates of the value of their labor vary so extremely, yet it is quite safe to say that the average profit on sugar beets this year was $30 per acre, and that this figure was considerably increased when the farmer did his own work. The following results of this year's crop are taken from the cultivator's own figures. In every instance the land belonged to the beet raiser, and his estimated value of rent of land is also given. Where the farmer did any of the work himself, the cost of such work is estimated at the amount it would take to have it performed by hired labor nd teams.

R. BURLAND—5 ACRES.

Plowing and preparing land, $4 per acre—22 cents per ton—total, $20.

Seed, $1.20 per acre—7 cents per ton—total, $6.

Hoeing, thinning, topping, and loading into wagon, $27.28 per acre—$1.50 per ton—total, $136 40.

Plowing out and hauling, $9.09 per acre—50 cents per ton—total, $45.45

94,742 tons yielded $473.71; profit, per acre, $53.17; per ton, $2.71; estimated rent of land, $15 per acre—82 cents per ton.

L. E. PEARCE—15 ACRES.

Plowing and preparing land, $5 per acre—31 cents per ton—total, $75

Seed, $1.02 cents per acre—6 cents per ton—total, $15.30.

Hoeing, thinning, topping and loading into wagon, $24.23 per acre—$1.50 per ton—total, $363.45.

Plowing out and hauling, $8.08 per acre—50 cents per ton—total, $121.20.

241,147 tons yielded $1205.73; profit per acre, $42.05; per ton, $2.63; estimated rent of land, $15 per acre—93 cents per ton.

O. TUTTLE—5 ACRES.

Plowing and preparing land, $6.50 per acre—32 cents per ton—total, $32.50.

Seed, 78 cents per acre—4 cents per ton—total, $3 90.

Thinning and hoeing, $8 per acre—40 cents per ton—total, $40.

Topping, $14.07 per acre—70 cents per ton—total, $70.35.

Plowing out, $3 per acre—15 cents per ton—total, $15.

Hauling, $10.05 per acre—50 cents per ton—total, $50.25.

102.56 tons yielded $512.81; profit per acre, $60,16; per ton, $2.89; estimated rent of land, $20 per acre—$1 per ton.

D. TUTTLE—11 ACRES.

Plowing and preparing land, $3 per acre—14 cents per ton—total, $33.

Seed, $1.50 per acre—7 cents per ton—total, $16 50.

Hoeing, thinning, topping and loading into wagon, $27.52 per acre—$1.25 per ton—total, $302.72.

Plowing out and hauling, $11.01 per acre—50 cents per ton—total, $121.11.

242.135 tons yielded $1210.67; profit per acre, $67.03; per ton, $3.04; estimated rent of land, $20 per acre—91 cents per ton.

J. W. GALLY—7 ACRES.

Plowing and preparing land, $5 per acre—20 cents per ton—total, $35.

Seed, 71 cents per acre—3 cents per ton—total, $4.97.

Thinning, hoeing, topping and loading into wagon, $37 38 per acre—$1.50 per ton—total, $261.66.

Plowing out, $4.29 per acre—17 cents per ton—total, $30.03.

Hauling, $12.46 per acre—50 cents per ton—total, $87.22.

171.21 tons yielded $856.06; profit per acre, $62.45; profit per ton, $2.60; estimated rent of land, $15 per acre—60 cents per ton.

A. C. PECKHAM—6 ACRES.

Plowing and preparing land, $5 per acre—29 cents per ton—total, $30.

Seed, $1.17 per acre—7 cents per ton—total, $7.02.

Thinning, hoeing, topping and loading into wagon, $26.22 per acre—$1.50 per ton—total, $157.32.

Plowing out and hauling, $10.49 per acre—60 cents per ton—total, $62.94.

103.43 tons yielded $517.15; profit per acre, $43.31; profit per ton, $2.54; estimated rent of land, $15 per acre—86 cents per ton.

J. PEDERSEN—15 ACRES.

Plowing and preparing land, $7 per acre—30 cents per ton—total, $105,

Seed, $1.09 per acre—5 cents per ton—total, $16.35.

Thinning, hoeing, topping and loading into wagon, $28.43 per acre—$1.20 per ton—total, $426.45.

Plowing out and hauling, $9 48 per acre—40 cents per ton—total, $142.20.

350.17 tons yielded $1750.86; profit per acre, $70.72; per ton, $3.05; estimated rent of land, $20 per acre—84 cents per ton.

J. ALBRIGHT—6 ACRES.

Plowing and preparing land, $8 per acre—29 cents per ton—total, $48.

Seed, $1.42 per acre—5 cents per ton—total, $8.52.

Thinning, hoeing, topping and loading into wagon, $40.68 per acre—$1.50 per ton—total, $244.08.

Plowing out and hauling, $21.70 per acre—80 cents per ton—total, $130.20.

165.54 tons yielded $827.70; profit per acre, $66.15; per ton, $2.36; estimated rent of land, $15 per acre—55 cents per ton.

M. TUTTLE—10 ACRES.

Plowing and preparing land, $5 per acre—27 cents per ton—total, $50.

Seed, $1.12 per acre—6 cents per ton—total, $11.20.

Planting, 65 cents per acre—3 cents per ton—total, $6.50.

Hoeing, thinning, topping and loading into wagon, $17.81 per acre—95 cents per ton—total, $178.10.

Hauling and plowing out, $9.37 per acre—50 cents per ton—total, $93.70.

187.527 tons yielded $937.62; profit per acre, $59.81; per ton, $3.19; estimated rent of land, $20 per acre—$1.07 per ton.

THE WOODEN NUTMEG of fraud fame has been eclipsed by Dutch ingenuity. According to the word sent from Utrecht, the Hollanders are making artificial almonds in large quantities from paste composed of glucose. They are shaped and colored to nature, and steeped in nitro-benzole, to give the necessary odor. Hundreds of bushels have been sold to unscrupulous dealers, who mix them with the genuine article. The same people are at work on a varnished coffee bean.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page. One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST, by addressing the publishers.

The Master's Desk.

S. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The new year is fairly started. At the first meeting of your Grange make a list of all farmers in your jurisdiction, with the members of their families, who are eligible to the Grange, and call on them with the view of interesting them in Grange work. You will surely find some who will join the Grange. It will pay to try. Good seed is almost sure to grow, and especially so if well planted in good soil.

Wanted! A charter list for a Grange in Southern California!

A good organizer can make money by taking the field in behalf of the Grange.

Manchester, N. H., is bidding high for the next session of the National Grange.

The new word is ready.

Help the officers of your own Grange and of the State Grange and of the National Grange to advance the interests, elevate the characters, increase the opportunities and enlarge the sphere of the American farmer. Help your Grange paper, for by so doing you help yourself, you help the Order, you help the farmer and you help humanity. Any means of education is a help.

The success of an army in a hard-fought battle is often due to good music. History teaches so. The general knows it; so does the soldier. Even the drummer boy knows his worth. Just so in the Grange. We find music a winning instrument. Try and have plenty of good music, and I am sure you will go home and say: "We had a good meeting to-day."

Appoint a committee of your Grange to assist your County Deputy to organize new and reorganize old Granges. Visit the locality where a Grange is most needed, and stay with those farmers till you get a Grange. "If at first you don't succeed, try, try again." "Where there is a will, there is a way."

Ask farmers to read; ask them to think; ask them to act; and then offer them the Grange as a means and as an end. The more they inquire about the Grange, the more they will respect it, and the more they will be convinced of the importance of an organization among farmers.

Recommend a good, live, competent Deputy. We must have workers. The Grange must grow; it must be extended. Work will do it, and nothing but work will succeed.

From and after this date, the National Grange will furnish the working tools, knife and pencil with each charter outfit.

The Grange will have suitable headquarters at the World's Fair, for all members of the Order. There will probably be a Bureau of Information, and from time to time, lectures will be given and essays will be read. On this point, more anon.

We want to elect men to office who will be servants, not masters of the people. Please bear that in mind. We want honest men, not the ordinary two-by-four hothouse politician. We want men who represent ideas more than they do dollars. In short, we want fitness, not flesh alone.

The sad news of the death of Bro. Wm. M. Ireland, one of the founders of the Order of Patrons of Husbandry, reminds us that there are but few of that noble band who have not been called to the Land of Eternal Rest. Bro. Ireland died Christmas Eve, 1891. His many years of usefulness on earth are closed, but the work he helped to begin will live after him. He erected his own monument. The Order of Patrons of Husbandry is sure to live and sure to occupy a useful position long after the last one of its founders has been garnered. All honor to the name of each one of the founders of the Grange! Let the announcement of the death of Bro. Wm. M. Ireland, a founder of the Grange, be made by the Worthy Lecturer of each subordinate Grange in California. Peace to the ashes of our departed brother!

The officers of Bennett Valley, Sebastopol and Santa Rosa Granges were jointly installed at the Hall of Santa Rosa Grange by Past Master G. N. Sanborn, on Saturday, Jan. 9, 1892.

The Baby Grange—Glen Ellen—has installed newly elected officers. A class of five members is to receive the third and fourth degrees at the next meeting, January 23d, and all Patrons in good standing will be welcome.

Splendid weather! More like May than January! Just the finest kind of growing weather. A good time to scatter some Grange seed. Send out a few Declarations of Purposes. Hand your farmer neighbor a copy of the Constitution and a blank application for membership. Sow Grange seed!

Cooperative Buying.

Practical Results Accomplished by Two-Rock Grange.

TO THE EDITOR:—Enclosed please find the report of the Cooperative Committee of Two Rock Grange, which was read and accepted at our last meeting, and, at the request of W. Master Martin, copied for publication in the RURAL PRESS for the purpose of leading other Granges to feel an interest in similar work.

If anything I could say, would induce other Granges to follow our example, I would gladly do so. To those who will read our report, it would be unnecessary to point out the material benefits derived, as the figures speak for themselves. And surely all know, that all kind of products now pass through too many hands, making the difference between the price the producer gets and the price the consumer pays, altogether too large. We complain of overproduction, but if consumers could be supplied with the various products they need at less expense than is now the case, overproduction would not be heard of, or at least very little.

Especially should we never speak of overproduction of the necessaries of life, as long as one worthy human being suffers for the want of them. We should then put the blame where it belongs, viz., to our faulty system of distribution.

It is, however, not so easy to remedy an evil which has existed so long, but we should try; we should make a beginning, even if it is somewhat difficult.

The first difficulty will be in getting a good committee; a committee that will work and work together; one willing to sacrifice time for the general good, and not be discouraged even if it sometimes hears grumbling and criticism instead of appreciation, for in the end honest efforts will always be appreciated. Then the members must become interested. This would seem easy, as not only can they be shown that they will receive a direct benefit, but that, by getting accustomed to work together, we farmers, can ultimately remedy all the social, political and commercial evils we now complain of. Nevertheless, the bulk of the members will be found slow to get started, and for various reasons; one of which is the scarcity of cash. In too many instances the members are indebted to the local stores in such a way as almost to be owned by them. There are other reasons that need not be mentioned. This, the most common one, is mentioned because it is the one we should most try to remove. It is worth sacrificing something to become free men and women. If we have a great many unpaid store bills we are not free.

The manner in which Two Rock Grange worked last year is briefly this: Every other month a combined order for groceries would be sent off, shortly after the first monthly meeting. The goods would then arrive before our second monthly meeting, on which day such articles as were to be divided were taken to the hall and divided. The Grange owns weighing scales and furnishes books and necessary stationery.

In some cases it may be well to pay the committee one per cent of sales to partly pay them for their trouble; in other cases, it would not be necessary. In order to avoid as much as possible buying broken packages, it is well to have a sinking fund either advanced by the Grange or created out of the orders by charging one or two per cent on the various bills for the purpose. The committee can then always order full packages of such articles as don't spoil, like soap, starch, rice, beans, etc., and hold them until used. We buy such articles as coal oil, flour, feed, etc., once or twice a year. Hardware we have so far not bought with any regularity. We have also taken advantage of the Trade-Card system to quite a large extent. C. NISSON.

The Committee's Report.

The above mentioned report of Two Rock Grange Cooperative Committee is as follows:

Worthy Master: Your Cooperative Committee begs leave to submit the following report for the year 1891:

We have bought groceries to the amount of $1246.41. Calculating that we have made 20 per cent by buying these goods wholesale for cash, instead of at retail, it made us a saving of $311.60.

In hardware we have not bought together as we should have done, for reasons explained during the year; but on the two bills of goods bought, a large saving was made. It is somewhat difficult to say what the average discount would be; on some articles it was 70 per cent, incredible as it seems, on others 50 per cent, 30 per cent and less. The average discount would probably not be less than 30 per cent, making a saving on the two bills of $37.56. In other words, instead of paying $125.70, we only paid $80.64. Under the "trade card" system, members have bought about $300 worth; with a saving on these purchases of ten per cent, a saving was made of $30. Of coal oil we have bought during the year about $400 worth, with a discount of 15 per cent, making a saving of $60.

On feed and flour we made, on one transaction, a profit of $200. This was somewhat of an accident, however, as was explained at the time. As a regular thing we have not been able to get more than 2½ per cent discount from feed and seed from ton rates, and on flour from 5 to 10 per cent.

The aggregate profit made, exclusive of feed, seed and flour, amounts to $428.50. As comparatively few members have taken as much advantage of our system of buying as might have done so, it is safe to say we could easily double this amount, and even treble it. We think our members do not quite realize how much they might save, because, in buying in the ordinary way in small quantities, the extra price paid amounts to but little each time, and is therefore not noticed much. It is for the same reason that a tariff tax is so popular all over the world. It is paid in small installments and not felt much at the time, although it is well known that it is the most expensive way of collecting a tax.

In showing the total of the profits made during the year, we hope we have made it clear that cooperative buying is a decided success. We desire, however, for the benefit of our successors, to say that this system of buying entails a great amount of work on the cooperative committee, and we should all make it a point to lighten this work as much as possible, by being prompt in sending in our orders, when called for, have them clearly made out, and always accompanied by sufficient cash to cover the orders. Respectfully submitted.—C. NISSON, J. R. DENMAN, WALTER CHURCH.

Practical Topics Before Dixon Grange.

EDS. PRESS:—Our Grange is in a prosperous condition. We have not missed a meeting since we organized on the 7th of last March. I am sorry to say that we did not receive the communication relating to the Grange Anniversary, until the time had passed, so we did not have an opportunity to celebrate it. I append some notes from the minutes of a preceding meeting so that you can see the direction of our discussions:

Sister E. J. Aylworth suggested select readings at each meeting. Bro. McCrory called upon the Lecturer for remarks, who however felt himself unable to instruct those who knew as much about farming as himself. Bro. Colter called to mind a Grange meeting which occured years ago. Each member was assigned a subject, such as fruit culture, tariff etc. He suggested breaking up our quaker meetings by a similar programme.

Bro. Wells said he believed it would not do to graft apricot on peach stocks, as the wood does not unite. Apricot should be grafted upon apricot of a different variety. [The peach is the best stock for the apricot under some conditions.—ED. PRESS.] The Royal is the best apricot, for it always produces a crop which is the most saleable.

J. K. Armsby had told him that the Fresno peaches, though larger than the Vacaville peaches, were not so favorably received upon the market. The Vacaville peaches were brighter. They used French sulphur, which costs 5 cents per pound, while Fresno used the common California sulphur at 2½ cents per pound.

He said all peaches should be graded before drying by a grader which grades into several different sizes, for large peaches bring the best price, while large and small mixed do not dry so evenly and bring no better price than the smallest.

He recommended the use of bisulphide of carbon for exterminating weevil from granaries and grain sacks.

Bro. Colter said a gentleman had recommended the use of alum mixed with whitewash as an efficient remedy for weevil, and that he himself had used carbolic acid crystals which he dissolved.

Sister Aylworth recommended the use of carbolic acid powdered, around chicken houses for removal of insects.

B. M. ROCKWELL, Ass't Sec'y.

PAST MASTER COULTER called in after attending the bank meeting on Wednesday. Suffering from a slight indisposition, he returned to Santa Rosa by early afternoon train. With Past Master Flint, he will visit Vacaville Grange Jan. 23d, when lots of good Grange doctrine and sound sense will be dealt out by word of mouth to the Grangers and farmers of Vaca valley, who should attend with their household jewels in round numbers on so good an occasion.

WATERLOO.—Secretary Merrill writes that Waterloo Grange will install officers Jan 23d.

PUBLIC WELFARE.

Selling Grain Short.

Senator Washburn of Minnesota, the author and introducer of the Option bill presented to the United States Senate last month, while in Chicago on his way to Washington, was interviewed by an *Inter-Ocean* reporter, and said: "I have just finished reading the interview in your paper with Mr. Counselman, in which he severely criticised the bill introduced by me to prevent grain-gambling. I am not surprised at his hostility, nor disturbed by the sarcastic references to my philanthropy in the premises, for any effort directed toward the curtailment of the great evil known as short selling is expected to call down the wrath of all dealers in illegitimate or fiat grain. What I want to do is to stop the pernicious, demoralizing practice known as 'short selling,' where a man can go on a board without a kernel of grain, real or prospective, and sell a million bushels, depressing the market the same as if so much grain had been dumped on it. Mr. Pillsbury, the largest buyer of real wheat in the world, tells me there are men in Minneapolis with their offices in their hats, who sell more wheat in a year than he buys."

Referring to the meeting of the Minneapolis Chamber of Commerce called on Saturday for a conference with him, the Senator said:

"Of course, the Board of Trade folks up there occupy the same position as the Chicago Board, save that they believe the bill means the utter demolition of all trading in futures, but they will find their mistake when the bill becomes a law and goes into effect. A very interesting table I came across the other day selects ten days from April to October, 1890, and shows that in those days, while the actual sales of wheat amounted to 437,800 bushels, the optional sales of fictitious wheat amounted to 125,720,000 bushels. On the 14th of April, 1890, New York speculators sold 44,000,000 bushels of fiat wheat, probably more than twice as much as reached that city during the year, and the actual sales that day were but 6000 bushels.

"Were it not for Board of Trade methods, I think every bushel of wheat would be worth 20 cents more to-day. In fact, all Europe is astonished that it is getting our wheat to-day for such a ridiculously low price, considering all the circumstances. They expected to pay more, and it is an outrage upon the producer that he should be a sacrifice to the relentless greed and disreputable deals of the short seller on our Boards of Trade. In my opinion, some kind of relief will be granted the producer in a restrictive law that will preserve all the good features in future dealings and eliminate the bad."

Don't Take Stock In It.

A man at Antioch, who is in the saloon business, has built the finest house in town. A bold inquirer asked where he got the money to put up such a beautiful and expensive piece of architecture. The answer given was to the effect that the workingmen of Antioch and vicinity made weekly contributions to this building fund—many of them casting in all that they had, even honor, manhood and self-respect, placing themselves on a degraded plane with the canaille, while they suffer the loss of their hard-earned money. Dear workingman, are you helping some saloon-keeper to build a fine house, while you degrade yourself and family by keeping them in second or third rate tenement rooms or a hovel? Do you go down every day or week into your pocket to help some saloon-keeper to support his wife and family in elegance, while you are obliged to see your own, poorly clothed and half fed? If so, may God help you to boycott the saloon and thereby break the chains of the worst monopoly that ever cursed the world.—"POW" in *Tradesman*.

FARMERS' ALLIANCE.

The Truth Close Home.

TO THE EDITOR:—As I have noted the real value of a dollar or any piece of money is what you can get for it. As collateral propositions, it may also be said that if at different times the amount of produce of any kind which can be got for it differs, then the value of the dollar in the purchase of commodities is variable, while if it will always be accepted as credit for just one dollar on book account, then its value in the payment of debt is always the same; so each piece of money may have, generally does have, at the same time a variable and an invariable value; and as value is a relation between human want and the available supply for it, there is no measure of values save the amount of human desire in any given case, and all talk about money, as a measure of value is empty combination of words. One fact stares us in the face in this country: There is not enough of the metals which have been selected for the money purpose, to do the business of the country. There is a great lack of them, and we find it necessary to, and as a matter of fact, business men do supplement them with pieces of paper used for the same purpose as the metal pieces, which use, Webster's dictionary says, makes them money. In short, any material commonly used to equalize the valuations put upon things by agreement of human beings is money. It is this use which gives to any material, for a time, the character of money—metal, paper, sawdust, sand or any material whatever. (See definition.) The real question is, whether it is better that these paper pieces should be of varied commercial character and form, issued by different citizens and corporations, or whether they should be of only a few forms, and issued by the General Government.

At this point it is necessary to remember that the General Government is simply the greatest citizen of the Nation; it is a corporate, legally constituted individual in all business matters; it is a public citizen which can do the same acts in a business way that private citizens can do, whenever it is authorized to do them by Congress or the people. It can issue its notes in satisfaction of accounts with private citizens, and receive them in accounts of private citizen with it; and the current worth of such notes will be determined by the knowledge of the private citizen as to the Government's readiness to, at all times, receive them as freely as it gave them out (that is, for all debts due it as well as all debts from it), and at the same valuation in matters of account, in this respect being subject to the same laws of business as the notes of private individuals. The question, again, is whether these paper pieces—which have scarcely any intrinsic value as paper, but which may have, as notes, whatever value is put upon them, provided it is justified in the minds of men by the circumstances of their creation and circulation—the question is, whether such paper pieces shall be issued helter-skelter by individuals and private corporations under a great variety of circumstances, the exact knowledge of which must necessarily be limited to sections of the country, or whether they should be issued by the General Government, which every one knows about, under circumstances which may be made well known to every citizens.

The advantage of simplicity, to be gained by General Government issue, is easily apparent. It is also apparent that the resources of the Government are greater than those of any private individual or corporation could be. Its revenue, or income, is also greater; and the amount of such revenue due it is the measure of its ability to receive its notes back from citizens, giving them credit and extinguishing their debts to it. This revenue it is authorized to collect would thus be a "redemption," or, rather, exchange fund, for any paper pieces it might issue in addition, to the limited metal currency; and this revenue fund now amounts to $400,000,000 a year, every dollar of which must be paid by citizens, with some kind of money. If that greatest of all citizens, the General Government, could afford to recognize its own notes at their face value in all commercial transactions and in payment of debt, all private citizens could also afford to; and thus all commodities in the United States which changed hands for cash would add themselves to the revenues of the Government as a still larger exchange fund for the Government's paper money; and even beyond this, we may go, and to satisfy those who prefer to handle metal money, we may say that the different kinds of material upon which the Government places the money stamp (the authority to circulate as equalizers of value) shall be exchangeable at the will of the holder, at places designated by Congress, for equal amount of any other kind of money issued by the Government and in its hands, and not specifically appropriated by the Government for its regular expenses.

Thus private citizens would gain all the advantage that could accrue from the maintenance by the Government of a special specie "redemption fund" which the banking interest of the East and Europe now leads the Government into pretending to maintain.

Two things only are necessary to a mixed currency which shall be equally honest and just to all in a nation: 1. That all materials used by the Government as money shall stand equal in legal tender quality. 2. That all classes of money issued shall be interchangeable at the will of the holder at Government depositories to the extent that each kind called for is in the hands of the Government and free from specific appropriation; provided that when metal money is called for in lieu of paper, the Government shall not pay more than half the sum in gold, and may elect to pay all in silver whenever, in the judgment of the officials, it is necessary to do so in order to protect the public welfare.

The legal tender clause of money should read: "This piece (or bill) is legal tender, within the United States, for all debts, public and private, to the amount specified upon its face"—in case of dollars and larger; or, "to the amount specified by law," in case of fractional currency, if it is decided to place a general limit to the legal tender quality of such currency. The face denomination of a piece should be the only standard of its value in payment of debt.

The larger bankers—the "banking interest" in a general way—of this country and Europe ask that the currency systems of the world be augmented by the issuance, in addition to metal of a paper currency, which shall be held to be valuable only because such paper shall claim that behind every dollar of it there is a gold or silver dollar ready to take its place in the hand of the holder at the holder's option. In case the claim were true, and there was a gold or silver dollar locked out of circulation for every paper one put in, then the paper would be but a substitute and the volume of currency would not be increased. If the claim were not true, and the paper was issued in excess of the gold and silver held out of circulation to "support" it, then it would become false to the extent of the overissue; and as no one could know which dollars would prove baseless in case of attempt to exchange more than the amount of the gold and silver held, the taint of distrust and danger would be thrown upon the whole paper circulation. Paper circulation should depend for its value upon the fact of its equal receivability with all other kinds of money issued by the same Government. A paper currency which depends for its value upon metal is necessarily either a substitute or a fraud. The bankers would not object to a dishonest paper issue because they could control its metal base, raise the price of gold and silver, when needed by private citizens for purposes for which the bankers beforehand would carefully see that the paper was not legal tender and so reap a profit by discount. Such is the kind of paper money they favor everywhere, and the kind they secured in the United States during the war of the rebellion and in the Argentine Republic during its recent land boom, and by which they wrought financial destruction to all but themselves and even to some of themselves.

F. P. C.

Executive Committee Meeting.

FRESNO, CAL., Jan. 5, 1892.

TO THE EDITOR:—In reply to your inquiry as to January meeting of State Executive Committee, I will state that as our late December meeting at S. F. was so near the end of the year, we decided not to meet again until April.

I would enjoy being at your county meeting, and did our committee meet at all this month in S. F., would certainly make dates so we could be with you. As in future we have so much longer time in which to hold county meetings, if counties will leave dates to be arranged by County Presidents and Secretaries, or to a committee, so arrangements can be made to have dates for several counties follow in proper order, State officers and others can visit many counties and great good would come from visits by one Alliance to another, where practicable.

Our Institute and County Alliance at Fowler this week promises to be a big success, if I judge correctly by interest manifested on all sides. Fraternally yours,

JOHN S. DORE, Ch. Ex. Com.

Alliance and Union Meeting.

J. L. Gilbert, Lecturer State Farmers' Alliance, has consented to attend the Alameda County Alliance meeting at No. 865 Broadway, Oakland, on Saturday, and speak at the public Union Meeting at the same place, in the evening. J. J. Morrison, District Lecturer, from Placer county, and members of the Farmers' Alliance, Trades Unions, Citizens' Alliance and other progressive associations will speak in the evening.

A Great Aqueduct for Irrigation.

(*Continued from page 45.*)

by skips, and in each pier the wells, by corbeling out the brickwork, are joined together for the superstructure of the pier.

The total quantity of well sinking was 15,019 lineal feet, or nearly three miles, and was executed by hand and steam dredging. It was commenced in May, 1886, and completed in May, 1888. The arching was commenced in November, 1888, and finished in April, 1889.

The well-sinking and arching went on night and day, the work being lighted by ten arc lights of 2500 candle power each. This construction is shown in the engraving on page 29.

Now that the aqueduct is completed, it forms a most striking object in the vicinity, and will, *Engineering* hopes, stand to bear witness in far distant ages to the beneficence of British rule in India and to the skill of English engineers.

The solidity of the great arches and piers and the fine sweep of the bastion-like wings all unite to give an idea of vast strength and stability, while the monotony of such a large surface of facade is relieved by the effect of light and shade obtained by the bold corbeling out over the spandrels to form a support for a roadway on either side of the canal, and the long horizontal lines of the cornice and railings are broken up by a tower at each end and one at each of the abutment piers.



THE NADRAI AQUEDUCT — BRICKWORK IN PROGRESS. — *See first page of this issue.*

WHAT THE BUZZ OF A BEE SAYS.—In a recent work on the bee, T. W. Coman states that the insect can draw 20 times its own weight, can fly more than four miles an hour, and will seek food at a distance of four miles. By a beautiful mechanical adaptation its wings bear it forward or backward, with upward, downward or suddenly arrested course. Its threefold voice organs are the vibrating wings, the vibrating rings of the abdomen, and a true vocal apparatus in the breathing aperture or spiracle. The buzz is produced by the first two, and the hum, which may be "surly, cheerful or colloquially significant," by the vocal membrane. A number of the bee's notes have been interpreted. "Humm" is the cry of contentment; "wuh-nuh-nuh!" glorifies the egg-layings of the queen; "shu-u-u" is the note of the young bees at play; "s-s-s-s" means the muster of a swarm; "b-r-r-r" the slaughter or expulsion of the drones; and the "tu-tu-tu" of the newly hatched young queens is answered by the "qua-qua-qua" of the queens still imprisoned in their cells.

FARMERS' INSTITUTES.—The Farmers' Institute at Fowler, Fresno county, on Thursday of last week, was a grand success in interest and in the importance of the discussions. We hope to present an outline of proceedings in our next issue. Preparations are being made for an Institute the first week in February, of which we expect to have fuller information in a later issue.



Mother's Country Parlor.

[Written for the RURAL PRESS by W. T. HEALD.]

A simple room with trimmings plain,
Clean, spotless sash and window pane;
Lace curtains that have known no stain,
Are seen in Mother's Parlor.
My brothers and my sisters, too,
Have loved that place their childhood through;
And love it still, indeed they do,
'Tis Mother's Country Parlor.

The pride of mother's thoughtful care
Is what you'd see on entering there.
You could not find a room elsewhere
More neat than Mother's Parlor.
A little organ, dear to me,
In richest tones of melody,
Pours forth sweet anthems, full and free,
From Mother's Country Parlor.

Upon the walls hang pictures dear,
Of those who almost welcome here,
The stranger who has chanced to steer
His course toward that old Parlor.
And there is Mother's easy chair,
You never see her sitting there,
Because she'd have her friends to share
Its comforts in her Parlor.

Those albums lying on the stand,
Have passed through many a loving hand,
And set before their vision grand
Old friends of Mother's Parlor.
Some of those old friends are gone,
And, as the silent years roll on,
We see their photographs alone
In Mother's dear old Parlor.

Their photographs I love to view;
I love to look the albums through,
And tell my friends how much they knew
Those dignities of Mother's Parlor.
No personage will ever be
So eloquent and grand to me
As those wise heads I used to see
In Mother's Country Parlor.

But as I grow toward manhood now,
Youth's emblem soon will leave my brow,
From thee my bark will turn its bow,
And yet, beloved Parlor,
While going down the stream of fate,
On childhood's days I'll meditate,
And vainly will I often wait
For scenes so dear and folks so great,
As those I knew, my childhood through,
In Mother's Country Parlor.

A Dream.

After Olive Schreiner.

[Read before the Woman's Club of Los Angeles, Cal., by MRS. SARAH F. JUDSON.]

In the dark night I lay on my bed. For a long time I tossed uneasily about, for the tea at the Ruskin Art Club was strong, and I could not sleep. My thoughts were of the woman who lay out on the desert, with sand piled about her. I had first heard of her that day, and she interested me exceedingly.

At last I fell asleep and dreamed I saw the woman lying on the sand, near to the stream which she must cross before she could come into the Land of Freedom. I saw that her head was lifted, and the light of hope was in her eyes, but the burden upon her back was too heavy; she could not rise.

Of this burden, which so weighed the woman down, I could only see the cover. It was made of cloth, woven in the most primitive style, and the bands which bound it to her body were of the strongest metal and very rusty.

There stood one beside me in whose hand were the keys to the book of knowledge, past, present, and future; and I said to him, "I have a woman's curiosity. I wish to know what is in this terrible burden which crushes the woman to the earth."

He touched my eyes, and said, "Look!" and though the cover and the bands remained unchanged, I saw that the burden was composed of many packages, some old and moth-eaten which the woman had carried always, others which she had gathered by the way and patiently borne upon her back.

The first and largest package was marked "Clothes," and in it was such a multiplicity of garments that time would fail me to name them all. There were dresses for every hour of the day, some of them with trains for street-cleaning purposes; dresses for every degree of heat and cold; dresses expressing every shade of sentiment, from the airy ball-costume to the crape-covered robe of the inconsolable widow, with every thing to match, from bonnet to shoes—these last a trifle small for the wearer. There were corsets, of course, and strings, and elastic, and whalebones, to hold poor humanity down and back, and fetter arms and limbs. There were dotted veils, each dot worth $10 to the oculist; kid gloves for hot days; and jewelry enough to satisfy the most barbarous taste.

In close proximity to the clothes were "Aids to Beauty," including "Bloom of Youth" (the sort that comes in bottles;) face-bleach, warranted to regenerate the worst complexion; quantities of false hair; improvers of every kind, rogue and paint for the lips, bleaches and dyes for the hair; in fact, all the devices by which the fair sex from time immemorial have sought to cheat Time and make themselves attractive, with doubtful success. The next package, rivalling in size and importance its neighbor, Clothes, bore the label "Society," and first exhibited the menu of lunch, a pink lunch of thirteen courses, the most indigestible and complex dishes possible to be concocted, ending with ice cream as an aid to digestion. There were visiting cards of the dear 500 whom nobody cares about; cards for dinner parties, birthday parties, anniversaries, at all of which your *presents* are requested; receptions big and little, with souvenirs hand-painted, bills for music, colored waiters, gas, used in preference to sunlight, refreshments, flowers; and close by I saw black-bordered stationery, indicating the exact relationship and the time elapsed since the death of the departed, gates ajar in flowers and a dove for the funeral of a wicked old man.

There were other things but I will not mention them all.

A very bulky package called "Household" then claimed inspection. In it were curtains to keep out the sunlight; looks for windows that were never opened, easy chairs, some very light novels, photographs of servant girls who never went to cooking school, or any other school, company things simply innumerable, badly-painted pictures, and very amateur work of all kinds, common shells and specimens, Christmas cards, tidies, drapes for everything, bric-a-brac, things neither ornamental nor useful, and the trail of the dust cloth was over them all. There were children's garments elaborately trimmed; receipts and bills of fare for every-day use, including every complicated and unwholesome viand known to the ingenuity of woman.

A small bundle; which gave me a thrill as I looked, held stimulants; principally tea and coffee, and, in small quantities, drugs of all kinds, with a very little alcohol to brighten the intellect, if required, and assist poor weak sisters to keep up when tired nature refused its aid. Besides the stimulants, were narcotics to soothe the nerves when some of the other things had done their work too well.

At this stage of my discoveries I began to feel weary, for I have not told the half of what I saw; but he who stood beside me said: "Go on. This opportunity may never come to you again, and you have not yet seen the heaviest things which the burden contains."

And I looked again, and saw a strangely assorted collection, marked "Miscellaneous," in which were some small coins, presented by a man to his wife for purchasing necessaries for the family; receipts for the work done at half a man's pay; dressmakers' and milliners' bills.

There were chains and fetters, stamped with the makers' names, viz.: Precedent, Established Custom, Popular Opinion, and many others.

There was a box containing marbles, black and white; and I said to him standing by me, "What are these for?" And he answered, "They are used by Clubs for the Advancement of Women, the white ones for voting in women who do not especially need their help, the black ones for voting out those who hold imploring hands to them for inspiration and help—for driving them out into the world with the brand of infamy upon them, so far as it lies in the power of a Woman's Club to do it."

At this I blushed, and I think I must have groaned a little in my sleep, for those marbles weighed heavily on my conscience.

There was a pair of tweezers, bright from long usage, in which the characters of women had been held up for inspection; a microscope to aid in the good work; and a stilleto, stained with blood from the hearts of beautiful women. This murderous little instrument was made of combinations of words, looks and insinuations, harder and sharper than the finest steel, and used principally by very virtuous women who never did anything wrong in all their lives.

Last and most pitiful of all, there was a baby—a sad-faced little thing, with tears upon its face, one of the large family of unwelcome children, the offspring of an enforced maternity.

Underneath all the rest, quite out of sight until the last, I found a small package marked "Work." In it were plans for bringing up and educating the children; answers to the question, "What shall we do with the boys and girls?"—plans for making them happy and beautiful; appliances for the care of the sick and helpless ones of the earth; garments for the orphans and aged; plans for charities and reforms of all kinds; kindergarden and church work; plans for saving the fallen, and winning back the weak and erring ones into right paths.

The bands that bound these things together were of silk, with the words "Love" and "Duty" woven therein, and formed a yoke easily adjusted to the wearer, and the bundle was not heavy because of the yoke.

And when I had seen all that was in the burden, I wondered not that the woman was unable to rise. I wondered more that she had ever come so far on the road that leads to the Land of Freedom.

I was very sad, and said to him who stood by me, "Is there no hope for the woman?" And he answered, "Yes. See, her head is lifted, she is thinking! Look again." And I looked, and behold, there came to her a band of angels. Their names were Reason, Common Sense, Education, and Independent Thought. One carried in his hand a staff with the word "Enfranchisement" engraved thereon. This he offered to the woman to assist her in rising, and give her strength to go on the way.

They all whispered in her ear, and tugged at the bands of metal. The woman struggled, till at last the bands snapped asunder, and all the burden rolled away, except the last and least of all, which the woman cheerfully adjusted to her shoulders by the bands of Love and Duty.

And with the vision of the woman standing, staff in hand, her face turned toward the Land of Freedom, I awoke.

Polly Frost Talks With Betsy Snow.

DEAR MRS. SNOW;—The editor of the RURAL granting me his permission I would like to talk with you for a little while. Of course these are busy times with the farmers wives, (what times are not?) Just now we are occupied with the making of head-cheese, cleaning pig's feet, trying out lard, helping with the sausage, etc. And here let me tell you two of the ways I have of providing for times of scarcity. When we have quantities of sausage in the winter, I fry it, and pack it down in jars as closely as I can lay the cakes together, and then heat lard and pour over it, entirely covering the sausage, which in this way will keep fresh and sweet all summer. And if any of the readers of the RURAL like myself live far from "the butcher and baker and candle-stick maker," they will find themselves provided with many appetizing dishes in this way, when confronted with that everlasting problem, as to what shall we eat. Our sausage put down last winter was perfectly good in August and September. I put it down in gallon jars, take it up and heat it through when I wish to use it. Another method of looking out for times of scarcity is by canning mince-meat. Before the fruit season comes, when our stores of canned fruit wax low, the problem of desserts for dinner becomes a vexed one, and at this season when apples and fresh beef are plenty in the farm homes why not prepare for future needs? for the hungry men will enjoy mince pies in the late spring. But perhaps my housewifely ways will not be new to other housekeepers.

It is as you say Mrs. Snow, we are in the midst of the holiday season, and if it is also as you say, that good husbands are ordering groceries and other indispensable articles for their wives' Christmas gifts, let us accept them cheerfully, and put it down to man's stupidity, for the experience of years teaches me that men are stupid creatures. They may be our superiors mentally, (but I do not believe they are,) but be that as it may I insist upon it, that they are stupid. There is Deacon Brightly a good man truly, but he never seems to have any innate sense of the fitness of things but goes blundering along all the years of his life, and the funniest part of it is, his wife never uses her quick woman's wit to counteract his stupidity; never indeed sees that he is stupid. Of course, the money the careful housewife has taken in from the sale of poultry has gone to help pay the taxes, or for something equally necessary; and why should it not? I am sure I worked no harder for the poultry money than Tom did for the money from the grain. And if our partnership means anything, it must mean that the payment of the taxes is a matter of just as vital interest to us as to our husbands. There is one thing in your letter of the RURAL of December 12th with which I feel like taking issue, Mrs. Snow, that is, that devoted wives are using their long hoarded nickles to buy cigar-cases for their husbands. I mean I take issue with the thought that this is the right or proper thing to do. Now, Mrs. Snow, be just as fond of your Fred as you please, that is your affair. Rise early and walk off just as far as you told of in one of your letters some years ago, and get a pumpkin and make pumpkin pie for breakfast, to suit your husband; all that is a matter for you to decide yourself. But I do protest, and that vehemently, against any woman who entertains the old-fashioned belief, "that cleanliness is next to godliness," doing anything to aid or abet her husband in continuing in this vile practice. Of course our husbands have ways and ways of their own in which they must be let alone. Josiah Allen, you remember, would go in his stocking feet. Tom Frost does have such a fondness for newspapers and I have to bear it patiently, but to encourage any man in the filthy habit of using that poisonous weed, I never shall while my name is POLLY FROST.

A STOUT elderly lady was hanging by a strap and casting black looks at an inoffensive but ungallant male beauty who sat sucking the head of his cane. A sudden lurch of the tram car flung the lady upon him with great force. "Say, dash it, don't you know," exclaimed the youth, "you've crushed my foot to a jelly!" "It's not the first time I've made calf's-foot jelly."

AT the close of a concert, while a young gentleman was struggling with his hat, stick, overcoat, operaglass and his young lady's fan, all of which he was trying to retain on his lap, a suspicious looking bottle from the overcoat pocket fell on the floor with a loud thud. "There," he exclaimed to his companion—"there goes my cough medicine, too!" There was presence of mind for you.

The Farmers Wife as She is Not.

[Written for the RURAL PRESS by MAID-OF-ALL-WORK.]

When the town quill driver undertakes to write about the farmers' wives of California, he succeeds in making a fine display of his own ignorance and filling up a column or two to the great injury of the paper containing the stuff, and he approximates a description of a farmer's wife about as well as a description of a flat boat would pass for a representation of a locomotive. It is intended to be witty, and is marked, "funny, this is to be laughed at," but it is a weeping failure, because the individual who is intended to bear the brunt of the wit has been dead and buried a great many years.

In the olden times when nursery tales were invented, three blind mice got after a farmer's wife, and she seized the best piece of cutlery she had in the house, and brought it down with such force and accuracy as to seriously damage the beautiful curve of their caudal extremities. And this same thing is liable to happen again if our city dailies do not cease to damage the reputation of our beautiful and prosperous State by bringing out illustrations of the farmers' wives as draggled and dirty and overworked, and generally abused. A great many people read these things and think they are founded on fact.

The average farmer's wife in California is neither a drudge nor a sloven. If farms here could not support their women better, they would cease to be desirable in the modern way of looking at things, and land would drop so low it would revert back again to large holdings.

Imagine a wife on an average California farm going out to milk, as represented in a daily not long ago. No one would be more surprised than the cow. In this tidy woman with a neat foot and well kept hair, the cow would see no resemblance to the slip shod creature so familiar to the imagination of the city penny-a-liner. When milking time comes the California cows expect to see the best hired man or the man who pays the taxes on the farm, and she would'nt stand for Mary or any other woman.

If the sad man who writes funny articles on the farmer's wife could attend a session of the State Grange, the blow to his imagination would be so great, that his surprise would take the form of petrifaction. He would be labled "soft-soap-stone," and set aside in a corner. Those grand dames in silk and velvet and fine shoes, who make witty speeches, and report laborious committee work, and make times agreeable wherever they are, are somewhat different from the wretched creatures of the quill drivers' imagination.

They evidently have done something else beside churn and wash.

The women of the State Grange are representative women, and they represent tasteful and comfortable homes, contentment, and all the domestic and social graces.

Contrary to the illustrated versions in the papers, the California farmer's wife does not churn butter with boots on, a grain sack for an apron, and her hair standing in seven directions, nor does she have to carry her butter to town in a basket and trade it for calico and buttons.

She is not a cross between an emigrant German with a growler, the Irish widdy of footlight comedy fame, with her "auld market basket." She is educated, neat and industrious, and if she does her housework, she does it with ease and grace.

Washing, sewing and butter-making are getting to be eliminated from the farmhouse work, as largely as from city homes.

The farmhouse has lost its heterogeneous character. Farmers are divided into horticulturists, viticulturists, stock raisers, dairymen, wheat growers; and the farmhouse is the place where the family resides, and not where petty industries are kept up to support the paucity of the acres.

One whose memories of a hard and joyless childhood on a farm way back in Missouri or somewhere else, leads him to libel the California farm home, ought to be invited out to pay a visit to the genuine California farm home he knows so little about. He will be treated like a king, and will be fed on light diet while he slowly digests his surprise. The daughter from the Seminary will sing for him, the Normal School girl will inform him on the leading questions of the day, the Business School graduate will beat him at chess, and he finds it is no use to make love to the pet daughter of the house, for the farm is too good a place to leave.

Even in humble farm homes where prosperity has not yet arrived, squalor, misery and dirt is never present in the absence of intemperance. The wife of a poor man is able to live a great deal easier in the country on a farm, than she can in the city, and food to eat is always assured.

She has no false appearances to keep up, she isn't a slave to her door-bell, and her work, if she has to work for wages, is independent and self-controlled. The penny-a-liner who would describe the farmhouse, will be surprised to learn that pigs are no longer allowed to wander at will in the kitchen, and that knitting the family hosiery, and making the masculine garments from the weaving up, is a forgotten art.

In these times the conveniences and comforts of life are about equally distributed between the city and country, according to the

respective conditions of the families. The poor see more misery in the city, and the rich flee to the country for rest and comfort.

Browning says: "There is nothing good in the city, but the patient lives of the poor."

All the world is in sympathy with that patience, and all the love and means of philanthropy is now being directed to the alleviation of that misery and sin. And the only remedy seems to be transportation to the freer opportunities and purer air of fields and pastures.

It is so much easier to make fun of things than to present truths in readable shape, that the dummies of the farmer and his spouse, made entirely out of "old clothes," are continually set up to fire bad jokes at. For cheap reading, this is space-filling, but does it advance the prosperity of an agricultural State, whose hope lies in training the next generation to cultivate our thousands of now lightly tilled acres. Or have we reached a time when we can afford to pay anything for a laugh, or be witty at our own funeral. If we must make fun, let it not be of our homes of industry, economy and enterprise.

But if the humorist can spare no one, let him dilate upon the miserable slip-shod farmer's wife as the exception, and not as the rule. Beware, oh, all blind mice, for there may yet be a farmer's wife who has a carver, and knows how to use it.

Lessons in Volapük.

The International Language of the Entire World.

LESSON 13.

In lesson 1 it was taught that any adjective may be made an adverb by adding o to it. There are also primitive adverbs of which the following are the principal:

Of time.	*Of manner.*	*Of quantity.*
Ai, always.	Also, thus.	Dilo, partly.
Anu, at this moment.	Elso, otherwise.	Lölo, entirely.
Bevüno, meanwhile.	Jeno, actually.	Mödo, much.
Biseo, beforehand.	Mofo, away.	Säto, enough.
Bletimo, recently.	Plobo, thoroughly.	Te, only.
Buö, formerly.	Sägo, even; yet.	Ti, nearly.
Denu, again.	Somo, so; in such manner.	Töbo, scarcely.
Egelo, always.	Voto, otherwise.	Tu, too.
Fino, finally.	Vio, how.	Umo, more.
Jünu, up to now.	Zo, round about.	Vemo, very.
Läto, lastly.	*Of place.*	Za, nearly; about.
Nog, still.	Diso, below.	*Varied.*
Nu, now.	Domo, at home.	Ba, possibly.
Ofen, often.	Fö, in front.	Beno, well.
Poso, afterwards	Ge, back.	Bo, of course.
Siso, since.	Ino, within.	Deno, nevertheless.
Sotimo, sometimes.	Is, here.	Kludo, consequently.
Suno, soon.	Lino, around.	Leno, by no means.
Läno, then.	Pö, behind.	No, no.
Ya, already.	Seo, without.	Si, yes.
	Suso, above.	Sikodo, consequently.
	Us, there.	Za, moreover.
	Valöpo, everywhere.	

Interrogative.

Liko? how? Kimna? how many times?
Kikod? why? Kiöp? where?
Kimiko, in what way? Kiüp, when?

Relative.

Kö, where. Kü, when.

The vowel series avails to form adverbs of time, as for example:

delo, by day. ivigo, three weeks ago.
adelo, to-day. omulo, next month.
adelo, yesterday; uyelo, year after next; evigo, week before last.

Exercises.

Ogolob oyelo lödön in dom olik—Jiblod obik kidof ai obi—Elogom bletimo fleni olik kel äkömom idelo—Okömoms denu umulo—Kimiko sagol volapükiko atosi?—Kimna eflapom jevali olik?—K öp ogolols oyelo ol e jinef olik?—Epölüdof lolis, kanof deno lemön flolis et kels binoms su tab—Kanon lifön nen fineds, nams u lams, ab no nen kap—Epelob ti sentabis fols a paun plo kaf et kel no binom gudik—Li-kanol konön obe kikod man at ehetom edelo vomi et e esedom adelo ofe lolis?—No li-ovipol spatön odelo ko ob ve jol fluma?—Ologobs us flolis nidik e nimis smalik e gletik.

I recently saw a man without feet or arms who formerly lived at your father's house—I shall by no means give you books if you lose them again—Yes, sir, I said that that boy that you saw yesterday will come to your sister's house to-morrow to remain there—If you will go soon then I shall go with you to the house where those boys live who always hate each other, although they sometimes kiss each other and have been taught to be friendly—I shall go soon. Will you go with me? otherwise I shall go with my uncle—Where shall I see you, day after to-morrow? It is especially (patiko) bad to hate your brother or your sister.

This series of twenty lessons was begun in the PACIFIC RURAL PRESS of Oct. 10, 1891. Those desiring assistance in the systematic study of the language will be put in the way of obtaining it without cost by addressing A. L. Bancroft, *Cifel* for California, 303 Sutter St., San Francisco.

SKILL RUNS IN THE FAMILY LINE.—It is well known that the Japanese are very skillful workmen, and the reason for this is undoubtedly accounted for in the following extract from an exchange: In Japan apprentices begin to learn their trades usually much earlier than in our country, so that when majority is attained the mastery of the crafts is thorough. Another striking feature of the Japanese system is that of heredity. Skill runs in family line. Not a few of the famous artisans of the present decade are descendants in the ninth, tenth and even twentieth generation of the founder of the establishment. A carpenter in Fukui can boast of his ancestry of woodworkers through 27 generations; and the temple records show such boasting to be true, though often adoption interrupts the actual blood line. At a paper-makers' establishment in Awotabi, in Echizen, the proprietor's ancestors first established the industry a thousand years ago. The same as above, so far as skill in the family goes, is as true of China as of Japan.

Chaff.

GENTLEMAN (to organ-grinder)—"I don't like your playing outside my house." Organ-grinder (blandly)—"Very well, sar, sall I comes inside?"

MINISTER (dining with the family)—"You were a nice little boy in church this morning, Bobby. I noticed you kept very quiet and still." Bobby—"Yes, sir. I was afraid of waking pa."

SHE—"Mamma says she knows that when we are married we shan't live so much like cat and dog as she and pa do." He—"No, indeed, your ma is right." —"Yes, she says she is sure you'll be easier to manage than papa is." —"Oh!"

MRS. BROWNSON—"Why under the sun are you standing here, gazing out of the front door?" New servant—"Sure the sun won't hurt me."

A young man was calling on a county councillor's daughter the other evening, when the father appeared at the parlor door. "May I come in?" he asked, hesitatingly. "Oh, yes," she answered, "you may, but we have a quorum without you.

LITTLE Johnny (looking curiously at the visitor)—"Where did the hen bite you, Mr. Angel-Smith?" Visitor—"Why, Johnny, I haven't been bitten by any chicken." Johnny—"Mamma, didn't you tell papa Mr. Angel-Smith was dreadfully hen-pecked? Why, mamma, how funny you look. Your face is all red."

HE was a bad writer.—Mrs. Green (to young physician whom she had called in haste)—"Oh, doctor! doctor! I fear you have made a terrible mistake! My daughter had that prescription which you sent her last night filled, and she took a dose of the medicine. Now she exhibits every symptom of poisoning. Oh!"—Young physician—"Prescription, madame? Why, that was an offer of marriage.

ENTER housemaid to give notice. Mistress: "Why, Sarah what are you dissatisfied with?" Housemaid (with a simper): "It ain't as anything is wrong, mum, but I'm going to be married." Mistress: "Why, you didn't tell me you were engaged when you came!" Housemaid: "No, mum, I wasn't then. But you remember you gave me a holiday about two months ago to go to a funeral. Well, I'm going to marry that corpse's husband."

WATTS—Aren't you ever going to get tired of shopping? You never seem to bring anything home. Where's the fascination in it, I'd like to know? Mrs. Watts—Oh, I like to look at the new goods, you know, and to see what lovely things I could get if I had only married rich.

YOUNG FOLKS' COLUMN.

The Little Singing Girl.

[Written for the RURAL PRESS by MISS EVELYN.]

Far away in the wilds of the Alps, there once lived a poor charcoal burner. His hut was high up a mountain side, and his little girl Gemma never went to school, because many weary miles lay between Gemma's home and the nearest village.

Gemma did not want to go to school, however. She was quite happy playing under the trees and hearing the birds sing.

"What a sweet sound you make, little birdies," she would say. "How I wish I could do it, too!" and then she would try to imitate the singing of the birds, until at last she could make sounds almost like theirs, herself. Now, behind Gemma's home, the mountain towered up till it was lost in snow and clouds. Some people have a fancy for climbing to the top of such mountains. They say they can see more of the world than they can in the valleys, where the view is shut in.

One bright, August day, when Gemma was about eleven years old, she was sitting at the top of a piece of rock, singing, when two gentleman, accompanied by a guide, came down the mountain side.

"What sweet music!" exclaimed one of the strangers. "It sounds like a nightingale singing."

"I really believe it must be that little girl," replied the other gentleman; and they stopped under the rock to listen.

Gemma, who had no idea that any human being was near, continued to sing, imitating the birds in such a wonderful manner that one of the gentlemen became too much delighted to keep silence.

"Brava! brava!" he cried, clapping his hands.

Gemma was terribly startled. She jumped up and ran to take refuge in the cottage, whither the gentlemen followed, for they wished to see the parents of the wonderful little singing girl.

After some conversation, one of them made a most startling proposition to Gemma's father and mother.

"Let us take your daughter away to the town of Milan to be educated. We will pay all the expenses of her instruction, and before many years she will be the greatest singer in the world."

"But how do we know that you will treat our child kindly?" asked the mother.

"You shall come with us now to Milan to see the school," answered the stranger, "and every six months you shall go there to visit your little girl." So the mother consented.

Poor Gemma! The change was very terrible to her at first. Instead of running barefoot on the mountain side, free as the winds of heaven, she was now shut up within the four walls of a boarding school. Her feet were cramped into shoes, her active young limbs ached for want of exercise. Study, too, was very hard work at first, and she often shed tears when she thought of her dear parents and her lovely mountains. But soon Gemma had a professor to teach her music, and this made her feel as though a ray of sunshine had entered her life. The professor was a nervous, cross old gentleman, who hated to hear children play or sing wrong notes.

He was in the habit of scolding all his other pupils roundly, but he never once scolded Gemma. "The child is a genius," he would cry with delight; "she is the first pupil it has ever given me pleasure to teach."

Sometimes the sister of the rich gentleman, who was paying Gemma's expenses, would invite the little girl to her house to spend the day.

The sister was a very fine lady indeed, and her house was so full of beautiful pictures and costly trifles that her poor little visitor was afraid to move about, for fear of overturning something.

From the way in which the lady looked at her, Gemma felt that she was thinking, "What an awkward child you are, how big your feet are, and how red and sunburnt your hands."

Perhaps the lady never thought this at all, but when Gemma saw her, all in silks and satins, her white hands gleaming with rings, the poor child felt as nervous and terrified as a wild linnet would do if you asked it to make friends with a tame canary. As the months went by, however, the tan wore off Gemma's hands and they became white, she grew accustomed to wearing shoes and learnt to move about as gracefully as any one.

Then the lady treated her more kindly and confidentially.

"My brother is so extravagant," she would say. "He is always doing some foolish act of generosity;" and Gemma would blush, for she knew that her education was one of his acts of generosity.

He himself, however, never hinted this; he was always very kind to the little girl, gave her boxes of candy, and praised her progress in singing.

When Gemma was eighteen, her master said: "She must sing at a concert, for I am anxious to know what people will think of her."

The concert took place in a very large building. All the great people of the town were there, and in the front row, sat Gemma's parents, and her kind friend. Alas! no longer rich, but he never for a moment regretted the money he had spent on Gemma's education, for he said: "Think how many sorrowful hearts will be lightened by hearing her sweet singing."

"How young she is, and how pretty," whispered the people as Gemma appeared. When she sang, it sounded as if the sweetest-voiced nightingale the listeners had ever heard, were pouring forth a song.

"Oh! brava! sing again," they all cried. They got up from their seats and waved their handkerchiefs, the people were all so delighted. "*L'uccello*—the bird," was the name they all gave her.

Of course the newspapers all spoke of "the bird's" wonderful singing. It was quite surprising how much money was offered Gemma to sing in other towns—enough, before long, to make her old parents rich, and enable her to save up a very large sum besides.

Gemma had been traveling about for three years, singing in Germany and England, even as far away as Russia, when she returned to Milan.

Her first inquiry was for her friend. "He has become very poor," they told her, "and scarcely ever goes into society, as formerly. There is a beautiful lady he wants to marry, but as she has very little money, and he has none, the wedding cannot be thought of."

Gemma knew it was no use offering to pay him back all he had spent on her, in her childhood, he was too proud to accept it, so she went to the lawyer, who had her benefactor's estate for sale, and though it cost a very large sum of money, she bought it.

Then she visited the sister, who treated Gemma very affectionately, now that she had become celebrated.

"I want you to hasten your brother's marriage, and give the bride this, as a wedding gift," said Gemma, presenting the title deeds of the estate.

"Never say that it is not yourself who makes this present."

Now, as the sister was very rich, and had not any children, no one was surprised at her making her new sister-in-law a splendid present, and you may be very sure that at the wedding, she took all the credit for great generosity.

Gemma's kind friend and his wife have lived very happily since the wedding.

If you should ever chance to meet them, I hope you will never tell the secret of how they became rich again.

DOMESTIC ECONOMY.

Care of Flat-Irons.

It is so easy to keep the flat-irons in good condition that there is little excuse for any housewife neglecting them, no matter how busy she may be. Any woman can easily tell at a glance when these articles are well kept. Some housewives will have in their possession irons that have been their mother's before them, and though they have been in constant use for years, are still as firm and smooth as any one could wish. Other women, with the same kind of irons, would, by neglect and carelessness, in a year or two, render them unfit to use.

Where there are many starched clothes to be done up weekly, it is a good plan to wash the irons once a week, but where plain clothes and only a few starched clothes are to be done, once a month is often enough. Take some clean ammonia soapsuds, and with a cloth wash the iron well, afterwards wiping with a dry cloth; then put them on the back part of the stove to dry thoroughly. To clean the irons, always have a piece of coarse sandpaper or a handful of coarse table-salt or a piece of wrapping-paper in which to wrap them. Always have the top of the range perfectly clean before putting on the irons, and never allow them to get too hot. If such a thing does happen, cool them by setting up on end on the hearth. Some women, when in a hurry, cool irons by plunging them into cold water, which will very soon spoil them. Don't keep the irons on the stove when not in use, for it is sure to harm the temper of the iron; and don't have irons on the stove when cooking, more particularly when the article cooking is one that is apt to flow or boil over, or while frying. After taking an iron from the stove for immediate use, first rub it over with a piece of heavy wrapping-paper kept for that purpose, then rub the smooth part with a cloth in which is encased a bit of wax. Rub the iron well over a clean cloth and then it is ready for the clothes. In ironing starched clothes, if any of the starch sticks to the iron, always scrape it off with a knife before placing it on the stove to heat. Irons should be kept in some closed, dry place. If kept on a shelf they are always dusty when wanted.—*Housekeeper.*

GRACE ORANGES.—Have the oranges perfectly dry. Separate carefully each carpel without breaking the inner skin. Stand them in a warm place to dry. Put one pound of granulated sugar in a porcelain-lined kettle, add to it a half-cup of water and stand over the fire to boil. Do not stir after the sugar is dissolved. After the mixture has been boiling about ten minutes, hold the forefinger and thumb in ice-water for a minute, then quickly dip up a little of the boiling syrup with them; press the thumb and finger tightly together, then draw them apart; if the syrup forms a thread, it is at the second degree. Boil gently about three or four minutes longer until it reaches the sixth degree. This may be known by taking a small portion on the end of a spoon, then dipping it into cold water and breaking it off quickly; if it is brittle without being at all sticky, it is just right. The syrup must never be stirred, or it will cause granulation. Now take it quickly from the fire, add a tablespoonful of lemon juice, stand in a basin of boiling water, to keep the syrup from candying. Take the fruit on the point of a large skewer or with sugar tongs, dip into the syrup, lay on a piece of buttered paper and stand in a warm, dry place to dry.—*Mrs. Rorer in Table Talk.*

BOILING VEGETABLES.—Now, what is there to say about boiling vegetables, except to put them over the fire and let them boil until they are done? That is the point—"until they are done," but not a minute longer. So general is the custom of overboiling vegetables, cooking them in a careless, haphazard kind of way, that few people realize their superiority when cooked just the right time and served as soon as done. A general rule to be observed is, that all vegetables must be put into fast-boiling water, brought to the boiling point again as soon as possible, and kept boiling until done. Potatoes, if of medium size, require 30 minutes to cook; of course, if they are small, 15 or 20 minutes' boiling is sufficient. Care must be taken that all are of nearly the same size. Carrots and turnips require 45 minutes when young and an hour in the winter. Beets, an hour in summer and an hour and a half in winter; or if very large, two hours is not too long. Onions, if of medium size, will be done in one hour; when small and young, half an hour is sufficient. Cabbage and cauliflower should not boil over 30 minutes. If onions, cabbage, cauliflower or turnips are boiled in a large saucepan with plenty of water, kept boiling rapidly and with no cover over them, the odor of these vegetables will not be noticeable in the house. I did not believe this until I tried it.

VEGETABLE FLANNEL.—Germany contains a number of establishments engaged in the manufacture of flannel and similar textiles from pine leaves, the articles made being used in hospitals, barracks, etc., owing to the fact that no vermin can lodge in them. When spun and woven, this material resembles hemp, and it may be employed in making many articles of wearing apparel, as the goods are comfortably warm and solid.

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SAN FRANCISCO:
Saturday, January 16, 1892.

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[NEW THIS ISSUE.]

Carbon Bisulphide—J. H. Wheeler, Melrose.
Cultivator—Jensen & Lauritzen, Watsonville.
Business College—W. C. Ramsey, Stockton.
Seeds—L. L. May, St. Paul, Minn.
Squirrel Exterminator—F. E. Browne, Los Angeles.
Seeds—John Lewis Childs, Floral Park, N. Y.
Seeds—John A. Salzer, La Crosse, Wis.
Plants—E. Bonner & Co., Xenia, Ohio.
Seeds—Alneer Bros., Rockford, Ill.
Fruit Trees—D. B. Derby, Vacaville.
Gopher Traps—Ira F. White & Son, Pomona.
Imported Clyde Stallions—H. P. Mohr, Mount Eden.
Seeds—F. Barteldes & Co.' Lawrence, Kan.
Seeds—The Dingee & Conard Co., West Grove, Pa.
Registered Shire Stallions—J. I. Parsons, Santa Rosa.
See Advertising Columns.

The Week.

The Citrus Fair at Auburn is in progress as we write, and early reports are of the full success of the fair as a meritorious display and as a recipient of public favor. Half a dozen counties are represented by collective displays, the designers of which have been able to produce quite unique and original effects. Besides these, there are a host of individual exhibitors competing for the array of premiums which have been hung up. These are naturally in the main from Placer county, but not wholly so. The fair seems to be bringing out the achievements of the foothills splendidly, and that will be a grand service to the State. RURAL representatives are at the fair and will secure its salient features for the benefit of absent attendants.

Congress is actively at work, and California Congressmen are introducing a host of progressive measures, some of which we hope will get off the file before the adjournment. We notice that river improvement is urged by our State Board of Trade. It is a good thing. If Congress will give us something liberal and adequate in this direction, we will endure the pigeon-holeing of a good many other things.

The Issue on the Peach Yellows.

There is no more important item in our local agricultural affairs just at present than the issue which is being forced on the practical exclusion of Eastern-grown peach, plum and apricot trees, because of the ravages, east of the Rocky mountains, of the dread disease known as the "yellows." This issue interfering as it does with courses of trade, which have long prevailed, naturally excites opposition among Eastern tree growers and upsets the calculations of local tree dealers who have hitherto relied, in whole or in part, upon the importation of Eastern-grown trees.

Probably no measure can be adopted without interference and hardship to some people. We sympathize with Eastern tree growers who have laid out their future upon sale of stock in California. Some of them have been very enterprising in propagating the varieties our planters desire, and have undertaken, at large expense, to procure buds from California orchards. We do not wonder that they feel aggrieved and that they protest against the position now taken by California fruit growers at their public meetings and through the State and County Boards of Horticultural Commissioners. We have received a number of communications on this subject from Eastern parties, which enlarge upon the grievousness of the situation in which they are placed, and we sincerely regret that they have to suffer in the ways described.

And yet what can California do otherwise than she has done? Here we are with a vast and growing peach interest. It is by much the greatest deciduous fruit interest of the State at present. More than this, we are free from this terrible disease which destroys peach orchards almost with the rapidity of fire or tornado. One cannot read the most conservative reports on this subject, such as appear in the Government publications, without being appalled at the insidiousness, the swiftness and the effectiveness of the scourge. There is no pest or pestilence among fruit trees which can compare with the little understood malady known as "peach yellows."

In view of these things, what can we do but protect ourselves? To weaken or to provide for future restriction may be to "lock the door after the horse is stolen;" the animal is now in the stall, vigorous and healthy and promising: let the doors be locked at once.

It has been charged that this movement is at the instigation of the California nurserymen and is for the purpose of corralling locally, the trade in trees. This is not true on the whole, and in fact we believe they have had very little or nothing to do with it. Perhaps an indication of this may be found in the fact that many California nurserymen expected to handle considerable quantities of Eastern-grown peach and prune trees this year and had orders placed for them which they, in some cases at least, countermanded as soon as they knew of the stand taken at the Marysville Fruit Growers' Convention. The result will undoubtedly favor the local growth of nursery trees, but unless we are very much mistaken, our California nurserymen had very little to do with the incisive action which has amounted almost to a practical exclusion of Eastern trees.

Again, the present California stand on this subject is not a local scare. It comes about through Eastern publications as to the character of the yellows and the intensity of its ravages. Current Eastern reports, backed up by the most carefully prepared statements by the Government investigators, must be charged with this protective action by the California fruit producers. Just as we write the mail brings us a new Government publication on this question in its most startling phases. It is entitled "Additional evidence on the Communicability of Peach Yellows and Peach Rosette," and is by Dr. E. F. Smith, the Specialist of the U. S. Department of Agriculture, who has been engaged upon this particular investigation for several years. Let the Californian read the following quotation and see that his protective action is not too early nor too incisive, and the aggrieved Eastern nurserymen also read it and perceive that it is not an issue forced by local nurserymen upon selfish ground. We quote from Dr. Smith as follows:

It is proper to state, however, that the losses continue in the infected districts; that the disease has appeared in new localities; and that regions now healthy are also threatened. The yellows is certainly as far south as southern Virginia and probably as far west as Arkansas and northeastern Texas. Peach growers are earnestly advised to stamp out the disease upon its first appearance, and are warned against the importation of trees from infected districts. These remarks apply with especial force to the Pacific coast, and in this connection it is well to remember that the apricot and almond are also subject to yellows. It would be much safer for the Californians to grow their own peach trees than to introduce any from the eastern United States. If trees are imported it should be known beyond question that they are from regions where this disease does not occur. The mere fact that the nursery stock is healthy at the date of shipment is not a sufficient guaranty that it will continue so.

This is warrant for all California fruit growers are doing, and it should be sufficient to disarm criticism. This State cannot afford to proceed longer in defiance of this disease, but is justified in the most stringent measures for its exclusion.

It is, perhaps, natural that the first thought of those who are temporarily troubled by the refusal of Californians to receive their trees should be retaliation. We are not surprised, then, to find one Eastern tree grower writing us in this way:

Our only recourse will have to be to get similar laws passed by this and adjoining States to exclude California fruit on account of its sanitary condition. We think, if we try, we can get laws that will operate as much against the fruit growers of California as they can by excluding our stock.

This is a heathenish threat, and none, perhaps, will be more ashamed of it in a little time than those who propose it. It is not to be feared on our part, for it is idle and impracticable. No Legislature could be made to adopt any such enactment nor could facts be shown which would justify it in the minds of any fair-minded men. Our Eastern friends in the nursery line, before any such venture could be undertaken by them, would remember that such action would be against their own customers and friends, and in many cases against their own investments. We look upon the threat as merely a manifestation of chagrin resulting from misapprehension of the motives which prevail in excluding trees from doubtful or infested localities. Usually the ill-temper which arises upon misapprehension quickly passes away.

Greatest Money Ever Paid for a Horse.

The *Call* is authority for the statement that an agreement was perfected Tuesday, by which J. Malcolm Forbes of Boston will pay Senator Stanford $150,000 for the two-year-old colt Arion. This is the highest price ever paid for horseflesh, the next highest being Axtell, who brought $100,000. Arion is a bay colt, 15.2 hands high, and was foaled March 13, 1889. His sire was the illustrious Electioneer and his dam Nanette, a sister to Woodnut (2:16¼). A few months ago, he made a record of 2:10¾ at Stockton. Mr. Forbes seems to be boring with a bigger auger than Bonner in the horse market.

Arion leads now an illustrious line of high-priced horses which California has furnished to Eastern fanciers. Among them are the following: Anteeo, who reached a price of $65,000; Bell Boy, who sold for $51,000; Mascot for $20,000, Alcazar for close to the same amount, Woodnut for $20,000, Norval for $15,000, and a dozen other stallions, young in years, that went over $10,000.

RATTLING A CROSS BULL —Mr. R. G. Sneath tells us of an early observation of his in the subduing of a vicious bull, as practiced by a San Mateo county butcher. The butcher was called upon to bid upon a cross Jersey bull, who was so ugly that no one could enter the field with him. The butcher made the bid and was given the bull, being cautioned of his dangerous character. He scouted danger, and as the bull came bellowing and pawing before him, he began rattling back and forth between the horns with a piece of a fork handle, striking quick, sharp blows on the horns as near the points as possible. The bull began to back away, and finally started on a run, and the butcher after him. After that the mere sight of the stick intimidated him. Try it; but take our advice and stay on the safe side of the fence until you see how it works.

The Evil of Grain-Gambling.

A measure is again before Congress to put an end if possible to grain-gambling. This, of course, does not mean the sale of futures where it is expected that grain will actually be handled, but the wholly fictitious gaming which has no grain in it, except the words printed on the contracts. The evil in this sort of dealing is so great that we have frequently attempted to characterize it and to depict its evil influences. So long as the practice exists, there will be occasion to strike it in the interest of legitimate producers and dealers.

We are glad to find in current telegrams some expressions from Senator Washburn of Minnesota, who as a resident of so great a wheat-growing and milling State, knows well the influences of the gamblers' practices. He is quoted as saying:

I want to stop the pernicious, demoralizing practice known as "short-selling," where a man can go on a board without a kernel of grain, real or prospective, and sell a million bushels, depressing the market the same as if so much grain had been dumped on it. Mr. Pillsbury, the largest buyer of real wheat in the world, tells me there are men in Minneapolis with their offices in their hats, who sell more wheat in a year than he buys.

A very interesting table I came across the other day selects ten days from April to October, 1890, and shows that in those days, while the actual sales of wheat amounted to 437,800 bushels, the optional sales of fictitious wheat amounted to 125,720,000 bushels. On the 14th of April, 1890, New York speculators sold 44,000,000 bushels of fiat wheat, probably more than twice as much as reached that city during the year, and the actual sales of that day were but 6000 bushels.

This shows how wholly unreal the trade is and how hollow are the reports of markets which are based upon such manipulations. Nor is this the whole of the trouble. If it were, possibly, the people could stand quietly and watch the spectacle of men driving each other to the lunatic asylums or to suicide. The worst of it all is that the gaming unsettles values and gives both producer and dealer no sound ground upon which to proceed. It also makes game of a world's food—a most vicious proceeding.

A still more direct and present effect of the gambling is shown by Senator Washburn in this way:

"Were it not for Board of Trade methods, I think every bushel of wheat would be worth 20 cents more to-day. In fact, all Europe is astonished that it is getting our wheat to-day for such a ridiculously low price, considering all the circumstances. They expected to pay more, and it is an outrage upon the producer that he should be a sacrifice to the relentless greed and disreputable deals of the short seller on our Boards of Trade. In my opinion some kind of relief will be granted the producer in a restrictive law that will preserve all the good features in future-dealings, and eliminate the bad."

Such a law is now before Congress. Now enact it and enforce it!

FROM HAWAII.—We had a pleasant call on Wednesday from H. J. Rhodes of Carpinteria, who was on his homeward way from a year's sojourn in the Sandwich Islands. Mr. Rhodes reports that the McKinley bill seems to be working something of a transformation in Hawaiian industries, leading to a diversity of production, and will result, probably, in making the islands more self-reliant industrially. There is also quite a sentiment springing up in favor of annexation, and generally a progressive spirit discernible. Mr. Rhodes brings back with him many rare and desirable plants, and on his return to the islands next month, will take quite a shipment of orange and other trees for planting.

MORE KITE SHAPES.—It is reported that San Francisco horsemen propose to construct a kite-shaped track near Pleasanton, Alameda Co., a five minutes' walk from the town, and adjoining the Pleasanton Stock Farm, on the road to Dublin. At least 160 acres will be secured, and about $125,000 will be expended on the grounds, including the grand stand and buildings and stables for the accommodation of a large number of horses.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

An Irrigation Bureau.

Senator Peffer of Kansas evidently understands the benefits of irrigation even as far East as that State, and one of the first things he did after Congress opened was to introduce a bill providing for the creation of a Bureau of Irrigation. The details of his plan have not come to hand, it being evident that the wise newspaper correspondents at Washington do not understand the growing importance of irrigation, and look upon the proposition as one of those vagaries which they assume are to be expected from the long-bearded representative of the farmers. Too many people fancy that all the wisdom in the country is bound up in the representatives of one or two Eastern cities and interests and look with a good-natured patronizing sort of air upon anything that is evolved in any other quarter. Particularly do they affect to despise any ideas that have their origin in what they are pleased to refer to as the wild and woolly West.

But the irrigation question is bound to create more and more discussion at each succeeding session of Congress, and it will be the Western representatives who will have to bear the burden of educating their Eastern contemporaries upon the importance of an adjunct by which a good deal more than half of the agriculture of the world is carried on. Heretofore, if they have given the matter a thought, it has been to dismiss it in airy fashion as a subject in which they had no interest.

But the wants of the great arid region are too pressing to be longer treated in this cavalier fashion, and the time is now at hand when national legislation must be had upon the subject of irrigation, water rights and water laws. The demand for such legislation is urgent, and it cannot be much longer deferred.

If Senator Peffer's bill for the establishment of an Irrigation Bureau means the creation of an organization which shall grasp the subject intelligently and pursue a line of action that shall be for the good of the people, and not simply to provide a lot of sinecure positions for politicians, then it should have the support of every intelligent man in the country. There is a vast amount of work waiting to be done by such a Bureau, and which can best be performed under the auspices of the National Government.

Another Plan for Reclamation.

The telegraphic dispatches at the date of writing (January 9th) have given but a meager account of the proceedings of the Irrigation Convention, made up of delegates from Montana, that was called to meet at Helena on the 7th. The only information yet received is to the effect that there was a good attendance, and that, after considerable discussion, the convention put itself on record as recommending that the General Government devote the money realized from the sale of arid lands in the West to providing means for reclaiming the same through irrigation. The Salt Lake Convention, it will be recollected, recommended that the General Government cede all these lands to the States and Territories in which they lie, and that it also expend a portion of the money already received from the sale of such lands in their reclamation.

The Montana Convention has done a good thing in thus proposing another solution of the arid land problem. Before any plan of action can be crystallized and decided upon, it is essential that the subject in all its bearings shall be fully discussed. Conventions should be held in each State and Territory, just as has been done in Montana, and the fullest and freest discussion should be encouraged. Then, out of the multitude of plans certain to be proposed, some one can be evolved which will represent the best sentiment of the entire country in regard to one of the most important economic subjects that has come up for discussion in a long time.

By another issue, the RURAL PRESS will be able to present its readers with a full account of the proceedings of the Montana Convention, and the entire plan there evolved can then be discussed.

District and Other Work.

News comes from the Poso district, in Kern county, that arrangements have been made by the district officers with the Portland Construction Company to complete the canals in that district for the sum of $450,000, payment to be made in the bonds of the district. The necessary papers have been signed, and work will be commenced at once.

During the recent rain storm, the dam now under construction across the Tuolumne river by the Modesto and Turlock districts withstood a severe test. A great flood came down, which the wasteways were unable to carry off. The water accordingly accumulated behind the dam and soon began pouring over the top, which it continued to do in great volume for some time. When it receded, it was found that no damage whatever had resulted to the incomplete structure, which is the strongest proof of the substantial character of the work.

It has been decided to lay steel pipes for laterals in the Perris district instead of those of vitrified clay, as was at first proposed. A pipe factory will be erected on the spot. Contracts for laying them have been let, and the work will be done as quickly as possible.

Escondido district is happy in the receipt of news that the long-delayed contract with the Moffit, Hodgkins & Clark Company has been signed and that work on the San Luis Rey water system will soon be commenced.

At the last meeting of the Board of Directors of the Selma district, S. B. Holton took his place as Director of District No. 2. J. H. Sayre was elected President of the Board. The officers have taken steps to oppose the movement made to have the district dissolved, which it will be recollected has been set on foot by those who have so far prevented active operations from being undertaken, and who allege the results of their own work as reasons for interference by the courts.

The proceedings in the organization of the Linda Vista district in San Diego county have been confirmed by the Superior Court, and the right to issue bonds to the amount of $1,000,000 has been affirmed. At the next meeting of the Directors, steps will be taken to at once issue a portion of the bonds voted. Three prominent engineers have made a thorough examination of the proposed source of supply and the works to be constructed, and agree that the plan is feasible and the estimated cost is within bounds.

The San Jacinto and Pleasant Valley district is actively at work in endeavoring to decide which of several sources of supply shall be utilized. The directors are determined to make no mistake, but will take every precaution to secure the best terms and largest supply that can be obtained.

At the last meeeting of the directors of the Alta district, the regular routine business was transacted and the A. B. Clark ditch was purchased for $1180.

A petition will be presented to the Board of Supervisors of San Bernardino county on Feb. 1, asking for the organization of the Riverside Heights Irrigation district. This district includes some 4000 acres of land adjoining Riverside, and lying above the present canal systems. It is probable that arrangements will be made with the Bear Valley Irrigation Company.

A condemnation suit has been brought to obtain the land for the construction of an extensive storage reservoir near Covina, Los Angeles county. A large dam will be erected across San Dimas canyon and several thousand acres of land near Puente will be irrigated.

The Tulare Lake Canal Company is erecting a dam across the Tule river by which a canal 60 feet wide will be supplied with water sufficient to irrigate 50,000 acres of fertile land.

The opposition to the formation of an irrigation district to complete the Oakdale canal has stimulated the stockholders of that concern, and it is said that an effort will be made to resume work on that enterprise.

The Inyo and Kern Canal Company has been incorporated in this city to construct a canal in Owens River valley, Inyo county.

The Orr Water Ditch Company of Nevada has made its annual report to the stockholders. It shows that the company's affairs have been ably managed. It carries about 2500 inches of water, and sells it at $4 per inch, and the expenses are less than $1 per inch. It is a fine property. Charles Gulling is its secretary, and the trustees are J. J. Becker, D. Paul, James Gault, F. Lemmon and M. Gulling. The ditch is valued at $50,000, or $200 a share.

Pumping for Irrigation.

W. S. Green, the sturdy champion of irrigation for the Sacramento valley, has taken up the subject of pumping water from that river to supply the adjacent territory, and is pursuing the matter with his usual force and persistence. Last week we quoted what he had to say upon the subject, and again have an interesting article upon the same lines. He says: "The margin of the Sacramento river from Butte Slough to Knight's Landing, on the east side, is absolutely unfit for grain-growing, but it is the finest grass, orchard and vegetable land in the world. These things cannot be grown to perfection without water at command. On the west side of the river, protection works have made grain-growing possible, but the few who have tried alfalfa say that it is almost a waste of land to sow it to wheat, because the grass is so much more profitable. Mr. C. P. Wilson has 60 acres of alfalfa, on which he pumps the water from the river, and he says that it pays five times as much as any other 60 acres he has. Above Colusa the high land extends farther back from the river, but there is not an acre of the river land that will not yield four or five times as much money if put in some crop that will employ water at any season. We have figured on the pump business, and find if there is any kind of unanimity in agreeing to take the water for a term of years, it can be thrown over the land at the rate of 15,000 gallons for 10 cents. It does not seem that an argument is necessary to induce men to enter into such an agreement. If it is not a success it will cost nothing."

Mr. Green then quotes some statements made by the RURAL PRESS in regard to a proposed irrigation enterprise in Placer county, by which he demonstrates that the cost of pumping is far less than that of water purchased from a company.

Irrigation in Arizona.

Many readers of the RURAL PRESS will be surprised to learn the great extent of the irrigation enterprises of Arizona. In a recent report made to the Secretary of the Interior, Acting Governor Murphy made the following statement in this connection:

"Maricopa county is the most important agricultural district of Arizona, and at present has irrigating canals and acreage of reclaimed land as follows:

Canals.	Length, miles.	Reclm'd acres.
Arizona	41	50,000
Grand	27	.....
Maricopa	26	45,000
Salt River Valley	26	.....
Tempe	19	25,000
Highland	22	18,000
Mesa	9	13,000
Utah	6	10,000
Farmers'	5	21,000
Total	181	182,000
Increase current year		20,000
Grand total		202,000

The foregoing canals are in the Salt River Valley and have been operated for several years, although their extent and capacity are being enlarged with the increased settlement of the lands under them.

CANALS ON THE GILA, IN MARICOPA COUNTY.

Canals.	Length, miles.	Reclm'd acres.
Buckeye	30	20,000
Palmer	22	12,000
Enterprise	12	6,000
Citrus	14	5,000
Gila River	8	5,000
Total	86	48,000

While these canals are already in operation, another on a very large scale and more important than all the others in operation on the Gila, is now being constructed by the Gila Bend Reservoir and Irrigation Company. When completed, this canal will carry water enough to irrigate about 175,000 acres of land.

Another very important irrigation enterprise has been inaugurated about 35 miles northwest of Phœnix, in Maricopa county, on the Agua Fria, by which it is proposed to reclaim at least 100,000 acres of land. The property is owned by the Agua Fria Land and Water Company, and the prospects are favorable to the early and successful operation of the projected reservoir and canal."

To the above we are now able to add, says the Phœnix *Herald*, the canal now projected and being surveyed and the construction of which will be immediately undertaken by the Rio Verde Canal Co., which will be in the neighborhood of 50 miles long and will cover 150,000 acres of land.

Arizona's Water Laws.

California irrigators may be interested in learning the salient features of the water laws of Arizona. They differ considerably from those of this State, and particularly in the declaration made at the outset that the common law doctrine of riparian rights shall not be enforced in that territory.

The principal features of the laws referred to are as follows:

The common law doctrine of riparian water rights, shall not obtain or be of any force or effect in this territory.

All rivers, creeks and streams of running water in the territory of Arizona are hereby declared public, and applicable to the purposes of irrigation and mining, as hereinafter provided.

All rights in acequias, or irrigating canals, heretofore established shall not be disturbed, nor shall the course of such acequias be changed without the consent of the proprietors of such established rights.

All the inhabitants of this territory, who own or possess arable and irrigable lands, shall have the right to construct public or private acequias, and obtain the necessary water for the same from any convenient river, creek or stream of running water.

Whenever such public or private acequias shall necessarily run through the lands of any private individual not benefited by said acequias, the damages resulting to such private individuals, on the the application of the party interested, shall be assessed by the probate judge of the proper county in a summary manner.

When any ditch or acequia shall be taken out for agricultural purposes, the person or persons so taking out such ditch or acequia shall have the exclusive right to the water, or so much thereof as shall be necessary for said purposes, and if at any time the water so required shall be taken for mining operations, the person or persons owning said water shall be entitled to damages, to be assessed in the manner provided in section six of this chapter.

All owners and proprietors of arable and irrigable land bordering on, or irrigable by, any public acequia, shall labor on such public acequia, whether such owners or proprietors cultivate the land or not.

All persons interested in a public acequia, whether owners or lessees of land, shall labor thereon in proportion to the amount of land owned or held by them, and which may be irrigated or subject to irrigation.

In case a community or people desire to construct an acequia in any part of this territory, and the persons desiring to construct the same are the owners or proprietors of the land upon which they design constructing the said acequia, no one shall be bound to pay damages for such land, as all persons interested in the construction of said acequia are to be benefited thereby.

During years when a scarcity of water shall exist, owners of fields shall have precedence of the water for irrigation, according to the dates of their respective titles or their occupation of the lands, either by themselves or their grantors. The oldest titles shall have precedence always.

It shall be the duty of each of the owners and proprietors to furnish the number of laborers required by the overseer, at the time and place he may designate, for the purposes mentioned in the foregoing section, and for the time he may deem necessary.

If any owner or proprietor of land irrigated by such acequia shall neglect or refuse to furnish the number of laborers required by the overseer, as required in the 18th section of this chapter, after having been duly notified by the overseer, he shall be fined for each offense in a sum not exceeding ten dollars, for the benefit of said acequia, which shall be recovered by the overseer before any justice of the peace in the county; and, in such cases, the overseer shall be a competent witness to prove the offense or any fact that may serve to constitute the same.

If any person shall in any manner interfere with, impede or obstruct any of said acequias, or use the water from it without the consent of the overseer, except as provided in section seven of this chapter, during the time of cultivation, he shall pay for each offense a sum not exceeding ten dollars, which shall be recoverable in the manner prescribed in the foregoing section for the benefit of said acequia; and he shall further pay all damages that may have occurred to the injured parties; and, if such person has not wherewith to pay said fine and damages, he shall be sentenced to 15 days' labor on said public acequia.

All plants and trees of any description growing on the banks of any acequia shall belong to the owners of the land through which said acequia may run.

Any person owning lands which may include a spring or stream of running water, or owning lands upon a river where there is not population sufficient to form a public acequia, may construct a private acequia for his own uses, subject to his own regulations, provided it does not interfere with the rights of others.

Forestry and Irrigation.

The Phœnix *Gazette* is cordially welcomed to the ranks of those who see an intimate relation between forestry and the supply of water for irrigation. The proposition is so self-evident that it would seem as though no sensible man could be found, at all events in a region dependent upon irrigation for prosperity, to combat it. But such men exist, in Arizona, doubtless, as well as in California, and for their behoof the position taken by the *Gazette* will stand quoting. That journal says:

"The question of irrigating the arid lands of the Southwest is one which is attracting much attention at this time. It is undoubtedly necessary to do something to make such land productive, if we are to provide for the hundreds of millions of people who, in the next hundred years, will exist within our boundaries. But while we are considering this question, we should also look to means which will increase the rainfall upon these lands. It is proven that the forests have a great influence on the rainfall of a country, and we should protect these from the destruction which is now threatening them. These forests should be protected from fires, and the cutting of trees for lumber and wood should be so regulated that the ruinous effects which have followed the destruction of forests elsewhere may not be left here. Those who cut down trees should not be allowed to take any less than one foot in diameter. Such a law, properly enforced, would preserve our forests, and thus prevent any diminution in the rainfall, and drouths will be less frequent than they surely will be if the wholesale destruction of our forests is continued."

Workings of the Wright Law.

There are one or two papers in this State that seem to be using their utmost power to destroy the confidence of the people of the State in the irrigation system given us by the Wright law, says the Traver *Advocate*. Why this should be is more than we can conjecture, unless it is that they are either paid for their services by some pettifogging attorneys who can not make a living out of a legitimate practice and are desirous of stirring up some litigation in the districts that these attorneys may make a few dollars in fees, or they do not understand the irrigation question. Prior to the organization of the Alta Irrigation District, while the 76 country was dependent upon the 76 company for water, the people had to purchase a water right, which could not be had for less than 40 acres at the rate of $10 per acre, or $400 for a water right, and pay an annual assessment of one dollar per acre, and upon the failure to pay said assessment the water right would be cancelled. The interest on the original sum ($400) paid for the water right at one per cent, would be four dollars per year or ten cents an acre, making an annual assessment equivalent to $1.10 per acre under the old system. We simply bring these facts before our readers because the parties referred to

have called the attention of the public to the Alta District stating that our assessment is $50,000 which, in their minds, is something enormous, but when our acreage is taken into consideration and compared with the old system it is a comparatively small item. We have in this district over 130,000 acres of land which will make the assessment per acre at less than 40 cents. How does that compare with $1.10 per acre? and if $50,000 is an enormous figure how would $143,000 appear? It is plain to be seen by anyone who will take a little pains to look into the matter, that the district system costs but a little more than one-third that of the old plan, while there are hundreds of people who can now irrigate and improve their lands that otherwise could not do so. We are glad to say that the dissatisfaction in the Alta District is among a few sore heads who pay no taxes and that all our people who derive any benefit from the products of the soil are satisfied with the district system, for without water our country is a desert.

Ten Years' Development, 1880-1890.

It is a matter of considerable interest to compare the capacity of irrigating systems in this great interior valley, in 1880, with the capacities of the same in 1890. We present herewith a table showing this contrast. It is not absolutely correct, for a correct table cannot be formed. No one knows just what the capacities for irrigating in 1880 were. Some of the systems allowed one inch to four acres, and others one inch to ten acres. In fact, in 1880, there was no real fixed data, these rules of a given amount of water to the acre having all been formulated during the past decade.

Again, the estimates given for 1890 are not absolutely correct. Pomona, for instance, is put down at 12,000 acres. It only requires 1200 inches of water to irrigate that much land at Pomona, while Riverside will use three times as much water for the same area.

Half of the systems on the list to-day had no existence ten years ago, and those which had an existence ten years ago have been improved and extended, and the water wasted then has been largely saved and utilized. The following table shows the capacity to irrigate land in 1880 and 1890. In most cases the waters have not as yet been fully utilized:

Water Systems.	1880.	1890.
Riverside	5,000	10,000
Gage Canal	.....	15,000
South Riverside	.....	6,000
Pomona	1,000	12,000
Ontario	.....	5,000
Etiwanda	.....	3,200
Cucamonga	2,000	10,000
Lytle Creek	5 000	10,000
North Fork Ditch	1,000	4,000
South Fork Ditch	1,000	4,000
Mill Creek	3,000	5,000
North Riverside Canal	.....	7 500
Vivienda Pipe Line	.....	5,000
Rincon Ditch	3 000	4,000
Chino Pipe Line	.....	3,500
City Creek	.....	500
Twin Creeks	500	3,000
Banning	.....	3,000
Colton Terrace	.....	2,000
Bear Valley Reservoir	.....	18,000
Totals	17,000	130,700

It will be noticed by this table that Bear Valley reservoir, with its present dam, can furnish more water for irrigation purposes than was being utilized ten years ago in all the irrigation systems of this great valley.

There are a few small systems not included in the above table, but the principal ones are given.—*Orange Belt.*

Public Lands.

Following is the text of the bill introduced by Senator Power for the purpose of securing additional data in the surveys of the public lands:

A bill requiring elevations and additional topography to be taken in all surveys in arid or mountainous country: Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That hereafter to the minutes secured in progress of making linear surveys of public lands in arid or mountainous country, and to the township plats thereof, there be added the elevations above sea obtained by precise leveling, of all the exterior corners on the lines of each township, including the section and quarter-section corners; in the subdivision of said townships, the elevations of all the interior corners to be established by an aneroid barometer, leveling without expense, save that incurred in recording the notes; also that full description of the topographic and economic features, and the surface formation of the country surveyed be added to the field notes to be entered in the records of such Government surveys, thus enabling the location and selection of public lands to be made from the maps and records in the land offices with greater accuracy.

A Plan to Be Discussed.

Many schemes have been proposed for supplying water to irrigate the arid lands of the west side of the San Joaquin valley, but none has as yet materialized into anything practical. A correspondent of the Hanford *Sentinel*, after pointing out the necessity for some comprehensive system for reclaiming these lands, concludes by recommending the following, which he believes to be perfectly feasible.

1. Throw a strong embankment around Tulare lake, confining its water within an area sufficient to receive and hold all the surplus water that shall be made to flow into it during all ordinary floods.

2. Make a cut at the natural outlet of the lake (now filled up) of sufficient capacity to carry all the water flowing into the lake more than would be safe for the confined limits of the lake to receive.

3. Build across this cut a strong headgate in the form of a navigable lock by means of which the outflow of water can be regulated and make the navigation of the lake through the canal possible.

4. Dig a canal through to tide-water large enough to use all the surplus water that cannot be retained in the lake during the time of all winter and spring freshets.

5. Open the channel of the main sloughs, creeks and bayous through to the lake for drainage or navigation during the high water.

6. Turn all the unappropriated and waste water of Kings river and other lake-finding streams back into the lake, so far as possible, through the above-opened channels where such water properly belongs.

How the money is to be raised to carry into effect so comprehensive a scheme is left for future consideration. The scheme is practicable, and of an enduring nature. The navigable part of it will prove a teaser to the railroads and of incalculable advantage in the matter of freight charges.

It will permanently reclaim all that part of Tulare lake outside of the confining embankments, as well as the extensive overflowed lands lying between the lake and the San Joaquin river, or at least relieve the latter from the periodical overflow it suffers from. The waterlogged land between the lake and the mountains will be relieved. The stagnant disease-breeding pools will be removed and this magnificent valley will remain for all time what it now is, the most prosperous and healthful part of the State.

The suffering, sun-burned West Side will get the water it so badly needs without the nightmare of damage suits for big embankments breaking, pipe lines collapsing, or a long, dry waiting for repairs.

TRACK AND FARM.

The Claims of the American Trotter.

ARMONA, TULARE CO., Jan. 6. 1892.

TO THE EDITOR:—In your issue of Jan. 2d, I observe an article entitled "Better Horses for California," to some parts of which I wish to offer a little friendly criticism.

I quite agree with the writer in his opinions regarding the superiority of imported stock for draft purposes over that of our own production, as the old countries of Europe, with their many large cities, have found it necessary for centuries past, to produce the largest and best draft horses possible for home use. While American breeders have, until within the last one or two decades, found the breeding of horses for the turf, field and farm the most profitable, as there has until recently been a greater demand in this country for these classes of horses, than for those of heavy draft. Every farmer who has tried him knows that the woolly-legged horse of 1600 to 1800 lbs. is not worth his feed in the plow or in the harvest field unless it be to look at, but the draymen of our large cities want him, there he is in demand, and with the building up of so many large cities in our country the demand for this class of stock is on the increase, and the imported stock is no doubt best suited to these purposes.

But I do deny that the German coach, the French coach horse, or the Cleveland Bay, is the superior, or even the equal of the American-bred trotter, for anything, no matter what it is, that a horse is wanted for, whether it be the turf, the field, the farm, or the carriage.

I do not mean the horse that is bred for speed alone, regardless of other qualities, but the fine, noble animal which is bred to combine speed and endurance with size, beauty and docility of disposition. Here in the Lucerne vale, the coach horse and the Cleveland Bay have been introduced. Some of the best specimens from fine registered stock across the water were brought here at a great expense, and they have in every instance been compelled to give way to our American-bred trotter. They had neither the beauty, speed or endurance of our trotter; nor were they superior to him in size and strength.

We live in a fast country, in a progressive age, and every young and middle-aged man among us, when looking for a carriage horse wants one with these qualifications. Even a clodhopper of a farmer is not at all satisfied to poke along with a European animal at the rate of six or eight miles an hour, when for less money and expense he can have a handsome, clean-limbed and spirited animal, strong and of good size, who can take him 12 miles an hour with equal ease to itself, and far less fatigue to its driver.

The American people, as a rule, are fond of new fads, but are too intelligent to be deceived long at a time, and many of our horse breeders have already discovered that the Cleveland Bay and the coach horses of Europe of whatever kind are not destined to remain popular long in America.

The American Standard Trotter possesses bone and muscle indicative of speed and power possessed by no other horse except the old-time thoroughbred from which he in most instances sprang. Of all the brute species, he is the greatest blessing known to civilized man, and will probably hold this place through succeeding centuries. A. F. JEWETT.

FLORIST AND GARDENER.

Propagating Plants.

[By Miss B. M. PRATT, before the California State Floral Society.]

The increasing of plants from seeds, cuttings, layers and grafting has been practiced as long as we have a history. At this season of the year, seeds of nearly all varieties of plants can be sown to the best advantage, cuttings and layers can be made, and, as no lover of flowers ever has pets enough of some kind, all are interested in some sort of propagating. Growing plants from seed is one of the most common ways, though many people, myself included, do not always succeed. In reading over one of the latest books published on this subject, some hints given seemed worth trying. After providing shallow boxes with cracks or holes bored in them to allow drainage, a layer of broken pots or stones was used, and over this another layer of moss before putting the earth in. This moss is to help keep the soil moist without such frequent waterings as are usually required.

The soil should be light, and not one that will bake or crack. Ordinary garden soil, with as much more clean sand added, will usually answer. Sand enough should be used, so that when a handful is taken up when moist and pressed, closely in the hand, it will fall apart readily when released, and not form a ball. Sift carefully to remove all lumps, then fill the boxes nearly full, and sow the seeds evenly over the surface, sifting over them enough more soil to just cover them. Water carefully and keep away from direct sunlight, or even in the dark, to prevent evaporation. Water when required. The principle difficulty seems to be to regulate the moisture, and to meet this, two flower pots are sometimes used. A pot of four or five inches is filled like the boxes and placed inside one at least an inch larger, the space between being filled with moss, and the moss only watered. Enough moisture is supplied through the sides of the inner pot to keep the soil in good condition.

The opposite extreme of too much water must be avoided, and as soon as the plants have their second leaves, they should be transplanted to other boxes, prepared in the same way. Very fine seed should be simply pressed into the ground and not covered. For this purpose, a pane of glass or smooth board will do. Two pots are also used for growing soft-wood-cuttings, but in this case, the outer one has clean sand, and the smaller one is placed inside and filled with water, the hole in the bottom being first stopped with plaster of Paris or a cork. Such a contrivance would be very easy to manage, and would answer most of us very well for rooting heliotrope, pelargoniums, geraniums and nearly any soft-wood-plant.

For hard-wood-cuttings of shrubs, roses, or other plants, use wood of the last season's growth that has ripened. Older wood will grow, but will not make so good a plant. Cut off square, leaving as little exposed surface as possible, and about five or six inches long. When convenient, plant where they are to remain, otherwise make a cutting bed of sand and put them in until rooted. Press the soil firmly around them. A California writer advises planting four or five slips or cuttings of any desired shrub or vine where the plant is wanted, and says his experience is, "they like company," and most of them are almost sure to grow. The surplus plants, if any, can be transplanted. Many plants not usually grown from cuttings will take root when the conditions are favorable, and it is a good plan to try them anyway.

One gentleman tells me he can grow anything he has ever tried from cuttings. His way is to make a hole about an inch in diameter and four or five inches deep with a dibber or sharp-pointed stick. This he fills partly with sand, then puts the cutting in, fills the space around it with more sand, packing it firmly with another stick and a mallet. Of course, it would not do to pack soil in this way. From our own experience I know that one of the most important items of success with hard-wood-cuttings is to have them so firmly planted that no air can get to the bottom. From the book, mentioned before, came another hint in regard to growing obstinate cuttings. They are made in the usual way and buried wrong end up, being covered with two or three inches of earth. In this manner bottom heat is supplied, root action hastened and the tops are kept entirely dormant. We intend trying this plan rooting Baroness Rothschild, Mabel Morrison, Mad. Gabriel Luizet and several other varieties of roses that are, to say the least, troublesome in the usual way.

Another way to deal with this class of roses is to root-graft them. Make a whip-graft taking care that the bark joins nicely and tie firmly with a cotton string. By the time a callous has formed and the parts have grown together, the string will rot off. A piece of root three inches long is about right. Treat afterward like cuttings.

Layering is one of the surest and easiest ways of increasing one's stock. It is usually done by taking a long shoot and bending it to the ground. A slanting cut is made about half through the shoot from the top, and it is then bent a little to one side and pruned down to the ground. A piece of wire can be bent like a hairpin to fasten it in place. The lovely asparagus plumosus nanus, or climbing asparagus, can be grown in this way, but takes time.

Budding can be done whenever the bark will slip or lift readily. Make a straight cut lengthwise of about an inch. Across the top make another at right angles with the first and carefully loosen and raise the bark. Then cut a leaf bud from the variety you wish to propagate, and, after removing any wood that may remain on it, slip the bud under the bark of the stock. Cut off the top of the bud so that the bark of bud and stock will join and tie firmly. In about two weeks, or when the bud shows signs of growth, cut the string on the opposite side from the bud. The top of the stock can be cut off or bent over, leaving two or more eyes to help draw up the sap and nourish the new bud.

Pruning Roses.

The pruning of tea roses should be attended to now. Nearly all of the tea roses can be grown on their own roots in standard or tree form by selecting a strong, vigorous shoot and not allowing any others to grow. Whether grown in this form, or as a bush, they usually need thinning out. Take out the fine, small wood, leaving the strongest and best branches. Many kinds will not bear cutting back much. Such varieties as Mad. de Watteville, Niphetos, Coquette de Lyon, Homer, Cels multiflora and many others will give lovely flowers if the fine wood is removed, but are almost worthless if not properly cared for. Their disposition seems to be to give branches instead of flowers, or else too many buds are formed, and only by cutting them off can we get perfect blossoms. Roses of stronger growth can be cut back, but all should be thinned enough to allow the air and sunshine to get through. Most of the Noisette roses are particularly sensitive about being pruned, and Cloth of Gold, Gloire de Dijon, Marechal Niel will never bloom so well as when left entirely to themselves. If they must be pruned, do it after their spring blossoming.

Cyclones in California and Elsewhere.

Cyclones of grand dimensions are frequently generated in the zones where the trade wind of the opposite hemisphere penetrates. They are caused by an augmentation or swelling in volume of air, proceeding from the opposite hemisphere, attending unequal distribution of the normal limits of the atmospheric circulation, and determined by the retardation which the trade wind or monsoon meets with in following the sun's movement.

The recent little touch of a cyclone in this city by which a house was demolished and two unfortunate lives lost, brings to the mind of the writer an incident which is said to have occurred near that same locality something over 40 years ago, and before the discovery of gold at Sutter's mill.

An American ship was riding at anchor off the Presidio, over which, at the time, the Mexican flag was flying. One morning, as a gentleman—a passenger—was standing upon the quarter deck, he was surprised by a sudden atmospheric disturbance which originated but a short distance from the ship and upon the water. It took the form of a tornado, or whirlwind, and commenced a movement landward, with a violent whirling motion, and struck the land just west of the Presidio, increasing every instant in violence, until it passed on and over the high ground near what is now Lone Mountain. In its passage, it actually tore up the surface of the ground, filling the air with sand and brush.

The circumstance was first made public by the observer, on a second visit to this State about 15 years ago, through a letter published in one of the city dailies. That letter came under the notice of the writer of this paragraph, who clipped and filed it away. The narrator expressed the opinion that if this city had been built up at the time, as it was at the time of his second visit, not a house could have stood in its track of a hundred feet or so in width.

This incident, and others of a similar character, which have occurred in several localities on this coast within the last 20 years, should be a reminder that California is not altogether exempt from those terrible atmospheric disturbances which occasionally work such havoc to life and property in our Eastern States. One of these California tornadoes occurred near the city of Nevada some 15 or 20 years ago, and passed for some three miles or more through a dense forest. As we now recollect the account, it twisted huge trees as though they had been mere saplings, tearing others up by the roots and making a clean path through the forest, something like a hundred feet in width. Judging from its destructive work, as no human eye saw it, no Kansas or Dakota cyclone ever reached greater violence or destructiveness.

PHOTOGRAPHS, IN COLORS, OF TINTED WINDOWS.—It is said that a Swiss doctor has succeeded, after a long series of experiments, in obtaining photographs of tinted windows in their original colors. His photographs contain red, violet, yellow, green and white. They were sent to Dusseldorf, after passing from hand to hand on the way, and the photographic journals speak favorably of their retention of the colors. These samples were taken in 20 seconds by the midday sun.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

EXPECTED LARGE GRAIN CROPS.—Oroville *Register:* Butte this year ought to have the greatest grain crop it has ever known, for the grain has been planted early, there is an unusual acreage seeded this season, the rains have been timely and owing to the high price that is certain to prevail, every acre that will pay to cut will be harvested for grain, so we look to see a very large crop, if the spring and early summer are favorable.

Fresno.

WHEAT STATISTICS.—Fresno *Republican*: The acreage in wheat in Fresno county in 1891 aggregated about 400,000 acres. The average yield was about nine bushels to the acre, being an off year, or 3,600,000 bushels. This was sold at an average price of 96 cents a bushel, or $1.60 a cental, though prices have been ruling 15 per cent higher later in the season. This wheat was not all shipped. Only 2,557,305 bushels have gone to the market, according to the report of the railroad company. The mills of the county manufactured into flour for home consumption 450,000 bushels of wheat and exported nearly 7,000,000 pounds, or about 12,000 bushels. This would leave about 500,000 bushels on hand in the county. The splendid rains which have just fallen augur well for the wheat farmers next year, and there will be a considerable increase in the acreage. If is quite safe to say that 440,000 acres will be in wheat. This county raises also, much volunteer wheat. There are in this office specimens of third crop wheat from a ranch which yielded 20 bushels the first year, 16 bushels the second and 12 bushels the third year after sowing. The last two crops were raised without any expense to the grower, and each year the stubble affords an income in the way of pasturage for sheep and other stock.

Kern.

LARGE RABBIT DRIVE.—*Echo:* The rabbit drive on New Year's day was a pronounced success, 2363 dead jacks evidencing the prowess of the mighty hunters of Bakersfield and Rosedale combined.

FRUIT ACREAGE.—Bakersfield *Echo:* It is doubtful if any part of the State can show so large a proportionate increase in the area of fruit trees and vines set out within a year as in Kern county. The acreage planted and variety before 1891, and in 1891, are as follows:

VARIETY	BEFORE 1891.	IN 1891.
Almond	71	4
Apple	44	50
Apricot	2	115
Cherry	4	6
Fig	116	246
Orange	30	4
Peach	161	327
Pear	4	140
Prune	25	221
Walnut	35	22
Grape	1,360	1,965
Assorted Fruit	137	140
Totals	1,989	3,240
Planted before 1891		1,989
Grand Total		5,229

Los Angeles

TREE PLANTING.—Los Angeles *Express:* The past year has been a notable one for tree-planting in this county. The figures are interesting. Commissioner Scott has received returns from a number of points. The estimates are made by men who have gone over the ground and know what they figure on. Pomona is credited with 3000 acres, as follows: Orange trees 1250, lemon 250, prune 1000, apricot 300, peach 200. At Fruitland 3500 trees were set out—walnut 500, citrus 1000 and deciduous 2000. Vernon set out 5000 trees as follows: Citrus 2000, balance in deciduous. At Rivera the number of trees set out were as follows: Orange 24,000, lemon 800, walnut 2000, olive 500, plum and prune 1100, other trees 1200. At Burbank the trees planted are as follows: Apricot 18,000. prune 13,000, walnut 17,500, peach 1200, fig 4000, apple 8500, pear 12,000, orange and lemon 5000, olive 2000. At Azusa the following trees were set out: Orange 43 682, lemon 8405, prune 9944, peach 6669, apricot 750; walnut 300, fig 200. At San Fernando 90 acres were set out to citrus trees and 400 to deciduous trees. Glendale is credited to the following trees: Orange 6000, lemon 1500, walnut 5000, fig 1700, olive 700, peach 16,000, prune 1000, Kelsey plum 1200, apricot 1500, apple 300, pear 400. Monrovia set out 230 acres to orange and 70 acres to deciduous trees. Pasadena 250 acres—orange 100, lemon 50, deciduous 100. Sierra Madre acreage is divided as follows: orange trees 44 acres, lemon 22 acres, olive 1½ acres, other fruits 10 acres. Duarte's acreage is divided thus: Orange trees 60, lemon 30, deciduous 50 olive 2.

THE ORANGE CROP.—*Express.* Jan. 4: Reports to the weather bureau indicate that the late cold weather was more severe and more protracted than any before recorded in this section of the State. But the injurious effects were confined almost entirely to certain belts or localities. In some places—as, for example, the hill district of the city of Los Angeles—even tender flowers escaped unhurt, while on the low lands there was general havoc among the comparatively hardy geraniums and other plants. The high lands, as a rule, are much more free from frost than those of valleys and plains, the cold air flowing downward, as water would, to the lower levels and depressions between the hills. Some of the orange-producing districts suffered scarcely any loss of crop from the late cold snap, while in others there is a material reduction in the estimates for the present season. The *Citrograph* has cut down its estimates of the total orange crop to 3200 carloads. Early in the season the general estimate was that the shipment would exceed 5000 carloads.

UTILIZING CULLS.—S. F. *Call:* Dr. S. C. Woodbridge, of Los Angeles, has had in operation at Los Angeles during the past year a manufactory which is proving to be an important adjunct to citrus culture in Southern California—the extraction of the essential oils from these fruits. Wind-storms, frosts and accidents in picking and packing oranges and lemons reduce to the grade of culls a large portion of the annual product. For a long time there was no demand for fruit thus damaged, and for the lack of a market the orchardists were accustomed to bury the culls in the ground, using them as fertilizers. The establishment of the citrus essence factory opened an avenue for the sale of inferior fruit, at prices, which, though small, paid better than the burial process. The plant of the factory has a daily consumption of 5000 oranges or lemons. The latter are used in greater quantities than the former, lemon oil being in greater demand by druggists and grocers than any other essence. The essential oil is obtained by a process of distillation, and is taken only from the rind. Dr. Woodbridge is now securing pressing machinery, which will give better and quicker results, and a larger daily consumption of fruit than by the process now in vogue, will also result.

FRUIT PEST QUARANTINE.—L. A. *Times:* The regulations for the exclusion of diseased and infected nursery stock, are being rigorously enforced in the upper counties of this State. During the last week or two, consignments of young trees thus affected, to the value of $5000 have been seized and condemned. At Auburn a carload which was found to harbor several diseases new to this coast, went by the board, and the consignor or consignee lost $2000 thereby. At Mountain Vineyard 12 cases were inspected and found to contain the Eastern curculio, so deadly to plums and prunes. Two carloads of trees quarantined at San Jose have since been condemned. While Eastern nurserymen may think the California policy rather heroic and perhaps unjust, there is no doubt it is the only measure of self-protection left for our large fruit interests. The State at large will lose nothing by excluding the foreign stock. We already have about every variety of temperate and subtropical fruit that is known, and it is only a question of a little time to propagate at home all the nursery stock required. In this way we are reasonably secure against introducing new parasites and new diseases, while our attention may be directed toward exterminating those already here. The chances of wholesale losses to fruit growers from new enemies before we arrive at a proper understanding of them are too great to be tampered with. A consensus of opinion of those most interested would sustain the most rigorous quarantine measures,

SUCCESS IN FIG PACKING.—Pomona *Times:* C. A. Loud has successfully packed his figs this year. Others have done so. There are numerous reports of profits in figs. The difficulty in making money out of figs has been much the same as in lemons, that is, not handling them properly. In both cases our people have mastered all the points necessary to success, and the fig orchards will hereafter be sources of profit.

Mendocino.

WALKER VALLEY.—Ukiah *Republic:* Nestled in the mountains about the center of the county, lies Walker Valley, truly a beauty spot in nature. No painter's brush or writer's pen can justly picture this little vale. A beautiful valley of several hundred acres of rich land, with thriving orchards and smiling fields of alfalfa and other crops, with the green hills stretching away on every side, it is the picture of contentment and quiet beauty. Along through its center meanders Walker creek, a branch of Russian river. The valley, with some fifteen or sixteen thousand acres about it, was formerly the property of Rancho Angle, and now belongs to his estate. The soil is very productive and produces abundant crops of all kinds of cereals, alfalfa, vegetables and fruits. It has some of the finest apple orchards in the county.

Orange.

COLD WEATHER AND RED SCALE.—*Anaheim Gazette:* It is said that the recent cold snap played havoc with the red scale. We saw a cluster of seedlings last week that were perfectly clean and bright, without a sign of scale on them, from an orchard that before the cold snap had been considered badly infested with the bugs. The frost had killed them and the subsequent rain had washed them off. The orchard is said to have been entirely ridden of its scale by the frost.

San Bernardino.

HIGHLAND FOR FRUIT.—S. B. *Times-Index:* Something like three thousand acres of land in Highland has been planted to orchards, principally orange and lemon. Nothing can be found anywhere surpassing the beauty and productiveness of the orchards of Highland. About 1000 acres of new orchards were planted last season, and the annual growth is steady and promises to continue for many years. Several hundred thousand dollars have been expended in building cement ditches for the distribution of water for irrigating and domestic purposes, and not a year passes without additions being made to the water system by the enterprising people.

A PINEAPPLE RANCH.—Mentone Cor. Pomona *Times:* Hon. C. F. Bicknell has sold his fine 16-acre ranch at Mentone to Mr. W. Scott Way, of San Jose. The place has a large variety of fruits growing upon it, and is in a fine state of cultivation. Mr. Way intends to engage extensively in the culture of pineapples. He has selected Mentone as the place which from his experience he believes will be best suited to his enterprise, and is confident that this fruit can be grown here successfully. He will also make experiments in growing other kinds of tropic and semitropic fruits that have not yet been grown in South California.

INJURY BY FROST EXAGGERATED.—Telegram to S. F. *Examiner*, Jan. 12: F. M. Keach, an orange expert, returned from a three days' visit to Pomona, Riverside, Colton and Santa Ana, where he made thorough inspections of the orange orchards with a view to determining the extent of damage by the recent frost. "The thermometer," he says, "went below 32 degrees in a number of places, and on the whole, the weather was colder than on the famous cold spell of 1886. That came, however, in November and December, at which time the juice had not gone into the orange, The frame and the pulp were there, but the juice was not in the meat, and the essential oil had not permeated the rind. The frost affected the little stem and prevented the juice from getting into the orange, and for that reason the fruit remained juiceless and cottony. The recent cold spell, coming as it did at Christmas time, was too late to shut off the juice and oil which had already filled the orange, and that this fact will result in showing that no damage has been done appears to be a reasonable idea, and it is a fact that so far the fruit shows no indication of being frozen. One thing is known and that is that after the orange has filled with juice and the essential oils are in the rind, it requires a lower tempature than 18 degrees to freeze the fruit."

SUGAR BEETS.—Interview with E. F. Dyer in L. A. *Herald:* I have been through the Cahuenga valley and took a good look at the land. The soil there is of a light, loamy nature; just what the beet requires. The land is much better than that of the majority of the beet-growing districts for the reason that the soil is of greater depth. The sugar beet could be cultivated to the highest degree on such soil, and the mildness of the climate gives the advantage of long seasons. I have been in France and Germany and studied their methods thoroughly. The industry sprang up in France, where it was fostered by Napoleon III, and extended from there to Germany. The excise laws in the latter country being more favorable to the industry, it grew to greater proportions than in France. In the countries I mentioned, they have to get the beets in the ground in about six weeks, and have about the same length of time to dig them after maturity. At Lehi, which is near Salt Lake City, where we have just completed a factory, the planting must be done in about thirty days. In this country the farmer can plant at any season of the year, and he need not hurry about taking the crop out. The factory at Alvarado, which was built by us and in which we are large stockholders was the first one in this country that operated in a satisfactory manner. Since it began running the price of land increased very materially, and is now worth from $300 to $400 per acre. Land close to the factory cannot be had for less than $400 per acre. There are now nearly 2000 acres under cultivation, and many owners rent their property at from $20 to $50 per acre. The average production is about twenty tons per acre. That means 4000 pounds of sugar. In Germany they figure it at twelve to fifteen tons per acre, but in this State there is no reason why the average should not be twenty tons and over. The sugar beet will grow with less moisture than any other crop. The plant has a tap root that goes down about six feet and finds moisture. The loose soil is therefore advantageous. The land surrounding the Lehi factory is dry and arid, and every acre must be irrigated. There is an idea that the beet is exhaustive to the soil. If properly cultivated it is not so. Most of the mineral constituents of the soil taken up by the beet are in the crown and the leaves, When the crop is out these are left on the ground, and the mineral matter is therefore returned. The saccharine matter in a beet varies from 12 to 20 per cent. Beets of 14 per cent sugar, native purity, will give a yield of 10 per cent white sugar. This can be produced where fuel can be had at a reasonable price at from 3½ to 4 cents per pound. My visit is primarily for the purpose of starting a factory. I desire to see just what the opportunity is. Our attention was called to this section, principally by newspaper articles regarding the meetings which have been held."

San Diego.

ACREAGE IN GRAIN LAST YEAR.—*San Diegan:* During the year 1891, crops were reaped from the following acreage: Wheat, 26 038; oats, 5109; barley, 41,086; hay cut, 18,762; corn, 2635. The estimated crop of the season is 1,000,000 sacks of grain, as against 750,000 last season.

HORTICULTURAL STATISTICS.—*San Diegan:* The acres of bearing grapes were as follows: Table, 679; raisins, 4702; wine, 1022. The crop of raisins for 1891 was 200 carloads, as against 150 in 1890. Fruit Inspector Jones, in the course of his duties, has begun the taking of a thorough tree census of the county. From the figures at hand, and careful estimates, he places the total number of fruit trees in the county, as planted in orchard form, at 1,800,000—an increase over the Assessor's figures of 738,000. The Fruit Inspector further reports, from the actual figures furnished him by his assistants, an addition of 1,000,000 orange trees one year old and over, but still standing in nursery rows. The number still in the seed bed is estimated at from three to five millions. Grand total of trees as returned by Assessor, 1,062,745; total reported by Fruit Inspector, 1,800,000. The orange crop of the county last year was 68 carloads. A conservative estimate of this season's crop is 150 carloads.

San Luis Obispo.

A LARGE GRAIN GROWER.—Santa Maria *Times*: William Smith is managing over 1200 acres this year and will seed it all to wheat and barley. He has for many years farmed a portion of the Keifer tract but this year he obtained a lease for a portion of the Suey valley land which has been resting from grain for the past three years and should bring an extra yield this year. He will also farm the Miller place west of town and his home place of 160 acres three miles to the southeast where he has lived since 1875. He has never claimed to be anything but a grain farmer, still he was one of the first to plant fruit trees in this valley and has for many years produced the prize apples of his neighborhood. He also has a young prune orchard just coming into bearing.

Solano.

HOW THE LEVEE WAS BUILT.—Barnhardt Cor. Dixon *Tribune:* The ranch now has one of the best levee systems in the State. It is 11 miles in length. It is 14 feet in height and correspondingly broad. A level was run from the mound on which the buildings stand, and which is the highest point on the ranch, to the east levee, which is supposed to be the lowest point, and the levee was found to be two and a half feet higher than the top of the mound. I have heard some criticisms from the old school farmers on our methods of leveeing, saying that levees built entirely with the Chicago grader would never stand the wash of the waves. They are correct in the last statement but if they would investigate the system thoroughly they would see the error that they, in common with those who have given leveeing and drainage more study, have fallen into. Our levees are built up to the height of about five and a half feet with the scrapers. After this, earth is thrown up with the grader, and a team attached to a heavy harrow driven along the levees. Another layer is piled on with the grader and is again harrowed. This process is continued until the embankment reaches a height of 14 feet. I claim that a levee constructed in this manner is as near perfect as possible and will withstand any ordinary flood as well as the choppy waves caused by high winds on the body of water in the tule basin.

Sutter.

PLANTING ANOTHER ORCHARD.—Yuba City *Farmer:* C. N. Tharsing has rented from M. Marcuse 83 acres of land known as the Schutz place, north of the White House in this county, and lying along the river. The lease is for eight years. Part of the land is not cleared, but Mr. Tharsing will remove the trees and brush from the same and plant the entire farm to fruit.

INCREASED TREE-PLANTING.—*Farmer:* The tree-planting season will soon begin, and from the low prices received last season for fruit, one would be led to believe that there would be somewhat of a halt called in the planting of more trees and vines. This is not the case here, at least, as there will be a large acreage set out this winter. There is hardly a nursery in the county but what has the greater portion of the stock engaged, and as there are several extensive ones here, it represents no small showing as to the amount to be planted. Many of the large fruit growers will extend their orchards, and others will start in this year by planting extensively. They have full confidence in the future of the fruit industry, especially that fruit produced or to be produced here. Our fruits stand in the foremost ranks in excellency, and the question of overproduction cannot out any figure in the case. The vigorous manner in which the people are now taking hold of the pest question and the active measures being instituted to prevent the spread of diseases, injurious to the fruit industry, has given the growers encouragement and they know now that their business is fully under the protection of the law in regard to such matters. More care is being exercised each year in the selection of varieties, preparation of soil, etc., which more fully insures the grower in his work against loss, and in the end lessens the expense largely. Our horticultural interest will show a large increase in the coming 12 months.

Tulare.

TO PRESERVE FRUIT.—Visalia *Times:* As the time for the opening of the World's Fair is not so very far off, it would be well for parties wishing to exhibit fruits or vegetables preserved to make the necessary preparations this year. Special care should be taken to use the proper liquid, so that the fruit will not spoil, as it did in some of the jars exhibited by Tulare county fruit growers at the State Board of Trade exhibit in San Francisco. I. H. Thomas,

the Visalia fruit man, is now experimenting with a preserving fluid, the invention of Prof. Wickersheimer of the University of Berlin, Germany. The German Government, for a valuable consideration, induced the Professor to abandon his patent and has made public a description of the process. The following is a correct recipe: In 3000 grammes of boiling water are dissolved 100 grammes of alum, 25 grammes of cooking salt, 12 grammes of saltpeter, 60 grammes of potash, and 10 grammes of arsenic acid. When cool it is filtered. To 10 litres of this liquid 4 litres of glycerine and 1 litre of methylic alcohol are added.

Ventura.

FINE FOWLS.—Ventura *Free Press:* Chas. Sewell has received a trio of white Indian games which are the best table fowls yet produced. They are imported from England and have only been out some three or four years. About seven years ago the breeder received a trio from India and found them so fine that a great many were bred.

Yolo.

TULE FARMING.—Tule farmer in Woodland *Mail:* There is more tule land in cultivation this winter than I have ever known of before in one year, and we only ask for a few moderate rains. Then, if prices remain as good as they are now, some of us fellows who have been struggling along so many years in poverty and ridicule, will be on our feet again in first-class shape. I don't believe we are going to have a very heavy rainfall this winter. The indications, as I read them, are good for enough to insure a good crop on the high lands, and that means all the water we need in the tule region. To tell you the truth, a whole lot of us fellows have got to raise a crop this year or we will go busted; but just give us the right kind of a season and you will see the liveliest times around here that you have seen for many a day.

FAVORABLE OUTLOOK.—Woodland *Democrat:* Farmers who have been in Woodland inform us that the effect of the late warm and gentle rains has been to sprout summer-fallowed grain and start it on a healthy growth. There has been less rotting of seed in the ground than usual, and in nearly every instance a good stand is assured. The farmers are well satisfied with the prospects. If the January rains fulfill the Signal Service predictions, there is but little doubt that the spring showers will mature one of the largest crops ever harvested in Yolo county.

FARMERS SAFE FROM FLOODS.—Woodland *Democrat:* Civil Engineer M. A. Nurse, who has charge of the construction of the new levee in Reclamation District No. 539, says that about 8½ miles of the levee has been completed, and the farmers are now safe from the floods. The new levee is 12 feet in width on top, has a three to one slope on each side, and is 29 feet high, which is 2 feet above the high-water mark. The entire levee will be completed by March 1st, and a large tract of fine land reclaimed. The farmers embraced in the district will pay an assessment of $12.50 per acre on all lands in the district, which will aggregate $40,000. The value of the land has been increased by reason of the levee from $40 to $100 per acre.

Yuba.

HOP NOTES.—Wheatland *Four Corners:* John Logan of Brownsville is delivering several carloads of trellis poles. The Rodden Brothers are planting about 20 acres of new hops and are putting up a new trellis on 60 acres. All the Bear river hops have been shipped, and all but a few carloads which Durst has in London have been sold. The last of the Rodden Brothers' crop was sold about Christmas day, and the last lo of Wood's consisting of 270 bales, was sold to Mebius & Drescher this week. The prices received for the last sales have been very good, ranging from 18 to 20 cents. Wheatland is rapidly being spoken of as a hop country. Mendocino, Russian river and Sacramento are synonyms for hop culture. Wheatland has produced a good hop for over seven years, but the other localities named have produced the hop many years more. It is but of late years that our growers made any effort to excel, and they have succeeded so well that Bear river hops command the attention of the buyers. We predict that in a few years it will be the Bear river hops first, Sonoma next and others following.

NEVADA.

LARGE CREAMERIES.—Reno *Journal:* Articles of incorporation have been filed for the establishment of three creameries in Mason Valley. The largest will be located at Greenfield. The milk of 6000 cows will be used daily in the manufacture of cheese and butter. The hay crop of Mason Valley has heretofore been largely in excess of the demand for it, and this excess will hereafter be fed to the Creamery Co.'s stock.

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The Most Terrible Volcanic Eruption on Record.

[By PROF. GRANVILLE F. FOSTER.]

Before the year 1883 physical geographers in speaking of the most disastrous volcanic eruption on record, referred first, in point of time, to the celebrated eruption of Vesuvius, in A. D. 79, when the cities of Herculaneum, Pompeii and several smaller towns on the slope of the mountain were destroyed by lava or buried under a mass of pumice stones and ashes; second to that of Hecla and Skaptar Jokull, contiguous mountains in Iceland, in 1783, when two enormous lava streams, one fifteen miles wide and over 100 feet deep and the other scarcely inferior, flowed, the first, fifty miles and the other forty, till they reached the sea, pouring a flood of white hot lava into the ocean, destroying everything in their paths and killing in the waters of the ocean the fish, the mainstay of the inhabitants, who were reduced by the disaster, directly or indirectly, to less than five-sixths of their former strength, and third to that of Galungung, in 1822, which devastated such an immense area in Java, but all the eruptions known besides were as mere child's play to the terrible one of Krakatoa in 1883.

If the reader will examine the map of the East Indies he will find represented in the straits of Sunda, which lie between Sumatra and Java, the little island of Krakatoa. In maps made before 1883 he will hunt in vain for the name, for like Bull Run before 1861 it was then unknown to fame, though navigators who passed through the straits knew it as a beautiful tropical isle, with an extinct volcanic cone in the centre. In the beginning of 1883, however, the little well-behaved island showed symptoms of wrath that boded no good to the larger islands in the vicinity. Noted for the fine fruits with which it abounded, it was a famous picnic ground for towns and cities even a hundred miles away, and when the subterranean rumblings and mutterings of wrath became conspicuous the people of the capital of Java, Batavia, put a steamboat into requisition and visited the island in large numbers. For a time the island was constantly in a slight tremor, and the subterranean roar was like the continued, but distant mutterings of thunder, but the crisis was reached August 23rd, at 10 o'clock, A. M. It was a beautiful Sunday morning and the waters of the straits of Sunda were like that sea of glass, as clear as crystal, of which John in his apocalyptic vision speaks. The beauty that morning was enhanced by the extraordinary transparency of the tropical air, for distant mountain ranges seemed so near that it seemed possible to strike them with a stone cast from the hand. Only the mysterious rumblings and mutterings of the pent up forces beneath the island, disturbed the breathless calm and silence that lay on nature—the calm before the terrible storm—the mightiest, the most awful on record! It burst forth! Sudden night snatched away day from the eyes of the terrified beholders on the mainland, but the vivid play of lightnings around the ascending column of dust penetrated even the deep obscurity to a distance of eighty miles. This awful darkness stretched within a circle whose diameter was 400 miles, while more or less darkness reigned within a circle with a diameter three times as great. Within this latter area dust fell like snow from the sky, breaking off limbs of trees by its weight miles distant, while in Batavia, 100 miles away from the scene of the disaster, it fell to the depth of several inches. The explosions were so loud as to be distinctly heard in Hindostan, 1800 miles away, and at Batavia, the sound was like the constant roar of cannon in a field of battle. Finally the whole island was blown to pieces and now came the most awful contest of nature—a battle of death between Neptune and Vulcan—the sea poured down into the chasm millions of tons only to be at first converted into vapor by the millions of tons of seething white-hot lava beneath. Over the shores thirty miles away, waves over one hundred feet high rolled with such a fury that everything, even to a part of the bedrock, was swept away. Blocks of stone of 50 tons weight were carried two miles inland. On the Sumatra side of the straits a large vessel was carried three miles inland. The wave, of course growing less in intensity, traveled across the whole Indian Ocean, 5000 miles, to the Cape of Good Hope and around it into the Atlantic. The waves in the atmosphere traveled around the globe three times at the rate of 700 miles per hour. The dust from the volcano was carried up into the atmosphere fully twenty miles and the finest of it was distributed through the whole body of air. The reader doubtless remembers the beautiful reddish or purple glow at sunrise and sunset for fully six months after August 1883—that glow was caused by volcanic dust in the atmosphere interfering with the passage of the sun's rays of the upper part of the solar spectrum, more manifest at sun-rising and setting than at other times during the day, because at these periods the sun's rays have to travel obliquely through the atmosphere and consequently penetrating a very deep layer, were deprived of all their colors except the red.

The loss of life was appalling. The last sight on earth to 35,000 people was that of the awful eruption. Engulfed in the ocean or covered with heaps of ashes, a few hours after the eruption commenced the awful work was done, and that vast multitude had vanished from off the face of the earth. The fact that in the neighborhood of the mountain there was a sparse population accounts for there not being even a far greater loss of life.

Notwithstanding the awfulness of volcanic and earthquake phenomena, there is some silver lining to the dark clouds. They prove that the earth is yet a *living* planet. Centuries must pass away before it will become like the moon—a dead planet—without water, air or life. Our satellite is a prophecy indeed of what the earth must eventually become when all its life forces, its internal energies, are dissipated into space.

Antioch, Cal., Jan. 4, 1892.

Fast Railroad Trains.

London *Engineer*, in commenting on the performance of the fast train on the New York Central road, says: Taking the American run as a whole, it constitutes a distinct departure in railway work. Not the least remarkable feature about it is that it shows that it is possible to attain very high speeds with comparatively small coupled wheels. It by no means follows, however, that it is advisable to retain them for very fast trains. On the other hand, we believe that very high wheels are equally out of place if very long runs are to be made, because on such runs it is certain that more or less steep inclines will have to be surmounted. If the average speed of a train is to be about 50 to 55 miles an hour, then banks may be ascended at 40 miles an hour, or even less, and descended at 60 to 65 miles an hour.

But when an average speed of 60 miles an hour must be made, we cannot rely on descents to compensate for ascents, because enormous velocities would be required, and the cost and wear and tear would be out of all proportion to the advantage gained. The engine must, therefore, be competent to maintain a high speed when running uphill, and this is almost impossible if very high wheels are used, unless the cylinders are too large for the rest of the road

As these high-speed, long distance trains cannot be heavy, it appears to us that the best type of engine would be one with 18 inches cylinders, 26 inches stroke, 1400 square feet of heating surface, 20 square feet of grate, and single drivers carrying about 18 tons, and 6 feet 8 inches in diameter, provided with the sand-blast. Such an engine would be an admirable hill-climber, and would run about as fast as any locomotive made. When the runs are over comparatively level roads, then a big wheel, such as Mr. Stirling proposes, is no doubt good, because its use reduces wear and tear.

Whether any extremely fast running will be done in this country remains to be seen. Any speed that can be attained in the United States can, of course, be got here on our better roads; but it is more than questionable that these excessive speeds pay. Whether they do or not is really the whole question. The problem is not one for the locomotive superintendent, but for the general manager.

A Large Importation of Shropshire Sheep.

Mr. H. Mecham of Petaluma has just received a flock of 78 head of Shropshire sheep selected from the most noted families of England. They were personally selected by his son, who made an extended visit to England last summer, and under orders of Mr. Mecham, his father, selected from the most noted families, the best that could be bought, without regard to price.

Mr. Mecham has been a breeder and importer of fine blooded stock of sheep for over 20 years, and his success in this line has been without parallel in this State.

The prices paid for individual members of this flock would seem exorbitant to those unacquainted with the values placed on this new family of sheep. Mr. Mecham has found by experience that by the infusion of new blood and sagacious crossing, price was no object in comparison to results that followed judicious breeding. He therefore determined without regard to price, to select the best that could be bought in the known world; and it is sufficient to say that, after looking over the selection made by his son, he believes that he has the best flock of Shropshire sheep that ever crossed the Rocky mountains.

We have not been able to see this flock, but will take occasion to inspect them soon, and give a more detailed description of this very valuable importation to the sheep interests of California.

Skillman's Importation of Horses.

In last week's issue of the RURAL, we noticed the arrival of Mr. Skillman's latest importation of thoroughbred horses from England. This stock consists of five Suffolk Punch and two Shire stallions, all young horses. Four out of the seven head have taken first premiums in the Show Ring. Mr. Skillman has been a regular importer for the last ten years, and his large experience and knowledge of the best families in France and England has enabled him to bring into our State the best that could be had. It has been his policy to select from the best strains of blood without regard to price. Good judges have spoken very highly of his latest importation as one of the best ever made by him. Any one interested in this class of stock is cordially invited to make a visit to Reilly's Stables, Petaluma, and judge for themselves. Those who desire can have a catalogue sent on application. We will make a more extended notice of these grand young horses soon.

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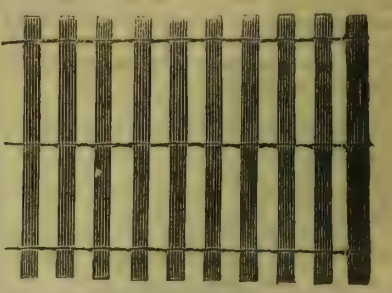
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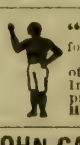
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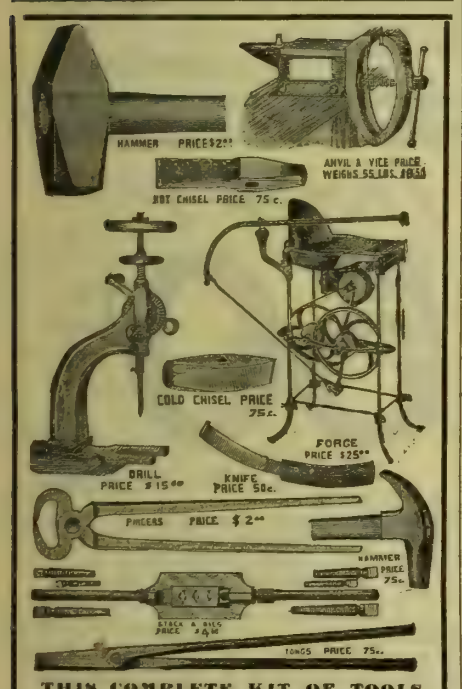
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— PATENT OWNERS OF —

NOBEL'S DYNAMITE, NOBEL'S EXPLOSIVE GELATINE, NOBEL'S GELATINE-DYNAMITE, AND THE JUDSON IMPROVED POWDER.

Best and Strongest Explosives in the World.

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The only Reliable and Efficient Powder for **Stump and Bank Blasting.** Railroad Contractors and Farmers use no other. **As others IMITATE our Giant Powder, so do they Judson, by manufacturing an inferior article.**

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The Giant Powder Co. having built Black Powder Works, with all the latest improvements, at Clipper Gap, Placer County, known as **THE CLIPPER MILLS**, offer this powder and guarantee it the best.

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CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

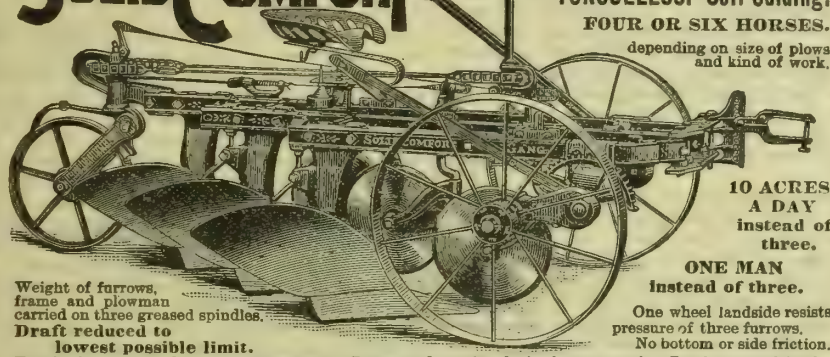
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Full Cargoes of Wheat furnished Shippers at short notice.

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TONGUELESS. Self Guiding.
FOUR OR SIX HORSES.
depending on size of plows and kind of work.



10 ACRES A DAY instead of three.

ONE MAN instead of three.

Weight of furrows, frame and plowman carried on three greased spindles.
Draft reduced to lowest possible limit.

One wheel landside resists pressure of three furrows. No bottom or side friction.

Foot brake prevents Gang running on team. Levers and turning device in easy reach. Can be turned in the length of itself. Easier Driving, LIGHTER DRAFT than any Gang in America. Adjustable STRAIGHTER Furrows, and frame—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut.

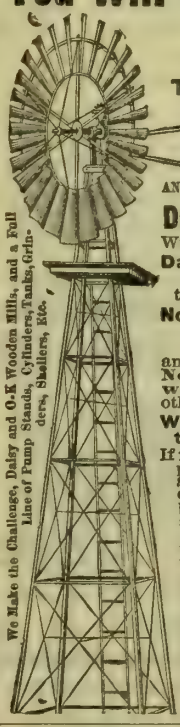
ECONOMIST PLOW CO., SOUTH BEND, INDIANA.

☞ Special prices and time for trial given on first orders from points where we have no agents. Our book, "FUN ON THE FARM," sent Free to all who mention this paper.

Be Happy While You Live, for

You Will Be A Long Time Dead

To Be Happy Buy a



DANDY STEEL MILL AND A **Dandy Steel Tower.**

With graphite boxes the **Dandy Wind Mill Requires No Oil for Years.** therefore **No More Climbing Towers No More Tilting Towers** to break down and injure you or your cattle. **Needs no attention** and is **warranted** to last longer than other mills that are oiled, and **Will Be Sent to Good Parties on 30 Days Test Trial** If not satisfactory freight will be paid both ways. The **Dandy Steel Tower** is a **Four Corner Tower**, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

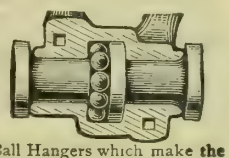
Challenge Wind Mill & Feed Mill Co.,
Batavia, Kane Co., Ill.



ASK YOUR GROCER FOR IT.

ENGRAVING—SUPERIOR WOOD AND Metal Engraving, Electrotyping and Stereotyping done at the office of this paper.

NOTICE THESE LITTLE BALLS!



They make the great Ball Hangers which make the

KEYSTONE DISC HARROW

The WONDER of all practical Farm People.

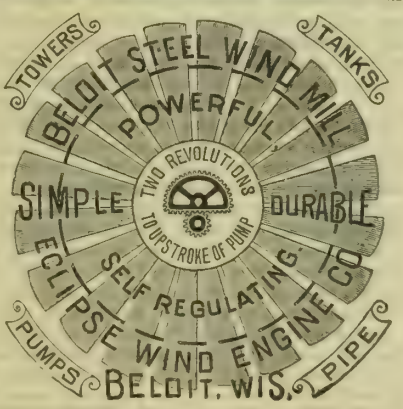
The same device which makes the Bicycle run easy, enables our Harrow to save one horse power in use, beside cost for repairs. It conquers toughest sod—fits uneven ground. *Examine it yourself.* Where time and horse-flesh are thought worth saving, the "Keystone" goes to stay.

Keystone Mfg. Co., Sterling, Ill.

BRANCHES: St. Louis, Mo. Kansas City, Mo. Council Bluffs, Ia. Columbus, Ohio.



Send for Harrow Book—"*The Reason Why*," Free.



WESLEY ROSE,

AGENT FOR THE BELOIT STEEL WINDMILL AND Manufacturer of the Rose Deep Well Pump. No. 1111 Ninth Street, SACRAMENTO, Cal. Catalogues Free.

DOUBLE Breech-Loader $7.99. RIFLES $2.00 PISTOLS 75c

GUNS

WATCHES, BICYCLES, &c.

All kinds cheaper than elsewhere. Before you buy, send stamp for Illustrated Catalogue to The Powell & Clement Co. 166 Main Street, Cincinnati, Ohio.

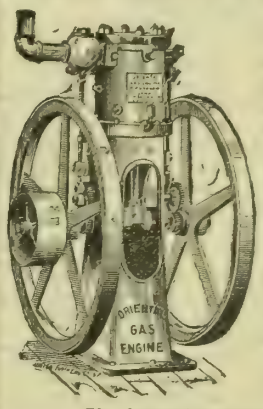
Sharples Improved CREAM SEPARATOR



Twenty per cent cheaper than any other Separator.
It is recommended by all commission houses.
Hepler & Johnson, Wm. Hatton and J. Warren Dutton have adopted it in preference to all rivals.
I now have on hand the small-sized Sharples Improved Separator and the Russian Steam Separator.
Second-hand De Lavals, good as new, for sale cheap.

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THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

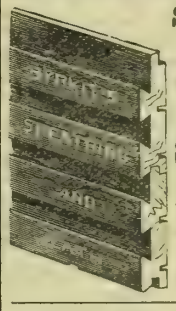
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Shingles, Posts, Pickets and Piling.



Manufacturer & Pacific Coast Agent of the Popular
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Sheathing Lath,
(PATENTED),
A valuable invention but recently used on this Coast. Send for Samples, Circulars, Price Lists, Etc.

42 Market Street,
ROOM 2, SAN FRANCISCO, CAL.

Malthine M'f'g Co.

FACTORY:

Cor. Jefferson & First Sts., Oakland, Cal.

MANUFACTURERS OF

ACID, ALKALINE AND WATER-PROOF PAINTS,

Superior to anything of the kind in the market for

IRON, WOOD AND TIN.

Unequaled for Submerged Timbers. Red and Brown Paints for Roofs, Warehouses, Stables, Fences, Etc., mixed Ready for Use. Also, Sheathing Paper, Portable California Mastic Roofing, the Best in the Market for

RANCH AND CITY.

AND UNEQUALED FOR

Teredo-Proof Pile Covering.

This Company also Manufactures a Malthine Compound for

RENDERING BOOTS AND SHOES WATERPROOF.

The same is a superior article for Preserving Harness rendering it Impervious to Moisture and keeping it always pliable and soft.

Send to Factory, Jefferson and First Streets, Oakland, for Samples and Prices.

WELL SUPPLIES

Mining, Wind & Steam Mach'y, Engines, Pumps

The American Well Works, Aurora, Ill.

11-13 S. CANAL ST., CHICAGO, ILL. Branch Houses
ELM STREET, DALLAS, TEXAS.

GOOD HEALTH.

Specks Before the Eyes.

Their Sudden Appearance—A Startling but Not Serious Affection.

People are often frightened almost out of their wits by the sudden appearance of flying specks before their eyes; sometimes they are only one or two, but often thousands of them can be seen, particularly when a person looks toward a white surface, as white clouds, white houses, white pavements, or toward water surface. These flying specks are mostly small points, connected one with another by fine lines, and the points often present a beaded appearance. At first, persons are likely to try to knock them away, thinking it is something before their eyes. They come usually in both eyes at the same time. They may diminish or increase in numbers at times, but rarely ever disappear entirely. They never interfere with vision by settling over objects looked at.

Dr. A. D. Williams explains, in the St. Louis *Medical Journal*, that the nature of the flying specks here described is not well understood, but badly focused eyes are most likely to be troubled with them. He says that they signify nothing serious so long as they are mere points connected with fine lines, and do not interfere with the acuteness of vision. Treatment is more than useless. If the eyes are out of focus, proper glasses should be selected. It is important that the patient should ignore their presence entirely; should avoid seeing them as much as possible and let them alone. Large floating masses before the eyes, which swim around and often obscure vision, are the result of serious disease, and should be promptly looked after.

CRIMINALITY AS A DISEASE.—"It is my opinion that the time will come when criminality will be recognized as an inherited disease and treated accordingly," said a man who has recently been studying this subject somewhat carefully from a medical standpoint. "Those persons who display in youth a tendency to commit crimes will then be placed in institutions very different in character from prisons, where they will be constantly watched and encouraged to employ their abilities in those kinds of labor for which they are best fitted. In this way society will be saved from the consequence of the vicious instincts of these people. In many cases careful treatment will doubtless cure criminals of their disease and enable them to return to the world and become useful citizens. In others, they will have to remain under surveillance during the whole of their lives. Of course, men and women not afflicted with vicious tendencies at birth will still be subject to temptations, and the law will be obliged to inflict penalties upon them for irregular proceedings; but the large class of inveterate lawbreakers will be recognized as irresponsible for their ill-behavior, just as people afflicted with hereditary diseases are never blamed for misdeeds.

CHANGE OF ACTION BETTER THAN REST.—As for the feeling that we need rest, rest, rest, it is often a fallacious one. It is action which makes muscle. The spirit of life enters into us when we take a vital part in to-day. Often we suffer from rest. A change of occupation is what we most need, as a rule, and the relief hours of an active person turn out to be very intelligent, says a contemporary. We must rest, but we must not lose our electricity, which the will, the thought can command at all times, and which ought to be on guard like an orderly, to summon us when we should become alert. Headaches evaporate if we must exert ourselves for those we love, or we almost forget the pain, which is the same thing; and ill-temper cannot flourish unless we have idleness in which to reflect upon the motes belonging to some one else. With energy leading the way, ennui lifts from the horizon, and we see color and distance again. There are women who labor day by day in hunger and despair. It seems as if others might labor in comfort and health, instead of sitting down to lassitude and sighs.—*Ex*

RUBBER FOOT FEVER.—If a man has a corn, says the *India Rubber World*, it can be removed, but if he is suffering from rubber foot fever, no chiropodist can help him, and the only thing to prescribe is liberal bathing of the feet and removal of the cause. Rubbers should only be worn to keep wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he had waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger and the cause of many more serious colds than they avert.

DISEASE FROM BIRDS.—One of the latest discoveries of the scientists is that the germs of yellow fever may be conveyed from tropical countries in the plumage of birds.

A NEW FIRE EXTINGUISHER is composed of a mixture of water and liquid carbonic acid gas, which, upon being discharged through pipes at high pressure, causes the rapid expansion of the gas, converting the mixture into a spray more or less frozen.

Robert Bonner's Start in Life.

"At the age of 15 I was an apprentice in the office of the Hartford Courant. The first year I received $25 and was advanced $10 a year during the five years I remained in the office. The paper was printed in the morning. There was a railroad between New York and New Haven (this was from 1839 to 1844), but there was no railroad between Hartford and New Haven. The type of the newspaper was set up the previous day for the morning's paper, leaving a space of four or five inches for a postscript in case somebody's barn burned down, or there was a meeting of the Common Council. During the evening the editor would write up a few paragraphs to fill this space. Two men were in the habit of getting at the office in the morning at 4 o'clock, setting up this matter, and, at 5 o'clock, they would put the paper to press and work off the edition. These men were paid a Yankee shilling (16⅔ cents) an hour. They arrived at the office at 4 o'clock in the morning and worked extra time until seven.

"As a boy, that was the only opportunity I had to get overwork. I was rather ambitious and I would get up early and go to the office in the morning. I was not paid anything for it, but I wanted to see the men work at the press and so get some knowledge of the presswork.

"One of the men would say to me: Wont you go and get a pail of water?' I would answer: Yes, I will get a pail of water for you if you will show me how to lock up a form.' 'Robert will you wash that roller for me?' 'Yes, if you will show me how to feed the press.'

"When I was quite young I read two lines written by Ralph Waldo Emerson, and I can say that they have had their effect on my character all through life: 'Oh, discontented man, whatever you want pay the price and take it.' (He, of course, referred to virtue and character more than to dollars.) I wanted to get a knowledge of the printing business, and I was willing to pay a price for the information. I would wash the roller for one, and for another get a pail of water at the pump outside on the sidewalk.

"After awhile one of these men (Wildman was his name) was going to leave and go to his brother's office in New Haven; his brother was one of the publishers of the *Palladium*. The proprietor of the *Courant* said to him: 'Henry, you cannot go until you get some one to take your place. You know that there is no one else but you that understands the press work.' Henry said to him: 'Robert understands it as well as I do.' The proprietor wanted to know how that could be, saying: 'He (Robert) never got any pay for doing such work.' Then Henry told him the circumstance of my being up there early every morning.

"The proprietor then sent for me and asked me if I would like to have the job and get a shilling an hour for extra time? As a matter of course I was delighted. In that way I could make about $3 a week overwork. That was a great deal more to me than $3000 a week is to-day.

"This is the way I came to leave the *Courant* office: I could set type and make up the forms. One day the foreman said to me, 'Come, Robert, let us hurry up or we will be late.' That was the first word of fault-finding that had ever been offered to me. I turned to him and said: 'Mr. Wetmore, I can set more type than you can, and make up the forms besides. I have done it every day.' I went down to the proprietor and complained of the foreman finding fault with me. I was very sensitive about the matter. He said: 'Oh, Robert, I know you are all right; you musn't mind.'

"After my apprenticeship expired I worked for eight weeks as a journeyman. The foreman spoke to me again about something. The real secret of it was that he was a little jealous of me. I then went down stairs and informed the proprietor that I would not work any longer in the office, and then left for New York.

"In New York I was assistant foreman and proof reader on the *Evening Mirror*. Here I became invaluable for the taste with which I set up the headings for the news columns and display advertising. The editors would specially request me to do the first kind of work and the publisher was so well satisfied with the manner in which I set up the advertisements that when he left the paper to go on the *Merchants' Ledger* he induced the proprietor of that journal to employ me at $4 a week more than he was paying the man that he then had.

"Any success that has come to me has been due largely to the fact that I have always endeavored strictly to attend to business. Let me give an illustration: When I was a boy in a printer's office and it came along 3 or 4 o'clock in the afternoon, I would say to myself, suppose the proprietor should come up to where we are at work and say, 'Robert, what have you been doing to-day?' what would I answer? He never did such a thing, but I used to reason to myself, 'suppose he were to do it.' If I could not, with pride and pleasure, point to what I had been doing, I would pack up at 6 o'clock and leave the place.

"I consider that kind of spirit is an element of success, and there is always room for young men who show that kind of disposition. The indolent boy who shiftlessly goes through his day's work will never reach the goal of success. The youth who is continually watching the clock, waiting until it shall strike 6, and tries to 'kill time'—well, it will not be long before time will kill him, so far as business is concerned.

"And the business man must not bend his energies so much to the making of money as to making a success of the enterprises in which he is engaged. While I had worked at the printer's trade in Hartford and New York I had managed to save a little money. The proprietor of the *Merchants' Ledger*, on which I was employed in New York, became interested in a new kind of printing press, and I was able to buy the paper from him and eventually transformed it from a class or mercantile journal into a great family paper. I have told people that I did not try to make money, but I tried to make a success of my business. The miser who wants to clutch on every dollar he can lay his hands on would not say to a publisher, 'I will take your whole paper for advertising purposes next Saturday.' The miser or mere money-maker could not do that; he could not find it in his heart to part with the price of the advertising. You must spend money if you want to make money."—*N. Y. Voice.*

NEW DRESSES FROM OLD ONES.

"I have just made me a new dress for street wear," writes Jean Hunt in the *Housekeeper*, "out of what was once a mode colored traveling suit. The dress was rather the worse for wear, but I carefully ripped it up, washed, and dyed it navy blue with Diamond dyes. After careful pressing the goods were like new.

"I made it up with new dress lining, bones, and braid, and the whole cost was only one dollar and sixty cents. Any woman can do as well if she uses the Diamond dyes. I have used many of their colors, and if the goods are properly washed after dyeing, they will not crock a particle. These dyes are fast colors, and I have found them so from years of experience."

A NEW AND USEFUL MACHINE.—One of the most interesting practical inventions lately put upon the market, is from a knitting machine manufactory in Dresden, Germany, the apparatus in some respects resembling an ordinary knitting machine in its make up. It can be readily employed as such both on round and flat work, but is especially adapted for variegated patterns in their usual diversity. It is capable of working variegated patterns—cardigan stitch, purl cardigan, two-and-two rib, and embodies the peculiarities of a striping machine, producing in one piece of goods single, colored, striped and many-colored patterns, without changing the machine itself. By the simple placing in or out of the back thread in the slotted thread conductor, it is claimed any desired number of colors and shades can be produced, the effect being such as to give the impression that the patterns are the result of embroidery.

BAY VIEW STUD FARM.

O. G. Knight, Sup't above farm, remarks, "I have used Quinn's Ointment on Blood Spavin, Curbs and Windpuffs with great satisfaction. I consider it has but few if any equals." Trial box 25 cents, silver or stamps Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

A MAMMOTH TOMATO.

No vegetable ever introduced has created such a sensation as the Mansfield Tree Tomato.

It grows to a height of 12 or 14 feet and produces fine large fruit of a most delicious flavor. Many of the tomatoes weigh over three pounds each. The Tree Tomato is ornamental, and being useful as well, should be grown by every one. The true seed is being offered in this issue by L. L. May & Co., St. Paul, Minn., who are headquarters for it. This firm is giving away $3,000.00 worth of valuable premiums this year and no one should fail to accept their offer and secure a premium list, catalogue and package of this seed.

Educational.

A. Auchie Cunningham, F.C.S. &c.
ANALYTICAL AND CONSULTING
CHEMIST,
14 Chronicle Building.... ....San Francisco.

Prof. of Chemistry Hahnemann Hospital College, S. F. Evening Classes in Theoretical and Practical Chemistry. Instruction also given by mail. Terms on application.

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Surveying, Architecture, Drawing and Assaying,
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Open All Year.
A. VAN DER NAILLEN, President.
Assaying of Ores, $25; Bullion and Chlorination Assay, $25; Blowpipe Assay, $10. Full course of assaying, $50.
ESTABLISHED 1864 Send for circular.

Bowens Academy,
University Ave., Berkeley.
BOARDING AND DAY SCHOOL
For Boys and Young Men.
Special university preparation, depending not on time, but on progress in studies.
T. S. BOWENS, M. A.....Head Master.

HEALD'S
BUSINESS COLLEGE,
24 POST ST., S. F.
FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.
SEND FOR CIRCULAR.
E. P. HEALD, President.
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FOR CHRISTMAS.

Ditson's
50c.
Music Books.

Ne Plus Ultra Piano Collection.
160 pages. Brilliant but easy pieces.
Ne Plus Ultra Ballad Collection.
160 pages. Latest and best songs.
Ne Plus Ultra Song and Chorus Collection.
Each song has a ringing chorus.
Ne Plus Ultra Dance Collection.
Every style of dance music; not difficult.
All these books are large sheet music size.
ANY VOLUME SENT POSTPAID FOR 50c.
OLIVER DITSON COMPANY, Boston

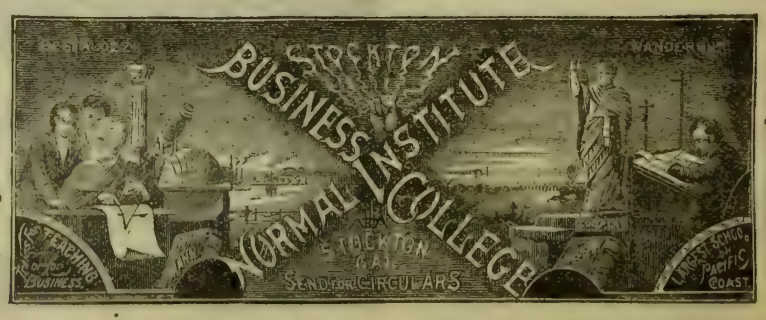
HELPLESS.



Chicago, Ill.
I was confined to bed; could not walk from lame back; suffered 5 months; doctors did not help; 2 bottles of
ST. JACOBS OIL
cured me. No return in 5 years. FRANCIS MAURER.
"ALL RIGHT! ST. JACOBS OIL DID IT."

Stockton-Fresno Business College.

EXCELLENT BOARD $10 per Month.



FURNISHED ROOM $3 per Month.

THE LEADING FEATURE OF THE SCHOOL IS ITS HOME.
Tuition One Year (52 Weeks), $75.
Sixteen Regular Teachers and Over Three Hundred Students attending. Courses Thorough, Rates Lowest Instruction the Best, and School the Most Reliable. Address W. C. RAMSEY.

Seeds, Plants, Etc.

Pacific Nursery.

ESTABLISHED 1871.

WELL GROWN AND SELECTED STOCK

—OF—

Fruit Trees, Olives, Grapes,
Ornamental Trees and Plants,
Roses, Magnolias, Palms.

—ALSO—

Azaleas Indica and Mollis,
Camellias and Rhododendron.

Send for New Price List.

F. LUDEMANN,

Baker and Lombard Streets, San Francisco.

100,000 EXTRA FINE

BARTLETT PEAR TREES.

Apple, Pear, Plum, Cherry, Peach, Apricot, Nectarine, Quince, Grape Vines and Small Fruits.

500,000 FRUIT TREES.

Orange, Lemon, Lime, Olive, Japan Persimmon, and all kinds of Nut-Bearing Trees. Shade and Ornamental Trees, Shrubs, Etc.

IMPORTED FRUIT TREE SEEDLINGS.

Ask for Prices.

James T. Bogue, Marysville, Cal.

500,000 OLIVE TREES.

200,000 DECIDUOUS TREES.

50,000 ORANGE AND LEMON TREES.

— FOR SALE BY —

J. L. HOWLAND,

POMONA NURSERY,

Pomona, Los Angeles County, Cal.

Write and get Prices.

OLIVE TREES!

PALMS!

—AND—

DECIDUOUS TREES

FOR SALE.

Price List mailed free. Address

CAÑADA NURSERY,

P. O. Box 86.....REDWOOD CITY, CAL.

—OR—

COX SEED & PLANT CO.,

411 SANSOME STREET.....SAN FRANCISCO.

OLIVE TREES

In Variety

FOR NURSERYMEN, DEALERS AND PLANTERS.

Prices and a Pamphlet on the Olive Mailed Free.

—ADDRESS—

John S. Calkins' Nurseries,

Pomona, Los Angeles Co., Cal.

OLIVE TREES

FOR SALE

—BY—

ALFRED WRIGHT, Pomona, Cal.

P. O. Box 282.

Manzanillo and Nevadillo Blanco Trees,

One and Two Years Old.

Every tree warranted true to label and free from scale. All orders will be carefully packed and delivered at S. P. Depot, Pomona, and Santa Fe, North Pomona, without extra charge.

GROW
Texas Thin Shell PECANS.

Growing the Texas Thin Shell Pecan pays better than Banking, Real Estate, Bonds or Stocks. One acre earns more than 10 acres in most farm products. Send for Circular.

Texas Pecan & Seed Co., Fort Worth, Texas.

PACIFIC HEIGHTS NURSERY

Nurserymen and Florists, Attention!

(WHOLESALE AND RETAIL.)

We have on hand and constantly arriving from Japan and China:

Camellias, Azaleas, Iris Kaempferi (over 150 varieties), **Ferns, Palms, Cycas Revoluta, Zamia, Japan Orange, Persimmon and other Fruit Trees, Lillies, Nerine Japonica, Chrysanthemums, New and Rare Evergreen and Deciduous Trees, New and Rare Plants, Shrub and Palm Seeds.**

All plants acclimated. Send us your Business Card and we will quote Trade Prices for 1000, 100, 10 or single plants.

KING BROTHERS,

2225 Jackson Street, San Francisco, Cal.

A LARGE SELECTION

—IN—

Citrus Fruit Trees!

LEMONS—Eureka, Villa Franca, Lisbon and Sicily.

ORANGE—Washington Navels, Mediterranean Sweet, St. Michaels Blood, &c., Mandarin and Tangeriene.

OLIVES—Mission and the Foreign Varieties—Spanish Italian and French.

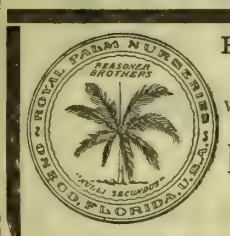
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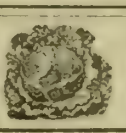
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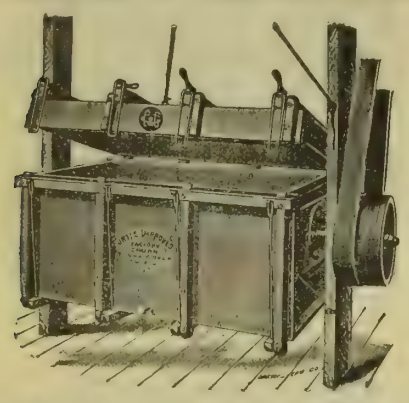
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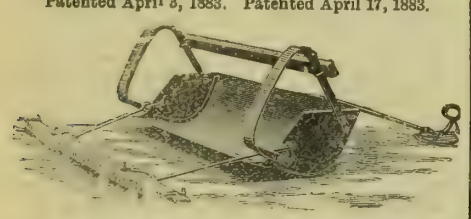
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Large or small coat, dress or other buttons, real value is from 15 cents to $1.00 per dozen, go now at 2½, 5, 10 per dozen, or 25 to 35 per gross, assorted to suit. Mostly black, late styles, but we have over 2000 gross and shall let them go at any price.

SWISS embroidery, 2, 2½, 3, 3½-inch edging, beautiful and costly, has sold at 25 to 50, now 12½ cents, and narrow ones at 5 cents. Fancy linen splashers (samples) and other linens at 50 cents on the dollar. Button-hole twist, assorted (3 black), 25 in a box at 37 cents. Sewing silk, 100-yard spools, assorted (3 black), 65 cents dozen. Ladies' handkerchiefs, several 100 dozen at one-half price, fine goods.

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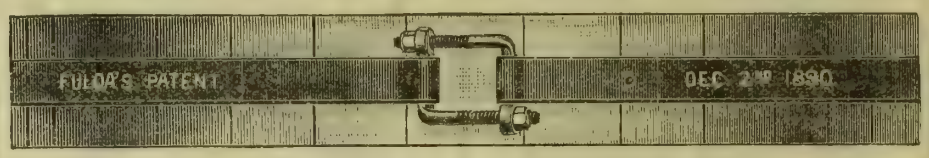
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A practical, explicit and comprehensive book embodying the experience and methods of hundreds of successful growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price $3, postpaid. Send for circular. DEWEY PUBLISHING CO., Publishers, 220 Market Street, San Francisco, Cal.

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THE DAIRY.

Dairy Progress at the North.

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In dairying, as in everything else, the most improved labor-saving machinery that can be devised must be used in order to secure the highest quality of product with a minimum of labor. The old system of constructing a large milk room, with innumerable flat-bottomed pans, placed around on shelves to allow the cream to rise in due season, and then be skimmed in a haphazard and wasteful manner, has been changed, and the housewife's labor materially reduced. The pan era in butter-making has gone and the separator age has taken its place. It has been demonstrated to a certainty that butter made by a first class separator will produce a better article, and keep fresh longer than when made under the old plan. This is accounted for from the fact that all the impurities in the milk are carefully eliminated from the cream while undergoing the separating process. Another desirable feature in this improved method of butter-making that is worthy of consideration consists in being able to pass the milk directly through the separator after milking, and feeding while warm to young stock, which derive greater nourishment than when fed cold. Of late our prominent dairymen have come to the conclusion that the introduction of improved machinery would not only lessen their labors but enhance the quality of their product, so as to secure the highest market price.

A *Gazette* reporter interviewed the three gentlemen in the county who use DeLaval separators in their dairies, in order to learn what they thought of these machines. The first man seen was Judge Beal, who said:

"When I purchased the town site of Athens, it included a large dairy. Among the fixtures was a DeLaval separator. I found from a hygenic standpoint it was a treasure, as it eliminates all the impurities by centrifugal force."

The next man interviewed was Jacob Wilson, one of the old, successful dairymen of Skamokawa, who said:

"I would not be without a DeLaval separator for double the price of the machine, as it saves me about two hours work per day, and I think makes more butter to the same quantity of milk."

A. J. Constable, of the West Valley, Skamokawa, who has a large dairy and uses a De Laval separator, said:

"It performs more than I expected. It does good work, saves labor and makes better butter than I can make by setting in pans."

Wahkiakum county butter has always sold at the highest price in the market, and is noted for its purity and excellence, and our dairymen would do well to maintain this high standard by surrounding themselves with all the modern adjuncts now used in the business.—*Cathlamet Gazette.*

RETAIN THE INDIAN NAMES.—There should be a revision of many of the names of rivers, mountains, valleys, etc., in California. The outlandish names which have found their way by means of the early comers into this State, into our maps and books and talk, should be laid aside and a new nomenclature adopted, better suited to our present and future civilization. There are many names now in use which are unfit to be spoken or printed. We could probably do no better than to adopt the old Indian names. Whatever may have been the lack of taste and civilization in the aborigines of this State, and the entire country in fact, in their modes of life, they were certainly far in advance of the present inhabitants in their taste for nomenclature. Many of the names they employed may be lacking in euphony to English ears, but they all had either a beautiful or most significant appropriateness of meaning to the localities to which they were applied. The State of Georgia, more than any other State of the Union has retained the Indian names of its rivers and most of them have a musical sound, as, for example, the Ocmulgee, the Ohopee, the Ogeechee, the Cannouchee, the Oconee, the Chattahoochee, Saltilla, the Altamaha and others. These examples might be multiplied indefinitely.

Cox's Seed Annual.

The Cox Seed and Plant Co. have just issued their Seed Annual for 1892, a handsome publication of 75 pages, closely printed and fully illustrated. The publication has many marks of progressiveness and enterprise, and the offering includes many interesting novelties. The firm handles all kinds of field, forest garden and flower seeds; also a full line of nursery trees, horticultural books and supplies, etc. Their large store at 411 to 415 Sansome street is well worth a visit, but distant planters can get a good idea of the stock by sending for their "Seed Annual."

Root Knots and Their Treatment.

CAMPBELL, CAL., Jan. 11.

TO THE EDITOR:—The Campbell Horticultural Society held its regular monthly meeting at Campbell on Saturday evening, Jan. 9th. After transacting routine business, Col. R. P. McGlincy, President of the Society, called the attention of the members to a root covered with knots, which for want of a better name here is called black knot. The root was almond, upon which French prune had been grafted. There were probably a half dozen of these knots, and when first discovered, it was supposed that they were only to be found upon myrobolan root, but examination of the orchards show that almond, myrobolan, peach, walnut, chestnut and other varieties of root are affected. The knot can be removed with a sharp knife, but in all cases where they have been removed, they grow out again the next year. The inside of the knot is soft and spongy, and has the appearance of being rotten. We wish to know whether they are fatal to the trees. Some contend that they are, while others say not. In one or two cases where the trees are affected, the owner has dug them up. Does the PRESS think this advisable? Some of our orchardists say the knot is caused by a worm, and that the tree will not outgrow the disease.

Will the PRESS give us all the information it can on the subject—cause, cure and effect upon the trees. So far, these knots have only appeared on young trees from one to four years old.

At the next monthly meeting, we are to discuss the question of "Marketing Fruit," and we look for some interesting remarks on that occasion.

Can any reader of the PRESS tell whether any kind of a wash has been discovered that will destroy peach borers—that is, if the wash be placed around the body of the tree at or near its base?

We are seeking for knowledge, and hope some of our experienced horticulturists will unbosom themselves. UNO.

We shall be pleased to hear from readers on these subjects.

Concerning the root knots mentioned, it may be said that their cause has not been demonstrated. Knots are formed by nematode worms, but they are not the knots which are most commonly seen in this State, which do not have such origin. We have submitted ample specimens to specialists on nematodes at the East, and this is their verdict.

These knots sometimes kill the trees, and sometimes they do not. Nursery stock with such roots should be burned, and nowadays it is usually burned—at least, by all nurserymen who are endowed with consciences. If young trees develop so much knot that the growth is notably lessened, we should pull out the tree and plant a healthy one. If knots have formed, but not in sufficient extent to interfere with a good season's growth of the tree, we should pare off the knots clean and paint the wound. If trees have grown several years in orchard, and make good growth and bear well, we should do the same. It is known that trees which have borne for a long time, and have not been suspected of root knots, have been taken out for some reason and have been found with roots infested throughout with these excrescences.

The above is in part personal observation and in part hearsay of the experience of others. It is a course the writer would adopt with his own trees. It is not altogether satisfactory. Until it can be demonstrated what is the cause of this diseased growth, a course of treatment can hardly be rationally prescribed.

INSTRUCTION IN ENTOMOLOGY.— Both our great universities are doing good work in educating students in entomology. At the State University, Mr. Woodworth has large classes, and the interest in class work and field work is very gratifying. Some students will engage in horticulture, others are educating themselves for teaching entomology in the public schools. Public interest will pertain also to the announcement of instruction in entomology at the Stanford University, which is made in another column of this issue. It will there be seen that Prof. Comstock, who has been doing such grand work at the Cornell University for a decade or more, will be this winter at Palo Alto. Prof. Comstock's services to this State while he was Entomologist of the Department of Agriculture in 1880–81 will never be forgotten. He laid the foundation of accurate knowledge of our scale insects upon which all our subsequent progress has rested. Prof. Comstock will receive a warm welcome, and we hope he may attend our horticultural meetings as supplementary to his work at Palo Alto.

RAIN-MAKERS AT TULARE.—It is reported that three of the Eastern school of rain-makers are at Tulare, and are under contract to produce 3½ inches of rain in as many days for as many thousand dollars—no rain, no pay.

A California Method of Egg Preservation.

During the late poultry show in Petaluma, which reflected much credit upon everyone who had anything to do with its management, one of the novelties which it brought forth was known to very few people.

Dr. E. T. Burnette of Haywards has invented and patented a new and entirely original process for preserving the freshness and fertility of the fruit of the feathered tribe. He claims that by his process eggs may be preserved for a period of eighteen months and their freshness and fertility kept intact. Dr. Burnette came up to our poultry show, bringing several dozen of his treated eggs with him. They were packed in small pasteboard boxes, bearing the affirmation and seal of a notary public who testified that they had been packed in his presence and sealed by him on the 18th of last May.

The eggs were very carefully examined and tested by Messrs. Byce, Armstrong and a number of other gentlemen, who were unable to detect in them any difference from eggs laid the same day in the coops at the exhibition. The appearance was exactly the same, both as to shell and contents, and the taste was that of a perfectly fresh egg.

In order to put the fertility of the eggs to a crucial test, Mr. Byce was given "a setting" of the eggs—in the original sealed packages, to keep three months longer and then put into one of his incubators for hatching. They will be "set" March 10, by which time they will be about ten months old. If even any considerable proportion of the eggs hatch, it will clearly demonstrate that a most wonderful and valuable new discovery has been made in the line of practical science, and the experiment will be watched with intense interest by a great many people.

A process which should perfectly preserve the virtues of eggs for even three months would be of enormous benefit. If they can be preserved for ten months or a year, who can estimate the advantage which the new discovery shall confer upon the poultry interests? *Petaluma Imprint.*

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JANUARY 5, 1892.

466,319.—GLOVE FASTENER—Wm. H. Bell, S. F.

466,453. — FRUIT-CUTTING MACHINE — John Burns, Los Angeles, Cal.

466,521.—PIPE COUPLING—Wm. L. Fitts, San Jose, Cal.

466,674.—WEED PULLER—Gatgens & Dowdin, Central House, Cal.

466,675.—VEHICLE SPRING BRACE—S. J. Graham, Colville, Wash.

466,538.—VEHICLE SPRING—J. Heilrath, Plymouth, Cal.

466,526.—GRAIN AGITATOR FOR SEPARATOR SHOES—C A. Kelley, Ripon, Cal.

466,716.—THILL-COUPLING—L. C. Rasmussen, S. F.

466,378.—IRONING TABLE—G. N. Simmons, Santa Cruz, Cal.

466,471.—CONDUIT FOR ELECTRIC RAILWAYS, C. P. Tatro, Spokane, Wash.

466,731.—POWER MECHANISM—G. O Vernon, Albany, Or.

21,286.—DESIGN FOR WATER-WHEEL CASING, A. P. Brayton Jr., S. F.

The following brief list by telegraph, for Jan. 12, will appear more complete on receipt of mail advices:

Charles Buckner, San Francisco, zither; James J. Culley, San Francisco, cuff holder; Robert H. Dixon, Santa Rosa, pruning implement; C. F. Gillett, Corvallis, Oregon, potato planter; Samuel N. Goldy, San Francisco, sash balance; Andrew S. Hallidie, San Francisco, clip for rope tramways; Emery I. Nichols, San Francisco, pulverizing mill; T H. Elesphar and A. Renard, Chehalis, Wash., stump extractor; John R. Russell, San Francisco, ore feeder; Augustus E. Scharff, Tacoma, Wash., brake for children's carriage.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co., in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

REMARKABLE SKILL AT STONE THROWING —It is supposed that we have no men nowadays who could compete on even terms with the old archers. A man named Uri Bailey, recently died in Pennsylvania, who was worthy of a place with the old-time soldiers. His skill in throwing stones was said to be marvelous. He was mentally deficient, but a giant physically. His aim with stones at any mark or game was as unerring as that of the most skillful handler of the rifle. He annually bagged scores of small game, pheasants, rabbits, quails and squirrels, which he killed with stones. He could kill a bird on the wing or a rabbit at full speed almost as easily as he could kill it at rest. He had a large leather pouch attached to one side of his coat, on which he on all occasions carried a good supply of carefully selected stones. An exhibition of his skill which was always a favorite with him, was to set up a scythe blade, edge toward him, and at the distance of 100 feet cut apples in halves by throwing them against the edge of the blade. He could almost exactly halve two out of every three apples he threw. Robin Hood's great feat of skill was to set up a peeled sapling at a considerable distance and split it with an arrow. We do not see that this is more difficult than splitting the apple o the scythe blade.—*Ex.*

A Typical Editor Gone.

Elijah Porter, founder, in 1841, of the Westfield (Mass.) *News Letter*, died recently in Cambridgeport, in that State, at the residence of his son, Linn Boyd Porter, known as "Albert Ross," the novelist. E. M. Waite, nephew of Mr. Porter of Salem, Oregon, E. M. Dewey of Tulare, Cal., and A. T. Dewey of San Francisco are among Mr. Porter's apprentices to the art preservative, the latter following Mr. Waite in the office in 1850, and to this coast in 1856. Asahel Bush, the wealthy Oregon banker and founder of the *Daily Statesman*, in Salem, while quite young, published the *Standard*, a Democratic competitor of Mr. Porter's whig paper. "Old Westfield" was a Democratic town, "two to one," but owing to the newsy style of Bro. Porter's "make up," the *News Letter* well distanced its local cotemporaries in circulation, until in the "Know Nothing" excitement of 1854. Then, the *Wide Awake American*, started by Dewey Brothers, attained a subscription list of over 2000, when the paper was moved to Springfield, changed to the *Independent American*, and finally merged with the *Daily American*, published by D. F. Ashley.

Elijah Porter was one of the truest, noblest-hearted and best-known men Westfield was ever blessed with. He was ever true to his family, his friends, his town, his country and mankind. All those who knew him aright both loved and respected him. We would honor his name as our early benefactor, and sincerely sympathize with those who mourn his departure into, we trust, a better and happier state. A. T. D.

A CURIOUS MINERAL.—Quite recently a large deposit of what is sometimes known as "fossil flour," has been discovered in the State of Maine, and that, too, of such purity as to arouse the wonder of the best analysts. In investigating the properties of this new earth, one is impressed at once by its wonderful faculty for resisting the action of acids, alkalies, oils, and especially by its remarkable quality as a nonconductor of heat. A simple test of this latter quality, made by one interested in the company, was to take an inch cube of the material and place it on a bar of iron. The iron bar was then put in a blacksmith's forge and heated until it was melted away from the cube of earth. So little did the heat penetrate this cube that one could easily place the fingers upon the upper part of it without inconvenience from the heat. Fossil flour is almost as white as oxide of zinc. It is so light in weight that a flour barrel of it in its natural condition will not weigh over 50 pounds. It is, as we have already stated, absolutely unaffected or unchanged by any sort of mechanical manipulation, by acids, alkalies or heat. As it is mined, it comes out of the ground a pure white powder, so fine that it cannot be ground any finer. A careful analysis of it shows about 95 per cent pure silica. This kind of earth has been used in Europe very largely for a variety of purposes; one of the most curious of which was in Sweden, where the poorer classes mined it and mixed it with wheat flour, in order to make bulky loaves of bread, not for sale, but for their own eating.—*American Miller.*

THE FLORAL SOCIETY.—The annual meeting of the State Floral Society was held Jan. 8, in the rooms of the State board of Horticulture. The principal business transacted was the election of officers, which resulted as follows: E. J. Wickson, President; L. O. Hodgkins, Vice-President; Mrs. H. L. Cross, Treasurer; E. E. Smith, Secretary; Miss Carrie Rixford, Accountant; Directors—Timothy Hopkins, E. Kellner; Committee on Spring Exhibitions—W. S. Smythe of Berkeley, Mrs. Sperry, Mrs. B, Harris of San Francisco, Mrs. S. C. Ross of Belmont, Mrs. E. F. Bailey of San Francisco. The papers read at the meeting will duly appear in our columns.

Notable Sale of Trotting Stock.

We have received a copy of the sale catalogue of a fine lot of standard bred mares, fillies and colts, the property of Dr. M. W. Hicks of Sacramento, which are to be sold by Killip & Co. on Jan. 23d, as per advertisement which appears in another column. Dr. Hicks has made a most valuable collection of horses, which he is obliged to part with because of ill health.

The catalogue is notable because of the excellent introductory essay descriptive of the stock, a part of which is in the words of Dr. Hicks. We can earnestly commend this offering to the attention of those seeking this valuable sort of blood. Catalogues can be had of the auctioneers.

HE KNEW WHEN HE WAS SUITED.

"Ma," said a certain school-boy, "Can't Sarah always put up my lunch? She's got a better appetite than you, and she puts more in."

The same sort of appreciation accounts for the wonderful "Roses by Mail" business of our advertisers, The Dingee & Conard Co. of West Grove, Pa. Flower lovers have large appetites, and like their orders filled where the best value is put in. This Company has long been recognized as the largest Rose Growers in America. Their handsome New Guide for 1892 describes upward of 2000 of the Choicest Roses, Bulbs, Hardy Plants and Flower Seeds. They offer this book and a specimen copy of their Floral Magazine, "Success with Flowers," to all our readers free on postal request. Mention this paper when you write.

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Two *new* first-class Sewing Machines for sale cheap. Will be sent direct from warerooms if desired. Address, H. F. D., Box 2517, San Francisco, Cal.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

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M. D. HOPKINS, Petaluma, importer and dealer in Eastern registered Shorthorns, Red Polled Cattle, Holsteins, Devons and Shropshire Sheep.

H. P. MOHR, Mount Eden, Alameda Co., Cal., breeder and importer of Registered Clydesdale Horses, Holstein-Friesian Cattle and Berkshire Pigs. Young stock always on hand and for sale. Correspondence solicited.

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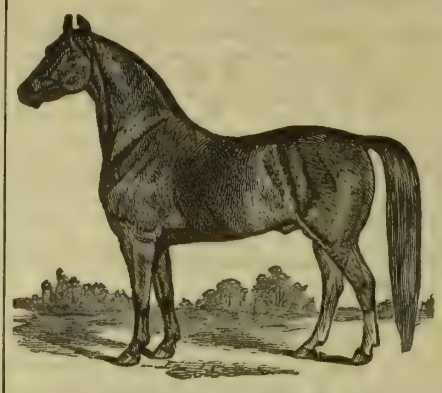


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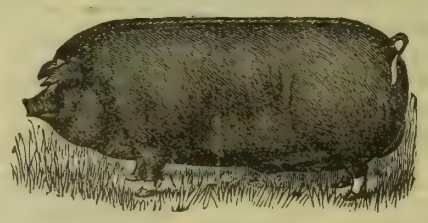
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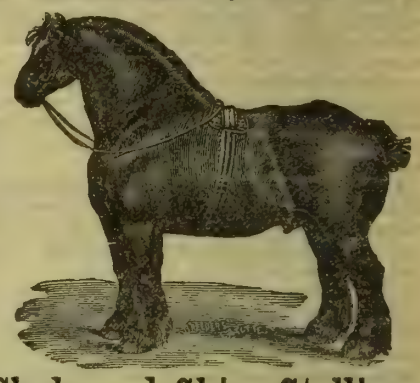
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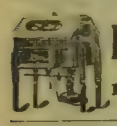
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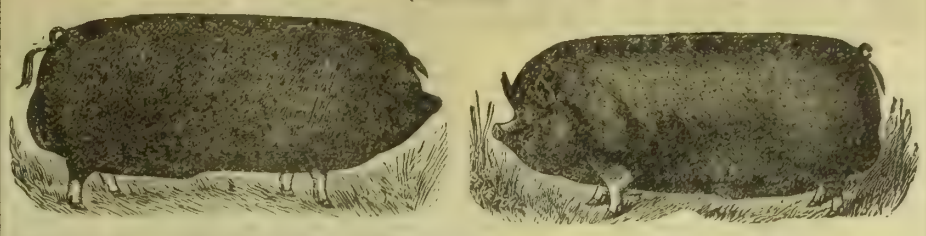
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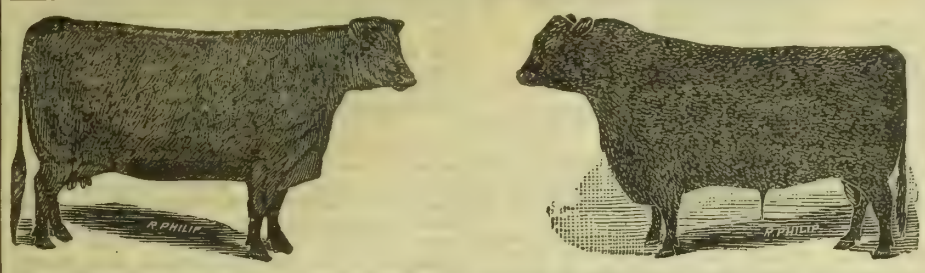
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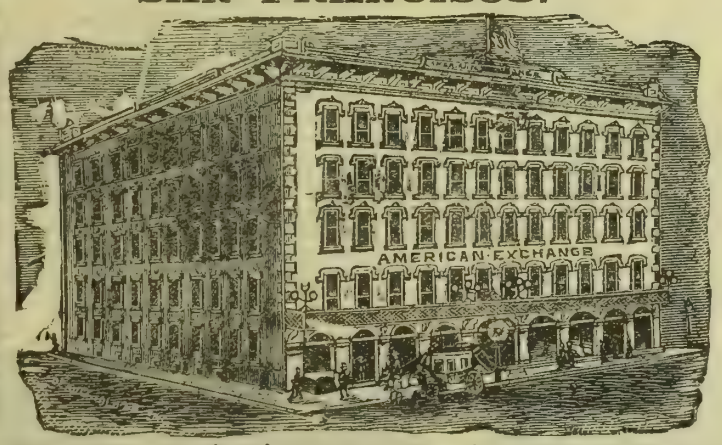
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1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
5—To disinfect barns, stables or residences and destroy Microbes.
6—To force all moisture out of the wood without closing the pores.
7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
8—To prevent Rope treated with Carbolineum from rotting, causing it to remain pliable and excelling Tar Coating.
9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
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All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

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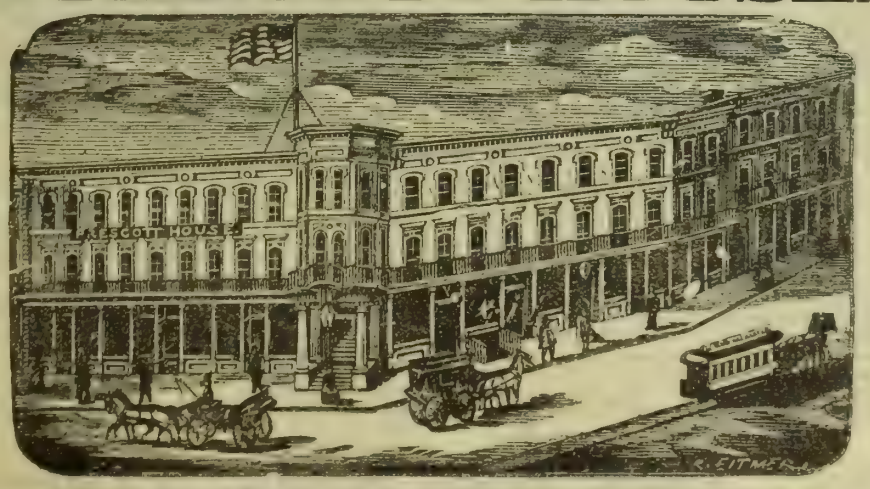
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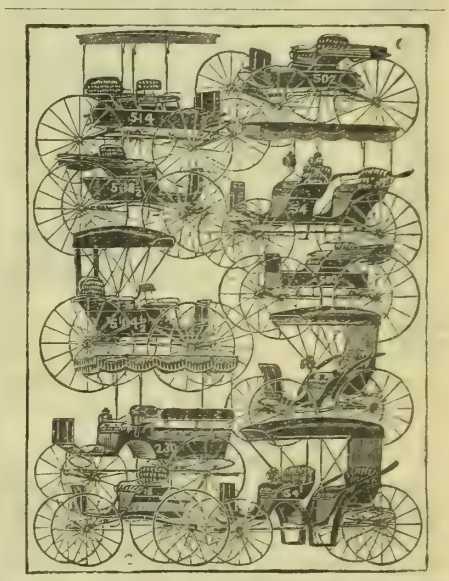
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H. H. H.
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MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

MANUFACTURED BY
H. H. MOORE & SONS,
THE DRUGGISTS,
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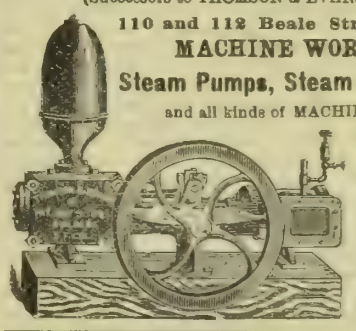


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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 13, 1892.

Absence of rains the past week was taken advantage of by farmers, orchardists and others to push outdoor work. Our advices from all parts of the coast are of a most cheerful character. With the usual spring rains, large crops of cereals and fruits are confidently looked for. In the local market, trading is generally light in farm products, owing to scant supplies. Money continues easy and in favor of borrowers having undoubted security. Silver is a fraction lower, which, of course, is against grain, owing to England being able to pay for her imports from India in the debased metal. Wheat would readily fetch two cents a pound in our market, if silver was par. The Eastern and European wheat markets have been settling. The following is to-day's cablegram:

LIVERPOOL, Jan. 13.—Wheat—Very heavy; California spot lots, 8s 4d; off coast, 41s 9d; just shipped, 41s 6d; nearly due, 41s 3d; cargoes off coast, inactive; on passage, very little demand; Mark Lane wheat, easier; French country markets, inactive.

Foreign Grain Review.

LONDON, Jan. 11.—The *Mark Lane Express*, in its review of the grain trade for the past week, says: English wheats are in buyers' favor at an average decline of 6d; foreign wheats are dull. At to-day's market English wheats were steady; American fell 6d and Indian 9d; English and American flours dropped 6d; corn was 6d dearer, new American ranging from 27s for immediate delivery to 24s for delivery within the month.

Liverpool Wheat Market.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May
Thursday	8s5⅞ d	8s6½ d	8s6½ d	8s6 d	8s6 d
Friday	8s5½ d	8s5⅞ d	8s5⅝ d	8s4⅞ d	8s4½ d
Saturday	8s5 d	8s6⅛ d	8s5½ d	8 6½ d	8s5⅜ d
Monday	8s6 d	8s4¼ d	8s4¼ d	8s4¼ d	
Tuesday	8s3⅞ d	8s3⅞ d	8s3⅞ d	8s4 d	

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	43s3d	43s3d	43s3d	Firmer.
Friday	43s	42s9d	42s9d	Quieter.
Saturday	42s6d	42s6d	42s3d	Quiet but st'dy.
Monday	42s6d	42s6d	42s3d	Very little inq'y.
Tuesday	42s	42s	42s	Depressed.

Eastern Grain Markets.

The following shows the closing prices of wheat at New York for the past week, per cental:

Day.	Jan.	Feb	March.	April.	May.
Thursday	171	173	175	178	172½
Friday	171	172⅜	174⅜	177	174⅛
Saturday	171	172½	174½	....	174
Monday	169	170	172	....	171½
Tuesday	166¾	168	170	172	169

NEW YORK, Jan. 13.—Wheat—$1.02 for February; $1.03 for March; $1.03½ for April; $1.02⅝ for May and $1.00⅞ for June.

CHICAGO, Jan. 13.—Wheat—91⅛c for May.

Eastern Wheat Statistics.

NEW YORK, Jan. 11.—*Bradstreets*: Exports of wheat, including flour, are increasing again, as per special advices to Bradstreets, amounting to 5,352,000 bus. within a week, a gain of from 50 to 60 per cent over the two preceding weeks. The available stocks of wheat in the United States and Canada (both coasts) on Jan. 1st were 78,006,000 bus., 18,000,000 and 6,000,000 bus., respectively, more than were held Jan. 1, 1891, and Jan. 1, 1890. Five years ago, however, like stocks of wheat aggregated 18,000,000 bus. more than on Jan. 1, 1892, the excess being chiefly of spring wheat.

Wool.

NEW YORK, Jan. 11.—The year opens with a hopeful selling movement, and the inferences are favorable to some recovery from a long rule of low prices, especially for unwashed. Prospective receipts of foreign deadens high grade of domestic, but it is thought that at least the present rates will be sustained, if not improved in the event of a few active weeks. The sales here were 624,000 pounds of domestic and 327,000 pounds of foreign. New York's stock is smaller than a year ago, and is light in Texas wool. Samples of Montevideo are here. Boston reports a wholesome inquiry, but no better rates. The sales amounted to 1,869,000 lbs. of domestic and 529,000 lbs. of foreign. In Philadelphia trade is slow.

Raisins.

NEW YORK, Jan. 8.—*Commercial Bulletin*: If current report and general belief as to purchases made of late are not at fault, there is practically no "headquarters" for California raisins at the present time. It would not be proper to mention names in this connection, and any remark calculated to create the impression that there is a corner will be greatly out of place, since all the goods in this city are not under one control, while New England and some Western distributing centers have more than a few pounds that might be spared in case of emergency. It is a fact, however, that a large proportion of the local supply is in a few hands, and held with confidence of a no uncertain character of a change for the better in prices should nothing occur to disturb the general business. The various distributing centers are fairly well supplied, but all accounts go to show that the bulk of stock is in good hands, whence distribution may be made as trade wants require and forced sales thus avoided. It is not to be wondered at that some people in trade are inclined to be bullish on the market since Valencia raisins of a desirable quality would have been let go for practically a song in the primary market to compete with California at the present prices, or a very fair advance on the same.

Hops.

NEW YORK, Jan. 12.—Hops are less active, but the situation is strong. The statistical position favors sellers. The English market is quiet, but is not shrinking. Common to best are quoted at 19 to 23c. About 30,000 pounds of State are unsold in the interior. Option dealing in hops opens tomorrow. The classification is choice, prime, medium or good, brewing or common. The commission for buying or selling is 25c a bale to members and 50c to outside parties in car lots. Contracts, limit of weight from 11,000 to 13,000 pounds gross. Deliverable weight for bales, 165 to 215 lbs., grades to be named at the exchange call, States of Washington or Oregon and California.

Miscellaneous.

NEW YORK, Jan. 10.—Honey—Several cars were placed at 7¼@7¾c, very little in receivers' hands. The light amber market closes stronger.

Lima Beans—There is a fair demand at $1.85 to $1.95, spot, bushel.

Local Markets.

WHEAT.

	Buyer Season. H.	Buyer Season. L.	Buyer 1892. H.	Buyer 1892. L.	Seller 1892. H.	Seller 1892. L.
Thursday	186⅛	185⅝	....	....	153⅝	152½
Friday	185½	185⅜	....	....	....	....
Saturday	184½	184	....	....	....	....
Monday	182⅝	181⅞	....	....	....	....
Tuesday	181½	181⅜	....	....	150½	149⅞

BARLEY.

	Buyer Season. H.	Buyer Season. L.	Seller Season. H.	Seller Season. L.	Buyer 1892. H.	Buyer 1892. L.
Thursda	114½	114	107⅞	107⅝	....	....
Friday	114¾	114⅜	....	....	....	....
Saturday	114⅝	113⅞	....	....	....	....
Monday	113⅜	112⅛	....	....	....	....
Tuesday	112½	111½	....	....	....	....

BAGS—The market is stiff, with holders firm at ground 7¼ cts for June-July delivery.

BARLEY—The sample market is fairly firm, but futures are lower, owing to bears' persistent hammering. The following is to-day's reported sale on Call:

Morning session: Buyer season—300 tons, $1.11; 600, $1.10⅞; 900, $1.10½; 800 $1.10½; 400, $1.10⅝. Seller season—200 tons, $1.05; 100, $1.05⅛ ₩ ctl. Afternoon session: Buyer season—500 tons, $1.10¼; 100, $1.10½; 300, $1.10½; 1000, $1.10⅜. Seller, 1892—100 tons $1.04½ ₩ ctl.

BUTTER—The market is steady, but any increase in the demand will bring about lower prices. This opinion is grounded on the general information that buyers are offish and will not anticipate requirements. The market is virtually cleaned up of choice to gilt-edged pickled and Eastern creamery, which, of course, is in favor of fresh in round and square rolls.

CHEESE—Receipts are increasing, and as buyers restrict their purchases, the market appears to have a weaker tone.

EGGS—Free receipts and a falling off in the demand cause a weaker feeling, with some disposition to shade prices.

FLOUR—The market is barely steady. Concessions are reported.

WHEAT—The sample market begins to show more life, due to holders letting go. In futures, trading is light, with the number of bears increasing. Reported sales made on to-day's Call are as follows:

Morning Session.—Buyer Season—900 tons, $1.81¼; 2000, $1.81⅛ ₩ ctl. Afternoon Session—Buyer Season—100 tons, $1.81⅜; 800, $1.82; 500, $1.82½; 1300, $1.82. Seller 1892—100 tons, $1.50½ ₩ ctl.

Market Information.

Produce Receipts.

Receipts of produce at this port for the week ending Jan. 11, '92, were as follows:

Flour, qr. sks	71,098	Bran, "	3,448
Wheat, ctls	232,718	Buckwheat "	....
Barley, "	17,704	Middlings, sks	1,860
Rye "	....	Chicory, bbls	....
Oats "	717	Hops, bls	9
Corn "	2,921	Wool, "	110
*Butter "	393	Hay, tons	1,358
do bxs	154	Straw "	55
do bbls	....	Wine, gals	145,360
do kegs	30	Brandy, "	50,540
do tubs	....	Raisins, bxs	40
do ½ bxs	90	Honey, cs	161
†Cheese, ctls	278	Peanuts, sks	190
do bxs	70	Walnuts, "	....
Eggs, doz	16,200	Almonds, sks	....
do "Eastern	60,000	Mustard, sks	....
Beans, ctls	415	Flax, sks	....
Potatoes, sks	20,632	Popcorn, sks	....
Onions, "	1,195	Broom corn, bbls	....

*Overl'd 314 ctls. †Overl'd 327 ctls.

Deep Water Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to Jan. 10, '91.	July 1, '91 to Jan. 10 '92
Flour, ½ sks	143,956	283,490
Wheat, ctls	685,913	1,024,615
Barley, ctls	120,154	27,905
Oats, ctls	188,638	286,123
Wool, bales	5,745	5,637
Hops, bls	333	339
Rye, sks	....	3,299
Potatoes, sks	16,314	25,675

Cereals.

The local wheat market has ruled more in buyers' favor, due to speculative holdings coming on the market. Farmers who are still holding begin to show signs of letting go. The very large export movement at the Atlantic seaboard has an unfavorable influence on the market. With this country's crop of 619,000,000 bushels of wheat and 2,000,000,000 bushels of corn, a very large part of Europe's requirements will be met before next crop season. The weather abroad is reported favorable for crops.

In this State, Oregon and Washington, the outlook never before seemed so promising in the month of January as it now does. Rains have been not only quite liberal in the agricultural district, but they have come in such a way as to allow a very large increased acreage to be seeded. So far as our advices extend, there has been very little, if any, rotting of seeds, which is an unusual occurrence. The large deposits of snow on the mountain ranges not only promise an abundant supply of water for irrigation and other purposes, but it is calculated to give us cooler weather, and delay the time for decimating north winds until after harvest.

STOCKS IN LIVERPOOL, JANUARY 1, 1892.

	Wheat, qrs.	Flour, bbls.
1891	840,000@360,000	120,000@180,000
1892	860,000@880;000	120,000@180,000

As will be seen by reference to tonnage movement, the disengaged tonnage in port is increasing. This is to be expected, with outward charters low and the bright prospects for a large wheat crop this year.

Barley has ruled fairly firm in the sample market, notwithstanding the pronounced raids on Call in futures. It looks as if very few transactions reported are legitimate. The call for feeding grades is quite strong, showing a continued large consumption. Brewery hands' troables keep brewing grades quiet, but as the supply in this State is light, holders do not exhibit any fears of a decline in prices.

Oats are steady. Receipts are only fair, while the consumptive demand is fairly active. It is claimed that available supplies in Oregon and Washington are light.

Rye continues to rule in buyer's favor. There is no demand for export, while the home demand is more or less nominal.

Buckwheat is inactive.

Feedstuff.

Bran and middlings are steady under lighter receipts and a fair demand. Buyers are trying to get concessions on ground barley and feedmeal.

Continued light receipts of hay, combined with a growing impression that the available supplies in this State are light, cause a strong local market. The demand, both locally and otherwise, is quite free, considering that feed on the ranges and in pastures is growing rapidly and available for range stock and dairy cows.

Live Stock.

Bullocks are in fair supply. The demand is increasing, owing to the cool weather and higher prices for mutton sheep. Improving range pasture has caused a falling off in selling offers of range stock. Mutton sheep are a shade higher. The advance is causing a lighter demand. Hogs are unchanged. Milch cows are fetching more money. The establishing of creameries is in favor of breeders.

Fruit.

Grapes, pears and persimmons are hardly worth quoting, owing to light supplies and a nominal demand.

Judging from the large deposits of snow on the mountain ranges, it is only reasonable to conclude that the deciduous fruit season in this year will open late.

Apples are in large supply. Only choice to extra choice Spitzenburg and Newtown pippin fetch outside figures. Receipts from northern counties and Southern Oregon are quite heavy. Considerable are coming to hand from Reno, Nevada. The quality of the latter is said to be of the best, but the fruit is small-sized.

In dried fruits, there is nothing new to report. The feeling appears more bullish. It is quite generally claimed that low prices have stimulated consumption to such an extent that the distributive centers are well cleaned up, which, if correct, ought to bring about a freer spring call. It is claimed that buyers have been and are still quietly looking around to find out when they can lay their hands on odd and end parcels, provided the spring trade justifies buying. Quotations are more or less nominal in the absence of business.

Raisins are inactive, with holders not disposed to press the market.

Limes and lemons are unchanged. Receipts are light and so is the demand.

The receipts of oranges are quite free. Some consignees report the bulk of their receipts wind fall and more or less frost-bitten, while others again report very few in their consignments. The market is in buyers' favor, with much difficulty met in placing consignments even in small jobbing parcels. The writer saw a sale made this morning of choice Riverside Navels at $3 a box. For Duarte and Riverside Navels, the market is quoted at $3 to $3.50 for choice to something fancy, while fair to good run from $2.50 to $2.75 a box.

Vegetables.

Truck farming is being actively pushed. A large increased acreage is reported in several of the principal garden truck farming sections. The southern part of the State continues to send us small supplies of garden truck, but the high prices at which they are held restricts their sales.

Onions are firm at quotations. The available supplies up north, it is said, while not large, will, together with ours, be ample to meet all requirements up to next season.

Choice, good-keeping potatoes are fairly firm, but off qualities are still in buyers' favor. The consumption is very heavy. This is due to low prices and the higher cost of flour, etc.

Miscellaneous.

From reliable advices up to Jan. 13, the following summary tonnage movement is compiled:

	1892.	1891.	In port. 1892.	In port. 1891.
San Francisco	240,802	278,816	*148,105	*49,426
San Diego	16,938	15,475	5,363	
San Pedro	7,478	3,840	4,712	19,966
Oregon	44,202	38,306	37,639	
Puget Sound	24,332	19,182	....	....
Totals	....	....	195,824	69,392

*Engaged for wheat, 1892, 77,678 1891, 42,228

The statistics of produce exports from this port compiled by the *Commercial News*, from July 1st to Jan. 4, are as follows:

	1891.	1890.
Wheat, ctls	9,159,130	6,327,160
Flour, bbls	629,523	542,000
Barley, ctls	765,190	173,646

In poultry there is nothing new to report. Choice conditioned large-sized are wanted.

Beans continue to gain strength. The stronger tone to the market is largely due to quiet but persistent buying for the East. The consumptive demand at the East is increasing.

Honey is said to be scarce, which causes buyers of more choice grades to bid well up for their requirements.

Hops are doing better with gilt-edged quite scarce and for which 25 cts. might be secured. Yesterday's New York telegrams report a sale of 150 bales of choice from this coast at 23½ cts. to arrive.

In wool there is next to nothing doing. There are so many different influences bearing on wool, that it is very hard to report or quote the market correctly.

Nuts are slow but the tone is steady.

THE PACIFIC RURAL PRESS of San Francisco **is as bright as ever, even though it has attained the twenty-first anniversary of its birth.**—*Redlands Facts.*

Domestic Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 13, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 05	Extra, CityMills	5 40 @ 5 50
Butter	2 20 @ 2 65	DoCountryMills	5 25 @ 5 50
Pea	2 40 @ 2 80	Superfine	3 40 @ 3 65
Red	2 00 @ 2 30	**NUTS—JOBBING.**	
Pink	1 75 @ 2 05	Walnuts, Cal. lb	7 @ —
Small White	2 25 @ 2 55	Do Choice	8 @ —
Large White	2 10 @ 2 45	Do paper shell	9 @ —
Lima	1 65 @ 2 25	Do Chili	7½@ 9
Ftd Peas, blkeye	1 50 @ 1 75	Almonds, sft shl	11 @ —
Do green	1 90 @ 2 10	Paper shell	13 @ —
Do Eastern do	2 60 @ 2 80	Hard Shell	6 @ 7½
Do Nlles	1 35 @ 1 45	Brazil	6½@ 8
Split	4 @ —	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 30	Peanuts	3 @ 4
Do good to choice	32½@ —	Filberts	11½@ 14
Do Giltedged	— @ 35	Hickory	7 @ 8
Do Creamery rolls	— @ 35	Chestnuts	11½@ 16
Do do Giltedge	— @ 37	**ONIONS.**	
Eastern	20 @ 34	Silver Skin	50 @ 1 00
Cal. pickled	23½@ 26½	**POTATOES.**	
CHEESE.		Early Rose, ctl	30 @ 45
Cal. choice mild	13 @ —	Peerless	35 @ 65
Do fair to good	11 @ —	Burbank Seedling	40 @ 65
Do gilt edged	14 @ —	Do do Salinas	95 @ 1 20
Young America	12 @ 15	Sweet's	2 00 @ 3 00
EGGS.		Garnet Chiles	40 @ —
Cal. ranch, doz	30 @ —	River Reds	30 @ 45
Do do selected	35 @ —	**POULTRY AND GAME.**	
Do store	25 @ —	Hens, doz	6 00 @ 9 00
Eastern	25 @ 30	Roosters, old	6 00 @ 7 50
FEED		Do young	6 50 @ 9 50
Bran, ton	17 00 @19 00	Broilers, small	4 50 @ —
Feedmeal	26 00 @ —	Do large	5 50 @ —
Gr'd Barley	24 00 @27 00	Fryers	6 50 @ —
Middlings	20 50 @22 00	Ducks	6 50 @10 00
Oil Cake Meal	25 00 @27 00	Geese, pair	1 75 @ 2 50
Manhattan Food ₩ cwt.	7 50	Turkeys, Gob'r.	12 @ 14
HAY.		Turkeys, Hens	14 @ 16
Wheat, per ton	14 00 @ —	Do Dressed	15 @ 19
Do choice	15 50 @ —	Manhattan Egg Food ₩ cwt.	11 50 @ —
Wheat and Oats	13 00 @ —	**PROVISIONS.**	
Wild Oats	12 00 @ —	Cal. Bacon, he'vy, lb	9½@ —
Cultivated do	12 50 @ —	Medium	11 @ —
Barley	11 00 @ —	Light	12½@ —
Alfalfa	10 00 @ —	Lard	9 @ 11
Clover	12 00 @ —	Cal. Sm'k'd Beef	11½@ —
Straw bale	50 @ 60	Hams, Cal salt'd	10 @ —
GRAIN, ETC.		do Eastern	12½@ —
Barley, feed, ctl	1 05 @ 1 10	**HIDES.**	
Do Choice	1 12½@ —	Salted	7 @ 8
Do Brewing	1 13¾ @ —	Dry Flint	13 @ —
Do do Choice	1 17½@ —	Dry Salted	11 @ —
Do do Giltedge	1 21½@ —	Kips	8 @ —
Do Chevalier	1 15 @ 1 45	Calf	10 @ —
Do do Giltedge	1 43¾@ 1 52½	Goat	20 @ —
Buckwheat	2 00 @ 2 25	Deer	15 @ —
Corn, White	1 35 @ —	Sheep Pelts	25 @ 75
Yellow, large	1 26½ @ 1 31½	**TALLOW.**	
Do small	1 33½@ 1 38½	No. 1	3 @ 3½
Oats, milling	1 45 @ —	No. 2	2½@ 3
Feed, Choice	1 42½@ —	**WOOL.**	
Do good	1 35 @ —	SPRING, 1891.	
Do fair	1 30 @ —	Humb't & Men'cino	20 @ —
Surprise	1 50 @ —	Sac'to valley	16 @ —
Black Cal	1 60 @ 1 90	Free Mountain	19 @ —
Do Oregon	1 45 @ 1 55	S Joaquin valley	13 @ —
Gray	1 32½ @ 1 41½	do mountain	18 @ —
Rye	1 55 @ —	Cala'v & F'th'll	16 @ —
Wheat, milling. Gilt edged	1 85 @ —	Oregon Eastern	14 @ —
Do Choice	1 82½@ —	do valley	21 @ —
Do fair to good	1 78½ @ —	So'n Coast, def	11 @ —
Shipping, cho'ce	1 78½ @ —	So'n Coast, free	13½@ —
Do good	1 76½ @ —	FALL, 1891.	
Do fair	1 73½ @ —	San Joaquin	9 @ 12
Common	1 70 @ —	Mountain	10 @ 15
Sonora	1 71½ @ 1 80	Humb't& Men'cino	14 @ 18
HOPS.		**HONEY.**	
1891 Choice to Ex.	22 @ 23	WhiteComb, 2-lb	10 @ 13
Fair to Good	17½@ —	do do 1-lb frame	12 @ 14
		White extract'd	6½@ 7
		Amber do	5½ @ 6½
		Beeswax, lb	22½ @ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	7 @ 7½
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pl'd, prime, bl.	10 @11
Do do prime	3½@ 4	Do do choice	11 @12
Do do choice	4 @ 4½	Do do fancy	12 @13
Do sliced, common	3½@ 4	Evap, peeled, in boxes, choice	15 @—
Do do prime	4 @ 4½	Do do fancy	16 @17
Do do choice	4½@ 5½	Evap, bleached, ring. 50-lb boxes	7 @ 8
Evap, bleached, ring. 50-lb boxes	7 @ 8	**PEARS.**	
APRICOTS.		Sun-dried, quarters	3 @ 4½
Sun-dried, unbl. com.	3 @ 4	Do sliced	4 @ 5
Do do prime	5 @ 5½	Evap, sliced, in boxes	6 @—
Do do choice	6 @ 6½	Do ring do	10½@—
Do bleached, prime	7 @—	**PLUMS.**	
Do do choice	7½@—	Pitted, sun-dried	4½@—
Do do fancy	8½@ 9½	Do evap, boxes, choice	— @—
Evap, choice, in boxes	9½@10	Do do do fancy	— @—
Do fancy, do	10 @10½	Unpitted	2 @ 2½
FIGS.		**PRUNES.**	
Sun-dried, black	3 @ 3½	Cal. French, ungraded	5 @ 5½
Do white	3½@ —	Do graded, 60 to 100	5½@—
Do do washed	— @—	Do do 40 to 60	6½@ 7½
Do do fancy	— @—	Fancy sell for more money.	
Do do pressed	— @—	**RAISINS.**	
Smyrna boxes	— @—	London Layers, choice ₩ bx	$1 50@ —
Do sacks	— @—	Do fancy, do	1 75@ —
GRAPES.		Layers, ₩ bx	1 25@ —
Sun-dried, stemless	3 @ 3½	Loose Muscatels, common, ₩ bx	1 00@ —
Do unstemmed	2½@ 3	Do choice, do	1 20@1 30
NECTARINES.		Do fancy, do	1 50@ —
Red, sun-dried	3½@ 5	Unstem'ed Muscatels, in sacks, ₩ lb	4@ 5
Do Evap., in boxes	6 @—	Stemmed do do	5@ 5½
White, sun-dried	5 @ 6½	Seedless do do	6@ —
Do evaporated	6½@ 7	Do do ₩ 20-lb bx	1 15@ —
PEACHES.		Sultanas, unbl, bxs	1 15@1 40
Sun-dried, unpeeled, common, bleached	3½@—	Do bleached, in bxs	1 30@1 60
Do do prime, do	4½@—	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	
Do do choice, do	5½@—		
Do do fancy	6 @ 6½		
Evap, unpe'l'd, choice	6 @—		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 13, 1892.

Limes, Mex	5 50 @ 6 50	Do choice	1 00 @ 1 25
Do Cal	75 @ 1 00	Do extra choice	1 50 @ 2 00
Lemons, box	1 25 @ 3 50	Do Lady Apples	75 @ 1 25
Do Sicily	5 50 @ 7 00	Pears, box	50 @ 1 25
Oranges, Winter small box	50 @ 1 00	Beets, sk	— @ 1 00
Do Seedlings Riverside	1 25 @ 2 00	Carrots, sk	50 @ —
Los Angeles	1 00 @ 1 50	Okra, dry, lb	15 @ —
Do Navels— Los Angeles	1 50 @ 2 50	Parsnips, ctl	— @ 1 25
Riverside	2 00 @ 3 50	Peppers, dry, lb	12 @ 20
Duarte	2 00 @ 3 50	Turnips, ctl	50 @ —
Apples, box	40 @ 75	Cabbage, 100 lbs	60 @ 70
		Garlic, lb	3 @ 4½
		Squash, Mrft, tn	7 00 @ 9 00
		Pumpkins, ton	7 00 @

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	6½@ —	Wethers	9 @10
Grass fed, extra	6 @ —	Ewes	8½@ 9½
First quality	5½@ —	Lamb, yearling	9½@ —
Second quality	4½@ —	Do Fall	12½@18
Third quality	4 @ —	**HOGS.**	
Bulls and thin Cows	2 @ 3	Light, ₩ lb, cents	4½@ —
VEAL.		Heavy	4 @ —
Range, heavy	4½@ 5½	Feeders	5½@ —
Do light	6 @ 8	Stock Hogs	3 @ —
Dairy	7 @ 8		

RAMIE DECORTICATION.—The new chemical process for cleaning the ramie plant is about to be introduced in San Francisco by the inventor, Mr. Walter T. Forbes. On special invitation by the Department of Ramie Culture, this gentleman has come to California. He it is who introduced a new process in Montzorango, Mexico, last spring. A building has been rented at 18th and Folsom streets, in which the fiber will be treated chemically in digestors. Samples of fiber exhibited by this Department are fine, strong and in a suitable condition for the spinner. The experiments made will be published by the State Board of Agriculture, Department of Ramie Culture, in the forthcoming report for 1892.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
GEO. WILSON—Sacramento Co.
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CHAUNCEY A. DAYTON—San Lucas, Cal.
G. R. GILL—Cambria, Cal.
A. DUNLAP—Hollister, Cal.
J. T. AUSTIN—Tulare County.
WM. T. HEALD—Cloverdale, Cal.
SAMUEL B. CLIFF—Creston, Cal.
S. A. DOYLE—Santa Clara Co.
W. W. MASON—Nevada.

Supervisors versus Ground Squirrels.

The result of the ordinances passed in Alameda, Contra Costa and some other counties last year, though not accomplishing all that was expected at first, stirred up the farmers to unusual exertions and large numbers of ground squirrels were slaughtered which would otherwise have been left alone to increase and destroy crops. Wheeler's Carbon Bisulphide—the remedy most extensively employed—was drawn upon to the utmost capacity of the works operating at Melrose, and a large increase in the output was required. A material advance was certainly made in western farming when the University of California and the Department of Agriculture at Washington discovered and called attention to this valuable destroyer of pests.

New Price Catalogue of Fruit and Ornamental Trees.

Trumbull & Beebe have just issued a price list of fruit and ornamental trees, shrubbery, flowering plants, etc. It will be found to cover pretty much everything in these lines that is adapted to the soils and climate of this coast.

Those who are intending to add to their orchards, or beautify their grounds this season, would do well to send for the new price list to Trumbull & Beebe, 419 and 421 Sansome St., S. F.

BERKSHIRE MEETING. — The 16th annual meeting of the American Berkshire Association will be held in the Illinois National Bank, Springfield, Ill., Wednesday, Jan. 20, 1892, at 10 o'clock A. M. Among other important matters to be considered at this meeting will be the exhibition of Berkshires, and the special premiums to be offered by this Association at the World's Columbian Exposition. This meeting promises to be one of the most important held by the Association.—JNO. G. SPRINGER, Secretary.

NEWSPAPER AGENTS WANTED.

Extra inducements will be offered for a few active canvassers who will give their whole attention (for a while at least) to soliciting subscriptions and advertisements for this journal. Apply soon, or address this office, giving address, age, experience and reference. Special inducements to old agents. DEWEY & Co., Publishers,
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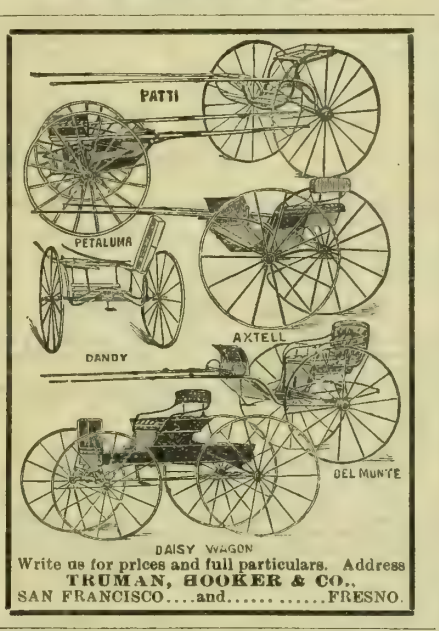
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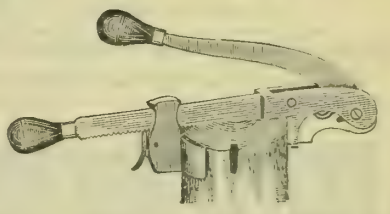
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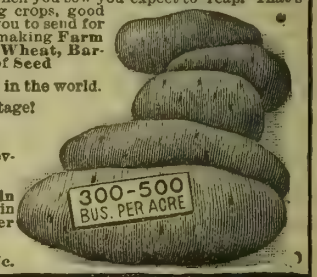
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Offer No. 10. This is the only variety that can lay claim to the title of "TREE TOMATO." It grows to a **HEIGHT OF 10 or 12 FEET,** and produces fruit of an IMMENSE SIZE and of the FINEST FLAVOR. At an enormous price we purchased the true stock of this tomato from the originator, and this seed CAN BE PROCURED ONLY FROM US. It is ORNAMENTAL as well as USEFUL. Two or three of these plants will make a wonderful display, and if cared for, will produce all the tomatoes one family can use. Single specimens **often measure over 6 inches in diameter and weigh over 3 lbs.** The demand for this rare novelty last season was greater than the supply. SEND IN YOUR ORDER EARLY THIS YEAR.

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In order to induce every reader of this paper to test Northern Grown Seeds, we will give, free of charge to every person who sends us 25 cents in silver or postal note for a packet of this rare tomato, and names this paper and number of offer, a COUPON that entitles them to a collection of either flower or vegetable seeds, which at our catalogue prices amounts to 75 cents. WE MAKE THIS LIBERAL OFFER SIMPLY TO INTRODUCE NORTHERN GROWN SEEDS into all sections. The seeds will be sent to you post-paid on return of the coupon to us.

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OUR CATALOGUE for this season is by far the most complete ever published, containing colored plates and hundreds of illustrations. It is a thoroughly reliable guide, and a book that no person who uses seeds or plants should be without. Price, 25 cents. This book will be sent FREE to all who order a package of the **Mansfield Tomato.**

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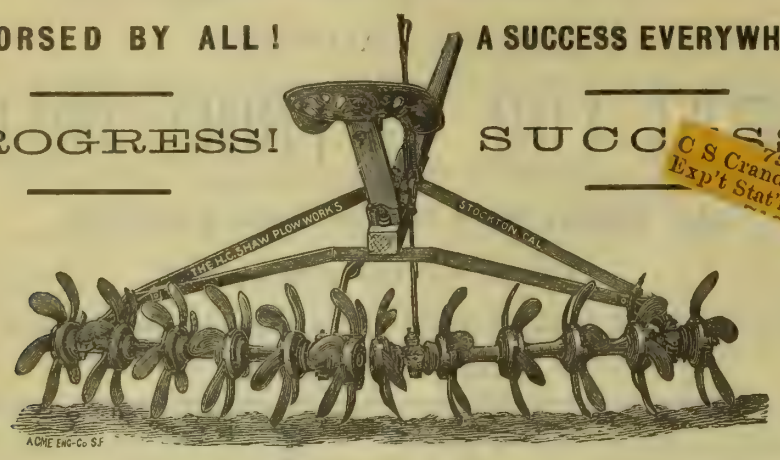
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TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH

SACRAMENTO, CAL., Dec. 31, 1891.

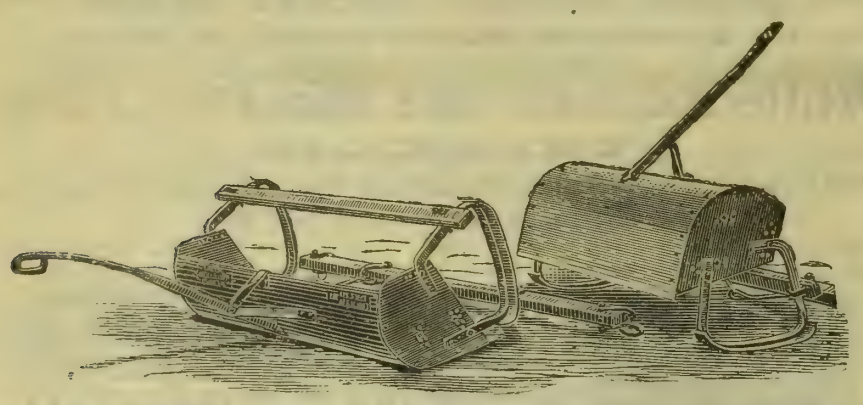
H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

We are Sole Agents for the Coast.

H.C.SHAW PLOW WORKS

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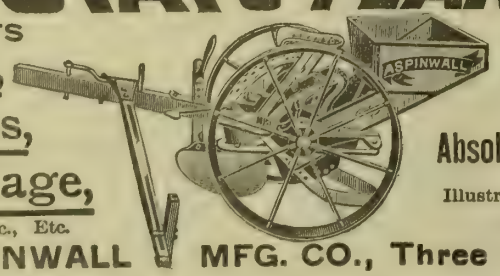
MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours, J. W. SCHMITZ, Supt. Miller & Lux.

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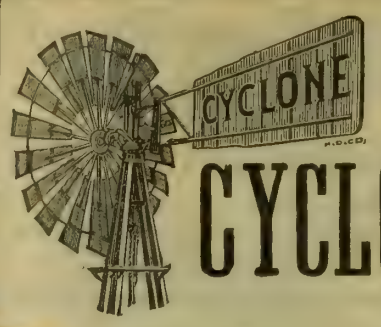
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The cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and du[illegible] mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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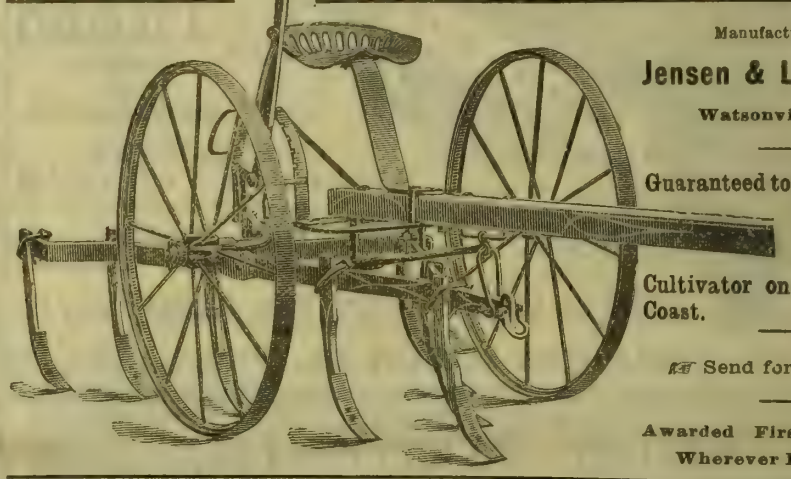
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Guaranteed to do a Greater Variety of Work than any other Cultivator on the Pacific Coast.

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Awarded First Premium Wherever Exhibited.

THE ROCHESTER STEEL FRAME ORCHARD and VINYEARD GANG.



LIGHT WEIGHT! EASY DRAFT! AMPLE STRENGTH!

STEEL FRAME OUTSIDE OF WHEEL

Prevents Injury During Close Cultivation.

LEVER ADJUSTS DEPTH WHILE PLOWING.

Steel Frame, Steel Molds, Steel or Chilled Shares and Lands, Tongueless, Self-guiding, Simple, Strong.

A simple adjustment permits plow nearest vines or trees to make shallow furrow, say two inches, thus avoiding danger to the roots, the others plowing required depth.

Weight of Three-Gang 7-inch only 200 pounds, and amply strong for hard soils. Price complete, $38.00.

The only implement with advantages of both Plow and Cultivator, thus satisfying the advocates of either.

Send for Catalogue and Testimonials.

G. G. WICKSON & CO., General Agents,

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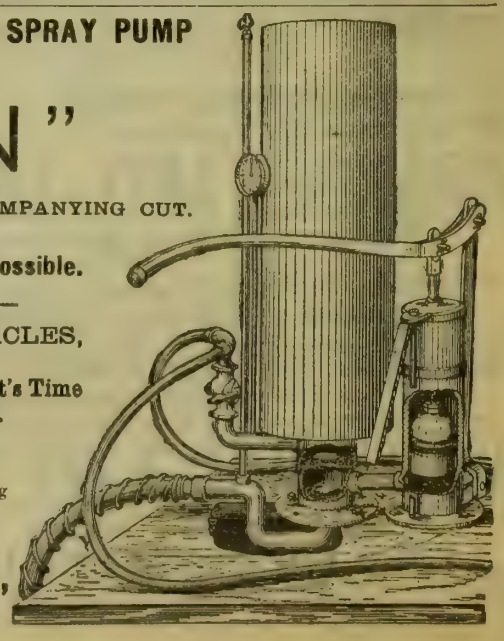
346 N. Main Street, Los Angeles. 141 Front Street, Portland.

IF YOU WANT A FIRST-CLASS SPRAY PUMP

—GET THE—

"BEAN"

WHICH IS SHOWN BY THE ACCOMPANYING CUT.



Every Year they are Improved, if Possible.

—THIS SEASON'S PUMPS HAVE—

HEAVY STEEL RECEPTACLES,

—AND—

Both Valves Can be got at in a Moment's Time with a Common Farm Wrench.

They ECONOMIZE LABOR and throw a penetrating spray. Send for Circulars.

THE BEAN SPRAY PUMP CO.,

SAN JOSE, CAL.

PACIFIC RURAL PRESS

Vol. XLIII. No. 4. SAN FRANCISCO. SATURDAY, JANUARY 23, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

Advance in Sulphur.

Winter spraying for scale insects is now in progress over a great part of the coast, and as the most popular application is the lime, salt and sulphur wash, the result has been a largely increased consumption of sulphur in winter, in addition to the large amounts used at other times of the year in vineyards and in fruit-drying. One of the large handlers of both the ground and refined says that within the past two years the demand has about doubled, due largely, if not entirely, to its use by fruit growers. In consequence of the latter's growing requirements for sulphur, any increase in its market value is severely felt.

The price of ground sulphur, which has been ruling at $1.35 a barrel, was the past week marked up to $1.75 a barrel, with a strong probability that a still higher price will be reached in the near future. The advance in the price is said by Mr. Durand, agent for the grinders, to be due to a recent combination of the mine owners in Sicily, who for several years past have been fighting each other. Their competition enabled New York grinders to secure the raw material at very low prices; but under the combination the price was advanced to $40 a ton delivered in New York. This rise caused Eastern grinders to look to Japan for supplies, and bid as high as $25 a ton on board ship. As Japan is the source of supply for this city, San Francisco grinders found themselves unable to buy at $20 a ton delivered here, and in consequence are paying in Japan the same price bid by New York buyers. Even at the advance, Japan sellers or miners will not enter into a contract for future delivery, except at the price current when required for shipment, which is accepted as indicating higher prices soon.

A Fine Grape Display.

We like to present engravings of fruit displays which show tasteful style in arrangement, as well as intrinsic merit in the materials exhibited. We have not recently seen a grape display which pleases us more for style than the one shown on this page. It represents a pyramid of grapes exhibited by W. W. Waterman of Laurel, Santa Cruz county, at a recent district fair at Santa Cruz. It received a first premium for display and eight first premiums for single varieties. The base of the pyramid was six feet, and its height three feet eight inches. It contained 500 pounds of grapes of ten varieties.

It seems to us that the exhibitor succeeded in adopting a very good form of pyramid, and in covering it so as to preserve symmetry. The intrusion of leaves is just emphatic enough to produce a good effect, and the immense clusters in the foreground are very effective. The engraving will serve not only to impress distant readers with the elegance of California grapes, but will be suggestive to local exhibitors in arranging other displays.



PREMIUM EXHIBIT OF GRAPES AT SANTA CRUZ FAIR, BY W. W. WATERMAN OF LAUREL.

REPORT OF THE UNIVERSITY EXPERIMENT STATIONS.—Prof. E. W. Hilgard has just issued his report as director of the experiment stations of the University of California. It is the largest, most varied in its contents and the most valuable report which has been issued from the agricultural department of the University at Berkeley, and our readers should make application for it while the supply lasts. It is sent free of postage. The scope of the report can be seen by a brief reference to its contents. There are 50 pages on soil analyses, 30 on water analyses, 18 on alkali topics, 28 on fruit and vegetable products, 10 on fertilizers, 26 on olives and olive oil, 15 on fiber plants, 20 on grasses and forage plants, 16 on various industrial plants, 28 on California weeds, 30 on the outlying culture stations, 25 on economic entomology, etc. Readers interested in any of these lines of investigation and experiment should certainly apply for this report.

PARTISANSHIP in the politics of this Government is a very great evil, and there are times when it appears as if there was no sentiment sufficiently earnest or patriotic to overcome it. But it is gratifying to notice that when anything like a serious national emergency arises, not only the people but the politicians are ready enough to put partisanship aside and remember only the honor of their country. The national capital is now given up largely to Chilean war talk. There is no other question, apparently, in the public mind there. And in all this talk there is not the first hint of partisan spirit, not the first apparent effort to turn the situation to partisan advantage. It is a mistake to believe that the spirit of patriotism is dead or even declining in the American people.

THE POOR SHEEP MEN.—The poor sheepowners who lead their flocks upon the sides and summits of the Sierra Nevada, are still catching it lively at the hands of the forest conservers. The latest infliction is a long article in one of the dailies entitled "The Huns of California," which means of course, the devastating sheep men.

A Movement Among Raisin Producers.

Steps were taken at a Farmers' Institute recently held at Fowler, Fresno county, toward a corporate or cooperative movement among raisin producers of the State to secure a better marketing of the product. The Tulare raisin men had previously met and authorized N. W. Motheral to proceed on a mission to Fresno to enlist cooperation. His address on the needs of such action was well received, and in the discussion which followed, as has previously been shown in the RURAL, those Fresno raisin producers who marketed their fruit this year through their own organizations had done better than those who sold to the old line of packers and shippers. There was noticeable in the meeting, which was a large one, a strong sentiment in favor of a general effort on the part of producers to do their own business, and there was finally appointed a committee to issue a call for a general meeting of raisin producers in Fresno, as is described in the report on the Fowler Institute reported on page 79 of this issue. We expect this call will soon be issued and given full publicity.

Evidence accumulates that the low prices for dried fruits last fall was due directly to a concerted bear movement among Eastern dealers, the method being to refuse to buy futures, force the product upon the market and get possession of it at the lowest possible price. The game succeeded better even than the dealers dared to hope. They got possession of the fruit at lower prices than they expected and now congratulate themselves that only three months have passed, prices are advancing and they have still nine months in which to enjoy advancing values before another crop is ready. It will be the producers' fault if they are caught twice in the same trap. The remedy is cooperative packing and selling; putting a fair price on the goods and holding for it. This the producers can accomplish by pulling together.

NOT QUITE.—The reports from the rain makers at Pixley, Tulare county, are that they succeeded in giving the barometer a lot of trouble and sent it tumbling downward, but that it persistently refused to go quite far enough and nothing appeared in the sky but a few clouds, which finally flew away in disgust. Evidently the material was set for a wetter spot than the upper San Joaquin and didn't have power enough. A heavier dose should be tried next time.

ANGORAS.—Next week we shall publish the memorial which the Angora Goat-Breeders' Association of California has addressed to Congress in the interest of their industry. It will be found a very important document. We regret to learn that Julius Weyand of Colusa, the well-known secretary of the association, is considerably out of health this winter. His old associates in goat circles will wish him speedy recovery.

THE BOTANIST.

Concerning English Names for Our Western Forest Trees.

[Written for the RURAL PRESS by J. G. LEMMON.]

OAKLAND, CAL.

To botanists, naturalists, writers, travelers and tree lovers generally, greeting:

Let us institute and maintain a much-needed reform in the use of English or vernacular names for our Western trees.

Let us insist, first of all, upon decent names for our trees.

Let us insist upon suitable names.

Let us insist upon descriptive names.

Let us insist upon distinguishing names.

Let us insist upon having but one name for each kind of tree.

Let us habitually use the one proper name until it is taken up by the public and made the popular name.

Of course, it is admitted that the only really distinguishing names are those conferred and duly published by scientists having full knowledge of an object and all its relations. These are the technical names—those of last resort—for they only may infallibly distinguish any object in nature.

These names are written in Latin, so as to be read and understood by the learned of all nations, but the ordinary English reader often hesitates about dealing with them, not knowing that they are generally easily pronounced, for all the letters are given their proper sound, none are silent, and every vowel is in a separate syllable.

However, I am not now advocating the popular use of the scientific names—that will come about in due time. The youths of America will soon be ashamed not to be as familiar with our principal botanical names as with household words.

But the conferring of English or vernacular names is often left to the indiscriminate fancy of thoughtless persons—those first meeting with the object.

For instance, in one short range of California mountains, there are seven different species of pine. Three of these pines are called by the same name, and that, the unintelligible, indecent one of "Bull Pine."

Now, one of these species—*Pinus Coulteri*—bears the largest and heaviest cones in the world, often weighing five to eight pounds each. What better name for this tree than BIG CONE PINE? A second—*P. Sabiniana*—has pea green or grayish foliage, distinguishing the trees from others at a distance. GRAY LEAF PINE is suggested for this tree. The third species—*P. Jeffreyi*—has dark, often black bark, finely checked, in strong contrast with the lighter colored YELLOW PINE—*P. ponderosa*—with which it is often associated. What better name for this tree than BLACK BARK PINE?

I submit the following list of names for our Western Cone-bearers, selected mostly from the confusion of names in local use, where such were found at all suitable or even passable. In a few instances, a new name has been coined which it is thought aptly describes or designates a given tree, while all indecent or totally inappropriate names, however common or popular they may be, are rigorously ignored.

I invite criticisms or suggestions from all interested, and hold this list open for correction for one year or longer if desired.

The subject is of much more importance at this time than may be apparent to the reader, because lately, attention has been directly called to our forest trees by the publication of extended descriptions accompanied by illustrations in our late Cal. Forestry Reports.

Also collections of specimens of all our trees are to be made this season for exhibition at the Quadricentennial Celebration of our country's greatness, and the English names will necessarily come in for a large share of attention.

Vernacular names with all their unfitness are *sure* to be suggested. Shall we see to it that only appropriate ones are used? Example is a potent teacher.

Let us lead the public mind!

Let us select the best names!

Let us magnetize the good names!

Let us fix the right names!

Cone-bearing Trees of Northwest America, including California.

In this descriptive list, just enough of detail is given to bring out the characters for certain identification, and upon which are based both the Latin and English names of tribes, genera, groups and species. It will be seen that the English name is often but the translation of the Latin one.

CONIFERÆ,

THE CONE-BEARERS.

Resinous, mostly evergreen trees and shrubs of cool, mostly northern regions; fruit mostly cone-shaped and scaly; leaves mostly needle-shaped; flowers diclinous.

Three sub-orders with ten tribes.

PINACEA, pines and their allies.

CUPRESSACEA, cypresses and their allies.

TAXACEA, yews and their allies.

PINACEA, includes three tribes: One, the *Araucarias*, in the Southern Hemisphere, the second the *Cunninghamias*, small dwarfed trees of China; the third, the one that concerns us most—the very important ABIETINEÆ, OR PITCH-YIELDING TREES. Very resinous trees; fruit a woody or leathery cone or burr of spirally overlapping scales on an elongated axis, each scale bearing two usually winged seeds.

Two large sub-tribes.

Sub-Tribe I., Fasciculares.

Trees with the conspicuous secondary leaves in fascicles or bundles of 2 to 5 each, or in elongated tufts of many leaves in each. Three genera, viz: PINUS, CEDRUS AND LARIX.

PINUS—True Pines.

Very useful trees with leaves in fascicles of 2 to 5 each (one species single-leafed) sheathed at base with scaly wrappings. Fruit, a cone or burr of diverse forms and requiring two years to mature (two species require 3 years). Cone scales with protuberances usually tipped with spines or the like. Two Classes.

Class I, *Smooth-Coned Short Leafed White Pines.*

Cones smooth, the protuberances on the ends of the scales devoid of prickles or hooks; seeds large, leaves in 5s. Wood usually lighter-colored, softer and less resinous than that of the other class. Five species in two groups, a trio and a pair.

GROUP 1. LONG-CONED LUMBER PINES. Cones long, narrow, cylindrical, 8 to 22 inches long and 1 to 4 inches thick, on long stems becoming pendent and breaking at maturity. Trees usually very large, with grayish, finely-checked bark, large and long, upper-bearing limbs and light green foliage.

1. *Pinus Lambertiana*, Dougl., "Great Sugar Pine." Trees of the largest dimensions, 120 to 300, or, favorably situated, 250 to 300 feet high and 10 to 20 in diameter; scattered among other trees of the Coast and Sierra mountains at middle elevations. Cones very long, 10 to 22 inches long—the longest known.

2. *P. monticola*, Dougl., "Mountain Pine."—Smaller, lighter-barked trees than the preceding in sub-alpine regions of the Sierra, but northward in Oregon and Washington found at lower elevations; cones narrow, 6 to 12 inches long; scales thin, weak, reflexed at maturity.

3. *P. strobiformis*, Wislizenus, "Arizona White Pine."—Large trees of Ariz. and Northern Mex. with cone scales long and strongly reflexed—(hence once named *P. reflexa* by Dr. Engelmann).

GROUP 2. SHORT-CONED ALPINE PINES. Dwarfed, often depressed trees forming the upper fringes of the forests on the Rocky Mts. and the Sierra Nevada.

4. *P. flexilis*, James, "Limber-twig Pine."—Small or depressed trees of the Rocky mountains and a few on the peaks of certain mountains in the Southern Sierra.

5. *P. albicaulis*, Engelm., "White-bark Pine."—Very white-barked, often repressed trees forming the timber line on certain peaks of the Sierra. Cone globular, set close upon the short, stout, erect, white, annual stems.

Class II. Rough-Coned, Diverse-Leafed Pitch Pines.

Cones rough, armed with conspicuous knobs, prickles or hooks. Wood usually darker, harder, more resinous than that of the first class. Fourteen species in two sections of two groups each.

SECTION A. SUB-TERMINAL, MOSTLY DECIDUOUS-CONED PINES.—Cones arising near the terminal leaf bud, deciduous at maturity. Eight species in two very unequal groups.

GROUP 3. COHERENT-CONED. SHORT-LEAFED, CLOSE-GRAINED PINES.—Cones small, at maturity separating from the stem and remaining entire. Four diverse pairs of species.

1ST PAIR: OBLONG-CONED, PLUME PINES. Cones oblong, cylindrical, 3 to 5 inches long, pendent from the long plume-like branchlets; leaves in 5s. Sub-alpine trees of the Rocky mountains, with a few trees only on the Sierra.

6. *P. Balfouriana*, Jeff., "Fox tail Pine."—A few trees in sequestered nooks near Shasta and in the vicinity of Mt. Whitney. Cones with very small prickles.

7. *P. aristata*, Engelm., "Bristle-Cone Pine."—Similar, but smaller trees on a few peaks of the Southern Sierra, but chiefly in Arizona, New Mexico and Colorado. Cones with long, conspicuous, bristle-like prickles.

2ND PAIR. CALIFORNIA GLOBE-CONED, NUT PINES.—Cones subglobose 1½ to 2 inches thick; scales few; very protuberant, without prickles, widely opening at maturity, loosely holding the large, delicious seeds.

8. *P. monophylla*, Torr. and Frem., "Single-Leaf Pine."—Small, branching trees of the Great Basin, the eastern slopes of the Sierra and the Tehachapi mountains; leaves solitary, terete, pungent-pointed; seeds large, soft-shelled.

9. *P. Parryanna*, Engelm., "Parry Pine."—Small trees in the peninsula of Lower California, with a few specimens extending into San Diego Co., California. Cones smaller than the preceding, with soft-shelled seeds; leaves in 5s.

3D PAIR. SOUTHERN PINYONS OR NUT PINES.—Cones globose and seeds edible, like the preceding. (Not strictly in our Northwest development, but partly included.)

10. *P. edulis*, Engelm., "New Mexican Pinyon or Nut Pine."—Small trees, with small, few-scaled cones and very nutritious seeds; largely collected for export to California and Eastern markets.

11. *P. cembroides*, Zuccarini. "Stone Seed Pinyon or Nut Pine."—Small, round-headed trees of Arizona and Northern Mexico, with small cones, but very large hard-shelled seeds, largely used in Mexico for food.

4TH PAIR. THIMBLE-CONED, THIN-BARK PINES.—Cone very small, 1 to 2 inches long, strongly declined; leaves in pairs. Trees with exceptionally thin bark and small cones.

12. *P. contorta*, Dougl., "Scrub Pine." Very small, scrubby trees, on and near the northwest coast of California and Oregon, the very small cones often remaining on the trees for many years.

13. *P. Murrayanna*, Balf., "Tamarack Pine."—Tall, slender trees in wet, subalpine swamps of the Sierra and northward; also in the Rocky mountains. Cones ovate-conical, 1½ to 2½ inches long. Trees usually discharging pitch or gum. Bark only one-fourth to one-half inch thick. Wood tough and light.

GROUP 4. BROKEN-CONED, LUMBER PINES.—Cones breaking away at maturity from the short stem by an irregular, transverse fracture within the base. They are of medium size, ovate-conical, 4 to 8 inches long, and half as broad at base; leaves in 3s, 5 to 8 inches long. Large trees, with thick, deeply-fissured bark, and yielding lumber of great value. Trees widely distributed at middle altitudes.

14. *P. ponderosa*, Dougl., "Yellow Pine."—Trees of the largest size 200 to 300 feet in height; the largest often 250 to 300 feet high and 5 to 15 feet thick; bark in the typical form, yellowish or whitish, mostly very thick and deeply-fissured into large plates; cones conical-ovate, 2 to 5 inches long; male flowers, long and flexuous. The broken branchlets exhale an odor of turpentine.

Var (*a*) *nigricans*, "Brown-bark Pine."—Trees of medium size, flourishing usually in moister situations than other forms and longer retaining their lower limbs; sapwood usually of many layers; cones, largest of the species, 3 to 6 inches long.

Var (*b*) *Benthamiana*, "Foothills Yellow Pine."—Medium-sized trees in the coast mountains and Western Sierra foothills, usually spire-shaped; cones, smaller and narrower than the preceding.

Var (*c*) *brachyptera*, "Southern Yellow Pine."—Trees of Northern Arizona and New Mexico; cones small, ovate, 2 to 4 inches long.

Var. (*d*) *scopulorum*, "Rocky Mt. Yellow Pine."—A small, spire-shaped tree of the Rocky Mts.; leaves often in pairs and remaining on the limbs several years.

15. *P. Jeffreyi*, Murr., "Black Pine." Chiefly distinguished from the *ponderosa* species (with which it is often associated) by the trees affecting usually more elevated regions and having darker, finer-checked bark; the young branchlets and leaves are colored by a whitish powder; also when broken they exhale a pleasant, aromatic odor like that of orange; cones large, 6 to 10 inches long, ovate, with strong prickles.

Var. (*a*) *deflexa*, "Red-bark Pine."—This form constitutes one of the principal timber trees of the high Sierras, notably near Truckee. The bark is usually reddish brown, thick, coarsely-checked and braided, especially toward the top of the tree; cones, large, 6 to 10 inches long.

Var. (*b*) *peninsularis*, "Peninsula Pine."—On the San Rafael mountains of Lower California; bark, grayish brown, thick, deeply-furrowed; cones, remarkably abundant and large, 6 to 8 inches long.

Var. (*c*) *ambigua*.—A tree of the lake region of Western Montana, "with purple cones and long glaucous foliage"

GROUP 5. NEW OR LITTLE KNOWN PINES OF ARIZONA AND SOUTHWARD.—Small coned trees resembling our Northern Yellow Pine.

16. *P. Arizonica*, Engelm., "Arizona 5-leafed Lumber Pine." In the highest mountains of Arizona and Northern Mexico.

17. *P. latifolia*, Sargent., "Arizona Broad-leafed Lumber Pine." Rare trees in the Santa Rita mountains of Central Arizona.

18. *P. Chihuahuana*, Engelm., "Chihuahua or Top-Coned Pine." Mountains of Southern Arizona and Northern Mexico.

SECTION B.—LATERAL, MOSTLY PERSISTENT-CONED, LONG-LEAFED PINES.—Cones arising laterally, *i. e.*, along the bearing stems, usually at some distance from the apex; mostly not falling at maturity, but persisting, and either becoming inclosed by the later layers of wood, or the peduncle is stretched and at length broken by the enlargement of the tree, while the cone is often carried outward confined in the bark, leaving a channel behind it to the heart of the tree. Leaves large and long, 6 to 12 inches. Six species forming a pair of trios, or groups.

GROUP 6. HEAVY, SPINE-CONED, LONG-LIMBED PINES.—Cones of the heaviest, largest and hardest description, on long, stout, spreading peduncles, opening at maturity, but often remaining until forced off by the enlargement of the tree. Scales of the cone very large and thick, often terminating in long, stout, curved spines or hooks; seeds very large, black, thick-shelled. Leaves in 3s or 5s, very large and long, 8 to 14 inches. Picturesque trees remarkable for their usually divided trunk or very long limbs and for their heavy, spine-bearing cones.

19. *P. Torreyana*, Parry, "Torrey Pine."—A few small trees, not to exceed a few hundred in all; buffeted, often prostrated by the ocean winds at Del Mar, San Diego Co., with a few on Santa Rosa Island. Leaves in 5s, very large and long, 8 to 12 inches. Cones broadly ovate, 4 to 6 inches long, weighing 1 to 2 pounds, and armed with short, stout spines.

20. *P. Coulteri*, Don., "Big-Cone Pine."—Trees of medium size, with dark green, abundant, three-leaved foliage; composed of very large and long leaves, 8 to 14 inches long. Cones elongated, elliptical, of matchless size and weight, 15 to 20 inches long and often weighing five to eight pounds. The outer hooks are often two to four inches long, and curved like a nail grab. Trees of limited range in the Southern coast ranges and San Bernardino mountains.

21. *P. Sabiniana*, Dougl., "Gray-Leaf Pine."—Usually small, round-headed trees of the hot, sloping foothills with divided trunks and scant foliage of grayish color, all but the leaves of the season drooping downward, or early falling away. Cones broadly ovate, weighing 2 to 5 pounds, armed with stout, short hooks; seeds very large, one-half to three fourths inch long, with a thick, narrow wing. Leaves in 3s.

GROUP 7. CLOSE-CONED, SLENDER PINES.—Cones in verticils or clusters, usually strongly declined and gibbous; usually long-persistent, and remaining long-closed, holding the seed. Small trees mostly crowded into dense groves, hence tall and slender; maturing fruit when quite young. Leaves in 3s or 2s.

22. *P. Banksiana*, Lambert, "Canada Horn Cone Pine."—A small tree, with its peculiar, persistent cones curving and pointing toward the apex of the branch like little horns (the only instance in the family). Reaching the Selkirk mountains in British Columbia.

23. *P. Californica*, Loiseleur (until recently called *P. insignis*, Dougl.), "Monterey Pine."—Beautiful trees on Point Pinos, near Monterey, and abundant in cultivation. Leaves in 3s.

Var. (*a*) *radiata*, "Spreading-Cone Pine."—The large-coned form near Monterey Bay.

Var. (*b*) *levigata*, "Nearly Smooth Cone Pine."—Cone small, nearly smooth. Trees on the outskirts of the forest farthest from the ocean.

24. *P. attenuata*, Lemmon (until recently called *P. tuberculata*, Gordon, and in English, "Knob-Cone Pine") "Narrow-Cone Pine."—Usually small, early bearing, slender trees on sunny slopes of the Northern Sierra, and rarely on the coast ranges. Cones strongly declined, narrow and pointed, 3 to 7 inches long. Remaining on the trees and unopened for an indefinite number of years. Leaves in 3s.

25. *P. muricata*, Don., "Prickle-Cone Pine." Small, slender trees usually in swampy places along a limited portion of the Coast Range, mostly northward from San Francisco. Cones clustered, ovate, 2 to 3 inches long, with small, sharp, persistent prickles. The cones have been known to remain unopened for 20 to 30 years, then to release good seeds. Leaves in pairs, usually long, 3 to 6 inches.

OTHER FASCICLE-LEAVED TREES.

The other two (or three) genera—TRUE

CEDAR, LARCH and FALSE LARCH (?)—have their leaves in fascicles of few to 60, tufted on the ends of short branchlets.

CEDRUS LINK, TRUE CEDAR.—Trees with cones erect, large, depressed at the ends; the leaves persistent several years. Cultivated in California.

26. *C. Libani*, Barrelier, "Cedar of Lebanon."—Leaves dense, grass green; branches flat, fan-shaped, on long, drooping limbs.

27. *C. Deodara*, Loudon, "Tree of God, Indian Cedar."—Leaves glaucous or whitish in larger fascicles on fewer, more irregular branches.

LARIX, LINK, LARCH OR TAMARACK.—Trees with cones pendent on branches of the previous season's growth; leaves promptly deciduous.

28. *L. Lyallii*, Parlatore, "Woolly Larch." Small trees of the Cascades and eastward to the Rocky Mts., the branchlets and cones clothed with whitish hairs, the cones promptly deciduous.

29. *L. occidentalis*, Nuttall, "Great Western Larch."—Large, usually tall trees of the Northwest, on high or dry situations, peculiar for their thick bark and the cones bristly with long-exserted bracts.

[*To be concluded.*]

HORTICULTURE.

The Mango.

MELBOURNE, FLA. DEC. 15.

TO THE EDITOR:—The mango ranks with the orange, pineapple and banana, the four choicest fruits of the tropics which compare very favorably with the peach, pear, apple and grape, the four typical temperate fruits.

The fruit is oblong, roundish or kidney-shaped, flattened, and contains a large flat seed or pit, to which the flesh adheres by a tough fibre after the manner of a clingstone peach. The skin is thick, peels off much like that of a banana and the pulp is orange, salmon or red and of a peculiar rich, spicy flavor, very luscious and juicy. Different varieties differ from each other greatly, but as a general thing they may be compared to clingstone peaches with a pineapple flavor. Like oranges and peaches, they sport from seed to some extent and thus new varieties can be produced. The tree bears at four or five years from the seed, therefore only seedlings have been planted; but by following the analogy of the orange industry we are trying budding by a peculiar process which promises well so far.

The tree yields enormously; seven year old trees having been known to bear five bushels per tree. The fruit will bear transportation as well as peaches or grapes.

The rind varies in color through all shades of pink, carmine, red, orange, yellow, salmon and green in different combinations and is very showy. The leaves are long and narrow and leathery and the new growth a brilliant wine color, which in contrast with the deep green of the mature foliage combined with its wonderfully symmetrical habit of growth, render it one of the most desirable of ornamental trees. The tree delights in a deep soil, but will thrive in sand, clay, gravel or rocks. While young, frost will injure it, but if protected for the first two years, it will endure hard frosts without harm and nothing but a heavy freeze which will encrust the ground will injure a bearing tree. Even if killed to the ground as they were with us in January '86 they will sprout again from the root and bear, like the guava, the second year after.

It is said that Columbus named the guava by exclaiming in Dago-English when the natives brought him some as a present and the peculiar aroma smote his olfactories, "Go offa! go offa!" The same authority has it that the mango was thus named by a Yankee peddler who was taking a trip through farther India with a stock of buttons, needles and looking-glasses. Writing back to his wife in Brookline he spoke of a fruit with "an unpronounceable native name which makes a *mango* wild with delight when he first tastes it."—JOHN B BEACH.

Injury to Citrus Fruits.

We hoped that the injury by wind and frost to citrus fruits of Southern California had been exaggerated in the early reports, but it seems that serious losses have been sustained. The Los Angeles *Times* of Jan. 9th, after taking time for full inquiry, arrives at the following conclusion:

This is undoubtedly the most destructive frost that Southern California has experienced for eight years, and perhaps equals in damage the hard freeze of eight years ago. The loss is of course much greater because there are so many more orchards to suffer. Experts in the orange trade are unable to give any accurate estimate of the scaling down of the product. In the early part of the season, it was thought that Southern California would be able to export this year from 4500 to 5000 carloads of citrus fruits. It is now doubtful whether half that quantity will be available. If this be the case, then the loss to the citrus industry of Southern California is more than $1,000,000 in fruit alone.

Transportation of Diseased Trees May Be Prohibited.

It is telegraphed from Washington that Congressman Caminetti has prepared a bill of great importance to the horticulturists of California and he will introduce it to-morrow, if possible, with the intention of having it reported next week, thus giving it a place on the calendar. It will prohibit the interstate transportation of trees, plants, vines and all nursery stock infected with scale-insects, codlin moth or other pests, with their eggs or larvæ.

The bill provides heavy penalties for violations of the law and covers every loophole of escape so well that violations will be extremely hazardous. Owners or agents who ship infected trees or plants are liable to a fine of $1000 or imprisonment for one year, or both. Railroad, ship, steamship, express or other transportation companies, if caught in the act of shipping such trees or plants from one State or territory into another, are also liable to pay a penalty of $1000. It is not necessary to convict them of a specific act of carrying from one State to another, but if dangerous trees are found in their possession, consigned to another State or Territory, sufficient proof will have been acquired to convict. The penalty will be recovered by a civil action brought in the United States Circuit Court. Foreign railroad or steamship companies are equally liable.

To add to the stringency of the law, conductors, masters, captains, or agents in whose care infected plants are found can also be fined $250 each or imprisoned for three months, or both. The Department of Agriculture is empowered to prepare rules by which transportation companies and their officers and agents, as well as United States officers, can guard against the violation of the Act. The Department may also appoint agents whose duty it shall be to enforce the law where States—as in the case of California—have boards or commissions empowered to guard against the introduction of horticultural pests. The Department of Agriculture may appoint some board or commission, provided no expense is incurred by the United States in so doing.

This bill carries no appropriation and the correspondent who sent the above outline thinks it may pass.

THE APIARY.

A State Bee-Keepers Association.

A meeting of the Southern California Bee-Keepers' Association was held last week at Chamber of Commerce hall, Los Angeles. President Abbott was absent on account of illness, and Vice-President J. F. McIntyre of Fillmore, occupied the chair. Remarks were made by Prof. A. J. Cook of Michigan Agricultural College, who referred to the wonderful climate of Southern California. "The Causes of the Failure of the Honey Crop" were considered by several members. John G. Corey said that an unusually low temperature was very discouraging to bees. As soon as warmer weather comes, the bees go to work with renewed activity. The year 1877 was very disastrous, and there was a lack of feed. The best temperature is from 80 to 100. The same subjects were discussed at length by other speakers.

The question of organizing a California Bee-Keepers' Association was discussed and such an association was decided upon. A constitution and by-laws were reported and adopted with slight amendments. The jurisdiction of the association includes the entire State.

Every county represented by membership is entitled to a vice-president. At 11 o'clock a recess of 30 minutes was taken, to give members a chance to sign the constitution and pay their dues.

The association proceeded to elect officers as follows: President, J. F. McIntyre; secretary, J. H. Martin; treasurer, G. W. Broadbeck; vice-presidents—L. T. Rowley, Los Angeles county; F. H. Hunt, San Bernardino county; T. F. Arundell, Ventura county; J. A. Odell, San Diego county; executive board—J. W. Strong, Allen Barnett.

Professor A. J. Cook, A. I. Root and Mrs. A. I. Root were elected honorary members.

Bee Culture in California.

TO THE EDITOR:—It was gratifying to one who has made a study of the honey product on this coast to find at least one voice raised in your columns against Mr. H. E. Hill's wholesale denunciation, in the *American Bee Journal*, of California bee-men and their methods in the apiary. Mr. Hill's extravagant statements are certainly not without some foundation of truth, though his conclusions are evidently drawn from visiting a few old time "bee ranchers," whose ignorance and shiftlessness are deserving of censure. An investigation of any one of the large apiaries of Ventura, Los Angeles and San Diego counties must impress the most cursory observer with the fact that apiculture in California is now in the hands of intelligent, practical men who are unmistakably up in the science of the subject, and who stop short of no reasonable expense and labor to promote the best possible results from their colonies.

In consequence of California's unequaled advantages for honey-making, beemen here are not obliged to put into practice a hundred details which are absolutely essential to secure any degree of success in Eastern apiaries. An owner of two hundred swarms of bees in this State finds he can compass their best interests with no greater outlay of time than three months' work among them every season. A novice in California bee culture, as Mr. H. E. Hill undoubtedly is, would readily make the mistake of supposing such easy bee-farming must indicate reprehensible carelessness on the part of the apiarist.

Speaking of hives, the correspondent of the *American Bee Journal* is again in error. The writer can state from personal knowledge that either the Langstroth or the Harbison hive is almost universally adopted by prominent beemen throughout Southern California. They also use the various machinery which in late years has made the honey industry quite as scientifically carried on as the generality of modern pursuits.

The Southern California Bee-Keepers' Association has efficient men at its head, and their prompt introduction of ways and means to promote the advancement of apiarists deserves the general recognition of all iuterested in apiculture upon this coast. Inspectors are sent out to visit all the apiaries in the principal honey counties, and their efforts to exterminate foul brood in hives are so rigorous and effective as to make possible the ultimate extinction of this dread disease.

Mr. C. N. Wilson, of Los Angeles, an able writer on California bee matters, says: "The object of the Bee-Keepers' Association is the advancement of apiculture generally, in all its branches and interests; to bring the producer and consumer of honey closer together; to effectually enforce the laws of this State as to foul brood among bees; to get exact information as to where the best supplies, hives, sections and apiarian appliances can be obtained; to secure a more uniform price for honey; to cooperate with all other societies and organizations of progressive bee-keepers throughout the world."

The same gentleman, in a recent letter to the writer, has this to say of the present outlook of Southern California bee men: "This has been a slow year from start to finish. The early part of the season was cold and cloudy, much fog and too little sun to induce swarming among the bees. The abundant rains insured good growth of the sages and those trees, shrubs and plants that make up bee pasturage, but owing to the dark weather, little nectar was secreted in the blooms. In some places, directly on the sea coast, bees had to be furnished sugar for subsistence, a very unusual thing, as you know, in this country. All inland apiaries had sufficient pasturage for the daily use of the bees, and many colonies stored more or less honey. The bees in Antelope Valley and on the outskirts of Mojave desert gathered a large surplus of honey, averaging more than 50 pounds to the stand. In fact, in a few instances, over 300 pounds of honey were taken out of a single hive.

The price of honey this year has been somewhat affected by the low price of sugar. Nevertheless, in my opinion, the future of California bee-keepers has a fair prospect. As they gain in experience they do better work year by year. And then it is the pleasantest occupation in the world."

A day spent last May at Twin Oaks, one of Mr. Wilson's apiaries in the San Fernando foothills, is one of the happiest and most profitable memories of your correspondent.

NINETTA EAMES.

THE RAVEN is said to be the only bird known to entomologists which is a native of every country in the world.

FORESTRY.

Eucalyptus Ficifolia.

PASADENA, CAL.

TO THE EDITOR:—This showiest of the Eucalypti "makes a distinct forest belt in the coast region of Western Australia, from the western side of Irwin's Inlet to the entrance of the Shannon, though never actually approaching the sea shore."

"The specific name of this gorgeous tree was chosen before the brilliancy of its flowers was known, and alludes to the similarity of its leaves to those of the fig trees of Ficus elastica, the principal caoutchouc tree of India."

It bears a strong resemblance to E. calophylla, but there is a marked difference in the seedlings of the two species, the seedling leaves of the latter never being "inserted above their base to the stalk," as they are in ficifolia.

Dr. Mueller says of this, in the number of his great work when it was first published: "This eucalyptus is one of the most splendid of recent acquisitions to horticulture, and was introduced by the writer of this work into the Botanic Garden of Melbourne in 1860, where it flowered already a few years afterwards while yet only in a bushy state. Soon subsequently he commenced to introduce it abroad. Hardly anything more gorgeous can be imagined, than forests of E. ficifolia about the end of January or beginning of February, when the brilliant trusses of flowers diffuse a rich red over the dark foliage of the whole landscape occupied by this tree. It should have a place in every select ornamental arboretum in zones free of frost and excessive heat."

It is further remarked that the "trade in seeds of this species has proved already extremely profitable to the vendors," and that they are constantly sought by the birds.

Fig. 1, in the plate shows the unexpanded flower, natural size, with the lid lifted. Fig. 7, a transverse section of the fruit. The numerous stamens indicate the enormous productiveness of a single flower.

There is another charming little eucalypt, a small shrub or minature tree, discovered in 1849 by Dr. Herman Behr of San Francisco. My specimens were presented to me many years ago by Henry Edwards, in a valuable collection of Australian plants. Dr. Mueller says of Dr. Behr: "His prior travels had shed much light on the flora and fauna of this country, and his ardor for scientific research has been unabated for 30 years in California where he has more particularly contributed to the entomologia of that country.

JEANNE C. CARR.

The Forest Reserve System.

The grand object of the proposed National forest reserve, set forth in a memorial recently presented to President Harrison by the American Forestry Association, is:

Not to withdraw these lands absolutely from occupation or use, but rather to increase their usefulness and the sum total of the productiveness of the territory, by making each acre do its utmost for the benefit of our people.

In the case of these reservations it is the purpose—

To minimize the destruction of forest areas by fires and the wasteful and erroneous methods of forest use prevalent.

To maintain and increase the lumber industry by a permanent and continuous yield of forest products on non-agricultural lands which, under the present methods, are laid waste by fires and made less productive.

To promote railroading and wood manufacturing industries by providing constant and increasing supplies of the raw material from cultivated forests, and creating a home market for labor and supplies at these manufactories.

To cultivate and develop new growths of valuable timber wherever the matured trees are cut for the market.

To specially guard and protect the sources of our main rivers and lakes and thus continue their flow for the benefit of the people at large.

To prevent these lands from being taken for timber only and abandoned after cutting the best, and also to secure *bona fide* settlements on the agricultural sections.

Nor is it the purpose to prevent prospecting for minerals, opening of mines, or other legitimate and rational use and development of these lands.

To attain these objects the American Forestry Association urges not only the reservation system, but at the same time the enactment of *administrative* laws which will secure these objects and in a simple manner satisfy all local wants.

PATRONS OF HUSBANDRY.

Our Official Grange Edition.—The Grange news of most general interest is given through all editions of our paper on this page One or more pages, devoted to Grange interests, are given in our Grange edition, which any subscriber can receive in lieu of the regular edition WITHOUT EXTRA COST. by addressing the publishers.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

If the wise prophets of our nation are not mistaken, the farmers of America are about to enter on a new era of prosperity. From many men and from many sections come the announcements that agriculture is going to pay. We rejoice, with millions of men, that the daylight of agricultural prosperity seems to be breaking. But it is well, at this time, to be careful. It may be there is an effort on foot by those who have axes to grind to deceive the soil cultivators. We all know what money and politics will do. There is a terrible struggle on hand, and the hothouse politician and the money broker have seen their foundations trembling, and they have seen and realized that the American farmer is the man who is making the confusion. Now these cunning fellows do not want to be thus overthrown. They do not want to be so quickly thrown out of a lucrative employment. Perhaps they have seen the handwriting on the wall, and know, if the conflict continues, they must sink. Hence, these politicians and millionaires may have concluded to pacify the farmer. They may have concluded to pay a trifle more for farm produce, and to temporarily reduce the rate of interest, and so forth, on purpose to have the farmer withdraw his forces from the field of the present conflict, and again expend all his strength (mental, moral, social, financial and political) on the farm. Nothing would suit the ordinary politician, the railroad president, the banker and the most of the lawyers better than to have the farmer leave all else and attend to his farm, and nothing but his farm. But a word to the wise is sufficient.

It is right that the farmer should attend to his farm. That is his business. But it is also right that he look to the schools, to the courts, to the boards of supervisors, to the city councils, to the legislatures, to banks, to railroads, to the acts of Congress, and to the treaties being made; and, last, though not least of all, to primaries, to conventions, to platforms, to end, best of all, to *men*. Don't be deceived, fellow farmer! We must keep up the fight. Be ever vigilant, for that is the price of your liberty. Keep up your organization. Stand by the Grange. Always keep the powder dry, even though you may not want a fight. We are on safe ground now; let's hold it. Let the prices of farm products advance; let agriculture prosper; let politicians tremble; let millionaires work; let right prevail, and, by all means, stand by the Grange.

Masters of subordinate Granges, send your recommendation for County Deputy. The Master of the State Grange wants you to act at once. No time should be lost in useless labor.

Send your petition to Congress asking for free rural mail delivery.

"United we stand, divided we fall," is a truism as applicable to Grange work as it is to anything in this world. In all ages, at all times, with all people, results are brought about by concert of action. Individual effort, backed by intelligence, is all right. It is a prerequisite to the most successful line of cooperation. But to make the greatest success of success, we must have harmonious, intelligent union, association, combination.

There is no danger of concentration of power in the National Grange. Each State has two votes and no more. New York is no bigger in a session of the National Grange than South Carolina. Nor is Rhode Island any less than Texas. Each State is the equal of every other State, so far as votes are concerned.

Have you ever tried to see how much you could say for the good of the Order? Try it!

Do write for the RURAL PRESS.

If you want to belong to a charitable, economic, educational, social, energetic, fraternal organization, join the Grange.

Send name for County Deputy. Name a worker. Then help him to extend the Grange.

Congress has "sessioned" for almost two months. What has been done?

The subordinates will soon get an official letter, concerning public meetings on special days. Let prompt answers be returned. If you want a State Grange officer to meet your people and talk to them of the Grange and matters that affect their situation, you will surely vote to hold a special meeting. The Executive Committee will do all they can do to scatter good Grange seed on fertile, well-cultivated soil. How much will you do toward maturing and gathering the the crop?

If you have anything on your farm, or if you can make anything that is a world beater, send it to the Columbian Exposition. Help the fair.

Send a charter list for a Grange, and get one dollar for each name up to 25. It will pay you. Try.

Three old Granges are now seeking information of how to get into camp. Seek and ye shall find. Knock and the Grange door will be opened unto you.

Send good Grange news and notes to the RURAL. Don't be afraid of overdoing the work, but be sure to give fresh, progressive ideas. This is a thinking age.

Who will canvass Stanislaus county in the interests of the Grange?

Wanted—a man who will organize the farmers of California into subordinate Granges. There are many farmers not yet in the Grange.

San Jose Grange.

CAMPBELL, CAL.

TO THE EDITOR:—Once more I come with my budget of items to let the fraternity know that we are not only alive, but are kicking—that is, we are at work, hoping that our work will prove beneficial to all interested in the Order.

When the Grange convened to-day, a number of the members were buried in their PRESS looking for the report from the Corresponding Secretary, and lo, it was easily found and quickly read.

To-day we conferred the first and second degrees on two candidates, received one petition from an applicant, and are looking earnestly for more.

After the work, some little time was devoted to a brief literary program; and here let me say that if Granges desire to make their meetings interesting, let them try a short program embracing music, readings and off-hand remarks, but long, set speeches, never! Nothing will so effectually kill an organization of this character as too frequent indulgence in set speeches.

To-day's program opened with a piano solo by Sister Jefferds, followed by a select reading by Sister Jennie Saunders; then came a paper by Bro. Amos Adams entitled "The Grange and Its Relation to Class Legislation." In his paper, Bro. Adams controverted the idea that the Grange is opposed to class legislation, and cited many instances, in both State and National assemblies, wherein the Grange advocated class legislation, but then it was not that harmful kind, to which every Grange should be in earnest opposition. The Grange wants an equal share in the class legislation enacted in this country. The writer favors the two per cent loan bill.

Following the paper came a brief discussion of its salient features, which, so far as expression was had, met the approval of the members.

Bro. Pomeroy read an extract from some paper, which roasted political bosses and declared that Wall Street ruled the bosses, and that the latter, to a great extent, controlled legislation. This closed the program.

Our Grange is making an effort to form a branch traffic association to work in unison with the association lately formed in San Francisco.

I beg leave to offer a suggestion to the Granges of the State, which is, that when any business other than that of a routine nature is transacted, make it known through the columns of the PRESS and your local papers, so that the world at large may see your light and know that what you are doing is not altogether done in the dark.

R. P. MCGLINCY.

The Late C. J. Cressey.

On motion of E. W. Davis, the following preamble and resolutions were unanimously passed at the annual meeting of the stockholders of the Grangers' Bank of California, held January 12, 1892:

WHEREAS, The stockholders of the Grangers' Bank, in 18th annual session assembled, have heard, with profound sorrow, of the death of C. J. Cressey, one of the founders of this bank and one of its true, faithful and respected directors and former executive head; therefore be it resolved by this body of stockholders:

That we bow in submission to the will of Him who doeth all things well.

That, in the death of C. J. Cressey, this bank has lost a valuable, honest and safe adviser; a man at all times loyal to the bank's, and, at the same time, to the people's best interests.

That a copy of this preamble and these resolutions be spread on the minutes of this annual meeting, and a copy, duly attested, be forwarded to the family of our deceased colaborer.

FARMERS' ALLIANCE.

Our Alliance Edition contains, additional to this page Alliance news which subscribers can receive WITHOUT EXTRA COST, by applying for the same.

An Alliance Talk.

Jesse Poundstone:

Who is the most dangerous man in this country to-day? Is it the ward politician? Is it the political boss? Is it the corrupt office holder, the thieving monopolist, the boodler, the briber, or the bum?

No, all these are bad enough, but we have a man more dangerous, more to be dreaded, more to be despaired of than any of the above. He is the man who is so selfish, who has so little regard for the welfare of his country, who is so insensible to the sacred trust reposed in him by his forefathers that he is willing to sit quietly back, take his ease and allow an institution like Boss Buckley to flourish. Yes; we raise our hands in horror at such men as Buckley and his gang, never thinking that they are the legitimate offspring of the citizens who fail to do their plain duty. Just so long as we have such citizens, who consider themselves above taking an interest in public affairs, just so long will we have bribery, corruption and boodle to contend with.

The Farmers' Alliance is doing more than any other party or organization to change this condition of affairs. Until recently the farmer kept out of politics from natural modesty and the impression (created and encouraged by political schemers) that he was not smart enough to understand the principles upon which the Government was founded, or intelligent enough to take a hand in making the laws. Stern necessity forced the farmer to *think*, and as far as politics is concerned, from the moment he began to *think* from that moment the farmer "was in it."

So don't be a "stay at home man." Don't stay at home all the year and then go to the polls and vote a ticket that a few bosses have arranged for you and in which you have had nothing to say. You will be just as good a farmer and a much better citizen if you will consider that you have a personal interest in the way public affairs are managed and your taxes spent. If the farmers will do their duty (and their most important duty is to join the Alliance) at the coming elections the disgraceful scene enacted at Sacramento last winter will not be repeated again.

Resolutions of Orange Alliance.

WHEREAS, We are bound together for self-protection against fraud and usurpation of the money power,

Resolved, That we most heartily endorse the action of Judge Wallace in his noble effort to ferret out crime and punish criminals, be they rich or poor, and commend him to the voters of California as a lover of truth and justice and a man worthy of our confidence and support.

Resolved, That we are most emphatically opposed to the Government issuing bonds to build the Nicaragua canal on any other conditions than that the Government shall own and control the canal.

RESOLUTIONS OF SYMPATHY.

WHEREAS, Death for the first time has invaded our ranks and taken from us our friend and brother, Charles Henry Young: therefore be it

Resolved, That we deeply mourn his loss and hereby offer our heartfelt sympathy to the bereaved wife and family,

That the charter of the Order be draped in mourning for thirty days.

That these resolutions be spread upon the records of the Alliance as a perpetual memorial, and that the same be published and a copy be sent to the family of the deceased.

By order of Orange Alliance No. 160, F. A. & I. U.

HIRAM HAMILTON, S. J. GOODRICH, C. R. BUSH, Committee.

Orange, Cal., Jan. 8, 1892.

San Miguel Convention.

To the People's Party Convention of San Luis Obispo County, Assembled at San Miguel: We, your committee appointed to present a platform for the People's party of this county, beg leave to present the following report:

WHEREAS, The affairs of the country show in the administration of government so many evils, in forms of oppressive monopolies, as national banks, gigantic railroad corporations, and unjust taxation, subverting all the powers of government, and destroying the elective franchise, thus overthrowing the dearest rights and principles of the American people; therefore, be it

Resolved, That we, the people of San Luis Obispo county, in mass meeting assembled in the city of San Miguel, California, on this the 7th day of January, 1892, firmly convinced that the time has come for independent political action, do hereby affirm the principles set forth at the Cincinnati Convention, and reiterated at Los Angeles on October 22d last, believing that the right will prevail, and that the freeman's ballot will rectify all the evils of government, which is herewith submitted.

The following supplemental report was adopted:

WHEREAS, As the last sample of "Simon Pure Justice," we have the disgraceful decision of our Supreme Court in the "boodler" cases in San Francisco;

Resolved, That the so-called justice of the day, as given to the people by their servants clothed with authority by themselves, is something that should bring the blush of shame to the cheek of every honest man and woman.

Government by the Many.

FRESNO, JAN. 18, 1892.

TO THE EDITOR:—The Farmers' Alliance in this State is reputed to have some 30,000 members; yet the decision as to what political declarations it should make was given, and its laws were made, in 1890, by about 45 persons, and this last year by not over 130, I think. A carefully prepared proposition to give the membership of the order a chance to pass upon the political demands and the State laws of the order before they became authoritative—a proposition to put the power to make them authoritative into the hands of the membership of the order in this State—was widely published previous to the State Alliance meeting the year past, was presented to the Committee on Amendments to the Constitution and Bylaws at the meeting, but was not even reported by the committee to the State Alliance so that the delegates could pass upon it. The changes in the State Alliance constitution recommended by President Cannon, approved by the committee and adopted by the State Alliance, were mainly in the direction of depriving the membership of the order of power over their own welfare, and of putting that power into the hands of one man, the President. This may have been wise; time will tell.

The putting of the control of questions affecting the welfare of all, into the hands of a few has been the main cause of the failure of the various reform organizations which have sprung up in this country in the last 30 years; and it will continue to be a cause of failure so long as it is retained and wherever retained. It is not so much that the few to whom power is delegated do wrong, as the danger that they may do wrong—the fact that they have the legal power to do so—which renders the public distrustful of reform organizations; loth to enter them, and makes persons distrustful of each other after they are in them.

The farmers of the United States are as keenly alive to the benefits of organization as any class of men; but many of them are instinctively distrustful of the efficacy of an organization—a political organization—the control of which, and particularly of its political function, is put into the hands of a few. Can you blame them? The existence of giant monopolies in the State and nation proves that organization controlled by minority does not bring that equal and greatest good to all for which we pray. Can it be that a form of organization which proves so faulty, which proves productive of monopoly, when applied to the State, will prove any different—will change its nature and become a mother of plenty—when applied to a reform organization? Will it not rather promote the growth of little monopolies within the order?

In the foregoing considerations there is, I think, no cause for discouragement; but much cause for a great awakening on the part of the people of the United States to the need of reform in the political system. In this class of reform we are behind England and France, and even Switzerland—Switzerland, which, with its three million people of different nationalities, is to-day the most peaceful, prosperous and happy nation of Europe, and the only democracy, or real government of the people, *by the people*, on the face of the earth, of any size! What our Government needs to make it that beneficent thing which a Government by the people would always prove, I believe, is not so much a new party (though I am for the new one) as new measures; not so much new men (though we need some badly enough) as a new order of doing business.

The matter rests with us. There will be a new order of things in a hurry when the people once raise their voices unitedly in a demand for one. Will we do so? When?

F. P. C.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

The Montana Convention.

As promised last week, the RURAL PRESS is now able to give its readers a full report of the proceedings of the Irrigation Convention held at Helena, Montana, on the 7th, 8th and 9th of the present month.

There was a very full attendance of delegates and Ex-Governor Hauser was elected permanent chairman. After the usual routine business had been transacted, the platform of the Salt Lake convention was read as follows:

Resolved, That this congress is in favor of granting in trust upon such conditions as may serve the public interest to the States and Territories needful of irrigation, all lands now a part of the public domains within such States and Territories, excepting mineral lands, for the purpose of developing irrigation to render the lands now arid, fertile and capable of supporting a population.

Resolved, That it is the sense of the convention that the committee selected to propose and present to Congress the memorial of this convention, respecting public lands, should ask as a preliminary to the cession of all the lands in the Territories in accordance with the resolutions of the convention, a liberal grant to said Territories and States to be formed therefrom, of the public lands, to be devoted to public school purposes.

WHEREAS, Large areas of arid lands and semi-arid lands, situated upon the great plains in the Dakotas, Western Nebraska, Kansas and Oklahoma were settled upon in good faith by homeseekers, under the supposition that they were entering agricultural lands; and

WHEREAS, The settlers upon such lands have expended much time and money upon the same, and paid into the United States treasury therefor only to discover that irrigation to a greater or lesser extent is necessary in making homes for themselves thereon; therefore be it

Resolved, That the representatives of all the States and Territories directly interested in irrigation, do hereby pledge their unwavering support to the just demands of such settlers, that the General Government shall donate at least a portion of the funds received from the sale of such lands toward the procurement of the means necessary for their irrigation.

It was agreed to take the platform up in detail for discussion. Senator Power was the first speaker, and he opened the discussion by denouncing the Salt Lake platform, saying it was a prearranged scheme, carefully prepared before the meeting of the Congress at Salt Lake, for the purpose of having all the arid lands in the United States ceded to the States and Territories. This would put a quietus to all future expected Government appropriations. A map was hanging on the wall, which Senator Power had had prepared showing the States in the arid region, including Montana, Nevada, Colorado, Kansas, Nebraska, Idaho, Utah, Washington and Wyoming. The Dakotas and California were not indicated on the map as lying in the arid belt. The Dakotas had been left out, he said, because the people of those States, recognizing the value of Government appropriations, had refused to ask for the ceding of all the arid lands to them. California had been left out because it was a country owned by the railroads—by the same men who ran the Salt Lake Congress. The Senator's speech was loudly and enthusiastically applauded.

Judge Strevell proposed the following amendment to the first section of the platform:

Resolved, That in the judgment of this convention it is the duty of the General Government to aid in the development of the arid lands in the several States and Territories where such lands exist; and while we do not deem it desirable that the control and title to such lands should pass from the General Government to the several States containing them, we do, nevertheless, urge that at least the proceeds arising from the sale of such lands shall be applied to the supplying of water for their development for the purpose of agriculture, and we urge our Senators and Representatives in Congress to use every effort to accomplish such legislation as will bring about this desirable result, not only for our own State, but for all other States and Territories similarly situated.

Judge Strevell proceeded to back up his resolution in a strongly worded and eloquent speech. He referred to the wonderful prosperity of Illinois, which emerged from obscurity into the front ranks of the United States as soon as the legislature offered every other section of land to the first corporation that would construct a line across the State. He referred to the development of the Western States by the advent of the Union Pacific road, notwithstanding the millions of dollars stolen from the people by those connected with that project. He did not favor the ceding of the arid lands to the several States, and he did not believe the Government would cede them if asked to do so. It was and is the duty of the General Government to provide every poor man with a homestead, if he wants it, and it is the duty of the General Government to provide water with which to cultivate these lands. He was strongly opposed to the adoption of the platform of the Salt Lake Congress. The States were not prepared to take these lands and the responsibilities and expenses connected with that act. It would be necessary to organize courts and State Land Offices, and the cost would, for a long time, be greater to the several States than it is at present to the General Government.

W. A. Clark replied to Judge Strevell and Senator Power in a long speech in which he strongly favored the ceding of the arid lands to the several States. He did not think the expense would be enormous and he knew the almost utter impossibility of securing appropriations from Congress for the purpose of irrigation. He paid his respects to Major Powell, of the United States Geological Survey, who, he said, had wasted appropriations of several hundreds of thousands of dollars, in making topographical maps, which, he said, were necessary for the proper location of reservoir sites, but which were in no way necessary for the purpose. He was in favor not only of asking the General Government to cede the arid lands to the several States, but also to cede the timber lands.

After a very warm discussion the Strevell resolution was adopted by an almost unanimous vote, and the Secretary of the Convention was instructed to transmit copies thereof to Montana's representatives in Congress, aud to ask them to present the same to the consideration of that body.

W. H. Sutherlin then offered the following resolution, which after considerable discussion was adopted:

Resolved, That the next Legislature of the State of Montana be memorialized to enact a law, similar in its provisions to the Wright irrigation law of California, for the furtherance of the interests of the farmers in the matter of constructing reservoirs and canals, and for the government of the distribution of the water.

Another resolution to the effect that all ditches, canals, etc., used for irrigation purposes be taxed for the amount of revenue derived from the sale of the waters and not according to actual cost or appraised valuations, was the subject of a long and somewhat heated discussion. It was finally decided to recommend that the resolution be rejected.

The following preamble and resolution was unanimously adopted:

WHEREAS, There will be held in the year 1892 a National Irrigation Congress, to be attended by delegates from all the States and Territories interested in irrigation, and

WHEREAS, The place where such congress shall be held has not been fixed and is to be designated by the Executive Committee of said congress, consisting of one delegate from each State, and

WHEREAS, Montana has within her borders more acres susceptible of irrigation and more water available for the purpose,

Resolved, That the State Irrigation Convention assembled in the city of Helena extend to the Irrigation Congress a cordial and unanimous invitation to hold its annual session in 1892 in Montana.

A resolution asking that the legislature be asked to appoint a State engineer to inspect irrigation canals, ditches, etc., and gather data was rejected.

The Secretary was instructed to transmit copies of the invitation to the National Irrigation Congress to Governor Thomas, of Utah, and to W. A. Clark, of Butte, for presentation by him to the Executive Committee. The President also appointed the Committee on Permanent Organization, a committee to select the town or city in Montana in which the congress shall be held in the event that the invitation is accepted and report to the convention at once.

It was moved and carried that the efforts of the people of Utah and other Territories to secure cessions of lands for school purposes from the general Government has the hearty sympathy and cooperation of this convention.

Donald Bradford presented the following, and a committee of five was appointed to memorialize the legislature on the subject:

WHEREAS, Montana contains 93,349,200 acres, and 38,000,000 acres comprise our ranges; interspersed with these are 30,000,000 acres of farming lands, and

WHEREAS, Montana has limitless latent wealth, the fact must be recognized that we are face to face with a vast problem, that we must prepare now to solve and not procrastinate till too late to properly and economically master it, and

WHEREAS, It is fair to assume 15,000,000 acres to be the area subject to all practicable means of irrigation; fifteen million acres, properly watered, means 1,000,000 additional rural population; canals for 1,000,000 population mean not alone irrigation, but demands for water power, for manufactories, water for houses, for cities and villages, and consequently a well-balanced law, prepared in the light of the experience of the countries of Europe, of Egypt and of India, that have, in a measure, overcome the difficulties in the proper distribution of water; a law anticipating the need of reservoir sites in every locality possessing irrigable lands, to prevent their occupancy and ultimate enlarged outlay in condemnation; a law that will place under the control of the people of each district or drainage area their water supply and will reduce the cost to a minimum; that will prevent discrimination as between all landholders, and

WHEREAS, The constitutional life of the legislature will not permit of an investigation or the research the importance of the subject demands; therefore be it

Resolved, By the Convention, constituting representatives from the several counties of the State, that a committee of one from each county be appointed by the President of this Convention with power to prepare a bill and present to the next legislature, which bill shall embody the following general points, to wit.

The creation of a State Irrigation and Immigration Commission, which shall be appointed by the Governor, together with a State Engineer, which Commission shall have the power, through the State Engineer, to divide the State into districts, according to natural slopes; to prepare plans for the construction of the necessary canals and reservoirs or other works of any district; to have sole control of construction; to cause the organization of any such district by the election by the legal voters of such district of five trustees, who shall exercise control of such canal, reservoir or other works after construction; issue bonds of such district for construction; levy taxes and otherwise provide for sinking fund, interest and repairs, subject in all cases to the laws of the State.

A resolution was also adopted, directing Montana's representatives in Congress to exert themselves to have appropriations made for public land surveys in the State. Another resolution which was adopted looks to surveys for reservoir sites in Montana, not under the direction of Major Powell. The State weather bureau was endorsed, and the members pledged themselves to aid in its extension in their respective localities. The proceedings of the convention are to be printed in pamphlet form, each county pledging itself to pay one-sixteenth of the cost. The remaining planks of the Salt Lake convention, which were passed on Friday, were, on motion of W. A. Clark, indorsed. They refer to Utah school lands and the arid lands in Nebraska and western Kansas.

It was decided to invite the National Irrigation Convention to hold its session at Anaconda, after which the meeting adjourned sine die.

District and Other Work.

The directors of the Anaheim district have received a proposition to sell $600,000 of their bonds at 90 cents, and a commission of $10,000 to the brokers. The board decided that they only wanted to sell $300,000 of the bonds, and they submitted this ultimatum to the parties who desired them. No answer has yet been received. Director Ryan reported that the State Association, the regular meeting of which he had attended at Tulare, had decided to send General Willey to New York to confer with prominent bond buyers and money borrowers in reference to the placing of irrigation bonds in general. He had seen General Willey previous to his departure for New York, and was satisfied the bonds were now in better shape than ever before. General Willey would be received with respect and confidence by the most prominent financiers of the country, and it was agreed that irrigation bonds were more salable now than ever before. Further, it was recognized the Anaheim district offers better securities for their bonds than any district in the State.

At the last meeting of the directors of the Selma district the only business transacted was to instruct the secretary to advertise the sale of lands in the district that are delinquent for the assessments of 1890.

The Directors of the Poso district have awarded a contract for constructing irrigation works, following plans of the Chief Engineer of that district, to J. M. Thompson of San Francisco, and J. H. Smith of Seattle. The entire work, including the construction of the canals and laterals, flumes, reservoirs, dams, etc., is to be completed within one year from date, and, upon satisfactory completion of the work, the contractors are to receive $440,000 in district bonds at par in full payment for construction. The contractors give a bond in $110,000 for faithful performance. There are about 65 miles of main canal and distributing ditches, several miles of flumes, two immense dams and two or three large reservoirs. The contractors intend to begin work within 30 days and will employ a large force in order to complete the contract within the limits of time. Poso district was organized in September, 1888, and subsequently election bonds in $500,000 were voted. Poso creek has been carefully studied by able engineers, who pronounce it amply sufficient to irrigate a much larger region than the district now covers. The stream has a water shed of 468 square miles, and with a system of reservoirs an abundance of water can be collected for irrigation. The land to be irrigated only needs water to become fruitful to the highest degree, says the Delano *Courier*, and much of it is located in a thermal belt where frosts are unknown and the earliest vegetables and fruits of the season can be raised. With the completion of this irrigation system, these lands will be rapidly improved and hundreds of homes will dot the fertile plains.

At the last meeting of the Directors of the Sunset district, it was decided to hold a special meeting at Selma on the 27th, to hear the report of the engineers on the proposed canal system.

The Directors ot the San Jacinto and Pleasant Valley district expect to receive their Engineer's report at their February meeting, and will thereafter at once proceed with the determination of the bond question.

The Secretary of the Perris district has sent out notices asking for reports as to the number of acres to be put under cultivation this year, for the purpose of fixing the rate.

A most important convention was held at Fresno during the past week in answer to the following call: "At a special meeting of the Fresno Board of Trade, called December 14, 1891, the proposition of dredging the San Joaquin river and the building of a ship canal from the point where navigation ceases was brought up and discussed by the Board. S. N. Griffith offered a resolution that the Fresno County Board of Trade call a convention to be held in the city of Fresno on Thursday, January 21, 1892, to consider ways and means for the building of a ship canal through the San Joaquin valley to tide water, and that the counties of Fresno, Kern, Tulare, Merced, Stanislaus, Mariposa, San Joaquin and Contra Costa, are hereby requested to be represented by five delegates each, to be appointed by the Board of Supervisors of each county or by the chairman thereof, and that the secretary of the Fresno County Board of Trade notify the Boards of Supervisors that they are authorized to unite and extend a formal invitation to all citizens, including members of the press of their respective counties, to be present and participate in said canal convention." A full report of this convention will be given in the next issue of the RURAL PRESS.

The South Riverside Land and Water Company contemplate the early construction of an upper ditch south of and parallel to the present irrigating system and nearer the mesa or high lands close to the Temescal mountains. This ditch will carry water enough for more than 3000 acres and will employ many men in its construction.

The managers of the Sharon lands in Fresno and Merced counties propose to construct a large reservoir for irrigation purposes. A fine site has been found on the Chowihilla river and a dam can be built that will supply water for 21,000 acres.

The Duty of Water.

The question is often asked: "How much water is needed to each acre of farm land?" The question is too indefinite to admit of an intelligent answer, says the Denver *Field and Farm*. In the first place, crops differ with respect to moisture requirements. For example, oats and wheat will require more than rye and barley; and buckwheat, amber cane and corn, still less than the other grains. Again, so many conditions are to be taken into consideration in determining how much water may or may not be needed for any given crop, and so little thought has, until quite recently, been devoted to the matter of economizing water, that little data that is at all reliable can be given.

Broad generalization, bordering closely on to "guess work," has been the rule. That there are difficulties in the way of arriving at accurate conclusions in these investigations, must be seen at a glance. Local conditions, character of the soil, slope of the land, cultivation, humidity, evaporation, precipitation, drainage and capillary action, are so widely at variance in different localities, that there is small hope of getting any formula that will admit of extended application. Then, too, the demands of plant life are variable.

The cubic foot a second is the unit of measurement usually adopted in the distribution of water from or by the large canals of Colorado. A quantity of water equivalent to a continuous flow of one cubic foot a second, during the irrigating season of one hundred days, will usually irrigate from 50 to 60 acres of land. It will often do more than this.

The duty of water is constantly increasing in nearly every portion of the country where irrigation is practiced. To-day in Colorado, some engineers and canal companies are making the standard of duty nearly double what it formerly was here. But the crops grown, the system used, and the means of applying water, all cut a very important figure. Where flooding takes thousands of gallons, the furrow system only requires hundreds, and subirrigation tens of gallons for a similar area.



My Two Suitors.

[Written for the RURAL PRESS by DAGMAR MARIAGER.]

"'Tis settled; Jack has lost the prize he sought;
I heard him speak to her words of rebuke.
That he dared do such thing I never thought,
Knowing so well her pride could never brook
Even the gentlest chiding from a friend."
So spoke the one who thought he knew me well,
Unto his wife, who said the final end
To Jack's courtship no one so soon could tell.

I knew my neighbor thought his cousin Ned
Would find "clear sailing" now in wooing me,
And that ere long we two would sure be wed,
Fearless that we should ever disagree,
As Ned, all knew, had much too kind a heart
To think or say a woman could do aught
But right, and boasted he could not depart
From that belief by his good father taught.

Ned had a pleasing way and manly form,
And handsome face and kind dark eyes, and yet,
Though Jack's soul might cloud up and even storm,
And though a plainer face I'd scarcely met,
Or simpler, franker spirit than was his,
He had, unknown to self, had stronger hold
Upon my heart and all my sympathies
Than Ned had with his goodness and his gold.

Ned was to me like a book richly bound,
And filled with nothing but an idle chatter,
Whilst Jack was one in which a wealth I found
Of earnestness, and even, when in battle,
So wisely and so scrupulously just
That every page in him breathed nobleness
So broad and deep that I knew I could trust
Him 'gainst myself, and e'en his chiding bless.

Yet I could not relinquish my own strength
Of will and purpose. So it seemed to White,
My neighbor, that we'd quarrel'd; but at length
It came to pass his wife was nearest right.
Whilst feigning anger, all the while I knew
Jack's words had fan'd my love to a deeper glow;
His storms are like the sky's when it is true
Unto the thirsting fields and bids them grow.

"I told you so, Bob White," I heard May say,
In a half whisper, as she saw me greet
Jack with my usual smile, when yesterday
He joined our company upon the street.
Four could not go abreast so well, we thought,
And so, whilst homeward bound, we wisely paired,
And Ned, I think, a glimpse of us had caught,
As it was Jack alone my evening shared.

Plucky Postmistresses.

The postmistress is a considerable factor in the United States Government, and she has a personal interest in every presidential election, although she has no vote.

During the last year, the Postmaster General has issued an order that the postmasters at the county seats must visit the postoffices in their counties. In some districts this is an easy matter, but in others it is almost impossible. The Washington correspondent of the *Cincinnati Gazette* has examined the reports of the women who are postmasters at the county seats, and has brought out some curious facts. So far, 61 women have reported. An Idaho woman rode in her visitations 254 miles on horseback. A Kentucky woman rode over a hundred miles, and spent $15 for horsehire. A Mississippi woman made her visitations in a sail-boat. Another woman from the same State made her trip through dreary pine woods alone, without fear. A Vermont woman visited the offices in her county, although it was composed of five islands. A Pennsylvania woman visited all her offices although there were 128, and many of them among the Allegheny Mountains. An Alabama woman said she would not be able to execute her commisson, as she could hire no horse in her county that could make the trips. A Louisiana woman reports that she keeps bankrupt willingly in order to improve the service in her own village. A New York woman visited 44 postoffices with a horse and carriage, travelling 291 miles. A North Carolina woman was so courteously welcomed by all the postmasters that she promised another visit next year. A Texas woman omitted to visit one office because it required a horseback ride of 35 miles. Virginia and California post mistresses visited every office in their counties. A West Virginia woman wrote that some of her offices were almost impossible to be reached, but she reached them just the same.

It is often said that if women vote, some women must hold office. Many women are already holding office under the Government as postmistresses, without creating scandal or surprise. If they are equal to duties so arduous as those here described, it seems as if they might be capable of filling any post to which the common sense of their neighbors would be likely to elect them.—Woman's Column.

Mr. B's Opinion of Character.

[Written for the RURAL PRESS by DUANE MORLEY.]

Mr. B., a staid citizen, having been appealed to for his opinion concerning a certain peculiar exhibition of character, said:

"My views are conservative, they having undergone great change within a decade of years, and chiefly from one circumstance which I will relate. Many years ago, while, at an early morning hour, my family were yet sleeping, I took, as was my usual habit, a street stroll. I passed outside my own grounds, which were quite extensive, and toward the suburbs near which I then lived. Going by an evergreen hedge in which, or beside which, stood an old stable, I heard voices. The fact of the building being unused, aroused my curiosity, and I halted to listen. The conversation proceeded from two tramps who had, in their need of better accommodations, appropriated the barn to their own use.

"And they were mutually considering their necessities and airing their grievances, though one of them took so reasonable a view of the latter that his words were, to a degree, fascinating. That was why I continued within hearing of his voice. He uttered no railing accusations against the rich; neither declared that the world was in his debt respecting the matter of breadstuffs, believing, as he averred, that the bettering of his condition was plainly a personal matter. But one critical remark fell from his lips, and that aroused a keen desire in me to meet and make acquaintanceship with him. 'Clean, social privileges,' said he, 'are denied the common workingman upon this coast; he is barred out as undesirable, with no resort open to him save that of the billiard hall or grog shop.' From other remarks, I learned that he purposed securing employment at the best pay possible, and through a course of economy and perseverance, work upward out of his low estate.

"My business was box-making, and though I was then in no especial need of more help, I got a few dodgers struck off at the printers', and rightly conjecturing that the fellow would continue his use of the stable, I, that evening, scattered about the streets and lanes in that vicinity a number of them.

They were worded as follows: "One or two good men can find employment at the Fifth Street box factory by applying early in the day." Two mornings later the man was snared; and having noticed him the morning before as he left his retreat, I knew him as he made application at the factory office. Of course there were some evidences about the man of the fraternity he had mingled with, but much about him was manly and inviting. I gave him the work of sorting out and stacking up the cut box lumber in the covered yard, and a better green hand I never set to work, never. Order was a faculty so largely developed in him, that soon what had been chaos in the yards was overpast, and, with memory active, there was no size ever called for that was not instantly forthcoming. But once did any difficulty occur. Then there were high words in the yard, and as I passed out to investigate, his voice sounded above that of another: "I tell you I will not be put upon! I'll resign my place sooner." Such were his words, and I discovered that a mean imposition was being practiced upon him. As I had much business of a noncorporate nature, I had, in my chamber, a home office where the books were kept pertaining to it. And this man's business qualifications, especially his order and unfailing memory, so appealed to me that I determined to appoint him my secretary or business manager; so I removed him from the one place to the other, thus bringing him into my own family circle and at my own table. I do not speak of this in any self-laudatory way, for the best and most we can do is inconsiderable and little worth mentioning.

Always a keen observer of men and manners, I noticed this man's constant struggle toward a cleaner and better life. Eventually he became a patron of the public library, a subscriber to lecture courses, and a frequent attendant upon church services, growing into my regard with each upward step. To-day he is managing a flourishing business of his own. The incident of that morning, when I overheard his sentiments as expressed to his tramp companion, I ever withheld. Telling a man when you have seen him down does not tend to his elevation. Kind estimation and right treatment are to the unfolding of man's better nature aud should be readily recorded."

—A Frenchman was asked if he liked hunting. His reply was pithy, and much to the point: "Ven de horse jomp easy, I like very much; mais ven he jomp 'ard, I do not remain!"

San Francisco Fashion Letter.

[Written for the RURAL PRESS.]

SAN FRANCISCO, Jan. 11, 1892.

DEAR DAISY:—I have spent the morning in examining the latest fashions, and have arrived at the conclusion that January is not the most satisfactory month in which to indulge in new apparel. The winter fashions have lost the charm of novelty, and the spring fashions have not yet come to gladden our hearts and lighten our purses.

I will however tell you absolutely the latest Paris fashions, so that you can take time by the forelock, for what Paris wears to-day the rest of the fashionable world will wear to-morrow. It would be an exaggeration to say that the world has gone into mourning, but it is nevertheless true that black has never been so popular as at present.

Dresses of black velvet and satin, which have, particularly the latter, been principally worn by elderly ladies, are now adopted, even by quite young girls.

Black velvet coats promise to become very fashionable, and certainly they are extremely becoming, as velvet always has a softening effect on the complexion.

The great drawback to possessing several black dresses is that they look alike, and unkind people are apt to exclaim, "The same old gown." In order to obviate this difficulty a little color is often introduced into the waists, a fashionable trimming being black, brocaded with a color. A brocade of pink rose buds, or of sprays of lilac, on a black ground has a very pretty effect for the collar and cuffs of a black dress. One pretty model I saw was black, with a delicate gray waistcoat and cuffs.

It is sad to contemplate how energetically the dress reformers lift up their voices and preach to deaf ears. In vain have they attacked trailing skirts, demonstrating the uselessness and folly of three inches of good material being dragged through the winter mud and snow.

Far from heeding, women wear their skirts longer than ever, positive trains being worn on the street. Some of the fashionable wraps even, have the backs shaped in a pointed curve, which lies several inches on the ground. The skirts are worn clinging and plainer than ever. The edge may be trimmed with a band on the bias, a tailor hem or a band of velvet, fur or feathers; but drapery is absolutely out of fashion.

A good way to lengthen an old fashioned, but still serviceable skirt, is to edge it with a band of velvet a quarter of a yard in depth, upon which you can stitch three or four rows of fur, fancy braid or feather ruching.

Princess gowns are struggling into favor. Some are made with Princess fronts and basque backs and vice versa.

In waists there are few changes. Lappels are still worn, but waists with belts bid fair to become as popular. Belts are worn both pointed and straight, of cloth, silk, variously tinted leather, and even of jet.

I saw a pretty costume the other day of cigar-colored cashmere, with a long clinging skirt edged with jet trimming, about three inches wide. The belt, which was very deep, was of jet, the collar and cuffs being composed of jet trimming also.

There seems to be a great tendency toward masculine, and even military attire. Not content with pique vests and four in hand ties, ladies are beginning to adorn their dresses with military froggings, hanging cords, metal braid, and even epaulettes, in imitation of those worn by officers. A pretty innovation is the military cloak, similar to the cloak worn by Italian officers. To make this correctly, a piece of cloth should be cut into a complete circle. Round the geometrical center of the circle, the collar should be placed, with an opening to the edge of the cloth. A cloak made in this lavish manner will hang in most graceful folds, but to be deep, it requires a ruinous amount of very wide cloth, so dressmakers are making their models much less full than the picturesque Italian originals. These circular cloaks are worn of all lengths, from mere capes to mantles that sweep the ground; in wraps they are the newest thing. Like everything else in the way of dress, buttons are subject to the caprices of fashion. Just at present they are rather at a discount on waists, for many of the best dressmakers make a point of carefully concealing the fastening.

To compensate for this neglect, buttons find favor on skirts, the sides of which have often simulated button holes, and either tailor made buttons, or else ones of pearl or colored bone.

A writer in a French magazine observes: "The crowing of the rooster is transformed into doleful wailing, and the clucking of the hen into lamentation. Terror reigns supreme in the poultry yards, for fashion, that so long has only used the plumage of rare birds, at length condescends to admire the domestic fowl, and holocausts of poultry must be sacrificed to satisfy her demands.

"Roosters' feathers are the rage for dress trimming, boas, muffs, millinery. The cheapest kind of feather trimming is made by fastening the feathers with glue, on to strips of cloth, but this lasts little longer than the flowers of the field, and a shower of rain instantly destroys it. A newer and more durable trimming is made by weaving the feathers together."

In millinery there are few novelties. A new trimming is composed of bands, crowns or aigrettes of overlapping spangles of various colors, which flash and sparkle in the sunlight. Jet and tinsels are in great favor, as are also the heads of birds and animals. Shaded and brocaded ribbons are beginning to be worn, the latter being frequently made more gorgeous by tiny pieces of jet, or glass jewels.

A novel appendage to the bonnet is a long veil of colored crape, or nun's veiling, reaching to the hem of the dress; but so far, in San Francisco at least, these veils have been more talked about than actually worn.

MARIE EVELYN.

Chaff.

—Master: Did the gentleman leave his name? Servant: Yes, sir. When I asked his name, he said, "It is immaterial."

—"I feel it just as much, my dear little boy," said papa, after he had spanked Billykins. "Y-yes," sobbed Billykins, "b-but not in the same place."

—Penelope: Don't! Stop! Jack: I can't help it (kisses her). Penelope: How dare you when I forbid it. Jack: You merely said, 'Don't stop.'

—Sumway: Is this Miss Scadds you speak of beautiful? Hunker: Is she beautiful? Why, sir, I never saw a car so crowded that she couldn't get a seat in.

—Mr. Smike: Willie, when you get to be the head of a family, what will you say to your sons? Willie (thoughtfully): I will tell them how good I was when I was a boy!

—Wife (returned from a visit): How is darling baby, George? Husband: I'm afraid he's not well. "Oh, dear! Whatever makes you think so?" "Why, he hasn't cried for a whole hour!"

—"So you haven't made Smudger your partner after all, eh?" "No, and I'll tell you why. Smudger was engaged to my wife before I married her, and I don't believe in becoming too friendly with a man who has proved himself more wide-awake than I am."

—"Why should you refuse Charlie on account of his not being your equal? Your grandfather certainly was a member of Parliament, but don't you believe that all men are born equal?" She: Oh, yes, of course I do; but some men deteriorate after birth, you know.

—A thoughtful spouse: I've a great notion to go and jump into the river, said Mr. N. Peck at the end of a little domestic discussion, as he picked up his hat and started out. "You come right back here," said his wife. "If you intend any such tricks as that, just march upstairs and put on your old clothes before you start!"

—A Cairns man tells of a lady in that city who had employed a Chinese servant who had quietly observed that all the lady callers at the house deposited a visiting card. One time when a Chinaman had been sent to answer a ring of the door bell, the mistress of the house was astonished shortly afterward to see from her window one of her nearest and dearest friends leaving the house without having come in. On investigation, she discovered that the Chinaman had shut the door in the caller's face. "Bleclause she no havee ticketee." John had supposed that the visiting cards were tickets of admission, and the caller had not offered a card.

QUEENS AND THE WORLD'S FAIR.—Mrs. Potter Palmer, President of the Board of Lady Managers, has made a brilliant move to forward the interests of women at the World's Fair. She has secured the transmission through the State Department at Washington of letters addressed to the Queens of the leading countries of Europe, asking that Women Commissioners be appointed, and that the sanction and patronage of royalty be accorded them. The Chicago *Tribune* says: While the Exposition management has sent the second commission to Europe, and has been endeavoring to arouse the United States ministers and consuls to action, it has remained for the President of the Board of Lady Managers to send a polite and earnest letter to the Queens of Europe, and have it dropped into their laps, dignified by the great seal of the United States and invested with all the dignity of diplomatic correspondence.

YOUNG FOLKS' COLUMN.

A Rabbit Hunt.

[Written for the RURAL PRESS by C. M. CARRINGTON.]

Knowing, or at least believing, that a large percentage of the readers of this column are boys, and that most of them live in the country, and in consequence enjoy the very word "hunt," I venture to offer for their benefit an account of one of the many enjoyable hunts I had last summer.

When at home I reside in a city where the law forbids such amusement, and so, when last May I received an invitation from a country cousin to spend a few weeks at his home in Amador county, I very readily accepted and found myself a week later safely at the end of my journey, and after a day's rest was ready for business or rather pleasure.

One Friday afternoon my cousin, who I shall call Will, another boy, who shall be known as Elmer, and I, met together and decided on a grand rabbit hunt, to take place on the following day. After some discussion we agreed to sleep that night at Elmer's house, and thus, being all together, we would avoid delay and be able to make an early start. So after thoroughly cleaning our respective guns, i. e., two shotguns, one each for Will and I, and a small rifle for Elmer, and putting up enough eatables to serve for breakfast and lunch, Will and I repaired to Elmer's house for the night.

"Now, boys," said Mrs. M———, our hostess, "Wake me in the morning and I will have a warm breakfast for you before you start. You wont want to leave here before six o'clock, I think."

Will and I were about to protest that six o'clock would be too late, but on catching Elmer's eye which he was screwing up into an elaborate yet surreptitious wink, we remained silent and with a general "good night" Mrs. M——— left us to seek our bed for the night and to talk over the incidents that would probably happen next day.

"You see," said Elmer, "If we told mother that we wanted to start at half-past four she would want to get up and help us off and might delay us, and anyhow there's no use in rousing her up so early just to get us a little breakfast. Let her sleep."

We admired his thoughtfulness and agreed that his plan was the best. Then he brought out an alarm clock, set it for four o'clock, and soon after we all went to bed and to sleep. Just as I had reached the climax of a very exciting dream, in which a wounded rabbit, as big as a bear and with three awful heads, was in the act of devouring all three of us, one in each great mouth, a voice awoke me, saying:

"Get up, C—, its almost five o'clock."

"Eh? How do you know?" I asked sleepily.

"Cause, see how light it is outside," answered Will. I sat up and looked out of a window.

"That's moonlight. Lay down and go to sleep," growled I, with an utter disregard of grammar, as most boys would be under the circumstances. But Will wasn't satisfied, and after getting Elmer and me wide awake, he crawled out of bed and looked at the clock.

"Only one o'clock, he announced, and with a few more growls we got to sleep again. Scarcely had I closed my eyes, seemingly, when some one shook me into a state of consciousness and said we had overslept.

After many remonstrances, I was persuaded and pushed out of bed and told to look at the clock. It was too dark, and I could find no matches, so Elmer had to take the clock out into the pantry, where he could procure a light. Soon he returned and whispered that it was only half past two. Greatly disgusted, we crept back into bed and dropped off into another slumber.

Thr-r-r-r-ring! went something presently, and I heard Elmer jump out of bed and clap his hand over the clock bell. Soon we were all up, and after assuring ourselves that Mrs. M— had not been awakened by the alarm, we gathered up our clothes and stole cautiously out into the kitchen. Then, shutting the door noiselessly and lighting a candle, we hastily dressed, shouldered our guns and eatables, and sallied forth.

After walking nearly a mile, we called a halt in an open field and ate our breakfast.

"Seems to me its more like night than morning," said Will, glancing up at the sky, where the stars sparkled and looked down upon us as if surprised at our early pilgrimage. The same thought had struck me previously, and Elmer appeared to coincide with Will's opinion, so, merely for curiosity's sake, we asked Will to consult his watch. It was just three o'clock! We looked blankly at each other and then the comicalness of the situation struck us simultaneously and we broke out laughing.

"Well, what a go!" commented Elmer, and we agreed that it was.

We sat around and talked till four o'clock, then started on again. At daylight, by which time we had reached what we thought a good hunting ground, we fixed upon a suitable rendezvous where we were to meet at lunch-time and compare luck.

Leaving my companions, I struck off through the woods. I walked for about a mile, and although keeping a sharp lookout on all sides, I failed to find anything until almost an hour had passed. Then, suddenly, right across my path ran a cottontail rabbit, and as he disappeared in the brush, I struck out after him as fast as I could go. Through the bushes I went, but the rabbit, of course, went ten rods while I went one, and it wasn't long before I had to give it up. Then I heard the report of a gun nearly a quarter of a mile ahead. "Some one has got him," thought I, as I trudged at a more moderate pace. About half an hour later I heard another report, not so loud as the first, and it began to dawn upon me that the other fellows were getting all the game and I was in a fair way to go into camp empty-handed. This thought was not gratifying, and I began to look around more on the alert than ever. I was soon rewarded. All at once there opened a picture before me that caused a thrill of satisfaction and keen sportsman-like feeling to take possession of me. Right in front of me, distant about thirty yards, sat a cottontail. It was of a peculiar color and half of its ear was gone. I recognized it as the very one I had seen an hour ago; but I did not stop to ask him how he had come there. Raising my gun, I took good aim and pulled the trigger. Bang! Slowly the smoke cleared away, and there lay the cottontail, dead. Just as I started forward I caught sight of some one disappearing at the top of his speed in the bushes two hundred yards away, and, somewhat surprised, I went over, picked up my victim, reloaded my gun, and started in the direction which the person had taken. Although I walked and walked till twelve o'clock, I failed to increase the number of my slain, and at last I reached the rendezvous tired and hungry and in no very pleasant frame of mind. There I found Will and Elmer, and after getting well started in on the comissary outfit, I turned to Will.

"Did you have any luck? Give us an account of yourself," said I.

Will glanced at his game-sack, looked rather dubious for a moment, then began:

"Well, after I left you fellows, I walked on for almost an hour without seeing a thing to shoot at, and at length I began to get weary. Never saw game so scarce. I was just thinking of hunting you up and going home, when suddenly up started a rabbit. He hadn't gone ten leaps when I up and—"

"Killed him," supplemented Elmer, eagerly.

Will sighed: "And shot at him," he continued, "and hit just behind him. Perhaps I wounded him, but at any rate he ran off so quick that I couldn't follow him. But I loaded up again and struck out in the direction he had taken, and at the end of half an hour I saw him again. He was sitting in an open spot between some bushes and didn't see me. I crept cautiously up behind a bush to within forty yards of him; then, poking my gun over a large log, I crouched down for a good shot and took aim. At that moment, bang! went a gun from some bushes on my right, and I saw the dirt fly all over where the rabbit had sat, and the rabbit himself cut off—"

"Like the wind, and disappeared among some high grass about five hundred yards ahead," interrupted Elmer.

"How do you know? asked Will suspiciously, but we told him to go ahead, and he did.

"Well he did disappear and I tell you I was mad. I supposed it was one of you fellows, but couldn't see you, and soon I struck out again. I saw that same rabbit three times after that but every time he was frightened off before I could kill him, and the last time, after I had crawled through nearly a mile of brush, and had got within twenty feet of him, just as I was about to shoot, a sheet of smoke shot out of some bushes near by and over went the rabbit dead as a rock."

"And here he is," said I, pulling him out of my game-sack and displaying him with some pride.

The others looked at me in some surprise and with gloomy countenances, but Will continued.

"Just as the rabbit 'layed out,' another one, a Jack, jumped up near by and started off and I after him. After chasing around for three or four hours, I struck out for here which place I reached half hour ago."

"And didn't you kill anything?" we asked.

"Y-es" was the answer.

"What was it?"

Will slowly rose, went to his game-sack and drew out a *blue jay*.

"Is that all!" I exclaimed.

"Well I'd like to see any one do better in a place where there's so many such hunters as you two fellows," he retorted in a disgusted tone. "Then, perhaps, you killed something" he added to Elmer. "Give us your story."

"Mine is soon told," said Elmer, with a laugh. He seemed to be the only good-natured one in the company.

"I only got one shot altogether and that was at that rabbit" he said. "When I left you I walked along slowly for over an hour, and then caught sight of a cottontail. I made a good sneak on him and got within fifty yards, rested my rifle over a log and banged away at him, knocking the dust and dirt over him and at first I thought he was hit, but off he ran and I didn't care to follow him. However, after I had wandered around an hour or so, I scared up the very same cottontail again and directly afterward saw Will hurrying through the brush after him. Soon I heard a shot and said to myself that Will had gotten him. Under the firm conviction that there wasn't another rabbit in the woods, I set out at a slow gait for the meeting place and after wandering around awhile, reached it, and here I am."

"And where's your game" asked Will ironically. Elmer laughed and pointed to the rabbit.

"There he is. Just look at him and see if there isn't a rifle hole in him. He looks as if he had been hit by a pile-driver."

And really he did. We examined him closely and found that all of his legs were broke, one ear was off and altogether he was an animal wreck.

Seven long hours hunting and only one rabbit and a blue jay. And worst of all we had all been chasing and hunting the same rabbit.

We looked at each other; then slowly we arose, shouldered our guns and turned our faces homeward. But little was said between us. We felt sad and avoided each other as much as possible.

Toward evening we reached home.

"What did you kill?" asked Will's smaller brother.

Then I felt in my game-sack. It was empty. We had left the rabbit at the rendezvous. * * * * * *

"Well," said Will as we wearily retired, that night. "You fellows can plan your hunts and make all the elaborate preparations you want to, but after this I'm going to hunt extemporaneously" with which wise resolve he dropped off to sleep.

GOOD HEALTH.

CLIMATOLOGY OF OLD AGE.—The climatology of old age may be roughly summed up as follows: Elderly people in general do well with equability and moderate warmth; they bear cold badly; they benefit by abundant sunshine. The high altitudes are very rarely suitable to them, and are usually decidedly injurious; they do best in level places, where there is abundant shelter. They may or may not benefit by the seaside or a sea voyage, but these measures cannot be recommended with at all the same confidence as in the case of children. Most of these principles become almost obvious upon a little consideration. The failing vitality, by which we mean impaired vigor of circulation, assimilation and excretion, which characterizes advanced years, and the special maladies most frequent at that time of life, such as rheumatism, cardiac disease, gout and renal affections, serve to determine the climatological problem. Moderate warmth with fair equability, abundance of sunshine with adequate shelter, and level walks, evidently meet the most obvious indications called for by these affections.

A REMEDY FOR THE GRIP.—Dr. Keely, who has met with great success in curing dipsomania at his home in Dwight, Illinois, says: "I would like to suggest a treatment for the grip which I know is nearly a specific as well as innocent. It is simply asafœtida, given in four-grain pills, one pill four times a day. No man need be sick of the grip these days who will take it. For the past two years, with all my patients here, subject, of course, to such an epidemic, I had not one man go to bed from the disease. I break it up very quickly, and, in fact, cure it. If this treatment was generally known, it would save sufferers much expense and wretchedness and many useful and valuable lives." In view of the fearful suffering, and large and increasing death record from this prevailing disease, would it not be well for some of our physicians, who are daily being called upon to prescribe for this disease, to try Dr. Keeley's prescription and report the results in some of our city papers?

DOMESTIC ECONOMY.

BUCKWHEAT CAKES.—One quart of lukewarm water, one-half cupful of wet yeast, one cupful of flour. To this add enough buckwheat flour to make a thin batter. Let them stand over night to raise, and in the morning dissolve one-half a teaspoonful of soda in one-half a cupful of lukewarm water, and stir this into the batter, then cook quick.

ORANGE PUDDING.—Peel and slice four large oranges, lay in your dish, sprinkle over them one cup sugar, three eggs, yolks only beaten, one-half cup of sugar, two tablespoonfuls of cornstarch, one quart of boiling milk. Let this boil and thicken. Then let it cool a little before pouring over the oranges. Beat the whites of the eggs and pour over it. Set in the oven to brown.

DROPPED EGGS.—Break the number of eggs desired for the meal into a pan of boiling water slightly salted, with muffin rings laid on the bottom of the pan, as they keep the shape of the egg well. Care should be taken not to break the yolks. When the whites harden, take the egg up carefully and lay each on a piece of toasted bread that has been moistened in hot water and buttered. Sprinkle with pepper.

APPLE DUMPLINGS.—Take light bread dough, and shorten with a little butter. Roll and cut into balls the size of dumplings. Drop these into boiling water, with a little salt added. Boil 1 or 1½ hours. Have ready a dish of apple sauce, break open the dumplings and spread with the sauce. Put the dumplings together again, and serve with sweetened milk. In this case, you know that the apples are done.

FRIED MUFFINS.—One cup milk, scalded, one-half scant teaspoon salt, one tablespoon sugar, one tablespoon butter, one egg, one-quarter cup yeast, flour to make a stiff drop batter. Scald the milk and melt in it the salt, sugar and butter. When cool, add the beaten egg and yeast; then add flour gradually, beating it in until you can beat no longer. Rise over night. In the morning, take up a spoonful without stirring and drop it into deep fat.

COCOANUT - CUSTARD PUDDING — One cup desiccated cocoanut, one quart milk, one-half cup sugar, one pint soft bread crumbs, three eggs, one saltspoon salt, one saltspoon nutmeg, one tablespoon butter. Soak the cocoanut and bread in the milk for half an hour. Beat the eggs (yolks), add the sugar and spices, stir into the milk, and bake in a moderate oven about an hour. Beat the whites of eggs, and add one-half cup sugar, and one teaspoon lemon juice. Cover and brown slightly.

CHOCOLATE CARAMELS.—Two cups of brown sugar, one cup of molasses, one cup of cream or milk, one-half cup of butter, one-half pound of grated chocolate, two tablespoonfuls of flour. Boil the molasses, butter, sugar and flour 15 minutes; stir the chocolate into the cream and pour in the boiling syrup and boil till done; drop in a little cold water; if it piles up and hardens, then it is done. Before pouring it out on buttered pans or plates, add a teaspoonful of vanilla, and as it cools, crease it in small squares.

INDIAN POUND CAKE.—Three-quarters of a pound of sugar, nine ounces of Indian meal, a quarter of a pound of wheat flour, half a pound of butter, one nutmeg grated, one teaspoonful of ground cinnamon, eight eggs, four tablespoonfuls of brandy. Mix the wheat and Indian meal together. Stir the butter and sugar to a cream; beat the eggs light and add to it then the flour; add the spices and liquor; beat it well. Line your pan with paper well buttered and pour in the mixture, or bake it in an earthen mold in a moderate oven. Rosewater may be substituted for the brandy.

SPANISH BUNS.—One pound of flour, three-quarters of a pound of sugar, half a pound of butter, two tablespoonfuls of rosewater, four eggs, one gill of yeast, one teaspoonful of cinnamon, half a teaspoonful of nutmeg, half a pint of milk. Cut up the butter and rub it well with the flour, add the sugar, beat the eggs very light, and stir in lastly the spices and rosewater, with milk enough to form a very thick batter, then add the yeast. The next morning stir it again and let it rise the second time. Butter your pans and fill them three parts full. When they are done and cold sift sugar over them, and with a sharp knife cut them in squares.

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ALFRED HOLMAN.....General Manager

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Fruit and Ornamental Trees—Jas. A. Anderson, Lodi.
Dormant Buds for Sale—E. P. Wray, Lakeport.
Situation Wanted as Farm Manager—A. H. Benson, Berkeley.

☞ *See Advertisiug Columns.*

The Week.

What glorious weather for work or for play, but what poor weather for growing! Such a reflection presses close upon the fruit grower, even though he finds the bright, warm days delightful for his pruning and spraying. It also mars the pleasure of the grain grower, who finds everything suited for quick and easy plowing—except on extra heavy soils which have crusted beneath drying winds. Even the dairyman cannot fully enjoy the milking under a bright sun or a clear moon, because the grass will not grow, and the hay and feed bills are pulling the dollars out of his pocket at an alarming rate. In fact, delightful as is this glorious weather, no one but a tourist can enjoy it without thought of what it may possibly signify.

So far, the season's rainfall at most California points is deplorably small. Fortunately there is still much time left, and if seeding has been done, the late rains make the crop. The situation is one of expectancy with fortunately very little apprehension thus far.

A Great Question.

As we go to press there is in session in this city a convention of those interested in mining, who assemble for the purpose of expediting arrangements by which hydraulic mining may be resumed upon navigable streams and their tributaries. Most of our readers know that such mining on such streams is now prohibited by Supreme Court decisions because it was so clearly shown that such mining had destroyed and was destroying valuable valley lands, and not only rendering navigable streams unnavigable, but by filling natural water courses, had made their high waters a menace to life and property in several populous cities and towns and destructive to agricultural lands by washouts and flooding. Testimony was adduced that this hydraulic mining contravened in a startling manner the old common-law principle that one industry shall not trespass upon the rights and destroy properties of another. This testimony was so overwhelming that, though the first cry for relief came from a few farmers around Marysville, only a few months passed before recognition of their claims extended until it became a public sentiment, although everything possible was done by the hydraulickers to belittle the issue and blind the eyes of the people with the glare of gold. Perhaps there has never been in all industrial history a case in which a few men, made strong by the right which was in them, met and overcame such mighty opposition as was put forth to crush the anti-debris movement at its beginning.

Now come the representatives of the mining interests. Their disposition is not what it was a decade ago. We will not insinuate that their mellow and respectful manner is merely politic; let us consider them frank and sincere, if you please, when they say that they now proceed with the idea of not injuring another industry. We may even forget the scorn with which they once showered objurgations and adjurations upon the mudsills of the valleys, and forgive them the insane wish that they could turn their monitors upon the groveling throng and wash them all into the Pacific. These were the old times; a decade of decadence has taught the miners wisdom. The oppressor has become the oppressed; the haughty barons use pleas which they once derided.

This is all right, and so far as disposition goes that of the miners commends itself. But herein lies the point. Change in men does not change the devastating disposition of the monitors. It is true that laws and decisions which prohibit work because of injury to others become inoperative when no injury is wrought. It is true also that engineers have reported that by certain safeguards, in the shape of impounding dams, it will be possible to hydraulic and make desolate the foothills without destroying valley lands and rivers. So far as official reports go, it would appear that we can give posterity gravel heaps and boulder banks without now burying fertile plains and destroying cities. Upon this ground the miners seem to rest their plea, and will urge Congress to set up great barriers which shall place metes and bounds upon their ruin.

Now, we are not at all sure that this ground is well taken, nor that official reports, which put a milder face upon the frowning bluffs and would even make pleasing melody of the crash and thunder of the monitor, are safe ground upon which to reopen this question. We are not ready to assure our dwellers in walled towns, if work should proceed upon the new basis, that they can forego further elevation of their levees, or river boatmen that they can longer count upon the pitiful channels now left to them. The fact of the matter is that it is really upon very scant and doubtful ground that this miners' movement, which promises to be persistent and strong, is based. They are very wise in their generation. They are endeavoring to make it appear that the whole mining industry is suffering, and hope to win some popular support from parading claims and statistics to only part of which they can properly lay title. They will succeed in arresting public attention, and herein arises a new duty and a new responsibility upon the agricultural and municipal and transportation interests, to all of which the resumption of hydraulicking is a menace.

For this reason we council a reopening of this question from general points of view. Some meetings have already been held at Sacramento, which show that the valley people are not unmindful of the responsibility of the hour. But it will not do to trust to small or sporadic efforts. There should be a most representative and comprehensive movement all through the valleys. Every point should be sharply scrutinized and all doubtful points strongly contested. The issue now beginning will probably be the real fight on this question. What has gone before has been but skirmishing, though bravely and resolutely done. It will not do to allow a resumption of practices which are attended by such wide-reaching destruction to proceed upon the dictum of three men. It should require far more evidence than that to induce Congress to invest a vast deal of money and incur such great risks, not alone of its outright loss, but of incalculable-resulting damages. If there is to be any lightening whatever of the bonds which now lie upon a single form of work because of its pernicious results, the relaxation should be undertaken with the greatest caution and only after all doubtful factors are eliminated. This issue is now upon the great valley and river-side interests of the State. How shall it be met?

The Chilean War Talk.

The subject uppermost in the public mind during the past few days has been the controversy between our Government and Chile. Within ten days there has been a revival of war talk, and the dispatches from Washington indicate that pretty much everybody there expects that the trouble will become serious, and that very soon. It is reported that Chile will not, under any circumstances, apologize for the outrages upon sailors of the Baltimore, much less contribute to the relief of their families, as our Government has demanded.

But in spite of all this talk, the RURAL begs leave to hold its own opinion, and that is that there will be no war. If the matter were left to the hot-headed Chilean military and naval officers, who do the talking at that end of the line, and to the scarcely less enthusiastic military and naval men who do the talking at Washington, we should, of course, soon be plunged into warfare. But, fortunately for mankind, these are not the people who make the policies of governments. The sober judgment of the people of Chile must lead them to know that, however brilliantly they might begin a contest with the United States, the end would inevitably be disastrous to them. It is a case of seventy millions against four millions.

But there are some considerations which seem to be forgotten on both sides in the pending discussion, and they rest largely upon the commercial interests which would suffer in case of war. The destruction of San Francisco on the one hand, and of the chief Chilean ports on the other, would not only cost the American and Chilean Governments dearly, but would, to a very great extent, involve English capital which is engaged in both countries, and very largely, indeed, in Chile. In case of war between the two nations, we believe that Great Britain, with her powerful navy, which is easily large enough to overpower and sink both the American and Chilean navies combined, would serve notice upon both combatants that the cities, which would naturally be the chief points of offensive attack, must not be damaged. English interests would demand this policy and the English navy would enforce it. We cannot believe that it will come to this. There will, no doubt, be found a way out of this controversy, just as a way was found out of the controversy with Italy. England will probably not be called upon to interpose a veto upon the destruction of the Pacific Coast cities, but in our judgment she may be depended upon to do it if the exigency should arise.

In the meantime the United States Government is making active war preparations. In all the navy yards of the country, including that of Vallejo, there is increased activity, and every craft that can be made formidable as a fighter or useful as a transport is being put in condition for service. A considerable number of steamers has been chartered, subject to demand, from the Pacific Mail Steamship Company, the Oregon Improvement Company, and other sources. All the available ships of the navy have been sent south under sealed orders, presumably destined for the Pacific Coast, and it is reported that the great Miantonomah, constructed especially for the defense of New York City, will be sent south to guard the straits of Magellan. In any event, our Government will not be caught napping, but will have all its naval and military resources ready for an emergency.

Lex Talionis.

The law of retaliation is the harshest principle of human action, and one which should be last invoked. It may be in some cases the only dignified means of international conduct, but it has no place in home affairs, except, perhaps, in its mildest forms. Aside from its hateful character, it is very likely to proceed upon misapprehension, and is, therefore, very often wrongly undertaken.

In our issue of last week, we alluded to certain declaration of Eastern nurserymen, who are aggrieved by our practical exclusion of Eastern trees, that they intended to labor for the depression of California fruit at the East. There is now published in San Jose a letter from a firm of nurserymen in Western New York, which embodies a different sort of a threat of retaliation, as follows:

> The nurserymen in the East are to join in a combination to get Congress to take off the duty on raisins, on apricots and on prunes that are imported from the Mediterranean, and the reason why they want this done is because that they believe—and I would not wonder if it was true—that all the laws that have been passed lately ruling the Eastern trees out of California have been enacted at the request and instigation of California nurserymen for their own selfish purposes.
>
> If this should be done, it would let in all the Valencia raisins, all the French apricots and prunes, all the German prunes and the Turkish prunes without any duty whatever. You had best consult with some of your leading men and see whether this thing had better go on until it has killed all the green and dried fruit interests in California, as it surely will, in the line of raisins, apricots and prunes.
>
> If this Act was once repealed, it would be a hard matter to get it back again. You can no doubt see what the power of the Eastern nurserymen would be, joined together with the wholesale grocers, to move Congress, especially if they show up the facts of the case, that the nurserymen of California have instigated a law, under cover of protecting the planters from insects, to destroy all the Eastern trees that come there.

This is a silly threat, and yet its spirit is so outrageous that it should not be passed without the severest condemnation. Like many other retaliations, it proceeds upon a wrong basis. As we stated last week, it is not true that California nurserymen are to be charged with the present action against Eastern trees. It will ultimately result to their benefit, it is true, but its operation this year will be to their loss in many cases.

If Eastern nurserymen desire to know why the general disposition to exclude their stock has been so strongly manifested, let them look to their own knowledge of peach yellows, and understand that only recently has this terrible disease and its work begun to be appreciated in California. This knowledge was not made public property here by our local nurserymen, but by our State Board of Horticulture, basing their announcements upon the U. S. Government reports, which are not equivocal, as we showed last week.

Now see what becomes of this Eastern retaliator's argument. He proposes to organize Eastern nurserymen for the ruin of California's great fruit-growing interest, because California nurserymen are believed to have done something which they did not do. Upon this false ground he would tear away the protection to the fruit interest, in which California is only one of several States benefited, and he would endeavor to turn in a tide of foreign fruit which would bring injury to all dried fruit producers in the country—not alone to the manufacturers of special products out here, as he seems to think. Of course he is a small man; no one but a small man could find a corner in his head small enough to hold such a narrow idea.

Such threats do not frighten us. The influential Eastern nurserymen are not going to be misled by such men. Even if such men should succeed in committing the Eastern nurserymens' associations to such a line of conduct as he describes, their petitions would never escape from the Congressional wastebasket. National policies are not to be shaken by trade fights. The statement which we quote above kills itself. It is of no earthly use except to be rebuked for its presumption and maliciousness.

The State Press.

Kern County *Echo*: "Governor Russell of Massachusetts advocates a law that shall compel candidates to publish a list of their campaign expenses. Such a statute would bring out some racy reading in this part of the moral vineyard."

Watsonville *Pajaronian:* "Good roads are a necessity, and the more permanent they are in construction the less expense they will be to keep in repair. The rule that 'the best is the cheapest' will forcibly apply to the business of road making."

Kern County *Echo:* "The silver question comes to the front at an early hour in the Senate, and we mistake the signs of the times if it does not maintain its prominence till settled. The coinage of silver is a question that has come to stay—and so has silver itself."

Perris *New Era:* "Fruit-raising and bee-culture are two industries that will go well together. One assists the other, while neither materially retards the other. Here in this valley this combination should be most advantageous, for the bees will assist the rancher to live while the young trees are growing."

Los Angeles *Express:* "When railroad magnates spend their valuable time in 'looking over the country,' it is generally with an eye to business. Perhaps the President of the Rio Grande Western has visited Southern California merely for recreation, but our people are inclined to think he has an eye to business."

With evident reference to the case of Minister Egan, the *San Diegan* says: "No man should be permitted to hold an office under one government when his allegiance is due to another government. There has been too much foolishness in granting newly-arrived emigrants all the rights of full-fledged American citizens, and it is about time to call a halt in this matter."

San Diego *Union:* "The postal subsidy law which tariff reformers fought so bitterly in the last Congress is not only going to give us the fastest and most efficient mail service in the world, and increase the tonnage of our merchant marine, but will also add to our naval strength, as the vessels constructed under the law will be capable of quick conversion into armed cruisers."

Sacramento *Daily News:* "Governor Markham's proposition for a Branch Capitol at San Francisco will not be looked on with favor by the people of Sacramento. The tendency toward San Francisco is strong enough already. With such a building there as the Governor suggests, the removal of all or nearly all State business to tide water might be looked upon as simply a matter of time."

Noting the fact that those members of the legislature who have been most earnest for reform and for decency in legislative methods have not as a rule been returned, the Stockton *Independent* remarks: "If the people were not ungrateful and did not neglect reformers, politics would be purer and there would soon be but little to reform. People demand virtue in public officers, but want to let virtue be its own reward."

Hanford *Journal:* "The fight which Judge Wallace inaugurated against Buckley and his adherents has been made futile by the courts, and it looks as though the people must arise in their might and do what the machinery of law absolutely fails to accomplish. The citizens of other parts of the State would be glad to see the politics of San Francisco cleaned, for it is well known that legislative corruption can generally be traced to its origin in the metropolis."

Sacramento *News:* "Representative Caminetti has introduced a bill declaring Sacramento, Stockton and Marysville, ports of delivery. Mr. Caminetti's idea is that if this is done the importance of the Sacramento and San Joaquin rivers will be made apparent to Congress, and to the people generally, for if the three towns named are made ports of delivery, statistics will be tabulated annually showing the amount of goods transported by water on the two rivers."

Fresno *Republican:* "The Grand Jury organized under the administration of Judge Wallace has proven an illegal body, but it served to make plain that a state of corruption exists in public affairs that is a menace to the welfare of every citizen and a source of shame and disgrace to the whole commonwealth. If, under the administration of Judge Trout, the good work commenced by the unfortunately illegal Grand Jury is carried forward to a successful conclusion, the benediction of a grateful people will be his now and in the future."

Sacramento *News:* "It is the solemn duty of our authorities to stop the awful crimes of Chinatown that are daily corrupting our own boys and young men. The worst of all these things are the lottery installments. They sell tickets to boys and girls for five, ten, fifteen or twenty cents. This puts gambling in the reach of children. The influences are all for evil. These lottery places ought to be closed. If the police are unable to cope with the wily Chinese, why do they not report their inability to the Grand Jury and appeal for help?"

Commenting upon the fact that Michigan has made a "bold and dangerous departure" from the general rule in choosing Presidential Electors, the Sacramento *Record-Union* says: "If followed by a few other States, it will certainly involve the whole country in serious trouble. The Democratic Legislature of that State a year ago passed a law providing that Presidential Electors shall be chosen by districts. Under that system, by use of the gerrymander, the will of the people of the State as a whole can be defeated. Thus Michigan is a Republican State, yet by the district system a majority of Democratic Electors will probably be chosen this year. A system such as that is a standing temptation to defraud, to manipulate and gerrymander districts, and to stimulate all the worst features of boss and machine trickery. The matter, therefore, concerns all the people of the Union. It is to be hoped that the agitation of the subject will be continued until uniformity of method shall be agreed upon and a constitutional amendment proposed to effect it. The subject rises above all partisan considerations; it is one of patriotic importance, and into which party bias cannot rightfully enter. Our Presidents ought to be chosen by an Electoral College that is selected by the same method in all the States, and until that is accomplished it cannot be said that we have attained that degree of political justice that ought to dominate in a republic."

San Jose *Mercury:* "One of the notable features of the present session of Congress has been the number of bills introduced to restrict the immigration of undesirable people to this country. While the Pacific States have been fighting for the exclusion of Chinese, the Atlantic States have found it necessary to protect themselves in some way from the hordes that come over from the slums of Europe. It is evident that a strong public opinion has been roused upon the subject, and the stream of European immigration hereafter will probably be forcibly turned from our shores to other portions of the world."

Free Silver Coinage

San Jose *Mercury:*

The most notable utterance that was made at the great Democratic banquet given by the Reform Club at New York on Saturday night was that of Senator Vilas of Wisconsin, in saying that "tariff reform and free silver coinage are not twin brothers." The special importance of these words lies not so much in the words themselves nor in the high position of the man who said them, as in the emphatic manner in which they were cheered by the distinguished company that listened to them. By this, as well as by the speeches of the other orators of the evening, it is made remarkably clear that a strong faction in the Democratic party is unalterably opposed to the free coinage of silver. There is no particular news in this fact, for it has long been known that the one point on which Cleveland and Hill agree is that free coinage shall not be made a part of the Democratic platform this year. On the other hand, however, there is an equally strong faction of the party that is resolved that it shall be, and this faction seems to be growing in strength all the time, so that, despite all the efforts of the New York leaders, it appears now to be more than a mere probability that the silver men will win in the convention. The Republican party is not so badly divided on this issue as the Democrats, but it cannot be denied that differences of opinion exist among its members also. In truth, the Government of the United States can hardly afford to keep silver at a discount by refusing to make use of it as money, for the simple reason that we have nearly half a billion of it in our Treasury. It is plainly to our advantage to get it recognized as money all over the world, and in the present monetary stringency in Europe there seems to be good reason for believing that, with a little effort, we can do this. It was stated in a dispatch yesterday that Senator Teller had given as his reason for introducing a resolution calling for an International Monetary Congress, that Mr. Goschen, the British Chancellor of the Exchequer, had intimated to him that Great Britain was willing to join in such a conference if the United States would take the initiative. Of course this means that British financiers are prepared to compromise the silver question, if not to concede it absolutely, and if the conference should be held it will doubtless result in some marked gain for the silver men. The question is in fact daily growing more and more paramount in the politics of the country. There can be but few business men who would like to see the present tariff disturbed just as the industries of the country have adapted themselves to it. Free silver, therefore, rather than free trade, is likely to be the issue of the coming campaign, despite the fact that the conservative leaders of both parties at the present time seem sanguine to ignore it. It is a question that cannot be permanently settled by a compromise, and an appeal to the people on the subject in some form or another is sure to be taken at this election, and if the two great parties do not speak out clearly in their national platforms, the people will demand clearness in the congressional districts and will vote for Congressmen very largely on that issue.

Why Is It So?

Santa Maria *Graphic:* "It is within the experience of many California farmers that a piece of land in their neighborhood, which they always considered worthless as agricultural land, has been taken up by a foreigner, who has gone industriously to work and in course of time has not only made it blossom as the rose, but has gone steadily on from poverty to prosperity, and finally to affluence.

"The question naturally arises, Why is it so? In answer to this, we must look at the work itself. In the first place, he goes to work methodically cultivating the land with the greatest care, plowing deeply, manuring well, observing what crop does the best this year, alternating with some other crop that is equally suitable to the soil next year, wasting nothing that can possibly be of use to him. In a word, he cultivates the soil scientifically.

"He has learned these things by hard experience in the land of his birth, where population is thick and where the soil has been cultivated for so many generations that these methods must be known to the tiller of the soil there; he has, in fact, been brought up to this sort of thing.

"The necessity for this knowledge has already come to many of the Eastern States, and they have made some advancement in this direction. California must soon fall in line.

"Much of her fertile land has been sown for years to the same crop, and the consequence is that it already begins to show signs of deterioration; therefore it behooves her farmers to think these things over and make the subject of agriculture a study."

Spice of Life.

Detroit Free Press: What Was Necessary. "Do you think we would be suited to each other?" she said, hesitatingly, before the final acceptance. "Certainly we would, after a little while," he responded, with supreme confidence. "All that is necessary is for you to suit yourself to me and we'll get along beautifully."

Kate Field's Washington: "What was the most successful funeral you ever saw?" "Well, I think the best attended one was that of a man who had spent the most of his life practicing the cornet with his windows open."

N. Y. Life: "I don't know which is worse, Christmas or measles," said Mrs. Workedtodeath. "Oh, Christmas, by all means," said Mr. W. "You only have the measles once."

GEORGE ELIOT says: "The man who trusts a friend educates him." But the truster often gets the most experimental knowledge.

"A Losing Battle Cry."

Commenting on the resolution introduced into Congress by Mr. Holman of Indiana, declaring that the appropriations of Congress shall be limited to moneys necessary to carry on the several departments of the Government, the Portland *Oregonian* says that the Democrats will show a lack of practical good sense in politics if they accept this proposition as a battle cry for the coming Presidential campaign. It further says:

Economy is a virtuous-sounding word in national as well as private affairs, but the value of the thing is relative. There are times in the history of nations, as of individuals, when the practice of the most rigid economy is the highest virtue. There are other times when what would have been common prudence in days of national or individual poverty, privation or debt, becomes petty and short-sighted meanness, defeating the object of promoting prosperity by checking progress and thwarting development. The trouble with Mr. Holman and those who follow him in this matter is that they do not know their time. Mr Randall won with the economy battle cry once; but he would have more sense than to try it now. Mr. Holman is less wise than his old leader, He will get himself laughed at and his party beaten.

That economy which avoids waste and extravagance, which demands the worth of its money, counts present and future resources before incurring debt, is always in place. That parsimony which limits national expenditures to the bare current needs of government, as if a rich man should refuse to satisfy more than his bare physical necessities, is out of place in a season of national prosperity, strong public credit, commercial expansion and political development. The United States has entered upon such a period, dating from the abundant crops, eager markets and high prices of last year. Individual prosperity everywhere makes up a sum of national prosperity. Judicious fostering legislation has given a new impetus to manufacturing industry everywhere, and its ample product is seeking new markets at home and abroad. The transfer of our raw crops to market has given an extraordinary stimulus to internal commerce; the foreign demand carries on the stimulus to ocean commerce with Europe, and the pressure to export products of industry creates new and increases old trade with all parts of the world. We have fairly entered upon such a period of national prosperity and national expansion as the United States has not known for two generations.

He is a short-sighted statesman who throws in the face of this state of things the parrot screech of national parsimony. The most vital function of government at this moment is to take advantage of national prosperity to encourage and protect national expansion. The most far-seeing and patriotic work of the last Congress was those appropriations which Holman denounces as extravagant; the river and harbor act which facilitates internal, and the mail subsidy law which creates foreign commerce; the liberal expenditures for navy and coast defences which furnish security to American citizens at home and abroad, and enable our race to pursue its destiny without asking leave of every mongrel Latin tribe with a few ironclads at its disposal. That work is going on, if not in this Congress in the next, and the most fatal blow Mr. Holman ever struck his own party was to put himself in its way. It will not be strange if the history of the next month shall demonstrate to Mr. Holman himself the utility of naval vessels and coast defenses, and the desirability of finishing the Nicaragua canal.

THE reelection of John Sherman to the United States Senate by the legislature of Ohio, which occurred on the 13th inst., continues in the public service for another term of six years the man who is perhaps the most competent and useful statesman in the country. Mr. Sherman lacks the "brilliancy" of Mr. Blaine, but for all-round capacity he has no equal. Since the retirement of Edmunds, he is the only man of the first rank left in the Senate. It is worth while to know what such a man deems the highest national duties of the time. In thanking the legislature for his election, he said among other things:

You will expect me to stand fast to the policy of impartially protecting all American industries from undue competition with foreign labor, so capital may be induced to embark in new enterprises, and American labor may secure such reasonable wages as are consistent with the dignity and wants of American workingmen. You will also expect me to insist on the best standards of value, so labor and production will be measured by money of the highest purchasing power. All measures to lower the purchasing power of money operate against labor and the producer. Good money and plenty of it is, I believe, the desire of both parties in Ohio. The sacred and faithful observance of public obligations to the surviving Union soldiers of the civil war, their widows and orphans, is demanded by the patriotic people of Ohio without distinction of party. These are the national duties of the hour.

Sherman was born in 1823, and is, therefore, now 69 years of age. His health is not of the best, and in all likelihood his coming term in the Senate (his fifth in that body) will be his last tour of public duty.

A Pessimistic View.

San Miguel *Messenger:*

The scheme on foot in San Francisco to construct a so-called "competing" transcontinental railroad, is but a dodge on the part of a lot of capitalists to build another road at the expense of the people. Under the guise of an "opposition road and cheap fares and freights," these schemers delude the business public into the belief that another road will break the backbone of the monopoly. But, when completed, this alleged competing road, built mainly by the subsidies of the people, joins the "pool," and the same high tariff rates prevail. It is the history of railroads, especially western roads. There are five transcontinental lines. Each charges exactly the same tariff on freights and fares. A "cut" by one road subjects the "offending" road to a fine. This is criminal extortion—about on a par with a gang of merciless free-booters who "corner" all of the necessaries of life and say to a famine-threatened people: "Pay our price, or starve!" It is the policy of these roads to "charge all that the traffic will bear," and thus keep the people in perpetual bondage—toiling for the benefit of the monopoly. The Government should own the railways. This is about the only way to prevent highway robbery, under the guise of "pools."

THE sinful editor of the Modesto *Herald* advised the girls that if they wanted something nice in their stockings to keep them on when they went to bed Christmas night.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FINE OLIVE OIL.—Oroville *Mercury*: In June, 1889, Messrs. Fogg & McLaughlin had their 30-acre olive grove set in Thermalito. Of course the trees were large and healthy, and on the 14th of this month a fine lot of olives were gathered. Mrs. E. W. Fogg, Mrs. A. G. Pierson and Mrs. Z. M. Sexton made a lot of oil from these olives and it is pronounced perfect.

CROP PROSPECTS.—Biggs *Argus*: Never before have the adobe lands in this section, at this stage of the season, shown better indications or prospects of a good crop than the present outlook. The farmers have had every opportunity to get in every available foot of land, and they made every hour count, and as a result the whole adobe section is one immense carpet of beautifully growing wheat. The rainfall has been all that could be desired, and with the usual fall during the coming three months, wheat growers will have an immense yield. The orchardists are just as fortunate as the farmers. The trees now planted, and nursery stock could not be better, and this year's planting, will have increased the acreage in orchard by several thousand.

Colusa.

ORANGES.—Colusa *Sun:* In many yards of Colusa, ripe oranges can be seen on the trees. The planting of orange trees has been increasing considerably during the past few years. These ripe oranges in January are a standing advertisement of our wonderful climate.

Fresno.

POULTRY PROFIT.— Fresno *Republican:* The poultry business has made rapid strides of late years with us, and though the fruit industry was aimed to be chief, now "honors are easy" in the two industries and parties are making from $50 to $80 per month in the hen fruit business.

GRAIN CROP OUTLOOK.—Fresno *Expositor:* If present appearances are worth anything, and present indications are carried out, Fresno county will this year have the largest acreage of grain that it has ever known in its history. That is saying a good deal, for there have been years in the past when the plains of this county looked like one vast wheat field. Good prices obtained this season for wheat, and the prospect that the price will be good next season, has much to do with the increased acreage that is being sown. Men have confidence in the business, and are willing to take the chances with the prospects of large gains, which will certainly be theirs if the year should continue to be a good one for the growing of wheat. It all depends on that. So far, the year has been favorable. True, there might have been more rains earlier in the season, but as it was the farmers were able to plow dry lands to a considerable extent, and the grain on them was brought out by the rains, when they did come, and now look fine, with every prospect for a good crop.

Kern.

FRUIT TREES QUARANTINED. — Bakersfield *Californian:* A consignment of about 1500 peach trees from the Phœnix nursery in Bloomington, Ill., consigned to W. C. Wilson at this place, arrived at the depot on Wednesday and was immediately quarantined by D. M. Pyle, who has the necessary authority for that purpose. While it is to be regretted that Mr. Wilson, who has undoubtedly acted in the best of faith in the purchase, should suffer any loss, Mr. Pyle has done the proper thing, for the welfare of our fruit growers demands that disease be kept away from us.

Los Angeles.

WINTER VEGETABLE DISTRICT.—L. A. *Express:* There is no more profitable branch of rural industry in Southern California than the production of winter vegetables and small fruits for shipping to the East. The Cahuenga district can furnish each winter thousands of carloads of beans, peas, lettuce, cabbage, new potatoes, strawberries and other fruits and vegetables for the frozen regions of the East. It has been amply demonstrated by experience that there is certainty of large profit in the business under favorable circumstances. The exemption from frost is a priceless advantage.

FERTILIZING ORANGE TREES.—A. F. B. in Covina *Argus:* Last winter I put about 20 pounds common stable manure (*well-rotted*) around my orange trees five years old and plowed it in; and around other trees five pounds of fertilizer manufactured in Los Angeles called "phosphate," and I find that during the past year, the trees having the manure around put on good growths and came out in the fall in a healthy, good green color, while those having the manufactured fertilizer grew about four times as much and seemed to use the fertilizer all up. They now have a rather sickly green color tending to the yellow. I believe the manure was the best, as it will last longest. The manure cost nothing, the fertilizer 10 cents to the tree, and the oranges are nicest on manured trees. Now I have five tons of guano which I will plow in around the trees, using perhaps 15 pounds to the tree, and shall put in about 30 to 40 pounds of unrotted manure around same trees I put manure on last winter. I shall tell you how they come out if you care to know next fall. I would like to hear the experience of others on this subject. It would be invaluable to many. I forgot to mention that the manured trees were in a very sandy soil, while the others were in a richer sandy loam.

RESULTS OF ARTESIAN WELLS.—L. A. *Express:* Artesian wells are now doing wonders for Antelope valley. Wherever irrigation is introduced, no matter what the source of the water supply, gratifying developments are sure to follow.

POULTRY SHOW.—The American Poultry Association will hold a convention at Los Angeles on February 12th, to continue six days. There will be several hundred delegates in attendance, and the session will prove of universal interest to breeders throughout the country.

San Bernardino.

THE OSTRICH INDUSTRY.—Riverside *Press and Horticulturist:* We are glad to hear that the American Ostrich Company, who have at Fallbrook the largest troop of ostriches in America, will shortly establish a branch of their business in Riverside. They have secured land on the Tibbets tract, and have already contracted for house, fences, etc.

SUGAR-BEET PLANTING. — Chino *Champion:* The beet-planting season is now fairly inaugurated. The crop should be ready to harvest at least 50 days earlier than harvesting commenced last year, and it is now but three weeks until the same date that planting commenced last season. The weather is fine for working now, and rainy weather later may cause considerable delay. Every day's work done now will be a big advantage, and may save considerable rush and anxiety later. The ground can be prepared for the seed, and the sooner that very particular work is commenced the more thoroughly it is apt to be done, thus insuring a much better crop.

TOMATOES FOR CHICAGO.—*Pomotropic:* C. E. Needham, of Glendora, has been shipping tomatoes to Chicago the past two or three weeks. Last week he shipped 40 crates of 20 lbs. each. They are packed in boxes holding 5 lbs. each, and sell there to the wholesale dealers at $3 a crate, or 15 cts. a pound. Some of the first shipped brought $3.25 per crate. Last year they were as high as $3.50. Mr. Needham has shipped about 85 crates, and may get off as many more. They net him 6 cts. a pound on the vines.

TWO PATRIARCHIAL OLIVE TREES.—Redlands *Citrograph:* On the place of Mr. Ingram, the Elder, at Highlands, may be seen two olive trees that for 15 years have stood among the orange trees in his splendid orchard and received the same fine irrigation and cultivation that oranges receive at Highlands, and have also had their share of fertilizers. When the writer last saw these trees, nearly two years ago, one of them was in the "off year," and yet it bore a greater weight of berries than any tree of its size, the difference in size more than balancing the difference in numbers, though even the difference in numbers was not so very great. The other tree, which was in the bearing year, was bowed down in every limb like a weeping willow. In the orange orchard of the same age as these two trees, there was fully $800 worth of fruit in sight, and yet it would have puzzled any one to say which he would have preferred—the whole place in oranges, or in trees like the two olives.

San Diego.

FARM NOTES.—San Jacinto *Register:* Farmers have nearly finished the season's plowing, with the result that a greater acreage is now in than has ever been known before. It is difficult to estimate just the exact figure sown to grain, but it is close in the neighborhood of 90,000 acres. Thousands of acres of virgin soil have this season been converted into vast grain fields. A successful harvest will give a wonderful prosperity to this section.

San Luis Obispo.

DAIRY NOTES.—Oak Park Cor. S. L. O. *Tribune:* Improvement of a substantial character is being made at the Pierce dairy between here and Pismo. The erection of a very neatly arranged building for cheese and butter making is a decided advantage in the work. A new windmill has just been put up. They are milking but few cows at present, but the rapid growth of the pasture will soon make plenty of work.

Santa Barbara.

A MECHANIC'S SUCCESS AT FRUIT-GROWING.—Santa Maria *Times:* G. M. Doane bought 50 acres of land up the valley a few years ago, for which he paid what seemed at that time a big price. He made a small payment down and mortgaged the property for the balance. He lost no time in putting out an orchard. Being a mechanic, he was obliged to hire all his orchard work done, which made it more expensive than if he had done the work himself. He was unable to buy first class yearling trees, so he made a deal for dormant bud trees, and he has made a perfect success of it. The great portion of his orchard will come into bearing in another year. His trees have made an even, thrifty growth. They are all of a size and height. They are all headed low, and no limbs were allowed to grow that would have to be cut out at pruning time. It is one of the prettiest orchards in the valley, and is an example of what can be done even though you owe more than the actual market value of your land. He has 1450 apricot trees, 1150 prunes, 500 apples and 400 English walnuts. Mr. Doane has raised two crops of beans between the rows, which have more than paid for the care of the orchard. He says it looked pretty dark for a long time, but he can look down those tree rows now and see some of the brightest sunshine he has ever seen in his life.

FRUIT NOTES.—*Times:* Fruit-growers are just beginning to wake up to the necessity of planting clean, healthy trees and keeping them that way. A number of the old diseased orchards will be dug up entirely this winter as the surest way to protect the adjacent young orchards. All fruit trees shipped to the Santa Maria depot will be inspected on Wednesdays and Saturdays. Any trees arriving on other days must remain at the depot until the next Wednesday or Saturday following. The inspector is only allowed two days each week for inspecting nursery stock at the depot. The many young orchards to be seen up the valley all made a good growth last year and are in a perfectly healthy condition. The thorough cleaning up last winter of old breeding places of disease was timely indeed for the benefit of these young orchards, and more will be done this winter. U. G. Battles will dig up his old seedling peach orchard this winter and plant the plat to apricots. There are a few people who still persist in planting seedling trees simply because they happened to have a good seedling tree or two in bearing or knew one who did, and then they are cheaper. Such people should learn a lesson from Mr. Battles' experience, and not encumber their grounds with worthless trees.

Santa Clara.

RASPBERRIES IN JANUARY.—Los Gatos *News*, Jan. 15: Wednesday of this week W. H. Cutter brought to this office a number of raspberry cuttings which were fairly well loaded with lucious ripe fruit, some not quite ripe, and healthy blossoms. They grew on his place north of town.

FRUIT-LAND IN DEMAND.—*News:* The great supply of young fruit trees placed near the Farmers' Union is rapidly changing. The number being planted exceeds that of any former year. There is an active demand not only for orchards but for improved land suitable for trees. The real estate men are busy with prospective buyers.

NAMING OF FARMS.—Cor. Fresno *Republican:* In Santa Clara county it has become a general custom for farmers to give their ranch a name, either using their own name or some fancy name, and in passing about the country you will see nearly every gate bearing a sign, such as "Evergreen Ranch," "Vine Ranch," "Valley Ranch," "Hopper Ranch," "Jones Ranch," "Brown Ranch," etc. The ranches are not only named, but every highway, and there may be seen on the crossing of the various roads a sign bearing the name of the road. This is as it should be in every county, and the writer hopes to yet see all county Supervisors do as much in road-naming.

Sonoma.

DAIRY NOTES.—Petaluma *Courier:* Peter Dolcini, a prominent dairyman of Nicasio, says: "The outlook is very favorable. Grass is very fine for this time of year, and the cattle came through the winter in more than average condition. Prices in butter are keeping up and prospects for the dairyman and farmer never looked better." William Camm informs us that there will be a meeting of dairymen of Two Rock valley with the view to the establishment of a large creamery in that valley. There is plenty of capital to take hold of it, and we have no doubt that it will be a success.

DEMAND FOR GUM TREES.—*Courier:* W. A. T. Stratton says: "I am shipping a great number of blue gum trees that are being sent to Fresno and Tulare counties; in fact, all through the upper San Joaquin valley. We will all be cleaned out of gum trees this year. The S. P. R. R. Co. are just now dividing up large tracts of land in that section and selling them off in five and ten acres, and are setting these trees around the tracts. I will this year ship 50,000 gums and 25,000 cypress trees. From the present outlook I will next year double and probably treble my output.

Stanislaus.

OAKDALE FARM NOTES.—Cor. Modesto *Herald:* The farmers in this section have never had a more favorable season for plowing and seeding their lands. As a rule, farm work is well advanced and a broad area has been seeded in a thorough manner, leaving nothing undone that would tend to the yield of an abundant harvest. J. W. Bell is pulverizing the soil in his vineyards with a spade harrow, which is the first implement of the kind ever used in this locality. It is drawn by two horses and thoroughly pulverizes the soil to a depth of six inches by means of several steel blades forming a revolving wheel. This implement is patented. It is well adapted to the cultivation of orchards and vineyards, as it can be run in close proximity to a tree or vine.

Tulare.

PORTERVILLE FARM NOTES.—Cor. Visalia *Register:* The Cheeney Bros. have the greater part of the "Old Reserve" plowed over and seeded, having all the land heretofore under cultivation finished and much of the hog wallow land taken in, which has never been used for other than grazing purposes. The large bunch of stock which has usually been kept on the place has been taken to different points in the foothills. It is a task to care for stock at present, as old feed is very scarce, while the green feed just starting is a "delusion and snare," merely calculated to keep hungry animals on the move. On Upper Deer creek, an arrangement has been entered into by the owners to cut the fences and let everything out on to the lower range and herd off the farmers, as the snow has been deep and weather cold. D. A. Vaughn has a large tract of land seeded on Deer creek. As the cattle have troubled him more or less, he has been buying a large quantity of fence wire from the Hockett firm, which will be put up immediately. The Pioneer Land Co. has seeded between one and two hundred acres to grain, and intend to sow a quarter section to alfalfa on the west side. The Hyde land has been cultivated by the Gibson Bros. Mr. Chin is having a section plowed south of Plano, besides other lands let out on shares. Taken all in all, there will be more grain sown on Upper Tule near this place than for many years.

IRRIGATING BY STEAM PUMPS.—Lindsay Cor. Tulare City *Citizen:* Mr. J. J. Cairn's steam pump has solved the water question in this locality. His pump throws over eighty thousand gallons per hour, and in less than four weeks he wet 160 acres down to bedrock with less cost than it would take to build a small ditch and keep it in repair for that length of time, and he can have the water whenever he wants it and no quarreling with his neighbors about water rights. Capt. Hutchinson has a new steam pump which he claims will throw thirty thousand gallons per hour, which will be used in irrigating his young orchard. He has two year old lemon trees on which a growth of five feet has been made during the past season. Mr. Hutchinson has trees started from the seed last March, which now measure nearly three feet in height. These trees he will bud for his own planting.

RURAL FARM NOTES.—Cor. *Citizen:* We are having fine weather for the young grass and grain crops, with sunshine and showers and warm weather. The farmers are all busy as bees, putting in their crops. There is no talk of drouth now, but cattle that have to depend on the outside range are suffering for feed, and some have already died.

TESTING THE EAST SIDE ELEVATED LAND FOR FRUIT.—*Citizen:* There is a great body of very fine land lying along the east side of this county, somewhat elevated and supposed to be valuable only for grain-raising and dry-farming, as there was no known water supply, the land being denominated as "hog wallow." The soil is hard and very strong, and has proved excellent for wheat, but a change is about to take place. J. J. Cairns has conceived the idea that it would be much more profitable for orange orchard and general fruit-growing than for wheat, and as it possesses all the natural qualifications except water, he has gone to work to supply the water. Mr. Cairns has leveled and irrigated 160 acres, and as soon as his teams finish seeding, he will level an adjoining 160. He will plant as a trial, 20 acres of oranges, 20 acres of lemons and about the same amount to soft shell almonds, besides other fruit in smaller quantities.

Ventura.

BEAN FIGURES.—Ventura *Free Press:* In some parts of the county there will be a decrease in acreage, and some place it as low as one-third of the average of last year, or say 20,000 acres. The following figures show the amount of beans on hand Dec 31 at the various stations of this division. It is furnished by John Simpson, agent of the S. P. Co.

	Pounds.
Carpinteria	1,270,000
Santa Barbara	180,000
Ventura	4,716,474
Montalvo	6 500,000
Santa Paula	752,184
Saticoy	1,835 400
Hueneme	4 200,000
Total	19,454,068

This is 9,727 tons or 972 carloads, a considerable amount to begin the year with.

RED OATS.—Saticoy cor. *Free Press:* T. J. Robinson, of the Ojai, five years since got 1½ gallons of red oats for seed, and in three years had 325 sacks of oats averaging 45 pounds to the sack. On Tuesday Mr. Robinson passed through Saticoy, en route for the Simi, with the seed of these oats, to plant 100 acres on what was part of the S. M. W. Easley tract.

NOT INJURED BY THE COLD WEATHER.—Saticoy, January 10: Making personal inspection of the ranches about our city recently, we find that none of the fruit trees are in the least injured by the Christmas cold snap. Of vegetables, nothing injured but the tomatoes. Some of the more delicate flowering plants were touched.

GRAIN COMING UP.—Conejo cor. *Free Press:* The new sown grain is coming up nicely. The season so far has been very favorable for the coming wheat crop.

ARIZONA.

PROFIT IN CEREALS. — Phœnix *Herald*: We give the subjoined figures of Alex Silva's two crops raised on one acre this year in Chalderwood district of Salt River valley. Only an acre is given, but Mr. Silva has done the same kind of farming on his whole 280 acres. There was only a partial crop of wheat on this acre this season, owing to the last spring's flood leaving the ditches in such shape that water could not be got through them for months. Two crops were harvested thus:

1000 pounds wheat at $1.50	$15 00
45 sacks corn at 65 cts	29 25
Total yield of one acre	$44 25

The cost of production included items as follows:

Water tax, one acre	$ 1 25
Seed wheat	75
Harrowing, sowing, irrigating	1 50
Threshing and heading	2 75
Sacking wheat	1 00
Plowing and planting	2 00
Irrigation	50
Harvesting corn	2 00
Total	$11 75
Profit on one acre	32 50

Mr. Silva cut his corn close to the ground. He has kept 100 head of cattle and horses six weeks on the fodder taken from 35 acres, and now has some ground plowed ready for another crop of wheat. Mr. Silva raised 800 sacks of corn this year. The crop of wheat was sowed in December, 1890, and harvested in May, 1891. The ground was then plowed immediately and allowed to remain idle until July, when it was plowed again and planted to corn. The corn grew four feet high without water, the ground not having been irrigated since the time of the first plowing in May. The only cultivation this second crop had was simply what resulted from running a furrow between the rows after the corn was four feet high, to receive the running water. Mr. Silva says the secret of raising corn in a hot climate is to plant it at the right time, and his experience has taught him that July is the best month for this section. If corn is planted too early it will tassel out during hot weather, when the sun will burn the tassel so that no ear can form.

FARMERS' INSTITUTES.

The Fowler Meeting.

TO THE EDITOR:—Notwithstanding the stormy weather of the morning of Jan. 7th, a large number of farmers from all parts of the county assembled at Good Templars' Hall, in Fowler, Fresno county, to give their attention to the important subjects that had been announced by program for discussion at that time. None of the time was wasted, for the time was far too brief, considering the importance of the subjects under consideration.

Most excellent papers were read on varieties and the cultivation of raisin grapes, by J. H. LaRue, and on vine-pruning by J. H. Harding. They will be offered the RURAL for publication, but the discussion of them, which was of equal value to the people of this county, cannot be given, for the reason that no stenographer being present, there was no way of furnishing off-hand speeches. The Secretary has all that one writer can do in recording the minutes and attending to the necessary business of the organization.

An earnest, determined representative body of men and women listened with closest attention to the address given to them by Rev. N. W. Motheral of Tulare, on the subject of marketing fruits. To attempt a synopsis of that address would be an injustice to the speaker and to myself. Every word of it was important; of such value none can be omitted without loss. The situation, the cause of it, the effect of it, the help for it, were all so vividly portrayed, and the remedy so practically demonstrated, that it reached the understanding of all present.

After a brief discussion by a number, including such persons as J. H. LaRue, Miss L. H. Hatch, J. S. Dore, Captain Norris and L. H. Harding, a committee was appointed consisting of the following named gentlemen: Capt. Charles H. Norris, John S. Dore, J. H. LaRue, Alex Gordon, of Fresno county; N. W. Motheral, L. M. Morton of Tulare, and D. M. Pyle of Kern county, "to prepare and issue a call to the raisin-producers of California to assemble in Fresno soon, to consider and take action upon the proposition of general cooperation of all raisin-producers in the preparation, packing and marketing of their products."

It is proposed at this meeting and at other following meetings of the Institute to secure the attendance of a reporter that will give our proceedings to the public.

In the unavoidable absence of our President, O. P. Laird, Prof. Wickson, of the State University, acted as chairman and conductor, filling both positions in a most acceptable manner. In the evening he gave a most interesting lecture on "What Horticulture Has Done for California." The large audience present was also entertained by Miss Nellie Boyd, who gave Tennyson's "Dora" in a way to well deserve the enthusiastic encore given, which brought out the humorous selection, "Pat's Letter."

The musical features of the program were delightful, despite the drawback of having an unmusical piano to use. They were furnished by Mrs. Charles H. Norris, Mrs. L. H. Norris, Mrs. Scott and Mrs. and Mr. Harlin. The song, "Forget Me Not," given by him, shows a voice of universal merit. All the exercises were good, but the closing piece, a trio by Mme. Norris and Mr. Scott, "Oh, Hush Thee My Baby," was music as pure and sweet as is ever heard.

The Institute having increased its membership to 129, it adjourned, to meet again in Fresno City some day of the first week in April.

MRS. M. B. STUART,
Sec'y Fresno Co. F. I.

A PLEA FOR SHORTHAND REPORTS.

FRESNO, Jan. 11.

TO THE EDITOR:—We had a splendid Institute meeting at Fowler, and it's too bad that the Regents of our State University permit its value to be so largely lost to the people, when by sending out with Prof. Wickson a shorthand reporter, those valuable addresses and the more valuable discussions could be secured and saved for publication in such papers as cared to assist this work; and at the end of the year what a volume the work of all our California Institutes would make. How valuable and helpful to the new comers who are confronted with new and strange conditions and new lines of work that accompany our wider range of products. The State cannot afford to lose so much that could be utilized by a little added expense. Other States have a care in this direction and point with pride to their annual volumes of verbatim reports of Institute work. Fresno County Institute has decided to have its next meeting at Fresno, in April, continue two days and one evening, and arrangements are to be made for a shorthand reporter and for full publication of the work of the Institute in some enterprising paper which will incur the necessary expenses and can furnish the space for such extended report.

JOHN S. DORE.

How Trees May Pass Quarantine.

LOS ANGELES, Jan 14.—The Southern California Horticultural Commission, after discussing at great length the question of stopping the importation of infected stock from the East, passed the following resolution:

Resolved, That we will place in quarantine all peach, plum, prune or almond trees and all deciduous trees on peach or plum roots or buds, pits or roots of the same that may be shipped into our counties from east of the Rocky mountains, and demand from the owner or person wishing to bring them into the county affidavits establishing the following points, to-wit:

First—That a certain person grew the trees or buds, pits, etc., under quarantine.

Second—That they were grown in a section at least 100 miles from any trees believed to be infested with yellows or rosette.

Third—That the grower of the trees, or buds, pits, etc., has not used or bought buds, pits or roots of the above-named trees from any district where yellows or rosette are known to exist within five years; and also that we will demand such further evidence as shall be necessary to satisfactorily establish the place of growth of the trees under quarantine, and that neither trees, buds, pits nor roots were grown in a district infested with yellows or rosette, and that we will hold trees, etc., in quarantine until such evidence is produced.

THE VERY BEST & CHEAPEST FLOUR.

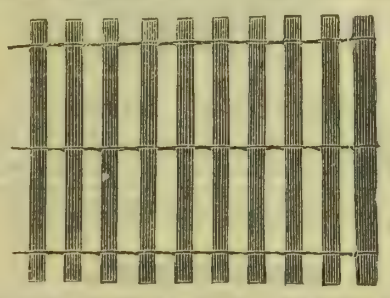


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STOCK FENCE!
Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to

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14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

IT STANDS AT THE HEAD!
"DOMESTIC"
THE LIGHT RUNNING
DO NOT FAIL to SEE THE "DOMESTIC"
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From 1863 to 1885—about 22 years—I suffered with rheumatism of the hip. I was cured by the use of ST. JACOBS OIL. T. C. DODD.
"ALL RIGHT! ST. JACOBS OIL DID IT."

A FEW KNOCK-DOWNS

Stock-taking last week has turned up a good many bargains where we have too much goods of a kind, or too little to keep it on the regular list, or out of style and reduced to close them out.

Our stock must be kept all O. K., at whatever sacrifice. 1891 goods and overstock must give way to new stock.

Over 100,000 Blood's, Turney's, Warren's, or Baylis' best sewing needles at 2½ cents a paper, 40 for $1.00, all sizes except 6; also 4 to 8, 1 to 5, 5 to 10, and 3 to 9 mixed darners or yarn needles at same price.

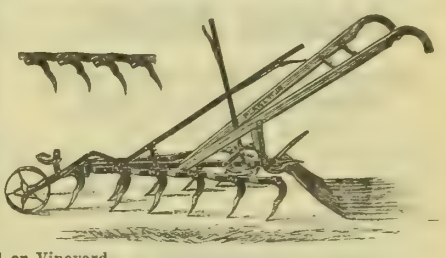
Large or small coat, dress or other buttons, real value is from 15 cents to $1.00 per dozen, go now at 2½, 5, 10 per dozen, or 25 to 35 per gross, assorted to suit. Mostly black, late styles, but we have over 2000 gross and shall let them go at any price

SWISS embroidery, 2, 2½, 3, 3½-inch edging, beautiful and costly, has sold at 25 to 50, now 12½ cents, and na row ones at 5 cents. Fancy linen splashers (samples) and other linens at 50 cents on the dollar. Button-hole twist, assorted (3 black), 25 in a box at 37 cents. Sewing silk, 100-yard spools, assorted (3 black), 65 cents dozen. Ladies' handkerchiefs, several 100 dozen at one-half price, fine goods.

10,000 articles we have not room to tell about. Order a few by mail or express if not ready for a large order by freight. Add for postage. Ask for complete list. Address

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ALL STEEL "PLANET JR." HORSE HOE FOR 1891.
Cultivator and Coverer Combined.
Patent Adjustable Lever Wheel.
Patent Parallel Steel Frame.
Patent Lever Width Expander,
Patent Side Adjustment for Handles,
Patent Hollow Steel Standards.
Levers Adjust Depth and Width while Cultivating



Handles adjust sidewise for close cultivating in Orchard or Vineyard.

The Planet Jr. Implements are built on scientific principles, with many advantages not found on any other tools; with new adjustments and devices to suit any and all crops and conditions of soil; with improvements which users appreciate and competitors copy.

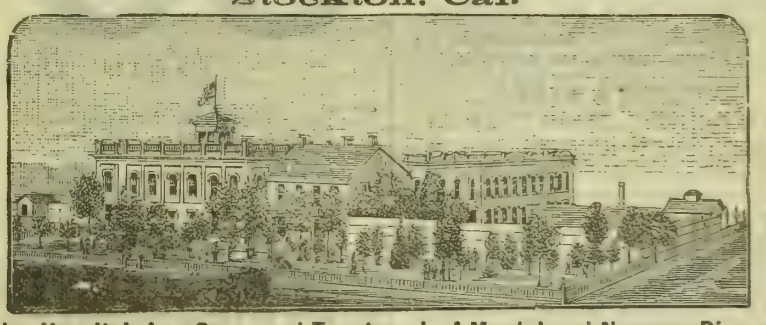
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These Double and Single Wheel Hoes, "Fire Fly" Plows and Hand Drills make gardening fascinating to ladies and even to truant schoolboys, and are most useful and practical tools for market gardeners and farmers. All blades made of hardened, polished steel.

Send for catalogue showing varied uses of above implements.

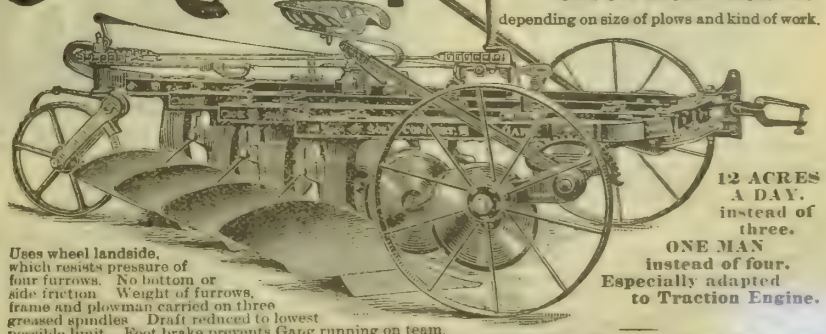
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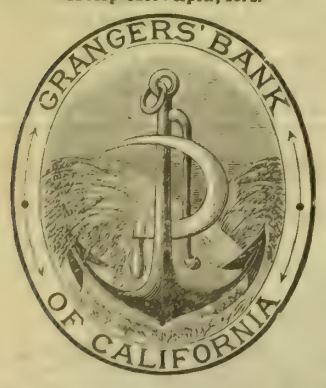
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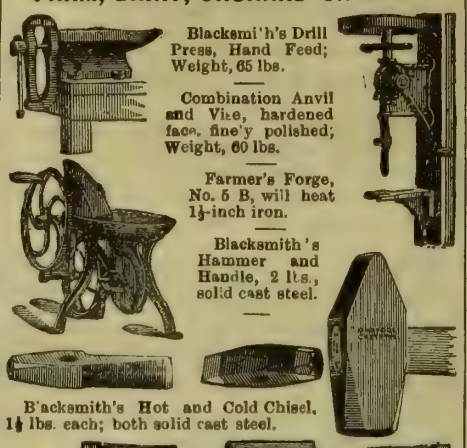


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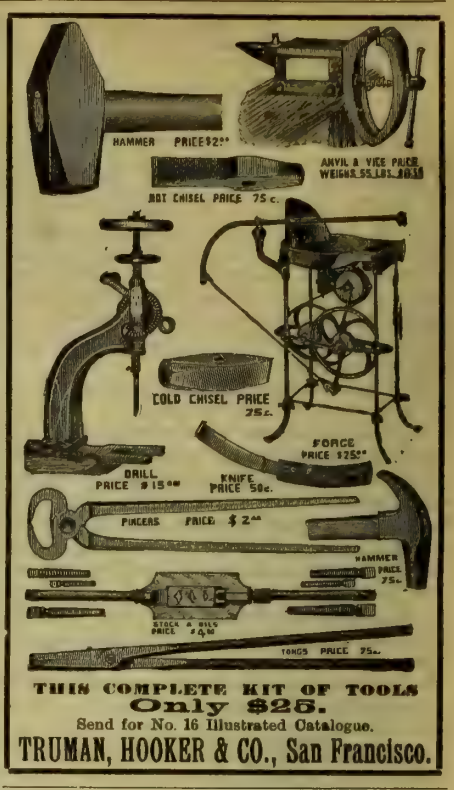
SEALED PROPOSALS WILL BE RECEIVED BY THE Directors of the Bear Valley Irrigation Company at Redlands, California, until March 1st, 1892, for the construction of a Tunnel about 6600 feet in length through rock, in accordance with the plans and specifications on file in the office of the undersigned. Bidders may propose to furnish their own plant, or to use a complete power-drilling, hauling and ventilating plant to be furnished by the Company. Each bid must be accompanied by a certified check for not less than 2% of the amount of the proposal. The Directors reserve the right to reject any or all proposals. EDWARD M. BOGGS, Engineer, Banning, California.

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FRUIT PRESERVATION.

A New Sulphuring Device.

VACAVILLE, Jan. 18.

TO THE EDITOR:—I have been able to profit many times by the experience of others, given through the medium of your valuable paper, so, therefore, I shall give some of my experience which may be of benefit to some of your readers.

As every fruit grower knows, there is a great deal of labor and expense connected with fruit-drying, and any method of handling the fruit whereby a saving can be made is worth considering by him, for to the fruit grower especially, economy is a matter of importance.

By the use of a new kind of sulphur box and other apparatus, devised by me two years ago, I have effected a great saving of time, labor and sulphur in the sun-drying of fruit, as compared with the usual method.

The past season I dried 400,000 pounds of green fruit, and used only 1100 pounds of sulphur, or one pound of sulphur to 363 pounds of fruit—an amount so small that even Prof. Hilgard would not object to it, and my fruit was of as fine color as any one could wish.

My apparatus and method of sulphuring was as follows: I constructed a track to run from cutting shed to drying ground, and two cars to run on this track. A car was run into the shed, and as the trays were filled, they were stacked upon the car until the car was full, when it was run out under the sulphur box, the sulphur ignited, and the cover, or box, drawn down over the trays until it rested on the platform of the car, which was made of matched flooring so as to be tight. The cover, or box, was made of canvas tacked over a wooden frame, and well painted, and hung inside of a frame with weights to counterbalance, so that it was an easy matter to raise and lower it.

I put 180 2x3 ft. trays on the car at a time, and used about the same quantity of sulphur that other people use for 20 or 30 trays. The box being perfectly tight, none of the fumes were lost by escaping, as is the case with a wooden box, and by having a large quantity of fruit in at a time, I effected a saving of both time and sulphur, and also labor in handling of the trays, as they have to be handled but twice, *i. e.*, when they are put on and when they are taken off the car to be placed where they belong in the drying ground. The empty car brings back the empty trays.

I have no patent on my rig, and any one can use it if they wish. At a future time I may give directions for building a sulphur box on my plan, with improvements suggested by experience of the past season.

J. R. SEARS.

[We like to publish such descriptions, and to have them commented upon by our readers. Perhaps Mr. Sears can induce a photographer to take a good photograph of his arrangement to go with the full directions for building, etc., which he promises. We can then make an engraving which will render the description more clear. We extend the same request to all who succeed in improving methods or appliances in any line of farm work. Tell us what you are doing, and send us sketches or photographs if you can.—ED. PRESS.]

Who Has Unsulphured Fruit?

906 North "M" St.,
TACOMA, Wash., Jan. 11, 1892.

Prof. Hilgard hands us the appended letter for publication. If any readers of the RURAL who have good unsulphured fruit desire to correspond with the writer, they have opportunity to do so.

TACOMA, Wash., 906 North M St.

Prof. Hilgard, Berkeley, Cal.:—I have read with much interest what you have written with regard to the use of sulphur in fruit-drying. Being desirous to get good *unsulphured* fruit, would be greatly obliged to you if you would send me the address of a party of whom I could get the genuine unsophisticated article. Hitherto, the California dried fruits I have been able to get here, or by sending to San Francisco, although handsome in appearance, have been unsatisfactory, and in some cases very unpleasant in flavor. As I still believe there must be somewhere where fruit is dried in such a way as to retain some of its natural qualities, I would be much obliged if you would give me the desired information. HENRI V. LEMENAGER.

FINE HORSES.—Holbert & Conger, 129 Eighteenth St., Los Angeles, have just issued a very neat catalogue of their imported English Shire, Cleveland Bay and German coach horses, in which 15 fine animals are described and pedigreed, and in some cases portrayed by the artist. It is a very attractive publication.

The Citrus Fair at Auburn.

The citrus fair held its interest undiminished through its week and was visited by a vast concourse of people from near and far. The display was a revelation, even to Californians, and is said to have paralyzed the descriptive powers of the distinguished editorial tourists from the East, who were dropped into it from out of the snows of the summit of the Sierras. We hope ere long to show some of the most striking features of the fair in engravings. The following are

The Awards.

Class 1, county exhibits—First, Placer County Board of Trade; second, J. A. Cleveland, Thermalito, Butte; third, Jack O'Brien, Smartsville, Yuba; fourth, C. F. Wyer, Winters, Yolo.

Class 2, largest and best exhibit of budded oranges—First, Robert Hector, Monte Rio: second, Peter Norburg, Penryn; third, Oroville Citrus Association, Thermalito; fourth, J. K. Correa, Jr., Newcastle; fifth, Auburn Orange Company.

Class 3, best twelve budded oranges—First, Oroville Citrus Association, Thermalito; second, J. R. Wolfskill, Winters; third, Mrs. D. Benjamin, Oroville; fourth, Mrs. J. H, Lewis, Monte Rio; fifth, Mrs. A. F. Jones, Oroville; sixth, Robert Hector, Monte Rio; seventh, W. A. Rogers, Thermalito; eighth, H. E. Parker, Penryn; ninth, J. K. Correa, Jr., Newcastle; tenth, Robert Hector.

Class 4, best exhibit of seedling oranges—First, Owen R. Owens, Penryn; second, J. K. O'Brien, Smartsville; third, William Barter, Penryn; fourth, George Rich, Sacramento.

Class 5, best twelve seedling oranges—First, J. K. O'Brien, Smartsville; second, George Jeffery, Smartsville; third, William A. O'Brien, Smartsville; fourth, S. A. Griggs, Red Bluff; fifth, H. E. Parker, Penryn; sixth, William Foster, Lincoln; seventh, R. G. Currier, Folsom; eighth, Owen R. Owens, Penryn; ninth, J. K. Correa, Jr., Newcastle; tenth, Mrs. Van Arsdale, Yuba City.

Class 6, best two boxes of budded oranges—First, Oroville Citrus Association, Thermalito; second, J. K. Correa, Newcastle.

Class 7, best two standard boxes of seedling oranges—First, J. K, O'Brien, Smartsville; second, J. K. Correa, Jr., Newcastle.

Class 8, lemons—First, H. Seamany, Winters; second, Auburn Orange Company; third, O. K. Cleveland, Thermalito; fourth, George T. Rich, Sacramento.

Class 9, shaddocks and pomelos—First, C. F. Lewis, Monte Rio; second, D. W. Lubick, Auburn; third, James Rutler, Florin.

Class 10, largest and best display of olives—First, Mrs. Roberson, Auburn; second, Miss N. S. Dunlap, Sacramento; third, Thermalito Olive Oil Association.

Class 11, pickled olives—First, Mrs. E. Roberson; second, J. R. Wolfskill, Winters; third, F. Class; fourth, George Cooley, Marysville.

Class 13, persimmons—First, W. B. Gester, Monte Rio; second, Martin Pelstet, Auburn; third, A. C. Keeler, Auburn.

Class 14, pomegranates—First, J. T. Jones & Son, Ophir; second, H. B. Saylord, Auburn; third, S. S. Betterley, Ophir.

Class 15, raisins—L. H. Cary, Lincoln; B. G. Stabler, Yuba City; L. G. Stone, Woodland; C, F. Wyer, Winters.

Class 16, dried prunes display—R. C. Kells, Yuba City; Mrs. F. Purrington, Santa Rosa; D. A. Jackson, Woodland.

Class 17, best dried prunes—Young Bros., Auburn; S. F. Woodworth, Clipper Gap.

Class 18, figs—Sherman Bros., Monte Rio; William Foster, Lincoln; L. A. Wilton, Yuba City; H. E. Parker, Penryn.

Class 19, general exhibit of dried fruit—Hon. H. P. Stabler, Yuba City; Sherman Bros., Monte Rio; C. F. Wyer, Winters; L. G. Stone, Woodland.

Class 20, preserved and canned fruit—Mrs. W. B. Gardner, Auburn; J. A. Devilbiss, Winters; E. B. Beecher, Auburn.

Class 21, nuts—J. R. Wolfskill, Winters; Mrs. F. Purrington, Santa Rosa; Hon. Thomas Frazer, Placerville.

Class 22, nursery stock—H. F. Boardman & Co., Auburn; W. R. Strong & Co., Sacramento.

Class 23, apples—Towle Brothers & Co., Towle Station; H. A. Frost, Dutch Flat; Mrs. F. A. Towle, Mrs. J. H. Lewis, Monte Rio.

Class 24, pears—Hon. T. Frazer, Placerville; Hon. D. W. Spear, Auburn: Mrs. F, Purrington, Santa Rosa; C. M. De Lamater, Newcastle.

Class 25, most artistic exhibit—Sutter county, by L. A. Walton.

Class 26, honorable mention—Dates, J. R. Wolfskill, Winters; bananas, J. R, Preston, Oroville; China dates, J. W, Smyth, Monte Rio; cotton, J. Smyth; cotton, Mrs. T. B. Gibson, Auburn; licorice root, T. Gibson; licorice root, Mrs. Pratt, Sacramento; green corn, Thos. Frazer, Placerville; grapes, H. Geisendorfer, Weimar; plums, usually ripening in December, H. Bresslier, Red Bluff, figs from 16-month cuttings, S. Dewy, Newcastle; seedless grapes, J. P. Onstott, Yuba City; oranges, Mrs. W. A. Rogers, Thermalito; orange syrup, Norton & Reckman, Oroville; exhibit of fruit, L. A. Walton, Yuba City; citrus lemon, G. H. Kimball, Red Bluff; seedless oranges, Robert Hector, Monte Rio; H. E. Parker, Penryn.

A Generous Proposition.

Wells, Richardson & Co., the enterprising manufacturers of Burlington, Vt., write us under date of Jan. 15, as follows:

Editor "Rural Press:" We are very anxious to have the gold medal for the best butter at the Chicago World's Fair go to some United States butter maker. At the Paris Exposition Moulton Bros., of Randolph, Vt, received the gold medal, and the color used in their butter was our Improved Butter Color. We will give enough of this color for sixty pounds of butter to any of your readers who will send us six cents in stamps. We will also send our valuable Dairyman's Account Book. The best materials are necessary for making the best butter.

Very truly yours,
WELLS, RICHARDSON & Co.

QUERIES AND REPLIES.

Sowing Alfalfa.

TO THE EDITOR:—Being about to seed a piece of land to 'alfalfa," I would like some advice regarding the best time to plant, fall or spring. I have had an idea of putting it out this December, so it would get the benefit of the winter rains, but am afraid of the frost injuring the young plants. Any information you or your correspondents may give through your valuable paper will be thankfully received. The location of the land I wish to seed is in Fresno county.—C. H. T.

As described by Daniel Flint on page 37 of the RURAL of Jan. 9, it is the practice in some localities to sow after the first rains, and in other localities to sow after the heavy frosts of the season are over. We believe Fresno and other San Joaquin valley experience favors sowing in the spring, especially in the lower and more frosty parts of the valley. We would like to have communications on this subject.

Killing Morning Glory.

MIDDLETOWN, CAL.

TO THE EDITOR:—Will you kindly inform me if you know of any way to exterminate wild morning glory. I have some in my yard that I cannot get rid of. I subscribed for the PRESS five or six years and saw several accounts of morning glory in the paper, but do not remember the remedies.

J. C. V.

There is only one way to kill out morning glory without destroying the soil, and that is to regularly and persistently cut it off below the surface of the soil just so long as it attempts to reach the light. Do not wait for it to make a top growth before cutting: cut the ground over, whether you see any morning glory or not. You may have to do this for weeks and months. Cut in the field or orchard with a flat or knife-toothed cultivator or weed cutter; in the dooryard you can do it with a hoe—but cut it and then keep cutting it.

Heroic Pruning of Moorparks.

LAMANDA PARK, LOS ANGELES CO., CAL

TO THE EDITOR:—It is not all moonshine about hard-pruning Moorpark apricot trees. Two years ago this coming March I cut off five Moorpark apricot trees and grafted them to another variety, leaving on about one-fourth of the top, also leaving on all low branches. Last summer I had more apricots on the lower branches than I ever took from any of the trees, and they are full of buds now for this year.

Last spring I cut off 25 or 30 more trees, leaving, as before, about one-fourth of top and all lower branches, and budded young shoots in July. The lower branches are just a mass of fruit buds.

I thought by cutting the top so hard it would force the sap to wood, but it has not. It has gone to fruit. The reason I am budding them is because they have never borne enough to pay. I am satisfied from my experiments that you must butcher a Moorpark to make it fruit.—E. A. BONINE.

We are glad to have this testimony. It will be especially interesting to our Santa Clara friends who now have their Moorparks booked for heroic treatment. The demonstration of this matter will be one of the most interesting things in our horticulture. It will be well for all Moorpark growers to try a few trees this winter and compare results next year.—ED. PRESS.

Hard-Working Butter.

TO THE EDITOR:—In making butter on a small scale (four pounds at a churning), I find the butter so hard that working it with the paddle is difficult. Can the butter be softened by warming without spoiling the product?—E. E. C., *Napa*.

Yes. It is good practice to bring your butter to a proper temperature before attempting to work it; but do not attempt to warm it by direct application of a high degree of heat. Let it stand in a room moderately warm until the mass of butter is evenly and thoroughly acted upon.

It would be better practice to conform to the modern method of butter-gathering which nearly dispenses with working. Stop churning when the butter comes in small grains, draw off the buttermilk through a hole in the churn or pour out upon a hair sieve. Wash by pouring cold water into the churn, stir it with the dash and draw off the water, or pour the water gently upon the granular mass of butter on the sieve. If the butter is thus freed from buttermilk and salted by sprinkling, all the working necessary is to press the granules into mass form and press out surplus brine. This gives the finest kind of butter with no chance to injure the grain by over-working.

GOPHER TRAPS.—Ira F. White announces in their advertisement in another column, that they have made certain improvements in their famous gopher traps which will greatly add to their already well earned popularity.

PATENTS!
Inventors should send to DEWEY & CO'S SCIENTIFIC PRESS PATENT AGENCY, No. 220 Market St., San Francisco, for latest Guide to Inventors. Most Experienced and Successful Patent Solicitors West of New York City. Established 1860

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co, Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING JANUARY 12, 1891.

466,878.—ZITHER—Chas. Buckner, S. F.
466,774.—CUFF-HOLDER—J. J. Culley, S. F.
466,879.—PRUNING IMPLEMENT—R. H. Dixon, Santa Rosa, Cal.
466,849.—POTATO PLANTER—C. F. Gillett, Corvallis, Oregon.
466,911.—SASH BALANCE—S. N. Goldy, S. F.
466,880.—CLIP FOR ROPE TRAMWAYS—A. S. Hallidie, S. F.
466,864.—PULVERIZING MILL—E. I. Nichols, S. F.
466,838.—STUMP EXTRACTOR—T. & A. Pinard, Chehalis, Wash.
466,881.—ORE FEEDER—I. R. Russell, S. F.
467,054.—BRAKE FOR CHILDREN'S CARRIAGES—A. E. Scharff, Tacoma, Wash.
466,809.—FILTER—Peter Stone, Los Angeles, Cal.
467,072.—WATER ELEVATOR—A. L. White, Suisun, Cal.

The following brief list by telegraph, for Jan. 19, will appear more complete on receipt of mail advices:

California.—Russel A. Arben, Los Angeles, calf and colt weaner; James W. Atkinson, Milpitas, incubator; Thomas W. Breen, Sausalito, gardening implement; Moses P. Farnham, Germantown, stovepipe drum; James L. Hawkins, Fresno, culinary boiler; James E. Hagan, Oakland, automatic cut-off for gas burners; Byron Jennings, San Jose, pneumatic clutch; Frederick P. McFeeley, Oakland, beam for cultivators; James McNeil, San Francisco, templet for boiler holes; John B. Pitchford, San Francisco, and A. S. Cooper, Santa Barbara, mixing machine for asphalt; Clarence M. Simonds, San Francisco, paint can. Oregon—Charles W. Tremain, Portland, steam engine. Washing on—Joseph Mount and F. H. Warneck, Spokane, hoisting apparatus; William F. Parsons and A. Davis, wrench. Nevada—James McFarland, Virginia City, stamp mill.

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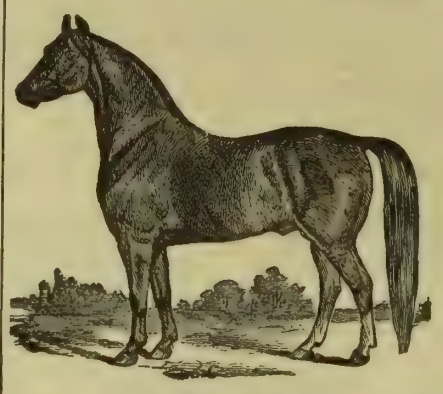


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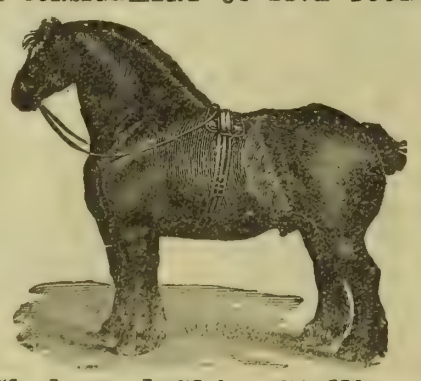
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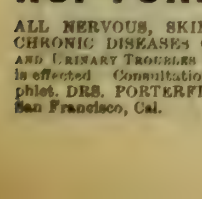
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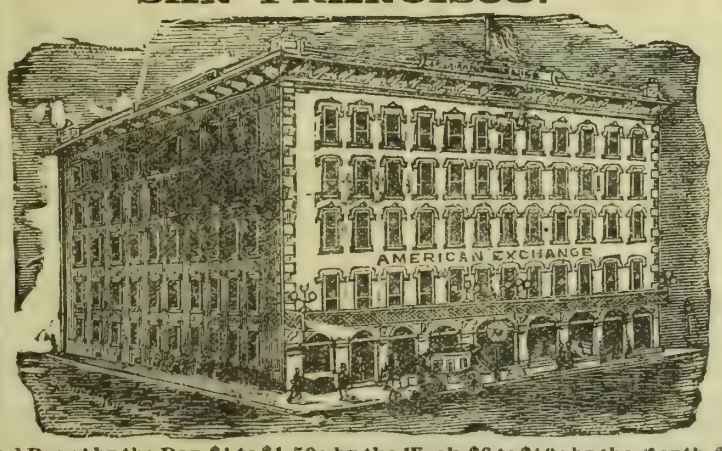
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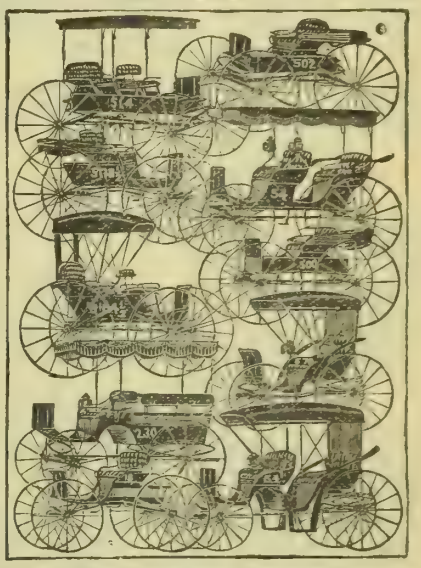
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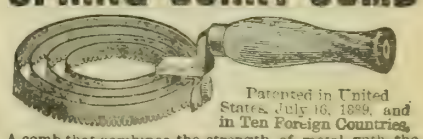
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

Fair weather the past week allowed outdoor work in all parts of the State. Our advices report that seldom, if ever before, has farm and orchard work been pushed with such vigor, and that with favorable seasonable rains all kinds of crops will show a very large gain over that of 1891. Trading in farm products has been largely of a nominal character, owing to light supplies and a light demand. Trade in orchard products is confined to oranges and apples. Money continues in liberal supply, with all legitimate requirements based on gilt-edged security readily placed.

Foreign Grain Review.

LONDON, Jan. 18.—"Mark Lane Express:" English wheats are dull; foreign wheats are inert. The total decline since the 1st of December is 4s California and 2s on American red winter. American flour is 1s lower; oats 1s, and corn 6d cheaper. To-day's market—English flour dropped 1s; barley is steady; oats and corn are unchanged.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May.
Thursday	8s3d	8s3d	8s2¾d	8s1½d	8s3½d
Friday	8s1½d	8s0d	8s0½d	8s0d	8s2d
Saturday	8s1½d	8s0d	8s0d	8s0d	8s 2d
Monday	8s1½d	8s1½d	8s1¾d	8s1½d	8s1½d
Tuesday	8s1d	8s0d	8s0½d	8s0½d	8s0½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	41s0d	41s0d	41s0d	American advices favorable
Friday	41s0d	41s0d	41s0d	Quiet but steady.
Saturday	41s0d	41s0d	40s9d	Tending down.
Monday	41s0d	40s9d	40s6d	Rather firmer.
Tuesday	41s0d	0s9d	4 s6d	Quiet.

To-day's cablegram is as follows:

LIVERPOOL, Jan. 20.—Wheat—Steadier. California spot lots, 8s 3d.; off coast, 41s; just shipped 40s. 6d.; nearly due, 40s. 6d.; cargoes off coast and on passage, firmer; English country markets, slow; French, dull; weather in England, cold.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Jan.	Feb.	Mar.	Apr.	May
Thursday	168½	169¼	171¼	172½	171
Friday	166	167⅛	169⅝	169½	168½
Saturday	168	169	171	171	170½
Monday	169	170	171¼	173	170⅝
Tuesday	170	171	172⅛	173	171½

The following is to-day's telegram:

NEW YORK, Jan. 20.—Wheat—$1.02⅛ for February; $1.02⅛ for March; $1.03⅛ for April; $1.02⅛ for May and $1.01¼ for June.

CHICAGO, Jan. 20.—Wheat—91¼c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer 1892. H.	L.	Seller 1892. H.	L.
Thursday	182½	181¼	....	....	....	....
Friday	179⅝	178	....	....	....	....
Saturday	179	178⅛	....	....	....	....
Monday	179⅛	178⅝	....	....	150	150
Tuesday	177½	176⅝	....	....	150½	149⅝

The following are to-day's recorded sales on Call:

Morning Session.—Buyer season, 400 tons, $1.77½; 200, $1.77⅝, 1300, $1.77⅞ per ctl.

Afternoon Session.—Buyer season, 100 tons, $1.77⅝; 1000, $1.78; 700 $1.78½; 700, $1.78 per ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892. H.	L.
Thursday	111½	110⅞	....	....	....	....
Friday	110¼	108⅝	102½	102¼	....	....
Saturday	110	109⅜	....	....	....	....
Monday	111⅜	111	....	....	....	....
Tuesday	111⅜	110½	104⅛	103⅜	....	....

The following are to-day's recorded sales on Call:

Morning Session.—Buyer season, 2.0 tons, $1.11½; 300, $1.11; 600, $1.10⅞; 400, $1.10½.

Seller season.—100 tons, $1.05 per ctl.

Afternoon Session.—Buyer season, 100 tons, $1.10¾; 200, $1.11; 100, $1.11¾ per ctl.

Eastern Wool Markets.

NEW YORK, Jan. 15.—"Bradstreet's:" There is a slightly better feeling noted in the leading wool markets. On fine wools the situation is not as strong owing to large importations of Australian wools and the slow movement of Ohio and Michigan wools. Cheviot manufacturers are buying heavily of quarter-blood unwashed wools, and dealers are holding their prices on this grade very firm. Good staple Territories sell well. Texas and California wools are rather quiet. Pulled wools are in good demand, particularly A and B supers The dullness in Carpet wools is reflected in weak demand; stocks of these wools in all leading markets are large; values are firm and dealers have refused to make concessions.

NEW YORK, Jan. 18.—The wool market does not promptly develop expectations. The mild weather has checked the demand for goods. Manufacturers at the moment are more or less apathetic, though quotations are as low as before and the offerings improved by the opening of many parcels that have been reserved for a better turn. Unwashed wools make the late full price at all the seaboard points, but enlarging sales of Australian cause considerable sober feeling among the holders of competing fleeces.

Dried Fruits.

NEW YORK, Jan. 18.—Unpeeled peaches are dull at 7¼@7½c. Philadelphia is underselling this market fully 1c, so our buyers are undecided. A small line of peeled brought 21c. Prunes in a moderate way are quoted: Four sizes, bags, 7c; five sizes, 7½c; boxes, seventies and eighties, 7¾c; sixties and seventies, 8¾c; fifties and sixties, 9¼c; forties and fifties, 10¼c. Apricots are quiet for bags at 7½c; best boxes 9c.

Eastern Raisin Market.

NEW YORK, Jan. 16.—Quite liberal sales of California raisins have been made the past few days, and the surface indications are that pretty much all the stock in transit has passed into the ownership of dealers in a position to work off goods to the best advantage, leaving no burdensome surplus to disturb values. Prices are not positively higher, but the market shows in better form. The interest in prunes and other dried fruit is tame at the moment, but business is at prices reflecting a fairly firm market, while the offerings indicate that supplies are well under control.

NEW YORK, Jan. 18.—Raisins, without being higher, show an encouraging firmness and fair activity, which endorses the belief in new wants of distributors. Prime three-crown bags have been readily placed at 5c in good grocery dealings, but two-crown drag a little at 3¾@4c. Boxes, too, have revived, sales of perhaps 6000 at $1.22½ are enough to indicate a better tone. The range for boxes, including the best of layers, which are somewhat off in quality from what is expected of that class, is $1.10@$2.35.

Eastern Hop Market.

NEW YORK, Jan. 16.—In hops some transactions in prime quality of States were 24½c, and low-grade goods at 21½c, showing a decidedly firm market. England and Germany are very firm.

NEW YORK, Jan. 18.—Hops advanced early and maintained the new prices at the close. Option operations were light; bull element prevailed during the week, helping to strengthen spot bids. The natural tone of the market, however, is strong, stocks and cables favoring sellers. The exports for the week were 1226 bales. A large lot went from Baltimore. The exchange future calls were well attended, promising success. New York, 1891, choice 25c; good to firm 23@24½c; common, 20@22; Pacific choice 25c; good to firm 22@24; common 20@21c; all nineties 13@19c; olds 6@9; new Bavarian and Bohemian 47@50c.

Miscellaneous.

NEW YORK, Jan. 18.—Honey is tending higher. It retails in small lots at 7¾c. Light amber Lima beans at $1.80 per bushel; spot is in most frequent selling rate.

Produce Receipts.

Receipts of produce at this port for the week ending Jan. 18, '92, were as follows:

Flour, qr. sks	48,133	Bran, sks	3,349
Wheat, ctls	164,420	Buckwheat "	.....
Barley, "	31,917	Middlings "	2,713
Rye, "	389	Chicory, bbls	153
Oats, "	49	Hop, "	168
Corn, "	3,763	Wool, "	57
*Butter, "	54	Hay, ton	2,148
do bxs	161	Straw, "	119
do bbls	1	Wine, gals	198,530
do kegs	.....	Brandy, "	46,830
do tubs	.....	Raisins, bxs	200
do ½ bxs	32	Honey, cs	172
†Cheese, ctls	383	Peanuts, sks	82
do bxs	15	Walnuts "	62
Eggs, doz	30,875	Almonds "	135
do "Eastern	88,020	Mustard "	53
Beans, ctls	5,307	Flax "	.....
Potatoes, sks	30,558	Popcorn "	.....
Onions, "	1,260	Broom corn, bbls	.....

*Overl'd, 153 ctls. †Overl'd, 200 ctls.

Deep Water Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to Jan. 17, '91.	July 1, '91 to Jan. 17, '92.
Flour, ½ sks	154,120	295,54
Wheat, ctls	715,458	1,356,222
Barley, "	133,092	28,207
Oats, "	199,573	295,357
Wool, bales	5,790	5,720
Hops, "	333	339
Rye, sks	.....	3,293
Potatoes, sks	18,110	29,406

Cereals.

The local wheat market has been on an almost continuous down move, with speculative holders unloading. So far as we are able to learn, there are very few farmers carrying wheat. The manager of the Grangers' Business Association says that in their warehouses there are not 10,000 tons held by farmers. Other large warehouse managers report like small quantities held by first hands, so that the bulk of the warehoused grain must belong to exporters, millers and speculators. Owing to shippers' immediate requirements being met, they are only tempted to buy by sellers offering concessions. The lower rates (20s f. o.) ruling for charters do not appear to act as a stimulant on exporting orders. One of the largest exporting firms informs us that the low, declining price of silver, combined with favorable crop advices from India, deter them and others from entering the market even at present prices. Oregon and Washington continue to send us liberal supplies, which is a source of surprise when it is considered that the direct exports from up north show a very large gain over the like time in 1890-91. The tonnage under charter in this port is decreasing, but in the Columbia river it is increasing. The tonnage on the way to Pacific Coast ports is decreasing, but the disengaged tonnage in the different ports is steadily increasing.

Crop advices are uniformly favorable. The absence of warm, forcing weather is decidedly in favor of growing plants. A strong north wind the past week dried out considerable land, yet no serious results are looked for. The acreage already seeded is in excess of last year, while continued plowing and seeding are being reported. From Oregon and Washington our crop advices are all that can be desired.

Barley receipts show a decided gain, yet the market holds to strong prices. The demand is said to never before have been so large, which is accepted as proof positive of the contention that each year shows an increase of from 10 to 25 per cent in work horses in the farming districts. This increase is due largely, if not entirely, to more attention to fruit culture. The supply of bright grades of barley is light

With a free call for oats and only moderate receipts, the market shows more strength with an advance obtainable. Free shipments to this port from Oregon and Washington have reduced the supply in those two States to such small proportions as to create the impression that there will be no carry over into the season of 1892-93, which, if proven correct, will cause still better prices before the end of the present season.

Corn is fairly steady. Receipts are light and so is the demand. It is generally claimed that a free export movement to Mexico and Central America will set in soon. If this is realized, then prices with us ought to do better.

Both buckwheat and rye are inactive.

Feedstuff.

There has been a renewed demand for ground feed, and as the receipts of both bran and middlings were only fair, holders were able to secure an advance in prices. Ground and rolled barley have met with a largely increased call from dairy and stock men.

Hay, while slightly easier, has a healthy tone. Rains the forepart of the month insured early pasture, and in anticipation of which many owners of range stock bought feed to carry their stock over until green feed is more abundant. Nevada continues to send liberal supplies into this State.

Dairy Product.

Butter is easier at declining prices. The unfavorable turn to the market is due to increasing receipts of fresh rolls and dealers confining their purchases. The lower prices will cause butterine and oleomargarine importers to cut off their orders for shipments to this coast. More creameries are being organized and ready for business by spring.

Cheese appears to be working to lower prices under increasing receipts and a lighter call.

Eggs are weak and lower, due largely to continuous heavy imports of Eastern eggs, of which the Dairymen's Union of California are large importers or handlers. Warm weather and better feed are increasing the supply of California.

Vegetables.

Outdoor gardening reports continued large and favorable progress. Los Angeles is sending us small quantities of tomatoes, peppers, asparagus and green peas. The high prices restrict the demand.

Onions are getting scarcer, and as there is a free demand, the market shows a slight improvement.

Cabbages are strong, with shipments being made Eastward.

Owing to very heavy receipts, poorer potatoes are weaker, but choice, good keepers are firm under free buying by some parties, who look for better prices after this month. This opinion is based on received advices that river potatoes will be all marketed by the end of the present month.

Fruit.

The market is almost bare of pears. Apples continue in large supply, causing low prices to rule for the poorer kinds, but choice varieties, tart and fruity, meet with a quick demand at full prices. Oregon, Washington, and the northern counties of this State supply the bulk of those received. Persimmons are sold at from 30 to 60 cts. for small boxes.

The receipts of oranges are very heavy, and as the stock on hand is large, consignees are compelled to offer concessions to induce buying. Trucksters are the largest buyers of off kinds, and their peddling at from 10 to 20 cts. a dozen aids no little in producing the demoralized market. Cold weather is another factor against the market. About all the oranges coming to hand are either windfall or else more or less touched by frost. The size is small and unattractive. Values take on a wide range.

The East is not drawing many oranges, owing to Florida still meeting the bulk of requirements. Cold weather at the East is against the market.

In dried fruits we note an improved inquiry for prunes and peaches. Large sizes of prunes are wanted, while the low prices ruling for peaches make them attractive to dealers and speculators. Apples and apricots continue slow.

Raisins are steadier with a stronger tone. The low prices have increased the consumption. The New York *Shipping List* says: "The low price of raisins this season, while a disappointment to growers, is likely to operate to their future advantage. By reason of their cheapness this year, California raisins have gone into markets that were hitherto closed against them. They have practically driven the Spanish raisin out of the American market, and in contiguous foreign territory California raisins are getting the call. Next season our growers will have a broader market than ever before, and will consequently have gained an advantage which they are likely to hold and extend."

Live Stock.

The market is easier for mutton sheep, but stronger for bullocks Since the advance in mutton the consumption of beef has been increasing and enlarging. Hogs are strong at an advance. Milch cows are wanted, with the inquiry running largely to improved breeds.

Miscellaneous.

Grain bags, hand-sewed, standard sized, are held at an advance. They are quoted to-day at 7¼@7½c.

The poultry market is lower and weaker for hens, roosters and chickens, but firm for ducks and geese. Turkeys are steady.

Beans are essentially unchanged. The market has the appearance of being controlled by a pool for the purpose of buying up the surplus.

Hops continue strong, with very light supplies to draw from. The East and Europe continue to strengthen.

There is an absence of business in wool, due largely to poor selections. The clip in California this year will not be up to the average, owing to poor feed toward the close of 1891.

Red clover is higher and advancing. Europe is drawing larger supplies from the East than for several years past. Alfalfa is in fair demand. Yellow mustard is steady at the advance.

From reliable advices up to Jan. 20, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	234,166	291,473	*134,744	*46,808
San Diego	19,263	15,475	6,605	.....
San Pedro	4,349	4,981	4,712	
Oregon	33,546	37,822	39,743	15,712
Puget Sound	21,513	18,746	.....	
Totals	314,837	368,497	185,804	62,520

*Engaged for wheat, 1892, 59,482; 1891, 45,072.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Jan. 4th, are as follows:

	1891.	1890.
Wheat, ctls	9,159,130	6,327,160
Flour, bbls	629,523	512,000
Barley, ctls	765,190	173,646

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, January 20, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 05	Extra, City Mills	5 40 @ 5 50
Butter	2 20 @ 2 65	Do Country Mills	5 25 @ 5 50
Pea	2 40 @ 2 80	Superfine	3 40 @ 3 65
Red	2 00 @ 2 30	**NUTS—JOBBING.**	
Pink	1 75 @ 2 05	Walnuts, Cal. lb	7 @ —
Small White	2 25 @ 2 65	Do Choice	8 @ —
Large White	2 10 @ 2 45	Do paper shell	9 @ —
Lima	1 65 @ 2 25	Do Chili	7½@ 9
Pid Peas, blk eye	1 50 @ 1 75	Almonds, sft shl	11 @ —
Do green	1 90 @ 2 10	Paper shell	13 @ —
Do Eastern do	2 60 @ 2 80	Hard Shell	6 @ 7¾
Do Nies	1 35 @ 1 45	Brazil,	6½@ 8
Split	4 @ —	Pecans small	12 @ 14
BUTTER		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 22½	Peanuts	3 @ 4
Do good to choice	27½@ —	Filberts	11½ @ 14
Do Giltedged	32½@ —	Hickory	7 @ 8
Do Creamery rolls	32½@ —	Chestnuts	11½@ 16
Do do Giltedge	34 @ —	**ONIONS.**	
Eastern	20 @ 32½	Silver Skin	75 @ 1 25
Cal. pickled	23½@ 26½	**POTATOES.**	
CHEESE.		Early Rose, ctl	30 @ 45
Cal. choice mild	13 @ —	Peerless	35 @ 65
Do fair to good	11 @ —	Burbank Seedling	40 @ 65
Do gilt edged	14 @ —	Do do Salinas	95 @ 1 25
Young America	12 @ 15	Do do Oregon	1 00 @ 1 25
EGGS.		Sweet's	2 00 @ 2 50
Cal. ranch, doz	26½@ —	Garnet Chiles	40 @ —
Do do selected	28½ @ —	River Reds	30 @ 45
Do store	22½ @ 26	**POULTRY AND GAME.**	
Eastern	25 @ 30	Hens, doz	5 50 @ 7 50
FEED.		Roosters, old	5 00 @ 6 50
Bran, ton	20 00 @21 00	Do young	6 00 @ 9 00
Feedmeal	26 00 @ —	Broilers, small	4 00 @ —
Gr'd Barley	24 00 @27 00	Do large	5 00 @ —
Middlings	23 00 @24 00	Fryers	6 50 @ —
Oil Cake Meal	25 00 @27 00	Ducks	6 50 @10 00
Manhattan Food ₱ cwt.	7 50	Geese, pair	1 75 @ 2 50
HAY.		Turkeys, Gobl'r.	12 @ 14
Wheat, per ton	13 50 @ —	Turkeys, Hens	14 @ 16
Do choice	15 00 @ —	Do Dressed	14 @ 18
Wheat and Oat	12 50 @ —	Manhattan Egg Food ₱ cwt.	11 50 @ —
Wild Oats	11 00 @ —	**PROVISIONS.**	
Cultivated do	12 50 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Barley	11 00 @ —	Medium	11 @ —
Alfalfa	10 00 @ —	Light	12½ @ —
Clover	12 00 @ —	Lard	9 @ 11
Straw bale	50 @ 60	Cal. Sm'k'd Beef	11½ @ —
GRAIN, ETC.		Hams, Cal salt'd	10 @ —
Barley, feed, ctl	1 05 @ 1 10	do Eastern	12½ @ —
Do Choice	1 12½@ —	**SEEDS.**	
Do Brewing	1 13½@ —	Alfalfa	7 @ 8
Do do Choice	1 17½@ —	Clover, Red	12 @ 13
Do do Giltedge	1 21½@ —	White	17½@ —
Do Chevalier	1 15 @ 1 45	Flaxseed	2 50 @ 2 80
Do do Giltedge	1 48½@ 1 52½	Hemp	3½@ 4¼
Buckwheat	2 00 @ 2 25	Mustard, yellow	3 25 @ 3 75
Corn, White	1 35 @ —	do Brown	3 00 @ 3 25
Yellow, large	1 26½ @ 1 31½	**WOOL.**	
Do small	1 33½@ 1 38½	**SPRING, 1891.**	
Oats, milling	1 47½@ —	Humb't & Men'cino	20 @ —
Feed, choice	1 45 @ —	Sac'to valley	16 @ —
Do good	1 37½@ —	Free Mountain	19 @ —
Do fair	1 30 @ —	S Joaquin valley	13 @ —
Surprise	1 50 @ —	do mountain	18 @ —
Black Cal	1 60 @ 1 90	Cala'v & F'th'll	16 @ —
Do Oregon	1 45 @ 1 55	Oregon Eastern	1a @ —
Gray	1 32½@ 1 41½	do valley	21 @ —
Rye	1 55 @ 1 60	So'n Coast, def	11 @ —
Wheat, milling, Gilt edged	1 82½@ —	So'n Coast, free	13½@ —
Do Choice	1 80 @ —	**FALL, 1891.**	
Do fair to good	1 76½@ —	San Joaquin	9 @ 12
Shipping, cho'ce	1 76½@ —	Mountain	10 @ 15
Do good	1 73½ @ —	Humb't & Men'cino	14 @ 18
Do fair	1 71½@ —	**HONEY.**	
Common	1 67½@ —	White Comb, 2-lb	10 @ 13
Sonora	1 67½@ 1 78½	do do 1-lb frame	12 @ 14
HOPS.		White extract'd	6½@ 7
1891 Choice to Ex.	23 @ —	Amber do	5½@ 6½
Fair to Good	18 @ —	Beeswax, lb	22½@ —

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 20, 1892

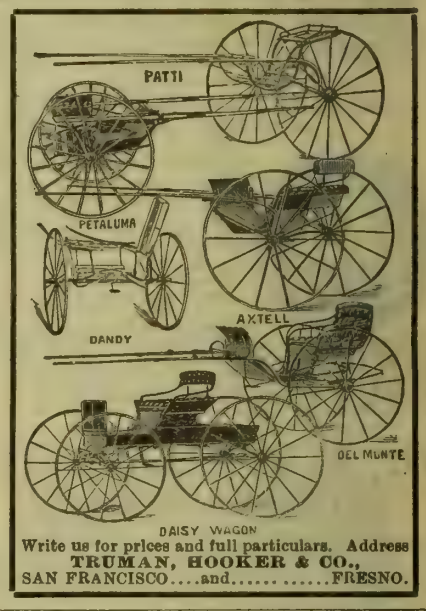
Limes, Mex	5 50 @ 7 25	Do extra choice	1 50 @ 2 00
Do Cal	75 @ 1 00	Do Lady Apples	75 @ 1 25
Lemons, box	1 25 @ 3 50	Beets, sk	— @ 1 00
Do Sicily	5 50 @ 7 00	Carrots, sk	35 @ —
Oranges, Winter small box	50 @ 1 00	Okra, dry, lb	12½@ —
Do Seedlings - River-side	1 25 @ 2 00	Parsnips, ctl	— @ 1 25
Los Angeles	1 00 @ 1 50	Peppers, dry, lb	12 @ 18
Do Navels— Los Angeles	1 50 @ 2 50	Turnips, ctl	50 @ —
Riverside	2 00 @ 3 50	Cabbage, 100 lbs	60 @ —
Duarte	2 00 @ 3 50	Garlic, lb	2 @ 3½
Apples, box	40 @ 75	Squash, Mrft, tn	4 00 @ 8 00
Do choice	1 00 @ 1 25	Pumpkins, ton	7 00 @ —
		Tomatoes, box	1 50 @ 1 75
		Asparagus, lb	20 @ —
		Peas, green, lb	10 @ 15

Live Stock.

BEEF.		MUTTON.	
Stall fed	6¾@ —	Wethers	9 @ 9½
Grass fed, extra	6¼@ —	Ewes	8½@ 9
First quality	5¾@ —	Lamb, yearling	9½@ —
Second quality	5 @ —	Do Fall	12½@18
Third quality	4½@ —	**HOGS.**	
Bulls and 1 thin Cows	2 @ 3	Light, 30 lb, cents	4½@ —
VEAL.		Heavy	4½@ —
Range, heavy	4½@ 5½	Feeders	4 @ —
Do light	6 @ 8	Stock Hogs	3½@ —
Dairy	7 @ 8		



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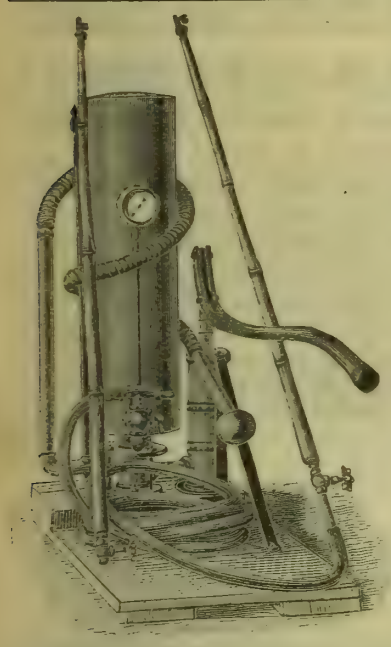
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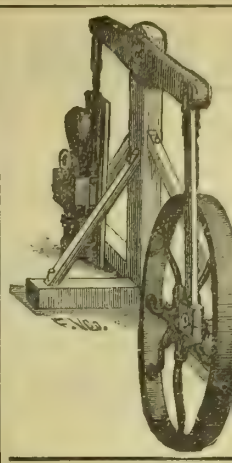
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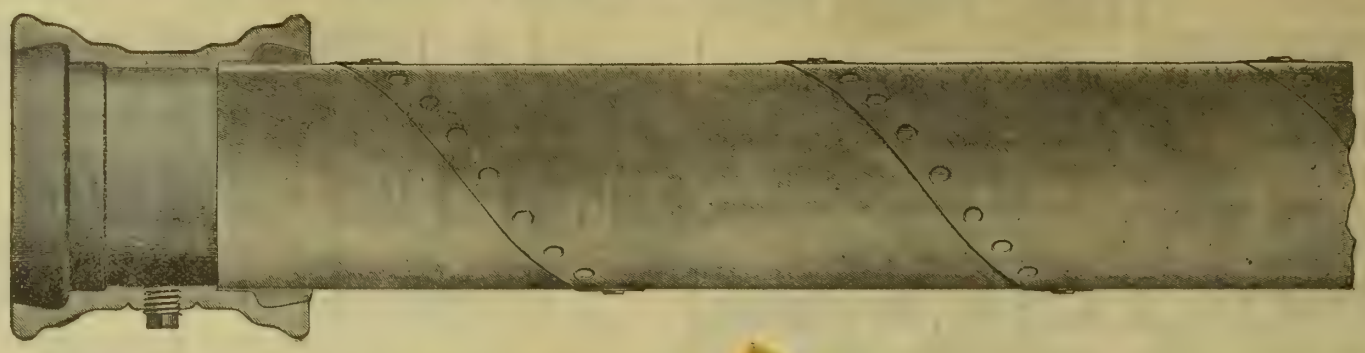
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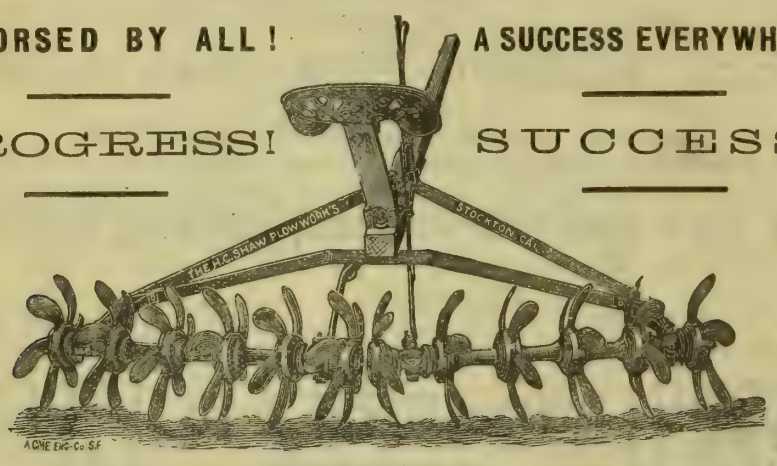
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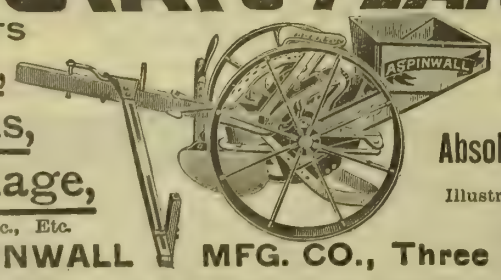
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Practically Settled.

Since our last issue the Chilean question has taken on an entirely new character. In the midst of the negotiations then pending, Chile peremptorily demanded the recall of our Minister Egan as an official not personally in good odor. Our Government held that whatever might be the personal ill-feeling toward Mr. Egan it was due to his obedience to orders, and in response delivered to Chile its *ultimatum*. Chile was called upon to withdraw the offensive letter written at the beginning of the trouble, to withdraw its demand for Egan's recall and to make suitable apology and indemnity for the Baltimore outrage.

These demands were presented simply and in civil terms, but in a tone clearly implying that if they failed of a satisfactory response, Chile could look out for "consequences." On the day following this demand, the President submitted to Congress a special message in which the whole question at issue was admirably and temperately summed up. Diplomacy, he said, had come to its last resource, and it now remained for Congress to determine what was necessary for the maintenance of the dignityof the nation. Here the matter rests so far as our side of the controversy is concerned. But it is unofficially reported that Chile has responded by recalling the offensive letter in question, recalling her demand for the dismissal of Egan and by proposing to submit the Baltimore matter to arbitration of any other nation or to the Supreme Court at Washington. These terms, though not in such frank spirit as they might be, are still fairly reasonable and will no doubt be accepted. There will be no end of correspondence and unlimited measurements of red tape but the danger of war, if indeed there ever was any danger, is now past.

It is very gratifying to note the admirable spirit in which the American people have borne themselves during this long negotiation. The offense was a most flagrant one, an incident of a sort most likely to inflame national resentment. It would not have been surprising if a spirit of hot indignation had overborne all calmer judgment and had forced our Government to visit upon Chile such humiliation as we were quite able to inflict. But not for one moment has there been failure to respect our position as the stronger nation, from whom deliberation and concession was due. There has been no wish to push on to a war in which we would be certain of success. On the contrary, public sentiment has stood for peace if it could be maintained upon terms honorable to our flag. The self-control of our people under aggravating circumstances has been a most admirable expression of public spirit. Incidents like this encourage to better opinions, those who see in the corruptions of politics, the jobberies of legislation and the iniquities of corporation business methods the evil stars of government by the people.

BENEFICIAL BUGS.—Another shipment of scale-eating ladybirds and of moth cocoons of a species the larvæ of which feed upon the black scale, have been received from Mr. Koebele, and are being distributed by Secretary Lelong of the State Board of Horticulture.

Mr. Jordan's Folly.

The Napa County Alliance has gone to a passionate length in its condemnation of President Jordan of the Stanford University, and has displayed a lack of temperance in judgment not at all creditable; but on the other hand there was good ground for indignation. Mr. Jordan has shown himself a very shallow observer and critic, and has given the rural population of the country good reason to dislike him. His charge that idleness, shiftlessness and loaferism are characteristic rural vices, is utterly absurd and indefensible. If Mr. Stanford is to make a success of his University he will have to put at its head a man of sounder judgment and broader sympathies.

ORANGE FREIGHTS.—The Santa Fe route has declared an "exigency rate" of 90 cents per hundred on oranges from Southern California to Missouri River points, instead of the old rate of $1.25. It is thought this may lead to a war of rates to secure the hauling of the orange crop which, because of wind and frost, will be less than anticipated.

THE BEET-SUGAR PRODUCERS of the United States have formed an association for mutual benefit. The first meetwas held in this city on Tuesday.



"JAY COOKE'S FARM."

Castle Rock.—"Jay Cooke's Farm."

One of the notable and famous wonders of the Pacific Coast is Castle Rock, a majestic pillar of basalt which stands on the north bank of the Columbia river, at the western extremity of the grand gorge which that noble stream has furrowed through the heart of the Cascade mountains.

It rises abruptly from the water's edge, in the midst of a level space, wholly detached from the mountain chain of which it is an outpost, and reaches an elevation of between eight and nine hundred feet. It is almost circular at its base, and is perhaps an eighth of a mile in diameter. Its sides are precipitous, of a dark-brown and gray stone, the common basalt of the Cascade Range of mountains, and its conical summit is crowned by a scattering growth of majestic forest trees.

There is nothing like this grand pillar anywhere else in the world. It has long been the wonder of geologists, and the admiration of the thousands who annually visit the grand gorge of the Columbia, which is truly one of the beauty spots of the world.

Many years ago the fame of this giant pillar of stone reached the eminent financier, Hon. Jay Cooke, of Philadelphia, then at the zenith of his greatness, and at the head of the Northern Pacific railroad enterprise. Through a whim he desired to become its owner, and by a considerable payment to the Government, under the land entry laws, became in fact its proprietor. He offered a prize of $500 to whoever would scale its precipitous sides and plant the American flag upon its summit, and the offer has never been withdrawn. Every year a new effort is made by some adventurer, but none of these have ever yet been successful. A crowd of soldiers from Vancouver barracks determined some years ago to win this prize, and spent a week in vain efforts to reach the summit. Every device that could be operated was tried, including the flying of kites across the mountain; but all failed, and it was given up as a bad job.

On the maps of the country, and in the ten thousand pictures of which this noble pillar is the theme, it is styled Castle Rock, but the people of Oregon and Washington rarely refer to it except ironically as "Jay Cooke's Farm." This name will probably last as long as the rock does. It is perhaps the most extraordinary piece of landed property in the United States, and certainly the most unique "farm" within its boundary.

On the occasion of Mr. Cooke's first visit to the Pacific Coast, only a few months ago, he was taken to see this "farm," and one of his entertainers laughingly asked him what he would take for it. "Well, I hardly know," said Mr. Cooke, "it comes high."

FOR THE WORLD'S FAIR.—The California World's Fair Commission is regularly at work now preparing for its display of the State at Chicago. A host of propositions is being brought to its attention. It appears that there is a good disposition to favor the various horticultural interests of the State, and that a grand display of our trees and shrubs, fruits and flowers, will be realized.

THE BOTANIST.

Concerning English Names for Our Western Forest Trees.

[Written for the RURAL PRESS by J. G. LEMMON.]

[*Concluded from page 71*]

Sub-Tribe II. Solitaires.

Trees with all the leaves solitary, not in fascicles nor tufted.

SECTION 1.—PENDERES, THE SPRUCES. Trees with fruit pendent from or near the end of the branchlets. Four closely related genera, often considered as one polymorphous genus, but clearly distinct.

PICEA, Link. TRUE SPRUCE. — Cones terminal, leaves scattered, sessile, with prominent, persistent bases or pulvinæ.

30. *P. laxa*, Sargent. (Until recently *P. alba.*) "White Spruce."—Trees of far northern regions, with glaucous or white leaves.

31. *P. Mariana*, Sargent. (Until recently *P. nigra.*) "Black Spruce."— Northern trees with dark green foliage.

32. *P. Engelmanni*, Engelm. "Engelmann's Spruce."—Rocky Mts. and westward to near California. Branchlets short and thick; cones elliptical.

33. *P. pungens*, Engelm. "Prickly or Blue Spruce."—Rocky Mts. and westward to Wyoming, along streams. Remarkable for its sharp, very glaucous leaves.

34. *P. Sitchensis*, Carriere. "Great Tideland Spruce."—Reaches the California coast from the north. Large trees, with slender branchlets and cylindrical cones.

35. *P. Breweriana*, S. Watson. "Weeping Spruce."—A recent discovery on the Siskiyou Mts. Branchlets very long, slender and pendent; cones tapering to each end.

HESPEROPEUCE, Lemmon. WESTERN SPRUCE.—Cones terminal, small, the scales usually reflexed at maturity; leaves scattered (not in two ranks), narrowed at base and with a single, large resin duct; seeds angular and bearing resin vesicles; pollen bilobed.

36. *H. Pattoniana*, Lemmon. (Until recently *Tsuga Pattoniana.*) "Alpine Western Spruce."— Alpine or sub-alpine trees of the Sierra and Rocky Mts. A solitary species usually classed with the Hemlock Spruces, but clearly distinct.

TSUGA, Carriere. HEMLOCK SPRUCE.—Cones terminal, very small; leaves two-ranked, flat, pulvina not prominent etc., only one species in Northwest America; pollen discoidal.

37. *T. Mertensiana*, Carriere. "Western Hemlock Spruce."—A large tree of the Northwest, reaching Northern California.

PSEUDOTSUGA, Carriere. FALSE SPRUCES.—Cones sub-terminal, with long, exserted bracts or leaves between the scales; true leaves petioled or stalked, leaving when fallen, oval, transverse scars, etc. Two species, both in Northwest America.

38. *P. taxifolia*, Britton. (Until recently *P. Douglassii.*) "Douglas Spruce."—A large and valuable lumber tree of the Northwest; abundant in California.

39. *P. macrocarpa*, Lemmon. "Big-Cone Spruce."—A very large-coned spruce local on the San Bernardino and neighboring mountains of California. Trees less symmetrical than the other species.

SECTION 2.—ERECTES, TRUE FIRS.—Cones erect, lateral, sessile, nearly cylindrical, axillary from the upper side of mostly the upper limbs; the scales deciduous. All in one large genus well represented in the Northwest, including California.

ABIES, Link. TRUE FIRS.—Mostly large trees which branches in horizontal whorls or strata; the leaves mostly two-ranked on young trees and lower branches. The Firs of Northwest America are comprised in two sections:

SECTION 1.—MEGACARPÆ, RED FIRS.—Species with cones mostly large; bark reddish within; leaves short, not twisted at base.

40. *A. lasiocarpa*, Nuttall. "Downy Cone or Sub-Alpine Fir."—Rare on high peaks of the Northwest. Cone scales bearing short, brownish hairs. Leaves small and very short.

41. *A. amabilis*, Forbes. "Lovely Red Fir."—A rare tree on peaks near the cascades of the Columbia and northward to Fraser river; cone bracts short, concealed; leaves flat.

42. *A. nobilis*, Lindley. "Feathered Red Fir."—A rare tree near Mt. Hood and in a few other northern localities. Cone bracts large, long, exserted and reflexed.

43. *A. Magnifica*, Murray. "California Red Fir.—Attains the largest size of any tree of the genus; on high plateaus and mountains of California; bracts mostly concealed, leaves quadrangular.

Variety, *Shastensis*, Lemmon. "Shasta Red Fir," near Shasta, bracts long, exserted.

Variety, *xanthocarpa*, Lemmon. "Yellow-fruited Fir," near Webber lake and southward to Mt. Whitney; cones, yellowish.

SECTION 2.—MICROCARPÆ.—WHITE FIRS; Cones smaller; bark whitish within; leaves longer, mostly flat, and twisted at base.

44. *A. grandis*, Lindley, "Oregon White Fir."—Large trees of the Northwest and reaching California. Leaves dark green.

45. *A. Lowiana*, McNab, "California White Fir."—Common in the California mountains at middle altitudes. Leaves whitened below.

46. *A. concolor*, Lindley, "Colorado White Fir."—Summits of the watershed of the Colorado river, including Wyoming, Colorado, Utah and New Mexico. Leaves, large, whitened above and below.

47. *A. venusta*, Sargent, (until recently *A. bracteata,*) "Bristle-Cone Fir."—Extremely local in the Santa Lucia mountains of California. Cone-bracts with the large midribs long exserted, like stiff bristles. Leaves very large and long.

48. *A. religiosa*, Schlectendal, "Mexican Sacred Fir."—Beautiful trees on high peaks of the Cordilleries of northern Mexico and southward to the mountains of Guatamala. Cones with bracts long exserted.

CUPRESSACEÆ.

CYPRESSES AND THEIR ALLIES.

Mostly important trees, widely distributed and including some of the largest trees known, particularly abundant in former ages of the earth. Leaves spiral, opposite, or ternate, usually small and scale-like Fruit, diverse, small.

They divide into three Tribes.

TAXODINEÆ.—Cone-scales spiral and peltate; leaves spiral. Trees of the largest size,

CUPRESSINEÆ.—Cone-scales opposite or verticillate, either valvate or peltate; leaves opposite, scale-like.

JUNIPERINEÆ.—Fruit, berry-like, with vestiges of scales; leaves opposite or ternate.

Tribe I., Taxodineæ.

The leading tribe have their leaves spiral and the cone with scales spirally arranged, terminating in rounded bosses or flat, shield-like heads.

They divide into two Sections:—

TAXODIEÆ. — Cone-axis elongated, comprising two genera; one in the Eastern States, the other in California—the "Big Trees."

GLYPTOSTROBI. — Cone-axis depressed; comprises two genera, neither indigenous to the Northwest, but often cultivated.

The TAXODIÆ include the two genera of monster trees:

TAXODIUM, the Eastern Bald Cypress, and SEQUOIA, the CALIFORNIA REDWOODS or BIG TREES, the largest and most magnificent trees known; peculiarly confined to the limits ot California.

49. *S. sempervirens*, "Coast Redwood." The famous lumber tree, growing only near the ocean in numerous groves from Monterey bay to near the Oregon line. Cones the size of a lady's thimble; leaves about half an inch thick in two-ranks.

50. *S. gigantea*, Decaisne, "Giant Sequoia," "Big Trees."— Limited to a few groves (about 20) in the high Sierra from Calaveras Co. to Kern Co. Cones about the size of a hen's egg; leaves scale-like, scattered. (This matchless tree is often miscalled "Wellingtonia.")

Tribe II, Cupressineæ.

This tribe includes a large number of genera and species of slow-growing trees, most of them in the Old World and Australia, with four genera in the United States, comprising ten species, six of them in Northwest America. The wood of all these trees is peculiarly fragrant and pungent; the leaves small and scale-like; the cones small, with scales valvate or peltate. They comprise in America two pairs of closely allied genera.

FIRST PAIR. AMERICAN CEDARS, with cones oblong and scales flat, convex or thickened; branchlets flattened horizontally, with dimorphous, decurrent leaves.

THUYA, RED CEDAR.—Fertile scales six, unequal in size, thin; seeds 12. Two species in America, one in the Eastern States, the other in the Northwest. Heartwood reddish.

51. T. *gigantea*, "Gigantic or Pacific Red Cedar."—A noble tree, with headquarters of greatest development around Puget Sound. Apt to taper rapidly from a thick, hollow base, hence highly prized for dug-out boats; also the wood being very durable is highly prized for shingles, clapboards, etc.

LIBOCEDRUS, INCENSE CEDAR.—Cones the size of a lady's thimble; fertile scales two, equal sized, thick, convex; seeds four, long-winged.

52. *L. decurrens*, Torrey, "California Post Cedar."—A beautiful and very valuable tree of California mountains. Most of the trees affected within by a fungus—"dry rot."

SECOND PAIR, TRUE CYPRESSES, with cones globular and scales ob-pyramidal and peltate. Heartwood yellowish.

CHAMÆCYPARIS, GROUND CYPRESS OR CEDAR.—Branchlets horizontal and leaves 2-ranked; cones the size of peas, maturing in one year; seeds few, narrowly winged. One species in the Eastern States, two in the Northwest.

53. *Ch. Nutkaensis*, Spach, "Alaska Ground Cypress." Abundant around Puget Sound and northward on the islands and peninsulas of Alaska. Timber a bright, clear yellow; highly prized for cabinet work.

54. *Ch. Lawsoniana*, Parlatore, "Port Orford Cedar." Most beautiful of ornamental trees, with its fan-like, horizontal or declined foliage, and, in the season, its numerous small globular cones. Timber light cream color, very serviceable, with a satin gloss and a pungent, aromatic odor.

CUPRESSUS, TRUE STANDARD CYPRESS. Trees or shrubs with cones larger, requiring two years to mature; seeds numerous, 6 to 20 to each scale, leaves not in two ranks, but scattered; trees readily yielding to treatment with pruning shears.

55. *C. Guadaloupensis*, S. Watson, "Guadaloupe Cypress." Native of Guadaloupe island, off the coast of Mexico, and reported from the coast of San Diego Co., Cal. Branchlets slender, drooping, light green; the bark flaking off, leaves a claret red surface to the limbs.

56. *C. Arizonica*, Greene, "Arizona Red-bark Cypress." Trees of the highest peaks of Arizona mountains. Branchlets erect, short, stout, and distinctly quadrangular, caused by the closely appressed leaves in four ranks.

57. *C. Macrocarpa*, Hartweg, "Monterey Cypress." The familiar hedge-making tree, indigenous upon Point Pinos, near Monterey, where the cutting winds from the ocean have fashioned the old, slow-growing trees into fantastic shapes. Cones the largest of the genus, about an inch thick.

58. *C. Goveniana*, Gordon, "North Coast Cypress." Rare, shrubby trees from Monterey bay northward. Foliage pea green; cones small, of six scales.

59. *C. Macnabiana*, Murray, "California Mountain Cypress." A tall shrub branching from the ground. Branchlets numerous, slender; foliage dark green; cones very small with prominent bosses.

Tribe III, Juniperineæ.

This, the last tribe of the Cypress-like trees, is peculiar in being so compact and uniform a group that, though composed of a large number of species, they are all usually regarded as forming one genus, with small, consolidated, berry-like fruit.

JUNIPERUS, JUNIPER. — Twenty species in the old world (two of them apparently reaching North America), five in Mexico, and four or five in more northern regions. Heartwood reddish.

60. *J. pachyphlæa*, Torrey, "Thick-barked Juniper." A species in Arizona and northern Mexico, with thick, hard bark, finely checked like a white oak; berries large and sweetish, much prized by Aborigines for food.

61. *J. occidentalis*, Hooker, "Western Juniper."—A small tree on the mountains from Southern Oregon through California to Arizona. Berries small, blue-black. Timber very valuable for fence posts, etc.

62. *J. Utahensis*, Lemmon, "Desert Juniper."—On the eastern slopes of the Sierra and on the mountains of Nevada and Utah. Berries small, reddish; leaves ternate.

63. *J. Californica*, Carriere, "California Juniper."—A shrub much divided from the ground; frequent in the plains of Southern California. Berries larger, the size of peas, reddish; leaves ternate.

Variety *monosperma*, Engelm. A form with single, large brown seeds. In the Sierra and San Bernardino Mts.

64. *J. communis*, Linnæus, variety *alpina*, Engelm, "Creeping Juniper."—A prostrate form of an Eastern Juniper that reaches the highest peaks of western ranges. Leaves one-half inch long in two ranks; pungent; berries small, dark blue, fleshy.

TAXACEÆ,

YEWS AND THEIR ALLIES.

This order of evergreens is really very numerous, but as its members are principally in the Old World or the Southern Hemisphere, it does not seem of importance to us of the Northwest. It comprises four tribes with 12 genera and about 90 species. Two genera only are represented in America, each with a species in the Northwest.

TAXUS.—TRUE YEW.—These trees are very numerous abroad, with two species in the Eastern States and one in the Northwest. Fruit a small, red, fleshy cup containing a solitary, erect, pointed seed.

65. *T. brevifolia*, Nuttall, "Pacific Yew."—A small tree growing along streams of British Columbia, Western Washington, and Oregon and extending along the coast to the Santa Cruz Mts. Leaves small, in two ranks.

TUMION. — (Until recently *Torreya*) FALSE NUTMEG.—Singular trees of four species found in Japan, China, Florida and California, respectively. Foliage of a heavy, disagreeable odor; fruit resembling a nutmeg in appearance, both exteriorly and interiorly, but terebinthinous. Seed large, solitary.

66. *T. Californicum.* — (Until recently *Torreya Californica*), Greene, "California False Nutmeg."—Rare in the Coast mountains and in the Sierra as far interior as Yosemite valley. Leaves large, two to three inches long, flat and pungent, in two ranks; fruit about the size of an almond.

SHEEP AND WOOL.

Goat Breeders' Memorial to Congress.

Julius Weyand, Secretary of the Angora Goat Breeders Association, sends us a copy of the following memorial, which by authority of his association, he has addressed to both houses of Congress:

On the 17th day of September, 1885, a number of breeders organized the Angora Goat Breeders' Association of California. Subsequently a Constitution was adopted and breeders from any and every State or Territory were declared eligible to membership. The object of the Association was, and now is, to advance the Mohair Industry, and at their annual meetings to report their advancements in breeding, handling and general management of their flocks.

Annual meetings were held at regular times, the seventh or last being held at Sacramento, California, on the 17th day of September, 1891. It was adopted that this Association prepare and present a Memorial to Congress and United States Senate, setting forth the condition of the Angora Goat industry in the United States, and petition for aid to make further advancements possible.

In Arizona, California, Colorado, Georgia, Idaho, Kentucky, Montana, Nevada, New Mexico, Oregon, Tennessee, Texas, Virginia and Wyoming, the industry is now well established and carried on profitably. In Alabama, Arkansas, Connecticut, Dakota, Florida, Illinois, Iowa, Kansas, Missouri, New Jersey, New York, North and South Carolina, Ohio, Washington, West Virginia, Pennsylvania and Wisconsin, experiments are being made, some reported successful. While there are no restrictions laid on the exportation of live stock from any other country to the United States, under general laws, permitting private individuals such privileges unmolested, the Turkish Government strictly prohibited the exportation of goats more than ten years ago, and new strains of blood cannot be obtained by private enterprise from that source.

Mohair, the fleece product of the goat, is apparently on a standstill instead of an advancement; the uniform fine, silky and lustrous staple suitable for most fashionable dress goods for ladies and gentlemen's wear, commands a fair renumerative price in the market of the country, and is the smallest portion of the clip.

The product of the inferior, low grade goat commands uncertain values and is the larger portion of the product.

First-class, or best blooded animals now obtainable from so-called pure blood breeders, are generally sold at high prices, transportation adding greatly to their cost, and the result of cross-breeding is frequently discouraging to the breeder's hopes to improve his stock.

Admitting that this pure blood stock is of early importation by their owners, the present system of breeding in for ten years, or longer by many breeders is unavoidable, but damaging to the constitutional powers of sires for reproduction, therefore grade stock of good constitution improves but little, and the product of fleece not improving, discourages the small breeder of grade stock.

The aid now asked for and the benefits sought to be received through the liberal action of the Government, is not for the present alone, nor for the benefit of a few, but for the good of all the breeders of Angora goats in the different sections of our country, and for the extension and improvement of an industry of great value both to the citizens and Government of the United States.

A vast domain now lying idle and unoccupied, being not suitable for any other domestic animal, can be made productive by fostering this live stock industry.

Compliance with the reasonable request

will be gratefully recognized and bear good results, while refusal will delay the further development of this most valuable industry.

Now, the Association prays that the National Legislature may recognize the importance of this subject, will pass laws and provide for the establishment of a Government breeding farm of pure blooded Angora goats.

First—Authorizing the honored Secretaries of State and Agriculture to negotiate with the Turkish Government for the sale of, and permit to purchase and remove from Asia Minor a flock of Angora goats. No less than one hundred does (twice that number being preferable) and no less than twenty-five bucks.

Second—To authorize the Secretary of Agriculture to engage suitable persons to proceed to Turkey, examine goats of different localities, to select the very best to be found, and purchase those animals by them selected and to remove to seaport and ship on the safest and best route, to the United States, giving them personal attention and care on the way, and upon the arrival in the United States, deliver the same to the duly appointed agents of our Government here, with full reports of the examinations of climate, resources of Angora, and other matters of general interest to the breeders.

Third—To authorize the Secretary of Agriculture, to select a suitable locality for keeping the said Angora stock, appoint qualified persons to take care of them, keep them separate from any private property of this kind and to provide well for their increase, keeping a register of the breeding and cross-breeding of said stock together with date of birth of the kids and their numbers for identification.

Fourth—To authorize from the increase of this flock, not diminishing the original number, to distribute to breeders in the different States at uniform rates, never exceeding one male and one female to one breeder.

Now can there be a more reasonable prayer presented, appealing to the National Legislature for recognition of the importance of this subject and providing for aid to this industry?

Therefore for the granting of their request the petitioners, the Angora Goat Breeders of the United States will ever pray, etc., etc.

By order of the A. G. B. A.

JULIUS WEYAND, Sec'y

THE VINEYARD.

Pruning the Vine.

[An essay read at the Fresno Farmers' Institute by J. H. HARDING of Oleander.]

The magnitude that the raisin industry has already assumed in this valley is far beyond the wildest guess of any pioneer vineyardist ten years back, and even now a sanguine prediction of its future destiny would likely be very wide of the mark.

We cannot even now assume that we are entirely beyond the experimental stage and are established on a firm basis.

Is it not a fact that we are yet continually altering our plans of propagation and culture, our modes of planting, pruning and training the vine to get new light, a more rational, intelligent and economic basis to reach the highest state of perfection by the surest and shortest route?

The conditions and environments of the raisin industry from its beginning in this valley have been so totally different from other parts of the world that we have had little to guide us that has proved satisfactory in the end. Each planter has usually followed his own ideas or the advice of some one but little better qualified, and as a result we are confronted with an unlimited number of theories and plans for the future salvation of the raisin industry in this county.

Have we not been going headlong under the rush to get as many acres planted to raisins as possible without stopping to investigate whether we have done it well and carefully, that the best results may obtain in the end? I fear not, and I doubt not that many of us will yet see that we have undertaken too great a task to do it thoroughly and well.

We have been unable under the pressure of work to give our vineyards the personal attention demanded to insure the greatest success. Too much must be left to inefficient and inexperienced subordinates, and any business conducted on such a scale largely must necessarily fall far below perfection or anticipated expectations.

One of the beauties of the raisin industry is that if we cannot give our personal attention to the whole vineyard, we can at least set apart a portion for experiment and study, and watch the results of our labor, so that when we gain a point we may apply it to the whole.

IMPORTANCE OF PRUNING.

Vine pruning is a part of the raisin culture that perhaps has a greater bearing upon its present and future success than any other portion of the work. It commences at the very time the cutting is selected and made before planting. None but the best, firm, ripe fruit wood should be selected. No cuttings should be made from sucker canes or coarse, pithy wood, as they are less liable to grow, and many are of the opinion that such plants as they produce have a greater tendency to keep producing too much wood and too little fruit.

In any event, it is safer to use only the best canes the vine produces, cutting close to the lower bud and as far as possible above the upper. Some success has been made by planting the cuttings directly in the vineyard, but it has not been general. Most planters prefer putting them out in nursery form for one year.

Rootings when taken from the nursery should be properly pruned, cutting the top back to one or two buds on the new wood, then all side roots should be cut clean of the stock and only those at or very near the bottom be left. These should be cut back short enough that each root will assume its natural downward position when planted, and not be bent up at the end or cramped.

A vine may grow and look well for a time if simply thrown down and partially covered, but a failure to properly prune and place the roots when planting will be a failure in making a productive and lasting vineyard.

Now we will take for granted that the vineyard has been properly planted, and during the summer all suckers have been removed, and we will go into the vineyard for the winter work.

THE FIRST PRUNING.

The first pruning of a young vineyard should not be for fruit, but merely a shaping up of the vines to form the future crown of the plant, leaving but one of the two spurs about the height you wish the crown to form.

Then as soon as the ground has been plowed away from the vines—a small strip will be left in the row, which hoe or dig away from around them as deep as plowed, and cut smooth to the trunk every side or surface root to at least five or six inches depth and compel the vine to get its nourishment from the original bottom roots.

There are many and obvious reasons why we should be so particular about keeping off the surface roots, and I will endeavor to show at least a tangible reason for the importance of this mode of treatment.

By allowing the side and surface roots to grow, they being nearer the top in the warm soil start earlier to throw sap into the young vine and soon become its feeders, leaving the original bottom roots in a weak and stunted condition. Then again, they soon get in the way of the plow and the cultivator and you are liable to tear them from the trunk and materially injure your vine. Not only this, but their tendency is to run along near the surface and are subject to excessive changes of temperature, and in the heated term are liable to check the flow of sap, and the result is a falling of the foliage from the vine and exposing the fruit to the burning sun. Some have argued that nature provides for her own wants, and if the vines throw out their roots near the surface it is perfectly natural that they should do so, and that they should not be disturbed or cut away. Upon the same theory the vine naturally throws out a superabundance of canes at the top, and why we do we cut them away? We have simply taken the vine from its wild state and have domesticated it and trained it to fulfill a certain mission, and in so doing it is just as necessary to take care of the bottom as the top.

We will now pass to the second year of pruning, still shaping our crown head of the vine, leaving three or four spurs with two or three buds or eyes, but leaving our spurs in such a way as to keep the crown from spreading apart and becoming too open or saucer shaped, but rather compact and upright.

SIDE AND SURFACE ROOTS.

As soon as the ground has been plowed away from the vines we must look after those side and surface roots, as they will keep pushing out, and you must not trust to the shears cutting them close enough. A sharp knife that will shave them close to the trunk is the best thing I have found that will stop their pushing out.

Why I dwell on this matter of root pruning is that I believe it of all things the most essential to the longevity of the vine and continued success of the vineyard.

I have visited vineyards 6 and 10 years old where I found large vines that I could turn over by hand. And why? They had never been root-pruned and these surface roots had become the sole feeder of the vine, and the original bottom roots had perished and they, with the trunk, had rotted off up to just below where these surface roots grew out, as an examination fully showed. After years of skimming over the surface next the vines, the vineyardist thinks his land is getting too packed aud he sets his plow down, rips up the shallow roots, tearing and breaking them from the trunk of the vine, and when he cross-plows again he sees his singletrees here and there hooking on to a vine and turning it over; he finds that in less than a minute he has destroyed what he has been trying years to establish—a model vineyard. We must remember that a vine grown from a cutting has no top root and is entirely fed by laterals, and we have the power of placing those feeders anywhere to a reasonable depth in the soil, and by so placing them down in the soil they are not subject to any radical changes of temperature, but keep up a uniform healthy circulation in the vine during the heated term.

THIRD YEAR PRUNING.

We have now arrived to the third year with our young vineyard and can now commence in reality to prune for fruit, as our vines should by this time have their crowns well shaped and the trunk almost clear of surface roots to the depth we plow, but still we must not neglect to cut away a few we will find here and there. We will find our vines healthy and strong. Now it's a matter of as much speculation as to how many spurs should be left and how many eyes or buds should be left on each as to who will be the next president of the United States. Each vineyardist has his own plan or theory, and scarcely any two agree.

I shall not attempt to solve the problem here as I might come in conflict with about every vine planter in hearing, and I will leave the whole matter for discussion after touching on

SUMMER PRUNING.

I think this matter of summer-pruning has been a mere experiment with most all of us. I have tried cutting back once, twice, three and even four times, and while it has helped greatly to protect and keep the fruit from burning, I am not fully satisfied it is all we can do to almost entirely protect the fruit. Cutting off the tops, no matter how often or close, has not fully prevented the vines from falling apart and exposing the fruit in the center.

I think the young shoots as soon as they have grown a foot or eighteen inches long, should be cut back just above the fruit bunches, to keep the wind from breaking them off, if nothing more. Then as the next or later shoots appear above where these have been cut, also cut them back too, then immediately tie a piece of common grape twine loosely around a few center shoots and stop pruning. I think by such treatment your vines will soon have a natural and proper shade and cannot fall apart and expose the fruit, but fully protect all the berries and save much expense and vexation in the season of picking.

[There was some difference of opinion manifested in the discussion, which followed the reading of Mr. Harding's essay, on the advisability of removing the side and surface roots of the vine. Some claimed that they had vines which would have been destroyed by so doing, because they had found that all below the so-called surface roots had rotted off. Mr. Harding, however, maintains his position that wherever the lower layers of the soil are not waterlogged, it is desirable to make the vine depend upon its lower root system rather than upon surface roots, which are in danger of being torn out in cultivating or burned by the summer heat in the surface soil. The question is an interesting one. We would like to have it discussed.]

THE MICROSCOPE seems to be very busy of late in bringing to notice parasites destructive to human life and health. Its latest achievement is the discovery of a parasite which infects paper money and is found nowhere else. It is invisible to the unassisted eye, does not attach itself to persons, but multiplies at a rapid rate.

IS THE MOLE BLIND?—"As blind as a mole" must henceforth take its place in the heap of shattered similar sayings, for a German naturalist has demonstrated that moles have eyes and that they can see as well as other animals.

THE TELEGRAPH IN SPAIN and the post-office system of that country have been consolidated.

FRUIT MARKETING.

Statements About Dried Fruit Prices.

We alluded briefly last week to the causes which led to the depressed condition of the raisin and dried fruit trade last fall. The statements in a letter of a California raisin producer to the *Chronicle* are as follows:

BOSTON, Jan. 14, 1892.

Now that the California raisin product for 1891 has passed from the grower and packer into the hands of the Eastern jobber, and at prices considerably below those obtained in former years, many of your readers will no doubt be interested in learning that the prices of California raisins in Eastern markets are advancing, and that the same men who have whipped our producers into accepting reduced prices for their crops with the old story of large crops and over-production, are now talking shortage in raisin stocks. Being interested in this matter as a grower, and having made quite an extended trip through the Eastern States, I have been looking for the causes of the reduced prices paid to vineyardists during the past season, and as a result of interviews with some of the leading jobbers in California dried fruits in Chicago, New York and Boston, I have come to the conclusion that our raisin growers have in their own hands the solution of this matter.

If they desire to dispose of their product at prices of former years, two things must be observed by them. First, the quality of the pack should be improved. More care can and must be taken in the handling of the fruit in all its stages if our output is to sell at the same prices as the imported. Eastern jobbers admit that our California London layers compare favorably with the Malaga in the size of berry, amount of saccharine matter contained and in the thinness of the skin, yet the Malagas are selling at from 25 to 50 per cent above the California, simply because they have been more carefully handled in the harvesting and cure, and have been packed in more attractive style. Malaga boxes are some larger than our own, enabling looser packing, thus better preserving the natural shape and size of the grape.

Second—The vineyardists, both large and small, should dispose of their crops through an association organized by them for the advancement of their mutual interests, and this association, controlling the entire product of its district, could more successfully dictate prices to the buyer than individual buyers, each operating independent of the other. The expense of such an association would be very small, and I am convinced that an organization of this kind would have secured for our vineyardists higher prices for the 1891 crop.

In this connection the following circular, handed me by a well-known New York house, may be of interest:

"The grocery and fruit trades are to be congratulated for the wise and conservative course they have pursued the past season with regard to buying California dried fruit, and have saved a great deal of money by not buying early for future delivery, as they formerly have been in the habit of doing. You will remember in a previous circular we advised this, and the result is those who have waited until the goods arrived have been enabled to buy California raisins at phenomenally low prices that are not only safe, but will show them a large percentage of profit, which will continue to increase as the season advances. It should not be forgotten that we have had only three months' consumption of this crop, and have nine months more in which to consume the present stock before the next crop comes to market. Furthermore, the next crop of raisins in California is likely to be restricted as to quantity, and there is even now talk of combinations being formed by the raisin-growers to keep prices up and not let them be sacrificed as they have been the past season. Therefore, we think it is quite improbable that the next crop of raisins will open except at much higher than present prices, and as loose muscatel raisins in bags will be just as good then as now, there is not the least danger in having some left over. But we have not the remotest idea that any one will have any to carry over, because we estimate the present stock of all kinds of raisins in this country at fully 500,000 boxes less than it was last year at this date; besides prices are about 50 per cent lower, which increases consumption. Present prices of California raisins practically shut off importation of foreign raisins, as they cannot successfully compete, and though we were formerly large importers and dealers of Valencias, we are forced to the conclusion that they are not in it with Californias. Since California raisins dropped to panic prices, about three weeks ago, we have never had the least doubt that they were good property, and we believe now, as we said then, that they are better than gold dollars at 90 cents. We have been astonished at the large and continued demand for California raisins in bags, and the time is not far distant when we shall be obliged to advance our prices. California raisins may advance 25 per cent, or even 50 per cent, and still be comparatively low."

I give you the results of my investigation into the Eastern fruit markets, in the hope that California raisin growers will take more pains in the handling of their crops and that some interest may be aroused in the matter of the formation of local associations.

ARTHUR BULL.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The following named sisters have been recommended as willing workers in the cause of Woman's Work in the Grange. They are therefore appointed such committee for the coming year. The first named is constituted chairman of the committee, unless the committee, at a meeting, shall otherwise decree. If there is any one of the sisters named who cannot, or will not, discharge the duties of the position for the honor conferred, I hope she will at once notify of the fact, and at the same time recommend some other sister for the position. But I trust each one will serve. The work of woman in our Order is far-reaching and of the highest importance. Without woman the Grange would be only half a success. With her presence, her counsel and her admonitions it cannot be any part a failure: Sisters Mary Merrill of Waterloo Grange; Hattie S. Jones of Yuba City Grange, Amos Adams of San Jose Grange S. J. Cross of Roseville Grange, S. H. Dewey of Temescal Grange, M. Brainard of San Jose Grange, N. A. Alling of Stockton Grange, E. Z. Roache of Watsonville Grange, C. E. Kinney of Temescal Grange, E. Greer of Sacramento Grange, and Mary E. Saxton of Santa Rosa Grange.

If you want an open meeting, and will get the farmers to attend it, send for a speaker. Some of the Past Masters, or any of the officers of the State Grange, will feel honored to respond to your call.

Send the name of the person you want for County Deputy. The law requires the one named to be a Master or a Past Master.

Organize the farmers. Now is the time. Lawyers, doctors, teachers, preachers, bankers, railroad managers, politicians and mechanics have their own independent organizations. Why not have just as thorough an organization among farmers? No class of people produces more, or is more severely tax-ridden than the farmer. Give us Granges everywhere. Though the Grange is non-partizan, yet it is both purifying and elevating in politics. It teaches loyalty and true citizenship. It makes voters independent by making them more intelligent. It gives opportunity to know men and to study principles. The Grange is National, not sectional. It is an organization, and it requires organization to meet the issues of the day. Farmers of California, do you want your business and your home more prosperous? If so, organize. Help make a Grange.

Look well to your public school. See to it that the children under your care, and in your jurisdiction, have that gentle training that will dignify them and the work they are to do.

Childrens' Day is a feature of more than ordinary note with the Grange. The National Grange wants one day in each year dedicated to the children. Let each Grange in this State see to it, that at the proper time a day is given to the Little Ones. Sonoma County Pomona Grange has already taken an interest in this matter; for the coming outing they propose to take the Little Ones to the sea-side. A picnic, &c., will be held at Dutton's Beach, Marin county. Date yet to be determined. We hope our friends everywhere will provide to entertain and instruct the children. Remember the Little Ones and suffer them to have one day of sport under the guidance of your Grange.

If you are going to keep up with the times and with the important events which make history, you must read. The questions of the hour are of importance, not only to the present generation, but to the coming one. Our Order will not do itself full and proper credit unless, as an Order, it keeps up with, and abreast of, all the questions which affect home, family, finances, Government, education, temperance and progress. No idle man can do his duty to himself in these trying times. Patrons of California, you have always been found at your post of duty, and very faithful to the trusts reposed in you! May you ever be thus. Bear in mind that no tree bears fruit in summer that does not blossom in spring. This is another springtime in our Order. Let your trees—your own Grange—bear blossoms. Care for these blossoms, and in the later summer you will have fruit; ripe fruit for the Grange. Encourage improvement among the members. Nature's orders are, "Forward March;" she never retreats. Send an application for membership, through the post office, to a few of the best farmers in your neighborhood, who do not belong to the Grange. Perhaps a few of them may want to know more about the Grange. Possibly a few might join the Grange. No one of us can tell which seed will grow and which one will perish. The trial is worth the effort.

If *you* are the Master, Secretary, Lecturer or other officer of the Grange to whom communications are sent, it is your duty to see the same at once placed before the Grange. The Lecturer should, at proper times, read from the Journal of State and National Grange Proceedings. Also from reports of special committees. By thus doing, much useful information will be imparted and the otherwise idle time of the Grange, will be utilized and improved.

Patrons' Relief Association.

The work of this organization, which was instituted by action of the State Grange at its last session (see pages 53–56 of Annual Report, 1891) is rapidly taking form, and will soon be ready to invite membership and issue certificates. The committee, consisting of Bros. A. T. Perkins, S. Goodenough and S. T. Coulter, P. M. of S. G., placed in charge of this important addition to Grange interests on the Pacific Coast, have been industriously attending to their duty, secured a considerable membership from Temescal and Eden Granges, and completed the formalities of organization. At a meeting held in Oakland, at Grange Hall, Jan. 16th, the following Board of Directors was elected: Messrs. A. T. Perkins, S. Goodenough, E. R. Jones, J. H. Hollister, A. T. Dewey, M. L. Gray, Henry Mohr and Mesdames Helena Gading and N. G. Babcock. Oakland was selected as office headquarters.

At a meeting of Directors held at 1304 Franklin St., Oakland, Jan. 23d, Mr. A. T. Perkins of Alameda was elected President, J. H. Hollister of Haywards, Vice-President, and S. Goodenough of Oakland was chosen Secretary and Treasurer. Regular monthly meetings of Directors will be held at 10 A. M. on the third Monday in each month. The Secretary and Treasurer was required to give a bond in the sum of $1000. The President and Secretary were made a committee to procure the printing of the Constitution and By-Laws of the Association and all necessary blanks and documents for the successful prosecution of this important work. They will be in readiness soon to lay this matter before all the Granges in this State, and extend its advantages to all Patrons between the ages of 16 and 60. We bespeak the favorable attention of all Patrons in behalf of this institution, which, we believe, is sure to be of great benefit both to the individual member and to the welfare of the Grange.

What the Grange has Done.

Letter from Mr. H. E. Hayes, Grand Master of the Oregon State Grange to the *Northwest Pacific Farmer:*

"I am willing to concede all the good the Alliance or any other Order has done or can do; they can never take the hard-earned laurels of the Grange from us. What Order first brought down the price of all kinds of farm machinery in Oregon? The Grange. What Order broke up Freadlander and his wheat trust, and placed our wheat in the markets of the world? The Grange. What Order first urged the Interstate Commerce Commission, and forced through the courts test cases, until we got the decision that railroads did not have vested rights to plunder the people at will? The Grange. What Order was instrumental in getting the Secretary of Agriculture to be made a member of the President's Cabinet? The Grange. Who were the first to urge that United States Senators should be elected by the people, and the free coinage of silver? The members of the Grange. And we have had a legislative committee at Washington urging the pure food bill, postal telegraph, to modify the tare at present levied on the cotton of the United States, and to modify the tariffs so that the raw material should be equally protected. It is not necessary for me to say more, and the man who thinks that any organization that is educating the laboring masses of our country upon the laws of trade and commerce, and the system of government under which they live, is a failure, is certainly a little mistaken. If the Grange had done nothing more than to teach its members parliamentary usages, and to lay aside the prejudices that existed after the war, which it has done to a great extent, it would have been amply paid; but we cannot gather all into our fold any more than the Baptist church can into theirs. Still that is no sign that others are not doing a good work. Charity is a noble trait of character; let the Grange concede to others all the noble qualities to which they are entitled."

FARMERS' ALLIANCE.

From Mr. F. P. Cook.

The Canal Question—A Personal Explanation.

FRESNO, Cal., Jan. 22, 1892.

TO THE EDITOR:—I feel under obligations to Bro. Jesse Poundstone, Secretary of the Executive Committee of the State Alliance, for his kind and courteous note in reference to my article in a recent number of the *Central Californian* of this city, and the very fair statement which he makes both of one position I took in that article and of his own. There are some facts in addition, however, which deserve mention in this connection.

1. As to whether my position or his is correct in the matter of the Nicaragua canal having been generally discussed and passed upon by the Alliance in this State, I leave members of the Order in each section to judge for themselves.

2. The only object of my article was to preserve peace and good will in a local matter here, and to show the falseness (as I believed) of a position into which the Order in the county had been put by a majority of delegates to the County Alliance.

3. I opposed, very strongly, the publication of the *Central Californian's* article criticising Pres. Cannon, and did all I could to prevent its publication, *not* because I thought the proprietors of the paper did not have the right to speak their mind, but because I at that time believed Pres. Cannon's position to be right.

As to the canal matter: One point seems to have been overlooked by both sides in this controversy, so far as what has been printed is concerned, and that point is that *Government ownership of the Nicaragua canal concession is now impossible except by purchase.* The Government, under Presidents Arthur and Cleveland, had a chance to secure the concession, but refused to do so. Then private citizens—not very rich ones either—of this Government secured it, and it is now theirs, and cannot be taken away from them by force, though perhaps they might be willing to sell it to the Government. It must, then, be apparent to every level-headed member of the Alliance, and other citizens as well, that a general sort of demand for Government ownership in this case is visionary and impracticable, and shows a lack of that careful study and wise suggestion in the matter which we have a right to expect from the State President of the Alliance in a matter so important to the farmers and other people, of the Pacific Coast in particular. So far as it goes, Bro. Cannon's suggestion that ships passing through the canal should have entrance, duty free, to Pacific Coast ports, strikes me as a good one, if in application limited to vessels bound from one part of the United States to another and carrying only United States produce, leaving foreign produce to pay duty. Beyond that, I would suggest that the pivotal point in this whole matter is to secure lower freight rates, and that if this can be secured by the Government guaranteeing the bonds and controlling a majority of the stock for a number of years, the Government ought to take that much hand in it, in that way or in any better way which is now practicable. As a general proposition, I am for Government ownership in preference to any other method of control, and was before I ever heard of the Farmers' Alliance; but in this case such ownership *has ceased to be practicable*, unless by purchase. The practical thing for the Alliance movement now to do is to see that everything that can be done by law shall be done to insure lower freight rates by way of the canal as a result of Government assistance.

And now, since there has been bitter and determined hostility to me personally on the part of a few in the Order in this State, since I gave evidence a year or so ago that I should oppose the building up of cliques and little monopolies of privilege within the Order, I deem it proper on my own behalf to offer a few words of personal explanation. Born in Michigan in 1860, I learned early the printing business, and went from that to newspaper work, at which I continued most of my time in the same State, until four years ago. So long as I remained at those businesses I was never out of a position, save when I chose to be. But ill health, incident thereto, brought me to this State by way of Washington Territory in the spring of 1889. Naturally the care of my health should have been my chief concern; but those who knew me in Michigan know that I always put myself out to forward reform movements, and those who have known me intimately in this State know that I have earnestly continued reform work here, whenever and wherever opportunity offered, regardless of consequences to myself. At the request of Bro. Barbee, one of the grandest Christian men among us, I entered the organizing work of the Farmers' Alliance in Nov. 1890, and continued to do such work to the best of my ability until the nervous strain which it involved compelled me to quit it six months later, when I practically surrendered my commission. In that six months, with the utmost economy and correctness of life, I was able to save $55 above necessary expenses while engaged on behalf of the Order; some $17 of that being unpaid at the time I quit, and $6 of it unpaid yet. I thought then that it was time for a man out of health, out of money, and compelled to learn a new business, to begin to look after his own interests a little better, and I am doing so. While I held a commission as organizer, and since, I refused to be a party to any little cliques that were formed, and little monopolies that were projected, inside the Order, because I thought and still think them wrong in principle. I endeavored to use what power I had for the general welfare of those with whom I came in contact. I enjoy a clear conscience for what I have done, and the principles I have noted shall guide me in the future as in the past; and I shall continue to do what I can (consistently with a reasonable regard for myself) to forward both the principles of the Alliance and its organization.

FRANK P. COOK,
Late Deputy State Organizer,
F. A. & I. U.

Red Hot Resolutions.

The Napa County Alliance In An Indignant Mood.

The following resolutions were adopted by the Napa County Alliance at its last meeting:

WHEREAS, The *Weekly Call* of Dec. 3, 1891, published what is claimed to have been said by David S. Jordan, President of the Stanford Jr., University, entitled, "Wastefulness of Farmers," in which he, Jordan, claims that loss to machinery from lack of proper housing, poor roads, all the Saturdays spent by farmers going to town, the increasing number of idlers hanging around R. R. stations, stores, etc., as the result of the waste or idleness of farmers,

1st, He ignores the fact that farmers are compelled to use machinery.

2d, He presumes that farmers are able to purchase material and take the time to build sheds for such machinery.

3rd, That poor roads are attributable to the laziness of farmers only.

4th, That farmers have no needs that require them to go to town, and when they do it is from indolence and a waste of time.

5th, That idlers around stores, R. R. stations, etc., are farmers.

And, finally, he says if farmers now worked as hard as they did 30 or 40 years ago, there wou'd be no hard times; therefore,

Resolved, By the Pope Valley Alliance, Napa Co., Cal., in regular session, Dec. 26, 1891, that we denounce the above insinuation and statement made by Jordan against the intelligent and industrious farmers of America as an insult and a lie, and could only emanate from the devil, who is said to be the father of liars.

Resolved, That such utterances, coming from a man at the head of a great institution of learning, pampered by a salary of $10,000 per year, for five hours work per day, every dollar of which he knows has been robbed from the horny hands of toil by a system of the most gigantic legal robbery ever known in the annals of history, are doing more to bring on a bloody conflict between capital and labor than all the speeches ever uttered by the red-handed anarchists.

Resolved, That our pride in the great university is humbled by a knowledge of the fact that every dollar of the immense sum that built the institution was taken by robbery, claimed to be legal, from the producers of this nation.

Resolved, That we are ashamed that such an institution should be presided over by a man so ignorant of the condition of the great body of producers as to be capable of making such utterances, or, if not ignorant, willing to please his master and the monied aristocracy, with which he is surrounded, would consent to rush into print with such a slanderous lie. Well does sacred writ describe him, "When thou sawest a thief thou consentedest with him. Thou givest thy mouth to evil. Thou sittest and speakest against thy brother; thou slanderest thy own mother's son."

The above resolutions were referred by the Pope Valley Alliance to the County Alliance for its consideration and adoption before being adopted by the Pope Valley Alliance. They were adopted Jan. 9, 1892, by the Napa County Alliance.

Calaveras County Alliance

At the last meeting of Calaveras Alliance the following resolutions were unanimously adopted:

Resolved, That this County Alliance do most heartily endorse the action of the California State Peoples Party Convention and the platform as a whole.

Resolved, That Calaveras County Alliance appreciates the benefits derived from the State Business Agency, and considers that it should on no account be abandoned, even if funds must be raised in some way to pay expenses over and above the commission charged.

Reeolved, That we extend to Bro. J. L. Gilbert our sincere thanks for his attendance at our County Alliance meeting; for his advice and instructions, and wish him success in his work.

THE IRRIGATIONIST.

Under this heading the RURAL PRESS will publish the latest and most accurate information upon the progress of irrigation enterprise on the Pacific coast. Contributions upon the subject are earnestly requested, in order that the public may be kept fully informed.

Forest Preservation.

So far as a close perusal of the press of the entire arid region discloses, there is an entire unanimity with a single exception, upon the desirability, indeed the absolute necessity, of taking immediate steps to guard the forests of the watersheds of streams used or to be used for irrigation, in order that the flow of those streams may be prevented from diminution or absolute cessation.

The only present method of so guarding the sources of these streams, is to withdraw the unentered Government lands from the market, and already a good commencement has been made in this direction. Singularly enough the only opposition that has been developed to this necessary step has been in California, and a memorial has been prepared for presentation to Congress, praying that the lands withdrawn be restored again to entry. How any irrigator or any intelligent man with the interests of irrigation at heart, can indorse such a step is past understanding.

In Colorado the necessity for forest preservation is fully understood. The press of that State publishes with commendation, the following plan of watershed protection, outlined by W. N. Byers, one of the oldest residents and most intelligent newspaper writers of that State:

"I would set apart the summit of every range, and of every spur thereof, and of every detached group of mountain peaks, that reaches up to or above the limit of timber growth as a national reserve for the preservation of timber and water, and I would maintain and protect them with all the safeguards of law and power of police that can be brought to bear. Taking the crest of the range, spur or group of mountains, along its axis as a center line, I would extend the park reserve on either side therefrom, outward and downward, four, six, or eight miles, more or less, depending upon circumstances and conditions, to certain designated range, township or section lines, more or less nearly parallel with the center line of the reserve. If this step is taken soon it will interfere with few vested rights. It will provoke very little opposition. It will protect the heaviest, largest and best bodies of timber in all these mountain sections. It will preserve all the most important sources of water supply and natural reservoirs–snow banks, ice fields, alpine lakes –the main reserve and resource for our midsummer irrigation. There can be no objection to including the strip of barren land between the upper limit of timber growth and crest of the mountain or range, in the timber reserve. It is more or less covered with spruce scrub and willows, and is in reality the beginning and best of our ice and snow reserve for midsummer water supply. You are aware that points of timber extend upward on either side in sheltered places almost to the crest. In fact they will often be found passing each other like interlocking fingers. It is better to have a few large reserves than a great number of small ones. The latter plan will lead to confusion and greatly add to the expense of their government and protection. This is one great reason for my plan of continuous reserve along the range from the north to the south boundary of the State."

Large Irrigation Enterprises.

There appears to be a rivalry between what may be called the private irrigation enterprises and those conducted under the provision of the Wright Act. From various portions of the State comes news of large reservoir and canal schemes suggested, or well under way. The rivalry is of the friendliest character, and is welcomed by all who have the development of the State at heart.

A notable recent event was the convention held at Fresno on the 21st to consider the feasibility of inaugurating inland navigation of the San Joaquin valley by means of the improvement of the river of that name and the construction of canals which should be available both for irrigation and transportation. That such canals are perfectly feasible is shown by the fact that all the large irrigation canals in India are constructed for the express purpose of filling both wants—irrigation and navigation. It was decided to lay the matter before Congress and ask for aid in carrying out the plan.

It is reported that the proposal to organize a Wright law district at Oakdale to complete the partially built canal from the Stanislaus river at that point, has been abandoned and that the work will be undertaken with private capital. The Oakdale Irrigation Company has spent something like $100,000 already in the work. A dam was built across the river just below Knight's Ferry, part of which has since been washed out, and the canal was dug nearly to Oakdale, with two small gaps left uncompleted. Three flumes several hundred feet long need to be built, but it is claimed that $10,000 to $15,000 would complete the canal to Oakdale so that water could be delivered on the great body of exceedingly fertile land in that vicinity. One thing is certain, there are few large bodies of land that are better situated for irrigating than this, and few that would respond more readily to the intelligent application of water. It is a pity that some plan cannot be decided upon for the immediate completion of the system.

The 178 canal scheme in Kern county is again actively under discussion and it is said that capitalists have been interested who will undertake the work. The plan is to issue bonds to obtain the necessary funds, and considering the certainty of a good return upon such an investment there should be litle difficulty in carrying out this idea.

Work was some time since suspended for the season on the Hemet dam, in the northern part of San Diego county. The location is so well up in the mountains that the climate is too severe during a portion of the winter months for masonry work to be properly done. The dam is now between 50 and 60 feet in height, and is to be 150 feet when completed, with foundations reaching 20 feet farther into the earth, or 170 feet all told, of solid masonry. The reservoir will be twice the capacity of the famous one at Sweetwater, and the engineer of the Hemet dam is the same one who completed the Sweetwater structure—J. D. Schuyler of San Diego.

The dam being built by the Sharon estate on the Chowchilla river, in Merced county, is an immense structure. It will be 110 feet high and 600 feet long across the top. The reservoir thus formed will cover 1200 acres of land and the water will be 40 feet deep. It is expected the structure will cost $400,000, and besides furnishing water for irrigating the lands of the estate, there will be a large amount available for disposal to others.

The Rosenthal colony lands in Tehama county have changed hands partially and it is reported that it is the design of the new owners to construct a canal from some stream in the Coast Range and irrigate these lands.

A Great Arizona Enterprise.

Brief mention was made recently of an extensive irrigation enterprise that was on foot in the valley of the Colorado river. The Denver *Republican* now furnishes full details of the scheme, as follows:

Articles of incorporation of the largest capitalized irrigation company ever organized in Colorado have been presented to the Secretary of State and duly recorded. The company is known as the Arizona and Sonora Land and Irrigation Company. The capital stock is $7,500,000. The incorporators are Samuel N. Wood, F. P. Earnest, Charles H. Dow, J. C. Beatty, James H. Frank and Frank A. Miller. The directors are the gentlemen named as incorporators. James N. Carlile, Charles M. Kittridge, Frank Church. The officers are C. H. Dow, president; James H. Brown, first vice president, J. C. Beatty, second vice president; Frank A. Miller, secretary.

The company owns 1,500,000 acres of choice mesa lands in the northwestern portion of the State of Sonora in the Republic of Mexico. It also has 60 miles frontage on the southern border of Arizona, east from the Colorado river. The object of the company is to construct a canal which will head at a point 28 miles above the town of Yuma, Arizona, from the Colorado river. The canal will be carried into Sonora by concession from the Mexican Government, and it will make productive what is estimated at 1,000,000 acres of land.

It has been figured that the cost of this canal system, from its source to the boundary line, which is where it empties into one of the sloughs near the coast of Sonora, and from thence into the gulf of California, will roughly approximate $2,000,000. The width of the canal will be 100 feet on the bottom. The canal heads near Stevenson's island, a rocky protuberance which rears its head above the surface of the water in midchannel of the Colorado river.

This is the only point on that river for a great many miles from which an irrigation canal can be taken. From this point it is not only practicable, but comparatively a simple and inexpensive matter.

At Stevenson's Island it is proposed to erect a dam and lock which will not in any way interfere with the navigation of the river. The lock will be so constructed as to raise the water 12 feet above low water mark. A bill is to be presented to Congress to obtain permission to construct the proposed lock, and it is believed that there can be no objection to it since it will assist rather than impede navigation by overcoming the heavy fall at this point in the river. There is little doubt that the measure will meet with legislative sanction.

The advantages of this canal not only lie in the increased quantity of land made subject to redemption, but it will form a most important factor in furnishing necessary water supply to people who take up land there. The entire property of the company consists of 296,080 acres of choice semi-tropical fruit and farming lands, held in fee simple, and a concession from the Mexican Government of 1,500,000 acres in one tract, comprising all of the mesa lands in the northwestern part of Sonora. The title comes direct from the Mexican Government, and is devoid of any restrictions or conditions whatever.

District Progress.

A meeting of land owners in the neighborhood of San Dimas, La Verne and Glendora, Los Angeles county, was held last week, to take steps for the formation of a district under the Wright Act. The San Jose Ranch Co., which owns several thousand acres of land in that section, was represented and is in favor of the enterprise, thus setting, by the way, a good example to large land holders elsewhere.

The scheme of the projectors of the district is to obtain irrigation water from San Gabriel and San Dimas canyons. The combined water in these canyons is never less than 2400 inches, and for many months in each year is over 6000 inches. It is proposed to dig a tunnel, over a mile long, through the mountain separating the San Gabriel and San Dimas canyons, and then conduct the water from the former canyon through the tunnel to the San Dimas canyon stream. Then to conduct the confined waters in an immense cement ditch to an $80,000 reservoir that has already been provided for on Carrion's ranch, west of Lordsburg. It is planned that the land in the proposed district be bonded for $20 an acre. That will yield a sum of over $700,000 for obtaining the water and distributing it on the land. About 38,000 acres may be brought under irrigation by the district.

Many land owners, whose property will be included in the domain to be irrigated, inform us, says the Pomona *Progress*, that they are very much in favor of the plans for the new district, and, looking at it from the stand of an outsider, we believe that no better plan for the enhancement of the value of the great tract of land about San Dimas has ever been proposed than this. There are dozens of our experienced fruit growers who say that for fertility of soil and freedom from frosts the San Dimas valley is among the very best in all this region. The orange orchards up there are unusually thrifty, and the nursery stock from there is first-class. It has been shown what wonders a little water will do on the soil there, and it is a reasonable certainty that with complete irrigation all over the valley, that may become some day a mammoth orchard.

Land that is now worth $100 an acre in the San Dimas country will easily bring $200 or $250 when irrigation becomes a sure thing. The Wright Act has been the means of bringing thousands of acres of dry land in this State under cultivation as orchards. There are great tracts of acreage property that have been quadrupled and quintupled in value from dry and grain lands into the finest fruit lands, in only a year or two, by the formation of irrigation districts. The San Dimas people cannot fail to increase the usefulness and value of their acreage property by the formation of a district as soon as possible, providing their plans for obtaining irrigation water are feasible.

Three hundred thousand dollars worth of bonds of the Perris district have recently been sold to Eastern capitalists at a fair price, and will be delivered on February 1st.

An offer of 85 cents on the dollar is said to have been made for $750,000 worth of the bonds of the Central district, Colusa county. The law requires that no bonds shall be sold for less than 90 cents.

The residents of the Jamacha Irrigation District will hold an election on January 30 for the purpose of voting upon the issue of $700,000 in bonds to secure water rights and construct a distributing system, says the Otay *Press*. It will be remembered that the Jamacha district has acquired the rights of the San Miguel Water Co., and will thus own its water. It is estimated that the natural flow of water will afford all that will be required for some time without the erection of expensive reservoirs.

The question of the taxation of the property of irrigation districts has come up in several localities, and it was finally referred to the Attorney General, with the result that he has given the following opinion, that such property is not taxable: "Irrigation districts formed under the law are *quasi* public corporations, organized for a public purpose, and the property is for the use of the public —that portion of the public and their lands within the district. Therefore I am clearly of the opinion that the property of such irrigation districts is not assessable, either for State or county taxes."

That the Wright law operates beneficially in forcing speculators to bear their proportion of the expense necessary in enhancing the value of their lands, can be seen from the following extract from a local paper in regard to the working of the Alta district: "By a careful analysis of the assessments paid to Alta Irrigation district, it is found that more than one-half of the assessments are paid by nonresidents of the district, who have invested in real property in this district for the purpose of speculation; and by those who have a little surplus capital and are desirous of placing it where they can reap a benefit from the labors of others without any great effort on their part. As the assessments in this district are about one-half for interest in bonds, etc., that expense is paid by nonresidents, leaving only the expenses of running the water to be paid by those who use it, and this money is also expended in the district for labor and reverts back to those who first paid it and is kept in our midst."

A dispatch received in this city from Chicago last week says: "To transform the dry, hard wheat lands of Northern California within the next twelve months into beautiful fruit lands is the purpose for which it is stated the Stockton and Lodi Irrigating Canal Company was incorporated under the laws of Illinois with a capital stock of $2,000,000. Before spring opens the work of irrigating the California wheat lands will be well under way, the promoters declare.

"The company will build a complete system of canals," said S. R. Walker, one of the incorporators, "and the land will thereby be made doubly valuable. We shall employ the lock system for transportation and the canals will be fed by neighboring streams and by great reservoirs that will be built in the vicinity. It is a venture that has been successfully tried in other parts of the State, and we are sanguine of our success. I am not at liberty to divulge the names of the stockholders, but I can say that they are prominent in business circles in Chicago."

"What was the object of incorporating in Illinois?" was asked.

"The offices of the company will be in Chicago, and as it has Illinois capital and Illinois men, it was thought advisable to incorporate in Illinois."

"How soon will work be begun?"

"Before spring opens," returned Mr. Walker. "We shall put a large force of men at work immediately in order to get through before the beginning of the year 1893." It is reported in San Joaquin county that the new company was organized to carry out the plan of the old Mokelumne Ditch and Irrigation Company, for the irrigation of a large body of land lying south of the Mokelumne river. The canal will be taken from that stream near Westmorelands bridge and will run to the vicinity of Lodi.

A Novel Exhibit.

The people of Stanislaus county, who are interested in the subject of irrigation, are discussing the feasibility of making a novel display at the Chicago Exposition. The idea is to prepare a large working model of the dam now being constructed across the Tuolumne river by the Modesto and Turlock irrigation districts, showing the entire plan of the work, with the canal headgates and all the other detail of the enterprise. This structure is claimed to be the largest overflow dam in the world, and a model such as the one proposed would be a valuable object lesson for those interested in the science of irrigation.

Provision has been made for a display of irrigation development at the Chicago fair, and already steps are being taken in other parts of the State for preparing models of irrigation reservoirs, canals, pipe lines, etc. The people of Stanislaus county owe it to themselves that an adequate display be made of the great work undertaken by them.



In a Country Store?

[Written for the RURAL PRESS by I. H.]

I opened the door and surprised them,
Caught in the obvious act,
Kissing just back of the counter,
A plain, undeniable fact.

He blushed like a very schoolboy;
She turned in confusion away.
I, an old woman of fifty,
What word of reproof could I say?

Lovers abashed at detection,
Plainly, conviction was clear;
Ah! so you think; but it happens
They had been married a year!

Quickly dispatching my errand,
I left them, but still in my heart
A glow as of sunshine, an echo
Of music that will not depart.

Twenty years hence, friends, may some one,
When I shall have long been away,
Still find you kissing like lovers,
Just as I found you to-day!

Against Wind and Tide.

People in Maysville always shrugged their shoulders when Mark Lamson was mentioned, and usually the expressive gesture was followed by some depreciating remark.

"Comes of bad stock," old Judge Lennox would say, in his pompous dictatorial manner. "All the Lamsons were worthless, and Mrs. Lamson was a Hodge, and everybody knows what they are."

The house in which Mark was born, and where he scrambled up to manhood, was a large farm house, tumbling to pieces inside, with a roof always being patched against leaking, doors without locks and with shaking hinges, windows that rattled in every wind, ceilings that dropped plaster whenever a heavy foot shook the upper rooms and furniture in the last stage of shabbiness. His father and mother were slatternly in dress, shiftless in household management, and the handsome bright boy was over-indulged and neglected as their own indolence suggested.

But Mark Lamson inherited none of the leading traits of his parents. Probably in some remote ancestor there was a mixture of energy, resolution and ability of which the Maysville gossips had never heard, and for which they certainly gave Mark no credit. It was in vain that the principal of the Maysville high school declared that Mark had graduated with the best record he had ever given in the school. It was useless for the lad himself to keep his life free from blame, and earnestly endeavor to do his duty. Maysville could not forget that he was a Lamson, and his mother was a Hodge—"bad stock!"

As he passed from boyhood to manhood, Mark began the unequal struggle against fate and circumstances, that was dictated only by his own energy. His father had been able to get bread from the farm by a lazy tillage that gave the bare necessities for the table; his mother had a very small income that gave the three clothing of the poorest description, and both were in open-mouthed wonder that Mark was not content, as they had been, to dawdle through life and "make out" with what they had.

And Mark, struggling to attain better things, with only a vague, undisciplined longing for improvement, met no encouragement at home or abroad. He tried to obtain a situation, but employers were shy about giving work to a Lamson. He met with a cool reception at the Maysville social gatherings, having no knowledge of how to repair his own linen or keep his poor clothing even tidy. Boy-like, he imagined a new suit and gay necktie were all-sufficient for a party, and did not heed the frayed cuffs and broken collars at which the Maysville belles turned up their noses.

But, in spite of his father's lazy comments, his mother's fretful remonstrances, Mark Lamson, finding no employment outside, determined to see if the farm would not find him in work.

"Oh, yes; do as you please," his father said. "But there is no money for new fangled fixings, and the land is about worn out. Plenty of it, to be sure, but 'tain't worth shucks."

So, single-handed, Mark undertook the work of bringing up the old farm. Early and late he toiled, repairing fences, weeding, picking stones, rooting out dead stumps, preparing his land, without one hand stretched out to help him, one voice to wish him success. Thomas, the only man his father employed, gave a surly refusal to aid, upon the ground that his regular routine of shiftless farming took all his time, and Mark patiently submitted.

He was twenty-one years old, when into his dull, monotonous life came a new stimulus—a hope, bright as a vision and almost as baseless. He fell in love! He did not walk in cautiously, counting his steps and weighing his chances, but he fell in plump, suddenly, hopelessly.

There had been a warm discussion at the judge's about inviting Mark to the party that was to celebrate Essie's eighteenth birthday and her final return from boarding school. But the pet of the house had a will of her own and a lively recollection of Mark's handsome face and boyish gallantries, and insisted upon his being invited. Mark, carrying in his memory only a pretty little girl, found himself confronted by an undeniable beauty, a face to win homage in far more pretentious circles than Maysville boasted, and a general grace of manner none of the girls of his acquaintance had ever extended to him.

The touch of the soft little hand offered to greet him riveted the chains Essie's face had cast about Mark's heart, and made him her slave then and there. He had starved all his life for sympathy, and his first half hour with Essie filled his longing heart with content. She remembered all his boyish aspirations; she entered into all his hopes and ambitions. The party was the beginning of an intercourse that stimulated anew every good resolution, gave a new vigor to every hope of Mark's life.

There are women who carry in their own hearts an overflowing fund of sympathy, who can sink self utterly in the presence of another person's interest, and throw their own power into their neighbor's work without officiousness or offense. Essie Lennox was such a woman, young as she was. She could give her whole mind to every detail which she had carried to her, from the cutting of aprons for a neighbor's child to the gentle soothing of an invalid's terror of death; from her mother's preserving kettle to the comforting of a newly bereaved widow or orphan. Nothing was too deep or solemn, nothing too transient or trivial, for that tender, ever active interest and sympathy that made her the idol of Maysville as well as the comfort of her home.

And in her home she found no one whose claim seemed to her stronger than Mark's. The village was essentially democratic, and the fact that Essie was the only child and heiress of the richest, most influential man in the place did not prevent her from visiting Mrs. Lamson upon terms of perfect equality. She was fond of the weak, amiable woman, strongly as she censured, in her youthful strength, the easy-going indolence that made her home such a scene of confusion and discomfort, and in her gentle, pleasant way, she endeavored to brighten the home for Mark by suggestions and offers of help that fell to the ground. It was like fighting a feather bed to try to rouse Mrs. Lamson to any active improvement, and, rebuffed there, Essie could only help Mark by words of sympathy that were like the wine of life to his love.

An hour with Essie sent him back to his uphill work full of new hope, every energy stimulated, every hope brightened. He had not dared to set out before him in plain words the hope of one day winning her heart to answer his own, for there was all the humility of true passion in that young, ardent heart, but he realized a new force, a new spur to ambition.

Essie never sneered at him, as the neighbors had become accustomed to doing. Essie never threw cold water over his plans for improving the land; Essie was never sarcastic over the clashing of his poverty and his ambitions. As he saw her more frequently, he ventured to tell her of wider, wilder hopes of some day escaping from the drudgery before him, and making his way to a city, where his education might give him a start in more congenial occupation.

"Father and mother seem to need me, now," he told Essie one day; "they are old and they have no other child. I think it is my plain duty to stay."

"I think it is," was the quick reply; "your mother could scarcely bear a separation."

"And while I am here, I must do the work that lies under my hand," he said, "hard as it is! But Essie," and his face brightened, "do you know that already I have made the farm pay double what it has ever done. Next spring I can hire help out of money I saved from the sale of last year's crops."

Essie, all eager interest, entered into the discussion of the capabilities of such a lot for turnips, such a patch for wheat, the possibilities of a dairy, the best culture for fowls, as if she had never studied music or filled her head with French and German verbs.

But the horror and wrath of Judge Lennox, when, after two years of mild courtship, Mark took his fate in his hands and asked permission to marry Essie, cannot be described.

"A Lamson!" he cried, when having dismissed Mark he returned to the bosom of his family. "A Lamson for Essie's husband! The fellow wants my money to spend after all his father and his grandfather have squandered."

"Do you really and truly think Mark is a spendthrift, papa?" Essie asked quietly. "Does he ever lounge about the stores or taverns, as Harry Carter and James Rayburn do?"

"I—Well, no, I never saw him," was the reluctant admission.

"Did you ever hear that he drank or gambled, or even smoked?"

"N--o—I never did."

"Is he not regular at church?"

"Ye-es."

"But, oh, Essie!" struck in Mrs. Lennox. "What shabby, half-washed shirts he wears, and his fingers all out of his gloves, and half the buttons of his coat gone!"

"Poor Mark!" said Essie, gently. "He needs a wife."

"Well, he need not look here for one," growled the judge.

"I heard Mr. Thompson say last week," said Essie, quietly, "that there is not a better farm in Greene county than Lamson's."

"Such a palace of a house!" the judge sneered.

"Mark is hoping to put up a new house on the place next year. He has had builders over from B——, but they say the old house is beyond repair, and it would cost less to have a new one."

"And where is the money to come from?"

"Where the improved farm came from," said Essie;" from Mark's industry, perseverance and energy, in the face of the hardest discouragements ever a young man had fight."

"Eh?" said the judge. "What? What?"

"See what he has done," said Essie, still in an even, quiet tone that carried conviction far more than an excited one. "Eight years ago, when he was but a boy, he put his shoulder to the wheel and took his play-time between school hours to weed and clear away stones. Nobody helped him. He was ridiculed, sneered at, discouraged on all sides. He had the poorest farm in the place, and he has made it one of the best. He has put every spare dollar into books on agriculture, improved machines, good stock. He has now four men at work for him, good horses, good cattle, good poultry, and he will have a good house. Papa, do you not think it will be a pity to have the new house in the care of Mrs. Lamson, to ruin as she has the old one? Outdoors, the management is all left to Mark, and see what he has done! But a man cannot make a home comfortable alone; he needs a wife."

"Well," said the judge, "let him have one, but not my child."

"Still he loves me," said Essie, "and I love him!"

"Pshaw!" said the judge, and marched out of the house.

But prompt as he was, he was just and he loved Essie. He had let prejudice influence him against Mark all his life. Now he took pains to find out how much of his dislike was well-founded. Grudgingly enough was the verdict given in Mark's favor. Maysville did not willingly acknowledge it had been wrong in its estimate, and shouldered upon Mark all the faults of his ancestors. But the facts were strong, and Judge Lennox found himself confronted by them. Slowly, for he was not easily convinced, he took respect into the place of contempt, and, after a month of patient investigation, sent for Mark.

* * * And so having imparted to him the result of his investigation, and expressed regret for his participation in the common prejudice, he made both Mark and Essie happy.

Womans' Sphere.

[An essay read by MRS. L. CANFIELD before the Farmers Institute at Dufur, Oregon, November 24th, 1891, and furnished for publication in the RURAL PRESS.]

This hackneyed subject has been talked about, written about, and studied over, ever since Eve first entered the garden of Eden, and according to Hebrew writers, her Creator found she was out of her proper sphere: from that time to the present she has been prone to follow in the footsteps of her predecessor, and it seems that no amount of judiciary training or ogling is sufficient to keep her within the prescribed limits. Ever since Adam's time men have been watching and fearing, lest woman should assert and maintain her own individuality, knowing that inherent in her nature was a desire to reach out beyond her surroundings for attainments that were withheld from her.

With all the superior mental culture to which men have attained, they differ widely in regard to these limits, each man narrowing or extending them according to his own selfish or liberal nature.

Each nation has its own restrictons in regard to the boundaries by which woman should be governed. "Thus far and no farther shalt thou go" has been the rule for ages, but ofttimes she has over-stepped her boundary lines.

Science, art and literature were at one time withheld from her, and we are told that she was sold in the public market place like a beast of burden; and even to-day we read of her being hitched to a cart with a dog, and hauling vegetables to market. Her sphere! where is it? Among the untutored, it is menial servitude; among a little more enlightened class it is looking after the comforts of home and keeping her husbands buttons sewed on; that ought to be sufficient scope to satisfy the most ambitious woman to-day. Her inclinations should never lead her into a world of her own, where she can lose for a moment man's identity, and claim for herself her direct kinship to the living God. No. Why? Because of the old tradition that for ages has clung to the human mind, that after all woman was created from man's rib; she should therefore be obedient to his will, and why indeed should she wish to look higher or beyond him? Is not the pedestal upon which he stands sufficient for her admiration and what more can she want than his love and protection?

We find from historical research that the church is greatly at fault and the principal cause of woman's sphere having been fixed or limited. Men have blindly followed the teachings of those ancient lawgivers as though they were really and truly the instruments of divine inspiration, and it was so long before the teachings of the old patriarchs could be modified, mens ignorance and superstition made them fear to do otherwise than abide the decision of old St. Paul, who said: "Let your women keep silence in the church and be under obedience, and if they will learn anything, let them ask their husbands at home."

Of course the Latin fathers and Greek philosophers of those days taught the inferiority of woman, and St. Paul's ideas of women were a mere reflection of the times when Tiberius and Nero ruled the Roman empire without mercy after the fall of the Republic under which the liberties of women were exercised to a great extent when Rome was at the height of her glory, but we are told their sphere was, through jealousies, narrowed by Augustus. Later, the church looked upon them as "daughters of the devil, and that man alone was created in God's image." Hence centuries are required to outgrow and overcome false theories and false doctrines. The customs of to-day are far in advance of the Apostolic age, and the following not long since came from the lips of an ordained minister in the pulpit, just before election, at a grand temperance rally:

"The whisky element cannot rule against the prayers of so many thousand women. The Lord will not permit it. He will *not* turn a deaf ear. Their prayers must prevail."

Thus you see this modern apostle had more faith in woman's intercessions with the Lord than in man's. Nevertheless the women prayed, the men voted, and the whisky ring went into power. Now, as the men are the most powerful, suppose they turn the table—pray awhile and let the women vote.

The following gem from Whittier is expressive:

"The outworn rite, the old abuse
The pious fraud transparent grown,
The good held captive in the use
Of wrong alone.

These wait their doom from that great law,
Which makes the past time serve to-day,
And fresher life the world shall draw
From their decay.

O, backward looking sun of time!
The new is old, the old is new,
The cycle of a change sublime,
Still sweeping through."

Woman physically is not fitted for military duty, yet we have authenticated accounts of her ability in commanding large bodies of soldiers and marching in open field against the enemy and winning many victories.

We have not time to recount the heroic deeds of women, but history, both ancient and modern, is full of glowing accounts of her successful adventures, her sacrifices for humanity, from the lowest depths of poverty

and crime to wealth and affluence, and from the garret to the castle, she has suffered martyrdom for those she loved and sacrificed every thought of self for others.

In politics, the higher class of English women exert a powerful influence over the lords and peers. We are told that during the last century "the beautiful Duchess of Devonshire electioneered openly at the polls," and at the present day men and women of high and low social cast are combining and forming political leagues, founded by the leading men and women of England, which will doubtless make a great change in the political world of our mother country.

Are the women not overstepping their boundaries? Shall American women stand back with bated breath to await the outcome of the experiments of those old countries, where wealth and royal trappings have been wrung from the heart's blood of her working classes, and where needed reform has awaited the force of circumstances?

Woman's sphere is beyond the ken of man to fix. She has thus far been kept subservient to his laws, under circumstances, not that "might makes right." Her sphere, like the spheres of countless stars that revolve in space, has no beginning nor no ending; it is as exhaustless as the ocean, and as endless as eternity. Upon her weakness or strength nations rise and fall. In her, power through direct inspiration from the source of all knowledge, is given to mould and fashion the minds of the greatest men. Truly "women are the wardens of the world, to whose keeping the keys of the future world are confided." And, although limited by conditions beyond her control, yet her influence goes out beyond her fixed boundaries of action, and like the noiseless tread of angels' feet, enters many a forbidden spot, and though not seen by mortal eye, its hidden forces are felt and a change is wrought.

Rest in your graves ye bearded patriots who founded governments on monopolistic principles. Woman's sphere has broadened a little since with reverend head you placed the government in the hands of God, leaving the woman out. They constitute the one hundredth part of the flock, and the good Shepherd is calling them in.

The signs of the times are similar to those when "the flocks were feeding on the hills and the stars sang together in the heavens" for the glory of the new dawn that ushered in a Christ. The coming dawn will usher in a reform as great as that of the Christian era. Women will be unshackled and become independent individuals capable of governing themselves.

History recounts from age to age the fact of women entering every school of learning or branch of industry ever opened to them and competing successfully with men. Then why set for them boundary lines? Will not their own inclinations lead them into that which they are best fitted for? Can a light-running vehicle run in the worn out ruts of an old lumbering coach? Is there any justice or equity in one individual circumscribing the limits of another individual's course of action? And what is right in part must be right in all, and if so the rule must work for both man and woman.

Senator Stanford, speaking of his endowment to the Leland Stanford Jr. University, says: "We have provided that the education of the sexes shall be equal, deeming it of special importance that those who are to be the mothers of a future generation shall be fitted to direct the infantile mind at the most critical period."

Professor Jordan, of the same university, says: "This higher education should help men to form new opinions worthy the evidence each new day brings them."

"How, I pray you, will you limit woman's sphere, after the liberal education the future offers?"

When the thongs of superstition, selfishness, bigotry and aggressiveness, that have bound men's souls for generations, have been removed by education, when the human mind has been brought up to a higher state of development, when the church can more clearly comprehend the true spirit of Christianity, and practical religion instead of symbolic religion governs the masses; when they no longer do right through fear; when their intellects are broadened in a sufficient ratio to the divine, that each one shall become a law unto himself, we shall have no need of setting barriers for others or building fortifications for ourselves. The great law that controls the universe and the destiny of man, is no respecter of persons. Equity and justice shall be meted out to every one, and the work of each individual will be given as he or she is able to bear.

This working over and over again, the crude elements of nature, is the only way to reach the most refined principles, and it is only through this refining process of the human mind, that we are to be brought into harmony with ourselves, harmony with each other and harmony with God, and of course it must be brought about by this constant friction in the social, religious and political systems, by which we are governed, and when this state of civilization is reached, the bone of contention, "woman's sphere," will have been buried with the musty traditions and barbarous customs of an undeveloped age.

Ye clouds, that in yon starry sky,
Your leaden folds hang down;
Roll back your softened draperies,
And show your silvery crown.

Through mists of years you've floated thus,
Though lighter you have grown,
And storms have burst, through thunders blast,
And fierce the winds have blown.

But on beyond, your darkened face,
We see the torches bright,
That gleam from out the future sky,
And light the darkest night.

YOUNG FOLKS' COLUMN.

A Rainy Day.

[Written for the RURAL PRESS by AUNT SUSIE.]

"O dear! O dear! I don't know what to do! Mamma, can't you think of something for me to do? I just hate rainy days!"

"Why, Jamie Grey, what would become of the flowers and trees if it never rained?"

"Well, I don't care. Folks in the city can go out when it rains, and here in the country there is just nothing to do but look out of the window and watch it rain, and rain—and rain!"

"Come to this window, Jamie, and watch the birds."

"O mamma, what lots of robins! My! there must be hundreds of them! Just hear them twitter! Oh, look at them in that puddle taking a bath! How can they like it this cold day? One, two, three, four, five, six. My! I can see six in that one puddle. How they do make the water fly! See each little head go under the water and up again quick."

"Yes, Jamie, and it seems as if I could hear them say: 'Oh, this is such fun! I just love a rainy day. Of course I'm all wet, anyway, but I like to take a bath. Oh, how nice and cold this water is! How could that little boy looking out of the window make a fuss when his face was washed this morning, and how could he say just now he hated a rainy day? Those long, delicious worms we had for dinner to-day never could have come up out of the ground if it hadn't rained and made the ground soft, and how could the grass grow if it never rained? Boys are so hard to please!'"

"O mamma, do you think the birds said that?"

"Well, my dear, they looked as if they did. It is true, isn't it?"

"Yes, I s'pose so. But see! A dear little linnet has come to rest on the window sill. He turns his head this way, and that as if to say: 'Can I rest here awhile out of the rain?' Yes indeed, dear little linnet, stay as long as you like. I'd gladly put some crumbs on the sill for you, but if I should raise the window, you would be frightened and fly away."

"O mamma, I have just counted twenty robins in that one cherry tree. Isn't it fun to watch them?"

"Yes, my boy. You see even a rainy day in the country gives us something pretty to look at and think about. See, those robins that were in the water taking a bath have gone to the peach tree to rest and are shaking themselves to get dry. See their heads go over their necks to smooth their feathers, while more come to the pond to bathe. There! our linnet has flown away, and now here he is back again looking as saucy as ever. He seems to say: 'Don't you wish you could catch me? But you can't. Just raise that window a grain and away I'll fly.' About like the bird in the song you like so much."

"Once I saw a little bird
Come hop, hop, hop;
So I cried, little bird,
Will you stop, stop, stop?
I was going to the window
To say 'How do you do?'
When he shook his little tail
And away he flew."

"O mamma, the clouds are going away. It is going to clear off. Oh, see the sun! Now for a rainbow! There it is, clear way down on the trees and bushes. My, what a big one; reaches way over to the other side."

"Yes, and see the fainter one above it."

"Oh, isn't it pretty, mamma? I don't believe rainbows are half as pretty in the city, for you can't see the colors shine on the trees."

"I thought my little boy was wishing he lived in the city this rainy day?"

"No, mamma, I've come to the conclusion there is lots more to see in the country on a rainy day than in the city. But tell me what you used to do when it rained when you lived in New York?"

"Well dear, I'll tell you what I saw one day just after a cold rain, each drop seemed to have frozen on the pavement, and it was all I could do to walk. I was on my way to my class in the Sunday school, held in the 'Children's Hospital,' when I met a most pitiful looking little girl. She had on a thin ragged dress, her feet and legs were bare and blue with cold and stuck to the icy pavement, she shivered, and the hand she held out to me was thin, and her whole appearance showed the most dreadful poverty. I did not have my purse with me as I intended to walk to the hospital and back, but my heart ached so for the poor child, I said, "Tell me where you live, and to-morrow I will go to see you and take you some food and clothes." She gave me a street and number, and I passed on to my class.

The next morning I took some food and clothes and went where she told me. It was one of the poorest tenement houses, and I had to go up three flights of very dirty, shaky stairs to find the room. I knocked, and the same little girl opened the door. She said, "I didn't go out this morning to beg. I thought you'd come. Mother is awful sick."

I followed the child to a miserable bed in one corner of a very small room. On the bed lay the poor mother with a feeble baby by her side, there was no fire in the cracked, rusty stove, and only a box for me to sit on. The poor woman said, "My husband is out of work, and we are all starving and freezing."

I opened my basket, and gave them food, which they eagerly devoured. After chatting with them awhile, I went home, saddened by what I had seen, and determined to do what I could for them, so went to the gentleman who had charge of the "church fund," and he had coal and food sent to them, and found work for the father.

Jane, the little girl, looked quite pretty in the clothes I gave her, and was much pleased with the idea of going to the sewing class, held every Saturday morning for poor children. I had her in my class, and the poor child tried so hard to learn to sew. Each child was given the garment made, if it was well sewed.

You ought to have seen the boys sew! One little fellow about ten years old, made an unbleached cotton shirt for himself, button-holes and all, and a prouder boy you never saw, when his teacher passed it from class to class for all to see how neatly he had made it.

"Well Jamie, do you think a little boy with a good home and a bright, open fire to keep him warm, ought to fret when it rains, even if he does live in the country?"

"No, mamma, and I'm sure I won't do it again. The sun has set and I can't go out to play now, but to-morrow I'll just have a fine time playing in the puddles with my new rubber boots on, Santa Claus brought me; it won't do to make the water fly all over me, as the robins did, but I'm sure I can have lots of fun."

DOMESTIC ECONOMY.

Three Things Observe with Care.

[Written for the RURAL PRESS by A. F. B.]

My dear housekeeper, you may not have a convenient kitchen, and you may not believe in "fixing it up," but three things—that magical number three—I beg you to put in the room in which you spend so much time.

1. A pin cushion. It will save you many a journey, and you can keep on it even the large needle for sewing up the dressed and stuffed turkey or chicken. Hang scissors on the cushion as a part of the outfit.

2. A clock. Perhaps you are blessed with the "kitchen clock" of which we have heard. If not buy a little alarm clock. You can time your baking or other work. You can urge your little folks to improve the record in dish washing, and the work will be hastened thereby.

3. An easy chair. Minutes of rest save hours of weariness.

GIRLS, LEARN HOW TO COOK and mothers, teach your daughters housework. At the age of eighteen I married a farmer and moved on a farm. Before this time I had been either attending or teaching school, and was at home but little. When I commenced housekeeping, you may be sure I was armed to the teeth with recipe books, but alas! they would neither bake the bread nor raise the cakes, and it took a good deal of time and patient labor to get the knack of these things. Many a time have I wept bitter tears at the sight of my ill-luck; and, girls, if you would avoid this bitter and shameful experience, learn now while you have some one to teach you, and do not leave it until you are a good many miles from mother before you commence "experiments."—A Wife of Three Years.

MINCED VEAL.—Cut cold veal into small bits; rub some butter and flour to a cream, according to the amount of veal. Stir into boiling milk, also the grated rind of a lemon. Let these boil until they become of the consistency of cream. Sprinkle a little flour, salt and white pepper over the cut veal and add it to the cream. Stand where it will keep at the boiling point, but not boil; when hot, squeeze lemon juice over it and serve at once on toast.

HOT MEAT SALAD.—Chop bits of meat very fine. To a coffee cup of minced meat add one chopped onion and boil in gravy or water enough to cook the onion; add salt and red pepper to the taste. Have ready the yolk of one hard boiled egg rubbed to a powder and mixed with a teaspoonful of mustard and vinegar, enough to make the whole pleasantly sour when poured over the meat. Spread over slices of buttered toast and serve hot.

A NICE BREAKFAST DISH can be made made from the tough ends of porterhouse or short steak which are unfit for broiling. Stew them slowly for two hours and let them cool, next morning cut them up in small pieces and set on the stove, with the water in which it was boiled, add a bit of butter, pepper and salt, thicken with flour and serve with toast. This meat is also nice to use for hash.

MICHIGAN SAUSAGE.—To 50 lbs of meat add 20 oz of fine dairy salt, 2 1-2 oz of allspice, 3 oz of black pepper, 2 1-2 oz of ginger, 1 1-2 teaspoons of cayenne pepper, 1 1-2 oz of saltpeter, and 1 oz of sage. Mix all thoroughly with the meat and you will have the best sausage in the land.—Gutelius Snyder, St. Joseph county, Mich.

TOAD IN THE HOLE.—Cut cold meat into dice and put in a greased baking dish. Beat one egg light, add to it one pint of milk; stir into it gradually six tablespoonfuls of flour, beating stiffly all the time. Strain through a fine sieve; add half a teaspoonful of salt and a little pepper. Bake one hour. Serve in a baking dish.

LEFT-OVER CHICKEN OR TURKEY.—Pick all the meat you can from the bones, also every bit of dressing, and put it in a spider. If you have any gravy, so much the better: pour it over the meat, and add a cup of water, a bit of butter, pepper and salt, and let it come to the boil. French fried potatoes go nicely with this dish.

GINGER COOKIES.—One cup of sugar, 1 cup of molasses, 1 cup of lard or part butter, 1 tablespoonful of soda, 1 tablespoonful of ginger, 1 tablespoonful of vinegar. Boil the sugar, molasses and lard. When cool enough not to scald the flour, knead hard; roll thin; bake in a quick oven. They are very nice.

MEAT FRITTERS.—Make quite a stiff paste of mashed potato and flour. Fold just as you would turnovers. Put a spoonful of minced meat into the squares of pastry and fry in hot fat. Have the fat smoking hot and keep the fritters in a sieve or something of the sort that they may not fry to pieces.

CREAMED CODFISH WITH CRACKER.—Prepare the codfish as usual and when almost at the boil put in a few split crackers, which will swell and thicken it, then drop several eggs in it, letting them cook soft. When taking them out be very careful to keep them whole.

AN OLD-FASHIONED DISH.—Take a dozen good-sized apples and core them, place them in a bean pot with half a cup of sugar and a little water, let them bake till quite soft. They will keep whole and are delicious eaten with cream.

BEEF SCALLOPS.—Fill some small tins two-thirds full with minced beef, a little chopped onion, pepper and salt. Moisten with gravy and fill the shells with finely mashed potato. Put a bit of butter on the top and brown.

DEVILED HAM.—One pint of chopped boiled ham, one tablespoonful of flour, one teaspoonful of sage, the same of pepper, one-half cup of boiling water. Press in a mold in a cool place. When firm serve cut in slices.

ESCOLLAPED MEAT.—Prepare alternate layers of minced meat and bread crumbs. Season each second layer with pepper, salt and onion juice. Moisten with gravy. Brown in the oven.

ELECTRICITY AND THE TIDES.—A Canadian electrician claims that electricity causes the tides, and demonstrates it by electrifying a rubber comb by rubbing it through the hair, and then drawing it over the top of a glass filled with water, the result being that a tidal wave follows the comb.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, JANUARY 30, 1892.

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[NEW THIS ISSUE.]

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Seeds, Plants; Etc.—J. T. Lovett Co., Little Silver, New Jersey.
Harrows—Cutaway Harrow Co., Higganum, Conn.
Oxford Down Sheep—W. A. Shafor, Middletown, Ohio.
Incubators—Petaluma Incubator Co., Petaluma.
Semi-Annual Statement—Grangers' Bank of California.
Percheron Stallions for Sale—J. C. Smith, Oakland.
Horses—M. W. Dunham—Wayne, Illinois.
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☞ *See Advertisiug Columns.*

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To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

The Week.

The rain, which began on Monday and continued during Tuesday, visited a large area of the State and was earnestly welcomed. It was not a heavy rain, for at wettest points it was but little over an inch, and shaded down to small fractions elsewhere. Its extension was good, however, and southern coast points were included. The dispensation was enough to reawaken confidence, and in some cases to confer considerable benefit. The best of it is that continuance is to be looked for. We ought to get a good soaking before the end of the month.

Winter work is well advanced and the clear weather has given opportunity for a vast amount of it. The area seeded is very large and a favorable season will give us a vast surplus. Orchard-planting has also been active and trees are regaining prestige in some regions where they have recently been neglected in the interest of raisin vines. We shall, probably, finally come to a fair degree of diversity in planting, so that all can have something which will be fashionable and profitable.

The Mining Debris Question.

Apparently by general assent the work of the Miners' Convention, held in this city last week, has been accepted as furnishing a new and satisfactory basis upon which both hydraulic mining and valley interests may proceed toward a final and satisfactory solution of matters which have for a decade or more been bones of contention between them. The proceedings of the convention show that a most commendable spirit was maintained throughout, and that the claims which were put forth by those who organized the meeting were justified by the behavior and declared sentiments of the large and representative convention which assembled. We hardly expected so much from the assembly, as was indicated by the tone of our comments in last week's RURAL, but the greeting and subsequent treatment accorded to the representatives of the valley interests who were present, indicated that the miners' assembly had a sincere desire to settle the matter upon an honest basis and this assurance has been generally accepted. If the future justifies the present, the San Francisco meeting, of last week, will be looked upon as one of the most important events of our industrial history.

Though the sessions were protracted and the proceedings many, the whole matter was crystallized in the memorial to Congress and in the resolutions adopted, and in them the miners approve several clear propositions, which we catch up as follows:

The Board of Engineers constitued by Congress reported that there are many millions of dollars which can be obtained by hydraulic mining, and that works can be constructed which will permit the resumption of hydraulic mining and will not only restrain the material producing the damage complained of in the past, but will also restrain the debris now dislodged, but still remaining in the canyons.

That Congress at once take steps to put into practical and effective operation the means suggested by the engineers in order that mining may be again resumed in the manner indicated without the injury complained of in the past.

They recognize the fact that until Congress takes proper action for the erection of suitable works for the restraining of mining debris, hydraulic mining is absolutely restrained by the courts, and as law-abiding citizens, they recognize that the laws must be obeyed and the decrees of the courts respected.

These propositions practically cover the subjects heretofore at issue and recognize the principles upon which existing court decisions rest. Action looking toward desired ends is entrusted to an Executive Committee which was appointed, and from the work of this committee must come further assurance of the miners' disposition. It is also arranged that conferences shall be held between this committee and those representing valley interests, and that an effort will be made for united action in certain directions. As the matter now stands, the outlook must be considered favorable for a satisfactory solution of the whole question providing Congress can be induced to act upon the recommendation of its own advisers, and provide the means for the public works necessary to make hydraulic mining legal and innocuous.

Dairy Progress.

The spirit of dairy progress, as has been shown by frequent items in our columns, is at large among dairy producers of the Pacific coast. There has never before been such a wide awakening on the subject of better machines and processes, and of cooperation among producers for more intelligent and profitable work all along the line from the milkpail to the market, as is now discernible. It is true that this awakening comes rather late, and is forced upon us by the results which Eastern dairymen have been for some time enjoying, but it is none the less fortunate. We have continually claimed that California was not getting all that to her belonged in the dairy business. We have been largely content to supply our own people and fight on the defensive against Eastern butter and oleomargarine. In this line of our production our policy should be aggressive, as it is with fruits. Our winter climate gives us advantages in pushing our fresh grass winter butter east of the Rockies, and our geographical position gives us decided advantages over Denmark in the production of canned and packed butter for the Pacific ports of all countries fronting on our ocean. It seems to us there can be no doubt but that we can by proper steps in production, packing and marketing, extend our butter product in a most gratifying and profitable way.

The first steps in this direction have already been taken. The first would be the introduction of improved machinery methods and policies. The second would be effective organization among our producers, so that they can have the means of exerting a united influence in improving local markets and seeking out distant ones. We have fairly begun to take these steps; we have the spirit of dairy progress and we have a strong Dairymen's Union. Now let these two agencies strive together toward desirable ends, and the results will be surprising.

Creamery is a single word which has come to be the synonym for all kinds of dairy progress, and rightly so; for it is the creamery movement which has led to the better handling of the milk for quality of product and profit in it, and it is the creamery which has topped the market with its output. But to cry "creamery" does not insure such rewards. The factors of success in a creamery enterprise are several, and among them are the following: Adaptation of local conditions, which includes climate, feed, cows and labor; investment, which should not be greater than the conditions warrant; management and support, which means not alone that the enterprise must have first-class dairy skill, but that there shall be dairy proprietors who are willing to buckle right down, with capital and personal effort, to a business which comes every day in the week and every week in the year. We have, fortunately, suffered lightly from the work of "creamery boomers," whose effort is to place buildings and machinery at exorbitant prices wherever they can arouse excitement on the subject, whether any of the factors of success which we have named above exist or not. We believe a few such ventures have been planted on this coast to the chagrin and loss of those who were wheedled into them. The people should beware of such "creamery boomers," and when a man comes into a region and proposes to get together a big lump of money to start a creamery where there are no cows or experienced dairymen to speak of, look out for him, no matter how smooth his tongue may be or how big his watch chain is.

The great dairy States of the West have suffered immensely from the work of these boomers, and their expensive buildings and outfits are lying idle in many places. The evil is so great that such operators have been denounced by trustworthy agricultural journals and by reputable dealers in dairy machinery, who can clearly see that to get their goods into a concern which is to be a loss and a byword in a community is of greater injury to them than any profit which such sales can possibly return.

Our attention is called to this phase of the subject at this time by perusal of the proceedings of the Indiana Dairymens' Convention, held this month at Indianapolis. It was there clearly shown that the rushing into expensive creamery building at the beck of interested boomers was working great injury and loss, and it was just as clear that creamery enterprises properly undertaken, under favorable conditions and conducted with full knowledge of the details of the business, were successful. The outcome of the discussion was that the association appointed a special committee to issue a printed bulletin "telling farmers what they should do as well as what they should not do—in other words, setting forth the conditions under which a creamery could be successfully operated, and stating the probable necessary cost of its construction and equipment."

This will be an important work and one worthy of the Indiana State Association. Our effort shall be in the same direction. We believe, as we have just said, that legitimate dairy progress will build up this important interest of our coast in a most gratifying manner and increase the profits of those engaged therein, but creamery booming, as of other booming, we have had quite enough to open our eyes, and if we can't see it and stop it, there must be something the matter with our optic nerve or the gray matter which lies behind it.

Successful Cooperation in Fruit Marketing.

PALM REST, ONTARIO, CAL., Jan. 25.

TO THE EDITOR:—I notice on first page of the RURAL of Jan. 23d an article headed "A Movement Among Raisin Producers," by which it appears that the raisin growers of certain sections are thinking and moving toward cooperation in the marketing of the products of their vineyards. That this is the right step and in the right direction there is no question, and one the fruit growers in general throughout all California will have to take or work for a bare living seems evident. In this particular section the principal interest in fruit production centers on the orange and lemon, though the raisin varieties of grapes are grown to some extent. There were probably 50 carloads of raisins grown within a comparatively small radius hereabout. The larger portion of the crop was consigned to a house in Chicago through a party here who acted as agent, there being apparently no other mode of disposing of them. The sales were made as follows: The agent here stemmed, cleaned and sacked the raisins after they were delivered at the packing-house for three-eights of a cent per pound, and advanced to the grower two cents per pound after the goods were sold; the balance, if any, over and above the expense, viz., of stemming, sacking, freights and commission, was returned. In most cases there was something over and above the cost; usually the goods brought about 2¼ cents. The price realized has been so low raisin growers here are somewhat discouraged and are feeling around cautiously for the next best thing to follow. The most of them are in a splendid frame of mind to listen to any feasible plan of cooperation.

The Southern California Fruit Growers' Union, with headquarters at 233 West First St., Los Angeles, established in April last on the cooperative plan, has met with very encouraging success. Its 20,000 shares of stock, at $5 per share, have been sought after with commendable earnestness, and the quantity of fruit pledged to the managers of the enterprise on Dec. 15th last amounted to about 450 carloads. They now have packing-houses arranged and plans laid on a foundation large enough to handle the entire orange crop of Southern California. While the organization has as yet done but little in the way of handling the orange crop of this season, the good effects of the organization are very apparent, as speculators who, previous to the Union's getting under way, were talking of offering 50 cents per box for Seedling and $1 a box for Navels are now doubling that offer with poor success. Some of them have been forced to leave the field altogether. I am the local director in this colony, and the association will handle on the cooperative plan fully two-thirds of the entire citrus crop of this colony this season.

The RURAL PRESS is doing immense good in waking up the growers to business principles in combining to market their own products instead of supporting an army of Shylocks in the capacity of middlemen, who absorb all the profits, leaving the growers only the scraps. I. C. WOOD.

We are very glad to have the above crisp note on this important subject, and to record the evidence of successful work by our friends in Southern California. Let the reader study carefully the points made in the article on page 91, entitled "Statements About Dried Fruit Prices." If it does not there clearly appear that, by the testimony of those engaged therein, the dried fruit crop has been made the victim of a conspiracy by dealers, we cannot read English.

As our correspondent remarks, the producers are now in condition for effective cooperative action, and it is just the time to do something to make the repetition of last fall's experience impossible. The committee appointed by the Fowler Farmers' Institute met in Fresno and decided to embrace the whole dried fruit interest, as well as the raisin product, in their effort for cooperation. The committee adopted the following resolution:

Resolved, That the call for the meeting of raisin and other dried fruit producers of California shall be for the purpose of considering the question of organization of all the growers in the State into one organization, to better control and market their products; that the meeting be called at Fresno on Thursday, February 18, at 10 A. M.

This will be the occasion for a general assembling of all who desire to do something in their own behalf. We understand that the committee appointed by the Marysville Fruit Growers' Convention will participate in the meeting. All local societies of fruit producers throughout the State should send representatives, and all individuals who can go on their own account should do so. Let there be a meeting widely representative of the State and the keynote of the future of our dried fruit interest will be sounded clearly in the ears of all men.

The State Press.

Watsonville *Pajaronian:* "All of California is not within the boundary of San Francisco, and not all of California—and not even the best part of it,—is visible from the railroad lines."

Gonzales *Tribune:* "The settlers are the pioneers of civilization and the upbuilders of our commonwealth, while their persecutors—the land grabbers—are the enemies of progress, and are responsible for the present undeveloped condition of a great portion of the State."

Sacramento *Bee:* "The State Miners' Convention was really a harmonious meeting of farmers and miners anxious to adjust the differences existing between them and to find some means of resuming hydraulic mining without injury to the navigable streams or to the homes and farms of the valleys."

Fresno *Republican:* "A grand jury which, for political or personal reasons, will whitewash such a gang of scoundrels as that which has been bleeding the State through the Whittier reform school, is not an institution of value to the public. It is more than worthless. Its capacity for harm is limited only by its opportunity."

Stockton *Mail:* "Major McKinley and his associates in the last Congress settled the question of lower freight rates against the people of California for the next ten years. Andrew Carnegie did not forget Major McKinley's good offices, for he sent him a check for $5000 to assist him in defeating his Democratic competitor for the Governorship."

Ventura *Unit:* "The railroads persist in charging rates that will prohibit the planting of beans. The cost of production is $1.80, the freight to Chicago is $1.10 and beans are worth in Chicago $2 90. The railroads absolutely demand every cent of the profit of the farmer's labor, and are doing apparently everything in their power to prevent immigration and retard the development of this coast. Only one course is open to the farmers, and that is to plant some crop that can be shipped by water."

Sacramento *Bee:* "It strikes us very forcibly that there is a far dirtier nest of corruption for the investigation of a Grand Jury right in the Courts of San Francisco than can be found anywhere else. It is easy enough to howl "boodle" in a general way, and to pass Grand Jury resolutions denouncing Buckley, but what the people want is some definite and specific action against some particular official. Let the coming body investigate the question as to whether or not there are boodlers and blackmailers on the Superior Bench in San Francisco."

Benecia *New Era:* "The Mining Convention met in San Francisco, Wednesday, to endeavor to devise a plan whereby the business of hydraulic mining may be restored to its former condition. No one objects to hydraulic mining; it is the damage inflicted on the farmers and to the rivers of the State that is objected to. If some means can be devised whereby the debris can be impounded, we have no doubt that the whole State would favor its resumption, as it is estimated that a loss of $1,000,000,000 has been suffered by the hydraulic mining interests since the mines were shut down."

Salinas *Index:* "It is a serious mistake in the public mind to imagine that a few political knaves are the main factors in political debauchery. It is only the existence of a low public sentiment that makes political rascality possible, and which attracts machine politicians as carrion does a vulture. And it is a mistake, too, to imagine that men who have acquired wealth through devious practices, and are so independent in circumstances that they can afford to be honest, will indulge in a luxury of that kind. On the contrary, turpitude seems to feed upon ill-gotten gains, and there is no hope of reformation until jury-fixers, legislative bribers and schemers who make a trade of politics are ostracized by a healthy public sentiment."

The Sutter County *Farmer* says of the Mining Convention: "The valley counties also had their delegates there and are in joint unison with the miners as far as river improvement is concerned, but they will hardly support the theory of improvement with the idea of an excuse to resume the work of running more mining debris into the streams, and the miners should not ask it of them. The valley representatives are also present to show their good will toward other branches of mining and will lend their aid toward any movement to foster or benefit the same. What interests the farmer's rights and concerns the preservation and protection of his property, will be the question on which he cannot be denied the privilege of being heard, even among the hydraulic mining advocates, and, supported by the courts of the State, and with right and justice on his side, he will be heard."

Sacramento *Record-Union:* "The publishers, editors and writers upon newspapers in the lesser communities of the Union more nearly than any others are in communion with the body of the people. They reflect the local and individual sentiment in the several sections that in aggregation make up what we term public opinion. They are intimately known in their individual estates to their communities; their characters, aims, purposes and methods are bare to public view, and maintenance of their positions is wholly dependent upon their faithfulness to their communities and the respect they command from them. It is the rule, in seven cases out of ten, with the rural newspaper that merit determines the measure of its success—not the mere success of money getting, but that greater success which is framed in the confidence and esteem of a reputable clientage and in achievement in building up a section."

Bakersfield *Democrat:* "The sending of a 17-year-old boy to the State prison at San Quentin by a magistrate of our neighboring county of Stanislaus is a picture not to be regarded by well-meaning men and women as a mark of our advancement as a civilized and progressive people. We do not believe in allowing thieves to go unpunished, whether they be 17 or 70 years of age; and at the same time, while the taxpayers of this State are annually mulcted for the support of two reformatories for minors, it seems too bad that boys should be sent to herd at San Quentin with the most dangerous ruffians and hardened criminals. No one at this late day will claim that a State penitentiary can have any softening or ameliorating effect upon the mind of any person immured therein and cut off forever from society. We put bad men there, not in the hope of making them better, but because their presence is a menace to the well-being of society so long as they are at large. It behooves Governor Markham to prevent any more punishment of juvenile offenders by sending them to San Quentin."

Woodland *Democrat:* "That the movement to pass a constitutional amendment providing for the election of United States Senator is becoming popular there is no longer any doubt. The Lower House of Congress is nearer to the people than the Senate, and is held in greater respect by them. Representatives are elected by a direct vote of the people, and no good reasons can be given why Senators should not be elected in the same manner. Representatives are usually elected on account of their ability and peculiar fitness. It is rarely the case that they are charged with having bought the office. How is it with the Senate? It is notorious that Senatorial seats frequently go, not to the best and ablest man, but to the candidate with the largest bank account and the strongest corporation backing. Men are frequently elected by legislatures who would not dare to offer themselves as candidates before the people. As a result the Senate has degenerated until it is made up principally of millionaires and corporation lawyers."

San Jose *Mercury:* "The Board of Supervisors has at the present time before it the consideration of an ordinance for the suppression of roadside dives. The ordinance is not intended to be prohibitory. Its object is simply the regulation of the liquor traffic in the county in such a way that disorderly resorts may be impossible. It is beyond question that some sort of regulation is needed. At the present time men whom the stricter regulations of the city have deprived of the privilege of opening a saloon have established their dives along the Alameda, Alum Rock avenue and other highways of the county and have thereby brought the criminal classes into close neighborhood with some of our best suburban districts. Nor are they confined to the highways and suburbs of cities, but have succeeded in locating themselves on the crossroads of quiet rural localities, where the absence of police supervision renders them even more annoying and dangerous to the community. It is manifestly injurious to have such places in neighborhoods where respectable people have their homes, and where children have to pass to and fro between their home and the schoolhouse."

Woodland *Democrat:* "The Miners' Convention which assembled in San Francisco on Tuesday, concluded its labors on Thursday evening and adjourned *sine die.* Those who anticipated a stormy session and distracted councils were happily disappointed. It was an orderly, peaceful, business-like convention, and the harmony and good feeling that characterized its deliberations augurs well for the reestablishment of the most cordial relations between the miners and the valley people, and the probability of an early and satisfactory solution of the debris question. * * * For the first time in many years the agricultural and mining interests are united in an effort to devise some plan by which tailings may be impounded and restrained from flowing down, destroying the navigability of our rivers and devastating our grain fields, and, happily for all, the enmity and war that has heretofore existed between the two classes promises to be a thing of the past. * * * The satisfactory outcome of the conference between the farmers and miners will certainly be of great benefit to the commercial interests of the State."

Marysville *Appeal:* "The Miners' Convention has closed its labors, and from all accounts the work done there has been satisfactory enough to farmers and miners. The hydraulic element has advanced the *theory* that dams can be so built as to restrain the debris from their mines. They want it tried and want the Government to stand the expense. Tacitly, they say in their resolutions, that, should the means proposed prove a failure, they are willing to desist, because they do not wish to engage in an occupation which will destroy public as well as private property. Such a system of dams and settling reservoirs, as have been suggested, might possibly prove to be the solution, though many people in the valleys doubt it. In justice to the miners, however, it becomes the duty of the Government, which sold them the land, to make the outlay and give the plan a trial. Should it succeed, contentment and peace will prevail. Should it prove to be useless and not a restrainer, then the valley people can protest, and if the miners are true to their convention obligations, they will desist. In the meantime, those hydraulickers on the Feather, Yuba and American rivers, who are now preparing to begin operations, either next month or during March, can gain the good will and assistance of the valleys in securing Congressional aid. by refraining from committing court contempts, and doing that which a representative body of their own number has declared to be destructive to the rivers."

The Nicaragua Canal.

Extract from Warner Miller's address before the New York Chamber of Commerce, December 15, 1891: The distance from San Francisco to New York around Cape Horn is 15,660 miles, by way of the canal 4907 miles, making a saving of 10,753 miles, or nearly half the distance around the globe. The same is true, of course, of Portland, Or., of Puget Sound, of Alaska and all the west coast of the United States. The building of this canal will, in my judgment, quadruple the population of the Pacific Slope within ten years of its completion. If you have watched the growth, or lack of growth, in California or the Pacific Coast, during the past ten years, you will find that the progress has been very slight, and the reason is that the products of California will not bear transportation across the continent by rail. All their wheat goes to Liverpool around the "Horn;" their lumber, if it goes at all, must also go around the same way, but at present but little goes. It will not bear the burden of transportation. The building of the Nicaragua canal brings California 10,000 miles nearer the rest of the civilized world than it is to-day. California has a most delightful climate, a most fertile soil, and is capable of maintaining a population of many tens of millions. This is also true of Oregon and Washington; but until this canal is built, there will be no great influx of immigration into these States. Not only will this canal build up the trade in California and of the Pacific Coast in connection with the East, but it will also give us the control of the trade of Japan and of the east coast of China.

Life in the Country.

Santa Cruz *Sentinel.*

In England it has always been the thing for those who can afford it, to live on country estates; and here in America, where it is so easy for every family to enjoy country life, if so inclined, there is coming to be more of a disposition to give free rein to the natural love for trees and good air and plenty of room. The motor lines and cable lines and electric roads bring the suburbs of big cities within easy reach. This is probably more true of American cities and towns than of any other places on the globe, and the convenience is rapidly spreading and becoming cheaper with each succeeding year and its inventions; but there is a country beyond the suburbs that is still more desirable, more free and less expensive. If only the disposition to hug the cities could be driven out from the heads of many who have no good reason for hugging the cities, and replaced with an appreciation of country life, even without all the luxuries that can be imagined, there would be a greatly improved state of things, and the country would all the time grow more attractive. There are many people between the rich and the poor who could have as many luxuries in one place as the other, with the balance in favor of the country in the matter of health and rest. The difficulty in the way of country contentment, with too many, lies in the notion that to go in the country and live in a small, economical way, is to leave behind forever the dear hope of getting immensely rich some day. Jumping from toil and deprivation in a day into the realm of wealth, with great buildings to rent and luxurious surroundings crowding their delightful presence into one's daily life, is always associated in the mind with a persistent adherence to the city. Envious comparisons and a dead strain of ambition to get money soon do their work and the hungry dream of dollars is over. It takes a man with pretty good ideas of life to understand how little there is in it beyond health and the daily comforts that keep it good. Anything more is like a gravestone—valuable as a record for other people to look at.

Faults of Our State Government.

Ontario *Record*, Jan. 20th.

Our State Government is enormously expensive. We spend more on our various State departments and public institutions than many Eastern States of double our wealth and population. The average official, no matter how efficient he may be, seems inspired with a desire to suck the public teat as dry as possible while he has access to it. Our Supreme Judges charge up their Pullman car "tips" to the State, and our minor State officials draw $5 a day for hotel bills when off on junketing trips (about one-half being perquisites), and a multitude of sins is covered under claims allowed for "personal toilet." Every time the Legislature meets big appropriations are log-rolled through so that there may be a surplus for all "the boys."

Our Government is too much at long range. Some Boards of Supervisors administer the affairs of counties larger than an average State. In the nature of the case, th y must often act without proper information, and it is no wonder that they are among the most abused citizens in the commonwealth. If they choose to build fine courthouses the people must pay for them. Pressing matters may suffer between their stated meetings, but there is no other power to appeal to. If the assessment and levy of taxes, relief of indigents, care of roads and bridges, and many such matters, were managed through some simple township organization, as a rule better results would be secured. Our counties are large and the centralization of the government at the county seat imposes large expenses for travel and hotel bills, in addition to the usually heavy taxes. The State Constitution provides for township government; that may not be feasible, but a simpler form of municipal organization might be provided, adapted to country districts, that would give more general opportunities for local self-government.

There is no sense whatever in the present system of double assessment and tax collection, one for county and another for the municipalities. It simply provides more officers at the expense of the people. The system costs Los Angeles county more than $30,000 a year extra, and this county probably pays a third as high a tribute to the plan. The last Legislature passed a law making it possible for municipalities to adopt the county assessment and have municipal taxes collected by the county. The Los Angeles County Grand Jury makes the wise suggestion that this provision be obligatory instead of optional.

Litigation is enormously expensive and as slow as it is costly. It costs several hundred dollars to administer on a small estate. If creditors foreclose on a hotel, for instance, they will find it stripped of furniture to pay costs, and finally sold to meet the fees of courts and lawyers, leaving them the cement sidewalks and a chunk of experience about as stony. Merchants universally say that it costs more to collect a small debt by process of law than the face of the account. The result is that they will lose a small bill rather than sue for it.

Take a minor matter by way of illustration. There are justices in this county whose fees amount to almost as much as the salaries of the Superior Judges. Our constables must be paid about two days' wages for nailing a notice on a tree. Does it seem probable that quiet country communities of one or two thousand population all over Southern California have legitimate police work enough for a constable and one or two deputies to draw fat salaries from the county treasury every month. Vag hunting and other less creditable means are adopted to create business. Decent men, hunting for work, are decoyed by these public plunderers to pick oranges, that they may "run 'em in" and get more fees and mileage. Back of this is the hard-working tax-payer putting up the money that supports these leeches.

We are no "calamity howler," but we are profoundly impressed with the need of some radical retrenchments. The marvelous wealth of our State, the comparative ease with which money is made, have caused us to be lenient and careless. But we are a tax-cursed and office-burdened people, and it is pleasing to see some faint signs of a coming storm of wrath that may do some little damage but will benefit the country like a January rain.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

ACORNS FOR POULTRY. — Oroville *Register:* Joel Garst of Wyman's ravine is one of the most successful chicken raisers in Butte, and pays close and careful attention to his fowls. During December, 30 pullets of his laid 40 dozen eggs, and from the 1st to the 17th of this month they laid 22 dozen eggs. He found out that live oak acorns pounded up so that the hens can get the meat, forms a splendid article of food, besides being very cheap, for by a few hours' work, a man can gather bushels of them.

Colusa.

COTTON-GROWING.—J. T. Bowden in Colusa *Sun:* You cannot make cotton-growing a financial success on $100 an acre land. You must have cheap land, and if not cheap labor, you must have labor trained to cotton-growing. Low-priced cotton won't stand competition with eight mule teams and combined harvesters. The experiment on Mr. Moulton's low land east of Colusa, last year, shows a gross yield of $30 per acre, and should with trained labor show a net yield of from one-half to one-fourth of that. The want of summer showers is an advantage to cotton-growing in California over the East, as it vastly cheapens the cultivation and facilitates the harvesting. On the lower end of the McConnell ranch and Mr. Moulton's around the Tall House, and similar lands where it is rich and too low to make grain-growing safe, cotton-growing can now be made a success.

Contra Costa.

EX-U. S. SENATOR FAIR BUYING BLOODED SHIRE STALLIONS.—Antioch *Ledger:* Ex-U. S. Senator Fair visited the Hyde Ranch stock farm for the purpose of inspecting the stock. This stock farm is making a specialty of Shire horses, and as these horses are taking the lead and rapidly superseding the Percheron and Clyde stock in the San Francisco market, they have attracted the Senator's attention. Senator Fair was so favorably impressed with the English Shire stallion, Weston Squire, that he bought him for the sum of $2750, and will take him to his Sonoma county ranch near Petaluma. J. H. Schneider, the manager of the Hyde ranch, was willing to part with Weston Squire because he has a two-year-old from the old horse that promises as much as his illustrious sire. Mr. Schneider has received a handsome offer for this young stallion.

BEET SUGAR NOTES.—*Ledger:* E. C. Burr of the Alvarado sugar beet refinery is here to superintend the planting of some beet land that had been prepared and was all ready for the seed. He is very hopeful of the prospects, and is more confident than ever that he will build a refinery here this summer. Mr. Burr stayed here most all the week, superintending the planting. He now has three seeders in the county—two in Antioch and one at Brentwood. The following is a corrected list of those who have agreed with Mr. Burr to plant beets: H. F. Beede, 10 acres; Amos Graves, 5; Sanford Robinson, at least 20; J. S. Walton, 40; E. L. Emerson, 30; Henry Heidorn, 10; Jos. Ruckstuhl, 10; John McQuade, 10; Andrew Walker, 14; Robert Harrower, probably 10; Gen. Veale, probably 20; Joe Miller, 15; M. Minto, probably 10; Jas. Hobson, probably 10; Wm. Fleckhammer, probably 5; J. D. Wightman, 5; C. Chrestianson, at least 1; James O'Hara, at least 1; Fred Mienken, at least 1; Wm. Shafer, at least 1. Total, 138 acres. In addition to the above, we understand Mr. Putnam is negotiating to rent 160 acres of land from Gen. Veale with a view to plant beets. We understand that Henry O'Hara of Bay Point and a number of others are talking of planting beets. The test promises to be pretty thorough.

Fresno.

ADAPTED TO SUGAR BEETS.—Fresno *Expositor:* One of the greatest industries for Fresno, which the future will develop, is the sugar beet industry. Experiments have shown that the beets grow here to perfection, and there are tens of thousands of acres in the county suited to this crop. It has been ascertained that large profits will be made at this industry, and without doubt this is destined soon to become one of the greatest of Fresno's elements of wealth.

FARMING BY STEAM.—White's Bridge Cor. *Expositor:* A. J. Chaney is at the head of a company to purchase land and farm same in the Pinoche district, also to dam that stream and use the water for irrigation. Their intention being to seed 3000 acres this season, caused them to bring to our plains a steam power with a capacity of 100 acres a day—that is, with the power, the company can plow, harrow and seed at the same time this amount of land. After the grain ripens, the same engine harvests it, and when the time arrives, hauls the grain to the nearest shipping point. The engine is a straw burner.

Lake.

FARM WORK. — Lakeport *Avalanche:* The farmers of this country are making the most of this fine weather and the excellent condition of the soil to put in their grain crops, Many are well nigh done and the outlook for large yields is good, as far as can be indicated at this time of the year.

Los Angeles.

OIL AND ESSENCE MANUFACTURE.—L. A. *Express:* Dr. S. C. Woodbridge has secured a new steam press for the extraction of oils. This machine has a capacity for exerting 100 tons pressure. At present it is used for the expression of castor oil, and the firm has purchased considerable quantities of castor beans, paying one cent a pound for beans in the hull and 2½ cents for the hulled product. The quality of castor oil is very superior, being entirely free from offensive odor. Fine grades of orange and lemon oil are also manufactured from the culls resulting from frosts, windstorms and accidents in picking citrus fruit. Heretofore the fruit thus damaged has been considered almost worthless in Southern California, and large quantities have been buried by orchardists. The works first went into operation in February, 1891, but considerable loss resulted from fire and a boiler explosion. Everything is now in good order, with increased facilities. Lemon juice and lime juice are prepared for the market, and the preparation of essential oils, in addition to those already mentioned, may be undertaken as the business increases. In the East the castor hulls have been used for fertilizing purposes. They contain five per cent of nitrogen, three percent of phosphoric acid, and two per cent of potash. This form of fertilizer has been found specially valuable for tobacco culture in Connecticut, and may be tried with a fair prospect of success in certain varieties of fruit trees.

GRAIN CROP PROSPECTS.—San Gabriel Cor. L. A. *Express:* The farmers are all busy putting in grain. More grain is being sown this year than ever before in this valley. The early sown grain is up and growing nicely, and the orchardists feel more sanguine of getting good returns from their crop than they did just after the windstorm. San Gabriel valley never looked more prosperous.

Monterey.

FARMERS SEEDING.—King City Cor. Gonzales *Tribune:* The town is dull now, very dull, owing to the diligence of its farmers in seeding their land. Reed & Frisbee, who leased the San Lorenzo ranch of C. H. King, are putting in 6000 acres of land in grain, one-half of which is in wheat and the other half in barley. Fourteen teams of eight horses each, besides the steam plow, which is equivalent to six teams o eight horses, are pushing things, in anticipation of the downpour that is to come to make them all happy. On the Dunphy ranch the same activity prevails, though Lynn, Jenks, Downing, Matt Williams and Shermantine have about finished seeding. On the San Bernarbe, David Leese, J. J. Lon- & Sons, Arce Bros. and Dianovich are working with might and main to get their lands seeded. Willoughby, notwithstanding his partial failure of last year on the Walker ranch, is as busy as a beaver—never looking backward, but hoping for the best.

Orange.

SUGAR BEET FACTORY.—Santa Ana *Blade:* Frank J. Capitain, the promoter of sugar beet culture and the erection of refineries on the co-operative plan, says that a refinery, to be built near Garden Grove or Anaheim, is an assured fact. 2,700 shares of stock have been subscribed, which justifies sending for machinery, and the Directors will soon be in a position to ask for bids and offers of location. It is desirable to locate the factory in a locality that will possess the necessary requirements, such as an abundant supply of pure water, easy access to railroad facilities. and in close proximity to the farms where the beets are grown.

San Benito.

FAVORABLE TO FARMERS. — Hollister *Free Lance:* In several localities of the county, notably Quien Sabe valley, no satisfactory plowing could be done until very recently, owing to the extremely moist condition of the ground. Generally speaking, however, our agriculturists have had rain just to suit them, and everywhere the plow, the seed-sower and the harrow are at work. A most promising outlook.

San Diego.

VINE-PRUNING. — Escondido *Advance:* The Highland Valley raisin growers are pruning their vines. The prospect is very good for the coming season.

San Joaquin.

HIGH RENT FOR UNCULTIVATED LAND.—Stockton *Independent:* A Chinaman who has signed a lease for 70 acres of land on the Sargent ranch came into town to induce the property owner to give him fairer terms, claiming that he could not make anything in paying $10 cash rent for unbroken land. The land owner met his tenant liberally and a satisfactory agreement was reached. The transactions in this case show the profit to be made in the tule lands situated so the markets can be easily reached. The Chinese renter takes the land in its rough state with rank tules all over it, and surrenders it two years later, when it is thoroughly cultivated and in condition to bring a larger rental. The first year he clears the land and sows potatoes and onions. He divides his crop with the owner of the land, taking the one-half for all his work and expense. The second year will be more profitable to both the land owner and the Chinaman, for the renter will be able to pay $10 an acre cash, $5 of the amount to be paid in June and the other $5 in December. After the land has been well broken up for crops of potatoes and onions, it will bring a better rent.

San Luis Obispo.

GRAIN-SEEDING NOTES.—Simmler Cor. S. L. O. *Tribune:* There have been many more acres seeded to grain than ever before, and the rains have started all the early-sown grain, and also started some few farmers who have adobe land, and therefore could not plow until the rain came and made the ground soft. This is not a common thing, for nearly all the Carisa is a sandy loam and can be plowed at any season of the year. The farmers around Goodwin are also wideawake and up to the times, and are putting in all the grain that they can get to put in. The farmers here that raised grain last year were mostly so poor that they had to haul away their grain and sell it as soon as it was threshed, and many of them sold themselves short of seed and feed, and now cannot put in as much grain as they would have done if the seed could have been had here,

Sonoma.

ANOTHER STALLION GOING EAST.—Santa Rosa *Democrat:* It is now definitely stated that another of our fine-bred Santa Rosa horses will leave the Pacific for the most remunerative and appreciative field in the East. Mr. McFadyen will soon start for New York with the handsome stallion Redwood, 2:21½, by Anteeo, dam Lou Medium by Milton Medium. He follows the lead of Anteeo, and may be taken to the same breeding farm at Morisstown, Pennsylvania. Redwood leaves behind him a progeny as promising as those of his now illustrious sire. Redwood is about 16 hands high, of splendid form, was foaled in 1885, and is regarded as one of the handsomest and best-bred horses on the coast.

WOMEN IN HOP FIELDS.—Sebastopol *Times:* Not only in picking hops, but at a much earlier period of the year, are women employed in hop fields. Experience shows that they can train the vines in a manner far superior to the Chinese, whose place they are rapidly filling. Mr. Otis Allen states that he has had more applications from women for this kind of work than he can fill, and recommends them to his brother hop growers.

POULTRY FIGURES.—A. Armstrong in Petaluma *Courier:* A gentleman who lives within five miles of Petaluma gave me the figures on what he has made off of 500 hens the past year. They are as follows:

Commencing with 500 hens on the 1st of January, 1891.	
Sold 4658 doz eggs at an average of 30 cents a dozen	$1,397 40
150 hens sold at $5.50 a dozen	68 75
18 doz broilers at $4.50 a dozen	81 00
Increased flock, 100 pullets, at $7 a doz	60 00
Gross receipts	$1,607 15
Cost of feed for the year	700 00
Net profit	907 15

Which gives a profit of $1.80 for each hen.

Some may discount this statement on the ground that 30 cents a dozen is too high an average for the year around, but the answer is that this gentleman shipped directly to a grocery firm in San Francisco, and thus saved the commission usually paid to middlemen. I wanted to get figures from another gentlemen who keeps 500 hens and ships to a commission house, but could not, as sickness in his family interfered with keeping a strict account.

CITRUS CULTURE.—Petaluma *Courier:* Joseph Naylor says: "Dr. Burdell's trees are well laden with fruit. He has oranges, lemons, limes and mandarins. His orange crop is certainly cleaner, plumper and in quality much superior to the average Los Angeles orange. The fruit is most delicious and in a week or ten days, when the crop is ready for the market, I will show as fine samples of oranges as can be seen anywhere on this globe. When we take into consideration all that we raise here, the butter, potatoes, the corn, the fruit, the berries and the oranges, the only wonder to me is that we are not overcrowded with population."

SALE OF A SUFFOLK PUNCH STALLION.—*Courier:* Ex-Senator Fair has purchased, through Dr. W. H. Carpenter, from Theodore Skillman, a fine Suffolk Punch stallion, three years old, imported from England, by Mr. Skillman, paying $2000 for him. It is the intention of the Senator to breed the stallion to some of the Biehler mares.

Tulare.

PASTURE PROFIT.—Visalia *Delta:* Ben Parker is having his 40-acre tract plowed preparatory to seeding it to alfalfa. Ben says he can make more from an alfalfa field, owing to the location of his land, than he would be able to from an orchard. He figures that he can pasture three animals to the acre for 10 months in the year, at $1.50 per month each; that is, his pasture land would pay him $45 per acre per year, or $1800 per year for the 40 acres; and there will be very little labor connected with the business.

THE SCALE DESTROYER.—Tulare *Register:* Messrs. Motheral and McDonald visited the Page & Morton fruit farm and found the orchard remarkably clean, though there were a few scale bugs among the pear trees. They made an important discovery also, one which will create a change in the time of spraying trees. They found the brown-necked scymnus, both in the larvæ and the perfected state. It was not heretofore known that the scymnus propagated in the winter, but since this has been learned spraying will be done in December so that these friends of the orchardist will not be destroyed. The scymnus is about the size of a pin-head, has a black body, a brown neck and a brown head. It has wings and can thus travel from tree to tree. It reproduces rapidly and is very voracious, eating scale bugs at all hours, day and night. The larvæ has the general appearance of that of other ladybirds, being of a light grey color, one-sixteenth of an inch in length, lighter streak down the back and the sides dark. At this time of the year it is sheltered in the crevices of the bark. This parasité is long lived, both in the larvæ and the mature state. In several localities it has almost eradicated the scale, but it has not become generally distributed.

HAY SCARCE AND HIGH.—Grangeville Cor. *Delta:* Hay comes high, but people must have it. Alfalfa hay is selling at $9 in the stack. J. N. Hoyt drove over to Fresno last week and was charged $1 per day for keeping his team on grain hay, as that article sells for $20 per ton in Fresno.

PEANUT GROWING.—Major C. J. Berry in Visalia *Times:* Last season my duties as superintendent of the Visalia Fruit and Land Company's orchard were to plant out several hundred acres of fruit trees. After the trees were planted—at a meeting of the Board of Directors—the question came up, What shall we plant between the rows of trees in order to utilize the ground and make some money? It was agreed that part of the ground should be planted to peanuts. I carefully prepared the soil by thoroughly pulverizing same, bought the peanuts for seed in San Francisco, costing us 8½ cents per pound laid down here. Upon receipt, broke the nuts in two parts, soaked them 24 hours in water; made drills in the ground four inches deep, and each drill three feet apart; planted the nuts in the drills about 12 inches apart, and cultivated and hoed the weeds out during the season. If all the land had been measured, it would have been about 15 acres. The results are 402 sacks of peanuts of a very excellent quality indeed. They should be planted in the early part of May and dug the last of October. In order to make the nuts of uniform color, they should be sulphured. My experience shows me I planted them too close together. I recommend the drills to be four feet apart and the nuts in the drill two feet apart. They are wonderful growers and need that room. Cultivate to them all the time and cover the runners only, leaving the crown out.

AMONA FARM NOTES.—Cor. *Delta:* Many of the ranchers about here have been very busy since the rain breaking up their ground and putting in seed. Most of the orchards about here are looking fine, having had their accustomed yearly dressing down and cleaning down of waste material. Several vineyards in this vicinity have been used temporarily this winter as pasture for sheep.

Yuba.

BROWN'S VALLEY FARM ITEMS.—Cor. Marysville *Democrat:* The Bernoulli farm is being cleared and cultivated, about 200 acres having been plowed and sown to grain. About 25 men are employed in grubbing, plowing and fencing. This farm has heretofore been used as a sheep range, and consists mostly of level, easily irrigated land, which can be cleared and cultivated at comparatively little expense. The soil and climate are well adapted to the production of grain, plums, peaches, grapes, oranges, figs and other fruits. The work of constructing the long irrigation flume is being pushed as rapidly as possible, and the canal will probably be completed by next spring.

ARIZONA.

FRUIT NOTES.—Phœnix *Herald:* In 1890, the raisin grape first appeared in quantity sufficient to warrant an attempt to produce raisins in commercial quantities, and this season one firm—Messrs. Adams & Logan—has shipped six carloads of as fine raisins as were ever put on the market; and the fact that the crop reached the Eastern cities before the California raisin growers had begun picking their grapes surprised the East, made a good price for the product, and established Central Arizona as the most promising field for the production of the raisin in the United States. To-day, there are upward of 5000 acres of grape vines, of one variety or another, nicely growing in Maricopa county. Hon. J. Harbert has returned from Los Angeles, where he went to buy orange trees for the Improvement Co., the directors of that enterprising corporation having decided to largely extend their citrus acreage. He contracted for 13,600 trees, which will be forwarded at once. About 80 acres will be planted at Arizona Falls, in extension of the company's present orchards. The balance of the trees will be distributed among other favorable points in the valley.

NEVADA.

A NEW CREAMERY.—Carson *Tribune:* Herman Springmeyer shipped to San Francisco this morning 500 pounds of butter manufactured at the Carson Valley Creamery from milk furnished by his own cows. Springmeyer has determined to establish a creamery on his own ranch, and to that end has ordered the necessary machinery from the East and will begin the erection of the building early in the spring.

GRAIN AND HAY NOTES.—*Silver State:* Last year in Humboldt county there were 4063 acres devoted to the cultivation of grain. The principal growers are as follows, with the number of acres of grain grown last year after their respective names: Kruse, 320; Larson, 300; Pitt, 250; Johnson & Morkenberg, 220; Thies, 240; Jeperson, 200; Hatton, 160; H. C. Marker, 200; Brown & Munk, 200; Marzen, 120; Downs, 125; Tomlinson, 150; Dumas, 110; N. P. Dann, 115; Anker, 115; Fuss, 110; Carpenter, 155 and Killebrew, 150. Then come the following, each with less than 100 acres: O'Kane, 30; Smith, 40; Billups, 10; Coffee Charlie, 15; Cleary, 30; Mortenson, 40; Jensen, 40; Grannis, 40; Welsh, 50; Clark, 80; Hauskins, 50; Harrison, 43; J. C. Damm, 40; Ludvig Munk, 35; Nelson, 45; Hansen, 45; Reed, 20; Olsen, 20; Bastian, 30; Moore, 5; Hanson, 30; Westfall, 40; Markwell, 30, and John Damm, 35. The Jerry Fenton ranch was rented by Messrs. Brown and Munk, and ex-Senator P. N. Marker's vast domains, on the tules, were rented to numerous individuals. For most of the above segregations, we hereby take pleasure in acknowledging publicly our thanks to Mr. Joseph Dumas. The prime alfalfa growers, as nearly as we can ascertain at this date, are as follows' with the respective number of acres appended: Marker Bros., 2000; Joe Marzen, 1500; Joe Hill, 350; Carpenter, 200; Thies, 150; Larsen, 150; Ruddell, 120; John Hill, 125; Ed Emmons, 100; J. R. Brown, 100; Harrison, 100; Fuss, Westfall and Downs, 80 each; Judge Brown, 70; Pitt, 150; Anker, 40, and Jno. Reed, 100. Of course, there are other important hay growers among us. Much of the hay is being converted into bales. There are seven presses owned and operated as follows: Marzen, Marker, Joe Hill, John Hill, Ruddell, Carpenter, Harrison and Clark. Mr. Marzen has two presses, one of which is not operated, nor is Joe Hill's brand new one in operation. Most of the hay is shipped to San Francisco. Hay brings, delivered in San Francisco, $11.50 per ton. Not all the grain from the valley has been shipped.

GOOD HEALTH.

The Keeley Cure for Dipsomania.

A Pacific Coast Branch Established at Los Gatos.

The RURAL recently called attention to the great value of the "Keeley Cure" for dipsomania, which is now attracting much attention in all parts of the country. Yet, notwithstanding the evidence of its value, it is regarded as of little importance by many. The medical profession especially seem to place but little confidence in it. One of their writers, speaking of Dr. Keeley's and other specifics for alcoholism, says: "All this notoriety about specifics is the veriest trash, and will soon pass away as one of the day's wonders." But the people at large, and most of the secular press, are disposed to regard it as a great boon to humanity, although many sad failures are from time to time reported. So far as can be learned, from 85 to 90 per cent of all who take the treatment receive perfect and permanent benefit. The doctor claims that 95 per cent are cured. It is an unfortunate circumstance in the history of medical practice that no treatment of disease is successful in all cases.

THE MATTER AND METHOD OF TREATMENT

Is as follows: The patient is first provided with a bottle of his favorite liquor and told to partake of it freely, and when satiety provokes disgust the doctor commences his regular treatment, which consists first in giving a hypodermic injection of a preparation, the name or nature of which has not yet been given to the public, but which the doctor explains to his patients is intended for a "bracer" and which he says also regulates the effects of the chloride of gold which is taken internally. The mode of preparing this last is also unknown to the world, as it is not a simple chloride of gold, but compounded with other ingredients. The patient after receiving his hypodermic injection is given a bottle of the chloride, which he is instructed to take once every two hours during the day, at his room or wherever he may be. He is also instructed to visit the doctor's office four times a day to receive a hypodermic injection. When this service is performed the patients are required to form in single column with bared arms and pass before the doctor or one of his assistants for treatment. The amount of the injection varies with the condition of the patient, as shown by the tongue and pulse. The primary object is to increase the temperature of the body by accelerating the pulse. The effect is instantaneous. The general effect of the treatment is an almost total obliteration of the appetite, a quieting of brain action—in short, giving the entire system a complete rest, or rather state of lassitude. A dislike for any kind of alcoholic drink is also set up within three or four days.

TREATMENTS FOR OTHER DISEASES AND HABITS.

Dr. Keeley also treats patients for the opium and morphine habit; for the excessive use of tobacco, especially cigarette smoking; also for neurasthenia, a peculiar nervous weakness. Each of these habits receive the same general treatment as for dipsomania, but with menstruums somewhat modified and carrying different chemicals, suited to each particular case.

THE USE OF A SOLUTION OF GOLD

For the treatment of disease is nothing new. It was in vogue some five centuries ago, and known as *aurum potable*, and was chiefly employed as a tonic and was by many regarded as a restorer of youth—an elixir of life. It is also used at the present day, but Dr. Keeley seems to have been the first to employ it as a specific for drunkenness.

IT IS A SECRET REMEDY,

And it is chiefly for that reason that the medical faculty, as already stated, takes but little interest in the matter. It is held by the profession as a fundamental principle that they shall not take any notice of, or hold any communication with, any person who employs any secret remedy. This practice may have some reason in it; but the evidence is cumulative that it costs the world many thousands of lives every year, a hundred times as many as are saved by adhering to it. It is, moreover, well known that many really valuable medical remedies have been brought to light by persons not enrolled as members of the profession in any of its branches, and who totally ignore all medical rules. Many maladies once thought incurable by the faculty are cured to-day by remedies not first introduced by professionals.

The rule may have a small value; but humanity would be immensely benefited by its total abrogation. Science marches triumphantly over many of the ancient landmarks of professional ignorance and prejudice, and good common sense often wins victories over maladies which our professionals of to-day pronounce incurable. It would be far more humane to seek for and utilize truth, wherever found, than to build barricades around it and compel it to come in through prescribed gates or stay out altogether. In this respect, the medical faculty is far behind the age, and is daily losing the good will and respect of progressive men and women. Does Keeley cure? That he does cure fully 85 per cent of those who come to him goes without saying; but there *are* those who derive but little or no benefit from his practice. In fact, there are

THREE KINDS OF CASES WHICH KEELEY CANNOT CURE,

And which have been stated as follows: "There is the wealthy class who go to him and think they are cured, and then they find themselves out of business. They have no intellectual pursuits and no longer see the enjoyments of the race course or the club, so that in some instances they have resumed the old habits. Another class is composed of those afflicted with a species of insanity. They are usually intellectually brilliant, or have been, but there is scarcely enough brain force left to build upon in an effort to change their mode of life. A third class is the thoughtless young man or boy, who usually belongs to the wealthy class, and is there, as he says, to 'please the old man.' These look upon it as a vacation, and go away from Dwight in some instances only to return. 'I'm here again, doctor,' remarked one on his second visit. 'The boys said I could not drink, and I thought I would show them I could.' But the doctor told him to go home again; that he could not and would not waste his time on such patients."

A KEELEY INSTITUTE FOR CALIFORNIA.

So great has become the popularity of this cure that Dr. Keeley has begun to establish Institutes in various sections of the country for local convenience. One of these has recently been established at Los Gatos; a beautiful and healthy location six or eight miles west of San Jose, in the foothills of the inner coast range of mountains. We understand that another will soon be established in this city, where "it is useless to remark," it is greatly needed. A large number of patients is already under successful treatment at Los Gatos. The first graduate left the institution, fully entitled to graduation honors, on the 15th inst. It is stated that much joy was manifested on the occasion. The gentleman's wife and two little children went to Los Gatos, and were rejoiced to bear the patient home in triumph, "clothed and in his right mind."

We trust that such may be the result with thousands—in fact all who may be in need of such a course of treatment.

A Family Secret Exposed.

TO THE EDITOR OF THE RURAL PRESS:—I have just found out how Mrs. A. keeps her family in such pretty and new looking clothes, and I am going to give your readers the benefit of my knowledge.

Some of her envious neighbors called her extravagant, when instead only a few cents' worth of Diamond Dyes, which are quite easy to use, have made the children look as if twice that number of dollars had been spent on their clothes, while her own dresses and Mr. A's suits, although they always look brand new, are often dyed over with these dyes. Since I learned this, I have used Diamond Dyes several times and always with success. They are the only dyes I have ever found that do not crock or fade. Yours truly,

MRS. K. S., Moline, Ill.

Northwestern Breeders' Association.

H. D. McKinney, Secretary above Association, writes: "I will say for Quinn's Ointment that I have used it with most satisfactory results and recommend to my friends." For Curbs, Splints, Spavins, Windpuffs, Bunches, works like magic. Trial box 25 cents, silver or stamps. Regular size, $1.50 delivered. Address, W. B. Eddy & Co., Whitehall, N. Y.

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap. Will be sent direct from warerooms if desired. Address, H. F. D., Box 2517, San Francisco, Cal.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. SCHULLER, Room 8, 420 California Street, San Francisco.

$3,250,000

TO LOAN ON MORTGAGE ON RANCHES AND CITY REAL ESTATE below market rates. HOWE, BANDMANN & CO., 508 California St, S. F.

LABORING MEN! TAKE CARE!

LOSS OF TIME IS COSTLY!



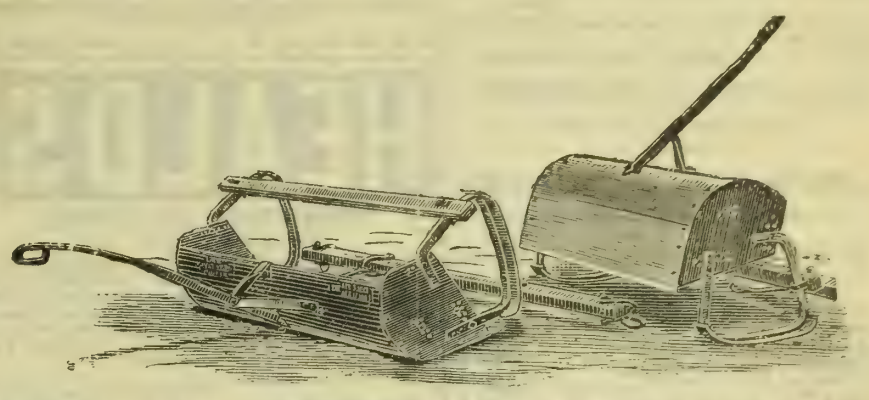
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CURES

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Sprains, Bruises, Cuts, Wounds, Soreness, Stiffness, Swellings, Backache, Neuralgia, Sciatica, Burns.



FRESNO CANAL, DITCHING AND LEVELING SCRAPERS.

FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

J. W. SCHMITZ, Supt. Miller & Lux.

SEND FOR CATALOGUE AND PRICE LIST.

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FRESNO, CAL.

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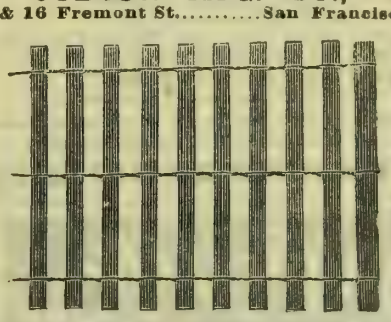
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Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to

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14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

MATTHIAS GRAY CO.,

106 POST STREET, SAN FRANCISCO.

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Importer of American and Foreign

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DO NOT FAIL to SEE THE "DOMESTIC"

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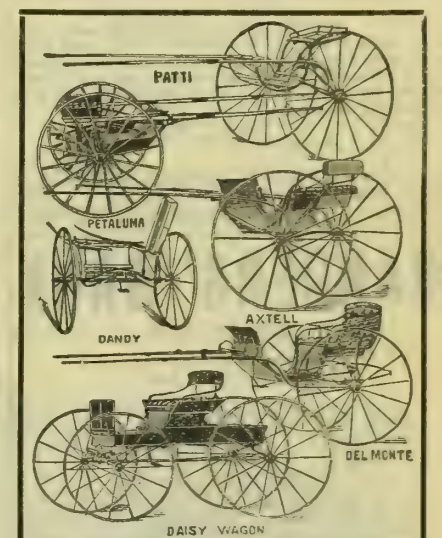
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ASK YOUR GROCER FOR IT.

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Home Mutual Insurance Company,

N. E. Cor. California and Sansome Sts.,

INCORPORATED A. D. 1864. San Francisco.

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

RAISIN GROWERS, ATTENTION!

POSITION WANTED AS FOREMAN ON A RAISIN farm, by a married man with five years experience in growing and packing raisins. Wife can take charge of packing department, being a first-class packer. Prefer taking position January 1, 1892, but can come at any time desired. Best of reference given as to capacity, honesty, etc. For particulars, address C. N., Box A. this office.

LOWEST PRICES. EASIEST TERMS. LARGEST STOCK. Oldest Music House.

PIANOS

DECKER BROS. FISCHER.

KOHLER & CHASE, 25 O'Farrell St., S. F.

SEMI-ANNUAL STATEMENT

OF THE

GRANGERS' BANK

OF CALIFORNIA,

Amount of Capital actually paid in U. S. Gold Coin, Surplus paid up and Reserve Fund..... $311,958 28

STATE OF CALIFORNIA }
City and County of San Francisco. }

A. D. Logan and A. Montpellier being each duly sworn, severally depose and say that they are respectively the President and Cashier and Manager of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

(Signed) A D LOGAN, President,
(Signed) A. MONTPELLIER, Cashier and Manager.

Subscribed and sworn to before me this 10th day of January, 1892.

(Signed) JAMES L KING, Notary Public.

SEMI-ANNUAL STATEMENT

SHOWING THE ACTUAL CONDITION OF THE

GRANGERS' BANK OF CALIFORNIA,

AND THE VALUE OF ITS ASSETS AND LIABILITIES

At the Close of Business December 31, 1891, VIZ:

ASSETS:

Loans on wheat, real estate and other securities	$1,530,539 58
Due from banks and bankers	2,225 96
Real estate	135,708 51
Office furniture, fixtures and safe	6,075 00
Cash on hand	258,250 78
Total	$1,932,799 83

And said assets are situated in the following counties in the State of California, to-wit: Alameda, Butte, Contra Costa, Colusa, Fresno, Merced. Monterey, Placer, Stanislaus, San Mateo, Sutter, Solano, City and County of San Francisco, Tehama, Tulare, Yuba and Yolo.

LIABILITIES.

Capital stock paid in U S. Gold Coin	$763,210 00
Surplus paid up and reserve fund	48,743 23
Due depositors, banks and bankers	1,075,054 00
Dividend No. 17	45 792 60
Total	$1,932,799 83

STATE OF CALIFORNIA }
City and County of San Francisco. }

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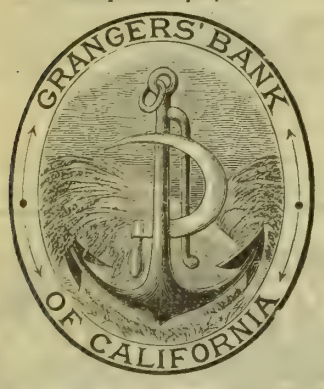
(Signed) JAMES L KING, Notary Public.

GRANGERS' BANK

OF CALIFORNIA,

SAN FRANCISCO, CAL.

Incorporated April, 1874.



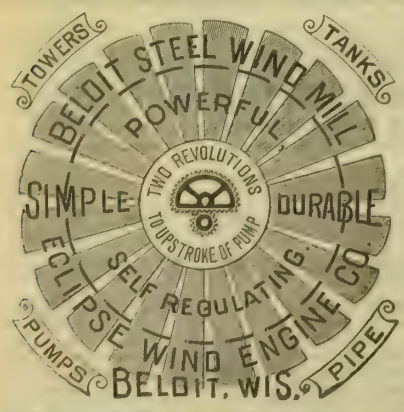
Authorized Capital	**$1,000,000**
Capital paid up and Reserve Fund	**800,000**
Dividends paid to Stockholders	**720,000**

OFFICERS.

A. D. LOGAN	President
I. C. STEELE	Vice-President
ALBERT MONTPELLIER	Cashier and Manager
FRANK McMULLEN	Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.

January 1 1892 A. MONTPELLIER, Manager.



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AGENT FOR THE BELOIT STEEL WINDMILL AND Manufacturer of the Rose Deep Well Pump. No. [illegible], SACRAMENTO, Cal. Catalogues Free.

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Music Books.

Ne Plus Ultra Piano Collection.
160 pages. Brilliant but easy pieces.

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160 pages. Latest and best songs.

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Each song has a ringing chorus.

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Every style of dance music; not difficult.

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Improved for 1892. Never fail. Fish-hook jaws. Double triggers. No loose joints to be repaired. Any child can set them. 25 cts. ea., or $3 a doz delivered. Ask or write for them and take no other. We also make the **SUICIDE** DOUBLE-END TRAP. Price 30 cts. each. The only trap which catches coming from either end. Send for both traps.

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BEST TREE WASH.

"Greenbank" 98 degrees POWDERED **CAUSTIC SODA** (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by

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WELL SUPPLIES All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind & Steam Mach'y. Encyclopedia 25c. The American Well Works, Aurora, Ill. 21-13 S. CANAL ST., CHICAGO, ILL. ELM STREET, DALLAS, TEXAS. Branch Houses.

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Mexican Phosphate & Sulphur Co.,

Now favorably known throughout the Citrus Growing Sections of the State, Stands Unrivaled as a True Fertilizer.

Certain in its Action, Great in Results, it maintains a high standard of fertility without undue stimulation.

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We guarantee uniformity in its analysis, and seek correspondence with bonafide purchasers of a reliable fertilizer.

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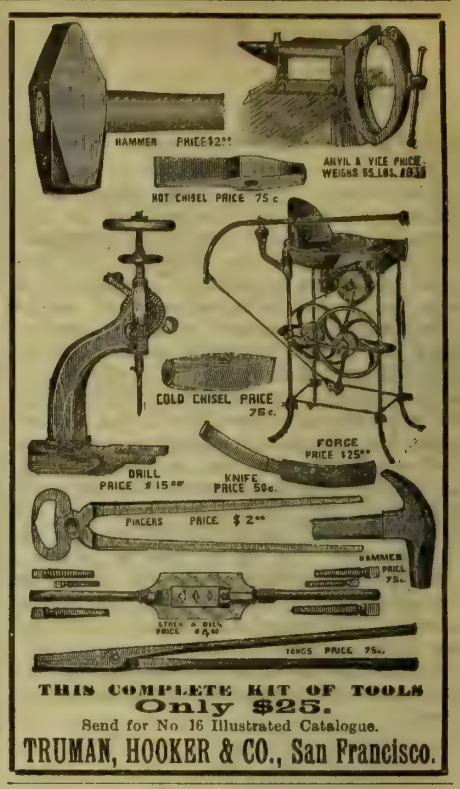
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Ball Bearings save horse flesh and repairs. **Double Levers** fit hilly ground. Sows any kind of Seed. *Saves its cost every year.* Once seen—it's Keystone or nothing. Send for Harrow book, "*The Reason Why*," **Free.** Mention this paper.

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Shingles, Posts, Pickets and Piling.



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Sheathing Lath,

(PATENTED),

A valuable invention but recently used on this Coast. Send for Samples, Circulars, Price Lists, Etc.

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No. 6 and 9 Best Quality Steel Wire in Long Lengths.

We have a very large Stock and will sell low.

CALIFORNIA WIRE WORKS,

No. 9 Fremont St. San Francisco Cal.

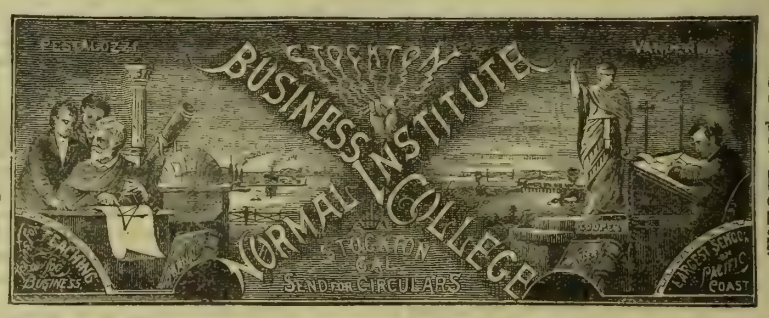
JOHN CAINE. 369 El Dorado St., Stockton.

1892—Wholesale and Retail—1892.

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EXCELLENT BOARD $10 per Month.



FURNISHED ROOM $3 per Month.

THE LEADING FEATURE OF THE SCHOOL IS ITS HOME.

Tuition One Year (52 Weeks), $75.

Sixteen Regular Teachers and Over Three Hundred Students attending. Courses Thorough, Rates Lowest Instruction the Best, and School the Most Reliable. **Address W. C. RAMSEY.**



BREED'S UNIVERSAL WEEDER

Every practical farmer is especially interested in any implement that will tend to lessen the amount of his labor and increase the production of his crops and is constantly on the outlook for such implements. During the last few years the methods of cultivation of crops have become almost entirely revolutionized. The deep root pruning process is going out. Surface culture is going to become universal. For this purpose no implement equals the **BREED WEEDER.** Investigate. Send for circulars.

General Agents, KNAPP, BURRELL & CO., Portland, Oregon.

FLORIST AND GARDENER.

Ornamental Horticulture at the World's Fair.

CHICAGO, ILL., Jan. 11, 1892.

TO THE EDITOR:—It is the desire of the Department of Horticulture that the planting of hardy shrubs for decorative purposes be completed by May 1, 1892, especially of such trees, shrubs and plants as will be found in the appended lists.

The Department wishes to impress upon all those who expect to make competitive groups, as well as those who loan or donate trees, shrubs or plants, that under no circumstances will poorly grown or badly root ed specimens be accepted. All material must be better than ordinary nursery stock; in other words, it must be shapely, vigorous and large enough to be effective. For instance, shrubs like *Deutzia crenata flora plena* should be three to four feet high with six to eight canes; *Spirea collosa* should not be less than 18 inches in diameter; evergreens must be characteristic of the species and varieties they represent.

The plans for this section of the Horticultural Department are now being prepared, and will be completed by the 1st of March. In order to follow out those plans, and to insure the harmonious effect as a whole, it is necessary that the Department be given full control of such plants, trees and shrubs as are contributed or loaned for this purpose. Those used for the general decoration of the grounds, and not planted as grouped exhibits for competition, will be cared for at the expense of the Department.

A complete list of all material to be supplied must be furnished the Department not later than March 1, 1892, and blank forms for this purpose will be furnished upon request. All plants sent must be correctly named, and duplicate invoices must be sent with each consignment.

ROSES FOR THE OPEN GROUND.

A most unique and beautifully designed rose garden is now being planned to accommodate not less than 50,000 plants, besides special areas for large groups. This garden will be of classic design, with temples, arbors, archways and trellises.

The "great masses"—the people—have never had an opportunity of seeing a typical rose garden. Now the time has come, and nothing should be left undone to insure a most magnificent display.

Rose plants may be on their own roots, budded or grafted. Those on their own roots must be from not less than 3½ inch pots, of the current year's growth; or they may be one or two years old, dormant plants. Well-rooted budded plants, with the buds dormant, will be admitted, thus giving an opportunity for showing a greater variety. The above remarks apply to H. P. and other hardy roses. Teas, Noisettes and other kinds will require different treatment, and it is suggested that strong plants in five inch pots be carried over in cold frames to be planted early in the spring of 1893.

It is expected that large and substantial premiums will be offered for roses, as well as for other plants, in addition to the awards that will be offered by the National Commission.

J. M. SAMUELS,
Chief, Dep't of Horticulture.
JOHN THORPE,
Chief, Bureau of Floriculture.

To Grow Refractory Plants from Cuttings.

SANDERS, FRESNO CO.

TO THE EDITOR:—Allow an old stager in the work to tell how to propagate plants from cuttings, especially such as are refractory about striking roots. The ends to be attained to insure success, are to give the bottoms of your cuttings heat, moisture and exemption from contact with the atmosphere. Give the tops moisture and dense shade. Here is the way I do it. Say I wish to start 200 refractory roses or other plants from cuttings. I dig a straight V-shaped trench due east and west, 16 feet long, eight inches wide at top, both sides sloping like a V to the center in the bottom. I make my cuttings about nine inches long with a bud near the top of each. I set these an inch apart along the north slope of my trench. Then I fill up the trench pressing the earth firmly about the cuttings. Then take an 18 foot board—a fence board will do—nail it to stakes at each end of your row of cuttings, so that it stands on edge two inches south of your row of cuttings. Put up another board in like manner a foot north of this one, then nail in end pieces and you have the tops of your cuttings in a box. Cover your box with old grain sacks and sprinkle them to thorough wetness in the hot part of every day.

Now about the bottoms of your cuttings. If you've followed my directions the bottom ends of your cuttings are eight inches under ground, forming a straight row two inches south of your box. Now dig a little trench along the south side of your box, but be sure to have five inches, at least, of earth between the bottom of your trench and your cuttings. Fill this trench with water two or three times a week, so that the bottoms of the cuttings shall be kept constantly moist. The water should be poured into the trench only in the hottest part of the day, so that it shall be, at least slightly, warmed by the sun before it reaches the cuttings.

A few years ago the daughter of my friend Rev. Mutersbaugh of Reedley, was bemoaning the waste of valuable citrus wood when the orange and lemon trees were pruned. I gave her the directions that I have written above; to-day she has dozens of thrifty citrus trees from just such a 16 foot row as I have described. Another lady in Los Angeles to whom I wrote instructions about propagating cuttings, writes that she has produced more of the rarest products found in her locality than she could buy with $20 from the nursery. She adds, "Write up this matter of raising refractory plants from cuttings, for the RURAL PRESS, or I will do it and will use your name in doing so." Believing that she has good cause for her request I've written it up.—W. A. SANDERS.

The State Floral Society.

At the last meeting of the State Floral Society in this city the following report was submitted:

This meeting marks the close of another year of our society's history, a year which, in point of growth and prosperity of our organization and gratifying success of its undertakings, is the most satisfactory it has seen. The reports of the Secretary and Treasurer will give you definite details of our growth in membership and improvement in finances, which are pleasing to those who have labored long and loyally for such results, and should be acceptable also to the public, in that larger membership and friends signify that we shall be able to exert ourselves more and better in affairs which tend strongly to develop the floriculture of of the State and more widely disseminate the love and devotion to the floral arts, which are so elevating, refining and humanizing in their influences.

I learn from my reading of journals devoted to floriculture and gardening in this country and abroad, that great progress is being attained in beauty-cultures everywhere, both those pursued from commercial motives and from love of the work. Never within my memory have the general discussions of floral topics, the introduction of new varieties, and the holding of special and general exhibitions been possessed of greater merit nor commanded wider attention than during the past year. It is gratifying to know that, through the efforts of our society, California can justly claim an honorable place in the world's advancement in floriculture. The world has a right to claim that a State with our peerless advantages for the growth of all that pleases the eye or delights the heart should not be laggard in this respect. We can see our progress in the continued improvement of private gardens, the increase of private plant collections, as well as in the improvement of our floral shows, the enrichment of public conservatories and the stimulation of the business of the florists.

It is especially important that such activity, progress and extended interest should characterize floral affairs at this time, because of the approaching World's Fair at Chicago and the effort which is being made to realize on that occasion the grandest display of floral materials and affairs the world has ever seen. The chief of the floricultural branch, Mr. John Thorpe, is a man eminently qualified for such an undertaking, and he is enjoying the heartiest cooperation of all Eastern societies and individuals. I think it would be very fitting for our society to declare by resolution its approval of his plans, as thus far disclosed, and offer him our cooperation in any service on this coast which he may desire to advance.

Our own floral shows of the past year are too fresh in your memory to warrant any extended characterization by me. We owe much to the intelligence, taste and devotion of the committee which carried these ventures to success. It is plain now that we are warranted in some extension in our preparations for these shows. We must have larger space for displays and more room for the accommodation of our patrons. At the fall show many exhibits might almost as well have been set up in a desert, for they certainly bloomed and blushed unseen.

A new and very promising feature of this year's fall show, as you will remember, was the enlargement of the list of awards by subscription funds from wealthy connoisseurs and patrons of floriculture. Notable aid to Eastern displays is gained in this way, and we hope that the generous hearts of our California friends are but just beginning to be warmed up in this direction.

After all, the most notable evidence of progress of the year now closing is the appearance of our proceedings in neat pamphlet form, issued as a regular monthly bulletin of the society. If I am rightly informed, this is the only publication of the kind in the United States. It is a great credit to our organization, and will, I believe, prove a strong factor in our future progress and success.

In closing, I desire to return thanks to all my associate officers, who have by their kindly watchfulness made it almost impossible for me to offend or err, and thanks also to the whole membership of the society for their most cordial cooperation in all matters looking to the society's welfare.

EDWARD J. WICKSON, President.

In consonance with the recommendation of the president, the secretary was requested to prepare and forward to Mr. Thorpe an expression of the society's confidence and desire to render assistance in his important work of developing the floral features of the World's Fair.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING JAN. 19, 1892.

467,144.—CALF WEANER—R. Arborn, Los Angeles, Cal.
467,285.—INCUBATOR—J. W. Atkinson, Milpitas, Cal.
467,364.—GARDENING TOOL—T. W. Breen, Saucelito, Cal.
467,370.—STOVE PIPE DRUM—M. P. Farnham, Germantown, Cal.
467,480.—CULINARY BOILER—J. L. Hawkins, Fresno, Cal.
467,287.—GAS BURNER CUT-OFF—J. E. Hogan, Oakland, Cal.
467,288.—PNEUMATIC CLUTCH — B. Jennings, San Jose, Cal.
467,187.—STAMP MILL—J. M. McFarland, Virginia, Nev.
467,296.—BEAM FOR CULTIVATORS—F. P. McFeeley, Oakland, Cal.
467,298.—TEMPLET FOR BOILER-HOLES — J. McNeil, S. F.
467,289.—HOISTING APPARATUS — Mount & Warnock, Spokane, Wash.
467,381.—WRENCH — Parsons & Davis, New Kamilche, Wash.
467,302.—ASPHALT MIXER—Pitchford & Cooper, S. F.
467,444.—DISH WASHER—M. Stone, Fallbrook, Cal.
467,290.—PAINT CAN—C. M. Symonds, S. F.
467,458.—STEAM ENGINE — C. W. Tremain, Portland, Oregon.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail or telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

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People's Reform Meeting.

Hon. Chas A. Sumner will speak at Liberty Hall, 865 Broadway, Oakland, Saturday evening, January 30, on: "The methods of the monopolists, and the way in which they can be most effectively confronted and overthrown." After adjournment there will be a conference of parties interested in taking early steps for organizing the People's Party in Alameda county.

Oxford Down Sheep.

Mr. W. A. Shafor of Middletown, Ohio, one of the most successful breeders of sheep in this country, has this to say regarding his experience in finding the best breeds and getting best results:

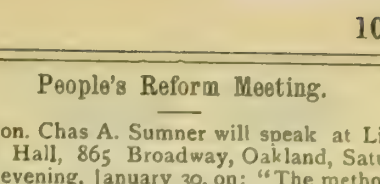
In 1880 I entered into partnership with my uncle, John R. Shafor, in stock raising and dealing. He had a flock of Southdown and a flock of Cotswold sheep. But his Southdowns were too small and his Cotswolds too tender to be as profitable as he thought they should be, so we began studying the different improved mutton breeds, in view of changing to a breed which combined size, quality and hardiness. After careful examination of the then most popular breeds in England and America, we decided to try the Oxford Down. And 12 years experience in importing and breeding has convinced us that we did not make a mistake.

I go to England each year to select and bring home our sheep, while my uncle looks after the farm and our business during my absence. But he is now 73 years old and wishes to retire from active business life. So we have decided to dissolve partnership March 1st, 1892. I shall continue importing and breeding Oxford Downs, as I consider them the best and hardiest sheep for the various climates and conditions in this country.

Complimentary Samples.

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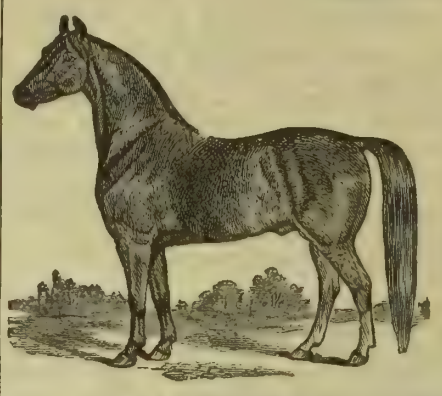


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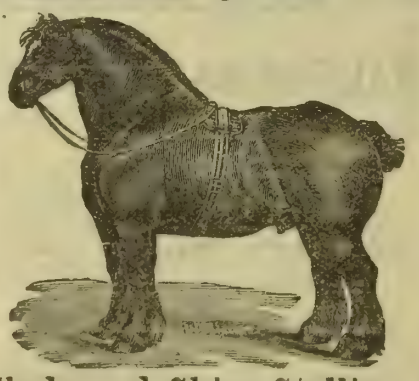
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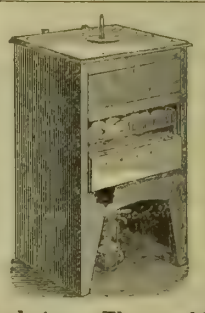
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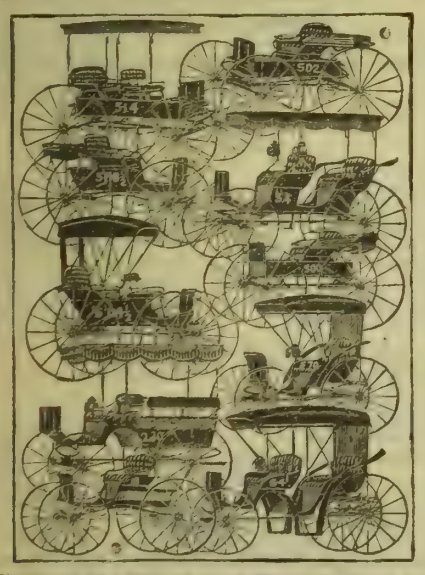
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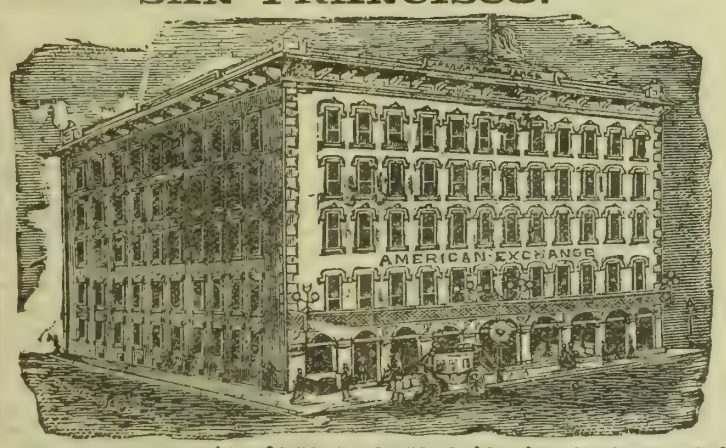


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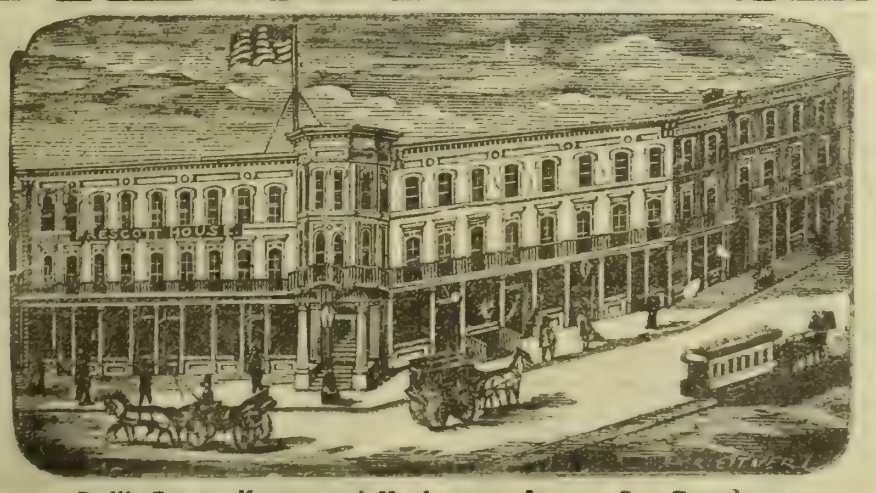
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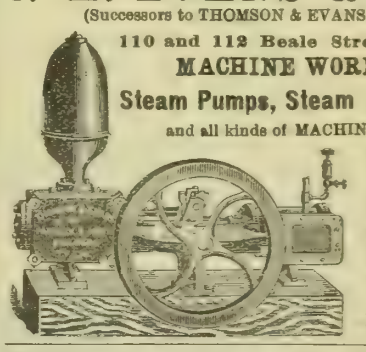
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Jan. 27, 1892.

Owing to limited supplies, trading in farm products is restricted. Wheat continues to go out freely. The export movements to date, with flour reduced to wheat, aggregate about 650,000 tons, which is over 200,000 tons in excess of the exports for the like time in the season of 1890–91. Money continues easy in the absence of either a speculative or legitimate demand. So far, the season has been very favorable for crop purposes in the northern and central counties, but in the southern part of the State there are complaints of a light rainfall. Up to Jan. 26th of this season, the precipitation in the southern part of the State has been only about one-half of the fall during the like time in 1890–91, while in the central and northern counties, it averages fully 100 per cent more. Notwithstanding the light rainfall in the southern counties, farmers there are buoyed up with the knowledge that in a majority of like former seasons, they had heavy rains in February and therefore they can reasonably look for its repetition in this year.

Foreign Grain Review.

LONDON, Jan. 25.—*Mark Lane Express:* English wheat made a further decline of 1s.; foreign wheats are 6d. lower, California being quoted at 40s.; Red Winter, 38s. 4d. Foreign flour dropped 6d., American selling at 41s. Corn was irregular, American selling at 22s 3d. Oats are firmer, American selling at 18s. 3d. Barley was dull. To-day's market was weak. English wheat dropped another 6d.; flat corn, 22s.; oats and barley were neglected. English and American flours were in slightly better demand.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May.	June.
Thursday	8s1d	8s0½d	8s1½d	8s1½d	8s1½d	8s1½d
Friday	8s ¾d	8s1½d	8s1½d	8s1¾d	8s0½d	....
Saturday	8s1d	8s1d	8 1½d	8s1d	8s0½d	8s1½d
Monday	8s1½d	8s1½d	8s1½d	8s1½d	8s1½d	8s0d
Tuesday	8s1½d	8s0d	8s1¾d	8s0d	7s11½d	7s11½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	41s0d	41s9d	40s3d	Held higher.
Friday	40s6d	41s6d	40s3d	Not much inquiry.
Saturday	40s6d	40s6d	40s3d	Firmer.
Monday	41s0d	40s9d	40s6d	Rather firmer.
Tuesday	40s9d	40s6d	40s3d	Steady.

To-day's cablegram is as follows:

LIVERPOOL, Jan. 27.—Wheat quiet but steady. California spot lots, 8s 2d; off coast, 40s 6d; just shipped, 40s 6d; nearly due, 40s 6d; cargoes off coast, quiet; on passage, weaker; Mark Lane wheat, turn easier.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Jan.	Feb.	Mar.	Apr.	May
Thursday	170½	171	172¾	173	171½
Friday	170½	170¾	172½	173⅝	171
Saturday	171	171½	172⅝	173¼	171½
Monday	172	172	173¼	173⅝	172
Tuesday	171	172½	172⅝	173	171

The following is to-day's telegram:

NEW YORK, Jan. 27.—Wheat, $1.02½ for February $1.03⅜ for March, $1.04 for April, $1.02⅝ for May and $1.01 for June.

CHICAGO, Jan. 27.—Wheat, 91½c for May.

San Francisco.

WHEAT.

	Buyer Season. H	Buyer Season. L	Buyer 1892. H	Buyer 1892. L	Seller 1892. H	Seller 1892. L
Thursday	178½	177½	....	....	150½	150½
Friday	177½	176½	....	....	....	....
Saturday	177½	177	....	....	151	151
Monday	176½	175½	....	....	....	....
Tuesday	174½	174	....	....	....	....

The following are to-day's recorded sales on Call:

Morning session: Buyer season—800 tons, $1.73⅜; 200, $1.73½; 200, $1.73⅜; 300, $1.73 per ctl. Seller 1892 200 tons, $1.48; 100, $1.47½ per ctl. Afternoon session: Buyer season—300 tons, $1.72⅜; 100, $1.72½; 100, $1.72; 100, $1.71⅝; 200, $1.71⅜; 200, $1.71½; 2300, $1.71; 300, $1.70⅝; 1500, $1.70⅜; 100, $1.70⅝; 400, $1.70½; 100, $1.70⅜; 200, $1.71⅜; 500, $1.71. Seller 1892 - 100 tons, $1.47; 100, $1.46½ per ctl.

BARLEY.

	Buyer Season. H.	Buyer Season. L.	Seller Season. H.	Seller Season. L.	Seller 1892. H.	Seller 1892. L.
Thursday	110½	110	103½	103⅜	....	....
Friday	110	109½	102½	102½	95½	95½
Saturday	110½	110	....	....	....	....
Monday	108	107½	....	....	....	....
Tuesday	108	107½	....	....	....	....

The following are to-day's recorded sales on Call:

Morning session: Buyer season 100 tons, $1.07½; 100, $1.07⅝; 100, $1.07½; 400, $1.08; 100, $1.08½; 900, $1.08½; 100, $1.08⅜; 300, $1.08½ per ctl. Afternoon session: Buyer season—600 tons, $1.08½; 300, $1.08½ per ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Jan. 22.—*Bradstreet's:* The wool markets still report a quiet demand for both domestic and foreign wools. Manufacturers are waiting for the opening of the next London sales, which are expected to forecast the movement of prices for the year. Letters which have been received from prominent London dealers state that every indication points to higher prices. The continent will be a heavy buyer at these sales. Holders in London have refused offers at the prices of the last sales. In domestic grades there is only a moderate movement. Ohio and Michigan wools are not quite as firm as a week ago, otherwise no change is to be noted in the markets as far as prices are concerned. The trade in carpet wools is still of a retail character.

NEW YORK, Jan. 24.—Light business is reported at all seaboard points, unwashed especially being neglected. Sellers of fall grades have to adopt a humoring policy with buyers, as the dry goods trade has only a streaky style of activity, and but few large parcels of raw material have been in treaty for fine work. Sales of Australian are heavier, with the price favoring buyers now at 32@41c. Foreign wool clouds the situation here by its heavy collections in England, and lower prices prevail than have ruled for the past six years. The sales of domestic this week are not instructive. In a price way nothing has improved. Disclosed shadings are meaningless at the moment. Accounts of London sales are looked for with much interest, and are expected to give a more general decided tone one way or the other over here. The sales at New York are 239,000 pounds of domestic and 388,000 pounds of foreign, the latter mainly common. At Boston the sales were 1,866,000 pounds of domestic and 775,000 pounds of foreign, chiefly Australian. Philadelphia had fair business in purchases for immediate want of mills. There is everywhere cheap and abundant offerings abroad to operate [illegible] buying.

Dried Fruits.

NEW YORK, Jan. 22.—Interest in California prunes [illegible] actually to be broadening out and prices are [illegible] as inquiries increase. Most of the holders now ask 7½c for 40s to 90s in sacks, and 8½c for the same assortment in boxes.

NEW YORK, Jan. 24.—Apricots are neglected and irregular. They are quoted: 7c for sacks; 9@10c for boxes of good quality. There is renewed activity in prunes. Cheapness enlarges the consumption, and also a realization of the excellence of Coast grown prunes. Five sizes sacks are quoted at 7⅜c; four sizes 7c. Designated sizes brought the full last quoted rates. Several carloads of prime yellow peaches moved speculatively, Philadelphia making the price. The retailers' trade wants 6½c.

Eastern Hop Market.

NEW YORK, Jan. 24.—Hops have again advanced. New prices check sales, but no yielding feeling is entertained by holders. Spot prices follow futures closely. The country tone is strong, and has been met in a number of instances. The exports for the week were 1350 bales. State, ninety-ones, 22@27½c; nineties, 14@20c; Pacific ninety-ones, common to choice, 21@26c; nineties, 13@20c.

Eastern Raisin Market.

NEW YORK, Jan. 24.—We have entered into the two dull months for the use of raisins, but the lull can and may be, broken speculatively, as prices continue favorably low. This, of course, does not mean there is a pressure to slaughter goods, for the fact is solid holders of strictly prime parcels seem inclined to wait and participate in possible chances of at least fractional advances. Nominal quotations are: Two crown bags, 3¼@4c; three crowns, 5c; all boxes range from $1.10@1.35.

Miscellaneous.

NEW YORK, Jan. 24.—Honey, firm. The demand is improving for pure strained in grocery flasks. Lima beans, $1.85 a bushel; full spot price for prime. Offers from the Coast at $1.75. Prompt shipment all rail.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Jan. 25, '92, were as follows:

Flour, qr. sks	113,781	Bran, sks	3,627
Wheat, ctls	156,079	Buckwheat "	....
Barley, "	26,363	Middlings "	1,023
Rye, "	22	Chicory, bbls	192
Oats, "	769	Hops, "	222
Corn, "	1,613	Wool, "	270
*Butter, "	384	Hay, ton	1,609
do bxs	166	Straw, "	67
do bbls	1	Wine, gals	241,650
do kgs	....	Brandy, "	11,320
do tubs	....	Raisins, bxs	2590
do ½ bxs	160	Honey, cs	7
†Cheese, ctls	410	Peanuts, sks	70
do bxs	54	Walnuts "	189
Eggs, doz	36,490	Almonds "	74
do " Eastern	49,050	Mustard "	71
Beans, ctls	3,609	Flax "	....
Potatoes, sks	19,072	Popcorn "	....
Onions, "	1,354	Broom corn, bbls	....

*Overl'd, 153 ctls. †Overl'd, 206 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to Jan. 24, '91.	July 1, '91 to Jan. 24, '92.
Flour, ½ sks	177,011	297,998
Wheat, ctls	770,521	1,090,377
Barley, "	176,187	28,207
Oats, "	213,618	295,357
Wool, bales	5,790	5,733
Hops, "	333	349
Rye, sks	....	3,291
Potatoes, sks	21,101	34,466

Cereals.

The wheat market continues to go from bad to worse, in sympathy with steady declining foreign markets. As early as November in last year, the writer indicated that lower prices could be looked for after the turn of the year, and those who acted on the note of warning by selling have no cause to complain. Our distance from the European demand markets will always cause the carrying of stocks over the holidays with us an unsafe proposition unless prices here rule at about the cost of production. The low rates of for outward charters at this port are in favor of wheat holders, but with continued favorable crop weather, disengaged vessels arriving will probably prefer to discharge their crews and tie up for new crop business, in which case, if wheat-selling offers increase, ships will have the advantage and our wheat market suffer with declines in values abroad. Sales in our market continue to be largely made by speculative holders, several of whom have met with severe losses. The receipts of wheat from Oregon and Washington are light. The decline here and an absence of much of a demand are against shipments to us. The tonnage in the Columbia river shows a slight gain, and this, too, in the face of a free export movement foreignward. The available supplies of wheat up north are running low.

The receipts of barley are only fair, barely enough to meet current requirements. Light rainfalls in the Southern part of the State have created an enlarged demand in that direction. This call combined with a fair to free inquiry from other parts of the State is rapidly reducing the available supply in, and as both Oregon and Washington have depleted their stocks by free shipments overland, it now looks as if we are liable to see better prices in the near future. It is claimed that brewers are not carrying large stocks of brewing goods, preferring to follow the course of the market than to carry large supplies.

Corn is easy. The reduction in quotations appears to have stopped shipments into this State from the Central States. The export demand is light. The stock of corn in this State is light, and were it not for the fear of Eastern corn, the market would unquestionably do better.

Rye is firm at another slight advance, but buckwheat is easy at shaded quotations.

Feedstuff.

Both bran and middlings are strong at a slight advance. The demand is largely from dairymen, although it is said that there are many buyers taking the two to feed stock in the counties reporting a scarcity of pasture or range feed.

Rolled barley continues to meet with a free movement.

Feed root vegetables are steady, with a fair demand.

Hay continues strong under a free demand for feeding. It is said that in several of the Southern counties more hay has been and is being fed out by fully 25 per cent. this season than for years past. This is due to stockmen being compelled to feed in several localities so as to carry their stock over until the expected February and March rains bring out good pasturage.

Fruit.

Apples continue to come to hand quite freely. Poor keepers and defective kinds are in light supply, which naturally sends consumers to the better grades. The East is sending us a few straggling consignments.

Continued heavy receipts of oranges keep the market in buyer's favor. Cool weather continues to retard the destribution demand. Trucksters are running on windfall and frosted oranges, and as they are of poor quality, consumers who took them condemn this season's oranges. Choice, smooth-skinned oranges meet with a fair sale both here and for shipment north. The reduction in overland freight on oranges from $1.25 to $.90 is calculated to increase the shipment eastward.

Dried fruits are reported virtually unchanged in quotations. Everything warrants the assertion that the market appears to be shaping into better position for the selling interest. While saying this, the situation does not justify looking for better prices, except, perhaps, it be for very choice large-sized prunes and other favorite fruits, and at the same time permit the marketing of supplies now in hand, so we can enter the new crop season untrammeled.

Raisins are slow of sale, yet there are many dealers who still hold to the opinion that the trade will absorb all now in hand before the close of the spring months.

The Salem, Oregon, *Statesman* says that the price of hops there has reached 21 cts. per lb. for choice, and adds that "a prominent commission merchant of Salem, in speaking of the hop market, said: 'There are about 800 bales of 91's in Marion county, which the growers are holding for 25 cents, and I think they will get it before the 1st of April. There are only 88 bales of 90's in the county, and the prospect for a good crop of hops this year is exceptionally fine, besides there will be no old hops on the market, as the 91's will be consumed by the time the next crop comes on, which will have a tendency to make the prices higher. There will be an increased acreage in this county this year of probably 300 acres. Oregon's '91 crop was between 15,000 and 18,000 bales against 40,000 bales in Washington. The average number of pounds to the acre in this State last year was about 1150.'"

The San Francisco market is very strong, with 25 cents named by some dealers. The stock here is light.

Vegetables.

The market continues to feed in a small way, with garden truck from the southern counties. The high prices restrict the demand. The weather is all that can be desired for gardening in the bay and river counties. It is the general belief that there will be a decided increase in the acreage to be devoted to truck.

Roots are fairly steady with a good inquiry ruling. Cabbages continue to move off at steady prices.

Onions fluctuate, but the general tone of the market is to strengthening prices. The bulk of receipts are poor keepers, which is accepted as indicating a short supply just before the new crop season which, if proven correct, will create better prices.

Live Stock.

Bullocks, if of handy size and in good to choice condition, are wanted, and to secure them slaughterers pay a slight advance. The scarcity of feed continues to cause stockmen in the southern counties, and also in parts of Arizona, to market their stock, and this marketing reduces buyers' bids for grades below good. Mutton sheep are fetching another advance. Although the higher prices restrict the demand, yet the light obtainable supplies keep the market up. Lambs are scarce and higher. Calves are reported firmer. No changes are reported in hogs. Good to choice milch cows for the dairy are wanted.

Miscellaneous.

From reliable advices up to Jan. 27, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	244,460	296,251	*124,813	*48,811
San Diego	15,475	21,160	4,24	....
San Pedro	1,935	6,519	4,159	13,464
Oregon	29,447	31,823	40,920	
Puget Sound	18,804	12,569	....	
Totals	309,121	378,231	185,804	62,520

*Engaged for wheat, 1892, 71,091; 1891, 6,054.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Jan. 4th, are as follows:

	1891.	1890.
Wheat, ctls	9,919,390	6,448,099
Flour, bbls	661,249	628,288
Barley, ctls	768,366	191,078

Grain bags, standard hand sewed, are firmly held at 7⅜@7½c.

In the poultry market low and unsatisfactory prices still obtain for turkeys. Hens and roosters are higher, with large-sized well-conditioned scarce and in quick demand. Ducks and geese are also strong.

Beans are fairly firm for white kinds, but weak for dark varieties. It looks as if a strong bear movement is under way to depress the market so as to buy up supplies.

Honey is very firm, with buyers forced to pay full prices to meet their requirements.

Wool is stagnant, owing to there being no assortments to draw from. During the past week there was received at this port from Australia 1672 bales and 149 bales from Honolulu.

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb.

APPLES.		Do do fancy	7 @ 7½
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pl'd, prime, bl.	10 @11
Do do prime	3½@ 4	Do do choice	11 @12
Do do choice	4 @ 4½	Do do fancy	12 @13
Do sliced, common	3½@ 4	Evap, peeled, in boxes,	
Do do prime	4 @ 4½	choice	15 @–
Do do choice	4½@ 5½	Do do fancy	16 @17
Evap, bleached, ring, 50-lb boxes	7 @ 8	PEARS.	
APRICOTS.		Sun-dried, quarters	3 @ 4½
Sun-dried, unbl. com.	3 @ 4	Do sliced	4 @ 5
Do do prime	5 @ 5½	Evap, sliced, in boxes	6 @–
Do do choice	6 @ 6½	Do ring do	10½@–
Do bleached, prime	7 @–	PLUMS.	
Do do choice	7½@–	Pitted, sun-dried	4½@–
Do do fancy	8½@ 9½	Do evap, boxes, choice	@–
Evap, choice, in boxes	9½@10	Do do do fancy	@–
Do fancy, do	10 @10½	Unpitted	2 @ 2½
FIGS.		PRUNES.	
Sun-dried, black	3 @ 3½	Cal. French, ungraded	5 @ 5½
Do white	3½@	Do graded, 60 to 100	5½@–
Do do washed	@	Do do 40 to 60	6½@ 8
Do do fancy	–@–	Fancy sell for more money.	
Do do pressed	–@–	RAISINS.	
Smyrna boxes	–@–	London Layers, choice ℔ bx	$1 50@ –
Do sacks	–@–	Do fancy, do	1 75@ –
GRAPES.		Layers, ℔ bx	1 25@ –
Sun-dried, stemless	3 @ 3½	Loose Muscatels, common, ℔ bx	1 00@ –
Do unstemmed	2½@ 3	Do choice, do	1 20@1 30
NECTARINES.		Do fancy, do	1 50@ –
Red, sun-dried	3½@ 5	Unstem'ed Muscatels, in sacks, ℔ lb	4@ 5
Do Evap., in boxes	6 @–	Stemmed do do	5@ 5½
White, sun-dried	5 @ 6½	Seedless do do	6@ –
Do evaporated	6½@ 7	Do do ℔ 20-lb bx	1 15@ –
PEACHES.		Sultanas, unbl, bxs	1 15@1 40
Sun-dried, unpeeled, common, bleached	3½@–	Do bleached, in bxs	1 30@1 60
Do do prime, do	4½@–	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	
Do do choice, do	5½@–		
Do do fancy	6 @ 6½		
Evap, unpe'l'd, choice	6 @–		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 27, 1892.

Limes, Mex	7 50 @ –	Do Lady Apples	75 @ 1 25
Do Cal	75 @ 1 00	Do Eastern, bbl	3 75 @ 5 00
Lemons, box	1 25 @ 3 50	Beets, sk	– @ 1 00
Do Sicily	5 50 @ 7 00	Carrots, sk	35 @ –
Oranges, Winter small box	50 @ 1 00	Okra, dry, lb	15 @ –
Do Seedlings		Parsnips, ctl	– @ 1 25
Riverside	1 25 @ 2 00	Peppers, dry, lb	12 @ 18
Los Angeles	1 00 @ 1 50	Do green	15 @ –
Do Navels–		Turnips, ctl	50 @ –
Los Angeles	1 50 @ 2 50	Cabbage, 100 lbs	60 @ –
Riverside	2 00 @ 3 50	Garlic, lb	2 @ 3½
Duarte	2 00 @ 3 50	Squash, Mrft, tn.	4 00 @ 8 00
Apples, box	50 @ 90	Pumpkins, ton	7 00 @
Do choice	1 00 @ 1 25	Tomatoes, box	1 25 @ 1 50
Do extra choice	1 50 @ –	Asparagus, lb	15 @ 20
		Peas, green, lb	8 @ 10

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, January 27, 1892.

BEANS AND PEAS.		FLOUR.	
Sayo, ctl	1 75 @ 2 05	Extra, City Mills	5 00 @ 5 25
Butter	2 20 @ 2 65	Do Country Mills	5 00 @ 5 25
Pea	2 45 @ 2 70	Superfine	3 15 @ 3 45
Red	1 75 @ 2 05	NUTS–JOBBING.	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	7 @ –
Small White	2 25 @ 2 65	Do Choice	8 @ –
Large White	2 10 @ 2 45	Do paper shell	8 @ 9
Lima	1 70 @ 2 10	Do Chili	7½@ 9
Wld Peas, blkeye	1 35 @ 1 65	Almonds, sft shl	11 @ –
Do green	1 70 @ 2 50	Paper shell	13 @ –
Do Eastern do	2 55 @ 2 75	Hard Shell	6 @ 7½
Do Niles	1 30 @ 1 45	Brazil	6½ @ 8
Split	3 85 @ 4 15	Pecans small	12 @ 14
BUTTER.		Do large	15 @ 17½
Cal. Poor to fair, lb	15 @ 22½	Peanuts	3 @ 4
Do good to choice	27½@ –	Filberts	11½@ 14
Do Giltedged	32½ @ –	Hickory	7 @ 8
Do Creamery rolls	32½@ –	Chestnuts	11½@ 16
Do do Giltedge	33 @ –	ONIONS.	
Eastern	20 @ 32½	Silver Skin	75 @ 1 20
CHEESE.		POTATOES.	
Cal, choice mild	13 @ 14	Early Rose, ctl	25 @ 40
Do fair to good	10 @ 12½	Burbank Seedling	30 @ 50
Do gilt edged	14 @ 15	Do do Salinas	95 @ 1 20
Young America	12 @ 15	Do do Oregon	1 00 @ 1 20
EGGS.		Sweet's	1 00 @ 2 25
Cal. ranch, doz	26½@ –	River Reds	25 @ 40
Do do selected	28½ @ –	POULTRY.	
Do store	22½ @ 26	Hens, doz	5 50 @ 8 50
Eastern	22½@ 27½	Roosters, old	5 50 @ 7 00
FEED.		Do young	6 00 @ 9 00
Bran, ton	21 00 @22 00	Broilers, small	4 00 @ –
Feedmeal	26 00 @ –	Do large	5 00 @ –
Gr'd Barley	23 00 @24 50	Fryers	6 00 @ –
Middlings	24 00 @25 00	Ducks	6 50 @10 00
Oil Cake Meal	25 00 @27 00	Geese, pair	1 75 @ 2 50
Manhattan Food ℔ cwt.	7 50	Turkeys, Gob'r	11 @ 13
HAY.		Turkeys, Hens	14 @ 16
Wheat, per ton	13 50 @ –	Do Dressed	14 @ 18
Do choice	15 00 @ –	Manhattan Egg Food ℔ cwt.	11 50 @ –
Wheat and Oats	12 50 @ –	PROVISIONS.	
Wild Oats	11 00 @ –	Cal. Bacon, he'vy, lb	9½ @ –
Cultivated do	12 50 @ –	Medium	11 @ –
Barley	11 00 @ –	Light	12½@ –
Alfalfa	10 00 @ –	Lard	9 @ 11
Clover	12 00 @ –	Cal. Sm'k'd Beef	11½@ –
Straw bale	50 @ 60	Hams, Cal salt'd	10 @ –
GRAIN, ETC.		Do Eastern	12½@ –
Barley, feed, ctl	1 02½@ 1 08½	SEEDS.	
Do Choice	1 10 @ –	Alfalfa	7 @ 8
Do Brewing	1 10 @ –	Clover, Red	12 @ 13
Do do Choice	1 16½@ –	White	7½@ –
Do do Giltedge	1 20 @ –	Flaxseed	2 50 @ 2 80
Do Chevalier	1 15 @ 1 45	Hemp	3½@ 4
Do do Giltedge	1 48½@ 1 52½	Mustard, yellow	3 25 @ 3 75
Buckwheat	1 70 @ 2 10	Do Brown	3 00 @ 3 25
Corn, White	1 27½@ 1 32½	WOOL.	
Yellow, large	1 22½@ 1 27½	SPRING, 1891.	
Do small	1 26½@ 1 30	Humb't & Men'cino	20 @ –
Oats, milling	1 46½ @ –	Sac'to valley	16 @ –
Feed, Choice	1 43½ @ –	Free Mountain	19 @ –
Do good	1 35 @ –	S Joaquin valley	13 @ –
Do fair	1 27½ @ –	do mountain	18 @ –
Surprise	1 50 @ –	Black Cal	1 60 @ 1 90
Black Cal	1 60 @ 1 90	Do Oregon	1 45 @ 1 55
Do Oregon	1 45 @ 1 55	Gray	1 30 @ –
Gray	1 30 @ –	Rye	1 65 @ 1 75
Rye	1 65 @ 1 75	Wheat, milling. Gilt edged	1 77½@ –
Wheat, milling. Gilt edged	1 77½@ –	Do Choice	1 73½@ –
Do Choice	1 73½@ –	Do fair to good	1 72½@ –
Do fair to good	1 72½@ –	Shipping, cho'ce	1 72½@ –
Shipping, cho'ce	1 72½@ –	Do good	1 70 @ –
Do good	1 70 @ –	Do fair	1 68½@ –
Do fair	1 68½@ –	Common	1 66½@ –
Common	1 66½@ –	Sonora	1 65 @ 1 77½
Sonora	1 65 @ 1 77½	HOPS.	
HOPS.		1891 Choice to Ex.	24 @ –
1891 Choice to Ex.	24 @ –	Fair to Good	20 @ –
Fair to Good	20 @ –		

Live Stock.

BEEF.		MUTTON.	
Stall fed	6½@ –	Wethers	10 @10½
Grass fed, extra	6½@ –	Ewes	9½@ 10
First quality	5½@ –	Lamb, yearling	10½@11½
Second quality	5 @ –	Do Fall	12½@18
Third quality	4½@ –	HOGS.	
Bulls and thin Cows	2 @ 3	Light, ℔ lb. cents	4½@ –
VEAL.		Heavy	4½@ –
Range, heavy	4½@ 5½	Feeders	4 @ –
Do light	6 @ 8	Stock Hogs	3½@ –
Dairy	7 @ 9		

Lessons in Volapük.

The International Language of the Entire World.

LESSON 14.

Indefinite Pronouns.

Alim, everyone.	Nos, nothing.
Ans, some.	Som, such (a one).
Bos, something; anything.	It, self (after a personal pronoun).
Ek, some one; anyone.	Balim—votim, each other; one another.
Nek, no one; nobody.	

Indefinite Adjectives.

Alik, each every.	Nonik, no; not any.
Anik, some; any.	Sembal, a certain, one (*a* or *an*).
Balvotik, one another.	Somik, such.
Bofik, both.	Teldik, many a.
Lölik, whole; entire.	Valik, all.
Mödik, much, many.	Votik, other.
Mödumik, several.	
Nemödik, a little; few.	

Exercises.

Alim kel vipom delön pudiko sötom lifön gudiko—Kel hetom neki binom flen alima—Ek kanom logön kelosi man et givom ciles okik—Ans obas binoms gudik e ans olas binoms flenik—No kanol lemön bosi plo nos—Cil obik labom buki alik keli elemol plo om—Nim teldik binom smalikum ka dog, ab nemödiks binoms smalikum ka mug—Ans olas sagoms nosi, votiks sagoms bosi—Puls e jipuls mödumik ärönoms ve jol fluma bifü dom fata olik—Li-lemol ai mödikum ka selol?—Man sembal kel äkömom bletimo al lom obsik älogom nevelo kati, e äsagom das ävipob lemön obsiki—Ek li-osedom obe bukis anik, bi epölüdob obikis?—If ukömol büfo blod olik ökömom ogivob ole bosi gudik—Ven ologob jipuli smalik olik okidob ofi.

Some of you should come to our house where we have something good which father bought us, three days ago—Somebody was here yesterday, when you were at your uncle's house buying the books you wished to give your sister's children—Some men give nobody anything and have no friends—Many a man loses nothing if he gives part of what he has to his friends—To hate one's self is better than to hate one's friends—Nobody can buy coffee for ten cents a pound—Who can tell what anybody should give me for the horse I bought day before yesterday?—Some of those dogs will run into the river if you do not tie them.

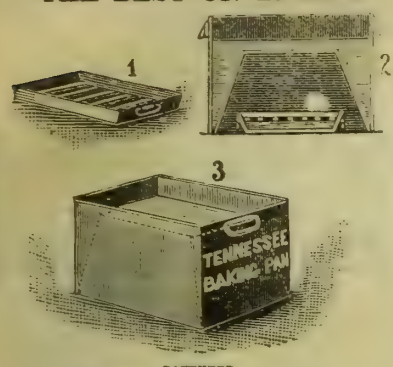
* This series of twenty lessons was begun in the PACIFIC RURAL PRESS of Oct. 10, 1891. Those desiring assistance in the systematic study of the language will be put in the way of obtaining it without cost by addressing A. L. Bancroft, *Ofel* for California, 303 Sutter St., San Francisco.

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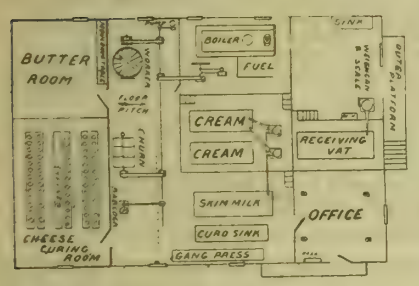
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THE OTHER WAY.

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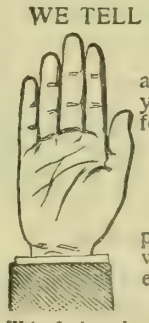
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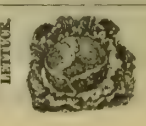
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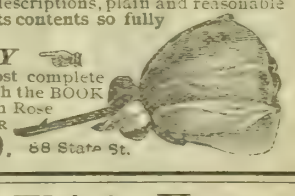
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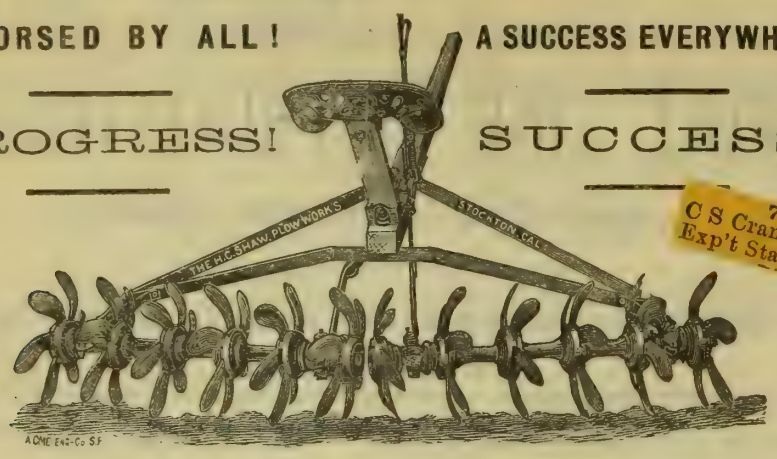
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MADERA, CAL., Dec. 22, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow we bought through your agents, Messrs. Cargile & Turnbaugh, is the best pulverizer in use. We have tried it in dry work and find it will do all that is claimed for it. Yours respectfully, D. E. LEWIS and L. W. FOX.

BERENDA, CAL., Dec. 17, 1891.

H. C. SHAW, ESQ., Stockton, Cal.—Dear Sir: Enclosed please find check to pay for the 12-foot Spading Harrow, the best implement ever invented for the cultivation of the soil. Respectfully, J. F. WARD.

VISALIA, CAL., Dec. 5, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Your Morgan Spading Harrow, as a cultivator, is a comp ete success, and I heartily recommend it to all orchardists and vineyardists as being a perfect ma'hine. Respectfully yours, L. C. RICE.

BAKERSFIELD, CAL., Dec. 22, 1891.

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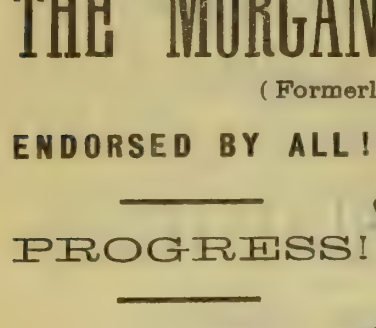
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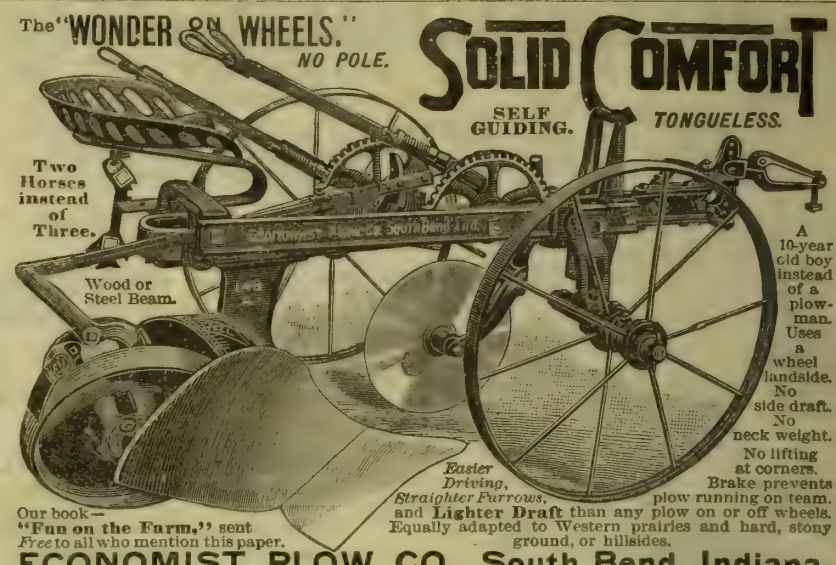
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PACIFIC RURAL PRESS

Vol. XLIII. No. 6. SAN FRANCISCO, SATURDAY, FEBRUARY 6, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

In a California Hopyard.

The engraving on this page gives the reader a glimpse within the precincts of a California hopyard. A hopyard at blooming time is one of the most beautiful sights in agriculture. The expanse and hue of the verdure, the graceful tracery of the vines, the profusion of the bloom—all are characteristic, and are as striking in their way as are blooming or fruit-laden trees or vines.

There are many ways of supporting the clinging hop vine and allowing it extension enough to perform its work in such a way that cultivating and other arts of the husbandman may be pursued. This is done in most hop-growing localities by poles and by poles and strings on the wigwam principle. Other styles of trellising have also been devised. The engraving used herewith is from a photograph recently taken in the hopyard of A. Menke, situated on the American river, in Sacramento county. It shows a style of training hops with upright posts, horizontal wires along each row of plants and across wires at intervals to strengthen the structure. The vine is taken from the plant to the wire by the use of a string, and when picking time comes the string is severed from the wire, as shown in the picture, allowing the vine to fall into the embrace of the pickers. The hanging strings show the points of attachment to the wires.



SCENE IN THE HOPYARD OF A. MENKE, SACRAMENTO COUNTY.

This system of training hops has advantages in allowing a very free growing of the vine, but it has sometimes proved unable to withstand strong wind when the solid banks of foliage oppose its force. All kinds of hop trellises are somewhat the prey of storms, but if we remember correctly, Mr. Menke suffered an unusual amount from a storm not long ago, and local critics were disposed to conclude that a return to the old way of poling would be safer. However, a way to make this method of trellising may have been found.

Daniel Flint, so well known to our readers as a leader in hop matters, uses a style of hop-training somewhat similar to the one shown in the engraving, but he uses lower uprights, redwood stakes 8 feet high, 2x2 inches, set in the ground one foot and the stakes eight feet apart. On the tops of these stakes wires are run at right angles, being held to the top of each stake by a staple. This lower training brings the vines within reach of the pickers. It would also much lessen the danger of blowing over in high winds.

THE WORLD'S FAIR FUND.—The charges concerning the administration of the California World's Fair Fund, made by the Los Angeles *Herald* (reprinted in another column), are serious enough to demand investigation. If the Commissioners are violating the law and frittering away the State's money, it is the business of the State government to put a stop to it. The Governor could not employ himself better for a few days than to look into this matter and report to the people upon it. He has not probably the authority to suspend the Commission or to veto its action, but a public condemnation by him of any abuses in the administration of the fund would practically accomplish the same result. California has made generous provision for the great fair and the money must not be wasted.

TIMBER LANDS.—Another lot of swindling "locators of government timber lands" has been run down by the San Francisco police. Government timber lands are well worth the attention of those who still have rights to make locations; but be very careful to deal only with locators or agents who can show good standing. The woods are full of timber frauds.

STATE PREMIUMS AT THE WORLD'S FAIR.—The World's Fair Commissioners of Illinois and of Missouri have decided that a part of the money appropriated by those States to secure State exhibits at Chicago shall be paid as premiums to those showing the best livestock from those States. In this way $20,000 of the Missouri and $40,000 of the Illinois appropriation will be given to individual exhibitors, who by their stock displays make a good showing for Illinois and Missouri. Perhaps our State Commission can take a hint from these States as to a way in which State exhibitors can be stirred up to do their best.

THE FRESNO CONVENTION OF DRIED FRUIT PRODUCERS.—The convention on Feb. 18th, to which we alluded last week, will be held under the auspices of the State Board of Horticulture, and a notice to that effect has been issued by B. M. Lelong. It is to be a general convention, and all interested will be admitted to participation. The movement for the meeting started with the raisin producers, and we have an idea its scope would have been broad enough if it had confined its work to the raisin interest, but possibly not. At all events, let the meeting be large enough to be influential and representative.

THAT ORANGE RATE.—The Santa Fe company in carrying oranges East at a 90 ct. rate has antagonized the Trans-Continental Association, but it has gone behind the Southern Pacific at a great rate. Recent dispatches are that the Santa Fe is moving all the oranges.

What Lawn Grasses for Dry Lands?

This is the question: none is so frequently asked: none so difficult to answer. We do not attempt to prescribe at this time for any but the region of San Francisco Bay and the coast of the central part of the State: possibly the advice will be good farther away but we do not commend it. We would like to have our readers tell us how far our statements accord with their experience.

Bermuda grass is grown from root fragments, which can be made by cutting roots in a hay cutter or otherwise, scattering the fragments along in shallow furrows or sowing broadcast and harrowing in. Bermuda grass will endure less water and more neglect than any other grass we know of. It will remain green except when browned by frost and will regain its verdure very quickly. But do not plant Bermuda grass if you have any cultivated land which you wish to keep it out of. It is good to stay and it stays in places of its own choosing as well as yours.

A better grass which also grows from roots is Texas blue grass. It is coarser and less handsome than Kentucky blue grass, and it also endures drouth much better. Divide the old clumps into single plants and plant these along in drills as you would cabbage plants. They will soon multiply and will ultimately make a sod which will survive such drouth as we have in the region mentioned above.

The best grass for a large lawn which is partly shaded and on which you expect to do little watering is orchard grass. Plow and harrow well and sow the seed quite thickly covering with a light raking. Thick sowing will partly obviate the disposition of the grass to grow in tussocks and will produce a good-looking lawn.

Another grass which will do well with moderate watering is Australian rye grass. It is replacing Kentucky blue grass in much of the lawn-making around the bay because it will look well with half the work and water which the former requires.

As for choking out weeds probably Bermuda grass will do it best of all grasses mentioned. Give it time and it will occupy the land. Lawns made of the other grasses mentioned can be freed from nearly all weeds by repeated mowing. A few tough weeds will have to be cut out with the hoe or pulled out bodily, but the rank and file of weeds, over the extraction of which so many backs have ached, can be repressed by using the lawn mower instead of the fingers.

So far as our experience goes we do not commend anything but Bermuda grass to go all through the dry season without losing its verdure; the other grasses can, however be kept in quite presentable condition with less water than any other plants we know of.

The Lake County *Avalanche* calls upon local enterprise to establish a fruit and vegetable cannery. Establishments of this kind are profitible everywhere.

THE DAIRY.

Experience with the Silo.

PETALUMA, Jan. 17, 1892.

TO THE EDITOR:—By your request, I will give you some experience with the silo, as desired by one of your readers in the Northwest.

I am now using silage from my silo for the seventh time. Five times I filled it with corn, once with oats and once with rye.

The first year the corn was planted with the grain drill; two rows were planted at once by closing up all but two ducts, thus leaving the rows 35 inches apart. Being rather late, I did not get a good stand, consequently what came up made a fine healthy growth, with plenty of well developed ears. The variety of seed planted was the Yellow Dent. This gave me about 15 tons per acre of superior silage.

The second year we drilled in as before, but used mostly the White Dent variety, unfortunately, as it afterward proved, we obtained a splendid catch. The plants made a good growth, but being so crowded there were no ears, and the stalks were soft and watery, having very little substance; all the lower blades fired. This crop produced the poorest silage that I have made, scarcely worth saving. I cut it with a binder, thereby saving much of the cost of handling.

The third year I planted the large Evergreen Sweet corn in rows about 40 inches apart, with the hills three feet in the rows; cultivated twice, once with a spring-tooth riding cultivator and once with a horse hoe. I secured a fair stand of thrifty stalks, loaded with fine ears; many stalks contained four large ears, and we found a few with six ears on a stalk. A peculiarity of the sweet corn is that most of the suckers, of which the plant is very prolific, produce ears. This crop gave me the best silage by large odds that I have had. Soon after commencing to feed it, my cows, young and old, strippers and fresh, averaged one pound of butter per cow per day. They got no other feed whatever, except on rare occasions; when they were kept in the barn over night on account of stormy weather, a little hay was thrown them. They were confined to a small enclosure where they could have got but little grass had there been any. The winter being unusually cold, and the months, December and January, there was no grass.

The next year being 1891, the season of wonderful rainfall, the land kept wet and cold so late into spring that a poor crop was produced. It was planted in hills as before, and sweet corn seed, gave only average results. Last year I planted the Small Yellow corn; again a late, wet spring retarded the growth, and the crows, for the first time since my residence here, which dates from 1853, pulled up a large percentage of the young plants. Quite late, the last of June, I replanted where missing with the Black Spanish sweet corn, a quick maturing variety. I gathered a fair crop, with fairly well-eared stalks; the last planting being dwarfed by the earlier planted, did not amount to much.

The oats were put in in the summer after the corn was fed out and used for summer, or rather fall, feeding, being all fed out before the corn was ready to go in. The oats were very rusty and weedy. They were cut with a binder and packed in as close as we could get them, allowed to settle a few days and the silo again filled up. This process was continued until the contents ceased to settle, when they were covered over with about six inches of road dust to exclude the air. When opened, I found about one foot of mold around the walls; the balance was eaten very well and gave very good results. Where not moldy, the cows ate it all clean, weeds and all.

Last spring, the silo was filled with rye cut just in the bloom, cut with the binder for convenience in handling, and the bands cut after pitching into the silo, and spread out evenly and well tramped down; no covering put on. When opened, I found about two feet on top moldy and about one foot around the walls. The cows ate it, but not with as great avidity as the corn or even the oats. It was very tough and fibrous and required much mastication. It should be cut when just out in full head. I intended to have cut it at that stage, but a rainy spell delayed the work. I don't recommend rye where oats can be produced successfully. Rye is too stringy and tough.

I have always used pulverized earth as a covering, gradually lessening the quantity from one foot depth the first season to only three inches the last. This year I used two-inch boards for covering—the same that I construct the platform with on which the cutter stands while filling. Use a 14 A. Ross ensilage cutter and elevator, cutting to one-half inch lengths.

The board covering seemed to give as good results as earth and is much more convenient to put on and take off. I would use some weight on boards if convenient. The boards used this year being very green or wet gave sufficient weight.

I will say to your Garberville correspondent that so far as I can judge from reading, Eastern experience corresponds very closely with California experience; not only my own but also of my neighbor the late I. R. Jewell.

To sum up, the best results have been obtained with the large growing sugar corn, planted in hills about 3x3 feet apart, and well cultivated.

The manner of covering is more one of convenience, having had good results from both earth and boards, and very poor from no covering.

Being in the fog belt near the coast, the dents and other large growing varieties of corn do not mature sufficiently. The plant must not be cut too green to secure good silage. Don't get in a hurry; let the corn on the ears begin to harden; a few of the ears will be quite ripe.

How do I like the Silo? I am better pleased with it each succeeding season. Ten acres in corn give more and better feed than 30 acres in hay did when I used it for winter feed. The ensilage from that amount of land will produce more and by far better butter than thrice as much in hay.

Now, as to cost: The present season I filled one silo 10x21x20 feet, and the total cost, including hire of engine to run the cutter, was $42, exclusive of board of men—had them (12 men) one and three-quarter days.

As to cost of raising corn, I do not consider that it costs me anything except rent of land (about $4 per acre) and seed (about one sack, 130 pounds for 10 acres), for the reason that I am engaged in farming and fruit-growing in connection with dairying, and keep a certain amount of help the year round. The planting and subsequent cultivation is done by this help at a time when they would not be occupied at anything else, or in other words, I hire no extra help or teams to do the work up to filling; and the ground being in fine condition for planting a crop of grain as soon as the corn is removed, amply compensates for any extra labor.

The above silage will feed 25 cows liberally for five months. A. P. MARTIN.

[This is an exceedingly interesting and important record of experience. Now, who else has used the silo, and with what results?—ED. PRESS.]

Dairying and Fruit Growing in Oregon.

[Address by PROF. C. H. SCHMIDT at the Farmers' Institute at Medford, Oregon, Jan. 28d and 24th.]

We are meeting here together for the advancement of agriculture and to profit by each other's experience. The field of agriculture probably is broader than any other field, and agriculture is like a mighty building which requires skilled builders and workmen to make the work progress and prosper. Farming as a profession is what we must look toward for multiplying happy and prosperous homes. This is the great question of the day to make two blades grow where before only one grew, to double the productions of our land, to increase the net income a hundredfold and to keep up the soil's fertility.

We can no longer be satisfied with the returns the farms give; it must be doubled and trebled. Quantity farming must be changed to quality farming; we must learn that in some measure that we feed the plant—the plant will feed us. Exclusive grain-growing and grain-selling spoils not only the farm but the community at large. When we sell $200 worth of wheat we take away $48 worth of plant food from the soil; when we sell $200 worth of butter we take away less than one dollar's worth of plant food.

FRUIT AND FERTILITY.

When we travel through our State we observe numbers of small fruit tracts set out recently, and doubtless there is money in fruit-growing if thoroughly understood, the trees planted in the right soil and afterward well cared for, but it is doubtless, also, that trees need considerable fertilizing material. We are now to a large extent setting out fruit trees on the flat land—without thorough drainage—but will probably soon learn that the rolling land and the hill land is more especially the profitable and lasting fruit land, while our other land will be much more profitably utilized for dairy purposes. The hill land will not only be benefited by manure for the plant food it contains, but it will tend also to serve an important office as a factor in retaining moisture during dry seasons. Dairying will therefore greatly aid fruit-growing indirectly by supplying manure for the trees, but this is by no means the only way; indeed, dairying comes directly to the assistance of fruit-growing, as the elder sister to a younger. Fruit-growing in the summer and dairying in the winter returns a golden harvest the year around. Dairying gives the fruit grower a much larger income, and what there is of great importance gives a sure income. The codlin moth, trying seasons, and sometimes bad markets, may conspire against the fruit grower, but leaves the dairyman undisturbed. Then again, the man starting in as a fruit grower has hard times the first five or six years, and here the gentle butter cow comes greatly to his assistance, paying off his mortgages and placing him on the high road to fortune and independence.

I call your attention to this beautiful picture, which you see here; it is of a wonderful Jersey cow; her name is Bissons Belle. She made 1028 pounds of butter in one year; think of one cow making $250 worth of butter in 12 months. It does not take a section of land to make a comfortable and happy home, when you are engaged in modern dairying. Fifty acres are plenty to make a good home and give all the boys and girls a good education and a good start in life. The speaker has been in many hundreds of such homes, where prosperity and happiness were visible on every hand. Mother had plenty in the storeroom and everything handy indoors, well clad, intelligent children, nicely painted houses and fences, good furniture, a piano and plenty of good reading; there were newspapers, agricultural papers, dairy papers and magazines; those homes were real homes, full of life, full of promise, full of satisfaction; yet the only gold mine they had to draw from was 50 acres.

Let us look a moment and see what income 50 acres will bring. We can feed 20 cows, two horses and half a dozen young stock, and still have 10 or 20 acres for fruit, and you will even see, if we have not cows as Bissons Belle, we will still make a large income. Mr. Goodrick of Jefferson county, Wis., had 20 cows, which the past year produced an average of 320 pounds of butter per cow, and returned a net profit of more than $50 per cow. That is to say, Mr. Goodrick had his feed, his labor, investment on capital paid at common rates, and a net profit besides of over $1000 on his 20 cows. Mr. R. H. Gage of Walworth county, Wis., had 350 pounds of butter per cow last year. Mr. A. Deverent of Deposit, N. Y., had 336 pounds of butter, average of 30 grade Jersey cows; his main feed is corn silage. Thousands of similar results could be cited from our Eastern brother; in fact, a majority of intelligent farmers throughout the East are just practicing what we have been referring to. Why should we not do the same in this State? We have undoubtedly one of the finest dairy countries in the United States, yes in the world—and we have a most excellent market. The city of Portland alone consumes over $2,000,000 worth of dairy products annually, to say nothing about the State at large and the Sound cities, which consume enormous quantities of dairy products, representing many millions of dollars, which to a large extent is coming from the Eastern States. It has been thoroughly demonstrated by Col. Cornelius of Washington county, Oregon, and many others, that under favorable conditions one acre will support a cow, raise feed enough for her the year around. Ten to twenty tons of silage corn to the acre can be grown nearly everywhere in the valleys and frequently on elevated land.

The Eastern States as well as Europe have taught us that grain-raising is starvation to the soil and an absolute hindrance for prosperity and development of the county, while on the other hand, when the gentle butter cow becomes closely associated with the members of the families, the bare floor becomes carpeted, the children get their education, prosperity takes the place of poverty and contentment the place of discontentment. Agriculture becomes as Washington said, the most healthful, most useful and most noble pursuit of man. Let it be recognized that prosperity in farming is education in farming. Only a few years ago Wisconsin and other Eastern States were mainly depending upon grain-farming, but they saw they went backward, and in marvelous short time has grain-farming had to give way to diversified farming and especially to dairy-farming. The earnings of Wisconsin cows alone last year was more than $20,000,000. We can do the same in this State and greatly benefit all classes and all professions. New York, Illinois, Wisconsin, Minnesota, Iowa, Indiana, and other Eastern States have their dairy schools, their dairy associations and model dairy farms, and are holding great numbers of Farmers' Institutes. We are anxiously waiting for our State to follow and lead.

THE VINEYARD.

Grapes and Raisins.

[An essay prepared for the Fowler meeting of the Fresno Farmers' Institute by J. H. LARUE, of Malaga.]

I consider the muscat is the best grape for making layers and large loose raisins for table use, as they have large berries and fine attractive clusters, which will always, I think, be in large demand, especially in the fashionable world, notwithstanding the fact that layers and loose raisins in boxes have been harder to place on the market at good prices than the sacked goods this season. This, however, is the first season that such has been the case, if I have been rightly informed. I do not think this depression will be long lived, especially for the first crop. There will always be a fair demand for choice goods, and fair prices will be the result if the goods are properly handled and placed upon the market in a business-like manner. It cannot be otherwise.

Of the seedless varieties the Thompson seedless in my estimation is preeminently the best. It has long, loose bunches or clusters, fair-sized berries, and are full of meat or pulp, which causes them to weigh heavier than those that have more water or juice. They are prolific bearers, and ripen about the time of the first crop of the muscat. Another great advantage about this variety is that it has little or no second crop. This alone would make it very desirable.

The sultana is a variety on which I am not posted. I would refer persons desiring to plant that variety to vineyardists who have had experience in that line of the industry.

IRRIGATION.

The amount of water used and time for using it depend entirely upon the quality of the soil. However, I would suggest a thorough irrigation in the latter part of the winter for light soils. I have had no experience in the red soils. As soon as the land is in good condition after being irrigated, break thoroughly to the depth of six inches at least, throwing the dirt from the vines, using a single plow close to the vine. It is more easily managed by both man and beast, and by so doing you are less liable to injure the vine. Plow the second time crossways, running one round with the land side next to the vine; then turn and throw the dirt to the vines. Be careful not to throw too much the first round, as it is not best to have the vine choked. A free circulation from below is very essential to prevent rotting, especially in the latter part of the season.

The third and last plowing should be the same way as the second, beginning in the center of the row and throwing the dirt from the vine. The third plowing may be done with a two gang plow, which does the work more rapidly and answers all practical purposes.

SULPHURING AND SUCKERING.

The next important step is sulphuring. This should be done at least twice, first when a majority of the buds are fairly started and again when the canes are from 12 to 16 inches long. The work should be thoroughly done. Things worth doing are worth doing well.

As soon as all of the buds have fully started, the suckering should be attended to with great care, as much depends on that part of the work to secure a good crop and the future of the vine. Suckering should be continued throughout the entire cultivation, as all superfluous growth detracts so much from the crop.

CULTIVATION AND SUMMER PRUNING.

Cultivation is very important and should be done carefully and thoroughly at least every ten days (once a week would be better), as long as the vines will admit of it. After the cultivation is finished take a weed-cutter (an implement made in the shape of the letter A), and go through as often as necessary to keep the vineyard clean.

As for summer-pruning, I pruned three times last season, beginning when the canes were about 12 inches long, by just clipping off the ends. In a few days I went over the

vineyard a second time, clipping off all that had attained the height of the first. I watched the growth very closely, and where the remainder of the canes reached the proper height I clipped them also. Whether it is best for the vine in the future, I do not pretend to say; but I do know that my grapes sunburnt but very little if any last season, while my neighbors who did not summer prune, had a grea many sunburnt, and that very badly.

THE APIARY.

Bee Culture vs. Horticulture.

GRIZZLY FLAT, January 24, 1892.

TO THE EDITOR:—The successful horticulturist is an enthusiast in his business, and I may also add so is the successful apiarist and all men who stand preeminent in their vocations and professions.

The man who plants trees and vines and takes an interest in his work is going to succeed. When he sees the mystic forces of nature respond to his well-directed energies and efforts a genuine pleasure thrills his soul, an intenseness is awakened in his nature, and he lives in a world of his own.

A successful horticulturist is a man of great skill, energy and learning, who canvasses the whole world to get new and improved varieties of fruit suitable for his location, and after grafting, propagating and hybridizing he relies on nature for the fertilization of their bloom.

He knows that several varieties of his fruits require the agency of bees in their fertilization, and he also knows that if stormy weather should come during their blooming time and wash all the pollen off, so that bees had no chance to fertilize them, the young fruit would not swell, but wither up and all fall off; especially is this true of the apple, pear and cherry.

The wind is a great fertilizer to trees that yield an abundance of pollen and whose blossoms are destitute of odor, but often during the opportune period of bloom there is too much wind or too little, and nature therefore does not place all her chances in a single venture, but brings into play bees and fertilizing insects.

A good many plants have the male and female organs in the same flower, and a person would suppose that they would be self fertilizing; but no, nature abhors anything relating to inbreeding, and the pistil of every plant will receive more acceptably pollen from a distant plant, and bees therefore act as agents in the cross-fertilization of their bloom, thus making the fructification of their bloom more certain.

The tiny drop of honey in each flower acts as a bait and encourages the bee in its work. In obtaining this minute drop of honey, the pollen being in close proximity to it, the bee gets more or less dusted with pollen, and each flower visited is mingled more or less with minute grains of pollen from surrounding blossoms, and is thus fertilized.

A bee starting out on a honey and pollencol-lecting trip generally confines itself to one kind of bloom until a load has been obtained. If it commences on apple bloom it will finish on apple bloom.

Without the agency of bees a great many varieties of fruit would be barren.

Professor Frank R. Chesshire, of London, England, states that in each apple matured, five fertilizations are necessary, and that if none are effected the calyx, which forms the flesh of the fruit, instead of swelling, dies and soon drops. Chesshire further states that the bees are not only florists but fruit producers, and the nectar and pollen obtained from the blossoms is their fee for their professional services.

It is stated on good authority that if a strawberry plant be covered with a fine cloth or screen of some kind during their blooming time, so that no insect could visit the plant, the blossoms will fail to form fruit unless hand-fertilization is resorted to.

A Nebraska strawberry grower after repeated failures of crops, bought some bees by a friend's advice, and with the advent of the bees strawberries came in abundance.

The crops of self-fertilized plants are not always reliable. D. M. Ferry, the great seedsman says: "We know it is claimed by some that peas and beans are self-fertilized, but we have learned that they are not always so, to our cost."

Therefore it will be seen that some plants that are said to be self-fertilizing will be greatly benefited by bees.

Mr. Darwin found that self-fertilized plants are very much inferior in vigor and power of constitution to plants that are cross-fertilized by the agency of the bees.

Most all flowers that yield a fragrance are more or less benefited by bees in their flowering season, and if bee keepers will observe, they will find that all the best honey plants are very prolific in perfume.

No doubt odorless flowers depend greatly upon the wind for their fertilization.

Prof. Gray calls the fragrance the flowers' advertisement. It is the fragrance that attracts the bee, not the color of the flowers.

Most all coniferous trees, grains and grasses are very prolific in pollen, and are therefore wind-fertilized.

The fields for improvement by cross-fertilization and the natural selection of the fittest is almost unlimited; the late improvements in strawberries have been accomplished by these methods.

An observing and successful horticulturist, noting the immense benefit derived from bees, is always their friend; no matter if they do suck out the juices of injured grapes or other fruits, he knows that their services are more valuable than the fruit juice they suck out.

As long as there is any natural bloom, containing any nectar to amount to anything, bees will leave the injured fruit alone; it is only when there is a dearth of honey secretion, that they suck up fruit juices. The fruit juice that bees gather is often death to them; the juice ferments and many times kills the whole colony; especially is this true when there are severe cold winters. The bees would always be a great deal better off if they would leave fruit juice alone.

Bee culture and fruit culture being dependent on each other, it is fitting that they should go hand in hand.

All fruit men should have a few bees, and all bee men should have a small or large orchard, as time would allow.

Some persons perhaps will remark: What is the use of going into so many businesses? A man has only time to learn one business in this world, and learn it thoroughly, and be fairly successful with it.

Yes, I will admit that there is considerable truth in that statement; but I think a little different. I think that a person can learn a business fairly well (well enough to make a success of it), and that he will have time to investigate the first principles of many sciences and businesses, thus increasing his observation and learning and enjoying himself better.

The successful horticulturist can take an interest in bees, without in the least detracting from his ability as a fruit culturist.

In California (especially Southern California), there are a great many bee men who are more or less interested in fruit culture, and with these two businesses combined, they prosper exceedingly well; if one business happens to fail, the chances are that the other one will help him out.

I know that there are several raisin growers that are antagonistic toward the bees, and possibly in large vineyards, where raisins are being dried in the sun, if there are hundreds of colonies of bees in the neighborhood, they may become a nuisance. In handling grapes, it is manifest that a certain per cent will be injured, and in the process of curing, the sugar and other saccharine matter that the grapes contain attract the bees, and consequently they will keep at work on the injured grapes as long as anything sweet can be obtained. Of course, injured grapes are not very valuable for raisins.

Bees never injure sound fruit, but work only on injured fruit.

The wasp and yellow jackets are the raisin grower's worst enemies. Certain species of wasps are paper makers and will not hesitate to tear a piece of skin from a grape, thus admitting the bees, and unthinking persons seeing the bees at work jump to the conclusion that the bees are the original trespassers.

This matter of bees injuring raisin grapes to any extent is greatly overestimated. I have the proof of a San Diego Co. raisin maker, who also thinks that the matter is entirely overdrawn; in fact, there are several persons who combine the two businesses in one location, and they find that they do not conflict.

If the raisin makers and bee keepers who are diametrically opposed to each other's businesses would meet and talk the matter over in a friendly bearing, the supposed injuries of the bees would dwindle into insignificance.

Of course, timid persons are continually afraid of being stung, where many bees are flying around; but if they will exercise a little caution and bravery, they will not get stung. Bees never attack anybody at a distance from their hives; it is only when a person is near the hives that they act vindictive and cross. Timid persons should always keep this in mind.

Why would it not be an excellent idea for the raisin makers to tell the readers of the RURAL PRESS to what extent they think bees are injurious to their business (it must be their own personal experience); and also raisin makers, who run apiaries in connection with their business, to give their opinions on bees and raisins?

S. L. WATKINS.

[It is also important that those who dry other fruits than grapes should say a word.—ED. PRESS.]

FLORIST AND GARDENER.

A Californian in Hawaii.

H. J. Rhodes of Carpenteria recently exhibited a number of interesting plants at the meeting of the Southern California Horticultural Society, and read an instructive paper on Hawaiian Vegetation. The following extracts are taken from the essay:

"The situation of the Hawaiian Islands within the tropics renders them particularly suitable for the growth of every kind of fruit and plant known to tropical or semi-tropical climates. The mercury seldom drops below 56 degrees, or rises above 80. The result is a very even temperature, and the most delicate plants are perfectly at home.

"It is well worth a trip to the islands to see the wealth of trees and plants, and especially the palms. They are simply magnificent, and words can scarcely describe their beauty. Side by side may be found the palms from California, and the most delicate plants from the East Indies; the hardy palmetto from South Carolina and the most beautiful varieties from Java and the South Sea Islands, all growing together with the same luxuriance.

"Among the most striking is the *Eureodoxia Regia*, or Royal Palm. Many of them reach the height of 50 feet, with smooth, symmetrical stems and a crown of leaves, some of them 12 to 15 feet long. The Sugar Palm is also very beautiful, growing quite as tall as the Royal Palm, but entirely different in appearance. It throws out long bunches of fruit stems that look like tassels, are often seven or eight feet in length, and give a very fine effect to the plant.

"There may be seen *Cocus Revoluta*, with stems a foot or more in diameter, and fronds three to four feet in length; also *Cycas Medina*, with stems 8 or 10 feet high, and fronds 10 feet long.

"The most striking and graceful of all is the cocoanut palm, that rises sometimes over 100 feet, with leaves sometimes 20 feet in length, with immense clusters of large nuts. They are scattered all over the islands, but mostly near the sea. There are large groves, and some of them are very old, being large trees when Captain Cook discovered the islands. The unripe nuts are very refreshing. The milk (or rather water, for it is clear and sparkling) has a slightly vinous flavor, and is very palatable, while the meat can be eaten with a spoon. In that state they are called custard nuts.

"Among the many fruits growing there, the mango is by far the most prominent. It bears immense quantities of delicious fruit. From February to October it forms a large portion of the food of many of the natives, especially the children. The fruit is considered public property, and is appropriated by any one wherever found. At the earliest streak of dawn the native children can be seen foraging for mangoes. They would be greatly surprised and indignant if they were refused the privilege. In many cases it is the only breakfast they get. The fruit is very nutritious and wholesome.

"There are very few fruits indigenous to the islands, but many have been introduced. A variety of Eugenia grows in the mountains, known as mountain apples. The guava grows in great abundance, but it is said to have been imported. Strawberries grow wild in some places. A few are grown for market, but the quantity is not large.

"They are beginning to raise grapes; the Isabella is the variety mostly grown. The Bread Fruit grows abundantly and is fine eating when baked. It has the flavor of a good squash and it is largely used by the natives. It is one of the most beautiful trees growing on the islands.

"Pineapples grow in great perfection, and large plantations are being planted. Bananas are grown largely for export; some steamers carry away as many as 7000 bunches at one trip. The variety exported is the Chinese Dwarf. There are many varieties grown there, and some of them are very fine.

"Oranges grow wild and are of good flavor, but somewhat fibrous. On the slopes of Mauna Loa grows a small shrub bearing a fruit not unlike a cranberry in appearance, but fine flavored. The natives call it Ohla. I shall import some of it into California to test it. If it would grow here, it would be a great acquisition. It is found at an elevation of 4000 feet, and I think it would do well here.

"There is one thing more I will mention, and that is coffee. It is found growing wild on all the islands, and is far superior in flavor to anything that I have tasted elsewhere. It promises to be a great success.

"Sugar has been their main dependence, but since the passage of the McKinley tariff bill they are turning their attention to other things. Eventually the McKinley bill will be a blessing to them, but it is pretty hard on them now, as it takes off $40 per ton from their sugar, and that much from 125,000 tons means considerable money and they will miss it."

FORESTRY.

Forest Notes from Australia.

LAMANDA PARK, Los Angeles Co., Jan. 24, 1892.

TO THE EDITOR:—The Forest Conservator's Report of South Australia for 1891 has just been received. The climate and conditions of that colony have many points of similarity with those of California, and consequently there is a considerable interest in their tree work for our citizens. In forestry, as in ballot reform, land transfer, railroad management, etc., this new community is far ahead of us.

The forest administration is now under Mr. Walter Gill, a distinguished and able man. He has in his charge 29 forest stations containing 227,135 acres.

The sugar gum has for a number of years been considered the best all-round forest tree adapted to South Australia. The last report shows the sugar gum (*Eucalyptus Corynocalyx*) to be still in the lead. Of the trees planted last year by the Forest Administration, there were of

Sugar gum, *E. Corynocalyx*	200 200
Blue gum *E globulus*	38 600
Manna gum, *E Viminalis*	61 800
Red gum, *E. rostrata*	37.600
Monterey pine, *P. insignis*	32,609

The other trees planted were in smaller quantities, making a grand total of 429,058. A grasshopper invasion destroyed all but 154,748. From this scourge the sugar gum suffered the most and the Monterey pine the least.

The Forest Administration also distributes trees for experimental planting and to encourage forestry.

This inquiry of citizens and their orders for trees shows the general relative estimate in which the different trees are commonly held. There were distributed in all 372,193 trees. Of these, the leading varieties were:

Sugar gum	216,606
Blue gum	14,963
Red gum	4,586
Manna gum	7,592
Monterey pine	53,892
Cluster pine, *P. pinaster*	8,302
Aleppo pine, *P. halepensis*	11,093
Pepper tree, *Shimis Molle*	7,570
Tamarix Gallica, *Tamarisk*	6 524

By this list, we see that the citizens followed a somewhat different course from the officials. We may also note that a good many of the trees, as the pepper, must have been for ornamental purposes. The sugar gums outnumbered all the rest of the trees put together.

The account of nursery stock for the coming season shows the same popularity of the sugar gum. Of the 965,525 trees in stock, 422,687 are sugar gums. The sugar gum stands drought and wind better than any tree adapted to South Australia. It will not, however, grow immediately on the sea coast where there is a strong and constant breeze. In such situations, it sea burns. The best tree for a sea breeze exposure is the Monterey cypress.

The cypress is, unfortunately, an inferior timber tree. The red gum, *E. rostrata*, seems to stand more frost than any of the popular varieties of eucalyptus.

ABBOT KINNEY.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Who of the California delegation in Congress is the farmer's friend? Read the daily proceedings of Congress and tell us who is the farmer's friend. Isn't it time for the farmers to have an advocate in Congress?

"In time of peace prepare for war." General election this fall. Look to the primaries; look to the convention; look to the interests of the industrial classes before you vote. No community can prosper, no people can be happy, no State can progress when agriculture and industry are overtaxed and when labor is not honored. See to it, fellow farmer, that some of the many honest tillers of the soil get your vote for public station. You can readily find many farmers who are competent to fill any office in the gift of the people. Unity of purpose and unity of action on the part of the farmers will accomplish a world of good in the field of politics and governmental management. See to it.

Study, if you will be the peer of your neighbor. This is a thoughtful age. We live in progressive times, surrounded by progressive people. If you are to keep up with events, you must work, not the muscular organs alone, but the brain as well. Leave some evidence by which others may see that you have been a somebody and that you have done something. You can always afford to stand for what you *know* to be right.

Placer county is to hold another session of the Farmers' Institute. Do other counties want an institute?

Give the children a chance in the Grange. The Grange is the children's second home. Have an open meeting now and then and let the little ones read, sing, recite and render dialogues for their own amusement and instruction, as well as for the good of the Order. Make your Grange a cheerful place. Nothing does more to break the monotony of life than the merry, winsome voices of the children. No home is complete without the little ones. No Grange is fully a success unless it looks carefully to the children in its jurisdiction. Be ye as little children are, and you are not far from the straight and narrow path. Remember the children.

Send your recommendation for County Deputy. But three counties have so far responded to the call. If recommendations are not made at once the Master will proceed to act upon his own convictions. Please attend to this matter immediately, Worthy Masters of subordinate Granges in each county.

Let subordinate Granges take immediate action on the official letter sent to each Grange. It is important for the Executive Committee to know soon how to arrange dates for the speakers who are to meet with the Granges. Don't fail to act, and don't fail to notify the Worthy Secretary of the State Grange of the action taken by your Grange.

Help build up the Grange. Take an application blank home with you and try, try faithfully to get one or more of your neighbors to join the Grange.

Sister L. A. Hawkins of Alabama, Chairman of the National Grange Committee on Woman's Work, is the author of a splendid article on "Woman's Sphere." The article is worthy of careful consideration.

A company of French capitalists and scientists have concluded to establish a perfume factory in California. This will open a new field of enterprise and industry. We assure our sisters of the Grange that there is not only pleasure, but there is to be money in the culture and growth of flowers. Let Sister Flora of the State Grange fully inform herself on this subject and then communicate said information, through the PRESS, to the sisters of the Grange. The field of thought is not circumscribed by a wire fence, nor is the culture of flowers without its rewards.

National Grange Proceedings.

During the past week a copy of the proceedings of 1891 has been mailed to the Master and Secretary of each subordinate Grange in California, also to postmasters and officers of the State Grange. If any have failed to receive them, please notify me. The report for this year is much larger than that for previous sessions, and contains much reading of interest to all Patrons.

Those receiving copies should select choice portions to present at Grange meetings. The secretaries will no doubt be pleased to loan the copy addressed to their care to the lecturer or other members who may be willing to examine and read or give condensed recitations of some of the most interesting portions of the volume under "Good of the Order" in their Granges.

We have a few copies left of both the State and National Grange Proceedings of 1891, as well as of some previous years, which we would be pleased to mail to Patrons desiring them who will send their request, with postage stamp.

A. T. DEWEY, Sec'y S. G. of Cal.

San Joaquin Granges at Lockefor .

Past Master Overhiser writes, Feb. 2, 1892, as follows: "I expect to go to Lockeford Grange Saturday, Feb. 6th. All the Granges in San Joaquin county have been invited and will meet at 10 A. M. I will install officers and we will have a harvest feast. Stockton Grange has received an invitation to attend Elk Grove Grange next Saturday also, and were informed that the State Master would be with them to install their officers."

ELK GROVE.—Worthy Master Davis expects to be with the Elk Grove Grange Saturday, Feb. 6th, which means a good time for those present.

Call for Special Meetings.

Desiring to open a vigorous campaign for the increase of membership and the establishment of new Granges, the Worthy Master, by a resolution of the Executive Committee, has addressed, through the Secretary of the State Grange, the following letter to each Subordinate Grange, looking to the holding of special meetings in all parts of the State:

Please ascertain at the first meeting, or earlier, if you can do so reliably, if your Grange will hold a *special* meeting, some time soon, on such a day as will best accommodate and save expense to the speaker sent by the State Grange. The expenses of the speaker or speakers will be paid by the State Grange (Subordinates may contribute if they so desire), and some one or more State Grange Officers will address the Grange, and other farmers, in public or private meeting, as your Grange may desire. The object in asking Subordinates to hold meetings, at other than regular date, is to economize time and save money for the State Grange. Adjoining Granges will be addressed on consecutive days, thus giving your members an opportunity to attend two or more meetings. Please answer on enclosed form as soon as possible, so the Executive Committee may be prepared to act, and act intelligently.

We hope every Patron will take an interest in bringing about successfully the business named in the above circular. Let every Grange consider well the matter, and aid in every way possible to forward the good cause. The holding of well-advertised public meetings whereby farmers outside of our gates shall become better acquainted with what the Grange is to day, through improvements that have been made from year to year in its managements, and the greatly increased advantages to be derived by membership (educational, social and pecuniary), will prove of great importance in forwarding our work and benefiting, we trust, thousands who are not now members of the stanch old Order of P. of H.

A. T. DEWEY, Secretary.

Lady Masters.

Last year California had three sisters good and true handling "the gavel" in Subordinate Granges. This year there are five already reported, as follows:

Miss Roxie Dennis.....Eden Grange
Mrs. S. C. Dunlap.....Placerville Grange
Mrs. Fannie Lawton.....Sebastopol Grange
Mrs. Mary E. Donalson.....South Sutter Grange
Miss E. E. Ashley.....Vaca Valley Grange

That's a good leap for leap year, isn't it? The brothers will have to be on their good behavior or they may find themselves ultimately in the minority of presiding officers, as they already are in individual membership. In proportion to members, we think California has more lady Masters this year than any other jurisdiction. How is that, Brother State Secretaries?

Executive Committee Resolutions.

The following resolutions were adopted at the recent session of the Executive Committee of the S. G. of Cal.

WHEREAS, Our Worthy Master has devoted to the interests of the Order a large amount of labor, and is being constantly called on to visit Granges, and whereas he has heretofore expended his own means; therefore be it

Resolved, That he use his discretion in making visits to subordinate Granges, and that his expenses be paid out of the Lecture Fund.

WHEREAS, It is important that our Worthy Master make an active canvass of the State in the interest of the Order; organizing, reorganizing and lecturing Granges:

Resolved, That upon the presentation of his itemized bill of expenses, this Executive Committee will admit the same and allow him three dollars per day for the time actually spent in such work. All such bills shall be presented monthly.

IN FAVORABLE CONDITION.—Quarterly reports for the term ending December 31, 1891, have come in quite promptly from nearly all Granges of California, together with the quarterly dues. The reports generally show an increase in membership, and nearly all the Granges in our directory are in a very favorable condition, and we may expect some excellent work done in the near future in nearly every quarter of the State.

DEATH OF FATHER HOOPER.—Bro. T. T. Hooper, for many years Master of Montezuma Grange, died at Benicia on Saturday morning last and was buried on Sunday P. M. from the Congregational Church. Many Patrons will remember the faithful old veteran long and kindly.

SONOMA COUNTY.—Pomona Grange has by resolution approved the Conger and Butterworth bills. The same Grange has by resolution protested against any appropriation by the supervisors of the county for a county exhibit at the Columbian fair.

FARMERS' ALLIANCE.

Alameda County Alliance Meeting.

A notable Alliance meeting was held at Liberty hall, Oakland, on the 16th inst., at which delegates were present from Warm Springs, Irvington, Niles, Pleasanton and Oakland Alliances.

J. L. Gilbert, State Lecturer, one of the most faithful and able members of the Order, State Agent J. M. Moore, Hon. J. R. Barton, Pres. of Placer County Alliance, and J. J. Morrison, Lecturer of the Second Congressional District, were among the able speakers present. Pres. Valpey opened the meeting at 10:15 A. M. Appropriate remarks were made by the President, and the usual committees were appointed, including the following: On Business Plans, Henry Tyson, H. R. Shaw and J. E. Jacobus; on Cooperative Banking and Loan Associations, E. Kelsey, A. T. Dewey and M. L. Gray; on Resolutions, Dewey, Tyson and Shaw. On request of Howard Overacker, Chairman, the standing committees on Cooperation and Constitution and By-Laws were granted further time. E. Kelsey of Committee on Conference with Federated Trades reported progress.

Mr. Barton made a most excellent and inspiring speech, criticising members of the Order in general, and committees in particular, for neglecting to properly perform their duties and live up to the great privileges of the Order.

Mr. Gilbert's bedrock speeches, remarks and advice also won him the true appreciation of all present. Mr. Moore, as usual, gave an excellent address, full of information and good advice. Mr. Morrison, in a modest way, also made himself very useful during the session.

The happiest feature of the occasion was the noonday lunch. The sisters from abroad brought full baskets, which were well matched with contributions from sisters and friends of Oakland Alliance, making a bountiful spread.

After lunch, toasts and responses were given in a lively way for nearly an hour, the uninitiated invited guests who could not attend the closed meetings being more especially called upon. Among those who were very able and entertaining in remarks were Judge E. M. Gibson, Mrs. C. P. Stetson, Mrs. Loomis and Mr. Finson. This pleasant feature of the day will no doubt be long and pleasantly remembered. The followfng are among the resolutions adopted:

Resolved, That we adopt some system of cooperative buying that will not interfere with our present system but embracing the Rochdale system, not necessarily in its entirety, but such part of it as we think would be of benefit to us, and that a committee of three be appointed by the chair to report at our next meeting.

Resolved. That a committee of three be appointed to investigate cooperative banking and loan associations, and report to this body at its next county meeting, looking to the establishment of such a State or county institution.

Resolved, That we heartily endorse the National platform adopted at Ocala in 1890, and reaffirmed at Indianapolis in 1891; also the demands of the State F. A. & I. U. of California adopted October, 1891; also the recent proclamation of Pres. Marion Cannon requesting Congress not to grant bonds to any private corporation or association for building a Nicaragua canal.

The bill of Commerce and Finance by Mr. E. Kelsey, which has been introduced in Congress by Hon. Jerry Simpson (in a measure a substitute for the sub-treasury plan), was read and endorsed, and recommended to the favorable consideration of the State and National Alliances. We hope to find room for this document in our columns later.

Quite a number of brief and excellent speeches were made by different members. Pres. Valpey handled the gavel admirably.

In the evening a union meeting of members of different progressive organizations and other citizens interested in reform movements of the day, was held. Nearly all present seemed determined in favor of the People's Party movement.

The Alliance and the Canal Project.

Citizen's Alliance of Sacramento county has adopted the following resolutions:

Resolved, That we do protest against the proposed issuance o bonds of the Nicaragua Canal scheme. That to issue said bonds would be a repetition of Pacific Railroad experience—Credit Mobilier Scandal—and would mean a watered stock corporation of five times the amount issued.

Resolved, Further, that should the Congress of the United States believe the canal a necessity, then the Government should build one and control the same, and that it shall be free to vessels floating the American flag.

The Highland Park Alliance has adopted the following resolutions:

Resolved, That we enter our protest against the proposed issuance of bonds of the Nicaragua Canal scheme; that to issue said bonds would be a repetition of Pacific Railroad experience and Credit Mobilier scandal, and would mean a watered stock corporation of five times the amount issued.

Resolved, Further, that should the Congress of the United States believe the canal a necessity, then the Government should build and control the same.

Farmers' Alliance Mill.

Watsonville Rustler.

An open meeting of the Farmers' Alliance was held in the Opera House last Saturday afternoon, the object of the meeting being to consider the proposition of establishing a flour mill at Gilroy, said mill to be built and managed by members of the Farmers' Alliance in the counties of Santa Clara, Santa Cruz and San Benito. Mr. Ellis, of Hollister, a prominent member of the organization, addressed the meeting upon the subject under discussion, and set forth the advantages that farmers would derive from taking stock. The idea is to form a stock company to build and maintain the proposed flour mill, said stock to be issued only to members of the Farmers' Alliance, the number of shares that may be issued to each individual to be limited, thus precluding the possibility of a "freeze out game." The farmers around Gilroy and Hollister are taking an active interest in the matter, and the object of Mr. Ellis' visit to this city was to awaken a similar interest among the farmers of the Pajaro Valley.

Call for Special Meetings.

The State Secretary has returns already from a few subordinate Granges in answer to the Master's query as to the disposition to hold a special public or closed meeting at a date convenient for some State officer to visit them while on a circuit of Grange visitations. Every answer so far is favorable. Soon as regular meetings are held, let us hear from the balance of Granges.

THE Executive Committee and State President of the F. A. & I. U. of California have appointed J. L. Gilbert of Reedley, Fresno county, and Jesse Poundstone of Grimes, Colusa county, delegates to the conference to be held at St. Louis, February 22d, 1892.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

SEEDING BLUE STEM WHEAT.—Pleasanton *Times:* A carload of 40,000 pounds of white Australian, blue stem, seed wheat, arrived lately for the Rancho del Valle, formerly known as the Black and Rose Tracts. They are planting about 500 acres out to this wheat.

Butte.

BEE TREES.—Oroville *Register:* Owing to the abundance of suitable food for bees the latter are not here obliged to lay up the store of honey that is requisite during the long winter months of the Eastern States. In the mountainous parts of the county, especially from 3000 to 6000 feet in altitude, there are many bee trees. In the vicinity of Mooretown, Magalia, Lovelock, Powelton, Lumpkin and Merrimac mills many bee trees have been found. In those high altitudes the bees seek the pine and fir, but lower down they use the oak in which to lay up their saccharine stores. D. K. Perkins tells us that an altitude of 6400 feet in the vicinity of the Golden Summit mine, a number of bee trees have been found during the past year.

A LARGE ORCHARD.—Biggs *Argus:* On the fine orchard and nursery of Alexander & Hammon on Rio Bonito, they have 50 men at work, some engaged in winter-grafting scions, cut from budded trees, into seedling roots, while others are planting pits and doing all kinds of work pertaining to the business. They will have a half million grafted trees before the work is finished. In apples alone they will have over 50 varieties. Besides the 100 acres which composed the nursery from which thousands upon thousands of trees have been shipped this year they are preparing another 100 acres for this year's planting. On the 200 acres of nursery land they expect to raise and prepare for market next year over 1,000,000 trees. Besides planting their immense nursery, this firm will extend their 300-acre orchard westward to the county road, which will add thereto another 100 acres.

TREE-PLANTING.—Oroville *Mercury:* In an interview with H. C. Hills of the Thermalito Colony Company, he mentioned the following who are preparing land which will be set to trees: Colonel Frank McLaughlin's beautiful 140-acre tract is being plowed, and before the season closes will be entirely set to orange trees, making it one of the largest groves in the State. M. Goodrich of New York is planting 15 acres to oranges. W. J. Martin of Oakland, 20 acres to oranges. F. O. Stanton, clerk of the Palace hotel, San Francisco, 14 acres to oranges. Dr. T. W. Serviss, five acres to olives. Neal Anderson, five acres to oranges. Major Fisher is preparing the "Twelve Trees" place for oranges. J. M. Sloane will put five acres in Mediterranean Sweets. Geo. Gable and W. W. Will are planting 40 acres to deciduous trees in North Thermalito. H. J. Langdon is preparing 100 acres of land for Col. E. S. Weeden of Chicago, which will be planted to oranges and olives. Not only in Thermalito, but in Palermo and other surrounding colonies, are extensive preparations being made to put out hundreds of acres of trees. The shipments East have established a high market price for Oroville oranges, with great resulting good to the whole community.

Colusa.

CROP PROSPECTS.—Colusa *Sun:* Crops so far are looking well. The land along the river has been mostly seeded, but there is much grain being put in every day. One week of fair weather will see most of the wheat in the ground. The season has been an exceedingly favorable one, although the summer-fallow wheat is not nearly so forward as we have seen it at this date. It is far enough advanced however for good results.

Contra Costa.

FRUIT SHIPMENTS.—Martinez *Democrat:* The amount of grapes shipped from Martinez during the past season by boat and rail is as follows: Per rail—Table grapes, 707,400 pounds; wine grapes, 1,146,010 pounds; total, 1,853,410 pounds, or 976.7 tons. Per boat—Wine grapes, 1,872,000 pounds; table grapes, 816,125 pounds; total, 2,688,125 pounds, or 1344⅛ tons. Besides the above, there were shipped during the season, per the California Transportation Company's boats from Martinez 2900 boxes of peaches, averaging 40 pounds to the box; 5965 boxes of pears, averaging 50 pounds to the box; 849 boxes of apples, averaging 50 pounds to the box, and 672 boxes of dried fruit, averaging 80 pounds to the box.

Glenn.

AN EARLY FRUIT BELT.—Willows *Journal:* Glenn county is fortunate in having an early fruit belt. The land in the vicinity of Fruto, a few miles west of Willows, will produce as early fruit as Vacaville or any other spot in the State. The soil being a light sandy loam, and being protected from frosts and cold by the mountains to the west and hills to the north, is considered by experts to be equal to the best for early fruits. This soil needs little or no irrigation, and proper cultivation will keep it in first-class condition. In a few years the fame of Fruto will be known far and wide, and the fertile lands between Willows and Fruto will become one vast orchard and vineyard.

Kern.

FARM NOTES.—Bakersfield *Californian:* About six years ago, perhaps 5000 acres would cover the whole number of acres planted in the Tehachapi valley with wheat and barley. It is estimated that at least 30,000 acres have this season been seeded over the area planted last year. The mountain valleys do not yield grain alone for their harvest, but fruits; especially apples are found to be a product of exceeding excellence. The apples are not only large and handsome, but keep well and are of delicious flavor equal to any, no matter in what part of the world they are raised. * * * In the Rosedale Colony this season nearly 4000 acres of virgin land have been plowed and seeded to wheat for the first time. Stoner & Duncan have 640 acres, Spangler Bros. 900 acres, the Kern County Land Co. 900 acres, Mr. Underwood 200 acres, Mr. Pierson 100 acres, Mr. Smith 100 acres, and in sundry small lots 600 to 800 acres. The grain is all up and looking finely, and with a seasonable rain a splendid crop will result.

CUMMINGS' VALLEY FARM NOTES.—Cor. Bakersfield *Echo:* Cummings' Valley contains about 16 sections of land and is connected with Tehachapi valley by a deep canyon of two miles, where it widens out into another valley of about 20 sections. A crop here is a certainty, for the mountains always absorb the moisture, while the valleys are dry. It began raining here on Dec. 4th and has kept up almost incessantly ever since, until now we have had about 16 inches of rain. The certain yield is from 12 to 20 centals per acre, and we have the enormous advantage over other sections that if, by any possibility, the crops should fail for grain, hay always commands from $12 to $18 per ton. Our hay market is always sure, the great mining camps of Daggett, Calico and Southern California consuming more than we can produce at from $12 to $18 per ton. All this land, only about eight years ago, was only considered fit for a cattle range.

REMARKABLE GROWTH.—Bakersfield *Californian:* R. Frisselle brought from the Rosedale vineyard one branch of the past season's growth, from a vine not yet two years old. The branch is about eight feet long, but the remarkable thing about it is its size. Six inches nearest the butt it is over one and one-quarter inches in diameter; then come two feet, averaging one inch in diameter; next 15 inches, three-quarters of an inch in diameter; then two feet, five-eighths of an inch in diameter, and after this a foot, one-half inch in diameter, and next branches tapering down to something small enough for cutting. When one thinks of a growth of nearly one and one-half inches in diameter within one season it is a most remarkable effort of nature.

Los Angeles.

THE SARDINE AND THE OLIVE.—Pomona *Progress*: The putting up of sardines is likely to become an immense industry in this State, now that the interest in planting olive trees promises to result in the production of olive oil in sufficient quantity for the purpose. Our waters are teeming with those delicate little fishes, and there is tin for the cans in the Temescal mines, and it goes without saying that capital is ready, so that nothing is lacking but the olive oil in which to preserve sardines; that will be forthcoming in time, now that olive trees can be produced cheaply by the method discovered by K. McLennan, superintendent of the Pomona Experimental Station while connected with the Station at Berkeley. He there succeeded in rooting herbaceous cuttings of the Navadillo and Manzanillo olives under glass, which were planted out and in four years from the cutting the trees bore fruit. John S. Calkins is propagating some 40 varieties of olive trees by this method here in his glass houses heated by hot water pipes, on Libbie St., just south of the Palomares hotel. He has now 400,000 cuttings planted in his houses, and will continue putting in till about the 1st of March, when the number will reach fully half a million. During this spring the rooted olives will be planted in his nurseries at Casa Blanca, near Riverside, and here in Pomona. As soon as the houses are empty, the filling in of cuttings will begin again, which will be rooted and ready to go out in the nurseries during the autumn months. [The method of propagation alluded to is that generally known as the "small cutting" plan, which is now common among olive propagators.—ED. PRESS.]

Monterey.

NO GLANDERS FOUND.—Salinas City *Democrat:* Dr. D. F. FOX, the veterinarian, who was sent south by the Board of Supervisors to investigate several reported cases of glanders among horses in Slacks canyon, says that after a careful examination of the horses in the region said to be infested, he was unable to find any case of the dread disease. He, however, found one horse with symptoms of glanders and had the animal placed in quarantine to await further developments. An examination of the Wayland horses, among which Dr. Buzard recently found the disease and had some of the animals killed, showed the disease to have been eradicated entirely, and a clean bill of health was given.

A GROWING GRAIN SECTION.—Salinas City *Index:* S. M. Shearer bought the first barley at King City of James Lynn in 1886, amounting to 30,000 sacks; also bought of Thaddeus Berry 1000 sacks of barley, and of J. C. Holmes 1000 sacks of wheat at San Lucas, being the first grain of any consequence shipped from those points. Now immense quantities of grain are annually raised in those sections which, for their cereal products, are becoming more important every year.

Napa.

DISPLACING THE PLOW.—Napa *Register:* Before the fall rains commenced this season, several farmers in this vicinity used disc or cutaway harrows or cultivators of different patterns to prepare ground for barley, wheat or oats. Some grain or hay land was sown before cultivating. These harrows seem to be growing in popularity with farmers, and the result of the harvest next fall on fields thus prepared will be closely watched and freely commented upon.

OLIVES TAKING THE PLACE OF VINES.—Napa *Register:* Eight years ago, F. Borreo planted on his hill ranch near Napa Soda Springs, 1500 olive trees of the Picholine variety, that have made excellent growth and have fruited well. He is this season planting in his Bay View vineyard, 3000 Mission olive trees, each of which takes the place of every third vine. This brings the trees 21 feet apart. Olive trees planted in the red soil on Mr. Borreo's vineyard commence bearing fruit at the age of five years. His eight-year-old trees bore about a gallon of berries per tree. The proprietor of this olive orchard is very careful to fertilize them at stated periods. "It is considerable work to do this," said Mr. Borreo, "but it pays. The trees make a more vigorous growth and bear more and larger fruit." That Napa-grown olives will make an excellent quality of oil has been proven by repeated experiments. That olive culture will at not a very distant day become one of our prominent industries is evident to any close observer. In many of the vineyards near St. Helena, especially among those on the hills on either side of the valley, many olive trees are being planted this winter, the owners having in view the same idea entertained by Mr. Borreo, which is that if the vineyards are destroyed by phylloxera, or any other cause, the olive orchards will remain. There is at least one fine olive orchard in the hills near Calistoga.

VETERINARY SURGEON APPOINTED.—*Calistogian:* The Napa county Board of Supervisors took the following action in reference to the glanders. It having come to the knowledge of this Board that a case of glanders exists among the live stock of this county; now in pursuance of the provisions of Ordinance No. 29 of the county of Napa, it is hereby ordered that Newton Cossitt, a competent veterinary surgeon, be and he is hereby appointed to examine into such case and any other cases of glanders or contagious disease among live stock that he may have reason to believe exists in this county, and if he shall find such disease to exist, said veterinary surgeon shall require the owner of the diseased animal to deprive the same of life as required by law and the form of said Ordinance.

Sacramento.

HOP NOTES.—Sacramento *News:* No contracts are reported during the week, growers declining to article on the basis of 12½, which is all dealers will offer for new crop 1892. Already the contest for the first bale of 1892 hops has begun and different growers are inclined to wager small amounts as to their chances. Pruning will commence in two weeks, and some plowing will be done earlier. The increase of the last acreage will be much larger than supposed a few weeks ago, a number of old hopmen having lately announced their intention of re-embarking in the industry. P. M. Rooney may be mentioned among this number. T. B. Lovdal and C. L. Munger will add to their yards. W. H. Leeman will increase his plant by 30 acres of new hops. W. F. Menke will build a new kiln and cooling rooms, as will also J. J. Merkley of Yolo.

San Bernardino.

PLOWING AND SEEDING.—Chino *Champion:* Plowing and planting are going steadily on over the Chino ranch. The steam plow is now at work east of Euclid avenue on land that had never been plowed before, and about a dozen gangs with teams are at work at different places.

CITRUS TREES FROM FLORIDA.—Ontario *Observer:* J. T. Lindley has received from Florida nurseries 20,000 orange and lemon trees. The trees arrived in fine condition, and are as smooth, fine and vigorous as any ever imported. The stock is the Florida sour variety, the buds being from the groves of Ontario and Riverside. Among the varieties of orange trees received are the Malta Blood, Ruby, St. Michael, Valencia Late, Washington Navel, Mediterranean Sweet. Villa Franca and other varieties of lemon are also carried.

FRUIT TREE STATISTICS.—Cor. *Times-Index:* There is now planted in orchard form in the Mission, Old San Bernardino, 154,452 orange trees, budded and seedling. There are now in nurseries ready for removal 81,600 orange trees in budded and three-year-old seedlings. Number of peach trees 32,599, and 97 acres of apricots. The largest apricot orchards are those of Wm. Curtis and H. H. Cole, and they pay well every year.

San Joaquin.

WHEAT FIGURES.—Stockton *Independent:* A prominent grain dealer says that at the close of January 44,000 tons of wheat were on storage in this city. The local consumption in January was not as large as usual because Sperry's and the Crown Mills were shut down most of the month to make the annual overhauling of machinery. The output of grain in December was 18,000 tons, but in January the reduction in stores was 9300 tons. Three large flour mills will be in operation from this time forward, and with the fourth mill, near the railroad, the daily consumption of wheat will be about 500 tons. Monthly, the local mills will require about 13,000 tons of wheat, and if there were no outside stores to draw from there would be a shortage here, but the mill men say they have piles of grain in country warehouses which they can call in any day, and besides they are buying grain every day, so there can be no great shortage before the new crop comes in.

San Luis Obispo.

GRAIN CROPS AT SIMMLER.—Cor. San Miguel *Courier:* The early sown grain is growing nicely. The farmers are most through seeding. There is a greater acreage sown than ever before, and the grain is put in in better condition. Early-sown grain in Sunflower looks well. Many of our farmers are summer-fallowing for fall sowing.

Santa Clara.

GRAIN NEVER SO PROMISING.—Gilroy *Gazette:* Expert farmers of this section say that the croaking that is being done by some about the so-called dry spell is entirely uncalled for. Grain they say never looked better than now, and if rain gets here again between the first and middle of next month there will be no trouble about crops.

TREE PLANTING AT CAMPBELL.—Cor. San Jose *Mercury:* The magnificent rain we have been having has been worth a great deal to grain fields and pastures. Orchards were not needing rain, except that the ground was getting rather hard for plowing and cultivating. Many trees have already been planted out and ground prepared for many more.

Santa Cruz.

INCREASED ACREAGE TO BERRIES.—Watsonville *Pajaronian:* The rain interrupted the work of planting vines in the new berry fields which are being set out in this section. There will be a considerably increased acreage in berries this year.

Shasta.

INCREASED YIELD OF FRUIT.—Anaheim *Enterprise:* This year will yield a considerable crop of fruit from the orchards planted in 1888. It will include such plants as the Alexander in Happy Valley, the two extensive Frisbie orchards, and Weaver & Campbell's 50 acres on the bottom near town. Especially will the increased production be noticed in peaches, while the prunes and Bartlett pears will come in for a good share though not a heavy yield.

Stanislaus.

GRAIN SEEDING ON THE ADOBE. — Oakdale Cor. Modesto *Herald:* A large area has been seeded on the adobe lands in the vicinity of Dry Creek during the late beautiful weather.

Sutter.

COMMENDABLE COURSE BY THE FRUIT COMMISSIONERS.—Marysville *Appeal:* The Sutter county Board of Horticultural Commissioners are using every endeavor to destroy the fruit pests in Sutter, and at present they are devoting their attention to the nurserymen. In order to prevent the dissemination of scale from infested nurseries, nine local inspectors have been appointed, and the trees in the nurseries in the vicinity of Yuba City are carefully inspected one by one before they are allowed to be shipped. Mr. Bogue placed an order last fall with a nursery in Alabama for an assortment of trees, including peaches. As the Fruit Growers' Convention held in Marysville last November condemned the practice of importing Eastern peach trees, on account of the danger of introducing the "yellows" and the Eastern peach root borer, Mr. Bogue promptly canceled his order as far as peach trees and nursery stock on peach root was concerned. However, as it was not supposed to be at all dangerous to import plum trees on their own roots, from districts not affected by the curculio, Mr. Bogue received a consignment of Simon plum trees. These were opened in the presence of the Horticultural Commissioners, and on being examined several of them were found to be infused with a root borer. Specimens were immediately submitted to Alexander Craw, State Quarantine Officer, who pronounced them the dreaded *Eastern peach root borer.* The consignment was at once quarantined and Mr. Bogue has offered to destroy the entire lot and to import no more trees from the East.

Tulare.

TREE-PLANTING AROUND VISALIA.—Visalia *Times:* We give below, as nearly as we have been able to ascertain it, the acreage to be planted in trees in the immediate vicinity of Visalia this season: Encina Fruit Co., 200 acres; Visalia F. and L. Co., 220; Evansdale Fruit Co., 35; Flemming Fruit Co., 30; Mineral King Fruit Co., 200; Cain Fruit and Nursery Co., 110; Land and Raisin Co., 25; Kelsey place, 40; H. C. Ray, 20; W. C. Pendergrass, 5; J. W. Fewell, 8; Robert Ogden, 15; E. Valgard, 40; J. A. Patterson, 12; C. W. Updyke, 10; Horace Thomas, 15; S. Z. Curtis, 30; Wallace & Morton, 200; Bishop Ranch, 200; Dan Switzer, 10; Thos. Jacobs & Bro., 40; C. Bergstrom, 5; Charley Lindsey, 15; C. J. Giddings, 20; Geo. Birkenhauer, 4; W. H. Hammond, 10; T. Mills, 15.

PLOWING AND SEEDING AT EXETER.—Cor. *Times:* Farmers are still very busy putting in their crops. Some are nearly done seeding, while others will be kept busy until the 1st of March to get their crops in. The ground and weather have both been very favorable for pushing the work, and farmers generally have availed themselves of these advantages. The result will be a very large acreage sown to the cereals.

Ventura.

A LARGE HORSE RANCH.—Ventura *Free Press:* The ranch of J. D. Patterson, near Hueneme, contains in round numbers 5680 acres in the ranch, and it is all divided and partitioned off in order to be most convenient for handling the horses and raising grain. At the present time there are 450 head of horses on the place, some of which are very high bred. They do not raise anything but solid horses, such as draft horses and the like, and do not incline toward fancy stock. The ranch sells from 250 to 500 head of hogs each year, and last year raised 20,000 centals of barley for sale. To take care of this big place requires as much precision and study as to run a machine shop. There are now 15 men employed besides J. D. Daly, the manager. They have their own blacksmith shop and do much of their own work.

THE HOME CIRCLE.

Two Towns.

Brother! you with growl and frown,
Why don't you move from Grumbletown,
Where everything is tumble-down
And life is always dreary?
Move over into Gladville, where
Your face will don a happy air
And lay aside the look of care
For smiles all bright and cheery.

In Grumbletown there's not a joy,
But has a shadow of alloy
That will its happiness destroy
And make you to regret it.
In Gladville they have not a care
But what it looks inviting there,
And has about it something fair
That makes them pleased to get it.

'Tis strange how different these towns
Of ours are! Good cheer abounds
In one, and gruesome growls and frowns
Are always in the other.
If your skies of ashen gray
Would change for sunny smiles of May,
From Grumbletown, oh, haste away;
Move into Gladville, brother.

—*Samuel Walter Foss.*

A Leap Year Lyric.

I.

If, hiding now my face from thee,
I should reveal my heart,
And thou therein couldst only see
How dear to me thou art,
Thou wouldst not wantonly disdain
A sanctuary where
Thine image must enthroned remain
The sovereign idol there!
Then howsoever high thy state,
Mine howsoever low,
I would not murmur at my fate,
Nor weary of its woe,
For I would know thy heart had seen
No heart so leal as mine,
And wert thou worshiped of a queen,
Less royalty were thine!

II.

I would not quench this fashion fraught
With tenderness so sweet,
Though I may only lay in thought
Its treasures at thy feet;
For if, concealing from thy sight
The altar and its flame,
I pass again into the night,
As lonely as I came—
Unseen thy sorrows still to weep,
Unknown thy joy to share,
One hope would yet survive to keep
My spirit from despair;
Mayhap a fairer day will dawn,
And I may live to see
Thyheart from lighter loves withdrawn—
Then thou wilt come to me!

—*Theo. H. Hill.*

The New Botany.

[Written for the RURAL PRESS by MARGARET B. HARVEY.]

"To minister delight to man,
To beautify the earth."

As little children we learned these lines by Mary Howitt, and thought we knew why flowers were created. But now the wise men of science are telling us that we were all wrong—that Mary Howitt did not know what she was talking about, that our belief in the beautiful ministry of flowers must perish like the other innocent delusions of childhood.

I like to think that the flower is the crown of the plant and that the lovely colors of the blossoms are their own excuse for being. But now I am told that colors in flowers exist solely for the purpose of attracting insects, and that flowers only appear when the plant is in a degenerate or impoverished state.

The fragrance of a flower is not "prayer-breathing incense," nor anything like it. It is only a lure for moths, butterflies or bees to draw them to the honey. The colored streaks so often seen on petals, as in the pelargonium and pansy, are "honey guides," or tracks to the center of the flower, which lines, an insect's feet will instinctively follow. Petals themselves are nothing more than resting places for insects.

White flowers generally attract insects that fly at night, as white corollas are more conspicuous in the dark than others. Such flowers as have tubular blossoms draw the insects with long feelers. It is to attract nocturnal insects that some flowers are more fragrant at night than at any other time, and flowers having inconspicuous corollas often make up for the deficiency by heavy perfume.

According to this, it would seem that a flower was a mere convenience for insects. Some scientists to-day would have us adopt this view. They say that if God did directly create flowers, He did not care whether man would ever see them or not—man was left out of the question altogether. And He did not create them for His own pleasure—such things as flowers are beneath His notice. And He did not care whether they were beautiful or not—His first thought was to gratify the insect. Some flowers are not beautiful; they have no need to be, for they can be fertilized by the wind. Among these are the blossoms of grasses and forest trees.

I like to think that I am as good as an insect, seeing that I am of more value than many sparrows, and I love to remember that when our Lord was on earth He noticed the lilies of the field. However, my mind isn't strictly scientific. I would rather believe that the insect was the servant of the flower than that the flower was the convenience of the insect; for, in these days, we must adopt one conclusion or the other.

It is now pretty well established that there is a closer relation between flowers and insects than was ever suspected until recent years. One cannot exist without the other. We have long had a high appreciation of the bee, but it is only lately that we began to believe that it had anything more to do than to gather honey. Now the fact has become well known that in New Zealand and elsewhere clover never perfects itself because there are no bees. A great law in nature is that of *cross-fertilization*, as necessary in the vegetable kingdom as in the animal. A bee on its travels carries the pollen from one flower to the seed-vessel of another, serving the plants even more than robbing them.

And we must revise our judgment of the butterfly and the moth. From time immemorial these have served as the emblems of foolishness and uselessness, as contrasted with the industry of the bee. But they fill quite as important a place in the economy of nature as the bee does. The only great difference is, certain species of flowers attract one kind of insect, while other species attract others, and humming birds, as well as other birds, sometimes aid the insects.

When the flower is fertilized it begins to wither away. It has no further need to attract insects. The plant may recover from its impoverished state, which showed itself in an excess of colored leaves. A regular green leaf is the only perfect one—*petals*, or flower leaves; *sepals*, or calyx leaves; *stamens*, or outer central organs, and *pistils*, or inner central organs, are all imperfect or undeveloped leaves. Had the plant been in a perfectly healthy condition, these would have all been green and properly arranged in branches. Flower-bearing then is a species of sickness in a plant. Its life and vigor can be prolonged if it can be kept from bearing.

This is the science of to-day, strangely as it may sound. It seems like a step backward. It reminds us of the old dogma, now well-nigh outgrown, that the conditions of birth in the human family are the result of a curse.

Before the plant can recover it must ripen its fruit. But ripening means withering or rotting. The brilliant colors of the peach are but the beginning of decay, caused by the plant giving it less and less of nourishment. The bright hues of autumnal leaves are traced to a similar cause. Frost has nothing to do with the phenomenon, any more than it has with the pink of June roses, or the scarlet of March's maples. To change color in autumn is the natural way for the leaves to ripen—or, more correctly, to degenerate. The reason is the leaf is losing its nourishment.

A plant is in a perfect state only after it has ceased bearing, or before it has commenced. That is, when it is producing the largest, handsomest leaves, or all green leaves. We begin to see now why so many plants bloom before the leaves appear, or why the leaves grow larger after the flowers and fruit have gone. It is because producing leaves is the real business of the plant—perpetuating the species is a troublesome interruption. Plants don't exist for flowers and fruit at all, but for such commonplace uses as to furnish food to animals, to shelter them and to influence climate and rainfall. Man may delude himself into the belief that plants are beautiful or ornamental, but these ideas had no place in the original purpose.

If there *was* a purpose, scientists admit that there may be a great First Cause, but it is many degrees farther away than we had previously supposed. There is no design in the fact that a wild rose, in a state of nature, always has five petals, while a lily has six. These numbers were accidental, while the petals themselves grew out of the necessities of some insect. Flowers, as we know them, are later luxuries in the vegetable kingdom. Such brilliantly colored blooms as lilies and orchids are recent developments after a long series of monotonous ferns and lycopodiums. Are we to conclude that the vegetation of to-day, with its gorgeous blossoms is in a degenerate state?

Until recent years, botanists supposed that plants lived on elements drawn from the air, the water and the earth. But of late the surprising discovery has been made that there were such things as *carnivorous plants*. If insects fertilized plants and insects fed upon plants, it ought not to be so very strange that plants sometimes fed upon insects. The first plant known to be carnivorous was the *Dionæa muscipula*, or Venus' fly-trap, of North Carolina. This has leaves armed with singular-looking hairs. The leaves are remarkably irritable, closing suddenly at the slightest touch. The hairs imprison the unwary insect that may have stepped upon a leaf. It has been found that the leaf secretes a peptic fluid, which actually digests flies and gnats.

Quite lately the list of carnivorous plants has been extended to include the sundews and butterworts. Now the question arises, May it not be extended indefinitely? If the world is teeming with animalculæ, may not *all* plants be carnivorous, even those never before suspected to be such? The question opens a field for research well nigh boundless.

Whatever we may think of the new science of botany, we may at least be sure that it is something quite different from the botany of the old scientists. Not that they were wrong, always—but that the science includes more. The new botany is but 15 years old, or less; its votaries are so few that they can be counted on one's fingers. Now, what a golden opportunity for our growing girls—why should they not distinguish themselves in this line as well as any other? If the leading scientists of the future are to be women, let the girls begin now and extend the new lines in botany. Perhaps it will be theirs to prove that the botanists of to-day are not quite right after all—that flowers really do exist,

"To minister delight to man,
To beautify the earth."

—Every man in the world is telling what he would do if he were a woman, and every woman is telling what she would not do if she were a man.

How Cornelius Flynn Pleased the Old Folks.

"Yes, Mrs. Haley, I was wunst jilted, as ye call it," said the handsome Irish Canadian, as he settled himself in a comfortable position in which to tell a story.

We, the children of the house, gathered about to listen, for there was an attraction about Corneil's stories that made us forsake our games.

We young ones were all born in Canada, but our parents were Protestant Irish, and we had the sense of humor which belongs to that wit-loving race.

Corneil was in a happy frame of mind that night, owing to the near approach of his second marriage.

Mother had heard from a not overly discreet neighbor that in her youth she had refused an offer from Corneil Flynn. Therefore when Corneil in his elation over his approaching marriage boastfully asserted that he was still able to cut out any of the young fellows, mother must lay his pride by an allusion to his former lack of success.

"Ha, ha, ha, ha, ha!" roared Corneil. "So my old sweetheart can't keep a secret. Now, Mrs. Haley, I know ye was amazed that any girl could refuse as likely a youth as I was twenty-five years ago, but Mrs. Jennings, she was Nannie Cooley, surely did. I never heard a body say no to anything as spiteful as she did to the offer of me hand.

"You see," continued Corneil, "I had nine brothers and sisters, all married before I was, and not wan of them married to suit the parents.

"Now, says I, but it must be hard to raise so many children up to disappoint wan. Nine disappointments for me poor old mother; I wonder how she bore them all, sez I.

"'Sure mother,' sez I, 'your tenth child will marry to plase you. You'll have a daughter-in-law to your likin' when Corneil marries, if any girl ye like will have me.'

"'As if any one could refuse ye,' said mother, looking at me handsome form. 'Are ye thinking of marrying, Corneil?' questioned mother with a look as if she was ready to advise me.

"'No, mother; I must first have a nest for me bird.'

"Well, after that I built a log house on the fifty acres I was clearing, and went to housekeeping by myself. Wan evening I returned to me cabin very tired and hungry and not a bite cooked to eat. I was that tired I felt that I had rather go to bed without supper than to cook for meself. My breakfast dishes were sitting there all grasy and dirty, for a man won't wash dishes until he has to.

"I had had only a cold bite for me dinner, so for the sake of my health I finally made a cup of tea, but I swore a big oath that I would never cook another meal until I knew where I was to get me a wife.

"After I drank me tea I dressed meself in me Sunday best and rode over to mother's. It was twelve o'clock when I knocked at the door, and me mother was greatly alarmed.

"'Cornelius, me boy, what brings ye home at this hour of the night, waking honest people from their drames.'

"'It's this, mother, I swore I'd never cook another meal until I knew where I was to get me a wife.'

"'An' where are ye goin' for one,' says mother, anxious like.

"'Well, mother,' says I, 'ye know I have promised to plase you in this matter, and so I am here for advice.'

"'Sure, Corneil, there is Nannie Cooley, as likely a girl as ye'll find, and nate as a pin. I am sure you can git her.'

"'Then, mother, I'll straightway ask her,' said I, but me heart was very heavy, for I was thinking of Nellie McNaughton, a little Scotch lassie over London way. There had never been anything said between Nellie and I, but we understood each other, and as mother was fond of her I had thought she would have chosen her, but the course of true love never ran smoothly.

"I was pledged to plase mother, so I rode over to Cooley's—was there in time for breakfast. Mr. Cooley met me with a smile, as if he knew something was up. He had my horse cared for, and we talked some about logging, and then I mentioned the hardship of logging and housekeeping at the same time. 'You should marry,' said Mr. Cooley with a rare smile and a significant wink at the three girls.

"That's what I came to see about, and if Miss Nannie will have me, with your consent, this day month we will be married, What do you say, Miss Nannie?

"Her sisters giggled, and Nannie told me no as cross as a bear. Then I asked her sister May, an' if you'll believe me, with the same result. Me heart was in me boots when I asked Eliza Ann, the third girl, if she would have me. She hung her head and blushed and I could hardly hear her say no, she spoke so faltering like. I never knew how precious Nellie was to me till I saw Eliza Ann hesitating there and looking as if she meant to accept me.

"All right girls, sez I, ye might go farther and fare worse, but if none of ye'll have me I must go elsewhere.

"'Cornelius, me boy,' says Mr. Cooley as he helped me saddle my horse, 'I think ye went a bit too fast with the girls. Come again and perhaps their answer will be different,' but I shook my head and I tried to look downhearted.

"Then I went to mother and told her that neither Miss Nannie nor the sisters would look at me.

"'The proud upstarts!' said mother, very angry like, 'I wonder I never thought of little Nellie McNaughton. She's worth a dozen like the Cooley girls. 'Twas her that made all the nice hot poultices for me rheumatism, and I belave she likes ye, Corneil, as what sensible girl would not? She'll not refuse ye like thim consated huzzies of old Cooley's.'

"I told mother I'd take dinner with her and go and see Nellie in the evening. My heart was bating so at the mention of Nellie I was afraid mother would hear it.

"Nellie met me at the gate, and if I had not been afraid of being too sudden, I would have asked her there to have me. So I waited till everybody had gone to bed, and then I took her in me arms and told her how I loved her and how me parents were waiting to welcome her.

"Sure I plazed meself and me mother too that time, an',

as ye know, Nellie and I spent twelve happy years together, and then God took her home.

"My mother was never very friendly with the Cooleys after that, and never missed an opportunity of alluding to my fortunate marriage when in their presence."

Here Cornelius withdrew without even mentioning the second Mrs. Flynn.

"His thoughts are with the lost Nellie," said mother'—Aunt Betsey in Prairie Farmer.

The University Extension Lectures.

[Written for the RURAL PRESS by M. M. S. P.]

To the readers of the RURAL PRESS in and about San Francisco, it will be interesting to know that these lectures, just now on different ones of Shakespeare's plays, are open to all friends of the University.

There is a course of lectures at Berkeley which is open to the public; and the appreciation of this opportunity was very evident from the fact that at the last lecture given by Prof. Moses on "The Characteristics of Spanish Civilization," there was scarcely standing room in the large hall.

The teachers of the San Francisco Girls' High School had taken their pupils over to the lecture, and much enthusiasm was shown by these young students, many of whom will one day enter those classic walls for a four years' course.

All effort to cement the relationship between our common schools and the University is toward higher education and is highly praiseworthy.

The next lecture at Berkeley is entitled "A Glimpse of Japan," and will be given at the Assembly Hall on Feb. 10th by ex-President Horace Davis.

The lecture will begin at 2:15 P. M. and last one hour. Those going over from San Francisco should take the 1 P. M. boat. The entire cost of the trip from the foot of Market St. is the two bit ferry ticket.

The University Extension lectures are given each Friday afternoon, at 4 P. M., in the lecture room of the Academy of Science building on Market St.

On Friday, the 22d inst., the subject was "Othello." The next two lectures will be on the subject of "King Lear," and the play succeeding these will be that of "Coriolanus."

It is not to be expected that these lectures will furnish an adequate equivalent for a university education.

They are merely intended to *extend* the influence and the beneficial effect of University work as done at Berkely by the teachers and a few advanced pupils who occasionaly read papers bearing on the plays presented.

Of course such instruction is merely a fragment of the work done at the University, but so imbued do many become with the mental atmosphere that permeates such assemblages, that sleeping ambition is roused in many a mind, and a resolve made to take the full University course if possible; at any rate, to get more knowledge.

When we consider that at a University is gathered much of the best educational talent of the State, it seems but proper that this talent should be of the highest service to the people, at the disposal not only of those who can go to the University, but in as far as is practicable, to those who cannot go to the University.

Viewed in this light it becomes the duty of the University to send some portion of its benefits to the many whose ties and duties prevent their accepting the whole.

Spice of Life.

—A conscience that is not troublesome is worthless.

—Keep your toes out of the way and nobody will step on them.

—Necessity knows no law, and is generally too poor to hire a lawyer.

—There is something as good as bravery in getting scared in time.

—The anarchist is a man who cannot stand other men's prosperity.

—There are almost as many prodigal fathers as there are prodigal sons.

—A fanatic is a man who takes a burning interest in something we don't like.

—Some bad habits must be much disgusted with the fellows they have caught.

—Wet feet and warm whiskies are good things from the undertaker's point of view.

—Man may want but little here below, but he makes an awful fuss because he doesn't get it.

—Some people are all the time afraid they are going to die. Their friends are all the time afraid they won't.

—There are times in a man's life when the way to earn his friendship and gratitude is to ask him no questions.

—When you borrow money you borrow trouble, but at the same time you sometimes increase the trouble of the fellow who lends it to you.

—"You'll let me go to your wedding, will you not?" said one girl to another companion. "Upon my word I can't promise. My folks are in such a rage about my wedding that I am not sure they will let me go to it myself."

—"Mr. Jones, don't you think women are more sensible than men?" asked Mrs. Smith. And Jones, after scratching his favorite bump for a moment or two, said: "Why certainly they are. They marry men, and men only marry women."

—"Did you ever meet a real pirate?" asked a young lady. "Yes," replied the old naval officer; "once, on the coast of Kent." "How delightful! And did he sail on a long, low, rakish-looking craft painted black?" "No; he kept a seaside hotel."

—A class in natural history was called up for recitation. The teacher talked to them about the relations of friendship between man and animals, and then asked a girl: "Do animals really possess the sentiment of affection?" "Yes, almost always," answered the little girl. "And now," said the teacher, turning to a little boy, "tell me what animal has the greatest natural fondness for man." "Woman," said the boy.

YOUNG FOLKS' COLUMN.

Resisting Temptation.

[Written for the RURAL PRESS by CAROLINE E. SANDERS.]

"Nearly every boy in school has some kind of a watch but me," said Wilhelm Costar to himself as he was going to school one morning.

His bright, good-humored looking face wore a frown that did not seem to belong there, though it was not the first time it had been clouded with that same thought.

Wilhelm's father was in moderate circumstances and could afford to dress his son neatly and give him many advantages, but no such luxury as a watch might be, yet the boy foolishly allowed himself to often dwell upon the thought of the pleasure and profit it would be to possess one. How he would know just when to go to bed and when to get up—not reflecting that his mother was a very good timepiece in those matters—and then it would be so much more agreeable to pull out his own watch and look at the time, instead of always having to ask one of the other boys.

He was pursuing this train of thought and so engrossed by it that he almost stepped on a pocket-book which was lying in his path. His heart beat quickly when he picked it up as the thought flashed through his mind: "Good Luck sent this to buy me a watch." But it was quickly followed by another which brought him to his senses: "Who is Good Luck?" He did not need to be told it was the One who was able to read his every thought and who knew that at the bottom of his heart was the feeling: "I am appropriating what does not belong to me." "I will advertise and then if no one claims it I shall have a right to keep it," was the next reflection. He did not dare open it and he glanced uneasily around, fearing some one had seen him pick it up and would think it strange he made no attempt to find the owner. It was near school time so he hurried on, but when there his mind was too much occupied with the pocket-book and its probable contents to be able to do justice to his lessons, and for the first time he was reprimanded by his teacher.

Hastening home after school closed, he went to his room, locked the door and examined his treasure. It contained several papers, of whose value he knew nothing about, and $25 in money. "Just enough to buy me a pretty little watch," he said to himself as he put it back in his pocket.

"Why, what is the matter with you, my son; you have not eaten anything?" said mother, as Wilhelm left the table.

"Somehow, I do not feel hungry," was the reply; and then the thought came, what if it should belong to some poor man who is hungry but has no money to buy food. But the consoling reflection followed; poor men do not carry such handsome pocket books as this real Russia leather.

His recitations this afternoon were but little better than they had been in the morning. His teacher appeared surprised, and he felt she must suspect something was wrong. At recess, they were having some rather rough plays, as boys will sometimes, when the thought came to him, "Oh, what if I should get hurt and they would find the pocket book on me. What would they think!" and he actually blushed at the thought, and sat down saying that his head ached, which it really did by this time.

The next day was Saturday, and he was kept busy all the morning running errands and doing chores, but through it all the controversy was going on in his mind. One moment he was the happy possessor of a watch, the next he was miserable in the thought that he was not only doing wrong in this matter, but that he must commit another sin, for he should have to give some kind of an account to his parents as to how he obtained this money. In the afternoon he had a game of ball with some of the boys by which his mind was diverted, but only to return with new vigor to the same subject at bed time. He slept badly, dreaming at one time that he owned a beautiful gold watch and when he drew it from his pocket it turned into a snake coiled up in a ring.

"You are looking pale; perhaps you had better not go to Sunday school," said his mother the next morning at the breakfast table.

"I am quite well and would rather go," was his reply.

The lesson for the day was upon the Golden Rule, and to make it more practical, the teacher tried to point out how we should not look to the result of our actions, but leaving that to the All-wise One, do such things as we know to be strictly right according to Scripture teaching; above all, make it a life motto to "do as we would be done by."

Wilhelm walked home in silence with a quiet, happy heart. Going to his room, he wrote out an advertisement; then asking permission for a walk, left it to be inserted in the morning paper.

"I knew I felt real sneaking, but I did not think what an awful sin it would be," was his final reflection on the subject.

He made a clean breast to his mother, telling her just how he had been tempted to do wrong, and any boy who has a good mother can judge how happy she felt to think he had not been overcome by evil, and how pleased she was to be able to tell him the next day when he returned from school that the gentleman who was the owner of the pocket book had called for it.

"What did he say, mother?" asked Wilhelm.

"He asked why it had not been advertised in Saturday's paper, saying if it had been one day later, not having possession of those papers would have resulted in a serious loss to him. I then told him how you had been tempted, and how you had resisted the Tempter. He appeared much interested, and an hour later came back bringing this little box for you."

Imagine, if you can, Wilhelm's joy when he opened it to behold a pretty little watch. Inside the lid was engraved these words: "Do unto others as you would they should do unto you."

DOMESTIC ECONOMY.

COTTAGE PUDDING.—One-half cup butter, one cup sugar, one egg, one cup milk, two cups flour, one-half teaspoon soda, one teaspoon cream tartar, one teaspoon lemon. Mix in the order given and bake in small tin cups or bake in a cakepan and cut in squares. Serve with liquid sauce.

BROILED TRIPE.—Select the honey-comb tripe, and cook it in boiling salted water half an hour. Drain quite dry. Spread the honey-comb side with soft butter, and cover with a thin coating of cracker dust. Broil over a moderate fire until of a delicate brown color. Spread with butter, salt, lemon juice and pepper.

SOFT GINGERBREAD.—Two eggs, well beaten, one coffee cupful of molasses, one teacupful of butter and lard mixed, two teaspoonfuls of ginger, one teaspoonful of cream of tartar, one teaspoonful of soda dissolved in one-half teacupful of milk or water, one-half teaspoonful of salt, flour enough to make the dough as stiff as a cupcake. Bake in a slow oven for half an hour.

COFFEE ROLLS.—One pint hot milk, one-half cup butter and lard mixed, one teaspoon salt, one-half cup yeast, one egg, flour to mix. Mix with a knife as soft as can be handled, and cut it thoroughly. In the morning, knead well, make into large balls, then roll each ball between the hands into rolls six inches long. Place them so they will not touch in the pan after rising. When light, bake in a hot oven.

COFFEE ROLLS.—One pint hot milk, one-half cup butter and lard mixed, one teaspoon salt, one-half cup yeast, one egg, flour to mix. Mix with a knife as soft as can be handled, and cut it thoroughly. In the morning knead well, make into large balls, then roll each ball between the hands into rolls six inches long. Place them so they will not touch in the pan after rising. When light bake in a hot oven.

DROPPED EGGS.—Break the number of eggs desired for the meal into a pan of boiling water slightly salted, with muffin rings laid on the bottom of the pan, as they keep the shape of the egg well. Care should be taken not to break the yolks. When the whites harden, take the egg up carefully and lay each on a piece of toasted bread that has been moistened in hot water and buttered. Sprinkle with pepper.

APPLE DUMPLINGS.—Take light bread dough, and shorten with a little butter. Roll and cut into balls the size of dumplings. Drop these into boiling water, with a little salt added. Boil one or one and one-half hours. Have ready a dish of apple sauce, break open the dumplings and spread with the sauce. Put the dumplings together again, and serve with sweetened milk. In this case you know that the apples are done.

FRIED MUFFINS.—One cup milk, scalded, one-half scant teaspoon salt, one tablespoon sugar, one tablespoon butter, one egg, one-quarter cup yeast, flour to make a stiff drop batter. Scald the milk, and melt in it the salt, sugar and butter. When cool add the beaten egg and yeast; then add flour gradually, beating it in until you can beat no longer. Rise over night. In the morning take up a spoonful without stirring and drop it into deep fat.

BEEF STEWED WITH ONIONS.—Cut some tender beef in small pieces and season it with pepper and salt, slice some onions and add to it, with water enough in the stewpan to make a gravy; let it stew slowly until the beef is thoroughly done, then add some pieces of butter rolled in flour to make a rich gravy. Cold beef may be done in the same way, only the onions must be stewed first and the meat added. If the water should stew away too much put in a little more.

CHOCOLATE CARAMELS.—Two cupfuls of brown sugar, one cup of molasses, one cup of cream or milk, one-half cup of butter, one-half pound of grated chocolate, two tablespoonfuls of flour. Boil the molasses, butter, sugar and flour 15 minutes; stir the chocolate into the cream and pour in the boiling syrup and boil till done; drop in a little cold water; if it piles up and hardens, then it is done. Before pouring it out on buttered pans or plates add a teaspoonful of vanilla, and as it cools crease it in small squares.

RAISED GRIDDLE CAKES.—One cup of white cornmeal, two cups of flour, two cups of milk, one pint of boiling water, two tablespoonfuls of yeast, one tablespoonful of brown sugar, two eggs, one teaspoonful of salt and one-quarter teaspoonful of baking powder. Scald the meal at night with boiling water, beat well; while warm stir in the flour, sugar, milk and yeast. Let rise all night. In the morning add eggs, baking powder and salt, and if too thin add cornmeal to make the batter the right consistency. Leave a cupful for the next morning's rising.

SPANISH FRITTERS.—Cut the soft part of bakers' bread into slices a quarter of an inch thick and of any form you choose. Take a pint of milk or cream, three well-beaten eggs, half a teaspoonful of nutmeg and cinnamon mixed, three drops of the essence of lemon, and sugar to the taste; stir all well together and pour over the pieces of bread. When they have absorbed as much of the milk as they will, take them out before they get too soft and fry them of a nice light brown on both sides. They may be served with or without sweet sauce.

ITALIAN CHICKEN AND MACARONI.—Cut up a chicken and boil it till tender. While the chicken is cooking dip out a pint of the chicken broth into another stewpan, and put it with one small onion sliced, one tablespoon butter and a quarter of a pound of macaroni broken into inch pieces. Cook until the water has nearly boiled away, then add one cup of milk or cream and cook slowly till the macaroni has absorbed the milk. Sprinkle grated cheese over it. Boil the chicken liquor till reduced to one pint, remove the fat, thicken it slightly with flour wet in cold water. Cook ten minutes. Add salt and pepper. Pour the macaroni over the chicken and the sauce over the whole.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 6, 1892.

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[NEW THIS ISSUE.]

Removal Notice—California Stump Puller.
Cream Separator—G. G. Wickson & Co.
Nursery Stock—W. R. Strong Company, Sacramento.
Louden Machinery Co., Fairfield, Iowa.
Nursery Stock—Hulbert Bros., Santa Rosa.
Nursery Stock—R. W. Bell, Santa Rosa.
Wagon Sacks—California Wagon Jack Co., Oakland.
Wire Netting—Pacific Incubator Co., Oakland.
Live Stock—H. Mecham, Petaluma.
Live Stock—M. D. Hopkins, Petaluma.
Creameries, Etc.—Crystal Creamery Co., Lansing, Mich.
Nursery Stock—J. S. Collins, Moorestown, N. J.
Apple Root Grafts—H. C. Graves & Sons, Lee's Summit, Mo.
Spraying Solution—W. S. Powell & Co., Baltitore, Md.
Nursery Stock—Peter Henderson & Co., New York.
Agent Wanted—International Stock Food Co.
Cattle—Henry Pierce.

☞ *See Advertising Columns.*

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The most notable publication of its kind of the current year, is Neely's Reversible, Political and United States Map. It is 46 by 66 inches in size, and presents on one side the latest and most correct map of the United States, and on the other a political chart of the United States from the beginning of the Government until now. It contains portraits of all the Presidents from Washington to Harrison, and shows at a glance the history of all political parties and the political complexion of each Congress. It gives the Cabinet of each President of the United States—this and very much more in a form so simple and convenient that a child of ten can study it with perfect intelligence and with great profit. It is in our judgement, and in the opinion of all who have seen it, the most complete and valuable publication of its kind given to the American public for many years. This map is sold in the book stores for $5.

We have engaged with the publisher for an edition of several thousand, and will furnish it, mounted upon rollers, postage prepaid, for ONE DOLLAR in addition to the regular price of the Rural Press. That is: the Rural Press for 15 months and the map for $4.00; the Rural Press and the map for one year, $3.40; the Rural Press and the map for six months, $2.50.

Any subscriber to the Rural Press whose name stands upon our books credited with an advance payment may secure the map by sending $1 to this office. But the map will not be sold to any delinquent subscriber, unless he shall pay up his delinquency and extend his subscription to a future date by payment in advance.

No premium offer equal to this has ever been made in California and no better offer can possibly be made.

The Week.

There have been several good rains during the week and we are glad to note that the dispensation has covered the State from end to end—the precipitation at some southern points being very generous. Cool weather still makes vegetation backward, but the sun is now getting so high that a time of lush feed and outburst of bloom must come. So far as we have observed, the deciduous trees have had a good sound sleep this winter, and it is to be hoped they will not not be awakened too soon.

Reports are still being received of the large area of land in cultivation and of the general forwardness of farm work. Some farmers have told us they have not been ahead of their work in years as they now are. This should give time for the many little improvements which farms continually need and are so long deferred for lack of time. Look to the improvements, too, in and around the home. It is just the time to order a dozen good roses or other plants, shrubs or ornamental trees from the many who advertise them in the RURAL and plant them in the house garden. The chances are that if the work is now begun it will be continued later, and many a home which now can show only a few indifferent blooming plants or shrubs, or perhaps none of them, will ere long be surrounded by a plantation of the best, which will give new delights to loved ones and friends for years to come. Try it.

Work of the California Fruit Union

The annual report of the Trustees of the California Fruit Union, submitted at a meeting of stockholders recently held, shows that the organization has pursued an even course during the past year and has handled a larger amount of fruit than in any preceding year. The total shipments for a series of years have been as follows:

	Carloads.
1888	851
1889	991
1890	1373
1891	1387

The report notes that though the gain in carloads in 1891 was small, the gross tonnage was much larger, and the number of individual shippers increased from 322 in 1890 to 453 in 1891. About 30 shipping points, all north of the Tehachapi mountains, furnished the fruit. The Southern California producers ship through their own organization.

Perhaps the chief novelty of the trade of 1891 was the free use of refrigerator cars. Out of the total cars given above, 1166 were refrigerators and ventilated freight cars, which being of larger capacity enabled the Union to ship more tons this year without much increase in number of cars employed. Only six special fruit trains were sent last year, and only 167 cars were sent by passenger trains. Shippers have found that refrigerator cars serve them better than the irregular transportation by special and passenger trains. The Trustees announce that there has been better service by the railways than formerly, but there is still chance for improvement by making a schedule time for all through fruit cars. Of the financial operations of the Fruit Union, the report has the following paragraph:

The change of the rate of commission from 10 to 7 per cent reduced the rebate, which was returned to the Union for 3 to 1 per cent, and, with the low prices that the fruit generally sold for, made but little money received by the Union. But still we are glad to be able to say that we have paid all expenses and have on hand $3822.92, which the Board of Trustees at a meeting just held apportioned as follows: A dividend at 6 per cent on all fully paid stock. A small sum was placed to the credit of the Reserve Fund and a rate of ¼ of 1 per cent declared to members of the Union on their gross sales of shipments. The amount paid as dividends and rebates reduces the net commission to about 6¾ per cent annually paid by the shipper, and only about ¾ of 1 per cent to meet the entire expense of conducting the Union.

Financially, the Union has exceeded the expectations of many of its supporters in being able to make a stock dividend as well as a rebate to shippers out of the small rebate of 1 per cent received from our Eastern agents.

A very significant paragraph of the report shows that out of $1,283,431 gross receipts for a part of the fruit shipped, the freight, cartage, commissions, etc., consumed $652,879.76, leaving $630,551.85 as net money to the shippers. In other words more than half the sales value of the fruit goes for transportation and commissions, and out of the less than half which the shipper receives he has still to deduct local freights, boxes, packing, etc., before he gets the net value in the orchard. The grower has still all the cost of producing the fruit to deduct from the small residuum which remains before he can count what really belongs in his own pocket.

We have always contended that railways and commission merchants are not justly entitled to more than half the gross receipts from sales of California fruits. The whole fruit interest seems to be waking up to this subject. The traffic will not bear such an exaction. We have hopes that the movement of merchants and manufacturers for reducing overland freight rates and the better organization which is enabling farmers to act unitedly in their own interests, will soon bring relief in some way from the excessive overland charges which have so long prevailed. All should labor wisely and persistently toward that end.

OUR AGRICULTURAL REVIEW.—We print on other pages of this issue our customary statistical tables and comments relating to the agricultural productions and exports for the year 1891. We trust that it will be found valuable to our readers. The special branches of fruit products and wool, do not appear in this issue but will soon be given. The data in these reviews should be preserved for reference, as they enter into the discussion of many problems connected with our industrial progress.

Mr. Jordan Misrepresented.

It will profoundly gratify the farmers of California to learn that the utterances in criticism of them attributed to President David S. Jordan of the Stanford Jr. University, were a distortion of what he said, so thorough as to be scarcely less than a fabrication. The editor of the RURAL has received a personal letter from Mr. Jordan, from which he takes the liberty of making the following excerpt:

Permit me to say that the words credited to me which have met with the denunciation of the Napa County farmers have never been used by me, and that the speeches which have been referred to have never been made. I have had no occasion, under any circumstances whatever, to criticise the farmers or farming community of California, nor have I written or spoken on any subject connected with the farming interests of this State since I came to California. If I had occasion to make an address on the "Waste of Time" in this State, I certainly should not choose the farmer as the best illustration of it.

The letter from which this is an extract was not, as stated above, intended for publication. But we deem it fair that President Jordan's own statement should be given to put a stop to the quotation of words that were never used from speeches that were never made. It is only fair to the RURAL and to the farmers of Napa county to say that the publication in the San Francisco *Call*, upon which criticism of Mr. Jordan was based, was assumed to be accurate and was accepted without question.

In connection with this note from Mr. Jordan we very gladly publish the following letter, written from Palo Alto on Wednesday, the 3rd inst., by Mr. Frank S. Chapin, the well-known correspondent of the RURAL, who was commissioned to visit President Jordan and to ascertain the facts at first hand. Mr. Chapin writes:

On July 17, 1891, Dr. David Starr Jordan delivered a valedictory address to the university at Bloomington, Indiana. During his presidency there he had enjoyed the largest measure of public appreciation and gained reputation of a high order as a scholar and an executive officer. His theme was designed to teach the importance of a wise use of time, founded upon an old Greek maxim: "The gods for labor give us all good things." In the elaboration of the thought he used many illustrations, and among them told some things that he had observed among the farmers in southern Indiana. These illustrated both prosperous farming and the reverse, and were along lines easily remedied. Having read the original address carefully, the writer is ready to stake his individual reputation on the proposition that it was an able and sympathetic address, either from the standpoint of the scholar or the economist. He is also very confident that it was an accurate and fair diagnosis of one of the diseases affecting the body politic in the country described.

This address was published in full and highly commended by the Indianapolis *Journal* of June 18, 1891, and extracts from it were published in the September number of *The Forum*.

Now, these extracts do not convey as clear an impression of the speaker's thought as the original, and it was upon this publication that the criticism of the *Call* was based. Yet it appears that the writer in the *Call* was inspired by such peculiar genius and so ardent a desire to make a sensational point that he would be perfectly capable of a similar criticism upon the Sermon on the Mount if he saw a chance for any plausible perversion by which he could fan any latent prejudices into a flame that would bring temporary popularity. To make matters still worse the Napa County Alliance apparently endorsed the views of its most extreme member on the mistaken idea arising from the most biased interpretation of the *Call's* prejudiced criticism of the *Forum's* partial report. We have not the least idea that there is a member of the Napa County or any other Alliance that would have voted in favor of those resolutions if he had heard the speech.

The whole affair is a sad comment on the evils of cheap, sensational journalism. It is hard to imagine a worse evil likely to befal the farmers of California than that this blunder, and we might almost add crime, should be fanned into such a flame of prejudice that instead of accepting the great gift of Senator Stanford and cooperating with his chosen administrative officers in the agricultural department contemplated by the university, we should hold aloof and allow bare walls to echo back to empty desks the voices of those scientists who are prepared to lead us in the way to form the grandest Alliance ever organized for the farmer's good, the one so ably described by Dr. Jordan, "The Alliance with the forces of nature."

THE RAIN MAKERS AT TULARE.—It seems that the rain makers at Pixley, in Tulare county, claim that they have 30 days in which to produce their 3½ inches of rain for $3500. They complain that they did not suppose that a semitropical country would show a less temperature than 40° and that the frequency of such low temperature is the reason their rain-persuader won't work; that as soon as they get the clouds coaxed together the temperature drops and they scud away. We understand that they still hope to carry out their contract if they have enough exemption from the 40° mark. Let them fight it out on that line if it takes all summer, and they will strike the 120° area. We wonder how that will suit the process.

A NORTHERN CITRUS FAIR ASSOCIATION.—In order to better the arrangements for future citrus fairs in the upper half of the State, an association, with the title given above, will be formed. County Boards of Supervisors are invited to name five persons in each county, who shall meet and appoint one delegate to attend a meeting to be held at the Golden Eagle Hotel, in Sacramento, at 10 A. M. of Feb. 25th. Seven counties have already taken such action and others are requested to do so. It will certainly be a great advantage to have a representative body which can advance this movement, and we trust all entitled to representation will avail themselves of it.

The State Press.

Woodland *Democrat:* "Senator Stanford put a quietus on his Land Loan bill when he admitted that under its provisions he could borrow money from the Government at two per cent on all the millions of acres of land that his company owns."

Santa Maria *Times:* "People are beginning to realize the fact that some of our best fruit land lies in the sandhill district, but in order to make that land appreciated at anything like the market price of other lands, at least comfortable means of access must be provided. Build a good road through that section and it will double the value of the property along the route."

Napa *Register:* "The restriction of the number of undesirable immigrants to this country is engaging the attention of many of our eastern friends, who a few years ago thought we of the Pacific Slope fanatics for wishing to keep the Chinaman from our borders. But such a horde of unprofitable and often dangerous immigrants have of late been coming to her eastern shores from all parts of Europe that our friends on the Atlantic slope are trying to check the inflowing tide. Several bills to accomplish this have already been introduced into Congress."

Kern County *Echo:* "Canals are great things, but one of their indispensable features is water. A dry canal has never been known to have a very beneficial effect on commerce of any kind, and until every acre of this valley is irrigated and there is still water left—a condition of things that is in the very dim future—it is a sheer waste of raw material to talk about an artificial waterway up and down this valley. Considering what the fields will produce under irrigation, water is worth far more for agricultural and horticultural purposes than for transportation."

The Los Angeles *Express* grew positively eloquent over the late rain as follows: "It purifies the air and by chemical action surcharges the atmosphere with life-giving ozone. It invigorates the system, inciting the human family to more active and energetic action. It sweeps down, as with an invisible broom, all the malarial and pestilential germs of disease; and the heart action is always more active and emphatic after than before a rain all medical authorities assert. More than that, it gives an impetus and incentive to business by encouraging all other vocations. With the poet Whittier the people of Los Angeles cry out: 'God bless the rain.'"

The Colusa *Sun* outlines its platform as follows: "We must have small farms. To get them we must have the Constitution amended in this: 1. Corporations must not own land. 2. No person must get land by will. 3. Estates must be settled up within a year and lines run, and land set apart to each legal heir, share and share alike. 4. All farming land must be graded, and every acre must be assessed like every other acre of like quality, and nothing growing on the land and no improvements must be assessed. Such is our platform, gentlemen! Fire away at it. We shall maintain that this will bring small farms, happy homes, an improved country, and a California of which all her children may feel proud."

Salinas *Index:* "All over the State during the past year, grand juries have not been confining their inquiries to mere infractions of the law by the so-called criminal class, but have been investigating the acts of respectable criminals in public places. The efficiency of the public service is promoted by a healthy public sentiment that demands strict accountability in, and faithful discharge of, official trusts. It is not intended to be intimated that there are matters in this county requiring investigation, but to assert as an obvious truth that it is one of the legitimate functions of a grand jury to promote administrative integrity by an assured certainty of investigation every time a grand jury meets. Honesty walks in the light of day and courts investigation."

Inyo *Independent:* "The worst and most dangerous item of political corruption is the prostitution of judges. This has now fallen to a depth of degradation in our own land as bad as was ever before known in any country. The Supreme Courts of States are presided over by judges who are the willing tools of corporations. Those judges were nominated and elected to office by the influence of corporations. In all cases where the profit of corporations is to be increased by trespassing upon public rights it is now seen to be useless for the people to bring suits in defense of their rights. When suit is brought in a court of subordinate jurisdiction, and the people get judgment against a corporation, the defendant at once appeals to the Supreme Court of the State, and there the judgment is sure to be reversed."

San Jose *Mercury:* "There is scarcely a city in the East that has not at least one Women's Improvement Club, and many of them have several devoted to different lines of work. On this coast, associations of this kind have been organized in the leading southern cities and towns, and only recently one was formed in Tulare. All of these associations have found plenty to do, and in most cases have fully justified the expectations of their promoters. The experience of other cities has been that there are many evils which men overlook that women take note of, and many improvements that men never think of that women are prompt to suggest, and the consequence is that the new form of woman's work has been received with an almost universal consensus of approval."

The Miners' Convention.

Sacramento *News:* "This paper believes that hydraulic mining ought not to be resumed if it is to be oppressive to the farmers of the valleys."

Ukiah *Republican:* "In former articles we stated that we did not believe the miners were sincere in their protestations and we still have that opinion. But if they be sincere and if there is to be any lightening whatever of the bonds which now lie upon a single form of work, because of its pernicious results, the relaxation should be undertaken with the greatest caution. The valley people have had a hard and expensive fight and they should be careful not to allow any popular impulse to undo the work they have accomplished."

Shasta County *Democrat:* "We believe now that, by common consent, in many localities, auriferous gravel mining would be permitted to be resumed in anticipation of congressional legislation suggested in the memorial."

Sutter County *Farmer:* "The farmers accept the promises, but under the circumstances are justified in protecting their interests by keeping a watch over the monitors to report any case where the little giant may be in operation. Strict vigilance is necessary at all times, and when the miner fully demonstrates by his actions that he has stopped work to await the further investigation of the question, the Anti-Debris Association will gladly recall the watchmen and cease to consider the monitor in a suspicious light. Until that time the valleys and rivers must be protected as before."

Watsonville *Pajaronian:* "Congressman Holman has laid down the program of economy that is to prevail at this session of Congress, and there does not seem to be any chance for the miners and Sacramento farmers to break through it with their program of Government aid. If the restraining dams are to be erected they will have to be made by the parties most interested—the miners and farmers along the Sacramento river. California is never in it when it comes to obtaining Government aid. The Government aid only reaches across the Missouri river in very small pieces, and in this year of reform according to the ideas of the Indiana reformer, there is no chance at all for the aid of the mining interests of this State."

San Jose *Mercury:* "In all seriousness, we believe that the injunctions of the Yuba county court against the Plumas county mines ought to be dissolved. If debris from those mines ever finds its way to the Sacramento valley, it must of necessity come down the branches of the Feather river and through the main river to the valley. There is no evidence that any debris from Plumas county has ever reached Oroville in its course to the valley. We think that the people of Oroville and, in fact, all Butte county, are willing to take chances on Plumas county debris, and we are more endangered than anybody else. The dam built by Col. Frank McLaughlin at the head of the Golden Feather mine will restrain all the debris that can get here from the Plumas mines within the next century."

Santa Rosa *Republican:* "To construct adequate impounding dams to retain the debris from the hydraulic mines is beyond the means of private enterprise to engage in the work; public assistance is required. This is unlikely to be granted by Congress, and the Constitution of California forbids appropriations of the kind. Where there is a will there is a way, and this formidable obstacle can be overcome. It depends upon the determination of the people. The Sacramento division of the State is directly and chiefly concerned—farmers and miners both; but in broad sense, the reopening of the hydraulic mines and the output of the vast amount of gold every year, to swell the aggregate store of the precious metal and improve the financial condition of the nation, are considerations to enlist the aid and favor of capital and labor and the support of the whole people."

Sutter *Independent:* "No set of resolutions adopted by men can change the law of gravitation or pretermit the known laws governing the force and carrying capacity of water. When the Government engineers stated in their report that the coarser material could be partially impounded, but that the finer material would pass over the crests of the dams to find lodgment in the streams below, they only stated what is patent to any unprejudiced mind capable of reasoning from cause to effect. Will the Government heed the request of the miners? We doubt it. The Government is committed to the protection of the navigable streams. It is the expressed policy of the Government to prevent the obstruction of navigable streams in any manner. There is a law on the Federal statute books against placing debris of any kind in the streams, or even on the banks or in the canyons where the same may be carried by freshets into the streams. In view of all the facts, laws and decisions relative to this matter, and in view of the further fact that the engineers' report explicitly says that in case restraining works are built they should be paid for by the miners themselves, we do not think the Government will stultify itself by undertaking the job."

The World's Fair Fund.

Los Angeles Herald, Jan. 30th.

The State Commission of California for the world's fair, having secured a decision of the Supreme Court affirming the constitutionality of the law appropriating $300,000 to be spent in erecting buildings for the exhibits of this State, proceeds at once to the creation of offices with high salary attachments. When the bill was under discussion in the State Senate, it was attacked on the very ground that the Commissioners would waste the money in creating sinecure offices with high salaries. It was only after the author of the bill explicitly declared that no offices could be created by the Commissioners, and that no salaries could be legally paid out of the money appropriated, that opposition was withdrawn and the bill passed. How have the Commissioners observed this condition of the Act?

They have already violated its spirit and letter by appointing a Chief Secretary and seven assistants with salaries of $1800 a year each. They have further created an entire new set of Commissioners, not contemplated by the Act, and fixed a salary of $1000 a year to each of these newly appointed Commissioners.

This is but the beginning. We are now confronted with a manifest policy developed by the Board to fritter away the money, appropriated for exhibition buildings and the expense of conveying exhibits to Chicago, in salaries to people who have a "pull" and want a fat job. They have not only appointed salaried Secretaries and duplicate salaried Commissioners, but they have also created the office of Freight Inspector or something of that kind, with a salary of $3600 a year.

But this is not all. The bill provides that all legitimate expenses approved by the Commission shall be certified to the State Board of Examiners, and if allowed, warrants for the same shall be drawn against the exhibit fund. Instead of pursuing this plain, honest business course, they have drawn out one-half of the entire fund from the Treasury in bulk, and with this money in hand, can exercise their own discretion in its expenditure, without any check whatever from the State Board of Examiners.

A Political Suggestion.

ONTARIO, CAL., Jan. 25, 1892.

TO THE EDITOR:—In addition to cooperation among producers for the sale of their produce, which the RURAL is fitly urging, the growers must make one more step forward—one which I believe a very important one. I will call it independent political action. It is about impossible to bring about reforms that will heal the present demoralized, corrupt and expensive methods through the old parties. For instance, San Bernardino county contains a population of about 25,000. It is pretty thoroughly Republican, and we who have so long trained with that grand old party in its early days, hate to go back on our former associates in politics. I inclose you a clipping from the Ontario *Record* of Jan. 20th, as copied from the Riverside *Press*, that you readers may see how officers elected by the good Republican voters of this big county manage to make good fat bills for the tax payers to pay. Where the bills are the heaviest is where the rum mills are the thickest. Now, the farmers as a rule are opposed to the liquor traffic, especially so with the intelligent tillers of the soil in Southern California. The resolutions that they have formulated at the different Grange meetings all indicate which way the wind blows. The whisky mill is a positive injury to all. Everybody knows that, and the farmer in particular, as the whisky-soaked towns get all the profits and the rancher pays the bills, or largely so. Now, why cannot the Granger and the Prohibitionist unite on a candidate in the great campaign of 1892. It is a positive fact that their feelings on all-important questions are very similar; their interests are identical. Both agree as to Government control of the railway systems, telegraph, telephone and mail. Why not agree also on the overthrow of the saloon? It will be a concession that will benefit all and will eventuate to bring into power, and that, too, within two years, the grandest combination of rulers with the grandest combination of principles any nation ever tackled. It can be done, and let us do it.

I. C. WOOD.

Following is the extract from the Riverside *Press* to which Mr. Wood refers:

The justices of the peace and constables' fees in this county for the year ending December 31, 1891, amounted to the large sum of $22,109.23. Colton is the banner township, it drawing $5793.55; San Bernardino is a good second and Ontario third. The experts for the Grand Jury report say:

"Nearly every constable's bill examined shows some evidence of apparent mileage overcharges, which it is impossible to locate with the data at our command. For instance, on the bill of E. A. Roberts, July 7th, in a misdemeanor case, his charges amount to $45.06, of which $22.39 was for mileage, and he must have traveled that day 204 miles. On the bill of I. W. Roach, June 15th, serving subpœnas on Mr. and Mrs. Duncanson, he charges mileage for both, when the law clearly states he should charge but one. Same constable, September 29th, arrest of two parties for petit larceny, apparently one and the same offense. If so, there should be but one mileage, yet he charged 60 miles at 15 cents—$9 for each. J. D. Ferris sends in bill as follows: July 23d, subpœnas 9 names and mileage, $10.23; July 31st, subpœnas 13 names and mileage, $12.77.

"There seems to be a startling lack of discretion on the part of constables in the arrest of so-called vagrants. On the bill of Justice Sprecker of Colton for December, 1890, he charges for the trial of 35 cases, fees $181. Twelve of these were discharged, but the fees of both constable and justice were paid by the county just the same."

To give an idea of what it costs to run the machine at Colton, we give below the bills of the justices of the peace and constables for October and November: October—Justice of Peace Milliken, $329; Constable Williamson, $195.73; Constable Bingham, $178.20; total, $702.93. November—Justice of Peace Milliken, $289; Constable Williamson, $157.18; Constable Bingham, $144.81; total, $589.99. Judge Milliken was sick two or three weeks, which accounts for his small December bill, which was only $207.

The Beer Decision.

From the Sacramento Bee.

Judge Budd of Stockton may be "a second Daniel come to judgment," but we doubt it exceedingly. A saloon keeper of Lodi was fined for selling beer to a minor. An appeal was taken, and Judge Budd overruled the judgment. This wonderful Solomon of the sunset boundary holds that "the evidence, so far as the transcript or appeal contained, did not show who drank the ten cents' worth of beer, and it did not appear that the minor did not drink any of the five cents' worth. Although there was testimony that beer is intoxicating, there was none that the amount of beer sold would be intoxicating.

* * * * * * * *

Judge Budd should study up the definition of plain English words, or else admit that language is put into the statutes to mean what it does not say. The wording of the law is plain:

Every person who sells or gives, or causes to be delivered, to any minor child, male or female, under the age of eighteen years, any intoxicating drink *in any quantity whatsoever*, etc.

Beer is "an intoxicating drink." It is a misdemeanor to sell or give it to a minor "in any quantity whatsoever," it making not a particle of difference what the intent of the giver or seller was. Judge Budd can wrap his decision all around with technical verbiage until one can scarcely see its form for red tape, and yet he can make nothing more out of the law than this.

There is a law on the statute books to the effect that "intoxicating drinks" must not be sold within a certain distance of the State University. Under the wonderful decision of Judge Budd, a person residing within the prohibited limit who sold a drink of whisky to a University scholar would not be guilty, for a slight beverage like that would not intoxicate the average college boy, who can stand half a dozen stiff cocktails without showing any signs of intoxication.

More than this, Judge Budd is decidedly wrong in his idea as to "the manifest intent and purpose of the legislature in passing the law." That body desired to prevent, as far as possible, the degrading practice of parents sending their children into the back rooms of corner groggeries for liquor for home consumption. The language itself would almost show that; the debates in Senate and Assembly prove it.

Judge Budd's decision, if sustained by the Supreme court, will permit the indiscriminate resumption of a practice which this law was especially framed to break up.

Our Annual Review

Of California Agricultural Products for 1891.

Many Indications of Growth and Progress.

[Written for the RURAL PRESS by J. R. FARISH.]

The year 1891 showed continued prosperity with farmers, although, as has been and as there always will be, there are many isolated complaints. There can be no doubt but the year went out with a large increase in the number of farmers and orchardists who were either able to cancel their indebtedness or else made such liberal payments thereon as to leave them fairly comfortably circumstanced, with no fears entertained of 1892 going out with their not having been able to pay everything in full. The land booms of a few years ago were entirely absent in 1891, which is accepted as evidence that the general prosperity noted is founded on legitimate business principles and not speculative, and in being such is more lasting.

The year 1891 witnessed large areas of fertile lands brought under irrigation, with work well advanced toward bringing many more sections in various parts of the State under irrigation. During the year there has also been a decided and most marked attention given to improving inland transportation facilities by waterways and through large additions in the mileage to the railroad system of the State. These additions have been made both in the main lines and feeders. Not only have large additions been made to the railroad mileage of the State, but several hundred miles of lines have been graded and are now about ready for track-laying. Besides this, railroad surveying has been actively pushed in all parts of California. Several of these surveys it is claimed, have been done in the interest of large Eastern and central roads seeking tide water connections in this State. It now looks as if two, and possibly four, competing overland roads will build into this State, and to tide water, within the next three or four years. With improved overland facilities, brought about through competing lines, combined with our advantage in shipping nonperishable farm products by deep water vessels to foreign ports in the Pacific, and also Atlantic ocean, as well as to Atlantic domestic ports, California producers can reasonably look forward to the incoming century ushering in greater advantages and far more prosperous times than have been enjoyed at any time during the century drawing to a close. Our dry and wet seasons also afford producers many advantages over those in a similar calling east of the Rocky mountains. None the least of these advantages is that of their being able to use farm steam implements, which it is almost, if not entirely, impossible to use in the Central, Southern and Northern States. With farmers able to employ many different kinds of steam implements to advantage, they can seed and harvest their crops at much less expense than where implements are used requiring more farm hands to handle.

There has been a decided increase in population in the farming districts, with larger areas of land brought under cultivation. With the increase in population, there has been a corresponding increase in small farms, with general attention going largely toward fruit tree and vine-planting. Even the low prices which ruled during 1891 for fruit has not, seemingly, had any depressing influences. It would seem that even at the lower prices, those orchardists who give close attention to their calling have netted handsome profits. This has been brought about by improved means of handling their products, better knowledge, through experience, of the varieties of fruits wanted, and also the better and more practicable way of packing and marketing them.

Cultivating vegetables is receiving renewed attention, and promises to be a growing industry as the Eastern distributive markets expand and improved means are brought out for transporting them by rail. This, of necessity, applies more particularly to the southern part of the State, where garden truck can be cultivated so as to be marketable at a much earlier day than it is possible to be in other parts of California. For proof of the large business in vegetables, see overland shipments via Southern Pacific Railroad.

The high prices received the past year for California bred horses and the speed records made by them, are drawing more attention to the breeding of standard or thoroughbred horses. This attention is not confined to speed animals, for we find that greater attention is being given to general utility and draft horses. The days of bronchos and scrub animals in general appear to be numbered with the past.

Closer competition with the Central States in dairy products has brought about the very natural result of introducing approved modern ways employed elsewhere in the making and marketing of butter and cheese. In consequence, we find that creameries, proprietorship and also cooperative, are being introduced. They not only lessen expense, but also admit of better general average grades of butter being placed on the market. With the establishing of creameries it is noticeable that milch cows are in better demand and fetch more money. It is no longer the fair to good milch cows that are taken, but it is the large milkers of the better class of thoroughbreds that are in demand. This change for the better is gratifying and speaks well for the future of the industry.

Sheep husbandry appears to be receiving more attention. The renewed interest is not developed toward large holdings, but toward small numbers that can be utilized advantageously on farms. The high price and increasing consumption of mutton make this a profitable auxiliary farm industry. Of necessity, carcass and not wool-breeding is the prime object aimed at by a farmer who keeps from 50 head and upward on his farm.

The poultry business appears to be gaining in importance, as knowledge, through experience, is acquired by which breeders are enabled to keep their fowls healthier. The business is also forging ahead owing to the large consumption of eggs and also of poultry, and for which good remunerative prices are obtainable the year round.

Overland Shipments.

It is to be regretted that the Santa Fe Railroad Co. does not furnish the shipments Eastward over its route, so we could give a full and complete statement of California products marketed east of the Rocky mountains. The following are the shipments in pounds made in 1891 overland over the S. P. R. R. route and also the leading points from which they were made:

ARTICLES.	Lbs.	Beans	Canned goods	Dried fruits	Deciduous fruits	Citrus fruits	Raisins	Honey	Hops	Nuts	Onions	Potatoes	Vegetables	Wine	Wool, grease	Wool, pulled	Wool, scoured	Hay	Cattle
Totals	Lbs...	6,928,350	19,537,390	6,432,410	115,870	67,270	1,017,110	199,610	825,630	211,990	817,920	19,178,410	6,073,850	38,074,740	14,662,360	800,160	7,703,460		
Colton																			
Los Angeles																			
Marysville																			
Stockton																			
San Jose																			
Sacramento																			
Oakland																			
San Francisco																			

There was shipped in addition to the above, from San Francisco, 37,500 lbs. butter, 1,420,230 lbs. mustard seed, 4160 lbs. mohair.

Produce Receipts.

The receipts of California farm produce at this port during the past year were fully up to the average of previous years. The receipts of wheat show an increase of over 2,200,000 centals, as compared with the year 1890. The arrivals of flour, barley and potatoes last year were also considerably heaver than in the year preceding.

The following table shows the receipts of certain leading articles during the past two years:

Articles.	1891.	1890.
Wheat, ctls	15,843,250	13,613,685
Flour, qr. sks	5,614,129	5,459,919
Barley, ctls	2,461,078	1,781,497
Oats, ctls	111,699	136,633
Beans, sks	397,386	446,808
Corn, sks	285,723	285,304
Rye, ctls	111,417	145,694
Potatoes, sks	1,129,589	1,018,913
Onions, sks	120,228	92,764
Hay, tons	128,027	129,575
Wool, bls	77,191	85,909
Hops, bls	8,972	9,546
Bran, sks	540,409	626,252
Middlings, sks	177,838	188,499
Hides, No	194,947	163,837
Pelts, bdls	33,156	17,523
Buckwheat, sks	1,452	4,425
Honey, cs	13,061	15,427
Raisins, bxs	183,141	1[illegible]5,296

There was a general increase in the receipts of produce from up north at this port last year. The receipts of wheat were nearly 868,800 ctls. heavier than in 1890. The shipments of flour received amounted to over 423,000 qr. sks., as against 341,300 qr. sks. for the previous year. Oats arrived quite freely, and the same can be said of barley.

The following is a tabular statement of the principal receipts from Oregon and Washington during the years 1890 and 1891:

Articles.	1891.	1890.
Flour, qr. sks	423,877	341,297
Wheat, ctls	1,619,088	741,298
Barley, ctls	213,443	52,717
Oats, ctls	470,935	380,447
Corn, ctls	3,800	.....
Rye, ctls	2,257	.....
Bran, sks	55,254	8,757
Middlings, sks	.....	1,565
Wool, sks	13,504	18,175
Potatoes, sks	121,441	69,024
Hops, bls	531	1,722
Flaxseed, sks	66,881	50,968

Wheat Review for 1891.

The accompanying statement of area and product of wheat are the annual estimates of the statistican of the United States Department of Agriculture, to be published in the December report of the Division of Statistics:

States.	Acres.	Bushels.
Maine	41,017	669,000
New Hampshire	8,972	148 000
Vermont	19,673	344,000
Massachusetts	.....	.....
Rhode Island	.....	.....
Connecticut	1,888	81,000
New York	640,540	10,633,000
New Jersey	138,833	2,124 000
Pennsylvania	1,337,487	20,864,000
Delaware	97,634	1,250,000
Maryland	540,494	8,107,000
Virginia	850,073	7,651,000
North Carolina	731,573	4,975,000
South Carolina	180,395	992,000
Georgia	309,743	2,323,000
Florida	.....	.....
Alabama	281,327	2,251,000
Mississippi	61,965	483,000
Louisiana	.....	.....
Texas	536,247	6,435,000
Arkansas	232,940	2,236,000
Tennessee	1,198,553	11,626,000
West Virginia	332,295	3,423,000
Kentucky	1,037,870	13,181 900
Ohio	2,662.603	45,531,000
Michigan	1,606,670	30,205.000
Indiana	2,917,518	52,807,000
Illinois	1,945,832	35,0[illegible]5,000
Wisconsin	916,128	13,043 000
Minnesota	6 453,317	55.333,000
I wa	1,803,036	27,588,000
Missouri	1,782,082	25,732,000
Kansas	3,539,700	54,866,000
Nebraska	1,205,350	18,080,000
California	2,815 007	36,595,000
Oregon	992,055	13,149,000
Nevada	20,338	372 000
Colorado	100,832	2,037,000
Arizona	27,227	395,000
North Dakota	2,927,274	52.105,000
South Dakota	1,954,883	30,714,000
Idaho	90,531	1,811,000
Montana	92,883	1,856,000
New Mexico	93,328	1,073,000
Utah	136 764	2,393,000
Washington	698,040	12,216,660
Wyoming	5,500	110,000
Totals	39,916,897	611,780,000

WHEAT ACREAGE.

The following gives the acreage seeded by counties, in this State, for three years past. Compiled largely from the assessment rolls:

Counties.	1889 Acres.	1890. Acres.	1891. Acres.
Alameda	21,265	16,429	30,685
Alpine	450	400	400
Amador	4,560	3,575	3,800
Butte	92,208	73,767	91,117
Calaveras	8,500	6,500	6,500
Colusa	403 008	386,477	203,128
Contra Costa	77,915	50,250	44,502
Del Norte	60	36	.....
El Dorado	2,597	973	4,134
Fresno	169,512	196,904	295,150
Glenn	.....	.....	150,425
Humboldt	20,564	1,526	2,517
Inyo	399	2,316	1,379
Kern	12,000	17,000	20,000
Lake	6,220	4,200	7,950
Los Angeles	50,760	75,150	63,242
Marin	343	.....	644
Mariposa	639	527	459
Merced	240 000	177,500	230,500
Modoc	45,800	35,200	43,500
Monterey	120,000	135,000	145,000
Napa	8 653	7,462	8,385
Placer	16,249	11,147	16,037
Sacramento	78,100	55,000	81,150
San Benito	46,600	35,800	51,202
San Bernardino	3,551	4,651	4,302
San Diego	14,026	25,145	26,038
San Joaquin	290,805	199,579	301,150
San Luis Obispo	98,385	95,617	101,650
San Mateo	1,825	1,500	2,000
Santa Barbara	71,427	54,720	55,725
Santa Clara	17,240	15,950	16,300
Santa Cruz	5,126	5,248	5,517
Shasta	14,051	2,154	13,620
Sierra	151	300	200
Siskiyou	9,554	13,125	16,215
Solano	57,624	48,210	83,616
Sonoma	15,820	12,250	13,460
Stanislaus	288,182	211,342	291,431
Sutter	123,920	43,412	66,414
Tehama	91,410	82,312	83,678
Trinity	10,003	100	1,200
Tulare	349,000	350,865	415,585
Tuolumne	4,000	3,500	3,600
Ventura	2,637	3,671	5,810
Yolo	155,000	103,500	149,843
Yuba	28,375	15,760	30,000
Totals	3,073,527	2,586,950	3,190,716

PRICE OF NO. 1 WHITE WHEAT IN THE SAN FRANCISCO MARKET FOR 26 YEARS FROM JUNE, 1864, TO JULY 1, 1891.

Year.	Highest.	Lowest.	Difference.	Average.
1864-65	$5.30	$2.30	$3.00	$4.16
1865-66	2.15	1.60	.45	1.97
1866-67	2.22	1.25	.97	1.76
1867-68	3.10	1.50	1.60	2.31
1868-69	2.50	1.17½	1.32½	1.71
1869-70	1.95	1.05	.90	1.70
1870-71	3.15	1.55	1.60	2.25
1871-72	2.85	1.52½	1.32½	2.29
1872-73	2.16	1.25	.91	1.95
1873-74	2.37½	1.60	.77½	2.02
1874-75	1.85	1.30	.55	1.60
1875-76	2.32½	1.65	.67½	1.96
1876-77	3.00	1.45	1.55	1.98
1877-78	2.45	1.82½	.62½	2.10
1878-79	1.77½	1.57½	.20	1.63
1879-80	2.15	1.45	.70	1.81
1880-81	1.57½	1.25	.32½	1.40
1881-82	1.75	1.30	.45	1.62
1882-83	2.05	1.60	.45	1.73½
1883-84	1.87½	1.42½	.45	1.64½
1884-85	1.50	1.17½	.35	1.32½
1885-86	1.50	1.25	.25	1.36
1886-87	2.10	1.22½	.87½	1.52
1887-88	*2.12½	*1.22½	.90	1.37½
1888-89	1.68¾	1.25	.38¾	1.43
1889-90	1.36¼	1.25	.1[illegible]	1.29½
1890-91	1.76¼	1.31¼	.45	1.53½

*Wheat collapse.

CALIFORNIA NO. 1 WHITE WHEAT IN LONDON.

The following comparison of the highest and lowest quotations by months in 1890 and 1891 for California No. 1 white shipping for cargoes in various positions shows a decided gain in prices this year over 1890:

	1890. Off coast High.	Off coast Low.	Just ship'd High.	Just ship'd Low.	Nearly due High.	Nearly due Low.
Jan	36s 9d	34s 9d	36s 6d	34s 9d	36s 0d	35s 9d
Feb	36 3	35 9	35 0	34 6	36 9	35 9
March	36 3	35 3	35 0	34 0	36 0	35 0
April	35 9	34 9	35 6	34 9	35 9	35 0
May	36 3	35 9	36 0	35 6	36 3	35 9
June	35 9	35 3	35 6	35 0	35 9	35 0
July	38 6	35 9	37 9	35 9	38 3	35 9
Aug	38 9	37 6	38 6	37 3	38 9	37 9
Sept	38 9	37 3	38 6	37 3	38 9	37 3
Oct	38 0	36 6	37 9	36 6	37 9	36 6
Nov	38 6	37 0	37 9	37 0	37 9	37 0
Dec	38 6	37 6	38 0	37 0	38 0	37 0
1891.						
Jan	39 0	38 6	38 6	38	38 9	38 6
Feb	39 3	38 3	38 0	37 9	39 0	38 0
March	41 6	39 6	40 6	38 9	41 3	39 6
April	46 0	42 9	46 6	41 0	46 0	41 6
May	45 0	43 0	45 0	44 3	45 0	44 0
June	44 6	42 0	44 3	42 9	44 3	42 0
July	42 0	40 6	42 3	40 6	42 3	40 3
Aug	45 9	42 0	46 6	42 3	45 9	42 0
Sept	45 9	43 6	46 0	43 3	45 9	43 6
Oct	44 6	43 6	44 9	43 3	44 3	4[illegible] 6
Nov	46 3	44 0	46 0	44 3	46 0	44 0
Dec	44 9	42 9	44 0	42 9	44 9	42 2

RANGE OF VALUES BY MONTHS IN THIS CITY

The wheat market in 1891 was strong, with over $1.80 per cental paid for No. 1 white shipping wheat in April and again in November. To obtain a better idea of the fluctuations in prices, the following table is compiled by months:

Date.	Price.	Date.	Price.
JANUARY.			
2	$1 35	16 to 19	1 35 @1 36½
3	1 36½	20 to 29	1 36½@1 38¾
8 to 15	1 36½@1 37½	30 to 31	1 37½@1 40
FEBRUARY.			
2	1 37½@1 40	17 to 18	1 36½@1 38¾
3	1 36½@1 3[illegible]	19 to 28	1 38½@1 40
4 to 16	1 36½@1 37½		
MARCH.			
2	1 42½@1 45	9 to 18	1 50 @1 52½
3	1 43¾@1 46½	20 to 21	1 47½@1 51½
4 to 6	1 45 @1 47½	23 to 30	1 50 @1 52½
7	1 47½@1 48¾		
APRIL.			
1	1 52½@1 55	17	1 65 @1 67½
2 to 7	1 53¾@1 56¼	18	1 70 @1 72½
8	1 55 @1 57½	20 to 22	1 78¾@1 83¾
9 to 14	1 56¼@1 60	23 to 28	1 75 @1 77½
15 to 16	1 60 @1 63¾	29 to 30	1 70 @1 73¾
MAY.			
1	1 73¾@1 77½	9 to 15	1 71½@1 75
2	1 72½@1 75	16	1 70 @1 73¾
5 to 6	1 70 @1 72½	18 to 28	1 72½@1 75
7 to 8	1 72½@1 75	29	1 73¾@1 77½
JUNE.			
1 to 6	1 70 @1 72½	19 to 23	1 60 @1 65
7 to 9	1 65 @1 71¼	24 to 26	1 57½@1 60
10 to 12	1 63¾@1 68¾	27	1 55 @1 57½
15 to 18	1 62½@1 67½	29 to 30	1 52½@1 55
JULY.			
1 to 16	1 50 @152 ½	28	1 52½@1 55
17 to 21	1 47½@1 51½	29 to 30	1 53¾@1 56½
23 to 27	1 51¼@1 53¾	31	1 55 @1 57½
AUGUST.			
1 to 10	1 55 @1 57½	20	1 65 @1 68¾
11 to 13	1 57½@1 61¼	21 to 26	1 67½@1 71¼
14	1 60 @1 62½	27 to 31	1 63¾@1 72½
15 to 19	1 62½@1 66¼		
SEPTEMBER.			
1 to 6	1 67½@1 70	13 to 25	1 62½@1 66¼
7	1 65 @1 67½	26 to 30	1 65 @1 68¾
OCTOBER.			
1 to 8	1 65 @1 68¾	26 to 29	1 67½@1 70
9 to 20	1 67½@1 70	30 to 31	1 68¾@1 71¼
21 to 26	1 65 @1 68¾		
NOVEMBER.			
2 to 3	1 71¼@1 73¾	17 to 21	1 83¾@1 86¼
4	1 75 @1 77½	23	1 87½@1 90
5	1 77½@1 80	24 to 25	1 85 @1 87½
7 to 10	1 82½@1 85	27 to 30	1 82½@1 85
11 to 16	1 80 @1 83¾		
DECEMBER.			
1 to 14	1 80 @1 82½	19	1 75 @1 77½
15	1 75 @1 77½	19 to 31	1 77½@1 81¼
16	1 72½@1 75		

The year 1891 has gone into the history of the world's wheat trade as a breaker of records. Had the same conditions and the same influences bearing on the market in last year made themselves felt as late as a decade and a half ago, they would have sent values the world over to famine prices, but with more general introduction of steam and electricity it becomes a difficult matter to

corner supplies. The network of the railroad systems of civilized nations facilitates inland transportation to such an extent that shipment to tide water only consumes a few hours, against nearly as many days nearly two decades ago. Then, again, deep water carriage has been revolutionized, for instead of sail vessels employed in short deep-water voyages, steamers of large carrying capacity are now in use, reducing the time in passage from one-half to nearly three-quarters. The steamers not only take large cargoes and make the run quicker, but they charge less for freight. While this is the case for short voyages, the introduction of steamers on long voyages, or between this coast and Europe, has not proven a success, consequently sail vessels maintain their supremacy in the Pacific Coast wheat traffic. But the displacing of sailers on short voyages have made them more plentiful on long voyages, which naturally causes lower charters to obtain. This is well illustrated in the history of this coast's wheat trade. A few years ago less than 40s per long ton for a handy-sized iron vessel, with favorable options to charterers, was considered low, but now over 40s for same options and for same sized iron vessel is considered high.

The consumption of wheat the world over is enlarging. So rapid has been the increase that the outturn of land devoted to its cultivation in supply countries has fallen short of the requirements, causing the large reserves in all civilized countries to steadily decrease, so that to-day the reserve stock is virtually exhausted. This change in the reserves must at all times cut an important figure in future markets. The increased consumption and the decreased reserve is better illustrated by the following compiled statistics of the world's production and consumption:

Year.	Estimated Production (bu).	Estimated Consumption (bu).
1882	2,187,000,000	1,935,000,000
1883	1,963,000,000	2 005,000,000
1884	2,184,000,000	2 026,000,000
1 85	1,999,000,000	2,045,000,000
1886	2,090 000,000	2,065,000,000
1887	2,127,000,000	2,085,000,000
1888	2 044 000 000	2,105,000,000
1889	1,950,000 000	2,125,000,000
1890	2,040,000,000	2,145,000,000
Year.	Inc. in Reserve Stocks (bu).	Dec. in Reserve Stocks (bu).
1882	202,000,000	.....
1883	.....	42,000,000
1884	159,000,000	.....
1885	.....	46,000,000
1886	25,000,000	.....
1887	42,000,000	.....
1888	.....	61,000,000
1889	.....	175,000,000
1890	.....	105,000,000
	428,000,000	429 000,000
Total decrease for the 9 years	.....	1,000,000

It appears from the foregoing table that during nine years the reserve stocks have decreased 1,000,000 bushels. In this period these reserves reached their highest point in 1887, when 340,000,000 bushels had been added to them. During the years 1888–89–90 they were reduced by 341,000,000 bushels, and by June 30, 1891, therefore, they will be as low, if not lower, than they were June 30, 1882, at which time, as we have before stated, they were almost exhausted.

The effect of light reserves was shown quite fully in last March and April, when it became known beyond the question of a doubt that France's wheat crop and Russia's rye crop were comparatively a failure. To realize this more fully, it is only necessary to state that France, next to the United States, is the largest producer of wheat, while Russia's rye crop is larger than that of any other country. A writer in the London *Agricultural Gazette* says that in 1879 the French wheat crop was supposed to have yielded not much more than 27,000,000 quarters, and the imports were just over 10,000,000 quarters; in 1885 the crop was estimated at 39,000,000 quarters and the importation was just over 2,000,000 quarters; in 1890 the crop was estimated at 42,000,000 quarters, and the importation amounted to over 5,000,000 quarters. As there are no means of ascertaining the amount of wheat held in reserve by growers, it is not possible to say how much France will need to buy, but presumably something more than the 10,000,000 quarters referred to. This year France set to work and bought largely early in the season regardless of cost, and forced up values considerably, reducing her import duties on wheat by 3s. 6d. per quarter. The world's market thus had a new experience; hitherto the United Kingdom, with her requirements of something like 20,000,000 quarters of foreign breadstuffs, has practically been the only buyer of importance, France, with her average requirements of some three or four million quarters, coming next, with the wants of other countries individually smaller still. But France, as a buyer in the market, with an open order of from ten to fourten million quarters to fill, made all the difference.

Russia's rye crop, which was placed at 53,300,000 qrs. early in the year, was increased later on to 64,800,000 qrs., but even this increase on the first estimate gave a shortage of 17,000,000 qrs. when compared with the 1890 crop, while the wheat crop was short 2,500,000 qrs. The prohibition by Russia of exporting wheat from that country did not go into effect until November, or until about the time winter laid an embargo on further shipment from Russia by closing her ports with ice. In anticipation of the prohibition, the exports of wheat from that country were largely increased up to the month of November.

To offset the wheat shortage abroad, the United States crops of wheat and corn were the largest on record, while the Argentine Confederation and Canada also turn out larger crops than ever before. Shipments the last half of 1891 from this country were the largest ever before within the like time, and yet the year went out with a very large available surplus to market, which the railroads at the East are being taxed to their full extent, and still the cry is "more cars."

The foregoing general review covers the general situation in 1891 and affords a clearer insight into several of the causes which produced the wide ranges in prices in the San Francisco market, as tabulated in another column. While saying the above it is but proper to state that the crops on this coast have had much to do with the values with us. There was a large increase in acreage seeded to wheat, yet deficient rainfalls reduced the outturn. There were only two days during the rainy season when the precipitation exceeded one inch, which were on Dec. 3, 1890, and Feb. 15, 1891, when the rainfall was respectively 1.83 and 3.38 inches. Without good, soaking rains early in the season, with seasonable rains in the spring months, the crop naturally suffered, and instead of a yield of about 2,000,000 tons, we only had about 1,400,000 tons. Oregon and Washington, on the other hand, had the largest crops on record. Although there was a light yield to the acre in this State, yet the grade averaged better than for several years past. This was due to fairly cool weather in maturing time. The cool weather caused many more fields to be harvested with fair result than would have been had even moderately warm weather prevailed. The receipt of first consignment of wheat in 1891 was in May and the price at which it sold was quite high, higher than the first consignment fetched at any time since 1871, as shown by the following table of first arrivals of new wheat, and prices paid for the same:

Year.	Month.	Price.
1859	July 14	$1 90@2 00
1860	July 3	1 50@1 55
1861	July 24	1 50@1 62
1862	July 11	1 62@1 65
1863	June 25	1 50@1 60
1864	July 9	2 80@2 95
1865	June 12	2 20@2 25
1866	June 25	1 50@1 60
1867	June 17	1 65@1 70
1868	June 18	1 90@2 00
1869	June 15	1 40@1 45
1870	June 9	1 70@1 80
1871	June 23	2 30@2 37
1872	June 10	1 80@1 85
1873	June 7 (Vallejo)	1 75@1 80
1874	June 11	1 65@1 67
1875	June 2 (Vallejo)	1 65@1 67
1876	June 9 (Oakland)	1 75@....
1877	June 2 (Vallejo)	2 40@....
1878	June 13	1 70@....
1879	June 20	1 65@....
1880	June 24	*1 00@....
1881	June 7	1 25@1 40
1882	July 6	1 67@....
1883	June 19	1 65@1 70
1884	June 20 (Port Costa)	1 42@....
1885	June 2	1 42@....
1886	June 5	1 30@....
1887	June 10 (Port Costa)	1 75@....
1888	June 15 (Wheatport)	1 31½ ....
1889	May 24	1 37½ ....
1890	May 20	1 30@....
1891	May 24	†2 02½ ....

*Inferior.

†Sold by auction at a fancy price, actually worth, by sample, about $1.65. It was Sonora, rather pinched and somewhat mixed with barley. It came from the Kimberlena farm, Kern Co. Last year's first consignment also came from Kern Co.

The monthly exports from San Francisco during the year ending December 31, 1891, were as follows:

Months.	Centals.	Value.
January	1,302,604	$1,779,886
February	1,293,846	1,772,365
March	1,854,904	2,743,8 3
April	1,574,954	2,438,681
May	1.128 830	1,938,320
June	736,228	1,244,751
July	1,386,205	2.202,455
August	1,499,159	2,476,653
September	1,315,362	2,218,089
October	1,269,452	2,120,934
November	1,708,115	3,049 620
December	1,878,258	3,338,486
Totals	16,947,917	$27,323,951
1890	13 014,306	17,277,634
1889	12,115,075	16,641,194
1888	11,763,436	17,390 382
1887	9,065,152	14,683,875
1886	15,832,155	21,448,167

The exports to Europe in 1891 and 1890 compare as follows:

To—	1891.	1890.
France, ctls	7,916,294	1,684,375
Great Britain	7 668,951	10,2b7,490
Belgium	1,088,430	772,825
Cape Verde Islands	91,198	.....
Totals	16,764,873	12,614,590
Increase, 1891		4,150,283

The following shows the exports to each country in 1891:

To—	Centals.
France	7,916,294
Great Britain	7,668,951
Belgium	1,088,430
Peru	98 613
Cape Verde Islands	91,189
Brazil	47,140
Central America	16,530
Hawaiian Islands	9,433
Australia	8,360
Chile	1 620
Tahiti	656
British Columbia	396
Ecuador	283
Japan	13
Total	16,917,917

The total exports of wheat (flour reduced to wheat) from this port are as follows, by years since 1885 inclusive:

	Centals.	Value.
1885	15,738,700	$21,782,900
1886	19,194,400	25,857,800
1887	11,461 600	18,104,500
1888	14,241,900	20,796,500
1889	15,509,900	21,413,600
1890	16.585,977	22,114,382
1891	20,643,896	33,105,541

The tonnage question was one of more than ordinary interest during the past year. The outlook at the beginning of the season and for some time afterward, was particularly favorable to ships, inasmuch as chartering ahead was carried on to such an extent that there was scarcely any available disengaged tonnage in port for wheat exporters to work on, and comparatively high rates were the rule. But the speculators in ships overreached themselves in their endeavor to control the market, and toward the close of the year disengaged ships were more freely attracted to this port by the high rates ruling. Then came a reaction in wheat abroad, and the inability of exporters to take ships at the asking rates, the local wheat market not having declined sufficiently to allow any profit on shipments. A prominent charterer found himself with a large number of high-priced ships on hand, with no chance to effect recharters except at a sharp decline in rates, and no wheat of his own to load them. The situation grew worse for the tonnage interest, and from 45s, at which a number of vessels were chartered to arrive, the market just before the close of the year went down to 23s, this rate having been accepted for an iron vessel, U. K., Havre or Antwerp. The great drop in freights was taken advantage of by the wheat interest, and prices were held up well considering the less encouraging condition of the foreign markets.

In studying the local market, it is not only interesting but instructive to examine into the invisible supply of grain that becomes available the last half of the cereal year. For this purpose we give the following statement of the quantity of breadstuffs on hand in the State Dec. 1st, estimated by the Produce Exchange, in comparison with the quantity at stock-taking for five years past:

LOCATION.	Flour, bbls.	Wheat, ctls.	Barley, ctls.	Oats, ctls.	Beans, sks.	Corn, ctls.	Rye, ctls.
San Francisco and Oakland wharf, including grain afloat in harbor and in transit	28,514	671,665	432,042	114,621	69,286	43,145	28,435
Sonoma, Humboldt, Napa, Solano, Yolo, Colusa and Glenn	41,309	1,746 840	280,095	28,500	700	6,350	.....
Sacramento, Yuba, Sutter, Butte and Tehama	23,670	1,038,725	140,615	1,380	2,850	15,300	200
Contra Costa and Alameda	2,020	2,605 210	303,365	2,010	940	100	5,910
San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern	26,640	2,932,975	243,410	1,318	120	610	.....
San Mateo, Santa Clara, San Benito, Santa Cruz, Monterey and San Luis Obispo	11,745	662,940	768,385	18,255	81,155	580	.....
Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino and San Diego	6,145	308,320	730,710	2,320	120,075	91,140	5,000
Totals	140,043	9,964,675	2,883,602	168,404	275,126	268,255	39,545
June 1, 1891	121,166	1,626 562	352,882	45,074	46,632	76,738	14,136
December 1, 1890	118,123	12,168,993	1,615,655	61,095	174 291	302,921	37,150
June 1, 1890	81,090	4,801,063	1,004,457	61,235	39,503	91,111	16,892
December 1, 1889	116,225	15,300,388	3,321,860	120 356	107,419	134,916	66,540
June 1, 1889	100,585	2,092,430	2,052,690	119,245	60,415	38,925	10,215
December 1, 1888	95,906	10,819,630	4,087 050	120,175	235,920	266,747	7,040
July 1, 1888	71,920	8,831,960	2,063,450	62,095	33,675	82,200	800
January 1, 1888	69,979	9,730,060	4,522,900	109,935	65,380	121,300	4,350
July 1, 1887	50,275	2,790,400	798,500	42,400	74 405	72,330	1,550
January 1, 1887	89,605	7,812,850	2,700,000	47,400	243,650	136,650	44,660
July 1, 1886	102,325	1,282,600	114,850	31,160	103,700	27,925	1,080

The stocks of wheat reported in the State by the Produce Exchange are generally available for export. At first glance this does not appear to be a correct statement, since 1,250,000 people have to be fed for six months from every stock-taking, besides once yearly there must be an allowance for seed. For these two purposes it is customary to allow 300,000 tons per annum, although 350,000 tons would be nearer it now. That this quantity is not taken from the stocks publicly reported is easily proven. In most years, it is true, drafts are made on the visible stocks for both seed and food. The quantity varies, but it is never up to the full quantity reported. An examination of the stocks and export movement for a number of years shows that the quantity reported in sight at the end of the first half of the cereal year is mostly available for export. The annexed illustrations under this head abundantly prove the assertion, as follows:

Stock January 1, 1887	403,083
Exported first six months 1887	267,377
Difference	135,706
Official stock July 1, 1887	147,061
Addition to visible supply	11,355
Stock January 1, 1888	495,499
Exported first six months 1888	207,742
Difference	287,757
Official stock July 1, 1888	204,886
Local draft on visible supply	82,871
Stock December 1, 1888	555,367
Exports six months thereafter	386,901
Difference	168,466
Official stock June 1, 1889	119 701
Local draft on visible supply	48,765
Stock December 1, 1889	784,452
Exports six months thereafter	494,162
Difference	288,290
Official stock June 1, 1890	252,106
Local draft on visible supply	36,184
Stock December 1, 1890	626,168
Exports six months thereafter	521,957
Difference	104,211
Official stock June 1, 1891	99,503
Local draft on visible supply	4,708

From all information at hand, we think that the last half of the present season will be no exception, and when the stock in the warehouses is taken, in next June, it will be demonstrated that the invisible supply not only met the consumption and spring seeding demand, but supplied part of the demand for export.

Flour.

Close competition the past year did not add materially to the millers' exchequer. This competition looks very much as if it is the big millers trying to force the smaller to the wall. The output of the mills shows a large increase, but this is not reflected so much in the exports as it is in the lessened receipts of flour from up north. With lighter receipts from Oregon and Washington, there has been a larger home consumption demand of Californian. One of the causes if not the only one, for the lessened receipts from up north is the establishing of steamship lines to the Orient by the Canadian railway, and a much lower rate of freight given to shippers. As this competition began to tell on our shipments to China, the Pacific Mail Steamship Co. lowered its freight rates. The low freight had the effect of stimulating the consumption of flour in the Orient.

The monthly exports were as follows:

Months.	Bbls.	Value.
January	106,981	$438,817
February	123 060	501 465
March	98,272	410 889
April	127.545	582,311
May	63 085	325,617
June	67,403	343,478
July	137,851	698,005
August	56,129	265,970
September	112 487	535 608
October	92,447	455,927
November	100,059	492 974
December	146,674	730,529
Totals	1,231,993	$5,781 590

The following shows the exports to each country in comparison with 1890:

To	1890. Barrels.	1891. Barrels.
United Kingdom	432,936	366,159
China	417,546	402,695
Central America	160 286	179,126
Hawaiian Islands	57,294	59,104
Australia	695	1,172
Ecuador	32 067	31,159
Japan	43,309	45,102
Panama	11,907	12 553
Society Islands	13,166	11.443
Asiatic Russia	15,482	16,907
Philippine Islands	11,200	4,850
Mexico	5,660	9,067
British Columbia	3,238	3,100
France	1,375	5,000
Samoan Islands	395	330
Brazil	275	.....
Marquesas Islands	182	134
Marshall Islands	117	102
Gilbert Islands	25	30
Peru	140	12,840
Singapore	125	[illegible]
Hervey Islands	50	[illegible]
East Indies	1[illegible]	2
Corea	2	80
Chile	.....	70,340
Totals	1,207,607	1,281,993

The price of flour throughout the year fluctuated with the price of wheat.

Barley.

To better understand the condition of, and influences bearing on, the barley market in 1891, the following tabulated statement of the acreage seeded for three years past is given:

Counties.	1889. Acres.	1890. Acres.	1891. Acres.
Alameda	20,967	20,415	63,432
Alpine	460	400	400
Amador	12,515	10,980	12,000
Butte	24,619	19,721	25,800
Calaveras	1,100	250	3,000
Colusa	48,683	23,072	26,925
Contra Costa	42,270	30,540	28,400
Del Norte	300	164	320
El Dorado	2,002	560	1,506
Fresno	36,242	34,471	40,250
Glenn	.....	.....	12,560
Humboldt	19,450	1,513	2,069
Inyo	571	455	397
Kern	25,000	3,000	4,500
Lake	3,870	2,600	3,100
Los Angeles	35,290	34,170	38,124
Marin	417	.....	225
Mariposa	5,078	1,802	1,672
Merced	52,000	25,000	36,650
Modoc	33,000	32,100	31,600
Monterey	75,000	60,000	80,000
Napa	5,847	6,374	5,985
Nevada	587	.....	.....
Orange	.....	19,760	50,000
Placer	9 670	1,718	10,366
Sacramento	38,460	26,725	34,215
San Benito	16,915	13,680	15,140
San Bernardino	103,587	93,450	91,260
San Diego	30,447	27,350	41,086
San Joaquin	108,920	53,049	58,120
San Luis Obispo	48,360	51,429	75,360
San Mateo	3,720	3,000	3,500
Santa Barbara	38 149	32,865	38,840
Santa Clara	20,370	18,550	17,820
Santa Cruz	3,110	3,226	3,292
Shasta	6,215	545	7,116
Sierra	1,850	1,600	4,000
Siskiyou	5,360	2,588	4,065
Solano	35,720	22,510	31,059
Sonoma	13,159	.....	8,352
Stanislaus	33,149	28 150	33,163
Sutter	21,840	4,899	14,174
Tehama	27,840	21,760	16,659
Trinity	200	200	200
Tulare	63,425	65,346	71,250
Tuolumne	2,000	1,800	1,500
Ventura	58,738	33,625	45,150
Yolo	20,000	12,700	13,550
Yuba	11,060	4,850	8,500
Totals	1,167,627	852,902	1,118,867

The decline in acreage seeded to barley in 1890 was over 25 per cent. The influences that brought about the falling off was alluded to as follows in the annual review for that year: "For three years preceding 1890, the barley market went from bad to worse, with the lowest prices, (52½ to 62½ cts. for feed touched in 1889), ever before known. The above low range was brought about by large quantities of weevil barley thrown upon the market, breaking prices, which caused large holdings of hypothecated barley to be sold by those who had advanced the money." The decline in the market value of barley in California had a disastrous effect on the industry in Eastern Oregon and Eastern Washington, owing to San Francisco being their chief demand market. The result was that up north the acreage seeded to barley was not up to what it would have been in ordinary seasons.

Farmers who look at the condition of the market and never at the influences on it, did not recognize the fact that with the increasing attention given to the fruit industry there would be a steady increase in the number of work horses, which would mean an enlarged demand for feedstuff. In former years, it was safe to estimate that for every sack of barley sent to this city for feeding and exporting, five were fed out in the country, but now it is a safe proposition, based on crop returns and other statistical information, to place the quantity fed out in the country at eight sacks for every sack fed out at and exported from this city. The increased attention given to the dairy industry by establishing creameries, has created freer feeding of rolled and ground barley, and as this industry appears to be only in its infancy, it is quite within the bounds of reason to claim that within the next two years the requirements from dairymen will be fully double what it is now.

The market in 1891 opened at $1.45 to $1.53 3-4 per cental, for good to choice feed, against 75 cts. to 85 cts. per cental at the like date in 1890. The market fluctuated slightly around $1.43 3-4 to $1.51 1-4, up to the first week in February, when, under a dry weather season, large feeding and poor pasture, prices began to be advanced by holders, but with sellers' higher pretensions, feeders reduced their buying. With heavy rains in the third week in February, the bears on Call began systematic raids and succeeded in hammering the market down, so that by the first week in march the range for feed was $1.35 to $1.41 1-4. At the low prices to which the market fell, strong buyers came in and took every available ton obtainable without exciting the market. This done, then a bull campaign was inaugurated and successfully carried out owing to the light reserves in Oregon and Washington. There was a steady advance, with slight fluctuations in the market, up to the new crop season (June) when the highest prices, $1.55 to $1.65, were reached.

The first receipts of new crop barley and prices received since 1870 are as follows:

Year.	Month.	Price.	Year.	Month.	Price.
1870	June 19	$1 20	1881	June 21	$ 90
1871	June 12	1 57½	1882	June 12	1 65
1872	June 6	1 40	1883	June 25	85
1873	June 5	1 10	1884	June 28	90
1874	June 9	1 45	1885	June 16	1 25
1875	June 20	1 35	1886	May 26	1 28
1876	May 30	90	1887	June 8	1 15
1877	June 30	1 55	1888	June 5	92½
1878	June 11	80	1889	June 1	75
1879	June 30	75	1890	May 31	1 06¼
1880	June 24	64¾	1891	June 6	*1 42½

*Auction off in Produce Exchange Hall. Market price about $1.20 per cental.

With the 1891-92 season fairly opened, prices for feed gradually set off until in the last week of June the range was $1.02½ to $1.12½. With the decline, buyers became more plentiful and sellers scarcer, which caused an advance, and by the middle of July, $1.15 to $1.25 was the range. From that time to the close of the year, the market fluctuated between $1.03¾ to $1.12½ and $1.15 to $1.25. These fluctuations made barley more atractive for gambling in futures on Call. The last half of 1891 was noted for light receipts from up North, owing to large overland shipments from Eastern Oregon and Eastern Washington, with a large export demand and light supplies of Surprise.

The exports in centals by sea and by rail by months in 1891 compare as follows with 1890 and 1889:

	1889. By		1890. By		1891. By
Months.	Sea.	Rail.	Sea	Rail.	*Sea
January	28,805	20,239	33,319	10 960	31,634
February	33,918.	10,833	11,659	1,684	14 751
March	13.812	2,873	18,023	308	13,006
April	14,109	4,004	19,916	.....	32,147
May	18,319	.....	17,006	.....	23,498
June	20,572	8,374	15,108	.....	10,179
July	41,585	17,335	27,735	.....	137,319
August	125,993	7,127	40,523	.....	23,667
September	234,880	26,077	18,516	.....	160,997
October	201,628	51 600	96,301	.....	271,767
November	83,978	14,739	18,035	.....	146,664
December	15,244	4,675	23,034	.....	70,764
Totals	832,843	162,876	339,174	12,952	936,793

* No overland shipments.

The exports to countries are as follows in centals:

	1889	1890.	1891.
Great Britain	352,962	44,811	323,501
New York	295,424	90,536	166,567
Hawaiian Islands	138,053	165 568	172,802
Australia	30,934	14,504	.....
Elsewhere	14,570	23,755	6,936
South America	.....	.....	115,205
Cape Verde Islands	.....	.....	82,152
Canary Islands	.....	.....	69,550
Totals	832,843	339,174	936,793

The United States Agricultural Department reports the imports of barley into the United States in 1890 at 5,078,733 bushels (less than 2,400,000 centals). All statistical information received in this month indicates that the imports in 1891 exceed those of 1890, and this, too, with a high duty in force.

Oats.

The acreage seeded to oats in this State compares as follows:

Counties.	1889.	1890.	1891.
Alameda	175	210	196
Alpine	630	650	600
Amador	75	50	150
Colusa	215	66	143
Contra Costa	....	1,600	1,600
Del Norte	1,500	907	109
El Dorado	....	204	990
Fresno	526	81	450
Humboldt	25,792	3,749	13,260
Inyo	681	836	841
Lake	720	450	890
Los Angeles	....	....	2,232
Marin	522	320	814
Mariposa	634	....	....
Merced	....	7,500	8,350
Modoc	3,840	11,350	12,060
Mono	....	24	....
Monterey	7.500	6,000	5,000
Napa	1,976	1,645	1,865
Nevada	1 235	....	1,050
Orange	....	100	....
Placer	2,865	1,718	1,930
Sacramento	415	215	510
San Benito	510	50	440
San Diego	1,550	1,582	2,109
San Joaquin	417	309	810
San Luis Obispo	4.246	4,341	5,200
San Mateo	2,916	1 900	2,500
Santa Clara	115	174	140
Santa Cruz	4,920	5 060	4,750
Shasta	1,121	409	930
Sierra	1,000	1,200	1,008
Siskiyou	3,646	1,766	2,455
Solano	191	...	....
Sonoma	4,728	....	4,327
Stanislaus	425	343	261
Sutter	368	330	886
Tehama	2,300	2,350	2,612
Trinity	500	500	350
Tulare	875	500	750
Tuolumne	800	700	750
Ventura	...	93	110
Yuba	1,271	805	3,000
Totals	115,601	60,197	96,620

The above affords an interesting study. It shows that in Humboldt county while the acreage seeded in 1891 was three times that seeded in 1890, yet it was more than 50 per cent less than that in 1889. Other counties present a few changes. Humboldt oats have always stood high, selling along side of Oregon. California is not and probably never will be a large oat producer. This is easily accounted for by reason of Western Oregon and Western Washington being better adapted to its cultivation. The acreage seeded up north in 1891 to oats was 233,037 acres in Oregon and 178,466 acres in Washington.

The market opened with the year at a range of $1.82½ to $1.91¼ per cental for fair to choice feed oats. February witnessed a slight increase in the range, but in March and April the range was lower, being as low as $1.70 to $1.78¾ in the latter month. May witnessed an advance of 10 cents per cental, which was sustained in June. With barley coming in freely, and with the receipt of confirmed advices of a large outturn to the acre up north, buyers became offish, and prices began to gradually settle, until $1.32½ to $1.51¼ was touched the first week in August. The market held to steady prices throughout that month, but under heavy receipts from up north they fell from 5 to 7½ cents per cental in the first part of September. The market held at around $1.25 to $1.40 the remainder of the year.

Owing to more attention being given to breeding of fine horses and the more general use of roadsters, bridle horses and match teams, the consumption in California of oats is enlarging.

Corn.

It is to be regretted that County Assessors do not collate the acreage seeded to different cereals more correctly. Many counties fail to have any returns made. Estimates based on the best obtainable information is the only way by which those not reporting can be filled out. The counties reporting acreage planted to corn in 1891 were as follows:

Counties.	Acres.	Counties.	Acres.
Alameda	500	San Diego	2,635
Alpine	20	San Luis Obispo	470
Calaveras	100	Santa Barbara	1,125
Colusa	1,096	Santa Clara	379
Contra Costa	2,200	Santa Cruz	2,062
Del Norte	7	Siskiyou	45
Humboldt	1,572	Sonoma	5,613
Inyo	1,697	Stanislaus	110
Kern	12,000	Sutter	1,044
Los Angeles	13,631	Tehama	775
Mariposa	400	Trinity	225
Merced	1,450	Yolo	500
Monterey	1,000	Yuba	690
Napa	1,565		
Orange	5,000	Total	58,476
San Bernardino	840		

The acreage reported to corn in this State by the U. S. Department was 161,470 acres in 1891 and the yield placed at 5,571,000 bushels. While we have no data at hand to disprove this estimate, yet we feel morally certain that it is too large. In 1889 the acreage was 75,382 acres, and in 1890, 80,602 acres. While we have reason to believe that the fair prices which ruled for corn the forepart of the year may have been an inducement to give more attention to its cultivation, yet with unfavorable weather, it is not at all likely that the acreage doubled over that of 1890.

The year opened on a fairly firm market at $1.27½ to $1.32½ for yellow, and $1.31¼ to $1.36¼ for white. In February there was a slight advance, which was maintained in March, but in April an advance of from 2 1-2 to 5 cents per cental was established under a good export demand, small supplies and price in the Central States being too high to admit of shipments to this Coast. In May, whites made quite a jump, moving up to $1.62 1-2 to $1.68 3-4, with the other kinds moving in sympathy. In June, whites sold at $2.05 to $2.20. This price was maintained in July. Toward the latter part of July prices set off about 10 cents per cental, at which they held steady until toward the close of August, when an offish feeling set in and the market began to settle. By the end of September whites sold at $1.27 1-2 to $1.35 and yellows at $1.15 to $1.32 1-2. By the middle of October the range was 12 1-2 cents less for white and 2 1-2 cents less for large yellow, and 7 1-2 cts less for small yellow. At the lower prices the market fluctuated up to the end of the year. The large crop in the Central States causing lower prices there, and an absence of a free export demand with us, were against the market toward the close of the year.

Rye.

The consumption of rye in this State steadily enlarges, yet without an export outlet any marked increase in acreage seeded would be met by very low prices. The year opened on a fairly steady market at $1.32 1-2 to $1.37 1-2, from which it varied but little up to August, when, under strong buying for export, owing to a shortage in Russia, the market moved up 15 cts per cental, closing that month still higher, being quoted at $1.62 1-2 to $1.70. Throughout September it held fairly steady, but in October prices began to set off, closing the month at a decline of from 5 to 7 1-2 cts per cental. At around the lower prices the market fluctuated the remainder of the year. The supply in this State is about exhausted. Oregon sent us several consignments toward the close of the first half of the season.

Hay.

County Assessors of the following counties report the acreage in hay in 1891 as follows:

County.	Acres.	County.	Acres.
Alameda	92,844	San Bernardino	33,205
Alpine	250	San Diego	18,762
Amador	7,000	San Luis Obispo	36,620
Butte	11,000	San Mateo	10,500
Calaveras	9.500	Santa Barbara	13,500
Colusa	3,696	Santa Clara	35 178
Contra Costa	48,400	Santa Cruz	5,285
Del Norte	135	Shasta	11.496
El Dorado	4,927	Siskiyou	52,686
Humboldt	25,275	Sonoma	8,470
Inyo	6.972	Stanislaus	1,500
Los Angeles	13,300	Sutter	4,555
Marin	10,120	Tehama	15,466
Mariposa	6,330	Trinity	3,500
Merced	11,300	Tuolumne	900
Modoc	107,000	Yolo	11,500
Monterey	20,0 0	Yuba	10,000
Napa	16,765		
Nevada	4,289	Total	681,751
Placer	9,845		

The remaining counties, from which no returns were received, it is estimated brought the acreage up to fully 800,000 acres. Notwithstanding the large and steadily increasing acreage given over to hay, the crop is considerably below the rapidly-enlarging feeding requirements of this State. Nevada and even Oregon send us supplies. Fully 20 per cent. of the crop of the former State is marketed in California. The steady inroads on the pasture lands, largely increased and steadily-increasing acreage given over to the fruit industry, combined with more attention being given to milch cows for dairying, are the prime factors in promoting the large consumption. The outturn to the acre in 1891 was not up to the usual average, while the grade was not of the best.

The market ranged around at about $12 to $19 per ton the first five months of the year. In the forepart of July, prices for new ruled at $9 to $14.50 per ton. This was the lowest range of the year, for buyers came in and took all the obtainable supplies, after which the range was moved up one dollar. The market hung around at $10 to $15.50 the remainder of the year, with at times slightly higher prices secured.

Vegetables.

GARDEN TRUCK.—This industry continues to enlarge in the southern counties with experience and better inland transportation facilities and improved means of marketing the product at distributive points east of the Rocky mountains. It promises to assume such proportions as to entitle it to further recognition from the various transportation companies. In the more favored localities, south, garden truck is cultivated which is marketed toward the close of the year, and by January and February the quantity becomes so large as to make itself felt in this city. The counties bordering the bay, and also on the tule land bordering the San Joaquin and Sacramento rivers, each year witness an increase in the acreage devoted to the industry. Dealers report that, considering the number of inhabitants, the consumption of garden truck in this State is simply enormous.

ONIONS.—The market opened this year at $2.25 to $3.50 per 100 lbs., to which it held steadily up to the first week in February, when it began to strengthen, and by the end of the third week in the month quotations had been advanced to $4.00 to $4 75. This high range brought in freer supplies and also limited buying, which caused holders to reduce their pretensions fully one cent per lb. The market did not remain long at the lower prices, for by March 10th the range was $3.75 to $4.35. The only change in quotations for the next fortnight was a reduction in the inside quotations from $3.75 to $3.00. In the forepart of April the range was $3.50 to $4.75, and even $5.00 per 100 lbs was secured for something extra. With new improving in quality, the trade turned to them toward the close of April, the range being $2.00 to $2.50 per 100 lbs. With free receipts the market soon broke to a range of $1.00 to $2.00, and by the middle of May it was quoted at 65 cts. to 90 cts., and within a week afterward reds sold at 50 to 75 cts. and Silver Skin at 75 cts. to $1.00. It held around at these ranges up to the middle of July, when reds were quoted at 35 to 50 cts. and Silver Skins at 60 to 80 cts. At the lower prices the trade ran on the latter. Even the increased buying did not prevent them going down 15 cts. per 100 lbs. At the decline the market held fairly steady up to October, when an advance of 15 cts. per cental was established. The market gradually gained in strength, and finally closed the year at about 75 cts. to $1.25. The low prices the last half of the year were due to large crops on the bottom lands along the rivers. The increased acreage along the rivers was due to low water.

POTATOES.—The market opened in January barely steady at a range of 80 cents to $1.60 per 100 pounds for fair River Reds to choice Burbank Seedlings. The tone was weak, due to the fact that at several points in the interior large supplies were held

ready to be dumped at a day's notice, while in the southern part of the State the second crop turned out to be large. With freer receipts of new and heavy receipts of old, the market closed with January at a range of 70 cents to $1.35 for the latter. By the middle of the month the outside range for more choice kinds had advanced with it, reaching $1.50 as an outside for Burbank Seedlings. The advance brought in more liberal supplies, and the range receded to 60 cents to $1.25 by Feb. 24th. This range was maintained with only slight changes up to the close of April, when, with new showing to much better advantage, the range fell off 15 cents per 100 pounds, which was followed by still lower figures in May. In June, quotations for old were withdrawn, as new were principally dealt in and quotations for old were nominal. The range was 60 cts. to 90 cts. per 100 pounds. This range was maintained until in the fourth week in June, when, with more varieties coming in and receipts increasing, the range was 45 cts. to 80 cts. With July, Burbank Seedlings became more plentiful, admitting of their being quoted, which gave the range 40 cts. to $1.25 per 100. By the last of July the range was 25 cts. to $1. One week later the outside figures had dropped to 90 cents. At this range the market fluctuated around up to the third week in September, when it showed signs of strengthening, which resulted in an advance at the close of the month of 15 cts. in Burbank Seedlings. This caused slightly higher figures for the other choice kinds. This advance was only temporary, for with heavy receipts it set back 10 cts. In November the market began to strengthen, which was carried into December. The year went out on a range of 35 cts. to $1.25 for the poorer kinds to choice Burbank Seedlings. In 1890 large quantities of potatoes were brought from the East but in 1891 our overland shipments were very heavy. Not even did the exceptionally heavy shipments overland relieve our market, so large was the crop. The price sunk to such low figures that feeding the poorer kinds to stock became quite general. Not only were they fed to stock, but two or three starch factories were established in the southern part of the State, so as to take advantage of the low figures.

The large crop was brought about by the river bottoms not being flooded, which admitted of cultivating many hundred acres to potatoes in 1891 that were not available in 1890. Many orchardists cultivated potatoes between their trees. It is quite safe to say that the acreage in 1891 devoted to potatoes was double that of any former season. Oregon and Washington have had only fair crops.

BEANS.—The bean industry is forging ahead, and train loads are no longer objects of curiosity. The superior quality of California beans causes them to be sought for at the East, where up to a few years since the imported held full sway. The high prices which ruled during the season of 1890–91, and consequent good profits secured, encouraged more attention to be given to their cultivation in Ventura and Santa Barbara counties. This, naturally, gave a large surplus, notwithstanding the yield to the acre was not up to the average.

Hops.

The market opened the year strong at from 30 to 40 cts. The strength of the market was due to very light available supplies and strong Eastern and foreign markets. The market held nominally at 30 to 40 cts. the first three months of the year, when quotations were given out at 25 to 30 cts. up to July, in which month another decline took place, and before new came in, sales are reported to have been made as low as 15 to 20 cts. In reviewing the market an exchange says that prospects early in the season of 1891 appeared favorable for one of the heaviest yields ever gathered, not only in this country, but also in Europe. Although later on indications were in the main good, there was some speculative demand in May, June and July for forward deliveries of 1891 hops at 18@20 cts for desirable growths. Contracting was by no means general, however, growers as a rule not being disposed at that time to negotiate very extensively, the bids appearing very low as compared with the values which had been ruling. Instead of getting better, the market continued to weaken, and this in face of the fact that the crop prospects on this coast were much less promising, lice and mold threatening serious damage in Washington and Oregon, the injury later on proving to be about as great as had been generally feared would be the case. The weakness of the market in August and September was based mainly on the reports from Europe, as to the condition of the crop in England and Germany, the advices being of such character as to afford little or no encouragement to anticipate any special foreign demand for American hops the current season. In August 15 cts was a full quotable figure for new, and in September the market was much of the time lifeless, with 10@14 cts the nominal range for fair to choice 1891 hops. In the latter part of September inquiry began to develop, not only on local, but also on foreign account, and it soon became evident that the European crop was not so large as had been anticipated. Values began to harden early in October, but rather slowly, as holders were tolerably free sellers at 12@13 cts for good medium grades, very many not caring to take the chances of carrying into the latter part of the season. After heavy reductions in supplies, through shipments outward, bids were advanced to 15 cts in November for good merchantable quality, and choice not obtainable under 18 cts. There was continued and steady reduction in stocks in December, with values stiffening, and before the close of the year 19 cts was readily obtainable for a choice hop, with few sellers of choice under 21 cts, and not many to be had at this figure.

Instead of more hops being produced here in 1891 than in previous year, there is ample evidence of a reliable character that the yield of 1891 was lighter than of 1890, by about 7000 bales, there being a heavy reduction in Washington, with only a moderate increase in California and Oregon. Lice and mold were serious drawbacks in Washington and Oregon, but in the latter State the increased acreage brought the yield ahead of 1890. While the California crop was considerably heavier than the previous year, many of the hops of last year were deficient in color and strength, the Russian river being about the only section of this State which turned out quality fully up to the average of former seasons. The *Grocer and Country Merchant* says that the yield on this coast for the past two years is in apportionment and in the aggregate about as follows:

	1891. Bales.	1890. Bales.
California	35,000	33,400
Washington	32 000	43,000
Oregon	20,000	17,600
Total	87,000	94,000

Shipments outward from this State since the beginning of the current season were 26,000 bales by rail and 600 bales by sea.

Honey.

The market during the year averaged better prices than in 1890. Up to the arrival of new crop, honey quotations were more or less nominal. On first arrivals of 1891 crop the market was quotable at 13@15c. white comb in 1-lb frames, and 12@14cts. for 2 lb frames, with amber at 8@10c., and extracted at 5¾@6¼c. for liquid white, 5¼@5 1-2c. for amber, 5c. for candied. There was soon a narrower range on comb, white going at 12@14c with latter figure obtainable only on 1-lb frames, and amber commanded 9@11c, as to condition. There was very little deviation subsequently from these figures, comb honey at the close of the year being quotable at practically the same prices as were current in June. The market for comb, however, has not shown any special animation at any time during the season, and a very large portion if not the bulk of supplies now remaining are of this description. Extracted honey advanced about half a cent in July, with the range 5-1-2@6-1-2 cts for the various qualities, and there was a further hardening in values of about quarter of a cent for the better grades in October, dark and candied continuing at old figures. The market for extracted at the close of the year showed decided firmness for best qualities, with fairly active export demand, and hardly enough offering at prevailing rates to accommodate the inquiry. White liquid extracted was not obtainable under 7 cts., and little of amber color, even where candied, for which 6 cts. would be accepted by holders.

The crop in 1891 was short, because in the southern counties of the State, where most of the apiaries are conducted, the season was backward, with much cool and foggy weather, unfavorable for the development of saccharine matter in the white sage and other wild flowers upon which the beemen most depend. Receipts in San Francisco in 1891 were 12,362 cases, as against 19,800 cases in 1890, and 11,428 cases in 1889. The total export movement for the year was only 10,250 cases, while in 1890 the shipments aggregated over 23,000 cases. Of the total export movement for 1891, about 8,200 cases were forwarded since the beginning of the current season. The shipments by sea included 4515 cases to England, 1094 cases to Germany, 612 cases to New York, with minor quotations to Australia, British America, the Hawaiian and other islands of the Pacific. The largest single quantity which went forward in 1891 was 1049 cases in November last per ship Langdale for Liverpool. The next largest amount was 960 cases per bark J. C. Pfluger, sailing for Germany in June last, this lot of honey being of the crop of 1890.

Dairy Products.

The receipts from California sources and from the East compare as follows:

	California. Pounds.	Eastern. Pounds.	Totals. Pounds.
BUTTER.			
1891	10,484 900	1,580,900	12,065,800
1890	11,491,500	1,067,700	12,559,200
1889	11,098,600	4,325,000	15,423 600
1888	8,376,700	3,597,500	11,974,200
1887	9 547,100	783,600	10,330,700
1886	9,979 200	627,800	10,607,000
1885	3,019,600	494,400	9,504,000
CHEESE.			
1891	4,427,800	1,820,500	6,298,300
1890	5.146,400	1,672,500	6,818 900
1889	4,272,000	1,155,200	5,427,200
1888	3,321,700	1,614,300	4.936,000
1887	3,989,400	968,400	4,957,800
1886	4.070,900	548,100	4,619,000
1885	3,657,500	471,000	4,128,500
	EGGS. Dozens.	Dozens.	Totals. Dozens.
1891	2,156,288	4 525,000	6 681,288
1890	2,479,886	3,602,500	6,082,386
1889	2,660,993	4,210,300	6,871 290
1888	2,210,015	3,168,741	5,378,756
1887	1,391,745	1,735,335	3,127,080
1886	1,663,200	2,192,900	3,856,100
1885	2,778,280	1,154,090	3,932,370

The above receipts show the unfavorable effect of short forage crop in 1891.

BUTTER.—The market opened in January at 30 to 40 cents for good to gilt-edged, but with freer receipts it weakened off by the middle of the month 2½ cents per pound. These prices ruled until the close of the first week in February, when a reduction, owing to freer receipts, of 1 cent was made. This was soon followed by another 1-cent decline. By the last of February the range was 27 1-2 to 32 1-2 cents, and one week later the range had dropped to 20 to 25. From these prices there was a decline of 1 cent, but by the middle of March there was an advance of 2 cents. The advance only held a few days, when under free receipts and strong selling the market began to ease off, and in the first week in April the range for good to gilt-edged in rolls was 18 to 22 1-2 cents. This range held fairly steady up to the middle of May, when an advance of from 1 to 2 cents took place. At the latter advance the market held steady up to June 10th, when a weaker tone, under heavy receipts, set in, and the market for good was marked down to 17 1-2 to 18 cents and gilt-edged to 21 to 21 1-2 cents. These prices obtained up to July, when an improved feeling set in, and an advance of 1-2 a cent in good and 1 1-2 in gilt-edged was established about July 8th. By July 25th the market, under steady advances, was quoted at 22 1 2 to 23 1-2 cents for good and 27 1-2 to 28 1-2 cents for gilt-edged. The first week in August another advance of 2 cents was established. The latter did not hold long, for under heavy receipts quotations were reduced 1 1-2 cents per pound. From this reduction there was a rapid advance, until the range in the first week of September was 32 1-2 to 39 cents for good to gilt-edged. This brought in free receipts, which caused the market to set back from 5 to 7 1-2 cents, but it soon recovered 2 1-2 cents of the decline. In October there were further slight advances. The market held around 32 1-2 to 37 1-2 cents the remainder of the year, sometimes selling slightly lower and at other times slightly higher.

The dairy industry of this State is fast reaching that point when it will be self-sustaining, and we will not be dependent for supplies on the East during any part of the year. When this point is reached it will no doubt be credited entirely to the establishing of creameries. During the year quite a number of large creameries have been built and equipped with the latest improved machinery. Nevada, Washington and Oregon report increasing attention to building creameries. Creamery butter sells at an advance over round rolls, owing to its being considered of better quality.

The first half of the year the butter market was unfavorably affected by free importations of Eastern creamery—not even low prices keeping it out, but the latter half the receipts of Eastern creamery gradually fell off, not even higher prices being an inducement to importers. Why it could not be marketed on this coast at a profit was that the markets on the Atlantic coast made such an up move, under lighter supplies, that it was more profitable to send butter from the Central States eastward than westward to this coast. Several firms here, having butter contracts in the Central States, secured quite a profit by allowing the sellers to cancel them.

The high prices of butter the latter part of the year caused a strong effort to be made to introduce oleomargarine and butterine.

CHEESE.—The light rains during the winter of 1890–91 and the spring of 1891 made short pasture, which was felt in the lessened output of cheese, notwithstanding the newly established creameries added largely to the general production. The market throughout the year, taken as a whole, was favorable to manufacturers, owing to the average range of values being on a higher plane than usually obtains. The receipts of Eastern at this city in 1891 were larger than ever before, yet they went into consumption without seriously disturbing the market. The lighter supplies of butter have had a favorable influence on cheese, for prices for the latter generally moves in sympathy with butter values.

The market for mild cheese opened the year at a range of 10 to 14 cts. per lb. By the last of January, the more choice grades had been advanced to 15 cts. as an outside figure. The 10 to 15 cts. range held up to March, when a weaker tone set in, and by March 10th the range was reduced to 10 to 13 1-2 cts. The decline was brought about by free receipts and the known heavy supplies to draw from. The market gradually settled until by the last of March the range was 9 to 12 cts. In April the market ruled at around 8 1-2 to 12 cts., in May at around 8 to 11 cts., and in June at around 7 1-2 to 10 1-2 cts. In July the market began to strengthen, which resulted in the month going out on a strong market at a range of 9 to 12 cts. The market held strong throughout August. In September the range was advanced one half ct. Under moderate receipts and a good demand with poor supplies, the range in October was 11 to 15 cts., at which it held the remainder of the year.

EGGS.—One of the anomalies of the times is the small attention given to poultry, either as a special industry or as an auxiliary to the farm. There is nothing that gives better returns than poultry, when properly cared for and strict attention given to feeding and cleanliness, and seeing that the coops are free from draughts and care taken to protect them from sudden changes in temperature. Our wet and dry seasons make these precautions absolutely necessary to secure health and the best results. We have to import from the Central States fully 25 per cent of the poultry consumed in this State, while one-half of the eggs consumed are imported, with the receipts in this city of the latter being double that of the Californian market. The lessened time in transit between the Central States and this coast, together with improved means of transportation, enable dealers in those States to lay eggs down in our city within a few days after purchase, which makes them comparatively fresh. In the majority of cases they are fresher than the general run of eggs received from the more distant points in this State.

The year 1891 like its predecessors, maintained a steady decline in values up to May or June, with slight fluctuations, when it turned for the better and steadily advanced under fluctuations up to October or November, after which it remained firm to the close of the year. January of 1891 opened on an easy market at a range of 27 1–2 to 30 cts. for good to selected; by the 15th it fell off 2 1–2 cts., then ran up 5 cts., after which the range began to steadily set off until by March 15th it was 15 to 22 1–2 cts. In March and April the market fluctuated around 15 to 22 1–2 cts. In June the range was from 3 to 4 cts. higher, which held up to July 20th, when under a steady advance the range was on July 25th 22 1–2 to 29 cts., with the trade running on strictly choice fresh laid, owing to hot weather. In August there were steady advances, the month going out on a 27 1–2 to 35 cts. range. September witnessed still higher prices; by the middle of the month the range was 32 1–2 to 42 1–2 cts. for fair to choice selected. In October the market held steady up to the 15th, after which it advanced to 40 to 50 cts. The market in November and December held strong, fluctuating between a range of 35 to 45 cts. and 40 to 50 cts.

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MR. JOHN T. SULLIVAN, of the Sea Beach Hotel, Santa Cruz, has just returned from a visit to New York, where he secured equipments and attractions for the season of 1892 that will add much to the pleasure and accommodation of the guests of this great and popular seaside resort.

WHEN IN TULARE patronize E. D. CASTLE'S livery and feed stables.

Humboldt County Progress.

BLOCKSBURG, Jan. 9, 1892.

TO THE EDITOR: I send you a few items from our mountain village, which may interest some of your readers seeking homes in a high, healthy and fertile country, 1650 feet above the level of the sea. For the past 20 years our hills have been used simply as pastures for countless sheep and cattle, but of late years small farm holders have made homes on 40, 80 or 160 acres of land, and it is surprising what fine places can be made wherever industry and perseverance have been employed. Of course some failures have been made, but they can be traced to lack of energy or mismanagement in nearly every case.

We are too near the coast for our winters to be very severe. Although we usually have some snow, it is not in sufficient quantities to prevent us from having fresh vegetables the year round. Celery, green onions, lettuce, turnips, cauliflower, etc., being on hand all winter, and young cabbage in April. Yesterday I noticed strawberries in bloom, and I have geraniums planted out in our garden nine years ago still flourishing. Fruit of all kinds grow to perfection, even on our dry hillsides, while on the river and creek bottoms the climate is perfect in winter and oranges thrive.

People are just awakening to the value of the land for fruit. A company of moneyed men from Eureka have bought a tract of 340 acres of land (the Francis place, one and one-half miles from our village) which they intend setting out in French prunes and apples. They are putting the land in order to set out 40 acres right away. Mr. Casterlin on the adjoining ranch will add 800 trees to his present orchard. V. Hope will set out several hundred trees, thus adding to his already large orchard and vineyard. Mr. Burgess is also enlarging his orchard, besides many others too numerous to mention. Apples, pears, peaches, plums, French prunes and grapes of all varieties grow to perfection; also grain, corn, etc., and alfalfa will grow even on our hillsides without irrigation, and by next harvest we shall have a flour mill in operation about nine miles below us. Our only drawback has been too great distance from market, but we are assured of more roads ere long, and Eel river a few miles distant is navigable to Humboldt bay. We are also promised a railroad through our county inside of two years; there is a gap of about 111 miles to build. These facts are from one who has lived here for 17 years.

MRS. E. HOPE.

[Our correspondent sends also a box of apples grown on the hillsides in the region which she describes. They are eloquent testimony to the adaptations of the district.—ED. PRESS.]

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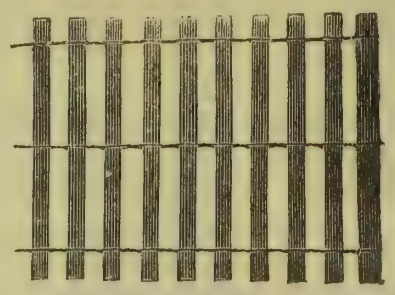
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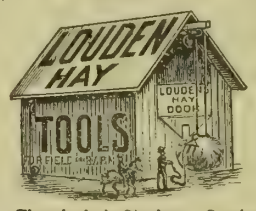
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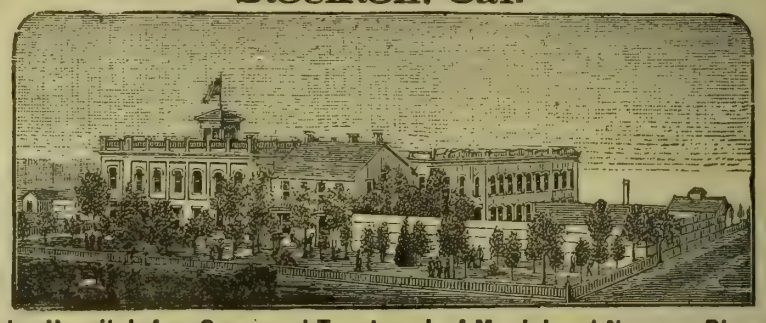
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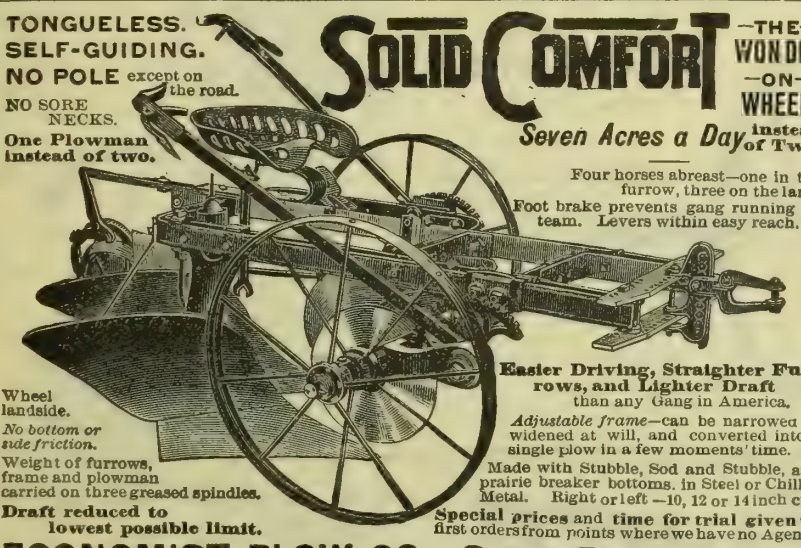
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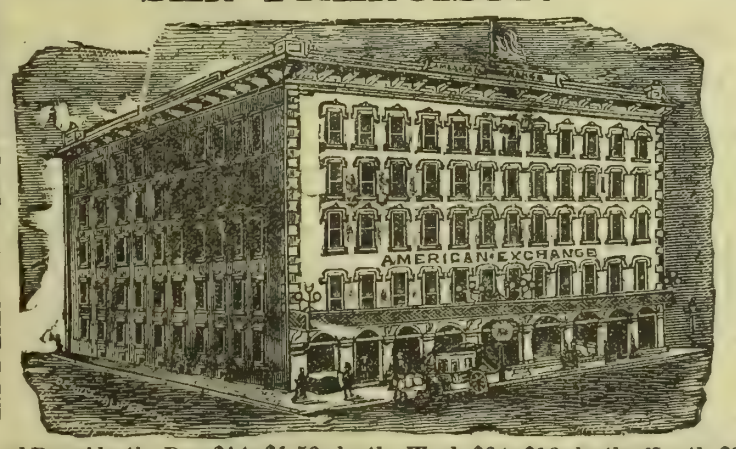
Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
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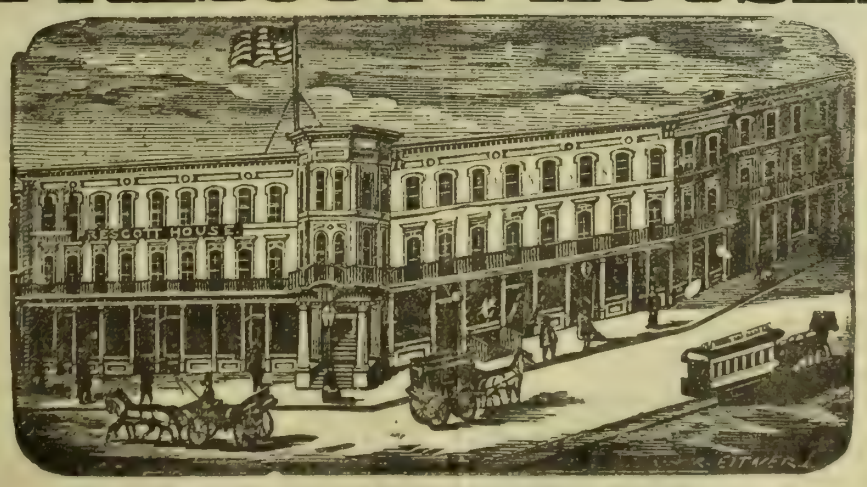
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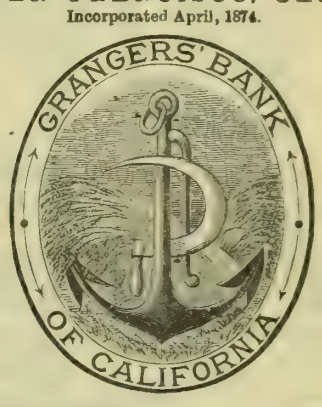
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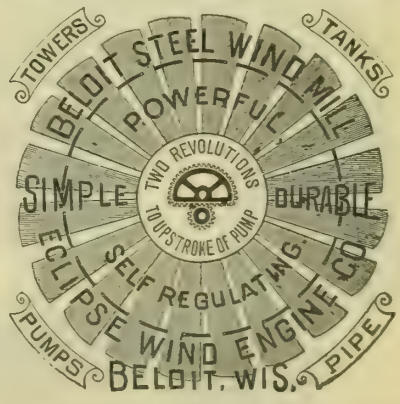
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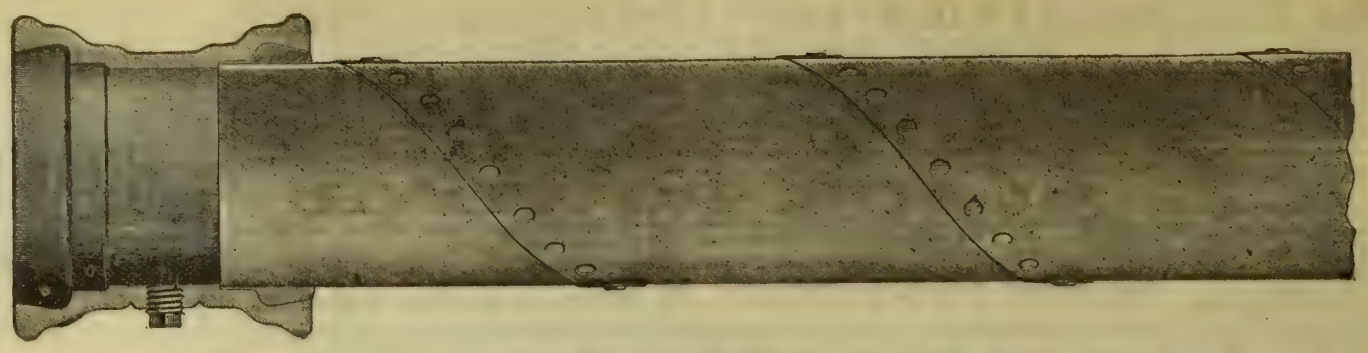
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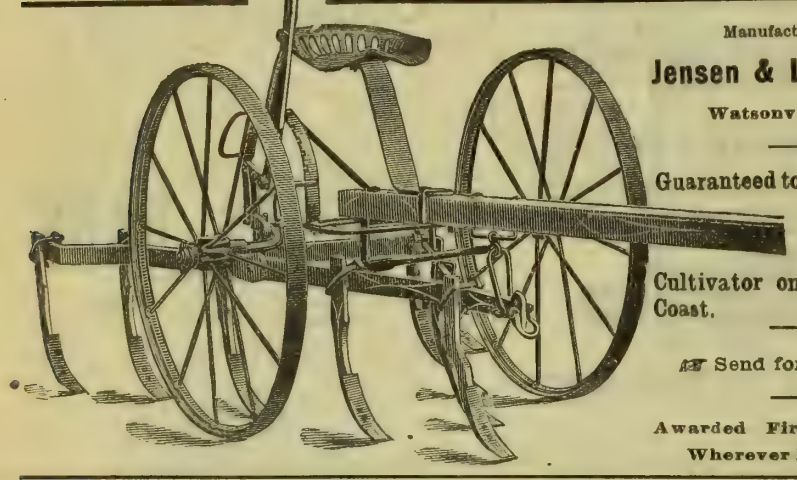
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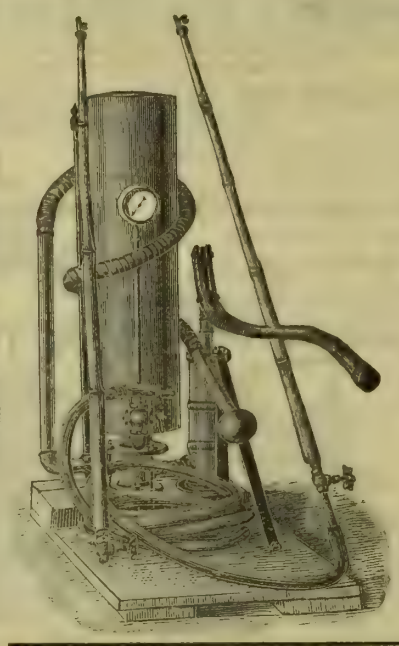
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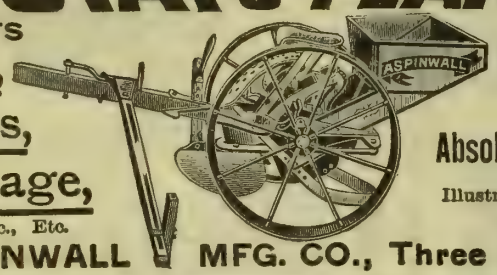
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Selling Walnuts at the South.

In our issue of January 9, we copied from the Ventura *Free Press* an item relating to the sale of southern grown walnuts which it seems from correspondence just received was incorrect in some particulars. We therefore reprint the item and the comments which we have received on the subject:

Manipulation of Walnuts.

A well-known walnut grower of this county was talking about walnuts the other day and went on to tell how the market was worked to the grower's detriment. "At the sale of the Los Nietos walnuts this fall," said he, "two buyers were in field from Los Angeles. One of them represented a house which usually tries to get in on every product, and the other was a young man representing most of his own capital. The young man outbid the other on a forty-car-load lot, by a fraction of a cent a pound, and he was given the walnuts. The other man, in order to teach those growers a lesson, went home and sent word East and to those in the business, not to buy walnuts, as there was a big stock and prices would fall down. As a result the purchaser of the nuts could not dispose of his buy, and as he was unable to make the proper advance the Los Nietos growers are still in possession of their crop. Of course this is not a usual case, bnt it goes to show how unprincipled some commission men can get."—*Ventura Free Prsss.*

FROM THE CONTRACTING FIRM.

LOS ANGELES, Jan. 25.

TO THE EDITOR:—Referring to your article on 33d page of your January 9th edition, headed "Manipulation of Walnuts," wherein you quote from the Ventura *Free Press*, would state that your item, as far as it pertains to the action of the house which failed to secure the walnut contract, and its subsequent effort to break the market, was perfectly correct.

As to the result mentioned, viz: "That the purchaser of the nuts could not dispose of his buy, and that the walnuts are still in possession of the Los Nietos growers," we enclose you two copies of the Downey *Champion*, under date of Dec. 26th and Jan. 16th. We have marked two items. The item of Dec. 26th gives you an itemized list of growers and respective amounts paid them for their crop. Item of Jan. 16th plainly shows you that the article which appeared in your issue is not only incorrect, but does us great injustice.

We are the firm who secured this walnut contract. We received every sack of walnuts covered by our contract, and had them all sold far in advance of the time that growers could get them ready for shipment. Our contract gave us till Dec. 20th to receive the nuts. We had them all received and shipped by latter part of November (some 35 or 36 carloads).

It is probably unnecessary to state that the firm who took this reprehensible manner of getting even, utterly failed to accomplish their object, as their reputation for slippery dealing was sufficient to keep the trade from putting any confidence in them. Their efforts worked injury to themselves, as the walnut growers in this section and Ventura are well acquainted with the circumstances, and will bear them in mind for future use.

SIMPSON-MONTGOMERY FRUIT CO.

COMMENTS BY THE DOWNEY "CHAMPION."

One of the enclosures to which our correspondents refer is the following:

As the representative journal of the Los Nietos valley, the *Champion* cannot allow certain inaccuracies in the foregoing article to pass without correction, particularly as the RURAL PRESS, a journal of great popularity and influence, and extensive circulation, in its issue of the 9th inst., republished the article and sent it forth to mislead its thousands of readers.

Though the actions of rival dealers to depress the market of a great staple crop of this valley is a matter of deep concern to our growers, it is not our purpose at this writing to refer to the reprehensible charge laid at the door of an unsuccessful bidder.

"As a result, the purchaser could not dispose of his buy, and as he was unable to make the proper advance, the Los Nietos growers are still in possession of their crop." This much of the article we pronounce without truth. The successful bidder received all the walnuts contracted for by him, paying the Ranchito and Los Nietos Walnut Growers' Association the handsome sum of $58,020.83, cash.

Furthermore, the officers and directors of the association are wealthy and shrewd business men who transact their affairs after correct business methods. The successful bidder for their walnut crop is required to enter into a written contract, and secured by heavy bonds. The article quoted implies a slip-shod method of doing business, not in accord with the reputation and business ability of our walnut growers and is calculated to do them great harm. We feel assured that the RURAL PRESS will make due correction.

We are glad to made the correction both for the sake of setting the matter right before our readers and to emphasize as well the fact that the walnut producers of the Los Nietos region have an effective organization through which they are doing business successfully. This is an item of general importance and significance.

ENTOMOLOGICAL.

Mr. Kœbele's Mission.

Prof. D. W. Coquillett, Agent U. S. Division of Entomology, stationed at Los Angeles, writes to Hiram Hamilton, President of the Orange County Horticultural Commission, as follows:

The short note I sent you in reply to yours of the 1st inst., asking for information concerning the ladybirds recently sent me by Mr. Kœbele, did not convey as much information as the subject demands, and I have therefore thought it well to write you more fully upon this subject.

I judge from the wording of your letter that you have seen the article in the San Francisco *Chronicle* of the 27th ult., giving an interview with the officers of our State Board of Horticulture. A few of the published statements will require modifying; thus, instead of 30 species of beetles being represented in the package it contained only 14 species, and instead of these attacking all the different kinds of insect pests that infest citrus and deciduous fruit trees in this State they are thus far known to prey upon less than half a dozen different kinds. It will be many years yet—perhaps centuries, but more likely never—before we succeed in introducing beneficial insects that will free our fruit trees of all the insect pests that attack them.

As regards the two species that prey upon the red scale, and which, therefore, concern your people most, i. e., the blue ladybird (*orcus chalybeus*) and the six-spotted ladybird (*orcus australasiae*), I cannot as yet speak with any degree of assurance. While they may in time free our citrus trees of these pests, the statement given out that they will be to the latter what the vedalia was to the cottony-cushion scale should be received with a great degree of allowance. The work which the vedalia accomplished is without precedent in the entire annals of economic entomlogy, and, therefore, we can scarcely hope for a repetition of it in the case of the recently imported species.

A word concerning these insects may not be out of place here. Our State Legislature, at its last session, appropriated the sum of $5000 for the purpose of importing beneficial insects into this State from other countries, and turned this over to our State Board of Horticulture; the latter, by a resolution, placed the entire sum at the disposal of Secretary Rusk, of our National Department of Agriculture, with the request that he send Mr. Kœbele on this mission. This he consented to do, specifying that Mr. Kœbele go as an agent of the Department, from whom he would receive his salary and instructions and to whom he is to report. These facts are given on page 38 of Secretary Rusk's annual report for the year 1891. One of the officers of the State Board also informed me that Mr. Kœbele received his instructions from the Entomologist of the Department. It will thus be seen that the introducing of these insects is now in the hands of the United States Department of Agriculture.

Mr. Kœbele will be put in possession of the facts gleaned by Prof. Riley through correspondents in foreign lands, and will be made acquainted with naturalists and other observers who are familiar with the various predaceous and beneficial insects occurring in their several localities. Every possible effort will be made to introduce, propagate and distribute every kind of beneficial insect that will prey upon the different kinds of insect pests found within the State; but until we are quite certain that the species thus introduced will be able to perform the task expected of it, our fruit growers are advised to continue the use of insecticides as heretofore.

Please acquaint the growers in your county with the facts above mentioned, and assure them that when an effectual parasite is received and has sufficiently demonstrated its usefulness, they will be put in possession of this fact at the earliest moment possible.

Alessandro Notes.

TO THE EDITOR:—There has been more continuous cold weather during December and January than ever known in our section before. The frost has done considerable damage to young orchards and seed beds, especially in the low lands of the valley.

There has been very little rain so far, but grain planting is going steadily on, many thousands of acres of new land being seeded, and we can see new camps every day where the plowmen are coming in to break up land. From the high lands, along the foothills, the valley looks like a checkerboard, where the plowed land and the unplowed are about equally divided. Alessandro is improving. Mr. Warner, the Postmaster, has just built himself a fine residence, and a store building where he will dispense groceries and mail matter. New houses are going up every day in the valley, and we have stopped counting them long since. The new brick blocks are now occupied, in Moreno, by grocers, hardwaremen, etc. They now have a blacksmith shop, meat market and a lumber yard, where they seem to be kept busy.

Water is now distributed, in pipes under ground, to most of the ten-acre lots in the tract, and the desert will soon be made to blossom. Everybody seems to be hopeful, in spite of the temporary backset given them by the cold snap, and planting will soon go on with renewed vigor. L. S. LYMAN.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING JAN. 26, 1892.

467,681.—MAIL BAG—C. Dickenson, Portland, Or.

467,882.—CAR COUPLING—F. A. Fox, S. F.

467,607.—ROTARY EXCAVATOR—W. P. Humphreys, S. F.

467,685.—EXTENSION LADDER—E. W. Hammon, Medford, Or.

467,687.—FRUIT GATHERER—D. B. Matlock, San Jose, Cal.

467,620.—DISH WASHER—W. C. Nelson, Santa Rosa, Cal.

467,612.—HYDRAULIC MOTOR—E. I. Nichols, S. F.

467,772.—DUMP CAR—C. D. Page, Tacoma, Wash.

467,614.—CAR COUPLING—David Stark, S. F.

467,696.—FLASH-LIGHT BURNER—S. M. Williams, S. F.

The following brief list by telegraph, for Feb. 2d, will appear more complete on receipt of mail advices: Mark Anthony, Berkeley, and W. C. Savage, Oakland, Cal., thimble and bushing for barrels; G. W. Bedbury and E. F Badgley, San Francisco, pile armor and casing; Edgar M. Brideweli, McMinnville, Oregon, anti-friction axle-box; Henry Bryan, Modesto, Cal., grain-cleaner attachment; Columbus F. Cardwell, Bridal Veil Oregon, door securer; James A. Christy, San Francisco, Cal., telephone holder; Gilbert T. Franklin, Walla Walla, Wash., gravel-screening machine; Alexis Janin, San Francisco, Cal., amalgamating silver ores: Charles J. Koefoed, San Francisco, band-saw mill; William F. Loan, Portland, Oregon, holders for brushes and dusters; Henry C. Lynch, San Francisco, Cal., cable-grip adjusting device; David R. McKim, Gold Hill, Nev., valve; Dennis O. Sullivan, Spokane Falls, Wash., sling cinch; Robert W. Parker, Camp Huachuca, Ariz., rifle sight; Emlio Prunetti and G. Avignone, Sierra City, Cal., aerial tramway; Fairfax H. Wheelan, Santa Barbara, Cal., separator; Henry G. Gates, San Francisco, ball-bearing device.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

STUMP PULLER.

Removal Notice.

I take this opportunity to inform my friends and the public generally that I have removed to the corner of Brannan and Zoe streets, between Third and Fourth streets, where, with increased room and improved machinery, I will have better facilities to meet the rapidly increasing demand for my machine. It is a fact that many of our American farmers, in an honest effort to clear a timber farm and compete in the price of their products with their more fortunate neighbor of the prairie, have been reduced to a condition nearly approaching that of the Russian serf or Polish Jew, and that men possessing the progressive spirit and boasted intelligence to which our American farmers are justly entitled, should hail with delight the invention of a machine which would elevate them above this condition of affairs, is little to be wondered at, and is fully attested by the many praiseworthy letters which I am receiving from the different sections in which my machine has been introduced; hence the necessity of my seeking more commodious quarters, for just so sure as the earth's diurnal revolution changes the day to night, or its annual revolution changes the seasons, just so sure will the CALIFORNIA STUMP PULLER prove itself the great successful medium in changing the forests of America into a garden spot Illustrated descriptive catalogue sent free on application. Address Geo. Harvey, corner Brannan and Zoe streets, San Francisco, Cal.

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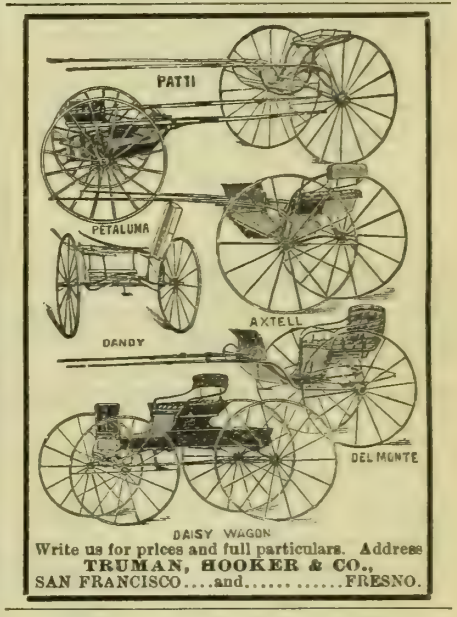
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ST. JACOBS OIL.

He used it freely all over his bruises. I saw him next morning at work. All the blue spots rapidly disappeared, leaving neither pain, scar nor swelling. C. K. NEUMANN, M. D.

"ALL RIGHT! ST. JACOBS OIL DID IT."

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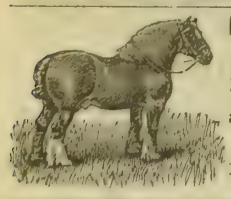
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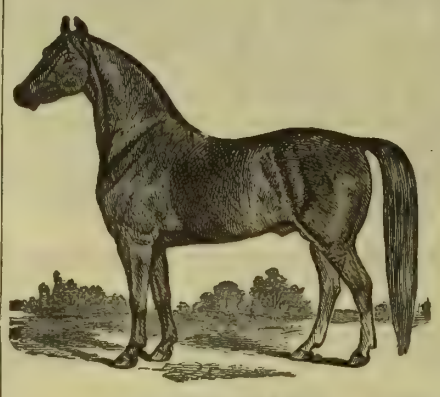
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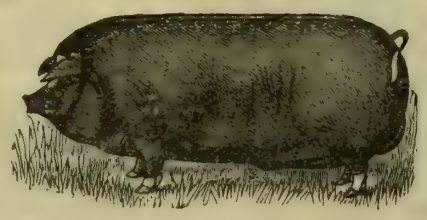
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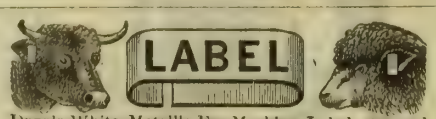
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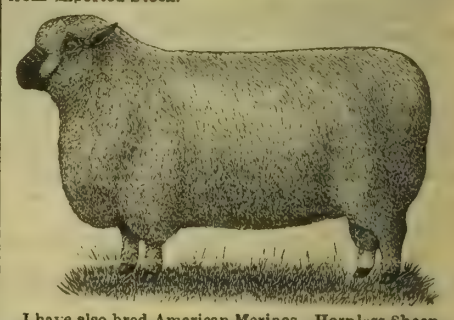
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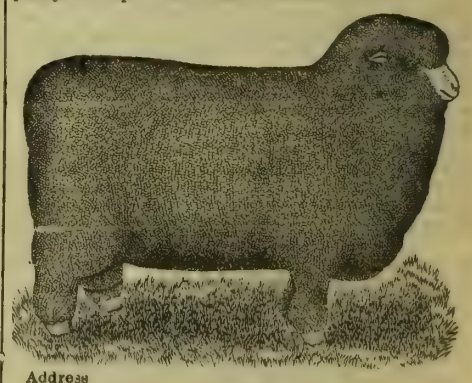
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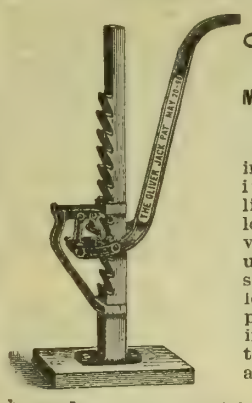
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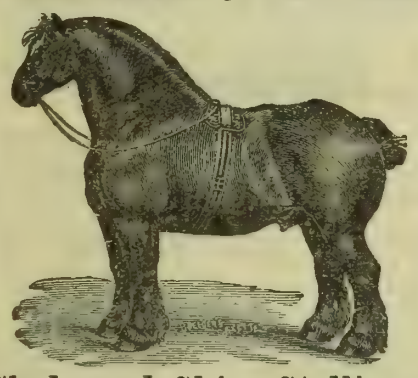
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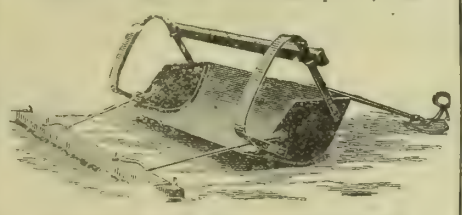
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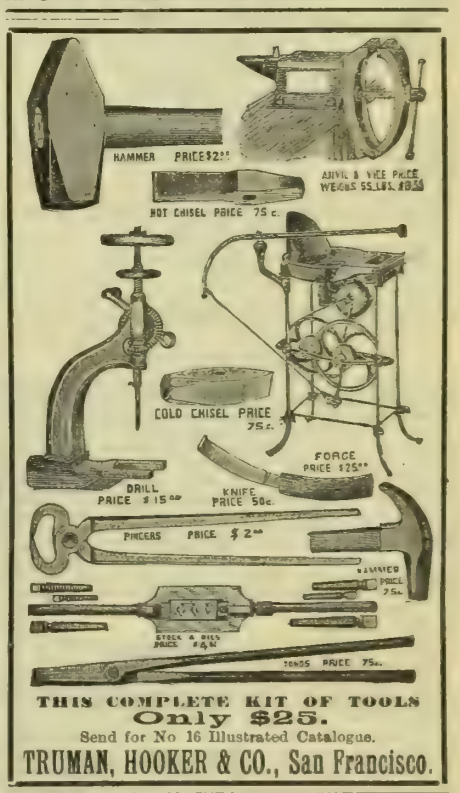
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 3, 1892.

Rains the past week were general, with the southern part of the State visited by a most generous downfall. Previous to this rain, several southern localities were reported to be suffering for the want of rain, with strong fears expressed of a drouth, but now all such fears appear to be allayed. From all information at hand, it appears within the bounds of reason to affirm that never within the history of the State has so large an acreage been devoted to grain as has been this winter, while the acreage being planted to fruit continues to steadily enlarge. The money market is reported easy, with rates of interest favorable to borrowers who offer first-class security. Wheat charters appear to have touched bottom, for with continued favorable crop weather, ships are disposed to tie up until next season. For new crop business, iron ships, handy sized, are obtainable at 30s, with favorable option to charterers. The introduction of whaleback steamers bids fair to revolutionize the carrying trade of this coast. In a voyage rounding Cape Horn they make steamship time, while carrying a sailer's cargo. In England a large number is being built.

Foreign Grain Review.

LONDON, Feb. 1.—*Mark Lane Express:* English wheats again declined 1s. Foreign wheats are depressed; California, 40s 3d; American Red Winter, 38s 6d. Barley is neglected; oats are dull; American, 18s 3d. Corn is dull; American, March shipments, 21s 3d. At to-day's market, American wheat lost 6d and oats declined 3d. American flat corn dropped 6d.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Jan.	Feb.	Mar.	April.	May.	June.
Thursday	....	.....	7s11½d	7s11d	7s11½d	7s11d
Friday	....	7s11½d	7s11d	7s10½d	7s09½d	7s10½d
Saturday	....	7s11d	7s10d	7s09½d	7s09d	7s09½d
Monday	....	....	7s09½d	7s8½d	7s08½d	7s9½d
Tuesday	....	....	7s09½d	7s8½d	7s08½d	0s8½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for he past week.

O. C.	P. S.	N. D.	Market for P. S
Thursday	40s3d	40s3d	40s3d	Heavy.
Friday	40s3d	4 s3d	40s3d	Steadier.
Saturday	40d	40s d	40s0d	Weaker.
Monday	39s6d	39s3d	39s3d	Very dull.
Tuesday	393	39s3d	39s3d	Quiet but steady.

To-day s cablegram is as follows:

LIVERPOOL, Feb. 3.—Wheat rather easier, California spot lots, 7s 10d; off coast, 39s; just shipped, 39s; nearly due, 39s; cargoes off coast, slow; on passage, weak; Mark Lane wheat, very quiet; French country markets, very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	170	171½	171	170½	167½
Friday	170¼	171½	172½	159½	166¾
Saturday	169¼	170¼	171	169½	166
Monday	169	170¾	170¼	168⅝	165½
Tuesday	167	168⅜	168⅝	167	163½

The following is to-day's telegram:

NEW YORK, Feb. 3.—Wheat, 99⅞c for February, $1.01¼ for March, $1.00¼ for April, 99¼c for May, 97½c for June and 96½c for July.

CHICAGO, Feb. 3.—Wheat, 88⅛c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	Buyer Season. L.	Buyer 1892. H	Buyer 1892. L.	Seller 1892. H.	Seller 1892. L.
Thursday	170⅝	170¼	....	....	....	....
Friday	169⅜	167⅝	....	....	....	....
Saturday	165½	164½	....	....	147⅛	147⅝
Monday	164	162½	....	....	143	142¼
Tuesday	162⅛	161⅞	....	....	143	142⅝

The following are to-day's recorded sales on Call:

Morning Session Buyer Season—100 tons, $1 60½; 2800, $1 60½; 1100, $1 60⅝. Seller 1892—300 tons, $1 41½; 100, $1 42 ₰ ctl. Afternoon session buyer season 100 tons, $1 60½; 600, $1 60; 700, $1 59½; 800, $1 59⅜; 300, $1 59½; 100, $1 59⅝. Buyer August 500 tons, $1 44. Seller 1892—100 tons, $1 41; 200, $1 40¾; 100, $1 40⅝; 100, $1 40½ ₰ ctl.

BARLEY.

	Buyer Season. H.	Buyer Season. L.	Seller Season. H.	Seller Season. L.	Seller 1892. H.	Seller 1892. L.
Thursday	107⅜	107½	....	....	....	....
Friday	106⅝	105⅞	101¼	101½	.	....
Saturday	103¼	103⅜	....	....	....	....
Monday	103	101½	98¼	98	....	....
Tuesday	102⅜	101⅛	....	....	90	90

The following are to-day's recorded sales on Call:

Morning session—Buyer season: 100 tons, $1.00⅜; 200, $1.00½; 300, $1.00½; 200, $1.00⅝; 300, $1.00⅝ ₰ ctl.

Afternoon session—Buyer season: 500 tons, 99½c; 300, 99⅝c; 200, 99¾c; 100, 98½c; 200, 98¼c; 100, 98½; 100, 98¾c; 100, 98½c. May—100 tons, 91½c; 100, 94½c ₰ ctl.

Markets by Telegraph.

Eastern Lima Bean Market.

NEW YORK, Feb. 1.—There is rather more interes manifested in California Lima beans by local and out-of-town firms, and between reports as to transactions in the Eastern distributive centers and advices from primary markets, a difference is found that arouses curiosity if nothing else. The popular quotation on the coast is now 2¼c ₰ lb. It is learned however, that bids on upward of 10 carloads have been solicited. Not long ago this line was purchased at $1.62 ₰ bushel landed here, to arrive by steamship. Carload lots to arrive by rail route have since been sold at $1.86, landed here, and smaller parcels at $2 and a shade under, spot. From New England points it was advised carloads had been offered to arrive there at 3c ₰ lb. within the past few days.

Eastern Wool Markets.

NEW YORK, Feb. 1.—There is more activity at seaboard markets, but there is nothing to strengthen the low tone of prices. Manufacturers admit of good orders in view, but insist that they are to be filled on the basis of recent raw rates. This is somewhat confirmed by their "shipping around" policy, and as they so meet tired holders and orders to realize upon consigned parcels, they control the situation. Fleeces are really off; double X Ohio sold in Boston at 29@30c; Delaine stock, 32@34½c. On unwashed wool the Pacific Coast shows the best range, but there were certainly intermediate lines of spring sold low enough to indicate the prevalent weakness. The London market opened steady for marks suitable for American. The sales at Boston were 2,206,400 pounds of domestic, including 215,000 spring California at 16@24c; 50,000 on private terms; 1,037,000 foreign, about half Australian, at 32@41c. The first was cheap carpet. Philadelphia's sales were confined to moderate current wants at no better prices.

Eastern Hop Market.

NEW YORK, Feb. 1.—Spot eased off one-half on choice Friday. Brewers bought lightly, and cables, though not lower, have not favored buying for export. Common to choice State range 22@27c; nineties ones, Pacifics, 21@26c; other unchanged. Options close lower; February, 25c asked; March, 26c; April, 24c; May, 26c; June, 27c, with 25c bid; July, 27¼c asked, 26c bid. The call system does not yet meet full favor. A movement to discontinue it was rejected by a small majority. The impression somewhat obtains among many old-fashioned dealers, particularly brewers, that the new system has a feverish tendency upon quotations. They also fear that "paper" hops may be detrimentally introduced, though prominent operators on 'Change say emphatically that the fear is groundless.

Eastern Dried Fruit Market.

Unpeeled evaporated peaches are offered freely here and at Philadelphia at 6½c. Prunes—There is a return of a good undertone, with some business, not of sufficient volume, however, to enlarge shipments. Bags, four sizes, 7@7¼c; five sizes, 7½c. Boxes, five sizes, 8½c; four sizes, 8@8¼c. Fifties and sixties brought 8¾c. Raisins are quiet London layer California raisins are doing a shade better. Apricots—Good bags bring 7@7½c; fancy, 9c.

CHICAGO, February 2: Prunes and raisins meet with a steady demand, and choice grades are firm. Apricots and peaches of fair quality sell fairly, but there are a number of only fair lots on sale which are dull; the demand for these fruits is from the better class of dealers, and as prices are low only the finest grades are wanted.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 1, '92, were as follows:

Flour, qr. sks	86,930	Bran, sks	5,191
Wheat, ctls	28,223	Buckwheat "	189
Barley, "	15,276	Middlings "	2,041
Rye, "	411	Chicory, bbls	120
Oats, "	1,511	Hops, "	.....
Corn, "	522	Wool, "	141
*Butter, "	608	Hay, ton	1,933
do bxs	120	Straw, "	75
do bbls	....	Wine, gals	246,670
do kegs	.....	Brandy, "	14,800
do tubs	....	Raisins, bxs	1,567
do ½ bxs	118	Honey, cs	32
†Cheese, ctls	261	Peanuts, sks	486
do bxs	....	Walnuts "	....
Eggs, doz	80,910	Almonds "	84
do " Eastern	11,970	Mustard "	....
Beans, ctls	5,025	Flax "	....
Potatoes, sks	15,745	Popcorn "	....
Onions, "	1,195	Broom corn, bdls	33

*Overl'd, — ctls. †Overl'd, 506 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to Feb. 1, '91.	July 1, '91 to Feb. 1, '92.
Flour, ½ sks	186,115	302,788
Wheat, ctls	794,057	1,095,773
Barley, "	181,937	28,207
Oats, "	242,788	330,974
Wool, bales	5,790	5,733
Hops, "	333	339
Rye, sks	....	3,293
Potatoes, sks	44,441	41,456

Cereals.

The Produce Exchange Call Board, reports the following stocks of grain, etc., in city Call Board warehouses at the close of January, and on the 1st of that month.

Tons.	1st.	31st.
Wheat	4,827	2,648
Barley	17,955	16,763
Oats	5,032	4,334
Corn	3,350	2,434
Bran	1,210	216

At the close of January, 1891, the stocks were as follows: Wheat 7796 tons; Barley, 9867; Oats, 1684; Corn, 3033; Bran, none. The receipts in January, 1892, were 5650 tons barley, 1232 oats, 986 corn and 2341 bran. The stock of wheat, January 31, 1892, in all Call Board warehouses, was as follows in tons: San Francisco, 2648; Stockton, 44,824: Port Costa, 58,275. Total, 105,747; as against 153,086 tons on December 31, 1891.

European mail advices report as follows: "Reports from Spain are quite favorable in regard to the appearance of the wheat crop. It is expected that there will be some improvement in the Spanish trade in foreign wheat, as native wheat is offered sparingly. The crop reports from France the first week in January were satisfactory. In Germany the recent severe cold weather had not been favorable, but the general condition was fairly good. In Hungary the outlook was still favorable. In Russia, according to the official reports, the autumn drouths in the Southern and Southwestern Provinces prejudiced the wheat crops to some extent. From the Argentine, reports have been received of serious damage to the wheat crop by rain. [Later advices report the Argentine crop unprecedently large.—COMMERCIAL EDITOR RURAL PRESS.] In reference to the general situation, *Beerbohm* says that, while the stocks of wheat at present amount to about 210,000,000 bushels in sight, including American on passage and in Europe, against about 167,000,000 bushels last year, it must be borne in mind that the requirements are also much larger. For instance, the British and French requirements this year are put at 264,000,000 for the entire year, while net imports so far this season have been 125,700,000 bushels, leaving a balance of requirements of about 139,000,000 bushels, or about 21,000,000 bushels more than for the same time last year. If the extra requirements of Belgium, Holland and Germany until the next harvest are added, the total requirements will not fall far short of 48,000,000 bushels more than last year. Leaving Russia out of the question, Australia and Argentine will not be able to equal last year's contribution, and America and Canada will have to make good Russia's shortage, and, to some extent, the lessened supplies from other countries. India is not likely to repeat her last year's unprecedented exports of 32,000,000 bushels from Jan. 1 to July 31, or, in other words, America and Canada will have to supply at least 144,000,000 bushels up to July 31st.

The first report of the wheat crop of Berar, India, states that the area is 834,997 acres, and the general condition of the crop favorable. The exports of grain from Braila-Galatz last year were 12,400,000 bushels of wheat, 10,600,000 bushels of corn, 4,900,000 bushels of barley and 2,200,000 bushels of rye.

Up to the first of January France had imported 42,224,000 bushels of wheat. Holland imported in the past year 22,500,000, against 16,500,000 last year; rye, 16,300,000 bushels, against 15,300,000 bushels.

Wheat the world over has been receding in price under strong systematic bear pressure, based largely on favorable crop prospects in Europe and in the United States. Late advices from Russia are confirmatory of previous received information that the crop outlook is all that can be desired for a large yield. While the present outlook is favorable to bears, yet the fact must not be lost sight of that weather influences will soon be an important factor in controlling values, and that this being the case any unfavorable turn in the weather, either at home or abroad, will undoubtedly bring about higher values for wheat. Receipts of wheat from up north are lighter. The falling off, while largely due to low wheat charters on Puget Sound and at Portland, is also traceable to the rapid decline in the price of wheat in our market.

On Call, the dealing in wheat and barley futures has shown more activity, with monthly options beginning to be dealt in. After the present season monthly options are to be dealt in almost entirely, which, it is accepted, will be more favorable to the wheat interest.

The bears on Call have succeeded in hammering barley to still lower figures, and this, too, in the face of reduced receipts, smaller stocks and depleting supplies in the country under a continued large consumption. From up north receipts continue light. A threatened strike by hands in the breweries is taken advantage of by buyers to try and force brewing grades to lower ranges.

Oats are steady with a firm tone reported owing to light receipts and light supplies to draw from. The receipts of Californian the past week show a slight increase over preceding weeks.

Corn is stronger under an improving export demand, but fears that the Central States will throw liberal quantities on this market in the event of higher prices being asked acts as a damper and at present is against sellers.

Rye is weak and slow.

Buckwheat is steady.

Feedstuff.

Bran and middlings are weak at lower prices. Ground barley is selling at lower prices, but feed meal is steady. While the consumption of ground feed is falling off, yet it is in excess of former seasons, when pasture was about what it is now.

Contrary to the general expectations held by dealers, hay holds to strong prices under continued free feeding and light obtainable supplies. All advices report that range and pasture feed is steadily improving.

Dairy Produce.

The butter market has ruled weak and in buyers' favor. Freer receipts with buyers confining their purchases cause a company which is a large receiver to force the market so as to sell to lower figures. Several firms report that they place their consignments at full figures, although they are compelled to follow the downward move. Improving pastures and an increasing number of milch cows will soon bring the receipts of butter up to high figures.

Cheese is unchanged so far as quotations are concerned, but the tone of the market is weak with a downward tendency.

Eggs have sold at lower figures. The demand is increasing, which fairly cleans up the market. Receipts are increasing from all shipping points in this State. The receipts of Eastern are decreasing.

Fruit.

Apples are fairly steady. Receipts do not appear to be so large, while the demand shows no falling off. Choice mountain apples are readily placed at outside quotations. Oregon continues to send us liberal supplies.

The receipts of oranges continue quite large, but as the bulk is poor, low prices are still the order. Shipments eastward are unusually large. The free shipments are being made so as to take advantage of the 90c freight rate. If growers send as poor stuff East as they do to this city, it is calculated to have an injurious effect by creating an unfavorable opinion with Eastern consumers. For the good of the industry it would be much better to destroy trashy stuff than attempt to market it. California oranges' reputation stands too high to have it undermined by either frosted or windfall oranges.

In our market the quotations for oranges take on a wide range, being governed by the quality and demand.

The dried fruit market continues unsettled and irregular, making quotations more or less nominal. To force sales, low prices must be accepted, while to buy full prices are paid. Choice large prunes are scarce and higher. All choice grades of fruit have a stronger tone.

Raisins are slow, but holders of choice London layers appear to entertain firmer views. It looks very much as if the market will very soon begin to do better, but of necessity this will depend upon the demand from the Eastern distributive centers.

Vegetables.

Spring garden truck continues to come to haud from Los Angeles. For two nights past there has been frost in the bay counties, but so far as we have been able to learn, no serious injury has been done to outdoor plants.

Onions are higher for choice good keepers. Oregon advices report that, owing to the open winter, there has been more sprouting than for years past. This being the case, it ought to lessen our receipts from that quarter.

Potatoes continue in oversupply, although toward the close receipts begin to show a slight falling off. Mild, moist weather necessitates more or less marketing of potatoes inclined to sprouting. Large dealers look for an improvement in the market soon. Oregon is increasing her shipments to this city.

Live Stock.

The market for choice, well-conditioned bullocks, mutton sheep and hogs, shows quite an advance. Selling offers have fallen off very materially. This is probably due to better feed causing owners of range stock to withdraw from the market until their stock have taken on more flesh. Stall-fed cattle are in better demand.

Miscellaneous.

From reliable advices up to Feb. 3, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	237,958	286,940	*114,182	*67,152
San Diego	22,609	15,300	4,240	.....
San Pedro	1,935	6,519	4,159	} 11,844
Oregon	24,452	35,811	40,173	
Puget Sound	15,249	15,511	.....	
Totals	302,194	360,081	162,754	78,996

*Engaged for wheat, 1892, 46,710; 1891, 12,997

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Jan. 4th, are as follows:

	1891.	1890.
Wheat, ctls	9,919,390	6,428,099
Flour, bbls	661,289	628,288
Barley, ctls	718,306	191,078

Bags are strong at 7⅜ to 7⅛ cts

Poultry has held to fairly strong prices. Large, well-conditioned continue to be comparatively scarce.

Honey is in light supply. Fair shipments were made the past week to Europe.

Beans continue dull and heavy under a strong bear pressure. It looks as if supplies are being concentrated in the expectation of better prices in the spring.

Hops continue to rule strong under light obtainable supplies and strong holding. It is reported that there are buyers in the field for next season's hops. English advices report a strong market, with old-crop hops being cleaned up.

In wool there is comparatively little doing. Eastern mail advices indicate that this year's clip is likely to meet with slightly better prices than have obtained for two years past, but of necessity that is largely dependent upon what fashion will demand in wearing goods.

IN AUSTRIA, experiments are being made with the view of replacing steam by electricity for rapid, long-distance railroad travel.

SUDDEN DEATHS.—It is claimed that eight men die suddenly to one such death among women.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 3, 1892

BEANS AND PEAS.			
Bayo, ctl	1 75	@	2 05
Butter	2 20	@	2 65
Pea	2 45	@	2 70
Red	1 75	@	2 05
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 10	@	2 45
Lima	1 70	@	2 10
Wld Peas, bik eye	1 35	@	1 65
Do green	1 70	@	2 50
Do Eastern do	2 55	@	2 75
Do Nies	1 30	@	1 45
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
Do good to choice	27½	@	—
Do Giltedged	32½	@	35
Do Creamery rolls	32½	@	34
Do do Giltedge	34	@	35
Eastern	20	@	32½
CHEESE.			
Cal. choice mild	13	@	14
Do fair to good	10	@	12½
Do gilt edged	14	@	15
Young America	12	@	15
EGGS.			
Cal. ranch, doz	24	@	—
Do do selected	26	@	—
Do store	22½	@	—
Eastern	20	@	25
FEED.			
Bran, ton	20 00	@	22 00
Feedmeal	26 00	@	—
Gr'd Barley	22 00	@	23 50
Middlings	22 50	@	24 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food ₰ cwt	7 50		
HAY.			
Wheat, per ton	13 50	@	—
Do choice	15 00	@	—
Wheat and Oats	12 50	@	—
Wild Oats	11 00	@	—
Cultivated do	12 50	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	12 00	@	—
Straw bale	50	@	60
GRAIN. ETC.			
Barley, feed, ctl	90	@	1 02½
Do Choice	1 03½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 10	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 10	@	1 45
Do do Giltedge	1 48½	@	1 52½
Buckwheat	1 70	@	2 10
Corn, White	1 27½	@	1 32½
Yellow, large	1 22½	@	1 27½
Do small	1 26½	@	1 30
Oats, milling	1 46½	@	—
Feed, choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 27½	@	—
Surprise	1 50	@	—
Black Cal	1 45	@	1 75
Do Oregon	1 37½	@	1 55
Gray	1 30	@	
Rye	1 60	@	1 72½
Wheat, milling.			
Gilt edged	1 68½	@	—
Do Choice	1 65	@	—
Do fair to good	1 61½	@	—
Shipping, cho'ce	1 72½	@	—
Do good	1 58½	@	—
Do fair	1 55	@	—
Common	1 52½	@	—
Sonora	1 55	@	1 67½
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—

FLOUR.			
Extra, City Mills	5 00	@	5 25
Do Country Mills	5 00	@	5 25
Superfine	3 15	@	3 45
NUTS—JOBBING.			
Walnuts, Cal. lb	7	@	—
Do Choice	8	@	—
Do paper shell	8	@	9
Do Chili	7½	@	9
Almonds, sft shl	11	@	—
Paper shell	13	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	12	@	14
Do large	15	@	17½
Peanuts	3	@	4
Filberts	11½	@	14
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Ch'e	1 25	@	1 60
Fair to Good	90	@	1 15
Cut	70	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	60
Do do Salinas	95	@	1 20
Do do Oregon	80	@	1 10
Do Humboldt	80	@	90
River Reds	25	@	40
POULTRY.			
Hens, doz	5 50	@	8 00
Roosters, old	5 50	@	7 00
Do young	6 00	@	9 00
Broilers, small	4 00	@	—
Do large	5 00	@	—
Fryers	6 00	@	—
Ducks	6 50	@	9 50
Geese, pair	1 75	@	2 50
Turkeys, Gob'r	11	@	14
Turkeys, Hens	14	@	16
Do Dressed	14	@	17
Manhattan Egg Food ₰ cwt	11 50	@	—
PROVISIONS			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	11	@	—
Light	12½	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	7	@	8
Clover, Red	12	@	13
White	9	@	20
Flaxseed	2 50	@	2 80
Hemp	3½	@	4
Mustard, yellow	3 25	@	3 75
do Brown	3 00	@	3 25
WOOL.			
SPRING, 1891.			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	
S Joaquin valley	13	@	—
do mountain	15	@	—
Cala's & F'th'll	16	@	—
Oregon Eastern	14	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22½	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¾c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com.	3	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	
Do do washed		@	
Do do fancy		@	—
Do do pressed		@	—
Smyrna boxes		@	—
Do sacks		@	—
GRAPES.			
Sun-dried, stemless	3	@	3½
Do unstemmed	2½	@	3
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	6	@	—
White, sun-dried	5	@	6½
Do evaporated	6½	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	4½	@	—
Do do choice, do	5½	@	—
Do do fancy	6	@	6½
Evap. unpe'l'd, choice	6	@	—

Do do fancy	7	@	7½
Sun-dr, pl'd, prime, bl	10	@	11
Do do choice	11	@	12
Do do fancy	12	@	13
Evap, peeled, in boxes, choice	15	@	—
Do do fancy	16	@	17
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap, sliced, in boxes	6	@	—
Do ring do	10½	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, ungraded	5½	@	6
Do graded, 60 to 100	5½	@	—
Do do 40 to 60	7	@	8½
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₰ bx	$1 50	@	—
Do fancy, do	1 75	@	—
Layers, ₰ bx	1 25	@	—
Loose Muscatels, common, ₰ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ₰ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ₰ 20-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60
Halves, quarters and eighths	25, 50 and 75 cents higher respectively than whole boxes		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 3, 1892

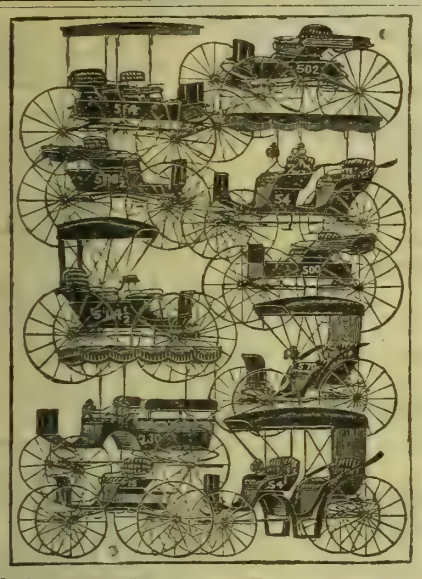
Limes, Mex	7 00	@	—
Do Cal	75	@	1 00
Lemons, box	1 25	@	3 50
Do Sicily	5 50	@	7 00
Oranges, Winter small box	50	@	1 00
Do Seedlings Riverside	1 25	@	2 00
Los Angeles	1 00	@	1 50
Do Navels— Los Angeles	1 50	@	2 50
Riverside	2 00	@	3 50
Duarte	2 00	@	3 50
Apples, box	50	@	90
Do choice	1 00	@	1 25
Do extra choice	1 50	@	2 00
Do Lady Apples	75	@	1 25
Do Eastern, bbl	3 75	@	5 00
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	12	@	18
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	60	@	—
Garlic, lb	2	@	3½
Squash, Mrft, tn	4 00	@	8 00
Do Summer, lb	10	@	15
Pumpkins, ton	7 00	@	
Tomatoes, box	1 50	@	2 00
Aspa agus, lb	15	@	20
Peas, green, lb	8	@	12½

Live Stock.

BEEF.			
Stall fed	7	@	—
Grass fed, extra	6½	@	—
First quality	6	@	—
Second quality	5½	@	—
Third quality	4½	@	—
Bulls and thin Cows	2½	@	3½
VEAL.			
Range, heavy	4½	@	5½
Do light	6	@	8
Dairy	7	@	9
MUTTON.			
Wethers	10½	@	11
Ewes	10	@	10½
Lamb, yearling	11	@	12½
Do Fall	15	@	—
HOGS.			
Light, ₰ lb, cents	5	@	—
Heavy	4½	@	—
Feeders	4½	@	—
Stock Hogs	3½	@	—

Complimentary Samples.

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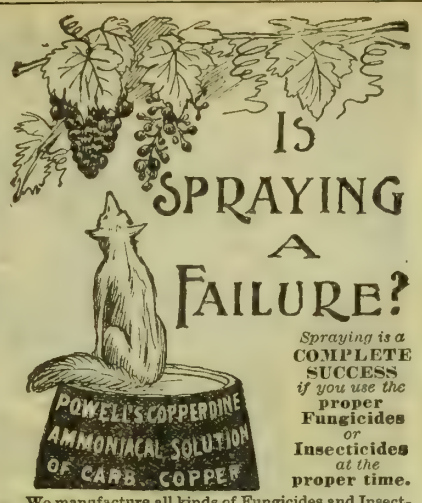
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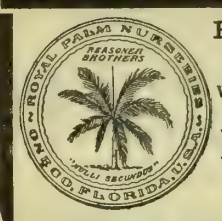
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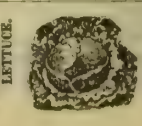
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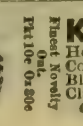


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LEADING VARIETIES OF FOREIGN GRAPES, Raspberry, Strawberry and Blackberry Plants. Price on application. L. D. BUTT, Penryn, Placer Co., Cal.

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French and Tragedy Prune on Myrobolan Stocks,	$10	$90
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4 TO 6 FT.; 2 TO 3½ FT.; 1 TO 2 FT.

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Our Stock is all of Our Own Raising. We use no Eastern Stock whatever.

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ORANGE AND LEMON TREES.

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And other new and old varieties.

Villa Franca, Lisbon and Eureka Lemons. Shamrock Orange for Hedges.

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CALIFORNIA FRUITS AND PRODUCE.

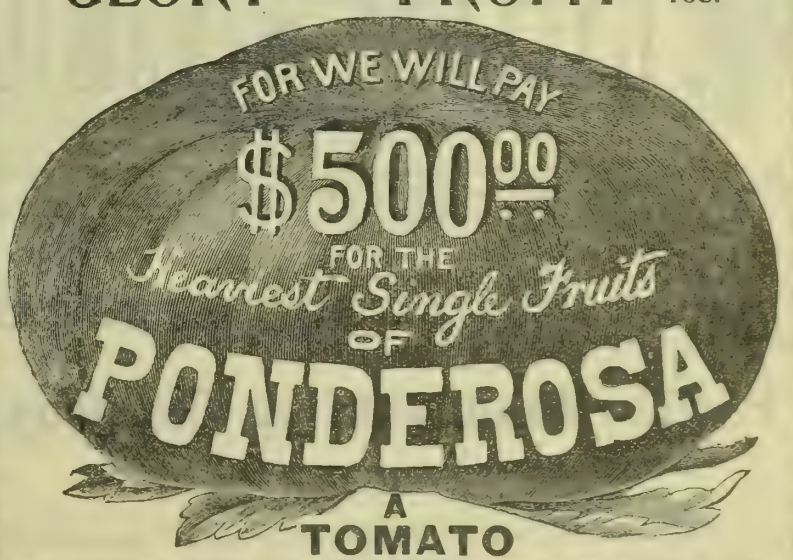
ALFALFA SEED A SPECIALTY.

117 TO 125 J STREET, SACRAMENTO, CAL.

Raise The BIGGEST **PONDEROSA TOMATO**

AND BOTH

GLORY and PROFIT AWAIT YOU.



so valuable that we paid $250 last year for the NAME alone when sold under the No. "400."

This year we think more of it than ever and to aid in making its merits still wider known we have doubled the amount of the money prizes.

NOW THEN FOR 1892 WE OFFER **$500.00**

for the heaviest single fruits raised from seeds of Ponderosa bought in 1892 in our sealed packets. Full details in Catalogue mentioned below, where also its fine qualities are told at length. It should be grown in

Every Garden in the Land

because the essential features of EARLINESS, SIZE, WEIGHT, COLOR, SOLIDITY and QUALITY, that make the ideal Tomato, this Ponderosa variety possesses in the superlative degree. Delicate persons will always prefer it because it is nearly seedless.

Price per packet 20c, 6 packets for $1, 12 packets for $1.75, 25 packets for $3.

DON'T FORGET, that with every order for a packet or more we will send FREE, our CATALOGUE of EVERYTHING for the GARDEN, (which alone costs us 25 cents) provided you will state where you saw this advertisement. This Catalogue of 150 pages is bound in illuminated covers, and is the largest and handsomest ever issued. It is replete with many engravings and colored plates of all that is new and desirable in SEEDS and PLANTS.

If Catalogue alone is wanted, we will mail it on receipt of 25 cts., which amount can be deducted on first order from Catalogue. Postage stamps accepted as cash.

PETER HENDERSON & CO.

35 & 37 Cortlandt Street, NEW YORK.

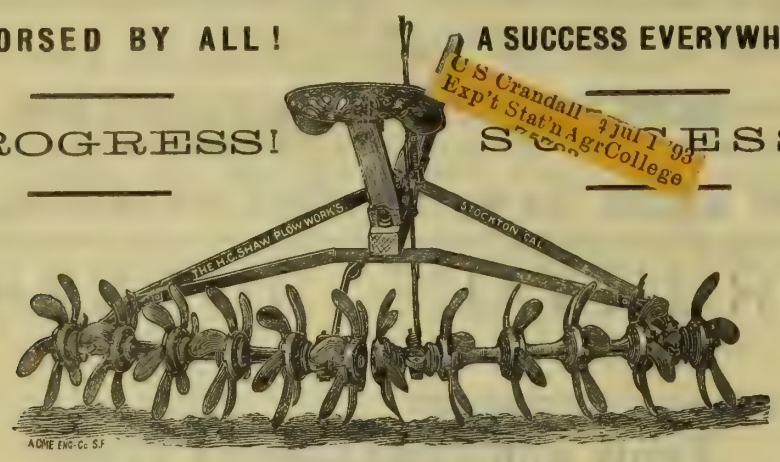
THE MORGAN SPADING HARROW.

(Formerly Called "TRIUMPH.")

ENDORSED BY ALL! A SUCCESS EVERYWHERE

PROGRESS! SUCCESS!

U S Crandall — 3 Jul '93
Exp't Stat'n Agr College



Style "A."

Greatest Pulverizer of the Age.

SOMETHING NEW AND ORIGINAL.

DO NOT BE DECEIVED BY IMITATIONS.

TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH

SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

We are Sole Agents for the Coast.

H.C.SHAW PLOW WORKS

361, 363, 365, 367, 370 389 and 390 El Dorado Street,

STOCKTON, CAL.

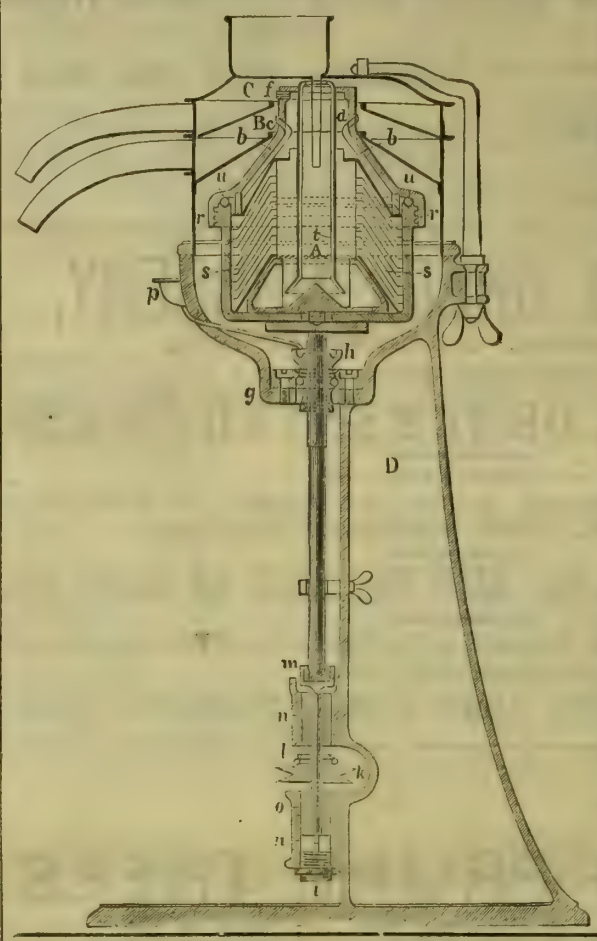
SOMETHING NEW IN CREAM SEPARATORS.

ANOTHER GREAT ADVANCE MADE.

If You Want a Separator You Want the BEST.

"ALPHA DE LAVAL."

The New Alpha De Laval, both belt and turbine, differs from the Standard De Laval in the construction of the bowl in which a system of plates distributes the milk and constitutes the "Alpha" invention BY WHICH THE CAPACITY IS VERY GREATLY INCREASED AND THE SEPARATION MADE ABSOLUTELY COMPLETE. Meeting with wonderful reception and universal success in every country, its sale is simply a question of supplying the demand.



Alpha A1 De Laval.

ACTUAL CAPACITY:

2000 LBS. PER HOUR.

Essential Speed Only 6000 Rev. at MOST.

Turbine Requires only 35 Lbs. Steam Pressure.

But the Overwhelming point gained is

Thoroughness of Separation,

Getting ALL the CREAM and LEAVES NONE AT ALL.

This saving of cream alone, over what has been accomplished heretofore by any separator soon assumes large proportions.

STYLES AND CAPACITIES OF THE "ALPHA:"

Alpha A1,
Actual capacity, 2000 Lbs. per hour.

Alpha Acme,
Actual capacity, 1200 Lbs. per hour.

Alpha Baby No. 3, Hand or Power,
600 Lbs. per hour.

Alpha Baby No. 2. Hand,
300 Lbs. per hour.

Acme and A1, Both Belt and Turbine.

Send for new Descriptive Catalogue.

G. G. WICKSON & CO.,
3 & 5 Front St., San Francisco.



THE RELIABLE CYCLONE WINDMILL.

No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

Send for Illustrated Catalogue to

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575 MISSION ST., SAN FRANCISCO, CAL.

Manufacturers and Jobbers of Windmills, Pumps, Tanks, TUBULAR WELL TOOLS, Pipe, Fittings, Etc., Etc.

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BUILDING PAPER.
IDEAL ROOFING.
PAINTS.

WATER ALKALI ACID PROOF!

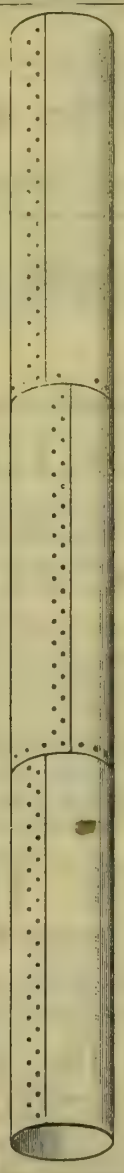
P & B Fruit Drying Paper.

SAMPLES AND CIRCULARS FREE.

PARAFFINE PAINT CO.

116 BATTERY ST.
SAN FRANCISCO.

SHEET IRON PIPE



IRON PIPE

ALL SIZES, FOR GAS, STEAM AND WATER.

— WE MANUFACTURE —

SHEET IRON AND STEEL PIPE,

ALL SIZES.

For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

The Cut shows a Section of Three Joints

DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a **high grade** of annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of **ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit.** It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



CORRUGATED IRON,

Black, Painted and Galvanized, for Roof and Sides of

HAY BARNS, DRY HOUSES, STABLES, ETC.

W.W. MONTAGUE & CO.

SAN FRANCISCO—SAN JOSE—LOS ANGELES.



SPRAY YOUR FRUIT TREES AND VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculio prevented by using EXCELSIOR SPRAYING OUTFITS. PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to Fruits mailed free. Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address WM. STAHL, Quincy, Ills.

PACIFIC RURAL PRESS

Vol. XLIII. No. 7. SAN FRANCISCO, SATURDAY, FEBRUARY 13, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

Abraham Lincoln's Log Cabin.

Every reader of the RURAL will, we imagine, be interested in the picture which adorns this page. It represents a cabin still standing in Macon county, Illinois, which Abraham Lincoln assisted in rearing, and which was for several years his home. The photograph from which our picture is taken is of recent date and shows the cabin in its present condition. The only additions to it since Lincoln's time are the shingle roof of the left section, the brick chimney and the glass windows. It would be difficult to find in the whole breadth of the American continent a more primitive or humble home, and yet there came from it a man who, as the Savior of his country, eclipsed even the great fame of him who is justly styled its Father. Measured by all the elements of lofty charaoter and by all the standards of high achievement, Abraham Lincoln was the greatest man America has ever known, and, in our judgment, not all the annals of secular history present a name entitled to be written higher than that of Lincoln. His fame rests upon the topmost summit of human greatness.



ABRAHAM LINCOLN'S LOG CABIN.

How little, how pitifully little, are the loftiest character and the highest achievement dependent upon what the world reckons as opportunity! Lincoln's "opportunities" were not greater than that of any one of the millions of boys born on the farms or in the remote wildernesses of America. Of course, it would be foolish to say that any boy can do what he did, but it is not too much to say that there is not a boy in the land who by the same devotion to high principle cannot develop in himself the character upon which Lincoln's great career was founded, and which after all was the best of the man and of his work. To be a true man in the sense that Abraham Lincoln was a true man, is not beyond the humblest situation or the humblest talents. The lesson of Lincoln's life should be an inspiration to all humankind.

It will interest many to know that the cabin which our picture represents will be taken to Chicago and be on exhibition next year at the great fair. We are frank to say that we are among those who regard the removal of this cabin from the spot where it now stands as a sort of sacrilege and therefore essentially wrong, but there will be in it this advantage—that thousands will see it, and from seeing it, learn a wholesome and practical lesson.

A GREAT FRUIT PROPOSITION.—It is reported that P. B. Armstrong has recently arrived in this State for the purpose of organizing "One large corporation to own so much of the fruit-growing interests as can be profitably admitted to the company, both large and small growers being eligible, provided, however, that enough small growers in a given locality come into the corporation to make the care, culture and handling of their products profitable to the corporation, in which all would be interested to the extent of the agreed upon value of their properties." To accomplish this it is anticipated that it may be necessary to have a capital stock of $50,000,000, and to have this stock listed on the New York stock exchange, and to operate on a broad plan throughout. We give this statement as a current rumor, reserving expression of opinion thereupon until further information is available.

THE assault upon American sailors at Valparaiso grew out of Chilean prejudice and hatred of the American name and flag. This sentiment is most extraordinary when it is recalled that we have always been friendly with Chile, and that only a year ago Chilean representatives joined cordially in Mr. Blaine's convention for promoting closer social and commercial relations between the countries of the American continent. For this changed feeling something or somebody is to blame, and there is serious reason to believe that the fault lies with United States Minister Egan. Our Government ought at once to investigate his course with a view to his dismissal if the insinuations against him are found to have any basis in fact. Egan's appointment was a serious error. He had barely become an American citizen after having made himself extremely offensive as an antigovernment agitator in his own country, and the only motive of his appointment was to "tickle the Irish vote." If Mr. Harrison and Mr. Blaine felt that political recognition was due to an Irishman they might at least have selected somebody who had been long enough in the country to learn its ways and to have assumed definite character as an American citizen.

THE management of the Stanford University is showing a commendable disposition to adapt the work of the University to the practical life of the people of California. A bulletin just received announces for the week beginning February 15th a series of popular lectures for the benefit of fruit growers, to be delivered in one of the University lecture rooms. The subject for February 15th will be "Horticultural Education;" for Tuesday, "The Origination of New Varieties of Fruit for California; for Wednesday, the 17th, "The Selection of Fruit Trees;" for the 18th, "The Location of Orchards and Vineyards;" for the 19th, "The Present and Future of Fruit-Growing in California." These lectures will be delivered by Prof. Emory E. Smith. In conjunction with these lectures, and at different hours, there will be a series of lectures upon insects by Prof. Henry Comstock and another series on the "Fishes of California," "Irrigation" and "Geology." Room and board can be obtained at Menlo Park, Mayfield or any of the neighboring towns.

IN England more than two hundred cities and towns utilize their sewage for fertilizing the farms near by.

Make the Fresno Meeting a Success.

No doubt RURAL readers are all aware that at Fresno on February 18, there will assemble a convention of raisin and dried fruit producers which should receive the attention of all in those important lines of work. The meeting is regularly called by the State Board of Horticulture, at the request of representative committees appointed by several well known local organizations. An attempt has been made to render the meeting broadly representative in its character and we hope it will so prove. To ensure this, we still further urge upon individuals and upon local societies to secure a voice in the meetings, if it be possible to meet the expenditure of time and money which will be required. The time is certainly ripe for united and progressive work among producers of raisins and dried fruits. Their product has been made game of in a thoroughly reprehensible manner. With themselves, and with themselves alone, lies the chance of rendering such disappointment and losses impossible hereafter.

Do not stay away from the meeting because you doubt whether any broad scheme involving the whole State can be made practicable. It may not be necessary to attempt any such scheme as such. It may be possible to arrange for the fullest local management in each fruit region, which shall meet local requirements and still enjoy the advantages of general cooperation. Do not think that your valley has nothing in common with some other valley. It is not true. Suppose your crops are different, your methods different and your difficulties seem to be different, the difference is probably merely superficial and the issues the same. Pool them. You will find that you are all in the same boat, some in the hold, some in the cabin, some hanging over the gunwale—all driven by the same wind upon the same rocks. You can only get into fair sailing again by united effort. Make it at Fresno on Thursday, Feb. 18, and make it wisely and forcibly.

EVER since the election last year the politicians of both the great parties have been profoundly concerned as to the political action of the nine Alliance members of the House of Representatives. The Democrats and Republicans have each claimed that this little band would attach itself as a sort of tail to their party kite. Their surprise must be great to find that the Alliance members will flock by themselves and strictly maintain their identity. This course was definitely agreed upon at an Alliance caucus held last Saturday at Washington City. It is just what those who sent these men to Congress expected.

FRUIT REVIEW.—We call especial attention to the comprehensive review of the fruit production and trade of last year which appears on other pages of this issue. It has been prepared with much application and care, and the hope is held that it is reasonably correct. We trust it may prove interesting and valuable to our readers.

CESSION OF ARID LANDS.—It is telegraphed from Washington that the proposition to cede arid lands to the States, to be reclaimed by them, was carried by an almost unanimous vote at a recent meeting of the House Committee on Irrigation.

SWINE YARD.

A New Importation of Poland-Chinas.

NILES, Alameda Co., Feb. 1, 1892.

TO THE EDITOR :—I have an item of news which ought to interest all your readers. As I probably know the straight of it better than anybody else could, I will venture to write it up myself, though it may seem like blowing my own horn. I have just brought out from Iowa, the leading hog State in the Union in point of numbers, and the highest of all the Western States in their average value, as shown by Government reports, a herd of the best obtainable Poland-Chinas, regardless of cost. I got them out of the herd which in 1890 won more premiums than any other at the State fairs of Iowa, Nebraska and Kansas, including first and sweepstakes at all three on the head of the herd; and in 1891 carried off two first, four second and three sweepstakes on Poland-Chinas in Iowa, and three first, two second and four sweepstakes in Nebraska. This is the famous Marsh Farm herd, of Jessup, Iowa, one of the last that will ever be able to boast of including Tecumsehs that were sired by the original Tecumseh himself.

I have one of his granddaughters, by King Tecumseh, his most famous son. King Tecumseh's greatest son is Geo. Wilkes, said to have sold for the highest price ($625) on record for a hog under one year old at public sale, and the most celebrated hog of the present generation. I got one of his best daughters, for which one of the highest prices was paid at a public sale, averaging $55 per head. I have two of the four sows that won herd sweepstakes in Nebraska this fall. I have the sow that won second in Iowa, over six and under twelve months old, but was not shown in Nebraska because too near farrowing, and three of her pigs.

You may imagine I had to pay for such hogs. I paid more for sows than many of the best Eastern breeders pay for boars to head their herds, and twice as much as the average breeder pays for the head of his herd. The lowest price I paid was $100 for three young sows under six months. It is not customary to squander anything like so much of the breeder's capital on the dams, but I chose the policy of laying a good foundation, and while I was importing sows I determined that California should have the best that was going, as she has in other kinds of stock. It was my intention, at any cost, to have one of the half-dozen highest-bred herds in America, the highest west of the Rocky mountains, and equal or superior to any west of the Missouri river.

To say that I have accomplished this would be invidious to my competitors in the Poland-China business, with whom I desire to maintain friendly and cooperative relations, and besides, it will take time to develop its merits or demerits. So far as it shows for itself, the admiring crowds that gathered around the car to get a peep at it as it came through, were all of one mind, as also those who have visited it since its arrival. And the same might be said of the scores of thousands of men, women and children who saw some of my hogs in the pens and show-rings of the State fairs where they were exhibited last fall.

The Iowa fair was probably the greatest hog show ever held on this planet. I speak from the reports of recent fairs in all the great hog States from Ohio to Nebraska. There were 2161 hogs on the grounds. Of these 1667 were Poland-Chinas, and it must have taken good hog flesh to get any kind of Poland-China ribbons. About 77 per cent, nearly four-fifths, were of that breed, and they numbered more than ten times as many as any other one breed. There were 125 Berkshires, 146 Duroc-Jerseys, 158 Chester Whites, 32 Victorias, and 33 Essex. About the same proportions hold good in all the great swine States, except Missouri, the average value of whose hogs was $3.64 in 1890, against $5.94 in Iowa, and a little less than Iowa in all the other swine States, including Ohio, which is less than half as far from New York as Iowa, and if it had as good hogs, ought to realize much better values.

It is variously estimated that from two-thirds to nine-tenths of the hogs packed in Chicago, and the other western centers of the industry, are strongly marked Poland-Chinas, and an astonishingly large proportion of them are full blood. This does not prove that they are the best for California, but is a very striking fact of national industrial importance, and does prove beyond question that they deserve a very thorough trial here, along with the other and better-known breeds. The brave pioneers who are already, at so much expense and trouble, laboring to introduce them, deserve credit and encouragement.

There isn't as good a market here for blooded hogs of any breed as there is for the least popular in the East. The field seems to be in about the same condition as it was in Iowa and around there before the general introduction of the Poland-China. The swine breeders had not a journal in the United States, not a National association, State association, record association, or any organization or machinery. Now there are four record associations in Poland-Chinas alone. One has reached its Vth, two their XIIth, and one its XIIIth volume. These registered close to 20,000 pedigrees last year. There are several successful swine-breeders' journals, and a leading one of them, recently picked up at random, contained the ads. of 201 Poland-China herds, to 92 of all other breeds, showing how well this breed supports the class journals, and how absolutely they depend on it for existence. There were 27 Berkshire herds and not so many of any other.

I write this for your own information, and not for publication in its present form. I am 30 1-2 miles from your city, a mile from the station, and if you or any friends wish to see the Great American "Mortgage Lifter" in his highest development, you can see him here as well as if you traveled 2000 or 3000 miles to visit an Eastern State fair. It cannot fail to interest you and your readers. Visitors giving due notice will be met at the station.

HENRY J. PHILPOTT.

[Our correspondent states expressly that he did not write for publication, and yet we cannot resist the temptation to print a letter which contains so much interesting and important information. We are especially desirous to develop the swine industry of this State, and glad to note the spirit of enterprise which Mr. Philpott manifests. If he and others in the swine interest will write us more freely of what they are doing and hoping to do, we shall be thankful.—ED. PRESS.]

Help Wanted in Ringing Hogs.

TULARE, Jan. 28, 1892.

TO THE EDITOR:—I write to learn if there is any sort of thing to put hogs in while ringing or splitting their noses. I once made a narrow box for the purpose; for a bottom I used four scantlings on edge, two in the center and the other two formed the bottom or lower edge of the sides. This made an open bottom. The scantlings were a foot or so longer at front end than the box, and at the front end I bored a hole through all four and put a rod through the holes to work as a hinge, when I would hitch onto the back end of the box with block and tackle. I thought with the hog's feet through the bottom and the back end hoisted up to an angle of 45 or more degrees, his nose would stick through the hole in the front door and I could ring his nose at leisure. I had no fear it would not work. But I was surprised at the hog putting his feet straight forward with his nose and against the door and pushing hard enough to keep his nose back inside. Instead of being helpless as I expected, of all the flouncing I ever saw a hog do, he did the worst. To say it made me sick would be too light, for of all the hard and almost impossible jobs that turn up on the farm, gashing the big hogs' noses is the worst. Muddy and slippery, they are hard to hold. After ringing a few, I resolved never to steel-point any more hogs' noses. The only thing seems to be to make about three cuts and the soreness stops their rooting, and they may not think of it again for a year. But it is so hard to do, and the strait one is in when they begin to root the alfalfa is dreadful. If you can tell of any way to hold the hog still, it will be a great boon to a large number of farmers.

H. E. DYE.

[We hope some reader will help Mr. Dye out of his plight. We supposed the improved nose tongs and ringing machines which have been introduced during the last few years, had done away with nearly all of the trouble which he describes. Who will write from successful experience?—ED. PRESS.]

THE APIARY.

California State Bee-keepers Association.

SAN MATEO, Feb. 4 1892.

TO THE EDITOR:—The apiarian readers of the RURAL PRESS will be glad to hear that we have at last got a State Association organized. We have a live president—Mr. J. F. McIntyre; a reliable man as treasurer, Mr. Brodbeck, and the secretary is no other than the "Rambler," who has at last settled down at Riverside and become a full-fledged "California Bee-keeper." I may add that the chief object of the Association is to promote the general interest of bee culture in California, and any person interested in apiculture, may become an annual member upon payment to the secretary of 50 cents. Ladies interested in apiculture, will be admitted free. Every live bee-keeper should join the Association at once. Below I give a copy of circular.

WM. STYAN.

TO THE BEE-KEEPERS OF CALIFORNIA.

On the 7th of January, 1892, according to a call issued by many prominent apiarists, who, realizing the necessity of continued efforts upon the part of the honey producers of the entire State, organized a State Association upon a broad and liberal basis.

Upon the organization of said Association, a committee, consisting of the executive board, was appointed with full power to confer with the Southern California World's Fair Committee, then in session in the Chamber of Commerce at Los Angeles. The committee learned that, while it is reasonable to expect that the honey producers will receive their proportion of the State funds, *if there is any left* after the erection of State buildings, etc, and while working for it, that we should not put too much dependence upon aid from that source.

It is well known that in addition to the above State funds, that all of the counties of the State are empowered to levy an assessment in proportion to their valuation, and as this will be the principal source of procuring funds for the exhibit, we would emphasize the fact that all local organizations should be on the alert to present their claims and secure the share they are justly entitled to. In the absence of a local organization the leading honey producers should take it upon themselves to urge their claims.

That there will be an exhibit of the products of the apiary under the auspices of the State, should lead the bee-keepers and all interested in California apiculture to bestir themselves and now begin to plan for their contribution for the coming exhibition. The exhibits must be in place in April, 1893.

As to what action different States may take in preparing or getting their exhibits in shape, or what action California may take, it is too early to state. But all who intend to produce anything for exhibition should put themselves in communication with the State Association, and information will be given as plans are developed.

In relation to the exhibit, strenuous efforts will be made to secure ample room for what should be expected from a State so widely known as California.

There should be as many distinctive qualities of California honey as possible from various portions of the State.

While the main exhibit should be in practical, salable shape, there should be some novelties in the shape of production, peculiarly distinctive of California. The same might be said of beeswax and foundation. Pressed flowers of all the different honey flora could be prepared by the youthful members of the fraternity. Also enemies of bees, both birds and insects. Models of apiaries, photographs of apiaries and scenery, California extractors, etc. Anything distinctive of California, either closely or remotely connected with the apiary will be interesting to Eastern visitors.

The California bee-keeper, while taking a laudable pride in the extent and beauty of the exhibit, should ever have before him the vital fact that this exhibition at the World's Fair is the best opportunity ever offered for the opening up of new and world-wide markets for his products, and he should be prepared to offer more direct and systematic methods of sale.

The California State Association was organized to forward all such laudable plans and desires to keep in close contact with all local organizations and enterprising apiarists in every portion of the State, and with that end in view ask for your earnest cooperation.

JOHN H. MARTIN, Sec., Riverside, Cal.
J. F. MCINTYRE, Pres., Fillmore Cal.
GEO. W. BRODBECK, Treas., Los Angeles, Cal.

THE VINEYARD.

A California Congressman upon California Products.

Hon. W. W. Bowers, Congressman from the California Sixth District, writes to the *Citrograph* as follows under date, Washington, Jan. 15th:

A few days ago I was making some purchases in one of the large fruit and grocery stores here. Seeing some nice-looking raisins, I inquired the price. "Forty cents a pound," was the answer of the clerk. Whew! He nearly took my breath away. After recovering somewhat, I asked if he had any cheaper. "Oh, yes; these are 35, these 30 and these 25 and these a shilling"—the last about like the refuse of stemmed raisins worth perhaps two cents a pound. I asked the proprietor if he had any California raisins. No, he had kept them, but had none now. I asked if the Malaga raisins were so much better. "Oh, yes." "In what respect?" "Well, they are thinner-skinned and better-flavored." This conversation determined me to investigate the raisin business a little from the retail standpoint. Accordingly, I have visited a number of the largest stores. The second one asked 35 cents for, apparently, the same quality of raisins as the first charged 40 for, and was about five cents cheaper all around. But he had no California raisins. He, too, considered the Malaga the best. The last store I visited asked 25 cents per pound for the quality usually sold in our retail stores in California for a bit. I had considerable talk with the proprietor, who seemed a very intelligent gentleman. He had no California raisins, but usually kept them. To the question as to quality, he said: "The ordinary California layer raisin is superior to the ordinary Malaga raisin, much so; but the best Malagas are superior for a table raisin, larger, finer, have been handled carefully, and look better. We pay $5 per box for the best Malaga and sell them at 35 to 40 cents, while we can buy the best California raisins for $2.20 to $2.30 per box and sell them for 25 cents per pound." This man talked sense. He said: "We must keep for sale what people want to buy." He was an American and had no *prejudices against American products*. I could not help noting the contrast with some of the other dealers. Without saying it, they made one feel that they had a certain feeling of pity, let us say, for one who would ask for California raisins, or indeed any domestic production, when the imported could be had. The fact is, that with all our boasted independence and superiority, we are the greatest nation of snobs, imitators and copyists on the face of the earth. Our newspapers caricature the dudes, for they're "English don't yer know;" but the free and independent American who expresses his contempt for the dude and his ways is clad, as he informs his friend, in "real English goods," has French calf boots, the finest Swiss watch in his vest pocket and an imported cigar in his mouth. Nine-tenths of all the so-called olive oil used in the United States is made from the cotton seed exported from this country, and comes back the "finest olive oil"—imported, you know. I was in a restaurant in this city a few days ago. The bill of fare had "English mutton chops," "English breakfast bacon," etc. Could anything be more silly? Even at a third-rate tavern in the United States the bill of fare must be in French, don't yer know. We ape every nation on earth. Ten gallons of French wine are drank in the United States for every gallon exported from that country. Many thousands of gallons of French (?) wine are sold and drank in California every year that were never outside the boundaries of that State. The wine men have dropped on to the racket.

But to come back to the raisins. I see by the reports that the growers in California are getting from $1.40 to $1.60 per box for London layers—that is an average of 7½ cents per pound. They are transported by the railroad 3000 miles for $1.50 per 100 pounds, isn't it? Say total cost laid down in the Eastern cities, nine cents for the best by the box, retail at 25 cents. Let us put it this way:

The producer gets for the packages ready for retail, per pound	07½
The railroad monopoly hauls them 3000 miles for	01½
The commission merchant who sells to the trade and hauls them ten rods or half a mile gets, per pound	02½
The retailer who weighs them out, per pound	13½
Total	25

That's about the way the matter pans out, and the retailer, like many other good men, is outraged at the extortion (?) of the railroad companies, although he takes more than the producer, the railroad company and the commission merchant combined. Now, let some of the railroad extortion howlers ponder over these figures. Possibly I have got the amount too low for the railroad, but it will not exceed 2 1-2 cents or the tribute taken by the commission merchant.

These being the facts—and they are the facts—what, in the immortal words of the immortal William Tweed, are the raisin makers "going to do about it?" It is easy to find fault—to show the wrong. Any one can do that; but to show a remedy is another thing. I have thought of several methods and abandoned them one by one. For a few days my favorite idea was that the raisin growers of California should combine, establish a depot in every principal city and sell their raisins through these depots. Let each agency say to all the retail dealers: "We will sell you

good raisins at a reasonable price and will not retail if you will buy of us. If you do not buy of us, we will advertise and retail raisins at half your price and then get more for our product than we are getting now. We only ask a fair divide." Perhaps this can be done; but the more I ponder on the matter the more I am convinced that the oil men and the wine men have the practical solution of the matter. They have learned that from the farmer, who hauls his few sacks of grain to market and his chickens and eggs to trade for groceries, clear to the highest nabob in the land, including the most enthusiastic American, all believe the "imported" article is the best. They have been taught that. California wines can take the first premium in France, as they did, *but not in the United States*. The people of the United States must have the "imported" article.

When the President of the United States was dined in the Palace Hotel in San Francisco in the State that took the first prize in Paris, France, for wine, all the wines used were imported. It would never have done to put home-made wine before such distinguished Americans. It must be French, you know.

The raisin makers of California *must furnish* the people of the United States *the imported article*, just the same as the wine makers and the olive oil makers do. They can do it. Their raisins are just as good.

I have just been eating some raisins that I paid 30 cents a pound for. The label on the box was "Malaga," but if these raisins were not California raisins, then there is no difference between the imported and the California.

Now, I am not going to discuss the moral turpitude involved in deceiving the American people into purchasing a good domestic article while they fondly imagine they are getting an "imported." I am only looking at the matter from a business point of view. If, by labeling their raisins "Malaga" instead of "Three Crown" or "London Layers," "Riverside," "San Diego" or "Fresno," they can sell them for nearly double, why not do it? If people want to buy labels, why not sell them labels, when, in fact, neither the farmer nor the man in the White House in this city nor all the men between them can tell the difference between a first-class California raisin and a Malaga raisin, because there is no difference. At a restaurant in San Francisco, a man has just ordered a bottle of imported claret; cost, $1.50. At the opposite table facing him, another man has ordered a bottle of California claret; price, 50 cents. Both are satisfied. The wine was drawn from the same cask in a cellar in San Francisco—good, sound, pure wine. The labels were printed at the same office in San Francisco, cost the same, one-quarter of a cent each; but one man bought the wine and the other the label, and both are satisfied. Patriotism, love of and pride in one's country are all commendable, but business is business. The country demands imported raisins, and the California raisin grower can furnish them. The country demands imported (?) wine and imported olive (?) oil and gets one from California and the other from the cotton plantations of the Southern States. Why shall it not have "imported" raisins from California?

W. W. BOWERS.

[Mr. Bowers writes in a racy style, and no one will find his writing dull. We do not wholly agree with him, and may give our opinions on the matters involved in another column.—ED. PRESS.]

FLORIST AND GARDENER.

Flowers for the World's Fair.

CHICAGO, Jan. 19, 1892.

TO THE EDITOR: The Bureau of Floriculture hopes to make such arrangements as will give to chrysanthemums, cyclamen, Chinese and other winter flowering primulas, cinerarias, calceolarias, amaryllis, Dutch bulbs, narcissus and other winter and spring flowering plants, a magnificent representation during their season of beauty, from November 1, 1892, to April 1, 1893.

The proposed plan is to have displays of the plants and bulds mentioned above in such quantities as to form a great attraction during their best season of flowering.

In the case of cyclamen, cinerarias, primulas, calceolarias and mignonette, all the seed from different firms contributing will be sown on the same day; the same treatment will be given to all; the same soil will be used; and at the final potting an equal number of plants from each contributor will be selected and grown together. When in flower it is expected that awards will be made in the order of merit, and all contributors will have the privilege of attaching their business cards and addresses, subject to the rules of the department governing the same. A record of all contributions will be kept and credited to the party supplying the seeds, etc.; all will be treated in the most confidential manner, and such methods will be pursued as will insure perfect justice to all.

All seed must be supplied free of cost to the department; thoroughly capable men will have charge of the growing of the various plants so that the highest state of cultivation may be developed, and the growing and cultivation of the plants will be carried on without expense to the contributor.

Seeds in sufficient number should be sent to make it certain that no less than 100 plants of each will be in good condition at the time of final potting.

Cyclamen seed must be sent immediately upon receipt of this communication, as it is now late in the season; the sowing of cyclamen will be made not later than February 4, 1892. They may be represented in 10 kinds.

Chinese primulas may be shown in 12 kinds, and must be sown not later than March 1; cinerarias and calceolarias in mixture, 200 plants, to be sown by March 1; mignonette will also be sown by March 1.

It is hoped that this offer will be thoroughly appreciated by those to whom we make it.

JOHN THORPE,
Chief, Bureau of Floriculture.

HORTICULTURE.

Pruning Deciduous Trees.

[An essay recently read before the San Diego County Horticultural Association by H. CULBERTSON of El Cajon.]

The first and chief consideration is, that a tree have strength to carry its load of fruit, instead of showing distorted and trailing branches from overbearing. The low heading of trees is also essential, as such develop more uniformly in size and vigor, and avoid the danger of injured trunks from exposure to the sun. But equally important is it to observe economy in the pruning and gathering of fruit. In pruning, cut deciduous trees back to not less than 15 inches above the ground, and leave three or four branches to grow the first year. They should have attention at least weekly, for six weeks, when the growth begins to keep the superfluous shoots rubbed off in the bud, because taking away a small shoot is a serious loss to the young tree. It is better to remove a shoot six inches long at the beginning. For the good of the tree, I should let it go and remove the following winter. In leaving these shoots to begin the head of the tree, bear in mind that they are to be permanent and that they may attain a diameter of six or more inches. With proper care the first year, the branches should not grow less than three feet, and for a healthy development four feet seems more satisfactory.

The treatment the first winter is to remove at least two-thirds of this growth. At the beginning of activity the second year, allow two or three shoots to develop from each branch, rubbing off all sprouts while in the bud or very small. Some of the growths this year may, under good care, reach five to seven feet, and should not be less than four feet on any tree. In pruning the second winter, take off from one-half to two-thirds of the previous growth. In general, the upper bud left after cutting back should be on the outside to aid in spreading the top, with the exception of a few varieties that naturally spread. It should be understood that in trees headed low the main branches will grow much more upright than when they are headed high, and hence more effort is required to make them spread. This point is especially true of the pear.

So far, we have given all kinds of deciduous fruits the same treatment, but at this point they must be separated. I would still continue the cutting back from one-half to two-thirds of the previous growth, and if the trees are coming on well this cutting should be done every winter, whatever the variety or age, except perhaps for the fig.

The peach bears its fruit on wood of the previous year's growth, and there is very little tendency to produce new wood except on the outside of the tree. The nectarine has more of a tendency to form short interior growths, and fruit buds are formed on the larger new growths, thus enabling the pruner to cut them back more closely, and yet have an abundance of fruit buds remain.

The apricot bears still more than the nectarine on spurs and very short new growths on the interior of the tree, thus enabling the pruner to cut back still more largely of the new growth on the outside of the tree with material advantage to its productiveness.

The plum family would come next in the tendency to grow its fruit on spurs alone, with very little tendency to produce fruit on the previous year's growth. These spurs are of very slow growth, and only an inch, more or less, in length, according to circumstances, and continue to be productive from year to year.

The pear and apple come next in the order of the method of pruning and in the order named. The pear has more of a tendency to fruit on the tips of the previous year's growth than the apple. The older trees of each kind fruit almost entirely on short spurs of the larger branches. These spurs require to be two or more years old before becoming fruitful.

We thus have the two extremes in methods of fruit-bearing, the peach at one end and the apple at the other. All trees in California have more of a tendency to fruit on new wood than those of Eastern States. This difference in pruning is the reason for difference in treatment. It can readily be seen that the peach, fruiting only on wood of the previous year's growth, bears fruit farther away from the body of the tree each year, and the small shoots of from one-eighth to three-sixteenths in diameter begin to decline when the fruit is removed. To have healthy growth, all of these small branches must be removed the first winter following their fruiting, when there is a greater tendency to form small new growths which may fruit the following season. In the peach, it will seldom be found necessary to remove any interior branches, except suckers, until they have produced a crop, when they will begin to decline and should be removed. At the other extreme, the apple fruits largely on short spurs that continue to bear for a number of years, and the growth of these spurs should be encouraged. Their increase in number and strength is largely aided by judicious thinning and cutting back, but it should be remembered that any tree producing fruit mainly on these spurs, if they grow rapidly, may be disappointing in the early production of fruit in paying quantities—in prunes, for instance, which are naturally good growers, and may be slow in the formation of these spurs.

I would certainly not cut peach trees back less than one-half in the winter pruning, and our trees are getting too large for their age even with that amount of pruning. This has suggested, in other localities, summer-pruning or shortening in, with success in some places. So far, my own experience is favorable. It will be noticed on trees kept growing rapidly that the fruit buds are near the ends of the shoots, and it seems to take away too many of these buds to cut back one-half in the winter-pruning, but by cutting back about one-half the new growth in August, fruit buds are developed lower down, and where they would not be without the summer-pruning. This method is comparatively new, but seems worthy of trial to ascertain what is best. Some say, however, where trees are not growing rapidly, this method is not advisable.

With the apricot, summer-pruning is proven to be almost a necessity, cutting back even three-fourths or more of the season's growth about August 1st. Experience teaches that there is no deciduous fruit tree but requires thorough and intelligent pruning for long-continued profitable fruiting. No pruning may produce a little more fruit while the tree is small, but such treatment reduces the later fruitfulness with heavy compound interest.

FRUIT MARKETING.

A Fruit Growers Union Proposed in Florida.

It is an interesting fact that Florida fruit growers are inclined to move in the same line upon which California growers are entering. The difficulties to be met seem identical and no doubt much can be learned by mutual comparison of methods. In view of the fact that a general meeting of California producers will be held in Fresno next week, we publish an account of the organization which the Floridians have agreed to attempt.

A meeting was held at Jacksonville the middle of January with the avowed purpose of organizing.

In his opening address, the chairman, Mr. Delano, said that the object of the meeting was to discuss all things pertaining to the orange industry, such as transportation, distribution, commission, etc. He stated that in a unity of the growers there was great strength, and suggested that a complete organization be effected. Previous organizations had been attempted in the interest of some commission house or institution of a like character. An organization to be a power must be untrammeled by allegiance to any other than its own interests, and then it will be a power to rectify the abuses which its members are made to suffer.

The committee selected to suggest a plan of organization reported the following:

The time has come when the fruit growers of the State of Florida must take steps to protect their own interests. The methods of marketing the crop and the existing rates and facilities for transportation are anything but satisfactory, and have created great uneasiness as to the future prospects of the fruit business. In view of these facts and for the purpose of serving the interests of the fruit grower in all directions, we, fruit growers, here assembled in Jacksonville, the 14th day of January, 1892, do most urgently recommend to all the fruit growers of the State to meet in their respective districts and organize under the following articles:

Article 1. The name of the organization shall be the Florida Fruit Growers' Union.

Article 2. The organization at large shall consist of local unions and county and State conventions.

Section 1. Local unions—The local union shall consist of the individual fruit growers who in any district shall band themselves together to work in connection with the county and State conventions in accordance with the articles and rules of the organization. To become and continue a member of the local union, one must subscribe to the articles and rules herein laid down, and pay all assessments that may be made by a m jority vote of the local union or State convention, provided that no single assessment shall exceed $1, and not more than two such assessments shall be made in any single year. The officers of the local unions shall consist of a president, secretary and treasurer, who shall hold office for one year.

The regular meeting shall be held once a month, and extra meetings may be called at any time by the officers of the union.

Sec. 2. County conventions—The county conventions shall consist of delegates to be elected by the local unions on a basis of representation of one delegate to every ten members, providing that a local union of less than ten members shall be entitled to one delegate.

The officers of the county conventions shall be a president and secretary, to be elected each year. The meetings of the county conventions shall be held on the first Wednesday in April, at 9 o'clock A. M., in the various county seats, excepting the first convention, which shall be held on the first Wednesday in March, 1892.

Sec. 3. State conventions—The State conventions shall consist of delegates from the conventions on a basis of representation of one delegate for every two local unions, provided that any county with only one local union shall be entitled to one delegate. The officers of the State convention shall consist of a president, to be elected each year by the convention, and a secretary and treasurer, who shall be elected by the board of directors.

The meetings of the State convention shall be held on the second Wednesday of April of each year, excepting the first convention after this meeting, which shall meet the second Wednesday in March, 1892, at 9 A. M., in Jacksonville.

Sec. 4. Board of directors—It shall be the duty of the State convention to elect a board of directors who shall have the entire management of the business affairs of the State organization. The officers of board of directors shall consist of one representative from each county containing a local union, to be elected annually by a majority vote of the State convention.

The officers of the board of directors shall be a president, secretary and treasurer and an executive committee to be elected by the board. The secretary and treasurer of the board of directors shall also be secretary and treasurer of the State convention.

Article 3. Section 1. Every member of the Florida Fruit Growers' Union shall be bound by personal patronage and influence to do all he can to forward any scheme set on foot by the State convention or board of directors for the advancement of the fruit interests of the State.

Sec. 2. Any article or section of this constitution can be amended by a two-thirds vote of the convention at any annual meeting.

This report was adopted as the constitution of the organization.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The women of the farm have many, very many trying duties to perform. They are not only expected to be splendid cooks, seamstresses, dairy-maids, butter-makers, housekeepers, governesses, teachers, gardners, poultry-raisers, accountants, advisers, nurses and entertainers, but they are frequently expected to share the honors of the axe-man, the teamster, the shepherd and the fireman. Truly, the duties of the willing housewife are manifold and never ending. But the patient matron is ever ready to do her full share, not only on the farm and in the house, but she is foremost in doing intelligently and willingly a good share of the work of the Grange. The dignity, the stability, the prosperity, and the promise of the future, great strength and honor of the Grange are all largely due to the counsel, devotion, steadfastness and refining influences of woman. To the women of the Grange every husbandman extends his sincerest gratitude, and though he may not speak, he thinks. All honor to the women of the Grange.

There are many people in the world who are constantly doing good, but who never get any public recognition of the service rendered. Then there is another class, who are continually getting praise for things they never did, and honor for words they never wrote or spoke. It is too bad that such a condition of affairs exists. It is especially bad that the latter condition exists so universally as it does exist. The ordinary politician of our day seems to raise himself into office, most frequently, by the things he never said or did. It is always what he is *going to do* that makes him the successful candidate—the winning horse if you please. Isn't this wrong? Why not select for office a man, a farmer, or carpenter, or blacksmith, or miller, or miner, or shoemaker, or some one of that class, who has done something? Give him the honor and put on him the responsibility! The men of family and with homes have as much to induce them to be faithful, to be honest and to be worthy as any men on earth can have. Then let us see to it that such men get our votes, our help, our approval.

California, Illinois and Pennsylvania are the only three states in the Union that have each appropriated $300,000 for the World's Fair. Now the conundrum is which State will make the best display? Gentlemen of the California World's Fair Commission, here is your opportunity. Outdo the sister States of Illinois and Pennsylvania. You have the State with equal, or better resources; you have the coin; now display the tact, energy, economy and the success will be ours. Otherwise we will have spent our money in vain.

Will not the farmers of Solano county have a Farmers' Institute? It will cost you nothing except hall rent and local expense. The State University—Agricultural Department—will furnish the speakers. Both Prof. Hilgard and Prof. Wickson are at your command. Let me suggest that Worthy Master Kline of Dixon Grange, and Worthy Master Ashley of Vacaville Grange arrange for a Farmers' Institute to be held at early date at Suisun. Brother J. H. Bauman of Suisun can be relied on for help sure.

Keep an eye on those of your public men who have control of the expense account! See where the money goes! Does your Road Fund go on the roads; the School Fund into the schools; the Indigent Fund to the hospital, and so on? Or does a good share of each of these and the other funds go to well-fed and well-clad office-holders? Keep an eye on the county and on the State "Cash Box!"

Public affairs should be run on an economic, not parsimonious basis. Get one hundred cents of value for every dollar of public money spent. That is the way we try to run our private business.

Owing to ill health Sister Mary T. Merrill declines to serve as Chairman of the Committee on Woman's Work, but she will gladly work as a member of the Committee. In the meantime, and till the Committee shall do otherwise, let Sister Hattie S. Jones of Yuba City Grange act as Chairman. I hope the Committee will *at once* get to work for the good of the order.

Sister C. E. Kinney begs to be excused from active duty as one of the Committee on Womans Work. She says that since her home is so far from the Grange centre, it is very difficult for her to meet with the other members of the Committee or with any of the subordinate granges. When we remember the good work Sister Kinney has done, and when we stop to realize the difficulties mentioned, it seems but fair to excuse Sister from active work on the Committee. We feel she will help the women of the Grange at any time, even though relieved of Committee duty.

Duty before pleasure all the time. Do your duty by the Grange. Do your duty to your neighbor. Take duty with you all through the year; yes, keep companion duty on guard at all times; and my word for it, you will have that welcome plaudit, "Well done." Then let duty be your watchword, your password and your by-word.

GIVE IT GOOD ATTENTION.—The Constitutions, By-laws, circulars and blank applications for membership of the Patrons' Relief Association have just been forwarded to each Grange in California. Let every Grange devote time to the matter of discussing and joining the Association. We think it is believed to be based on a safe plan and well calculated to greatly benefit each member that joins it and prove a solid help in the progress of the Order.

THERE is a probability that the Executive Committee of the State Grange will hold a special session this week.

Vaca Valley Grange.

Past Master Flint recently installed the officers of this Grange and speaks highly of the pleasant time and harvest feast had on the occasion, saying: "One feature of this Grange is they have a worthy sister for their Master. I hope the result will be as encouraging as it was to Watsonville Grange when they tried the innovation of electing a sister to the mastership.

After the installation the writer gave them a thirty minutes' talk on the objects and aims of the Grange, how to gain membership and make it beneficial to the farmers.

Several short speeches were made and one especially to the point.

I do not know of a place in California where there should be so large a Grange and that should bring such benefit to its members as one in this valley. The valley and the side-hills are one continuous orchard and vineyard for miles and miles. Land is so precious they can soarcely spare enough for their buildings. They do not grow the hay and grain they consume, and little attention is paid to house gardening.

It must be an interesting sight to be in this valley at the height of harvest time.

The first conundrum that I proposed to these fruit-growers was, where do you get your help to harvest these vast acres of orchards? If Congress continues to cinch the Chinese, field-labor will be so scarce and dear in a few years that there will be no profit in fruit culture.

I was most hospitably entertained by Brother Ashley and family at their home, one and a half miles from the village, on an elevation where it gave a fine view of the valley and surroundings.

In the morning a young brother gave a party of four of us a fine ride in the valley behind a pair of high-headed, prancing buckskin colts. I return my thanks and appreciation to the young brother (let me whisper it to the young sister grangers that he is keeping a bachelor's home), and the other genial companions that made this ride so pleasant.

D. F.

[Corrected Publication]

Executive Committee Resolutions.

The following resolutions were adopted at the recent session of the Executive Committee of the S. G. of Cal.:

WHEREAS, Our Worthy Master has devoted to the interests of the Order a large amount of labor, and is being constantly called on to visit Granges, and whereas he has heretofore expended his own means; therefore be it

Resolved, That he use his discretion in making visits to subordinate Granges, and that his expenses be paid out of the Lecture Fund.

WHEREAS It is important that our Worthy Lecturer make an active canvass of the State in the interest of the Order; organizing, reorganizing and lecturing Granges:

Resolved, That upon the presentation of his itemized bill of expenses, this Executive Committee will admit the same and allow him three dollars per day for the time actually spent in such work. All such bills shall be presented monthly.

To make the copy plainer for the compositor for our publication last week, we had the above resolutions typewritten. The type-writer, who is usually very correct, unfortunately substituted the word "Master" for "Lecturer" in the second resolution—a mistake we sincerely regret.

National Grange for Free Silver.

A dispatch from Washington City dated 9th inst says: "At the hearing before the House Committee on Coinage, Weights and Measures to-day, Leonard Rhone, representing the Legislative Committee of the National Grange, said the American farmer was asking silver to be restored to the position it occupied prior to 1873. The increased volume of money, he said, meant the enhancement of prices. He wanted Congress to protect the legal-tender qualification of money issued by the Government, so he could not be compelled to make his payments in one form of money only. Rhone said the free coinage of silver would go a great way toward bringing it into a parity with gold. Even if all that was said against free coinage were true, the farmer would not lose anything, because there was no time the farmer was so well off as in 1865, when there was a depreciated currency. He favored the free coinage of both gold and silver."

Notice.

To the Patrons of San Joaquin Co. Pomona Grange: The regular meeting of the above Grange will be held in Lodi Hall, Thursday, Feb. 25th, commencing at 10 A. M. Installation of officers, conferring the degree, with an evening session, and other important business to the Patrons; the afternoon session open to all fourth degree members. The Worthy Master of the State Grange will be present. Fraternally, J. D. HUFFMAN, Sec'y.

NOT HIS FAULT.—In a private letter of Feb. 2d, Past Master Overhiser mentioned the meeting of Lockeford Grange for Feb. 6th, adding: "Will install and have a feast." Thinking he was overmodest, we appropriated the information, and to round out the sentence, gave it to our readers as follows: "I will install officers and we will have a Harvest Feast." Bro. Overhiser did install the officers and partake of the Harvest Feast, yet it is due him to say he did not write (before being invited to officiate) the "big I," etc.

W. L. OVERHISER, P. M., and G. P. Loucks of the State Grange Executive Committee visited our office on Tuesday. Bro. Overhiser speaks encouragingly of Grange interests in Placer and Nevada counties, of which we hope to have more to say soon.

SEVERAL GRANGE COMMUNICATIONS have been delayed publication for want of space, which will appear later.

SAN JOAQUIN has probably the largest number of active Grangers of any county in the State.

Pure Food Bills.

We have received from Alexander J. Wedderburn, Chairman of the Legislative Committee Virginia State Grange, the subjoined blank petitions to Congress, with a request that the same be signed by members of the Grange and others in favor of the passage of the bills named; the petition to be forwarded to Hon. Wm. M. Springer, Chairman of the Ways and Means Committee, House of Representatives, Washington, D. C., or to some Representative or Senator from this State, requesting that the petitions be duly presented to Congress. It is also recommended that individuals write to their representatives in Congress, urging the passage of the bills.

The substance of these bills has been repeatedly endorsed by the National Grange. They simply advocate pure and honest food, drugs, liquors and lard, and their passage means the saving of millions each year to the farmers.

The petitions printed herewith can, for convenience, be clipped out and pasted on suitable writing paper, for receiving signatures.

Petition in Favor of Pure Lard.

The undersigned respectfully urge upon Congress the prompt consideration and passage of House of Representatives Bill No. 395, introduced by Mr. Brosius, and designated a bill "Defining Lard and Imposing a Tax on Manufacturers of Compound Lard."

Your petitioners reside in.....
County, in the.....Congressional District in the State of.....

SIGNATURES.

Petition in Favor of Pure Food.

To the American Congress:—The undersigned petitioners residing in .....County, ...Congressional District in the State of.....respectfully urge the prompt passage of the Paddock or the Edmunds Pure Food Bill, or some similar measure, to protect the people against the adulteration of food and drugs.

THE PATRONS' RELIEF ASSOCIATION Board of Directors will meet at No. 1304 Franklin street, Oakland, Feb. 15th, at 10 A. M.

FARMERS' ALLIANCE.

Capturing the Alliance.

CHICAGO, Feb. 9.—The *Inter Ocean* will publish to-morrow a two-column expose of an alleged scheme whereby the National Cordage Trust, through connivance with a number of the leading Alliance officials, is attempting to get control of not only all the present Alliance stores in the country, but 4000 additional ones the trust proposes starting. Statements are made by D. M. Fullwiler, the State Business Agent for the Alliance in Illinois; E. E. Whipple of the Whipple Harrow Company, St. Johns, Mich., and William Deering & Sons of Chicago that place certain prominent Alliance leaders in a compromising position. Alonzo Wardall, a member of the National Executive Committee of the Farmers' Alliance and Industrial Union, admits, so the *Inter Ocean* says, that he is hired by the National Union Company, the agency through which the cordage company is operating, and he also admitted to E. E. Whipple that he thought the National Cordage Company is behind, or largely interested in, the National Union, as he (Wardall) knew that Mr. Waterbury, the National Cordage President, gave his check to the Union Company last summer for $125,000, and he (Wardall) had it in his possession several days, showing the "boys" while in New York last June.

BUYING UP THE AGENTS.

This June meeting was the secret one that the National Union had called of all the State Alliance business agents it had induced into the scheme, that company paying all the expenses. At this meeting McCune, the Chairman of the National Executive Committee and editor of the *National Economist*; Coffeen, the State business agent for Illinois, F. M. B. A.; George G. Close, the State agent for Dakota; Alonzo Wardall; Cole, the president of the Michigan Alliance, and the business agents for a dozen other States were present, and from Wardall's statement to Whipple, all were conversant with the relation of the National Cordage Trust to the scheme. It is also stated that Whipple has a letter from President Waterbury of the National Cordage Company, stating that they are largely interested in the Union Company, and highly recommending it. The part of the scheme that has appealed so powerfully to the Alliance agents is the commission of 1-2 of 1 per cent allowed to the State agents for all goods sold in their territory. It is asserted that the National Union Company is preparing to capture the St. Louis conference on the 22d inst., and get an indorsement. This, the *Inter Ocean* says, will be strongly opposed by many of the Alliance men and some of the strongest papers in the organization.

Resolutions by the Merced Alliance.

TO THE EDITOR:—The Merced Co. F. A. & I. U. met at Los Banos, Jan. 28th. The Committee on Resolutions submitted the following, which were duly adopted:

Resolved, That our County Alliance and the Sub Alliances of Merced county, Cal., indorse the principles and demands of our State and National Alliance.

Resolved, That our State President Marion Cannon's circular on the Nicaragua canal be earnestly studied by the various Alliances of this county, and that we heartily agree with him that government ownership of the canal for the people be insisted upon and that we agree that a controlling interest in the canal by moneyed monopoly is detrimental to our very existence as a State and nation.

Resolved, That we urge upon the various Alliances of Merced county the imperative necessity of taking steps to revive the latent interest in our Order, and that we request our State President to send us a Lecturer and Organizer to devote his time and talents to increase the number of Alliances and to encourage existing ones.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

CROPS IN THE HILLS.—Haywards *Journal:* E. R. Jensen says: "The outlook this year was never more promising. We have had excellent weather to get the grain in, and the ground was never in such fine condition as this spring. About all the grain will be planted this week, and the acreage seeded is larger than former years. Common barley is the main crop, as the price the last few years has more than held its own. With ordinary rains the hills will make a good showing this year."

Butte.

FRUIT NOTES.—Oroville *Register:* From almost every quarter we hear of the planting of additional fruit trees and vines. It would seem that fruit-growing would some day be overdone, but there are no signs of halting at present. Peaches take the lead in the county, but apricots, early apples, oranges, figs and olives all come in for a good showing. It is probable that of olives alone there will be not less than 250 or 300 acres set out this year. We call to mind at this minute 154 acres that we know will be planted, and this is probably not one-half of the total acreage. We give below the list of the different fruits growing upon the 200-acre orchard of White, Cooley & Curtis and E. H. Hudson, with the number of trees of each variety: Red May peaches, 100; Hale's early, 500; Foster, 1700; Muir, 1000; Susquehanna, 1500; late Crawford, 900; Tuscan cling, 1500; orange cling, 1000; California cling, 1500; Golden State almonds, 650; IXL almonds, 650; paper shell almonds, 700; peach apricot, 1200; Hemskirk, 800; royal apricot, 1000; Bartlett pears, 1200; French prunes, 650; white Adriatic figs, 132; budded oranges, 72; vines, 50. This gives 115 acres in peaches; 35 of apricots, 30 of almonds, 15 of Bartlett pears, and the remainder of the orchard in French prunes and white Adriatic figs.

GROW LIQUORICE.—Biggs *Argus:* The man who will plant two acres to liquorice root on such soil as is found along the Feather river can harvest a good income every year. The root grows wonderfully fast, and, in running in every direction when planted in mellow soil, soon makes a solid mat of roots, which can be cut and prepared for market while the soil remains rooted right along. The root is used in many cough medicines, in manufacturing plug chewing tobacco, etc., and always brings a good price. The writer knows that it will do well here, owing to the fact that he planted about a dozen cuttings in his yard a few years ago, and now the yard is matted with roots for about 200 feet and in adobe soil.

Contra Costa.

CROP PROSPECTS.—R. G. Dean, Brentwood, writes Feb. 6th, as an item of interest: The season is generally accepted as propitious, though only about five inches of rain have fallen to date; but a sufficient downpour to wet the ground through would relieve much anxiety now existing as to the season's output of grain. The area sown to wheat and barley will be unusually large, owing to the remarkably favorable weather, and with the present and future promise, we confidently look forward to an abundant harvest.

Fresno.

A FOOTHILL OLIVE ORCHARD.—*Central Californian:* Last winter H. S. Williams set out quite a number of olive trees on a foothill ranch which he owns, near Raymond, in the northern part of this county. They thrived so well that Mr. Williams has decided to largely increase the size of the orchard this spring, and he expects to set out 6000 additional trees. He owns nearly a section of land, fully three-fourths of which, it is thought, will grow olives to perfection, and the whole body will eventually be turned into an olive plantation if success crowns the present venture. There is little doubt now but that olives can be grown almost anywhere in the foothill section of Fresno county, and we are glad to see such enterprising men as H. S. Williams turning their attention to olive culture.

PROMISING OUTLOOK FOR APRICOTS. — *Central Californian:* Never before have apricot trees of this section given brighter promise at this season of the year for a bountiful yield. The branches are as full of swelling fruit buds as it is possible for them to be, and unless frosty or freezing weather comes at the critical time, Fresno county orchardists will have a crop of apricots worth having this year.

Kern.

VINE AND TREE NOTES AT ROSEDALE.—Cor. Bakersfield *Echo:* The pruning of vineyards is progressing rapidly. The pruners from Fresno are surprised at the immense growth of the two year vines, saying they have never seen anything to equal it in their past experience. While the growth of vines has been marvelous, is it not possible that too large a portion of the vitality of the vines will be absorbed by the wood and leave a less proportion for fruiting? Another season will doubtless prove the matter and, it is to be hoped, satisfactorily. Quite a large acreage of Bartlett pears will be set this season, as it has been proven in other localities that ground too wet or charged too heavily with alkali to grow vines or other fruits successfully, is well adapted for pears. While alkali ground is not recommended for pears, pears, it seems, are recommended for alkali ground.

A MOVING BRUSH BURNER.—*Echo:* R. Frisselle, superintendent of the Rosedale vineyard, has a convenient way of disposing of the brush cut from grape vines. It is a big sheet-iron box, mounted on low wheels and drawn by a team. In this a fire is started, and as the team moves slowly across the field, two men pitch the brush into the box to be burned. The heat of the fire does no injury to the vines and much time and labor are saved.

PROMISING CROP PROSPECTS.—*Echo:* We have had a good rain during the past week and still the weather remains warm. Rain fell almost continuously from dark to dawn Saturday night, giving the ground a good wetting. Another storm took place Sunday night, and a light shower fell Monday night. The weather is unusually warm and feed is growing very rapidly. Grain that has been making a slow growth for a month past, will now just rush along, and the outlook for a good crop is very promising. Perhaps never before in the history of the county has there been as great an acreage of grain in the county as this year. Much of this is on irrigated land, and hence independent of rains, but the showers will not hurt it any. In the mountain valleys and on the plains above the ditches, the rain was needed and timely.

Los Angeles.

THE ORANGE MOVEMENT.—L. A. *Express:* The rains have interfered materially with the movement of oranges. The orchardists have not been able to pick the fruit and the probabilities are that they will not be able to pick and pack fruit for several weeks to come. All the fruit that was packed and waiting transportation was carried by the Santa Fe eastward.

EXTENSIVE PREPARATIONS FOR THE CITRUS FAIR.—L. A. *Express,* On Saturday, Feb. 6, the people of Santa Ana held a public meeting to decide upon their design for the Citrus Fair. Similar meetings will take place at Pasadena and Glendora. The Vernon horticulturists are already at work on their design. Secretary Willard, of the Chamber of Commerce, is sending out premium lists to prominent citrus growers. He is daily receiving applications for space, and according to present indications, the next fair may eclipse all previous citrus exhibitions. La Canada desires the same position as that assigned to her last year. The Santa Barbara Art Leather Company will make a fine display, and San Diego will send a large exhibit.

Monterey.

INCREASED LAND SEEDED.—Monrovia *Messenger:* A note from Salinas says that never in the history of Monterey county has there been so large an acreage sown to cereals, and never has the same been put in better condition. The ground, on account of the December rains, has been placed in a condition to enable farmers to plow and sow. The land being seeded under very favorable auspices, the soil being thoroughly pulverized, less moisture is needed than when the ground is broke up badly.

Orange.

FAVORABLE TO P TATO PLANTING.—Garden Grove cor. Santa Ana *Herald:* The late rains have made it possible for the ranchers to plant early potatoes for the Eastern markets, and a great many are intending to do so.

Sacramento.

STATE FAIR NOTES.—*Record-Union:* The adjourned annual meeting of the State Board of Agriculture was held February 4th, at which Hon. Frederick Cox was unanimously chosen as President for the ensuing year, G. W. Hancock reelected Superintendent of the Park, and Hon. Chris Green reelected Superintendent of the Pavilion. Director Green moved that all standing committees be named by the President by the next meeting of the Board, together with a committee of five on Premium List; also the same number as a Committee on Speed Programme. The State Fair for 1892 was set for the first Monday (the 5th) in September, to continue two weeks, the racing and stock exhibition to open on Thursday of the first week, and to continue nine days. It was ordered that the rental of stalls at Agricultural Park for the season of 1892, beginning March 1st, be fixed as follows (the new Cottage Stables to be reserved entirely until fair time): Stalls in the old Cottage Stables and new annex, $2 each per month, and all others at $1 per stall per month. Parties renting $2 stalls, and entering horses in races at the State Fair, to receive $1 rebate for every month paid for such horse or horses entered. Owing to the heavy repair expenses each season of stalls used (and abused) by occupants, it was deemed important to make these rates, and they will be strictly enforced. The Board agreed to give the usual two, three and four-year-old trotting purses, and two, three and four-year-old pacing purses. Entries for the 2:30 class to close March 15th. The Board adjourned to March 21st.

HOP FARMING NOTES.—*News:* Sacramento hop growers are plowing in some of the early yards, though trellising is what claims the attention of most of the ranchers. There is a marked improvement in the trellises, and in many fields the old poles are being hauled up to the farm house for fire wood, to give place to cedar posts and wire or twine. The Sacramento valley can now show some of the finest and most substantial trellises on the Coast.

San Benito.

PROFITS IN CHEESE.—Hollister *Advance:* The following is the annual report for 1891 of F. Vile's cheese factory at San Felipe: Total number pounds of milk received, 457,998; total number pounds of cheese made, 50,625; highest price received per pound, 16½ cents; lowest, 10 cents; average gross price per 100 pounds, $13 29; average net price per 100 pounds, $12.09; average number pounds of milk to one pound of cheese, 9.04; average net price to producer per 100 pounds of milk, $1.13 and 4-5ths; cost of making, per 100 pounds of cheese, $1.80; number of cows milked, 82; average net income per cow, $63.50.

San Bernardino.

TWENTY-EIGHTH DISTRICT AGRICULTURAL FAIR.—San Bernardino *Times-Index:* The 28th Agricultural District Fair, to be held at Colton on Monday, February 22d, and continuing five days, offers a splendid list of premiums. For best individual display of oranges, $100 premium is offered as first prize; $90 to the second, and so on up to the seventh prize, which is $40. Passing to the stock list we notice that the best trotting stallion is offered a prize of $10. Eight prizes are offered for best horses of all kinds or a total of $70. All of these prizes foot up to just the amount offered to the fourth best individual display of oranges. Twenty dollars is the total amount offered to neat foot animals; $15 to sheep; $10 to swine. It is not our intention to disparage the orange industry. It is the principal industry in the county, but we think that the time has come to pay more attention to the improvement of stock, especially of dairy cattle. If this county is lacking in any particular agricultural industry it is in the character of its dairy cows. There are hundreds of orchardists in this county who ought to keep one cow at least to supply the family with sweet butter and milk, and there are others who ought to keep chickens, ducks and turkeys to keep down the grasshoppers and insect pests that damage the fruit crops. Now, the Agricultural Association is intended to encourage all these industries and to awaken public sentiment to the importance of paying more attention to them. It is too late to modify the premium list offered this year, but if similar premiums were offered for the best milch cows to those being offered for the best oranges, $100, $90 and so on to $40 for the seventh prize, this county in a few years would have thousands of cattle where there are now only hundreds. A similar result would follow in the poultry yard. Let us build up some of these industries that are now neglected.

San Luis Obispo.

CROP PROSPECTS.—San Miguel *Courier:* The season so far has been one of the most promising we have had for several years. The first rain came early enough and in sufficient quantity to enable the farmers to do their plowing in good shape. The rain has come in showers in such a way as not to interfere with plowing. Many thousands of acres have been seeded, and hundreds of acres of new ground have been broken this winter. The acreage is greater than ever before, and with the usual spring showers, the yield will be equal to that of any previous year. The crop prospect considered from all points never was better than at present. Indications point to a most prosperous year for the upper Salinas valley.

Santa Barbara.

GLANDERED HORSES.—Santa Ynez *Argus:* Dr. A. E. Buzard, veterinary surgeon of San Francisco, is here in compliance with the request of the Board of Supervisors to investigate matters in regard to the existence of glanders or other contagious diseases among the horses of this section. It is reported that several parties have glandered stock in their possession which they refuse to destroy. If the report is found to be true, the law will be vigorously enforced, and the penalty for this offense is very severe. Dr. Buzard writes: "Had eight killed so far." EDS. PRESS.

Santa Clara.

FARM AND ORCHARD NOTES.—Campbell Cor. *Mercury:* Grain and pasture fields are looking well. Our timely showers are making the prospect for a large hay crop very bright. We have had no soaking rains yet and no water in our creek at this point, though it has been raining above and in some of the irrigating ditches. Prune trees are very full of fruit buds, as are also the young apricot trees. The peach and apricot trees, which bore so full last year, do not show indications for heavy fruitage this year.

Santa Cruz.

SUGAR BEET ACREAGE.—Watsonville *Pajaronian:* Over one thousand acres have been contracted for beets in this valley, and there are promises for much more land. Spuds had an off year last season, and beans were not a very profitable crop; and the sugar beet did pay and its returns were certain after the crop was gathered, and hence the beet is to the front again this year.

Solano.

WALNUT LOGS.—Winters *Express:* A carload of walnut logs was shipped from J. R. Wolfskill's farm to San Francisco to be used for the manufacture of furniture.

MOUNTAIN APPLE ORCHARDS.—Winters *Express:* Experiment has demonstrated that the climate of the mountains to the westward of Winters will produce good apples, and William Bolinger and W. G. Davis, who own places therein, will plant a number of acres to this fruit this winter. Mr. Bolinger has several trees already in bearing which yield well, and bear most excellent fruit. We are glad of this, as we have long thought that while it is too warm to raise apples successfully in this valley, they could be grown to perfection in the mountains.

Sonoma.

BENNETT VALLEY NOTES.—Cor. S. R. *Republican:* Cherry trees are in full bloom in this favored valley. Grain-sowing is about completed in this part of the county for the harvest of 1892. There are not so many acres sown as there were last year.

Petaluma *Imprint:* There are only about 96 bales of hops remaining unsold in Sonoma county. It is estimated that the hop acreage of Sonoma county will be greatly increased this season. Already, reports are coming in to that effect. H. Button will put in 20 acres on his farm one mile and a half from Santa Rosa. Mr. Finley, living near Mark West, will increase his acreage to the extent of about 15 acres. Losson Ross, the well-known hop raiser, will put in a few acres as an addition to his big fields. Sam Talmadge has made arrangements to plant 20 acres this spring. S. J. Clark of Mark West will cultivate 30 or 40 acres more than he did last year. Farmer & Peterson will increase their acreage, and Ed Hall will make his hop fields larger by about 20 acres. The high pole system has proved a great success thus far, and more growers will make use of it from year to year. Those who have tried it claim that the benefits more than pay for the extra expense.

Sutter.

LARGE ACREAGE SEEDED AT LIVE OAK.—Cor. *Farmer:* An immense crop of wheat, with the usual amount of barley, has been planted in this vicinity, and while a small portion is summer-fallow, yet the whole crop is in good condition.

FARM PROSPECTS.—Yuba City *Farmer:* The farmers can find no fault at present, as they have had it all their own way this winter, as far as the weather is concerned. The rains have been timely and given every opportunity for the planting of a large acreage in this county. While the grain is somewhat backward, it is now making a splendid growth, and the warm, pleasant days will bring it out wonderfully. Winter sowing is still going on, but to no very large extent, as most of the grain was put into the ground during the last month. Considerable barley will yet be sown. While the coming crop will undoubtedly be a large one, much depends on the spring rains to bring it to maturity with an abundant yield. Already summer-fallow plowing has commenced.

TREE-PLANTING IN DISTRICT No. 70.—*Farmer:* Ira H. Wood is planting about 1500 trees, mostly peaches, on the old Sultzberger place in No. 70 along Butte slough. On the same farm John Wilkie is planting 30 acres to fruit, having rented the land for ten years at $20 per acre per year. With what has been planted, it makes an orchard of about 50 acres. This is the largest tract planted to trees in the district or in that part of the county, but it is expected that considerable more land will be planted to trees during the next few years.

RUSY IN THE NURSERIES.—The work of inspecting nursery stock continues to take the attention of the Horticultural Commissioners and their inspectors, and the large amount of tree stock is being thoroughly examined. All the nurseries have more orders than they can fill, and the demand for trees all over the State seems to be unlimited. Tree planting is active at present.

Stanislaus.

SUMMER-FALLOWING AT OAKDALE.— Cor. Modesto *Herald:* With few exceptions, the farmers in this vicinity have finished the work of seeding and are now engaged in summer-fallowing. The season has been a most favorable one for putting in the crop in a thorough manner, and early sown grain is presenting a healthy appearance.

Tulare.

PRUNUS SIMONI.— Selma *Enterprise:* One of the most promising fruits for profit is the Simoni prune (*prunus simoni*). It has a combination of fine qualities to recommend it. It is early, being ready for shipment about the middle of June. It is then a rich apricot yellow, but even in this immature state is sweet, aromatic and palatable. From this stage it ripens to a dark, rich red. Shipped in its yellow state, it ripens, like the Bartlett pear, in transit, and arrives in New York or Chicago in prime condition. It has been successfully shipped to the cities named and to Liverpool by a grower in Tulare county. The fruit is of a large size with very small pit. The flesh is a deep yellow and has a rich aromatic flavor peculiar to itself and suggestive of pineapple. Mr. Motheral, who happened in as we write, says: "I have seen it ripen here, and I consider it the most delicious of all the prune family." Prof. Wickson, author of "California Fruits," told the writer that he thinks it the best early prune we have. The prunes that reached Chicago last season brought almost fabulous prices.

Ventura.

RAPID GROWTH.—Staticoy Cor. *Free Press:* Last April C. C. Bryson, of Wheeler Canyon, planted a piece of ground ten feet wide and 40 feet long with seedling peach seeds, and now has about 250 trees in that bed. Last August, one of these trees apparently growing more rapidly than he desired, he cut off the top of it. Last Sunday we measured the tree and found it to be eight feet high. Several other trees in that bed are eight feet high.

Yolo.

OF INTEREST TO WOOL GROWERS.—*Democrat:* It may be of interest to the flock-masters of Yolo, who intend to exhibit sheep at the next State Fair, to know that the Board of Directors, at the last meeting, ordered that each exhibitor be required to file an affidavit, verified by two reputable citizens resident of the locality where the sheep came from, that lambs exhibited were born on or after January 1st of the year exhibited, and that all sheep were shorn on or after March 1st of same year they are exhibited.

GRAFTON FARM NOTES —Cor. Woodland *Democrat:* The farmers are busy sowing their crops, and are jubilant over the prospects for a good crop. The river farmers are confident that there will be no overflow this year, as the river is very low, considering the lateness of the season.

The Home Circle.

Not in Vain.

She pinned some creamy fluffy thing
About her throat, and added there
A half-blown rose; and lingering
Awhile to make herself more fair,
I queried of her, half in jest,
The name of her expected guest.

"We dine alone to-night," said she.
"I linger at my toilet
Not for the eyes of company,
But for a dearer object yet—
Now for a husband's eyes attired,
The self of old my love admired.

"It would have grieved my heart of yore
Not to be comely in his eyes;
And now how infinitely more
Of moment to retain the prize!
And so I have a rosebud there
To brighten in my silvering hair.

"Not for my sister-woman's gaze,
To rouse her envy; not for this,
But for the sake of those sweet days
To save the honeymoon of bliss
From ever waning, succoring so
From waste the paradise below.

"Twere not enough to win him mine,
Nor yet enough so to be won,
But the sweet right of love divine
To keep the Eden so begun,
And when another decade dies
To still be lovesome in his eyes."

Oh, beautiful philosophy!
The key to riches manifold;
Its secret sovereign alchemy
Changing the dullest day to gold,
Leashing two hearts in love's sweet thrall,
A love that never wanes at all.

A holy lesson, sweet to con,
And sweet in daily life applied;
Youth's blithest idyl still lisped on,
The matron gentle as the bride,
The winning long ago was done,
But every day she keeps him won.

—ROSALINE E. JONES.

Mercy.

[*Annie Weld Edson in Portland Transcript.*]

On my way to school I passed two little boxes of houses exactly opposite each other. Their two small yards were neatly kept, and the vines that clad their shingled and unpainted sides gave them a bower-like effect that was very pleasant and picturesque.

Back and forth, to and fro between these two cottages constantly flitted a figure that had anything but a "queen-of-the-bower" look about it. A little, wiry shape, attired in a short, lanky gown of ugly calico, from which craned a thin neck and a small head surmounted by coarse iron-gray hair screwed into a neat bell-knob at the back. As you approached, great gray eyes turned on you in a half-frightened sort of way, and a kindly voice gave the regulation New England greeting, "Howdy-do." The face was long, narrow and sallow, the nose very large, and eyes, ears and mouth partook of this generosity of outline.

Not a very interesting picture, surely, yet this poor little soul is one of New England's heroines, whose names will never be graven on marbles storied with praise of their noble deeds; only on the simple white stone above the last resting place in the country church yard.

Mercy Scoville was never a pretty girl. She was born in the cottage on the left of the road as one comes from Woodville, and with her father and mother and two brothers lived an uneventful life, the principal gaieties being husking bees and singing schools, in both of which she was an unimportant factor, as she never by any chance got the red ear, and could not tell one tune from another.

One of the brothers married and moved West, and the other, a tall, goodlooking fellow, was casting loving eyes on a buxom damsel who had recently settled in those regions.

It seemed, indeed, as though Mercy would go on mending and dusting and dish-washing in the old home, and running on errands over to the little house across the road, where Uncle John Scoville and Aunt Mary lived all her days. But about this time something happened that changed Mercy's peaceful, dull life to one of romance.

Captain Westland, of the army, had business in Woodville, and pranced into the Scoville front yard one fine morning just as Mercy was putting out the shining milk-pans, each on its private and particular short post, to dry in the sun. Doffing his hat respectfully, he asked for her father. The result of his conference with Mr. Scoville was that he was given board in the house for a few weeks, while he transacted the business on which he came.

Captain Westland had sharp eyes, and he was not long in finding out that Mr. Scoville, from his earnings as a woodsawer, had laid by quite a snug sum yearly in case of a "rainy day." His captainship was handsome and popular, and fast living had drained his purse to such a degree that he felt it behooved him to refill it at the earliest opportunity. Not overscrupulous at best, he did not, in this hour of perplexity, shrink from utter baseness. He began to show attention to Mercy, and to say that she was flattered is to speak very mildly indeed.

Mercy lived in the clouds and forgot her dish-washing more than once, as, mop in hand, she stood gazing down into the ravine that skirted the back of their home, and dreaming dreams in which a tall, fine figure in uniform and her own little self in silk attire formed the principal dramatis personæ.

Poor Mercy!

One moonlight evening, when the Baltimore Belles were flinging their wealth of beauty and fragrance about the porch, Mercy flung the beauty and fragrance of her faithful love at his feet who had asked it with lips trembling, with seeming earnestness. Oh, why did not some guardian angel cry out, "Neither cast ye your pearls before swine, lest they trample them under their feet, and turn again and rend you." Ah, well! it might have been too late to convince the trusting country girl; how could any one who had such a sweet voice and such elegant clothes with brass buttons be like the swine?

Mr. Scoville gave Mercy a good dowry in money, and Mercy herself brought a generous one in bed and table linen all made up and marked with her owu hand. How many prayers and hopes and ecstasies she stitched into her simple bridal outfit!

Captain Westland took his bride to New York City to live.

Mercy, with some quiet tears, took leave of father and mother and brother at one house, and Uncle John and Aunt Mary at the other; and she cast many glances back as the swiftly rolling carriage bore her from the two little homes where her life had centered.

For the first few weeks all went well. Captain Westland took his bride all about the great city to see the lions, and his devotion made her very happy. "Of course there's no wonder I love *him*," she would say to herself, "but I wonder how he loves me so much when I'm so little and plain."

After a time he seemed more pre-occupied and neglectful. Mercy saw the change with pained surprise, but thinking something had occurred to annoy him, wisely kept silence, and renewed her efforts to please him. One evening she waited his coming, in the pretty parlor of the suite he had taken on their arrival, but he did not come. She passed the night in an agony of suspense, and it was not till dusk the next day that the result of her inquiries led her to the terrible discovery that he had deserted her, and had taken with him every cent he could lay his hands on, not leaving even enough for her return fare home.

A horrible awakening, surely—and in this emergency Mercy showed the real force of her nature. She remembered the name of a noted clergyman of her denomination who resided in New York City, and finding his address in the directory, stumbled blindly about till she found the street, the house and the man.

In a faltering voice, and with a wretched face that gave him no doubt of her truth, she told him her pitiful story, and asked him to loan her the requisite money to return home. The good doctor was touched from the depths, and would gladly have done more for the poor woman in this her said strait; but a gentle, firm refusal met all his proffers of further assistance, and Mercy, with many thanks, turned away to go on her sad, homeward journey, broken-hearted.

Great was the surprise and consternation in the two households when Mercy appeared in their midst, and their anger knew no bounds when the cause was known to them. Old Mr. Scoville, with choked utterance and flashing eyes, swore revenge, but Mercy, with uplifted finger, checked him.

"Father, it's I has been wronged, and it's I will bear it. There can't nothing be done, and I've come home to care for ye all so long's I live!"

Something in the white, determined face overcame the old man as no words could have done; and from that day on, the family, by mutual consent, never discussed this grief and disgrace before Mercy.

Aunt Mary died very soon after; and since Uncle John was childless, and would not think of leaving his little home, Mercy slipped quietly into her aunt's place, humoring and caring for the querulous old man.

She saw, with sorrow never spoken, yet none the less keenly felt, the marks that grief had made upon her face, reflected in the faces of her aging parents. They had never been rich, but they had always been proud, and this had given their pride a terrible blow. The mother's temper, never very good, grew sharper and her strength less. So, back and forth, to and fro, flitted Mercy, uncomplaining and gentle, bearing the main work of the two households on her frail shoulders.

As if this were not enough, the erstwhile buxom damsel, now Brother John's wife, had frequent ill turns, and the tired feet would patter down the road to John's house, bearing quiet, order and comfort to the sick room and motherly care to the three little ones who loved Aunt Mercy dearly.

Our stock of fall and winter wood having been brought, I strolled down the hill to Mr. Scoville's one fine afternoon to engage him to saw it. Mrs. Scoville, who was now confined to her chair, was the only one in the house, Mercy having run over to the other house to catch an afternoon nap.

Mrs. Scoville was unusually talkative, and I very soon realized that her mind had failed somewhat. She spoke of Mercy. "She's an angel uv mercy to us," said she, the tears starting to her eyes. "And she's alwuz so cheerful. Ye'd never dream but what her life had ben all sunshine to see her round house. But it hain't ben; no, indeed, it hain't. There wuz a time when it didn't seem as ef we'd any uv us pull threw and stan' it; but I guess we'd a' ben ashamed to hev gone under."

Vainly I tried to soothe her and to change the subject. She was evidently bound to have her say, although I felt confident it had never been mentioned to a stranger before, and felt the more uncomfortable therefore.

"I s'pose folks is kinder curious ez ter whether Mercy keers fer him now or not. I never knew myself, until the other day, no, it must be about two years ago, she hed—would you believe it?—hed a letter from the vil-liun. The first and I guess the only one. He hed ben out in Colorady and got rich, and wuz kinder sick, and wanted her come on and 'furgive and furgit,' and so on. 'Twuz like a message from the dead, but I see threw the hull business, and it made me mad; he wa'nt well, and wanted her to come on and slave herself out for him, and he like ez not stumblin' home nights about how-fares-ye; howsoever, I made up my mind to keep still and see what Mercy'd do about it. Well, I went into the keepin' room to git my rags (I wuz making a rug, and 'twuz a beauty; took the prize ter cattle show thet year), and there set Mercy with thet pictur"—pointing to a framed likeness of a handsome man in military dress—"in her lap, and she a-bendin' over it, and takin' on ez ef her heart would break. I'd hed the pictur in the fire years ago, but she alwuz said no (he hung it there the day before they wuz married), so there it staid. I've sometimes thought ef the old man and I hedn't stood in the way, she'd a packed off to him, bag and baggage. Women is queer critters, if I do say it as am one!"

So the old woman rattled on. In vain it was to attempt to stem the tide of her eloquence. As the poor old mind began to waver, the iron bars of pride that had held back the knowledge of its sorest wrongs from the world so long, were broken.

Other changes came—Mother Scoville died; Brother John's wife fell down with a sudden gasp one day, and the doctor rendered the report "heart disease." It seemed as though Mercy was to be the only woman left of the Scoville race. Bravely she tugged through the following summer, caring for her aged father and uncle and "seein' to" Brother John's growing children.

As winter set in, one of the children came down with scarlet fever; the others caught it, and Aunt Mercy was kept on a constant ministry of care and love and patience. The little frame was wiry, but, alas! it was no longer young, and with a tired droop Mercy flung herself down on the bed one day, little dreaming for how long.

"Why, doctor, I aint sick, nuthin' of the kind! I can't be, nohow, fur how'd the folks and things get along without me?"

But all through the winter they *did* get along without her, and all through the spring. Neighbors ran in with delicacies; pretty bouquets graced the sick room; kindly if unskilled hands smoothed the pillows.

And one June morning, the sun rose bathed in blushing clouds, gleamed on the merrily nodding Baltimore Belles that ran riot over the little house, till each dewdrop seemed a flashing gem; and smiled in through the muslin curtains at an upturned face that wore the sweet triumphant smile of eternal rest.

It was the anniversary of Mercy's wedding day. Tenderly they clad her in the soft gray silk of that fated day, and all around and about her laid the Baltimore Belles.

The watchers said that at midnight she had waked and asked for "his" picture; and they said it was a sight to touch the stoniest heart to see the look of love and longing she fixed on the faded likeness of him who had blighted her life.

Yes, old Mother Scoville, "women *is queer*." Yet, unaccountable as it often is, a woman's capacity for deathless deep love is, to my mind, the most nearly divine of any earthly love.

It will bear coldness, repulse, utter lack of requital; will hug to its throbbing breast the slightest boon, and call it great; will be dragged in the dust, yet shine as brightly as a diamond among rubbish; will live and grow, even when the object of its devotion is totally ignorant of the passion it has roused. Such is woman's love! And is not that courage with which she turns from disappointment and loss of her own happiness to share others' hopes, others' cares, others' sorrows, sublime—*heroic?*

The headstone in the little churchyard says only this:

MERCY,
Wife of Captain J. F. Westland,
Aged 38 years, 6 mos.

Women as Nail-Drivers.

Ever since I can remember, and probably a few years before, it has been said: "A woman can't drive a nail." Her assumed inability to "hit the nail on the head" has furnished innumerable newspaper paragraphs. As a sample, read what the Detroit *News* says anent Mrs. Palmer's driving the last nail in the women's building of the World's Fair:

"Now what is offered on the speed with which Mrs. Palmer drives the nail? Two to one on the nail. Ten to two that Mrs. Palmer hits the building five times for once she hits the nail. One hundred to twenty-five that she hits her fingers if the nail isn't started for her. Even money that she gets the hammer tangled in the ribbons of her bonnet. Eight to ten that she shuts her eyes for the first blow. Five to four that she wrinkles her nose after the first 25 blows with the hammer. Even money that the world will have to take a recess for lunch before the nail is driven, providing Mrs. Palmer doesn't begin to hammer at it before 10 o'clock. Even money that after Mrs. Palmer works eight hours the nail will have to be turned over to a carpenter. Ten to one that the nail is leaning to the southwest when Mrs. Palmer quits."

The above seems to be quite a complete collection of the kinds of joke that spring up in the masculine mind whenever one of the other sex is mentioned in connection with a hammer and nail. But "Lo, and behold you!" the Savannah *Morning News* prints all that the Detroit *News* man has said, and adds the following:

"But in all due solemnity, the enterprise would be placed in a very embarrassing position if she should merely waste her energies in waltzing around the nail all day and fail to hit it at all. An erect position is the safest one for that nail. Unless it wobbles it is in no immediate danger. Yet there is no visible good reason why the building should be all battered up in that way."

I never had a full realization before of how very important women are, especially to the makers of newspapers. Just think of it. If that nail were to be driven by a man, even the most renowned man in the world, it would only furnish a line or two for the papers. Mrs. Palmer, do you realize your consequence as a woman? It is enough to make men weep for envy. They drive nails, year in and year out, and who says anything about it?

But isn't it strange that when a woman has held the

championship as a nail driver for three or four thousand years, all this little side talk and ridicule should have been allowed to go on? Has any man a record to compare with that of "Jael, the wife of Heber the Kenite?"

The particulars of this remarkable case are to be found in the Bible, in the fourth chapter of the book of Judges, as follows:

"Howbeit Sisera fled away on his feet to the tent of Jael, the wife of Heber, the Kenite. * * * And when he had turned in unto her into the tent, she covered him with a mantle. * * * Then Jael, Heber's wife, took a nail of the tent, and took an hammer in her hand, and went softly unto him, and smote the nail into his temples, and fastened it into the ground; for he was fast asleep and weary. So he died.

"And, behold, as Barak pursued Sisera, Jael came out to meet him, and said unto him: 'Come and I will show thee the man whom thou seekest.' And when he came into her tent, behold, Sisera lay dead, and the nail was in his temples."

May we not hope that men will hereafter no more put forth their funny paragraphs relating to woman, hammer and nail, until one of their own sex has beaten the record made by the wife of Heber, the Kenite. Considering the history bearing on this subject I do no hesitate to prophesy that Mrs. Palmer's nail-driving on the Fair building will be a striking success. — Celia B. Whitehead in Woman's Journal.

Exposition Day.

[Written for the RURAL PRESS by MAUDE M. S. PEASLEE]

Indiana seems to be booming her interests in the World's Fair to be held in Chicago in 1893.

The Committee on Education of the Board of World's Fair Managers of that State have recommended certain days in the school year to be set aside and called Exposition Days.

The object is two-fold: First—It is hoped that by soliciting contributions of one penny each from the pupils and ten cents each from the teachers, a "penny fund" may be started which will do much toward making an educational exhibit. Second—It is greatly desired that the interest of the young people may be stimulated in this matter.

It is very important that the children should be educated in the history of their own country, and that patriotism should be roused in their hearts.

Probably this generation will learn more of the history of their own country in the time that intervenes between now and the opening of "The Columbian Exposition," which is set for May 1st, 1893, than they would be likely to acquire during the rest of their lives.

From now on the commissioners of each State will be busy; the papers will contain frequent items concerning this work, and the interest of the people will be roused.

Much good work can be done in the schools of each county. A large proportion of the information must be sought outside the usual school histories, and the proper books should be added to libraries where they are wanting.

Beginning with the lives of Christopher Columbus and his contemporaries, together with the map of the world as it was then known, there is much ground to be covered, many points to be taken up, and great possibilities involved.

Teachers should post themselves at once on such subjects as other international expositions, purpose, place, date, measure of success and apparent effect on commerce and emigration.

The general intelligence and enthusiastic patriotism of the children should be daily stimulated.

Perhaps no one better realizes than the school teacher, the superficial knowledge of his own country, past and present, that is shown by the average pupil.

Mere book knowledge availeth little.

Now is the time to arouse each pupil, and through him, his family, to an active interest in the present condition of his own country, its products and its manufactures, and the causes that have led to its present development.

Let not Indiana be alone in this active work, while California and her schools hesitate and so fall behind.

Begin this work at once, O California teachers, that you may have ample time.

Spice of Life.

—He: They married in haste. She: And repented at leisure, I suppose? He: No; their repentance was quite as hasty as their marriage.

—She: Promise me that if I die you will never marry again. He: What? And let people think my dear little first wife was such a terror that I didn't dare to? Never!

—"Who drove this poor man insane, doctor?" "He tried to figure out his wife's reasons for setting the clock ahead whenever she wished to get up early."

—The Czar: A horrible thought strikes me! The Lord High Executioner: What is that, your majesty? The Czar: If that dentist was a nihilist, he may have filled my teeth with dynamite. Then, the first time I bite hard, I shall blow the top of my head off!

—In Chicago—Miss Finehout: I see that Mrs. Porker seems to have an increasing affection for the memory of her late husband. Mr. Dunn: What, is he dead? I've been away, you know. Mrs. Finehout: No; but he's made a heap of money since their divorce.

—Tomson: Billson is a man who never keeps his word. Johnson: Indeed? Tomson: Yes, confound him. I owe him a trifle, and he said he intended to call round after it. I stayed out of the house on three occasions when I expected a visit from him, and he didn't come. You can't depend upon him.

—Old gent (who knows the young man's salary): If you and my daughter could live respectably and comfortably on twenty dollars a week, I should not object to the match. But you can't. Young man: N-o; but my salary is twenty dollars a week, and that added to the twenty dollars a week you are talking about would make forty.

Young Folks' Column.

Ben Barlow's Disinclination.

[Written for the RURAL PRESS by DUANE MORLEY.]

Everywhere that Ben Barlow went, his disinclination went with him. Not always was it uppermost, but it was always ready to spring up at the least provocation. When a boy at school, the fractions called vulgar, and even those called decimal, provoked it. In fact, the whole arithmetic was a standing provocation to Ben's native disinclination. Not so with the reader, the speller, the geography, the astronomy, nor but little so with the grammar.

Toward all mathematics though, Ben's disinclination was a giant; but he got along with them, to a degree, by the indulgence of teachers and the help of kind classmates. I do not wish to say that Ben was lazy; that is too severe a term to use; but he hated to grub, hated to dig, hated it more than tongue can tell. But yet, there was hardly a word in the reader that he did not have by heart, especially the poetry and mellifluous prose; and on occasions, though short the notice, could memorize any ordinary production in order to fit out a literary entertainment with a new or pleasing feature. He was brilliant Ben Barlow, but with a weakness, a disinclination to dig. When he started out for himself, his disinclination went with him. Had his parents been keen enough to have seen his defect, and skillfully chosen a pursuit in which the distasteful would not arise, his career might have been different. But such a pursuit would have been difficult, if not impossible, to find, since in all, or any one of the pursuits a vast deal of severe labor is required to achieve success.

Studying medicine with Dr. Brown, a most patient, helpful man, did not suit Ben. He would sooner read Goldsmith's poems, Addison's silvery prose, or old Sam Johnson's sonorous phrases, than to read the medical works.

And set up at storekeeping by a faithful, loving father, the accounts in Ben's hands soon became a maze of contradictions, through his disinclination to keep instant and exact entries. Then, naturally enough, a little cloud appeared in the sky; the store was put into other hands, and the erstwhile storekeeper relegated to a tract of land and farm tools and team given him, along with the free advice to dig the soil and earn bread. Ben did well enough in the cool of the springtime; plowed, harrowed, planted and sowed; but when the days grew hot and cultivating time came, Ben was often to be found in the shade of an apple tree with a book in his hand, while the weeds grew gigantic in the midst of the corn. Reading is all right; nothing more necessary, healthful or stimulating; but all that Ben the boy, all that Ben the young man seemed to care for, was a chance to read, and when his eyes got tired, to dream.

He had read every book in the district library, and many a volume imported from the city; and so, as he would read, the farming too proved a failure. The business idea, the stern necessity of doing something, seemed not to have dawned upon him. And, had Ben been a college graduate, with a professorship tendered him, he could not have accepted it with any possible chance of successfully holding it, simply because a vast amount of application and attention to it would have been necessary.

Time was passing, and Ben's schoolmates were becoming successful in life; one a merchant, another a bank clerk, another cashier, another a lawyer, and so on, while poor Ben's name was bandied about with the word failure and its every synonym. Finally Ben said to himself, and to his parents: "This is no place for me; things are too close, they do not fit me. I'll go out west where I can do something. The west must be the place for me."

The tears rained from his mother's eyes when he left her to take the Overland, and said she: "Ben, dear; do your best to get ahead; your father is so anxious for you to succeed." Ben promised, and all the way across the continent, steaming over the plains and through the mountains, he had visions of the heroic things he would do. Without practical talent, or apt readiness to embrace offered opportunities, the little lump of money Ben brought with him out of his father's hard earnings, soon melted away, and the heroic things he thought he would do did not materialize; they rarely do. New countries and strange scenes demand strong souls, and Ben was not strong-souled. When almost a tramp, for such he nearly became, shifting from one pursuit to another, he took a position as sheep-herder. Ben deemed the employment a poetic one, one furnishing a legitimate opportunity to muse. While his conclusions respecting it were correct, he was as yet unaware of the fact that the business was dolefully monotonous. It proved to be pernicious to him, wearing away his buoyancy of spirits, and utterly unfitting him for the discharge of its simple duties. Eventually the sheep wandered; some of them became lost, whilst others were a prey to wild animals, so bringing him under the condemnation of the owners. That, the fruit of carelessness, scored another failure against him. When fortune frowns it sets a man thinking—come to think about it, that is all a frown is good for—and when Ben was out on the white, glaring California highway again, almost moneyless and consequently despairing, he began to think, began to take an inventory, so to speak; began to note his feelings and arrive at the cause. In every man's life, young or old, that hour is a trying one, and that hour came to Ben. The highway Ben was footing it over was long, and Ben's thoughts were long, deep, anxious, miserable, At last he said, and his soul was in it: "If ever I have another chance I'll improve it, or die trying."

At one time, California was divided into immense ranches or ranchos. Some of them still remain, and it was on a road winding through the great San Miguel rancho, or ranch, that Ben was that moment traveling. And he was nobly making a stake or pledge of his last atom of courage, in the event of his ever securing another opportunity to retrieve his mistaken past. One man's fate (if there be such a thing as fate) sometimes becomes another man's fortune. It was so in Ben's case. Nearing an immense irrigating ditch, a ditch nearly as wide as the Erie canal, Ben's attention was drawn to a clatter on the hard road behind him. As he turned about, he saw a large, unmanageable, riderless horse coming directly toward him at a most frantic rate. Riderless, I say, though its rider was there, dislodged from the saddle, his foot caught in the stirrup, his head mopping the ground and endangered by the horse's hoofs.

Without a thought of self-preservation, Ben made a dash for the bridle reins, happily catching one of them and pluckily holding on. The horse, great as he was, encumbered by the double load, soon came to a halt, but not before he had dragged both Ben and his rider midcurrent of the waters of the canal. The insensible fallen man, revived by the touch of the water, would yet have perished, had not Ben or some one else been there to release his foot from the stirrup. Holding to the bridle with one hand, he extricated the man's foot with the other, the man proving to be the owner of the ranch, the buildings of which were but a short distance beyond.

After having helped the man to remount, it was necessary for Ben to support him upon the horse, as best he could, along the way.

That adventure was the turning point in Ben Barlow's life.

Saxby, the owner of the ranch, had that day, prior to his mishap, been writing and mailing letters to different points to find a good, reliable man to oversee his place, during his own prospective long absence upon an Eastern and European trip. And next day, mindful of the obligation he was under to Barlow, he tendered him the place; yes, thrust it upon him, at a salary much greater than is usually paid for such services. And he fully installed him in the position, making him acquainted with every detail of the general management, and putting him on good terms with the half dozen sub-overseers, besides driving him to town and introducing him to his bankers and farm furnishers. It was a general turn over; the remainder of the Saxby family left behind, being in Barlow's care, and all things under his control. Barlow had the requisite ability, though dormant, and this time he made use of his opportunity. He spent the half of many a night in the ranch office, reducing the management to a system, and keeping close watch of the accounts and books, the days being usually spent in money transactions, the ordering of supplies, and advising with sub-overseers. There were times, of course, when Ben's disinclination would spring up, but no sooner was it apparent than down it would go again beneath his sturdy resolve. His keen eye was upon every part of the farm management, and wherever economy could be, he practiced it. Finally, business became a pleasure, a delight, and when Saxby returned from his prolonged European trip, he found his ranch under excellent control and Barlow popular with his men. And Saxby not only kept his new overseer, but put him in the way of certain investments which yielded him large returns, so that, years afterward, when Barlow returned to the East to revisit old scenes and revive old associations, clasp the father's palsied hand and kiss the mother's trembling lips, success clothed about him like a garment. And so it was that, after many a failure, he overcame his disinclination, and schooled his faculties into a business channel.

Domestic Economy.

Random Rules for the Cook.

[Written for the RURAL PRES by MAID-OF-ALL-WORK.]

Put a ltttle bicarbonate of soda in your pie-crust. It will be tender and much more healthful.

Do you always parboil your beans with bicarbonate of soda? A great many young housekeepers do not know of this simple and necessary precaution.

Keep a second grade of California olive oil on your cooking table. Use it everywhere in preference to lard. The family will get well of dyspepsia and the doctor will go elsewhere.

In yeast powder biscuits, use rich milk and olive oil, and your stomachs will not suffer if you have hot biscuits every morning.

In all puddings containing flour, use the olive oil in place of butter.

Save all your left-over fruit juice to add to pudding dips.

You can also use olive oil in beans in place of pork.

Most of the lard we use is put up outside of California. Much of it is a compound of mutton-tallow, cotton-seed oil and other things. The constant use of it will surely shorten our lives, while the use of our pure olive oil will lengthen them.

If you will heat your milk hot in the pans before setting them away, you will have no trouble with your butter by its tainting either in the cream or after it is made up. This is the best way to make home-made butter. You will get more cream and better butter.

Do not warm over your potatoes in lard. Slice them fine, pour milk over them, and let them simmer.

If you will insist on frying everything, drink plenty of hot water in the morning before breakfast to wash the grease out of your stomach.

Canned lobsters make a delicious soup. Use half a can for six persons. Pick it up fine and put into the milk with the usual seasoning for oysters. Heat slowly. But the best soup in the world is made of the coast abalone, pounded fine and boiled in rich milk.

Avoid making pie if you can. Make any kind of layer cake or pudding where cream or olive oil can be used in place of lard or butter.

Melted butter is indigestible and should not be used at all in cooking, Try the olive oil.

Very nice puddings are made by stirring berries or minced fruit into a batter made with cream, flour and yeast powder; bake. Having first strained the fruit, the juice seasoned and thickened makes the dressing. Canned blackberries are especially nice this way.

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BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 13, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Lands for Sale—Kern County Land Co.
Water Lilies—E. D. Sturtevant, Los Angeles
Nursery Stock—Alexander & Hammon, Oakland.
Sawing Machines, etc.—Jas Linfoith.
Plows—Baker & Hamilton.
Stock Food—International Food Co.
Trees—W. A. T. Stratton, Petaluma.
Nursery Stock—Pacific Heights Nursery.
Wire Stretcher—Harper & Reynolds, Los Angeles.
Sheep Wash—Chas. Duisenberg.
Poultry—C. Blow, St. Helena.
Nursery Stock—Peter Henderson & Co., New York.
Stump Puller—Geo. Harvey.

The Week.

Another good contribution has been made to the rain record of the season and there follows a splendid chance for work. Push along the pruning and spraying while the weather favors, for growth is starting. The almond has broken bloom in some localities, and the peach and apricot buds are growing restless under their covers. Another short morning nap and they too will awake to a new season's responsibilities.

The weather also favors late plowing and sowing, and it is time for speeding along with garden operations. If you have not yet grown your own garden stuff, try it this year. Write for all the seed catalogues which are offered by our advertisers. The descriptions will make your mouth water, and you will thus make sure at least of the pleasures of anticipation, which the philosophers say are superior to those of realization. Then if you garden well you will secure both blessings. Try it this year. Of course it is still too early to sow many things in many places, but it is just the time to plan for the garden, and give it deep cultivation if you have not already done so. Write us how you do it and others may profit by your example.

IRRIGATION EXTENSION.—It is telegraphed from Riverside that the Directors of the San Jacinto and Winchester irrigation district, who have for the past two months held options on the best water sources in the San Jacinto mountains, decided yesterday to purchase for the district the rights of the Florida Water Company and the San Jacinto Flume Company. This will add to the irrigated lands of Southern California 18,000 acres of the finest fruit land, at a cost of about $20 per acre.

CALIFORNIA FRUITS IN ENGLAND.—United States Consul Lathrop, in a letter from Bristol, England, to the State Board of Trade, says that California pears in limited supply are reaching that country in good condition, and readily retail at from 16 to 24 cents each. He notes a steady growth of popularity for our canned fruits, and offers his aid in establishing a larger market for these goods and California wines than at present exists.

LATE REPORTS from the Argentine Republic say that the wheat and wool crops in the Republic are the largest ever known in the country's history. The railroad companies are preparing for a very busy season.

Sound Morals and Good Policy.

We publish upon another page an article written by a California Congressman, whose name is there given, expressing his views upon several matters connected with the marketing of California products. We are compelled by our convictions to dissent from some of the conclusions at which the writer arrives, but we do not publish his article merely for the purpose of dissenting from views expressed by a distinguished citizen of the State. It is rather because the views are frequently held, though less prominently urged and less honorably fathered, and we oppose them at this time because we conceive them to be the more dangerous the more distinguished the name written beneath them.

As for the interesting descriptions of personal observation as to how much the Eastern consumer pays for California products and how little the producer obtains of the expenditure, we have only to remark that the case is hardly adequately described. In the special illustration given of the actual receipts of the raisin grower, the writer should reduce the amount 25 to 50 per cent to meet recent experience of raisin producers. If they obtained 7½ cents per pound for their share they would be very happy. But it is not with that subject that we have to deal. We desire to remark upon the means and policies which the writer proposes by which the California producer is to secure his share of the money which the consumer expends.

The proposition is to pander to the fashion for imported products by discarding California names and adopting the style and title of the foreign products which we aim to displace, and in the argument to uphold this policy the writer proceeds at considerable length. We dissent for several reasons: (*a*) It is bad morals; (*b*) it is bad policy (*c*) experience in several important products has proved the opposite course satisfactory; (*d*) even if it should temporarily serve a purpose, it is a cowardly evasion of an issue which this generation should meet, and of which it should make final disposition.

The writer is apparently aware of the moral turpitude of putting foreign labels upon California products, but he dismisses the thought with a word. We do not believe it can be so easily disposed of. The whole recent course of commercial affairs is in the direction of fairer trade, which is a recognition of the fact that a great business must have a sound moral basis. Of course there is petty business which proceeds upon the measure of gullibility in humanity and thrives by lies, deception and fraud, but no great private business, which has a history and a future, is resting upon such a basis. And with this teaching of experience, which we believe cannot be successfully disputed, is it not an unwise as well as an unworthy suggestion that a great industry of a great State should be placed upon such a foundation? Even if we grant the writer's unwarranted claim that the subject should not be discussed upon a basis of morals, it does not help his position, for it at once becomes apparent as a conspicuously bad policy, as further consid eration will show.

We have already won too many notable successes in marketing California products as such, to abandon the hope and purpose of making a California brand in every thing superior to a foreign mark. Should not the success of the California prune alone answer those who claim that a foreign brand is the only key to public favor and patronage? Should the California canned fruits, jams and jellies be labeled "Crosse & Blackwell?" Is there any label under the sun which will fit our evaporated apricots, peaches and nectarines, except one bearing the legend; "Californica?" And more than that, we are under the impression that even in raisins, on which the writer makes a special point, the California names are even now better in in the trade than those which he commends. Certainly, the foreign olive oil label is a byword for adulteration and fraud. If we mistake not, our Congressman has trusted too much to his own cogitations and to the testimony of the retail grocer, and, proceeding to generalizations upon defective information, seriously errs therein. In his diagnosis of the condition of the wine trade we presume he is nearer right, but we do not believe his remedy is the proper one. We do not see why California wines will not ultimately win upon the basis of purity, genuineness and wholesomeness, for all of which qualities they are already conspicuous among those who think more of what is in the bottle than upon it.

Finally, even if there should be more immediate profit in fraudulent sale of California products, what of the future? There must come a time when the truth must come out. We shall soon be contending in foreign markets with those products from which we are now advised to steal livery for Eastern parade. Then we shall appear in the eyes of the world as a country without a name, for our products will bear marks of every land except our own. Shall we bestow such a legacy upon our children? Shall they say of us: "Our fathers, in hope of gain, expatriated their products; by our effort this State shall win a name?"

It shall not be. Before the century closes, and while there still live men who established the crowning and distinctive industries of the commonwealth, California products by California names shall ask no favors of the world except the rewards which peerless excellence commands.

Warning to the Unwary.

RURAL subscribers are not so verdant as to be caught by snares which the blacklegs of the metropolis are continually laying for the feet of the unwary, but they have it in their power to guard others against the chagrin and loss which awaits all those who, unused to city ways, fall a prey to the swindlers. It is not the men who are endowed with good common sense and morality, even if they are inexperienced in city devices, who are the game of the impostor. It is rather the "smart aleck" or the out and out "noodle" from the rural districts, who is taken in. As we have said, such are not found in families where the RURAL is welcomed, and yet there are such probably among the farmhands and others to whom our readers may be able perhaps to extend timely warning.

The robbery of ruralists has become so large a business in this city that a special circular has been issued by those in authority. We shall publish it prominently below and we advise all our readers to cut it out and tack it up in their laborers' quarters, or in the stable, or the fruit house, or elsewhere, where it will not escape the attention of those to whom money is paid and who come to the city to spend it. It is as follows:

OFFICE CHIEF OF POLICE.—Strangers are hereby notified to beware of bunco steerers, short-card players and confidence men. These men infest the corridors of hotels, the vicinity of railroad ticket offices and hotel wine rooms. They obtain from the hotel registers the names of guests and places from which they come, meet them on the street with a cordial good morning or good evening, and calling them by name, I knew you at (mentioning the place where they are from). The man, being in a strange place and unused to the ways of these vermin, is only too ready to greet a person who may claim that he knew him at his home. Then follows a friendly drink and an invitation to take a walk, and finally he is ushered into the back room of a saloon where a game of cards or dice is in progress, on the pretense to pass the time. The steerer takes a hand, be it cards or dice, and wins some money. He then asks the stranger to play, often dividing his winnings with him as an inducement. This invitation is rarely refused. After a little time he is dealt a hand at cards, and if it should be a dice game he is also invited to participate, which he does, resulting in losing his money, probably all he has in the world. He then finds his opponent has a hand that beats him.

The bunco steerer invariably extends to the victim sympathy and wishes him better luck next time. They leave the place together, but the victim is soon shaken off, when the steerer returns to the saloon to get his percentage of the winnings so obtained by fraud. P. CROWLEY, Chief of Police.

It would seen that no one but a knave or a fool could be caught by such a coarse game as this, but such material must be plenty, for victims are plenty. There are, however, finer games which should be also guarded against. All kinds of plans for investment, with promise of unusual profits, are being worked. Our advice to all is, invest in nothing until you assure yourself of three things at least: first, that the claims commend themselves as fair business propositions; second, that those who urge them are men who can give good references as to business history and moral standing in the community; third, that they, or those associated with them, are financially responsible. All these points can be met by legitimate dealers or operators in any legitimate enterprise. Anything short of this is, to say the least, dangerous.

THIS FALL'S FAIRS.—The State Board of Agriculture, at its annual meeting last week in Sacramento, reelected Fred Cox President, G. W. Hancock Superintendent of the Park and Chris. Green Superintendent of the Pavilion. The opening of the next State Fair was fixed for the first Monday in September, racing and stock displays to commence the following Thursday. The Board made the following suggestions for district fair dates: San Jose, August 1st to 6th; Oakland, August 8th to 13th; Napa, August 15th to 20th; Petaluma, August 29th to September 2d; the State Fair, September 5th to 17th; Stockton, September 19th to 24th; Fresno, Sept. 16th to Oct. 1st. In the matter of the exhibitions of sheep, it was decided to require affidavits from the owners as to the dates of lambing. The usual stakes for trotting and pacing colts will be given. The Board will meet again March 21st.

AT Dresden they are baking an American corn bread that is finding much favor and is much cheaper than their ordinary bread. A pound costs a trifle over three cents.

A FRENCH SURGEON has invented a medicinal remedy which, he claims, will cure any snake bite. It is applied subcutaneously.

THE estimated cost to Russia of the famine and its consequences is $500,000,000.

IN India one of the leading forms of gambling is to bet on the weather.

The State Press.

Sacramento *Record-Union:* "Congress should now go one step further and forbid the express companies carrying mail matter in the interest of the lottery swindlers."

Woodland *Democrat:* "The law ought to be amended so as to require that all sessions of the Supreme Court of the State shall be held in Sacramento."

Woodland *Democrat:* "If there has ever been offered any plausible argument why any public official should be elected by a direct vote of the people, that could not be urged with equal force in favor of the proposition to elect postmasters, we have never heard of it."

Lassen *Mail:* "The forests are the preservers of water. Without them the mountain streams will be torrents during the winter rains and dry at other times. The land that now depends on irrigation for its fertility will have to be abandoned if the forests that protect the water are cleared away."

Chico *Chronicle-Record:* "Too much cannot be said in praise of the new ballot system. It successfully precludes the great amount of electioneering and wire-pulling which has been so much indulged in heretofore. There is now a good chance of electing the choice of the people, and the professional politicians cannot carry the controlling vote about in their vest pockets."

Riverside *Enterprise:* "According to the Oakland *Tribune*, Bill Higgins once said that the only way to get the Legislature to pass good bills for the general benefit of the people is 'to appoint a State briber, with unlimited funds to his back to raise the boodlers out of their boots.' The San Jose *Mercury* thinks that a better plan would be to appoint a people's committee, with unlimited hemp at their back, to raise the boodlers with their boots on them."

Paso Robles *Moon:* "One thing which has heretofore retarded the growth of our section is the large land holdings. There are in this State over 100 private land grants. As soon as these large sections of country are cut into smaller tracts more prosperity will come without solicitation. The reformation of cutting these large holdings into smaller tracts is now at hand. One notable instance is seen in the act of Mr. Huntington, owner of 5000 acres near this city. This will give hundreds of home-seekers a chance to secure good farms in a new section of California."

San Jose *Mercury:* "The purchase of the San Martin Rancho from Daniel M. Murphy by C. H. Phillips, with the intention of subdividing its 8000 acres into small farms, is one of the most important industrial events that are likely to occur in Santa Clara during the current year. In fact, no enterprise equal to it is even so much as projected at the present time, with the sole exception of the proposed railroad to Alviso. It cannot be doubted that the cutting up of this large estate means the almost immediate transferring of its fertile acres from the growing of grain to the cultivation of fruits and grapes."

Kern County *Gazette:* "The carp are said to be doing damage to the irrigating canals in Fresno county, and the matter of introducing alligators into the waters for the purpose of destroying the fish is being agitated. This may be a good idea, but after the fish are destroyed, what will be imported to rid the country of the alligators? And, besides, is it an established fact that the alligator will thrive in Fresno? Are there a sufficient number of colored juveniles there to keep him looking handsome? If the alligator is to be imported into Fresno, the condition of things should be as near like Florida as possible."

Santa Maria *Graphic:* To one who has watched the rise and progress of the Farmers' Alliance, it looks as though there are too many discordant elements within its ranks in different localities for it ever to become a harmonious and solid organization. The foundation principle of the organization, that of the amelioration of the condition of the farmer and the laboring classes, is a good one. It is in the endeavor to apply this principle that all the trouble comes. It seems to us that the great mistake made by the organization is that of condemning everything that does not exactly square with their ideas of how things ought to be done."

Los Angeles *Express:* "It is to be hoped that the copious rains will not unfavorably affect the movements for the formation of irrigation districts in various parts of the State. It is far better to rely upon irrigation than upon rainfall. Irrigation works mean control of the water supply, and it is of the utmost importance to have the ground wet just when moisture is wanted. In the Cahuenga valley, there has of late been agitation for the formation of an irrigation district under the Wright act, as during the first months of the winter the growers of early vegetables and small fruits found themselves seriously hampered by the lack of water for irrigation and the absence of the usual rains."

Sacramento *Record-Union:* "Since 1885, $11,900,000 have been expended on public works in Illinois, as against $2,100,000 in California; that two buildings alone in New York cost the General Government $19,311,000, and that in Louisiana $4,800,000 were expended, while nearly $6,000,000 were spent upon a single public building in Massachusetts. In the matter of river and harbor appropriations, there are nine States with less coast mileage in the aggregate than California, which from 1789 to 1892 received for harbor work over $42,000,000, while up to 1882, California waters received but $1,493,000, and since then but $2,300,000. For the Mississippi river alone since 1881, $24,000,000 have been expended, whereas California rivers have received but $726,000, and that only for current work, such as snagging, etc., no rectification and protective work having been done. Yet for the decade from 1881 to 1891, California paid into the National Treasury the sum of $118,000,000. Herein no account has been taken of the enormous addition the mines of California have made to the national wealth and strength, nor any account of the beneficence to the whole Union of the building of this State upon the Pacific shores of the Nation."

Santa Ana *Blade:* "It would be an interesting thing to look up the growth of the horse-breeding industry of California and ascertain how much money it has made for the State since it became thoroughly systematized. We know, in a general way, that California has become the peer, if not the superior, of Kentucky in raising fine horses, but we believe no effort has been made to study the subject thoroughly or to collate the complete statistics of this great and constantly increasing industry. There would be no objection, we imagine, on the part of the owners of the great breeding farms to giving enough information to make such an article substantially accurate, for it would only extend the reputation of California horses and increase the breeders' profit in the future."

Antioch *Ledger:* "The trouble with the Californian is, that he is like the turkey in the coop—he is looking too high for a remedy. Instead of figuring on building transcontinental railroads we ought to bend our turkey heads down. We should devote some attention to reforming the condition of things at our very feet before we look across the continent. We should devote our energies to building local roads — competing railroads, connecting one portion of the State with another. There is something radically wrong when it costs as much to ship a carload of machinery from San Francisco to Fresno as it does from Philadelphia to Fresno. What we want is cheaper local freights, not cheaper overland freights. We want to build local lines of competing roads before we begin to trudge across the continent."

Stockton *Independent:* "The Government of the United States aided the construction of the Illinois and Michigan canal, which connects Lake Michigan with the Illinois river, and built the canal which connects the lakes of Superior and Huron. The Government is now being asked to construct a canal around the falls of Niagara on the American side, and great popular pressure is being brought upon Congress to appropriate a vast sum for that and like purposes. It is right that this work should be done by Government aid, and it is likewise right that all similar enterprises should receive like aid. The projected San Joaquin canal is as important to California as are the Eastern enterprises to the States through which they pass. It will greatly increase the commerce on the San Joaquin, and consequently benefit the whole country."

Woodland *Democrat:* "The necessity for retrenchment in the expense of maintaining the Supreme Court will be more apparent after an examination of the expense in each State. California ranks twenty-second in population and the total expense of the Supreme Court is $264,166. New Jersey ranks eighteenth in population, but the total cost of maintaining her Supreme Court is only $151,500. The population of Illinois is nearly four times that of California, but the expense of the Supreme Court is less by more than $25,000 per annum. New York's population is nearly eight times that of California, but the Supreme Court expense is only about twice as large as that of California. And so the comparison might be continued through the entire list, and always to the disadvantage of California. This is a serious matter and well worthy of the serious consideration of every taxpayer."

Presidential Chances.

The most important political incident of the week is the declaration by Mr. Blaine that he is not a candidate for the presidency. He makes this statement in a brief note to Mr. Clarkson, Chairman of the Republican National Committee, who gave it to the public on Tuesday. Mr. Blaine does not say that he will not, under any circumstances, accept the nomination—simply that he is not a candidate and that his name will not go before the convention. The political newspapers and the public generally appear to have accepted this declaration as final, though we imagine that Mr. Blaine's more enthusiastic friends—and there are many of them in California—will still hope that in certain contingencies he may be induced to alter his determination. For example, if at the time of the convention Mr. Blaine should be in good health, and if the nomination should be tendered him with practical unanimity, it would scarcely be possible for him to decline it. There is nothing in his letter to Clarkson that would prevent his doing so; and it is not at all unlikely that such an offer will be made. Looking at the situation broadly and accepting Mr. Blaine's declaration for just what it says and no more, we are of the opinion that the ultimate of the matter will be Mr. Blaine's nomination, if he is in good state of health when the convention meets.

However, popular judgment in the East seems to regard Mr. Blaine as disposed of by this letter, and the prevailing opinion is that the road is now fairly clear for the renomination of Mr. Harrison. It is admitted that as against Blaine, Harrison would not be in the race, but with Blaine out of the way, and presumably favorable to his renomination, his chances are exceedingly good. The office holders, who constitute a powerful political force, will of course support him; conservative citizenship generally, which always wants the fewest possible changes, will be with him; the record of an efficient, though not brilliant, administration will lend its powerful aid. In short, unless Mr. Blaine can be induced to change his mind, Mr. Harrison is almost certain to be again put forth by his party.

The Democratic situation is not nearly so clear. Mr. Cleveland has unquestionably the strongest hold upon the personal favor of his party, but he is frankly not in sympathy with a large element in it upon the currency and upon other vital questions of party doctrine. It has been declared for Mr. Cleveland by his closest friends, and not disputed by him, that he would not stand upon a platform representing policies from which he has publicly dissented. There seems small prospect that the party as a whole will come to Mr. Cleveland's views, and in the opinion of many of his warmest admirers and friends, this fact disposes of him as a candidate. But in addition to this situation, it has recently become manifest that Mr. Cleveland will not secure the endorsement of his own State, without which his nomination would be an impossibility. In view of all these facts, it seems extremely unlikely that Mr. Cleveland will be the candidate of his party. What is known as the Hill and Gorman faction of the democracy is now clearly in the ascendant, headed by the powerful Tammany organization of New York and by the general strength which elected Mr. Crisp of Georgia speaker of the House over Mr. Mills of Texas, the especial friend of Cleveland. Against Hill's chances there is an unquestionable element of personal distrust in his party, though his command of practical political forces might overcome this and secure the nomination for him. At the least, it looks as if Hill would have the loudest voice in naming the candidate, and it is interesting to know that his first choice after himself is his friend Gorman. With the situation thus mixed, speculation becomes mere guess work.

The Late Mr. Spurgeon.

The great English preacher, Spurgeon, who died last week, stood to the English world of Christianity very much as Beecher stood in America. He was nominally a Baptist, but no sectarian bounds were wide enough for a man so big and broad as Spurgeon, and he became a preacher outside of sectarian lines to all earnest Christian people. For 36 years he preached in London and never during that whole time was able to find a hall big enough for the crowds who came to hear him. His great temple in London was capable of seating 15,000 people, with standing room for many more, but it is said that he never preached a sermon in it when every foot of space was not occupied and hundreds came who could get no farther than the door.

Mr. Spurgeon's power did not proceed from great scholarship, for he did not have it. It did not proceed from noble eloquence, for he had not what the critical would call eloquence. His power rested not upon these qualities, but upon the spiritual force of a profoundly earnest common man addressed in plain terms to common people. He talked not to the learned, although the learned flocked in crowds to hear him. But he talked to Peter, John and William in the plain phrases they could understand, and with that eloquence past all art—the eloquence of profound conviction and of intense spiritual fervor.

Spurgeon's career showed that the strength of a pulpit rests less upon scholarship, eloquence, lofty music and noble surroundings than upon a profound spirituality. There never was a great church without a strong pulpit, and there never was a strong pulpit without profound spirituality in the man behind it. This is a fact very often disregarded in the organization of churches, and one which explains why it is that many churches do not prosper. Mr. Spurgeon was a man of tireless intellectual energy.

His sermons, pamphlets, lectures and essays number into the tens of thousands, and have been reprinted and widely read in every civilized country. There is scarcely a subject related to practical Christianity upon which he has not written exhaustively. In addition to all this labor, he has been active in works of practical philanthropy and has performed prodigious labor as an educator. No other man of his time and country save Mr. Gladstone has led a life of such unceasing intellectual activity, and perhaps none other has carried to such multitudes that which has given light and comfort to their lives.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press,' and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company: 220 Market Stre*

The Fruit Industry.

Market Review for the year 1891.

[Written for the RURAL PRESS by J. R. FARISH.]

The fruit industry of California continues to forge ahead, and at no very distant day will fetch in more money to the State at large than will that of wheat. The number of fruit trees given below, although showing an increase of fully 1,500,000 trees over County Assessors' returns in 1890, does not give the correct number of growing trees in this State. By those in position to know, it is claimed that there are at least 19,000,000 trees planted. To this number, large additions will be made in 1892, which will bring the aggregate up to about 20,000,000 trees. Of course, this includes decidous and citrus. With these trees in full bearing, the fruit crop of this State will be simply "enormous." In view of the growing importance of the industry, and the products coming more strongly into competition with Eastern cultivated fruit, horticulturists are not only paying more attention to the growing of the better varieties, but are experimenting with a view of greater perfection. This desire to excel has added several improved kinds to our already large list of choice fruits. Not only is greater attention given to growing choice varieties of fruits, but more attention is given to cultivating the trees and vines by the most approved modern systems, the result of which is better fruit.

One of the greatest drawbacks to the industry is the high freight rates charged by railroad companies on both local and overland shipments. In view of the large output of the orchards, and its being added to yearly by largely increased numbers of trees coming into bearing, it would seem that the railroad companies could of their own accord reduce their freight tariffs, and at the same time add largely to the rolling stock, which should be made to transport fruit without injury. While a decided improvement has been made in the latter direction, yet there is room for more. With competing transcontinental railways all desired requirements will undoubtedly follow.

By consulting the tables of overland shipments given below, a few very striking changes will be observed. Every branch of the industry shows an increased shipment in 1891 over those of 1890, except canned goods. The most decided increase was in citrus fruits. In dried fruits, every point shows an increase, except Oakland, Colton and Los Angeles. While Oakland fell off about five per cent., that of Colton fell off fully 50 per cent. and Los Angeles about 70 per cent. The falling off in the shipments of dried fruits from the southern part of the State is accepted as evidence of a larger marketing of the green fruit.

The following are the County Assessors' returns of the number of fruit trees growing on March 1, 1891 (oranges and lemons are included with deciduous in the first table of trees):

Counties.	Fruit Trees.	Oranges.	Lemons.
Alameda	58,510	2,599	1,147
Alpine	1,500	.....	.....
Amador	120,250	116	52
Butte	770,000	119,012	1,762
Calaveras	.....	230	218
Colusa	171,065	6,923	99
Contra Costa	264,770	398	258
Del Norte	1,821	.....	.....
El Dorado	148,958	284	295
Fresno	265,141	5,941	1,380
Humboldt	109,705	.....	.....
Inyo	40,308	.....	.....
Kern	215,000	1,277	640
Lake	61,008	361	.....
Los Angeles	1,746,530	987,102	76,927
Marin	57,600	248	16
Mariposa	45,050	173	133
Merced	163 700	950	635
Mo oc	150,460	.....	.....
Monterey	30,500	221	14
Napa	675,845	1,375	65
Nevada	213,370	300	.....
Orange	351,696	141,029	25,066
Placer	684,715	11,535	1,895
Sacramento	581,370	13,610	1,142
San Bernardino	2,319,847	2,286,200	18,000
San Diego	1,062,745	204,026	65 92
San Joaquin	305,711	2,752	87
San Luis Obispo	83,720	5,800	2,550
San Mateo	40,000	470	50
Santa Barbara	41,260	44,200	13,150
Santa Clara	2,024,008	1,335	331
Santa Cruz	307,195	216	128
Shasta	169,300	.....	.....
Sierra	8,591	199	44
Siskiyou	45,290	.....	.....
Solano	1,032,565	3,417	404
Sonoma	1,846 345	3,185	1,095
Stanislaus	51,098	17,796	568
Sutter	239 240	3,497	152
Tehama	413,495	1,246	218
Trinity	10,000	.....	.....
Tulare	461,051	3,330	1,885
Tuolumne	16,350	.....	.....
Ventura	347,573	63 700	36,727
Yolo	275,000	1,341	523
Yuba	120,000	21,159	327
	17,649,765	3,958,350	416,467

The acreage set to grape vines by counties is as follows:

Counties.	Wine.	Table.	Raisin.
Alameda	6,396	236	194
Amador	.....	.....	.....
Butte	111	65½	604½
Calaveras	404	†	.....
Colusa	24	28	370½
Contra Costa	2,085	975	81½
El Dorado	1,019	370	123
Fresno	5,574	.....	43,936
Inyo	12½	21	9
Kern	.....	.....	1,200
Lake	1,046	15	.....
Los Angeles	4,632	40	23
Marin	477	25	.....
Mendocino	190	14	.....
Merced	425	.....	1,421
Monterey	.....	.....	.....
Napa	18,177	52	.....
Nevada	190	30	.....
Orange	140	.....	4
Placer	354	1,431	500
Sacramento	3,131	1,164	335
San Benito	140	35	.....
San Bernardino	1,024	.....	2,591
San Diego	132	40	4,455
San Joaquin	900	346	.....
San Luis Obispo	437	33	1
San Mateo	747½	26	15
Santa Barbara	260	10	.....
Santa Clara	10,294	1,126	103
Santa Cruz	1,365	319	.....
Shasta	122	104	242
Solano	† 1,928	1,167	437
Sonoma	22 351	332	.....
Stanislaus	82	13	524
Sutter	88	47	285
Tehama	3,705	80	227
Tulare	70	.....	9,849
Tuolumne	.....	.....	.....
Ventura	100	23	197
Yolo	1,575	1,000	1,125
Yuba	570	123	.....
Totals	90,228	9,300½	68,837½

*Partial.
†Reported as wine grapes.

Eastern Fruit Shipments.

The following table of the Eastern shipments of California fruits, in pounds, by the Southern Pacific and the Santa Fe lines during the year 1891 in comparison with 1890:

SHIPPED OVERLAND BY THE SANTA FE SYSTEM.

Stations.	Dried Fruit. 1891	Dried Fruit. 1890	Deciduous Fruit. 1891	Deciduous Fruit. 1890	Citrus Fruit. 1891	Citrus Fruit. 1890	Nuts. 1891	Nuts. 1890	Raisins. 1891	Raisins. 1890	Canned Goods. 1891	Canned Goods. 1890
San Francisco	6,432,410	4,768,630	1,380,260	76,520	67,270	144,540	181,920	897,620	1,017,110	45,630,140	19,537,390	
Oakland	802,080	356,020	53,878,040	1,571,930			32 950	20 050	43,340	316 240	1,529 460	
Sacramento	14,073,770	8,275,920	12,785,840	46,865,220			274,660	3,797 290	3,365,280	10,276 640	8,397, 020	
San Jose	25,496,020	13,962 210	5,661,130	12,185,020			30,000	185,440	191,240	16 654,780	11, 11 030	
Stockton	5,254,630	8,534,350	29,850	5,040,630	20,000		20,880	20 148,690	30 079,200	1,112,560	2,196,850	
Marysville	4,619,520	2,131 770	1,953,760	992,510	7,477,120	15,736,490	21,140	1,201,430	394,730	3,422 680	2,276,050	
Los Angeles	717,610	2,256,050	1,661,420	1,053,290	10,501,560	14 945,810	16,290	1,128,770	845,670	601,980	931,390	
Colton	1,061,300	2,592,960					20,650	1,343,860	965,340	3,166,970	1,142 340	
Totals	58,447,390	43,377,910	77,561,310	68,084 120	18,441,320	30 769,500	1,720,020	27,370,330	36,901,310	80,121,950	47,121,450	
All places	4,030,000				57,435,000			250,000	52,000			
Los Angeles Co.	806,000							25,000	52,000			
Orange Co.	6,396,000							11,275,000	7,332,000			
San Bernardino Co.	312,000							2,200,000	2,638,000			
San Diego Co.	11,644,000							13,750,000	10 374,000			
Totals	11,644,000	21,217,271		68,084 120	57,435,000	30 769,500	1,720,020	27,370,330	36,901,310	80,121,950	47,121,450	

Deciduous Fruits.

The fruit market in 1891 was a series of disappointments, resulting in losses to handlers of both green and dried. Early in the season, canners and driers entered the market and contracted at the following prices: Apricots $20 to $35, cherries 3c to 6c per lb. according to quality, Bartlett pears $35 to $45, prunes $35 to $45, peaches $30 to $50, plums $30 to $45, nectarines $30 to $45. As the season advanced and reports of large peach crops at the East became a certainty, buyers bid lower for peaches. Fruit averaged smaller, which caused a wide range in prices. Choice selected, for special purposes, were readily placed at good figures, while small sized sold slowly at low prices. Taken as a whole, last year's fruits were poor keepers, which necessitated forced sales of the poor to fair at very low prices, and even then, large quantities had to be dumped. Never, within the writer's recollection, was there ever before a season wherein green fruits made such rapid decay. Consignments received in good order would within two or three days, show more or less rotting. This was not the case in all consignments, but the remarks apply to from 50 to 70 per cent. In the PRESS of August 15, we wrote as follows: "It is seldom, if ever, that the market presents so demoralized an appearance as at present. Fruit in this State ripened from one to three weeks late, while at the East it was generally earlier. These two events caused a short selling season at the East for our fruits, and the result is that it does not now pay to forward fruits, consequently this market is the dumping ground. This (Wednesday) morning the writer's tour among commission merchants showed heavy stocks and few buyers, with canners not showing up. Under such a condition, the market is hard to quote. Poor, trashy fruits are given the go-by, and being neglected, considerable are rotting."

On August 22d (one week later) we reported the market as follows: "Never within the history of the fruit trade of this city has there been so demoralized a market as now obtains. Combined with unprecedented heavy receipts are two unfavorable conditions, viz., the generally poor-keeping quality of fruit and an absence in the bulk of the receipts of that juicy, fruity flavor so highly esteemed by consumers, and in its stead is to be found a watery, unfruity taste. The poor-keeping quality is due largely to climatic changes—hot days, cool days, warm days, etc., alternating. Fully one-half of the peaches received have their pits cracked open, and the fruit itself is partly sour. Peaches grown on the higher altitudes, or where the climate is more uniform, are of excellent quality, but the oversupply of the poor kinds are against them. Pears are generally overripe. Large quantities of fruit are being dumped daily. Merchants are advising orchardists not to ship for a short time, or until the market cleans up."

Apples sold considerably lower last year than they did in 1890. The price averaged from 40 to 50 per cent less. There was an unusually large quantity of poor, wormy and defective.

Berries in 1891 did well, holding to fairly good prices throughout the year.

Grapes, like tree fruits, held to low prices throughout the year. The crop was large. The shipments overland were heavy. Wine grapes had a wide range. Many grapes had to be sold for making brandy owing to damage by climatic changes.

Citrus Fruits.

In 1890–91 the orange crop was as follows in boxes:

Riverside	340,000
Los Angeles, outside of Pasadena and Pomona	450,000
San Diego	30,000
Anaheim	35,000
Pomona	22,000
Pasadena	30,000
San Bernardino, Colton and Highland	20,000
Ontario and vicinity	2,000
Santa Ana, Orange and Tustin	86,000
Redlands and Old San Bernardino	25,125
Ventura	15,000
Santa Barbara	2,000
Oroville	2,880
Yuba	5,000
Placer	2,500
Santa Clara	1,000
Fresno	500
Sutter	300
Solano	150
Total boxes	1,069,435

For the first two months in 1891, the orange market ruled generally in buyers' favor, with San Francisco made the dumping ground, owing to Florida's product monopolizing the Eastern markets. Toward the middle of February we wrote in the PRESS: "The crop of oranges in this State is larger than heretofore estimated, and as Florida oranges, owing to relative cheapness, have the run of the Eastern markets, our product is forced on the coast markets at low prices. The weather has been and still is in favor of growers, for the fruit is ripening slowly. Had oranges ripened as rapidly as they did last season, forced shipments to all distributive points would have been in order, and with forced sales, much lower ranges in prices would have followed than is now witnessed." This condition held up to about the middle of March, when a better market set in, which was quite marked by the last of the month, as the following advices from Los Angeles, published in the PRESS of March 28, shows: "Thus far this season's shipments of oranges to the Eastern market have been remarkably light. Growers have been holding off waiting for better prices. In order not to be at the mercy of the combination of buyers, many of them arranged to ship their own crops. The effect of the growers holding back and not selling their fruit will be greatly to their advantage, as within the past ten days prices have gone from 75 cents to $1.10 per box for seedlings on the tree. The cause of the increase in price is the reported failure of the Italian crop and also a story to the effect that the rest of the Florida crop has been badly injured. Orchards are being sold every day now to packers, and the orange industry is at its height for the season."

The result of free shipments to the East began to make itself felt on our market by steadying prices and causing a gradual appreciation until quotations ranged at an advance of from 40 to 50 per cent over January quotations.

The crop season of 1891–92 opened as usual with Butte county sending in the first consignment, which was soon followed by Solano county, with the southern part of the State not far behind.

Referring to the present situation, the Los Angeles *Express* of a recent date says: A few weeks ago the orchardists were in the slough of despondency and could see nothing ahead to cheer their drooping spirits, but now they feel their drooping spirits being invigorated by the tonic of the events of the last few days. First came the prompt and salutary reduction of rate on citrus fruit on the part of the Santa Fe, and the like reduction to take place on February 1st; then the salubrious rains and the assurance that the rains bring with them that the frost is gone. The orange growers are, as a rule, very optimistic people, and are made so by the trend of fortunate events in the past few years. Last year (1891) there was great competition among the middlemen and buyers to secure the crop, and the orchardists realized handsome profits on their crop. * * * This year (1892) the buyers are very conservative; in fact, they may be said to be extraordinarily cautious. This was one of the causes of the orchardists' gloom. They expected the middlemen and purchasers to fall over each other in their zeal to buy their fruit. The windstorms and the frost added to their gloom. There is, however, a slight reaction. Buyers show a little more activity, and though they are not offering such large prices as last year, the prices are such as to give the raisers a little profit and a little comfort. The fruit injured by the winds and frost, under the new 90-cent rate, can be shipped to near Eastern and Northern points for the huckster trade. In this way even the inferior grades of oranges can be disposed of with some little profit to the producers. One prominent middleman said: "After sorting the abraded and frosted fruit it was found that a large proportion of it was in very fair condition and available for shipment. If the demand in the East was as great this year as it was last year, there would be no difficulty in disposing of the crop, even the inferior grades slightly damaged by the winds and frost. Southern California oranges, even in view of the calamities they have sustained, are reported to be superior in quality to the Florida product, which has been seriously injured by the blighting frosts that have visited that section this season. This affords great solace to the orchardists, as they realize that in case of an active market in the East the California product will be given the preference. Another favorable aspect of the orange crop is that the budded varieties, such as the Navels and the Mediterranean Sweets, have suffered less from the winds and the frosts than the common variety. All the middlemen and speculative buyers say that the late crops will be of good quality and will find a good market. The excessive cold weather in the East has had a great deal to do with the sluggishness of the market.

In 1891 was inaugurated a fairly free shipment of lemons to the East, where they met with a good market, owing to growers having a better knowledge of how to pick, cure and pack. This industry promises to assume large proportions in the near future.

Olive culture is attracting renewed attention. It is found that from California olives, a very superior oil is manufactured, and wherever introduced, it has met with unqualified success.

Figs are forcing themselves rapidly to the front. California figs, when properly cured and packed, meet with a quick market and at good prices.

Dried Fruits.

From a private circular issued at the close of 1891, we obtain the following, which is a condensed but faithful review of the market:

(*Concluded on page* 144.)

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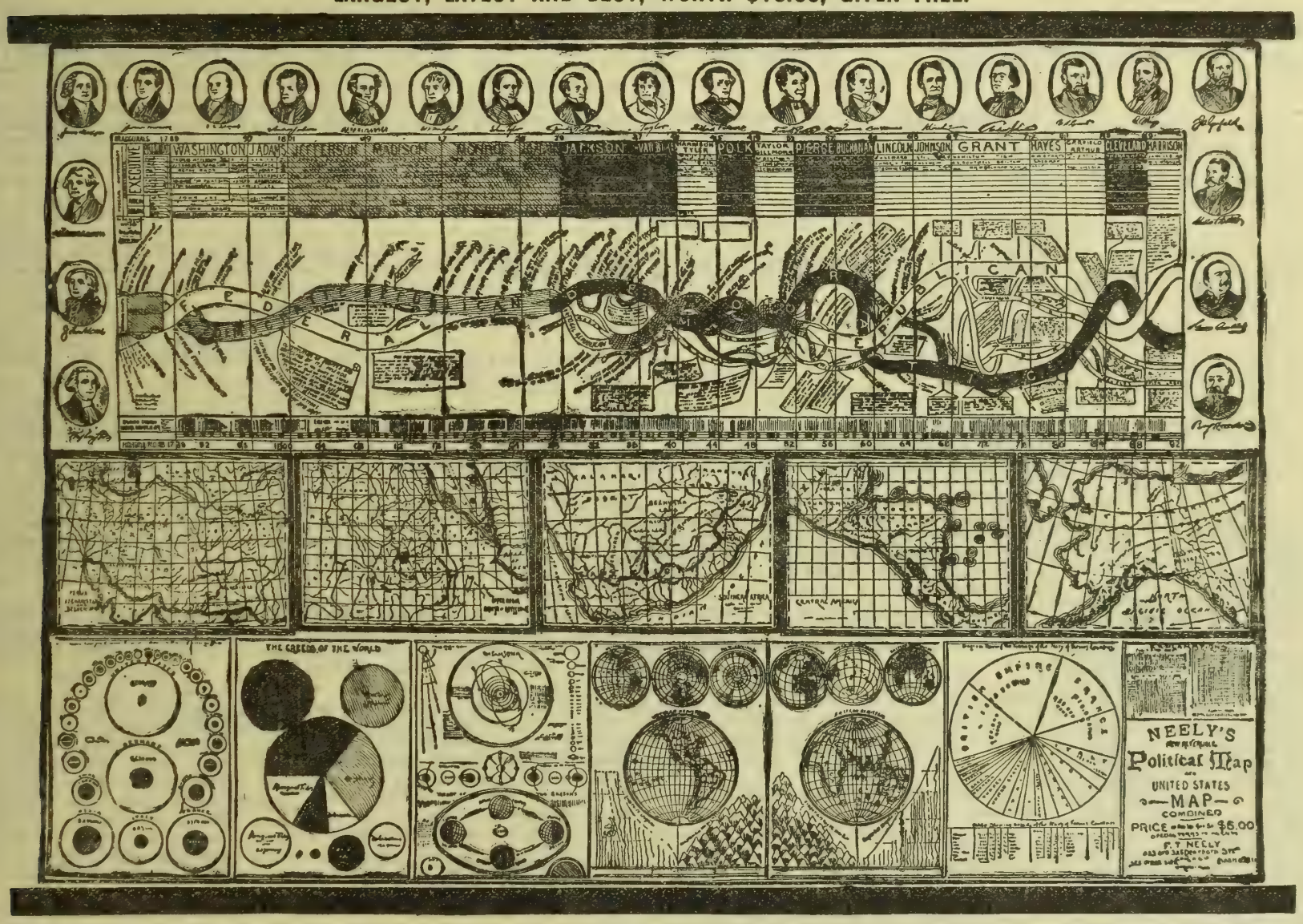
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The Fruit Industry.

(*Continued from page* 142.)

The year just closed has not been so satisfactory to the dried fruit producing interest as the one preceding, which is not surprising, as the season of 1890 was a phenomenal one for the dried fruit trade of this coast, and that there will be many such in the future is altogether improbable. With a failure of the fruit crop East in 1890, and no extra heavy yield in this State, the shipping demand for fresh and canned fruit was unprecedented, and it was thought in the early part of that season that there would be little dried fruit of 1890 curing obtainable. Speculative inquiry sent prices for some descriptions to unwarranted levels. More particularly was this the case with peaches, plums pitted and apricots, although values along the entire line were on a comparatively high plane. There was more dried fruit that season than was anticipated, and heavy losses were incurred by speculators and dealers, especially on late holdings. The lack of confidence thus created has in no small degree acted against the selling interest the past season. The very low prices that obtained for green fruit caused increased quantities to be dried, and with small holdings coming on the market, it was found impossible to control the markets either on this coast or at the East.

Prunes.

Prunes met with better favor than any other variety this season. The yield was never so large, as the acreage has been greatly increased during the past few years and many new trees have just commenced bearing. The San Jose section continues to lead in the growing of this fruit, from 60 to 70 per cent of the entire crop being produced in that locality, but in Sonoma, Solano and some of the other northern counties, more particularly in Sonoma county, prune culture is making satisfactory progress and is now of no small proportions. The increase in prune orchards in Sonoma county the past few years has been exceedingly large, and this section bids fair to soon come into decided prominence as a prune growing district. The California prune crop of 1891 may be stated in round numbers at 24 000,000 pounds, or about 1200 carloads of ten tons each. The graded stock has been nearly all marketed, and it would be difficult at this date to get orders filled for carload lots of the four sizes. Most of the prunes now remaining unplaced are 90 100s and smaller, with no evidence of there being any large amount of this class of stock still awaiting a market. The range of prices, exclusive of extra large sizes and fancy qualities, or very small and inferior stock, has been, in wholesale circles, from 4½@6½ in sacks, as to size and other conditions, with most of the business within 5@6c. The four sizes have sold mostly at 5½@5¾c, but have been quoted lately at 5¾@6c, with the market tolerably firm under slim offerings, and prospects more favorable for values to harden than to recede as the season advances. Boxed prunes commanded only about half a cent advance over stock in sacks, the preference being given to sacks by nearly all large buyers.

Peaches.

Owing to large crops at the East and liberal drying reported, our market for peaches of other than select quality has dragged most of the season at generally low and irregular prices, and the more ordinary descriptions do not give promise of cleaning up speedily at the low figures now ruling. Comparatively few peeled peaches came on the market from last crop, neither was there any decidedly active inquiry for this style. Peeled and bleached found moderate custom within range of 9@13c, but for peeled unbleached, there were few buyers, values for this description being nominal most of the time at 6@8c. Peaches unpeeled ranged at 3½@7½c for bleached from first hands, and 2@3½c for ordinary sun-dried, although sales as low as 2c were the exception, and mainly of undesirable quality, accompanied with decided selling pressure. Bleached peaches of first quality, obtainable at 6@7c, were sought after early in the season, and most of this class of stock had two months ago passed into the hands of jobbers. The bleached unpeeled which are now offering are dragging at 3 1-2@6c, and common sun-dried are not being sought after at 2 1-2@3.

Apples.

Apples were turned out in fair quantity, but the quality of a large portion of the product was not all that could be desired, and considerable was decidedly inferior, especially sliced and evaporated of Chinese packing. Early sales of evaporated in boxes were at 7 1-2@8 1-2 cts., with sliced in sacks 3 1-2@5 1-2 cts., and quartered 3 1-2@4 1-2 cts. In September, prices receded fully half a cent, and in October there was further shading, especially on inferior stock, some poor evaporated in boxes going at 4 1-2 cts. During the past two months wholesale trade has been dragging on a basis of 6@7 cts. for evaporated and sliced in boxes and 2 1-2@3 1-2 cts. for sun-dried in sacks.

Pears.

Pears have not been offered freely this season, and there was a fair demand for desirable curings, such commanding moderately good figures. Peeled and sliced, evaporated, in boxes, sold mainly within 6@8 cts, as to quantity and quality, with sun-dried sliced in sacks at 3 1-2 to 5 cts., and quatered 2 1-2 to 4 cts., little of really choice quality being obtainable lately at any figure.

Apricots.

The crop was disappointing both in quantity and quality. The fruit did not mature well in some of the more important localities, and it was in these sections where most of the drying was done. Royal apricots, bleached and in sacks, have sold mainly at 5@7½ cts. for fair to prime, and at 3½@5 cts. for common grades of sun-dried. Moorpark apricots of choice to select quality have been quotable at 7½@9 cts., with no large offerings of this description at any date from last crop.

Plums.

Plums were not cured as extensively, perhaps, as in some former seasons, but there were enough to accomodate the demand and at the same time keep prices at very much lower levels than in 1890. Pitted stock constituted the bulk of offerings, and was the kind most salable. The market for pitted plums opened this season at 5½@6 1-2 cts., with a few early sales at a little higher range. Prices were soon on a decline, however, with 5 1-2 cts. a full wholesale figure during the greater part of September and October, and later on 4 1-2@5 cts. was about all that was justified as a wholesale quotation.

Dried Grapes.

Dried grapes, in common with other fruits, did not fare so well from a producer's standpoint, as in 1890. The output the past season was of fair proportions, certainly not less than 5000 tons. Most of the yield has passed into second hands, and all things considered, at fairly good figures. Efforts were made early in the season to purchase in wholesale fashion at 2 1-2 to 2¾ cts. but the attempt was not attended with noteworthy success. September and October business, and the bulk of the wholesale trading was transacted in these two months, was at 2¾ to 3 cts. Later on, with less inquiry, and that not very urgent, the market receded fully a quarter of a cent, with the range of values little more than nominal at 2¼ to 2 3-4 cts. at the close of the year.

Raisins.

By reference to the tabular statement of overland shipments, it will be seen that the shipments of raisins in 1891 show large gains over those of 1890. The exports by water to foreign ports in the Pacific show a steady and gratifying increase. The general run of 1891 raisins shows a slight improvement over that of 1890, yet there is still room for further improvement. Well-known and established brands found a ready market, but unknown brands had to run the gantlet of thorough inspection, and with low, demoralized markets, every excuse was offered by buyers either for rejection or else to secure lower prices.

In its review of the raisin market, the *Grocer and Country Merchant* says that the season could not well have been more favorable for the curing of raisins, as there were no rains of sufficient volume to do any damage to the crop until after there had been abundant time to get the entire product cured and housed. A large proportion of this season's crop was marketed in bulk or in sacks, this style being in favor with many large handlers in Eastern centers, and has this in addition to recommend it—that it reduces cost of transportation and enables forwarding earlier than where the fruit is boxed before shipment. While the yield and the opportunity of taking care of the crop were in the main satisfactory, the marketing of California's raisins for 1891 has not been attended with success in many instances, and it is evident that there has been some very poor management or total lack of management in some quarters. Such an irregular and unstable market as regards values was never before experienced. That this was due to, or unavoidable on account of, the large size of the crop, cannot reasonably be admitted, for it should be possible to place in the United States alone, at much more satisfactory and uniform figures than have prevailed this season, a decidedly larger quantity than has been urged to sale during the past few months. The demoralization which has attended a great portion of the raisin trade of 1891 appears to be mainly attributable to consigning to parties who had not the necessary qualifications or facilities to handle the goods in a proper manner, in addition to which there were bad results through contracts which were only such in name, and afforded no protection to the seller or producer. Quite recently there have been forced sales of three crown Muscatel raisins on the Atlantic side at $1 per box, while in a regular jobbing way $1.50 to $1.75 per box was being demanded and obtained in same section, the latter being on a parity with values nominally current here. One dollar per box for prime raisins in New York, freight and commissions deducted, would not net the packer three cents per pound, and this is a lower figure than the most common raisins loose have been offered for in this center. Loose Muscatels in boxes have been difficult to obtain here as low as $1 per box for ordinary quality. Most of the local wholesale business in loose raisins has been within range of 3 1-2 to 4 1-2 cents per pound. There has been little deviation in quotable rates throughout the season, but weakness has been a pronounced feature of the market during the greater part of the time, and especially so during the past month, with offerings tolerably large, and little opportunity to effect transfers of noteworthy magnitude, even at decided concessions in buyers' favor.

The low prices at which California raisins have been marketed is being accepted as a blessing in disguise, for it is driving out foreign competition. Bearing on this and other points of interest, we excerpt the following from a fruit circular issued on Jan. 5, 1892, by a leading jobbing house in New York: * * * Those who have waited until the goods arrived have been enabled to buy California raisins at phenomenally low prices that are not only safe, but will show them a large percentage of profit, which will continue to increase as the season advances. It should not be forgotten that we have had only three months' consumption of this crop, and have nine months more to consume the present stock before the next crop comes to market. Furthermore, the next crop of raisins in California is likely to be restricted as to quantity, and there is even now talk of combinations being formed by the raisin growers to keep prices up and not let them be sacrificed as they have been the past season; therefore we think it is quite improbable that the next crop of raisins will open, except at much higher than present prices, and as loose. Muscatel raisins in bags will be just as good then as they are now; there is not the least danger in having some left over. But we have not the remotest idea that any one will have any to carry over, because we estimate the present stock of all kinds of raisins in this country at fully 500,000 boxes less than it was last year at this date; besides, prices are about 50 per cent lower, which increases consumption. *Present prices of California raisins practically shut off importation of foreign raisins, as they cannot successfully compete, and though we were formerly large importers and dealers of Valencias, we are forced to the conclusion that they are "not in it" with Californias.* Since California raisins dropped to panic prices about three weeks ago, we have never had the least doubt that they were good property, and we believe now, as we said then, they are better to have than gold dollars at 90 cents. We have been astonished at the large and continued demand for California raisins in bags, and though we have bought all of the very cheap ones that have arrived, we have not been able to increase our stock owing to our large sales.

But it is not at home alone that California raisins are making a name, as the following extracts from foreign letters show: Henry Berry, writing from Melbourne, Australia, Dec. 23, to the Secretary of the Producers' Raisin Packing Co., Fresno, says: "Yours of November 10 came duly to hand, since which, the raisins referred to therein have duly reached us in good order and condition. Having carefully examined some and compared them with the Spanish, we have to report that the Muscatels in layers, in all size packages, are salable here, and that the loose muscatels would doubtless also be salable to some extent, though they have never been put on the market in this form before. As regards the style of package, we would say that this is in every way satisfactory and compares favorably with the Spanish method. The seedless Sultanas are not a line that would find ready sale, they being totally different to the Smyrna fruit and appear to us to be nothing more than large currants."

The following is taken from the New York *Herald:*

"In view of the present agitation concerning the desirability of developing the English home market for California dried fruits and raisins, the following letter is of interest. It is written to George Bishop, of Fresno, one of the British syndicate now managing the Barton Vineyard Company, by James F. Wright, of Hanson Sons & Barter, one of the largest firms in the foreign fruit trade in the great city:

"'Referring to your inquiries, through Mr. Ivey, respecting California raisins, we believe there is a great future for these goods, but at present the Californians have a great deal to learn as to the mode and style of packing, and also considerable improvement to make in the growing of the raisins themselves. * * * You appear to confuse Muscatels with Valencia raisins. Permit me to point out that what the Californians are aiming at is to produce Muscatels or dessert raisins, whereas Valencias are simply pudding raisins, the former being treble the price of the latter. We have had a great number of inquiries respecting California fruit, and have seen and tasted a great variety of samples. There are only three fruits that seem likely to succeed here, viz: Muscatel raisins, evaporated apricots and black prunes, similar to French plums. The only practical way to make a trade in any of these goods is through the old beaten path—namely, to send consignments and list the market for the goods on their merit. The first lot may leave a loss, and probably will, but if the goods are really superior they will soon make their mark beyond a question. We may be a little more explicit in what we mean about packing fruit and rasins. While it is most important that the fruit should be uniformly and fairly packed, it is yet possible to make the face of the layers more sightly than has been the case with the California fruit heretofore. Spanish raisins are of two classes—faced, or Dehesa fruit, and unfaced, or cluster fruit. If the fruit be exceptionally fine, the latter is of course the better style, as it is impossible to "paint the lily" and thereby improve on nature; but with the other class of goods, the fruit hitherto sent from the Far West leaves much to be desired in the facing of the layers. The Spanish are adepts at this, and in order to render the fruit salable in England, a showy face of raisins, so laid as to show the raisins in the way that exposes their largest flat surface to the eye of a beholder, is indispensable. The papers should also be tasty and elegant, not vulgar, and lined with another thickness of clean white paper.'"

The above suggestions regarding packing may possibly hold good in controlling other markets where foreign fruits are competitors.

Nut Review.

While the fruit industry is making fast strides, that of nuts comes in a good second. The rapidity with which it is coming to the front causes close observers to predict that before many years pass California-grown tree nuts will drive foreign nuts from the markets in the East. The quality, under more thorough and systematic cultivation, shows a steady improvement. Peanuts are being given more attention, owing to their proving to be a good crop to grow between vines and trees.

The almond crop of this State for 1891 was only of moderate proportions, with the quality of fairly good average. The Eastern demand was never better, and not much time was consumed in relieving the market of the surplus of soft and paper shell. Most of the wholesale transactions in soft shell were at 10 to 11c for fairly good to choice, and at 12 to 14c for prime to select paper shell. For a month or more past little other than a small jobbing trade has been possible, with market firm at 13 to 15c for paper and 11 to 12c for soft shell. Hard shell have been offered very sparingly, hardly sufficient for local requirements, and have commanded 6 to 7c from first hands. The walnut crop did not mature so well as previous season, but the yield appears to be fully as large as that of 1890. Some were carried over from previous crop, in addition to which the equivalent of over 5000 sacks Chile walnuts arrived here in October, and these stocks of old domestic and imported had a depressing effect on values for current crop. Transfers of white walnuts of 1891 crop were at 7½ to 9c for fair to select of the ordinary variety, and at 9 to 11c for paper shell. Peanuts show the heaviest crop, according to arrivals, that has ever been grown in the State. Receipts for the season to date aggregate nearly 15,000 sacks, or more than double the quantity for corresponding period in 1890. Peanut market this season opened at 4½ to 5½c, but soon declined to 4 to 5c, and has been lately dull and weak at 3 to 4c, carload lots of prime nuts failing to move at lower figure.

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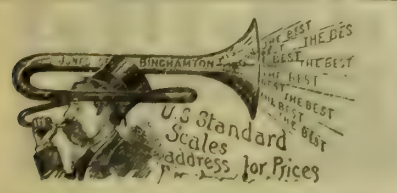
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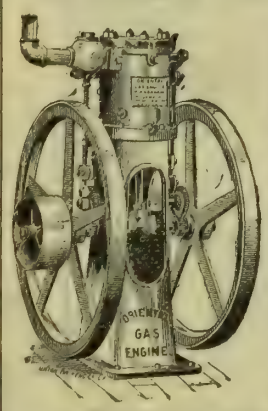
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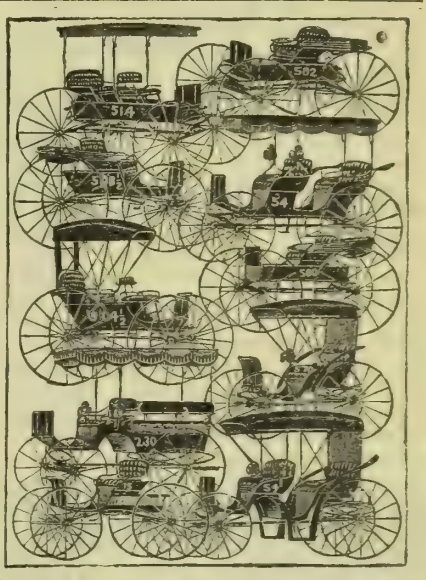


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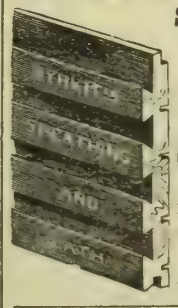


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GOOD HEALTH.

INDIAN SURGERY.—It is a mistake to suppose that the Digger Indian is entirely ignorant of how to proceed in cases of broken bones. A correspondent of the *Scientific American*, who once had some experience in sawmills in California, writes that journal as follows: On one occasion, while a number of Indians were curiously watching the operations of the mill, and standing near the double-flue boiler to keep warm, one of the flues suddenly collapsed in such a manner as to fatally scald one of the owners and hurl a poor old Indian woman some 20 feet away, breaking one of her legs below the knee. In the excitement of the occasion and the necessary care of the injured owner, the injury sustained by the woman was not observed and she was taken quietly away by the other Indians. Three or four days later quite a large number of Indians appeared in a hostile attitude on a near-by elevation which overlooked the mill. After taking their station, a tall chief approached and inquired for the "sawmill man," complaining that he had "shot off his sawmill" and broke the leg of a *mahale*, and he, the chief, was ready for a fight. The foreman took in the situation at once, invited the chief into the house adjoining, and showed him the stricken owner in the agonies of death. The chief then, in his turn, took in the situation from the opposite standpoint, and immediately exclaimed: "No intendi, accidenti. Me safe, no fite, all wano." We now append the interesting and surgical part of the story as given in the *Scientific American:* In a day or so after Mr. Hoxey's burial, the surgeon went to the *campudia*, and there sat the poor broken-legged *mahale*. The physician told me that the Diggers measured around the leg in several places, then cut a piece out of a slippery elm tree, near the size and shape of the leg, took the bark off, shaved off the outside and made as fine a splint as he ever saw, and fitted it around the broken limb, leaving the space open about one-quarter of an inch on the top, and were pouring in a little water to keep down the fever heat, and that in a few weeks the squaw was limping around town again.

WOMEN AS DOCTORS.—The increase of women doctors in the city has been very marked lately, and several of them are now admitted as staff physicians at the hospitals and dispensaries. One great advantage that they seem to have over their rivals of the other sex is that they can tack out their sign and then go as professional nurses until business comes to them. The male doctor frequently has to starve through a course of a year or two, and then he frequently fails to make enough to keep the pot boiling. Women doctors are generally proficient nurses, and they are trained by nature and study to care for the sick. They can take a patient and prescribe for him, and then watch by the bedside until all is over. At the end double fees are demanded—the regular doctor's fees for prescribing and then the nurse's salary for watching and nursing the patient according to the prescriptions made out by herself. There is no doubt but a great advantage is obtained in this way, and the nurse and doctor are both held responsible for any mistake. Among babies and women the female doctor has a field which she is gradually making a specialty.—New York Times.

LIGHT IN CHILDREN'S BEDROOMS.—A medical writer says: If mothers notice that the brains of their little ones conjure up uncanny sights and thoughts from the shadows of a room more or less dark, let the light burn brightly. To force a child to become accustomed to the darkness is a grave error, if its nervous system is so organized that this forcing is productive of fright. The nervous system of a child is a very susceptible organization, and the deleterious impressions made upon it will often make their influence felt throughout its whole after-life. If the child asks for a light under such circumstances, *do not refuse it.*

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[Written for the RURAL PRESS by MAUD M. S. PEASLEE.]

Well worth the attention of all who are interested in the resources of our State, is the State Exhibit at the Board of Trade on Market St., San Franciscio. Always open to the interested visitor, it is quite an object lesson to all who have the opportunity to examine the display.

The attendants are most courteous, and all exhibits are so plainly labeled that they speak for themselves.

Products, *natural* and *manufactured*, fill the large room, representing the various industries of the State. All the counties are not represented; the ones having the finest displays being Tulare, Tehama, Colusa, Sacramento, Fresno, Stanislaus, Kern, Butte and Los Angeles.

The exhibits from these counties is well arranged and on stands of their own with name of county in large letters above each stand. Much that comes from other counties is not noticed by the casual observer, because it is so scattered about the room.

The Tulare county stand is made of curly redwood, said to be 3700 years old and is beautifully polished.

Visitors to California, prospective investors in real estate, would do well to visit this fine collection; and the counties not represented should rouse themselves to a sense of the injustice they are doing their own section of country.

Let it be said of the length and breadth of California that it is a rich and productive land, inhabited by people who know its resources of whatever nature, and appreciate the importance of urging its claims upon the uninformed public.

Almond Gathering and Hulling.

SANTA ROSA, Jan. 24.

TO THE EDITOR:—Will you please tell me how those who have large orchards of almond trees gather and shell their almonds? To knock them from the tree and pick them up is slow work, and to shell them by hand leaves little or no profit. If there is machinery to shell them with, is it expensive? —J. M. T., Santa Rosa.

Almonds are usually gathered by spreading canvas under the trees and shaking the limbs separately. The few nuts which cling to the limb are dislodged by striking with a small stick. The gathering should be done after the hulls have burst open, but should not be delayed until the nuts are badly discolored. Hulling is done with machines, of which there are several in use. J. Hobart of Nordhoff, Ventura county, has one; A. O. Rix of Irvington, Alameda county, another, and a later device has been brought out on the Pearce ranch at Brentwood, Contra Costa county. We have not space to describe these machines, but they are simple and not expensive. All interested can write concerning them to the parties named.

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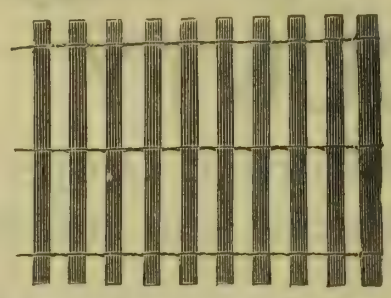
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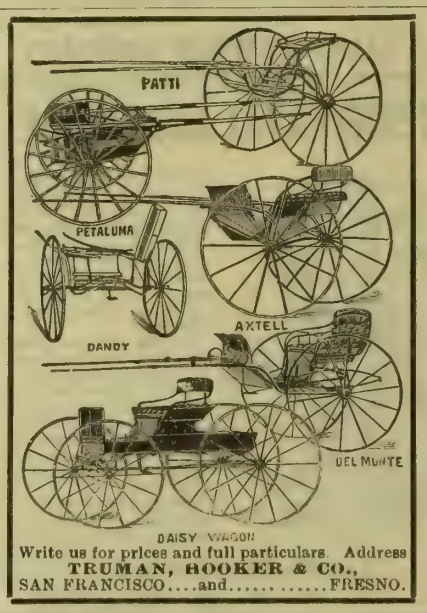
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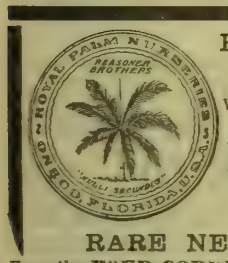
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All plants acclimated. Send us your Business Card and we will quote Trade Prices for 1000, 100, 10 or single plants

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Did you ever receive a letter? You can receive our Roses the same way—by mail, postpaid. The Californian or the Pennsylvanian can alike enjoy the advantage of dealing direct at the Rose headquarters of the world. Success is universal with our

ROSES ON THEIR OWN ROOTS.

We desire the acquaintance of every flower lover in America, and offer our *Rose Guide and Catalogue*, **free**, by way of introduction. It mirrors our immense stock, and gives a quarter of a century's special flower experience for the asking only. **Other flowers also.** No fancy prices. The *Guide* without price. Send your address.

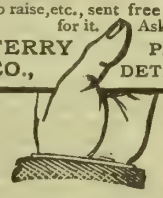
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A FINE STOCK OF BARTLETTS.

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If you want *Pure Fresh Seeds Cheap*, direct from growers, send for our *Beautiful Illust'd* **Catalogue** *mailed* **Free.** Pkt's only 2 and 3 cts. *Market Gardeners ask for Wholesale Price List.*

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401 Varieties

Of **BEST SORTS** of Apple, Pear, Peach, Cherry, Plum, Quince, Strawberry, Raspberry, Blackberry, Currant, Grape, Gooseberry, etc. Also Chestnuts, Walnuts, Trifoliate Orange, Eucalyptus Longipipe and other Novelties. Send for Catalogue.

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Growing the Texas Thin Shell Pecan pays better than Banking, Real Estate, Bonds or Stocks. One acre earns more than 10 acres in most farm products. Send for Circular.

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BLUE GUMS.

Monterey Cypress.

In lots to suit. Write for prices delivered on wharf in San Francisco. Address

W. A. T. STRATTON, Petaluma.

Seeds, Plants, Etc., Continued on Pages 154-155.



RARE

WATER LILIES

—AND—

EGYPTIAN LOTUS,

California Grown Roots.

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The finest gardens in the country are our patrons. Central Park, New York; Executive Mansion at Washington; Lincoln and Jackson parks, Chicago; and Golden Gate park, San Francisco, all purchased their original stock of aquatics from us.

WATER LILIES IN ALL COLORS—Red, White, Blue, Yellow, Pink, Purple. Also a choice variety of

ORNAMENTAL PLANTS and PALMS,

Consisting of KENTIAS, PHŒNIX, COCOS, Etc.

NELUMBIUM SPECIOSUM, $1.50 EACH.

Our COLORED PLATE of the EGYPTIAN LOTUS (14x21 inches) shows the flower, actual size. Our ILLUSTRATED CATALOGUE contains directions for culture, and full information with prices of plants. Catalogue, with colored plate, sent for six cents. Catalogue without plate free.

Nursery and water garden in the foothills between Edgemont and Cahuenga Pass. Address

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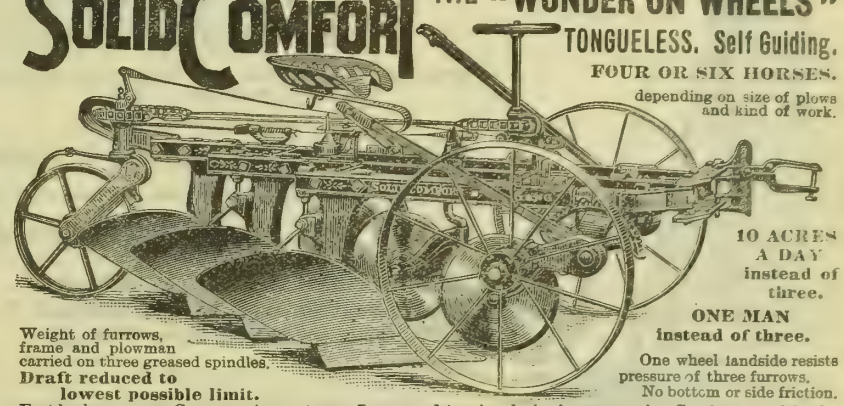
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TONGUELESS. Self Guiding.

FOUR OR SIX HORSES.

depending on size of plows and kind of work.



10 ACRES A DAY instead of three.

ONE MAN instead of three.

Weight of furrows, frame and plowman carried on three greased spindles.

Draft reduced to lowest possible limit.

One wheel landside resists pressure of three furrows. No bottom or side friction.

Foot brake prevents Gang running on team. Levers and turning device in easy reach. Can be turned in the length of itself. **Easier Driving; LIGHTER DRAFT** than any Gang in America. **Adjustable STRAIGHTER Furrows**, and **frame**—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms, in steel or chilled metal. Ten or twelve inch cut.

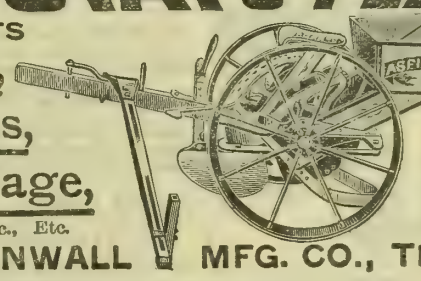
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POTATO-PLANTER

PLANTS
Corn,
Beans,
Ensilage,
Etc., Etc.



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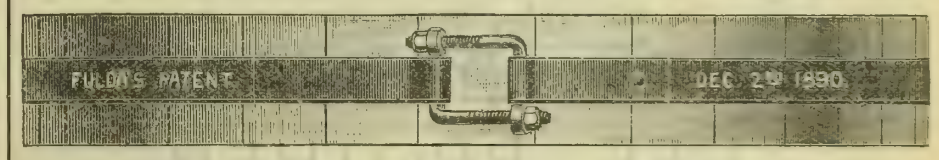
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The Best, Simplest and Cheapest Coupling for Tank Hoops.

A sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of size. Made in sizes to fit any width of iron

Prices, $1.00 to $1.50 per Pair. For sale to the trade. Liberal discount in quantities.

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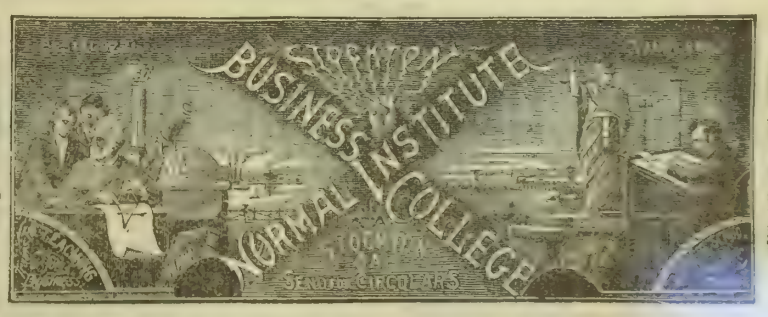
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Sixteen Regular Teachers and Over Three Hundred Students attending. Courses Thorough, Rates Low. Instruction the Best, and School the Most Reliable. **Address W. C. RAMSEY.**

A School Girl's Rig.

If you are fitting out the children for school please remember that it can be done better and cheaper than any place on the coast at

Smith's Cash Store, 416-418 Front St., S. F., Cal.

Black and white ginghams, large plaids and stripes, fast colors, closing at 6¼c per yard, reduced from 15c, add 8c if by mail. Stylish dress gingam in large plaids, stripes and combination styles down from 15c to 6¼c to close out and make ready for March arrivals now enroute.

Plain, that is, solid color ginghams, wash and wear beautifully, down to 6¼c and 8c, some light, some dark, mostly dark colors. Nothing ever offered like 'em at twice the money.

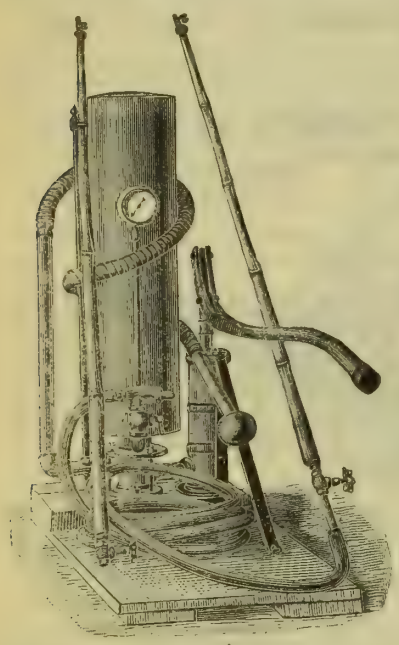
If these are not what you need ask for full 40-page list of goods from 5c up, and it will be sent you free of cost. Why not save money and have something good when you have the opportunity.

In Shoes we offer 11 to 1½ for misses in NARROW widths to close at 90c to $1.25, for fine, serviceable kid shoes of best quality. Our shoe list alone is worth $20 to you in a year if you have several to buy for.

In composition books, drawing books, pencil tablets, letter tablets, ink, paper, envelopes—everything for school, we can save you 50 to 100 per cent. Small sponges for slates, middling good, we offer 15 for 25 cents, such as you pay 5 cents for in town.

For boys we are just as well fixed. Good school or Sunday suits from 5 to 13, knee pants, at $2.50, $3.50 and $4.50. With long pants and vest, $4 50, $5.50, $6.50, and even higher We do not keep the cheap cottonade or common low-priced suits. We have a few from 7 to 11 years we are closing at $1.40, worth $2.50, in two-piece suits, but shall not replace them.

But we have about 60 SINGLE COATS, without vests or pants, from 9 to 17 years, at $1.50, $1.75, we would like to sell, and they would be called cheap at $4.00. Hats, shoes, shirts, caps, collars, stockings, boots, underwear, one line of ready-made dress shirts, colored, at 25 cents, well ——



If you want a First-class Spray Pump

—GET THE—

"BEAN"

WHICH IS SHOWN BY THE ACCOMPANYING CUT.

Every Year they are Improved, if Possible.

—THIS SEASON'S PUMPS HAVE—

HEAVY STEEL RECEPTACLES,

—AND—

Both Valves Can be got at in a Moment's Time with a Common Farm Wrench.

They ECONOMIZE LABOR and throw a penetrating spray. Send for Circulars.

THE BEAN SPRAY PUMP CO.,

SAN JOSE, CAL.



SURE DEATH

To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

Ongerth Liquid Tree Protector,

The only effectual remedy in the market. Indorsed by the University of California. Send for circular with testimonials to

Ongerth Grafting Compound Co.

212 Davis Street,

SAN FRANCISCO.....CALIFORNIA.



Whitewashing Machines & Tree Cleansers.

Complete Outfits at prices from $3 to $50.

The Pumps are all BRASS, with BRASS AND RUBBER VALVES.

For Orchardists, Florists, Stockmen, Poultry Raisers

THERE IS NOTHING LIKE THEM.

Pump sent complete as in cut for $14. Send for Illustrated Catalogue.

WAINWRIGHT SPRAYING APPARATUS CO., 10 Hayes St., S. F

Contracts taken for Large Jobs of Whitewashing.

CLUFF BROTHERS, Wholesale and Retail Grocers.

Orders by Mail Promptly Filled. Packed and Shipped Free of Charge.

Send for Price List, or send us a list of what you want and we will put prices to it and mail it back for your approval, by which you can see what you save by ordering from us.

All Goods Guaranteed as Represented, with Special Terms to Grange Trade-Card Members.

— ADDRESS —

CLUFF BROTHERS, Grange Department, 9 Montgomery Ave., S. F.

BREED'S UNIVERSAL WEEDER

Every practical farmer is especially interested in any implement that will tend to lessen the amount of his labor and increase the production of his crops and is constantly on the outlook for such implements. During the last few years the methods of cultivation of crops have become almost entirely revolutionized. The deep root pruning process is going out. Surface culture is going to become universal. For this purpose no implement equals the BREED WEEDER. Investigate. Send for circulars.

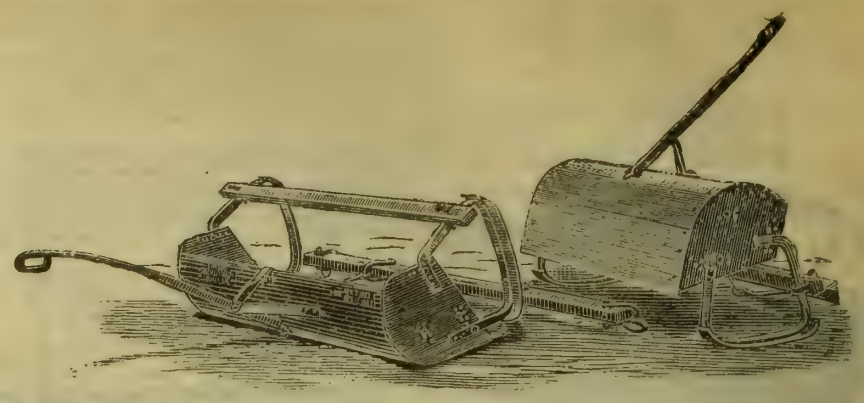
General Agents, KNAPP, BURRELL & CO., Portland, Oregon.

ORANGE CULTURE A practical treatise by T. A. GARNEY giving the results of long experience in Southern California. 196 pages, cloth bound. Sent post-paid at reduced price of 75 cts. per copy. DEWEY PUB. CO., 220 Market, S. F

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FRESNO CANAL, DITCHING AND LEVELING SCRAPERS.

FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

J. W. SCHMITZ, Supt. Miller & Lux.

SEND FOR CATALOGUE AND PRICE LIST.

FRESNO AGRICULTURAL WORKS

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CARBOLINEUM AVENARIUS.

PRESERVATIVE AGAINST ROTTING, DECAY, FUNGUS, ETC., OF WOOD AND STONE.

REMEDY AGAINST DAMP WALLS. PROOF AGAINST TEREDOES.

What We Guarantee Carbolineum Avenarius to Do:

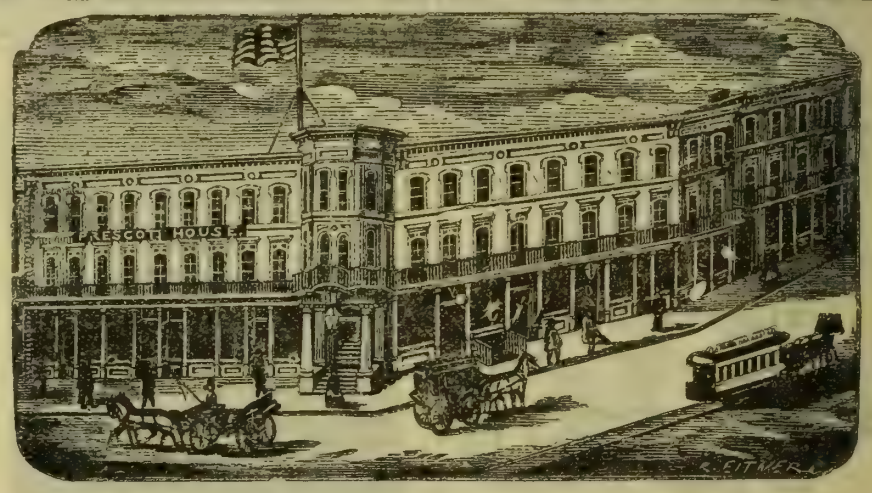
1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
5—To disinfect barns, stables or residences and destroy Microbes.
6—To force all moisture out of the wood without closing the pores.
7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
8—To prevent Rope treated with Carbolineum from rotting, causing it to remain pliable and excelling Tar Coating.
9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
11—It is the cheapest and best wood preserver in the world.

All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

CARBOLINEUM WOOD-PRESERVING CO.,

MUECKE & CO., Pacific Coast Agents, 319 California St., San Francisco, Cal.

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S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and from the House. J. W. BROKER, Proprietor.

GRANGERS' BUSINESS ASSOCIATION,

SHIPPING AND COMMISSION HOUSE.

OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL, AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

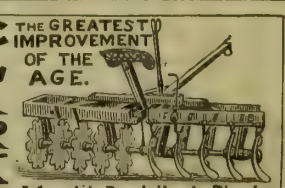
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CLARK'S CUTAWAY HARROW SUPERSEDES THE PLOW Makes a PERFECT SEED BED Send for SPECIAL CIRCULAR.



CLARK'S CUTAWAY REVOLVING PLOW

THE GREATEST IMPROVEMENT OF THE AGE.



A Complete Revolution in Plowing Requires less than half the Power of any other Gang Plow. STRONG AND DURABLE—MAKES A PERFECT SEED BED

CUTAWAY HARROW CO. SOLE MANUFACTURERS. HIGGANUM, CONN. New York Office 18 Cliff St. NEW YORK

Progress in Kern County.

New Colonists Arriving from England. Large Acreage of Fruit being Planted.

BAKERSFIELD, Feb. 8th, 1892.

TO THE EDITOR—Another large party of English colonists arrived here last week and at once proceeded to Rosedale, where selections had already been made for them. In several cases these lands had been improved in advance, so that the new settlers went upon places already planted with trees and vines instead of having to take the initiatory steps themselves. This plan gives great satisfaction, and the newly arrived colonists are invariably greatly pleased with the idea. All of these new comers belong to a class which makes the most desirable citizens, and the people of Bakersfield and the county at large are more than pleased to welcome not only these but as many more like them who can be induced to come to this far Western shore. One good thing is that the English settlers who have been here the longest are doing the best missionary work. They are all well satisfied, and the accounts sent home by them of California in general and Kern county in particular are productive of great benefit not only to this community but to the State as a whole.

The horticultural outlook in this section for the coming season is most promising. All the new settlers are making arrangements for planting trees and vines to an extent larger than before, while the older settlers have caught the prevailing contagion and are talking orchard and vineyard in the most enthusiastic manner.

A conservative estimate of the fruit acreage prior to 1891, and of the additions made during that season, is as follows:

Variety.	Before 1891.	Added in 1891.
Almond	71	4
Apple	44	50
Apricot	2	115
Cherry	4	6
Fig	116	240
Orange	30	4
Peach	161	327
Pear	4	140
Prune	25	221
Walnut	35	22
Grape	1,360	1,965
Miscellaneous	137	140
Totals	1,989	3,240
Total acreage at close of 1891		5,229

It is believed, from all that can be learned, that this acreage will be at least doubled during the present season. It will be observed that the grape leads, and there is good reason for this. The raisins put up here the last year have received the highest praise from all who have seen them, and what is of still more account, they received high prices as well, an average of six cents a pound having been netted. These unusually favorable results have induced the preparation of a large area for raisin vineyards this season. While the Muscat is the favorite, the Seedless Sultana is being extensively sought for and will be given a great deal of space.

It will be observed that the fig is second favorite after the peach, and here, too, it is not without good reason that such is the case. During the past year, White Adriatic figs dried in this county were sold for 18 cents a pound wholesale by the producer, and he was assured that there was an unlimited market at good prices for all the fruit of equally good quality that could be produced. The fig growers of Kern county are of the opinion that the White Adriatic, at such figures and even considerably less, is "good enough for them," and they are not wasting any time waiting for the long-delayed "genuine Smyrna." Of course they will be glad to welcome that variety, but in the meantime they are content to cultivate the White Adriatic, which will pay them several hundred dollars an acre annually.

Not many people probably are aware that Kern county possesses the largest area of alfalfa of any county in the State, or for that matter of any other State or Territory. A modest computation of the "alfalfa patches" in this county gives the following result:

Alfalfa Acreage in Kern County.

Poso Ranch	22 920
Rosedale Ranch	3,810
Lakeside Ranch	2,230
Mountain View Ranch	1,900
Hop Ranch	1,770
Greenfield Ranch	9,120
Stockdale Ranch	5 800
Anderson Ranch	960
Bellevue Ranch	4,170
McClung Ranch	2,130
Buena Vista Ranch	4,880
Cotton Ranch	840
Total	58,530



CORN IRRIGATED FROM CANALS OF KERN COUNTY LAND COMPANY.

Owned by the Kern Co. Land Co.	58,530
Other parties	29,500
Total in county	79,030

This will be added to this year, considerably also. The new settlers are one and all fully impressed with the value of alfalfa, and no "ranch," however small, is regarded as complete without the alfalfa patch for the support of horses, cows, pigs and chickens—all of which are exceedingly fond of this nutritious and rapidly growing grass.

Immense as is the area devoted to alfalfa, the product is nearly all consumed at home—a plan which all advanced farmers know to be the best. The motto of the wise farmer should be to convert his hay, grain and root crops into beef, mutton and pork on the farm where they are raised. Only by this method can the best results be realized. This advanced method of farming is carried out comprehensively here, as may be seen from the fact that according to the Assessor's report (which is probably 33 per cent. at least below the actuality) there are in this county the following number of farm animals:

Cattle	72 995
Horses	9.542
Mules	1.053
Oxen	68
Goats	840
Hogs	5,824
Sheep	317.752

This does not begin to represent the actual number of animals fed on alfalfa raised here. There is a continual coming and going all the year round of which there is no record on the assessment books. Range cattle are shipped in constantly from Arizona and elsewhere, fattened in our alfalfa pastures, and after a few weeks are reshipped to San Francisco, having been converted into prime beef. During 1891 no less than 700 carloads of fat cattle alone were sent from here to market, and 450 carloads of mutton sheep were also forwarded. A good idea, by the way, of the rate of growth here can be formed from the fact that during 1891 no less than 445 carloads of lumber were received at Bakersfield—a sure indication of the large volume of building done.

A great deal of interest is being taken here in the extensive deposits of petroleum, asphaltum and natural gas known to exist in this valley. In the western portion of the valley is a belt of oil-bearing territory, in which a local company has already sunk six wells, all of which are producing an abundance of petroleum of fine grade and of extra commercial value. Other wells will be sunk as fast as the machinery can be provided, and refineries will be established at Bakersfield and elsewhere, in which to prepare the crude product for use. In this crude oil, too, is to be found fuel of admirable quality and low cost, which can be utilized in manufacturing enterprises in conjunction with the abundant water power already enlarged upon.

In the same vicinity are vast deposits of asphaltum, both liquid and crystallized, and covering thousands of acres. Two companies are already at work here, and refineries have been established which from their very inception have been successful. The crystallized asphaltum found here is of the highest value for use in the manufacture of mineral varnish, and for other purposes, and its purity is such that experts have been unwilling to credit the statement that though just taken from the earth it had not been subjected to a refining process.

In the immediate vicinity of these deposits are vast quantities of sulphur, which exists in ledges in a state of great purity, and which can be readily made available for commercial purposes.

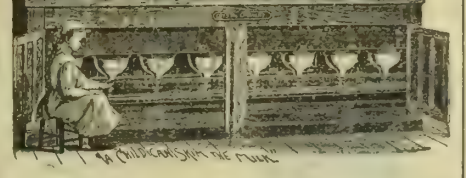
The Southern Pacific Railroad is now surveying a branch from Bakersfield to these valuable as well as wonderful mineral deposits, which will thus be made tributary to that city, and whose development will necessarily prove a source of great wealth. Not only will the preparation of the asphaltum for market be a source of no small wealth and give employment to many, but the constantly increasing variety of manufactures into which this wonderful material enters, and which can best be carried on here in close proximity to the source of snpply, will create industries which will play a most important part in the future of this place. G. F. W.

The famed Diamond Dyes in the household to day
May well hold a prominent place;
By using them, treasures that Time has despoiled
Come back to us clothed with new grace.
Philosophers long sought a fountain or stream
Whose waters their youth might restore;
The Diamond Dyes offer to all fading things
A promise to do this and more.

* * * * * * *

From leather to laces, and all things between,
The Dyes can transform by their art;
No fabric but yields to the magical touch,
Which gift it is swift to impart.
The poor faded splendors bloom brightly once more,
We prize what we held cheap and light—
Their value is heightened to eyes that behold,
And hearts are made glad by the sight.

The above are selected stanzas from a prize poem on Diamond Dyes. We recommend to our readers the use of these reliable home dyes, and feel assured that you will find them a most valuable aid to handsome and economical dressing. They are the strongest and simplest dyes known, and they offer an escape from the delays and expense incurred by sending goods to the dye-house.



The accompanying illustration is a cut of one of the large sizes of the Crystal Creamery. It must interest every butter maker (either large or small producers), as this creamery is not only made in large sizes for dairies of from 50 to 100 cows, but also for one or two cows.

This creamery has now been in use in N. Y. State, in the best dairying counties, for seven years.

The Crystal Creamery Co., of Lansing, Mich., was organized within the last year, taking up the good will of the inventor, who had manufactured in N. Y. State for six years, and had never been able to supply the demand.

Chinese Matrimony

Is a subject of much general interest. How it is associated with flower culture is told in the attractive advertisement of Peter Henderson & Co. in another column. Ladies will be especially interested in this advertisement—and what interests the ladies will certainly be worth the attention of the men.

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING FEB. 2, 1892.

468,144.—THIMBLE, ETC., FOR BARRELS—Anthony & Savage, Oakland, Cal.

468,291.—PILE ARMOR OR CASING—Bedbury & Badgley, S. F.

467,968.—ANTIFRICTION AXLE BOX—E. M. Briedwell, McMinnville, Or.

468,069.—GRAIN CLEANER ATTACHMENT—Henry Bryan, Modesto, Cal.

468,218.—DOOR SECURER—C. F. Cardwell, Bridal Veil, Or.

467,917.—TELEPHONE HOLDER—J. A. Christy, S. F.

468,134.—GRAVEL SCREEN—F. T. Gilbert, Walla Walla, Wash.

468,197.—GRAVEL SCREEN—F. T. Gilbert, Walla Walla, Wash.

468,063.—AMALGAMATING SILVER ORES—Alexis Janin, S. F.

468,303.—BAND SAWMILL—C. J. Koefoed, S. F.

468,036.—HOLDER FOR BRUSHES ETC.—W. F. Loan, Portland, Or.

468 064.—CABLE GRIP ADJUSTER—H. H. Lynch, S. F.

468,029.—VALVE—D. R. McKim, Gold Hill, Nev.

468,205.—SLING CINCH—D. O'Sullivan, Spokane Falls, Wash.

468,206.—RIFLE SIGHT—R. W. Parker, Camp Huachuca, A. T.

468,208.—AERIAL TRAMWAY—Prunetti & Avignone, Sierra City, Cal.

468,066.—SEPARATOR—F. H. Wheelan, Santa Barbara, Cal.

468,067.—BALL-BEARING—H. G. Yates, S. F.

The following brief list by telegraph, for Feb. 9, will appear more complete on receipt of mail advices:

Frank A. Fox, San Francisco, car coupling; Frank A. Huntington, San Francisco, crushing mill; Edward M. Knight, San Francisco, filter: Thomas Powell, Stockton, wheel pump; Johnathan M. Robinson, Vacaville, propelling vessels; Anderson & Fairchild, S. F., adjusting device for cable grips.

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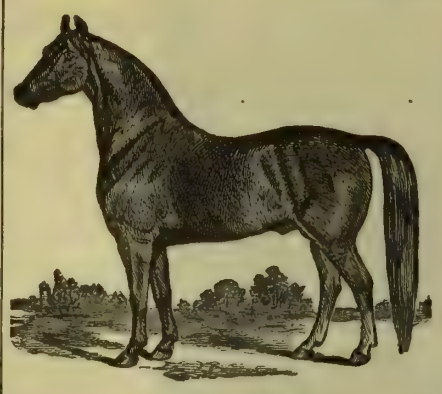
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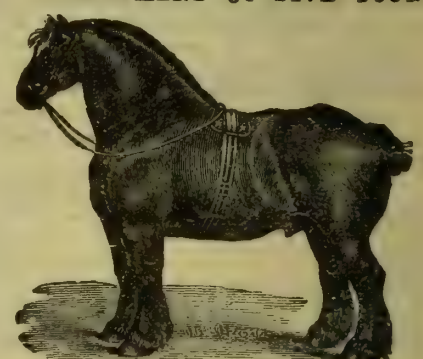
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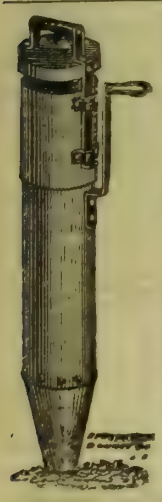
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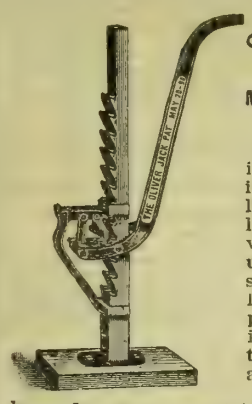
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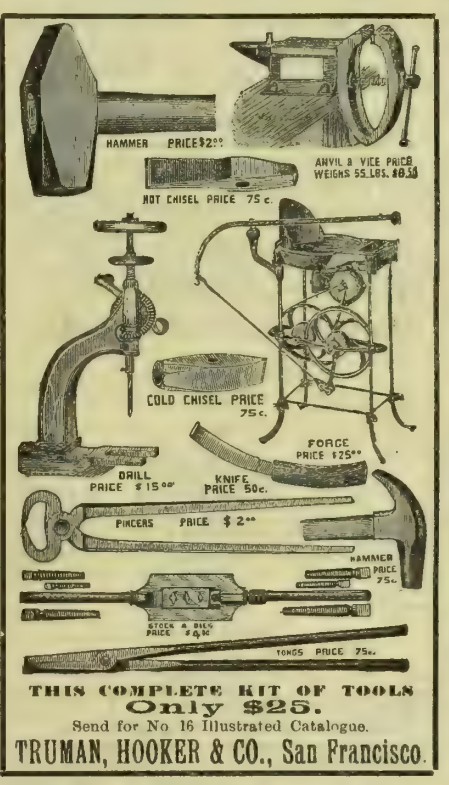
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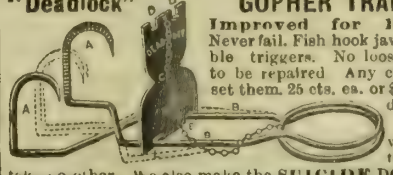


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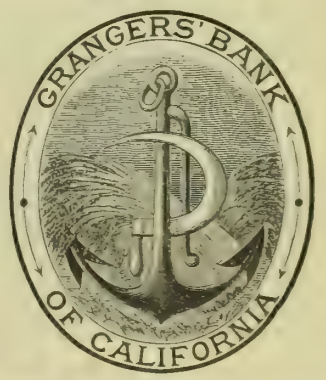
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 10, 1892.

The weather continues favorable to outdoor work Farmers, as a rule, have finished seeding and are now summer-fallowing. Pruning and other seasonable work is being pushed in the orchards. The low prices this season for all kinds of fruits, and with no corresponding reduction in railroad freights, horticulturists and others are trying to find ways and means by which the evil may be overcome. In this connection, the following from the financial department of the New York *Mail and Express*, Feb 2d, is refreshing reading and goes far to show what a harvest the Southern Pacific Company reaps from its exorbitant charges: "The Southern Pacific Company now claims a place second only to the Pennsylvania as the great system of the country under one management. The Pennsylvania system long ago passed the hundred million mark, with the Reading second as receiving almost $50,000,000 a year. The Southern Pacific last year (1891) received $50,449,255. Its expenses were but a little more than for the previous year (1890) and the net earnings were $19,285,548, almost a million a week of earnings and almost $400,000 of profit. The statement is a strong one in view of the falling off in the transcontinental business generally."

Foreign Grain Review.

LONDON, Feb. 8.—*Mark Lane Express:* English wheats are still declining and foreign wheats are lower, California 3d and other American wheats 2d lower. Flour is down 6d, Corn is and Oats 3d. At to-day's market English wheat was firm and foreign wheats were up 6d; Flour and American corn were 6d higher. Oats and barley were in better demand at fractional advances.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April.	May.	June
Thursday		7s0⅞d	7s.6d	7s6d	7s06d
Friday	7s08d	7s08¼d	7s07⅞d	7s07½d	7s07½d
Saturday	7s10d	7s10d	7s09d	7s08½d	7s08½d
Monday		7s08½d	7s.8d	7s07½d	7s07d
Tuesday	7s09½d	7s09d	7s09d	7s08½d	0s08½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	38s3d	38s3d	38s3d	Quiet.
Friday	38s9d	38s9d	38s9d	Turn dearer.
Saturday	38s9d	38s9d	39s0d	Steady.
Monday	38s9d	38s9d	38s9d	Quieter.
Tuesday	39s3d	39s1	39s1	Steadier.

To-day's cablegram is as follows:

LIVERPOOL, Feb. 10.—WHEAT—Dull. California spot lots, 7s 9½d; off coast, 39s; just shipped, 38s 9d; nearly due, 38s 9d; cargoes off coast, weaker; on passage, quiet; Mark Lane wheat, quiet but steady.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	1.65⅞	168⅝	168⅝	166⅛	163⅝
Friday	17 ⅜	1 3⅛	173½	170⅝	167⅝
Saturday	173⅛	174⅝	17 ⅜	172	169
Monday	169	173	172⅛	170⅛	167½
Tuesday	170⅛	171	170⅝	167⅝	165½

The following is to-day's telegram:

NEW YORK, Feb. 10.—WHEAT—$1.01⅜ for March, $1.01 for April, 99⅝c for May, 98½c for June, and 96¼c for July.

CHICAGO, Feb. 10.—WHEAT—89½c for May.

San Francisco.

WHEAT.

	Buyer Season. H	L.	Buyer Aug: H	L.	Seller 1892. H.	L.
Thursday	161½	159	144½	144½	142	141
Friday	167⅜	164⅜	....	....	145	144
Saturday	168	166½	147⅜	147	....	....
Monday	167	164	....	....	142⅝	142½
Tuesday	166⅛	163⅝	....	....	141	141

The following are to-day's record sales on Call:

Morning Session – Buyer season: 1 0 tons, $1.64; 100, $1.63⅝; 200, $1 63⅝; 200, $1.64½; 500, $1.64⅜; 300, $1.64½; 300, $1.64½ ₱ ctl. Buyer season: 800 tons, $1.63⅜; 160, $1.63½; 100, $1.66⅜; 8 0, $1.63⅜: September—100 tons, $1.44 per ctl.

Afternoon Session –Buyer season: 2600 tons, $1.65; 300, $1.65½; 800. $1.64½ ₱ ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L	Seller 1892 H.	L.
Thursday	97⅜	96	92½	92½	....	....
Friday	99½	98⅜	1 1	....	....	....
Saturday	102	1 ⅜	94⅜	93⅜	....	....
Mond y	1 3½	1 0⅜	93⅝	93½	88½	88½
Tuesday	102	100	....	....	....	....

The following are to-day's recorded sales on Call:

Morning Session—Buyer seaosn: 100 tons, $1.00⅜; 400 $1 00⅜ ₱ ctl.

Afternoon Session—Buyer season: 100 tons, $1.01; 100, $1.01½; 200, $1.01½; 200, $1.01½; 200, $1.01⅜ ₱ ctl. Seller season: 200 tons, 93½c; 100, 94c; 100, 94½ c; 200; 94½c; 100, 94⅜ per ctl.

Markets by Telegraph.

Decrease in Available Wheat.

NEW YORK, Feb. 6.—Stocks of available wheat in the United States and Canada, Europe, and afloat from all sources for Europe, decreased only about 1,300,000 bushels in January, as compared with more than 6,000,000 bushels decrease in January, 1891, over 9,000,000 bushels decrease in January 1890, and more than 11,000,000 bushels decrease in January, 1889. Exports of wheat (and flour as wheat), from the United States, both coasts, this week aggregate 4,740,000 bushels, an increase, as contrasted with the preceding week.

Eastern Dried Fruit Market.

NEW YORK, Feb. 8.—Evaporated peaches are weak at 6@6½c. Chicago has lightened our stock materially. Prunes are strong and not over plenty; five sizes bags, 7¼c; four sizes, 7c; boxes, respectively, 8¼c and 8c. Apricots are weak; choice sacks, 7@8c; best boxes, 9c. The efforts of New York dealers to introduce a more general offering of California dried fruits in England show little favorable result. Apricots, which were so largely counted upon for a position over there, continue to be offered as novelties by shopkeepers, who charge unpopular prices.

Eastern Raisin Market.

NEW YORK, Feb. 8.—The position of raisins is nominal, but hopeful for a good stock. There has been considerable Western inquiry for some good parcels since the stiffer price on the coast set in.

NEW YORK, Feb, 9. The *Commercial Bulletin* says: For example, it is shown that the importations of raisins for three years ending with 1890, averaged about 39,000,000 pounds per annum, while less than 19,000,000 pounds were imported in 1891. This apparent opening for 20,000,000 pounds of California raising, however, sinks into insignificance alongside the prune exhibit.

NEW YORK, Feb. 9.—The *Commercial Bulletin* in [illegible] less than 74,500,000 pounds of prunes were imported, while the average of the three years ending with 1890 is about 60,000,000 pounds. In 1891 [illegible] pounds were imported. Evidently [illegible] have a promising future. Certain it is the product of the Golden State must profit by the remarkable falling off in the foreign supply. It looks very much as though California should secure a large percentage of the former foreign trade, if prices are kept within reasonable bonds.

CHICAGO, Feb. 9.—The *Trade Bulletin* says of California dried fruits—The market is rather quiet. Peaches are meeting with moderate demand. Inquiry is for the best goods, on account of prices being low. Common are slow. There is a fair trade in apricots. Silver Prunes are in fair demand. Other kinds are meeting with some sale, but nothing big is doing.

Eastern Orange Market.

CHICAGO, Feb. 9.—It is thought that California shippers have made a mistake in forwarding frosted oranges to the East. Being imperfect, the fruit has had to be sold low and the poor quality has brought the fruit into disfavor. Plenty of choice fruit is expected later, but it may take some time to convince the trade that there is merit in the goods. First impressions are sometimes difficult to eradicate or change. California green fruits are quiet, with pears selling as follows: Easter Beurre, ₱ box, $2@2 25; P. Berry, $2 50@3. Winter Nelis, $2 25@2 50; d'Alencon, $2 75@3, California Navels, not frosted, $2 50@$3 25; frosted, $1 50@2 25: Seedlings, not frosted, $1 85@$2; frosted, $1 25@1 50.

Eastern Wool Markets.

NEW YORK, Feb. 5.—A fair amount of wool has been taken during the week by manufacturers, but at prices favorable to them. There is not much wool held in Eastern markets on consignment. Dealers show too much willingness to unload these stocks, and as a rule manufacturers can secure wool at their own prices. The wools which show the greatest strength, are those which are owned by dealers. The season has been against the goods markets, and manufacturers in consequence are not inclined to carry large stocks, and are for the most part buying wools only as they need them. With the exception of pulled wools stocks of all grades are large. Large shipments of Australian wools are now being received, and the amount already taken for this country at the London sales is said to be heavy. American buyers are meeting with strong competition, and in consequence there is considerable firmness shown in all wools suitable for America. The worsted and dress goods mills have been large buyers, other manufacturers having taken only small lots. Carpet wools are still dull and sales are light.

NEW YORK, Feb. 8.—The feeling is not so heavy this week, as there have been encouraging Eastern sales, though prices have neither shrunk nor advanced. The London market, now well attended by our buyers, has taken a stiffer turn and this fact has checked the weak tone of Ohio washed grades. The feature of the week was the large movement of Territory. In the dry-goods market cheviots lead the sales. Worsteds are slower than counted upon, Manufacturers at any point show no disposition to take much material ahead. The sales at New York were 303,000 lbs of domestic; 716,000 lbs of foreign, mainly carpet and China, and 250 bales of Australian to arrive. Boston sold 2 917,700 lbs domestic and 500,000 foreign, chiefly Australian. Philadelphia reports fair trade at easy prices, with some pressure to sell.

Eastern Hop Market.

NEW YORK, Feb, 8.—Light business all the week. Brewers obtained prime for 23½c and choice at ½ cent off at the close. State ninety-ones range from 20@.6½c; Pacific, 20@26c; previous crop, 13@18c. The English market is quiet. The closing call on change bid and asked, March, 24@25c; April, 24¼@25½c; May, 25¼@26c; June, 25½@26c; July, 24¼@26c; August, 26@26¼c; a sale of choice March at 26c. Exports for the week, 1674 bales. Freights are easier ⅝ of a penny for London, via Liverpool.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 1, '92, were as follows:

Flour, qr. sks	60,180	Bran, sks	8,510
Wheat, ctls	268,770	Buckwheat "	....
Barley, "	11,365	Middlings "	4,236
Rye, "	2,206	Chicory, bbls	270
Oats, "	1,265	Hop, "	....
Corn, "	466	Wool, "	....
*Butter, "	616	Hay, ton	1,644
do bxs	296	Straw, "	27
do bbls	....	Wine, gals	267,460
do kgs	21	Brandy, "	14,120
do tubs	....	Raisins, bxs	1,922
do ½ bxs	45	Honey, cs	41
†Cheese, ctls	353	Peanuts, sks	....
do bxs	....	Walnuts "	199
Eggs, doz	51,570	Almonds "	95
do "Eastern	....	Mustard "	....
Beans, ctls	9,715	Flax "	....
Potatoes, sks	20,571	Popcorn "	....
Onions, "	1,963	Broom corn, bdls	88

*Overl'd, — ctls. †Overl'd. 336 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to Feb. 1, '91.	July 1, '91 to Feb. 1, '92.
Flour, ½ sks	186,115	302,788
Wheat, ctls	794,057	1,095,773
Barley, "	181,937	28,207
Oats, "	222,788	330,974
Wool, bales	5,790	5,733
Hops, "	333	339
Rye, sks	....	3,293
Potatoes, sks	44,441	41,456

Cereals.

The situation abroad, it is believed, will gradually become less favorable as the season advances, and unless there is some serious accident to the growing crop, Western Europe will have the whip handle of the market instead of America. It is calculated that the new Indian crop, the Australian and Argentine crops and the exports from Chile will supply enough wheat, so that purchasers in America need be only enough to fill the immediate requirements, until the amount on passage and the shipments from the countries named will become available for use. In connection with this there is quite a difference of opinion. In a recent review of the situation *Beerbohm* estimated that Western Europe will require 144,000,000 bushels of wheat from America during the balance of the crop year. Following this, the *Corn Trade News*, of Liverpool, estimated that it will require about 105,000,000 bushels. The average of the two estimates would indicate about 125,000,000 bushels from January 1st to August 1st next. This does not take into consideration the requirements of the West Indies and South America, which have been increased by the reciprocity treaties. The question arises whether, with the prospects of selling the greater part, if not the entire amount of the surplus, American farmers in the Central States will rush to sell their wheat at less than $1 a bushel, in New York.

Reports from the Argentine Republic estimate that the wheat export surplus will be 22,000,000 bushels, but it is stated that other and more reliable commercial advices point to not more than one-half this figure.

Last year's crop in India was 6,842,000 tons or 356,000,000 bushels, against 6,123,000 tons or 229,000,000 bushels in 1890. Beerbohm says that the prospects for this year's crop point to a production about the same as that of 1890, and that there is probably very little wheat yet remaining to be shipped from the crop of last year.

The Government report of the Indian wheat crop is fairly satisfactory. In the Punjaub the area in wheat increased, but dry weather prevented good filling. In the Bombay presidency the insufficient Moonsoon rains caused a diminution in the area, and the crop is disappointing. In the Northwest provinces and the Oudh the whole prospects are good.

Advices from Germany state that the rye crop in North Germany shows a more forward growth than last season and wheat is developing nicely.

The imports of wheat and flour into the United Kingdom in 1891 was 166,786,000 bushels, the largest on record. The total imports for ten years past have been 1,483,987,000 bushels, an average of 148 398,000 bushels. Of this amount in the past year the United States furnished 80,400,000 bushels of wheat and flour, reduced to its equivalent in wheat, or 48 21 per cent. The total imports from the United States in the last ten years have been 729, 259,974 bushels, an average of 73,925,798 bushels. The average par cent of the total imports has been 49.82 per cent.

In the local wheat market, dealing in futures was more active the past week, with quite an advance up to Monday, when the market began to fall off. There is a growing impression that parties who have oversold to any great extent will have some difficulty in filling if called on for actual grain, but as this seldom occurs, particularly with the wheat ring desirous of keeping the market down for new-crop purposes, private settlements may be in order. For actual grain the sample market has held to fairly strong prices, notwithstanding a report current that exporters have all requirements met for vessels in port under charter.

The bears on Call succeeded in forcing barley futures to lower figures, which dragged down the sample market. The supply of bright grades is very light, causing the market to be overstocked with dark grades of coast. The consumption continues quite large, which is rapidly reducing the supply. Those in position to know are firm in their conviction that the season will go out with a light carryover. The low prices ruling for barley will cause many more fields to be cut for hay than otherwise would. Oregon and Washington continue to send us light supplies.

Oats have remained fairly steady thoughout the week. The consumption continues large, while the receipts are only fair.

Corn has a stronger tone, due to quiet buying for export and light receipts.

Rye and buckwheat are essentially unchanged.

Feedstuff.

In ground feed the market is reported firm for all kinds, with free buying for feeding. High and advancing markets for stall fed bullocks and mutton sheep is an incentive to liberal feeding by stockmen, while in other directions the demand shows only a slight falling off.

Hay has a weak tone under improved range pasture and a falling off in the demand. From information at hand that is considered reliable, it appears reasonable to state that the crop to be harvested this year will be very large, owing to favorable weather and high prices, causing more attention to be given to seeding for hay-cut ing.

Dairy Produce.

Butter has held fairly strong at last week's quotations. Receipts of Californian are increasing in this and other cities. Free shipments up north are a temporary relief to our market, but with milder weather in Oregon, that demand market will be cut off.

Cheese is steady, with a fair demand ruling. It is claimed that receipts will begin soon to increase quite fast.

Eggs set off still more, but at the close a steadier feeling has set in. Receipts are large, with a steady increase looked for, which, if realized, ought to cause the market to shade off to still lower prices.

Fruit.

The receipts of apples show signs of decreasing, and as the supply of good to choice oranges is light, it is not at all unlikely but slightly better prices might obtain for the more choice before Australia begins to send us liberal supplies. Eastern apples in barrels continue to come to hand.

The outlook for liberal crops of deciduous fruit is of the most promising character. It is quite certain that horticulturists are giving more attention than ever before to pruning, spraying and cultivation of fruit trees, so as to bring out better grades of fruits. The cultivation of berries shows increased attention, with more acreage given over to the industry.

Dried fruits are essentially unchanged The market is very hard to quote correctly, prices being governed largely by sellers and buyers—for forced sales low prices rule, for forced buying high prices obtain, These remarks, to a certain extent, apply to the poorer grades of raisins. Choice to fancy raisins are firmer.

The market for oranges continues to be overstocked with frosty, poor trash. The older the frosted oranges get, the poorer they become. Choice to gilt edged or fancy oranges are in light supply, and as the trade wants these grades, good prices are obtainable. Orange growers would do well to let frosted and trashy oranges rot at home, for in sending them here, they work an injury to the industry.

Lemons are steady at current quotations. Limes do not show any material change.

Vegetables.

Spring garden truck begins to come in slightly freer. The outlook is promising for heavy supplies of all kinds.

Under free receipts and an offish demand, onions sold lower. Liberal receipts of cut operate against the market.

The potato market continues to drag for all kinds except Salinas Burbanks. This is contrary to the general expressed views of dealers, who looked for a steadying market in this month.

Sweet potatoes are scarce and high. Sales are reported as high as 4 cts per pound.

Live Stock.

Bullocks continue to advance. This is the natural result of improved pastures in Southern California, and also in Arizona. Mutton sheep are quoted lower, although at the close the tone is stronger. Hogs are easier. Fresh milch cows are in good inquiry.

Miscellaneous.

From reliable advices up to Feb. 10, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	245,051	29 ,468	*100,982	*55,380
San Diego	21,708	15,209	2,968	.....
San Pedro	2,414	6,433	2.134	15,784
Oregon	23,269	34,907	37,035	
Puget Sound	16,147	14,154	.....	
Totals	308,589	368,171	143,119	71,164

*Engaged for wheat, 1892, 53,072; 1891. 46,770

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Feb. 4th, are as follows:

	1891.	1890.
Wheat, ctls	10,644,634	7,175,054
Flour, bbls	686,027	697,364
Barley, ctls	777,977	199,932

Poultry is in buyer's favor for those not in good condition. Large sized and well conditioned are in good demand.

Honey continues to rule strong with light receipts reported.

In beans there appears to be a better demand and an improved tone. This probably is due to a prospect of securing better overland freights.

Hops are scarce. Gilt edged are wanted. For new crop delivery, contract sales are reported at 12 to 13 cts.

Wool is quiet. The stock of old is about cleaned out. For new clip delivery, we are unable to hear of any particular inquiry.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 10, 1892

BEANS AND PEAS.			
Bayo, ctl	1 75	@	2 05
Butter	2 20	@	2 65
Pea	2 45	@	2 70
Red	1 75	@	2 05
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 10	@	2 45
Lima	1 70	@	2 10
Fld Peas, blk eye	1 35	@	1 65
Do green	1 70	@	2 50
Do Eastern do	2 55	@	2 75
Do Niles	1 30	@	1 45
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, ₱	15	@	22½
Do good to choice	27½	@	—
Do Giltedged	32½	@	—
Do Creamery rolls	32½	@	—
Do do Gilte lge	34	@	—
Eastern	20	@	32½
CHEESE.			
Cal. choice mild	13	@	14
Do fair to good	10	@	12½
Do gilt edged	14	@	15
Young America	12	@	15
EGGS.			
Cal. ranch, doz	23	@	—
Do do selected	25	@	—
Do store	21	@	—
Eastern	24	@	25
FEED.			
Bran, ton	20 00	@	22 00
Feedmeal	27 00	@	—
Gr'd Barley	22 00	@	23 50
Middlings	22 50	@	24 00
Oil Cake Meal	25 00	@	27 00
Manhattan Food ₱ cwt.	7 50		
HAY.			
Wheat, per ton	13 50	@	—
Do choice	14 50	@	—
Wheat and Oat	12 50	@	—
Wild Oats	11 00	@	—
Cultivated do	12 50	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	12 00	@	—
Straw bale	50	@	60
GRAIN ETC.			
Barley, feed, ctl	90	@	1 02½
Do Choice	1 03½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 10	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 10	@	1 45
Do do Giltedge	1 48½	@	1 52½
Buckwheat	1 70	@	2 10
Corn, White	1 27½	@	1 32½
Yellow, large	1 22½	@	1 27½
Do small	1 26½	@	1 30
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 27½	@	—
Surprise	1 50	@	—
Black Cal	1 35	@	1 75
Do Oregon	1 25	@	1 40
Gray	1 30	@	—
Rye	1 60	@	1 72½
Wheat, milling.			
Gilt edged	1 62½	@	—
Do Choice	1 62½	@	—
Do fair to good	1 63½	@	—
Shipping, cho'ce	1 63½	@	—
Do good	1 61½	@	—
Do fair	1 57½	@	—
Common	1 52½	@	—
Sonora	1 55	@	1 67½
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—

FLOUR.			
Extra, City Mills	5 00	@	5 25
Do Country Mills	5 00	@	5 25
Superfine	3 15	@	3 45
NUTS—JOBBING.			
Walnuts, Cal. ₱	7	@	—
Do Choice	8	@	—
Do paper shell	8	@	9
Do Chili	7½	@	9
Almonds, sft shl	11	@	—
Paper shell	13	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	12	@	14
Do large	15	@	17½
Peanuts	3	@	4
Filberts	11½	@	14
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS			
Silver Skin, Ch'e	1 20	@	1 30
Fair to Good	90	@	1 15
Cut	70	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	50
Do do Salinas	95	@	1 20
Do do Oregon	80	@	1 10
Do Humboldt	80	@	90
River Reds	25	@	40
POULTRY			
Hens, doz	5 50	@	8 00
Roosters, old	5 50	@	7 00
Do young	6 00	@	9 00
Broilers, small	4 00	@	—
Do large	5 00	@	—
Fryers	6 00	@	—
Ducks	6 50	@	9 50
Geese, pair	1 75	@	2 50
Turkeys, Gob'r	12	@	15
Turkeys, Hens	14	@	16
Do Dressed	15	@	19
Manhattan Egg Food ₱ cwt.	11 50	@	—
PROVISIONS			
Cal. Bacon, he'vy, ₱	9½	@	—
Medium	11	@	—
Light	12½	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	16	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	7	@	8
Clover, Red	12	@	13
White	9	@	20
Flaxseed	3 50	@	2 80
Hemp	3½	@	4
Mustard, yellow	3 25	@	3 75
do Brown	3 00	@	3 25
WOOL.			
SPRING, 1891			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	18	@	—
Calav & F'th'l	16	@	—
Oregon Eastern	18	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Do fair	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6¼
Beeswax, lb	22½	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb.

APPLES.			
Sun-dried, 1's, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com.	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed		@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	3	@	3½
Do unstemmed	2½	@	3
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	6	@	—
White, sun-dried	5	@	6½
Do evaporated	6½	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3	@	—
Do do prime, do	4½	@	—
Do do choice, do	5½	@	—
Do do fancy	6	@	6½
Evap. unpe'd, choice	6	@	—
Do do fancy	7	@	7½
Do do extra	8	@	8½
Do peeled, in boxes, choice	15	@	—
Do do fancy	16	@	17
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced		@	5
Evap. sliced, in boxes	6	@	—
Do ring do		@	10½
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, ungraded	5½	@	6
Do graded, 60 to 100	5½	@	—
Do do 40 to 60	7	@	8½
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₱ bx	1 50	@	—
Do fancy, do	1 75	@	—
Layers, ₱ bx	1 25	@	—
Loose Muscatels, common, ₱ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ₱ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ₱ 20-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60

Halves, quarters and eighths 35, 50 and 75 cents higher respectively than whole boxes

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 10, 1892

Limes, Mex	7 00	@	—
Do Cal	75	@	1 00
Lemons, box	1 25	@	3 50
Do Sicily	5 50	@	7 00
Oranges Seedlings			
Riverside	85	@	1 50
Los Angeles	65	@	1 25
Do Navels—			
Los Angeles	75	@	1 25
Riverside	1 25	@	3 00
Duarte	1 25	@	3 00
All kinds of oranges free from frost sell at an advance of $1 per box on the above quotations.			
Apples, box	50	@	90
Do choice	1 00	@	1 25
Do extra choice	1 50	@	2 00
Do Lady Apples	75	@	1 25
Do Eastern, bbl	3 75	@	5 00
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Paranips, ctl	—	@	1 25
Peppers, dry, lb	12	@	18
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	60	@	—
Garlic, lb	2	@	3½
Squash, Mrft, tn	6 00	@	10 00
Do Summer, lb	20	@	25
Pumpkins, ton	7 00	@	—
Tomatoes, box	1 50	@	2 25
Aspa agus, lb	15	@	20
Do choice to ex.	25	@	30
Peas, green, lb	8	@	12½
Rhubarb, lb	15	@	18

Live Stock.

BEEF.			
Stall fed	7½	@	—
Grass fed, extra	7	@	—
First quality	6½	@	—
Second quality	6	@	—
Third quality	5½	@	—
Bulls and thin Cows	2½	@	3½
VEAL.			
Range, heavy	5½	@	7
Do light	8	@	9
Dairy	8½	@	10
MUTTON.			
Wethers	10	@	10½
Ewes	9½	@	10
Lamb, yearling	11	@	12½
Do Fall	15	@	—
HOGS.			
Light, ₱ lb, cents	4½	@	4¾
Heavy	4½	@	—
Feeders	4	@	—
Stock Hogs	3½	@	—

State Horticultural Society.

The regular meeting was held at the State Board of Horticulture January 29, Vice-President S. J. Stabler in the chair.

The Secretary announced the following appointments by Pres. Hilgard.

Committee on nomenclature and new fruits: Leonard Coates, John Rock, R. C. Kells, James Boyd, B. M. Lelong, F. C. Miles and Prof. Husmann.

Committee on Papers: Emory E. Smith, Ed. M. Ehrhorn, A. L. Bancroft, C. H. Allen and H. P. Stabler.

Emory E. Smith of the World's Fair Committee reported progress; that several informal conferences had been held with the State commission, but that nothing definite had been agreed upon.

Leonard Coates, chairman of the committee on meeting of pioneer horticulturists, reported in favor of devoting the February meeting of the society to this subject and the secretary was instructed to issue a circular to that effect. The meeting will be held February 26.

A general discussion was held on marketing of dried fruits, in which J. L. Mosher, C. H. Allen, A. G. Freeman, B. N. Rowley and others took part.

A. L. Bancroft presented a paper outlining a place for the establishment of a Fruit Exchange in San Francisco, which was referred to the committee on that subject.

C. F. Wyer made a preliminary report on the establishment of a dried fruit sampleroom in this city, stating that B. N. Rowley of 321 Market St. would furnish space and custodianship for such a sampleroom.

B. M. Lelong submitted a call for a general meeting of dried fruit producers to be held in Fresno, Feb. 18, and a telegram from Mr. Motheral asking that the Society send representatives to a preliminary meeting to be held Feb. 17. Upon motion Vice-President Stabler appointed B. N. Rowley, E. W. Maslin and C. F. Wyer as delegates from the Society.

An exhibit of processed prunes was submitted by Felix Gillet of Nevada City, which was generally sampled and commented upon. It was thought that thinning of the skin by dipping would have improved the fruit. Members expressed their satisfaction that Mr. Gillet had found prune-processing profitable, while others had abandoned it, but they still maintained the advantage of the sun-drying method of curing prunes in this State.

The following new members were elected: J. H. Ramsay, Woodside, San Mateo county; Thomas Jacobs, Visalia; Theodore Deming, 1222 W street, Sacramento.

The Artificial Production of Rain.

Attempts at the production of artificial rain have been undertaken by many enthusiasts during the last 50 years, but thus far without any decided success. The name of Espy will be recalled by many as one who caused no little interest in this direction from 1840 to 1850. His theory was probably more philosophical than that of any of his successors. His proposition was to effect changes of currents in the atmosphere by means of large fires, producing ascending currents of heated air—the exact manner in which such phenomena are produced by nature. But nothing came of it.

Somewhere about 1859 or 1860, an officer in the French army conceived the idea that rain might be produced by the use of explosives. He had seen much service in Africa and visited France with the view of interesting the Academy of Sciences in Paris to aid him in making experiments, but that body declined to have anything to do with the project. The officer returned to his post somewhat dejected, but resolved to do what he could in demonstrating the value of his theory. Some experiments were made, but on a small scale, and without success. The officer became known as "The Rain Maker of Sahara." He died in 1870, or near that time. His name was Parceau.

The particulars in regard to the recent experiments of Prof. Dyrenforth in this direction, made in Texas, are familiar to our readers. The professor had all reasonable means and appliances which a liberal Government appropriation could furnish, with a selected staff of enthusiastic assistants; but the results seem to have been quite unsatisfactory to the public, although the participants and some of his friends claim partial success. There is no probability that the Government will take any further interest in the matter.

While the Texas experiments were in progress, another "rain maker" appeared in several of the Western States. His process was a secret, and many claimed for him great success. He operated in various localities and in several States, but the public in general gave no credence to his claims.

Within the past few weeks, Mr. O. H. Smith has, according to common report, been conducting a series of rain-producing experiments in this State. Mr. S. is a member of the "Interstate Artificial Rain Company," a corporation organized in Kansas last December. Branches have been in operation in Kansas, at Temple, Texas, and at Pixley in this State. He claims that the efforts to produce moisture have been eminently successful. He has certainly commenced operations in this State at a very favorable time for success, but it is the impression of the people at large that he will have to divide the causes of success with the presiding rain genius of the Pacific Coast, with the honors largely in favor of the latter.

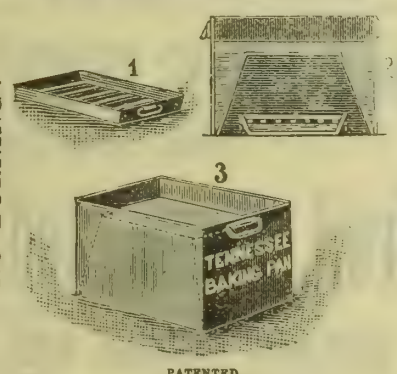
The system of Mr. Smith differs materially from the Dyrenforth plan of discharging explosives. Five chemical compounds are administered as medicine to the atmosphere by means of a machine, the modus operandi of which is secret, as is the entire process. The machine requires to be kept going day and night, and the inventor claims that the only condition causing failure is a thermometer below 40°.

The company claims to have engagements in advance covering the balance of the winter. Huron, in the San Joaquin valley, and Los Angeles are among the points to be visited in this State. Experiments will also be conducted in South Dakota, Eastern Oregon and Colorado.

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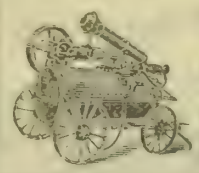
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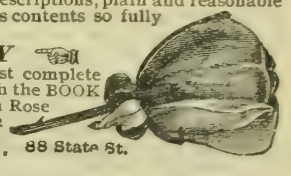
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TESTIMONIALS.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: In response to yours of the 25th would say that I am pleased to give your Triumph Spading Harrow a good recommend. I have used two harrows to cultivate my orchard and vineyard for the past year, and they did my work better than any tool used to do like work on my ranch. I am very well pleased with the harrows. Yours truly, A. W. TOZER.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal —Dear Sir: We have your favor of the 25th inst. In regard to the Morgan Spading Harrow would say that we have used the harrow cultivating our orchard and vineyard and find it just the tool. In fact, we know of no tool that will surpass it as a cultivator. Yours truly, HATCH & GIST.

VISALIA, CAL., Dec. 5, 1891.

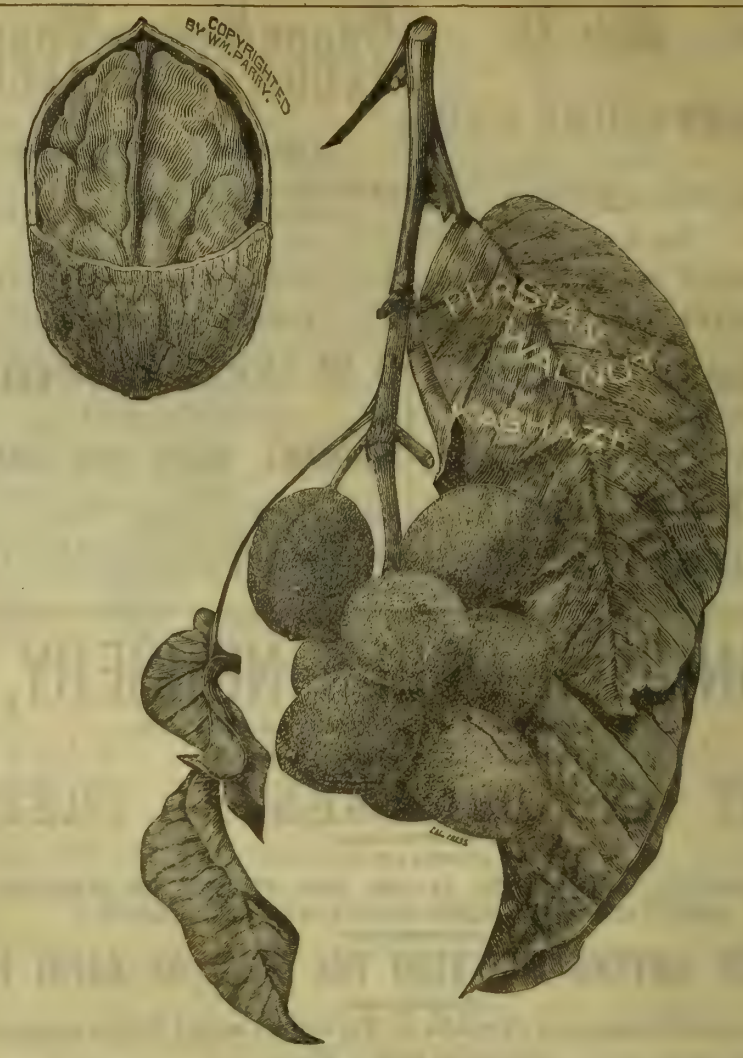
H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow I purchased from L. N. Wood, your agent, is a complete success. I have had considerable experience in the orchard and nursery business in this State, and I can from personal experience recommend the Morgan Spading Harrow to be the best cultivator in existence. Respectfully yours, CAIN FRUIT & NURSERY CO., Supt. GEO. F BEALES.

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It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

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PACIFIC RURAL PRESS

Vol. XLIII. No. 8. SAN FRANCISCO, SATURDAY, FEBRUARY 20, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

The California Building at Chicago.

At the meeting of the California World's Fair Commismission, last week, a final choice was made from the 29 plans offered by the various architects, for the State building to be erected at Chicago. The design selected by the Commission as the best, was that submitted by A. Page Brown of this city.

It will be seen from the engraving, which we have prepared from Mr. Brown's drawings, that the style of the proposed building is that of the well-known "California Mission," with the arcade, Spanish roof garden and flat dome. When the old padres, headed by Junipero Serra, came wandering into this region from Spain and Mexico, their idea was to convert the Indians and incidentally take possession of their horses and lands. The Indians were gathered around the missions and had to settle down to work—this being called the first settlement of the State. Wherever the Mission fathers determined to stop, they put up these mission buildings, consisting of a church, with the necessary structures for residence, storage, etc. All the buildings were of the same general style, with broad, arched corridors and tiled roofs, the usual material being sun-burned adobe bricks, commonly whitewashed.

Mr. Brown has closely copied the best features of these old Mission buildings, maintaining the simplicity of detail which is a marked characteristic. These peculiar structures, many of which are still standing, are much admired by Eastern tourists, and in fact it remained for travelers to discover their picturesqueness and beauty, the old Californian seldom looking beyond utility in such matters. The buildings are very cool in the hot summer and comparatively warm in winter, the thick walls, wide and low, being also peculiarly adapted for a country where earthquakes are liable to occur.

The old Mission buildings have been so often described and figured in various publications that they are everywhere recognized as peculiar to California. It is therefore very appropriate that the California building at the World's Fair should be of this type. The only wonder is, however, that such good judgment should have prevailed, and something chosen so common here, but which will be an object of curiosity to visitors to the World's Fair. As a general proposition, we might have expected some ornate structure having nothing whatever to do with this State or its architectural history. As it is, the Commission may be congratulated on its excellent choice, and Mr. Brown also for confining himself to the peculiarities of the type, and carrying out his plans in such a skillful manner.

The extreme measurements of the building will be a length of 500 feet by a width of 110 feet. The total floor area will be 100,000 square feet, of which 60,000 feet will be on the ground floor. From the ground to the eaves will be 50 feet, and to the center line of the roof, 65 feet; the top of the dome will be about 80 feet high. The lower portion of the roof is to be covered with genuine Mexican tiles and the upper portion, including the dome, with iron plates shaped like the tiles. It is intended that the walls shall be a close imitation of the adobe. Plenty of the well-known adobe soil of the State could be spared, of course, to build with after the Mexican fashion, but in the climate where the building is to be erected, the adobe could not very well be sun-dried in the way it is done here.

The main entrance of the building will be in the center, as the drawing shows, the various departments being arranged along the sides of the structure. The gallery will afford an area of about two-thirds that of the ground floor. The offices are to be grouped in the second story in such a way as to command from them a view of the whole interior. It is estimated that the cost of this building will be about $75,000.

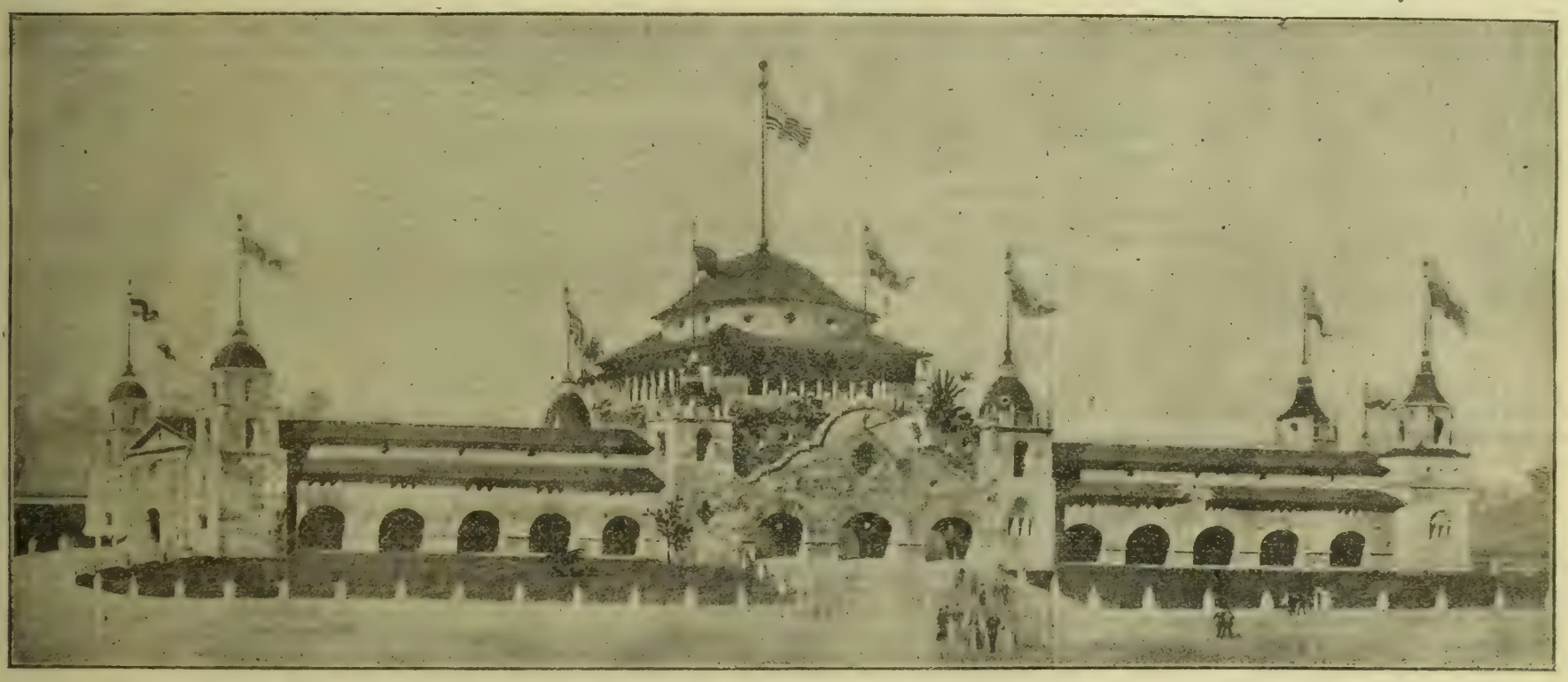
These plans will doubtless be accepted at once by the construction department of the World's Fair and work on the building will be commenced as soon as possible.

A great deal more has been already done in preparing for the World's Fair than many persons imagine. Many of the buildings are in process of construction. The buildings themselves are in many varied styles of architecture. The Administration building alone will cost over half a million of dollars. It will be about 250 feet square and will consist of a central building surmounted by a gilded dome of fine proportions and with large square pavilions at its corners. The edifice devoted to manufactures and liberal arts will be the largest of the kind ever constructed; it is to be 1688 feet long and 788 feet wide, covering in all about 31 acres. This will cost about one million dollars. The architect of this building, George B. Post, says of it: "Two of the vast machinery halls of the Paris Exposition could be wheeled through it and the Auditorium, the building of which Chicago is most proud, could be pushed under its great roof, tower and all."

The agricultural building will cover nine acres and cost $540,000. Its dimensions are to be 800 by 500 feet. All these buildings are well under way.

The Art, Machinery, Electrical, Horticultural and U. S. Government buildings are all to be grouped about the basins and lagoons; that for Manufactures and Liberal Arts occupying the central position close to the lake shore. Outside of the circle a large space is reserved for the erection by foreign governments of buildings to illustrate the special features of those countries.

We have in previous numbers of the PRESS illustrated and described some of these buildings, many of which are in process of construction. There is good reason to believe that the California building will have its due share of attention; and when filled with the varied products of this great State, will attract numberless visitors whose influence will in the end be of the greatest benefit to us.



CALIFORNIA'S BUILDING AT THE WORLD'S FAIR.

THE DISEASED TREE QUESTION.—The diversion created by Mr. Caminetti's bill in Congress to prohibit interstate traffic in diseased plants and trees is leading Eastern indignation into other channels, and making the little protective measures of California seem of little moment to the great Eastern tree growers. The Nurserymen's Association of the United States has published a circular and distributed it in Washington, opposing Caminetti's bill, on the ground that the germs of many tree diseases are too obscure for recognition even by experts, and that nothing short of a recognition of every microscopic point upon the surface of every plant could show the absence of disease germs. We are inclined to the same view. The more feasible ways to approach the question, if it is worth approaching at all, would be to inspect and to quarantine nurseries showing disease or to order disinfection of all stock offered for sale. However, we do not set out to tell Eastern nurserymen what to do. They can handle Mr. Caminetti on their own account, but they will find him able to defend his ground when he believes it is right.

IDAHO has about enough population and territory to give each person a square mile. There are 84,290 square miles of land in the State and 84,385 people.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.—ED.

Santa Barbara Notes.

CARPINTERIA, Feb. 8 1892.

TO THE EDITOR.—The year is now promising finely, as over three inches of rain have fallen in the past two weeks, and to-day, Feb. 8th, a nice rain is falling with indications of a heavy storm. All the rain so far has soaked into the ground, and streams have not raised, but now a heavy shower would cause streams and gullies to "boil" in a short time. Farmers are well up with their work as nowadays the bean farms are kept free from weeds from harvest to seed time by the use of improved cultivators, in many cases entirely doing away with the use of the plow. Thus farm work is relieved of much drudgery, and crops are improved as well as the farmer's minds. The keeping of the weeds from growing at all, greatly lessens the danger of drought, as the ground retains the moisture instead of giving it to the weeds.

Prospects are good for the fruit crop, all kinds excepting pears being loaded with fruit-buds. Peaches have been a very light crop for several years but are budded full this season and will probably have a large crop. A cannery somewhere in the vicinity of Santa Barbara would be a great help to the country hereabout, as much fine fruit goes to waste every year. Last year Bartlett pears and apricots were sent to Los Angeles canneries, and many carloads of apricots were sent to Newhall and dried there in the sun.

The tendency of the people in this section is towards smaller places, and many extremely small ones can be seen ranging from five acres downward. Not a great number of trees are being set out. Walnuts, lemons and olives are taking the lead in this part of the country.

Santa Barbara city will be connected in a few days, by telephone with Ventura, Los Angeles, San Bernardino and intermediate towns. The line is completed to Carpinteria, ten miles from Santa Barbara. Goleta is to be the present terminus of the line, but eventually it will be extended up the coast to San Francisco. Seventy thousand dollar bonds have been voted to build a drive along the beach from State St. to Castle Point. The drive is to be paved with asphaltum and lined with ornamental trees. A tunnel is being run in the hill adjoining the city on the north (Arlington Heights) for the purpose of developing water for the city. A project to establish a museum of natural history and zoology has been under discussion for some time as Dr. L. G. Yates, F. L. S., offered to donate his fine collection for that purpose. Such a collection as Prof. Yates has is hard to beat and no hesitation should be felt in embracing such a grand opportunity.

Feed is now commencing to grow nicely and will soon be good for stock. Range stock have had a close call but very few if any losses have occurred in this county on account of the long dry season.

There is some movement in beans but at low prices about $1.60 per 100 pounds being paid. It looks as if a beet sugar factory would be a good thing in this section and would lighten up the bean product so better prices might rule again for beans. L. B. CADWELL.

Tulare Water Park.

TULARE, Feb. 10, 1892.

TO THE EDITOR:—Fresno, Tulare and Kern counties are talking of a canal to tide water, and it seems a suitable time to direct attention again to the rare opportunity now offered to the people of these counties to create, with little trouble, a unique and beautiful pleasure resort, the like of which exists in few places in the world. Tulare lake ought always to be maintained as a reservoir and to soften the climate, and as a fishing ground for the people of this end of the San Joaquin. But now it is a shallow, unapproachable pool. It needs improving to fit it for all its uses. A dredge kept going around and around it for two or three years would throw up a high bank, which would deepen the water, make the banks approachable and prevent overflow. A lock opening into a canal to the San Joaquin would regulate the water.

So much for utility. Now it needs no vivid imagination to picture the scenes of wonderful beauty that may be created here by a touch almost; $1000 would do more here than $10,000 in Golden Gate Park or Central Park. A dredge could easily throw up the bank in curved lines, in points and bays and sheltered coves. Timber properly and artistically placed would quickly beautify every shore line. Islands would as easily be made dotting the surface of the lake. In this climate and soil there is hardly a limit to the lovely effects possible to the landscape gardener. Such another opportunity has probably never been offered before either to the landscape artist or to a people to secure a pleasure resort of such magnificent possibilities.

Such a lake would be about 15 miles wide by 25 miles long, with a 300 foot driveway all around it and a suitable number of boat-landings, for this lake would be a part of the canal and a feeder for it, and in days to come will be anything but a solitude, but busy carrying some of the freight of the great valley. When the banks are accessible, with shores and islands beautiful with waving trees of every zone and every land, who indeed would not relish a day's sailing and fishing in this the people's water park? Some might prefer a spin along the widest and longest driveway in the world, bordered sometimes by oranges and palms, sometimes by the New England elm. The picture is not exaggerated in the least. The chance is here, can be easily taken, and ought to be. I invite the attention of the people, especially of Tulare county, to their opportunity.

W. S. PROSSER.

THE APIARY.

Bees Deserting Their Hives, Swarming, Etc.

GRIZZLY FLATS, Feb. 12.

TO THE EDITOR:—It is a mystery to many why bees should leave their hives when, apparently, they were prospering in every respect. A new swarm will sometimes leave, even if every precaution is used; you may put them in a fair sized hive, every frame fitted up with foundation, the hive well shaded, but all to no purpose; after being in there for a few hours, out they come, and start to parts unknown.

If they had returned to the parent hive again, an apiarist would have known what caused their strange behavior, for their queen did not come out, and therefore their return.

I am well aware that it would never do in a country where there are many suitable habitations for bees, to hive where they settled in swarming, because their returning scouts would call the swarm out, and away they would go. I always move the hive quite a distance from where they settled, and, therefore, I am more puzzled as to why they leave; they may possibly have a future location picked out, and then the only way to make them stay would be to cage the queen a couple of weeks, that is if you are lucky enough to catch them after they have started.

I think that bees do occasionally choose a future home before swarming, but not very often.

Bees will sometimes swarm at odd seasons of the year, which, to a beginner, looks very strange; this is easily accounted for though, as they must have been on the brink of starvation. If they are returned to the hive again and fed, they will be all right, although the queen will never be as prolific as before.

In robbing season, sometimes bees will swarm out, but they are generally robbed and are starving. Many times these roving swarms that have been robbed of stores, will unite with the bees that robbed them.

Queenless colonies will many times swarm out, after all hope of ever rearing a queen is given up. Such colonies are generally worthless, because there are more or less fertile workers among them.

Fertile workers will nearly always be found in colonies where there is no larvæ of the right age for rearing queens; with Carniola, Cyprian, Syrian and Holy Land bees, fertile workers rapidly develop, when their means of rearing a queen are lost; with Italian and black bees, fertile workers do not develop so rapidly.

Sometimes, in full colonies of Cyprian, Syrian and Holy Land bees, fertile workers will be at work when a laying queen is in the hive, but still they do not seem to be of any serious detriment to the prosperity of the bees, as long as they have a good queen.

Some beginner may possibly wish to know what a fertile worker is, so I will state that fertile workers are worker bees that lay eggs, and what is more, these eggs hatch, and produce inferior, undersized drones. The ordinary worker bees are not neuters, as many suppose, but in reality are undeveloped females. Microscopic examination reveals the fact that they are possessed of nearly every organ that a queen has, only a great deal more minute, and that their reproductive organs are too small to admit of their fertilization by a drone.

It is easy to detect when fertile workers are present in a a hive; if you find a number of eggs in a cell, and here and there notice high convex cappings over brood, you may be pretty certain that fertile workers are at work; take a good look anyway, and see if you can find a queen; if no queen is present, they are indeed fertile workers.

Sometimes a queen, failing to get mated, will lay eggs similar to fertile workers; these eggs also hatch and produce drones, but whether these drones are capable of fertilizing a queen or not, I am unable to state.

A well sexed queen's eggs are laid regularly in the cells, and in perfect order; each egg fastened to the bottom of the cell, whereas, with fertile worker eggs, they are fastened disorderly to the sides and bottoms of the cells.

If you find two or more eggs in a cell, it is not always conclusive evidence that there are fertile workers present; sometimes a very ambitious young queen, in a small colony, will lay two or more eggs in a cell; but they will be found fastened to the bottom and not to the sides.

Every apiarist should keep track of all colonies during the season, and see that each one has brood of the right age to rear a queen at any time, and fertile workers will rarely, if ever, be found. If fertile workers are discovered before they get any of their own brood capped, it is quite possible to save them, if a little care and caution is exercised in giving them a fertile queen, or if you have a young virgin queen just hatched, introduce her. Another good plan is to give them a queen cell (protected with a cell-protector) that will soon hatch.

In hiving a new swarm, it is a good idea to give them a frame of unsealed brood, as it greatly encourages them to stay; also, if the swarm came out without a queen, they will stay and make a queen from this unsealed brood, and rapidly grow into a prosperous colony.

Bees that have just swarmed should be kept well shaded for a few days, until they are well established, and they will be all right. In the dry, sterile, foothill sections of Central and Northern California, in the spring, bees bend all their energies to swarming, and some seasons it is very hard to make them stay; their instinct seems to teach them to seek more favorable honey fields, and they accordingly strike out for them. In these dry sections, I have known bees, after being in their hives a few weeks, and drawing out eight or ten frames of comb, which was tolerably well filled out with eggs and honey, to swarm out and leave entirely.

Bees should not be allowed to swarm too much, but should be controlled as much as possible, by cutting out queen cells and giving needed room, also by proper ventilation and shading. I am aware that this will not prevent swarming, but it will keep it down to a great extent. The frequent use of the honey-extractor also tends to lessen swarming.

Bees are a great deal harder to manage in some locations than in others; the better the location the less trouble is experienced.

In good locations very little trouble by robber bees is ever experienced, but in poor locations the apiarist is continually in hot water trying to devise some method of getting ahead of them.

Therefore, if you intend to start in the bee business, try and start in a good location, where nectar-yielding flowers grow in abundance. S. L. WATKINS.

THE VINEYARD.

Careless Pruning of Vines.

TO THE EDITOR:—Having visited many vineyards in the San Joaquin valley at a time when the principal and most important operation was in progress, connected with the cultivation of the vine, viz., pruning, I observed closely all I saw and the upshot of these observations is, that not one in ten of the large vineyards, and a less percentage of the small, are correct in the methods they have adopted. Some of the large vineyards have the good sense to hire men who thoroughly understand the business, and hence the crops are all that is desirable both for wine and raisins. By making inquiries, I found the prevalent idea of the necessities in this important operation was simply to cut off all the old limbs, leaving as many buds as you please, in some cases eight to ten, for the future growth. When asked if it was not necessary to know something of the nature of the kind of grape, the answer in most cases was characteristic, "O no, not at all." But, I said, how about the prevailing wind? "O that makes no difference." Then I asked, did you not find that the grapes (muscat) became, to a certain extent, raisins before the rest of the first crop matured, by being exposed to the sun? "Well, yes, a great many of them were, and most of the exposed bunches to the windward side were dried like sticks before those that lay on the soil had time to ripen." Then by this means, you lost much? "Yes."

Then, on another occasion, I repeated the same questions and added (for I got the same reply), Should you not endeavor to prune your vines with a view of obtaining the necessary shade to enable them to ripen in a uniform manner? The answer came, "Who can you get to do this? Who will take any interest in the matter? A hired laborer will not, and as to instructions, well, it will do very well while you are watching them, but as soon as your back is turned, it is go as you please."

I replied, hire some responsible vineyard man—some man that knows his business; pay him well, and make him show you that he understands his work. There are plenty of men, French and Italian, who understand this; try them.

On a vineyard near Merced of some extent, I found a boy of 16 years in charge of this important branch of work. His only qualification seemed to be (for the work accomplished was all wrong) the amount of cheek he had and the supineness of the proprietor and his foreman. In speaking to one of the men with reference to this callow youth and his ability, he said: "You bet he knows all about it. His father has 20 acres of vineyard; besides, he has two sisters who work in a cannery every season."

Thus it is that many people are under the impression that failure is due to natural causes, when it is a patent fact that the fault lies with themselves, for they will not take the trouble to furnish themselves with information, either by learning from the study the methods of successful men, or by reading the current literature on viticulture. Some are too egotistical to learn from others; some too mean to hire the experienced help, and others who think they can find it all out in some unknown or miraculous way.

There is a great want of such journals, in most ranches, vineyards, etc., as the RURAL PRESS. If the intelligent men engaged in farming in this country would read, mark, learn and inwardly digest the words of wisdom to be found for a mere song, they would not then allow boys, with shallow pretence to knowledge, to mutilate a valuable vineyard at so much a day; in fact, it would pay any person who has the remotest regard for his vineyard, to pay such pruners (?) to keep away from the district altogether.

I will have something to say ere long on the subject of propagating by cuttings. WANDERER.

THE ORNITHOLOGIST.

Beneficial and Injurious Birds.

Each man who cultivates the ground for profit should be able to distinguish the beneficial from the injurious birds. Every woman who desires to see her grounds adorned with lovely and attractive flowers knows how unceasingly she must combat the slugs, beetles, plant-lice and other insect pests. From the moment the seed is planted till the ripe grain is harvested the farmer has to contend against loss and destruction from injurious insects. As the orchardist watches the numerous birds amid his fruit trees, he eyes them anxiously and is often in doubt which ones are doing him good and which ones harm. Some facts given below will make this more clear to the farmer and fruit grower. Europe and America lose each year in food and fibrous plants $300,000,000 from injurious insects, yet in the face of these immense losses 5,000,000 birds that keep these insects in check are annually slaughtered for feminine adornment. In a number of States, laws have been passed protecting the beneficial birds from their human enemies, and in several, fines of $2 are imposed for each bluebird, martin or swallow killed. Among the injurious insects kept in check by our birds are the strawberry borer, twig borer, a small chestnut-colored beetle that does much damage to young fruit, the woolly aphis, codlin moth, peach-root borer, sun-scald beetle, the striped squash bug, the red spider, the flat-head borer, the grape-vine hopper, the

grasshopper, the pear slug, army worm and hessian fly.

We desire below to call attention to the birds that are found most useful in keeping down these insects. The common robin is complained of as detrimental to the orchardist. Two years ago, myriads of these birds entered the olive orchards of Placer and caused a loss of hundreds, possibly thousands, of gallons of berries. It is believed they were driven to this by the unusual severity of the winter, for on a careful study of the food of these birds, it is found they are destructive to fruit and vegetables 59 1-2 days during the year, are beneficial 142 1-2 days and neutral 163 days. Meadow larks are considered by many to be pernicious, and farmers will tell you that in the spring much young wheat is pulled up and eaten by them. A careful examination of the stomachs of a large number of larks shows that their food is mostly insects, and hence the damage done is slight compared to the good they perform. Thirty larks' stomachs showed 100 seeds, 25 caterpillars, 57 grasshoppers and 80 beetles. When we consider the damage that would have been done by these caterpillars, beetles and grasshoppers had they not been destroyed, it shows conclusively that the lark should never be killed upon the farm or in the orchard, for he is a friend of the farmer and fruit grower. Owing to the small amount of nourishment that is found in these insects, birds require an immense number of them for food. E. A. Samuels, a keen observer of birds, ascertained that two robins, in a single hour, brought to their young 50 cut worms. On another occasion, in the same length of time, he counted a pair that brought to their nest 40 cut worms and smooth caterpillars.

A writer in the Lakeport *Avalanche* thus scores the bluejay: "He will raid the vineyard and steal every grape if left alone. He will perch upon the boughs of the fruit trees and stick his bill into the most luscious fruits, and what he cannot eat or carry away, he will spoil by nibbling. If you succeed in killing one, a hundred strangers come to attend his funeral and supply his place." He gave but one side of the picture, while the eminent ornithologist Audubon gives the other, when he says that two jays and their five young require for food, in 100 days, 20,000 insects that are harmful to fruit and food plants. More than 40 years ago the horticulturists near Boston petitioned the legislature to repeal the law protecting the robin from sportsmen. Prof. Jenks was appointed a judge to try the robin and ascertain whether he deserved death. He found that from March 1st to the last of April the robin lived almost exclusively upon the larvæ of the *bibio albipennis*, which was very destructive to strawberries, vines and other food plants. During May and June the robin lived upon worms and other harmful insects, while during the next two months he lived upon berries and the seeds of noxious plants. Fruit and grain had hardly been touched by him, so that when Prof. Jenks made his report the petition was promptly withdrawn. Ninety-seven years ago the forests of Saxony were almost destroyed by insects which fed upon the foliage and the tender wood. When the cause of the great increase of these injurious insects was ascertained, it was found that a war of extermination had been waged by the people upon the woodpeckers, the natural foes of these insects. In Prussia, at one time, sparrows were thought destructive to wheat, and the Government ordered as many killed as possible. Within two years such was the increase of noxious insects that the law was promptly repealed, and one was passed protecting the feathered friends of man. Wilson Flagg, a keen observer of birds, says that forest tracts in Virginia and the Carolinas were many years ago nearly stripped of their leaves by a borer of the beetle family. These beetles had been allowed to increase prodigiously by a warfare waged upon their natural enemies, the woodpeckers. A farmer's son in Ohio watched a bevy of quail in his father's corn field, and as they ran from hill to hill, he was convinced they were eating the corn. He waited an hour, and then shot one of the birds and ripped open his stomach to count the kernels of corn. He found one cut worm, 21 striped vine bugs and 100 chinch bugs, but not a single kernel of corn. Buffon, the great French naturalist, says that grasshoppers accidentally introduced from Madagascar to the Isle of Bourbon proved damaging to crops, so blackbirds were brought from India to destroy the insects. The planters saw the birds pecking so constantly in the fields that they became alarmed and at once set to work to exterminate them, at the same time declaring that they were eating up their crops. Now, the grasshoppers increased so rapidly that the farmers saw their mistake and a new lot of blackbirds was brought to the island, where they were carefully protected and in the end effectually destroyed the insect pests. At North Bridgewater, Mass., in 1820, birds were slaughtered in such quantities that cartloads of their bodies were used to manure the ground. The woods and orchards were decimated of their feathered tenants, and as a result, immense damage was done during that summer by harmful insects. The people realized when it was too late that they had slain friends instead of foes, but it was some years ere the woods were again filled with the insect destroyers.

A similar case took place in Pennsylvania in 1860, when a war of extermination was waged against larks, robins, swallows and other birds, which the people declared were eating their fruit. The killing took place about the last of May, and during that whole summer scarcely a bird was to be seen in the whole neighborhood. As a result, the cut worms ravaged the cabbage patches, whole orchards were destroyed by borers and caterpillars, and one-third of the grain crop was eaten by army worms. The farmers, when too late, realized their mistake, but it was several years before the birds had multiplied in sufficient numbers to keep in check the injurious and destructive insects. The downy woodpecker or sapsucker is considered an enemy by all orchardists in California, and is slain whenever there is an opportunity; but while he does damage by girdling the trees, yet his food consists largely of insects and grubs that are harmful to fruit. An examination of the stomach of one of these birds will show that he has killed large numbers of ants, beetles and borers, and is, therefore, entitled to consideration at the hands of the fruit growers. The ruby-throated humming bird is not a honey seeker, as many suppose, but an insect destroyer that does much good. The cranes ought to be protected by law, for their food consists mostly of gophers, mice and other enemies to the farmer. The night hawk that goes skimming through the air is one of the most useful insect exterminators, and should never be killed. There is no greater friend to man than the sparrow hawk, for he is a large feeder and his diet consists almost entirely of destructive insects, field-mice, snakes, etc. The owls are entitled to protection, for they are equal to terriers as rat exterminators. They bring large numbers of rats, mice, etc., to their young in the early part of the night, and their presence should be encouraged by every orchardist and farmer. Linnets, on the other hand, feed very largely upon fruit buds, and during the season of ripe fruit they devour peaches, figs, grapes, nectarines and cherries in great quantities. Martins and swallows feed largely upon insects, and they should be protected. The crow is a bird concerning which there is a division of opinion. John Randolph, who watched these birds carefully, would not permit one to be killed upon his lands, but recent observers declare that the crow does more harm than good. Not but what he eats more insects than fruit or grain, but because he destroys the eggs of other birds. Had these eggs been left unmolested, the birds hatched from them would have destroyed far more insects than the crow, hence from this cause he must be classed as one of the most injurious birds. Mr. Samuels, who paid special attention to the crow, estimates that he devours but one-ninety-sixth of the borers, beetles and worms that would have been killed by the birds that would have hatched from the eggs he destroys in a season.

To the list of injurious birds must be added ducks and geese, which are very destructive to grain at certain seasons of the year. It will be seen, however, that the injurious birds are few compared to those that are beneficial, and if all fruit growers knew which ones to kill and which to let live, they would in the end be greatly benefited.—S. S. Boynton in Evening Bulletin.

THE FIELD.

How to Exhibit at the World's Fair.

Chief Buchanan, of the Department of Agriculture, has issued rules for the guidance of intending exhibitors at the World's Fair in that department. These rules have been approved by all the necessary authorities, and should be carefully examined by all our readers who desire to enter their produce in the regular classes for competition. The regulations are as follows:

Articles intended for exhibition will be admitted to the agricultural building on and after Nov. 1, 1892.

All exhibits, except those of a perishable character, must be in position on or before April 20, 1893. Vegetables and other perishable products will be admitted during their season, and may be replaced with fresh specimens when found necessary by obtaining a special permit from the Chief of the Department.

The Chief of the Department reserves the right to order the removal of any vegetable or perishable exhibit contemplated by rule 2, where the exhibit is not properly cared for. Arrangements can be made with the Chief of the Department for the sale of such perishable products as may become necessary to comply with this rule.

A special display of sugar beets will be made during the two weeks beginning Monday, Oct. 9, 1893.

A special display of potatoes and other tubers will be made during the two weeks beginning Monday, Sept. 11, 1893.

The space granted an exhibitor will be indicated on the permit in feet and inches, together with its location. It may be utilized in such a manner as the exhibitor may think best in arranging his exhibit, under the direction of the Chief of the Department, subject to the approval of the Director-General, in accordance with the following specific regulations:

All platforms must be of uniform height, namely, eight inches. All railings and counters must be uniform, namely, 36 inches above the floor. No partition will be permitted exceeding 6 ft. in height above the floor. Space will be computed to an aisle or to some definite point, and all railings and ornamentation are to be included therein. No distinct form or design is prescribed for the construction of counters, railings, etc., for the arrangement of an exhibit (columns, pyramids, cones, etc.), except that a drawing to a scale of one-quarter of an inch to the foot must be submitted by each exhibitor to the Chief of the Department, showing elevations, construction, material to be used and the arrangement of his exhibit so far as possible. This design must be approved by the Chief of the Department before such exhibitor will be permitted to proceed with the installation of his exhibit.

MUST FIRST GET A PERMIT.

The permit for space issued to an exhibitor must be presented and properly stamped at the office of the Chief of the Department before the exhibitor begins preparation for the installation of his exhibit. Provision will be made for the storage of empty boxes and cases immediately after unpacking.

It is required by the Director-General that exhibitors begin work on the space assigned them at as early a date as practicable, so that the installation may be rapidly carried on after the arrival of an exhibit at the exposition.

Exhibits of cereals and other farm products must be accompanied with the following data and information: Name of object; name of producer; place where grown; character of soil; date of planting; quantity of seed planted per acre; method of cultivation; date of harvesting; yield per acre; weight; price of product; nearest home market; average temperature by months for the time intervening between planting and harvesting; average rain or snowfall by months for the time intervening between planting and harvesting; was exhibit produced by irrigation.

CONDITIONS OF THE DAIRY EXHIBIT.

Dairy products will be received for exhibition only between the 1st and 10th of the following months: June, July, September and October, 1893.

The arrangement of all dairy exhibits will be under the control of this department.

Exhibits of butter will be classified and limited as follows:

(1.) Dairy butter made by exhibitor on the farm from a mixed herd. Exhibit to consist of not less than one package; weight to be not less than 10 pounds nor more than 20 pounds.

(2.) Dairy butter made by exhibitor on the farm from a herd of one breed. Exhibit to consist of not more than one package, weight to be not less than 10 nor more than 20 pounds.

(3.) Prints and fancy packages butter must be manufactured by exhibitors. Exhibits to occupy space not exceeding 18 inches square. Total weight of exhibit not to exceed 20 pounds.

(4.) Creamery butter made by exhibitor from the milk of mixed herds from cream separated from the milk in the creamery where the butter is made. Exhibit to consist of one commercial package, to weigh not less than 55 pounds

(5.) Creamery butter made by exhibitor from gathered cream. Exhibit to consist of one commercial package to weigh not less than 55 pounds.

(15.) Exhibit of cheese from the United States and Canada will be classified and limited, as follows:

(1.) Factory cheese—Cheddars, exhibit to consist of one cheese, diameter not less than 14 nor more than 15 inches; height not less than nine inches; weight to be not less than 60 pounds. Flats, exhibit to consist of one cheese, diameter not less than 14 nor more than 15 inches; weight to be not less than 30 nor more than 35 pounds. Young Americas, exhibit to consist of four cheeses in one package, total weight to be not less than 35 nor more than 40 pounds.

Domestic Swiss, exhibit to consist of one cheese, weight to be not less than 30 pounds. Brick cheese, exhibit to consist of six bricks in one package, total weight to be not less than 20 nor more than 30 pounds.

(2.) Dairy cheese, made by exhibitor on the farm from exhibitor's own herd. Exhibit to consist of one cheese, weight to be not less than 30 pounds.

(16.) Cheese other than that mentioned offered for exhibit from the United States and Canada, and all cheese offered for exhibit from points ontside the United States and Canada, will be subject to such limitations and restrictions as may be decided upon by the Chief of the Department at the time application for space is made.

(17.) All cheese exhibited from the United States and Canada known commercially as "American" and "Canadian" cheese must be manufactured of full new milk.

(18.) Cheese that has been cut, bored or tried in any way will not be admitted for exhibition.

(19.) All cheese will be divided into two classes, that made previous to the year 1893 and and that made during the year 1893, and will be judged on the following points, the figures set opposite each indicating the maximum per cent, the total of all such maximums making 100:

Flavor	45	Make-up	10
Grain	20		
Color	15	Total	100
Salting	10		

THE BUTTER AND WOOL EXHIBITS.

(20.) Butter will be judged on the following points, the figures set opposite indicating the maximum per cent, the total of all such maximums being 100:

Flavor	45	Packing	5
Grain	25		
Color	15	Total	100
Salting	10		

The general standard for butter will be "June grass butter."

Special blanks will be furnished by this department for the use of exhibitors of dairy products.

(21.) Exhibits of wool will be classified and limited as follows:

(1.) Pure bred fine wools.
(2.) Pure-bred middle wools.
(3.) Pure-bred long wools.
(4.) All cross-bred wools.

The following entries can be made in each of the above classes: First fleeces from lambs, fleeces from animals under two years old that have been sheared, fleeces from animals over two years old.

Entries in any of the above classes to consist of one fleece in the natural condition taken from the animal. Exhibit to be neatly folded and secured against injury in handling and to be accompanied by the following information: Sex of animal, breeding of animal, age of animal, date of shearing, weight of animal after shearing, age of fleece in days, gross weight of fleece at shearing.

(22.) Exhibitors of agricultural and other machinery comprised in the classification of this department must furnish a drawing, to a scale of one-quater of an inch to the foot, of the plan and distribution of their exhibit, and must state the actual horse power required for each machine, diameter of steam, water or gas pipes (if any), and must state whether water, gas or steam is necessary in connection with their exhibit. Power will be supplied from shafting having 120 revolutions per minute. Pulleys to be placed on main shafts must be balanced in halves, and must not exceed two feet in diameter, and must be secured in a manner satisfactory to the Chief of the Department. All pulleys, countershafting and belting must be furnished by the exhibitor, and all connections will be made at the exhibitor's expense.

(23.) Exhibitors must assume the supervision and responsibility of all gearing supplied by themselves.

(24.) Exhibitors of traction and portable engines, wishing to show them at work, should so advise the Chief of the Department on making application for space.

(25.) All freight and other charges for the delivery of an exhibit intended for this department must be prepaid by the exhibitor at the point of shipment.

26.) Right to amend or add to above rules is reserved.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Have a special commlttee in each Grange on "Woman's Work." The women of the Grange will do much to keep up the interest in every meeting. Call on them for a report under the heading "Reports of Special Committees." Ask them to communicate with the like committees appointed by the State and National Granges. Give the women of the Grange a chance and you will be surprised to see the work they will do for the good of the Order.

Write to E. J. Wickson, State University Berkeley, for full particulars about having and holding a Farmers' Institute. Hold an Institute in your town or county! Try one, it costs you nothing.

Do you study the science and art of agriculture, as you would expect an attorney to study and present your case in Court? If not, why not? There is as much study required of a farmer who would know about his business and succeed with it, as is required of the lawyer who would know about your law-suit if he would succeed with it. Study cooperation, study soils, study products, study the world's markets, study yields, study money values, study laws affecting buyer and seller, shipper and insurer, study transportation, if you hope, as a farmer and as one who produces to succeed. The vocation of the farmer is one that requires the work of the student as well as of the laborer.

The Agricultural Bulletins of the State University ought to be read by all who love their calling or who believe in education.

The County Assessor will soon be out to see you. Receive him kindly. Ask him if he is going to assess city property, both personal and real, on the same footing that he is assessing country property. No doubt he will say "yes." Then look to it this summer that the John Does and Richard Roes who have fine buildings and large stocks of goods in the towns and cities are properly assessed. Fairness and Justice will hurt no one. The burdens of Government should be, as far as possible, equally distributed. Look to the assessment in your own county, fellow Patrons. You will find the rich are escaping a big lot of the burden of taxation right in your own county. Remember that "Charity begins at home," but that one must not be dishonest even with his charity.

Within the coming three months, the "cunning politician" will be at his old tricks. The political pot will be boiling. Already the campaign fires are lighted, and it is surprising to see how many firemen are ready to offer their services and to contribute their fuel that the blaze may be so bright that the political party to which they belong may see them in the light of a nomination for office. In the meantime, these politicians are asking one another, and no doubt they are asking you, good reader, "What do the farmers want? What are you farmers going to do in this campaign?" To these politicians, I think we can all say: "We want honest, competent, working tax payers in office. We want men who will represent something besides themselves; men who will represent homes, ideas, principles, honor, manhood; men who will not 'cinch' or be 'cinched;' men who know right from wrong, and who, without the fear or the favor of corporations, political parties or bosses, will dare to vote, act and speak as the dictates of an honest conscience direct. And we are going to vote for men, without regard to political affiliation, who will aid in reducing the public expense account; who will do the business of the county, of the State and of the nation in a spirit of fairness to all persons, and who will not use their official position to dishonestly promote their own ends and the welfare and bank account of the members of their own family." The farmers are willing to bear their full share of tax burdens, and they insist on having their full share of honors, of emoluments and of protection offered by the Government. Nothing more is wanted; nothing less will satisfy.

Eureka Grange.

TO THE EDITOR:—Upon the suggestion of Past Master Overhiser, Eureka Grange decided to hold two meetings a month hereafter, on the first and third Saturdays of every month, the first meeting to be held in Edgewood schoolhouse in the evening, commencing at 7:30, and the second at I. O. O. F. Hall, in Auburn, at 10 A. M.

Our officers for the ensuing year were all installed but one last Saturday. With the addition of several new members, and the good words and impressions left by Bro. Overhiser, the Grange has taken up a more active life than ever before. We hope to see the Grange prosper as it never did. The writer has retired from the guiding position, and is now more at liberty to write to the RURAL the doings of our Grange. The labors as Master are done, but the activity of one deeply interested in the principles of our noble Order shall not cease. Whatever lies within my power to do will ever be cheerfully done.

What a feeling of fraternity is evinced at the announcement of a brother or sister! What are the joys of meeting one connected in a brotherhood! And yet so many forget to visit other Granges. Why, sisters and brothers, do you not visit more? Keep posted upon the time and place of meetings of other Granges, and drop in for a few minutes whenever you have business in their vicinity. Try it. Try it this year, and you will at its end be a better Patron than you ever were. Fraternally, B. A. GIANTVALLEY.

ENTERPRISE GRANGE, Sacramento Co. expects to hold their annual re-union in April, in lieu of a special meeting as proposed by the Ex. Com.

LOCKFORD GRANGE expects to return Washington Grange a visit February 20th.

The Noble Cause of the Grange.

The following was read by Mr. E. C. Hayden before Washington (Oregon) Grange, February 8th:

"Some say 'one cannot be a Granger and be a Christian.' Others say 'we must mingle with all sorts of people if we join the Grange,' this has been said to me. Now, if the good people who say those things knew what our obligations are, they would know that even if they did see a black sheep in the flock, that it is not simply because he or she is a Granger. And where will they find an organization of any kind, even a church, with no black sheep?

"But, my dear brothers and sisters, if we are more careful to study the real weight of our obligations and live up to them as near as possible, perhaps we may induce our should be friends to think differently, and perhaps our work would be more prosperous; if we will, we can live up to the mark.

"We should be very careful whom we admit to our Order, for, if a worthy person sees an unworthy person admitted, the worthy one will most likely stay out.

"Just think what a noble cause is ours, and it requires a noble and determined mind, as well as a strong and determined will, on the part of every one of us, to accomplish the good work well begun. So, let us all lift and pull together, shoulder to shoulder, hand and hand, not waiting one for another. In so doing, our work will be accomplished harmoniously, and with ease and pleasure, especially if the work is well spiced with fun, as is our wont, for amusement is as cheering as music, and music cheers the poor soldier through the hottest battle.

"If we do this, we will, some day in the not distant future, see that we have won a glorious victory in lifting a burdensome yoke from off the necks of millions of poor white slaves to monopoly, and I fancy we will have done almost as noble a work as that of freeing the colored slaves, without having to put ourselves up for a target to be shot at, or live on half rations. No, indeed, we have plenty to eat and the most of us pleasant and comfortable homes; why, then, can we not make a little sacrifice for the future happiness of the farmer, "the man who feeds us all."

Sixth Degree Certificates.

Recently, seventy-six certificates for the Degree of Flora were mailed to members who received the Sixth Degree at the State Grange in Haywards. Where there were two or more in the Grange, the certificates were mailed to the secretary of the subordinate Grange. If any have failed to receive their certificates, they are requested to notify the secretary of the State Grange.

DEATH OF MRS. ELIZABETH RISTINE.—Memorial resolutions have been received from the Committee of Potter Valley Grange (Laura B. Sierby, H. P. McGee and W. Kilbourne) on the death of "Grandma Ristine," who died on the 11th of January last, at the age of 79 years. The members of Potter Valley Grange deeply sympathize with the relatives in their sad bereavement by the loss of one whose cheerful face and voice will be greatly missed.

SOUTHERN COAST GRANGES.—Hon. Geo. Steele, of Arroyo Grande Grange, in letter of Feb. 15th, says: "Our Grange will do all that it can to assist the work in this portion of the State." Bro. Steele suggests that the special meetings be held so as to allow the visiting officer to meet the Granges on consecutive days through Monterey to San Luis Obispo county. Arroyo Grande is nearest to the southernmost Grange now in the State, viz., Carpinteria, in Santa Barbara Co.

NEW SECRETARY.—On account of poor health and increased business cares, C. E. Mack, Jr., the able and efficient Secretary of Sacramento Grange, has resigned his position. Our readers are under many obligations to Bro. Mack for his inimitable Grange reports and correspondence. We hope that with improved health he will soon write for our columns again. Elmer G. McMullen, Bro. Mack's successor, we hope will favor us with items of interest.

SPECIAL MEETINGS. — About thirty Granges have answered the circular sent them regarding holding a special meeting soon. With two or three exceptions each has expressed a desire to have a special meeting to be attended by some State officer. The letters received are now in the hands of the Worthy Master, who will in due time arrange for the contemplated visits. Early word is now desired from the rest.

ON Jan. 30th Representative Davis, an Alliance member of Congress from Kansas, introduced a bill authorizing the erection of the postoffice buildings in places of more than 3000 inhabitants, and in places of less population where such place is a county seat, the building is to cost not less than $6000 nor more than $50,000. In the second stories of the buildings there shall be public libraries.

WISCONSIN VISITORS.—L. F. Rogers, of Milton Junction, Wis., and wife, old neighbors of S. C. Carr, P. M. of Wisconsin State Grange, recently visited Temescal Grange. The fraternal greeting was enjoyed by all. Bro. and Sister Rogers, who have been visiting their son, Dr. D. W. Rogers, of Oakland, started home via. the Southern route, intending to call on Dr. E. S. and Jennie C. Carr at Pasadena.

BATES DE HART, P. M., Hollister, had a serious breakdown lately, crushing his foot and several ribs. He writes in good grit and with satisfaction to friends, that they may expect him at the next State Grange session in San Jose.

J. E. REAMER, librarian of the W. P. C. Association of San Francisco, appreciatively returns acknowledgment for copy of annual proceedings of the State Grange, which has been placed in the library.

WORTHY MASTER DAVIS writes, Feb. 15th: "I go to Sebastopol Grange on the 20th. Santa Rosa Grange gives a social Friday night for the benefit of their piano fund. Am very busy with farm and vineyard work."

FURTHER GRANGE MATTER will be found on page 170 of this issue, in Bro. Amos Adam's address on "The Grange and Its Relation to Class Legislation."

FARMERS' ALLIANCE.

A Statement From the National Secretary.

Men often speak when their utterances are the legitimate offspring of their wishes. Some say that the Farmers' Alliance is going to pieces because it is favoring the People's party; others say it is going to pieces because some are trying to hold it in one or the other of the old parties, but the facts, as they are coming to my office every day, prove that both are wrong. By observing closely, I find that we have men in our Order who would gradly see it sink into oblivion if thereby their individual political fortunes could be built up. Beware of the men who are howling themselves hoarse to prove that the Alliance should stay in the Democratic or republican parties to accomplish its purposes, and be equally guarded against a similar class who would have you believe that the only road to success is for the Alliance to go into the People's party.

When a man talks party, give him a deaf ear, but when he talks reform as laid down in the Ocala demands, listen to him and aid him in every possible way, for this is the duty of every good Alliance man. As an organization, let us quit talking party and spend all our time and energies in educating the people, and when education has done its perfect work, we need have no fears, for the people are determined to take care of the party that takes care of their principles. Reports from the County Alliance meetings all over the country are very encouraging. Every mail brings the cheering news that "Our county is solid for the Ocala demands, and we will not vote for any man or party that does not adopt them." I am also very much gratified at the way the Sub Alliances are responding to the call for a "propaganda fund." It is coming from every State in amounts ranging from fifty cents to ten dollars. This fund will enable us to push the work of education as it has never been before, and good will inevitably result.

Face to the front and pass it down the line, that by the help of God we are in the Alliance to stay till victory perches upon our banner and the people get relief. Fraternally, I. H. TURNER,
Sec'y N. F. A. & I. U.

Alliance Cooperation.

Los Angeles Farmer.

The members of the Farmers' Alliance in this section are getting ready to work out their cooperative plans, and yesterday articles of incorporation were filed in the county clerk's office for the Alliance Cooperative Exchange. The design of the new exchange is to provide ways and means for the handling and disposing of the products of the members of the Farmers' Alliance to the best advantage.

The exchange will erect factories for canning and drying fruits, and store houses for the storing of fruits and vegetables, and such other establishments as may be required. They will conduct a commission merchant business and make all arrangements for the shipment of the farm products of the members.

The principal place of business of the exchange will be located in Los Angeles. The following board of directors have been elected for the exchange: Thomas Wardall, Duarte; Jacob K. Bashen, Covina; W. H. Carlin, Colegrove; Joseph Lucas, Compton; J. W. Hains. The new exchange will commence operations as soon as possible.

Los Angeles Alliance Resolutions.

The Los Angeles Alliance adopted the following resolutions at its last meeting:

WHEREAS, We are bound together for self-protection against the ward strikers, politicians and money kings,

Resolved, That this County Citizens' Alliance indorses the action of Judge Wallace in his noble effort to see crime where it justly belongs, regardless of rich or poor, and believe him to be a true, honest and impartial judge and worthy of our confidence and esteem, and

WHEREAS, Marion Cannon, President of the California State Farmers' Alliance, has raised his voice in warning against the gigantic conspiracy known as the Nicaragua canal scheme, and

WHEREAS, It would rob the taxpayers of the United States of over one hundred millions of dollars to build up a gang of money kings,

Resolved, That this County Central Citizens' Alliance of Los Angeles county hereby indorses the action of President Cannon in denouncing this gigantic scheme.

President Cannon's Story.

At an Alliance meeting held last Saturday night in Avenue schoolhouse, reported in the Ventura *Democrat* of the 12th inst., President Cannon told the following story: "An old darkey down South, got religion in the intensest form, and in obedience to that spirit was on his way to church one evening, when in the midst of his pious meditations he espied a few fat turkeys roosting low on some limbs hard by. When he got home from "meetin" he spent a long and laborious hour supplicating the good Lord to bring him one of those fowls, but nary a bird came. He then took a new tack and prayed more fervently than ever that the blessed Lord would direct him to the roost in his dreams and enable him to secure one, and as he himself expressed it, "de very next morning dat turkey was in de cellar."

STATE SECRETARY BARBEE of the Farmers' Alliance states that from one to six Alliances are being organized in this State a day. The total number of Alliances in California now reaches a total of 524.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

AN OLD ORCHARD.—Gridley *Herald:* George and Prescott Thresher's father settled here in 1852, and here the "boys" have lived ever since their birth. The elder Thresher was only possessed of a comparatively small tract of land, but he made the location and his sons have profited thereby. Now a splendid farm of 750 acres is under their control. The home is built near the river upon high ground and is surrounded by magnificent trees, both native and foreign. One of the first orchards in the country was set out, now many years ago. Pear trees, now old, are bearing heavily, some of them from 600 to 1000 pounds to the tree, proving the adaptability of soil and climate. The Threshers have some 60 acres in fruit trees, including an olive orchard of 15 acres, three years planted. Twenty-five acres are in pears only a year or two planted. To show the quality of the land, it may be stated that the ground between the pear trees was planted to potatoes last year, turning off 2100 sacks, which shows pretty well for a half crop. Not far from the house may be found the oldest olive tree in all the country round about. It is extremely thrifty and filled with fruit. A Hermosa orange tree stands near, pretty well filled with fruit, healthy and bright, although it has had no extra attention. A small "patch" of blackberries of extremely vigorous growth serves to emphasize the fact that anything grows with great luxuriance here. Prunes, peaches, apricots, walnuts, almonds, may be seen, all adding their testimony to the same effect.

FAVORABLE FOR GOOD CROPS.—Oroville *Register:* A farmer who has been growing grain in this valley for many years says the outlook this year is for an excellent crop. The cold weather is causing the grain to stool out, and there will not be the rank growth of straw there was last season. He asserts that when the grain grows very vigorously the heads do not fill out and the yield of grain is considerably less than during seasons when the growth of straw is only medium.

Fresno.

USING GYPSUM FOR FERTILIZING.—Fresno *Californian:* Some of the colonists of Central and Washington Colonies, whose lands have become too strongly impregnated with alkali, are trying the experiment of hauling gypsum from the Coast Range, about 45 miles distant. Gypsum is found in great quantity in the coast mountains, and may be had for the mere hauling away, and being such an excellent neutralizer of the evil effects of strong alkali, and a first-class fertilizer even where no alkali exists, it is quite likely that the experiment of hauling it by teams will prove profitable to those who are able to do their own teaming. Freight rates are too high to justify bringing gypsum out on the Huron branch of the Southern Pacific.

Kern.

ROSEDALE GRAIN NOTES.—Cor. Bakersfield *Californian:* It is said that from 5000 to 6000 acres of land in this vicinity have been seeded to wheat this season, upon which the recent rain has had a most beneficial effect. The sprouts have taken a fair start, and so have wild flowers.

FIGS AND FROST.—C. Brower in Bakersfield *Echo*: I notice in your last issue the discouragement of Mr. L. S. Harmon, in the Rosedale district, over the loss of his young fig trees by frost, and his conclusion to replace them with a hardier fruit. This is a mistake, so far as his fear of the non-adaptability of the fig to the climate is concerned. It is no new thing to have young figs killed by frost in the San Joaquin valley, and still there is no place where the fig is more satisfactory in growth and fruiting. The writer has in his grounds adjoining Bakersfield a number of very large fig trees, some 15 years of age, which bear regularly immense crops of fruit, and still he found it necessary to protect them slightly for the first year or two. He has also a five-acre orchard planted on the warmer lands of Rosedale, which, like our friend Harmon's, were killed to the ground by the unexpected severity of the present winter, but he will by no means abandon them for this reason. They will spring up readily from the root and make a splendid growth next summer, and he will then take the precaution of protecting them during the following winter. This is a very simple and inexpensive matter; a mere handful of tules or flags, tied around the bodies, or on the sunny side, will carry them through safely, and the slight freezing, if any, at the tips of the limbs, will work no injury.

Los Angeles.

CROP PROSPECTS.—L. A. *Herald:* We have interviewed a number of leading farmers in order to get their views about the agricultural outlook. They all declared that the rains have come at a time when they would do the most good, and that the yield of the field and the orchard ought to be phenomenally large this season. There might, in some places, be a shortage of the acreage of grain planted, on account of the difficulty of planting dry soil early in the season; but whatever shortage there might be on that account, would be more than made up by the fullness of the crop sure to be harvested. Mr. Freeman, who is among our very largest grain farmers, says that the Sausal Redondo and the Centinela ranches will have nearly the usual number of acres planted, while there will be a considerable acreage of volunteer grain that can be depended upon for half a crop.

Napa.

VITICULTURAL NOTES.—St. Helena *Star:* Storehouse-keeper E. S. Gridley, who has been in charge of the St. Helena bonded warehouse during the past month, has kindly furnished us with the following recapitulation of business transacted there: Brandy on hand January 1st, 72,296 gallons; received from other distilleries, 5,149; withdrawn, tax paid, 2,078; loss allowed on tax-paid brandy, 191; transferred to other warehouses, 3,131; balance on hand, 62,045. We are credibly informed that J. H. Wheeler has just sold nearly 9000 gallons of the brandy, from the San Francisco bonded warehouse, half in barrels and the remainder in half-barrels, to a New York firm for 52½ cents per gallon. This is certainly encouraging news and should be an incentive to our wine men to hold on to their wine and brandy for the good prices which are inevitable. The San Francisco papers report that 92,500 gallons of brandy left that city Saturday for Hamburg, Germany. Our brandies are fast coming into great demand in foreign countries.

Orange.

INVESTIGATING FRUIT PESTS.—Santa Ana *Blade:* Newton B. Pierce, Special Agent U. S. Department of Agriculture, says investigations of the grape disease show that cuttings made from diseased trees show disease in proportion to the amount contained in the parent stock. As a consequence, the healthy parent vine will give a better cutting, and proportionate success to a new vineyard will result. Great pains should be taken in procuring cuttings in a region where the disease does not already exist. In many instances, viticulturists gather cuttings from different localities, and due care should always be taken to the health of the vines from which the cuttings are taken. This object is not always kept in view, and with bad results. The professor is engaged in a study of the fig disease. The fruit is found to ferment both on the tree and on the drying board. Especially is this found to be the case when the soil is damp and wet, and where the trees have received too much irrigation. The direct cause of this fermentation is found to be yeast contained in the fig, and the indirect cause is ascribed to moisture, which affects the sugar of the fruit and produces fermentation. The professor displayed cuts of figs on the branch and on the drying board, in which is displayed the different stages of fermentation produced by incubation of yeast, and the study of the process is a most interesting one. All these experiments are being constantly carried on by Professor Pierce, and the results cannot help but be of the utmost use to the Department, and a great aid to the future extermination of diseases that have been detrimental to the successful cultivation of the grape and other fruits in this country.

Sacramento.

SUGGESTING DATES FOR MAIN RACING CIRCUIT.—Sacramento *Bee:* At the meeting of the directors of the State Board of Agriculture, it being developed that individual members of the board having been spoken to by the directors of the various Agricultural District Associations in the main racing circuit, on the subject of suggesting a schedule whereby such associations that have pavilion displays could be accommodated by dates which would enable them to encourage exhibits in this department, it was ordered, on motion of Director LaRue, that the State Board—merely as a suggestion—present the following schedule of dates: San Jose, August 1st to 6th; Oakland, August 8th to 13th; Napa, August 15th to 20th; Petaluma, August 29th to September 3rd; State Fair, September 5th to 17th; Stockton, September 19th to 24th; Fresno, September 26th to October 1st.

FRUIT PESTS DECREASING.—Sacramento *News:* State Inspector Alexander Craw of San Francisco came down from Marysville and spent the last three days in visiting various nursery firms and inspecting their stock. Mr. Craw reports a great improvement in the condition of fruit trees in this locality, and expressed the opinion that it would only be a matter of a short time when insect pests would be driven from the orchards of the Sacramento valley. Several large orchards were visited on the river. Among them were a number of pear orchards which a few years ago did not produce enough salable fruit to pay expenses, but with the introduction of improved spraying solutions the trees have been cleansed of vermin, and last year yielded enormous crops. Mr. Craw found the trees perfectly clean and bright and in a vigorous condition. The new growth, heretofore very small, was in some instances sufficient to give the tree an entire new top. He gives it as his opinion that the orchards on the river never were in better condition to insure a large crop of fine fruit than now. A marked prosperity among the fruit growers was also noticeable over that of a few years ago. The same favorable condition of affairs was found about Marysville and other northern points visited.

San Bernardino.

BEET-PLANTING.—Chino *Champion:* The weather is now first class, and the soil could not be in better condition for farm work. In fact, the prospects for the farmers never looked brighter than they do now. Four beet seeders have been kept busy this week, and there are now about 300 acres planted to beets. Planting will now go steadily on at the rate of at least 300 acres per week until the entire 4000 acres are planted. Mr. Gird's steam plow is at work, plowing about 35 acres every day, besides a number of teams and gang plows, which are plowing about an equal amount. It is one of the most animated scenes one can look upon on a ranch nowadays, to see the numerous teams on gang plows, the steam plow turning up the soil and a number of beet seeders placing the seed in the ground at the rate of about 50 acres per day. By daylight every morning the ranch hands are astir, and soon the heavy draft teams are at work on the plows and seeders. These farming operations are much more extensive than those on any other single ranch in California where intense cultivation is employed. The first planting of a few acres is now well up and about ready for thinning. As soon as this work commences in earnest, Chino will again be the liveliest place in Southern California, and so continue throughout the season.

San Diego.

SILK CULTURE.—*San Diegan:* In a circular issued by the Ladies' Silk Culture Society of San Diego county, the following statement is made: "A mulberry orchard of one acre may contain 1210 trees. The second and third years they will support some worms, and the fourth year one acre, well cared for, will support the worms hatched from six and one-half ounces of eggs (40,000 to the ounce), and yield a net profit of $226.25 if the cocoons are sold. If they are converted into silk the acre will net $357.50, allowing $1.50 per day to each laborer except the reeler. In this State the regular wages paid for reeling is $40 per month. An expert can reel one pound of 16 ounces per day. The mulberry tree should be pruned low every year after the warm season is over, i. e., in June. They are a clean, long-lived, healthy tree. The roots strike deep into the ground. They bear two crops of leaves yearly. There are many varieties. The Morus Multicaulis is the best for early feeding, as it comes out first in the spring. The Morus Alba furnishes the best silk. The Morus Tartarica (or White Russian) furnishes a strong silk. All kinds of mulberry grow rapidly here, either as orchard or forest trees. The orchard is best for silk culture, requiring less labor in securing the leaves, and yielding more to the acre. They do not require as much irrigation as most other trees."

Solano.

RECLAIMED LAND.—Rio Vista Cor. Dixon *Tribune:* A number of prominent farmers from this and other counties have recently inspected the new reclamation district and they are unanimous in the belief that when the directors have accomplished what they have set out to do, they will have a veritable Eden within their levee walls. The land cannot be excelled for productiveness in the world, and it is only necessary to keep it clear from water. The reclamation operations will cost a vast sum, but the farmers will be able to recoup themselves in two seasons' crops.

CROP PROSPECTS.—*Tribune:* There is some complaint among the farmers on account of the light rains, but the general impression seems to be that the rainfall will be ample to insure a crop. The grain is looking well and with the usual spring showers there need be no cause for apprehension. The tule farmers, as well as those living on the higher lands, have sown a larger area than usual this year. If even a fair crop is obtained there will be a larger quantity of grain in the country than in ordinary years. Taken as a whole, the farmers of northern Solano have not as yet any cause for complaint.

Sutter.

ORCHARD NOTES.—Yuba City *Farmer:* The season is opening for grafting and from indications there will be considerable work of that kind done this season. New varieties of fruit coming in and creating a preference in the market for the same, the fruit growers find it more profitable to cut down large trees of varieties not exactly suited for large profit, and graft on the new varieties. In the line of peaches the grafting this season will run mostly to the Orange, Phillips and Runyon Clings. There will be a large amount of grafting done in some of the large vineyards where wine and table grapes will be cut back and the seedless raisin varieties grafted. The demand for spraying material is great this year as every orchardist is alive to his own interests and understands that he must take action to destroy the injurious pests that are attacking the fruit trees. The thorough work done in this line last season has about eradicated the scale from many of the larger orchards, and although only a few trees are found infested in many orchards, all the trees are thoroughly sprayed to leave no room for a doubt as to their healthy condition. The orchards in this vicinity certainly show the benefiting effects of the spraying. Our enterprising nurseryman, Jas. T. Bogue, who is alive to the present situation regarding the necessity of eradicating injurious pests and insects detrimental to the fruit interests, on last Tuesday burned the entire lot of Simon plum trees recently quarantined by the County Horticultural Commissioners as being infested by the Eastern peach root borer. There were 1900 trees in the consignment. Mr. Bogue is to be commended for his prompt action.

Sonoma.

DRIED FRUIT FOR LONDON.—Sebastopol *Times:* As representative of Sonoma county at the citrus fair held recently at Auburn, Placer county, Mrs. F. Purrington gave 250 pounds of dried fruit to be sent by the board of trade to London, England, as samples, with a view to opening a market there for California dried fruits. Mrs. Purrington visited this place Friday in that interest. Messrs. G. W. Huntly, C. Wightman and others responded liberally, and it is to be hoped that more than the promised amount will be donated.

Tulare.

FARMING ON A LARGE SCALE.—Visalia *Times:* J. J. Cairns of Lindsay is planting 18,000 acres to wheat this season. In order to give our readers some idea as to the size of this ranch, we will say that it only lacks 1306 acres of being as much land as was cultivated to wheat in 1887 in the States of Nevada, New Hampshire, Massachusetts and Connecticut. The following information was given by Mr. Cairns, and will prove interesting: When the first rain fell about the 18th of December Mr. Cairns had 4000 acres of grain sown. Since that time he had plowed and planted up to February 5th about 12,000 acres. He is working 65 men and 320 head of mules and horses. By the latter part of this week he will finish sowing, as he plows about 300 acres a day. The men are boarded and lodged at three camps located conveniently to the land that is being plowed. At one of these camps he has a canvas barn in which he keeps 150 head of horses. It requires the services of a bookkeeper to look after the accounts, while three blacksmiths are kept busy during the planting and harvesting season. Mr. Cairns does not summer fallow any of his land, planting it all every winter. Harvesting usually begins about the 15th of June, but some seasons it is commenced as early as the 25th of May. Mr. Cairns will gather the grain from his 18,000 acres this year with two steam harvesters, which make a cut of 26 feet each, and a horse power harvester, which cuts 16 feet. In addition to these he has 15 header wagons. It takes about the same number of men and horses to harvest the crop that it does to put it in. In 1890 Mr. Cairns was five months and 15 days harvesting 18,000 acres. Mr. Cairns says: "The farmers are putting their land in better condition this year than I have ever seen them do before, and the season so far has been better and the outlook to-day is more flattering for a good crop than I have ever seen since I have lived in Tulare county." Mr. Cairns is keeping a close account of the cost of planting his crop, and will also know exactly what it costs to harvest it.

FARM AND ORCHARD NOTES AT EUREKA.—Cor. Hanford *Sentinel:* The Solano Fruit Farm is looking well under the new management. Messrs. Dunlap and Porter are making every stroke count one, and the ranch looks as if the managers understood their biz. J. G. Mackey is through sowing grain, and has men and teams now on the roads. He will have them all in good order before he leaves them. George Tomer is in the vineyard business this year. He has Mr. Jacob's vineyard on the Wilson ranch partly pruned and plowed, and is this week on a vineyard near Lemoore.

Yolo.

A NEW DAIRY.—*Democrat:* C. P. Balzari, who recently disposed of his dairy to Johnson Bros., will again engage in business. This time he will devote his attention to butter-making, and will start a dairy on his farm in Willow Oak Park. He has already erected a large brick milkhouse, and will purchase the latest improved devices for manufacturing butter out of pure, rich cream. The dairy will be one of the finest in the State.

RAIN NOTES.—Woodland *Democrat:* Farmers in the southern portion of the county inform us that they have not yet received sufficient rainfall to make the land plow well, while those in the northern part say that they have had all they want for the present.

CROP PROSPECTS.—*Democrat:* Many men who have studied the situation say that Yolo will have an average crop, no matter whether the season be a dry or a wet one. If it is a dry season, the tule farmers—and there are many of them—will have a big harvest. If the usual amount of rain falls, the farmers on the highlands will have abundant crops. It is possible to have a heavy rainfall without drowning out the tule farmers, if the precipitation is properly distributed throughout the remainder of the season. In that event, both the highland and the tule farmers will strike it rich.

HIGH FREIGHTS AGAINST THE RAISIN INDUSTRY.—Woodland *Democrat:* Mrs. G. G. Briggs, who owns the largest raisin vineyards in Yolo and Solano counties, has just returned from Fresno county, and is not in a hopeful frame of mind over the outlook for the raisin industry. High freights and low prices have made the season very unprofitable. During her visit in Fresno county, she met many people engaged in the industry who are much discouraged on account of the prospects. One man told her he would have to give up his vineyard if low prices prevailed for another season, and she thinks many vineyardists are threatened with the same danger.

Yuba.

SEVENTEENTH DISTRICT AGRICULTURAL FAIR.—Marysville *Democrat:* The Seventeenth District Fair will begin on Tuesday, August 30th, continuing five days, and will not conflict with any of the other fairs, the dates for holding which have been agreed upon. The State Fair will open on Monday, Sept. 5th, the week following our local fair. It is understood that the Willows, Red Bluff, Chico, Marysville and Nevada associations will advertise their fairs and premiums together. By such an arrangement, the advertising will be more general than usual.

THIRTEENTH DISTRICT FAIR.—Marysville *Appeal:* The week preceding the State Fair has been selected as the time for holding the next District Fair in Marysville. At a meeting of the directors, general plans were formed that should promise as a result one of the most successful fairs that the district has ever known. W. T. Ellis Jr. was elected President of the Association; A. D. Cutts, Treasurer, and G. R. Eckart, Secretary. The election of a Vice-President was passed for the present, and the meeting adjourned to the call of the chair.

THE TREE BUSINESS.—Marysville *Democrat:* The demand for nursery stock in this vicinity has never been as great as at the present time, and every purchaser wants a guarantee from the dealer that the trees bought are entirely free from insects or diseases that are injurious. This is correct, and in accordance with the sentiment which prevailed at the late meeting of the horticulturists in this city, as voiced by resolutions, and which instigated the bill of Representative Caminetti, mentioned in another part of this paper.

The Home Circle.

Secret Thoughts.

I hold it true that thoughts are things
Endowed with bodies, breath and wings,
And that we send them forth to fill
The world with good results—or ill.

That which we call our secret thoughts,
Speeds to the earth's remotest spot,
And leaves its blessings or its woes
Like tracks behind it as it goes.

It is God's law. Remember it
In your still chamber as you sit
With thoughts you would not dare have known,
And yet make comrades when alone.

These thoughts have life, and they will fly
And leave their impress by and by,
Like some marsh breeze, whose poisoned breath
Wafts into homes the seeds of death.

And after you have quite forgot
Or all outgrown some vanished thought,
Back to your mind to make its home,
A dove or raven, it will come.

Then let your secret thoughts be fair,
They have a vital part and share
In shaping worlds and moulding fate—
God's system is so intricate.

—ELLA WHEELER WILCOX.

The Horrors That Beset Our Pathway.

[Written for the RURAL PRESS by ISABEL DARLING.]

There now, look at it! Does not the very sight of such a many-jointed, double-geared name prove the existence of what it refers to? Let us see how it applies to everyday life.

It is Saturday morning, and you have a small world full of big and little things to do. Your John comes rushing into the kitchen door, calling for his other hat, his rubber coat and umbrella, turning every other half minute to shout "whoa!" to the uneasy horse and at the same time asking you what you want to send for. You breathlessly answer, sugar, and dart away for the required articles. Perhaps he is one of those strange beings who likes brown sugar better than white; perhaps he has been turned against the latter by unpleasant accounts of the cleansing or bleaching process; perhaps he is only careless or hurried like yourself; whichever it is makes little difference if he brings the brown when you wanted white.

While you took your after-dinner rest you picked up a paper and read this:

Thousands of disgusting little insects creep over one another in almost every pound of the low grade sugars. Samples taken at random from stores by a curious analyst of this city have shown that some qualities contain as many as 250,000 of these repulsive-looking little creatures. They are plainly visible under a microscope, and in some cases under an ordinary magnifying glass, and even to the naked eye. In the human stomach they are said to be capable of doing great damage.

Of course you are so glad he bought brown sugar!

In desperation you reach for a glass of water to wash the very impression of the hideous things out of your throat. Just then one of the children begins to read aloud:

What sensible man or woman who ever held a glass of water up to the light, felt that it was pure? Even a near-sighted person can see that it is full of vegetable and animal matter. In this city, where water is allowed to accumulate in tanks on the top of the roofs, naturally the bottom of the tank becomes covered with black mud. In the country, wells are simply drainings from the surface water outhouses, often from barns and stables. Is it any wonder it is impure? Is it any wonder people get sick from drinking it? Some people boil the water, and while this may kill the live germs, it does not remove them nor remove the vegetable matter which may be in the water, and which is often poisonous.

To be sure the following sentence begins: "The safest way for any one to do is to mix a little pure whiskey with the water—." You are a Teetotaler and unalterably opposed to that, but the sight of water just then sickens you.

The toddling two-year old is digging furiously at his ear and you ask him what is the matter. He says it itches, and you examine.

"Why your ear itches, I've found it!" shouts another of the children. "Persons having itching ears will learn with surprise of the development of a-n-i-m-a-l-c-u-l' a and e together—now what's that?"

"Bugs," you answer shortly, and he goes on, stumbling badly on the long words—"of a hitherto unknown species resembling in form the genus *culex*, but so exceedingly diminutive in size as to require the most powerful lens to bring them to a definition, the common microscope showing them also a moving mass without form. Prof. Wilborstadt, of the Berlin university, takes the ground that they are a possible development of a migratory species, having an origin in the vibratory chambers of the ear, and developed by the mixed use of the trumpet in the telephone; as examinations show the disease to be located, almost universally, in the left ear."

"Yes, we know all about it now," you exclaim. "It is more likely to be a flea in the old German's ear, the ear that is listening toward France," then you shake some loose sand out of that child's hearing organ.

"Mamma," whines another, "I don't want to make clay things in the kindergarten any more."

"Why not?" you ask in astonishment.

"'Fraid I catch something," and she holds out a marked paper some one has given her. You read:

It is claimed that the same clay is handled by all the pupils, and that any skin disease troubling a pupil may thus be communicated to others.

"Nonsense!" you exclaim, and of course it is nonsense. Those who know enough to teach in these schools also know enough to be careful in regard to sanitary conditions. Besides, among Indians, wet clay is the universal remedy for skin diseases.

John wants his dinner and tells you he has just laid a nice ham in the storeroom. Generally this would have no particular effect on you, but this forenoon when you unfolded the cloth for your new wrapper and pinned the old newspaper pattern to it, glaring, staring, intensely black headlines to an article attracted your attention and you leaned on one elbow to read about the "Harvest of Death," and how "The Trichina gets in its Deadly Work," and that there are "Two dead and four more just breathing their last in one house;" and—you don't feel hungry for ham.

Another benefactor of the human race has told you, in a mournful column of despair, that bacteria which produce epidemic diseases are floating in the air, and that when you breathe you appropriate millions of them, as the night hawk scoops in stray flies. This was just when you had half concluded to try the new-old cure called *Haemospasia*, for you do sometimes feel "powerful weak" in hot weather. Of course you know exactly what *Haemospasia* is. Of course, when you went to the Corn Flower Academy, you studied all the languages that were going, and some that had stopped, and you know perfectly well that the beautiful word means *air*, fresh air, outdoor air, brought indoor and compressed, not, you think, in a cider or cheese press, but somehow. Now, you conclude that if common air is so dangerous, that almost solidified preparation must be surely and suddenly fatal, and you know John couldn't spare you until after the planting is done, may be not till after harvest. After that you try harder than ever to coax the baby to keep his mouth shut, for if he breathes through both nose and mouth he will take more of that horrible air and, perhaps, get the diphtheria or something.

John brought home a new almanac, and while the dinner is cooking you open it. There is another dreadful thing.

"The nearer people live to each other the shorter their lives are." Well, where can we go?

"Oh, mamma," shouts the restless, observing boy, "the yeast is boiling over!"

How thankful you are as you set the jar into a pan that the action of yeast is said to be vegetable, not animal, and you almost wish scholars wouldn't try to learn so much, if the rest of the world must be made so uncomfortable; for, as they represent it, earth, water and air are filled with voracious, destructive, living creatures, that wiggle, creep, swim and fly wherever the human race presumes to try the dangerous experiment of existence, as well as wherever it does not. In the way of every contemplated movement for pleasure or benefit you find this bug-a-boo.

I once knew a man who indulged excessively in alcoholic beverages. Am I sufficiently considerate of his pride? (You know "Billy never forgot that he was a gentleman.") He has spent some time at the Napa Asylum, but for a long while before he went, he was continually bug-hunting. The snakes seemed to make him no trouble, but bugs swarmed everywhere, and the diligence required to keep from being eaten up by them left him no time to work at his trade. It would be a pity if all the world should become possessed of the same delusion.

Suppose there is minute life in every place. As the Dutchman said, when reminded of the tremendousness of Niagara Falls, "Vell, vat of it?" If it was not so, would there not be a waste of space? If all life germs were extracted from water, earth and air, would they sustain larger and coarser life? Is it any worse to swallow creatures too small to be seen than to close the lips behind sardines, shrimps and oysters, without regard to contents? or even than to devour hogs, sheep, cattle, horses, dogs, frogs and lizards? All these are eaten by human beings, who not only live but remain well, yet at other times have suffered severely after taking the same sort of food; which shows that harm done does not depend altogether on injurious qualities in articles of diet, but is produced partly by the condition of the partaker. The offense is in the receiver as well as in the giver. As strychnine may be needed for a remedy in certain states or stages of physical disease, yet be very harmful at others, so may the effects of food and drink, even breath, be various according to the chemical reception that it receives. Why does your doctor send you to the seaside at one time, and to the mountains at another, unless he thinks that an excess of one element or a deficiency of another requires a counteracting or supplying influence, and why is any potion likely to fail when the mind is possessed by fear? The records of all epidemics show this to be true, but give little explanation of the fact.

We know that digestion and assimilation are chemical processes that create and allow motion of various kinds and degrees in muscle, nerve and brain; we also know that strong emotions, not excepting fear, may interfere with digestion and assimilation so that the secretions of the body are greatly changed; just how, is hard to understand. If, as they tell us, too great an amount of any chemical in the system causes languor, depression, obstruction, disease in the weaker parts, it seems reasonable to believe that its opposite, sent into the circulation, would produce new action at the place of meeting; that action, heat, and that heat, electricity, the food supply, the needed stimulant for the nerves and brain, and that with this increase of force would come the power to remove obstructions and prevent or check disease.

Reasoning on the back track, we would say that languor and depression, like the sluggishness of a poor drain, allow injurious accumulations that give destructive life-germs time to develop.

Then, keep the drains open, all the circulations active, including the spiritual, which knows, feels that

> "All are but parts of one stupendous whole,
> Whose body Nature is and God the soul,"

And you may almost bid defiance to these numerous horrors; else what meant the promise: "And if they drink any deadly thing it shall not hurt them?" We read: "The slothful man saith, 'There is a lion in the way,'" and to that might be added: "The fearful man saith, 'There is a bug in the road."

Company Table Manners.

There seems to be an idea among many people that there must be a different set of manners for company from what is observed in everyday life. While it is the proper thing to have for an invited company a more elaborate dinner and a little more ceremony in the service than for the family table, it must be remembered that one should not put on and take off good manners as one would a garment. They are a part of one's self, and whether the family meal consist of many courses, or only a cup of tea and a slice of toast, it should always be served decently and in order, and the manners of the members of the household should be such that one need not blush for them, even in the finest company. As soon as a child is old enough to come to the table he should be taught by precept and example what good table manners are. If the father and mother be so unfortunate as not to have had proper training themselves, they should study to correct any bad habits they may have, for the sake of their children. Let it be understood that good manners are not the acquiring of every new wrinkle that fashionable society may prescribe. There is a great difference between good manners and good form. What is good form to-day may be very bad form to-morrow, but good manners are not changeable. Unselfishness, kindly feelings and politeness are the foundation of good manners.

Good table manners demand that one shall take soup from the side of a spoon; shall eat with a fork, rather than a knife; shall take small mouthfuls of food and masticate quietly, making no unpleasent sound; shall take in the fingers no food except fruit, confectionary, olives, bread, cake, celery, etc., and that the members of the family shall be as polite to each other as to any guest. Where people rush through their meals there is not much chance for table maners or good digestion. If properly managed, the table can be made one of the most refining influences of the home.—Ladies Home Journal.

W. P. A.

At the social meeting of the Women's Press Association, Monday, Jan. 25th, Mrs. Lemmon, the wife of Prof. Lemmon, whose researches in the botanical world have been of such great value to the science, was to read a paper on "Trained Nurses." The attendance was so small that it was decided to renew the subject at the next social meeting.

Mrs. Sarah B. Cooper, Vice-President of the W. P. A., has been dangerously ill, but was able to be present at the last business meeting, Feb. 8th.

Mrs. E. T. Y. Parkhurst, the efficient Corresponding Secretary, is ill.

The Pacific Coast Women's Press Association has been admitted to the Woman's National Press Association.

The P. C. W. P. A. was recently elected a member of the International League of Press Clubs.

Miss Minna V. Lewis has been made Associate Editor of the N. Y. *Business Women's Journal.*

Mrs. Frances M. Blades, formerly of the San Diego *Union*, has bought the plant of the *Great Southwest*, the official organ of the San Diego Chamber of Commerce.

From the length and breadth of the Pacific Coast comes encouraging news of the work of our members.

The new Constitution and By-laws have been printed in a very attractive form, and the neat little book contains also the names and addresses of all the members, together with the work they are legitimately engaged in.

The *California Illustrated Magazine* has in press an exhaustive article on the practical work of the W. P. A. for the past year, and upon the possibilities and scope of similar organizations.

Mrs. Mary Lynde Hoffman's monograph on "County Roads and City Streets," which was published in the RURAL PRESS, has been translated into Norwegian by Emmeline M. North, and is being printed in Norway for distribution among Norway editors and officials. It is hoped that an interest will be awakened toward the improvement of roads in that country. They are at present most primitive and ill-kept.

Spice of Life.

—"What makes you think that Stillwater is such a clever fellow? I never heard him say anything more than 'yes' or 'no.'" "That's what convinces me that he is clever."—Boston Post.

—Bingo—"Wasn't the servant girl unusually pleasant this morning?" Mrs. Bingo—"Yes. Her beau called last night." Bingo—"See if you can't get him to come here and live."—Life.

—Mrs. Musicmad: "Doctor, why is it that all the great pianists have such long, bushy hair?" Professor Savage (reflectively)—"I presume it is to keep off the flies while they are performing."—Puck.

—Nothing exasperates a woman, who has been shading her eyes from the gas light with her hand all evening, so much as to find that, after all, she had left her best diamond ring on the washstand.—Siftings.

—Mr. Briggs—"I always have a morning walk. I'm out of bed every morning at five, you know." Mrs. Trotfast—"How long have you been doing that?" Mr. Briggs: "Oh—eh—um—ever since the baby came."—Pick-Me Up.

—Courtier (Cannibal Islands)—"Here comes some more missionaries." King—(espying a detachment of the Salvation Army, with tambourines)—"At last these foreign nations are getting sense. With this lot they have sent along some plates."—Good News.

—Worried mother (in railroad train): I hope my baby's crying doesn't disturb you. I can't stop it. Old bachelor (genially): I'm all right, madam. Don't worry about me. I'm afraid, though, the noise is a sort of a wet blanket on those young people yonder. Worried mother: Dear me! Why? Old bachelor: They're on their wedding tour.

Young Folks' Column.

In a Mining Town.

[Written for the Rural Press by Mary E. Bamford.]

It seemed to Marianne that she had always known Hazel. Probably, though, the two children became acquainted with each other in flood time. Hazel's cousins, Jennie and Eliza, lived next to Marianne. Perhaps that was the reason why the children all went to Hazel's when the creek acted so. The creek ran through the middle of a small mining town among the foothills of the Sierra Nevada. Nobody cared much about the little thread of a creek in the summer, but in the winter or spring everybody had to care, for then came a flood. One flood time, Marianne's family moved by boat toward the hills out of danger, and then Marianne and Cornelia and Jennie and Eliza and Hazel lived in the same house till, after some weeks, the flood subsided.

Hazel was twelve years old—a pale, thin, sweet-tempered girl. She came down to the brick house occasionally after Marianne, and Cornelia went back there; and when Marianne's folks moved into the other brick house across the creek, the house that had the levee all around it to keep it from floods, Hazel came there, too, sometimes.

What things the children told each other as they played! How, if you lie down on the ground and put a straw hat over your face, and look at the sun, you can see little rainbows in the bits of cracks of the hat; that when folks go out in the rain without any umbrella, it is because they want to grow; that when people stand up in meeting in singing-time, and swing back and forth, it is because they want to encourage the singers.

But Marianne, who was deeply impressed by Hazel's goodness, concealed many things. She never would have told Hazel about the times of wrong-doing—the time Marianne stole some gooseberries from a neighbor's bushes; or the time she ate a green apple and threw the core under the bales of hay in the barn so that her mother might not know; or the time Marianne ran the feed-cutting machine in the barn after her mother had told her never to touch it for fear she should cut off her fingers.

Sometimes the children went by the camps of the Chinese miners on the hill just outside the town. The Chinese miners wore large hats, fringed around the brim with pendulous beads. Marianne and Cornelia had each a hat of this kind once. The Chinese campers used to have a peculiarly good kind of brown sugar candy that the children liked very much. There was a little of this Chinese sugar at Jennie's once on the mantle. Marianne saw the sugar when they were all there playing

"Chickany, chickany, McCraney crow,
Went down to the well to wash my big toe,
And when I got back, my chicken was gone."

Marianne wanted some of the sugar, but there was only one piece of it on the mantle, and she did not like to ask. She hoped Jennie would offer it to her, but she did not.

Hazel grew thinner and weaker, and coughed more and more as the long, hot summer days made the little town seem like an enlarged oven. She did not walk with the other children any more. She could not come down to Marianne's, and Marianne missed her very much, although Hazel was four years older.

To be sure, there was little Cornelia for company, and there were certainly a great many things to be done. There were great plum trees to visit. Marianne was wont to eat the plums, even before they were ripe, with the aid of lumps of white sugar.

And, in time, there were red manzanita berries to be had from the bushes over beyond the house where the woman lived who had no teeth, and who had the shocking habit of letting her little boy and girl chew apples for her before she ate them.

Marianne and Cornelia went on long rides with their father and mother, too, and once when the summer grass and the wild oats were brown and dry, the two girls saw a horned toad by the side of a road. Marianne wrote about it in the inky journal that she kept in an old red desk in the back room beyond the pile of bags of flour, where the swing was that Marianne sometimes swung in when she tried to learn the multiplication table. The table was very hard for the eight years old.

There were certainly a great many things to be done. Marianne and Cornelia had a little brick store of two minute rooms at the foot of the big peach tree at the corner of the piazza. The boy across the street built the store. The little front room was devoted to the sale of pepper grass and yellow mustard heads and the midribs of dock leaves and little "cheeses" from the low malva and juicy lengths of grape stems and pieces of fennel and whatever other vegetable remnants children are wont to find edible. The little back room was the treasury where the money used in trade was kept. The "money" consisted of peach stones which were brought from the orchard in candle-boxes drawn by strings.

Yes, there was plenty to be done, but Marianne missed Hazel. The two had not seen one another for quite a while. One day, at last, Marianne's mother said they would go together to Hazel's.

Marianne and her mother went up the road through the heart of the little town till they came to the building where the doctor had his office. Marianne knew that there was a bony skeleton hanging behind his office door. She and Cornelia were always proud to think that the skeleton did not frighten them. They dared to go up and touch the bones of the fingers. Other little girls were afraid of the skeleton, but other little girls did not have a doctor for a father.

Next, Marianne and her mother had to cross what was the terror of the way to the little girl, the new suspension bridge. It had been built across the creek after the last flood. Marianne was glad that her mother was with her, and held tightly to a corner of her mother's shawl till firm land was reached once more.

Next, the travelers went by the brick house where the girl lived who wore curls and was very "stuck up" and thought she knew how to play the piano. The airs of this girl were a trial to Marianne's plain little soul.

And then the two passed the house where the kitten was that Marianne had given away to save from drowning. The road now led northerly toward the hills. There were open fields beside the road, with here and there a house. Soon, Marianne and her mother passed the place where the boy lived who had once told Marianne that he would cut her ears off if she did not go home. Marianne had been horribly frightened by the threat, and had rushed down the road crying till she met her father, the doctor. To him she explained the cause of her terror, and the doctor declared that if Marianne's ears should disappear in any such fashion, he would see to it that the boy's ears were also cut off. This promise was a source of doubtful comfort to Marianne, who looked askance at the brick house now as she went by, fearing lest she should see that boy.

And then, away beyond, the next house, where the hills began to rise, was Hazel's. Out beside the house were the tea roses. There never were such tea roses anywhere as those that bloomed out toward the bee hives. So large, so full of sweet odor, were the roses that Marianne had often buried her face in them with delight! Marianne followed her mother inside the house, and there Jennie's mother showed them into the room where the sick girl was.

Hazel lay very still, with her eyes shut. She was so thin, and she coughed a little! She was propped up on pillows in the bed, and she barely lifted her eyelids to look at the visitors. She smiled faintly at Marianne, and then shut her eyes again.

Hazel's mother sat one side the bed, gently fanning the sick girl. Hazel's big sister was there, too, and her father and her aunt who lived over beyond the Chinese camp.

Marianne tiptoed to the foot of the bed and looked at Hazel. Everybody was very quiet. Soon, the visitors went out of the room.

Marianne peeped back at Hazel, but she lay there with her eyes shut still. Jennie's mother had come out with them. What made her cry? Marianne did not like to stay with people who cried. She left them, and ran out to smell the big tea roses and to stand and watch the bees coming and going. Marianne did not dare go too near for fear she should be stung. One of the bees did sting Hazel once. Which bee was it?

"Marianne," called her mother softly from the front of the house.

The child ran. Her mother and Jennie's mother were saying in low tones something about "consumption" and "night sweats." Marianne did not know what they meant.

"Good-bye," said the aunt.

"Good-bye," answered Marianne and her mother.

The two walked down the road. The mother looked at the little girl. It was so plain that she did not understand what was coming. How should she be told? But Marianne climbed the fence for some wild flowers.

That night, some time, Hazel died, Marianne's father told his wife the next morning, and then, as gently as they might, they told Marianne.

The child comprehended at last. She had never before known any one who died. She had never seen a dead person.

She looked at her mother, and then turned and ran away out of the house, up the steps of the levee, along on top of it till she came to a patch of mustard that grew high above her head. She flung herself down in the midst of the green and yellow growth and sobbed great sobs that came from her breaking child heart.

Hazel was dead, dead, and gone to heaven, and nobody would ever see her again! Nobody could ever tell her about anything! She would never talk or play with any one again, never, never, never! Oh, what made people die? What was dying? What did folks want to do it for? Marianne lay there sobbing till she could cry no more. The yellow mustard heads waved above her, and the locust trees by the levee shook a little in the breeze. She could hear the old flour mill going, by the creek. Hazel and she used to go over there, and the miller would weigh them sometimes. Marianne could hear Mrs. Jackson's voice across the street. Mrs. Jackson always gave the two girls cookies and bread with fresh butter on it. Marianne remembered that once when they were coming home, she had thrown a piece of Mrs. Jackson's bread into the irrigation ditch because there was so much butter on the gift. Hazel saw Marianne do it, but Hazel promised not to tell. Mrs. Jackson was a very generous woman. She was apt to put too much butter on bread. And oh, Hazel would never go to Mrs. Jackson's again! Hazel would never go anywhere again!

The next day but one was the funeral. The people brought Hazel in a coffin to the small, white church on one of the hills, the church of which Hazel had been a member for about two years.

Marianne went down front and sat there with Jennie. Jennie was crying, too, and Eliza cried.

"O dear! O dear!" sobbed Marianne to Jennie, softly, "what did make Hazel die? What *did* make her?"

But Jennie only sobbed on.

They had put Hazel's coffin before the pulpit, and the minister talked and folks sang. Out of the open window Marianne could see the pine trees near the church. Hazel and her father used to go with Marianne sometimes to get the little, sweet-tasting, brown and yellow pine nuts from the burrs of those pines. Marianne cried when she thought of it.

When everybody went to look at Hazel, Marianne looked too. Hazel's hair was just as pretty as it always was, and she had on a nice white dress, and Marianne could not possibly see how Hazel could be dead. She looked as she did that day when they played with the little plaster of Paris lambs together—the lambs that Marianne's mother made and baked on a tin in the oven.

Everybody rose. Some folks took Hazel in her coffin and went across the road. Everybody followed into the little cemetery that was just beside the mining flume. Outside of the graveyard fence, the hills were dotted with the heaps of red earth that had been thrown up by the spades of miners years before. Time did not seem to much dull the color of the red earth, neither did the grass care to cover the relics of former labors, so there the red mounds remained like so many more graves outside the cemetery, like graves of persons thought unworthy of burial in consecrated ground.

Marianne and Jennie and Eliza all watched while the men put Hazel into the ground. Oh, it seemed dreadful to bury her so! The men piled the red earth on top of her Marianne would never forget it. She had caught her first glimpse of the great mystery of death. Heaven held Marianne's first saint.

Somebody's Darling.

He was quite friendless—a mere stranger in whom no one was interested. When they found him in the wreck of the car, with the life quite crushed out of him, why, if he had been one of their own townspeople, they would have mourned over him, for realities were more to them than mere abstractions; but he was only a stranger, and after looking in solemn-faced silence upon the dead face, they went on their way and scarcely thought of him again. A mere stranger—a tramp, probably, for the body had been drawn out from the wreck of a freight car, and he must have been stealing a ride when the accident happened. But it was a young face, with a look upon it, cold and still as it was, that "told of a spirit that would not die!" In what far home did they wait for his coming? Where was the hand that had clasped his own when he was a babe, teaching it to take his first tottering steps? From what home corner did he go out on the road that ended here?

But some one, searching his pockets, has found a letter, only a few days old, and as they crowd around, the finder reads it aloud in a voice that falters as he reads: "My own brave boy," it says—oh, poor little mother! If she could have known that letter would lie next his heart when it was stilled! "My own brave boy, how my heart bleeds for you, away among strangers, without money, and trying so hard to get a foothold and obtain work. It seems very hard that such burdens should have fallen on you while you are so young. And so you have set your heart on having a little home for your sister and mother in that far land! Oh, if that could once be realized, what a home that would be! If it were only one little room, and I could have both my children with me, I would be the proudest and happiest woman in all the world. But I try not to be impatient, my dear. 'They also serve who only stand and wait,' and I am waiting for God's own time. But remember, my boy, wherever you may be, that every evening when you see the sun fade from sight behind the western hills, your mother is on her knees in your old room, praying God's blessing on her wandering boy."

The reader ceased. Some one, turning to look at the western sky, saw the sun dropping out of sight; and as the last of the golden disk went down behind the hills, every hat was removed and they stood uncovered around the quiet dead, for whom, in some far home, the faithful mother sent her winged prayer up to the throne.—Julia Truitt Bishop in Austin Statesman.

Domestic Economy.

Beaten Creams.

Whipped Cream.—A deep bowl and an egg-beater are the best accessories. Pure sweet cream, not too thick, is required, and it will whip much easier if very cold; therefore a pan of cracked ice under the bowl is usually recommended. When the whipped cream is wanted very stiff, a tablespoonful of gelatine dissolved in a very little milk may be added to it. For some purposes it is best to sweeten before the process begins, by adding two tablespoonfuls of pulverized sugar to a pint of cream. A few drops of rum or vanilla extract is also admissible. As the frost rises it is sometimes skimmed off and drained on a hair sieve, but this is not essential. If the cream is cold and not mixed with milk, a fine stiff whip will be produced in a short time by the vigorous use of the egg-beater.

Coffee Cream.—Among the most acceptable as well as generally available flavorings, coffee may be put first. Make by the drip method a small cup of very strong, clear coffee; soak half a box of gelatine in half a cupful of milk for an hour or two, then set in double boiler over the fire, and stir till dissolved; add a cup of sugar, the cup of coffee and the well-beaten yolks of four eggs. Strain and set away to cool. When almost cold, stir for a few minutes until smooth and almost stiff, then stir in quickly a pint of whipped cream. Mold and set on the ice.

Chocolate Cream.—For chocolate cream the mode is precisely the same, substituting a cupful of very rich, thick chocolate for the coffee. The amount of chocolate used is, of course, a matter of personal choice and may vary according to taste.

Orange Cream.—Fresh oranges make a delicious cream. Pare off a few bits of the thin, yellow rind, and soak and scald with the gelatine. Squeeze and strain the juice of four or more oranges, according to size and quality. Sweeten and mix with the yolks of four eggs, as before. Add the dissolved gelatine, strain, and when almost cold stir in the pint of whipped cream with a few light strokes.

A meringue made of the whites of the eggs, with a small cupful of pulverized sugar, is sometimes served wih these creams, heaped round them after they are turned out. But to most tastes a delicate cake seem a more appropriate use.

Many other variations will suggest themselves to one experimenting with this fascinating cookery. Desiccated or grated cocoanut makes a highly attractive combination. A French cream of this variety calls for an admixture of crushed macaroons or lady fingers. The cream itself makes a fine charlotte russe filling. Other flavors and fruits may be used.—Albany Cultivator.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 20, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Cream Separators—G. G. Wickson & Co.
Cultivators—Baker & Hamilton.
Nursery Stock—Frank Kunz, Sacramento.
Poultry—California Poultry Farm, Stockton.
Nursery Stock—Wm. Parry, Parry, N. J.
Wire Fencing—McMullen Woven Wire Fence Co., Chicago.
Sheep Shears—C. S. Burch & Co., Chicago.
Stallion For Sale—Mrs. E. Thalman, Pinole.

☞ *See Advertising Columns.*

To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

The Week.

The week has been a continuation of the delightful season which has characterized the past month. Atmospheric disturbances have been light, growth is advancing somewhat, and there has been comparative freedom from drying winds and frosts. Were it not for the several inches deficiency in our season's rainfall, there would be nothing to provoke concern, for moderate winter growth is better than excessive. A good rain would be a great blessing, and as we write, the signs seem to be shaping for it.

Before this issue reaches readers the Fresno convention, in the interest of fair freight rates and fair trade generally in fruit and fruit products, will have been held. As we write on Wednesday, the indications are favorable to a good representative attendance at the convention, and there will be men there who can speak from long experience of the hardships under which the fruit interest has labored. We trust the convention will strike a trail out of the woods and pursue it. We believe the times are ripe for effective action, both in transportation and trade.

Warm Words on a Cold Subject.

If any lingering impression has remained in the minds of any one that the California State Board of Railway Commissioners is of any earthly use to the producers and merchants of the State, recent events should remove it. That producers and traders generally consider the Commission is a useless body, is clearly seen in the severity with which they let it alone. In a State where everything which exists on the surface of the earth is railroad-ridden to the utmost limits of endurance, a branch of the State Government, constituted to secure our industries against extortion and oppression, is allowed to hold mock meetings under whose soporific influence even Argus-eyed reporters yawn and doze and recover from the weariness of previous night-work. Could there be more forcible indication that the greatest task of the Commission is to determinehow not to do anything? Is it any wonder that those whose interests it was created to protect have determined that it is even better to delve and slave in production of which the railway takes the bulk of the profits, than stultify themselves and undergo the indescribable weariness and vexation resulting from an appeal to the Railway Commissioners?

Though this is the usual habit of the public with reference to the Commission, occasionally there appears a person or an incorporation engaged in production or trade to whom there remains but a choice of two evils—to expire quickly by railway garroters, or to pass away by the slow torture of the Railway Commission. Most people, as we have said, choose the former exit; some are so hardy as to endure the latter, and if they grow restive under the process there results a spasm of noisy but ineffective activity on the part of the Commission. The latest party to arouse the Commission from its grinding toil was an incorporation of ice manufacturers. By constant contact with its own product this incorporation has cooled its blood down to a point where it thought it could endure the forcing of an issue upon the Commission without losing its temper, and strange to say this cool daring of the appellant engendered heat in the Commission to such a degree that the public was aroused, and the water began to boil also in the freezers of the ice company. There was a great tumult. People thought that now certainly the Commission would take its hands out of its pockets and do something. And what was really accomplished?

Under the unanswerable arguments, sustained by unimpeachable statistics, showing that California local freight rates are outrageous, as compared with rates on Eastern roads, and showing also that in the matter of ice rates there was discrimination shown in favor of a mountain ice monopoly, so that it could deliver ice throughout California at about one-third the rates charged the appealing ice company, the Commission decided that a new schedule of ice rates was really demanded by the public. This is nearer than the Commission has come to doing any thing within easy recollection, and public attention was excited, as might be expected. In due time the new ice schedule appeared, and the ice company soon found that it was worse off than it was before, for the average rate to 30 or more points, according to the new schedule, is 4¾ cents per ton per mile, an apparent gain of one-quarter of a cent per ton per mile over the average rate cited in the original complaint. The result is that the company which appealed to the Commissioners seems to be worse off by a considerable amount than they were before the appeal was made. Poor fools, they did not let poorly enough alone. Strange spectacle—an ice company out of the frying pan into the fire!

Now, there is also a cruel humor about this business of a new schedule. It is current comment that the commission does not know enough to get up a schedule to run a hand-car on. It must of necessity go then to those who make schedules, and the freight bureau of the railway soon had it ready, elegant in its style, imposing in its serried columns and imposing also upon the public interests, as a railroad freight schedule is expected to be. Having fixed it up and labeled it with the sign manual of the commission, the freight director of the railway sat him down quickly and wrote a solemn protest against the adoption of the new schedule, as follows: "The company is advised by counsel and believes that your board cannot legally fix the rates to be charged for transportation over any of the lines of railway operated by the company, and therefore respectfully protests against your action in that respect."

Is it not a screaming farce? It is however a cruel sort of humor, for think of the position in which it puts the railway commission. Why should the company thus persecute its devoted slaves? Why, when putting a sword in the hands of its friends to cleave the ice company should it have chosen one in which the handle was sharper than the blade? Is it a piece of its old policy to kill off both friend and foe alike, that it may stand alone in its solitary grandeur? Is the railway aiding the people to make it plain that the present railway commission is a delusion and a snare? Does the company think it would be cheaper all around to abolish the commission? If this is the key to the situation, it is funny, but isn't it awfully cruel?

The Baden Stock Yards Enterprise.

In the RURAL of October 4th we gave illustrations and description of the great live stock enterprise being developed at Baden, San Mateo county. Work has progressed since the date mentioned, and at the annual meeting of the incorporation, which was held in this city on Tuesday of this week, it was reported that the company had expended $1,380,309.21 during the year 1891 for the improvements it is making.

The reports submitted at the meeting also give evidence of the design cherished by the copious capitalists who are putting money into this enterprise. They declare that they believe that, San Francisco being the commercial metropolis of the Pacific Coast, can be made one of the largest and most successful live stock markets on this continent, and as overpopulated Europe is to-day largely dependent upon the United States of America for its supply of food, composed of animal products, it is believed that this surplus can be produced and forwarded from this coast as successfully as it is now being done from Chicago and St. Louis. To accomplish this end, they believe it is only necessary to provide in this locality a live stock market of sufficient permanency as to encourage the farmers of California and adjoining Pacific Coast States to make it a business to raise cattle, hogs and sheep in largely increased numbers over what are now produced. They say further:

"The development of these industries to the extent intended by their promoters will necessarily, by the natural law of trade and commerce, result in material benefit to the great State of California; it will greatly promote emigration, as well as enhance the true interest of every farming industry throughout the entire western slope of the Rocky mountains. The progress of this development will of course be in proportion to the growth in the supply of cattle, hogs and sheep; in other words, the producer can always depend upon there being a market at the stock yards of South San Francisco for the stock he produces, with equal confidence of the farmers of the great Mississippi valley as to the markets of Chicago and St. Louis.

We are glad to find in the report of the company a statement of the imports of leading Eastern animal products to this coast during the year 1891: Hams, 5,400,000 lbs.; packed meats, 850,000 lbs.; meats in bulk, 21,394,000 lbs.; canned meats, 5,202,000 lbs.; lard, 6,598,000 lbs. A total of 39,424,000 lbs. The company claims that the greater part, if not all, of this importation will be prevented by the creation of adequate packing facilities at this point, and such facilities they propose to offer. We hope this claim may be realized.

Local Influences of the Farmers' Institute.

The Farmers' Institute held recently at Auburn, Placer county, was very satisfactory in the interest awakened and the freedom with which the farmers of the region participated in the addresses and discussions. Prof. Hilgard of the State University delivered a lecture upon soils and fertilizers, which was listened to with marked attention and provoked much discussion. Prof. Wickson was also present and conducted the meetings. We expect to present several of the papers read at the meeting, as space permits.

The influence which a good Institute exerts in building up local agricultural organizations in the region in which it is held is shown in the fact that 19 new memberships were taken by the Auburn Horticultural Society, under whose auspices the Institute was held. This fact should be generally noted. People who think they have already a sufficiency of local organizations should remember that it is not the sphere of the Institute to compete with them, but rather to build them all up by drawing in and interesting people whom the local societies do not succeed in gaining. This is done in part by the fact that outside speakers prove attractive to the public, and in part to the appreciation of the advantage of free concourse and discussion, which must be engendered by attendance at an Institute meeting, which is usually full of cordiality, earnestness and practical suggestions. The Institute creates an appetite for means of progress, which local societies can constantly provide at their regular meetings.

Death of President Arnold.

We hear with deep regret of the death of President B. L. Arnold of the Oregon State Agricultural College, which recently occurred at Corvallis. We had the pleasure of personal acquaintance with Prof. Arnold, and greatly admired him for his sterling character, distinguished ability and gentlemanly bearing. His death is a great loss to the educational cause.

It is the expressed intention of the Board of Regents of the College to fill the position made vacant by the death of President Arnold, with some competent man from the East who has had much experience in industrial lines of work, that is, in the work of an agricultural college. Such a man, when found, will be President of the college and Director of the experiment station, it being thought best to unite those two offices as hitherto. Pending this appointment, Prof. Letcher has been made Acting President and Prof. French Acting Director of the Station.

The State Press.

Colusa *Sun:* "The Southern Pacific has to bear a great deal it is not guilty of."

Escondido *Times:* "If thousands of the business men, legislators and financiers of the East would take a month or two each year in traveling over the country, north, south, east and west, it would be of incalculable benefit to both them and the great West."

Colusa *Sun:* "We have been around legislators for the last dozen years and have had an eye open, and have come to the conclusion that if we wanted to buy a legislator we would have no hesitation whatever in approaching any man who made a business of howling about everybody else's misdoings and his own righteousness—it is simply a question of price. If men of character and standing controlled our legislation and our press, instead of the howlers along the highways, the railroad companies, the insurance companies and others would be glad to come to decent terms, and save the money that corruption costs."

Fresno *Republican:* "Chinese labor is always unsatisfactory, both to its employers and the community in general, and it is growing more so every year by reason of the increasing independence of that usually servile race. The demand for their service having become equal to the supply, they are losing their only desirable characteristic from the employer's point of view—that of reliability. Hitherto they could be depended upon with almost absolute certainty to carry out their contracts with those who furnished employment. * * This labor problem will never be settled without some systematic effort on the part of the vineyardists and fruit growers."

Redlands *Facts:* "It is a singular coincidence that a people claiming to be a Christian nation do not allow the very book upon which Christianity is based to be read to the children. It is an absurd idea that all the laws of the Nation are based on the Bible and yet the children are not to be encouraged to study the foundation of the laws; that this book, which sets forth the rules governing the relation of individuals in every walk of life, shall be a sealed book; that that Nation which stamps upon its coin 'In God we Trust' dare not teach its children to trust in God. But the banishment of the Bible from the public schools is one of the 'political necessities' of the day—a political necessity because neither of the great parties can dispense with its portion of the ignorant and superstitious classes who have been flocking to this country, to its injury."

Stockton *Mail:* "If inebriety is permitted to play the part in the defense of crime, which the Supreme Court decision holds in the case of Jack Phelan, look at the armor which it places about the malefactor. John Smith has determined to burglarize your house this night, and he wishes to be as safe as possible in so doing. How does he accomplish this double end? Easily enough. He goes and gets drunk—not too drunk, but just drunk enough, and it is easy enough to act a little more razzle-dazzle than he feels—then he proceeds to burglarize your house. If he is not caught, well and good; if he is, he says, "I was drunk and did not realize what I was doing," and asks the protection of the law, as enunciated by the Supreme Court. Do you see that it is a perfectly simple and plain proposition all the way through. Let the man who attempts to commit a crime get drunk as a measure of safety. As the knight of old buckled on his armor when going into a tournament, so may the modern criminal buckle on his well-considered jag when about to pursue his nefarious calling."

Stockton *Mail:* "The most iniquitous tax of all is the poll tax—a tax per capita upon the privilege of existing, regardless altogether of the ability to pay, being $2 a head alike upon the millionaire and the pauper. The road tax is another form of laying the burden equally and indiscriminately upon all, ignoring entirely their widely varying ability to stand it. It was only the other day that our own Supervisors, following the law and the custom, notified every male citizen of the county, outside of the city of Stockton, within certain limitations as to age, that the regular annual time for paying the $2 road tax was at hand. Farmer Barnhart's hired men must each pay as much of this tax as their wealthy employer, whether they ever use the roads or not. It is important to Barnhart that the roads should be at least passable, for otherwise he might not be able to get his crops to market, but to some of his hired men it may be a matter of not the least concern. Nevertheless, they must pay the tax or suffer the consequences, which are severe, and not one of the cranks of the day lifts his voice against the outrage."

The San Diego *Union* thus sums up the advantages of improved country roads: "They would make it possible for the farmer to take advantage promptly of the highest market, no matter at what season of the year. They would allow him days and weeks of time which he wastes every year wallowing through the disgusting mire of dirt roads. They would reduce to a minimum the wear and tear on wagons and carriages. They would lessen the expense in keeping horses in working order, and vastly less horses would be required in a county to perform the farmers' work. They would require less expense to keep them in repair than do the dirt roads. They would make it easier for a team to pull several tons over their smooth surface than to drag a wagon through the mud. They would afford ready communication with the outside world at all times of the year. They would spare the farmer many vexations and nervous strains. The would practically shorten the distance to the local market. They would increase the demand for country and suburban property. They would be free from dirt in summer, and mud and ruts in fall, winter and spring. They would bring every farming community into closer social relations. They would make an evening's drive a pleasure instead of a vexation, as it is now."

Table of High Horse Values.

The sale of the California three-year old trotter Arion, 2:10¾. to J. Malcolm Forbes of Boston, for $150,000, makes a new record for horse prices, displacing the $105,000 paid for Axtell at Terre Haute, Ind., in 1889. The American trotter leads in the figures. He has more uses and value and lasts longer, though not having the earning capacity of a thoroughbred of equal quality. A table of the highest prices paid for trotters and thoroughbreds here and in Europe will be of value at this time. Here it is, as published in the *Drovers' Journal* of January 25:

TROTTERS.		THOROUGHBREDS.	
Horse.	Price.	Horse.	Price.
Arion	$150,000	St. Blaise	$100,000
Axtell	105,000	‡Common	70,000
Anteeo	55,000	‡Ormonde	70,000
Bell Boy	51,000	‡Doncaster	70,000
Stamboul	50,000	‡Blair Athol	62,500
Nancy Hanks	45,000	‡Kangaroo	60,000
Sunol	41,000	‡Meltoe	50,000
Acolyte	40,000	‡Prince	50,000
Maud S	40,000	‡Friars Balsam	50,000
Smuggler	40,000	‡Isonomy	45,000
Pocahontas	40,000	‡Busy Body	44,000
Rarus	36,000	‡Harvester	43,000
Harry Noble	35,000	‡Galopin	40,000
Antevolo	35,000	‡Scottish Chief	40,000
Dexter	33,000	‡Petrarch	40,000
Goldsmith Maid	32,000	‡Robert the Devil	40,000
The King	31,000	Kentucky	40,000
Jay Gould	30,000	Verneuil	39,000
Lady Thorne	30,000	King Thomas	38,000
Blackwood	30,000	‡Hampton	36,000
Prince Wilkes	30,000	‡Maccaroni	35,500
Pancoast	28,000	‡Beaudesert	35,000
Gov. Sprague	27,500	‡The Palmer	35,000
Patron	27,500	Bolero	35,000
Mascot	26,000	‡Gladiator	35,000
Alcazar	25,800	Iroquois	34,000
Happy Medium	25,000	Tournament	33,500
Jerome Eddy	25,000	Rayon d'Or	33,000
Wedgewood	25,000	The Earl	30,500
Geo. M. Patchen	25,000	‡King Lud	30,000
Fearnaught	25,000	Lady Primrose Colt	30,000
Macey	25,000	‡Rosicrucian	30,000
Voodoo	24,000	Galore	30,000
Sam Purdy	22,000	Bonnie Scotland	30,000
Nutwood	22,000	Kingston	30,000
Edward	20,000	‡Hobbie Noble	31,500
Rosalind	20,000	Dewdrop	29 500
St. Julien	20,000	‡Spinaway	27,400
Lulu	20,000	‡Blue Gown	26,000
Clingstone	20,000	‡Gatinuie	25,500
Startle	20,000	‡Julius Cæsar	25,000
St. Vincent	20,000	Potomac	25,000
Lady Maud	20 000	Virgil	25,000
Edward Everett	20,000	‡Wheel of Fortune	25,000
Socrates	20,000	‡Janette	21,000
Constantine	20,000	Cantinere	20,500
Russia	18,000	Luke Blackburn	20,000
Oliver K	17,000	Duke of Magenta	20,000
Darby	17,000	Mortimer	20,000
Lucy	17,000	Ban Fox	20,000
Parana	16 600	Louisburg	20,000
Edgmark	16,000	‡Priam	20,000
Edwin Forrest	16,000	Falsetto	18,000
Palo Alto Bell	15,000	Drake Carter	17,500
Prospect Maid	15,000	Pontiac	17,500
Warlock	15,000	Raceland	17,500
Alma Mater	15,000	Sir Dixon	17,500
Grafton	15,000	Proctor Knott	17,500
Zoraya	13,100	Terra Cotta	17,100
Electric Bell	12,500	Glencoe	16,000
Jack	12,500	Magnetizer	16,000
Chimes	12,500	Hanover	15,500
Electioneer	12,500	Norfolk	15,000
Launcelot	12,500	Lexington	15,000
Houri	12,500	Kingfisher	15,000
Susie S	10,050	Leamington	15,000
Suisun	10,100	Hindoo	15,000
Guy	10,000	Spendthrift	15,000
Reverie	10,000	‡Amderby	15,000
Midnight	10,000	‡Consul	15,000
Ansel	10,000	‡Glenlyon	15,000
		Darebin	15,000
		Reclare	15,000
		‡Loughsboroughs	15,000
		Baden Baden	15,000

‡English Prices.

The English thoroughbred record is not given below $25,000, or the American below $15,000. The trotting price record runs down to $10,000.

A Canal for Drainage and Navigation.

A very important suggestion is now made that the short canal needed to give Fresno producers a water route to this city be also a drainage canal, to relieve the country of surplus water and thus greatly advantage the producers in another important way, and do much also to settle the alkali question which bothers some of them. The following communication from J. H. Harding of Oleander, appears in the *Expositor:*

While we have been agitating a navigable canal from Fresno to the San Joaquin river, there has been one important feature overlooked in conjunction with that enterprise.

The water level lying beneath the surface of the irrigated portion of this country has been constantly rising for several years past, until it is a matter of serious consideration whether in the future we will not be compelled to adopt an extensive system of drainage, to reclaim large areas of valuable lands and also prevent the farther inundation of county roads in the low grounds.

Already thousands of dollars of the county road funds have been expended in throwing heavy grades across swamps and lagoons that less than ten years ago were as dry as any part of the highways, and still we are just in the beginning of these heavy expenditures.

The porous nature of the substrata of our lands allows the water from the irrigating canals to percolate and spread from the high ground upon which they are carried, to the lands of a lower level, sometimes flooding the surface, at other places reaching within a few feet, to the injury and often destruction of valuable orchard trees and vines.

With all these things in view, would it not be of untold benefit to the whole county to not only build such a canal, but to extend it up through the irrigated portion of the county and drop the water level a few feet and utilize the drainage to feed the canal, saving many dollars to the county that must ultimately be expended upon its roads, save thousands of valuable trees and vines, reclaim thousands of acres of valuable lands, carry off the excess of alkali and add greatly to the sanitary condition, and make Fresno county the richest and healthiest place on earth?

Our Board of Supervisors could do nothing that would add so much to the prosperity of our county as to give their unqualified aid to such an undertaking. The extra money annually spent in grading and keeping the roads above the water level would go far toward building such a canal. To go on as we have, annually expending thousands of dollars, and how much better will be our roads? How much better will be our sanitary condition? How much better will be our orchards and vineyards? And how much wealth will be added to our county?

Something must be done, and that soon, if this fertile valley continues to bloom as the rose, and many of our happy homes are not inundated by the continual rise of the water level.

This is a matter of the utmost concern to every horticulturist of our valley, and a problem that must soon be solved by public or private capital. Let our county government take the matter in hand, and they will find every horticulturist ready and willing to come to their aid and carry through this grand enterprise, that means their future salvation and continued prosperity. By all means bring on the canal to and beyond Fresno, and let us tap it with laterals, drain our county and supply it with the needed water.

Arizona Development.

TEMPE, ARIZONA, Feb. 16, 1892.

TO THE EDITOR: Since my letter to the RURAL as to that coming garden that is to be below Ft. Yuma, I have received more than one letter asking information as to the scheme. Now that the RURAL of January 30th, on page 93, has answered those inquirers how the thing is to be done, I will only add that those interested will find in Acting Governor Murphy's report to the Secretary of the Interior that the Governor thinks the climate and conditions favorable to the growing of the citrus fruits, in Yuma county, Arizona, cannot be surpassed in any region known.

The same climatic conditions so much valued at the bay of San Diego exist here at the mouth of the great Colorado river, namely, the gentle breezes from the southern Pacific ocean. The altitude being only a few feet above ocean level, those breezes that make famous even the coast of the Gulf of California, ward off the frost near the salt water. The RURAL, nor the Denver paper, made any mention of the labor and money spent in the coast survey at the mouth of the Colorado in the selection of the site for the coming city that is to spring up and claim a share of the commerce of the Pacific ocean. It may be visionary, but think about it. Our mountains of coal, and our multitude of low grade mines! With the Isthmus canal completed, cannot Arizona haul those ores to the gulf, and thence to Europe? Really, the amount of low grade ores is inexhaustible in Arizona. It is low grade ores anyway that are of value to a country. High grade ores make a few rich men; but low grade ores, like agriculture, gives employment to the people, and peoples a country.

It seems to be a mutual agreement these days that capital is to lead the way in the development of agriculture in the arid lands of the southwest. Many men of enterprise, like the late Dr. Woozencraft, tried to talk to those in need of homes that the region in and about the mouth of the Colorado offered great inducements. But pioneer will, to break in a new country, is a scarce commodity in the market these days. So now, if you want a home among the olive and the orange groves in Yuma county, just sit back and wait; they are coming, certain. But when you come for your nice home in these parts, bring a pretty long purse, pretty well filled, or else stay where you are; for a home in Southern Arizona is no longer a joke, but has something the same meaning as a home in Southern California.

From the Chamber of Commerce of the city of Phoenix, which is diligent in ascertaining what is being done in my county (Maricopa), we are informed that the planting of citrus trees in Salt river valley, for the year 1892, will be 3000 acres; and, too, that the parties planting are experienced orange growers, who think they know what they are doing. Among other reports, the Chamber of Commerce has given the following figures as to the products of Maricopa county. Considering the fact that our farm products increase at the ratio of about 40 per cent. per annum, and our canal systems are yet in the beginning, we may yet be able to have something of a country here.

Report for 1891: Grain, 58,500.000 pounds; alfalfa hay, 263,000,000 pounds; grain hay, 5,000,000 pounds; alfalfa pasture for 25,000 beef cattle, brought in from distant ranges.

GEO. KAY MILLER.

Irrigation Movement in Tulare.

It is announced that the Board of Directors of the Tulare Irrigation District has decided to purchase the Kaweah canal and irrigation system for $150,000 in bonds of the district. They also voted to purchase the Cameron and Rocky Ford system for $20,000. As soon as the transaction has been completed a large force of men and teams will be put to work in order to connect the systems and construct the laterals so that the water may be fully utilized this year. The Kaweah Canal Company will not bring their lands into the district, but contract to pay $1.25 per acre for one thorough irrigation. This large transaction has been under consideration several weeks.

ON THE IDAHO RANGES.—The stockmen seem to be having a most disastrous winter in southern Idaho. Stockmen say there is absolutely no hope for the stock upon the ranges. Thousands of animals are already dead and the efforts to save the remaining thousands will be abandoned. In some of the valleys the farmers have run short of feed and have been compelled to turn the poorest of their stock adrift to starve. The stallions owned by stockmen are a source of great trouble. They seem to go mad with hunger and run amuck among the herds and droves, tearing the other animals with their teeth and striking and kicking them with their feet. The present winter has never been equaled in Idaho.

SHEEP AND WOOL.

Wool Review for 1891.

Statistical and Other Interesting Data.

[Written for the RURAL PRESS by J. R. FARISH.]

The wool clip of California for the past quarter of a century is estimated in pounds as follows:

Year.	Pounds.	Year.	Pounds.
1867	10,288 600	1880	46,074,154
1868	14,232,687	1881	45,776 639
1869	15,413,970	1882	40,529,119
1870	20,072,660	1883	40,848,690
1871	22,187,188	188	37,415,830
1872	24,255,468	1885	36,561,390
1873	32,155,160	1886	38,509,160
1874	39,356,78	1887	31,564 231
1875	43,532,223	1588	32,569,972
1876	56,550,973	1889	33,591,720
1877	53,110,742	1890	34,917,320
1878	40,862,091	1891	32,416,250
1879	46,903,360		

By reference to the above table it will be seen that for nine years beginning with 1867 the industry forged ahead at a rapid rate. In 1876 the clip reached over 56,000,000 lbs, but two years after it fell off nearly 16,000,000 lbs. From 1878 to 1884 it ranged from 40,500,000 lbs to nearly 47,000,000 lbs. In 1887 the clip was the smallest on record. Since that year it has fluctuated from about 32,000,000 to over 34,000,000 lbs. At this writing it begins to look as if it will again increase, owing to more attention being given to it as a farm auxiliary, unless the consumption of mutton sheep continues to increase as rapidly as it has within the past five years. As an auxiliary of the farm, carcass-breeding will be followed largely at the expense of wool, the same as obtains in Australia, where mutton sheep dress over 80 lbs to the head. Although the wool clip of this State shows a large falling off compared with 1876, yet the industry is, in the United States, third in the list as to the number of sheep, and second as to pounds clipped. In this connection the following tabular statement of estimated pounds of wool grown in 1891, as published by the National Association of Wool Manufacturers, affords an interesting study:

States and Territories.	Estimated average weight of Fleeces.	Number of Sheep as per Agricultural Dep't, 1891	Washed and Unwashed.	Estimated average per cent shrinkage in scouring.
Maine	6	547,670	3,288,020	40
New Hampshire	6	183 183	1,099,098	60
Vermont	7	351,249	2,458,743	60
Massachusetts	6	55,965	335,790	50
Rhode Island	8	20,433	122,598	40
Connecticut	5	45,824	229,120	45
New York	6	1 393.583	8,361,498	50
New Jersey	5	100,075	500,375	50
Pennsylvania	6	1,039,502	6,237 012	55
Delaware	6	22 517	135,102	50
Maryland	4	156,338	627,352	50
Virginia	5	444 563	2,222,815	50
North Carolina	5	398,226	1,991,130	55
South Carolina	5	98,970	494,850	50
Georgia	4	383,017	1,532,068	42
Florida	5	111,465	557,275	45
Alabama	4	274,788	1,099,152	50
Mississippi	8	235 345	1,412,070	65
Louisiana	5	113,931	569.655	65
Texas	6	4,990 272	29,941,632	60
Arkansas	7	269,484	1,886,388	65
Tennessee	6	511,118	3,066,708	55
West Virginia	5	518,827	2,594,135	40
Kentucky	6	765,679	4,594,074	40
Ohio	8	4,061,897	20,309,485	50
Michigan	6½	2,263,249	14,711 118	58
Indiana	5½	1,150,200	6,326,100	45
Illinois	6	770,993	4,625,958	50
Wisconsin	6	889,910	5,339,460	60
Minnesota	6	330,649	1,983,894	65
Iowa	6	452,025	2,712,150	65
Missouri	6	898,850	5,391,900	50
Kansas	7	447,079	3,1 9,553	65
Nebraska	7	234,612	1,642,284	65
California	6½	3,712,310	24,130,015	66
Oregon	7	2,431,759	17 022,313	60
Nevada	7	501,710	3,532,970	65
Colorado	7	1,819,569	12 736,983	65
Arizona	8	593,643	4 749,144	70
Dakota	7	274,319	1 920,233	65
Idaho	7	501,978	3,513,846	65
Montana	7	2,067,337	14,741,359	65
New Mexico	4	3,133,663	12,534 652	40
Utah	7	2,055,900	14,391 300	55
Washington	6	673,060	4 038,360	60
Wyoming	7	1,119,110	7,833,770	65
		43,419,136	262,401,507	

While the fleeces in 13 States and Territories average heavier than do those in California, yet when it comes to shrinkage in weight through scouring, California wool holds second place, and as buyers in purchasing, figure on the loss in scouring, it is readily seen that unwashed Californian wools, all else being equal, sell proportionately less than do wools giving a less loss in weight. In the above table, spring wools only are taken into account, fall clips not being given, neither is the pull wool given, which is estimated at a little over 41,000,000 lbs. for the entire country.

Statistical Review for California.

	Pounds.
Received in San Francisco from Points in California	24,845,976
Shipped East from interior points of California	4,067,500
Held at interior points of California	100 000
Total California clip, 1891	29,013,476
Received in San Francisco from Nevada and Territories	1,500,000
Received in San Francisco from Oregon and Washington	4,296,320
Received in San Francisco from foreign (Australian) ports	1,403 280
Total receipts in San Francisco, etc	36,213,076
Add stock on hand January 1, 1891	7,397,000
	43,610,076
Shipments during 1891—From San Francisco by railroad to Eastern markets, Grease and Pulled	19 536,960
From San Francisco by sea to Eastern markets, Grease and Pulled	1 464,026
From San Francisco by sea to Eastern markets, Scoured	37,840
From San Francisco by railroad to Eastern markets, Scoured	5,773,750
Being product of Grease Wool of	17,359,090
Consumption of local mills	1,250,000
Wool held in country	100,000
Wool sold and awaiting shipment January 1, Scoured and Greased—equal to lbs. in Grease	1,400,000
Total lbs	41,110 076
On hand in San Francisco, January 1, 1892	2,500,000

Average Prices for 1891.

The following table shows the average prices in San Francisco during the year 1891:

	Per Pound.
SPRING CLIP.	
Northern, choice	20 @23½c
Northern, good	17½@20c
San Joaquin and middle counties	14 @17c
Southern coast	13 @15c
FALL CLIP.	
Northern, choice	16 @17c
Northern, fair	13 @15c
Mountain Falls, free	11 @14c
Southern and San Joaquin	8 @11c
Eastern Oregon, spring good	16 @17½c
Eastern Oregon, poor to fair	13 @15c
Valley Oregon	20 @23c
Nevada, spring	15 @20c
Nevada, fall	12 @14c

Scoured wools have ranged from 23c to 35c per lb. for the poorest defective fall up to from 46c to 50c for choice free stock. Eastern Oregon and Nevada spring scoured sold at 52c to 56c.

Market Review.

Taking the year 1891 as a whole, it was exceedingly prosperous, notwithstanding the low range of values for wools. The lower price which ruled for wool was more than offset by good to high prices for mutton sheep and lambs. James P. Hulms, of this city, very correctly states, in a contemporary, that, as has been the case for several years past, a very large portion of the wool coming to this city, except the very best bright spring grades, are scoured before being sent to other markets. Fully three-quarters of all the Eastern Oregon, Nevada and Arizona spring and California clip is now handled in this manner, and were the rates by the overland roads made a little more liberal on scoured wool, even a larger proportion would be treated thus. This is the only way to handle dusty and heavy shrinkage wools to advantage.

Prices through the year 1891 ruled very steady. With the advent of the spring clip in April came an active demand from all the Eastern markets, and through April, May and June there was a lively inquiry for all good wools at very full prices, ranging on an average fully 1c per pound over those of the preceeding spring. In July the large outflow of gold from the United States caused a feeling of uneasiness as to the future of the money market, and induced manufacturers all over the country to pursue a very cautious policy, buying wool only as they were forced to have stock. The consequence has been a slow, dragging market since then. In some instances, and especially on the poorer wools, a little weakening in prices has been shown.

Probably never within the history of the trade have prices exhibited so great a steadiness as was a characterizing feature of the 1891 markets of this country. This was contrary to general expectation at the time the McKinley bill passed Congress, increasing the duty on wools imported into this country. There have been several influences on the market which operate against our wools, namely, change in fashion for woolen goods, large stocks of foreign goods and wools rushed into this country to take advantage of the McKinley bill, more general use of shoddy, and last, but by no means the least, the improvement made in manufacturing cotton goods to imitate, when made into dresses, the general appearance of the best woolen goods.

In former years, satinets were made with wool filling; now shoddy is used. The same change has taken place in the manufacture of other goods in which was formerly woven more or less wool.

The United States is noted for the production of fine wools, outranking all other countries in this line, but with fashion demanding luster goods there was an increasing call for coarser wools, and our manufacturers found themselves compelled to import very heavily of this class to turn out the desired goods. This necessarily bore heavily against domestic wools, for, there being no foreign competition for buying our wools American buyers, or, at least the heaviest, combined, and would not pay over certain ranges for American wools. These ranges were placed only high enough to prevent shipments to foreign markets.

The demand of fashion for luster goods has brought Australian wools well to the front, making that Colony's remarkably large increased production cut no small figure in the world's wool market. The number of sheep in Australia were as follows:

Years.	Number.	Years.	Number.
1871	49,773,584	1888	96,487,811
1881	78,063,426	1891	1 9,167,625

The London *Economist* estimates that the fleeces average 5 1-2 lbs. each, so that it will be be seen that last year's clip was about 600,000.000 lbs.

Bearing on the above the following is taken from a private circular of a well known firm in this city.

"Considerable attention has been paid to foreign, particularly Australian, wools by dealers and manufacturers during 1891, and large importations were made. The London sales, which opened on January 26th were attended by at least ten buyers from the Eastern markets, and large quantities of wool continue to arrive direct from Australia in this country. The total exportation from the colonies, mostly to London, from July 1st to December 10, 1891, was 718,819 bales, being an increase of 169,688 bales over corresponding period of previous year. Of this wool, 20,102 bales came to the United States direct, freight rates from there to Boston and New York, via. San Francisco, being 1 1-2 cts. ₱ lb only, which identical rate is charged from San Francisco to Boston by rail. This is a serious matter for wool growers to contemplate and it will undoubtedly show its effect at the opening of our spring market, for which we predict low figures, particularly as the wools now on the way to this country direct will reach the Eastern markets about the time our new clip is ready to go forward."

The following tabular statement gives the wool exports for the past ten seasons of wools from Australia to the United States:

Seasons.	Bales.	Seasons.	Bales.
1881-82	11,070	1886 87	15,360
1882-83	5,794	1887-88	22,379
1883-84	14,863	1888 89	37,175
1884 85	6,221	1889 90	12,340
1885 86	20,161	189 -91	31,0 0

The above does not include importations of wools bought at the London wool sales.

The importations of Australian wools into Great Britain has increased from 931,889 bales in 1881 to 1,226,172 bales in 1890. Referring to the imports in 1891, the London *Economist* of Oct. 3d, said: "In the first eight months of this year our imports of wool from Australasia were 388,600,000 lbs. against 344,600,000 lbs. in the same months of 1890; and of Cape wools we received 79,100,000 lbs., against 69,900,000 lbs. From these two quarters, therefore, in the eight months, this country has received 53,200,000 lbs. more of the staple than was the case last year; and the prospects are that these augmented supplies will be continued. More wools have also reached us from India and other countries, and at the same time the supplies of River Plate wools to Continental markets, which fell off in 1890, are increasing in 1891."

In 1866 a bale of Colonial (Australian) wool was worth in London $122, and in 1889 only $67, and in 1891 still less.

The outlook for wool in 1892 does not present any encouraging features for the immediate future, although there are indications that fashion is on the eve of making a change, and this time to finer grades of goods, which will call for fine or merino wools. When this desired change fully sets in, then much of California's wool will find a readier market and at much better prices.

The 1891 clip in this State will be mixed as to quality. In the northern counties of the State, pasture or feed has been fair to very good and the wools will show a corresponding favorable growth; in the central counties feed has been only fair, while in the southern counties it has been poor. In Oregon and Washington the winter has been quite favorable to sheep, and therefore no setback was met by the growing wool.

PADDED HORSESHOES.—A new system of shoeing horses has recently been invented in England. By it the iron shoes are fixed to others made of sail canvas, which are then cemented to the hoof. Shoes fixed this way have been worn quite thin without moving. The process has been patented in England.— Australasian Coach Builder and Saddler.

GOOD HEALTH.

The Human Ear.

The human ear is a much more delicate organ than most people suppose. It is extremely dangerous to interfere with it by use of earpicks, or any of the various instruments used for the purpose of cleaning it from wax. The wax is a natural secretion, and unless the ear becomes diseased it does not accumulate any faster than is necessary to protect the passage from the entrance of insects and various particles which might otherwise be forced in and tend to interfere permanently with the hearing. The greatest care is necessary in washing the ears of little children. They should be washed outside, but on the inside only so far as the finger wrapped in a soft towel will go. The practice of forcing a hair pin or any other hard instrument into the ear passage is fraught with danger of injuring the membrane and causing permanent deafness.

Earache is a malady of childhood and causes most distressing pain. The simplest remedy for it is to take a little cotton dipped in warm sweet oil and put it in the ear passage. A danger that may arise from doing so simple a thing as this is that minute particles of the cotton may be left in the ear.

To prevent this, some physicians advise making a little wad of the cotton and wrapping it in the finest and thinnest linen cambric that can be found, and dipping this in warm sweet oil. In case of intense pain, a few drops of hot laudanum or camphor may be used with the oil. When foreign bodies get into the ear they should be removed by syringing them out with warm water. To attempt to remove anything from the ear passage by forcing an instrument in is a rash thing for anyone except an aurist to undertake. The best medical practitioners refuse to treat affections of the ear or eye, but send their patients to specialists.

WONDERFUL TRAINING OF THE EARS.

It is really wonderful in regard to the acuteness to which the human ear may be trained.

At the meeting of the locomotive engineers, to be held in Cape May during August, an interesting paper will be read by H. H. Dantzer, formerly an engineer on the Reading railroad, but now a contractor in West Philadelphia. The paper will deal entirely with the wonderful manner in which engineers on railroads, steamboats and the masters of mammoth machinery ascertain accurately and instantly when anything goes wrong with the machinery under their control.

Strange as it may seem, the only reliable friend of the engineer is a well-trained ear. The greater part of Mr. Dantzer's paper is filled with incidents relating to railroad work, but the really wonderful incidents of which he treats are taken from the mammoth press-rooms in which Philadelphia abounds.

Mr. Dantzer's paper tells of many queer incidents of his experience as a railroad engineer. The master of a locomotive gets to know his engine as a mother does her child. In the darkest night, with the train dashing along at the rate of 45 miles an hour, the trained engineer hears a slight sound which is out of the ordinary. He not only becomes aware of it by reason of hearing it, but if he were deaf as a post the disorder would be communicated to him through the medium of the throttle. He would feel a slight jar which would indicate as clearly as the sound that something was out of order, and, if the occasion warranted, a stop would be made at once or the matter would be attended to at the next station.—Philadelphia Record.

MUCILAGE AS MEDICINE. — A correspondent sends us the following item: Mucilage is an excellent remedy for burns; apply it to the burn and lay on any soft blank paper. The mucilage soothes and the paper excludes the air. For corns there is nothing better than mucilage applied every night. It softens the corns so that they may be easily trimmed. A feverish patient will gratefully drink water in which gum arabic has been dissolved. The cooling draught may be flavored with lemon or orange.

LIMEWATER is an element not so much used as it would be if people realized its effect on the bones and teeth of growing children. When placed in milk, it adds a sweeter flavor even if no more than a teaspoonful is used to a tumbler of milk. It may also be used for indigestion. When the skin is broken out from poison oak, an excellent remedy is a solution of saltpetre. If strong, it causes pain when applied, but it subdues the poison.

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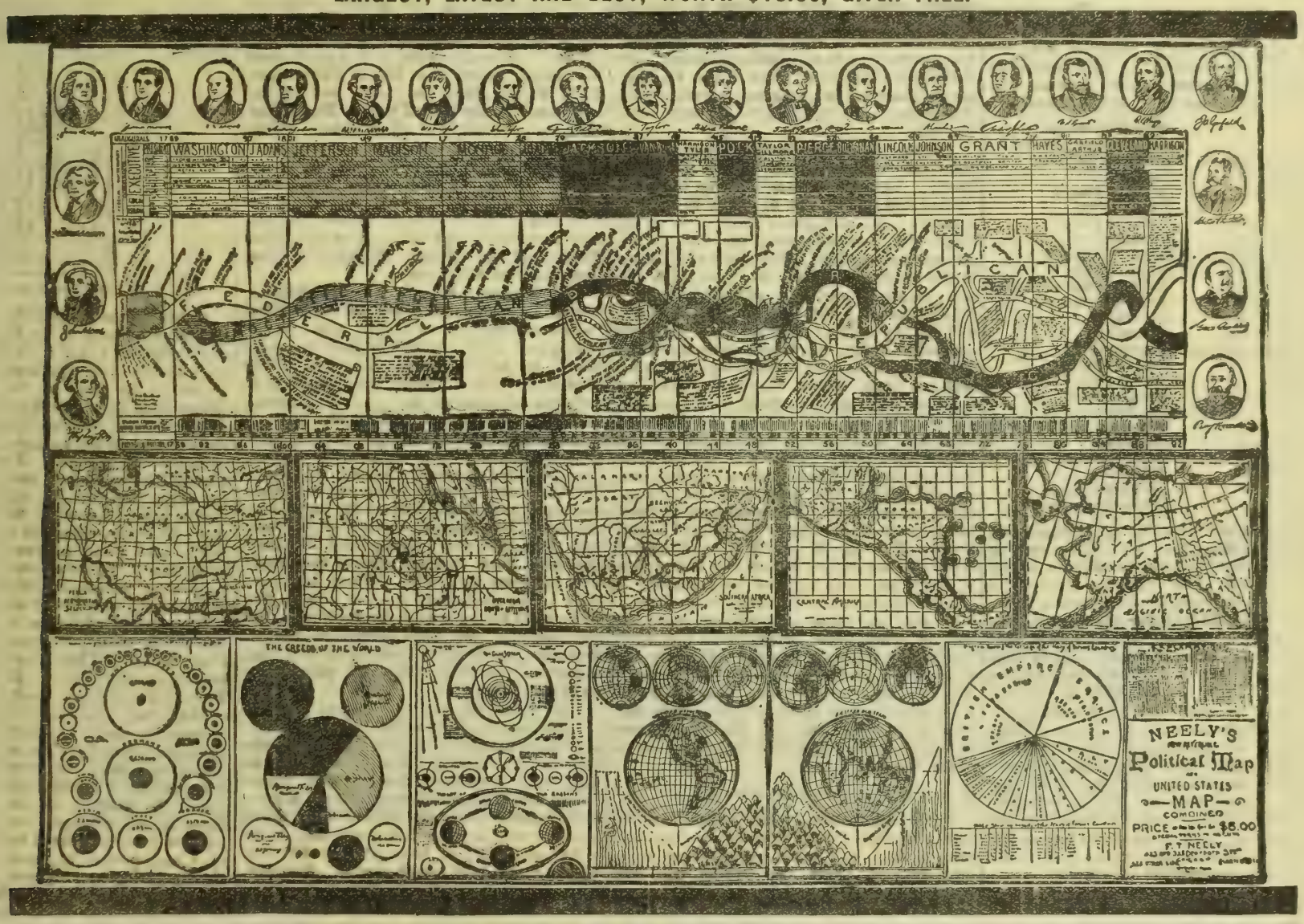
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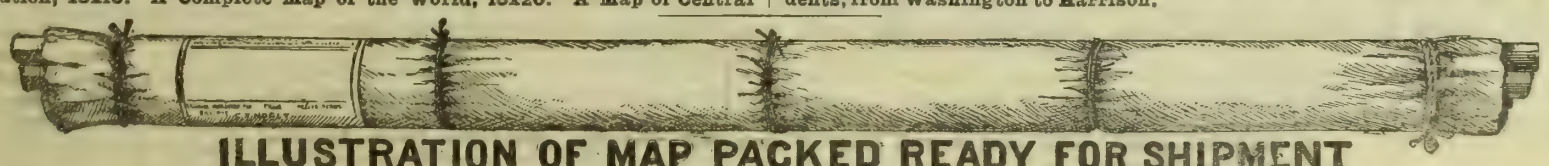


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HORTICULTURE.

Fig Trees at the California Experiment Stations.

University Experiment Station Bulletin No. 96.

The fig promises to become one of the most important fruit trees of California. But the culture of this fruit belongs chiefly to the borders of the Mediterranean, especially Asia Minor, and much less is known here about varieties and their treatment than is the case with the more common deciduous fruits. The numerous discussions upon the fig, in recent years, prove the existence of a strong and growing interest in the subject. It was, therefore, decided to stock the stations with every distinct variety of fig, and to observe the growth, hardiness, quality of fruit, and other elements of importance.

There are about 50 varieties growing at the various stations, and some additional sorts are still in nursery rows. The smallest stock is at Pomona, but it will be increased this coming season, to an equality with the stations earlier established. The following list shows the varieties now growing, and studied in the preparation of this report:

Agen.	Gros Gris Bifère.
Angelique.	Grizzly Bourjassotte.
Abondance precoce.	Hirtu du Japon.
Brianzola.	Ladora.
Black Ischia.	Monaca Bianca.
Brunswick.	Negra Larga.
Black Bourjassotte.	Osborne Prolific.
Black Marseilles.	Pasteliere.
Barnasotte Grise.	Royal Vineyard.
Brown Ischia.	Ronde Noire.
Brown Turkey.	Ronde Violette Hative.
Black Brogiatto.	Raby Castle.
White Brogiatto.	Rocardi.
California Black.	Rubrado.
Col di Signora Nero.	Smyrna No. 1.
Drap d'Or.	Smyrna No. 2.
Dalmatian.	Smyrna No. 3.
Doree Narbus.	Smyrna, Wild.
De Constantine.	San Pedro.
Du Roi.	Sanvito.
White Dattato.	Trojano.
Black Dattato.	White Bourjassotte.
Early Violet.	White Genoa.
Guigliono.	White Adriatic.
Grossale.	White Marseilles.

The first season after the figs were planted at the different stations, many differences in growth and in adaptation to climate began to be noticed. The varieties showed a greater range of variation in respect to their power to resist cold than any other semitropic fruit. The problem that naturally presented itself was this: How do the various sorts compare in point of hardiness and relative endurance? The colder districts of the State desire to grow figs, if possible, and need the varieties that are most hardy. Then, also, we may expect to produce still more hardy seedlings from hybrids of certain sorts, or by fertilizing the finer table figs with the wild Smyrna. In a few more years, when all the varieties being grown are in bearing, the comparative value of the fruits can be tested. At present the problem of hardiness requires attention.

FIGS AT THE SAN JOAQUIN STATION.

On December 17th and 18th I examined the growth of the fig trees at the San Joaquin Valley station at Tulare. Forty-two varieties are now represented there, to which the wild or Capri fig, and several new sorts imported last year, will be added. The fig trees are planted in avenue form, and in the present unsheltered condition of the station it cannot be said that there is any difference in temperature between different portions of the avenue. In the course of time, when the orchard is fully developed, the avenue will be less exposed to the wind. But the Tulare region is subject to as great a range of temperature as any other part of the San Joaquin valley. There seems to be a basin about the lake into which the cold air settles, and it is doubtful whether rows of forest trees will be of as much service here as in some other localities where the cold is due to air currents that may be broken.

The fig trees at this station were mostly planted in the winter of 1888–89. Some died, having been set in alkali spots, and were replaced. The worst situations have now been treated with gypsum, about 10 pounds having been put around each tree. Owing to the differences of soil, a very great difference in the growth of trees of the same age is manifest. This of course is complicated with the difference naturally belonging to the growth of different varieties. About 12 of the varieties of figs represented bore fruit last season (1891.) Du Roi, a new variety little known in the State, was one of the best of these, and attracted much attention.

All the fig trees received some irrigation, but not a drop of water was allowed them after August. The first heavy frosts in November took off all the leaves. The wood appeared well ripened in most cases, except, as usual, the extreme tips of "water sprouts" and late growths. It was therefore a surprise to the foreman when some of the trees showed the effects of the early December frosts (temperature 22°). Certain varieties appear to suffer, and it does not seem to be a question of alkali or cold currents; for, as previously stated, the whole tract is subject to identical conditions in this regard. Besides, trees of the same kind, one of which stands on sandy soil and the other on "alkali," seem to suffer to a similar extent.

Of the older varieties (older in point of introduction to this State), the California Black is not to be ranked as high in the matter of hardiness as was to be expected. It can only be called "medium"; the White Ischia stands somewhat better; the Dalmatian does fairly well; the Black and White Marseilles, which unfortunately are rather small for table use or for drying, do even better than the Dalmatian. The San Pedro, a fine table variety much liked by growers, suffers greatly, even branches of half an inch thickness being frozen. The two Smyrna varieties have stood the frost well. The Brown Ischia has suffered more than the Black California. The three Bourjassottes, black, white and green, together with the White Adriatic, are able to withstand the cold.

Among the newer varieties, the Du Roi, previously alluded to, is one of the most hardy. Ladora, an excellent fig, is badly frosted, but not enough to justify discarding it as yet. Col di Signora Nero is so much frozen that it must be cut back nearly to the ground next spring. One of the worst cases in the avenue is that of the Gros Gris Bifere, which is certainly not hardy enough for the station. Ronde Violette Hâtive is a fine fig, but slightly frosted, and probably safe when older. De Constantine and Drap D'Or have done well. Abondance Precoce suffers a little; Royal Vineyard ranks but medium. The most hardy fig at the station, and the only one that shows no sign of frost anywhere, is the Doree Narbus, one of the new importations. There are two trees of this variety in different parts of the grounds, one in alkali, the other (near the orange trees) in sandy soil. It has compact growth, hard, dark bark, short joints and small buds. The leaves are dark and rather small. It has not yet fruited, but if it proves to bear well and to be of fine quality, it can be recommended for frosty situations.

To sum up these observations, there are two or three sorts being tested that seem unlikely to stand the climate. Possibly ten sorts show appreciable loss of young wood. All the others, except the Doree Narbus, show some slight effect of frost upon the soft, late growth, but not, except as above noted, enough to effect their orchard value to the region.

FIGS AT POMONA STATION.

The fig experiment at the Southern California Station, near Pomona, is less advanced than any other, since trees were only planted there last spring. It was hoped that all the varieties would prove hardy at Pomona, and at first it appeared that they would do so. But this month, January, many varieties have suffered from frost. The complete comparison with Tulare and Paso Robles cannot yet be made, for the list of varieties is incomplete at Pomona. But the following sorts proved "hardy:" Du Roi, Monaca Bianca, Hirtu du Japon, Agen and Col di Signora Nero. This shows that more varieties out of the complete list of 51 will thrive at Pomona than at Tulare or Paso Robles. Twelve varieties, mostly new, and very small trees with immature wood sent to the station for growth for a year in nursery rows, were severely frozen, in some cases "nearly to the ground." This, however, is not evidence against future success with many of these varieties. The following trees suffered much from frost, and are probably unreliable in that part of the valley; Grosse Grise Bifere, Grizzly Bourjassotte, Ronde Violette Hative, and Negra Larga.

FIG TREES AT PASO ROBLES.

At the Southern Coast Range Station, near Paso Robles, where the same varieties of figs are growing, the problem is further complicated by the fact that there is much difference in the soil and location of the trees, the avenue passing through a low swale that is much more frosty, and has a more compact soil, than the rest of the tract. Most of the trees were planted at the same time as those at the Tulare station. They received no irrigation. Those in the most exposed positions were wrapped in straw to protect them. January 4th the straw was taken off so as to make a thorough examination, and put back again.

Among the figs on the high land were the Black and the White Bourjassottes, the two varieties of Smyrna, Ronde Noire, Brunswick, Col di Signora Nero, Angelique, White Ischia, Agen and Pasteliere. All did fairly well, except the White Ischia, which was badly frosted. At Tulare also the White Ischia was more tender than the Bourjassottes. The only marked difference between the two stations in this group was in the case of Col di Signora Nero, which nearly escaped frost at Paso Robles, but was very badly frosted at Tulare.

Continuing along the avenue toward the swale, under less favorable conditions, White Adriatic, as at Tulare, proves fairly hardy, and grew well. A small tree planted in 1890–91 suffered somewhat. The Dalmatian was only a little touched with frost. Drap d'Or, on quite low ground, suffered much. De Constantine, as at Tulare, made a strong growth and nearly escaped frost. A Smyrna planted in the swale in 1890 gave an opportunity for comparison; it was considerably frosted, but not nearly as much as some other varieties. The Black Marseilles, which did well at Tulare, was "cut right down" to the ground with the cold. California Black, as at Tulare, was not in the front rank, only "of medium hardiness." Brown Ischia, as at Tulare, must be placed below the Black Californian. Early Violet, which did fairly well at Tulare, was severely frosted here. Doree Narbus, the most hardy of all at Tulare, "withstood the frost," though in one of the lowest and most exposed situations, but "has grown little." Hirtu du Japon was also hardy. Grosse Grise Bifere, which was one of the most badly frosted sorts at Tulare, was also very severely frosted here. So was the San Pedro and the Monaca Bianca. The last three were on adobe soil.

The foreman, Mr. R. D. Cruickshank, writes as regards the general subject that "some varieties are on adobe, some in the swale and some on the higher and drier land," as before stated. He adds: "The kind of soil they occupy has much to do with the maturity of the shoots in autumn and their ability to withstand the frost. I notice that those on the high ground have always suffered least, while none of them have been very severely frosted this year." The thermometer went down to 18 degrees one night this season and to 20 degrees on another. The figs have been touched regularly with frost every spring and fall since they have been planted, and on the whole have not done very well: "They do not occupy a very good piece of land, and at first had a hard struggle with the gophers." For this reason it has been decided to remove from the swale those varieties that do not withstand the frost there and plant them on higher land.

The result of the experiment can be summed up in a few words. The fig is not an entire success in this region unless the location is carefully chosen. It must be high and protected from severe frosts. When the swale on the station tract is more fully underdrained, figs will do better there, but it is not the place one would choose for a fig orchard. A tract 200 or 300 feet higher would give better results. For family planting it would seem that the Smyrna, White Adriatic, Doree, Narbus and several others to which allusion has been made are here among the more hardy sorts.

CLIMATIC OBSERVATIONS.

This portion of the Coast Range is subject to greater fluctuations of temperature than has been heretofore supposed. The mean monthly temperature can never be used as conclusive evidence of any climate. Nothing could be more misleading in reference to the climate under consideration—a climate representative of many higher valleys in the California coast ranges. The station is situated 80 feet above the Salinas river, about 800 feet above the sea level and forty miles due east of Estero bay, with a high mountain chain—the Santa Lucia—between. There are many places in the district where the thermometric variations are even more sudden than at the station. The following table, compiled from Mr. Cruickshank's weather reports, will show some of the peculiarities of the climate. Especial attention is called to the great daily variation of temperature; also to the sudden changes in relative humidity. The greatest atmospheric dryness in October and December occurred when a north wind was blowing. The hygrometer was exposed on the north side of the house, so that the conditions were favorable to extreme indications, but in any case the record is an extraordinary one. So far as human sensations are concerned this very atmospheric dryness serves to soften materially the impressions of the temperature variations.

METEOROLOGICAL TABLE SOUTHERN COAST RANGE STATION.

1891.	December..	November..	October.....	September.	August	July	June.....	May	April	March..	February...	January.....
BAROMETER (800 feet above sea).												
Mean barometer	29.52	29.39	29.31	29.26	29.20	29.21	29.23	29.26	29.33	29.32	29.26	29.45
Highest barometer	29.80	29.53	29.42	29.40	29.30	29.30	29.41	29.39	29.49	29.52	29.65	29.65
Lowest barometer	29.10	29.25	29.10	29.12	29.12	29.13	29.10	29.10	29.11	28.38	28.40	29.20
Monthly range	.70	.28	.32	.30	.18	.17	.31	.29	.38	1.14	1.25	.45
THERMOMETER.												
Mean temperature (Fahr.)	42.75	51.33	60.15	68.08	75.96	75.82	70.79	60.27	57.43	52.95	49.38	44.62
Maximum temperature (Fahr.)	66	78	90	104	108	112	112	89	90	76	64	68
Minimum temperature (Fahr.)	18	24	31	42	45	48	42	42	34	30	30	22
Monthly range	48	54	59	62	63	64	70	47	56	36	34	46
Greatest daily variation	38	43	50	48	53	54	52	43	47	44	28	38
Least daily variation	10	20	21	14	35	34	23	18	17	4	2	12
Mean daily range	22.35	34.66	35 93	36.16	45.41	45	38.86	26.38	28.73	23.19	17.50	26
PRECIPITATION.												
Rainfall	3.05							.07	.77	2.35	7.29	.55
RELATIVE HUMIDITY.												
Mean relative humidity of month	62	61	58	55	44	45	62	84	74	52	77	80
Highest humidity	93	88	89	93	66	80	87	90	97	85	87	86
Lowest humidity	13	38	12	24	26	32	36	51	43	74	69	50
Monthly range	80	50	77	66	40	48	51	26	54	11	17	36

FIGS AT THE FOOTHILL STATION.

At the Sierra Foothill Station near Jackson, Amador county, the figs are planted so as to encircle a hill. Some of them are only 25 feet above the lowest point on the grounds—the bank of the mining ditch; others are nearly at the top of the hill. They occupy several classes of soil—the red (slate) and the granitic; but few are on the pure granite soil. The foreman, Mr. George Hansen, writes that the leakage of the large reservoir on the top of the hill might have reached a few of the figs, but that the finest trees are entirely out of its reach, and none received any intentional irrigation. We have here a fine practical illustration of the suitability of fig culture to the rocky foothills of similar regions.

It is worth while to note, further, that the olives occupy the warmest part of the reservoir hill. The lowest temperature on record at the ditch is 20 degrees Fahr. Twenty-five feet is a small elevation, but it is likely that it makes a difference of several degrees in such a locality. When a few trees are planted on the newly cleared land beside the ditch, for purposes of comparison, the list of hardy varieties may be lessened. At present, as the foreman writes, there is not a single variety that shows signs of having suffered from frost this season. Some trees matured late, and the wood is still green, but sound. Two kinds, Du Roi and Brown Ischia, both at the top of the hill, kept their leaves later than others, so the leaves were frozen, but that did not affect the wood. Practically, none of the 51 varieties of the fig at the station can be called other than hardy, as now planted, above the valley.

One point worth comparison with the other stations is that of growth. Doree Narbus, noted as being especially hardy elsewhere, but as of slow and poor growth, is "gigantic" at the foothill station. Other superb growers are Brown Ischia, De Constantine, Monaca Bianca and White Adriatic. The following sorts can be called first-class growers, though not equal to the first named: White Genoa, Du Roi, Early Violet, Col di Signora Bianca, Bourjassotte Grise, White Ischia, and White and Black Marseilles.

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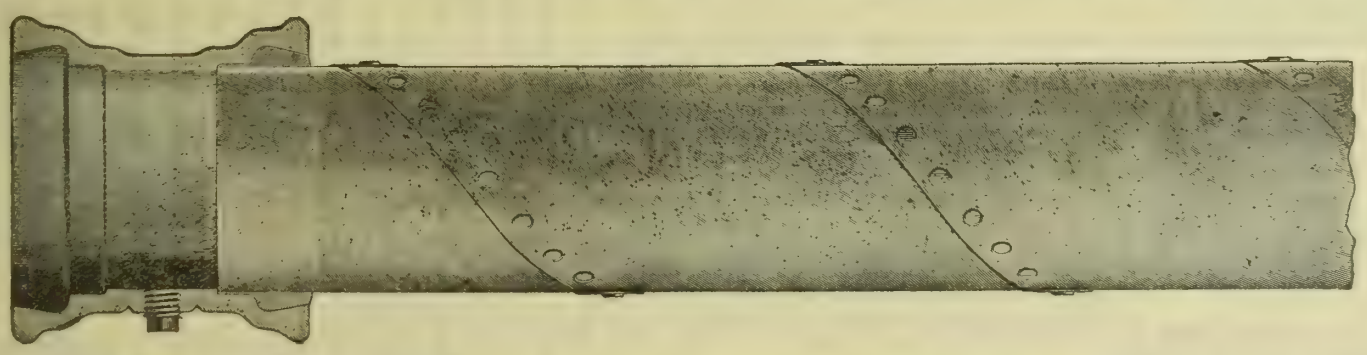
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The Grange and Its Relation to Class Legislation.

[A paper read at a recent meeting of San Jose Grange by MR. AMOS ADAMS and published by special request of the Grange.]

In the last annual address of the Worthy Master of the National Grange, in referring to what is called the sub-treasury system proposed by the Farmers' Alliance, and the land loan two per cent proposition advocated by many Grangers, he said that these measures if carried out would be class legislation which the Grange is opposed to.

Now, without discussing the merits or demerits of these propositions, the sub-treasury or the land loan bill at this time, I will call the attention of this Grange to some facts connected with the Grange movement, and we will then be better able to judge if the facts justify the Worthy Master of the National Grange in saying that the Grange is opposed to class legislation.

For this purpose let us turn our attention to the journal of proceedings of the National Grange at its session held at Atlanta in 1890, and there will be found 32 measures recommended by the Grange to Congress, to be enacted into laws, each one of which can fairly be called class legislation, and some of these recommendations are over the signature of the Worthy Master of the National Grange.

Moreover, the National Grange has had for years and has to-day a committee in the city of Washington, to urge upon Congress the enactment of laws favorable to Grangers and farmers as a class, and not favorable to mechanics or consumers generally, and our Worthy Master Brigham is at the head of that committee.

In fact the State Grange of California has for years had a Legislative Committee, which has been active during the sessions of our Legislature in having laws passed favorable to Grangers and farmers.

It was class legislation when the Legislature of California voted $10,000 to bring the National Grange to the Pacific Coast, and enabled us to grasp the hand of our worthy Bro. Brigham on the sunset side of this continent.

The statutes of the United States teem with class legislation recommended and voted for by stanch Grangers. I instance the tariff law passed by the last Congress as purely class legislation, then again subsidizing railroads and not wagon roads—subsidizing contemplated ship canals and not irrigating canals; subsidizing steamships and not sailing ships, paying a bounty for the manufacturer of sugar and not to the farmer who grows the beets from which the sugar is made. Loaning money to National banks at two per cent interest and not to farmers on cultivated lands. The eight-hour law. The law exempting Congressmen from certain legal processes during the sessions of Congress and not other government employes. The free coinage of silver. Giving to farmers a cabinet officer and not to mechanics is all class legislation, and all of these measures have found active, intelligent, earnest, devoted grangers advocating and voting for them.

The State Grange of California has for years up to the last session passed resolutions, asking Congress to make appropriations to foster the silk industry, and not to foster the potato industry in California.

Can it be truthfully said then that the Grange is opposed to class legislation?

What the Grange wants is its equal share of class legislation.

What would so paralyze the prosperity of our country, block the wheels of progress, retard the advancement of civilization as would the attempt to govern under general laws, this vast country with its varied climates and wonderful productions, stretching from the Atlantic to the Pacific Oceans, from the Aleutian Islands with their seal rookeries of the north to the Everglades in the sunny south, with its infinite variety of interests and possibilities?

Class legislation, like special and legislation of a general character, should be so formulated that equal and exact justice should be done to all as near as possible.

If the Grange is too conservative, using that term instead of one more forcible and possibly a more appropriate one, to avail itself of the ordinary legislation of the country—it would write itself up as being too pure, too exalted ever to attain a very advanced age in this practical, utilitarian era of the world, and we may soon be called upon to weep over our treasure laid up, possibly, in heaven.

The writer of this takes no stock in, nor does he believe the great body of Grangers throughout the country are so opposed to the two per cent land loan bill, that they would prefer to pay ten per cent per annum for money instead of two per cent, simply because some of its enemies choose to call it class legislation.

What! the Grange opposed to that kind of class legislation? Let me call your attention to a report the Worthy Master made to the National Grange in 1890, while acting as Chairman of the Legislative Committee. He says, "For a long series of years this National Grange has been on record in favor of free and unlimited coinage of silver, with a view to a larger volume of currency with which to transact the business of the country.

Acting upon these instructions, your committee urged the complete remonetization of silver, and its unlimited coinage.

The law enacted did not fully meet our views, but will undoubtedly afford some relief. It is an advance toward an end that will doubtless ere long be reached."

What is this but class legislation of the most pronounced and virulent type.

The law, the committee says, is an advance toward an end which compels the Government to enter the market and buy 54,000,000 ounces of silver per annum at a cost of about $60,000,000. The first and direct benefit of this law is to those who own silver bullion. This is class legislation because it discriminates in favor of silver and against wheat and fruit. And yet we fail to hear any protest from Grange or Grangers, no, not even from the Legislative Committee or Master of the National Grange.

I suppose the report recommended the unlimited coinage of silver instead of iron because silver is being used as one of the currencies of the country.

But why did the report recommend that the class of men who had silver bullion on hand, or were engaged in mining for silver ore, should have the product of the accumulations of their labor coined into dollars to the exclusion of that other class which has copper ore on hand, a metal which the Government coins into a circulating medium and makes it a legal tender, if it was not to favor class legislation, which it only condemned when it is in favor of farmers—many farmers—who, in their laudable efforts to obtain a home for themselves and their families, that they might sit under their own vine and fig tree, contracted debts in the purchase of the land which constitutes their homes, are now, and have been for a long series of years paying such exorbitant rates of interest, have at last lost their homes and are now penniless wanderers, while other farmers, crushed to the earth without hope, without encouragement, are dragging out an existence made miserable by paying high rates of interest.

What Grangers, as well as farmers who are not Grangers, want, and what they are justly entitled to, is not to be be relieved from their indebtedness, but the enactment of a law under which the Government shall loan money to farmers at as low a rate of interest as it does to those who own government bonds.

Therefore I submit that it is too late in the day, if the time ever was, to flaunt the scarecrow of class legislation in the faces of intelligent farmers, to defeat the the land loan bill, the best and only practical measure ever proposed in Congress for the relief of the farming class.

The foregoing paper was indorsed by San Jose Grange No. 10, at its regular meeting held January 16th, and the PRESS was requested to publish the same.

R. P. MCGLINCY.
Corresponding Secretary.

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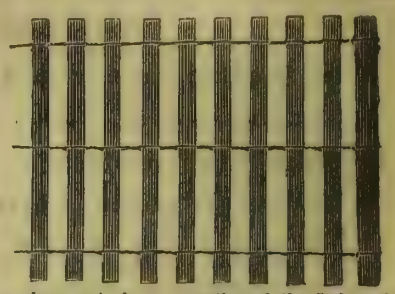
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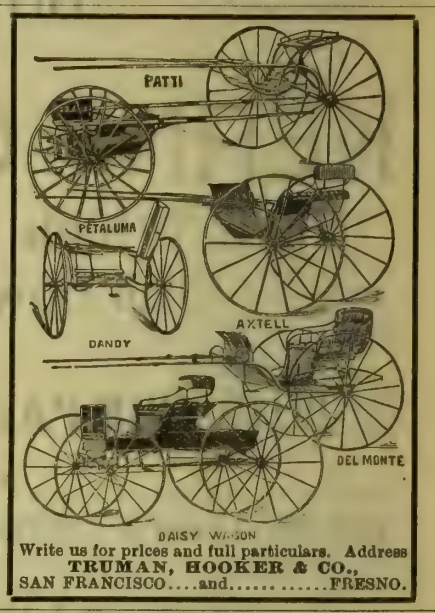
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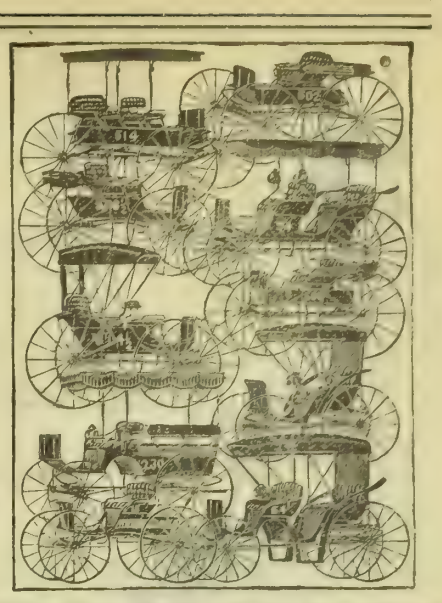
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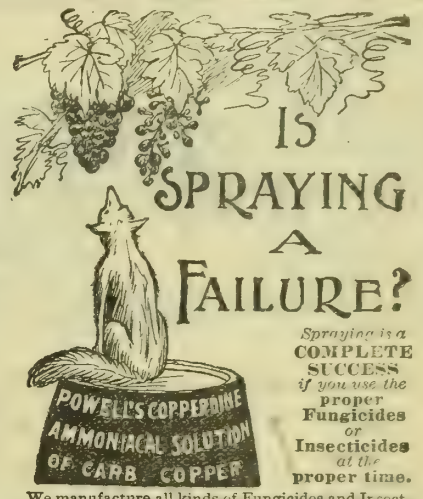
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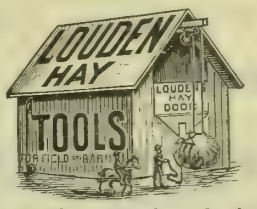

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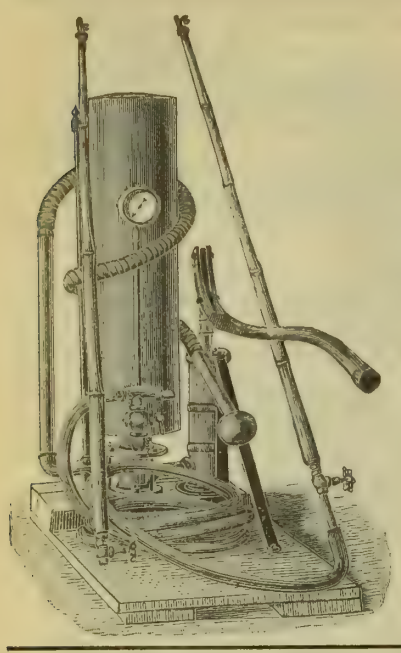
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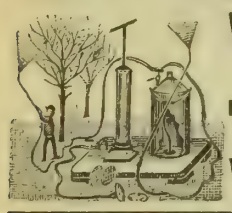
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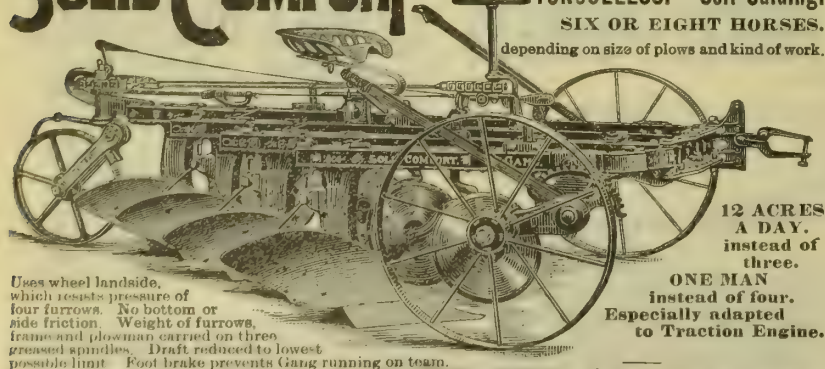
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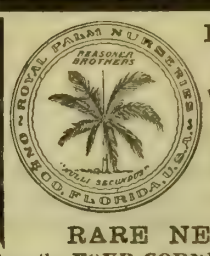
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Seeds, Plants, Etc., Continued on Pages 178-179.

POULTRY YARD.

National Poultry Association Exhibit.

The National Poultry Association exhibit at Los Angeles opened February 10th and continued three days. The exhibit was very large, and included some of the finest birds in the country. Many of the most prominent breeders at the East were in attendance and expressed themselves as highly pleased. One of the visitors, Alexander Wilson of Evansville, Ind., is reported by the Los Angeles *Express* as saying: "I was surprised to see the interest that is generally taken in poultry-raising in this city. Nearly every one keeps hens, and that, I suppose is the reason why the subject is so fraught with importance to them. There have been great strides taken in the past five years relative to poultry culture. The great object is to get the greatest number of eggs possible and the most approved breed for that purpose. The subject will be discussed in all of its bearings, and the discussion will be appreciated by the owners of hens in this city. There are a good many people in the East who have a 'fad' for hen-raising, the same as a man may have a hobby for horses or dogs. Here in California, I presume, the utilitarian idea is uppermost. That is what the society is organized for, and this is what interests every one. I am sure that all the delegates will be more than pleased with Los Angeles."

In its description of the exhibit, the *Express* of February 9th says: "A pen of Light Brahmas, owned by the Pacific Incubator Co., arrived this morning. They are perfect beauties, and their crowing apparatus are in excellent shape. Another pen of Light Brahmas from Taunton, Mass., owned and bred by Philander Williams, elicited encomiums from all the chicken lovers in the hall. This pen is claimed to be the best exhibit of Light Brahmas in the world. H. G. Keesling of San Jose sends a pen of Mottled Langshans valued at $200. It is claimed that Keesling wants $50 a setting of eggs of this species. Keesling is very proud of this breed, having originated it, and is buoyant in the hope of their getting the highest percentage. Keesling also has a pen of Black Langshans. Mrs. Purdy of Lawrence, Cal., has sent a pen of Buff Brahmas, a species introduced by her. They are beautiful birds, and it is claimed that they can outlay any other kind of fowl. There are several pens of Buff Leghorns in the hall coming from all parts of the country. To enumerate the variety and number of fowls arrived, would take the whole side of this paper. Suffice it to say that the exhibition of fowl will exceed anything of the kind ever had in this country. The value of the fowl exhibited is estimated at $100,000. Two hundred of the exhibits are valued at $20,000. In point of number and excellence the American class leads, with the Asiatics a good second and the Mediterraneans coming up in the rear. Although the fowls will be judged by breeding pens on exhibit, they will be classified as cock, cockerel, hen and pullet. They will be judged on the standard of 100 per cent. No pen getting less than 85 per cent can be considered 'in it' as prizes are concerned. A rating of 85 per cent at this exhibition will be equal to 97 per cent at the ordinary county fair exhibition."

On Friday, Feb. 12, the following officers were elected for the ensuing year:

President—Orrin Scotten, Detroit, Mich.

Vice-Presidents—H. S. Babcock, Providence, R. I.; H. A. Bridge, Columbus, O.; Sid Conger, Flat Rock, Ind.; E. R. Spaulding, Jaffrey, N. H.: David A. Nichols, Bridgeport, Conn.; Col. R. J. Hamilton, Springfield, Mass.; F. A. Mortimer, Pottsville, Pa.; J. Y. Bicknell, Buffalo, N. Y.; J. E. Diehl, Beverley, N. J.; Loring Brown, Bolingbroke, Ga.; Ross A. Smith, Charleston, S. C.; Geo. O. Brown, Baltimore, Md.; James H. Cayford, Montreal, Canada; George T. Pitkin, Chicago, Ill.; John D. Mercer, Los Angeles, Cal.

Secretary and Treasurer—George E. Peer, Rochester, N. Y.

Advisory Board—George W. Bristol, Conn.; Charles A. Sweet, Buffalo, N. Y.; Philander Williams, Taunton, Mass.; W. H. Churchman, Claymont, Del.; James E. White, Washington, D. C.

An Executive Committee and Finance Committee were also chosen.

THE PREMIUMS AWARDED.

The judges selected to judge the poultry were: Geo. O. Brown, one of the editors of the Baltimore *Sun*; A. A. Bridge of Columbus, O., and Sharp Butterfield of Ontario, who made the following awards:

BARRED PLYMOUTH ROCKS.

O. J. Albee, Lawrence, Cal., cock, first prize, score, 90¾.

J. D. Nash, Pasadena, Cal., second prize, cock; score, 88¼.

J. D. Nash, Pasadena, Cal., cockerell, second prize; score, 88.

C. T. Paul and S. Tyler each have cockerells scoring the same, but according to A. P. A. rules preference is given to the highest bird where score is the same.

H. H. Deaves, second prize, pullet; score, 88.

Same, third prize; score, 87½.

S. Tyler, Pasadena, fourth prize, B. Plym. Rock; score, 87.

LIGHT BRAHMAS.

Philander Williams, Taunton, Mass., first and second cocks, score, 72½ and 72.

W. B. Terress, San Bernardino, first and second prize, prize cock, score, 92½ and 90¾.

Philander Williams, first and second on Light B., score, 93 and 92.

Pacific Incubator Company, Oakland, Cal., first and second on Light B., score, 92 and 91.

DARK BRAHMAS.

O. J. Albee, Lawrence, Cal., first and second cock, score, 92, 92.

Pacific Incubator Company, first on cockerel, score, 92½; O. J. Albee, second cockerel, score, 90; Rob Bowen, Pasadena, third cockerel, score, 88.

J. F. Bentler, Boyle Heights, first on pullet, score, 92¼; O. J. Albee, second, score, 91½; Pacific Incubator Company, third, score, 90.

O. J. Albee, hen, second prize, score, 90.

Buff Brahmas—Mrs. E. C. Purdy, Lawrence, Cal., first prize cockerell, first, second and third pullet, no score. These are the only birds of this kind in the United States.

SINGLE COMB BROWN LEGHORNS.

W. W. Thurston, Los Angeles, first cock, score, 92; same, second on cock, 90½.

W. W. Thurston, first cockerel, score, 93½; W. W. Thurston and O. J. Albee both score same for second prize.

W. W. Thurston, first and second prize on hen, 92½ and 92½.

O. J. Albee, first and third on pullets, score, 93¼ and 92.

George H. Case, Boyle Heights, second on pullets, score, 92½.

INDIAN GAMES.

E. C. Thurber, Alhambra, first cockerel; James Fullerton, Orange, second cockerel.

E. C. Thurber, first on cock; first, second and third on hen.

L. Tyler, Pasadena, first on Pullets; James Fullerton, second on pullets, G. W. Knox, Los Angeles, third on pullets.

White Plymouth Rock, Niles & Co., first on cockerel, first on Pullet; Pacific Incubator Co., second on cockerel.

SILVER WYANDOTTES.

S. Tyler, Pasadena, first and second on cockerel, score, 90½ and 90; A. E. Olhausen, third cockerel, score, 88.

S. Tyler, first, second and third hens, score, 91, 91 and 90½

S. Tyler, first and second on pullets, score, 92½ and 92; James Mitchell, St. Helena, Cal., third pullet, score, 90.

S. Tyler, first on breeding pen.

BLACK SPANISH.

Robert Raven, Pasadena, first prize, hen and pullet, score, 97.

ROSE-COMBED BROWN LEGHORNS.

Cock—J. Edmundson, Pasadena, second, 89.

Hen—J. Edmundson, Pasadena, first, 93, and second, 92½.

Pullets—J. Edmundson, Pasadena, first, 90½, and second, 89½.

SINGLE-COMBED WHITE LEGHORNS.

Cock—Mrs. R. Dunne, Garden Grove, first, 91; James J. Brown, city, second, 90.

Hen—Mrs. Dunne, Garden Grove.

BUFF COCHINS.

Cockerel—E. E. Purdy, Lawrence, first.

Pullets—E. E. Purdy, first, second and third.

Hen—E. E. Purdy, first.

Pearl Guineas—S. Tyler, first.

Parrot—C. B. Goodell, first.

WHITE WYANDOTTES.

Cock—O. J. Albee, Lawrence, first, 91½.

Cockerel—C. E. Conklin, city, second, 88½.

Hen—Mrs. McFadden, Santa Ana, first, 93; O. J. Albee, Lawrence, first, 93; second, O. J. Albee, 92½.

Pullets—C. E. Conklin, city, first, 93½, and second, 91½.

FRIZZLES.

Cock—Mrs. Kitten, city, first.

Hen—Mrs. Kitten, city, first.

MOTTLED LANGSHANS.

Cock—H. G. Keesling, San Jose, first.

Cockerel—H. G. Keesling, San Jose, first.

Hen—H. G. Keesling, San Jose, first.

Pullet—H. G. Keesling, San Jose, first.

BUFF COCHINS.

Cockerel—Pacific Incubator Company, Oakland, Cal., first, 93, second, 92½.

Pullets—Arthur E. Olshausen, city, first, 92½, second, 90½, and third, 89½.

WHITE-FACED BLACK SPANISH.

Cock—S. Chase, city, first, 92; Robert Rowan, Pasadena, second, 90½.

Cockerel—Robert Rowan, Pasadena, first, 92½, second, 90½.

Hen—S. Chase, city, first, 93½: Robert Rowan, Pasadena, second, 92½.

Pullets—Robert Rowan, first, 96, second, 94.

HOUDANS.

Cockerel—Pacific Incubator Company, Oakland, Cal., first, 90¾; James T. Brown, City, second, 90½.

Hen—James T. Brown, city, first, 92½, second, 92.

Pullet—George Bacon, city, first, 88½.

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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co, Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING FEB. 9, 1892.

468,555.—ADJUSTING DEVICE FOR CABLE GRIPS. Anderson & Fairchild, S. F.

468,540.—ORE SEPARATOR—Henry Cane, Spokane Falls, Wash.

468,765.—CAR COUPLING—F. A. FOX, S. F.

468,655.—MACHINE FOR ROLLING HOLLOW RODS—J. S. Griffin, Roslyn, Wash.

468,658.—PENCIL ATTACHMENT—J. H. Hamill, Globe, Ariz

468,344.—STUMP PULLER—A. Hopkins, Centralia, Wash.

468,544.—CRUSHING MILL—F. A. Huntington, S. F.

468,664.—FILTER—E. M. Knight, S. F.

468,665.—CARPENTER'S SQUARE—L. C. Labady, Tacoma, Wash.

468,430.—WHEEL PUMP—Thos. Powell, Stockton, Cal.

468,364.—BOOT CLEANER—J. B. Prickett, Forest Grove, Or.

468,694.—PROPELLING VESSELS—J. M. Robinson, Vacaville, Cal.

21,338.—DESIGN FOR KEY TAG—C. McIntosh, Tacoma, Wash.

The following brief list by telegraph, for Feb. 16, will appear more complete on receipt of mail advices:

Allen S. Brown, Los Angeles, Cal., ventilator and drip tray; Joseph Brumbaugh, Gold Hill, Oregon, ore crusher; John Downs, San Francisco, sewer gate; George W. Forbes, Gubserville, Santa Clara county, cultivator; John H. Howard, Pasadena, cooking steamer; Edmund R. Mallett, San Francisco, swimming apparatus; Kelly McFarland, Clackamas, Oregon, coupler for caps and fuses for giant powder; Adolph Somer, Berkeley, viscid fatty compound; George A. Stevenson, Los Angeles, elevated railway structure and double traction motor for elevated railways; Charles W. Tremain, Portland, Oregon, steam stamp; Houghton Sanger, S. F., electric arc lamp; A. J. Painter, Pasadena, Cal., motor for street cars; L. A. Steiger, San Jose, Cal., interlocking brick paving block; Frank Walker, Los Angeles, Cal., automatic flushing apparatus.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

More Concerning the New Enemy of the Tussock Moth.

STATE UNIVERSITY,
BERKELEY, Feb. 15, 1891.

TO THE EDITOR:— The insect mentioned in the RURAL PRESS of Nov. 7th, as a new enemy of the Tussock moth, proves to be a beetle, known to science as *Perimegatoma variegatum*. I have had opportunity to carefully study the insect, both from material sent me by Mr. Radcliff of Watsonville and from some collected here at Berkeley. It makes a very important addition to the list of our beneficial insects.

Perimegatoma variegatum was first described in 1875 by Dr. Horn, in the transactions of the American Entomological Society. It is probably a native insect, but had escaped the observation of entomologists before. In the *American Naturalist* of 1882, Prof. Riley says that it injures insect collections, and another species of the same genus has been supposed to feed on the *Icerya*.

This would be a valuable insect to export to the Eastern States, where the Tussock moth is quite as injurious as it is here.

C. W. WOODWORTH.

Thinning Fruit Blossoms.

PLYMOUTH, MICH.

TO THE EDITOR:—Much is said in your paper about the necessity of thinning fruit. Would it not be better to thin out the surplus fruit buds or blossoms after the fruit is formed than to wait till much of the vitality of the tree is expended in growing the surplus fruit? "A stitch in time" will thus "save nine."—J. S. TIBBITS.

Thinning by removing blossoms would be too dangerous, because out of a heavy bloom it often happens that none too much fruit sets. In fact, it is not safe to thin until the natural "drop" has occurred and you see how much is left. With some fruits, some thinning can be done by twig thinning and pruning. The regular thinning must be done after the fruit is surely started on its course.

Meeting of Pioneer Horticulturists.

The California State Horticultural Society invites all pioneer horticulturists to attend a meeting which will be held at San Francisco on Friday, Feb. 26, at 1 o'clock P. M. in the hall of the State Board of Horticulture, 220 Sutter St. S. F. Those who laid the foundations of the present great horticultural industries of California are passing away, many of their important undertakings and accomplishments are not upon record. It is important in view of the great present and still greater future extension of these industries, that their early history should be better understood For this reason the Horticultural Society issues this invitation to all who were engaged in California horticulture previous to 1865, to meet for discussion of the early deeds in which they were participators.

It is also contemplated that such a reunion will be very pleasant to all who attend, and may result in other similar meetings in the future. Gen. John Bidwell, of Chico, has signified his interest in this meeting and will preside during its deliberations, if possible. Every Horticultural Pioneer is cordially invited and is respectfully urged to be present.

FOR SALE.

One half breed Norman Stallion, nine years old, weight, 1700 pounds. Will be sold cheap. Can be seen at Mrs. Thalman's residence, Pinole, Contra Costa Co., Cal.

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Also, 160 acres less than two miles south of the 480 acres, of equally good but unimproved land, bound also to greatly advance in price.

Examine this land and improvements and be ready to bid it off at a bargain.

Auction in Tulare City, Saturday, Feb. 27, 1892. Place and hour of sale to be announced later.

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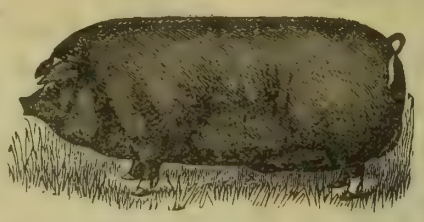


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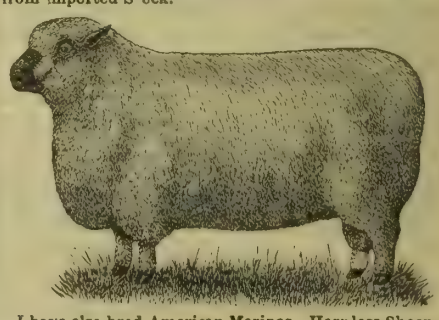


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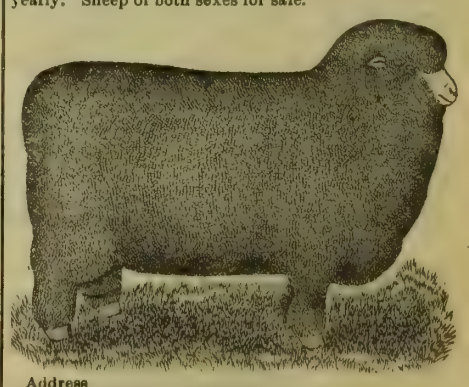
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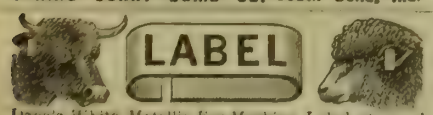
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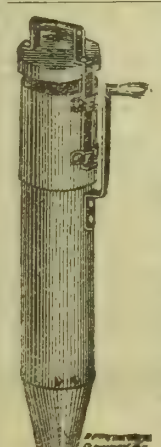
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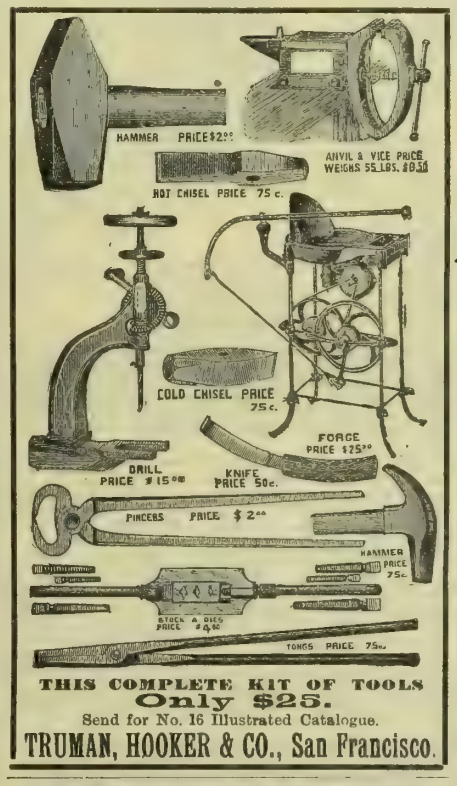
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 17, 1892.

The weather continues to be all that farmers can desire for crop purposes, yet confidence in the general result will be more or less "shaky" until the spring months assure us of well distributed rains in the rural districts. The acreage seeded to grain is not only the largest on record, but the weather so far has been uniformly favorable for the growing plant. This information is not confined to any particular section, but covers every locality in the State. While the rains have been well distributed and the precipitation ample for present requirements, the large deposits of snow on the mountain ranges give assurance of a liberal supply of water for irrigation purposes well into the summer, and at the same time give reasonable hopes of "staving off" the dreaded north winds until after harvest. Other crops, outside of grain, are reported in most excellent condition, with the outlook favorable for large outturns. Money continues easy, with still larger supplies of funds looked for after assessment day.

British Grain Market.

LONDON, Feb. 15.—The Mark Lane *Express* says: English wheat has recovered 6d, but trade has been slow. Foreign wheats are less depressed. The Continent is buying freely of California, Argentine and India at 6d, advance. California sold at 39s 6d and Red Winter at 39s 8d. Flour is quiet, and American is in fair demand, with prices 6d per sack better. Corn is weak—New American, 20s 9d. Barley and oats are firm.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April.	May.	June
Thursday		7s09 d	7s.8½d	7s 8½d	7s07½d
Friday	7s08d	7s09 d	7s09 d	7s09 d	7s08¾d
Saturday	7s09½d	7s09¾d	7s09¾d	7s09¾d	.....
Monday	7s10½d	7s10¾d	7s11 d	7s11½d	7s11½d
Tuesday	8s	8s01¼d	8s01¼d	8s01¾d	8s01¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	
Thursday	..39s	39s	39s¶	Steadier.
Friday	....39s	39s	39s	Rather firm.
Saturday	...39s3d	39s3d	39s3d	Upward tendency.
Monday	...39s3d	39s3d	39s6 l	Improving.
Tuesday	...39s6 l	39s9 l	40s	Strong.

To-day's cablegram is as follows:

LIVERPOOL, Feb. 17.—Wheat, quiet but steady. California spot lots, 8s 1d to 8s 2d; off coast, 39s 6d; just shipped, 39s 9d; nearly due, 40s; cargoes off coast, quiet but steady; on passage, a pause in the demand but no alterations yet, white wheat continuing firm; Mark Lane wheat, firm; English country markets, generally dearer; French, firmer.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	171	171¼	170½	168	165½
Friday	172½	172⅝	172	169¼	167
Saturday	176½	173¼	173¼	170⅞	168
Monday	178¼	178	176⅝	173	169⅝
Tuesday	177	176⅜	175	172	168½

The following is to-day's telegram:

NEW YORK, Feb. 17.—Wheat, $1.06⅞ for March, $1.05⅝ for April, $1.03¾ for May, $1.01⅝ for June and 99⅝c for July.

CHICAGO, Feb. 17.—Wheat, 92¾c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	166⅜	165	...	....	142½	1.2½
Friday	168½	169	....	....	144½	143⅜
Saturday	170	168⅜	143½	147½	145¼	113⅜
Monday	171	169½	....	....	144½	144½
Tuesday	171¼	170⅜	....	....	14½	144¼

The following are to-day's recorded sales on Call:

Informal Session—Buyer season—500 tons, $1.70¼; 100, $1.70⅜; 200, $.17.0⅜ ₩ ctl. Seller 1892—100 tons, $1.43½ ₩ ctl. Regular Session Buyer season - 100 tons, $1.70⅜; 1700, $1.70¼; 1100, $1.7· ⅜; 100, $1.70¼. Se ler 1892—1.0 tons, $1.43⅜ ₩ ctl. Afternoon Session — Buyer season - 200 tons, $1.71⅜; 100, $1.71⅛; 100, $1.71¼. Seller 1892—100 tons, $1.44½; 100, $1.44¼; 100, $1.44⅜. Buyer August—200 tons, $1.47⅞; 100, $1.47⅞ per ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	Seller 1892 H.	L.
Thursday	102⅞	101½	94½	94½	....	....
Friday	103¾	102½	....	....	.	....
Saturday	101	100⅝	....	94½	....	....
Monday	1 2	10	94½	94¼	....	....
Tuesday	101⅜	101½	94¼	....	....	....

The following are to-day's recorded sales on Call:

Informal Session - Buyer season—100 tons, $1.00½; 100, $1.00⅜; 100, $1.01; 500, $1.01½; 100, $1.01⅜ ₩ ctl. Regular session—Buyer season - 400 tons, $1.01½ ₩ ctl. Afternoon session Buyer season—500 tons, $1.01½; 500, $1.02 ₩ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Feb. 15.—All the Eastern seaboard markets report good action, but no better prices. Manufacturers confess to the possession of liberal orders, but they look for soft spots in the market and they do not intend to risk the extra cost for material for big lines of goods. They have been on the right side of quotations for a long time and the seller's side is not propped up by the abundant existence of foreign clips. All the millers are making the Australian blend, as they are compelled to maintain a uniformity of the previous output. Sales at New York aggregate 1,700,000 lbs., of which 1,000,000 lbs. were of Donskoi. Boston sold 2,272,500 pounds of domestic and 621,000 foreign; fleeces and unwashed are unchanged. The quality of Australian wools in late arrivals runs less even than before. Philadelphia reports fair trade in good worsted mill-wool, and fair to steady market for other.

Eastern Hop Market.

NEW YORK, Feb. 15. — The situation is weak in prices, with an actual break at the close on export orders. A few brewers bought sparingly until Friday when a concession brought fair business in their grades. Pacifics are quoted stronger than State. Futures ruled weak, with some recovery at the close. March California, 23c was bid; April, 23½c; May, 24½@24¾c, bid and asked; June, 24¼@25c; July, 24½@26c; August, 25c asked; 91s, 20@25c; common to prime Coast, 20@25½c; others unchanged.

NEW YORK, Feb 16.—In hops spot business is moderate. The export and brewers' trade is dull. Prices are unchanged. A vague sort of a rumor is in circulation that a local firm has secured control of the bulk of the supply of California prunes in this market and is working to get a tighter grip upon the market for the goods.

Eastern Raisin Market.

NEW YORK, Feb. 15.—For raisins there is no wholesale call, and grocers seem fairly well stocked for present wants. The market is no lower, 3-crown [illegible] quoted at 5c; C boxes, $1.10@1.20.

A leading commercial paper refers again to the favorable prospects of the California raisin trade, based on importation statistics, and adds: Since the publication of those statistics, the returns of shipments from California have been given out, and the figures suggest that California has already made great strides in the direction of supplying the outlet that was formerly a field for foreign raisins. As a matter of fact, it would seem practically demonstrated that California has produced enough raisins to supply an outlet equal to that which foreign goods found in this country when the latter had the field almost exclusively, and it is suggested that, weather conditions permitting, there will be enough raisin grapes grown there the coming season to bring the supply of California raisins fully up to the crop of last year and the importations from Europe combined.

Eastern Dried Fruit Market.

NEW YORK, Feb. 15.—Prunes move fast enough to maintain confidence. Large sizes are scarce, sixties to seventies, in bags, 7¾ cts.; seventies to eighties 7¼ cts.; eighties to nineties, 6¾ cts.; nineties to one hundred, 6¼ cts. Evaporated peeled peaches are offered at 18 cts. In unpeeled there is better trade, though the range is wider 5¼@5½ cts Apricots—Weak, sacks, 6½@8 cts.; fine boxes, 9 cts.

CHICAGO, Feb 16.—California dried fruits rule about steady, and though not active there is a fair showing of business. The demand runs to raisins and large prunes and choice grades of peaches and apricots. Ordinary grades of the latter descriptions are slow. Prunes, 40 to 50 to the lb, in sacks, new, 9½c; 50 to 60, 8½c; 60 to 70, 8c; 70 to 80, 7½@7¾c; 80 to 90, 7@7¾c; 90 to 100, 6½c; 100 to 120, 5@6c; ungraded, in sacks, 7@7½c. Apricots, new, choice to fancy, sacks, 9@10¼c; fair to good, 6@7½c. Peaches, peeled, boxes, 17 to 18 to the lb, 16@17c; peeled, sacks, 14@15c; unpeeled, 5@9c. Nectarines, sacks, 6½@7c. Pears, sacks, 5@8c.

Miscellaneous.

NEW YORK, Feb. 15.—Light amber honey is firm at 7½c. Beeswax is quiet and unchanged. It is now too late for sales of comb foundations.

Lima beans—The large supply here deadens the market; spot is slow, $1 75.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 15, '92, were as follows:

Flour, qr. sks	85,667	Bran, sks	7,568
Wheat, ctls	112.2 3	Buckwheat "	26
Barley, "	14,855	Middlings "	2,958
Rye, "	3..	Chicory, bbls	70
Oats, "	1,672	Hop, "	....
Corn, "	3,669	Wool, "	16
*Butter, "	617	Hay, ton	1,992
do bxs	135	Straw, "	187
do bbls	....	Wine, gals	296,790
do kegs	....	Brandy, "	12,980
do tubs	....	Raisins, bxs	1,047
do ½ bxs	83	Honey, cs	....
†Cheese, ctls	391	Peanuts, sks	....
do bxs	48	Walnuts "	77
Eggs, doz	59,15.	Almonds "	25
do " Eastern	....	Mustard "	720
Beans, ctls	9,768	Flax "	....
Potatoes, sks	22,977	Popcorn "	....
Onions, "	1,319	Broom corn, bdls	107

*Overl'd. — ctls. †Overl'd. — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '91 to Feb. 14, '91.	July 1, '91 to Feb. 13, '92.
Flour, ½ sks	200,747	331,258
Wheat, ctls	867,605	1,128,861
Barley, "	205,470	29.099
Oats, "	251 5.7	326,284
Wool, bales	5,798	5,968
Hops, "	368	388
Rye, sks	....	3,293
Potatoes, sks	36,211	55,497

Cereals.

The Liverpool *Corn Trade News* states that the latest reports indicate that the condition of wheat in India is 15 per cent below that of last year, indicating a shortage of at least 38,000,000 bushels as compared with last year. This foreshadows a crop of 217,000,000 bushels against 255,000,000 bushels last year.

The reciprocity treaty with Great Britain, covering the British West Indies, has been negotiated, and makes a reduction of 25 per cent on all breadstuffs and provisions from the tariffs of each separate colony. An exception is made of Trinidad, where the tariff on flour is not to exceed 75 cts. per barrel.

A writer in the San Francisco *Call* says that wheat-growers pay far too little attention to a factor in their business which is as important as the foreign harvests. That is, the rate of ocean freights. The freight market is very fluctuating, and the freight, whatever it may be, comes out of the farmer's pocket. A few weeks ago freights to the United Kingdom stood at 50 shillings, that is, the California wheat-grower paid to the ship-owner $12 for carrying a ton of wheat to Liverpool. Now freights are 20 shillings, which reduces the charge paid by the farmer to the ship-owner to $5. The farmer gets, or should get, just $7 more for his wheat than he could do in December. It would seem that it would pay the farmer to bestow a little attention on the course of foreign shipping. As a general rule, the vessels on which we rely to carry our wheat to market sail out of a British port with a cargo of assorted goods for Australia; load in Australia with a cargo of coal for San Francisco, and fill up here with wheat for Cork or orders. But if anything interrupts this combined voyage, the nominal price of freights rises or falls. When the great strike among the coal miners in Australia in 1890 stopped coal shipments to San Francisco, ships lying in Melbourne, Sydney and Auckland cleared in ballast and went anywhere their owners fancied there was a chance for a cargo; our supply of shipping fell off, freights rose, and the California farmer got so much less for his wheat.

The following is the preliminary report received from the local Government in India on the crop of the season 1891–92:—"The area estimated to have been sown with wheat in the Punjab up to November 30, 1891, is 7,153,400 acres, being 1.1 per cent above the area shown in the final forecast last year, and 12 4 per cent above the estimate of last year's first forecast. The increase has occurred entirely in unirrigated areas in which it amoants to 4.7 per cent. "*Bombay Presidency.*—The information for this report is generally up to December 5th, but sowings continue; hence the information is incomplete. "*Gujarat.*—The area is 312,000 acres, or an increase of 21 per cent over the corresponding forecast of last year. "*Gujarat States.*—The area is 238,000 acres, but the information is incomplete. "*Deccan.*—The area is 899,000 acres. In spite of an increase of 2.7 per cent over the corresponding forecast of last year, this year's area will be below that of last year, except in Khandesh and North and East Nasik, where the condition is good. "*Karnatak.*—The area is 240,000 acres or a decrease of 38 per cent below the corresponding forecast of last year. "*Karnatak States.* The area is 64,700, or 44 per cent below last year's corresponding area. "*Sind.*—The area is 861,000 acres, or a decrease of 7.5 per cent below the corresponding forecast of last year. "In Khairpur the area is 30,000 acres; the decrease is due to want of moisture. Sowing in progress." *North Western Provinces and Oudh.*—The first report received from the local Government:—"The rain in June and July was generally light and afforded great facility for plowing the fields for *rabi*; in August it was continuous, but in September and October it fell with sufficient intervals for *rabi* plowing. Land was sufficiently moist at the time of sowing, and germination was excellent. Prospects very good on the whole. The area is 4 per cent more than last year.

The local wheat market has not only ruled strong the past week, but made quite an advance. The closing is strong. The higher prices were generally looked for and which were indicated in our writings in November and December, 1891, but the prevailing impression was that no decided improvement here could be expected until after the first Monday in March, for in February, or up to assessment day, many holders would let go rather than pay taxes on their holdings. Receipts of wheat from Oregon and Washington continue light. Our advices from up north indicate that over three-quarters of the surplus has been marketed. With higher prices for wheat abroad, there is a gradual strengthening in ships at this and neighboring ports, but the most of the foreign market's advance has gone to wheat

In grain futures, trading on Call has been fair It is said that there is quite a short interest, which, if correct, may result in still better prices, providing the bulls do not let the bears settle with money consideration and not with the actual grain.

Barley has been marked up under steady buying. There is still some inquiry for seed, but the large bulk of purchases is for feed. Bright grades are scarce, and any marked demand is met by higher asking prices. Receipts are lessening, particularly from coast ports. The lighter receipts cause a steady call on the reserve stock, which will show a decided falling off by the close of the month. It is claimed by many well-informed dealers that present low ranges for barley are due to holders forcing sales so as to avoid paying taxes.

Free receipts of oats and a more general desire of holders to sell before assessment day, have created an easier tone to the oat market, with lower prices quoted. The demand for feeding is reported fair. It is claimed that a lessened acreage has been seeded to oats in this State.

Corn is steady, with a fair home and export demand ruling. It is claimed that an increased acreage will be planted this season. So far, the weather has been favorable to the planting.

Buckwheat and rye are unchanged.

Feedstuff.

Ground barley and middlings are strong, with higher prices ruling for the latter. Feedmeal and bran are firm. The consumption for feeding continues quite large, with the bulk of the demand coming from feeders, who are fattening stock for market.

The market for hay is in somewhat of an anomalous condition. While the supply in this State is light, yet the market is easy. Probably the latter condition is due to the favorable outlook for the hay crop, with confirmed advices of a large increase in the acreage devoted to it. Range and pasture feed continues to improve.

Fruit.

Apples show more strength, with very fancy placed readily at outside quotations. Receipts from all sources show a decided falling off, while the demand holds up quite well.

It is quite generally claimed that the season for all kinds of deciduous fruits will open earlier this year than usual, provided similar weather to that we are now enjoying holds in next month.

The orange market continues glutted with undesirable sizes and also with frosted. To sell these kinds, very low prices must be accepted. Choice oranges are in free demand, and are readily placed at $1 a box over our outside quotations. Fancy Navels of desirable sizes sell at from $4 to $4.50 a box for Riverside and Duarte. Advices from the southern part of the State continue to report free shipments to the East. There is an intimation in the correspondence of a leading firm in this city that some growers are holding their choice to fancy oranges in expectation of getting better prices later on.

Raisins show a stronger tone, with a slight advance reported to be obtainable for choice to fancy. The supply in the State of the last two grades is light.

The dried fruit market exhibits a better tone, with an advance in the more choice grades of prunes and peaches. The large grades of prunes are about out of market.

Vegetables.

Potatoes are a drug in the market, with lower prices ruling under continued heavy receipts. To warm, growing weather can be attributed in part, if not altogether, the generous receipts at this port. In the writer's tour on the wharves and among dealers, it was noticed that sprouting is becoming quite general, which will necessitate assorting. The acreage to be devoted to potatoes this season, it is claimed, will show a falling off.

Under free receipts of onions, there is an easier tone at lower quotations. The rush of onions to this market is largely due to the soft weather causing them to grow. The demand for hard and good keepers is reported to be free for the season.

Warm, growing weather is causing a rapid growth in garden stuff, which will cause an early season. Already we note a shading market for earlier garden truck, such as asparagus and rhubarb. String beans are in better supply. Cucumbers were received yesterday from A. F. Tompkin, Saratoga. They sold at $4.00 a dozen.

Dairy Produce.

The butter market continues strong under a good demand and only fair receipts. The market is well cleaned up of fair to good butter, and for these grades the range in prices is close to the range for choice. Improved pasture and more creameries established have given us liberal supplies for the season of gilt-edged grades. To points up north shipments continue free, but with growing weather in Oregon and Washington, that outlet will soon be closed.

Live Stock.

For both bullocks and mutton sheep, the market shows continued strength, with still higher prices looked for at an early day; even now bullocks that cut up without much wastage are readily placed at a slight advance on current quotations. Hogs are in better demand for the block. Lambs are scarce, but with a continuance of present favorable weather the dropping season ought to be well under way soon. The crop will be quite large. For small calves the market shows a stronger tone.

Miscellaneous.

From reliable advices up to Feb. 17, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	244,169	310,223	*†105,728	46,112
San Diego	21,708	13,749	3,921	.....
San Pedro	2,414	6,433	1.234	11,457
Oregon	24,300	34,750	35,982	
Puget Sound	16,685	14,154	.....	
Totals	309,276	379,309	146.868	57,569

*Engaged for wheat, 1892, 56,072; 1891, 43,834. †For new crop loading, 1,746.

With free receipts of Californian and a large falling off in the outside demand, eggs have settled to lower figures, closing the week under review weak. It now looks as if still lower ranges will rule in the near future.

The poultry market has held fairly steady. Wild game is in good supply, with condition good.

There is an increasing consumption of hog product, but as yet neither hams nor bacon show any advance.

Grass seeds continue in free demand. Clover continues in light supply.

Mustard seed continues to meet with a fair to free export demand.

Contracts for next season's hops continue to be reported at from 12 to 13c. The market for spot parcels is strong, with choice grades hard to get.

The wool market is featureless. All information at hand does not point to any material change in prices from those ruling in 1891. Advices received from the East do not warrant the belief that there will be any change in the tariff.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 17, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 75 @ 2 05	Extra, City Mills	5 00 @ 5 25
Butter	2 50 @ 2 60	Do Country Mills	5 00 @ 5 25
Pea	2 35 @ 2 70	Superfine	3 15 @ 3 45
Red	1 75 @ 2 05	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	5 @ —
Small White	2 25 @ 2 65	Do Choice	7 @ —
Large White	2 10 @ 2 45	Do paper shell	7 @ —
Lima	1 70 @ 2 10	Almonds, sft shl	11 @ —
Wld Peas, blk eye	1 35 @ 1 65	Paper shell	12 @ 14
Do green	1 70 @ 2 50	Hard Shell	6 @ 7½
Do Eastern do	2 55 @ 2 75	Brazil	6½ @ 8
Do Nies	1 30 @ 1 45	Pecans small	12 @ 14
Split	3 85 @ 4 15	Do large	15 @ 17½
BUTTER.		Peanuts	3 @ 4
Cal. Poor to fair, lb	17½ @ 26½	Filberts	11½ @ 14
Do good to choice	30 @ —	Hickory	7 @ 8
Do Giltedged	— @ 32½	Chestnuts	11½ @ 16
Do Creamery rolls	— @ 32½	**ONIONS.**	
Do do Giltedge	3½ @ —	Silver Skin, Ch'e	1 00 @ 1 15
Eastern	20 @ 32½	Fair to Good	75 @ 90
CHEESE.		Cut	50 @ —
Cal. choice mild	13½ @ 15	**POTATOES.**	
Do fair to good	10 @ 12½	Early Rose, ctl	25 @ 40
Do glit edged	15½ @ —	Burbank Seedling	30 @ 45
Young America	12 @ 16	Do do Salinas	80 @ 1 05
EGGS.		Do do Oregon	60 @ 85
Cal. ranch, doz	21½ @ 24½	Do Humboldt	75 @ 95
Do do selected	23 @ 24	River Reds	25 @ 40
Do store	20 @ —	**POULTRY.**	
Eastern	— @ 20	Hens, doz	5 50 @ 8 00
FEED.		Roosters, old	5 50 @ 7 00
Bran, ton	19 00 @ 22 00	Do young	6 00 @ 9 00
Feedmeal	27 00 @ —	Broilers, small	4 00 @ —
Gr'd Barley	23 00 @ 24 00	Do large	5 00 @ —
Middlings	25 00 @ 27 00	Fryers	6 00 @ —
Oil Cake Meal	25 00 @ 27 00	Ducks	6 50 @ 9 50
Manhattan Food ₩ cwt	7 50	Geese, pair	1 75 @ 2 50
HAY.		Turkeys, Gob'r	12 @ 16
Wheat, per ton	13 00 @ —	Turkeys, Hens	14 @ 16
Do choice	14 50 @ —	Do Dressed	15 @ 19
Wheat and Oats	12 00 @ —	Manhattan Egg Food ₩ cwt	11 50 @ —
Wild Oats	11 00 @ —	**PROVISIONS.**	
Cultivated do	12 00 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Barley	11 00 @ —	Medium	11 @ —
Alfalfa	10 00 @ —	Light	12½ @ —
Clover	11 00 @ —	Lard	9 @ 11
Straw bale	50 @ 60	Cal. Sm'k'd Beef	11½ @ —
GRAIN, ETC.		Hams, Cal salt'd	10 @ —
Barley, feed, ctl	95 @ 1 03½	do Eastern	12½ @ —
Do Choice	1 05 @ —	**SEEDS.**	
Do Brewing	1 05 @ —	Alfalfa	7 @ 8
Do do Choice	1 10 @ —	Clover, Red	12 @ 13
Do do Giltedge	1 15 @ —	White	20 @ —
Do Chevalier	1 05 @ 1 40	Flaxseed	2 80 @ 2 80
Do do Giltedge	1 45 @ 1 50	Hemp	3½ @ 4
Buckwheat	1 70 @ 2 10	Mustard, yellow	3 25 @ 3 75
Corn, White	1 27½ @ 1 32½	do Brown	3 00 @ 3 25
Yellow, large	1 22½ @ 1 27½	**WOOL.**	
Do small	1 26½ @ 1 30	**SPRING, 1891**	
Oats, milling	1 45 @ —	Humb't & Men'cino	20 @ —
Feed, Choice	1 42½ @ —	Sac'to valley	16 @ —
Do good	1 32½ @ —	Free Mountain	19 @ —
Do fair	1 25 @ —	S Joaquin valley	13 @ —
Surprise	1 50 @ —	do mountain	18 @ —
Black Cal	1 35 @ 1 75	Cala'v & F'th'll	16 @ —
Do Oregon	1 25 @ 1 40	Oregon Eastern	14 @ —
Gray	1 30 @ —	do valley	21 @ —
Rye	1 60 @ 1 72½	So'n Coast, def	11 @ —
Wheat, milling		So'n Coast, free	13½ @ —
Gilt edged	1 73½ @ —	**FALL, 1891.**	
Do Choice	1 72½ @ —	San Joaquin	9 @ 12
Do fair to good	1 71½ @ —	Mountain	10 @ 15
Shipping, cho'ce	1 71½ @ —	Humb't & Men'cino	14 @ 18
Do good	1 68½ @ —	Do fair	1 65 @ —
Do fair	1 65 @ —	Common	1 60 @ —
Common	1 60 @ —	Sonora	1 60 @ 1 72½
Sonora	1 60 @ 1 72½	**HOPS.**	
HOPS.		1891 Choice to Ex	24 @ —
1891 Choice to Ex	24 @ —	Fair to Good	20 @ —
Fair to Good	20 @ —		

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	8 @ —
Sun-dried, ¾'s, com'on	2½ @ 3½	Sun-dr, pl'd, prime, bl	11 @ —
Do do prime	3½ @ 4	Do do choice	12 @ —
Do do choice	4 @ 4½	Do do fancy	13 @ —
Sliced, common	3½ @ 4	Evap, peeled, in boxes, choice	15 @ —
Do do prime	4 @ 4½	Do do fancy	16 @ —
Do do choice	4½ @ 5½	**PEARS.**	
Evap, bleached, ring 50-lb boxes	7 @ 8	Sun-dried, quarters	3 @ 4½
APRICOTS.		Do sliced	4 @ 5
Sun-dried, unbl. com	2½ @ 4	Evap, sliced, in boxes	6 @ —
Do do prime	5 @ 5½	Do ring do	10½ @ —
Do do choice	6 @ 6½	**PLUMS.**	
Do bleached, prime	7 @ —	Pitted, sun-dried	4½ @ —
Do do choice	7½ @ —	Do evap, boxes, choice	— @ —
Do do fancy	8½ @ 9½	Do do do fancy	— @ —
Evap, choice, in boxes	9½ @ 10	Unpitted	2 @ 2½
Do fancy, do	10 @ 10½	**PRUNES.**	
FIGS.		Cal. French, ungraded	5½ @ —
Sun-dried, black	3 @ 3½	Do graded, 60 to 100	6 @ —
Do white	3½ @ —	Do do 40 to 60	8 @ —
Do do washed	@ —	Fancy sell for more money.	
Do do fancy	— @ —	**RAISINS.**	
Do do pressed	— @ —	London Layers, choice ₩ bx	$1 50 @ —
Smyrna boxes	— @ —	Do fancy, do	1 75 @ —
Do sacks	— @ —	Layers, ₩ bx	1 25 @ —
GRAPES.		Loose Muscatels, common, ₩ bx	1 00 @ —
Sun-dried, stemless	3 @ 3½	Do choice, do	1 20 @ 1 30
Do unstemmed	2½ @ 3	Do fancy, do	1 50 @ —
NECTARINES.		Unstem'd Muscatels, in sacks, ₩ lb	4 @ 5
Red, sun-dried	3½ @ 5	Stemmed do do	5 @ 5½
Do Evap., in boxes	6 @ —	Seedless do do	6 @ —
White, sun-dried	5 @ 6½	Do do ₩ 20-lb bx	1 15 @ —
Do evaporated	6½ @ 7	Sultanas, unbl, bxs	1 15 @ 1 40
PEACHES.		Do bleached, in bxs	1 30 @ 1 60
Sun-dried, unpeeled, common, bleached	3½ @ —	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes	
Do do prime, do	5 @ —		
Do do choice, do	6 @ —		
Do do fancy	7 @ —		
Evap, unpe'l'd, choice	7 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 17, 1892

Limes, Mex	7 00 @ —	Do Eastern, bbl	3 75 @ 5 00
Do Cal	75 @ 1 00	Beets, sk	— @ 1 00
Lemons, box	1 25 @ 3 50	Carrots, sk	35 @ —
Do Sicily	5 50 @ 7 00	Okra, dry, lb	15 @ —
Oranges Seedlings		Parsnips, ctl	— @ 1 25
Riverside	85 @ 1 50	Peppers, dry, lb	8 @ 12½
Los Angeles	65 @ 1 25	Do green	20 @ 35
Do Navels—		Turnips, ctl	50 @ —
Los Angeles	75 @ 1 25	Cabbage, 100 lbs	60 @ —
Riverside	1 25 @ 3 00	Garlic, lb	2 @ 3½
Duarte	1 25 @ 3 00	Squash, Mrft, tn	6 00 @ 10 00
All kinds of oranges free from frost sell at an advance of $1 per box on the above quotations.		Do Summer, lb	20 @ 25
		Pumpkins, ton	7 00 @ —
Apples, box	60 @ 1 00	Tomatoes, box	1 50 @ 2 25
Do choice	1 25 @ —	Asparagus, lb	15 @ 20
Do extra choice	1 75 @ 2 25	Do choice to ex	20 @ 27½
		Peas, green, lb	8 @ 12½
		Rhubarb, lb	15 @ 18
		String Beans	17½ @ —

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	7½ @ —	Wethers	10 @ 10½
Grass fed, extra	7 @ —	Ewes	9½ @ 10½
First quality	6½ @ —	Lamb, yearling	11 @ 12½
Second quality	6 @ —	Do Fall	15 @ —
Third quality	5½ @ —	**HOGS.**	
Bulls and thin Cows	2½ @ 3½	Light, ₩ lb, cents	4½ @ ⅝
VEAL.		Heavy	4½ @ —
Range, heavy	5½ @ 7	Feeders	4½ @ —
Do light	8 @ 9	Stock Hogs	3½ @ —
Dairy	8½ @ 10		

Talks With Practical Men.

The city of Petaluma has recently taken rapid strides in regaining her former prestige as a shipping point. Petaluma creek has been dredged and Mr. John McNear is now completing a basin provided with locks adjacent to the city, for large sized vessels to enter. A silk factory is now being constructed; the woolen mill will be enlarged to double its present capacity and the machinery is now in place to start a new boot and shoe factory. A RURAL PRESS reporter made a visit last week to this locality to see the late importation of fine horses from England by Mr. Skillman, and large importation of Shropshire sheep from England by Mr. Mecham.

He spent several hours in the pretty little city in talks with different citizens and makes the following report of some of the more interesting interviews:

W. H. Worth.

In a talk with a reporter, Mr. W. H. Worth, proprietor of the Petaluma Agricultural Works said, speaking of his new gas engine: "While other gas engines are open on the sides, with the fly wheel on one side, pulley and belt on the other, close up to the sides, so that you cannot get at the connecting rod, mine is open in front with the crank shaft turning toward you, leaving the boxes and connecting rod so that you can get at them. I claim further, that there are only about one-half as many parts in my machine, and the sparking device is a wiping motion and no springs inside of the machine; therefore I claim convenience, simplicity and durability in my gas machines."

Mr. Skillman.

"How many horses," asked a RURAL PRESS reporter of Mr. Skillman, the well known importer; "have you brought to the Pacific Coast?" "Over 60 head," replied Mr. Skillman, "stallions and mares all registered and thoroughbred." "Your importation for 1891 and 1892 were largely of Suffolk Punch. Do you regard them as a draft horse of high merit?" "In my opinion the Suffolk Punch which has a distinctive pedigree for 150 years, is one of the best, if not the best, breed for a draft horse for general purposes. They have strong prepotency, always a sorrel in color, compact, a solid bone, fine constitution, and together with the Norman are the only breeds whose legs are free from the long, shaggy hair. "Among the stallions you brought out this year are two very fine large stallions known as "Shire." "The Shire horse is a notable breed of horses in many localities and are very popular as carriage and draft horses. I am of opinion that my importation this year was in many respects the best lot of horses ever brought into this State.

Mr. H. Mecham.

The breeding farm of Mr. H. Mecham, lying six miles north of Petaluma, was visited a few days ago by a reporter of this paper, who was most hospitably received by the proprietor and shown about the place. Seventy-eight head of lately imported Shropshire sheep were in a field adjacent to Mr. Mecham's beautiful home, feeding on the California grasses, and apparently thriving as well as upon their native heath in England. In a field adjoining were about 80 ewes, which had increased their number by 40 lambs since January 1st of this year. It is conceded by sheep growers that Mr. Mecham has achieved great success as a breeder of sheep and established a distinct herd of Merino sheep that has given him a national reputation. He sold last year 900 head, and had orders for 3000 more that he was unable to fill. Mr. Mecham has been breeding sheep for 30 years, and in connection with breeding has been importing sheep more than two-thirds of that time. His principal class has been Merino, but four years ago he tried the Shropshire, and he is now firmly convinced that these two breeds are superior to all others for all purposes of profit. Talking with the reporter, he said: "For small flocks of sheep for farmers and near cities, where mutton and lambs are a good deal of an object, I regard the Shropshire as far ahead of any other sheep for an all-around sheep for profit. The Merinos I consider more valuable for running in large herds. There is no other sheep that compares with them in this respect. There has never been any other sheep that compares with them for profit." Concerning his recent importation of 78 head, Mr. Mecham said that they were specially selected for him by a well-known expert, without limit of price, and that he regarded them as one of the best, if not the best flock ever imported in his line. Returning to the qualities of the Merino and Shropshire, Mr. Mecham said: "The reason why I regard them as the best is that I have crossed all other classes of long-wool mutton sheep and have found the cross too radical. In some places on the body the wool would be long, while in other places it would be short. The Shropshire, being a middle class wool, appears to mix and make an even fleece. In fact, their fleece is nearer a Merino fleece than any of the mutton breeds, the Shropshire being as well wooled over the body, head and legs as the Merino. The Shropshires are very compact, wide and deep through the shoulders, short legged, and very hardy. The cross between the Merino and Shropshire makes a very hardy mutton sheep, and produces fine lambs for the market, which mature earlier than the Merino. When I bought my Merino sheep," continued Mr. Mecham, "20 years ago, among the lot were two rams without horns. One of them proved to be an extraordinarily fine one, shearing 35 pounds in 12 months. In looking over this ram I thought I could see a great advantage if I could breed a Merino sheep without horns. I have bred from that ram and his offspring ever since and I do not have now over one ram in 30 that has any sign of horns. My sheep are now a great deal larger and stronger in constitution than when I commenced. My rams produce from 20 to 25 pounds of long white wool, 12 months' fleece."

Interview with L. C. Byce, Manager of the Petaluma Incubator Co.

"Mr. Byce, I see you are running a full force in your manufacturing department. Do you have a good demand for incubators and poultry devices this season?"

"Yes, the demand is on the increase all the time, and if I could get some skilled labor in this line, I should increase my force of men, as I have added to my help in the office."

"Is the volume of poultry-raising increasing in California?"

"Yes, decidedly so, and there is a large number of Eastern people, who are late arrivals, going into the poultry business, and, in this connection, my bills for postage amounts to from $50 to $100 per month, and will average over $60 per month."

"As a rule, have the men and women who have embarked in the poultry business made a success?"

"Yes, especially those who have followed out the latest methods of feeding and caring for fowls, viz., feeding cut bone with the meat on direct from the butcher and cutting clover very fine and mixing it with meal, using the same thrift and sagacity in feeding that men do in caring for horses and cattle—in fact, this system is claimed by our most reliable men to decrease the cost of feeding fully one-half."

"Have any improvements been made of late in artificial hatching of eggs?"

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"Mr. Byce, I believe it has become a settled question that hatching eggs by artificial heat has proved a practical success, but the chief trouble seems to be in the artificial 'mother,' or, as generally known, the 'brooder.'"

"That is true. The great difficulty in the past has been the 'brooder,' but the defect in this system has been surmounted by our Petaluma Brooder, which has been in use for the past three years (there being now over 8000 in use), and the complaints are so few that we believe we have an unqualified indorsement and an efficient and practical brooder."

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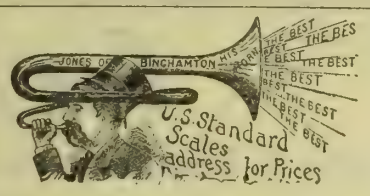
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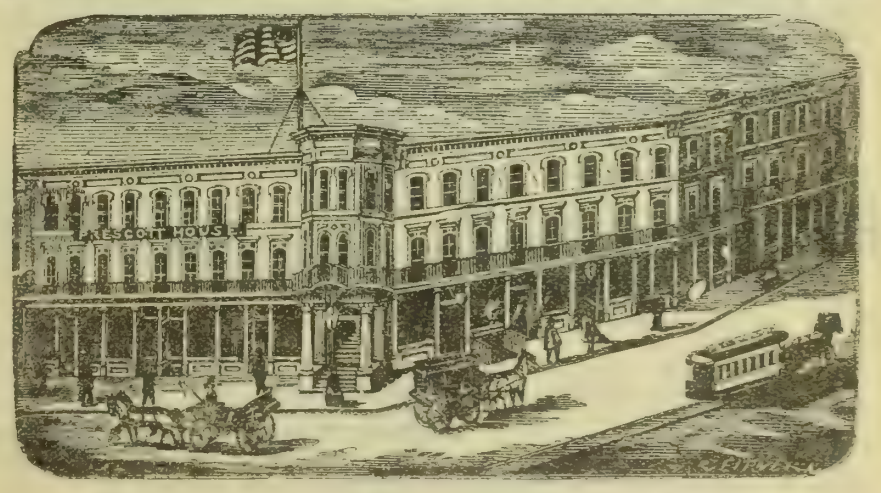
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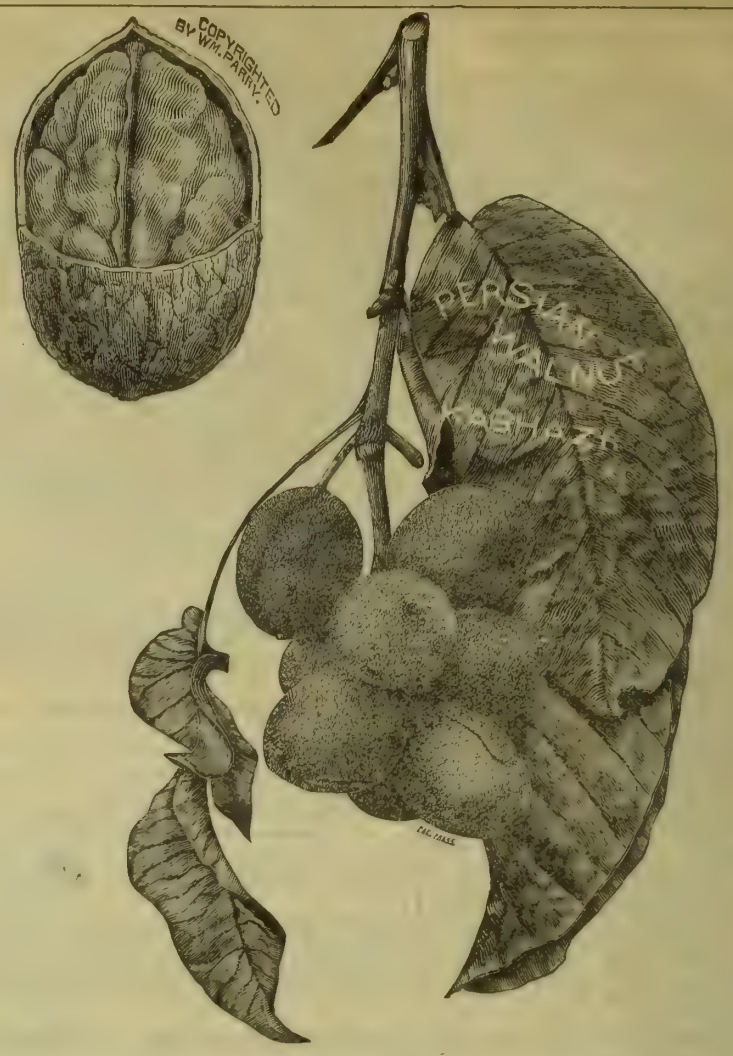
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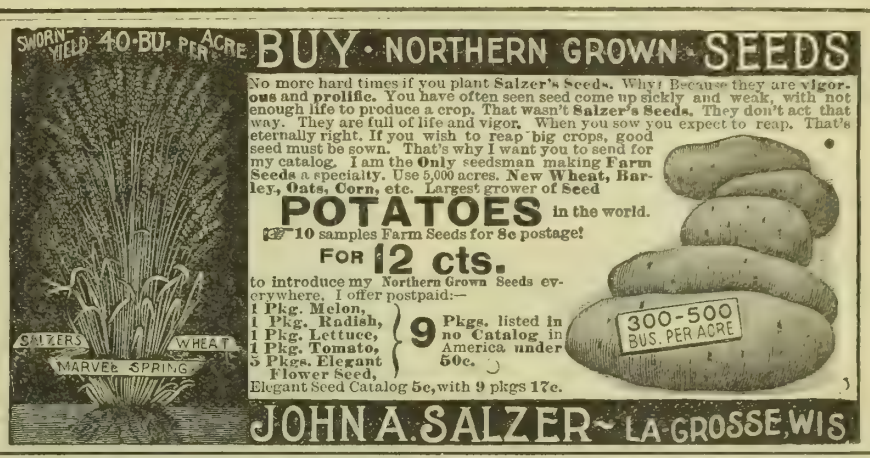
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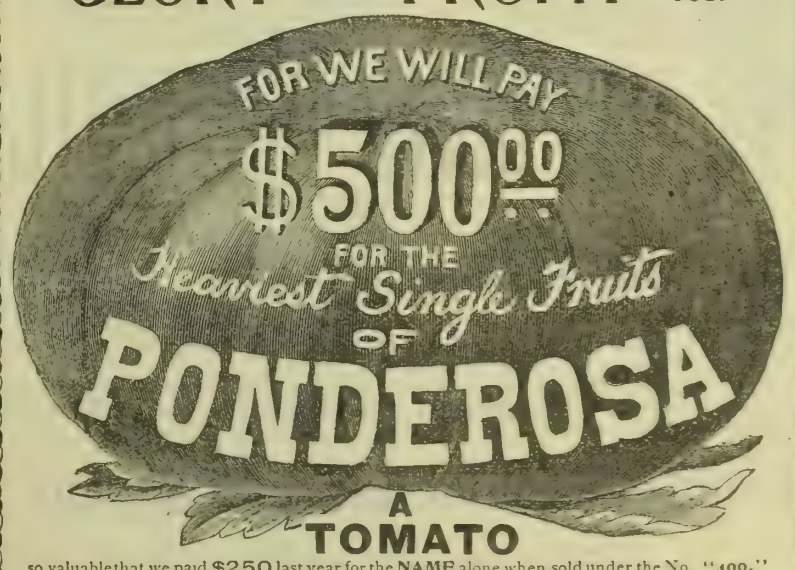
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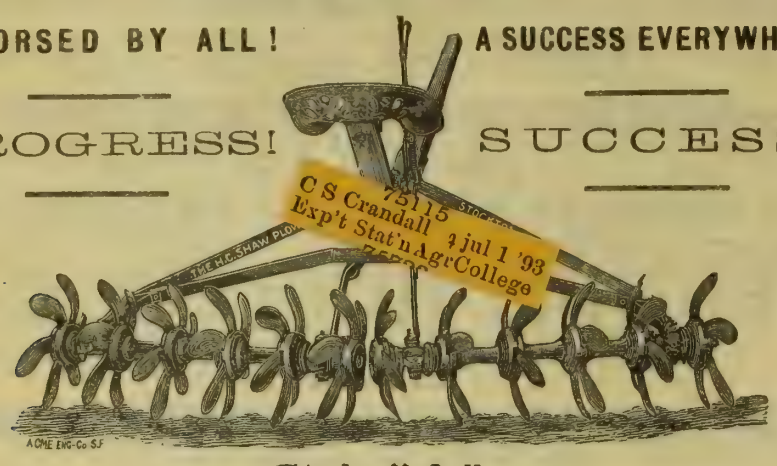
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TESTIMONIALS.

GRANGEVILLE, CAL., Dec. 25, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Your favor of the 22d, asking me how I liked the Triumph Spading Harrow I used on the "Oothout Vineyard and Orchard," received. In reply would say that I have used almost all the modern implements, but as a pulverizer and cultivator combined I never saw anything to equal them.

Yours truly, H. H. CLARKE,
Formerly Supt. and Manager of the "Oothout Orchard and Vineyard," Fresno, Cal.

FRESNO, Cal., Dec 19, 1891

H. C. SHAW PLOW WORKS.—Dear Sir: The "Morgan Spading Harrow" which I purchased last season I am well pleased with and I can recommend it as being a first class implement for orchard and vineyard work.

Yours truly, A. V. MORSE.

FRESNO, Cal., Dec. 10, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Last winter I purchased a ten-foot Triumph Spading Harrow, and am pleased to say that I found it a most satisfactory tool. I used it for both my nursery and my orchards and found that it left the ground in better shape than any cultivator I had ever used. For pulverizing rough and cloddy ground I don't believe there is an implement superior to it in the market.

Yours truly, GEO. C. ROEDING.
Manager for the Fancher Creek Nursery, Fresno, Cal.

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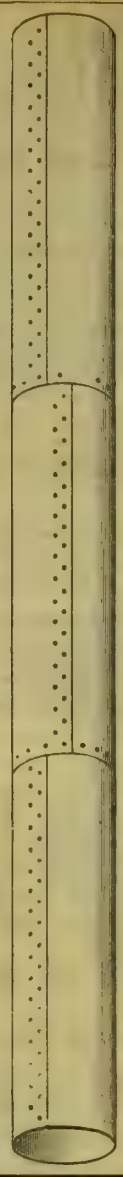
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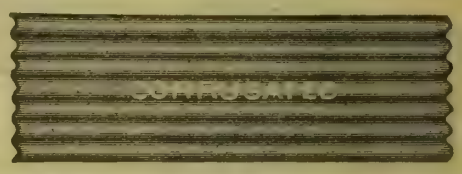
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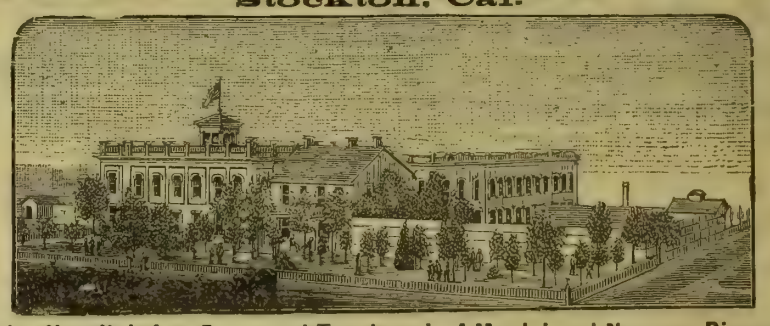
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PACIFIC RURAL PRESS

Vol. XLIII. No. 9. SAN FRANCISCO, SATURDAY, FEBRUARY 27, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Great Southern Citrus Fair.

The State Citrus Fair for the Sixth Congressional District, which includes Alpine, Fresno, Inyo, Kern, Los Angeles, Mono, Monterey, Orange, San Benito, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Tulare and Ventura counties, will open in Hazard's Pavilion, Los Angeles, on Wednesday, March 2d. While the district tributary to this fair is immense, and covers about half the area of the State, it is the counties south of the Tehachapi mountains which make most of the display. Still, we have enumerated all the counties, that any of our readers, in any of them, who have citrus fruits may understand that the lists are open to them. Very liberal premiums are offered, and there is every inducement for all citrus regions in the district to bring forward their best products and display them in the best style.

The prospects for the Fair, as we learn from local advices, are very fine. Applications for space have been freely made, so that at the close of last week there were more applicants than the whole number of exhibitors at the last fair, and the territory to be represented will be much wider. Both counties and localities which refrained from showing last year will have notable displays on this occasion. The management of the fair this year is in the hands of an Executive Committee consisting entirely of fruit growers, only one of whom, namely, Mr. E. F. C. Klokke, is a resident of Los Angeles. The others are E. W. Holmes of Riverside, chairman of the committee, who is at once well known as a citrus fruit grower and a journalist; George W. Ford, a veteran citrus and walnut grower of Orange county; F. J. Smith, one of the best known and most active of Pomona's young men, and John Scott, Horticultural Commissioner of the county, who hails from Duarte, and has had an active hand in enterprises of this sort. The same may be said of all the members of the committee.

Los Angeles journals are well filled with prophecies of the coming charms of the Fair. We read in the *Herald* that Hazard's Pavilion will be decorated on a scale of magnificence never before attempted. All the vast dome of the building will be covered with a fretwork of wire netting, interlaced with ivy and oranges securely fastened in place. Down the middle of the dome will run a row of incandescent electric lamps. At the front end of the building, over the stage, a huge arch will be constructed of iron, wire and cloth covered with palms, ivy and other evergreens. In this, several hundred electric incandescent lamps will glitter, and the vast arch of green will be lighted up by splashes of orange color in designs wrought out in the living fruit. The pillars will be covered with cloth and vines, and the galleries festooned with vines and foliage. For the purpose of decorating the hall, some 8000 or 10,000 square yards of wire netting, some thousand yards of cloth and several tons of ivy and foliage will be required. The question of the colors to be used in decorating was submitted some time ago to Mr. Charles H. Ward of the firm of Marshall, Field & Co. of Chicago, who returned answer that the only suitable colors to be used at a citrus fair were the light and dark greens which appear in the foliage of the citrus trees, and the colors of the orange and lemon, and no other colors except those will be allowed in the building. Wherever other colors occur in the interior of the building, they will be covered up. Thus, when the work of decorating is completed, the interior of Hazard's Pavilion will be one vast bower of green, lighted up here and there by the colors of the live fruit, and brilliantly illuminated with many hundred electric lights.

Such a forecast of the decorative sights, added to the surety of the highest excellence in the fruit displays, which will be grouped amid such environment, should prove a strong attraction to draw Californians and visiting tourists strongly toward the southern part of the State next week. To our northern fruit growers, here is a chance for a most delightful recreation for the family before the hard work of another summer begins. Let all who can afford the time and the expenditure give themselves this recreation, accompanied as it is with the opportunity of learning much of Southern horticultural production. Such knowledge will be of great practical value to many of our northern readers.



MULTNOMAH FALLS.

THE Senate has passed the bill to protect foreign exhibitors in the World's Fair from prosecution for exhibiting wares protected by American patents and trade-marks.

Fungus Proof Apricots.

We suggest that apricot growers who have collections including a number of varieties take notice as to how different varieties are affected by the shot hole fungus, and report in due time which varieties are worst injured and which if any are little affected. We are led to make this suggestion by an item in a South Australian exchange which describes how Mr. Westerman Smith advances the proposition that, instead of trying to combat the shot hole fungus of apricots, it would be better to grow varieties that are nearly free from attack, such as Oullin's Early Peach and Princess Orange. The first he had growing for five years, and the latter seven years, and nearly free from disease, which has been present in the orchard three years. Over 85 per cent. of clean fruit was yielded by the two varieties, without any cost for fungicides. Of the 20 sorts of apricots cultivated, only two or three were any good.

One of the varieties named by the Australian observer is hardly known in this State and the other is not on record at all. But if these resist there are probably others known to our readers which are also resistant. Our observation is that there is considerable difference in the severity of the attack, both with apricot and plum varieties, but we have not looked into the matter as closely as we shall in the future. We trust others will do the same and see if a test can be made of varieties satisfactory in season, size and bearing which do not yield to the shot hole. It would be a consumation greatly to be desired.

Multnomah Falls.

We print this week the last of a series of pictures published from time to time during the past three months, illustrating the magnificent scenery of the Columbia river gorge. The picture in this issue represents the Multnomah Fall, on the south bank of the Columbia river, in Oregon, almost immediately west of the summit line of the Cascade mountains.

The fall is a double one, and is one of the most beautiful in the world. It has perhaps but one superior, and that is the well-known fall in Yosemite valley. The stream represented issues directly from the glaciers of Mt. Hood, flowing northward, close to the summit of the Cascade mountains, pouring its entire volume into the Columbia river over the cliff which forms its south bank. The picture represents only the upper fall, a leap of 461 feet, while the lower, scarcely less picturesque, flows out of the basin directly from the rustic bridge shown in the cut.

The fame of this view is world-wide, and trains on the Union Pacific Road, which pass within 200 feet of it, stop to allow the passengers to enjoy the magnificent spectacle.

SALE of ELLWOOD.—Announcement is made of a sale by Ellwood Cooper of his famous ranch, including olive orchards, etc., to an English syndicate for $200,000. The local representative of the English company is Dr. Harold E. Sidebotham, who says that it is the company's intention to colonize the tract with English emigrants and endeavor to keep its products up to the standard which Mr. Cooper has established, there being no intention of making any change in the productions.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.—ED.

A Winter Trip to Shasta and Siskiyou.

SAN FRANCISCO, Feb. 16, 1892.

TO THE EDITOR:—The present prospect for crops in these two northern counties bids fair to exceed last year's product which was not particularly encouraging to wheat growers, but exceptionally good for the orchardist. There is no denying the fact that grain does not do as well in the upper Sacramento Valley as below Red Bluff. The farmer sows twice as much seed to the acre, and yet the crop comes up scattering, and there is usually considerable shrinkage of the heads. Corn also has an uncertain yield in this soil, the stalks lacking nothing in body and height, but the ears proving more or less blasted. There are certain valleys in this section, however, where cereals are grown with more than average success. The writer has never seen finer fields of wheat and oats than are raised around Fall river and in Scott Valley. There are also many acres of river-bottom land at Redding, Anderson and Cottonwood, where the luxuriant stretches of grain are a delight to the eye.

In the middle of January the farmers were steadily at work plowing and sowing between the light showers of rain. On the Bonny View tract just out from Redding, some fields were already green with sprouting wheat, which grew to the very trunks of the stately white oaks. These picturesque lowlands following the river are not equally good for fruit, the water being often within three feet of the surface. The first year or two the trees do remarkably well. After this the roots become water-soaked, and soon the entire orchard is withering or dead. This has been the fate of many of the young orchards planted hereabouts in 1887, when Shasta's horticultural resources first came to the front.

On the other hand, fruit trees set out on the first bench a few feet above the bottom lands, have done uncommonly well. The soil of these higher locations has a gravel drainage, though water can be found anywhere within 10 to 14 feet of the surface. The largest orchard tract in Shasta county is in the immediate neighborhood of Anderson. Here are 1500 acres of bearing peach, apple, pear, plum, prune, almond and apricot trees, and 500 acres more in preparation for the planting of prunes. For some reason the quince does not do well in Shasta county. Almonds on the contrary have so far proved a good investment. It is well known that the almond tree thrives where the cherry and plum do well, though there is always the uncertainty of its bearing quality. An orchardist naturally wishes to be assured of his crop, and therefore the almond is usually rejected by him. As a consequence California does not raise enough almonds to supply the home market, though the varieties produced here compare well with the best imported ones.

A prominent fruit grower, Mr. Edward L. Frisbie of Redding, has looked into the almond problem to good purpose. He has brought to profitable bearing, 2000 almond trees near Anderson, whose crop last season exceeded his highest anticipations. Speaking of this flourishing young orchard, he says:

"The essential question is always to adapt your fruit to your location. I know the almond requires dry, porous soil, with some elevation and hot summers. I was assured we had just these requisites at Anderson, and so ventured the experiment and am not sorry I did so. At the same time I planted 150 acres to Royal apricots which have also produced well, though I was told repeatedly they could not be cultivated successfully in this climate. I never irrigate my trees. The Bartlett pear and the winter Nelis are particularly good here. The Bartlett ripens a month later in Shasta county than it does in Napa Valley, which is a great advantage in the disposal of the crop. There are excellent grapes raised around Anderson and Igo and in Happy Valley, but in many parts of the county the intense heat of the summer burns them before they are ripe enough to pick. At present the general tendency of our fruit growers is to set out prune orchards. I am convinced they are one of our surest crops. We have a variety which originated here, and is in every way equal to the French prune. This "Anderson prune" ripens six weeks earlier in the season than the French prune. There are thousands of acres of good fruit land in this section now uncultivated or used to poor advantage in the growing of grain. We already have a cannery, though much of our fruit is dried for shipment."

Four years ago Mr. Fred H. Deakin of Yokahama, became enthusiastic on the subject of olive planting on the bench lands in Redding. Some acres of these high tracts were thereupon cleared of the thickets of manzanita and scrub oak, and set out to several of the best varieties of the olive. For the first two years the trees made excellent growth, but upon the property changing hands they have since been neglected. They have, however, held their own against all odds, and even added a few inches annually to their branches, thus proving an undeniable adaptability to this red, gravelly soil. A Redding Picholine seven years old, bore a heavy crop last season, which has been marketed as first-class pickles. In fact there is no longer any question that many of these foothills about Redding and Shasta City, can be profitably utilized for olive and fig culture.

The venerable fig trees planted by Shasta miners more than 40 years ago, are still in noble bearing, the fruit being large in size and of delicious flavor. A winter visitor to the historic Weiser place, a mile this side of Shasta City, sees a picturesque illustration of the inconsistency of the climate of California. Beyond the famous Shasta Palms and next to the old vineyard of Mission grapes, there are patches of snow on the ground beside young pines and wide-spreading fig branches, with several orange trees resplendent in their lustrous green and pendulous golden balls.

Mr. R. Bostwick has oranges growing on his beautiful orchard slope within the town limits of Redding. An orange picked here in the middle of January proved to be perfectly ripe and of faultless color and flavor. There is something infinitely piquant in this plucking of oranges within sight of an arctic zodiac of peaks!

These snow covered summits, however, do a peculiar work for horticulturists in northern California. Without the high altitude and frosty pine-laden breath of these colossal ranges, this coast could not produce such apples as are found in the Siskiyou foothills and valleys. As an old Maine farmer declared, "They have the true *appley* flavor." While at Mott, the hotel table was daily furnished with the finest apples I had seen in the State. They were of splendid size, firm and juicy, and of the richest red color imaginable. These Siskiyou apples are rapidly gaining prominence, and San Francisco and Sacramento fruit buyers come up in the fall to secure all the surplus crop. It is estimated that as many as 130 carloads of apples were shipped from the different portions of this county the past season, while hundreds of acres are being newly planted to young trees. One who has seen and eaten these apples, must give northern California the credit of disproving the oft-repeated statement that this State cannot rival the East in the production of first-class apples.

NINETTA EAMES.

Development of Humboldt County.

BRIDGEVILLE, HUMBOLDT CO. Feb. 16.

TO THE EDITOR:—Since there is so much talk going the rounds about tapping Humboldt county by a road from Crescent City, another from Red Bluff and latest that the Southern Pacific will buy the Donohue system and extend to this county, I will indulge my fancy and try and portray the change which railroad facilities would make on a large stock ranch.

A ranch most widely known in this vicinity is the Geo. W. Charles ranch. It was purchased by Messrs. Charles and Richardson, from the pioneers Messrs Bent, Ward and Sherwin. They stocked up the ranch with cattle, and their band ranged from 500 to 1000 head. At length the county began to settle up and the Government caused a survey to be made in 1871, when from that time the large ranches began to acquire title to their lands. Later, Mr. J. Richardson died and his partner acquired his interest. Mr. Charles tried sheep raising later with marked success. In addition to managing his ranch, he yearly drove bands of mutton and beef to San Francisco, and was regarded as one of the best stock traders in Northern California. In 1880 he built a fine residence and spared no expense in improving the grounds, etc., and he had a large orchard laid out, which has since matured and is bearing well.

Several years ago Mr. Charles was drowned at Alder Point in crossing Eel River, since bridged by the longest single span in the State.

Since his death, the ranch has been in litigation, and has but lately been settled. During the interval, the ranch was not stocked, and the grass is so high in spring it would make good hay. Out of the 8000 or 10,000 acres, nearly one-half is suitable for cultivation, and the soil is adapted to wheat, oats, and cereals generally, though the price for threshing was until last season six cents, last season it was five cents, but it will probaply be reduced to four cents this year on account of competition. Grain has sold from 1 ½ to 2½ cents.

There is a large tract of this land lying north and east of the village of Blocksburgh, with a rich black loam, and I presume there are 1506 acres in one body, level or slightly rolling, that can all be farmed. This side of the range, is within a couple of miles of the 320 acres where Eureka and Eastern capitalists have started planting out an orchard, the soil and lay of the land being very similar, though neither tract has any prestige over the Hanson farm or some other adjoining places.

There is considerable bottom land near the residence and orchard which is very fertile. Some idea of the location can be gained, as the Blocksburgh race track is situated on one of the numerous level strips, and in days of yore, has been the scene of some of the best of races.

Railroad facilities would bring all this tillable land to the front, it would enhance the utility of the land and the prices would keep pace with the times. This ranch like many others, is well watered, but at present these fine privileges are only used by stock. However, the day is not far off when the way will be worth as much as the land itself.

Work is progressing favorably in the fruit colony under the efficient management of Dr. Hall, lately from the East, the fencing and plowing is being done by contract, and both are nearly completed. He intends to plant 40 acres in orchard this season.

J. W. Rockwell and Steve Henry, wholesale butchers of San Francisco, have just driven out a fine band of mutton sheep. T. W. Burn's lease of the McClellan ranch expires this spring. There is a fine stock ranch for rent, stocked and well-fenced, in this section.

John Vance, Mayor of Eureka, died on Jan. 23rd. He was a rustler of the first water, who came to this county 40 years ago flat broke. In all his vast undertakings he backed his own judgment. In him the workingman ever found a friend, not one who gave the tramp a dime, but who gave employment to those who stood in need of assistance and were able to work. I have no intention to laud the dead or censure the living, and I ask no one's pardon for saying that John Vance was the most public spirited man of our county. It is a stubborn fact that the logging and milling business antagonizes the country farming and stock industries. The farmers needed the improvement of the bar to extend their industry, the country wanted good wagon roads and finally a railroad. The milling interests have contested all the wagon roads, and now they are making frantic efforts to defeat the bonding question, which means good roads, a tide of immigration, and at length a railroad. In John Vance the rural districts ever had a warm friend. He took a broad view of our county's prosperity and he was not owned by any steamship company that caused the country and its roads to be misrepresented, in order to corral all the travel by sea. He stood out prominent as a lumberman who favored good roads and a railroad. His funeral was the most largely attended of any ever held in the county.

There is a growing sentiment in favor of cutting up the stock ranges and paying more attention to farming. Mr. Biar Curless intends to dispose of some 400 acres of farming land, and devote his entire attention to sheep. The Martin ranch will probably be put on the market in tracts suitable for orchards. The price of land here, like other sections, is governed by the quality of land, and how badly the owners wish to sell; if a tract can be purchased for just what it is worth at the present time to graze stock, no better investment can be found in the State.

ED. ROBERTSON.

HORTICULTURE.

A Fruit Grower's Lessons.

Leon Leighton, a fruit grower and nurseryman of Shasta county, makes the following points in an article written for the Anderson *Enterprise*. Our readers will no doubt be interested in comparing his experience with their own.

A few animadversions upon matters relating to fruit-growing may not be out of place at this time of year. I have been in the business more or less for some four or five years, and during that time I have "a good many things found out."

One is that it don't do to put much dependence in what we may call floating statements, either as to methods of management or the degree of profits. I look upon fruit-raising as a stable, established business, that will, one year with another, bring a fair profit and no more. It is now subject to the same pernicious skinning schemes of the dealers and speculators that other farm products are, such as wheat or beef. Perhaps the skin is not so thoroughly removed as it is in the case of beef, but the profits are quite as thoroughly absorbed by the middlemen who handle the fruit and the railways which transport it as in the case of other products. If the producer can make a good square living and some profit he would feel satisfied, for the average producer of other farm products does extremely well if he lives well.

The man who has soil adapted to the growth of standard fruits can hardly go amiss in planting such fruits as will flourish in his soil, having regard also to the climate.

The idea which I at one time held that citrus fruits and the olive would do to plant in this climate, I have long since abandoned. We have enough other fruits without them. The peach, prune, pear, fig and vine are sufficient for the main body of an orchard with us. Nut trees may do well, and the apple, limited with us to a side issue, should be the one great fruit in the higher altitudes.

The atrocious or neglectful treatment which young trees sometimes receive, precludes the possibility of success. As nurserymen, many queer things come under our notice. After giving the most explicit directions as to the proper care of young trees to our patrons, we have had them completely disregard our instructions; something like this, viz.:

Case I.—By planting peach and almond trees in ground so wet that water seeped from the surface. Result; many of the trees never leafed out, and all in that part of the soil which was waterlogged died. I will remark here that the ground in which these trees were planted was not plowed until after the trees were planted and dead. Second result, the planter declared something was the matter with the trees and wanted us to replace them. Now this man was told, positively and repeatedly when he took his trees from the nursery, not to plant peach or almond trees in soil in which water stood, for if he did the trees would die.

Case II.—A man of means took a large number of first-class prune trees, planted them on fairly good soil, cultivated them well, but left them exposed to the ravages of rabbits, etc. The rabbits, by traveling some half mile, had access to alfalfa and did not damage the trees fatally, but no shade was provided to keep the sun's fierce heat, as reflected from the hot earth, from scalding the tender bark of the young trees near the ground, and the borer beetle finished the trees by depositing his eggs at that place, the soon-hatched borer rapidly cutting the tree clear around beneath the outside bark, and the tale is told to the careless and ignorant manager only when the tree dies. This party was told that prune trees should be protected from rabbits and borers, and from the sun, by standing two shakes, one, so it would shade the south side and the other the west side of the young tree. This party concluded that his trees were on the wrong root, i. e., the nurseryman was to blame. The nurseryman knows though that thousands of prune trees of all ages and sizes are flourishing upon that same root (peach), and have never shown a sign of debility unless the soil was unadapted to that root.

Case III.—A fruit tree of choice variety was planted near to and so that it was shaded in the afternoon by a large oak tree. Result; tree died without any cause apparent to the owner. He did not know that the roots of the big tree absorbed all the moisture from the soil, leaving none to keep the young tree alive. He said that tree was shaded from the heat of the sun and that the borers did not attack it.

Case IV.—Sold to a party some trees of a certain variety known to be true to name. Without waiting for the trees to fruit, he blows around that they are some other kind, when all that he would have to do to prove that they are true to name would be to visit the orchard near the nursery during the fruiting season.

Case V.—While talking with a certain party, a California squash bug (*Coreus tristis*), described on page 300 of "Cooke's Injurious Insects," came walking along. This party immediately pointed him out and exclaimed, "thanks,

a good bug. He is one of them parasites. We never kill them. They go around all over the vineyard and orchard and clean out all these injurious insects." Imagine my astonishment, that an old fruit raiser should take that vile pest for a friend. It is supplied with a beak and punctures the bark and sucks the juice of squash vines and squashes figs and other soft and juicy fruits, rendering them worthless, and in the case of squash vines, destroying them. I consider it a bad pest, and from the rapidity with which it increases, a dangerous foe.

Case VI.—Bought some apples of a peddler. The apples were raised near his home. Asked him if the codlin moth had reached that locality yet. He said "no." Upon opening the sack found that many of the apples had been infested by the larva of the moth. They were what he called wormy, but he did not know that the worms and the codlin moth were different forms of the same thing.

Case VII.—An article appears in one of the county papers denouncing the peach root as a stock for any fruit tree, even for itself, and strongly hinting that its frequent use was the cause of about all the fruit tree failures that happen. The plum was the root lauded as the only proper one for the prune, apricot and peach. I think I know the author of the article. If I do, I know that he has to go but a few miles from home to find prune and apricot trees on plum roots dead and dying. Almost invariably the case with the apricot. I suppose that the Almighty, when he made trees, gave them such roots as were best for them. He also made some roots better adapted to certain conditions of moisture than others. I find that the peach root is better adapted to the conditions of moisture which prevail in most of our soils than the plum root, and certainly trees on it flourish better. On loose soils, where water never stands, the almond root is good. It stands drouth better than any other root I know of. On wet, heavy soils, in which water stands in winter and spring, I would plant the pear exclusively. The plum root will endure such conditions better than the peach or almond, yet not so well as the pear. Peach budded on plum is liable to outgrow the stock and strangle to death, as it were.

Mr. Thissell's Points on Early Fruits

The following paper was read before the Winters Horticultural Society, at the meeting last Saturday afternoon, by Mr. G. W. Thissell of Pleasant Valley:

In presenting a paper on the planting of fruit, I take it as granted the majority of us are planting for the dollars and cents there are in it, and when we talk of planting 20 acres in Pleasant Valley, or in any location, to fruit, there are many things to be taken into consideration. One of the most important ones is the market to be supplied.

The land I have selected to be planted lies across the valley, reaching well up on the hillside. This would contain some of the latest land in the valley. The fruit selected is for supplying the Eastern market, and I have selected the following fruit, because it would be ripe and gone before the same kind grown in other localities could come in competition with it. There is no rule that I know of that can be laid down to go by in selecting fruit to plant, better than the following:

Having selected the location and the land, then select the market. Having done this, then post yourself in regard to the fruit desired in that market, and select from the list of fruit accordingly. The fruit selected and planted should be especially adapted to the soil and location chosen. Last, but not least, to make a success, plant no fruit that is not prolific.

I would not dare to advise anyone what variety to plant. There are so many new varieties being introduced that the fruit we would plant this year, perhaps next season we would want to graft over. However, there are some leading varieties that will hold their place in the market for many years to come. On 20 acres of land in Pleasant Valley I would plant Clyman plums, ripening June 1st, 5 acres; Tragedy prunes, ripening June 8th, 5 acres; Abundance plum, ripening June 15th, 2½ acres; Peach and Columbia plum, ripening July 4th, planted alternately, 1½ acres; Alexander peaches, ripening June 10th, 1½ acres; Shoemaker peaches, ripening June 10th, 1 acre; Early St. John peaches, ripening July 4th, 1 acre; Thissell's and Wigen's Seedling apricots, two varieties on same stock, ripening June 8–10th, 1½ acres; Early Royal apricots, ripening June 15th, 1 acre.

THE DAIRY.

Dairy Tests for the Columbian Dairy School.

At a meeting of the Executive Committee of the Columbian Dairy Association, held in Chicago, a committee was appointed, consisting of three from the Executive Committee of the Columbian Dairy Association, one delegate from each of the cattle clubs, who agree to furnish their quota of cows for working dairy; one delegate from the American agricultural colleges and experiment stations; and one delegate from the manufacturers of a dairy machinery.

The committe of thirteen appointed a sub-committee of three, who formulated the following rules of dairy tests for the Columbian School.

First—There shall be two breed tests, one of which shall be for four months, one month of which shall be devoted to cheese-making and shall be carried on in conjunction with with the Columbian Dairy School; the other shall be for several days, thirty days, and be under the charge of the same committee as the four months' test, but the milk may be handled by breeders. The rules governing the four months, test shall be as follows:

First—Each cattle association competing, shall furnish twenty-five registered cows of the breed represented by them; provided, however, that the Red-Polled and Brown Swiss Association may be allowed to compete with an entry of fifteen cows each.

Second—No cows of any breed shall compete which shall not be recommended by the association representing the same; provided, however, that in case any association representing any dairy breed shall fail or refuse to either furnish the number of cows required, or to recommend those offered by others for competition, then such breeeds may be represented without endorsement of said association.

Third—All cows competing shall be on the grounds at least thirty days before the competive test begins.

Fourth—No cow shall be substituted for another during the tests.

Fifth—No tonic, stimulant or other drug shall be given the cows during the tests, except in case of sickness and in case a cow is sick enough to require a stimulant or other drug during the test, her milk shall not be saved during the time or for three days after the drug is so given.

Sixth—Each cow shall be weighed at least thirty days prior to and at the beginning and close of the several tests, and proper records made of same.

Seventh—An accurate account shall be kept of all food given to the cows for the thirty days before and during the tests to arrive at the costs of dairy products so made in the tests, and charged to the cow, at actual market value, but owners shall be at liberty to feed such kinds of food as they choose; provided, however, that only ordinary dairy foods shall be fed to cattle.

Eighth—The cows shall be milked at stated periods during each 24 hours, but in no case more than three times per day.

Ninth—All cows shall be milked in the presence of a testing committee, or some person authorized by such committee. The milk from each cow shall be weighed as soon as drawn, and then thereafter, immediately, a weighed sample of the milk shall be taken for analysis. The milk from the cows of the same breed may then be mixed and a weighed sample of such milked milk be drawn for analysis.

Tenth—The milk shall then be delivered to the dairy school, and thereafter in the presence of the testing committee, the milk of each breed—being kept separately—may be handled under any improved accurate method of separating the cream from the milk, or making cheese or butter under approved methods, provided, however, that all the handling of the milk and its products shall be the same method for all competitors alike. In each case, the skimmilk, the buttermilk and the butter or cheese shall be analyzed under the supervision of the testing committee.

Eleventh—No foreign substance shall be put in the milk or butter during the test, except clear water or ice or salt, provided, however, coloring matter may be used in the dairy products of any breed of cattle competing, by the request of the managers of that breed; if so used, a statement of the fact shall be made in the award, and the cost of such coloring matter shall be charged to the animal producing the butter or cheese.

Twelfth—All analyses shall be under the supervision of the testing committee; but each breed of dairy cattle competing may be represented by a chemist or expert at their own expense, who may have the privilege of witnessing the analysis, and who, upon approving the accuracy of any test, shall sign such approval at the time the analysis is made. If, however, such chemist or expert claims inaccuracy or mistake in the analysis or test, the question involved shall be settled by a further analysis. In case such chemist or expert shall be absent at any analysis, then his absence shall be recorded and it shall be construed as his approving the test.

Cows Should be Tested.

All sorts of tests to ascertain the butter value of milk is of such importance to the owner of cows, that he cannot afford to overlook or neglect any of the means offered for the purpose. A dairy record of the quantity of milk, the cream gauge indications from time to time, the influences exerted by food, all have a deep interest claiming his study. The churn for determining the actual amount of butter that a cow's milk yields is without doubt most practicably adapted to the needs of the average farmer. The oil test is easier and a shorter cut, and while no butter comes from the process, the proportionate presence of the fats of butter is shown by the action of the chemicals correctly; therefore it is a valuable help to the dairyman or cow owner in weeding from his herd the cows that are not profitable.

Not only is it of the highest importance that the capabilities and characteristics of the cows should be positively known in order that intelligent action may govern in their treatment and as to their disposal, but the owner owes himself and his interests an obligation that falls far short of fulfillment when he fails or neglects to ascertain the real butter capacity of his cows. Butter yield and the fat in butter form the basis of value in all milk. Those having experience of selling thoroughbreds where the blood lines exert a factor of value are very familiar with the importance of the butter tests. Most buyers who are in the market for high-priced animals, want tested cows or their progeny, and when the facts are favorably demonstrated, price becomes secondary. The time has gone by when pedigrees alone, because of the names of fashion and popularity, will insure the highest prices, and it is not often a breeder who is well informed, will purchase a bull for his herd that has not a tested cow for his dam, and his value for breeding purposes is received by the number and proportionate powers of his tested ancestry. The owner of a herd of pedigreed cattle who offers them to the buying public—untested—stands a poor chance of naming prices for them, that will do strict justice both to himself and his customers, regardless of customers, regardless of the purity of his intentions.

The judgment of the eye is very misleading, and the untried cow—supposed to lack in butter properties, and for which a low price is asked in accordance—may be the best in the herd, and would command, readily, the highest price.

The difference is all between guesswork and certainty, and in these days of advanced methods, when it is so simple and easy to be certain, it seems a wonder—and criminally negligent—that dairymen, farmers and breeders should be so blind to their interests as to accept so much by faith, and guess that a cow's milk is rich because it looks so to the eye. The climax of reform will be reached when all dairy cows shall be tested. It will also be the dawn of great surprise to the dairy world.—Indiana Farmer.

ENTOMOLOGICAL.

Cankerworms.

[A lecture by PROF. J. H. COMSTOCK, at the Stanford University, Feb. 18th, 1892.]

The most important insects for the fruit growers of the Santa Clara valley to study at this time, are those known as the cankerworms. These are very serious pests which, when allowed to multiply, completely strip orchards of their foliage early in the season. There are two species of cankerworms, one known as the spring cankerworm, and the other as the fall cankerworm. These insects are very similar in appearance and quite similar in habits. I have observed only one of them in this State, that is the fall cankerworm. This, however, is thoroughly established in the Santa Clara valley, and doubtless occurs in other parts of the State. It is one that must be fought or the orchards will be destroyed. Fortunately, it is an insect that can be controlled, and as it is one that spreads slowly, individual efforts are well repaid.

The cankerworm first attracts attention in the larval state. They hatch from the egg about the time the leaves first expand. In an infested orchard, the buds are eaten into; later, minute holes are made in the young leaves, and still later, when the worms are larger, the entire leaves are consumed. When full grown, a cankerworm measures about one inch in length. It is what is commonly known as a looper or measuring worm; sometimes they are called inchworms, these names being suggested by the peculiar way in which the insects walk. The larvæ vary in color from greenish yellow to dark brown, with paler stripes along the sides. When not feeding, they are apt to remain motionless, either stretched out, with the body closely applied to the limb, or raised at an angle of 45 degrees from the limb, in the latter case appearing as a little twig. Both color and attitude protect them from observation. These insects spin a silken thread wherever they go. If an infested branch be suddenly jarred, they will drop from it and hang suspended by this thread. This habit of dropping from the tree when they are jarred, doubtless explains the way in which the species is commonly spread. They fall upon passing vehicles, upon plows, harrows, or upon people passing through the orchards, and thus are carried to other parts of the same orchard or to neighboring orchards.

The cankerworms become full grown when about four weeks old. They then cease eating and descend into the ground. Here, each makes a little cocoon from two to six inches below the surface of the ground. This cocoon is made of buff-colored silk, mixed with earth. In about 24 hours after the cocoon is made, the worm becomes a pupa. The length of the pupa stage varies greatly with different individuals. Thus, in the case of the fall cankerworm, the one that is common here, some of the adults will appear in October, while others will not appear until the following spring. Between these two dates, the insects are constantly appearing.

In the adult state the sexes differ greatly. The male is a moth with large, although delicate, wings, and is able to fly a considerable distance. The female, however, is wingless, and is forced to crawl over the surface of the ground to the trees upon which they lay their eggs. The eggs are laid in clusters upon the smaller twigs and branches of the trees. The eggs of the fall cankerworm are cylindrical and placed on end, side by side, in a compact cluster. Those of the spring cankerworm are oval in outline and laid in irregular masses.

The fall cankerworm is so called because in this species the majority of adult insects appear in the autumn. In the case of the spring cankerworm, although some adults may appear in the autumn, the great majority appear in the spring. As the females are wingless, this species spreads very slowly. The female, when it leaves its cocoon, crawls to the nearest tree, climbs it and lays her eggs upon it. Thus, almost the only method of spreading the species is that of distributing the larvæ by passing vehicles or other means, as indicated above.

The methods of fighting this insect, most commonly employed, are based upon the fact that the wingless female must climb up the trunk of the tree in order to lay her eggs. Various devices have been invented to prevent the female from getting access to the tree. That most commonly used is a band of paper fastened closely about the tree and smeared with some sticky substance. Printers' ink is most commonly used, as this dries very slowly. The wingless female, in attempting to climb the trees, reaches this band and is unable to cross it. Most of them become stuck to it and thus perish. In order to be efficient, it is necessary that the band should be closely applied to the trees, so that in case females lay their eggs on the trunk below the band, the young worms cannot crawl under it, and thus gain access to the trees. It is also important that the bands be placed upon the trees before the insects begin to emerge from their cocoons, that is, as early as October, and that the ink upon them should be kept fresh throughout the remainder of the season and winter, until after the insects have ceased emerging in the spring. This involves so much labor, that I am inclined to believe that the most practicable way of fighting the pest is to spray the trees with Paris green early in the season. This should be done as soon as the leaves expand, so that the young worms may be destroyed before they have done much injury. It should be remembered, as stated in a previous lecture, that the foliage of the stone fruits is very susceptible to injury by the arsenites, and hence, in the case of peaches, prunes and like fruits, the Paris green should not be used stronger than one pound to 350 gallons of water.

PATRONS OF HUSBANDRY.

Executive Committee Meeting.

A special meeting of the Executive Committee of the State Grange was convened Feb. 12th, at the request of the Dewey Publishing Co., who desired to discontinue existing arrangements for the publication of a supplementary Grange edition of the RURAL PRESS, unless larger patronage or special remuneration could be extended to meet the necessary outlay of the same.

There not being a full attendance of the committee, the meeting was adjourned to Feb. 23d, when there were present E. W. Davis, Chairman, Thos. McConnell, Geo. P. Loucks and B. F. Walton, members, and A. T. Dewey, Sec., also visiting Patrons I. C. Steele, P. M.; D. Flint, P. M.; S. T. Coulter, P. M.; Wm. Johnston, P. M.; W. L. Overhiser, P. M.; J. D. Huffman, Lect.; A. P. Martin and W. B. Ewer.

The subject of an official organ was discussed, and it was resolved that the existing engagement with the PACIFIC RURAL PRESS be discontinued. The RURAL PRESS will publish its P. of H. department in its regular and entire edition, containing news and matters of general interest to all Patrons throughout the State, and it will continue to be a medium of communication between the Grange and the public.

STATE GRANGE CANVASS.

The Executive Committee on Wednesday devoted much of its time to planning for a general canvass of the State, and the visitation of the officers of the State Grange, Past Masters and Deputy Lecturers at special meetings, to be called by nearly all the subordinate Granges in the jurisdiction. It is proposed in each instance to hold a closed meeting, to be opened in ample form at 10 A. M., unless otherwise arranged. Open meetings will be held on the same day at 2 P. M., at the discretion of each subordinate Grange; each Grange, at its first meeting, to discuss this matter and appoint committees, who will arrange for music, make proper announcements in the local papers or otherwise, and attend to other details necessary to make the meetings as perfect a success as possible. Let extra exertions be made to notify all who may be willing to attend at both closed and open meetings, and make these meetings and their objects and interests widely known.

The appointments are as follows:

E. W. DAVIS, W. M., S. T. COULTER, P. M., and WM. JOHNSTON, P. M.:

Roseville Grange	Monday, 10 A. M., March 7th.
South Sutter (Nicolaus P. O.)	Tuesday, March 8th.
Wheatland	Wednesday, 10 A. M., March 9th.
Yuba City	Thursday, March 10th.
North Butte	Friday, 10 A. M., March 11th.
Gridley	Saturday, 10 A. M., March 12th.

DANIEL FLINT, P. M., B. F. WALTON and HON. C. P. BERRY:

West San Joaquin	Monday, 10 A. M., April 4th.
Woodbridge	Tuesday, 10 A. M., April 5th.
Lodi	Wednesday, 10 A. M., April 6th.
Stockton	Thursday, 10 A. M., April 7th.
Waterloo	Thursday evening, April 7th.
Lockeford	Friday, 10 A. M., April 8th.
Washington	Saturday, 10 A. M., April 9th.

D. FLINT, P. M., and S. T. COULTER, P. M.:

Alhambra	Monday, 10 A. M., April 11th.
Valley	Tuesday, 10 A. M., April 12th.
Danville	Wednesday, 10 A. M., April 13th.

A. P. ROACHE, W. O.:

Temescal	Thursday, 10 A. M., April 14th.
Eden	Friday, 10 A. M., April 15th.
Dixon	Saturday, 10 A. M., April 16th.

J. D. HUFFMAN, Lecturer, and W. L. OVERHISER, P. M.:

Vaca Valley	Monday, 10 A. M., April 18th.
Grimes	Wednesday, 10 A. M., April 20th.
Antelope	Friday, 10 A. M., April 22d.
Orland	Saturday, 10 A. M., April 23rd.

J. D. HUFFMAN. W. L., WM. JOHNSTON, P. M., W. L. OVERHISER, P. M.:

Millville	Monday, 10 A. M., April 25th.
Anderson, Tuesday and Wednesday,	10 A. M., April 26th and 27th.
Red Bluff	Thursday, 10 A. M., April 28th.
Nord	Friday, 10 A. M., April 29th.
Chico*	Saturday, 10 A. M., April 30th.

*May picnic was for one week. E. W. Davis, W. M., will also attend.

A. P. ROACHE, W. O., I. C. STEELE, P. M., and J. D. HUFFMAN, W. L.:

Glen Ellen	Monday, 10 A. M., May 9th.
Bennett Valley	Tuesday, 10 A. M., May 10th.
Petaluma	Wednesday, 10 A. M., May 11th.
Two Rock	Thursday, 10 A. M., May 12th.
Sebastopol	Friday, 10 A. M., May 13th.
Santa Rosa	Saturday, 10 A. M., May 14th.

J. D. HUFFMAN, W. L., and DON MILLS:

Potter Valley	Monday, 10 A. M., May 21st.
Kibesillah	Tuesday, 10 A. M., May 23d.

J. V. WEBSTER, P. M., I. C. STEELE, P. M., and B. F. WALTON:

American River	Monday, 10 A. M., May 16th.
Enterprise	Tuesday, 10 A. M., May 17th.
Florin	Wednesday, 10 A. M., May 18th.
Elk Grove	Thursday, 10 A. M., May 19th.
Sacramento	Friday, 10 A. M., May 20th.
Grass Valley	Saturday P. M., May 21st.

A. P. ROACHE, W. O., and HON. C. P. BERRY:

Eureka Grange	Monday, 10 A. M., May 23d.
Pilot Hill	Tuesday, 10 A. M., May 24th.
Magnolia	Wednesday, 10 A. M., May 25th.
Placerville	Friday, 10 A. M., May 27th.
Plumas	To be announced later in season.

E. W. DAVIS, W. M., A. P. ROACHE, W. O., S. GOODENOUGH, W. C.:

San Jose	Saturday, 10 A. M., April 2d.
Hollister	Monday, 10 A. M., April 4th.
Watsonville	Tuesday, 10 A. M., April 5th.
[illegible]	Wednesday, 10 A. M., April 6th.

B. F. FRISBIE, S. G. D., and J. D. HUFFMAN, W. L.:

Selma	Saturday, 10 A. M., March 5th.
Tulare	Tuesday, 10 A. M., March 8th.
California	Thursday, 10 A. M., March 10th.
Merced	Saturday, 10 A. M., March 12th.

J. V. WEBSTER, P. M., W. L. OVERHISER, P. M., and HON. GEO. STEELE:

Carpinteria	Dates to be supplied.
Arroyo Grande	Dates to be supplied.
Creston	Dates to be supplied.
Paso Robles	Dates to be supplied.
San Miguel	Dates to be supplied.
Bradley	Dates to be supplied.
San Antonio	Dates to be supplied.
San Lucas	Dates to be supplied.

TO BE SUPPLIED LATER:

Franklin, Pescadero and Plumas.

Any changes rendered necessary in the above announcements, on account of sickness or other cause, should be communicated to the Secretary by letter or telegraph immediately.

Done at San Francisco this 24th day of February, 1892, by order of the Executive Committee of the California State Grange.

A. T. DEWEY, Sec'y. E. W. DAVIS, Chairman.

This is undoubtedly the most important official Grange canvass ever undertaken in this State. Every Patron should give it earnest and active support and secure rich results in the advancement of this sterling, progressive and beneficial farmers' organization.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Who will organize the first Grange in California in 1892?

During the next ninety days you may expect some of the best Grange speeches you ever heard. If the Order does not make some progressive strides, we—personally and collectively, shall be mistaken!

There ought to be at least twenty-five new Granges organized in this State this year. There is one dollar per name for each *charter member*, to those who will send in a charter list. Some of our good sisters can make more money in organizing granges than they can in raising poultry. Try it, Sisters!

Keep watch for revised list of county Deputies. It will soon be published!

California has had a splendid rain. Just what was needed! In fact the "Doctor" had ordered it just in the nick of time. Now look to the garden, the orchard, the vineyard and the home! But don't forget the grange! While everything about you is growing, budding, blooming, don't fail in your *duty* to the grandest of all—your own subordinate grange! Strengthen all its surroundings! Help make it the greatest power for good in all the neighborhood! Work for it in FAITH, strengthen your HOPE, practice the CHARITY which it teaches and reap the reward which, in FIDELITY, it is sure to bestow.

Why don't we get the figures from the Census Bureau, on the subject of agriculture? Can you tell why?

It is claimed by *Farm and Home* that a celery grower in Rhode Island netted the fabulous sum of $2,084.44 from one acre of ground in one season. 100,000 bunches of celery was sold. Does truck farming pay?

Have you noticed the fiery opposition that is being made to the Anti-Options Bill? Do you know the reason why the "Sharps" are opposed to that Bill?

Are you satisfied with your home on the farm? If not, why not? Tell us in the RURAL! If you think farm-home-life the most honorable, enjoyable and profitable, please tell us why!

Stand by the Grange! It is your friend! It has a history noted for progress, conservatism, honesty and purity. Say a word for it!

The Committee on Woman's Work means business Help them all you can, please.

Grange Memorials to Congress.

The Executive Committee of the State Grange has ordered sent to every subordinate Grange an official circular, closing as follows:

Herewith you will receive several memorials prepared by the Legislative Committee of the National Grange, transmitted through and with the approval of the Executive Committee of this State Grange upon the following bills for legislation in the National Congress, to wit: Free Delivery of Mails in Rural Districts; Pure Lard Bill; Gambling in Farm Products; and Pure Food Bill, and would recommend that you appoint a committee to circulate the same among the Patrons, farmers and others, and forward the same to John Trimble, 514 F St., Washington, D. C. We have performed much labor in this connection, and have incurred considerable expense in the matter, all of which will be wasted unless the subordinate Granges promptly respond.

By order of Executive Committee,

A. T. DEWEY, Sec'y. E. W. DAVIS, Chairman.

Patrons' Relief Association.

G. P. Loucks introduced the following, which was adopted:

WHEREAS, the Patrons' Relief Association of the Pacific Coast has lately been duly instituted in accordance with the resolution of authority adopted at the last session of the State Grange, therefore be it

Resolved, That the officers and deputy lecturers of the State Grange of California be recommended to use all reasonable efforts to advance the thorough organization of said association throughout the jurisdiction of the State.

S. H. JACKMAN AND J. R. DENMAN, Masters of Sacramento and Two Rock Granges, respectively, were in S. F. Feb. 24th.

FARMERS' ALLIANCE.

The St. Louis Industrial Convention.

Judging from the Associated Press dispatches the gathering at the St. Louis Industrial Convention this week was an immense one. On Sunday evening, Feb. 21, a monster meeting was held at which Rev. de la Matyr of Ohio preached. Some 6000 farmers and working men were present. On the same evening the California delegation to the Convention adopted the following resolution, which will create somewhat of a sensation in political circles:

WHEREAS, There are certain parties in the city of St. Louis booming Leland Stanford for the Presidency of the United States:

Resolved, That the delegates from California emphatically declare that the people of California are not looking for a Cæsar, a Cromwell, a railroad monopolist, nor a millionaire, but rather for a Cincinnatus, and when he is found we will know him by the character he bears and the work he has done.

It was developed also, that numbers of persons were in St. Louis working in Senator Stanford's behalf. The idea was that should the Californian be made the third party's standard-bearer he would stand a chance of indorsement in the other national bodies later on.

Before Benjamin Terrill of Texas called the meeting to order the big hall was lively with discussions. The National Committee of the People's party, sixty-nine of the biggest guns of the political army, was gathered on the stage of the Music Hall, and the main body of the hall and galleries were filled with groups of delegates and spectators.

Chairman Taubeneck was authorized to appoint a committee of ten to canvass for funds.

The committee was having a hot wrangle as to whether it should record itself as ordering the arrangements made for a national nominating convention when a halt was demanded by Marion Cannon, president of the California Farmer's Alliance, and it was decided before doing anything further to wait the action of the convention. If that body decided to take action looking to the nomination of a presidential candidate the People's party would go ahead on its own hook immediately.

At 2:25 P. M. Terrill called the convention to order without the formality of an address. The proceedings were opened with prayer by Rev. Mr. Basher of Millageville, Ill. Miss Alice Mitchell of the National Woman's Alliance sang "The Star-Spangled Banner" and the audience joined in the chorus.

President Polk of the National Alliance was introduced by Terrill.

President Polk said that the farmers had assembled here to perform a solemn and responsible duty. On Wall street and the boards of trade money was 1½ per cent. In many small towns in the West money was from 10 to 20 per cent. This had to be righted. The farmers paid over 20 per cent of the taxes, and if money can be borrowed in New York on cotton and wheat at 1½ per cent, why cannot the same thing be done in the West? He computed the gain in wealth of the New England States as compared with the producing States of the West and South as five to one of the former against the latter. He entered a solemn protest against these unequal conditions. In closing, Polk said: "We want relief, we demand relief, and I repeat now what I have repeated from Maine to California, we must have relief if we have to wipe the old parties from the face of the earth."

President Polk was followed by Powderly and Ignatius Donnelly, both of whom made addresses.

Marion Cannon of California was selected for temporary chairman, and Messrs. Steele of Illinois and Hayes of Pennsylvania as temporary secretaries.

On Tuesday there was more or less confusion attending the permanent organization. The report of the committee on credentials recommended the seating of 246 delegates from the Farmers' Alliance, 53 Farmers' Mutual Benevolent Association, 82 Knights of Labor, 97 National Farmers' Alliance, 25 National Citizens' Alliance, 97 Colored Farmers' Mutual Benevolent Association, 27 National Citizens' Independent Alliance, 63 Patrons of Industry, 25 Patrons of Husbandry, a total of 677. The Farmers' Alliance was given 25 delegates-at-large, and thirteen minor detached organizations and individuals were given representation of 58.

Ignatius Donnelly moved an amendment that Miss Frances Willard, Lady Somerset, Clara Hoffman and F. H. Ingalls be seated as delegates representing the National Women's Christian Temperance Union. Both amendments and the report were adopted.

President Polk of the Farmers' Alliance was elected permanent chairman.

Miss Frances Willard and Ben Terrill of Texas were elected vice-presidents.

John W. Hayes of the Knights of Labor was made secretary, and Warwick, a colored delegate from Virginia, assistant secretary.

The platform committee was a very large one and chosen with some difficulty.

Then Willetts, National Lecturer of the Farmers' Alliance, moved that the convention demand the passage of the subtreasury bill, as a means of relief for the people, instead of petitioning Congress to enact the proposed antioption law. The lecturer for the Knights of Labor moved to lay Willetts' motion on the table, and this was done.

Kelly of Kansas offered a resolution that the appropriation bill pending in Congress for a permanent census bureau be indorsed, if provision is made for continuing the investigation of farm mortgages as a permanent part of the work of the bureau. This was carried by an emphatic vote.

A resolution asking Congress to pass a bill for the free and unlimited coinage of silver was set aside until the committee on platform could report. The convention is still in session as we go to press.

A pure man or woman is not any more tarnished by the tongue of Slander than is pure gold tarnished by the heat of the furnace!

Jerry Simpson at Work.

His Bill to Promote and Encourage Agriculture.

Hon. Jerry Simpson has introduced in Congress the following bill which represents nearly, if not fully, the principles of government loans and land as laid down in the Ocala demands. It aims to protect the homestead and can not be made to serve the speculator or large land holder. The amount of loan and number of acres are limited:

A bill to provide for the relief of the agricultural population of the United States and to promote and encourage agriculture.

WHEREAS, The agricultural interests of the country are now greatly depressed, and consequently the farmers, farm laborers and those dependent upon them are impoverished, and the present financial and economic conditions are such that many crops are grown at an actual loss, compelling the farm owners to mortgage their homes and farms to greedy usurers at exorbitant rates of interest, and many of their homes are passing into the hands of great landed proprietors or financial corporations; and

WHEREAS, It is the duty of the representatives of the people, the law makers of the nation, to recognize existing conditions and to provide remedies for existing evils; and

WHEREAS, Immediate action is demanded to alleviate this depressed condition and give prompt relief to the agricultural classes, besides providing for the encouragement, greater development, and future prosperity of that great industry: Therefore be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that any citizen of the United States, or any person who has declared the intention of becoming a citizen, who owns and resides upon any tract of land containing not less than 10 and not more than 320 acres of land, and who has at least one-half of said tract of land in actual cultivation, shall be entit ed to apply for and receive from the Treasury of the United States a loan, in amount not to exceed one-half the assessed value of said tract of land and the improvements thereon.

SEC. 2. That all loans under this act shall be for a period of not less than five nor more than ten years, at the option of the borrower, and shall bear interest at the rate of two per centum per annum from the date of the loan.

SEC. 3. That the Secretary of the Treasury is hereby authorized and directed to establish in his department a "bureau of loans," to be under the charge and direction of a Commissioner of Loans, who shall be appointed by the President by the advice and consent of the Senate, and who shall receive a salary of five thousand dollars per annum. Said bureau shall have charge, under the Secretary, of all business relating to the loans herein provided.

SEC. 4. That the Secretary of the Treasury shall cause to be prepared by the law officers of his department a blank form of mortgage, with instructions as to the proper manner of filling the blanks in said form. Said mo tgage shall contain a clause binding a mortgagor to keep the land mortgaged free from all claims for taxes, and the improvements insured in some responsible company for the protection of the Government. The Secretary shall also have prepared such other blanks as may be required under this act.

SEC 5. That the President shall appoint, upon the recommendation of the Secretary of the Treasury, a loan agent for each congressional district of the United States, composed wholly or in part of agricultural lands. Said loan agent shall be an actual resident and qualified voter in the district for which he is appointed, and shall receive a salary of two thousand, five hundred dollars per annum and necessary traveling expenses, and shall give a good and sufficient bond for the faithful performance of his duties

SEC. 6. That upon the receipt of any application for a loan, as provided for in this act, said application shall at once be transmitted to the loan agent for the congressional district within which the applicant resides, and said agent shall be supplied with copies of the blank form of mortgage as provided for in this act

SEC. 7. That it shall be the duty of said loan agent, upon the receipt of any application, as herein provided, to examine into the title and assessed valuation of the tract of land upon which the loan is asked, for which purpose there shall be furnished him an abstract of the title from the proper recording officer of the county in which the land is situated, and a copy of the last two preceding assessments, and a certificate of the actual residence and cultivation required by this act. The fee for obtaining said abstract and certificate shall be paid by the owner of said land.

SEC. 8. That when said loan agent shall be satisfied that the title to the land upon which the loan is asked is in the applicant, free from all incumbrances, and that the applicant is an actual bona fide resident thereon and cultivator thereof, he shall ascertain from the two last assessments the maximum amount that can be loaned thereon under the provisions of this act, and shall then prepare in duplicate, two of the mortgage blanks herein provided for, and have the same executed by the applicant before some duly qualified officer. One copy of said mortgage shall be forwarded to the commissioner of loans, and he shall cause the same to be placed on file and recorded in the bureau of loans, and the other copy shall be filed and recorded in the proper office in the county where said land is situated, said record to be made at the expense of the mortgagor.

SEC. 9. That upon the receipt of any mortgage as hereinbefore provided the commissioner of loans shall immediately draw his warrant for the payment of the sum named in said mortgage, out of any money in the treasury not otherwise appropriated, and a draft for the same, payable in coin certificate, legal tender notes, or other lawful currency, shall be sent to the mortgagor.

SEC. 10. That the interest on all loans made under the provisions of this act shall be paid annually at the office of the loan agent for the district, and he shall transmit the same to the Treasurer of the United States. The failure to pay interest for two consecutive years shall entitle the government to foreclose, and all proceedings for foreclosure shall be attended to by the loan agent and conducted according to the form of procedure in district where the loan is made, and all lands reverting to the government by foreclosure shall be added to the public domain and held for sale to actual settlers at the amount loaned thereon, with ten per centum added thereunto.

SEC. 11. That to enable the Secretary of the Treasury to carry into effect the provisions of this act he is authorized and directed to issue, as fast as may be required, in denominations of one, two, five, ten, twenty, and fifty dollars, United States notes of full legal-tender value, to any amount necessary to provide for the payment of all loan contracts that may come under this act, which certificates or notes, when issued, are hereby appropriated for the purpose of loans upon farm mortgages, said notes shall be a full legal tender for all debts, public and private, except such national obligations as may be, at the passage of this act, specifically made payable in coin

SEC. 12. That all laws and parts of laws in conflict with this act are hereby repealed.

SEC. 13. That this act shall take effect from and after its passage.

FRUIT MARKETING.

Proceedings of the Fresno Convention.

The general convention of fruit producers, the first steps for the assembly of which were taken by the Fresno Farmers' Institute, at its meeting at Fowler, was held in Fresno last week Thursday and Friday. As has already been stated, the meeting was held under the auspices of the State Board of Horticulture, and will, we presume, be included in the series of excellent meetings held by the Board.

The sessions began in Armory Hall at 10 A. M., on Feb. 18. Vice-President L. W. Buck, of the State Board, was Chairman; D. M. Pyle, of Kern, and J. H. La Rue, of Fresno county were Vice-Presidents and B. M. Lelong, Secretary.

OPENING ADDRESS.

Chairman Buck, in opening the meeting, delivered the following address:

Fellow Citizens—In November last a State convention of fruit growers was held at Marysville, and among other matters discussed was the subject of a plan for the profitable disposition of our dried fruits. A committee was appointed to devise ways and means through which an organization might be effected, composed of N. H. Motheral of Tulare, P. W. Butler of Placer, D. Lubin of Sacramento, John Markeley of Sonoma, and G. M. Gray of Butte. This committee has been actively at work, and at its request the State Board of Horticulture has called this convention, representing as it does the chief industry and the leading fruit sections of the State, for the purpose of considering the advisability of organizing into one organization to better control and market their products, and such other business as may come before the meeting.

For years the fruit interests of this State have been jeopardized by the extortionate freight rate charged by the railroads, and by the too frequently unscrupulous dealings of middlemen who have had the handling of the fruit product. The fruit producers have been made to suffer from a most unfortunate competition, which has antagonized growers and reduced profits to a disastrous minimum. A traffic association has been formed with headquarters at San Francisco, and it is to be hoped that they will aid us in this movement and for securing proper concessions.

A resolution was adopted at the Marysville convention, by a unanimous vote, requesting the Southern Pacific to so reduce the rates on fruit products as would encourage the producers in their disposition, and thus increase a demand for all fruit products. We have received an answer in which the company says that a meeting of the different roads will be held in April, and that the subject matter will be considered then. We should lose no time in adopting such measures and persist in our demands for cheaper rates till we secure the desired result.

The transportation companies have thus far been very short-sighted in not aiding the producers by giving them a rate reasonable enough to insure them a profitable return for their products, and thereby aid in the general prosperity of the State. They have always been of the opinion that it pays them better to handle our products at higher rates and thereby limit the production and a demand for it, than an increased production at cheaper rates. Neither can they be made to see the rapid strides and growth of our industry, which is being impeded by the exorbitant rates charged.

Withdraw the horticultural industry from the maintenance of all transportation companies and in five years they would go into bankruptcy. Exorbitant rates have unfortunately caused fruits in some years to sell at higher prices than consumers could well afford to pay, and in a year of increased production prices have necessarily ruled low, and after the transportation bills have been paid the producer's share has been very meagre.

You, as producers, must now put your energies together to remedy this evil, which may in a measure be attributed to the producer's fault in not foreseeing and acting at the proper time. Yet this fault cannot be altogether attributed to them, but to the lack of encouragement by transportation companies and also by lack of cooperation and the faulty methods at hand for the profitable disposition of their products.

There have been various attempts to remedy the evil and notwithstanding the perceptible progress made, there still remains yet much to do to attain the results aimed at. Whatever course you may pursue, it should be with the aim to remove the cause of adverse conditions and to be no longer at the mercy of transportation corporations and middlemen.

AN ORGANIZATION PROPOSED.

The first work taken up was a discussion of the advisability of organizing a State Cooperative association. Just how this was to be done, called forth various opinions. A resolution, in the following language, was given:

Resolved, That we recommend the forming of a State Fruit Growers' Cooperative organization, incorporated under the laws of the State of California, and that branches be located where needed; also the establishment of a fruit exchange at some central point.

In the discussion of the resolution, Mr. Motheral spoke ably, and pointed out what was needed, but did not know, and said he did not care, how it was done, just so it was done. He said that unless some better mode of marketing the fruit be brought about, the fruit growers would have to go out of the business. The sharks, he said, are getting the profit for carrying the produce to market. There must be some center, some power that can combat and contend against the organizations which oppose the fruit men.

There were several others who spoke in various parts of the hall, indorsing what Mr. Motheral said.

J. H. Harding of Oleander read a paper, in which he said that the thing most needful was some means for closing up the gap between the producer and the consumer—to change fruit and raisins from luxuries to necessities.

The proceedings began to show that some local issues were becoming prominent, and speeches were made by John S. Dore, the chairman, and others, restating the great issue, which should not be obscured.

Mr. Motheral, at this point, offered the following, in lieu of what had gone before on the subject:

Resolved, That a committee of eleven be appointed to formulate a plan, in conformity with the plan of the committee, for effecting a State organization of fruit growers.

This motion was carried, and the committee was appointed as follows:

N. W. Motheral, Hanford; D. M. Pyle, Bakersfield; D. Lubin, Sacramento; Mr. Baker, Tulare county; Alex. Gordon, Fresno; John S. Dore, Oleander; Mr. Veter, B. N. Rowley, Mr. Agee of Solano, and P. W. Butler of Placer.

PENDING THE REPORT OF THE COMMITTEE,

Other subjects were taken up. Chairman L. W. Buck stated that it had been requested that the roll of counties be called to see how many were represented. It was found that Los Angeles, Kern, Sonoma, Sacramento, Santa Clara, San Francisco, Butte, Alameda, Tulare, Sutter, Merced, San Joaquin, Solano, had each, one or more delegates.

Captain Norris being called upon said that there was one matter he would like to bring before the convention—the taxation of fruit trees and vines. After discussion by several members, Mr. Block offered the following:

Resolved, That it is the sense of this meeting that a constitutional amendment should be submitted, exempting trees and vines from taxation, and that the men to be elected to future legislatures be required to pledge themselves to vote for such an amendment.

The motion was carried. Further subjects being brought up for consideration, Mr. Briggs spoke of the mistake there was a possibility of making in describing the difficulties and discouragements of the situation, lest we should deter immigration and injure ourselves abroad.

Mr. Block of the State Board of Horticulture, a man who has grown gray in the work of fruit-raising and shipping, spoke most earnestly on the subject, showing how necessary it was that the truth should be given. We do not want a disappointed people who are not prospering, he said; it was that state of things that brought on anarchy and crime.

Mr. Gray of Chico made the speech of the day, showing dispassionately and logically the condition of the fruit farmer; that it was not all bad, that the production was great and the sureness of the crop to be depended on; but the marketing was so badly mismanaged that financial distress and discouragement was taking the place of hope and prosperity, and the large crowd present was a silent argument that the vital interests of the people were involved.

THE COMMITTEES REPORT.

The committee appointed at the session being ready to report, Mr. C. J. Berry, secretary of the committee, read the following:

Mr. Chairman and Members of this Convention—Your committee begs leave to make the following report:

The fruit growers of the State of California in convention assembled hereby

Resolve, To form a Fruit Producers' Association, and that a fruit exchange be opened at some central location in this State, or elsewhere, with branches where necessary; and that a corporation be organized under the laws of the State of California, said corporation to be known as "The Fruit Producer's Association of California."

Resolved, That a committee of eleven be appointed by the chairman to effect this organization.

Resolved, That a stock subscription be opened, and we invite this subscription at once.

Resolved, That the capital stock of this corporation shall be $250,000 and that each share shall be $1, and the subscription of stock shall be limited to one share for each acre of trees and vines owned.

D. LUBIN, Chairman.

Mr. Harding moved that the convention accept the report. This motion was carried. He next made a motion that each article be discussed seriatim before being adopted.

Mr. Motheral asked that David Lubin, chairman of the committee, be asked to offer some explanations of the work of the committee, which he did in a lucid and convincing manner.

Dilatory speeches were made by some, but they produced no impression.

J. S. Dore replied with a brief but emphatic speech that showed the danger of delay, and was followed by Mr. Motheral and T. C. White, who spoke plainly upon the immense labor in calling together such a body of people as had now gathered from all over this State for this purpose.

The motion was then put and carried with but one dissenting vote.

In accordance with a clause of the report the permanent committee was appointed as follows:

N. W. Motheral, of Hanford, chairman; C. C. Agee of Solano, J. S. Dore and Alex Gordon of Fresno, D. M. Pyle of Bakersfield, T. C. White and J. H. Harding of Fresno, Joseph Routier of Sacramento, H. P. Stabler of Sutter, C. F. Wyer of Solano.

This committee was given power to fill vacancies. The former committee was then discharged.

A motion was carried to adopt a resolution to the effect that the convention ask for a reduction, from the railroad, of the rate on fruit of at least 25 per cent.

The executive committee being ready to organize, the convention, which had been the matter of so much interest to the entire State, was adjourned sine die.

The officers of the executive committee of the Fruit Producers' Association are N. W. Motheral, chairman, D. M. Pyle, secretary. This committee proceeded with its work immediately upon the adjournment of the convention and prepared the following outline of an organization which will be published as a special

ADDRESS TO THE FRUIT GROWERS OF CALIFORNIA.

The horticulturists and vineyardists of this State are in a condition which, if continued, will seriously affect the prosperity of their vocations. The soil yields abundantly, and the ultimate receipts of prices paid by the consumer would seem to warrant a remuneration for the toil of and the capital invested by the producer. But between the producer and the consumer the values are, in the main, absorbed by high rates of transportation and the handling of our products by many persons.

It is proposed that the producers come in immediate relation with those who buy their fruits, and by such means provide that the profits heretofore realized by others shall be retained by those who, in all justice, are entitled to them. The time has come when organization is necessary.

It is proposed to form a corporation under the laws of the State for the purpose of marketing the fruit product of shareholders. The details of the work will be provided for by the shareholders hereafter. The company will receive the fruit, provide agencies for its sale and distribute it to such points as the exigencies of the market may demand, to the end to prevent a surplus in the market and the producers from being their own competitors. It can in a great measure fix the price of fruit, and by being a compact body and speaking for the fruit growers obtain concessions in the rates of transportation which individuals cannot do. It can also aid in establishing a uniform grade of fruit and a uniform method of preparing for the market, a most important factor in obtaining the best fruits.

Each producer by himself is weak; together he and his brethren are strong.

This is the opportune moment for action and we appeal to the fruit producers of California to unite for once in a hearty support of this effort to better their condition.

The powers and objects are set out as above as follows, which, of course, may be more or less modified so soon as the corporation is formed to meet the views of the stockholders.

The capital stock shall be $1,000,000 and shares of the value of $1 for each share.

The first payment shall be 10 per cent. of the value of each share, and other payments as the directors may determine.

The amount of stock to be taken by each shareholder shall be based upon the acreage of trees or vines in bearing condition owned, or the acreage of production owned by him when the land is owned by another.

Each share of stock shall represent one acre of bearing trees or vines.

Each member shall ship or provide for the handling, by the corporation, of all the product of the acreage represented by his stock, except otherwise by the consent of the Executive Committee of the company.

The place of business shall be ————.

The Board of Directors shall be composed of eleven members of the corporation.

No one shall be a stockholder unless he be a fruit grower, and when any number of fruit growers are incorporated for the purpose of preparing and marketing their fruits, such corporation may become a shareholder to the number of shares represented by the acreage of fruit of each shareholder.

Please sign the following subscription and return the prospectus and subscription list.

N. W. Motheral, Hanford; C. F. Wyer, Winters; C. C. Agee, Winters; John S. Dore, Fresno; Alex Gordon, Fresno; D. M. Pyle, Bakersfield, T. C. White, Fresno; J. Routier, Sacramento; C. J. Berry, Tulare; J. H. Harding, Fresno; H. P. Stabler, Yuba city, committee.

The plan of the subscription is as follows:

The undersigned, each for himself, subscribe the number of shares noted opposite our respective names, to the capital stock of the corporation referred to in the foregoing prospectus to be hereafter formed; and we agree to pay the first payment of 10 per cent of the par value of our stock into the hands of the treasurer of said corporation upon the the completion of the corporation and published notice of the call for the same; and the remainder as may be called for by the corporation.

Having completed the work before them, the committee adjourned to meet March 4, at which time a call will be issued for a convention to meet at an early day. The widest publicity will be given to the plan as it is outlined, and when the convention gets together a permanent organization will no doubt be effected, and the plan can be put into operation in time to handle this year's crop.

THE HOME CIRCLE.

Whittier's Birthday.

John Greenleaf Whittier's 84th birthday, at Newburyport, last month, was a most interesting occasion. The poet, in the hospitable Quaker home of Joseph Cartland, his cousin, wandered here and there about the room, greeting every guest informally and pleasantly. The parlor of the house was filled with cut flowers and birthday gifts from loving friends. Among other graceful gifts was an exquisite basket of 84 English violets, from the loving hands of Mrs. D. Lothrop ("Margaret Sidney"). The poet greeted all cordially. He reads but little of late. He noticed in a particular way on this occasion only the tribute of Rev. M. J. Savage and the poem by "Margaret Sidney" (Mrs. D. Lothrop), which we give as follows. Margaret Sidney's poem was suggested by Mr. Whittier's "Slave Songs," which voiced New England's protest against slavery, so much admired in this same edition.

JOHN GREENLEAF WHITTIER.
1807–1891.

I.

To be near the heart of Christ
Was his creed;
White as truth the life
That all men may read;
Strengthful of soul,
Yet lowly in meekness;
Dreading no hate of men,
Scorning all weakness,
He sounded the warning note,
When it cost to be brave and true;
Sang freedom for the slave,
Then almost death to do.
Unbind every shackle;
Loosen each chain;
Bid every slave go free!

II.

He led, when to follow
Was loss and disgrace;
But he sang as he led, with a
Light on his face.
Glorious years have rolled on;
Since, groaning in anguish,
The black man—our brother—
Was suffered to languish
Under whip and the chain,
In goading despair;
To-day—not a slave,
He breathes the free air!
While the singer and prophet,
Whose song broke each chain,
Lives in afterglow of
His fiery strain.
All honor to Whittier, whose pen in its might
Wrought the downfall of slavery with letters of light.

Daisy Plume's Valentine.

Outside, the freezing glitter of a full moon lighted up the wintry world. On the distant hills the cedars and the hemlocks seemed to interlock their waving branches; while the icicles pendent from a thousand leafless boughs made faint music at every breath of air. All nature was cold. In Israel Plume's snug little farmhouse, however, there was no lack of either light or warmth.

Daisy Plume had kissed her old father good night, and gone up to her own room to finish packing, for with to-morrow's earliest beam she was to start upon her first pilgrimage to the great city.

A low, clear fire burned upon the red-brick hearth; two tall candles, on the white-draped toilet table, diffused a pleasant brightness throughout the room, and Daisy sat in a little rocking-chair, putting an array of dainty laces into a silk-lined box; while her elder sister, Huldah, stood by the bed folding dresses, and laying them leisurely into the tray of the old-fashioned hair trunk which had gone with Daisy's father and his second wife—Daisy's mother, not Huldah's—upon their unpretending wedding trip.

"I suppose you'll have a splendid time," said Huldah, sighing.

Aunt Penrose had never thought of inviting *her* to come to New York with Daisy; yet Huldah never once dreamed of being jealous of her beautiful younger sister. It was quite natural and right, in her eyes, that all the good and pleasant things of this world should be awarded to Daisy.

"You'll be sure not to forget us, Daisy," said Huldah with a sort of unaccountable yearning tugging at her heart-strings, and the sound of unshed tears in her patient voice.

"Forget *you*, Huldah!" And the skirt Huldah had so carefully folded was sent flying half across the floor, as Daisy pounced upon her, with first a shake and then a kiss. "What do you take me for, you dear, cross, fault-finding, old Huldah? As if I ever should forget you and my home!"

"There, there, child!" gasped Huldah; "don't choke me to death! And Hiram Walters, too, dear; he thinks a deal of you."

Daisy laughed, and shook her yellow curls.

"Now that is too ridiculous, Hnldah. I wonder if Hiram Walters thinks I am going to be contented to settle down to a mere farmer's wife, with nothing to do but to feed chickens and count the pans of cream on the dairy shelves?"

"Oh, Daisy!"

"And oh, Huldah! Do you suppose I never had any ambitious imaginings? Just wait a little, and I will show you what a country girl can do! Why, Aunt Penrose knows a young man, the son of one of those New York millionaires, who has seen my photograph at her house, and—but, of course, that's all nonsense. Only I can tell you that Hiram Walters and the red farmhouse are not by any means foregone conclusions."

"But he loves you, Daisy."

"Well, and I like *him*, after a boy-and-girl fashion, and I always shall like him. But that is no reason I should cramp my whole existence to match the pattern of his humdrum life. Now, Huldah, don't look grave; you know I don't set up for a pattern of perfection—only a faulty human girl."

Huldah shook her head; she could not find it in her heart more definitely to scold the pretty pleading creature who clung to her so beseechingly.

It was hardly daylight the next morning, when the crisp sound of sleigh bells at the door warned Daisy that the moment of departure had come, and she ran merrily downstairs.

"Papa, you haven,t got your fur cap and gloves on. Aren't *you* going to drive me to the depot?"

Israel Plume looked a little embarrased.

"Well, Daisy you see, it's a stingin' cold morning, and I had a tough spell of rheumatiz last week, and—"

"Never mind, papa, dear," interrupted Daisy, "perhaps it isn't best. Good-bye, dear. And, Huldah, don't let him forget the woolen muffler round his throat when he goes out."

She went into the porch, hiding the pang of disappointment that her charioteer was to be only Simon the farm hand.

"It's too bad, Simon," said she, "to take you all the six miles to the depot this cold morning with your asthma."

But, to her amazement, it was not Simon that sat at the right hand of the little red cutter, but Hiram Walters.

"Don't be angry with me, Daisy," he pleaded. "But I did so long to drive you over, and your father was very kind about it and didn't object. It will be so long before we see each other again, Daisy!"

"Angry! I am not angry, of course," said the girl, apparently busy in arranging the robes round her slight form, only I am sorry to give you the trouble, Hiram."

"Daisy!"

"Well, of course it *is* a trouble."

"Daisy," he said, tremulously, "do you remember last Valentine's Day, when I stood under your window, waiting for the sun to rise, and you to draw back the white curtains? And when I first caught sight of you, with your long hair turned to light in the eastern sunshine! O Daisy, Daisy! I knew that I had won the right and privilege to be your faithful valentine all the rest of the year. And you can talk of 'trouble' after that! Daisy, I shouldn't think it a trouble to walk from here to Oklahoma for you, if it could save you a pang or do you any good. We are valentines, Daisy, and I shall stand under your window in the city streets next 14th of February, come what may, save sickness or death to prevent me."

"What nonsense!" cried Daisy, with a light laugh. "Of course, we all know that it is nothing on earth but an old-fashioned custom, forgotten long ago, except in just such out-of-the-way nooks and corners as this."

"*I* have not forgotten it, Daisy, and I never shall."

Daisy did not answer him; she only nestled her hands closer into her muff and gazed dreamily out upon the snowy landscape, now tinted with pink and silver from the first rays of the morning sun.

"It is very, very pretty here," she said, musingly. "I wonder how it will seem when I come back."

"Oh, Daisy, you will come back the same? You will not change?"

"You tease me, Hiram!" she uttered, a little impatiently. "How can we any of us tell what is going to happen to us?"

The young man said no more, but drove on in silence, and not until the train which bore Daisy Plume away had disappeared, shrieking, into the gorge of the hills, did he remember and realize how much he ought to have said—how little he had had the courage to utter.

"But one thing is sure!" he muttered to himself. I will be her valentine this next year, please God!"

So Daisy went to her aunt in New York and bewitched the city people by her carmine bloom and innocent freshness and artless country ways, as unexpected and refreshing as it would have been to find a tuft of buttercups in City Hall Park. And she had not been there a month before she found herself a belle in the Penrose's set after the most approved and head-turning fashion.

"Isn't it nice?" cried Daisy. "Oh, if I could only be a girl of seventeen forever, and have hot-house bouquets sent to me, and wear pink and blue silks, and dance away my life to Strauss's waltz music! It is like having strayed my way into Aladdin's Palace. I don't think I ever knew what it was actually to live before I came to New York."

"My dear," said Aunt Penrose, sagely, "don't talk nonsense, but let Aimee dress your hair with the oleander blossoms to-night. Mr. Davenport has told me that he would call."

Mr. Davenport! The fresh color flooded Daisy Plume's cheeks at the name, for Mr. Davenport was no other than the identical modern Crœsus who had shown first his good taste by falling in love with the little photograph, and then his constancy by correspondingly admiring its original. Were her bright dreams coming true after all? Should she walk on carpets of *moquette* and wear great diamond drops in her ears, and trail the scented folds of camel's-hair shawls after her? Daisy was only an average specimen of human girlhood, as she herself had asserted, and the temptation was very strong. How could Hiram Walters and the red farmhouse expect a second thought after this new cavalier hnd entered the lists? Daisy's eyes sparkled brighter than ever, and her cheeks rivaled the oleander blossoms she liked to wear in her golden hair, as the weeks crept slowly on.

How was it, then, that she blushed and felt vaguely guilty whenever she thought of Hiram Walters and the little border of clove pinks he had planted under the south windows, because she liked pinks, and the old balsam tree he had cut down because she thought the river view obstructed by its black-green layers of shade? Daisy did not analyze her feelings. Perhaps because she dared not.

"Daisy, you are not going to that party to-night!" remonstrated Aunt Penrose. "You took cold at the Rink yesterday, and your throat is bad. I know it by the husky sound of your voice."

"Oh, auntie, yes," pleaded Daisy. "Mr. Davenport is to be there—and Madeline Clymer."

"Pshaw, child! Madeline Clymer can't very well run away with George Davenport, even if you are not there to keep guard over him."

"But I want to be there, auntie, all the same. And the new white dress with the low corsage is *so* pretty and these flowers he sent are just exquisite. No other adjective in the language would apply to them. Only to-night, auntie, because it is St. Valentine's Eve, he was reading me some of the sweetest verses I ever heard about it; and he says—do you think he can really mean it?—that he shall pace up and down the pavement for an hour before daybreak for the mere chance of seeing me at the window the first of all!"

"Humph!" said Aunt Penrose, momentarily beguiled into forgetting her fears of diphtheria and its attendant horrors. "How about the milkman and the police"

"Oh, auntie, you needn't laugh! You know what I mean. Last year—"

Here Daisy checked herself abruptly as she saw, in the mirror of her memory, the radiant, upturned face of Hiram Walters in the chill February dawnlight, and recalled his parting words.

"But of course he has forgotten all about them," thought Daisy. "Men talk about heartbreaks, but they are only silly words. Hiram Walters is a great deal too sensible and commonplace to break his heart for a silly little chit like me."

Daisy had never looked prettier than she did that night in the white crepe dress cut *decollete*, revealing the slender, swanlike throat and the ivory-white shoulders, rising from a foamlike edging of tulle, while great, luminous pearls glimmered in her ears—they had been a part of Aunt Penrose's bridal *parure* twenty years ago—and a bunch of white jessamine swung its perfumed stars amid her yellow hair.

George Davenport thought he never had seen so fair a vision in all his life, and Miss Madeline Clymer was simply scornful.

So Daisy Plume went home on the night of the 13th of February. Starlight and bitter cold it was, with the air tingling as if it were filled with innumerable stinging particles, and the cold pavement seemed to strike to Daisy's very heart, as her little white-slippered feet danced from carriage-step to threshold.

"Home at last!" she cried. "Oh, I am so glad. I believe I shall never be warm again."

Was it but a chance utterance or a prediction springing from the deeps of Fate?

Up and down, up and down the sounding pavements two watchers paced, each keeping his own vigil, unmindful of the presence of the other. Once or twice Hiram Walters glanced half-defiantly at Mr. Davenport's stately figure, wrapped in a fur-lined mantle, and wondered within himself if this was one of Daisy's fine city lovers.

"He shall not outwatch *me!*" he thought.

Meanwhile, behind the yellow satin curtains of the tightly closed casements the two young men watched so closely, the lights were flickering with sickening pallor, and people came and went for this thing and that and the other, while the old, gray-haired physician sat by the bedside, and Aunt Penrose wrung her hands and asked hysterical questions, which no one had the heart to answer. On the other side of the pillow, visible and yet invisible, stood the waiting specter, Death.

Suddenly the languid eyelids lifted; the eyes shone dimly up, like forget-me-nots peeping through April snows.

"Am I *dying*, aunty? Oh, don't let me die yet! I must go back to Huldah and papa and Hiram—"

And Death came to be pretty Daisy's valentine as she spoke, and the last word upon her lips was Hiram Walters' name. Could he but have known it!

But Hiram Walters will live widowed to his life's end.

"Death took her from me," he said, "and Death will, one day, give her back. And I can wait."—A. O. Conner in N. Y. Ledger.

A Delayed Proposal.

It was nearly five o'clock, and the early spring twilight was fast fading. It had been a warm day, and Miss Nancy Wheelock had opened each of the windows in her little parlor exactly six inches. The air was filled with early spring sweetness, and flowers bloomed in the two little windows. The white muslin curtains, stiff and clean from a recent washing, rustled gently and lazily in the tiny breeze that had sprung up within the last half-hour.

Miss Nancy sat by a window in her high-backed rocker, her long, slender hands crossed in her aproned lap. She felt the peace of it all, and a delicious sense of comfort stole over her. She leaned her head back, and thoughts of old times and thoughts of present times became strangely mingled. Suddenly her glasses fell off, and she woke up. It was almost dark and perfectly quiet. An old clock on the mantel struck six. She started up, smoothed back her soft hair, and walked with a quick, springy step into the kitchen, where she hastened about preparing the toast and tea. She was in the midst of her preparations, when the latch of the door which led into the kitchen clicked and lifted. A rough, ungainly hand, holding a letter, was thrust into the opening. Next followed a frowzly gray head, and old John Lane, the carpenter, said "Good even-in', Miss Wheelock, here's a letter for you that's just come." Miss Nancy dropped the toasting fork with the toast right into the fire, and the nicely browned slice was turned to a crisp in a minute. Poor Miss Nancy was pale with fear; she had not had a letter for three years. The last she had received had announced the death of her only brother. Who could have written? She was actually trembling. She took the white missive with a hasty "Thank you, John," and sank into the nearest chair. The gray head disappeared, and she was left to face the news alone. At first she dared not open it, and it was a good half-hour before she mustered sufficient courage to take a pin and run it evenly along one of the short ends. She drew the folded sheet slowly out; then placed the candle directly in the center of the table, and drew her chair up to it. She then

laid the letter out flat, and shutting her lips firmly together commenced reading.

"Dear Nan." She started. What could it mean? It has been years, years since she was called "Nan." As a girl it had been her nickname, and had suited her well. But now Miss Nancy was forty-two, and had lived alone in her little house for eighteen years. In all that time no one had called her "Nan," and here it was written! Her tense expression relaxed, and she continued the reading:

"I don't suppose you remember me, but I remember you, Nan. Don't you recollect one evening when you and me walked home from the church picnic, and you had on a pink dress, and looked mighty purty. And don't you think it might be that you'd remember how I told you I loved you, and you said you was glad. And then you kissed me, Nan, and I ain't never forgot it, and I ain't never goin to forgit it, nuther. Since then I've been most round God's world, Nan, and it's a big place and a lovely. I've thought on you always, Nan, and I've got 'nuff money to marry. So if you think you could remember them old times, I'm ready to take care on you. Do you think you can remember, Nan? Truly yours, BENJAMIN CRANE."

Miss Nancy read it through five times in quick succession, stopping every now and then to wipe away the big tears that would fill her eyes, still so blue and pretty. After the fifth reading, she carried the letter into the parlor, sat down in her old seat, and leaned her head back against the cushion. But this time she did not go to sleep. No, she thought of Benjamin Crane, whom she had last seen 20 years ago. Her mother had been living then, and had said: "Ben Crane is a good fellow, Nan." She thought of his six feet two, and his broad shoulders, and then the idea crept in somehow it would be a comfort to see him. When she realized what she had thought, she blushed, and thought of it again. This time she didn't blush. She remembered well the picnic and the walk home. She remembered just how many frills the pink gown had. She remembered everything. She thought a while longer, then rose and got pen, ink and paper. Seating herself at the kitchen table again, she pulled the candle nearer and put on her gold-rimmed glasses. Then she read Benjamin Crane's letter for the sixth time. She lingered over the last sentences, "I'm ready to take care on you. Do you think you can remember Nan?" Then she wrote:

"Dear Benjamin" (somehow she couldn't say Ben), "I remember everything. Yours truly,

NANCY WHEELOCK."

She directed the envelope and enclosed the letter. Then she sat still a long time thinking. The clock in the parlor struck ten. She put away the paper, pen and ink, and took the candle in one hand and Benjamin Crane's letter in the other and went up to her little bedroom. She had forgotten to eat her supper, but she never knew it.—Florence Louise Call in American Cultivator.

Gudbrand's Good Luck.

A Paraphrase.

[Written for the RURAL PRESS by MAUDE MANSFIELD S. PEASLEE.]

In the spring of the year Gudbrand brought home Elsa, his sweet blue-eyed bride to the house he had so hopefully built on the mountain's sunny slope. Around it spread wide green fields. He had been so lonely, "for," he said, "a man's but half a man till he gets him a wife."

Everything flourished. Fair, pretty children played round their door, and Gudbrand was much envied by all his neighbors.

One evening pretty Elsa said: "My dear Gudbrand, we scarcely need to keep both the cows that stand in the shed. To-morrow will be market day. You might take one of them to town. Perhaps you could get one hundred thalers for old Brindle."

"Why, so I will. You are a good thoughtful little wife," cried her husband.

The next morning he took Brindle down the mountain-side and went whistling to the market, where no one would buy.

"Well, we'll go back," he cried, and climb the hill again. On the way he met a man who rode a prancing horse. They soon agreed to make exchange, and Gudbrand, mounted on the horse, went gaily on until he met a man who led a fine fat pig. He gave his horse away for the pig, which he afterward changed for a goat, which was soon replaced by a goose.

He was soon persuaded to give the goose for a rooster, which, being hungry, he sold for two shillings to buy some bread. His neighbor met him at the door and asked his luck. On hearing the story, he felt so sure of Elsa's anger that he laid a wager of one hundred thalers with Gudbrand that she would make him smart for it.

"Thor's hammer, man," he cried. "I'm glad I'm not in your shoes."

Gudbrand laughed aloud, quite certain of Elsa's kindness.

The neighbor accompanied him to the door to listen without. Elsa's welcome was all Gudbrand had expected.

"Thank God, my dear husband, you've come back at last. What befell you and the cow?"

"I changed her for a horse," he said.

"That's well! Now we can ride to church. Go, children, go, and put him in the stall."

"But wait," he cried, "I changed him for a pig."

She planned at once to feed on sausage meat.

On hearing of the goat, she spoke of milk and cheese, while from the fleece she hoped for woolen clothes.

The goose she'd roast, and of its downy feathers make a pillow.

The crowing cock, she cried, was just what most she wished, and when she found that it had bought him food in need, she rejoiced that he had not suffered hunger.

"Come in, my friend, come in," cried Gudbrand, proudly. "Have I fairly won the hundred thalers?"

The neighbor laid the money down. "I'd barter Norway's crown," he cried, "for such a wife as thine."

YOUNG FOLKS' COLUMN.

The Boy's Stratagem.

[Written for the RURAL PRESS by MINNIE W. EDWARDS.]

"The old red barn," as it was familiarly called by all the farmers located near it, was made of large iron plates rivited together, so red with rust and remnants of former paint, as to give color to its name, and was a landmark for all the country round, besides being a relic of '49 and spring of '50. The iron which formed it was used in "early times" in the construction of a house in San Francisco, and had originally come from the then far distant States "round the Horn," now stands in the Norton's ranch, through which the weekly mud-wagon, called stage by courtesy, would be dragged up the hill by its weary horses, and all the passengers would alight to stretch their tired, cramped limbs, and sample "Poppy" Gales bad whisky, (sad truth to tell!) The barn was inhabited in one corner by a family, while the horses' stalls were on the other side, all the other available space being oocupied by mother hens and their broods, who thus managed to pick up a living between the family table and the horses' mangers.

But now all is changed, and in place of the cumbersome stage, the frequent shrill whistles of the locomotives, and the long, well-laden freight trains from the prosperous farming region northward, show that progression is rapidly reaching everywhere, though doubtless had the old barn been able to express itself, it might have mumbled something about the "good old times," and rattled some of its loose iron plates in a dismal way, in place of a sigh; but they did rattle now, anyway, and quite startled Phillip and Ross, who were enjoying themselves wonderfully well by burrowing into the loose hay with which the barn was filled; spinning yarns, and altogether having a good lazy time.

"Oh, its only the wind, I guess," said Ross, who, a school friend of Phillip Norton's, was spending a portion of the summer vacation with him. "Did you take it for a ghost?" queried Phil, "tho' 'the natives' do call this place haunted."

"Do they really?" asked Ross, "tell me about it."

"There isn't much to tell, only that once, long ago, when there were no houses anywhere around here, people used to live in this old barn—see that stove-pipe hole cut in the iron over there? and once some Digger Indians were on a raid for chickens while the men were away, and one of the woman folks shot at them and killed one, just by chance of course, I suppose. So they say around here that his spirit "haunts" the barn, but we've never been troubled, and never think of it—such nonense!"

A little more chatting and the boys were certainly drowsy, all was so tranquil; while overhead were the heavy buzzing of some bumble-bees, and the twitterings of the swallows which darted in and out of some openings in the roof. They were quickly gliding into dreams when a sudden streak of bright sunlight on the wall, and a quick slamming of the back door awoke them completely, and before they could speak, "Whist now," said a gruff voice with a rich brogue, "phat air ye afther banging the dure so, d ye want the whole counthree to be hearing of us?'

"No, it just schlipped von mine hand out, und der vind dit plow it," replied another voice.

O, no mather, Dutchy, come along, now; tin to one there's nobody round, for the maisther and the mon have gone up to the mills afther lumber, and won't be afther comin' back a day, and Oive been sphying all over for thim pesky byes, but say thim Oi cuden't, so we have a foine opporchunity to tork about this job.

It may be imagined that the aforesaid "pesky byes" were considerably startled, but were boylike and fearless enough to want to learn about the "job," so, nudging each other, they quietly sat up, prepared to hear every word that was uttered the other side of the hay.

"Maype I petter see dere vas nopody dere," was heard in Dutchy's voice.

"Af coorse there's niver a body there," responded he of the brogue, but the boys heard the crackling of hay under the Dutchman's heavy feet, and drew noiselessly back into their burrow, as there was nothing else to do, hoping in that way to escape being seen, and so fortunately it happened, and "Dutchy" returned to his companion satisfied that they could freely discuss their plans.

"D'ye say thim two ind stalls?" ("That's old Irish Jim," whispered Phil to Ross). Well, ivery noight that noice mare ye saw on the flat, and her two-year-old colt, are put there, and whin Oi were here hilping thim plant spuds, Oi heerd the ould man say he wouldn't take two hundred and fifty for her, and the colt is wurth about one hundred and fifty, so d'ye moind, now's our chance, wid nobody but thim byes and the madam and the haythen cook, so the coast's clear."

"Is it?" mutters Phil.

"Vell," broke in Dutchy, "let's yust go down and take dem out dot flat and go oup countree."

"Ow, ye idjot ye! d'ye want a toight cravat 'round yer Dutch neck? That mare's well known all 'round here and we'd be afther bein' sthopped afore we'd got anywhere."

"Vell, vell, I titn't know dot," apologized Dutchy, and so Jim proceeded with his plans.

"After we've resthed here we'll go ask fer a boit at some of the places round, thin slape under thim threes near the bridge till about noine, whin ivery body'll be quiet, thin crape saftly up here, get on the craythurs and go out the back road yonder so's the dratted dogs won't hear us, and then 'll roide in grand sthyle into Healdsburg, sell the horses and git off before the boss is back wid his lumber."

"Yah, dat is goot," Dutchy says, "put yer know apout dem ghosts vat vas here."

"Arrah! Ghosts is it? Niver a one did Oi iver say that Oi cuden't flatten out wid me foine phist!" laughed the Irishman; so Dutchy said no more.

"Now let's rest for a toime, and thin we'll go for our supper, an' it's yerself'll be afther thanking me for giving ye a chance to turn an honest penny."

The boys looked at one another at this novel idea of honesty, and were very anxious to be out of the barn, especially as the quiet was growing painful after the exciting talk they'd overheard, and both were inwardly planning all sorts of schemes to thwart the horse thieves, and were greatly relieved when the two tramps gathered themselves up and went out the back door, while somewhat later, after discussing ways and means, the boys went out the front door and up to the house just in time for supper.

Phil had decided the neighbors were too distant to depend upon, and the Chinaman too cowardly, and while he thought it best to say nothing to his mother for fear of frightening her, he perhaps had an idea of Ross' and his own ability to frustrate the thieves' plans.

At supper table Phil asked his mother if she had any old white rags or sheet, or anything.

"Why yes," replied Mrs. Norton, "but what for?"

"Oh, just for a lark," said Phil, "a sort of surprise."

"Well, I trust it will be a pleasant one, my son, and I'll give you an old sheet and a couple of old pillowcases. Will that do?"

"Just the thing," says Phillip. "We'll have a regular sheet and pillowcase party," with a meaning glance at Ross.

"What are you up to, anyway, boys? No harm, I trust. I always feel nervous when your father's away—not that there seems to be anything to fear, but we are so far away from everybody!"

"Well mother, that's rather hard on us. Don't you even think *I* could take care of you if it were necessary," responded Phil, and as his mother looked with motherly admiration at the tall, muscular figure and bright face of her sixteen-year-old boy, she fondly admitted she could gladly trust herself to his care.

Supper was over by six, and the boys off, and just as Mrs. Norton had become interested in her book, Ross put his head in the door with an "Oh, Mrs. Norton! Do you know where that piece of phosphorus is that Phil says has been here so long?"

"In the washhouse on the shelf in a bottle of water in an old cigar box, tho' what the father wanted it for I can't tell any more than I can what you want it for, tho' you're sure it's no harm, Ross?"

(*Concluded next week.*)

DOMESTIC ECONOMY.

Tough Meats.

[Written for the RURAL PRESS by MRS. M. B. P.]

Often, especially in small places, the meat is so tough and flavorless that the cook needs to exercise much skill and ingenuity to render it agreeable to the taste. An economical cook will frequently buy the coarser cuts in preference to better, because they are much cheaper, and when properly cooked are just as nutritious.

These cuts are generally plainly stewed, but a skillful cook can make a variety of pleasing dishes from them. To me there is a real pleasure in taking a coarse cut of meat and by careful cooking transforming it into a tender, attractive dish. To do so requires thought, care and time, and the exercise of good judgment.

Below are given a few methods for cooking the coarser cuts which will render them pleasing and nutritious.

Grenadines of Beef.—Take a round steak and cut it into neat well-shaped pieces. In a flat-bottomed iron pot lay a few thin slices of fat bacon. On these lay the pieces of steak. Season with pepper. Stand the pot on a part of the stove where it will cook very slowly in the fat of the bacon. When it has cooked from fifteen minutes to half an hour according to the toughness of the meat, turn the pieces of steak, and pepper the top. Cook again the same length of time. Then put the steak on a hot dish. Take out the bacon and pour off all but two tablespoonfuls of the fat. To this add a generous tablespoonful of flour, stir until smooth, then add a scant pint of water, and let it boil up. Pour over the steak. Serve with this boiled macaroni dressed with tomatoe sauce.

Mutton Chops on Toast.—Take six large mutton chops, put them in a pot with three thin slices of bacon or pork beneath them. Cover the pot closely and cook them on the back of the stove for two hours. When they have cooked half an hour add a small onion finely minced and a tablespoonful of minced parsley. Turn frequently to prevent burning. At the end of two hours add four tablespoonfuls of wine vinegar, a dash of cayenne and quarter of a teaspoonful of ground cloves. Cook half an hour longer. Wet a teaspoonful of flour with a little of the gravy, pour into the pot, stir well and let it boil up once. Have six slices of hot buttered toast on a dish; on these lay the chops and pour over the gravy.

Haricot of Mutton.—Take three pounds of lean mutton, and cut into neat pieces. Put two spoonfuls of butter into a pan, in this fry the mutton, and a small onion sliced. Add to them a cup of gravy or stock. Stew slowly an hour. Then add a carrott sliced, and a cup of green peas. Stew half an hour. Thicken with a tablespoonful of flour. Season with pepper, salt and a tablespoonful of tomato catsup.

Ragout of Mutton.—Cut two pounds of coarse, lean mutton into small pieces. Have two tablespoonfuls of butter in a pan, in which fry the mutton, and a small onion minced. Cover with hot water or stock, and stew slowly two hours. At the end of an hour, add pepper, salt and a tablespoonful of summer savory. At the end of two hours, thicken the gravy with a tablespoonful of flour and boil up. Turn into a hot dish and serve with it boiled green peas.

Steamed Mutton Chops.—Steam three pounds of mutton chops for three hours. Take them up and dredge with pepper, salt and flour, and fry brown in butter. Serve with tomato sauce.

PACIFIC RURAL PRESS.

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ALFRED HOLMAN.....General Manager

SATURDAY, FEBRUARY 27, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Nursery Stock—E. J. Bowen.
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Pacific Coast Home Supply Association.
Standard Mower—Stanton, Thomson & Co., Sacramento.
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☞ *See Advertising Columns.*

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The Week.

A good rain, in some respects the best of the season, followed quickly upon the promise which we gave in our last issue, and we think now of applying for a position on the staff of the rain-making bureau. The rain was wet, warm, penetrating and wide-reaching. Everything north of Tehachipi was well watered by it and the slight deficiency which still remains in the seasonal figures is little thought of. The outlook is for the grandest kind of a year—this is the current comment among those we meet.

The political pot is beginning to boil everywhere. This week has seen ebullitions all the way from New York to San Francisco, and in all cases there was no lack of warmth resulting from the clash of conflicting interests. And this is only the beginning. Soon we shall have politics from day to day and week to week, until November brings relief.

Work of the Fresno Convention.

If there is only one deduction to be drawn from the convention of fruit producers last week at Fresno, of which we publish full outlines on another page, it is that a disposition toward cooperative action now exists as it has never existed before among the producers of this State. It was an open convention and the axe-grinders of all interests had free access. A few years ago these henchmen of corporations and trade interests would have wrecked the convention, as they have on many a previous occasion, and would have baffled earnest, progressive men by their dilatory and illusory propositions. This convention had evidently no patience to be trifled with and the obstructionist was soon disposed of. This we take to be a clear indication that producers are stronger in their determination to protect and advance their own interests than ever before.

But there is another indication presented by the convention which is hardly less notable than the foregoing. It is the greater unanimity of opinion and deeper feeling of sympathy which are discernible. There is less than formerly of the timorous spirit, of the questioning as to whether producers can in fact understand their own interests and advance them. We don't hear so much as we did about approaching certain powers in a certain way and hoping that said powers have consciences large enough to hang an appeal upon. Even the kindly conservative ones who used to make such speeches a few years ago do not make them now. They have learned better. They have been bitten by the very pets which they fondled and they now know that there is nothing to be gained by such methods.

As the ideals of magnanimity and unselfish devotion in high corporate places have lost their charms, the producers naturally come closer together and have more confidence in each other. Enough has recently been done by them to warrant this confidence and to teach them that they have little to expect in the way of service from masters. It is not surprising then that producers have, during the last few years, acquired a good education both in the ills of others and the good in themselves, nor that they propose to turn this knowledge to their own account and sweep away obstructions which hinder their industrial progress.

We do not speak except in such general terms of the convention because the report upon another page presents the details of the work undertaken as clearly as it can be described. Whether the convention and its committee have hit upon just the best plan or not can only be made clear by longer thought and discussion of minute features of the plan. That will come in the immediate future. The movement has force in it and behind it. Do not let it fall from inaction. There must be united action. The situation among the fruit men is much as it was among the old signers of the Declaration of Independence when one of them said: "We must hang together or we shall hang separately." Fruit growers have been hanging separately long enough and some of their necks are seriously strained. Let them now try hanging together.

Irrigated Area.

The telegraph brings outlines of a special report on irrigation which issued from the Government Printing Office at Washington on Monday of this week. The report is prepared by Mr. Hinton of the Irrigation Bureau of the Department of Agriculture and is the final report of the artesian well investigation and the second part of the irrigation inquiry, both ordered by Congress. The document presents the States of Nevada, Oregon, Washington and Arizona in separate papers, wherein effort is made to illustrate the chief cause by which aridity is produced and the ways through which benefits by irrigation may be secured. For California, special attention is given to the progress of the storage of water and the distribution on a large scale in the fruit-bearing portion of Southern California, and the progress of the San Joaquin Valley fruit orchards in the growth of irrigation projects and the changes that are being produced by it in the great wheat ranches of Merced, Tuolumne, Colusa and Butte counties.

The following table is a condensation of the results secured by statistical inquiry as to the irrigated area of the arid States:

STATES AND TERRITORIES.	Estimated under ditch	Acreage under cultivation, 1891	Number artesian wells, 1891
Arizona	660,000	315,000	42
California	4,500,000	3,550,000	3,500
Colorado	3,007,050	1,800,000	4,500
Idaho	1,200,000	330,000	12
Kansas*	990,900	120,000	50
Montana	1,250,000	419,000	36
Nebraska	200,000	40,000	100
Nevada	150,900	75,000	76
New Mexico	700,000	405,000	10
North Dakota	2,500	2,000	670
Oregon	125,000	45,000	6
South Dakota	100,000	54,000	950
Texas	350,000	160,000	1,000
Utah	735,000	423,000	2,524
Washington	175,000	75,000	10
Wyoming	3,031,484	185,000	6
Total	18,533,107	8,019,000	13,690

*West of 97 deg. long.

ANOTHER WORLD'S FAIR ASSOCIATION.—At a meeting held at Yuba City last Thursday, there were delegates present from Shasta, Butte, Tehama, Glenn, Colusa, Sutter and Yuba counties. It was decided to form an association for joint work in the interest of good representation at the World's Fair. Gen. Chipman was chosen president. Other meetings will follow.

Railway Rates to the Citrus Fair.

It seems that reduced railway fare to and from Los Angeles during the fair can only be enjoyed within limits. In answer to an inquiry which we made at Southern Pacific headquarters in this city we received the following:

"A rate of one and one-third for the round trip will be made from stations between Bakersfield and Indio, including points on branch lines. Tickets will be good by trains arriving at Los Angeles March 2d to 8th, inclusive, and returning up to March 9th, inclusive."

We are sorry the reduction does not extend to all points. As it is, it is not available to those who live north of Bakersfield or east of Indio.

AMERICAN MEAT IN ENGLAND.—The directors of Eastman's Limited Company have issued a report for 1891. They estimate the falling off in sales of American meat in England at £69,000, which they attribute to the high price of cattle and excessive competition.

QUERIES AND REPLIES.

Points for Hawaii.

HONOLULU, Feb. 10.

TO THE EDITOR:—Please state in RURAL PRESS the best known means for killing blight and scale-infesting fruit trees, more especially oranges, lemons and limes?

We have a species of grass nut, imported here from the Coast, which it is impossible to exterminate by ordinary methods. It is a great nuisance to us, as it will kill out any other grass with which it comes in contact. Can you suggest a means for exterminating it?

Could sticks of buds of olive and orange be successfully sent from the Coast to Honolulu for purpose of budding native stocks? If so, inform me of persons who could supply same. Yours truly,

JOHN EMMELUTH.

If our friend had read his RURAL a little more carefully he would have already had a scrap book full of scale remedies. He is probably aware that for the red scale, which is now our worst foe on citrus fruits, the gas remedy, which has been fully described in our columns, is best. Probably, however, our correspondent desires washes, to use on a small scale. The following formulas are prepared by Mr. Alex. Craw, with the prices of the materials in this market:

ROSIN WASH FOR CITRUS TREES INFESTED WITH "RED SCALE."

20 lbs. rosin at 1½c	$ 30
6 lbs. caustic soda at 5c	30
3 lbs. fish oil at 4c	12
Total	$ 72

Water to make 100 gallons. This is very effective and costs about three-fourths of a cent per gallon.

ROSIN WASH FOR NEWLY-HATCHED BLACK SCALE UPON CITRUS TREES.

18 lbs. rosin at 1½c	$ 27
5 lbs. caustic soda (70 per cent) at 5c	25
2½ lbs. fish oil at 4c	10
Total	$ 62

Water to make 100 gallons. This will cost five-eighths of a cent per gallon.

COAL OIL EMULSION FOR BLACK SCALE UPON OLIVE OR CITRUS TREES.

5 gallons coal oil at 17c	$ 85
1½ lbs. laundry soap at 3½c	05¼
2½ lbs. home-made soap at 1c	02½
Total	$ 92¾

When emulsified, this will make in all 40 gallons of wash, or a little over 2¼ cents per gallon.

We presume the "grass nut" imported from this Coast is the "chufa." It can be killed out in dry soils in this State by plowing up in the hottest, driest time of the year. How to handle it with Hawaiian conditions, we do not know Will someone tell?

Bud-sticks of olives and oranges can easily be sent to Hawaii, if properly packed. Probably any nurseryman advertising these fruits in our columns will furnish the buds.

Six-Day Creamery Practice.

WESTMINSTER, ORANGE CO., CAL., Feb. 15.

TO THE EDITOR:—The farmers here, who take their milk to a creamery which runs but six days in the week, wish to know the best and cheapest way of keeping milk sweet from Saturday night to Monday morning, without injuring the quality or quantity of butter, especially in warm weather. Can you help us in this matter?—G. W. MACK.

We know of no treatment which would both keep the milk sweet and prevent the rising of the cream. The use of ice would prevent souring, but would hasten the cream rising. The use of preservative powder, if this can be shown to be without injury, would prevent souring but not cream rising. The creamery which will not run every day should therefore arrange to receive cream on Monday instead of milk, or else the farmer will have to churn his own cream from the delayed milk. In fact, in this country where ice is usually too high-priced for dairy use, the dairyman has no choice but to get the cream from the milk as rapidly as possible, and for this purpose the centrifugal separator is best, and shallow pans next best.

How to Ring a Hog.

CLOVERDALE, Feb. 22, 1892.

TO THE EDITOR: Replying to Mr. H. E. Dye of Tulare county, I will give you what seems to be a practical plan for holding hogs while ringing:

In your corral, substantially fasten a strong scantling in a horizontal position, and about four feet from the ground. Prepare a rope with a noose, and when your hog is caught, and he opens his mouth to squeal, the noose can be slipped over his upper jaw, until it comes back of the tusks, turning the loop down into the mouth. Then take a turn on the scantling and let the hog loose. He will pull back, very naturally, and be in a very good position to ring.

WM. T. HEALD.

The State Press.

Chico *Chronicle:* "Whether the bill to elect Senators by direct vote will pass or not remains to be seen, but of its wisdom and propriety there can be no question. Unless the people of a State can be trusted to elect their Senators, the Senate of the United States should be done away with entirely, for under the present system it certainly is not a representative body."

Palermo *Progress:* "We believe our judges should not be elected by the people on a party vote. They should be appointed, and appointed for life or during good behavior, and the higher appointments always filled by promoting from the lower ranks those meriting promotion. Our criminal trials ought then to be tried before a court in bank, and it must follow that less mistakes and less expense and more justice would result."

San Jose *Mercury:* "The miners of California have already found out that there will be a hard fight before it to get Congress to grant the relief it has gone to seek. That the fight will be hard can be due only to the parsimony of the present majority in the House of Representatives, or to the spirit of indifference, born of ignorance, with which too many Eastern men regard the needs of California. Certainly a juster claim, or one of greater importance has rarely, if ever, been presented to the Government."

Gridley *Herald:* "The next legislature will undoubtedly be strongly petitioned to make the offices of Justices and Constables salaried positions, thus doing away with the deadly fee system which is in many instances apparently an incentive to hasty and unnecessary arrests. Butte county tax-payers are this year being called upon to foot many a long bill for trials which ought never to have bothered the courts, either high or low. The only way to check the growing tendency to wanton waste in official circles is for the tax-payers to enter a united protest against such extravagance from now on and clinch their arguments at the polls. Spot the leeches and stop the leaks with ballots."

Stockton *Independent:* "Mr. Newberry's bill to cut off pensions from nonresidents of the United States will receive very wide support. There is a growing disposition to regard the pension list with jealousy since it has grown so large. This jealousy has long asked that the cases of all pensioners and the Pension Bureau be closely investigated, and the revelation that 15,000 pensioners reside in foreign countries will add to the clamor. Congress has the undoubted right to so amend the pension laws as to require pensioners to live within the country that supports them. If the drain on the Treasury for these 15,000 pensioners takes no more than a half million a year out of the country, the drain of money from the country is greater than the people will approve."

Stockton *Independent:* "Men of the world who like to see a successful politician win a fight will naturally congratulate lucky workers like McKenna and Morrow, but how will the appointments strike the people, who have been taught in days long past that the judiciary is the highest and ablest department of the Government. * * * President Harrison certainly did not fairly judge between available men when he passed over half a dozen of the ablest jurists of the State and selected men who are best known for their political successes. United States Judges are appointed for life, and thinking men who believe that the ablest lawyers in the land should be named for such positions of grave responsibilities will be disappointed in the selections made in California."

Visalia *Delta:* "The American Forestry Association has adopted a memorial asking for the establishment of four additional timber reservations, as follows: The Turtle Mountain reserve in North Dakota, Crater Lake reserve in Oregon, Lost Park reserve in Colorado and Sierra Madre reserve in California. Those who are opposed to Government reservation and control of unentered timber lands, fear that the purpose of the Government is to prevent all trespassing upon such territory for any purpose, but such is not the intent. The main object is to protect the cutting of timber, the prospecting for and working of mines, or the farming or pasturing of suitable lands. It would be folly to think of withholding a large area of land from use, thus preventing it from contributing toward any creative industry."

Government Railway Management.

SAN GABRIEL, LOS ANGELES CO., Feb. 19, 1892.

TO THE EDITOR:—I often read of the benefits which it is claimed would accrue from Government ownership and management of the railway system of the United States, and as often read and hear the idea scouted and ridiculed, and pronounced impracticable because it would lead to political jobbery and corruption in the practical management thereof, etc. Yet in Germany, I read, the railways are controlled by the State to the great benefit of the country, to the oppression of none, and are operated by the army. Why can this not be done in the United States? If it could be done, our trains would cease to be robbed, our mails and express would be safely transported, our postoffice department save millions now paid for carrying mails; there would be no strikes; the railways themselves would cease their unjust discriminations and oppressions of our peoples and places.

I do not ignore the pension rock. Let the law and the Constitution, if necessary, be that all men who enlist in the army or navy thereby forfeit (during their enlistment) the right to vote. Then the millions of men who will manage the railway system cannot collude with the corrupt politicians and vote themselves pensions. The army in this case should be so large in excess of the men required to manage the railway that while one-fifth, we will say, are attending to their military duties, drilling, etc., the other four-fifths would be on extra duty—that is to say, receive extra pay and be attending to their extra duties in the railway service, just as men are now on extra duty in the commissary and quarter-master's department of the United States army. The one-fifth on military duty could be on drill and learn all that is required to be perfect in the school of the soldier, and then, to keep him from "stagnating," put him on extra duty to keep him actively alive. We could in this way always have a great and efficient army, ready for any emergency, not idle, thriftless fellows, but soldiers with their wits about them.

Have the railway system so run as to pay its own expenses, and the expenses of the army and navy (perhaps), and a sufficient fund to pay interest and for a small sinking fund and extension fund, and no more. By this plan, the Government can own the railways. As it is, it is claimed the railways own proximately the federal and State Governments, with the Congress and Legislatures of the States, and also the federal and State judiciary. Proximately, I say, it is so claimed. I hope the claim is wrong; but I, and all other citizens, as far as I know, believe the claim approximates the truth.

If the baneful hand of the railway corporations, with their billions of dollars, were off of Congress, courts and legislatures, would we not have a chance to come back to honest principles? Railways, telegraphs, telephones and trusts are new institutions, comparatively, and if we allow them to get complete control of this nation (and are they not closing down on it?), then how can we get rid of them except by a great civil war—a war with all the money and power of the railway and of the telegraph, telephone and trusts on the one side, and the farmer, with his pruning shears and hay fork, on the other.

Forty years ago, the farmers of this country owned 80 per cent of its wealth. Now they own 20 per cent, and that mortgaged. Forty years ago, 80 per cent of the young men in our colleges were farmers' sons; now not eight per cent. What do these things mean?

It is claimed to be a fact (is true) that from 1872 to 1887, 15 years, the tariff on the railroad iron used in the United States paid to our Iron Baron, was one hundred and fifty millions of dollars. Not one cent of this went into the United States treasury. And our farmers are charged by the railways to pay this extra one hundred and fifty millions. For whose benefit was this? Would the Government, if it owned and managed these roads, pay these extraordinary, unjust and farm-crushing charges?

I write this from the standpoint of the farmer.

A. B. CHAPMAN.

Fruit Growers at Stanford University.

CARMEL VALLEY, Monterey, Feb. 22, 1892.

TO THE EDITOR:—Mental improvement being one of the traditions of the Berwick family, last Monday found my son and self on the cars northward bound for Menlo Park to enjoy all the good things that the Stanford University had to offer California's fruit growers. Menlo is 2¼ miles from the University buildings, and the somewhat exorbitant fare of 50 cents was charged each passenger by the conveyance plying between the two points. Next year an electric railroad is to connect Palo Alto depot with the University, and it is presumable that all cars will then stop at Palo Alto instead of Menlo. Leland Stanford Junior University (L. S. J. U. for brevity) requires a blue sky to show itself to the best advantage. Skies were gray as we traveled, and viewed in its present unfinished state, L. S. J. U. reminded one rather of some huge manufactory than of any collegiate edifice previously known. The present quadrangle is merely an interior square of a mammoth quadrangle yet to be erected of two-storied edifices. In the center of one face of these edifices will be a chapel of glorious architecture, and in the center of the other face a magnificent triumphal arch. These appear in the architect's sketch to be of white marble. The only fair place at present to judge of the effect of the style adopted is from the interior, and when the bright sunlight of California lit up the quadrangle of warm buff sandstone, with its red tiled roof, and the rich blue of heaven appeared through every arch, one could realize something of the future glories of the finished structure.

Room 90 was the apartment to which we were directed as the fruit growers' gathering place; but as the first special lecture did not begin until half past ten. Pres. Jordan kindly made us free of the institution to pluck from the tree of knowledge such fruit as each should desire. During the week, we amply availed ourselves of the privilege. I think we began by sampling the highest growing fruit first, and ranged from psychology down through flowers of poesy and literature, physics and chemistry, to the scale bug on the trunk and aphis on the roots. As the amount of intellectual pabulum provided required five days to swallow and an unlimited number to digest, I must refer your readers to those daily papers which published the lectures more or less in extenso.

There was one little point that Prof. Comstock made that may be of much service to us all. It was regarding the *application of the arsenites in spray*, as insecticides. Fruit growers have been advised heretofore to use ammonia to mix with their Paris green to make it more soluble. Prof. Comstock, replying to my question, deems this all wrong. He thinks it equally destructive to bugs when merely held in mechanical suspension in the spraying medium, and much less prone to burn the foliage than when made soluble by the addition of ammonia. When used for stone fruits, one pound to 320 gallons of water he deems amply sufficient. Attention to this will not only save the ammonia, but many a disfigured tree.

An address, of which I have seen no newspaper report, but which was of much practical importance, was delivered by Mrs. Comstock. "Mental horticulture" was the subject announced, and the lecturer forcibly urged the importance of making farm home life attractive intellectually, as well as physically. Mrs. Comstock deplored and deprecated the insensate folly of exchanging a pure, wholesome, natural life in God's sweet country air for a monotonous city routine in an atmosphere, moral and material, charged too often with foulness and filth, sickening to soul and body.

What can possess "our boys" that they should forsake the noble and invigorating career of the horticulturist to pen themselves for 10 hours a day behind a Kearny street counter, in the effeminate and emasculating business of measuring yards of ribbon and tape, or acting the human bootjack and buttonhook, even with the additional pleasure of nightly imbibing beer in some malodorous underground "dive," is certainly one of the things that "no feller can understand doncherknow." If a tailor be but the ninth part of a man, what fraction of manhood can remain in the many pale-faced underlings whose occupations demand not the ninth part of a tailor's ability? If the American male biped is to retain the vigor and sterling manliness of his progenitors he must seek and cherish it elsewhere than in Kearny street dry goods depots or Dupont street dives. And the American girl, let her not forget it!

These are not quotations from the lecture, for I took no notes, but my reflections on ideas therein set forth. Perhaps, Mr. Editor, you might persuade Mrs. Comstock to pleasure the home-staying fruit growers by publishing her lecture in the RURAL.

President Jordan one evening gratified both students and visitors with a stirring recital of the ascent of the Matterhorn by himself, Dr. Gilbert and party; he also gave an hour to describing the salmon and trout of the California coast. Dr. Gilbert entered a plea on behalf of the robin and other feathered friends of the farmer, now being recklessly and ruthlessly slaughtered by pot-hunters, to the great detriment of the horticulturist, and the untold multiplication of the bug. He also graphically described the methods of deep-sea exploration, illustrating his remarks with diagrams and specimens, including a sample, under the microscope, of the shells from the globigerina ooze. Dr. Marx urged our irrigationists to restrain their impatience until the expiration of such time as should allow a proper and comprehensive survey to be made of areas of water collection, distribution, etc. Dr. Brannan talked on the formation of soils by the disintegration of rocks, and the action of water and ice. Mr. E. E. Smith discussed phases of fruit culture and kindred subjects. But of course the chief attraction to fruit growers were the lectures of Prof. Comstock, who has made a life study of the fruit growers' friends and foes, insects, predaceous or rapacious,—predaceous as they prey on each other, rapacious as they commit havoc or rapine on farm crops. These are not professional distinctions, be it remembered. The professor speaks with that freedom which is possible alone to a master in science.

It would be hardly right to close this letter without a hearty acknowledgment of the uniform courtesy and kindness with which we were treated by all those with whom we came in contact. I am a little disposed to think that we felt almost as much at home at the L. S. J. U. as we do in our easy chairs by our farm firesides; and when I recall my 27 years of backwoods life, I don't think I can better indicate the heartiness of the welcome extended us. A body of men so talented, with so much modesty and so little assumption, ought to and *will* achieve great things, even in this "wild and woolly West." I am also vastly pleased to record that the Faculty are unanimous in their verdict that the students at L. S. J. U. average higher in ability and attainments than their former students of the Middle or Eastern States. EDWARD BERWICK.

Fair Trade and Honest Labels.

NILES, ALAMEDA CO., Feb. 18.

TO THE EDITOR:—I must commend your editorial on "Sound Morals and Good Policy" in the impression of Feb. 13th. Speaking as an Eastern consumer, only lately become a California producer of almonds (I sent a carload to Chicago last year) and green and dried fruits, my theory is exactly the opposite of those who advise foreign labels. The reputation of California fruit is too high for its own good, and Eastern retailers take advantage of it to put on a price which restricts the sale. No matter what price we get, that tyrannical power called "the trade," which consists of the jobber and retailer, but holds sway over the commission merchant and the manufacturer, will not let the consumer have "California" fruit at anything less than a fancy price.

It deserves all the credit it gets and more; but the true remedy is to let the Eastern consumer know that he does not need to pay the fancy prices. He will more than double his purchases, and soon will not be satisfied with anything short of "California" fruit. I have just had some visitors from Indianapolis. They said they never got prunes as good as those on my table for less than 20 cents a pound, nor such dried peaches for less than 15 cents. I got 7 cents for the prunes and 5 cents for the peaches in Chicago, freight paid, and out of these prices paid five per cent commission.

I would have been glad to lay down in Indianapolis, freight paid, anything over 100 pounds of mixed fruits at 10 cents a pound. I could not do that every year, but they say they see no difference in this year of low prices for the California producer.

"The trade" has its rules, immutable as the laws of the Medes and Persians, and one of them is that everything from California, except wine, must be held for a high price. "Wine is a mocker," the good book says, and California wine may have to travel under an *alias*. If Montcalm had conquered at Quebec instead of Wolf, and this country had passed under French control, the wine men might have succeeded; but we drink an average one-half gallon of wine a year to the Frenchman's 20 gallons per head of population, and we carry beer and whisky into the winery and drink it rather than change.

The wine men have tried to induce or force retailers to sell wine at five cents a glass. They know better than I do how they succeeded, but I know that if we could induce Eastern retailers to sell our fruits at reasonable prices, we could have an enlarged market at better prices. HENRY J. PHILPOTT.

Cost of Creameries.

Cor. Reno Gazette.

As the creamery business is the all-absorbing topic these times, we give the following cost of a creamery outfit for making butter from 100 cows:

1 6-H. P. engine	$ 175 00
1 8-H. P. boiler, horizontal	235 00
1 improved De Laval separator—capacity 1300 pounds per hour	350 00
1 200-gallon milk receiving vat	40 00
1 200-gallon cream vat	45 00
1 200-gallon box churn with tight and loose pulleys 16x4 inches	32 00
1 power butter maker—preferably Mason's	50 00
1 400-pound platform scale	15 00
1 Renesselaer scale, for salting	8 00
1 60-gallon weigh can	2 50
1 milk conductor head	2 50
Milk conductor pipe, 6 feet at 20c	1 20
Thermometers, dippers, ladles, etc	3 00
1 power force pump for water supply	25 00
1 separator tempering vat	15 00
1 cream cooler	8 00
1 butter-milk strainer	2 50
1 20-bottle Babcock milk tester	21 00
Total	$1,028 20

The size and number of pulleys, lengths of shafting, belting and pipes, will depend upon the dimensions of the building and position of the machinery. Below, I give the list prices of such material as is needed for setting up and connecting the machinery: Four-ply rubber belting costs, for 2 to 8 inch, 21 to 80 cents per foot; leather belting, for 2 to 8 inch, 23c to $1.02 per foot; shafting—cold rolled—1 7-16 inch size, usually used in creameries, 80 cents per foot; drop hangers, rigid, 1 7-16 inch journal each, $3.60; drop hangers, adjustable, 1 7-16 inch journal each, $5.89. Pulleys for above machinery, calculated for 6-H. P. engine:

Counter shaft to engine 16½x6 in	$ 4 85
Counter shaft to main shaft 12x5	3 50
Main shaft to counter shaft 23x5	6 50
Main shaft to churn 9x8	3 85
Main shaft to worker 7x6	3 00
Main shaft to pump 5x6	2 75
Total	$24 45

Additional apparatus necessary to fit the above plant for cheese-making:

1 500-gallon cheese vat	$ 60 00
1 curd mill with salter attachment	24 00
1 10-foot curd sink	18 00
1 cheese press with 6 hoops and followers	44 50
Or a gang press for 10 to 20 cheeses	$45 00
1 12-blade curd knife	4 50
1 conductor head and 10 feet of pipe	4 50
Curd pails, scoops, milk pails, dippers, thermometers, etc	5 00
1 milk cooler and aerator	5 00
50 feet 1-inch steam pipe with two globe valves	10 00
Tees and elbows	1 00
1 cheese dater	1 25
Total	

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

THE BEST ORANGES FOR BUTTE CO.—*Register:* P. R. Persons and Judge Lott made a long and careful examination of the Orange trees in this vicinity and compared the different varieties. Mr. Persons says that St. Michaels are strong and thrifty growers, but the fruit is small and there is not the demand for them that there is for the larger and more attractive oranges. The Washington Navels and the Mediterranean Sweets are the best in this climate. The navel when young is a shy bearer but as the trees get older they increase in bearing. The Homosassa is small and has many seeds like the ordinary seedling. The fruit is, however, delicious, and at this time of the year is as perfect as any fruit can be. Some of the navels are already beginning to show their white buds for blooming which is very early. The navels and Mediterranean sweets are in his estimation the two varieties that will lead all others in this region for size, flavor and salable qualities.

BAG THE ORANGE TREES.—Oroville *Register:* Major A. F. Jones, who has watched the planting of thousands of orange trees at Thermalito, tells us that the orange tree roots should be bagged even when the trees are to be moved but a short distance. He showed us trees taken from the same nursery and planted side by side in groves at Thermalito and those where the roots had been bagged were more flourishing and thrifty during the first year and there was far less loss than when the trees were not bagged. He says in this mild climate the trees are not dormant enough to be moved without causing a loss of vitality at any time during the year and hence the need of protecting the roots even when the trees are removed from a nursery and planted at once in orchard form.

ORANGE AND OLIVE TREES AT THERMALITO.—*Register:* Major McLaughlin has now 1,200 orange trees that are looking finely and will plant during the coming month 2,000 Mission olive trees and 6,000 seedling orange trees, making in the orchard 9,200 trees in all. This is just north and across the road from the 40-acre olive orchard owned by Messrs. Fogg and McLaughlin. There are 152 acres in the tract north of the road, and a vast amount of work has been done upon this in plowing, grubbing, leveling and putting in good shape for thorough cultivation. It is near Oroville, and will make, in a year or two, a magnificent showing from this town. F. S. Foote, of San Francisco, is filling in vacancies where some trees died and will put out 2,200 Parson Browns, Mediterranean sweets and navels. Col. Danicke will plant 1,200 budded orange trees, but we did not learn the varieties, and the work of plowing and planting is being done by J. B. Kiefer. Fred Stanton, of San Francisco, is putting out 1,400 budded orange trees of different varieties. G. C. Goodrich, of New York city, is planting 1,080 budded orange trees. Mrs. Goodrich will put out five acres to oranges a little further south in the colony. In the twelve trees tract Major Fisher is having 1,800 budded oranges planted. W. B. Martin, of Alameda, is having his land put in fine shape to put out 2,000 budded orange trees. The work is being done under the supervision of John R. Preston who has the contract for the orchard. Miss A. Briggs and her nephew, Frank Briggs, both of Chicago, are having their land prepared and will plant ten acres of oranges, ten of olives and ten of tragedy prunes. There are 309 acres of oranges, ten acres of prunes and forty acres of figs being planted at present.

Fresno.

THE SEEDLESS GRAPE.—W. A. Sanders in Visalia *Delta:* "The advantages the Corinthian, the Zante, the Sultanas and the Thompson seedless grapes possess above the Muscat are, first and greatest, they ripen from ten to twenty days earlier. This means that raisins from these varieties are entirely cured during the hottest and dryest weather of the summer before there is any possibility of loss from even the earliest autumn rains. Another advantage nearly as great, they are the first of the raisin crop of the world in the market. As they cure faster than the Muscat their output of raisins can be marketed a month ahead of the great mass of Muscat raisins, thereby insuring quicker sales and larger prices. Thompson's seedless vines grafted into Rose of Peru roots in March, 1889, yielded as high as one hundred pounds of grapes to the vine. Sultana vines, twelve years old, yielded sixty-three pounds average to the vine, Corinthians about the same, Zantes slightly less. Muscats averaged forty-two pounds to the vine, but were made to do so by counting with them a few dozen Huascos that yielded over eighty pounds to the vine. To sum up, seedless raisins yield more heavily than Muscats, are cured more easily, and being marketed earlier meet a ready demand, and are wholly exempt from liability to loss by autumn rains. Another potent fact that should be borne in mind, seedless raisins are growing rapidly in public favor."

Kern.

THE 15TH DISTRICT AGRICULTURAL FAIR.—Visalia *Delta:* The directors of the 15th District Agricultural Association met in this city Tuesday. Directors H. H. Fish and H. H. Blodget, accompanied by Captain Thomas B. Merry, editor of the Turf, of Bakersfield were present. It was intended to give Kern county $1,500 of the state appropriation of $2,500, and use the remainder for a horticultural show in this city. During the meeting it was moved that the entire appropriation be given to Bakersfield, and it was carried. There will be no fair in this county this year, and if a horticultural show is held the money for premiums will have to be subscribed in this city and vicinity.

Mendocino.

FRUIT TREE PLANTING.—Ukiah *Republican Press:* From inquiry among fruit men it is learned that not so much planting will be done this season as last. Two reasons are assigned. The price of prune stock, which may be said to be the leading fruit here, is high, and many who would plant this fruit if prices were lower, will wait another year. While pear stock ranges about the same as in other years, people realize that it requires considerable knowledge of this fruit to succesfully grow and market it. It cannot be denied that Bartlett pears grown in the Russian River valley are unexcelled by those in any other portion of the State. They are of good size, excellent quality and do not rot at the core. But Bartlett pears to be grown with profit must be shipped east, and of course until the people understood this and have enough of the fruit, no great results will be obtained. About 125 acres of Bartletts will come into bearing near here another year, and when the producers begin to successfully ship carload lots east, the reputation and adaptability of this part of the country will be established. The acreage planted to prunes in this county this season will be something over 100 acres.

Orange.

UNFROSTED ORANGES SELL HIGH.—Anaheim *Gazette:* Mr. Gilman sold his orange crop to Thacker Bros. The price is not stated, but it is reported to be in the neighborhood of $12,000. Mr. Gilman has 25 acres of oranges in bearing, and there is not a finer orchard in the State. The fruit consists of Navels, Mediterranean Sweets, thin-skinned St. Michaels and some seedlings. The crop is estimated at about 10,000 boxes or more, and although the price is not given it is believed $12,000 is not far from the figure. Both the Earl Fruit Company and the Thackers put in a bid for the crop. Last year Mr. Gilman received about $7500 for his crop. The increased price is owing to the fact that the orchard was absolutely untouched by frost or injured by the windstorm last month.

Sacramento.

HOP NOTES.—Sacramento *News:* If a hop is properly grown, and has moisture enough to mature it perfectly, it gathers a great amount of lupuline, and has a rich yellow hue, tinged with green. It also takes a peculiar luster, which distinguishes it from an inferior hop. Persons unacquainted with hops will readily detect this rich color and luster when contrasted with other grades. Daniel Flint is arranging to have an irrigating plant placed in his Yolo yards and also in the Riverside yard. A gasoline engine and a centrifugal pump have been decided upon. George Menke will irrigate, and is now engaged in sinking a deep well in order to secure an ample water supply. Several ranches commenced pruning this week and the good weather has put a number of cultivators in the yards. More care, it is thought, will be exercised by farmers in this important feature of the hop culture than has been done heretofore. Plow pruning has been abandoned almost entirely, which is as it should be. If too many of the top or water roots are destroyed the plant is sure to suffer from a lack of sustaining moisture. Over pruning or low pruning should be avoided also, as the crown of the plant is subject to irreparable injury. It is time that Sacramento growers awaken to the necessity of more care in growing and curing their hops. It is well known that no country in the world is so well adapted to hop-growing as the fertile valleys of Northern and Central California, and yet every man who knows one grade of hops from another must realize the fact that there are many bales of second and even third grade hops placed in the market. What is needed is reputation, and that can only be gained by producing a uniform high-standard grade of hops.

WORK OF RECLAIMING OVERFLOWED LAND.—*News:* Supervisor Jenkins, Chairman of the Committee on Roads and Bridges, says: "A year ago I visited Andrus and Brannan islands and other reclamation districts, with other members of the Board. We found the country a tule swamp. Thousands of acres of what comprises those islands were but a glassy sheet of water, broken here and there by a wilderness of tules. On my visit last week I found instead of a vast lake a broad plain protected on all sides by high and substantial levees. Farmers were busy at work cultivating the fields and hundreds of acres are already sown to grain. I was informed by ranchers who have formed the adjoining reclamation districts that 50 sacks of barley is not far from the average crop. Two crops are raised annually. The first crop, usually hay or grain, is harvested in June and July and the stubble is burned, the ground plowed and beans, onions or potatoes planted, which mature in good season. Four crops of alfalfa may be cut from the ground, the yield per annum averaging about 10 tons per acre. I have no idea of the amount of land reclaimed, but it runs up into the thousands of acres. Few people outside of the men interested in the reclamation have even a faint idea of the importance and magnitude of the work. The benefit to the county can hardly be estimated. These lands will each year throw into the market hundreds of thousands of dollars' worth of grain and hay. Such a thing as a failure of a crop will never be known, unless, of course, a levee should break, and these are being strengthened every year by being built higher and broader. If the season is unusually wet the rancher simply sets his pumps running and pumps the water out. If the season is dry he lifts the flood gates and lets the water in. They are independent of the elements as much as any people in the world. The effect the reclamation districts will have on the river will be a very material one, if carried to the extent that is now predicted. It will simply act as a levee to the river and force it into a deep channel, and thus, during the flood seasons, the river will be scoured out until large vessels will ascend."

San Bernardino.

SUGAR BEET ACREAGE.—Chino *Champion:* Work is now going on steadily and vigorously on a crop of 4000 acres, which will be planted, cultivated and cared for in the best light of the knowledge gained by close observation and careful study of the soils, the plants and the methods of cultivation.

THE FRUIT INDUSTRY.—From Horticulturist Commission to the Board of Supervisors: The planting for the season of 1891 is as follows:

	ACRES.	TREES.
Vines	1,639½	
Peach	524	32,705
Pear	1¾	132
Apricot	144½	14,299
Apples	16¼	1,635
Figs	99¼	8,154
Olives	102½	9.514
Prunes	823	79,689
Nuts	70¾	6,396
Lemon	350¼	30,123
Orange	6,602¼	599.588
Total	10,373¾	782,235

Making the total acreage of these fruits in the county at this time as follows:

	ACRES.	TREES.
Vines	6,807	
Peach	2,472	244,581
Pear	347	37,662
Apricot	1,257	120,509
Apples	123½	9.141
Figs	301	35.668
Olives	229	21,536
Prunes	1,095½	117.066
Nuts	201	12,691
Lemon	786	68.835
Orange	19,673	1,760,531
Grand Total	33,292	2,016,327

San Diego.

ALPINE FARM NOTES.—Cor. S. D. *Union:* At this writing, the prospects for hay and all kinds of fruit are quite favorable. A large amount of new land has been cleared and planted to fruit trees and vines.

BIG FARMERS.—Perris *New Era:* Some idea of the extent of our agricultural resources may be gained from the statement that within sight of our office Mr. William Newport is engaged in plowing and seeding 6000 acres of land to wheat and barley, using 70 horses on the work. Schee Bros. are planting 3600 acres adjoining, using 28 horses, and Messrs. Clark & Hewitt are farming a 4000-acre tract near by with 68 work animals.

San Luis Obispo.

A NEW CULTIVATOR.—*The Moon:* J. V. Webster has patented a new cultivator. So far as it has been perfected, it beats all other cultivators. It is six feet in width, and with four horses does much more work than any other cultivator extant. It clips every weed and stirs the soil to a good depth.

GRAIN-SEEDING AT SIMMLER.—Cor. Paso Robles *Moon:* Large crops are being sowed, larger than ever before. Some of the farmers are through seeding.

San Joaquin.

COST OF A 40-ACRE ORCHARD.—Lodi *Sentinel:* Frank J. Lease of San Francisco, some weeks ago purchased 40 acres of land, three miles east of Lodi. Mr. Lease, in response to a request of the writer, gave a complete statement of the cost of planting his 40 acres of trees and the caring for the same for the coming year ending Feb. 1, 1893. In making his statement, Mr. Lease referred to his receipted bills and his account book. Nothing was guessed at, bunched and "averaged in," hence these figures can be relied upon as being the correct result of practical experience. Following is the statement:

2616 almond trees (best varieties)	$ 368 75
200 assorted trees for personal use	69 72
Plowing 40 acres	80 00
Marking and staking	10 00
Digging holes	12 50
Planting	25 00
Freight and drayage	5 00
Miscellaneous labor	15 00
Contract with man to take care of place 1 year to Feb. 1, '93	200 00
Total cost of orchard when 1 year old (not including taxes and interest)	$ 785 97

Mr. Lease intends to plant 40 acres more next year, when he will build a residence and make his home on his fruit farm. This locality needs several thousand more men of Mr. Lease's stamp and then Lodi will be so far ahead of what it now is that some of the local silurians, who do not keep up with the procession, will become lost and bewildered in orchards and vineyards.

Santa Cruz.

POTATO NOTES.—Watsonville *Pajaronian:* Holders of spuds are unloading, and there is a good demand for shipment to the San Joaquin valley and the southern counties. Several shipments have been made to these places, especially to San Diego and Los Angeles. The time of the year when the new spud puts in an appearance is not far off, hence the activity of shippers.

Santa Clara.

PRUNE-PLANTING AT LOS GATOS.—*News:* Reports concerning the planting of prune trees continue to come in. It is difficult to make anything like an approximate of this year's increase, but it will reach into the thousand acres within a few miles of Los Gatos. It is undoubtedly the workingman's fruit. Recent improvements in handling, curing and packing have reduced the cost to a figure that would have been incredible five years since. Recently, the Santa Cruz mountains have shown some excellent results, and the foothills will have to make an effort to retain their laurels. The redwood soil being deep and mellow, seems a natural home for the prune family.

DISTRICT AGRICULTUAL FAIR.—S. J. *Mercury:* An important meeting of the Santa Clara Valley Agricultural Society and the Santa Clara and San Mateo District Association, No. 5, was held February 23d. The joint meeting was for the purpose of setting the date for the annual fair and attending to matters in connection therewith. It was resolved to give a free stallion exhibition on Saturday, March 12th, at 1 o'clock. The directors expressed the hope that all stallion owners would bring their horses and the public generally would attend. The time of holding the annual fair was set as Sept. 26th to Oct. 1st. This will make it about the last on the list. The reason for this action was that a great many of the best stables are to leave here in June to go over the Montana circuit. They will not return until it is time for the State Fair, and by holding the San Jose Fair later they will be able to come here.

Sonoma.

CROP PROSPECTS.—Petaluma *Argus:* The present season has thus far been one of exceptional fair crop prospects in Sonoma county. This applies to the wide range of products of field, farm and horticulture. The rains have been neither heavy nor continuous, but came in such manner as to give our farmers ample opportunity to do their planting. While we have not had any extremely cold weather, there has been enough frosts to keep the fruit orchards from premature development of buds. The testimony on every hand is that the grain is looking better now than for several years at this season.

ANOTHER CREAMERY AT TOMALES.—Petaluma *Courier:* The creamery is to be built on the Fallon ranch, at Griffin's Switch, and therefore it was concluded to call it the Fallon Creamery. The capital stock is to be $10,000, representing 671 cows, with a prospect of more coming in directly. The present subscribers are: Geo. W. Burbanks, 60 cows; O. B. Hubbell, 35 cows; D. B. Burbank, 40; P. Sartori, 90; E. Carporgno, 55; Wm. Bassett, 40; A. L. Corrick, 27; W. D. Freeman, 30; D. T. Thomas, 45; Mrs. Luke Fallon, 25; J. W. Graver, 40; Samuel Webster, 60; David Bassett, 45; Mrs. E. Griffin, 19; total, 671. The Directors are Geo. W. Burbanks, J. W. Gaver, P. J. Sartori, Louis Bailey, A. L. Corrick, with full power to build and act.

Tulare.

BUG INSPECTION.—Hanford *Journal:* N. W. Motheral, Horticultural Inspector for this district, was engaged all last week in inspecting the orchards in this vicinity for injurious insects. He informs us that he found very few scale bugs and very few of the parasites which feed upon them. The inference is that the parasites have killed out the scale pretty thoroughly and have departed for pastures new, where scale bugs are more plentiful. Mr. Motheral states his belief that if all the fruit trees in Lucerne are sprayed this year, we will be rid entirely of the scale bugs, but if this is not done enough of the pests will be left to keep the orchards well supplied. Our orchardists should take united action and rid themselves for good of the pest, now that they have such a favorable opportunity. Mr. Motheral states that the willow trees are great breeders of scale bugs, and recommends that these trees be destroyed, as they breed the scale and perhaps other insects injurious to orchards.

FAVORABLE FOR COFFEE CULTURE.—Porterville *Enterprise:* James Deitrick of Tulare City, late superintendent of the Southern Pacific R. R. Co., is conferring with E. Newman as to the advisability of planting 2000 coffee trees in this immediate vicinity. Mr. Deitrick has friends in Guatemala, who own large coffee plantations, and he recently made a trade with them for the trees. He is sanguine about our climate and soil, and says it is certainly as favorable as the best coffee land in Brazil, South America. In the latter country Mr. Deitrick spent the past summer and made a careful study of coffee-raising.

AN IRRIGATION SYSTEM PURCHASED.—*Journal:* The Tulare Irrigation District, embracing lands in the vicinity of Tulare City, has made another large purchase of ditches and water rights. A dispatch from that place, dated Feb. 9th, says: The Board of Directors of the Tulare Irrigation District this evening decided by a vote of 4 to 1 to purchase the Kaweah canal and irrigation system for $150,000 in bonds of the district. They also unanimously voted to purchase the Cameron and Rocky Ford system for $20,000. Part of the consideration is that R. Linder take additional bonds and advance money to connect these systems with the present system of the irrigation district. This will require about $60,000. As soon as the transaction has been completed, a large force of men and teams will be put to work in order to connect the systems and construct the laterals, so that the water may be fully utilized this year.

RAIN TO ORDER.—Huron, Feb. 8: A contract between the rain makers and the grain growers has been formulated, and is now being signed by the latter. The former agree to bring rain sufficient to produce six sacks of grain per acre over an area of 60,000 acres for the sum of $30,000, money to be paid when crops are marketed. In case of a failure of the rain men, there is no charge to the farmers. Only land on the plains and not under irrigation or subject to overflow is included in the contract. Operations are to begin as soon as the temperature does not go below 40 degrees F.

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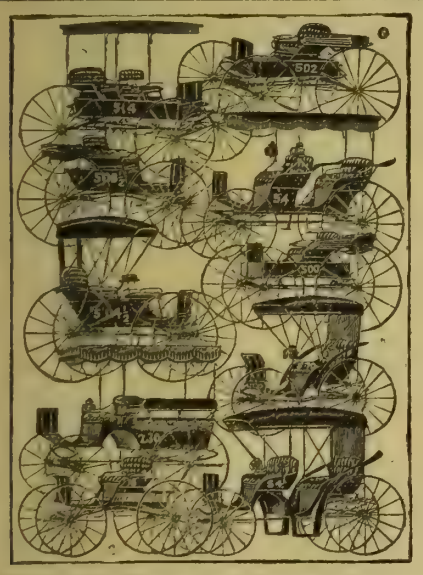
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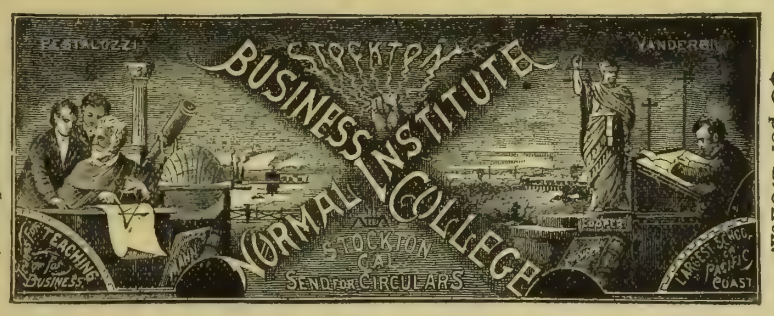


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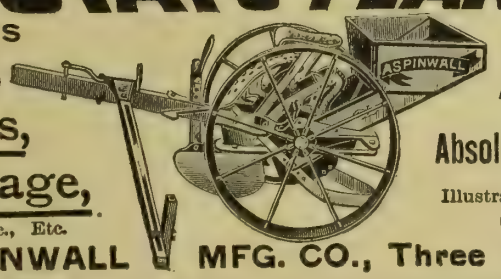
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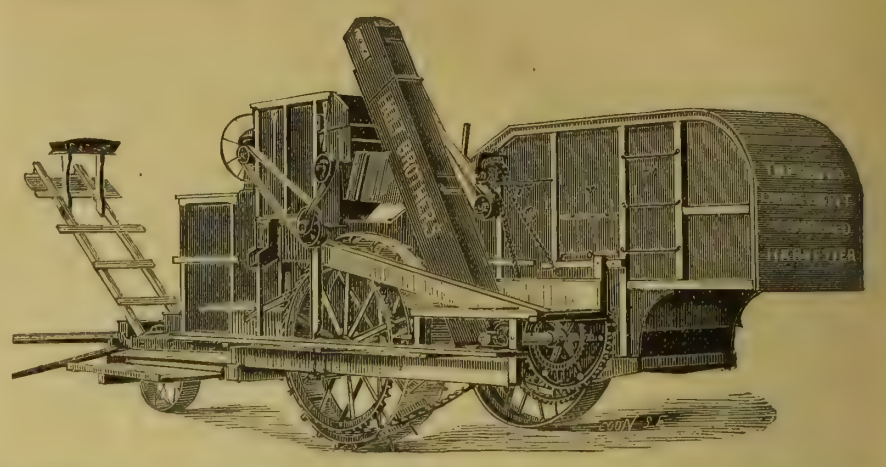
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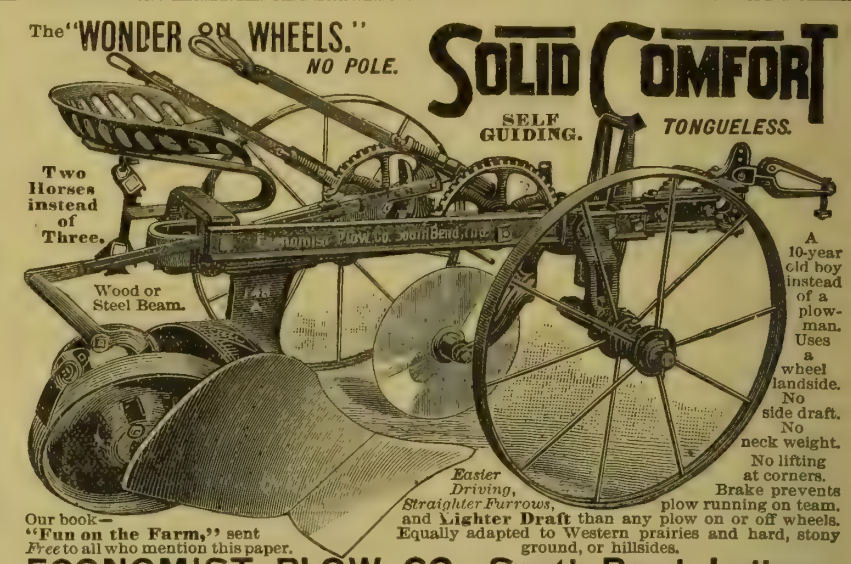


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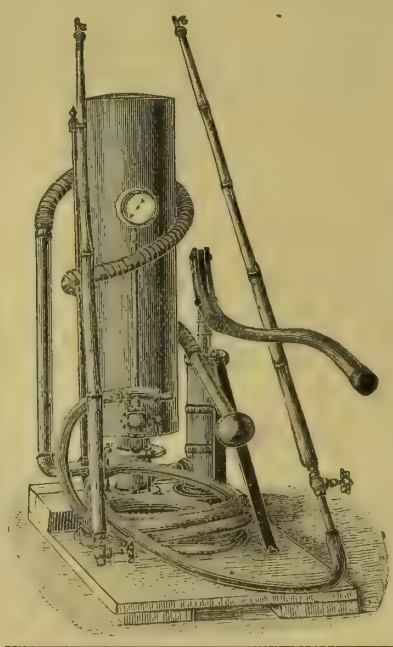


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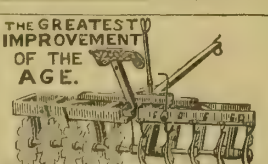
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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

The following brief list by telegraph, for Feb. 23, will appear more complete on receipt of mail advices:

Elmer Bowen, Los Angeles, automatic car coupling; William F. Buswell, San Francisco, pulley; Frederick W. Cook, San Francisco, gang edger; James E. E. Depue, Oakland, ledger, sales and billing book; Frank H. Disbrow, Glendora, stoning knife; Peter B. Donahoo, Fresno, street sweeping machine; John H. Driller, Los Angeles, automatic funnel cut-off; Thomas Fullen, Angels Camp, safety device for mining cages or elevators; James H. Hawthornthwaite, San Francisco, amalgamator; William Holder, Mokelumne, atmospheric bed covering; Robert W. Jessup, Alameda, seed cleaner; Alexander J. McAdam, San Francisco, hydraulic elevator; C. Vogel, San Anselmo, conduit for cable and electric tramways; John W. Pack, San Francisco, hydraulic motor; John A. Perou, Perris, inhaler and respirator; William Smith, Berkeley, electric railway.

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All reform organizations and every man and every woman who are in sympathy with reform movements, and believing in independent political action, endorsing and willing to support the People's Party platform, adopted by the State Convention of the People's Party held at Los Angeles on the 22d of October, 1891, are earnestly requested to assemble in

MASS CONVENTION

At the Town Hall in the town of Niles on *Saturday, March* 5, 1892, at 10 o'clock A. M. for the purpose of organizing the People's Party in this county and electing a County Central Committee and adopting a plan for conducting an active political campaign, and such other business as may be brought before the Convention.

E. M. WARDALL, Chairman.
H. B. VALPEY, Member for Alameda.

Warm Springs, Alameda Co., Cal., Feb. 20, '92.

[P. S.—Persons willing are requested to favor the new movement by extending the circulation of this publication and arousing interest in the cause.]

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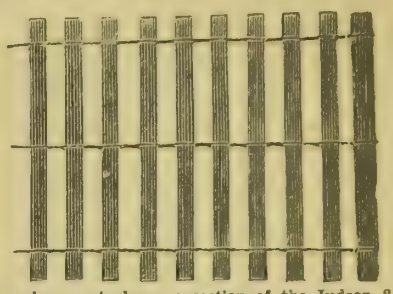
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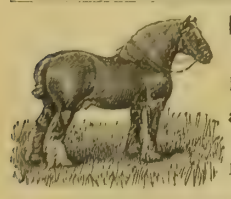
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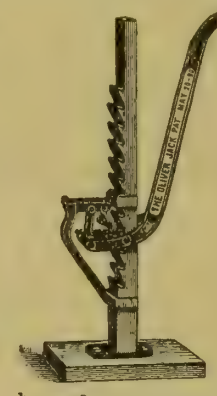
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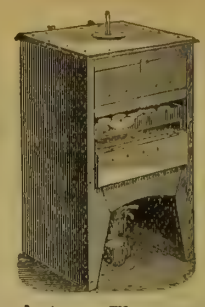


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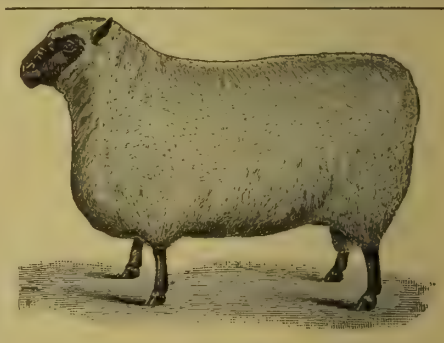
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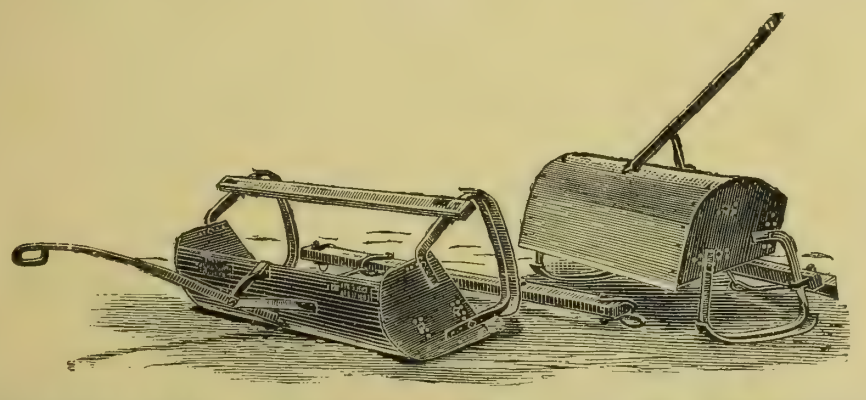
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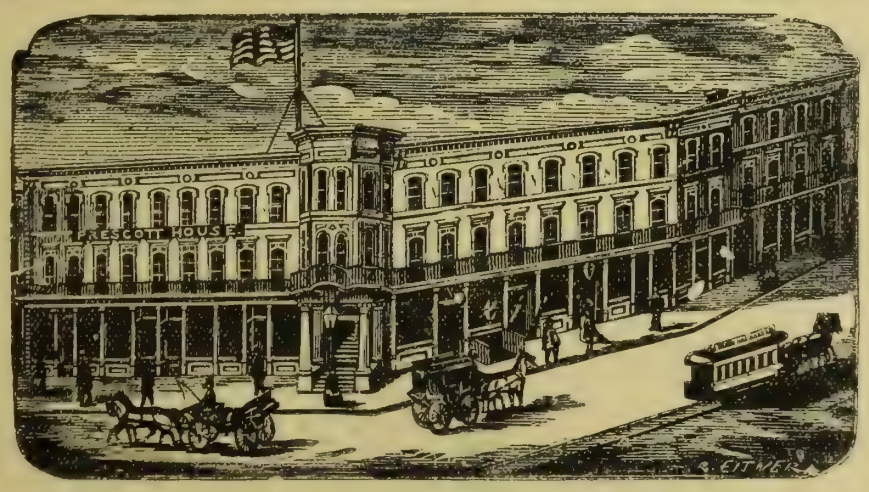
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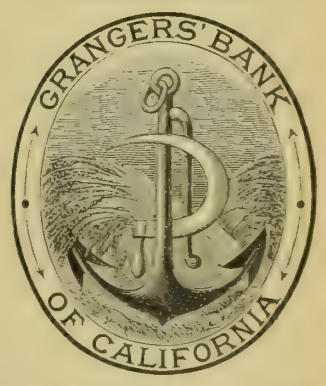
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Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	720,000

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FRANK McMULLEN.....Secretary

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January 1, 1892 A. MONTPELLIER, Manager.

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11-13 S. CANAL ST., CHICAGO, ILL. Branch Houses:
ELM STREET, DALLAS, TEXAS.

S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 17, 1892.

The weather continues to be of the most favorable character for outdoor work and also for growing crops. Leading farmers visiting this city report that crop prospects never before, at the like date, were so flattering for large yields in cereals, fruits and vegetables. This opinion is also reflected by our exchanges. There has been more or less of a selling pressure in hold-over grain, hay, etc. The local money market continues easy, with the rate of interest generally in borrowers' favor.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Feb.	Mar.	April.	May.	June.
Thursday	8s 01½d	8s03 d	8s02½d	8s02½d	8s01½d
Friday	8s03½d	8s04 d	8s02½d	8s02½d	8s01½d
Saturday	8s03½d	8s04 d	8s02½d	8s02½d	8s01½d
Monday	.....	.....	.....	.....	.....
Tuesday	8s	8s00½d	7s11 d	7s10½d	7s11d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. O.	P. S.	N. D.	Market for P. S.
Thursday	40s3d	40s6d	40s9d	Held higher.
Friday	41s	40s9d	41s	Very strong.
Saturday	41s	40s6d	41s	Quieter.
Monday	....	....	....	
Tuesday	40s6d	40s	40s6d	Weaker.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	181⅝	180½	180	176⅝	173½
Friday	181	180	179⅝	175½	172⅝
Saturday	180	179½	178⅝	175	171⅝
Monday	.....	.....	.....	.....	.....
Tuesday	176⅜	176⅜	175⅜	172	169⅜

The following is to-day's telegram:

NEW YORK, Feb. 24.—Wheat, $1.06 for February, $1.05⅞ for March, $1.05¼ for April, $1.03⅞ for May, $1.02½ for June and $1.00¼ for July.

CHICAGO, Feb. 24.—Wheat, 92⅞c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	Buyer Season. L.	Buyer Aug. H.	Buyer Aug. L.	Seller 1892. H.	Seller 1892. L.
Thursday	174½	172⅜	149½	149	145½	145
Friday	173	171½	147⅜	147⅝	144½	144
Saturday	171	170½	....	....	144½	144½
Monday	.....	.....	....	....	.....	.....
Tuesday	168⅜	165⅜	....	....	142⅞	142½

The following are to-day's recorded sales on Call:

Informal session: Buyer season—300 tons, $1.67; 100, $1.66½; 800, $1.66⅜. Seller 1892—200 tons, $1.43½ per ctl. Regular session: Buyer season—100 tons, $1.68; 100, $1.67½; 100, $1.67½; 100, $1.68; 300, $1.68½; 100, $1.68⅜; 1000, $1.69; 400, $1.68⅝; 200, $1.68½; 200, $1.68⅜; 900, $1.68¼; 300, $1.69; 100, $1.69½; 200, $1.69⅜; 100, $1.69½; 700, $1.69½. Seller 1892—400 tons, $1.43½; 500, $1.43⅜; 100, $1.43½ per ctl. Afternoon session. Buyer season—100 tons, $1.69½; 600, $1.69⅜; 300, $1.68½; 300, $1.69. Buyer September—100 tons, $1.45½. Seller 1892—100 tons, $1.43½ per ctl.

BARLEY.

	Buyer Season. H.	Buyer Season. L.	Seller Season. H.	Seller Season. L.	Seller 1892 H.	Seller 1892 L.
Thursday	103½	101½	....	....	....	....
Friday	101	99½	....	....	....	....
Saturday	99½	99½	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	99	97	92⅜	92	....	....

The following are to-day's recorded sales on Call:

Morning session - buyer season - 300 tons, 99c; 100, 99½c; 100, 99½; 2300, 99½; 200, 99⅜c; 100, 99⅜c ₩ ctl. Afternoon session—buyer season—100 tons, 99⅜c; 100. 99½c ₩ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Feb. 22.—The wool movement has been light at the seaboard markets, in buyer's favor. Mills are well emptied of men's heavy goods and cloth, but the smaller ones intimate that they have to work close to the previous raw prices, especially for early orders. Western manufacturing competition is also alluded to with some emphasis.

Wheat and Corn Exports.

NEW YORK, Feb. 22.—Exports of wheat from United States ports for the week ending February 17th equal 4,042,000 bushels against 3,641,000 bushels the week before, 2,036,000 in the same week a year ago, and 2,236,000 in a similar period two years ago. Indian corn exports for this week continue phenomenally heavy, being 3,264,000 bushels, as compared with 2,927.000 bushels a week ago, as contrasted with only 327,000 bushels in the likeweek a year ago.

Eastern Dried Fruit Market.

NEW YORK, February 22.—Unpeeled peaches are unchanged; peeled are reported at 20c.

Prunes—The consumption is fairly steady, the last-designated prices being supported for a period. Sellers are plenty at the old prices for all styles. Apricots are slow. The weather this winter has been against their free use.

Eastern Hop Market.

NEW YORK, Feb. 22.—Hops show the lightest trading for several weeks. Large brewers are using direct supplies. Interior State are quoted at 20@23c, and spot wants, order higher grades than recently. Full last prices are upheld, with Pacifics holding their advance. Common to choice '91's range from 20@25c; choice Coast, 25½c. The foreign market is quite steady with no inquiry of importance here. Exports for the week, 165 bales. Closing options—California, bid and asked, March, 23@23¾; April, 23¼@24c; May, 25½c, asked; June, 23¾@25¼. July, 24@25¼c; August, 25@25¼c. There has been fair dealing in prime, 50 bales of choice July selling at 26½c; 30c. was once asked.

Miscellaneous.

NEW YORK, Feb. 22.—Honey is firm. For extracted comb there is little inquiry.

Beeswax is as before for Coast. The South supplies current wants cheaper.

Lima Beans—Sellers are plenty. Trade is confined to small lots, quoted at $1.75@1.85.

The latter are machine-cleaned.

General Remarks and Statistics.

Cereals.

The shipments to Europe of the principal exporting countries, America, Canada, Russia and India, from August 1 to January 16 of wheat and flour amounted to the tremendous total of 181,000,000 bushels, against 100,000,000 last year.

Returns from the Russian ports on the first of February showed that there were in store on that date at ten ports 10 400,000 bushels of wheat. Returns last year of the amount at Odessa and Nicolaieff were 12,800,000 bushels, and the remaining ports were estimated to hold 7,200,000 bushels, making a total of [illegible] bushels.

Chairman Hatch, of the House Committee on Agri[illegible]ure. "What I regard as legitimate dealing in futures, is this: A company has elevators scattered through the grain districts and it finds itself with 50,000 or 100,000 bushels of wheat on hand. It wires its brokers to sell this wheat to be delivered at such a time as it can be conveniently sent to the seaboard. Meantime it borrows money at a low rate of interest on warehouse receipts. This is beneficial to the farmers and to the elevator company; but when the buyer of this wheat in New York sells it to another and he to another, the transaction is not legitimate, and becomes an injury to the producer, because the great volume of business, by magnifying the apparent visible supply, tends to depress the price. Congress can suppress such transactions by the exercise of the taxing power.

The local wheat market made quite an advance, but declined rapidly under strong bear raids at the East and abroad, brought about by close stringent money markets abroad and political unrest. English papers coming to hand report lack of confidence in commercial and financial circles, and until confidence is restored, money-hoarding and an absence of speculation will continue to prevail. Outward shipments of wheat continue on a liberal scale. Disengaged tonnage in port is increasing; while the list of engaged ships is growing smaller. Crop prospects never before looked so promising in this month, and with well-distributed spring rains, the outturn to the acre is expected to show a large increase over that of 1890 and 1891.

Receipts of barley show a large increase, and as there is a strong selling pressure to avoid paying taxes, the market has shaded off, closing the week, weak. The feeding consumption continues on a large scale for the season of the year.

Oats are easier, with concessions offered to induce purchasing. The receipts are only fair

Corn, like oats and barley, is weak under free offerings and buyers holding off until after March 7th. There is a fair export movement to Central American ports.

Buckwheat and rye are fairly steady.

Feedstuff.

Bran and middlings hold strong under a free demand and only moderate obtainable supplies. Rolled barley and feedmeals are easier.

Straw comes in sparingly, yet dealers are offish, confining purchases to near-by requirements.

The market for hay continues in an anomalous condition, viz.: To force sales, lower prices must be accepted; to buy, full prices must be paid. Obtainable supplies are light, while the demand is falling off. Crop prospects continue flattering.

Fruit.

Apples continue to gain in strength under moderate receipts and an enlarging demand due to the poor quality of this year's orange crop.

It is claimed that strawberries will begin to soon put in an appearance. This opinion is based on the advanced season.

The receipts of oranges are large, causing a heavy dragging market, owing to the bulk being very poor in quality and small of size. Choice, juicy oranges are wanted and for which good prices are obtainable.

Lemons are barely steady. Mexican limes are weak and lower.

Raisins are fairly firm for the more choice grades.

In dried fruits there is nothing new to report, The firmness reported last week in peaches and prunes is not only continued, but a disposition is manifested to advance prices. In other dried fruits the market is slow.

Vegetables.

General information received is confirmatory of last week's remarks of the forward condition of garden vegetation and that the market will be supplied at a much earlier date than usual. The receipts of asparagus and rhubarb are increasing, causing prices to steadily shrink.

Onions are in liberal receipt for the season, and as the bulk is poor keepers, forced sales are in order. Good keepers are wanted.

Potatoes continue to glut the market, causing low prices to obtain under forced sales. Oregon and Washington are liberal contributors to the market,

Dairy Produce.

Freer receipts and poorer keeping weather are against butter. Many dealers under forced sales had to accept lower prices. Retail dealers confine their purchases under an impression that still lower ranges in values will obtain.

Eggs are weak at lower prices, with the trade looking for still lower prices. This opinion is grounded on experience derived from former seasons.

Cheese has a weaker tone, although quotations are reported unchanged.

Live Stock.

The market is easier for both bullocks and mutton sheep, owing to freer offerings. Indications are said to point to the combine being broken, or, at least, it is reported that indirect undersellling is done by one or more of the members. Hogs are strong at previous quotations. Lambs are hard to get.

Overland Produce Shipments.

The following is the official statement of Eastern overland shipments of California produce and the points from which they were forwarded during the month of January, 1892, via the Southern Pacific Co:, and total shipments to Feb. 1, 1892:

PRODUCE, TONS.	San Francisco.	Oakland.	Sacramento.	San Jose.	Stockton.	Marysville.	Los Angeles.	Total.
Beans	338	.....	.....	.....	.....	.....	453	791
Canned goods	314	24	124	309	.....	121	223	1185
Fruit dried	24	.....	200	596	181	59	27	1305
Fruit citrus	.....	.....	.....	.....	.....	.....	869	869
Honey	1	.....	39	.....	.....	.....	16	56
Hops	60	.....	61	.....	8	8	.....	133
Raisins	60	.....	238	7	851	11	157	1314
Vegetables	66	.....	.....	.....	11	.....	209	286
Wool grease	918	11	.....	4	.....	.....	8	952
Wool pulled	23	.....	30	.....	.....	.....	.....	53
Wool scoured	170	.....	.....	.....	.....	.....	.....	170

Produce Receipts.

Receipts of produce at this port for the week ending Feb. 23, '92, were as follows:

Flour, qr. sks	59,275	Bran, sks	17,444
Wheat, ctls	257,107	Buckwheat "	..
Barley, "	25,237	Middlings "	7,449
Rye, "	103	Chicory, bbls	87
Oats, "	1,118	Hops, "	130
Corn, "	4,770	‡Wool, "	8
*Butter, "	832	Hay, ton	1,496
do bxs	314	Straw, "	81
do bbls	....	Wine, gals	232,780
do kegs	....	Brandy, "	9,120
do tubs	.....	Raisins, bxs	250
do ½ bxs	182	Honey, cs	21
†Cheese, ctls	440	Peanuts, sks	93
do bxs	10	Walnuts "	46
Eggs, doz	71,070	Almonds "	147
do " Eastern	.....	Mustard "	308
Beans, ctls	19,615	Flax "	....
Potatoes, sks	19,384	Popcorn "	6
Onions, "	1,292	Broom corn, bbls	456

*Overl'd, — ctls. †Overl'd, — ctls. ‡905 bales, Australia.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon Washington and other distant points compare as follows:

	July 1, '90 to Feb. 21, '91.	July 1, '91 to Feb. 20, '92.
Flour, ½ sks	203,627	335,904
Wheat, ctls	995,347	1,136,083
Barley, "	231,396	29,099
Oats, "	266,482	329,757
Wool, bales	5,798	5,978
Hops, "	392	396
Rye, sks	....	3,299
Potatoes, sks	45,397	72,073

Miscellaneous.

From reliable advices up to Feb. 24, the following summary tonnage movement is compiled:

	On the way— 1892.	On the way— 1891.	In port— 1892.	In port— 1891.
San Francisco	226,341	298,311	*†119,789	57,655
San Diego	20,528	10,934	4,348	.....
San Pedro	2,414	6,433	.....	} 19,226
Oregon	21,172	30,050	31,470	
Puget Sound	16,126	17,335	.....	
Totals	236,481	363,063	155,607	76,881

*Engaged for wheat, 1892, 39,085; 1891, 44,993. †For new crop loading, 1,746.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Feb. 18th, are as follows:

	1891.	1890.
Wheat, ctls	10,975,801	7,972,182
Flour, bbls	732,022	768,036
Barley, ctls	768,306	191,078

Bags are strong at 7⅛@7⅜c.

Poultry after shading off closes the week strong at a slight advance. Ducks are wanted at a much higher range.

Next season's hops are being contracted at 12 to 13 cts. It is said that as high as 15 cts. and as low as 11 cts. have been paid.

Wool continues slow. The stock here is about cleaned up.

Beans are doing better under a freer eastern demand. The Ventura *Free Press* Says: "Thos. Lake during last week purchased 200 tons of lima beans for shipment East by rail and steamer. He paid from $1.67½ to $1 75. It is also learned that Dixie Thompson has sold some 200 tons and that A. Levy, of Hueneme, has made quite extensive purchases during the week. The railroad people have asked Mr. Lake to hold his shipments a few days to see what they would do toward lowering the rates." The above indicates lower freight rates to points at the East.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 24, 1892

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	2 @ 2 20	Extra, City Mills	5 00 @ 5 25
Butter	2 30 @ 2 80	Do Country Mills	5 00 @ 5 25
Pea	2 50 @ 2 80	Superfine	3 15 @ 3 45
Red	2 20 @ 2 50	**NUTS—JOBBING.**	
Pink	1 90 @ 2 05	Walnuts, Cal. lb	5 @ —
Small White	2 40 @ 2 70	Do Choice	7 @ —
Large White	2 30 @ 2 60	Do paper shell	7 @ —
Lima	1 80 @ 2 15	Almonds, sft shl.	11 @ —
Wld Peas, blk eye	1 35 @ 1 65	Paper shell	12 @ 14
Do green	1 70 @ 2 50	Hard Shell	6 @ 7½
Do Eastern do	2 55 @ 2 75	Brazil	6½@ 8
Do Nies	1 30 @ 1 45	Pecans small	12 @ 14
Split	3 85 @ 4 15	Do large	15 @ 17½
BUTTER.		Peanuts	3 @ 4
Cal. Poor to fair, lb	17½@ 25	Filberts	11½@ 14
Do good to choice	28 @ —	Hickory	7 @ 8
Do Giltedged	— @ 33½	Chestnuts	11½@ 16
Do Creamery rolls	— @ 32½	**ONIONS.**	
Do do Giltedge	— @ —	Silver Skin, Ch'e 1	00 @ 1 20
Eastern	17½@ 25	Fair to Good	75 @ 90
CHEESE.		Cut	50 @ —
Cal, choice mild	13½@ 15	**POTATOES.**	
Do fair to good	10 @ 12½	Early Rose, ctl	25 @ 40
Do gilt edged	15½@ —	Burbank Seedling	30 @ 45
Young America	12 @ 16	Do do Salinas	80 @ 1 05
EGGS.		Do do Oregon	60 @ 85
Cal. ranch, doz	19 @ —	Do Humboldt	75 @ 95
Do do selected	— @ 22	River Reds	25 @ 40
Do store	17½@ —	**POULTRY.**	
Eastern	— @ —	Hens, doz	5 50 @ 8 00
FEED.		Roosters, old	5 50 @ 7 00
Bran, ton	20 00 @22 50	Do young	7 00 @ 9 00
Feedmeal	— 00 @ 27	Broilers, small	4 00 @ —
Gr'd Barley	23 00 @24 00	Do large	5 00 @ —
Middlings	25 00 @26 50	Fryers	6 00 @ —
Oil Cake Meal	— 00 @25 00	Ducks	9 00 @12 00
Manhattan Food ₩ cwt.	7 50	Geese, pair	1 75 @ 2 50
HAY.		Turkeys, Gobl'r.	11 @ 13
Wheat, per ton	13 00 @ —	Turkeys, Hens	13 @ 15
Do choice	14 50 @ —	Do Dressed	12½@ 16
Wheat and Oats	12 00 @ —	Manhattan Egg Food ₩ cwt	11 50 @ —
Wild Oats	11 00 @ —	**PROVISIONS**	
Cultivated do	12 00 @ —	Cal. Bacon, he'vy, lb	9½@ —
Barley	11 00 @ —	Medium	10½@ —
Alfalfa	10 00 @ —	Light	12 @ —
Clover	11 00 @ —	Lard	9 @ 11
Straw bale	50 @ 60	Cal. Sm'k'd Beef	11½@ —
GRAIN, ETC.		Hams, Cal salt'd	10 @ —
Barley, feed, ctl	90 @ 1 00	do Eastern	12½@ —
Do Choice	1 02½@ —	**SEEDS.**	
Do Brewing	1 05 @ —	Alfalfa	7 @ 8
Do do Choice	1 10 @ —	Clover, Red	12 @ 13
Do do Giltedge	1 15 @ —	White	20 @ —
Do Chevalier	1 05 @ 1 40	Flaxseed	2 50 @ 2 80
Do do Giltedge	1 45 @ 1 50	Hemp	3½@ 4
Buckwheat	1 70 @ —	Mustard, yellow	3 25 @ 3 75
Corn, White	1 27½@ 1 32½	do Brown	3 00 @ 3 25
Yellow, large	1 22½@ 1 27½	**WOOL.**	
Do small	1 26½@ 1 30	**SPRING, 1891.**	
Oats, milling	1 45 @ —	Humb't & Men'cino	20 @ —
Feed, Choice	1 42½@ —	Sac'to valley	16 @ —
Do good	1 32½@ —	Free Mountain.	19 @ —
Do fair	1 25 @ —	S Joaquin valley	13 @ —
Surprise	1 50 @ —	do mountain.	18 @ —
Black Cal	1 35 @ 1 75	Cala'v & F'th'll.	16 @ —
Do Oregon	1 25 @ 1 40	Oregon Eastern.	14 @ —
Gray	1 30 @ —	do valley	21 @ —
Rye	1 60 @ 1 72½	So'n Coast, def.	11 @ —
Wheat, milling. Gilt edged	1 73½@ —	So'n Coast, free.	13½@ —
Do Choice	1 72½@ —	**FALL, 1891.**	
Do fair to good	1 71½@ —	San Joaquin	9 @ 12
Shipping, cho'ce	1 71½@ —	Mountain	10 @ 15
Do good	1 68¾@ —	Humb't & Men'cino	14 @ 18
Do fair	1 65 @ —	**HONEY.**	
Common	1 60 @ —	White Comb, 2-lb	10 @ 13
Sonora	1 60 @ 1 72½	do do 1-lb frame	12 @ 14
HOPS.		White extract'd	6½@ 7
1891 Choice to Ex.	24 @ —	Amber do	5½@ 6¾
Fair to Good	20 @ —	Beeswax, lb	22 @ —

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 24, 1892.

Limes, Mex	4 00 @ 5 00	Beets, sk	— @ 1 00
Do Cal	75 @ 1 00	Carrots, sk	35 @ —
Lemons, box	1 25 @ 3 50	Okra, dry, lb	15 @ —
Do Sicily	5 50 @ 7 00	Parsnips, ctl	— @ 1 25
Oranges— Butte County.	1 50 @ 2 25	Peppers, dry, lb	8 @ 12½
Do Seedlings— *Riverside	85 @ 1 50	Do green	20 @ 35
*Los Angeles.	65 @ 1 25	Turnips, ctl	50 @ —
Do Navels— *Los Angeles.	75 @ 1 50	Cabbage, 100 lbs	60 @ —
*Riverside	1 25 @ 3 50	Garlic, lb	2 @ 3½
*Duarte	1 25 @ 3 50	Squash, Mrft, tn.	6 00 @10 00
*Oranges free from frost sell at an advance of $1 per box on the above quotations.		Do Summer, lb	20 @ 25
		Pumpkins, ton.	7 00 @ —
Apples, box	75 @ —	Tomatoes, box.	1 50 @ 2 25
Do choice	1 50 @ —	Asparagus, lb	7 @ 12½
Do extra choice	2 00 @ 2 50	Do choice to ex.	15 @ 22½
		Peas, green, lb	8 @ 12½
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First quality	6½@ -	Lamb, yearling	11 @12½
Second quality	6 @ —	Do Fall	15 @ —
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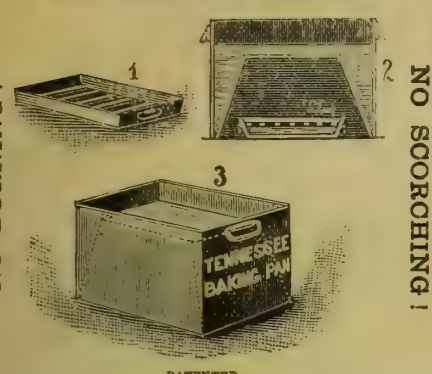
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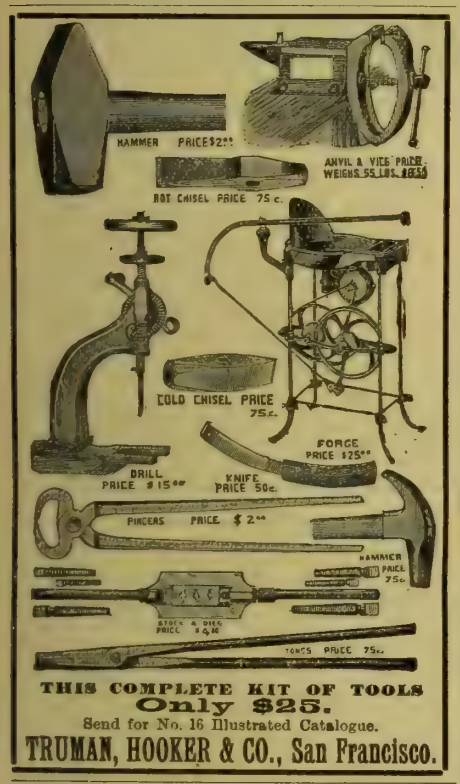
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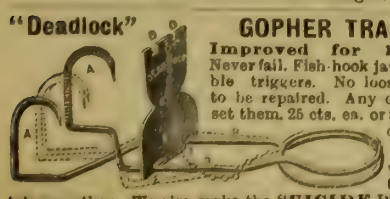
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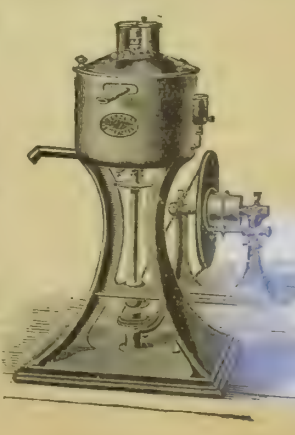
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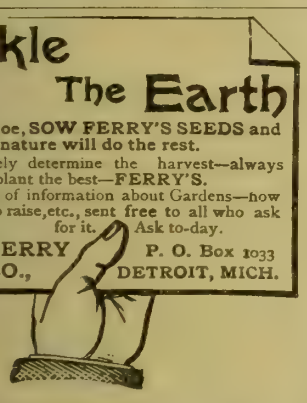
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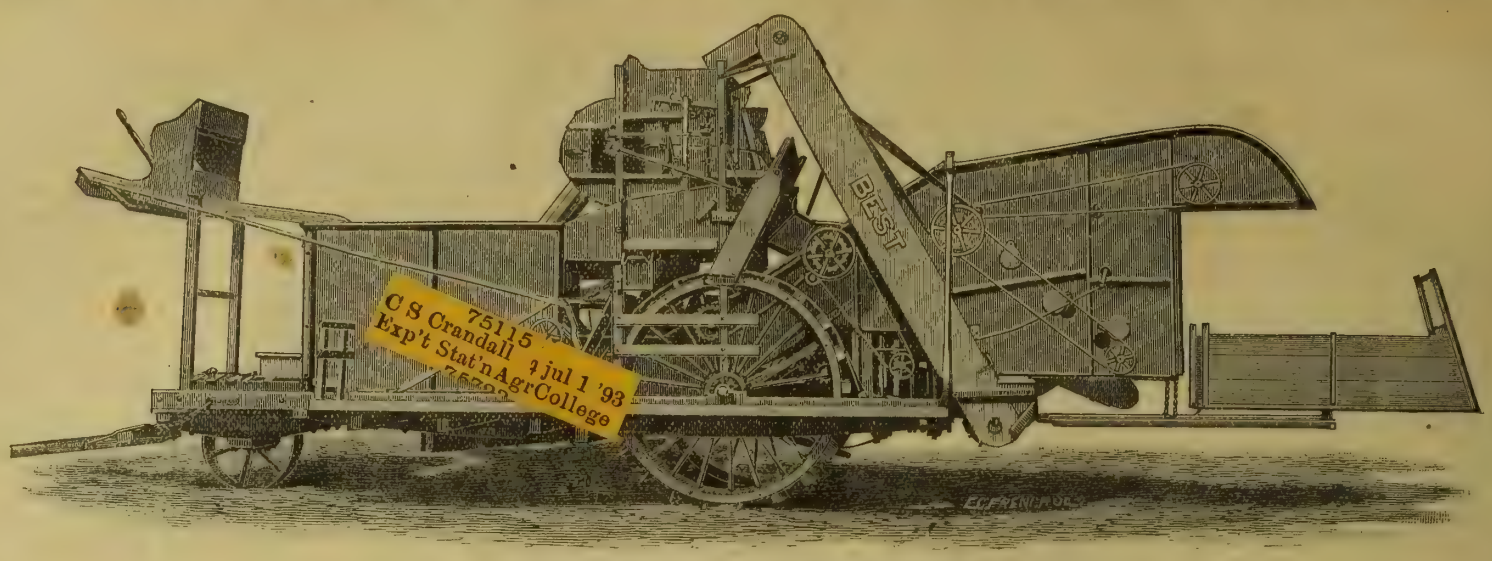
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TESTIMONIALS.

FRESNO, Cal., Dec. 19, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Having used the Morgan Spading Harrow last season I can well recommend same for vineyard use, it is economical and does its work well. In heavy ground it is the best tool I have used for a pulverizer and it leaves the ground in good condition.

Respectfully yours, E. I. BABER,
Manager for Eisen Vineyard, Fresno, Cal.

FRESNO, Cal., Jan. 20, 1892.

H. C. SHAW PLOW WORKS.—Dear Sir: In reply to your inquiry regarding the Morgan Spading Harrow will say that it is by far the best tool I have ever seen used in a vineyard. I had the Disc Harrow, the Pacific Spader, the Clark Cutaway and the Morgan Spading Harrows all at work in our vineyard last year and soon discovered that the Morgan was the boss of them all. The draft is much lighter and its work more complete, besides being the easiest handled of all others. The Morgan will be the only cultivator seen at work in our vineyard the coming season. All others will be found at rest in the fence corners. Yours truly, S. K. LEMON,
Supt. Oakland Vineyard Co.

BERENDA, CAL., Dec. 17, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: Enclosed find check to pay for Morgan Spading Harrow. It is the he best implement ever invented for the cultivation of the soil. Respectfully, J. F. WARD.

We are Sole Agents for the Coast.

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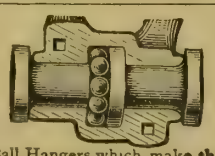
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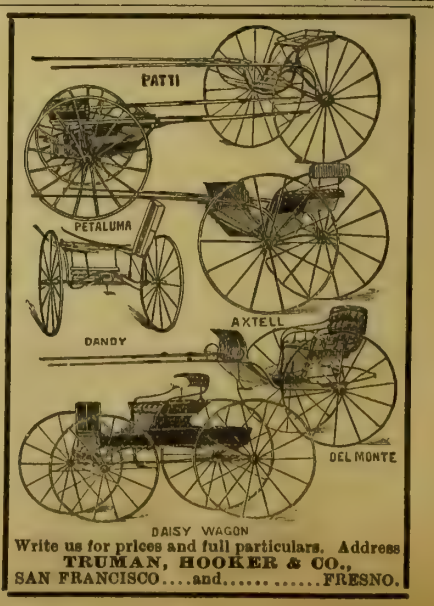
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PACIFIC RURAL PRESS

Vol. XLIII. No. 10. SAN FRANCISCO, SATURDAY, MARCH 5, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Orange Interest.

The king of citrus fruits is now commanding more attention than ever before at the hand of planters. His power has fluctuated somewhat it is true, from year to year, and yet has always increased, though with varying degrees of rapidity. Plantations at the north have thus far justified the hopes built upon them, and growth has been very gratifying to planters. If no mishap befalls, we are now approaching considerable shipments of oranges from the groves on the bench lands on the eastern side of the Sacramento and San Joaquin valleys. Disposition is turning again to plantations on the higher portions of the valley plains as well as upon the mesas. People claim to be justified in such extensions by the success of the trees they already have in such situations. We trust, however, that all such conclusions will be conservatively drawn, for there is always a danger that such an enticing fruit as the orange will be put in places where an occasional drop in temperature will destroy the value of the fruit, even if it does not kill the tree.

At the south there has also been a most notable increase in the orange acreage, and the lemon, too, is increasing in popularity. The wonderful development of water supplies, the new reservoirs, the economical distribution by pipe lines, the employment of artesian wells and other similar undertakings, are increasing the available acreage at the south more rapidly than was once thought possible. This year it is true that there has been much loss by untoward weather conditions, so that the exports will not be as great as should be in the regularly ascending series, but it is only very seldom that such seasons occur and the usual products soon make them easily forgotten. On another page of this issue, a special contributor for the RURAL gives the results of recent inquiry among the citrus fruit growers of the south, which show the activity and confidence which characterize this leading producing interest at the south.



A TWO-YEAR-OLD TREE.

As a token of citrus charms, we give on this page an engraving from a photograph by W. R. Nutting of a young, budded orange tree growing in the Riverside region. The tree had been two years in the orchard at the time the picture was taken and held 136 oranges at the time. It was in the nursery four years from the seed, and was, of course, budded in the nursery a year or two before planting out in orchard. This mass of fruit comes then, probably, four years from the insertion of the bud. Such returns from trees in good situations and well cared for are not infrequent.

Such a tree as the engraving portrays, in its natural colors of green and gold, is one of the most beautiful sights in our horticulture. It is little wonder that the visitor from wintry regions of the earth becomes enraptured by the view of such products on the warm mesas, while perhaps the mountain peaks above are clad in snow mantles.

THE Italian Government is alarmed over the extensive migration of Italians to Brazil and the Argentine Republic.

The Northern Citrus Fair Association.

In last week's issue, we alluded to a movement to organize the citrus fruit interests of the upper half of the State. On Thursday last, the movement was given definite form by the incorporation of the Northern California Citrus Fair Association. Its object is to encourage the cultivation and exhibition of citrus, semitropical and deciduous fruits. There is a State appropriation for two citrus fairs annually in California — one in the southern part of the State and the other in the central or northern portion. This Association will govern the expenditures under the appropriation for the latter. All the counties north of the Sixth Congressional District were asked to send delegates. Eleven counties were represented, and it is expected others will come in. The articles of incorporation designate Sacramento as the principal place of business, and there is no capital stock.

The first fair under the auspices of the Association will be held in San Francisco in January or February next.

A committee was instructed to apply to T. L. Thompson, the World's Fair Commissioner, for half of the five acres allotted to California for horticultural exhibits and growing trees.

PIONEER HORTICULTURISTS.—We are in a fair way to secure a better knowledge of the early history of horticulture in this State than has hitherto been available. This is very important in view of the extent thus far attained in horticultural arts and industries and the greater development which will follow. The call issued by the State Horticultural Society for a meeting of pioneers in this city, last week, was quite well attended, and much interest was manifested. The pioneers of the region around San Francisco bay were naturally most fully represented, and their descriptions of crops in the lower part of Alameda county in the early fifties were heard with much interest. Portions of the Sacramento and San Joaquin valleys were also represented. At another time, we will give an outline of the meeting and account of the measures taken to secure upon another occasion a fuller attendance of pioneers, and a series of written papers in which the early horticultural history of the various counties and regions will be set forth.

FORESTRY.

A Strong Letter on Forest Preservation.

We are glad to print the following vigorous letter on the important subject of forest preservation, which is sent us for publication by the recipient, Abbot Kinney, ex-chairman of the State Board of Forestry, who is known throughout the State as a friend of the trees:

U. S. DEPARTMENT OF AGRICULTURE,
Division of Forestry,
WASHINGTON D. C., February, 10, 1892.

Abbot Kinney, Esq., Lamanda, California—DEAR SIR: I regret to learn, that the misrepresentations of interested parties have weight enough with the people of California in hindering the wise policy, just inaugurated, of reserving some of the mountain forest cover and managing it with more sense and more consideration both of its value as a material resource and a protection to stable water conditions, than has prevailed hitherto.

For a self-governing people we govern ourselves badly, indeed, when we allow transient sheep-herders, irresponsible land steerers, selfish lumber syndicates and the like, for their own present gain, to use up, wantonly destroy and render unproductive one of our most important resources without any regard to consequences.

There are many foolish things done in the world, but the most utterly foolish, because self-destructive, going on in the United States appears to me now the vandalistic uncivilized manner, in which forest growth is being destroyed or deteriorated.

Is it possible that there are still reading and observing men, that are ignorant of the end and result of such a policy?

Are you in California still in such a crude and undeveloped condition, that the thought of the future—and that the near future—need not to be considered in the management of your resources?

Is there anybody in the fertile valley who does not know that his interest lies in permanent water supplies? Is there anybody so ignorant as not to know, that the permanency of equable water supplies depends upon the condition in which the mountain slopes are kept? Recite to them the history of France in those mountain departments where the same foolish disregard of consequences has led to poverty of thousands, where to restore the natural conditions, nearly forty million dollars have been, and as many more will be, expended for replanting the barren rocks, made so by ax, sheep and fire. And it is not the tree growth alone, the tall timber, which influences the water supply, but much more, the forest-floor and undergrowth, which keeps the sun out and prevents rapid evaporation and equalizes the flow of springs, brooks and rivers; and the forest-floor is difficult to replace when once destroyed by fire and sheep.

Can you not make your people see that? Can you not also make them understand that proper forest management does not exclude timber cutting, mining, water storing—even pasturing in proper places? It is only the manner in which these things are done at present, that is reprehensible. It is only the wantonness and lack of forethought and method with which the timber is cut, or much oftener burned, the forest floor and young growth is destroyed, that leads to ruin not only of the forest resource itself, but of the fertility of adjoining agricultural lands.

I cannot see any reason, if we are as smart people as we pride ourselves, why we might not manage our forest resources as wisely and profitably as is done now in France and for a longer time in the German Empire, a management under which the timber is cut and reproduced and with all the profits resulting from marketing the crop, the forest conditions are carefully preserved so as not to disturb water conditions.

How this is to be done seems to me clear enough. First withdraw and reserve for permanent forest reserves the mountain timberlands, protect them from fire and keep out the trampling browsing herds of sheep; regulate the manner in which the Reserves may be occupied by prospectors, miners, campers, hunters, etc.; institute a management under which timber can be supplied to adjoining settlers, as well as the small sawmillmen, and, if there be sufficient areas of heavy timber, to large lumber operators, under a system of licenses as described fully in Senate Bill 1779, 50th Congress; supervise the cutting of the timber and regulate it, so that there will be desirable natural reproduction, and if the profits permit, begin replanting the barren spots, which the thoughtless policy of our predecessors have left us as an undesirable heritage.

Above all things open the eyes of the people that listen to those who counsel against such a course, to the fact that, they are being duped by men who will use them simply as tools for their selfish ends.

Very truly yours

B. E. FERNOW,
Chief of Forestry Division.

Work of the State Board.

"I have just returned from the Bidwell station, near Chico," said Mr. Lyon, State Forester, to a *Call* reporter. "We have been shipping deciduous and evergreen trees, and have distributed eight or ten car loads, representing not less than 30,000 trees. They have been used about the grounds of public institutions and for roadside planting. The Ukiah Insane Asylum, the Home for the Adult Blind at Berkeley, the Soldiers' Home at Yountville, the Oakland public parks, the road improvement clubs of Niles, Fruitvale, Calistoga and other towns in Northern California received donations.

"We have 40 acres at this station, and a number of the trees have been planted permanently to beautify the grounds. Drives and walks have been constructed, and the whole plat laid out to a park, which will be thrown open to the public.

"Several varieties of trees have been obtained by a system of exchange with foreign countries. One of the more recent introductions is the Cordea cordata sent from the Botanical Gardens of Rio Janeiro, where it grows in high altitudes. During the past year it has been planted in various districts of Southern California, where it has thriven. It is a valuable timber tree.

"Another new tree is the Lagunaria Patisoni, brought here two years ago from Brisbane, Queensland. It is growing well in every part of California, and there are now about 2000 fine specimens in the State. Although a small timber tree, the wood is valuable. It is highly ornamental, bearing handsome flowers, and is one of the best of the recent additions to the California exotic flora."

THE APIARY.

Nonswarming Systems of Bee Culture.

GRIZZLY FLATS, CAL., Feb. 19, 1892.

TO THE EDITOR:—Ever and anon, some bee keeper of limited experience spends considerable time and money in trying to introduce his nonswarming system of bee culture. He would not labor long under such a delusion if he would buy up a few bee books and a few years' back numbers of bee magazines and give them a thorough perusal.

No sooner does an infatuated beginner get fairly well started in the apiarian business than he goes to inventing something, and nine times in ten, what he thinks he has invented has been tried and abandoned years ago.

It is a pity that so many spend their time and money inventing and patenting worthless hives for controlling swarming; or worse still, patent a moth-proof hive, which, did he know it, is the perfection of absurdity and worse than useless. If he advertises it in the bee journals and agricultural papers, he gets laughed at or pitied for his pains by all progressive apiarists.

The bee keeper of to-day rarely thinks about the moth as an enemy to bees. With the new races of bees—that is, the Italians, Cyprians, Carniolans and Syrian bees, little trouble is to be apprehended from moths. The only way they bother, to amount to anything, is to destroy empty combs, not protected by the bees, and bee keepers should not be so careless as to allow empty combs to lie around any length of time.

All bee hives that are advertised as possessing superior advantages in the way of nonswarming, will find no purchasers to amount to anything in these enlightened times. Nonswarming hives are a failure. When it comes to managing bees to advantage, and to keep them from swarming too much, the Langstroth hive is as good as any style hive. It is not a complicated hive and not a costly hive.

It is true there are systems of bee culture by which swarming can be reduced to a great extent—by the inversion of the hive, destroying queen cells, and by adding surplus room when needed; also sufficient ventilation and shading, and the frequent use of the honey extractor.

If headed off too many times in their attempts to swarm, they will kill their queen and raise another; and when this one is able to fly, they will swarm. And if this queen is interfered with, and kept from going, they will go off without a queen. Too many setbacks given to bees when they are trying to swarm, will be apt to demoralize them, and they will swarm anyway.

Mr. Simmons, an English bee keeper, originated a system of bee culture known as "Simmon's nonswarming system." It has some valuable points on discouraging bees from swarming, and is as follows:

He gives each colony in the spring of the year several frames with starters in them, placing them between the brood and the entrance. (From this I infer that he must use hives with the frames running crosswise of the hive.) After carefully watching the brood apartment, and cutting out all the new combs built on these frames, previously inserted, he places this said comb in section boxes, and returns to the bees. If the new combs happen to contain eggs or larvæ, they are left away from the bees long enough to destroy their vitality.

The originator of this system says that bees will never swarm until they have a finished brood nest, and as part of their brood nest is cut out as fast as finished, the bees will have no desire to swarm, and therefore swarming is controlled. In time, the bees finding the sections filled with combs, will gradually cease working on the unfinished frames in the brood apartment to a great extent and go to work with redoubled energy in the section boxes.

Mr. Simmons believes it is best to give the bees an abundance of room (from 40 to 60 one-pound sections at once). He thinks bees should not be cramped, as it greatly encourages swarming. Mr. Simmon's system is certainly original, and a person with a small apiary might control his bees to better advantage; but a man having 500 colonies could not afford to bother with such a system. Of course, this system will not prevent swarming, but will discourage to a great extent.

A California apiarist, in order to accomplish rapid work, must have a different system of management entirely. He must have a hive that is easily and quickly manipulated—a hive where surplus room can be easily and quickly given, by either side or top storing; a hive where the queen can be easily discovered and queen cells cut out at a moment's notice. With a honey harvest crowding hard, he has no time to cut comb out of the brood chamber and insert in section boxes; foundation is a great deal better and cheaper. Some apiarists prefer bees that do not swarm much, and with this end in view, breed all their queens from colonies that cast but few swarms.

Such strains of bees may be pretty good for honey-gathering, but all things considered, I believe I would sooner have a strain of bees that is good swarmers. If bees are managed right, the colonies that swarm most are the most profitable.

S. L. WATKINS.

ENTOMOLOGICAL.

Scale Insects.

[A lecture by PROF. J. B. COMSTOCK, at the Stanford University.]

One of the most anomalous groups of insects is that family known to entomologists as the Coccidas. This family includes the insects commonly known as mealy bugs, bark lice or scale bugs, and many other forms for which there are no common names. Although these insects are bound together by certain structural features which have led entomologists to class them as a single family, the different species differ greatly in appearance, and we find even that the two sexes of the same species differ as greatly in appearance as do insects of different orders.

There are many other forms of scale insects than those commonly known to the fruit growers of this State. The family includes three sub-families. I will describe representatives of each. The first sub-family is represented by the mealy bugs and their allies. The mealy bugs are well known pests in the conservatories the world over, and in the open air in warmer sections of the country. Thus oranges are often infested by mealy bugs. These insects receive the common name from the fact that the body is covered with a whitish mealy powder. It is the presence of this powder, which is waterproof, that makes these insects so difficult to combat. The ordinary washes used to destroy allied insects are of little value when used against the mealy bugs, the wash being shed by the mealy covering and the insect remaining uninjured. The meally bugs differ less than other members of the family from other insects. They retain the power of movement throughout their lives, whereas most scale insects become fixed in the latter stages, or at least the females do. The female mealy bug, when full grown, excretes a mass of woolly or cottony matter, within which the eggs are deposited. These masses are commonly found in the axis of the leaves of infested plants. When the eggs hatch, the young lice scatter over the plants, being able to crawl quite rapidly. The young lice resemble in form the adult female. In the case of the females, there is little change in form, simply an increase in size, but the males differ from the females in a remarkable way. The sex is rarely observed by gardeners. The male insect, when it ceases feeding, is not more than one-third as large as the adult female. It spins a delicate cocoon about its body, and within this transforms to a pupa, and later, from this cocoon, it emerges as a winged bat-like insect. These are very small, delicate creatures, and would escape the attention of any but skilled observers.

I think, without doubt, the mealy bug is the most difficult insect to destroy that occurs upon plants in conservatories. We have conducted a very extensive series of experiments, using all of the commonly recommended insecticides, and found nothing that was satisfactory. The best results were obtained by the use of an extract of pyrethrum. This, however, is too expensive for use except upon a small scale. When the mealy bugs infest trees in the open air, as they do orange trees to a serious extent in Florida, doubtless the best method of combating the pest is by the use of hydrocyannic acid gas, in the same way that the red scale is fought upon orange trees in the southern part of this State.

The cottony cushion scale, so well known upon this coast, is closely allied to the mealy bugs. In this species the adult female excretes an egg sack somewhat similar to that of the mealy bug described above, but much more regular in form. In fact, it is a beautiful object, being ribbed in an exquisite way. The transformations of this species are similar to those of the mealy bugs just described, the male being a winged bat-like insect, differing very greatly in appearance from the female, the form commonly observed. Since the introduction of the Australian lady bird (*Vedalia*) there is little need of discussing other methods of combating this pest.

Not all the insects of this order are obnoxious to men. Certain species are very beneficial. Among these is the Lac insect, which exists in Asia. This insect lives in large numbers upon the twigs of certain trees. They suck their nourishment from these trees and excrete from their bodies a resinous substance which finally completely envelops them. This substance is collected and becomes an article of commerce, under the name of Stick Lac. The resinous excretion of the insect is dissolved and made into thin plates, which are known as Shell Lac, and from this is made the substance commonly known as shellac, which is used so widely in finishing woodwork.

Cochineal is an insect closely allied to the mealy bugs. It lives upon cactus in the warmer countries. I have fouud it living upon cactus in Florida, although it does not occur to any extent in this country. The insects are collected, killed and dried, and their bodies form the dye commonly used under the name of cochineal.

The second of the three sub-families of scale insects includes the Lecaniums and their allies. Here belong several of the well-known pests of fruit trees in this State. The soft scale of the orange, the black scale infesting almost all our cultivated plants, and the brown apricot scale, are familiar examples. In these the adult form usually becomes fixed, remaining in one place upon the plant infested. The young Lecaniums are active, crawling quite rapidly over the limbs of infested trees. It is in this way that the insects spread.

In the case of both the black scale and the brown apricot scale, the eggs hatch in the latter part of the summer. The young lice grow but little during the fall and winter months. In the spring they move out upon the newly-grown wood. Finding a suitable place, they settle, insert their beaks, and do not move thereafter. Very soon after this the body increases rapidly in size, becoming very convex. This rapid growth is due in part to the development of eggs within the body. These eggs are deposited beneath the body of the insect, the body shrinking upward so as to make room for them. In this way the insect becomes reduced in thick-

ness, so that it is finally a little cuplike scale covering the eggs. When the eggs hatch, the young crawl out from under the scale and spread over the tree.

A remarkable fact in the history of the majority of species of Lecanium is that the males are unknown. It seems probable that in the majority of species, this sex rarely if ever occurs. This is true of both the black scale and the brown apricot scale.

The third sub-family is represented in this State by the pernicious scale, the red scale of the orange, and many other species. These insects differ from the two preceding sub-families, in that the body of the insect is covered by a scale. Thus, while in the Lecaniums the scale like object covering the egg is the dried up body of the female, in the case of the pernicious scale and its allies the scale which one sees is a covering beneath which the insect is to be found.

The young insects of this sub-family resemble in general appearance those of the preceding sub-families. Their active stage, however, is much shorter. After crawling about over the twigs of the trees for a few days, the young scale insect settles upon a suitable place and immediately begins to excrete a cottony substance which soon becomes compacted into a thin pellicle covering the body. As the insect grows and needs to shed its skin, this cast skin is joined to the excretion and forms a part of the scale. This is the bright colored nipple-like prominence seen in the centre of the pernicious scale and of the red scale of the orange. The position of this cast skin in the scale differs in different genera and forms a good character for classification.

The closely allied species present but little difference in the forms of the scale. To distinguish these it is necessary to study the insect itself, which is found beneath the scale. The distinctions between closely allied species are such that it requires very close observation and much skill in this particular line to make the determinations, a careful preparation of the specimen and an excellent microscope being necessary requisites.

The different species of scale insects vary as regards their food habits. We find that certain species infest particular plants and will feed upon no others. Thus the red scale of the orange does not trouble deciduous fruits. On the other hand, other species have a very wide range of food plants. This is the case of the greedy scale, which infests a great variety of both cultivated and wild plants.

As to the best methods of fighting scale insects, there are two which are used under different conditions. Thus in the case of citrus trees, where, owing to the constant presence of the foliage, it is difficult to reach every part with the spray, the gas treatment used in Southern California is doubtless the best; but in the case of scale insects infesting deciduous trees a cheaper method can be employed, namely, the use of winter washes. During the season of the year when the trees are free from foliage and the buds are dormant it is a comparatively easy matter to spray the trees in such a way that every twig can be thoroughly coated with a wash which will destroy the insects and not injure the trees. Formulæ for making these washes have been prepared by the State Board of Horticulture, and can be obtained from that board on application. From what I have been able to observe in comparing orchards treated by the different washes, I am led to believe that the most efficient wash now in use is that known as the "Resinous Wash for Winter Use on Deciduous Trees."

The wash which Prof. Comstock thus commends is, we presume, the following, as priced by Mr. Craw:

ROSIN WASH FOR WINTER USE UPON DECIDUOUS TREES.

This remedy should be applied as soon as the leaves drop in the fall, and will destroy the "San Jose," "apricot" and "black" scales.

30 lbs. rosin at 1½c	$ 45
9 lbs. caustic soda (70 per cent) at 5c	45
4½ lbs. fish oil at 4c	18
Total	$1 08

Water, 100 gallons, This brings the diluted wash to a little over one cent per gallon.

SHEEP AND WOOL.

A Valuable Record of California Experience.

The following, which we find in the Ukiah *Press*, Mendocino county, is probably the most careful record of California sheep-breeding experience which has ever been published:

In February, 1873, we made an investment in ten thoroughbred Spanish Merino ewes and one buck. They cost us delivered on the ranch $987. The sheep were bred by Jewett in Missouri from stock selected from the then famed flocks of Hammond and Atwood of Vermont. We were unfortunate in the loss of our buck in the following August. We bought a buck, imported by Muson, which cost us $68 more; our whole stock in the autumn of 1873 cost us on ranch $1055, which formed the base of the flock. We had no experience in sheep husbandry. Bought all the standard works treating on the subject; adopted everything we found practical in them. The conditions under which their experiments were made were entirely different from ours; we in the genial climate of California had not to make much preparation for shelter and food that flock masters had to make in more rigorous climates. Our sheep are shorn twice each year, while other localities shear but once. We went it blind as the saying is; wherever we found we had made a mistake we corrected it. We endeavored to breed our sheep up to a high standard in quality and fineness of wool, form, reducing wrinkles, black top and yolk in wool, endeavoring to get as many of these good qualities in our sheep as possible, which future experience taught us a slow and rather uphill business. All stock bred up to a high standard requires constant watching and judicious crossing to improve them. The great tendency is to deterioration. The old proverb of like producing like will not hold good in my experience of advance stock-breeding, from the fact that so many conditions have been used to elevate the standard; many lie dormant and crop out in future crosses. I append a table that is self-explanatory regarding the average prices of wool in Ukiah City, and average wool yield per sheep.

		Cts.		Lbs
May 20, 1873,	sold in Ukiah,	30.00	Average wool yield	14.00
May 20, 1874,	" " "	30.00	" " "	13.23
Season, 1874-75	" " "	23.38	" " "	14.10
" 1875-76	" " "	16.25	" " "	13.26
" 1876-77	" " "	23.63	" " "	13.07
" 1877-78	" " "	20.00	" " "	12 66
" 1878-79	" " "	21.50	" " "	1 23
" 1879-80	" " "	25.75	" " "	9 77
" 1880-81	" " "	26.50	" " "	9 25
" 1881-82	" " "	21.20	" " "	10 86
" 1882-83	" " "	19.84	" " "	12.52
" 1883-84	" " "	17.56	" " "	10 44
" 1884-85	" " "	14 56	" " "	9.79
" 1885-86	" " "	16 46	" " "	9 80
" 1886-87	" " "	16.85	" " "	9.89
" 1987-88	" " "	15.50	" " "	9 60

The above table shows great variation in price of wool, and annual average per head. In 1879 we procured an exceptionally free white yoked merino buck; we were trying to improve the quality of our wool, as our wool was considered heavy, his progeny gave us lighter fleeces and better quality of wool. We never sold any of our merino ewes; as they aged, it reduced the general average per head. In 1884-5-6, heavy wools got a black eye; prices fell far below other wools.

We adopted the method of weighing each fleece as it was shorn. We procured metal tags numbered from 1 to 12 inclusive; inserted in the ear, we had, as it were, 12 families. We stamped the age of each sheep on them, and the year each lamb came, so we were enabled to credit each sheep in the family with their weight of fleece when shorn. By that method we thought we could ascertain what progress we were making. It proved a delusive hope, the variable seasons and grass gave us such unequal results that we learned nothing from it. It clearly demonstrated one fact, whenever the growth of wool was arrested by short feed, spoiled feed, rain after grass dried in summer losing its strength, rigorous or inclement weather, all the wool growth lost during such periods of its growth were at the expense of length of staple and weight of fleece. We had no way of finding out what progress we were making in regard to fineness of fiber. In 1883 we addressed a letter to the Hon. Commissioner of Agriculture to ascertain who he appointed to examine wool fibers. He referred our letter to Wm. McMurtrie, professor of chemistry in the Illinois Industrial University; that placed us in communication with him. We sent him wool samples in 1883-4; he reported to us after examination that our wool samples sent him had an average fineness of 1267 fibers to the lineal inch.

YONATT'S MEASUREMENT OF MERINO WOOL FIBERS.

In England from Lord Westerman's flock, 1835, lineal inch	750
Manly Miles' measurement of wool fibers from E. Hammond's flock of eight merinos, Vermont growth of 1864	1,209
From W. H. Ladds of Ohio, growth of 1864	1,294
From C. H. Rich, Lapier, Michigan, one ram, 1864	1,164
C. H. Rich, Lapier, Michigan, four ewes, 1864	1,087
Argentine Republic, 13 rams, 1876	1,265
Australian Colonies, seven rams, 1876	1,260
Our measurements made by McMurtrie, 1884	1,267

From the above comparisons we had kept abreast of the times in regard to fineness of fibres. In 1888 we closed out our merino flock after charging every expense against them except feed and care; we had to the credit of our merino family after paying original investment $2465.36, in a run of fifteen years with them.

In 1873-4 we bought 217 thoroughbred southdown ewes from E. Meek, Alameda county. The original stock was imported by J. D. Patterson of New York, costing us delivered on the ranch $1565. This was the base of our grade flock; we crossed them with thoroughbred Spanish merino bucks. By having those two and pure varieties we were enabled to make crosses with but two types, one to the merino and the other to the southdown. I append a table of the results of our crosses; we adopted an ear mark for each grade. Before shearing we separated them into their respective grades, each grade of wool was weighed, averaged, and placed to the credit of its class. Our sheep year was from September to September. We adopted that method in order to get our fall lamb clip in their first year's average. We sent samples of our grade wool to McMurtrie in 1883; he reported in 1885 as follows:

LINEAL INCH MEASUREMENT.

15-16 merino 1-16 southdown	1292
7-8 merino 1-8 southdown	1316
3-4 merino 1-4 southdown	1320
1-2 merino 1-2 southdown	1060
Pure Shropshire buck	713
9-16 merino 4-16 shropshire 3-16 southdown	1196
3-8 merino 4-8 shropshire 1-8 southdown	1042
2-8 merino 4-8 shropshire 2-8 southdown	1077

From the above report our 15-16, 7-8 and 3-4 merinos were finer than our thoroughbred merinos. Our 3-4 merinos were the finest.

By referring to the above table you will notice that the first cross between the merino and southdown gave us an average gain of 3 38 100 lbs. The second cross, 3-4 merino 1 4 southdown, gave a gain of 3 36-100 lbs. over the first.

In the fall of 1878 we commenced breeding lighter-fleeced merino bucks with freer wool, less yolk, and black top. The 7-8 merino and 15-16 crosses were no gain, rather a loss from the 3-4, but better wool. It has fully demonstrated the fact. The two first crosses gave the best results, and there is where we should have stopped; after passing the 3-4 cross became more effeminate, poorer milkers and mothers, lambs more weakly.

In 1881 we bought a thoroughbred shropshire buck from J. B. Hoyt of Solano county, used him in the manner the table indicates; his blood gave us larger and more vigorous sheep. Our 1-2 merino 1-2 shropshire gave us larger sheep than merino and southdown of the same grade, good mothers and extra milkers. In my judgment, our 3-4 merino 1-4 southdown, the 1-2 merino 1-2 shropshire were the best sheep we ever bred. My preference is the 1-2 merino 1-2 shropshire as the best all-round sheep we ever bred.

Since 1888 we have been breeding a coarser and larger variety, aiming at about 3-8 merino 5-8 shropshire. Mutton has more largely entered into consumption in our food centres in this State, ruling higher than beef; with our depleted flocks it will continue to. So it now behooves the sheep grower to produce a sheep that will yield a large carcass, mature early, and as much good free wool as he can get on it.

The 1-2 merino 1-2 southdown cross gave us 7 86-100 lbs. The same merino and shropshire gave us 5-8 of a lb. more though the style of breeding was different. The first was merino buck and southdown ewe. The second, merino ewe and shropshire buck. It is an undisputed fact among intelligent stock breeders that the female imparts more of her qualities than the male, hence the difference of wool yield.

TABLE SHOWING RESULTS FOR SIXTEEN YEARS.

Years.	1873	73-4	74-5	75-6	76-7	77-8	78-9	79-0	80-1	81-2	82-3	83-4	84-5	85-6	86-7	87-8
Annual average per cent. of lambs				60	84	97	70	90	75	75	90	90	90	93	95	93
¾ Merino, ¼ Shropshire													8 49	9 07	9 48	8 87
½ Merino, ½ Shropshire													9 13	9 08	7 98	
¾ Merino, 3-16 Shropshire, 1-16 South Down													8 31	7 50	8 44	7 11
¼ Merino, ½ Shropshire, ¼ South Down													8 63	6 01	7 28	6 44
9-16 Merino, 4-16 Shropshire, 3-16 South Down													9 44	7 38	8 29	7 19
⅜ Merino, ⅛ Shropshire, ⅛ South Down													8 27	5 75	7 87	6 28
15-16 Merino, 1-16 South Down													10 97	9 14	8 22	6 62
⅞ Merino, ⅛ South Down														7 87	6 17	5 12
¾ Merino, ¼ South Down														9 04		
½ Merino, ½ South Down																
Annual average of South Downs		3 50	5 90	4 60	4 48	4 49	4 60									
Number of wethers shorn each year				20	76	112	168	228	115	53	10	13	15	18	16	20
Average of Merino bucks' fleeces bred			16.38	16.5	17.50	17.00	19.25	16.63	15.00	14.00	13 00	*14 12	†12 62	†12.38	‖11.50	*11.25
Annual average price in Ukiah		30 00	23 38	16. 5	23.63	20 00	21.50	21.10	25 75	26 50	21.10	19.82	17.56	15.50	21.20	15 50
Annual average lbs. per head		3.50	5.90	4 60	5.49	6.19	7.11	8.67	7 99	8 74	8.14	8 92	8 02	6.70	7 93	7.85
Number of sheep		16	32	245	409	519	628	514	635	561	559	684	711	696	417	513
Number of days between shearings		368	367	357	407	366	365	366	366	373	355	375	356	358	370	364

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

ANOTHER GRANGE VICTORY

has been gained at the last session of the National Grange. A resolution was passed asking for a better dissemination of weather forecasts for the farming classes. A letter has just been received from Hon. Mark W. Harrington, chief of Weather Bureau, in which he says: "I am pleased to inform you that the Weather Bureau will cordially cooperate with your Order in placing the daily forecasts within the reach of as many of your members as the limited appropriations of the Bureau will permit." In a short time circular letters of information will be mailed to each Grange in California, giving further and explicit information about signals, and so forth. Be patient, fellow-patrons! Another victory is about won. To those farmers who are without the Grange, we would say: Organize a Grange and get the benefits of Trade-Card, Weather Bureau and other things too numerous to tell.

Have you had a package of seeds from your Congressman? If so, please tell us what else he has done, to your knowledge, for the benefit of agriculture. I suppose that the Representative concludes that he who causes two—onions—or cabbages—or beets—to grow where but one grew before, is entitled to a reelection and his little $5,000 a year, with mileage and the franking privilege. Think so!

Be very careful to whom you send the name and Post Office address of your Master and Secretary. Designing parties are seeking these addresses. The Master and the Secretary of the National Grange have given the "sign of caution." The Master of the State Grange repeats it! Beware! Beware!

Sebastopol Grange has appointed a committee to look into the advisability of holding a farmers' institute at that flourishing place.

Sutter County farmers are taking great interest in the Grange.

How has your "Trade-Card" served you? Can't you save money by purchasing through the houses with whom the Executive Committee have made special arrangements?

It is claimed that the agricultural product of 1891 exceeded that of 1890 by $700,000,000, but were your taxes any less? Is your bank account much increased? Who obtained most of that $700,000,000, the producer or the speculator?

Which has the stronger grip on the modern legislator, coin or conscience.

Who controls State Legislatures and Congress, corporations or the people? Is it the *jew*, or is it the *many* for whom laws are made? Look to the Statutes and see for yourself.

Are you *jor* or *against* "Free Rural Mail Delivery?" Do you know that you help pay the expense of delivering the letters and papers to your city cousins? Why not let them help pay for the delivery of your mail?

San Joaquin Pomona Grange.

TO THE EDITOR:—Pursuant to the notice heretofore published in the RURAL for the meeting of San Joaquin County Pomona Grange, which was held in Lodi hall on Thursday, the 25th of February, it being a beautiful day, the hall was filled to overflowing with Patrons, which from general appearance was a State Grange session, there being present the Worthy Master of the State Grange, Past Masters of the State Grange, and Hon. Thos. McConnell of the Executive Committee. The special order being the installation of officers and discussion of the silver question, the Worthy Master, E. W. Davis, assisted by C. W. Norton, installed R. Pixley as Worthy Master, etc., all in due form, after which the Worthy Master and McConnell addressed the Patrons upon the grievances, accomplishments and purposes of the Order, which consumed all the afternoon, the evening being for degree work and feast of Pomona. From the encomiums manifested, all the absent brothers and sisters missed a treat in not being present, and if you will permit the writer to be a judge, I will say that it was the best and most enjoyable meeting that this Grange has held. Owing to much important business that could not be taken from the table, there will be

A SPECIAL MEETING

Of Pomona Grange in Woodbridge Grange hall, Thursday, the 24th day of March, commencing at 10 A. M. A full attendance is desired, and it is expected all the Patrons will take due notice and govern themselves accordingly. Fraternally, J. D. HUFFMAN, Sec'y.

A Solano County Farmer's Opinion.

DIXON, Feb. 16, 1892.

TO THE EDITOR:—It seems the history of the past few years makes it the imperative duty that every farmer should unite as a combined body to have some uniform prices on our productions; also, we should be represented in Congress by a goodly portion of farmers, many of whom are as well qualified, yes, better than most lawyers, who do not study the farmer's interest. We see combines, monopolies and call board systems are working for themselves and against the farmer. Let us meet in our Granges and societies for discussing methods and means whereby we can honorably meet the necessities of the day.

SOLANO COUNTY FARMER.

W. L. OVERHISER, P. M., intends to start from Stockton, on his tour of Grange visiting, through Monterey, San Luis Obispo and Santa Barbara counties, about the 21st of March. He is a sterling P. of H., who proverbially makes things interesting wherever he goes. Public meetings will be held by each Grange in the above named counties. Hon. J. V. Webster and Hon. Geo. Steele will accompany Mr. O. as far as convenient.

The Nicaragua Canal.

STOCKTON, Feb. 29, 1892.

The following address was delivered before Stockton Grange, No. 70, P. of H., by Past Master Thos. E. Ketcham, Feb. 27, 1892:

In addressing you upon the subject of the Nicaragua Canal, I regret that I am not possessed of the ability to give you a more full and exhaustive statement of the present situation, as I believe that the early completion of the Nicaragua Canal is of vital importance to the United States, both in a commercial and military sense.

The question of a passage through the American continent was sought to be solved by the Government of Spain as early as the year 1502, and in fact the last voyage of Columbus was undertaken with the principal object of finding a feasible passage by water connecting the two oceans. Since that time, a number of expeditions has been organized by the United States to survey the Isthmus of Panama, as well as the Isthmus of Nicaragua, to determine the relative practicability of the two routes. Lieut. Strain of the U. S. Navy, in his survey of 1854, fully demonstrated the impossibility of constructing a canal across the Isthmus of Panama. The surveys of the Nicaragua route show conclusively that the canal can be built at a small expense, comparatively, and that it is the only available route known and discovered at the present time. The length of the proposed canal is about 169½ miles; of this distance, from 28 to 40 miles would be required to be excavated. Lake Nicaragua, the San Juan river and the basin of the San Francisco furnishing a natural waterway for the balance of the distance, the summit level of the canal will be 110 feet above the mean sea level. It is proposed to build seven locks, 1000 feet long, 100 feet wide and 30 feet deep, having a capacity of passing from two to four vessels at one lockage. The greatest difficulties to be overcome are the harbors at the Atlantic and Pacific termini. A large amount of work has already been accomplished at the harbor of Greytown on the Atlantic side; vessels drawing 14 feet of water can now enter the harbor and discharge at the docks.

From information received from friends who have visited Nicaragua and other sources, I learn that the soil is fertile and the climate salubrious; the productions, coffee, sugar, cochineal, cotton, cocoa, indigo, indiarubber and tropical fruits in abundance, besides large forests of the most valuable woods. The estimated cost of the canal is one hundred millions of dollars; but if the company has to place its bonds upon the markets of the world, the cost will be greatly enhanced by the payment of discounts, commissions, etc., besides the danger of foreigners getting control of the canal.

I believe that the U. S. Government should guarantee the payment of the interest on the Canal Company's bonds, but with such safeguards as would prevent any loss to the Government and secure the people from a repetition of the scandals of the Union and Central Pacific Railroads. It is also of the first importance that the United States should have the controlling interest in the canal and erect fortifications at salient points to prevent foreign powers from seizing or using the canal to the detriment of the United States.

The distance from San Francisco to New York via Cape Horn is 14,840 miles; San Francisco to New York via the Nicaragua route, 4946 miles, a saving in distance of 9894 miles; from Liverpool to San Francisco via Cape Horn is 14,690 miles; Liverpool to San Francisco via Nicaragua route, 7694 miles, a saving of 6996 miles. The wear and tear of a voyage around Cape Horn, the cost of insurance, seamen's wages, supplies, etc., are very great; by the Nicaragua route, it would be comparatively small.

The time required by sailing vessels to make the voyage around Cape Horn is from 110 days to 150 days. The voyage by steamers via the Nicaragua route (when the canal is completed) can be easily made in 25 days, thereby avoiding the perils of the tempestuous voyage around Cape Horn, reducing the cost of insurance, etc., lessening freights and enabling farmers and shippers to save a large percentage of the money now required to get their goods to market.

The completion of the Nicaragua Canal will eventually give us the control of the American continent, the commercial supremacy of the Pacific Ocean, neutralize the power of England to injure us, through her possessions in the West India Islands, settle the question of the Monroe doctrine, secure our sailors from injury and death at the hands of foreign mobs, and be a powerful factor in preserving peace and insuring a just and equitable settlement of any disputes that may arise between us and foreign nations.

To illustrate the possibilities for business by the Nicaragua Canal, I will state that prior to 1846, all the transportation done on Lake Superior was by batteaux and canoes, during the winter of 1846. Capt. McKay moved the schooner Algonquin on ways across the portage of Sault St. Marie and launched her on the waters of Lake Superior, sailing early in spring for Copper harbor (with Cyrus Mendenhall and myself, with a number of men and supplies for the mines in which we were interested), being the first vessel of any considerable size that, so far as known, ever floated on Lake Superior. Since then there has been a canal built around the Sault St. Marie, connecting Lake Superior with Lake Huron. In 1881, the traffic by the Sault St. Marie canal amounted to 1,802,571 tons; in 1890, it had developed to the vast amount of 7,221,935 tons, exceeding the business of the Suez Canal by nearly 1,000,000 tons.

For full information on the subject, I refer you to the reports of Warner Miller, Pres. of the Nicaragua Canal Co., to an article by Senator Sherman, published in the *Forum* for March, 1891, and a pamphlet by Capt. Wm. L. Merry of San Francisco.

STATE GRANGE CANVASS.—The list of appointments published in last week's RURAL has been sent to Worthy Master Davis for any possible necessary correction or revision.

The publication of the list referred to will be considered as an answer to many of the letters written to the Secretary of the State Grange concerning special meetings, all correspondence relating thereto having been turned over to the Master, for consideration, at the late Executive Committee meeting.

By another week we expect to have something further to report in regard to the special meetings. The Secretary or Lecturer of each subordinate Grange to be visited, should take special pains to have his meeting well announced in the local papers, stating when the meetings will take place and by whom they will be addressed, extending a broad invitation to all interested to attend these Grange and farmers' gatherings.

QUESTIONS FOR GRANGE DISCUSSION.—According to arrangements of the Committee on Womans' Work in the Grange, Mrs. C. E. Kinney, Deputy of the N. G. Com. announced questions for discussion by Pacific States Granges from November to February inclusive, with the understanding that the State Committee on Woman's Work in the Grange for Oregon should prepare and send the RURAL PRESS the questions for discussions for the next four months, and the Committee of Washington Grange for the four months following. Will Oregon Committee now send us the questions for discussion for March, April, May and June; and Washington in due season their quota.

LECTURER'S PROGRAME.—The Lecturer of Corvallis (Oregon) Grange, announces the following programme for the meeting of March 12th. Useful Weeds, by Moses Craig; Declamation, A. Pike; Reading, D. P. Adamson. For March 26th: The Farmer's Duties to his school, J. D. Johnson and Charles Horning: Reading, Ida Locke. Would it not be well for Lecturers of all subordinate Granges to make similar appointments in advance? Who will try it in California?

VACA VALLEY GRANGE will be visited by W. L. Overhiser, P. M., March 12th.

FARMERS' ALLIANCE.

Less Than Two Months Work.

Secretary Barbee reports that since Jan. 1st the following Sub Alliances have been chartered:

NAME.	NO.	LOCATION.	ORGANIZER.
Poso,	492,	Kern county	J. T. Austin.
La Dow,	495,	Los Angeles county	P. K. Wood.
La Canada,	498,	" "	T. A. Atwater.
North Perris,	507,	" "	G. P. King.
Kingsburg,	496,	Fresno county	J. L. Gilbert.
Pescadero,	503	San Mateo county	P. R. Adams.
Buckhorn,	508,	Ventura county	M. M. Tousey.
Mt. Fairview,	511,	San Diego county	Wm. Justice.
Hope,	521,	San Diego county	Anna F. Smith.
Courtland,	501,	Sacramento county	A. A. Krull.
Ocean View,	517,	Orange county	D. E. Smith.
Suisun Valley,	499,	Solano county	S. D. Bristo.
Skyland,	506,	Santa Cruz county	J. B. Rigdon.
Pacific,	509,	" "	J. C. Drew.
Mt. Pleasant,	505,	Placer county	Henri Fairweather.
Excelsior,	510,	" "	J. H. Gregory.
Austin,	493,	Tulare county	John T. Austin.
Cross Roads,	497,	" "	"
Kaweah,	500,	" "	"
Central,	502,	" "	"
Quincey,	504,	" "	"
Barcelona,	512,	" "	"
Hooker,	513,	Mariposa county	J. H. White.
White Rock,	514,	" "	"
Oakdale,	515,	" "	"
Ben Hur,	516,	" "	"
Palona,	518,	" "	"
Snow Creek,	519,	" "	"
Indian Gulch,	520,	" "	"
Garnette Springs,	522,	" "	"
Comes,	523,	Tuolumne county	"
Marshs' Flat,	524,	" "	"
Groveland,	525,	" "	"
Morning Star,	526,	" "	"
Curtis Creek,	527,	" "	"

This makes a total of 34 Sub Alliances organized since this year began, with Kern and Tuolumne ready to organize.

The Industrial Convention.

People's Party Platform, Etc.

Dispatches from St. Louis of Feb. 24th give the following in brief of the platform and resolutions adopted on the last day of the session of the Union Industrial Convention:

The platform states that the nation is on the verge of moral, political and material ruin; that corruption dominates the ballot-box, the Legislatures, Congress, and touches even the ermine of the bench; newspapers are subsidized or muzzled, public opinion is silenced, business is prostrated, homes covered with mortgages, labor impoverished and land and money are concentrating in the hands of capitalists. The workmen, it declares, are denied the right of organization for self-protection; imported pauperized labor beats down wages; a hireling standing army, unrecognized by our laws, is established to shoot them down, and they are rapidly degenerating into European conditions. The national power to create money is appropriated to enrich bondholders; silver has been demonetized to add to the purchasing power of gold, and the supply of currency is purposely abridged to fatten usurers, bankrupt enterprise and enslave industry.

A resolution declares that the old political parties have allowed this to exist without any effort at restraint, and therefore, it asserts, a new political organization, representing the political principles herein stated, is necessary.

The declaration of principles is then made. A national currency is demanded that is safe, sound and flexible, issued by the General Government only, and full legal tender for all debts, public and private, and that, without the use of banking corporations, a just and equable means of circulation be established with a tax not to exceed two per cent, as set forth in the subtreasury plan of the Farmers' Alliance, or some better system. It demands the free and unlimited coinage of silver; that the amount of the circulating medium be speedily increased to not less than $10 per capita; a graduated income tax; that all national and State revenues be limited to the necessary expenses of the Government, and that postal savings banks be established by the Government.

The platform declares that land should not be monopolized for speculative purposes and alien ownership of land should be prohibited. All lands now held by railroads and other corporations in excess of their actual needs, and all kinds now owned by aliens, should be reclaimed by the Government and held for actual settlers only. It declares that the Government should own and operate the railroads, telegraph and telephone, and demands that the Government issue legal tender notes and pay the Union soldier the difference between the price of the depreciated money in which he was paid and gold.

The following Conference Committee was appointed to act with the People's party of the National Committee: Van Wyck, Nebraska; McCune, Texas; Branch, Georgia; Powers, Nebraska; McGuire, New York; Polk, North Carolina; Willets, Kansas; President Humphreys of the National Colored Alliance; Hackett, Missouri; Barnett, Illinois (F. M. B. A.); Morrill, Louisiana; Seits, Ohio; Mrs. Lease, Kansas; Mrs. Doctor Dabbs, Texas; Benjamin Terrill, Texas.

Later, the Conference Committee selected July 4th as the date for the convention, the selection of the place

being left to a sub-committee of ten to be appoinfed by Taubeneck of Illinois.

Much excitement was created in regard to Woman Suffrage and prohibition resolutions, and the former only was adopted.

Whether the fact that temperance advocates are divided on the prohibition question defeated Miss. Willard's resolution or not, fuller reports may show. Through intervening conference the Fourth of July nominating conventions may yet bridge the gap made by the hastily closing convention.

Readers should bear in mind these early reports are made up from news gained by reporters who are not members of the orders and associations composing the convention, and for publications not particularly friendly, to say it mildly, to the organization of a new party.

Alameda County Organization.

Individual members of the Alliance and other farming and industrial organizations will assemble in mass convention at 10 A. M. of Saturday, March 5th, in the Town Hall at Niles, for organizing the People's Party in the county and appointing a Central Committee. Those who support the Los Angeles (State) platform, both men and women, are invited.

Mrs. C. P. Stetson, an able writer and speaker, has promised one of her excellent poems for the occasion. A basket lunch has been recommended, with music and appropriate songs. All interested in the new movement are expected to manifest it by their personal attendance, if possible. COM.

Address to the Goddess Pomona—An Acrostic.

The following lines will be best understood by those acquainted with the geography of the valley of Pomona and surrounding country, embracing Los Angeles, San Bernardino and San Diego counties. The names of certain places and natural objects are employed to signify the various mythical characters of the piece :

Peerless Goddess of fruits, and patron of plants and flowers,
Of gardens rich, of shady nooks, and cool and leafy bowers;
Most gracious the divinity, that gave thee inspiration,
On this most fair and lovely spot, to fix thy habitation,
No other half so beauteous could'st thou have ever found,
As this transcendent, charming vale, in all the world around.

Legions of loyal Angels, who in thy western province dwell,
Obey thy royal mandates, and of thy goodness tell.
St. Bernard, with devoted zeal, shall rule throughout the East,

And save from all intruding foes, and make thy subjects blest,
Noble, brave San Bernardino with royal force enmasse,
Guards with faithful vigilance thy northern mountain pass.
Exalted, grand "Old Baldy" with his mighty host stands forth,
Loyally protecting all thy borders upon the north.
Enlightened San Diego doth o'er thy south land reign,
Sacredly thy will expounding from mountain to the main.

Calm and chaste Sierra Madre, from her lofty seat on high,
O'erwatches all thy vast domain, with ever sleepless eye.

Coronado, blithe and sweet, and Santa Monica gay,
And Santa Ana staid, sedate in her more modest way,
Lends each her aid to greet San Pedro, who watches o'er thy sea,
Inspecting all aquatic sports, if good or bad they be;
Faithfully thy ports commanding, guarding thy ocean trade,
Offering unto Santa Rosa every needed aid.
Redundant San Antonio pours forth his generous flood,
Nobly giving man and beast their needed drink and food.
In love and pride thy sweet handmaid, the gentle San Jose,
Attends with true fidelity, her goddess day by day.

Thy great magicians, mighty men, lest there should come a dearth,
Hold high their magic wand of art and smite the pleth'ric earth.
Each potent stroke is blessed; and lo, a hundred flowing wells

Proclaim "glad tidings of great joy" to every one who dwells
Amid the marvelous glories of this thy favored land;
Replete with nature's choicest gifts, magnificent and grand.
Aye, grand! all climes within thy realms unite, and yet is each
Distinct; frigid mount, tropic plain, and cool and temperate beach.
In its botanic products are plants from every zone,
Such sagebrush, briars and brambles, as in the north are known,
Eucalyptus, pepper, palm, banana and cyprees green,

Orange, lemon, apricot, olive, prune, fig, nectarine;
Fir tree, spruce and cedar, cottonwood, oak and stately pine,

Every apple, peach, pear, plum, cherry, small fruit plant and vine,
Add the gorgeous wealth of flowers, culled from every clime;
Richest perfumes, fairest landscapes, and mountain scenes sublime,
Then all may see, who've read of Eden, where Adam's race had birth,
How this, thy home, sweet Goddess, is "The Paradise of Earth."

Thus saints, magicians, angels, too—powers below, above—
Have all with lavish nature joined to found thy realm of love.
Exquisite taste, ingenious skill, and learning now shall plan

How best to furnish and adorn a perfect home for man.
Orient and Occident shall patterns proper supply,
Making architectural grace comport with strict utility.
Elegant palatial homes and cottages neat shall rise,

Of every ornate style of art that genius can devise.
Fragrant, neat and orderly yards, and spacious garden grounds,

Adorned with flowers of every hue, and where delicious fruit abounds;
Replete with shade trees, verdant lawns and cyprees hedge of green,
The shapely fount, the hydrant's flow, complete the outward scene,

The same good sense and genius rare, o'er things within preside.
Homes, to be true temples of love, for culture must provide.
Exalted men of high resolve and sentiments refined,

Long since have found the finer arts give strength to heart and mind.
Ah, then, must music find a place in every perfect home,
Nor may it fail the youth to charm, that they may never roam.
Dearly cherished portraits of friends shall hang upon the wall—

Oh true and sweet remembrancers. How fondly they recall
Faces and forms now absent or forever gone. So then

Must fine art have a place in all the perfect homes of men.
Indeed, these lovely private homes, complete in every part—
Love-inspiring, soul-exalting—make thy land "The Home of Art."
Kindly, too, thou dost provide for every grosser need,

And herds and flocks, to furnish meat, upon thy hillsides feed;
Nor doth exalted chanticleer, with happy, cackling brood,
Deny to any, chicken pie, nor fail to furnish them egg food.

Honest, well kept, patient kine, afford an ample supply
Of good rich milk and butter fine, and cake and custard pie.
Nor is this all, for still, to please, thou givest honey from the bees,
Enchanting land! in all things rich, now blessed with work and money.
Your realm is royal, Goddess: "The land of Milk and Honey."

—*H. W. Finson.*

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

FARM NOTES.—Haywards *Journal:* The farmers have now rested on their oars, and the entire valley and hillsides will soon be coated with green, and with a continuance of the present warm and moist weather, the young grain will begin to climb at a rapid rate. Never before in our recollection have we had such a glorious winter for crop-planting, and the full acreage is put in. Chevalier barley-seeding will come next, and there is little doubt but that the good luck so far met with will continue throughout the season. The mild open winter has given orchardists a show to thoroughly prune their orchards, and also spread terror in the ranks of the bug family, particularly the brown apricot scale that has gained such a foothold in this valley, that the most active measures will have to be used to get rid of it.

Glenn.

COUNTY AGRICULTURAL FAIR.—Willows *Journal:* At a meeting of the Directors of the Willows Agricultural Association, the following officers were elected for the ensuing year: J. R. Troxel, Pres.; W. R. Merrill, Vice-Pres.; W. V. Freeman, Sec.; Bank of Willows, Treas. They fixed the date of the annual meeting for the second week in August, commencing Tuesday, August 9th, and continuing five days. Directors Merrill and Kelley were elected as delegates to attend a meeting of the Directors of all Northern Associations to be held at Chico to formulate a speed program for the northern circuit.

Kern.

REMARKABLE GROWTH.—Bakersfield *Echo:* In the spring of '91, E. W. McCutchion set out a prune tree, then one year from the bud. All the limbs were cut away, leaving the main stem about 18 inches high. He recently measured the limbs that grew last year and found that they aggregated 221 feet. This was in Mountain View Colony.

Los Angeles.

A LARGE GRAIN FARM.—Santa Monica Cor. Los Angeles *Herald:* A ride over the Jones-Baker tract reveals one of those marvelous agricultural spectacles only to be seen in Southern California. Here you will see 5000 acres of barley, sown ten days ago and now sprouting four inches above the soil. Here also, in due season, you will find 1000 acres planted in corn. The steam plow has opened up great possibilities on the Jones ranch, and crops of 60,000 centals of barley are the result.

THE IRRIGATION QUESTION.—Pasadena *Star*: There is need of a much more general use of irrigation in Southern California in order that the subdivision of land and the multiplication of rural homes on which our growth in prosperity and wealth so greatly depend, may be brought about. The tendency of dry farming in California is toward increase in the size of ranches and decrease in the number of farmers. Under present methods of growing grain, calling for the use of combined harvesters and steam power in the place of animals, the small farmer is at a disadvantage compared with the large operator. As the small farmers drop out their lands are added to some of the large ranches adjoining. This tendency prevails in the United States as a whole, as well as in California. In the area covered by the three counties of Los Angeles, Orange and San Bernardino, as the maps of the State engineer show, there are not less than 1,250,000 acres of land susceptible of irrigation. This is all on the seaward side of the great mountain chain which forms the western boundary of the Mojave and Colorado desert. Of this great irrigable area not one-tenth has yet been supplied with water. There is abundance of the fluid, and storage systems are needed to prevent it from flowing idly to the sea. The catchment area of the Pacific slope of the mountain ranges and the snows and rains of each winter season supply more than enough water for the irrigation of every foot of the 1,250,000 acres above mentioned.

Orange.

FREE PLANTING AT ROUSE VALLEY.—Cor. Santa Ana *Blade:* The virgin soil of the low foothills has been invaded by the sturdy farmers, and the horticulturists are busy planting sweet olives, figs, apricots, etc., and there will be planted in primitive farming this year a larger area of corn, potatoes and barley than ever before in this valley. The Belford Company are quietly but vigorously transplanting the hills adjoining their estates here, into magnificent olive orchards, which will in a few years form a lovely setting to the modern villas that will be built in their midst. Thes eye of the invalid, as he passes through this paradise on his way to the Hot Springs, will dance with delight.

IMPROVED APPEARANCE OF ORCHARDS AND VINEYARDS.—Santa Ana Cor. Los Angeles *Express:* That portion of Orange county embracing Santa Ana, Orange, Tustin, El Modena, McPherson, Silverado and Garden Grove, coming within a ten-mile circle, looks very inviting just at this time. It is recovering from the stroke of paralysis which took the nerve out of it two and three years ago, through the vine disease and prevalence of scale, which utterly ruined many vineyards and materially weakened nearly all the orchards. Hundreds of husbandmen have been put to the test of financial endurance by reason of those plagues, and right well have most of them withstood the strain, using every known available method to cope with blight and parasite. The result is that they are now in a fair way to recover lost ground, as the severe methods used—in some cases, entire obliteration and replanting, with severe pruning and the recent introduction of the new red scale destroyer—has proven effective. In each place named, the fruit is now looking well and a more cheerful feeling prevails.

San Bernardino.

ENLARGING OPERATIONS.—Redlands *Citrograph:* The Bear Valley Irrigation Co. continues to enlarge its field of operations. The latest step in advance was made last Friday, when water was turned on the Arrowhead tract north of San Bernardino. Pipes are already laid to cover 1000 acres, and 3000 acres more will be brought under irrigation from this new pipe line. The water has a heavy pressure, and the pipes are of steel, made by the Redlands Steel Pipe Works, and range in size from 18 inches to two feet. The Arrowhead Lemon Co., which is to plant 400 acres to lemons, has its land in this tract.

San Diego.

EARLY FRUITS AT VALLEY CENTER.—Cor. Escondido *Times*: Crops look fine. Apricots and peaches are blooming a month earlier than last year.

Santa Cruz.

THE CREAMERY A SUCCESS.—Watsonville *Rustler:* The Watsonville creamery has passed the experimental stage, and is now an assured success. Two hundred cows are being milked daily, and the butter product is of good quality, meeting a ready sale in the San Francisco and local markets. More buildings are to be erected. The success of the creamery should encourage the establishment of other industries in this valley.

SUGAR BEET NOTES.—Watsonville *Pajaronian:* The acreage contracted for beets for this season shows that there will be more land in cultivation for this crop than at any time in the history of the factory. From 1500 to 2000 acres are expected in this valley—the former amount being already contracted for—there will be over 1200 acres on the Moro Cojo ranch, and across the Salinas river from it, there will be from 500 to 600 acres of the Cooper ranch, the Blanco district will furnish as much more, and in the vicinity of Salinas an acreage nearly as great has been contracted. It is expected that there will be over 4000 acres of land planted in beets for the Watsonville factory. Up to date, the prospects for the season could not be more encouraging. The rains have come just right, and no part of the work of preparation has been delayed. If the good fortune continues, the beet crop should be enormous. The major part of the land in beets outside of this valley is on tracts which have been leased by the Western Beet Sugar Co., and the company has been more successful in making its labor contracts than in former years. The Mongolian has become more reasonable in his demands, and some heavy contracts have been made during the past week.

Solano.

CROP PROSPECT.—Dixon *Tribune:* The late storm relieved the apprehensions of the farmers and business men alike. Nothing was absolutely suffering for want of rain, but a feeling of uncertainty pervaded the whole State, and it was feared that there would not be sufficient moisture to start the winter-sown grain, which was languishing, and the feed was becoming very short. The storm removed all forebodings, however, and it is now conceded that with the usual spring showers, a crop is assured. Business has brightened up and every one is looking for a return of good times.

Sonoma.

A FARMERS' INSTITUTE.—Sebastopol *Times:* The grangers of this vicinity, realizing the benefit derived from Farmers' Institutes, have appointed Messrs. G. N. Sanborn, C. Wightman and M. Litchfield as a committee to arrange for an institute at this place in the near future. As there is no expense attached to such a meeting, aside from entertaining the guests from a distance, there is no reason why all should not fall into line in this important matter. And none can fail to concur with us when we say important, for instruction is gained by the horticulturist from these institutes that can be derived in no other way. Farmers interchange views, and methods of fruit culture are discussed, soil is analyzed and lectures given by men who have scientific knowledge of fruit pests, their parasites and exterminators, all of which becomes more practical when gained in this way than from any other source. The Farmers' Institute is to the farmer what the Teachers' Institute is to the teacher, and what wide-awake teacher would be willing to do away with this annual coming together? Let the fruit and the vine of the "Gold Ridge" be cultivated scientifically and with intelligence.

Tulare.

RAISIN CULTURE.—C. J. Berry, Visalia *Times:* Many of your readers will doubtless be interested in the description of how I produced six tons of first-class raisins on a 16-acre vineyard, the vines one and a half years old. When the vines started to grow I carefully removed all the suckers, and just as soon as the buds of the grape showed up I at once sulphured them, and when the buds had opened into blossoms I then sulphured again. It seemed to me that when the second crop's buds made their appearance, the vines were going to overbear. I severely thinned the second crop, and sulphured the vines again. I thus avoided the "colure," that is, the dropping of the grape berry. The bunches set full. When it came to the time when I ought to summer prune the vines, I went carefully through the vineyard and cut off such lateral vines that had not fruited. I did not top off any part of the vines that had fruited well. By this process, I threw the sap into the fruit and produced a larger berry and made a first-class raisin. When the blossoms of the third crop came on, I was too busy to pull them off from the entire vineyard. I could only do so with a portion of it. I found that portion produced the largest grapes. The results I have already stated. I am well satisfied, if the grape grower for raisins will follow this plan of thinning the fruit and summer prune as described, he will produce a much larger grape and will make a finer quality of raisins, which will bring him a better price, and none of which he'll have to carry over.

EXPERIMENTING WITH ORANGES.—*Times:* J. J. Cairns visited Southern California this fall and gathered all the information he could about orange culture. His place is located in a section of the county that is supposed to be perfectly adapted to orange-growing, and in order to test the matter he has reserved 160 acres of ground surrounding his house, 135 acres of which he will plant in oranges. This land has all been flooded from a well on the place, and 30 acres plowed to a depth of 30 inches, which will be planted this year. He has contracted to have the trees planted, which will cost him $80 an acre. Next year he intends to plant 105 acres more. He will plant 10 acres of assorted fruit trees on the south side of his house.

Stanislaus.

GOOD CROP PROSPECTS AROUND OAKDALE.—Cor. Modesto *Herald*: Gentle rains and mild weather during the past week give a cheering promise of an abundant harvest. The grain crop has made a rapid growth within the past ten days, and our farmers chuckle with delight over the cheering outlook for prosperous times.

FARM NOTES AT SCHAUTZ.—Cor. Woodland *Mail:* Almond trees in blossom, peach trees in full bloom, wheat and barley all looking well, green peas a foot high, potatoes of equal stature, and all other vegetables feeling the forcing influence of the rain.

Yolo.

FRUIT OUTLOOK.—Woodland *Mail:* J. S. Houser, who owns a fruit and berry farm on Cache Creek near Woodland, and is an enthusiastic and progressive orchardist, says that so far as he could judge from his own orchard and those of his neighbors and the reports he had heard, the apricot crop promises to be extremely light this year. The fruit buds are very scattering. Mr. Houser attributes this in great part to the immense crops of last season. Other fruits are promising well and the yield of berries bids fair to be enormous. Mr. Houser furnished the markets of Woodland and Sacramento last season with blackberries, almost to the exclusion of other growers, and then had several tons that he could not dispose of, and which were a dead loss. It will be hard to find a market for the immense crop which will be borne this season.

Yuba.

WORK ON AN IRRIGATION FLUME.—Cor. Marysville *Democrat:* The Brown Valley irrigation flume is being constructed as rapidly as possible—at the rate of nearly a quarter of a mile per week—under the management of superintendent E. C. Kendall. J. R. Meek is engineer. About 30 men are employed on the flume, which is a very stable structure, capable of carrying a large quantity of water, being five feet in width and three feet in height.

NEVADA.

THE BEEF MARKET.—The beef market is looking better daily. Seven cents is readily offered, but there is none for sale at that figure. Seven cents and a half and eight cents are offered for an agreed delivery, but feeders seem to think that if there is anything to be made by feeding them, they can afford to take the chances themselves. There is a good deal of difference whether one is holding on a falling market or on a rising market that is strong and healthy.

THE HOME CIRCLE.

The Whistling Boy.

O'er the pavement comes the schoolboy, lips a-pucker, cheeks out-
blown,
Scraps of ancient tunes he whistles, little catches of his own;
For is it not vacation time, the greatest of all boons,
When he wanders like an Arab in the golden afternoons?
Whistle, whistle, how his treble through the varied bustle cleaves,
Drowning out the noisy chatter of the sparrows in the eaves;
Whistle, whistle, what a joyance as it echoes up the street,
I have heard in all my journeyings no music half so sweet;
For he whistles down the shadows that the jealous years have cast,
And in whistling off the present he has whistled up the past.

I have heard the blackbirds whistling on a swaying maple bough,
And have heard the plowmen whistle as they walk behind the plow;
I have heard the mournful meadow-lark, whose whistle is a wail,
And well I know the whistle of the brown and bonnie quail;
Yet none of these may enter in the city's grimy walls,
Where the crash of wheels is constant and the veiling smoke appals.
But the trilling of the schoolboy seems to bring them back to me,
And I see an old red schoolhouse by a gnarled wild cherry tree;
For his whistling tells of happiness unmixed with care's alloy,
And I mark amid his shrilling lilts I whistled when a boy:

"Bonnie Doon" and "Annie Laurie," "Yankee Doodle Come to
Town,"
"Sailor's Hornpipe," "Old Dan Tucker," "Money Musk," and
"Camperdown."
Why, I seem to smell the clover and the basswood budding bright;
There's a well-sweep in the distance and an orchard to the right,
And the pink-white apple blossoms nod this message from each
bough:
"School is over for the summer; school is over, over now."
Whistle, whistle, they are coming, all my happy boyhood days,
With the sound of running waters and the winding, wooded ways.
Whistle, whistle, now he ceases—and yon sunshaft's amber gleam
Turns as gray and cold as winter—God have mercy, 'tis a dream.

—*Ernest McGaffey, in Independent.*

A Lucky Mistake.

Within a month after Fort Sumter was fired on, two young men from Pennsylvania enlisted in the Union army. These young men were twins, Tom and I. We were very much alike in size, feature, voice and manner—everything indeed, and the only persons who could always tell which was Tom and which was I were the twins themselves. We did not join the same branch of the army, Tom enlisting in the cavalry while I joined the Secret Service.

After the investment of Vicksburg, and when the Union forces were each day digging nearer the city, I was sent to make an inspection of the Confederate fortifications.

I succeeded in passing theConfederate lines and entered the city of Vicksburg, where, dressed in civilians clothes, I was reasonably free from suspicion. But it took me a full day before I secured the desired knowledge and started back toward the Union lines under cover of darkness.

I passed the guards safely, and was perhaps the third of the way to camp, when I heard a sharp "Halt! who goes there?" accompanied by the click of cocking weapons.

Escape was out of the question, and a moment later I was a prisoner.

"Which camp do you belong to?" queried the leader of the men who had captured me.

"Neither," I answered, "but I am staying at Vicksburg."

"How came you so far from the lines to-night?"

"I was just wandering around and thought I would go until I reached the outer line of guards," I answered.

"This is very strange—if true," said my questioner, turning to his comrades; "but probably it is all a lie." Then to me, "We'll just take you into camp and sift that yarn of yours."

The yarn sifted so poorly that I was convicted as a spy and sentenced to death.

On the day after my conviction some young ladies of the city visited the prison where the Yankees were confined, some to see the strange animals of the north, who, they believed had "horns and hoofs like an elephant," as one of the young women expressed it; others to leave flowers or fruit for the unhappy prisoners. The number of the latter class was small.

As a condemned spy I was an object of especial hatred or commiseration, according to the feelings of the fair visitors.

"Is he really a spy?" asked one young girl of gushing class and age.

"Yes," answered the guard, "he is a genuine Yankee spy."

"Oh, isn't it awful?" said the girl. "How can you tell He doesn't look like a spy, and if you hadn't told me I should say he was real nice."

"You can't tell anything by looks," replied the guard. "Some of the brightest and handsomest men in the service are spies. This 'un looks well enough but he is a sneaking spy, just the same.'

"How strange! And what do these dreadful spies do? What did this one do?"

"He came to look over our fortifications, so he could tell the Yanks where it would be easiest to break through them and capture the city."

"Oh, dear! you don't think the Yankees will capture Vicksburg do you? If they should, they would kill us all, wouldn't they? Oh, how dreadfully awful it would be!"

"I don't think they will ever take the city; it is too well fortified and too strongly defended."

My attention was soon attracted to three young ladies who were distributing handsome little bouquets to some of the prisoners whom they appeared to know, and I was surprised to see the horrified stare which followed the younger girl's first glance at me. She looked a second time, searchingly, her face pale and startled, then turned away with her companions.

The next day she came back again bringing flowers, and I had a chance to watch her for some moments. She brought me a small bouquet, and when handing it to me accompanied it by a glance apparently full of meaning and yet utterly bewildering and untranslatable.

"Surely," I thought, "I have never seen her before. Not a look, or question, or movement is familiar. And yet she appears to recognize me." The more I thought on the subject the deeper and blinder was my mystification, the more surprising the action of my beautiful friend.

I watched my charming mystery-builder until she left the prison, then turned to the bouquet she had given me. I gave it a close examination. Hidden among the leaves of one of the flowers was a very small note, the paper being almost as delicate as the tissues of the flower leaves. The note said.

"DEAR TOM—I was so startled and horror struck to see you yesterday that I almost betrayed the fact that I recognized you. Fortunately I did not, and now I will try and help you. Examine carefully everything I bring; it may have something useful. Agnes is already almost ill, and I have not dared to tell her. MABEL."

Evidently the young lady thought I was somebody else.

A guard came to my cell after she left and said:

"I saw you were one of the favored ones to-day."

"Yes," I replied, "who is the lady?"

"Miss Murfree—Mabel Murfree."

"Her home is in Vicksburg, I presume?"

"No, Judge Murfree, her father, lived outside, and his plantation was for several weeks in possession of the Yankees. Finally he came here to be in a safe place, and brought his daughters along."

The next day Miss Murfree came again, and when she reached my cell she handed me another bouquet.

I waited until I was free from observation, then examined my bouquet. In the hollow stalks of the flowers was a very small file, a slender but strong steel bar with sharp point, and a little platinum bottle of hydrofluoric acid. The flowers had been carefully sealed up at the bottom to prevent their contents from falling out. Besides the tools for escape was this note:

"DEAR TOM—To-morrow I will try and find out the password from a young officer who visits us. MABEL."

I awaited the result of her effort with painful interest, and when she came the following day and gave me the usual bouquet, I found the following note:

"MY DEAR TOM—The password to-night is 'Cartridge.' If you get out, go to the corner this side of the flag-staff, which you can see from your window, and give a low whistle. A colored man will come from the basement of the tall building on the right and address you as 'Massa Tom.' Follow him and I think you will be safe. May God help you to escape! MABEL."

The night proved an auspicious one for my purpose. It was very dark, and a heavy thunderstorm shook the old jail, so that no amount of filing or prying could be heard. With the acid and the tools I made short work of the bars across my window, and of the irons which fettered my limbs.

I squeezed through the window and dropped to the ground.

I had not gone far when a guard called out sharply, "Halt! Who goes there?"

"A friend," I answered.

"Give the countersign!"

"Cartridge."

"Pass on!"

On reaching the corner, I whistled softly, and in answer a negro came up and said, interrogatively, "Massa Tom?"

"Yes," I replied.

He threw a long cloak over my shoulders, and started up the street at a sharp gait. I followed him perhaps half a mile, when he stopped before a plain brick house, unlocked the door and bade me enter. I had scarcely glanced around the dimly lighted hall before the mysterious "Mabel," accompanied by a young lady taller and darker than herself, hurriedly entered from an adjoining room. They had evidently been waiting for me.

I only heard my benefactress say, "Oh, Tom, thank heaven!" before her companion, with a wholly glad and half hysterical cry, threw her arms about my neck and showered tears and kisses upon me in most embarrassing profusion.

I was utterly dumfounded. Finally, collecting my thoughts, I turned from the excited and half-crying woman I held in my arms to the one I partially knew, and said:

"My dear Miss Murfree, you have saved my life, and I am bound, as an honorable man, to tell you that you have made a strange mistake in thinking you know me!"

"Mistake!" gasped the young lady who had so passionately caressed me. "Mistake! What do you mean? Are you not Tom Atherton?"

"Not quite," I answered; "but if you thought I was he, the mistake is not a very bad one. I am his twin brother Ned."

The surprise and confusion which had overwhelmed me were transferred to the young ladies, and for a moment we all simply stared at each other. Then Mabel laughed and said:

"And so you are that wonderful brother of whom Tom used to tell us."

"Yes, fortunately," I answered.

"And you stood there and let me kiss you without saying a word," Agnes (I found out afterward she was Agnes) said reproachfully.

"You didn't give time to object, even if I had wished to," was my perfectly truthful reply.

"I don't know but that is so," she assented. "But, Mabel, what shall we do with him?"

"I am entirely in your hands and will do whatever you wish," I said. "If my being here will endanger you in any way I will try and get through the lines to-night."

"You will be much safer here," Mabel said. "We owe it to you to do whatever we can for you."

"Owe it to me!" I said, "for what?"

"For your brother's sake. He saved my sister's life and protected our property from destruction and us from insult. He is the best and truest man that ever lived, and we can not do too much for his brother."

I was compelled to keep a dark retreat only a part of the time, and several hours each day were spent with Judge Murfree or his daughters.

Mabel Murfree had saved my life, and the gratitude I felt was perhaps enhanced by the fact that she was a rarely beautiful woman.

After weary weeks of siege, the city was captured, and the soldiers of Grant and Sherman entered it in triumph, and I was free.

When the time came for me to go, having said good-bye to Judge Murfree, I went to the parlor to see Mabel and Agnes, feeling how hard, how very hard it was to say farewell; and when I saw Mabel dressed in pure white, with white flowers in her beautiful hair, her cheeks flushed with excitement, and her deep blue eyes unwontedly bright, the duty was not made any easier.

"Agnes is writing a letter to Tom for you to deliver," she said as I entered the room. "She will be down in a few moments."

"I am quite willing to wait," I replied; "and, indeed, I am sorry that I must go at all. I do not expect to ever again find such friends as I have found here."

"You must thank your brother for them," Mabel answered.

"Miss Murfree, Mabel, you wish to rob your act of saving my life of any personal significance; you do not want me to be misled by the gift of my poor life to ask for that which can make it valuable. I refuse to be warned. I love you, Mabel—love you madly, hopelessly—love you as I never thought to love any one; and while I dare not hope that you will return my love, I could not leave you without speaking. Forgive me if I have pained you; but it was impossible for me to go away without telling my love, and you will at least be fortunate in the fact that an opportunity will not soon occur for you to be troubled again by one whose love was stronger than his fear of offending."

Tears trickled through the long dark lashes, then, half-smiling through her tears, she lifted her brave, clear eyes to mine and said:

"And what if I insist on your remaining to repeat your offense!"—H. F. Marsh, in Once a Week.

San Francisco Fashion Letter.

[Written for the RURAL PRESS by MARIE EVELYN.]

SAN FRANCISCO, Feb. 20th, 1892.

DEAR DAISY:—A cynical French writer has observed that there is something not absolutely displeasing to us in the misfortunes even of our friends. Without going so far as this, we must own to a feeling of complacent satisfaction on hearing from Paris that they are still complaining bitterly of the severe weather, still devising winter dresses and fur lined wraps; while here the tokens of spring greet us at every step. The store windows are full of spring goods; violets are being sold at all the street corners and in every milliner's store, only the milliners have introduced purple varieties unknown to the horticulturist, particularly in the cheaper kinds which many people patronize, in order to afford to discard them at the end of a month.

By all means be in fashion with us here, and wear a bunch of violets, but let it be in a hat containing neither fur nor feathers, for although many people are now combining the spoils both of the animal and vegetable kingdoms on one piece of headgear, it is not considered good taste to mix flowers and feathers. Some of the new spring bonnets are charming, though so small and transparent as to be a covering to the head in name only. Hats on the contrary, are worn very large.

Many of the new bonnets are composed entirely of flowers, others of jet, or of lace and jet trimmed with colored bows or sprays of flowers.

As for the crowns, they are often to small to fit a good sized doll, and make no pretence to going onto the head, the brims, small as they are, being ridiculously large in comparison. Most bonnets have narrow velvet strings, crossed at the back in a variety of ways, and as this draws attention to the back of the head, the hair is dressed in elaborate little rolls and puffs, coiled in braids, or else crimped and arranged in a knot ornamented with a dagger or some fancy pins.

The long clinging skirts, that look so graceful, prove very expensive wear, as they fray out rapidly and gather up mud and dust. To obviate these disadvantages, most of the dry goods stores are now selling a rubber lining, about an inch and a half deep, edged with velvet of shades to match almost any dress. Sown inside the hem of the skirt this lining is a great protection and when worn out can easily be renewed, as it is very cheap.

Cloth skirts are made without any foundation, and are lined throughout with thin silk or muslin. A French correspondent tells us that for cloth-made garments the ultra fashionable color is green. In fact green is the color of the season for anything made of cloth.

Costume dresses are certainly the most in vogue for street wear, particularly with a surah silk vest of the same color or one that harmonizes well. This is a description of one gown. Soft dove colored cloth, with a long clinging skirt, trimmed with three bands of silk to match. A long coat of dove colored cloth, open at the front, shows a vest of olive green surah, drawn in at the waist by a ribbon of the same color. The bonnet is of jet, trimmed with three bands of olive green velvet, a black aigrette and black velvet strings, the gloves of dove-colored undressed kid.

Some of the new spring goods are extremely pretty and delicate, particularly those in challies and in surah silk. Flower patterns upon a black or neutral ground are extensively shown, so if you have any old-fashioned flowered silks, of your mothers or your grandmothers that went out of fashion years ago, this is the time to have them made over.

MRS. ANNIE BAXTER was some months ago elected County Clerk of Jasper Co., Mo., by a large majority. The defeated candidate, Julius C. Fischer, contested the election, claiming that women are not eligible. The Circuit Court at Springfield, Mo., on Jan. 27th decided in favor of Mrs. Baxter, and condemned Fischer to pay the costs of the contest. Mrs. Baxter is very popular in the county, and the case has excited much comment.

The Eldest Sister.

How much the world owes to the oldest sister in the home, writes T. De Witt Talmage in his department in the *Ladies' Home Journal*. Born while yet the family was in limited circumstances, she had to hold and take care of younger brothers. And if there is anything that excites my sympathy it is a little girl carrying round a great heavy child, and getting her ears boxed because she cannot keep him quiet. By the time she gets to young womanhood she is pale and worn out, and her attractiveness has been sacrificed on the altar of sisterly fidelity, and she is consigned to celibacy, and society calls her by an ungallant name, but in Heaven they call her Mariam. In most families the two most undesirable places in the record of births are the first and the last, the first because she is worn out with the cares of a home that cannot afford to hire help, and the last because she is spoiled as a pet. Among the grandest equipages that sweep through the streets of Heaven will be those occupied by sisters who sacrificed themselves for brothers. They will have the finest of Apocalyptic white horses, and many who on earth looked down upon them will have to turn out to let them pass. And this leads me to the thought: Let sisters not begrudge the time and care bestowed on a brother. It is hard to believe that any boy you know so well as you do your own brother can ever turn out anything very useful. Well, he may not be a Moses. There is only one of that kind needed for six thousand years. But I tell you what your brother will be—either a blessing or a curse to society, and a candidate for happiness or wretchedness. He will, like Moses, have the choice between rubies and living coals, and your influence will have much to do with his decision.

What Gain?—Lilian Whiting, in the Boston *Budget*, commenting on the assertion that the woman suffrage movement has made no gain, says: "Compare the status of woman in the closing decade of the 19th century with that of its early half! Colleges are built for her; the higher education beckons and entreats her to enter into its golden land; occupations are open to her; the arts and sciences and professions are as hospitable to her as to men. She has even outlived the pioneer days when she was pointed at as eccentric if she chanced to prefer independent self-support to being a burden on others, or being driven into a *marriage de convenance*. It is now as honorable—as womanly, even—to be a doctor as to be a drudge, to be a scientist as a seamstress. The world is before her where to choose; and all this, whose summary would require pages, may be condensed into the terse little phrase of achieving individuality. And this is the present gain which woman suffragists may claim—the gain of having educated and elevated and exalted womanhood,"

Miss Amelia B Edwards, the Egyptologist, has been accorded a pension on the civil service list of the British Government, "in consideration of her services to literature and archæology." This honor comes at a most opportune time, for Miss Edwards is still confined to a sick bed, having never entirely recovered from the accident which befell her towards the end of her lecturing tour in this country nearly two years ago.

Young Folks' Column.

The Boy's Stratagem.

[Written for the Rural Press by Minnie W. Edwards]

Concluded from last week.

"Not the least bit, truly Mrs. Norton, but maybe we'll not be in till late," and Ross was off before his words were fairly heard.

With nightfall came rolling in from the sea, a dense fog, such as often comes in summer in California, all over the country around the Norton's ranch, which was about fifteen miles from the ocean, and the wind howled dismally 'round the old barn, shaking its loose irons, and the fog gathered on the roof and trees and dripped, dripped down in a lonesome, dreary fashion, while in the barn could be heard only an occasional movement of the two horses which the boys had tied in their stalls as usual.

Out of the mist and gloom,—it seemed about midnight—there slunk noiselessly up to the barn door on the side of the stalls, two hulking figures looking like giants in the fog, their slouch hats drawn down over their eyes, and gently unlatching the door, felt their way in to find the steeds they expected to ride that night.

Where were the boys? Had their courage given out and their valor vanished? It would soon be too late to save the horses.

"It's a durned quare schmell here anyway," said the Irishman, as he groped around to untie the halter rope. "Dot's so," echoed Dutchy, who acquiesced in everything, even to committing a crime, and he would have thought it still queerer had he lifted his head and seen the ghastly looking object that sat on each horse, with its left legs resting on the horses' necks, so as not to be touched by the would-be thieves, who each one led a horse out, and no sooner were they outside than a large, cold, wet hand was gently drawn 'round the cheeks and necks of the two tramps by the boys (who as you may have surmised, were the ghastly looking objects that now straddled each horse), and as that caused the thieves to look up with a cry, of fright, they beheld terrible looking creatures with bright glowing horns, glistening ribs and gleaming eyes, that stared and glared at the two rascals till they were almost unable to move, and Jim forgot about the strength of his boasted "foine phist," and rolled on the ground in an agony of fear, while Dutchy was flat on his face muttering, "Himmel, himmel!" as the nearest approach to a prayer he could remember. Each boy now prodded up his particular tramp with a pitchfork they'd provided themselves with, so that Jim and Dutchy were soon rolling, stumbling and endeavoring to escape their foes; bumping into trees, falling over stones and piles of boards, crying, "Holy Moses," and "Dunder unt blitzen," till the boys were choking to laugh, while urging the horses on and using their weapons at every opportunity. They were now out in the grove, and the dogs having joined in the fray, the confused tramps felt they were chased by numberless demons, and soon were over the fence into the county road, but as the boys had left the gate open purposely they were able to follow them up the road, prodding them when within reach; each punch of the pitchfork bringing forth a terrified howl.

When the first crossroad was reached, however, the boys slackened speed, and then with a dash turned up it and were on the way to the rear road of the ranch, while the tramps did not dare to look behind for some time after the prodding had ceased, and when they did, were positive they saw their bony enemies vanish in the fog, and so ran another half-mile to get well away, their superstitious fears and guilty consciences urging them, when, thoroughly exhausted, they sank down under shelter of a fence, with frightened eyes staring fixedly down the road. Finally Jim whispered, "Did ye moind thim horns," at which Dutchy howled more like a puppy than anything else, "and thim eyes" (another howl), "and did ye say the ribs of 'em and the strake o' fire that was behoind 'em, and did ye fale the ridhot irons they stuck into us." "Ow, wooh, wooh!" a smothered howl from Dutchy, "und dot colt hant, oh himmel!" "Bedad, that was enuff to freeze yer marrer," and so the tramps whispered, enlarging on their experiences till sleep overcame their flight, and they slept to awake the next morning sore and stiff with cold and the race they had had "wid the auld one himself."

Meanwhile, the boys had returned to the barn, rubbed the horses down and fed them an extra allowance of grain, and shedding their ghostly rags and donning their clothes, made their way to the house and found Mrs. Norton waiting for them at the door, wondering at their absence and at the noise in the barnyard. No sooner had the boys reached her, than she exclaimed, "What is this frightful odor, and what have you been doing?" and though both Phil and Ross had determined not to relate their adventure till the next morning, for fear of causing Mrs. Norton a sleepless night, they could not resist the temptation, and between horses, tramps, pitchforks, barn-sheets and confused words, breathlessly uttered by both boys at once, it was some time before Mrs. Norton could make head or tail of their story. "And we put the pillow-cases over our heads and tied the corners up like horns and rubbed them with phosphorous from one, and made holes for our eyes, and false eyes above in phosphorous from the other, and streaked our underclothes with it, too, to look like bones, and we each had one of father's old working gloves on, well soaked in cold water, and ho, ho! ha, ha!"—and the boys had to stop, and nearly doubled up with laughter at the fright of the two tramps, and their grand success at playing ghosts.

"Here's all that is left of the sheet. We tore it in pieces smeared more phosphorous on them, of course, and we tied a piece around our necks so it flew out behind us when we rode; and I don't wonder one bit the tramps were frightened, just too, when they thought they were having everything their own way, and could simply walk off with the horses."

"You must have been terrifying-looking objects," said Mrs. Norton, "especially to those scamps, and I think the sight must have been worth seeing, though I'm just as well pleased I knew nothing of it; but while I wondered at the noise continuing, I thought you must be romping with the dogs, and had a good scolding ready for you when you should come in for staying out so long such a cold, foggy night as this is!"

"Well, I guess you won't scold us now, will you, little mother, for you see you were well taken care of to-night? But my! I'd have felt terribly to have had father come back and have found those horses stolen!"

"How did you come to think of rescuing them in such a way?" asked Mrs. Norton.

"Well," said Ross, "Phil thought up some, and then I suggested some things; but I think the Dutchman's talk about the ghost put the idea in both our heads. Just for a moment, though, while the men were fumbling at the door, I did feel somewhat frightened; didn't you, Phil?"

"Yes," acknowledged Phillip, "I did feel shaky; but so soon as they were inside, and the fun commenced, I was too excited to think about being afraid. But the smell was so like garlic and so horrid it made the horses uneasy, and we both concluded *we* didn't care about going to that 'lake of fire and brimstone.'. We were all settled on the horses some time, of course, before the tramps came, so we had a good dose of it, and were glad enough to get out in the air again!"

"But oh, my dear boys, you have run such a risk! Suppose they'd been armed! And don't you know that phosphorous is very dangerous, though of course the ordinary phosphorous sold has to be aduiterated? Still, it is dangerous to play with, and you might have set the hay on fire!"

"We were real careful, though, mother, for I knew it was risky; but we were so anxious to get ahead of those wretches. And as to their having pistols or anything, I knew that sort didn't keep anything they could sell for whisky. Besides, we were armed and had the advantage of being mounted," and Phillip went to hang the ghostly rags out in the air, for as Mrs. Norton said, they savoured too much of the geysers to be pleasant.

"And you were prancing around in your underclothes!" suddenly exclaimed Mrs. Norton. "Goodness! I have been so upset myself, I just realized it. And now, there's plenty of hot water, so take baths, and I will get you clean clothes, for I'm dreadfully afraid you'll both have severe colds, and I feel too proud of you both to allow that, even after such an escapade."

And when the boys were refreshed from their baths, they found a delicious hot lemonade awaiting them; and as Mrs. Norton hovered over them, attending to their comfort, they talked over their impromptu "surprise party," and felt quite like heroes.

The next day when Mr. Norton returned from the redwoods, he commended the boys so heartily, and was so proud of their well-laid plan, that they were both quite elated, and had a "surprise party" of a pleasant nature given them, when Mr. Norton presented them each with a fine bicycle, thus showing a practical appreciation of their wit in outwitting the tramps by the success of their well-planned scheme.

Domestic Economy.

Tough Meats.

[Written for the Rural Press by Mrs. M. B. P.]

[*Concluded from last week.*]

Beef a la Champignone.—Take a piece of beef weighing about five pounds and fry it quickly, turning it that all sides may be browned. Take it up and put it in a kettle, dredging it with salt, pepper, a teaspoonful of ground mace and half a teaspoonful each of cloves and cinnamon. Cover the meat with cold water and stew slowly, keeping it closely covered for three hours; then add a third of a cup of mushroom catsup and simmer half an hour longer.

Stuffed Beef.—Take a round steak. Mix together one-quarter of a teaspoonful of pepper, one-quarter of a teaspoonful of nutmeg, one-half teaspoonful of allspice, one teaspoonful of salt, one-quarter of a teaspoonful of cloves, one tablespoonful of minced parsley, one cup of bread crumbs and one tablespoonful of melted butter. Spread this mixture over the meat, roll and tie with twine. Put it in a saucepan and cover with the following gravy: Put a tablespoonful of butter in a pan. When brown, add a tablespoonful of flour and stir until smooth, then add one quart of stock. When it boils, add one tablespoonful of tomato catsup, one tablespoonful of mushroom catsup, one tablespoonful of Worcestershire sauce, one onion minced and one bay leaf. Pour over the meat and simmer gently three hours. Take out the meat, put it in a pan with a little of the gravy and brown in the oven.

Rolled Beef.—Take a round steak and spread over it one-half cup of finely chopped ham, mixed with one egg, a dash of cayenne and a tablespoonful of parsley. Roll the steak and tie with twine. Roll it in flour. Have some hot fat in a frying pan, put in the steak and brown it on all sides. Put it in a saucepan. To the fat in the frying pan add two tablespoonfuls of flour and one pint of hot water or stock. Stir until it boils. Pour this gravy over the rolled steak. Add a small onion, a sprig of parsley and a bay leaf. Cook gently for two hours.

Beef Braise.—Take a five-pound piece of rump of beef. Dredge on all sides with salt, pepper and flour. Have some hot fat in a frying pan. Put in the beef and turn frequently that all sides may brown. Take it out and put it in the braising pan, with two thin slices of bacon under it and a slice on top. Put in the pan with it a large onion sliced, a sliced carrot, six whole peppers, four cloves, a pinch of thyme and a cup of stewed tomatoes. Add a pint and a half of hot water or stock, cover and simmer for three hours, turning it several times. This is very nice, served surrounded by a macedoine of vegetables.

Chopped Beef.—Take a pound of coarse, uncooked beef, chop it fine. Put one tablespoonful of butter in a frying pan, and when hot, add a small onion minced, and cook until a light brown. Then add the meat and a tablespoonful of chopped parsley, some salt and pepper. Cook about five minutes, stirring constantly. Add half a cupful of hot water or stock, or if you have any gravy use it. Cook about ten minutes on the back part of the stove.

Veal a la Jardiniere.—Lay a scrag of veal in a pot. Over it lay a sliced turnip, a sliced onion and two tomatoes, quartered. Sprinkle with salt and pepper. Add a cup of water or stock, cover and simmer gently one hour. Then turn the meat and simmer another hour. Serve on a hot dish.

Ragout of Veal.—A piece of the breast is very good for this. Roll it in a neat shape and tie it. Dredge with salt, pepper and flour. Lay in a stew pan and just cover with stock. Season with a small blade of mace, a sprig or two of dried herbs and the rind of a lemon. Simmer gently about three hours. Take up the meat, strain the gravy, return to the pan and thicken with a little flour. Let it boil up, then serve poured over the meat or in a gravy tureen, as preferred. Vegetables may be stewed with the meat, if desired.

Veal Cakes.—Take two pounds of veal and chop very fine. Add to it one-half cup of crumbs, one-fourth of a teaspoonful each of sage, summer savory, sweet marjoram and thyme, add half a teaspoonful of pepper and a generous teaspoonful of salt, half a cupful of stock, two eggs, well beaten, and three tablespoonfuls of butter. Mix these ingredients thoroughly and divide into ten parts, which form into oblong cakes. Beat an egg, and after dipping the cakes in the egg, roll them in half a cupful of crumbs. Place the cakes in a baking pan. Put two tablespoonfuls of butter in a frying pan, and when it begins to brown, add a heaping tablespoonful of flour and stir until dark brown. Now add a cup and a half of stock. Boil up and season with a scant teaspoonful of salt. Put the pan of cakes into the oven and cook half an hour. At the end of the first ten minutes, baste with the sauce and baste every five minutes afterward. Arrange the cakes on a warm dish. Scrape all the gravy from the baking pan into the sauce. Let it boil up once and pour over the cakes.

Veal a la Creole.—Take a rough piece of veal. Dredge lightly with salt, pepper and flour. Lay in a stew pan the bone side down. Just cover with rich stock. Add a sliced onion and three tomatoes sliced. Cook slowly for three hours, turning several times. The last time, lay the meat side down. Cook until the meat browns and the gravy is a thick brown glaze. At this stage, it must be carefully watched or it will burn.

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ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 5, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

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☞ *See Advertising Columns.*

The Week.

This week the RURAL dons a light mohair duster and goes south to attend the Southern Citrus fair in Los Angeles. Readers who receive their papers a little ahead of time this week, and clad in its gray traveling garb may at first not recognize an old friend, but look inside, and no doubt will remain—the heart is the same whate'er the garb and the season. We trust to greet at Los Angeles a host of old friends with whom we enjoyed the citrus fairs of the last decade; also a host of new friends whom the grand growth of the South has brought within our circle.

Now that California is advancing so rapidly; now that the old plains and mesas are becoming almost obscured by an overgrowth of orchards, vineyards, and flourishing towns, memories of the past are becoming more and more precious. But happy is the one who knows the past without overpraise, and the present without disparagement. The West seems to give even to its oldest votaries a renewing youth which keeps them infused with the spirit of the progress until the end. In their love and loyalty to the State of their adoption, they sing as Tristam sang to Isolt: "new life, new love to meet the newer day."

California Citrus Fairs.

We believe that the citrus fair is a California invention. There were no doubt very fine displays of fruits from trees of the citrus family long before California achieved a reputation for Hesperidian apples, but special fairs for this line of production, in the manner and for the purposes which have characterized them, originated in Southern California about twelve years ago.

The first exhibitions did not, of course, present much more than a promise of the extent and elaboration which have since been attained, but no one who participated in them can ever forget the spirit which marked them or the indescribable interest which they awakened. They were revelations not alone to the sojourner who visited them, but to those who actually participated in the displays. The growth of citrus fruits as an industry, inviting considerable investment of effort and capital, had but just been entered upon. There were such fruits produced, in respectable quantities for the period, in mission and pioneer orchards, but in the oldest of those colonies which have now become rich and famous through citrus products, only the very few first-planted trees had begun bearing fruit. The majority of the orchard owners at the fairs had as yet not plucked a single orange from a tree of their own, and had never seen a collective display of citrus fruits. Their hopes, expectations and money were all in the business, but they had never seen collections larger than those of the fruitstands in city markets. It is easy then to imagine how they were entranced by the result of their own efforts to secure such displays as the first citrus fairs brought to light. With what pleasure they contemplated what then seemed vast expanses of gold and green; with what interest they studied the varieties shown, and with what enthusiasm they listened to recitals of production and profits. The nuggets of '49 found not brighter nor more longing eyes than the globes of thirty years later.

Thus it appears that the educational value of the citrus fair was clearly recognized and was the moving force in the earliest exhibitions. Local emulation was also a factor then as it has been ever since, but the feeling was milder and better humored than it has been on some later occasions. The boom years at the south and the consequent intense local rivalry made it for a time apparently impossible to hold general citrus fairs, but very fine local shows inflamed local pride and entranced visitors. The educational features, though ever existing, were subjugated to local glorification and property interests. Nor were these characteristics lessened, but were rather heightened by the uprising of citrus exhibitions in the upper half of the State. Under the forcing heat of these contending interests, California citrus fairs became horticultural tournaments, and were almost wholly given over to means and methods which were thought best calculated to attract and enchain the public interest. Horticulture as an art was almost forgotten; horticulture as a favorite of mammon was bedecked and bedizzened and decorated to catch all, for devotees, who had gold in their hands. But, fortunately, there could not be much progress in pursuit of wealth in the line of citrus production without knowledge, and though the fairs were less contrived to teach, they indirectly increased the general information on the industries which had to deal with evergreen fruit trees, and thus discharged an honorable mission.

It was but natural, perhaps, that the feverish impulse to attract the eye and grasp the purse should carry our citrus fairs not alone into an excess of decorative features, but into a strained and grotesque style of decoration which has offended good taste and has crushed art beneath the heel of artisanship. The most fearful and wonderful contrivances which could be given a shell of impaled fruit or could be covered, by aid of nail and glue and twine, with anything which existed on the face of the earth, have been allowed to replace natural and tasteful arrangements of fruits and flowers and foliage. The admirable has been sacrificed to secure the spectacular.

Fortunately, there is indication that this era of the citrus fair is near its close, and that in the future there will be a return to the truer ideas which actuated those who called such exhibitions into existence and were delighted and educated by them. As we have made most notable progress in citrus production, as we have tens of thousands invested where there were but hundreds, and more varieties to discriminate between than there were once individual growers to exercise discrimination, it is imperative now that our citrus fairs should move upon a higher plane and should be conducted upon the highest lines known to those who are experts in industrial exhibitions. The booms are, we hope, all over; the claims of localities, so far as they can be made known by dissolving views, are recognized. What we need now is the closest study of the arts of production and marketing and the means and materials with which these arts have to deal. As the fairs are now provided with State money, there is perhaps the greater reason why the true and high interests of the commonwealth in this direction should be studied by the managers of citrus exhibitions. Let us then see to it that in the future the fairs shall determine which are the best fruits, what climates, soils and methods best produce them, and in what way they can be best brought to those whom they are to nourish and invigorate. And while all these invaluable considerations are pursued, let the splendid display educate the people in the recognition and appreciation of the beautiful in art. We are glad to see that the forecasts of this week's fair at Los Angeles promise something in the directions noted.

There is another and a special reason why California citrus fruit producers should learn as much as possible from the fairs of this and next winter. The World's Fair at Chicago will give the citrus interests of this country, and perhaps of the world, a more close and careful scrutiny than these interests have ever before experienced. Boom displays will not win there. There must be the most discriminating selection of material and the most effective arrangement of it. All that we can learn by experience in this direction will be to our advantage in the contests which are coming. It is also important that the best methods of judging citrus fruits should be practically demonstrated. Valuable work has already been done in this direction by Californians, and will be continued this week at Los Angeles. It is to be hoped that there may be representative Floridians present who can participate in the trial of the California plan. There should certainly be, next winter, or sooner if practicable, an attempt made to agree upon the points which are now at issue between the chief orange-growing States. It is in the adjustment of all such matters, and in the incidental advance in knowledge, which we can all gain by participation in their adjustment, that our citrus fairs, properly conducted, will prove a potent factor in our progress in the art and science of horticulture.

IRRIGATION EMULATION.—It seems from current items that there is so much enterprise and so much water in Kern county that rival water-kings are striving for land to pour them upon. It is said that Haggin & Carr, who own 400,000 acres of land and claim the majority of the water in Kern county, have consented to permit a branch to be constructed from the Kern Island Canal, which will irrigate about 50,000 acres of land next to Bakersfield that has heretofore been held as a desert. They have evidently been stimulated to this by the energy of the officers of the Kern River Canyon Water Company and the Doherty or Baldwin people, who are about to construct their irrigation scheme that will irrigate the noted wood patch country and would cover both systems. Here they are then fairly pouring water on top of each other. This ought to make the desert blossom, surely.

THE CONDITION OF AGRICULTURE.—So we are to have our agricultural condition inquired into! The U. S. Senate is likely to authorize its Committee on Agriculture to make general investigation for the purpose of ascertaining the present condition of agriculture in the United States. This is an eminently respectable thing to do. The English parliament did it a few years ago, and if our memory serves us correctly, the royal commission advised the farmers, in view of the vast imports of American beef, to give greater attention to the home production of plum jam and nosegays, for in those lines there was a long-felt want of supplies. We wonder if our Senate can make such a fragrant and deliciously practical report. We shall see.

PRODUCTION OF FLAX.—The Superintendent of the Census has sent to the press a bulletin on flax productions. It shows the total area of land devoted to its cultivation in the United States in 1889 to have been 1,318,698 acres; production of flaxseed, 10,250,410 bushels; production of fiber, 241,389 pounds; the amount of flax straw sold or so utilized as to have a determined value was 207,757 tons, and the total value of all flax products, $10,436,228. Although flaxseed is reported from 31 States, Minnesota, South Dakota, Iowa and Nebraska produced 80.06 per cent of the total amount.

A SQUARE MILE OF LEMONS.—One of the big things in the air, with reference to citrus fruits, is the report which comes from San Diego that John S. Hill of East St. Louis has purchased 640 acres of land near Oceanside on the Escondido branch of the Santa Fe road, and proposes to plant the largest lemon orchard in the United States. Nearly all the 640 acres will be planted to lemons. Present estimates show that the planting of orange and lemon trees this season will be the greatest ever done in San Diego Co.

LABOR DAY.—Governor Markham has informed the Committee of the Sacramento Federation of Labor that he had decided to declare Labor Day, the first Monday in September, a legal holiday.

The State Press.

San Benito *Advance:* "The recent Legislature adjourned with a notorious bad record. As a political body, it was rotten to the core. The single redeeming feature about the "Legislature of a thousand scandals" was its adoption of the Australian ballot system."

Santa Rosa *Republican:* "Many of our best timber lands are the property of the railroad companies. In their sale no provision is made for forest protection and in consequence there is a reckless destruction of timber. The title in this property being absolute when it is conveyed to private parties, the State is powerless in its efforts at forest protection."

Sonoma *Democrat:* "Now is the time when an organization can be started at the least outlay of capital. The merchant, producer, capitalist and laborer all have a common interest in promoting it. The merchant spares no pains to secure the trade of the producer, upon whom he depends for the profit of his business, and if he helps the producer he certainly benefits himself."

Gonzales *Tribune:* "As long as the land of this State is owned and controlled by absentee landlords and speculators, its further development will be uphill work. Land monopoly is the greatest evil the people have to contend with, and any remedy which may be proposed as a means of getting rid of this curse of California, should be carefully studied by every good citizen, and, if found to be legal and just, should meet with their hearty approval."

Petaluma *Courier:* "It is easy enough to get appropriations to build costly buildings in San Jose, Stockton, Los Angeles, Oakland and San Francisco. It is no trouble at all to get four or five million dollars to improve San Pedro harbor, but it will be a long time before we can get a million dollars to improve the San Joaquin river. And yet the improvement of the San Joaquin river would be a thousand times more valuable to the entire State than San Pedro harbor."

Porterville *Enterprise:* "A man may buy a load of hay and decamp without the intent of paying for it; a man may buy a beef, eat it, and run away without intent to pay for it; a man may buy a suit of clothes and surreptitiously remove with the intent not to pay therefor, and he cannot be prosecuted under any of the provisions of the penal code. Then why should we favor a hotel man, a lodging-house keeper or a restauranteur more than we do a farmer, a butcher or a clothier? The law is not equitable nor just on that point, as it does not treat all alike and should therefore be repealed."

Experience With the Silo.

Recalling the fact that Mr. E. Meeker the well-known agricultural writer of Puyallup, Washington, two or three years ago made a series of practical trials with the silo, the editor of the Rural a few days ago asked him to give the results of his experience. In response he writes from Puyallup as follows:

When I sold the dairy and moved from the farm, the inspiration of the agricultural writing left me and my thoughts drifted into other channels.

I thoroughly believe in the silo, but some enthusiastic writers have extolled its virtues too high. Ensilage has its value in accordance with the intrinsic value of the material used. For instance, if you use corn, sown thick and without ears, the feed will be inferior to that better matured, just as the same would be without going into the silo. For milk cows in particular, the same material in ensilage is better, and a given quantity will give better results than the same preserved in the ordinary way.

Your correspondent is right when he says that corn ensilage is best when there are ears on the stalks nearly matured.

I did not cut my ensilage as usually practiced, but stored the crop uncut, just as it came from the field. We took good care to tramp down well on the outer edge next to the wall of the silo. Corn was found to be the best, red clover next, then oats; either of these crops made good ensilage.

I formerly looked upon ensilage as a food that must need be used promptly or else lost. The east barn on "riverside" was burned and what ensilage was left in the large silo destroyed; that left over in the smaller silos at the west barn was not finaly all fed out until the second winter, or rather until the ensilage was over two years old. Some heifers were wintered on this, 13 in number, and came out slick and licking their sides in the spring. The ensilage was *still warm* in the silo, although, as I said before, was still over two years old.

I have no doubt but in a dry climate, the pit silo can be used with success.

Advice as well as Criticism.

Atwater, Merced Co.

To the Editor:—I notice an article in your columns from some one in this locality who writes over the *nom de plume* "Wanderer." He severely condemns the manner in which grape vines are pruned here, but he fails to instruct us how it should be done. Now, there is very little comfort in being told that we are on the wrong road when the right road is not shown us.

We have here at our district schoolhouse a lyceum which meets every Saturday evening. Debates, recitations, dialogues and essays are among the order of exercises. There was an article in one of our county papers condemning the manner in which these meetings are conducted and signed "Wanderer," doubtless the same Wanderer. Now, what we wish to say to Mr. Wanderer is this: If you know anything worth telling about pruning vines or running a lyceum, out with it! We have had satisfactory results for our manner of running both these institutions, but if you know of anything better, let us have it. Either offer something better or keep silent.

On the 22d inst. there was probably the largest congregation ever known at our schoolhouse. It was the occasion of the flag-raising. It was certainly a grand occasion, and our children certainly have been inspired with love and respect for the star-spangled banner by the eloquent orations of Hon. J. W. Breckenridge and their teacher, Mr. Rector. W. T. K.

[The point is a good one, and our publication of "Wanderer's" musings was for the purpose of drawing out from him and others a discussion which would show whether ruling practice could be improved or not. Sometimes it takes just such a provocation to draw out the facts. Let them come. Ed. Press.]

The Mission Fathers.

North Temescal, Feb. 20, 1892.

To the Editor:—The old Catholic missionary padres, who so successfully undertook to christianize the Indians of this coast, were not mercenary, and yet, in the Rural of this date, you convey the impression that they were, by stating in your notice of the "California Building at Chicago," "their (the padres) idea was to convert the Indians and incidentally take possession of their horses and lands."

Now this would make the priests no better than robbers, yea, even worse, for it would be using the sacred circle of Rome to help them in their iniquity. But the facts prove far the opposite. They were not mercenary, as I stated at the beginning. They were a body of men, as are all Catholic missionaries (and I am charitable to believe all other missionaries without regard to creed), who left home and fatherland to comply with that command of Christ saying "Go teach all nations." They went among the Digger Indians of this State, as they had gone among the more savage ones of the Southern States, as well as the Northern States and Canada, with no other weapons than the Scriptures in one hand and the cross (the symbol of Christianity) in the other. It was with peace on earth, good-will toward men," that they wished to win the savage to a better, a higher life. No matter whether it was the Franciscan friar, the Jesuit scholar, or a priest of any other missionary order of the Roman Catholic Church, the same means were used, the same gospel was preached, the same results accomplished—and all without cheating the poor Indian or teaching him how to drink firewater, as our Government agents have too often done, and, I may truly say, without shedding one drop of the Indian's blood.

Precious few, if any, were the horses the Californian Indians had when the padres set foot at any of the places which they chose to establish as missions. In reading the history of these missions, we find that the live stock of each new mission was brought from some of the missions, those nearest to the new one being usually the contributors, and that each one contributed according to its means. So from this it can be seen that the horses belonged to the missions and not to the Indians, therefore they could not be *incidentally* taken away from the Indians. Another thing, horses were not of much account at the missions. Cattle and sheep were the stock desired, and these were raised in great numbers. Their carcasses could be turned into money by being stripped of the wool, tallow or hides, while the horse's carcass was more ornamental than useful.

Nor are you right in saying that the priests were fishing, so to speak, to strip the Indians of their lands. The missionaries, as I have already stated, do not do such things for one reason, and also for the fact that the land was claimed by the Spanish or Mexican Governments, and if the priests wanted the land they would get it from the Government for the asking. They were not so ignorant nor criminal as to steal it from the natives. No, it was reserved for the whites—the Americans, as the Mexicans call them—to do the stealing, for we have seen too forcibly, by the innumerable land litigations in our courts in years now past, how the Spanish or Mexican owners of the land—men who were, in many cases, decendants of the Indians—were deprived of their patrimony by the greed of the people who flocked to this coast shortly before or just after the discovery of gold at Coloma. Yes, the land was unjustly stolen from many of those old families, and too many of them have since died in the poor-house and lay in graves unhallowed and unwept; and they might have died like lords if thieves did not rob them of their lawful rights.

No greed for pelf nor other of this world's goods can be laid at the early missionaries' doors. If they worked to make their missions rich in wealth, it was for the love they bore the poor Indians, whom they were as devoted to as the Indians were devoted to them. It is said that "he who makes two blades of grass grow where but one grew before is a benefactor to the human race," and there is no doubt of this. Then how greatly blessed must have been the missionary fathers, who not only christianized the California Indians, but made them industrious by teaching them to be citizens and agriculturists. They sowed and they reaped and housed their crops. The vine and the fig tree were planted about the mission door; the palm and the olive were planted in the genial soil of the State, and specimens of these trees set out by the padres' hands can be seen from San Diego to Mission San Jose, if not also at Sonoma and Solano, the farthest north the missionaries went. These men were the true fathers of agriculture and horticulture in this State. It was they who gave us the visible marks that ours is a glorious State, and that it was possible to make every inch of it blossom as the rose. It is to these sturdy missionaries that the agriculturists of the State owe much; it is to them that our agricultural press should sound its praise, for, like the press, were not they proclaimers to the world of the richness of our soil and climate, and was not each mission an agricultural college in itself—an experimental station where the cereals and fruits of the world were tested, some of their tests being so successful that to-day we are reaping the benefit of their grand labors.

Therefore I say, all praise to the Californian World's Fair Commission for honoring the padres by choosing a type of their work—their architecture for California's building at the Columbian Exposition. They were not a lazy lot of monks, as carpers and bigots have said. They were wise men and industrious men, and their work in behalf of humanity in this State will live forever, even if their adobe buildings crumble into dust and pass away, as will all things made by the hand of man. W. A. Pryal.

There was not the slightest intention on the part of the writer in the Rural, referred to by Mr. Pryal, to belittle the work of the body of religious men who founded the mission of California. Their virtues are recognized by all who have read their history, and it is well known that they were the real pioneers of this country, finding it in a state of barbarism and establishing the first settlements. The Rural praised the World's Fair Commission for selecting the type of building which is characteristic of the structures built by the priests who first civilized this section. The remark to which Mr. Pryal takes exception, viz., "that the padres came to convert the Indians and incidentally to take possession of their horses and lands," was made in a jocular spirit and with no malicious intent. At the same time it must be confessed that the padres accumulated a great deal of property and the missions became wealthy, so wealthy that the property was finally taken away from them by the Government. All this is a matter of history. In the preface to Mr. Hittell's "Resources of California," he says:

"The Franciscans held that the chief virtues of life were chastity, celibacy, poverty and abject humility, and the chief duties were the frequent recitation of prayers, the mortification of the flesh, the sacrifice of the passions, and the renunciation of all social pleasures and secular interests for the sake of beatitude in a future existence. Twenty-one missions were founded, none more than 30 miles from the ocean; the first most southern at San Diego, in 1769, and most northern at Sonoma, in 1823.

"The missions were in their best condition in 1814 (after which they were injured by the stoppage of pay and other consequences of the Mexican revolution), but they continued to increase in population and property until 1826, when they had 24,611 Indian neophytes, 215,000 head of neat cattle, 135,000 sheep and 16,000 horses, and harvested 75,000 bushels of grain.

"In 1822 the independence of Mexico was formally proclaimed; and in 1777 the first town was established at San Jose by colonists from Sonora. In 1781 the pueblo of Los Angeles was founded by another party. The rancheros and townpeople never agreed very well with the Mission fathers, who became subordinate in influence to the military and civil authorities soon after the Mexican flag was hoisted. The Indians ceased to obey their teachers, neglected their work, and plundered the mission property. In 1835 the missions were secularized, that is, orders were issued that part of the herds and agricultural implements should be distributed among the neophytes and rancheros, and the remainder should be disposed of for the benefit of the public treasury; but most of the property was soon in the possession of the chieftains and their friends. In 1842 only 4500 Indians remained at the missions, some of which had been deserted by the friars."

From this, it will be seen that considerable property had been accumulated by the fathers, and that it was taken from them. The Indians had been compelled to work at the Missions, very naturally, for civilization really means work. It is true, as Mr. Pryal says, that the Mexicans were badly treated by the Americans after the Americans got possession of the country, in the matter of taking their lands; but it seems the Mexicans had done the same thing to their predecessors. Two wrongs do not make a right, of course, but it seems a case of retributive justice in the end.

As to the remark about the fathers stripping the Indians of their lands, it was true the land was claimed by the Spanish Government, but no possession had been taken until the Mission fathers came. Whether the Indians who were born upon it had a better right to the land, is one of those questions which open up so broad an argument that it is useless to discuss it. It is doubtless a fact that the fathers came here to California in a spirit of religious fervor to christianize the Indians, and not with a desire for this world's goods. But it is also a fact that by the labor of these Indian converts and their own, great wealth was created and possessed by the fathers. The Indians themselves do not appear to have gained any until it was finally distributed among them, by being taken from the fathers, by the Mexican authorities.

The Sour Orange as an Avenue Tree.

No tree makes a more beautiful street or avenue tree than does the Florida sour orange. It is of beautiful shape naturally, and is a strong, vigorous grower, much more so than any sweet orange. It is very hardy and long-lived, and will retain its vigor and beauty for from two to four centuries; and the older it gets the more beautiful it becomes. Many shade trees look handsome for a few years, but as they grow older become an eyesore. Not so with this elegant tree. It has a dark, rich, glossy green foilage, and, being an evergreen, retains its beauty the year round. It bears a medium-sized and very handsome orange, which will hang on the tree for eight or ten months of the year; in fact, the tree has oranges on it the year round, and although it may look very tempting, not even "Peck's Bad Boy" would ever try to eat more than one of them, as they are sour, bitter and astringent all at the same time. So there need be no fear of the tree being molested for its fruit.

What a beautiful appearance would our towns and cities present (especially to the eyes of the Eastern visitors) if our sidewalks were lined with these beautiful trees, laden with the handsome, golden fruit! Were the streets of Sacramento thus ornamented, the tourist and capitalist would at once become enchanted and decide to look no further, but to buy him a home and spend his days (and his money) with us; so that the trees would be not only a source of beauty and pleasure, but at the same time a source of profit. They would add millions to the value of our property and would attract people of culture and refinement.

Now, when we can get a tree possessing all these qualities for about the same money that we would pay for an ordinary shade tree, why should we buy the unsightly deciduous tree that in a few years will become a nuisance and have to be removed? There need be no fear of their not succeeding anywhere in our valleys and foothills, as they are perfectly hardy and have been thoroughly tested in nearly all the different kinds of soil and climates that we have, and have invariably proven a success.

There are many beautiful specimens in Sacramento, and we should plant nothing else for street trees. If we would do this we would have the most beautiful city on the coast, and would double our population and wealth in a short time.—Cor. Record Union.

[We wonder why the writer did not include in his list of charms the fragrance of the blossoms. They are more fragrant even than the sweet orange. But, on the other hand, the objection to evergreen trees in shading streets and roadways in the winter, should not be overlooked. On heavy soils in regions of large rainfall, a row of such trees on the south side of an east and west street will keep the roadway wet or muddy all winter. On north and south avenues the trouble is much less.—Ed. Press.]

Some Suppressed Figures.

Ventura Unit.

When the railroad companies are asked for a trifling reduction of freight rates to enable their best patrons to escape bankruptcy, they plead that not the least reduction can be made without inflicting a loss upon themselves. The falsehood of the assertion is fully exposed by the following statement of the earnings of the S. P. R. R. for 1891, viz.:

During the last twelve months the gross earnings were $50,440,222, exceeding those of 1890 by $2,096,751. The operating expenses were $31,163,769 or $8,666 more than those of the preceding year. This makes the amount of net earnings $19,285,486 or $2,088,085 more than in 1890.

Mr. C. P. Huntington "did not wish these figures published," but they leaked out somehow, and as they correspond substantially with previous statements they are doubtless correct. Nearly 40 per cent of the total income of the S. P. R. R. is net gain, and yet they cannot afford to reduce the freight rate on one product of this county for a period of a few weeks.

CITRUS FRUITS.

The Orange—From Seed to Fruit.

[*Written for the Orange Belt by I. N. Hoag of Redlands.*]

None but seed from natural or seedling fruit should be planted. Such seed has more meat and native vigor and gives greater strength and a better send off to the little tree. In other words it gives the trees a better constitution.

LOCATION AND SOIL.

Select a sheltered locality protected from prevailing winds and cold frosty currents of air for the seed bed. The soil should be a rich sandy loam, of such a consistency that it will not bake or cake after irrigation. If any manure be added it should be leaf mold or old, well rotted stable manure. But if the soil is rich in plant ingredients and does not contain too much clay, better not add any manure. It is better to sprinkle the required manure on the surface of the bed after the trees have made some growth. The soil should be well pulverized at least 12 to 15 inches below the surface. Do not mix the surface soil with that deeper down in the process of pulverizing. Shovel the surface soil off and replace it after the lower soil has been pulverized and leveled. Plant the seed in rows, two inches apart and two inches apart in the rows. Cover them one inch deep with sifted surface soil, and then add about an inch of fine sand or road dust, also sifted. The bed should not be over six feet wide. Enclose it with boards 18 or 20 inches high, or with cloth in place of boards. If cloth is used it should be strong and well tacked to a good frame. Cover with heavy cheese cloth, so arranged as to roll off handily. Your bed is now complete and the exacting care of your infant trees begins. Sprinkle the bed daily, just so much as will keep the soil well moist all through. Keep the cover close to retain a warm moist atmosphere on the bed. In about three or four weeks your little trees will begin to make their appearance, one by one. The stronger seeds come first and keep ahead.

The little trees should have a dark green color from the first. If they have a yellow sickly look, something is wrong. Too much water will give them this appearance. If they keep good color and grow rapidly all is right. If you want to hasten their growth add about one-fourth as much nitrate of soda, or well rotted and pulverized barnyard manure, as you think they can bear and watch the result carefully. Rake the surface of the bed about once a week, keeping the soil soft and pliable. As the cold weather appears in the fall, have the bed uncovered during part of each day, to accustom the trees to outdoor life and prepare them for winter. As cold weather approaches, keep the beds tightly covered nights and cold days, and open, warm, sunshiny days and the trees will grow all winter.

THE NURSERY.

The nursery should also be located in a sheltered place, both from winds and cold frosty currents of air.

The soil should be a rich sandy loam. A fair quantity of old barnyard or sheep manure plowed under, the year before planting, will improve it. Plow deep and pulverize well, but let the last plowing turn the old surface soil on top. Transplant the trees in March or early in April. Set them in rows, four feet apart, and a foot apart in the rows. Make the holes with a large iron dibble and press the soil tightly around the root with the same tool. Conduct water along the rows in shallow trenches as the trees are planted. Let the trenches be on each side the rows, so that the water will settle the soil about the roots, but not touch the stems of the little trees or cover the surface in the rows. After this, water should be applied only by running through deep furrows made midway between the rows by a shovel plow. At each irrigation a small stream should be kept in these furrows till the whole soil is thoroughly saturated. By this method the moisture reaches the roots from below and the surface soil, around the stems and between the trees, remains comparatively dry and hence will not bake or crust. After each irrigation cultivate deep and well, and hoe around the trees, and about a week later follow with a drag or smoothing cultivator, keeping the surface well pulverized as a mulch to prevent evaporation. This mode of irrigation and cultivation sends the roots deep down and secures a strong vigorous growth from the beginning—a habit which the tree will keep up through life and add greatly to its hardiness and value as a fruit producer.

Mere surface irrigation close to the stem of the tree and shallow cultivation induces the starting of mere surface roots, which are in turn destroyed by the cultivator and hoe, and the tree forms a scrubby habit which it will keep up in the orchard, without great care and labor is bestowed and time lost in trying to overcome it.

PRUNING.

As soon as the roots have gained a strong hold of the soil and the stems are throwing out new branches and new shoots are coming up from the roots, the process of pruning should commence. The design of this pruning should be to concentrate all the vigor and growth of the tree into one stem or body and that nothing shall go to waste, and that no time should be lost in getting ready for the bud.

By degrees cut off all limbs or branches lower than about three inches from the ground and keep down all extra suckers starting up from the roots. Rub off all new shoots below this point as soon as they make their appearance.

By judiciously following up the above methods you will have your trees by fall large enough to bud, and the bodies will be smooth and ready for the operator.

BUDDING.

There are differences of opinion as to whether spring or fall budding is best. Either is good enough if successful. My own practice has been to bud two-year-old stock in the spring, and my practice has been followed by very satisfactory success. Those who follow a different mode of irrigation and cultivation and allow the tree to form shrub habits the first year in the nursery, generally bud in the fall after the trees were two years old in the spring. Trees thus treated are ready for transplanting from nursery to orchard when they are four years old from the seed, while mine are ready at three years from the seed and have the advantage of a year in the orchard—their life home, where they are to produce a revenue, or do business for their owner. I believe it is the general opinion of experienced nurseryman and practical fruit growers, that the younger younger a tree reaches its permanent home in the orchard the better. This is certainly the theory and the practice as to all deciduous fruit trees and ornamental trees and shrubs, and why should a different rule be adopted with citrus trees?

AFTER BUDDING.

Whether budded in the fall or spring, and the buds are set and showing unmistakable evidence of growth, the natural top of the tree must be cut off so as to throw the vigor and sap of the roots into the bud. The practice is to cut all the top off about four inches above the bud. After this, keep all suckers and sprouts appearing below or above the bud closely rubbed off before they have attained any size or strength. If more than one shoot starts out from the bud, rub off all but the stronger. Keep this clear of all side shoots or limbs, thus giving this single stem all the force and vigor of the roots. Irrigate and cultivate the same as the preceding season. When the buds are five or six inches long, tie them loosely to the stub to keep them from injury from wind, and to secure an upright and straight shank for the future tree. After the second time of irrigating, subsequent to budding, stake the trees by driving six-foot stakes close to the north side of the tree next the bud, two feet into the ground. Keep the growing bud tied to this stake with common cotton wrapping twine till it reaches the top, or nearly so. At this point, with the thumb and finger, pinch off the tender point. The tree will then begin to throw out side branches. As these start out they should be watched with care and when more than one start from the same point, all but the most vigorous grower should be pinched off. This secures a strong and upright growth to the remaining branch and makes an upright head for the tree, which will add much to its value when set in the orchard, as it will maintain this upright habit, instead of taking the form of a weeping willow. These drooping branches on young orchard trees do no credit to the intelligence or practice of nurserymen, and add greatly to the labor and expense of the owner, besides retarding the proper growth of the tree and putting off the time of its usefulness or profitable bearing.

TRANSPLANTING TO THE ORCHARD.

The matter of planting in orchard, will be deferred till the disputed question as to taking the trees from the nursery is examined. It has been the almost universal practice in this section to "ball" the trees. That is, in removing the soil from the tree preparatory to lifting the same—to hew out of the dry and baked soil, a block or ball immediately about the crown. Then let this stand, dry and harden to prevent cracking or breaking while handling. The size of this ball varies from six to ten inches in diameter, and from one foot to 15 inches in length. When sufficiently baked or dried, the tap root is cut and the tree and ball are removed and placed in a hole prepared for the same in the orchard, generally with the full top. With this mode of handling, the great pains and work to dig a large hole and pulverize the surface soil to refill the hole about the roots is, in a great measure, dispensed with, and the labor of planting greatly reduced. But let us examine the process for a moment and see if the good of the tree is not at the same time largely sacrificed. First let it be stated that if the "ball" were made large enough to preserve intact the roots of the tree, including the tap root, then this would be an excellent practice, but a very expensive and inconvenient one. By reverting to the surface mode of irrigation and cultivation as noted above, it will be seen that the growth of the roots, especially strong, deep-growing roots are not encouraged. Now, by this process of "balling" all these roots are cut back, the side roots to from three to four inches, and the tap root to a foot or 15 inches in length and the stubs subjected to a process of kiln-drying preparatory to removal to the orchard.

Then all rules of setting trees are violated because you have a "ball" to deal with instead of roots, which need careful handling and covering. It is no justification of this mode of handling that few trees die, and that in time the orchards bear fruit. The weak and drooping branches and the two or three years of nursing necessary to give the trees strength to hold up their branches, to say nothing of the fruit they may be allowed to bear, are damaging witnesses against the whole practice.

PUDDLING.

If you have any number of trees to transplant, dig a trench on one side the row of trees, say eight inches from the same, and two feet or more deep, as you find the length of the tap roots. On the other side of the row dig another trench not so deep. Fill both these trenches with water, keeping both full till the soil about the roots has become perfectly saturated, so it can hold no more. Then turn off the supplying water till that in the trenches has settled to leave them about half full. Now place a spade or shovel down into the soil at the bottom of the shallow trench and pry the tree and accompanying soil over into the deep trench. The process, properly executed, places the tree, with all its roots, uninjured at your disposal to lift out.

When lifted out, the roots come up completely covered with mud, and thus wholly protected from the sun and air. In this condition transport them to the orchard, where large holes two or three feet in diameter, and the same depth, have been provided with heaps of surface soil gathered from the adjoining surface ready to fill in. Let one man hold the tree in place by the guide stakes and board and another manipulate the roots, keeping them in abou the same positions they occupied before lifting, while a third carefully places the pulverized surface soil about them. Allowing for settling, the tree should be planted about the same depth as before. The hole should be filled nearly full and the supporting stake put in place to hold the tree in position before the water should be turned on to settle the soil. When well settled, fill the hole up to a level, adjusting to a perpendicular, and the job is completed in a rational manner, and the tree hardly knows it has been transplanted.

THE ORCHARD.

The work of the nurseryman has now been completed, and that of the orchardist is to begin. Under this rational system of growing, pruning and transplanting, scarcely a leaf will wilt or a branch droop, but the orchardist has plenty of careful and exacting work to perform before he can expect returns from his investment and undertaking.

The first thing for him to do is to examine each tree carefully and become acquainted with it in the whole detail of its condition and needs. Cut off every redundant branch or limb and cut back those that are too long and heavy for their size and strength, and all that are growing across other necessary branches. Let all this be done with a general idea of a future upright and symmetrical form of the tree. As each new growth begins during the season, examine each tree carefully, and wherever more than one sprout is starting from the same point, pinch off all but the most vigorous one, and do the same with all that, in your judgment, will weaken or retard the growth of those branches you have selected to make up a good healthy head.

No unnecessary delay must occur between the time of of planting and the first regular irrigation, as a good supply of water at this juncture will greatly assist the roots in getting themselves adjusted to their new location and surroundings. This irrigation, and all in the future, should be through deep furrows midway between the rows of trees—the water not being allowed to cover the soil at the base of the tree. Each irrigation should be thorough, so as to soak the soil deep down, and should be followed by thorough cultivation, and this by a surface stirring of the soil by a smoothing cultivator at intervals of a week or ten days between each irrigation. In the fall of each year, in the orchard, a fair top dressing of stable manure, to preserve the proper mechanical condition of the soil and to strengthen the growth of the tree the following season, will be a good investment.

In the spring of each year the same examination of trees and lopping off redundant branches and suckers should be followed up as directed for the first season, and so at the beginning of each new growth during the summer. Allow no accumulation of branches from the same point at any time, and you will be troubled but very little with drooping branches, and you will have an upright tree, capable of holding up a heavy crop of fruit. If the trees bloom and set some fruit the first year in the orchard, let them mature it, and thus allow them to form habits of usefulness and thrift while young. The third year, under this treatment, you may expect a crop of fruit to pay at least the expenses of the year's cultivation, and the fourth year a good average crop, and from this on a pleasurable and paying business.

Pruning Year-Old Prune Trees.

About this time in the year, or a little later, it becomes necessary to prune our young prune trees. Personally, I advocate cutting to an inside bud, generally. This will make the tree more compact and will make the connection from the bud, so left on the limb cut off, with the leverage in the right way so that when the tree is grown up and bears its large load of fruit, as our prune trees of this Visalia district are apt to do, it can hold its weight of fruit without breaking. In some instances limbs will have a tendency to grow out of a regular and uniform shape, and perhaps, in cases of that kind, it will be advisable to cut to an outside bud. I have found, however, the best plan to adopt with a limb that in your judgment requires spreading, is to cut a short brace from off the thick end of the branch you have just pruned off and insert that brace against the limb you want pushed out and a stouter one on the tree, and thus you can make that particular limb spread itself. In regard to the actual cutting off of the limbs, of how much or how little ought to be done, as every tree grows somewhat different, you should use your judgment and think for yourself what to do with each and every one of your trees. As a general thing, it is advisable to cut last year's growth back to 12 to 18 inches from the fork of your tree. If your trees grow shapely the second year, I do not advise any more pruning of this variety of fruit tree. Of course, if some of the trees are not in shape, it will be necessary to shape them, but only that, and no more cutting than is positively necessary.—C. J. Berry in Tulare Times.

Spice of Life.

—His honor (to vagrant): What is your business? Vagrant: Looking for a job.

—"Baby growing right along?" "O yes; I think he will catch up with his voice in a year or so."

—Mrs. Bunting: I wonder how that poor man feels who lost both his hands to-day? Bunting: I don't suppose he can feel at all.

—A crusty old bachelor, not liking the way his landlady's daughter had of appropriating his hair oil, filled his bottle with liquid glue the day before the ball to which the girl was invited. She stayed at home.

—"I never withhold anything from my wife. I tell her every night all that I have done during the day." "And do you tell her every day what you have done during the night?" "Well, that's different."

—Photographer: But why do you wish to be taken with your watch in one hand and your pocket-book in the other? Mr. Bascom: I'm a-goin' to send this picter to my wife, young man. When I left home, she said she'd bet I'd be buncoed out o' everythin' I had before I'd be'n in the city two hours.

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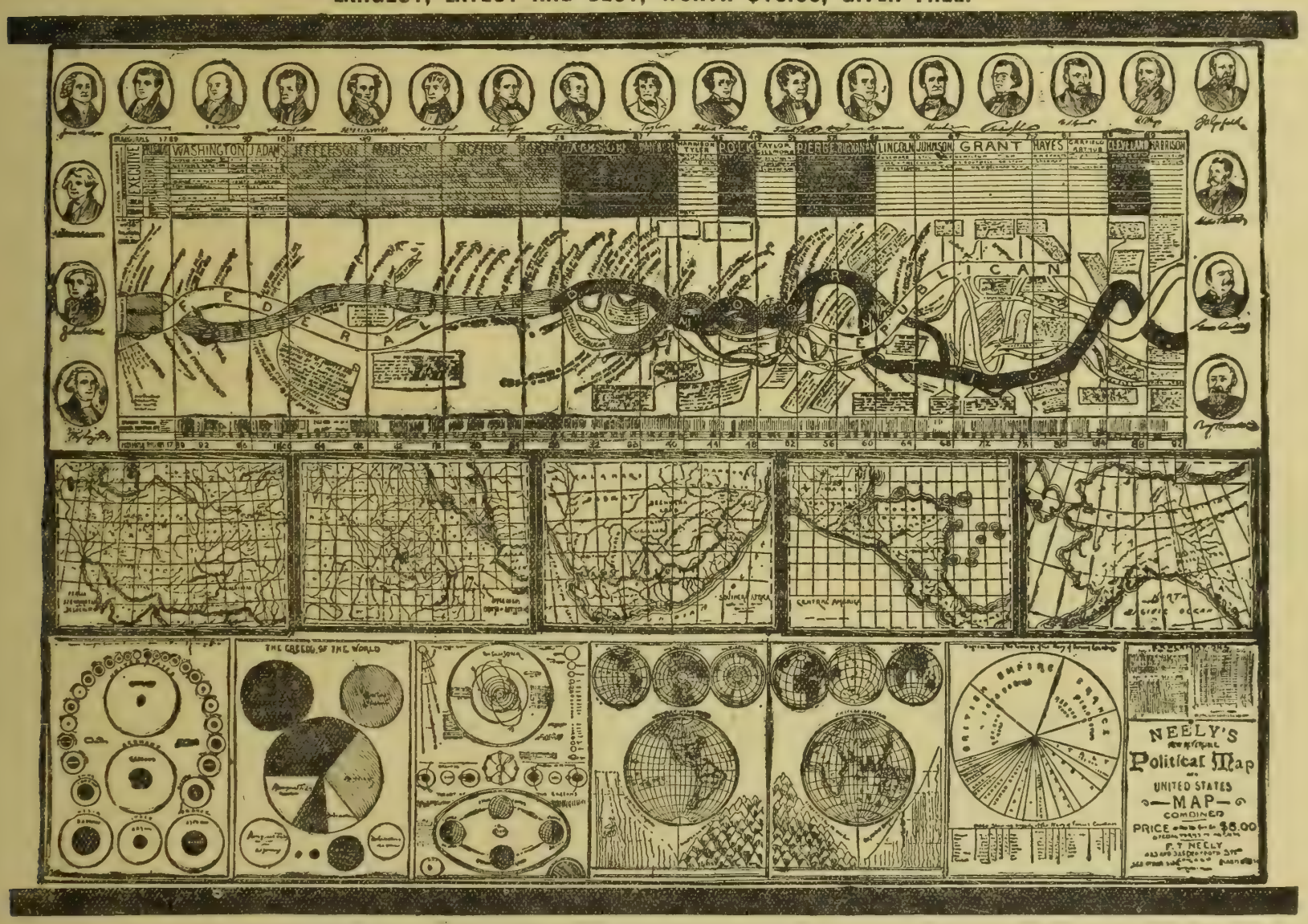
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THE SOUTHERN "BELT"

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ANNUAL PRODUCT WORTH OVER THREE MILLION DOLLARS.

Review of the Orange Industry In the Southern Counties.—The Colton Fair. The Great Los Angeles Fair This Week, Etc., Etc.

It is more than a hundred years since the Mission Fathers planted the first orange trees in California. These trees, planted near the old Mission at San Gabriel, were considerably more than half a century old before any considerable interest was taken in the project of raising oranges for profit in California.

About 50 years ago, the celebrated Wolfskill and D. B. Wilson orchards were planted—the one in the city of Los Angeles and the other in the San Gabriel valley.

These orchards demonstrated the fact that orange-growing could be made an exceedingly profitable industry in Southern California, it having been shown that these two orchards, at maturity, paid a net profit of from $1000 to $1200 per acre. Following this favorable showing, within a few years there had been planted within the city limits of Los Angeles (embracing an area six miles square) many acres of the trees destined subsequently to play so important a part in the commerce of Southern California.

The second notable step in advance in this new industry was taken at Riverside, at which point, 20 years ago, a number of colonists embarked in the business of raising oranges—with what ultimate success the world well knows—and soon thereafter the Indiana colony engaged in the same enterprise at Pasadena. About the same time, groves were planted at Orange, Santa Ana, Tustin, and Anaheim, as well as at points in Santa Barbara and Ventura and San Diego counties, on a less prêtentious scale.

The greatest area set to orchard is in Los Angeles, San Bernardino and Orange counties. The number of bearing trees at the present time being, respectively, 475,000, 390,000 and 90,000—in round numbers, and it is estimated that these counties have planted and not yet in bearing 500,000, 1,800,000 and 50,000, respectively, of young trees.

The San Gabriel valley, in Los Angeles county, will always be noted for its choice citrus fruits, including, as it does, the many favorable localities for the industry commencing at the key of the valley, Pasadena, and embracing Alhambra, Sierra Madre, Arcadia, Monrovia, Duarte and Azusa. There are also the famous Verdugo and San Fernando valleys, which contain some of the best-paying orchards in the county.

There is a well-grounded theory among many citrus fruit growers that the interior valleys are better adapted to the successful raising of this fruit than are the localities along the sea coast. A few writers have lately combatted this theory, declaring that the coast will eventually rival interior localities in the quality of fruit produced. While the consensus of opinion seems to favor the interior for oranges, it is asserted by high authority that the same rule will not apply to lemons, which have been known to thrive to perfection in several different localities on our coast, as is well known of the same trees in Europe.

Only a few years ago, as every one knows, the citrus fruit industry of Southern California seemed in danger of complete destruction through insect pests. Through the agency of predaceous insects, native and imported from Australia and New Zealand, backed by the nerve, brains and energy of the orchardists, this alarm has been allayed, until to-day no apprehension is felt upon this score.

With the enormous increase in orchard area constantly being made, the question naturally arises, "Will there not, ere long, be an overproduction of oranges?" In answer to this query, put by the writer to one of the most prominent orchardists and a leading authority upon all matters pertaining to citrus fruits, he replied: "I do not think we shall ever see an overproduction which will affect the price of oranges. There may be an overproduction in quantity, but it will cut no figure in fixing the prices of good fruit. There are, and always will be, a great many men raising oranges who do not give the proper attention to details, nor show the matter the intelligent care which any business should have in order to insure its success. The natural consequence is that their product is of a quality which does not come in competition with salable fruit. This attention to detail commences with the planting of the orchard, and continues, step by step, to the final marketing of a choice, salable fruit. The whole secret of citrus fruit culture lies in this matter, and you cannot emphasize it too greatly. But no matter how you emphasize it, there will always be a great many growers who will fail to heed the warning—always too large a proportion of orchardists who do not get satisfactory results from their investment of money, time and labor simply because they do not give their business the care which it reasonably demands.

"Another argument against the idea of overproduction—such as increased demand and new markets—has been sufficiently discussed and will not be entered into here. It is safe to say that the production of choice oranges, properly marketed, will never be overdone in California."

The question of satisfactory marketing is one which our intelligent orchardists are now grappling with, and, like any other matter which they undertake, there is every hope that they will ere long bring about a more satisfactory condition of affairs than obtains at present.

During the season of 1890–91 Southern California shipped to market, in round numbers, about 4500 carloads of oranges and lemons, valued at about $3,000,000 on board cars at points of shipment. The shipments of 1891–92 would have exceeded those of the previous season had not the severe wind, early in last December, created such havoc along the foothills in Los Angeles county, followed by Jack Frost's Christmas raid in San Bernardino county.

As it is, the shipments will be very much curtailed and the prices received on ordinary fruit will be materially less than usual, while for choice oranges, known to be entirely free from frost, fancy prices will be received.

As an illustration: L. C. Waite has a 40-acre orange orchard, located in what is known as a practically frostless belt, in Highlands, San Bernardino county. This orchard was planted five years ago last June, and his crop this year is estimated at 2500 boxes. He has refused $4 a box for his crop, delivered in bulk at the packing houses, and he expects to get $5 a box for his fruit—Washington Navels—before the season closes. When we consider the fact that $3 a box for this class of oranges on the tree has been considered a high price, it will be seen that prices on good fruit are still encouraging, although, of course, damaged stock will not sell in any market at satisfactory figures.

In this connection, it might be stated that Mr. Waite refused $100,000 for his 40-acre five-year-old navel orchard, which yields him this year from $10,000 to $12,000, and which is only just beginning to bear. This orchard is considered a model of its kind, and it shows what can be done in a good locality by a man who understands his business.

As an indication of the effect which the cold season and the consequent partial loss of crop have had on the real estate market, it may be stated that in Riverside, where the damage from the late frost was especially severe, orchard property is selling at the same old prices generally, with some cases of actual advance over former sales, and while the demand for that class of property is not expected to be brisk under the present depressing state of affairs, still a good many sales are being made.

The present season has fully demonstrated the fact that in a large section of favored localities in the sloping valley-sides next to the foothills there the thousands of acres of land to which frost is unknown, and where the orange and the lemon can always be grows to perfection, while in a much larger territory the crop can be safely depended upon nine years out of ten—and, probably, nineteen years out of twenty—but where once in many years the frost is liable to do damage.

The proud citizen of Colton and vicinity is wont to boast that the San Bernardino citrus fruits are the best-known in commerce, and that they beat the world in competition at New York, Chicago, New Orleans and St. Louis. Certainly there appears to be a substantial basis for the claim in the growing demand for the fruit.

The cost of a good orange grove, per acre, in this county is estimated by a competent local authority as follows:

Land and water, per acre	$300 00
Preparing and grading ground, per acre	25 00
Fluming for irrigation, per acre	10 00
Trees, first-class, budded, 90 @ $1.00	90 00
Planting and care, first year,	25 00
Total estimated cost, per acre, at end of first year	$450 00
Care and fertilizer during second year, per acre	25 00
Interest on $450 at 10 per cent	45 00
Total estimated cost, per acre, at end of second year	$520 00
Care and fertilizer during third year, per acre	25 00
Interest on $520 at 10 per cent	52 00
Total estimated cost at end of third year	$597 00

At the end of the third year the trees will begin to bear. The yield is estimated as follows:

At end of third year, per acre	$ 50 00
At end of fourth year, per acre	100 00
At end of fifth year, per acre	200 00
At end of sixth year, per acre	400 00
At end of seventh year, per acr	600 00
At end of eighth year, per acre	800 00

After the eighth year the increase in returns is less rapid, still the yield will grow steadily larger as the trees grow older.

The above contemplates the selection of excellent land in a good locality, and it is thought that the estimate is a conservative one in all its features. The intelligent reader is left to judge for himself as to the profits to accrue from such an investment.

The orange and lemon seem to find a natural home in the San Bernardino valley, doubtless owing to the rare combination of soil, climate, elevation and proper distance from the seacoast.

In the opinion of leading experts in the matter, the lemon industry bids fair to "come to the front" in a very rapid and highly profitable way, during the next few years. It is now a settled fact that lemons can be picked in November and December, cured and stored away and kept until the following July or August when they can be marketed at the highest prices of the year. This work, however, cannot be successfully done by every one. It will not pay a man to plant a few trees and from those few trees hope to successfully market his crop. Large orchards will be the most successful, and they must be controlled and managed by men who understand the business, and who are willing to undertake the necessary detail work to make their fruit-curing a success.

As an illustration of this plan of procedure, the Arrowhead Lemon Company of San Bernardino county, has been formed for the purpose of planting a 400-acre lemon orchard on the north side of the San Bernardino valley and has contracted with Messrs. L. M. Holt and T. S. Ingham to plant the orchard for the company and take care of it for seven years, the two gentlemen named taking as pay for their services about one-half of the crop during the seven years. Only the best of trees will be planted, and the reputation of these well-known orchardists is a satisfactory guarantee of the care which their charge will receive. Much interest is felt in the outcome of this venture, and it is believed that it will be the forerunner of many similar enterprises.

The lemon comes into bearing somewhat earlier than the orange, as the tree grows much more rapidly and is able to sustain the weight of a large crop considerably sooner than the latter. One orchard in this section of the State planted five years ago last May, the writer is informed, yielded an average of four and one-half boxes of fruit to the tree—picked prior to the heavy windstorm, in December, which ruined a great deal of fruit.

A story is current in this section to the effect that G. W. Garcelon of Riverside—the best-known lemon grower in California—being pressed by an Eastern newspaper man for information as to the profits of lemon culture, made the following statement: "You may put in your paper that I make $600 an acre for my lemons." A look of incredulity overspread the features of the "tenderfoot," whereupon Mr. Garcelon declared: "I told you that no one in the East would believe the truth if I told it. Now, you may publish what you will, or publish nothing, but I am actually making $1800 an acre off my lemons."

And there is not the slightest difficulty in finding plenty of men in this broad and beautiful valley who will declare that the speaker told nothing but the truth.

That Southern California is growing rapidly in wealth must be conceded; that this fortunate condition of affairs is due mainly to the citrus fruit industry cannot be denied.

As an illustration in this matter of cause and effect, take the case of Riverside. That city has a population of only about 6000, and yet the surplus cash of that population on deposit in the local banks is $1,100,000, nearly $200 to each man, woman and child in the valley, or about $1000 on deposit for each family. It is claimed that no other section of the United States can make, proportionately, so good a showing in this particular.

Riverside has on its assessment rolls property to the value of about $5,000,000, and the actual value of this property is fully five times the assessed value. No one will deny the fact that Riverside's material wealth springs almost entirely from citrus fruit culture.

Ten years ago the assessed valuation of this entire county was about $3,000,000, and in 1891 it was $26,000,000. In 1880 the population of the county was less than 8000, while the census of 1890 placed it at over 26,000.

In 1880 the water in sight for irrigating purposes was not sufficient to irrigate more than 14,000 acres; in 1891 there was available a supply sufficient for 150,000 acres, and the extensive developments of the Bear Valley Co., together with the magnificent project of the Arrowhead Reservoir Co., give assurance that, by the completion of works now in progress, the time is not far distant when these two companies shall be able to furnish water sufficient to irrigate 750,000 acres of land.

With an ample supply of water to bring to life the dormant richness of her fertile valleys, we need have little doubt that Southern California will nobly do her part in helping to work out the destiny of what we are proud to call the grandest State in the Union.

E. C. O.

The Colton Fair

The third annual fair of the Twenty-eighth District Agricultural Association (embracing San Bernardino county) was opened at Colton on Monday evening of last week, concluding the following Friday night.

The fair was held in the cannery of the Colton Packing Company, which had been transformed into a pavilion admirably suited to the purpose in hand. The arrangement of the spacious rooms, the decorations and everything pertaining to the fitting up of the quarters had been accomplished in a manner which reflected the highest credit upon those who had undertaken the task.

At 7:30 o'clock, on Monday, evening the improvised assembly hall was crowded almost to suffocation by people from all parts of the county who were anxious to hear the opening exercises of the fair. On the stage were seated the gentlemen whose function it was to formally inaugurate the exhibition. They were President L. M. Holt; Vice-Presidents J. A. Kelting, M. O. Kelting, Geo. Miller and John Brown, Jr.; Commissioners J. A. Cole, A. B. Miner and I. N. Hoag; Secretary I. N. Davenport, and the speakers of the evening, W. A. Harris of San Bernardino and A. C. Fish of Riverside.

The Arend orchestra of Los Angeles, which had been secured to furnish music every afternoon and evening during the week, opened the programme with an excellent overture, after which President Holt made the opening address. He was enthusiastically received and proceeded in a thoroughly business-like—and, withal, a very entertaining—manner to recite the history of the fair association, with its trials and triumphs since its organization, three years ago, together with an enthusiastic representation of its hopes for the future.

W. A. Harris, the orator of the evening, was then introduced. This gentleman is one of the shining lights of the California bar, and is regarded as one of the most brilliant orators in Southern California. His address was full of wit and wisdom, and the picture he drew by way of comparison between the hard struggle and precarious life of the Eastern farmer and fruit raiser and the comparatively happy lot of the favored Californian in the same avocations provoked vast merriment and enthusiasm on the part of his hearers.

A. C. Fish was the next speaker, and his sole theme was the benefit to be conferred upon California by the completion and working of the proposed Nicaragua canal. He had evidently given the subject very careful study, and appeared to thoroughly impress his hearers with the incalculable advantages to be derived from the great undertaking in question.

Other speakers followed, briefly, their addresses interspersed with excellent music by the orchestra, and the program was concluded with the announcement by the president that the Fair was formally opened.

The exhibits, as a whole, were thoroughly creditable. Competent judges declared, with enthusiasm, that all previous efforts in that line in the county had been eclipsed,

and there were not a few who asserted that no better display of citrus fruits had ever been made in Southern California. It should be stated, in this connection, that citrus fruit was from the start expected to be the main feature of this exhibition. Other features there were, to be sure, in great variety, but they were naturally overshadowed by the regal orange and the lordly lemon.

THE MAIN EXHIBITS—RIVERSIDE.

As would naturally be expected, the Riverside exhibit was one of surpassing excellence, both as to quantity and quality. When it comes to showing to the world her greatest good and chiefest charm, Riverside spares neither pains nor expense. The present instance was certainly no exception to the rule. The display covered a table 8x40 feet in size, solidly covered with fruit, the name "Riverside" being wrought in immense letters with navel oranges, with a background of lemons.

In the same section of the hall were individual exhibits of Riverside growers, as follows: J. W. Roberts, Australian navels and Lisbon lemons; A. C. Fish, two-year old budded navels, with oranges on the limbs—a few of forty trees grown in boxes, to be exhibited at the World's Fair; F. H. Edwards, navels and blood oranges; W. H. Backers, raisins and navel oranges; D. C. Twogood, H. A. Puls and George Duncan, navels, seedlings and Malta bloods.

What was probably one of the most superb exhibits of lemons ever seen on the coast was that of G. W. Garcelon, Riverside's "Lemon King." It occupied a table 6x25 feet in size and formed an ideal presentation of its kind.

SOUTH RIVERSIDE.

This exhibit was more varied and included aside from a very creditable display of citrus fruits, a number of other features of decided interest, in the way of fine brick, sewer pipe, and most interesting of all, a big stack of pig tin from the famous Temescal mines. The bright white metal, about 700 pounds in weight, attracted no little attention from the throngs during the week.

HIGHLAND.

This exhibit, under the charge of T. S. Ingham, one of the best informed of the citrus fruit men in this part of the State, was more than creditable. The oranges and lemons shown were simply perfection and spoke volumes for the possibilities of the section which they represented. Among the principal Highland exhibitors were W. H. Randall, W. R. Ingham, S. M. Tyson, W. H. Ham, L. C. Waite and N. W. Goddard.

REDLANDS.

The exhibit from this city—which is rapidly assuming a leading position in the citrus fruit world—was very large and of the highest merit. It was in charge of I. N. Hoag, ane was composed principally of Washington Navels, although there were numerous other varities, each seeming to be the best of its kind.

RIALTO.

This young colony made a small exhibit, but the specimens were of the highest grade, and were such as to confirm the claims of Rialto's friends of "as good a citrus country as lies outdoors."

OLD SAN BERNARDINO.

This was one of the most interesting exhibits in the pavilion. The most striking feature was a large design in the shape of a yacht, laden with oranges and lemons, and with sails wrought in orange leaves. The after deck was covered with seedling fruit taken from the first orange trees planted in San Bernardino county. A similar design, representing a monitor—also bearing a cargo of the precious fruit—formed another attractive feature of this exhibit. Those who contributed to the fine display referred to were Anson Van Leuven, Will Curtis, Henry Fuller, A. P. Morse, Edmund Rhodes, C. G. Pierson, Doran & Caldwell, Henry Riggins and F. G. Mason. Aside from citrus fruits, there were shown a great variety of plants, trees, shrubs, etc.

COLTON.

When this exhibit is mentioned it means a great deal. The citizens of Colton made a most creditable effort, not only in the way of the "Colton exhibit," but in everything else which could possibly contribute to "the good cause" in general.

Specifically, Colton certainly covered herself with glory in this enterprise. Her showing of citrus fruits was most creditable, the exhibit representing Colton Terrace being one of the very finest in the pavilion, and other exhibits in the way of dried fruits, peanuts, marble, onyx, canned fruits, etc., attesting the claims of Colton to a most honorable position in the list of California cities which deserve honor for what they can produce.

NOTABLE INDIVIDUAL EPHIBITS.

Aside from the citrus fruit and other fruit exhibits, there were many displays worthy of particular mention.

Probably the most striking feature among the individual exhibits was the "Miner's Cabin," built "from the ground up" of oranges. This edifice was about 12 x 16 feet in size, with a very well-appointed interior, including a fire-place, table and settee—the last-named presumably not "practical"—made of oranges. This was the exhibit of A. B. Miner, president of the Colton Packing Company, and no one feature of the fair attracted more attention than did "Miner's Cabin."

One of the finest displays seen in the pavilion was that of the Colton Packing Company. This concern, which is one of the leading canning companies of the Pacific Coast, made a grand effort to outdo itself and every other institution in its line in the way of a display of canned fruits. The showing was thoroughly creditable, not only to San Bernardino county, but to California, for there were not a few competent judges who asserted that the exhibit had never been surpassed on the Pacific Coast in the matters of quality and artistic arrangement.

Another very striking exhibit was that of the Colton Water Works. This was one of the most unique displays shown, and it consisted of a perfect irrigating system in miniature. A good-sized stream of water came rushing down very life like mountains to a sure enough reservoir, whence it was carried through flumes to orchards and grain fields in the valley below. The practical working of the irrigation system as operated in this section was perfectly represented, even to the most minute details, and the flowing water, as it rushed down the toy mountain side, through the tiny flumes, into the "play" valley and between the rows of sprigs which represented really-truly trees set out in orchard form, commanded no end of delighted enthusiasm from the throng.

The Colton Marble Company made a very fine display of monuments and different articles in onyx. This was much admired by all.

John C. King, one of the oldest and most highly respected citizens of San Bernardino county, and an old-time miner, made a most creditable exhibit in the way of minerals. The specimens included gold, silver, lead and antimony, and all were from mines in San Bernardino county. Mr. King's collection is the result of years of search, and is considered one of the finest in the State. It comprises about a hundred specimens.

Mr. Hubbard of Colton made it his business to show the world that California could raise peanuts to perfection, and he succeeded, beyond all doubt. His display was arranged in very "taking" style, and an expert test of the "goobers" dearly demonstrated the fact that if California was not the home of the peanut, that popular delicacy might easily make itself at home here without much further effort.

Another very creditable feature of this fair was the poultry exhibit. This included a large number of birds of almost all the popular breeds, and—to the credit of local enterprise be it said—almost all of the specimens were from Southern California pens.

There were many other features of interest, and if it were not for that very important matter of "space," they would all be described herein in detail. As it is, only the more important features can be mentioned.

In point of public patronage this fair was the greatest success ever known in San Bernardino county. The attendance throughout the week averaged about 1,500 daily. And as the exhibits were excellent in the extreme and the management in all respects beyond criticism, it may be said that our friends of San Bernardino county did themselves and their county great honor in their effort to show the world what they had worth showing to the world. E. C. O.

Complimentary Samples.

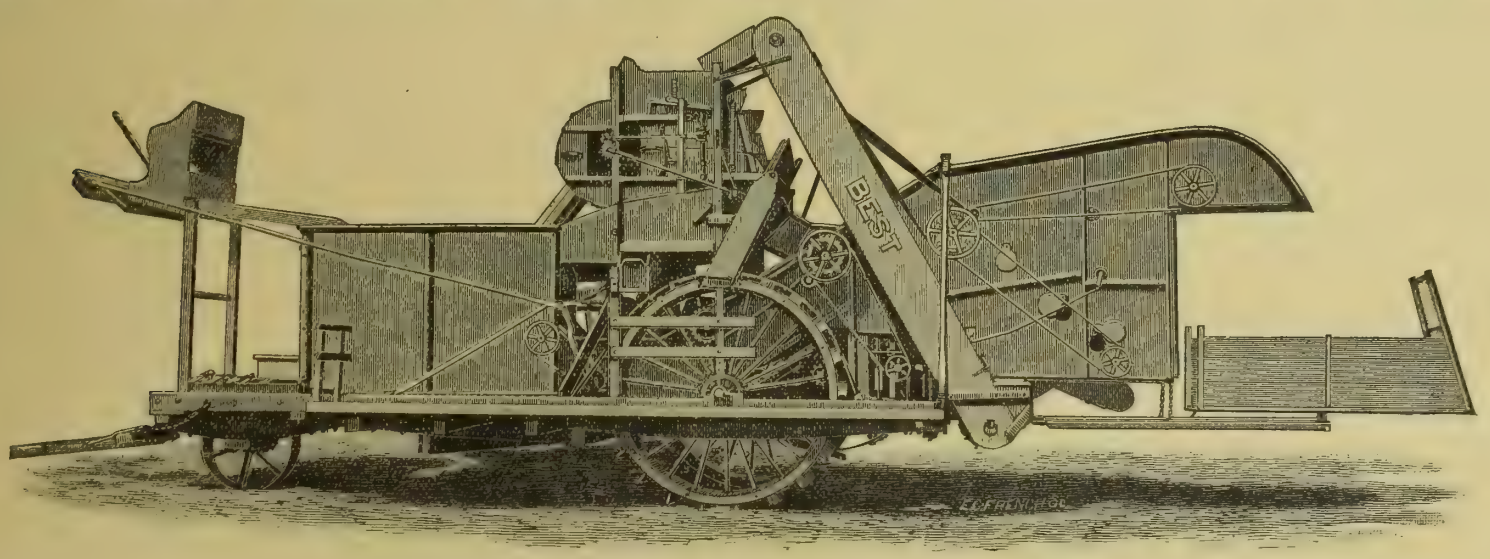
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Three miles from Newcastle; a splendid bargain; 36 acres; 20 acres in fruit four years old; peaches, figs, olives, berries, etc., all in fine condition; good hard-finished house of five rooms, good outbuildings; fine climate; schools and churches near; best Eastern shipment facilities in the State; easily irrigated by ditch on premises. S. J. STABLER, 328 Montgomery St., Room 3, S. F.

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And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

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DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

The Southern Citrus Fair.

The Third Annual Southern California Citrus Fair will be held in Hazard's pavilion, Los Angeles, opening March 2, 1892.

1. The exhibitor is not required to purchase an entry card. He makes his exhibits without charge of any kind.

2. The total amount of premiums allowed by the State is $2500; this is increased to $2995, the margin to be paid out of door receipts.

3. The exhibitor is provided with free freight to and from the city of Los Angeles for all articles intended for the exhibit.

4. All fruit and other articles intended for the fair will be carted from the depot to the exposition building free of charge.

5. All plain lumber to be used in the arranging of the displays will be provided free of charge.

6. All cambric and cheesecloth necessary for the decoration of the displays will be provided free of charge.

7. At the end of the fair, 50 per cent of all profits will be paid to the exhibitors to satisfy any remaining expenses which they may have incurred in making the display.

The attention of fruit growers is respectfully called to the list of premiums and to the regulations governing the display.

Applications for space must be made early to secure satisfactory location. Apply for space or for information about the fair to C. D. WILLARD, Secretary and General Manager, Chamber of Commerce, Los Angeles.

PREMIUM LIST.

Class 1.—Best exhibit of citrus fruit from any county: first premium, $400; second, $200; third, $100; fourth, $50.

Class 2.—For best exhibit of citrus fruit from any locality: first premium, $150; second, $100; third, $50; fourth, $25.

Class 3.—For best exhibit of Washington Navel oranges by an individual: first premium, $75; second, $50; third, $25.

Class 4.—For best exhibit of budded oranges, other than Washington Navels, by an individual: first premium, $75; second, $50; third, $25.

Class 5.—For best exhibit of seedling oranges by an individual: first premium, $75; second, $50; third, $25.

Class 6.—For best specimens of Washington Navel oranges, not less than one box: first premium, $20; second, $10.

Class 7.—For best display by an individual of Mediterranean Sweets, not less than one box: first premium, $20; second, $10.

Class 8.—For best display by an individual of St. Michaels, not less than one box: first premium, $20; second, $10.

Class 9.—For best display by an individual of Malta Bloods, not less than one box: first premium, $20; second, $10.

Class 10.—For best display by an individual of Valencia Lates: first premium, $20; second, $10.

Class 11.—For the best specimens of seedling oranges, not less than one box: first premium, $20; second, $10.

Class 12.—For best variety of late budded oranges, not less than one box: first premium, $20; second, $10.

Class 13.—For best exhibit of Japanese variety, not less than one box: first premium, $15; second, $5.

Class 14.—For best display by an individual of oranges, not otherwise specified in this list, in quantities not larger than a plateful to each variety: first premium, $25; second, $15.

Class 15.—For best variety of oranges, not specified elsewhere in this list, in quantity not less than one plateful: first premium, $25; second, $15.

Class 16.—For best display of orange wine, $15.

Class 17.—For best display of orange marmalade, $15.

Class 18.—For best display of all products of the orange, $15.

Class 19.—For best display of budded lemons from any locality: first premium, $80; second, $60; third, $40.

Class 20.—For best exhibit of budded lemons by an individual: first premium, $30; second, $20.

Class 21.—For best variety of budded lemons, not less than one box: first premium, $25; second, $15.

Class 22.—For best display of Lisbon lemons by an individual: first premium, $25; second, $15.

Class 23.—For best display of Eureka lemons, quantity not less than one box: first premium, $25; second, $15.

Class 24.—For best display of Villa Franca by an individual, quantity not less than one box: first premium, $25; second, $15.

Class 25.—For best display by an individual of lemons, not otherwise specified in this list, quantities not larger than a plateful of each variety: first premium, $25; second, $15.

Class 26.—For best variety of lemon, not specified elsewhere in this list, in quantities not less than one plateful: first premium, $25; second, $15.

Class 27.—For best exhibit of limes: first premium, $15; second, $5.

Class 28.—For best exhibit of citrons: first premium, $15; second, $10.

Class 29.—For best exhibits of shaddocks or pumelo: premium, $5.

Class 30.—For best exhibit of grape fruit: premium, $5.

Class 31.—For best exhibit of raisins from any county: first premium, $75; second, $50.

Class 32.—For best exhibit of raisins from any locality: first premium, $30; second, $15.

Class 33.—For best exhibit of raisins by an individual: first premium, $25; second, $10.

Class 34.—For best exhibit of 5-pound box of raisins: first premium, $10; second, $5.

Class 35.—For best exhibit of 2½-pound box of raisins: premium, $5.

Class 36.—For best exhibit of dried figs: first premium, $10; second, $5.

Class 37.—For best exhibit of pickled olives: premium, $15.

Class 38.—For best exhibit of olive oil: first premium, $20; second, $10.

Class 39.—For best exhibit of walnuts: first premium, $30; second, $10.

Class 40.—For best display of almonds: first premium, $10: second, $5.

Class 41.—For best display of fruit of the guava: premium, $10.

Class 42.—For best display of the products of the guava fruit: premium, $5.

Class 43.—For best display of semitropic fruit, not mentioned in this list: premium $25.

Class 44.—For best artistic display of citrus fruits: first premium, $100; second, $50; third, $25.

NOTES.

County Premium.—In order to compete for the county premium, authority must be given some person or persons, at a regularly called meeting of fruit growers, to enter the exhibits and receive any premium awarded. The county exhibit will include all individual and locality exhibits made from the county.

Locality Premium.—Any number of exhibitors (i. e. two or more) from any city, township, school district or town, may join together and enter their exhibits for a locality premium, and the money awarded will be paid to anyone authorized by the exhibitors to receive it.

Individual, Locality and County.—The same set of exhibits may be entered for an individual exhibit, and with others by individuals, for a locality exhibit, and with other localities for a county exhibit.

Individual Entries.—In all classes except 1, 2, 19, 31, 32, 43 and 44, entries can be made by individuals only.

Exhibits should be in the city of Los Angeles by Monday, February 29th.

Exhibits must be in position and ready for the examination of the judges before 9 A. M., Thursday, March 3rd, at which time the judging will begin.

A special committee, consisting of J. E. Cutter of Riverside, W. E. Collins of Ontario, and J. R. Dobyns of San Gabriel, has been appointed to report on a standard for the judging of California citrus fruit. This committee has also been asked to draw up a set of rules for government of the judges in their decision as to the merit of the fruit on exhibition. The judges will be selected from every section of Southern California, with special reference to their fitness in individual lines, and every possible effort will be made to secure just decisions.

The following judges of the Fair have been appointed :

Class 1 (county display)—E. W. Jones, Los Angeles; J. G. North, Riverside, San Bernardino county; R. H. Gilman, Fullerton, Orange county; Russell Heath, Santa Barbara; W. L. Hardison, Santa Paula, Ventura county; W. C. Kimball, National City, San Diego county; Jesse D. Carr, Monterey.

Class 2 (locality display)—H. K. Snow, Tustin, Orange county; W. R. Tolles, San Bernardino; C. H. Richardson, Pasadena, Los Angeles county; Thomas Hosmer, Santa Barbara; H. Crumrine, Santa Paula, Ventura county; L. E. Allen, San Diego; C. M. Wells, Los Angeles.

Class 3 (Washington Navels) and class 6 (specimens Washington Navels)—Stoddard Jess, Pomona; J. P. Jones, San Diego; L. C. Waite, Riverside; A. G. Haight, Redlands; J. R. Dobbins, San Gabriel.

Class 4 (budded, other than Washington Navels)—W. E. Collins, Ontario; M. Balbridge, Covina; C. F. Rudesill, Rivera; J. C. Joplin, Tustin; H. A. Pulse, Riverside.

Class 5 (seedlings, individual) and class 11, same, boxful)—F. A. Kimball, San Diego; J. E. Packard, Pomona; A. H. Fuller, Colton; A. Petch, Hermosa; W. J. Rice, Ventura.

Class 7 (Mediterranean Sweets, box)—Thomas Bakewell, Riverside; S. McKinley, Vernon; W. Ferguson, Glendora; George Hannahs, San Diego; W. B. Hervey, Santa Ana.

Class 8 (St. Michaels, box)—William Chippendale, Duarte; E. J. Waite, Redlands; P. L. Palmer, Pomona; E. E. Leech, Ontario; C. H. McKevett, Ventura.

Class 9 (Malta Bloods, box)—R. H. Gilman, Anaheim; F. P. Drinkwater, South Riverside; C. A. Coffman, Rivera; C. C. Thompson, Pasadena; R. H. Young, San Diego.

Class 10 (Valencia Lates)—W. H. Backus, Riverside; T. S. Ingham, Highlands; J. W. Cook, Glendora; Abbott Kinney, Sierra Madre; N. W. Blanchard, Santa Paula.

Class 12 (late budded, box)—Byron O. Clark, Arrowhead Springs; Andrew Garey, Inglewood; W. R. Barbour, Covina; James Boyd, Riverside; C. F. Eaton, Santa Barbara.

Class 13 (Japanese, box)—J. E. Cutter, Riverside; G. W. Burton, Los Angeles; H. J. Rudesill, Los Angeles; Wm. Friend, Ontario; J. P. Jones, San Diego.

Class 14 (oranges, N. O. S., plate) and class 15 (variety, N. O. S., plate)—Capt. F. Edward Grey, Alhambra; F. A. Gates, Garden Grove; E. C. Kimball, Pomona; G. W. Garcelon, Riverside; W. H. Randall, Highlands.

Class 16 (orange wine)—Eugene Germain, Los Angeles; H. Jevne, Los Angeles.

Class 17 (marmalade)—F. A. Korn, Anaheim.

Class 18 (products)—E. G. Judson, Redlands; R. H. Howell, Los Angeles.

Class 19 (budded lemons)—D W. McCloud, Riverside; E. G. Judson, Redlands; W. E. Ferguson, Glendora; H. K. Snow, Tustin; E. P. Fowler, San Diego; Joseph Sexton, Goleta; David C. Cook, Ventura.

Class 20 (budded lemons)—J. W. Cook, Glendora; Hiram Hamilton, Orange.

Class 21 (best variety budded lemons)—W. E. Collins, Ontario; J. R. Dobbins, Alhambra.

Class 22 (Lisbon lemon)—C. R. Paine, Redlands.

Class 23 (Eureka lemon)—J. A. Driffill, Pomona.

Class 24 (Villa Franca)—Hiram Hamilton, Orange; John Burr, San Fernando; E. P. Fowler, San Diego.

Class 26 (best variety lemon, N. O. S.)—J. E. Cutter, Riverside; H. H. Sinclair, Redlands; H. C. Ford, Santa Barbara.

Class 27 (limes)—H. O. Fosdick, Tustin.

Class 28 (citrons)—W. C. Kimball, San Diego.

Class 29 (shaddocks)—H. H. Sinclair, Redlands.

Class 30 (grape fruit)—Ernest Watson, Duarte; H. C. Ford, Santa Barbara.

Class 31 (raisins, county)—H. Jevne, Los Angeles.

Class 32 (raisins, locality)—R. H. Howell, Los Angeles.

Class 33 (raisins, individual)—J. E. Cutter, Riverside.

Class 34 (five pounds, raisins)—Adolf Petch, Hermosa.

GOOD HEALTH.

Health of the State.

The report of the State Board of Health for January, gives the mortality returns from 118 cities, towns and villages, having an aggregate population of 819,913. The deaths reported from all causes were 1622, at the rate of 23.64 per thousand per annum. Consumption caused 223 deaths; pneumonia, 285; la grippe, 96; bronchitis, 75; cancer is credited with 44—making that malady the fifth in point of fatalities on the list. Various complaints of the stomach and bowels caused 53 deaths; various throat diseases, 72, and diseases of the heart, 110. There were 595 deaths from various diseases of the lungs in January, as against 706 in December. There was also a falling off of 16 in diphtheria; 9 in typhoid fever; but an increase of 49 from la grippe.

The State at this time is free from small pox, outside of the Government quarantine station on Angel Island. There, however, the disease seems to have taken a permanent hold among the 500 Chinaman recently landed from a China steamer. The large number of cases which have been developing from time to time since the landing, tells in a most unmistakable manner of the terrible scourge with which the State would have been visited had not the Health Board and other proper authorities taken the most thorough precaution to confine the disease among those who are responsible for bringing it here. It is to be hoped the authorities will not relax their precautionary action until the malady is effectually stamped out on the island.

MEETING OF THE CITY BOARD OF HEALTH.

A very lively and interesting meeting of the city Board of Health was held on the 17th instant, at which the subject of small pox and general hospital matters were freely and somewhat forcibly discussed. The Board manifested a most firm determination to do its duty in all matters pertaining to the small pox invasion.

The general subject of the need of further and better hospital accommodation was freely discussed. The importance of more and special accommodations for incurables and cancer patients was referred to. Dr. Regensberger thought it would be wise and proper to call on the Legislature for an especial appropriation for such purpose, as San Francisco was simply a resort for such people from all parts of the State, and necessarily so from the fact that there was no other place for them to go to. It is to be hoped that this matter will not be dropped, but that it will be called up at the next meeting and more fully ventilated.

The Shag Rock business was freely ventilated, and found but one supporter, while all the other members of the Board present were free and generally very emphatic in their denunciations of the project.

The meeting closed with a very pretty and appropriate episode, which consisted in the reading of an interesting and well written paper by Mrs. Ellen A. Weaver, Matron of the Almshouse, and wife of Mr. P. L. Weaver, Superintendent of the same. Mrs. Weaver drew a very beautiful and vivid picture of life in that institution, and described in a striking manner the marked contrast between the characters of those who are obliged to seek that resort from unavoidable misfortune and those who find their way there as a consequence of their own misconduct and downfall. The paper was written for and read before the Century Club, of which Mrs. W. has long been a prominent member, and by special request was repeated before the Board of Health. The address furnished the most striking evidence that the Matron, who is a well educated and polished lady, is the right person in the right place. She received a most hearty vote of thanks for her effort.

RUMSON & MONMOUTH.



NURSERIES.

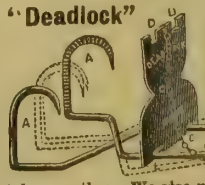
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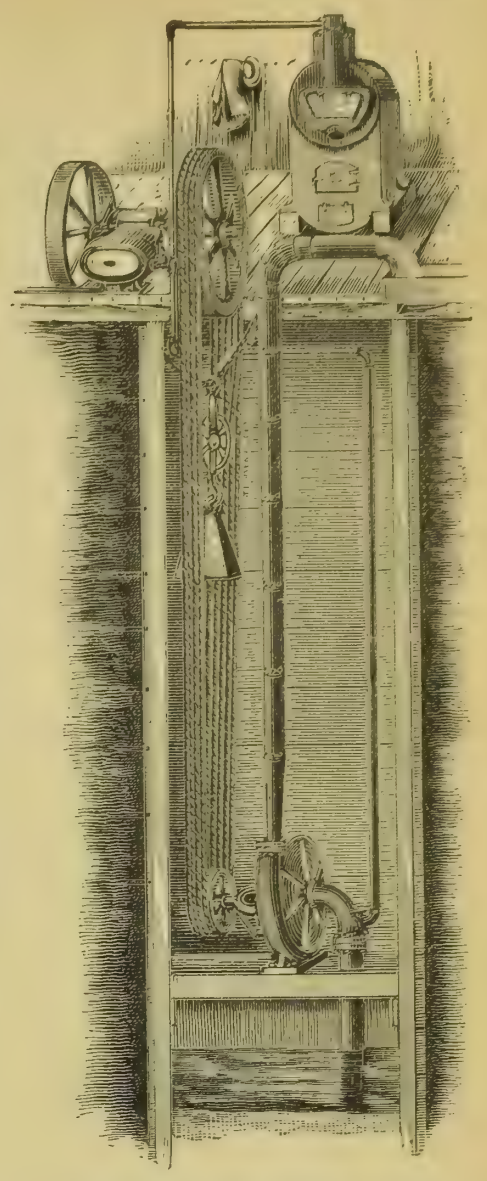
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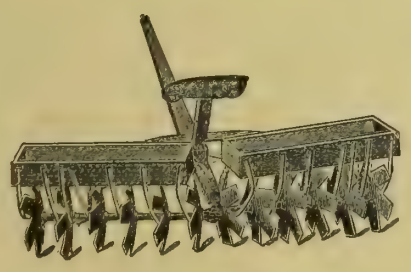
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We have these for both Field and Orchard Use, from 5 to 16-ft. cut. The Reversible or Fruit Growers' and Orchard Harrows, 5-ft. and 6-ft. are made so that the soil can be turned either way, from or towards the tree.

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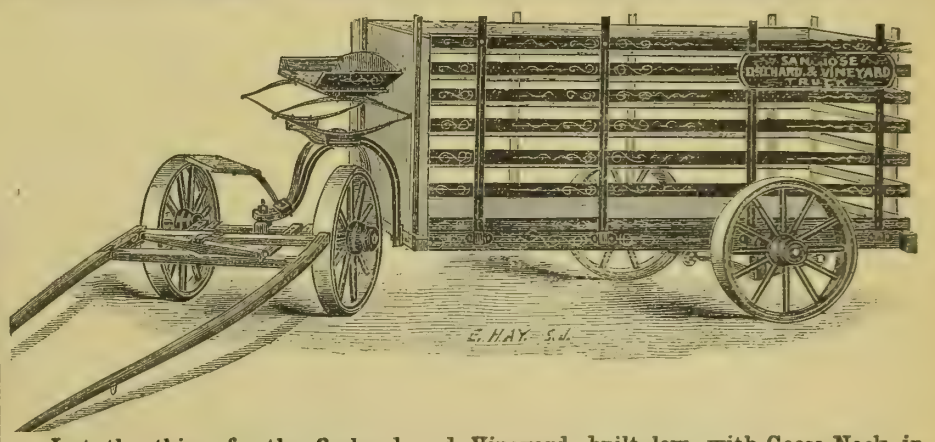
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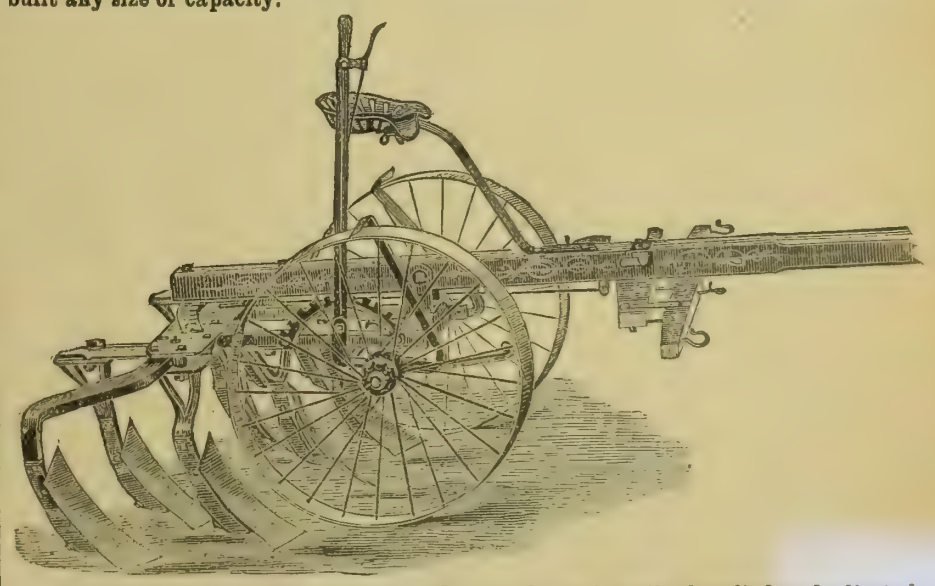
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SAN JOSE AGRICULTURAL WORKS, SAN JOSE, CAL.

Social and Intellectual Features of the Grange.

[Paper read before the Northampton County Pomona Grange by MRS. JAMES W. GERNET of Seeps, Pa., published in *Farmers' Friend.*]

Worthy Master, Brothers and Sisters: The subject which I have selected is the Social and Intellectual Features of the Grange. The Grange found the patient tillers of the soil, the farmers, isolated, unsocial, divided into parties and sects, considering each other as enemies, antagonists, without any leader of their own class, but following the lead of the artful, designing class, who live at the farmers' expense and and without any organization of their own. One object of the Grange was to break up the isolated, unsocial condition by organizing them into a social Order composed of the farmer and his family, that they might in this social capacity become acquainted, and regard each other as friends, who should labor together to tear asunder the net that has been wily woven, with which, singly, they have unwarily been entangled, to lift the oppressive burdens that have been heavily heaped upon agriculture and learn that by cooperation they can remove every hindrance to the elevation of agriculture, and the farmer. Although they have not yet fully extricated themselves from the net into which they have been lured, yet they have made such progress in the work as to begin to discover their power and demonstrate their ability to paddle their own canoe.

The Grange is bound together with a golden cord more strongly than a thousand tillers of the soil, who every week meet in these Grange halls for social, intellectual, moral and financial improvement. The Grange is stronger and accomplishing more good now than any other organization. The Grange confers its benefits not alone on its own members; neither do farmers only reap its rewards of all. The farmers are the bone and sinew of the land. When they are prosperous we never hear of hard times; but if from any reason there are short crops, low prices, hard times, then it is that the manufacturers talk of overproduction, merchants of dull trade, mechanics and laborers complain that they cannot get work. Individual happiness depends upon general prosperity. The soil is the source from which we derive all that constitutes wealth. Without wealth we would have no agriculture, no manufactures, no commerce. Of all the gifts of the great Creator and Giver of all good, the various productions of the vegetable world are the first in importance.

All history proves that where agriculture has prospered, the nation has prospered. The Grange seeketh the greatest good to the greatest number, and so benefits manufacturers, trade and commerce as well as the farmer and his family. To-day all over the country the farmers, their wives, their sons and daughters control their own assemblies and are honestly considering the deranged state of society, and are discussing the practicability of abolishing the false social institutions that have invariably wronged the farmer and his family. The farmers are beginning to awake to the consciousness that they really have brains—that commodity so essential to law-making—and there are men of their own class who have brains enough, and of the right kind, to make the laws by which the farmer should be governed. Woman, too, is beginning to discover that she has brains and to take the positions in society of true women—to God, herself, society and country true. The Grange is prominently a social Order, excelling all others in opening the door wide and bidding women welcome—welcome on the plan of equality. Thus, that it might be a success in this social feature, it adopted the divinely ordained social principles established at the inauguration of the social relation when God made man a help-meet. The social feature of the Grange in its restricted sense is construed to apply to social gatherings and festivities; but in its extended sense it embraces education in all its departments, cooperations, any and every feature of the Grange, as far as its ultimate object, the uniting of society and elevating it. The plan adopted in making practical these social features is to meet in social gatherings, where is provided not only a feast of good things to refresh and invigorate the body, but also a feast for the mind, a feast of reason and flow of soul. I think none of the Grange features and teachings has ever made man or woman worse, but its lessons all develop the good, the beautiful and true. Not half has been told of its good work, and it can and will do more in the future, because the Grange is founded upon the great principle of truth and justi[illegible]

Cooperation in Raisin Marketing.

By the request of the committee which called the Fresno Convention, J. H. LaRue of Malaga prepared the following address, which was not presented at the convention, but which is of general interest:

Being one of your number duly appointed as a member of the committee by the Farmers' Institute at Fowler, I deem it my duty to lay before the committee some of the ideas I have in relation to the point at issue, namely, what plan can be adopted whereby the growers may handle, pack and market the fruit of their labor.

My firm and candid opinion of the matter is that the only salvation for the growers is to pack their own product, and as a means to that end the only means of ultimate success is by complete cooperation, which is very easily accomplished if all will work in strict harmony. There is no denying the fact that the prime interest of one is likewise the dominant interest of all, and harmony is the essential element in the composition of cooperation.

There are now, always has been and always will be those among us and in all lines of business pursuits a certain element whose way of doing their own or other people's business is the one and only way in their own estimation. Consideration for the opinions of others is necessary to the success of organized effort in any and all lines; so let us consider with a feeling of charity the ideas of all, and strive thereby to accomplish the end that we all feel and will be of benefit to the producer.

If cooperative associations can be formed throughout the State on the plan of the Fresno Raisin Company, the Producers' Packing Company, or the Easton Packing Company, and the entire product marketed through one channel, or at least in one way, the question will slowly settle itself. A fruit and raisin exchange is one of the means, and a good one, of bringing about a rapid solution of the problem.

This can be established at some suitable center of trade, with men at the head whose principal interest is not the furtherance of personal ends, but whose ideas are laid out on a broad and liberal principal; and in such a way I fail to see why we cannot obtain fair and remunerative prices for our product, which is all that we can expect. I do not see why the outside packers, those who buy and pack only, cannot be members of the exchange, provided, of course, they will allow themselves to be governed by the same rules by which the growers' associations are governed, as we are all equally interested in maintaining the prices.

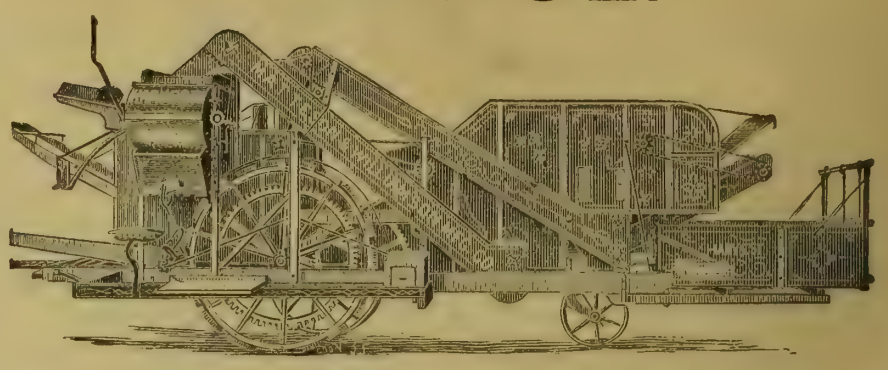
Of paramount importance is the proper curing of the raisins, and the assorting into the several grades, neatly packed in boxes or sacks, and branded or marked in accordance with its grade or quality. I am convinced that such associations or firms can enter into an agreement and place their respective goods on the market through the medium of such an exchange at prices to be established from time to time by a committee to be mutually agreed on by the different interested parties, each party or association to have representation based on its own pack or output, each association or party to the contract to be firmly bound under a sufficient bond to maintain the purpose of the organization.

Now, as to the selling and manner of selling. I am of the opinion that we should profit by the experience of other large establishments, such as manufacturing, for instance. We should so arrange that our business should be in the hands of some well-established house in each State and allow that firm to handle our entire business in its respective territory. However, if suitable arrangements cannot be made in each State, then give more territory to the nearest firm or agent.

20,000 Monterey Cypress
IN BOXES.
Also, Large Stock, Nice Shape
Irish Yew Trees, from 4 to 7 ft.,
For Sale Cheap by
HUTCHISON & SANBORN,
NURSERYMEN,
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A Practical Treatise by T. A. Garey giving the results of long experience in Southern California. 196 pages, cloth bound. Sent postpaid at reduced price of 75 cts. per copy. DEWEY PUB. CO., 220 Market, S.F.

New Improved Belt Combined Harvester
"PRINCE."



Farmers, Take Notice.
You who contemplate buying Harvesters this year, please examine the
HARVEST "PRINCE."
It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by 1½-inch tires, with a 5-foot header wheel, renders it very easy of operation.
OUR CLEANER IS ONE OF THE BEST MADE.
This machine will show that we still maintain our reputation of doing what we do well.

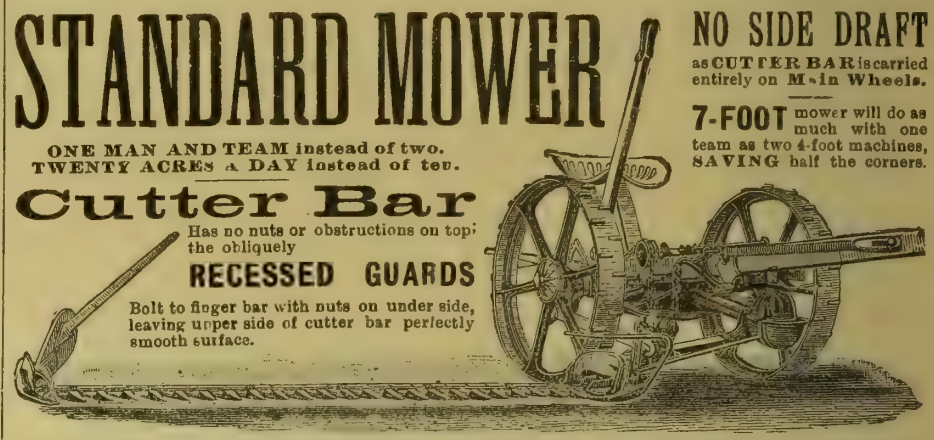
TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.
MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

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MATTESON & WILLIAMSON MF'G CO.
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STANDARD MOWER
NO SIDE DRAFT as CUTTER BAR is carried entirely on Main Wheels.
ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.
7-FOOT mower will do as much with one team as two 4-foot machines, SAVING half the corners.
Cutter Bar
Has no nuts or obstructions on top; the obliquely
RECESSED GUARDS
Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.



MAIN WHEELS made interchangeable—one wheel fits either side of mower. THE FOOT LIFT raises cutter bar with perfect ease without the aid of hand lever, the first ever made. EASILY TILTED. THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

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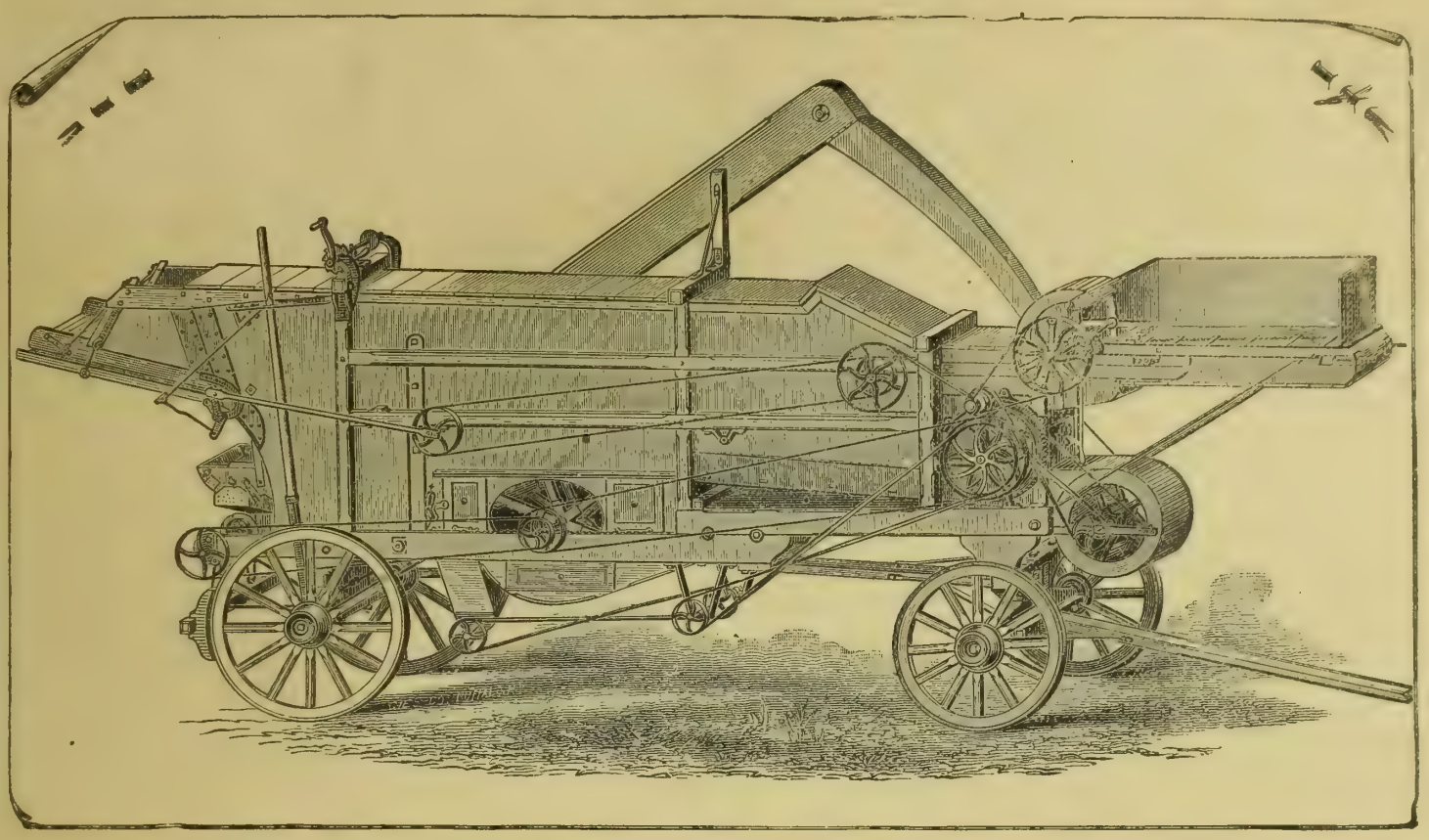
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Always in Stock.

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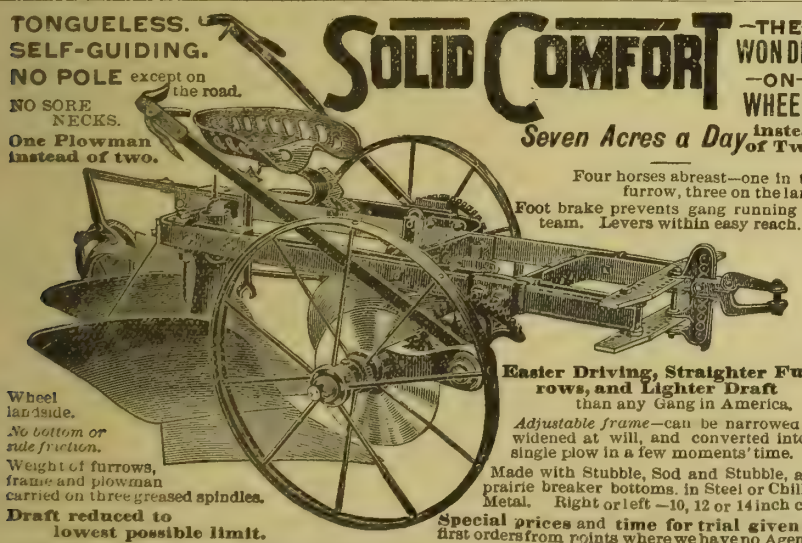
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One Plowman instead of two.

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Seven Acres a Day instead of Two.



Four horses abreast—one in the furrow, three on the land. Foot brake prevents gang running on team. Levers within easy reach.

Wheel landside.
No bottom or side friction.
Weight of furrows, frame and plowman carried on three greased spindles.
Draft reduced to lowest possible limit.

Easier Driving, Straighter Furrows, and Lighter Draft than any Gang in America.

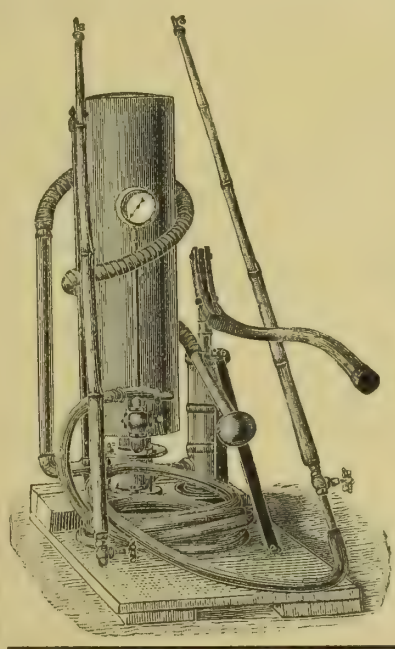
Adjustable frame—can be narrowed or widened at will, and converted into a single plow in a few moments' time.

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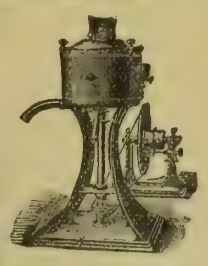


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This is the GREATEST CONTEST in all Europe, and leaves the EXTRACTOR-SEPARATOR as the

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It is the ONLY BUTTER EXTRACTOR. It is the **Best Cream Separator,** and has a capacity of **2,000** to **3,000** pounds per hour. We guarantee this machine in every respect—material, workmanship and separation of the cream—**equal to any.** The bowl is made of **imported Swedish steel,** the best and strongest steel in the world. It is **superseding** other cream separators, because of the **larger amount of milk** separated with greater thoroughness. **Send For Full Illustrated Circulars.**

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Equipped complete, ready for use, with hose, short-hand extension and our latest improved spray nozzle.

We refer to more than 1000 California orchards where our machinery is in satisfactory operation. In many instances single fruit growers have in use from five to fifteen Chapman outfits.

We manufacture several sizes and styles. Write for illustrated descriptive catalogue and price list.

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To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

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The only effectual remedy in the market. Indorsed by the University of California.

When Grafting or Budding use our Liquid Grafting Compound.

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Whitewashing Machines & Tree Cleansers.

Complete Outfits at prices from $3 to $50.

The Pumps are all BRASS, with BRASS AND RUBBER VALVES.

For Orchardists, Florists, Stockmen, Poultry Raisers

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Pump sent complete as in cut for $14. Send for Illustrated Catalogue.

WAINWRIGHT SPRAYING APPARATUS CO., 10 Hayes St., S. F.

Contracts taken for Large Jobs of Whitewashing.

FRUIT PRESERVATION.

Sulphuring in Fruit Drying.

University Experiment Station Bulletin No. 96.

Of late several papers in this State have discussed the subject of the use of the sulphuring process in fruit-drying, some prefacing their articles with the remark that I had "issued another proclamation" on the subject. I am unable to remember having uttered anything in public relating to the subject since the publication of Bulletin No. 86, eighteen months ago. Since, however, the articles alluded to bring the matter forward, and imply a partial misconception of my views, and of their true basis, I think it proper to put them on record once more.

Sulphurous gas, which is formed when sulphur is burned, is well known, and constantly used as a disinfecting, bleaching and deodorizing agent, second in virtue only to chlorine. The fact that it is the agent officially used in the disinfection of infected houses, ships and individuals is conclusive on these points. It is therefore idle to pretend that sulphuring does not diminish the flavor of fruit or of anything else touched by it. It is perfectly certain that it does so; and the only debatable question is the extent to which it may be used for bleaching fruit without any material detriment to the flavor.

It is in evidence that a reasonable amount of bleaching can be done by applying the gas to the freshly cut fruit without injuring the flavor to a material degree, since the flavor will penetrate from the inside outward to a sufficient extent to compensate for the loss of what naturally belongs to the bleached exterior portion.

The limit, however, is a narrow one, and it is so frequently exceeded in practice (whether intentionally to secure "extra light" color to attract the unwary purchaser or, more commonly, by unskilful or negligent workmen in charge of the sulphuring boxes) as to put upon the market a good deal of fruit that is the reverse of creditable to the State that produces it, and ill calculated to insure a permanent demand. This is especially true of the thinly sliced apples and pears, which are quickly penetrated by the gas and assume a greenish-white tint that, while it may be inviting to equally "green" purchasers, assures the expert that the natural flavor is practically gone. The producer himself declines to put them on his table, but the dealer and the public, as at present informed, are willing to pay an extra price for it. This demand for unnaturally light-colored dried fruit is a "fad" like many others, which will have its day but will inevitably give way, in the course of time, to a preference for the better-flavored product having the tint which insures its being so. So long as the "fad" lasts, so long will producers or dealers sulphur the fruit to suit the eye rather than the palate of the consumer. It certainly seems desirable to hasten the advent of a more rational state of the public mind on this point; quite apart from the sanitary consideration, which, if not of primary importance as regards most of the sulphured fruit now in the market, has nevertheless proved sufficiently potent to cause the practice of sulphuring to be legally prohibited in the old world, where therefore our fruits so treated would fall under the ban of the law. An additional consideration is that this process permits of rendering third and fourth class fruit equal in appearance to the best, and is therefore easily used for fraudulent purposes.

There thus seems to me to be abundant cause for desiring, and working for, the abatement of the public delusion on the subject of light-colored dried fruit, which sacrifices the substance to the shadow and is certain, in the end, to inure to the detriment of our dried-fruit trade. The oversensitiveness that has of late manifested itself in respect to the maintenance of my position in the question seems, therefore, to be ill-founded.

I hope to find a measurably unobjectionable substitute for the uncertain process as now practiced, in the use of a solution of "bisulphite of soda" (heretofore sold under the name of "California fruit salt") of definite strength, into which the cut fruit can be dipped before drying. In this process, the same agent (sulphurous gas) is employed in the liquid form, but so controlled as to the amount used that the chance of overdoing the sulphuring—now so great because of the convenience with which the fruit can be left exposed to the [illegible] for an indefinite time—would be reduced to a minimum. The compound can be produced very cheaply, and the solution used will be very weak.

The exact strength and time required to produce the best results with different fruits will form the subject of experiments at the station during the coming fruit season.

E. W. HILGARD.

Notes on Persian Palms.

The importation of palm trees from Persia made by the United States Department of Agriculture promises to be of much importance to the State. The forthcoming report on station work will contain the history of this fine collection, but the large number of letters of inquiry received makes some additional notes upon the present condition of the palms desirable.

The palms are planted at Pomona and at Tulare. The larger number of varieties and in some respects the best plants were sent to Tulare, as it was thought at Washington that the climate there would prove more favorable. This expectation does not seem likely to be realized, as several varieties that are more tender than others have suffered this winter. Some, however, are eminently suited to the place.

At Tulare Station, also at Pomona, the pistillate or bearing palms are planted in a circle, with the staminate plant in the center. The soil is sandy and free from alkali. Irrigation ceased the first of September. Deglet Nour and M'Kintichi prove to be very poor growers, small leaves, hard to root, and not to be recommended unless the fruit is of peculiar excellence. These two varieties show similar characteristics at Pomona.

The Sultaneh variety, said to be one of the best, is extremely delicate in appearance, leaflets slender and fine, growth slow; suffers from frost at Tulare. This variety does better at Pomona, and is certainly one of the most beautiful of all in an ornamental sense.

Amhat, at Tulare, is so badly frosted that it will be advisable to move it to a better locality. When most of the large leaves of a palm are killed, and protection is needed for the heart of the plant, it is evident that no valuable result can follow further experiment at that point. This variety at Pomona has so far escaped with only slight injury. It is the most tender of all the Persian palms at the stations.

Next to the Amhet is Haraneh, a poor grower, considerably frosted at Tulare, and slightly so at Pomona.

Rashedah and Rass show only medium hardiness at Tulare, losing a portion of the upper leaves. Rass is a remarkable variety of very strong growth, leaves large, light green, and beautiful in appearance. The plant at Tulare has already six small suckers. It is the only one of all the palms that has as yet increased itself by division. The difference in rapidity of growth between such varieties as Rass and such as Sultaneh or Deglet Nour, is as great as that between a Bartlett pear tree and a Seckel.

One palm at Tulare shows marked hardiness. This is Seevah, a compact grower, with small, dark leaves; it is more hardy than the seedling date palms at the station, which latter correspond more nearly in hardiness with such varieties as Rass. In Seevah we probably have a date palm suitable to all parts of the San Joaquin valley; perhaps three or four more of the twelve varieties represented are likely to prove desirable there. But several, as the preceding notes imply, are not likely to withstand the frosts of the open valley, whatever they may do on the foothills. Referring again to the seedling date palms at Tulare Station for comparison, one observes that all are slightly frosted, while two are badly so. The wild date (*P. Canariensis*) would undoubtedly stand the same locality and pass unscathed through the severest winter ever known there, but the species date is merely ornamental; and the seedling date offers no advantages in point of hardiness over any, except a few of the named varieties now at the station, while it is distinctly at a disadvantage in comparison with several of the best.

A curious fact in connection with the date palms is that the large grasshoppers of the San Joaquin valley attack the leaves with a special zeal. Last summer the grasshoppers left fields of grain, and beds of small cultures representing many species of plants, to settle on the palms and eat holes in the leaves. They could hardly be prevented from destroying several varieties for which they showed a strong preference, and they injured nearly all to some extent. Their method of attack is to make dozens of holes, about as large as a dime, in the leaflets. Sultaneh, Rass, and Haraneh are among those that were the most severely injured. Thriftiness, or lack of thriftiness, in the plant seemed to make little or no difference with the grasshoppers. The hardy variety, Seevah, they left entirely alone, and it was the only one that escaped attack. At Pomona also the grasshoppers left other plants to attack the palms, and here, as at Tulare, they showed preferences, though less marked, as their invasion was of much shorter duration.

There has not been any complaint, so far as I know, that the grasshoppers destroy seedling date palms, or the Canarian date, in any part of California. At the stations, as it happens, the seedling palms were uninjured, though this was probably owing to their location nearer the buildings than were the named varieties. It is well known that the locusts of the deserts of Asia and Africa sometimes entirely destroy palm groves, but it is certainly surprising to find that the California grasshoppers prefer the hard, fibrous leaves of the palm to any other green food.

The problems of importance, next to the hardiness of different varieties, seem to be: How soon will the plants bear, and how fast can they be propagated by suckers? When better established, it will be possible to force them into a more rapid division, but this can only be done at the expense of the mother plants. The small number of specimens obtained—only two of any variety and of some only one—precludes the idea of such an early or general distribution as many correspondents appear to expect. Besides, the U. S. Agricultural Dep't has distinctly required the first increase of stock to be held subject to its orders, at least for the present. Those varieties that promise best can be imported by nurserymen in larger numbers, and easily propagated to supply any future demand. The experiment at the agricultural stations fulfils its end, and justifies the cost, whenever those stations have fully tested and reported upon the varieties in their hands.

CHARLES H. SHINN.

Berkeley, Jan. 25, 1892.

The Science of Physiognomy.

Can Character Be Read from Heads and Faces?

The study of character by observing the cast and expression of the human head and face is of great antiquity, and is known by the term "physiognomy." The claim of physiognomy to be considered a science, has been regarded differently by different persons for the last 2000 years. Some are enthusiastic in the affirmative, others as strong against it. Still, it has occupied the attention and study of the brightest men of every age, from the days of Hippocrates about 460 years before the Christian era down to the present time. Hippocrates wrote upon it as then being a subject upon which scholars had long been much divided. Socrates, who was his cotemporary, was a full believer, and wrote the earliest systematic treatise upon the subject which has come down to us.

We have the record that Egyptian scholars, also, wrote largely upon the subject, and mostly in the affirmative. References to physiognomy are also found largely scattered through Greek and Roman classics. The literature upon the subject is very extensive, and of itself would form quite a library. The sixteenth century was quite rich in publications on physiognomy. Some 25 or more noted writers of that time wrote more or less fully upon the subject.

The writers of the following century generally attempted to bring discredit upon it, and more than 30 prominent writers and scientists of that time are recorded as entering upon such discussion mostly in the negative.

The first really elaborate attempt, in recent times, to elevate physiognomy to the rank of modern science was made by Lavator in 1775–8. The first real scientific school of physiognomy was founded by Sir Charles Bell in his "Essay on the Anatomy of Expression," published in 1806. A republication of Lavator's work soon followed, and gave an additional interest to the subject. "The correlation of the physical actions and psychical states" was made a subject of interesting speculation by Spencer in 1855, and those speculations were reduced to a system by Darwin in 1872.

We have been led to these reminiscences by a hasty perusal of two large volumes upon this subject, lately written by a well-known lady resident of this city—MRS. MARY OLMSTEAD STANTON, who has devoted a large portion of her life study to the subject of physiognomy. This lady had previously published several less pretentious volumes, but in the present work, consisting of over 1200 large octavo pages, under the title of

"A SYSTEM OF PRACTICAL AND SCIENTIFIC PHYSIOGNOMY; OR HOW TO READ FACES."

The author has given a most complete manual of instruction in the knowledge of human physiognomy and organism, embracing the discoveries of located signs of character in the body and face. The work is most profusely adorned by elegant and life-like engravings illustrative of the text, and printed on very heavy paper of the finest quality. It is dedicated "to the lovers of science—to the earnest and enthusiastic searchers for truth throughout the world."

These volumes display a most thorough knowledge of the subject, and constitute, really, the most complete formulation of this system of mental science which has hitherto been presented to the world. It is written in a plain, practical manner, such as would readily admit of its being introduced as a text book into our high schools and colleges.

No person can rise from even a cursory examination of the work without feeling that scientific and practical physiognomy should be introduced as a part of our common school education and advanced, by gradation, to our very highest institutions of learning. This study, commenced as it should be with its simplest principles, with the very beginning of our grammar grade of schools, could not fail to greatly advance the mental, moral and physical conditions of all humanity on which it might be brought to bear. Better, perhaps, than almost any other line of study, this study might be made to carry forward the evolution of the race to the very highest type of humanity. It is also well in line with an earnest and religious regard for the young, without the least touch of sectarianism. It is really a study of divinity in its highest manifestations of creative energy, and leads directly into the path best calculated to enable us to make the best possible use of the form and mental capacity with which humanity has been endowed.

Complimentary Samples.

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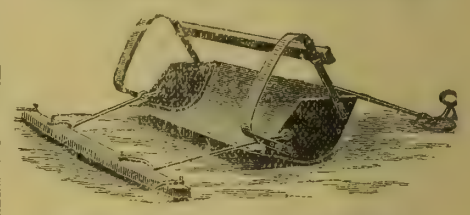
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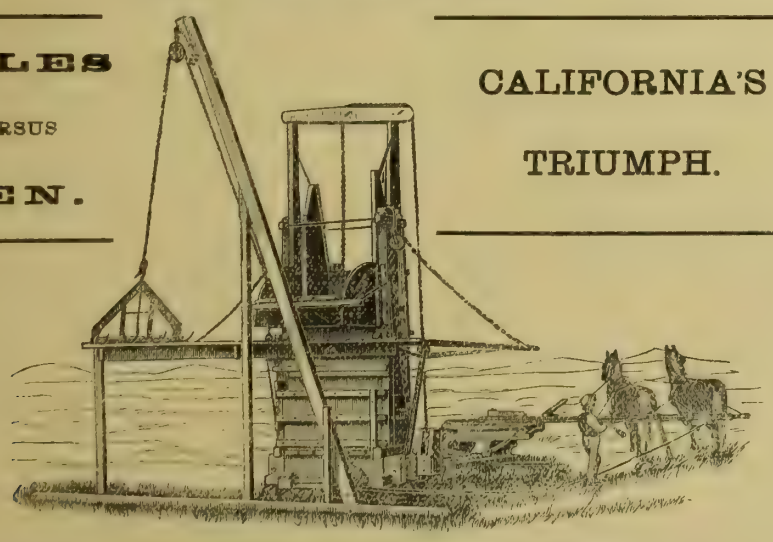
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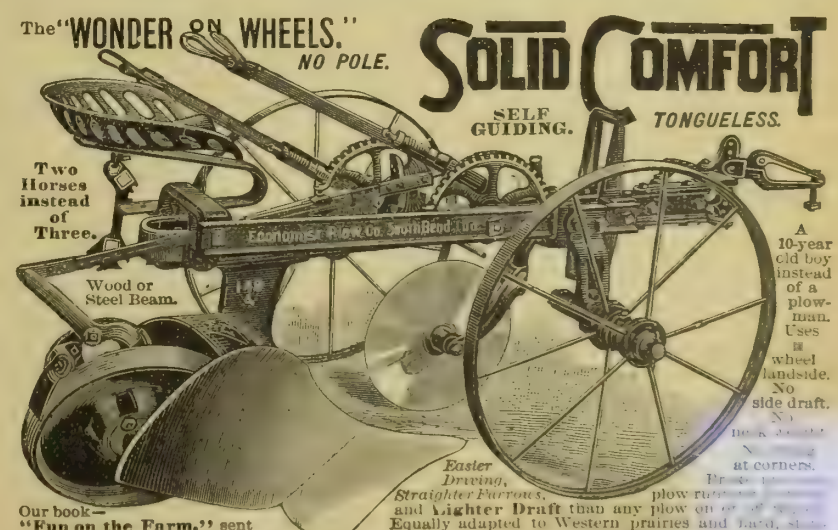
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The Kern River Valley.

Its Fertile Soil and Immense Water Supply—Vast and Comprehensive System of Canals.

BAKERSFIELD, Feb. 21st, 1891.

TO THE EDITOR:—If the reader will consult a map of California he will observe that below the central point of the State the Sierra and Coast Range mountains curve in a wide sweep from either side and finally join in a grand semi-circular barrier to the south. This semi-circle is the southernmost boundary of the San Joaquin valley, which stretches away to the northward for 300 miles or more. For ages, nature has been devoting herself to the preparation of this valley for the behoof of man. Just as man now prepares a perfect seedbed, by mingling the proper elements together in suitable proportions, so has nature, upon a scale gigantic but perfect, been constituting the magnificent seedbed which forms the valley of the Kern river, the great basin which lies at the head of the largest of California's immense twin valleys. Not a single thing has been neglected, but, guided by a master hand, Nature has here worked out in perfection one of her laws, and as a result presents to man a combination of soil and climate which challenges the world for an equal and utterly denes any claim to superiority.

That nature deals in compensations is a well-known axiom, but seldom is it better illustrated than in the present case. Here are millions of acres upon which the rainfall is so scanty, as a rule, that the cereals or other crops cannot be successfully produced. Indeed, the uninitiated may be pardoned for regarding it as little better than a desert under natural conditions. But to make up for the lack of rain, nature has provided an inexhaustible supply of water in the streams that traverse the valley, and the lakes that dot its face, and has so formed the surface of the basin that this water can be readily diverted from its channels and spread in every direction, wherever it is needed. The irrigating canals that already form a network throughout hundreds of thousands of acres render the farmers independent of the seasons, and enable them to produce a succession of crops of almost every conceivable variety in a luxuriance not excelled in the most highly favored portions of the earth. Every cereal, every vegetable, every fiber plant, every fruit of the temperate or subtropical zone, flourishes here in the highest perfection, and the genial disposition of the climate is such that there is no long period of enforced idleness during any season, but the farmer can, if he be so disposed, plow and plant continuously, removing one crop only to make room for another, and thus obtain two and even three harvests in the same period within which the Eastern farmer deems himself fortunate if he reap but one.

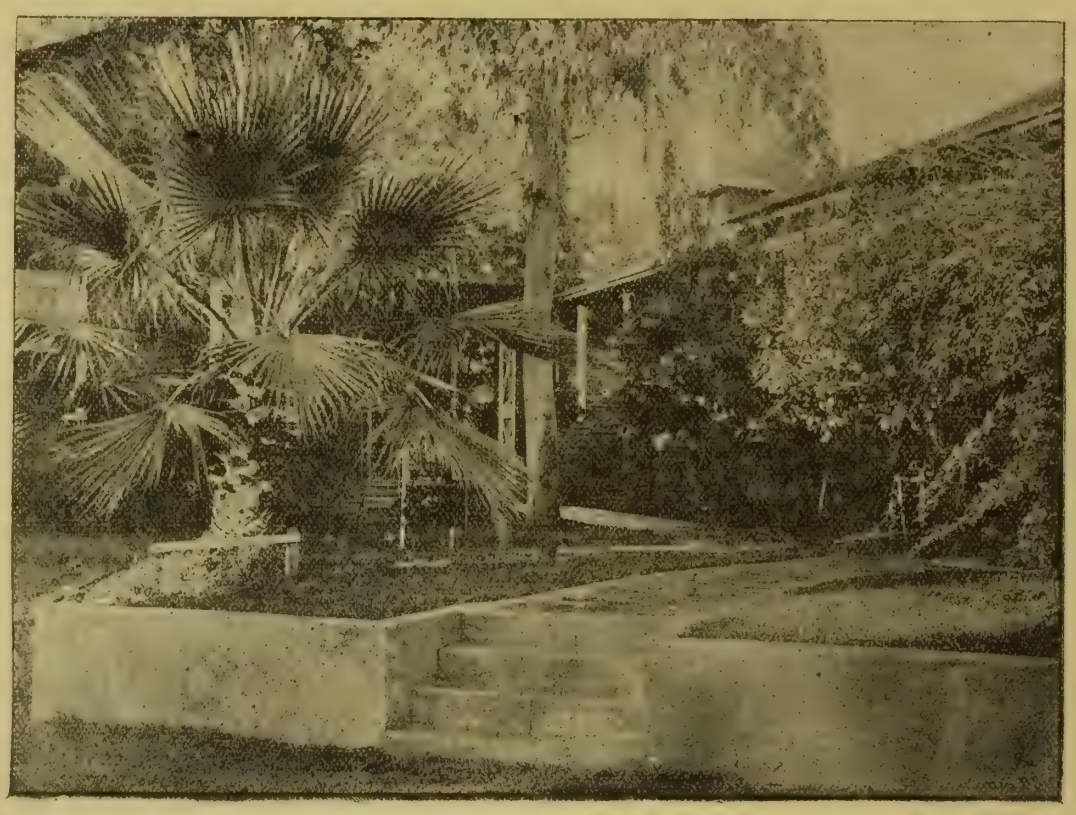
But to return to the comprehensive irrigation system of this valley, which has been so successfully inaugurated and carried out by the Kern County Land Co. Away up in the lofty Sierra, region of perpetual snow and ice, rises the Kern river, fed from a source that can never fail. For something like a hundred miles this river's course lies through the rocky defiles of the mountains, where it receives numerous smaller streams into its channel, and finally leaves the lofty ramparts at a point some 20 miles from Bakersfield. From its source to its entry into the valley the river has a fall of upward of 12,000 feet, and the last few miles of its course, prior to reaching the plain, are signalized by numerous falls and cataracts that, as has already been shown, afford a water power of almost incalculable extent.

The immense possibilities of the Kern river, either as a source for irrigation, or for utilization in manufacturing, may be seen from the fact that repeated measurements have shown that its normal flow is equal to that of any stream in the State, while its source of supply is perpetual. Not only can this immense flow be utilized for the generation of electricity and other powers for manufacturing and kindred purposes, but such use will not in the least, owing to the unusually favorable formation of the country, interfere with the further utilization of the water for irrigation, there being sufficient, when properly handled, to supply every acre of the immense holdings of the Kern County Land Company.

The system by which the water of the Kern river is now diverted upon the adjacent lands is the most comprehensive, costly and extensive of any irrigating plant under one management in the entire State. Thirty-two main canals of varying size carry the water in every direction. One of these canals is 120 feet wide on the surface, and 80 feet wide at the bottom, carrying water sufficient for the moistening of more than 200,000 acres. Several other canals are more than a hundred feet in width, and all told, there is a length of over 300 miles of main canal alone in the valley, while the laterals are five-fold greater in extent. The total appropriation made for these canals is upward of 600,000 miner's inches.

Water being so abundant, the cost of irrigation is naturally very low, especially when the immense amount of capital invested in the canals is considered. Several million dollars were expended in developing this vast system, yet the annual charge for an abundant supply of water for individual users is only from $1.00 to $2.00 an acre. What this means can best be understood by comparison with other sections, where the cost not infrequently reaches $7 or $8 an acre annually, and where the results obtained by irrigation are no better or more remunerative than here. The expense for water, required to be borne by the farmer of this section, is so light that it is not felt, and it is rather welcomed than otherwise, since by it he is rendered entirely independent of the vicissitudes of the season, and can plant and sow in the perfect certainty of reaping an adequate harvest in due time.

M. F. W.



A HOME IN KERN RIVER VALLEY.

Stanford University Lectures.

To President D. S. Jordan, Professor Comstock, and the Faculty of the Leland Stanford Jr. University—GENTLEMEN: We the undersigned, on behalf of the California Fruit Growers' Class of 1892, beg to tender our grateful acknowledgments for the very kind manner in which you have received and entertained us, feeding us, with unsparing hand, on fruits plucked from the tree of knowledge.

May this branch of University extension take vigorous root, and under your skillful and fostering care bring forth fruit a thousandfold to the lasting profit and glory of our ever glorious California and to the additional renown of the L. S. J. U.!

We have been made to feel that your University is an institution *for the people*, and as representatives of the *people* we have received a hearty welcome. Trusting that a long career of ever increasing success may be accorded to each and all of you, we remain, gentlemen, yours sincerely,

JOHN FRANCIS, Mountain View,
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COSTA RICA has ordered a large iron building, to be shipped in sections, for a schoolhouse.

FLORIST AND GARDENER.

Annuals for Bedding in California.

A regular meeting of the Southern California Horticultural Society was held Feb. 22 in Los Angeles, J. H. Tomlinson presiding. After preliminary business the following valuable essay was read by John Franklyn:

"The selection and arrangement of annuals for bedding purposes involves several very important considerations. Foremost among these are height, color and time of flowering. With regard to the first, it is very evident that however successful a flower bed might be in other respects, if through ignorance or carelessness the dwarf varieties were planted in the center, and the tall ones at the circumference, the effect would be ridiculous. This of course is true of all bedding plants, but as it is often necessary to sow the seed of annuals in the beds in which they are to flower, it is much more likely to be overlooked in their case than in that of summer bedders which are planted out from the pots.

"The same remarks apply to a judicious arrangement of color, it being necessary for the gardener to produce the desired effect in imagination before he can produce it in reality. But perhaps the most important of these considerations is the one which relates to a simultaneousness of flowering. Nothing can be more exasperating, after having planned a gorgeous effect, than to see it produced in installments, one part beginning to flower after another has ripened its seed.

"In order to avoid such a calamity, it is advisable to plant in the same bed, or group of beds, different species of the same genus only, or, better still, different varieties of the same species. In the latter case at any rate they will be sure to flower simultaneously. It is obvious from the above remarks, that in producing the best results with annuals, a previous acquaintance with them is very helpful.

"The object of this paper is not to discuss the cultivation of this class of plants, but to offer suggestions for its selection for bedding purposes. Perhaps we cannot do better than begin with the aster. This, in its improved form, is a beautiful flower, and embraces many very fine varieties. It also enjoys the advantage over many of its confreres that it can be raised in boxes and transplanted from them into beds. A beautiful effect may be produced by planting in the center of the bed, say the German quilled in one distinct color, next the peony perfection in another distinct color, following with the cocardean and dwarf chrysanthemum, the former having white centers and colored margins; and edging with the pretty little bouquet aster.

"Stocks make excellent bedding plants when in the hands of a good gardener, not otherwise. A bed of good stocks amply repays its owner for all the care bestowed upon it, its fragrance alone being considered sufficient compensation in many cases.

"It is surprising that in a country like Southern California, where the country is so well adapted to them, we should so seldom see the beautiful portulaca. This will thrive in localities where it is too hot and dry for the majority of bedding plants to succeed. It will survive any amount of neglect, though it is grateful for a moderate supply of water. For variety and intensity of color, this genus has no superior, and but few equals; the colors ranging from through white, yellow, pink, purple, and the most dazzling vermilion. The flowers are large, about the size of a dollar, and while the single varieties are beautiful, the double ones are much more so. It is well adapted to bedding purposes, whether in mixture, or distinct colors. With such a list of recommendations this genus should be more extensively cultivated.

"In Phlox Dummondi we have another annual preeminently adapted to the purpose under consideration. If we are searching for numerous varieties of the same species, we have them here. Drummond's Phlox has divided and subdivided until now we have it in many varieties; P. D. grandiflora, also in many varieties; and several of P. D. nana compacta. The range of colors is about the same as in Portulaca, minus the yellow and plus a black. These are varieties of the little purple phlox that Mr. Drummond introduced, and that grows so prettily in the woods of Texas.

"The Tom Thumb nasturtium is so well known and so highly appreciated as a bedding plant that it is unnecessary either to recommend or describe. There is, however, a species of Tropaeolum compared with which the Tom Thumb nasturtium looks coarse and overgrown. This is T. minus coccineum. The habit of the plant is very dwarf and compact, the leaves small and the flowers scarlet. It may be used very effectively either to fill a bed or to edge one composed of the ordinary Tom Thumb varieties.

"The dwarf French marigold must not be overlooked. The yellow and striped varieties are both desirable, and are used rather extensively for large beds. There is a Tagetes that is used much more largely—T. signata pumila. The leaves give the whole plant a graceful plumose appearance; the flowers are small and single, and are produced in great profusion. This annual is very effective where a mass of yellow is desired, and is often used as a substitute for yellow calceolaria. Success with tagetes is better than failure with calceolaria.

"Saponaria calabrica, and its white variety, S. C. alba, are also very desirable. Their habit recommends them, being so dwarf and compact that they give to the bed a cushion-like appearance, that suggests the possibility of standing on it without materially depressing it. Add to this its profusion of pretty stellate flowers, and we have a little garden that deserves to be better known.

"Arctotus breviscapa is a showy annual. It is an orange-colored composite, and very much resembles the gazania. Eucharidium grandiflora, in the size and form of the flower, very much resembles the Clarkia, than which it is dwarfer and more compact, and is more acceptable as a bedding plant. The habit is all that could be desired, and the flowers are attractive, not only for beauty, but for the curious appearance presented by them, possessing as they do the peculiar trilobate petals so characteristic of the Clarkia and its allies.

"There are no plants that flower more profusely than the annual viscarias. The flowers are produced on about the same level. They are dwarf, and their flowering season is considered protracted. A bed of these, with the colors judiciously arranged, and the seed sown rather thickly, so that the plants will afford support to each other, forms one of the prettiest objects imaginable.

"The remarks made on viscaria apply to the annual candytuft and its varieties. For blue, a color always at a premium, we have the ageratums, tall and dwarf; the companula pentagonia. Lorei and speculum; nemophila insignia, etc.; while for annuals with ornamental foliage, the most prominent are perhaps Perilla nankinensis, with leaves that appear to have been dipped in ink; and amaranthus melancholicus ruber.

"Time fails me to write in detail of the Godetia, with its large and brilliant flowers and many varieties; of the superb but little known Salpiglossis, the double Jacobaea, silene pendula and many others. I cannot close the list without calling attention to one other genus—eschscholtzia (California poppy). Under favorable circumstances it is liable to become perennial, and so is the nasturtium; but no list of annuals would be complete without the latter.

"In addition to E. Californica, yellow, and E. crosea, orange, there are others which are the outcome of cultivation and selection. E. rosea has petals which are white on the upper, and rose on the under surface; while E. mandarin is yellow on the

upper, and red on the under surface. There is also a white and a double variety.

"In conclusion let me offer two suggestions. First, when colors are planted separately, and intended to form a design however simple, always plant the individual colors in sufficiently large masses, especially when the plants are inclined to be tall, the stems weak and the flower heads large. Otherwise the bed is liable to become a mixed one. Take for instance, the larger varieties of Phlox, planted in narrow concentric circles. The weight of the blooms will cause the stems to decline from the perpendicular; when the pink will become mixed with the scarlet, the white with the purple, and the whole be hopelessly blurred; while if the zones were wider, though the continuous edges might become more or less intermixed, the general effect would be preserved.

"Secondly, use solid colors. Flowers with spots, stripes, etc., are often very pleasing when we have time to examine them individually; but as effective bedding plants they are often a failure. What can be richer than a mass of nearly black flowers brought into contrast with golden or yellow; or what more chaste and pretty that a sky-blue in company with a pure white?

"Such combinations attract us in spite of ourselves, and it is certainly better for the effect to compel the admiration, than for the eye to have to seek the effect."

The thanks of the society were voted to Mr. Franklyn for this instructive essay, and, as he will soon leave the city, his name was placed upon the roll of honorary members.

COMMENDATION OF H. M. LA RUE.—At the Fresno Fruit Growers' Convention the following resolution was adopted:

Resolved, That we, the fruit growers of the State of California, in convention assembled, earnestly recommend the appointment of the Hon. H. M. La Rue of Sacramento for the position of Chief Viticultural Commissioner at the World's Fair.

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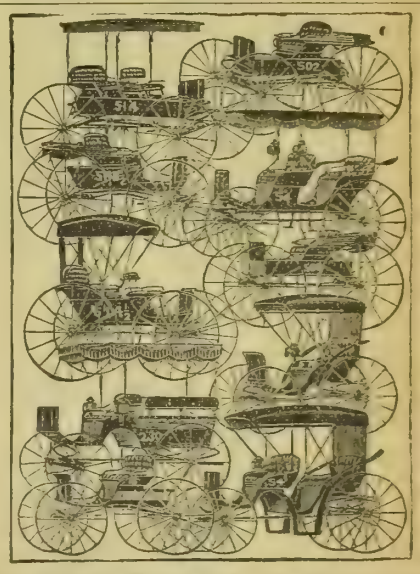
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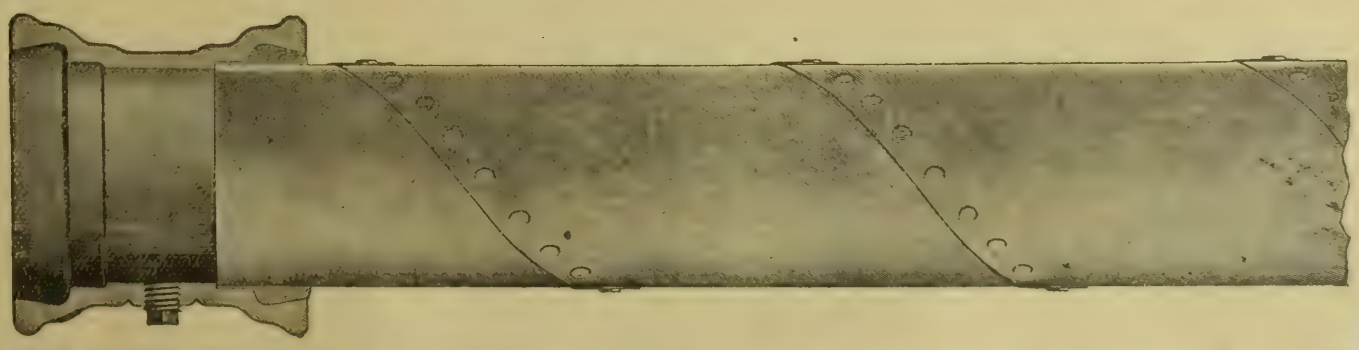


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The Philosophy of Electrical Action on Vegetable Growth.

TO THE EDITOR:—From recent experiments in France and other localities, so frequently alluded to of late in your columns, it has been demonstrated, beyond all doubt, that the application of the electric current to certain species of vegetation has the effect, in some mysterious manner, of accelerating their growth. The question therefore naturally arises, by what law are such effects produced upon vegetation. Is it true, as was formerly the general belief, that electricity is a fluid substance, contained by all material things, and that this fluid is composed of, or contains, the necessary fertilizing properties, sufficient to produce such effects upon the growth of vegetation? If such is the fact, then the application of electricity to the barren lands in certain sections of our country would have the effect to clothe them with vegetation and give value to the sterile and barren wastes upon our planet. But, owing to the advance in thought of the present century in relation to natural phenomena, the conclusion adopted by our more advanced scientists is that electricity is not a fluid substance, but that it is a force or a form of energy. If such is the case, and it does not contain within its composition those elements necessary for plant life, by what law then (would be naturally asked) does simple force or energy have the effect to stimulate the growth of vegetation?

In order to give a satisfactory answer to this question, it is first necessary to understand, or, at least, to have some idea of the process by which plants are caused to grow. Now, the phenomenon of the growth of all forms of organic life is due to a combination of the elementary atoms contained in the soil, and it is only when such atoms are in activity that their combination and crystallization into organic substance is possible, and that such combinations and the solidifying of the atoms is an effect of the interference of their motions. We arrive at this conclusion from an investigation of other phenomenon, as, for instance, in the phenomenon of light. It is demonstrated by experiment that an interference in the motions of the atoms which give to our minds the conception of light, have the effect to destroy the phenomenon and to produce darkness. So, also, in sound it is found that an interference in the sound waves has the effect to produce silence. For such reasons, we are justified in the conclusion that if the atoms which compose the various elements were at rest, the formation of substance would be impossible, but that it is in consequence of their continual activity and as an effect of their interference that solid substance is produced. The reasons why such effects are the result of an interference in the motion of the elementary atoms, the peculiar process by which such effects are produced, as well as the operation of the laws which regulate their motions, is, of course, beyond man's conception; yet we find that the law is uniform and constant in its operation, a fact of which the existence of the universe, with its endless variety of phenomenon, furnishes sufficient evidence. Under such circumstances, it is evident that any means that it would be possible to adopt, which would have the effect to accelerate the motions of the elementary atoms contained in the soil, would, from the nature of things, accelerate the growth of vegetation upon its surface, since the interference in their motions and consequently their combination, would proceed at a more rapid rate, and their crystallization into plant life would be accelerated in a corresponding ratio. It is for such reasons that vegetation under glass, as well as steam pipes buried beneath the soil, have the effect to put into greater activity the elementary atoms of the soil, by a contact of atoms and to accelerate the growth of plants.

For such reasons as given, we are justified in the belief that this mysterious phenomenon known as electricity is simply the motion of atoms of some one of the elements, varying, of course, according to circumstances, or of the conditions under which such motions are produced; for instance, there are reasons for believing that the lightning flash is an effect of the intense motion of the atoms of oxygen gas which has accumulated in excess in the atmosphere above, set free from the surface of the waters of our planet by evaporation, while it is possible that the phenomenon of plant growth may be accelerated by stimulating the motion of the atoms of carbonic acid gas within the soil by imparted motion, produced in the battery by the decomposition of metallic substances; and in my opinion, it is this motion imparted by contact to the elementary atoms of the soil, by the intense motion of atoms of certain elements from without, which is termed the electric current, that explains the mystery of the increase in the growth of vegetation, as an effect of its application.

The evidences presented by the fossil remains of various forms of organic life, found beneath the earth's surface, show us that in prehistoric ages all forms of life were of a gigantic growth, compared with the present; hence the question would naturally be asked, why are all forms of life gradually decreasing in dimensions? Is it because the elements of which they are composed are being continually lost or destroyed? No; but since experiment has demonstrated the fact that in order to increase in dimensions the growth of vegetation it is necessary to stimulate the atoms of the elements which compose them into greater activity, it is therefore evident that the gigantic growth of organic life in the past, was owing to the greater activity of the elementary atoms. But why their motions should gradually decrease, or by the operation of what law such effects are produced, or for what special purpose, is, of course, beyond man's conception. At any rate, judging from the present growth of all forms of organic life, compared with their dimensions in the past, it is evident that the elementary atoms are tending to a passive state, for which reason we must assume that a state of rest is the normal condition of the elementary atoms of which the universe and all things are composed. It is therefore only a question of time when the universe, with its myriads of celestial bodies, will become, like our own satellite, a cold, lifeless collection of dark masses, having fulfilled their destiny, as designed by the Creator and Ruler of all things, have now become a collection of cold, lifeless and dark objects, like old abandoned hulks upon the ocean, floating at random in space.

C. W. HASKINS.

Canals and Deep Water Ways.

A large amount of interest seems to be engaged, just at this time, in opening up water ways for transportation in various parts of the country. In our own State, much interest is felt in the proposed canal through the San Joaquin valley; and no wonder, when the railroad charges are as much for haulage from Visalia to San Francisco as for the same amount of transportation from Visalia to St. Louis.

Careful estimates show that a good and continuous water way can be opened from navigable water on the San Joaquin to Buena Vista lake, a distance of about 220 miles, for about $1,205,000, an average of about $5,500 per mile; thus opening to the cheapest kind of transportation one of the grandest and most productive valleys in the world; and one capable of supporting about as large a population as is now found on the entire Pacific Coast.

With such a canal, and a proper location of feeders in the shape of cheap electric roads along both sides of the canal, there is no estimating the amount of products which might be marketed, or the wealth of land which might be thereby created. That such a work will soon be accomplished there can be no doubt, and it should be constructed as far as possible, by persons having interests in that valley which call for cheap transportation. Such a work should never be allowed to fall into the hands of outside owners whose charges might be "all that the traffic will bear." This subject will soon be before Congress. The Secretary of War has already transmitted Major Heuer's report on the practicability and need of the improvement.

Another important California improvement is the projected canal from the head of San Francisco bay to San Jose, so as to connect that growing city directly with all the great water ways of the State.

DEEP WATER WAYS AT THE EAST.

The combinations of railway facilities is everywhere driving the people to protect themselves by going back to the old time systems of transportation by canals. There is a determination to secure cheaper transportation between the Great Lakes, into the vast country bordering upon Ohio, by a deep water ship canal through the center of that State to the Ohio river. Preliminary surveys have been made and there is no doubt but that a practicable and easy deep water way can be found.

Energetic measures are also being taken to secure a first-class ship canal—sufficient for war ships from New York inland to Philadelphia, connecting the Delaware and Chesapeak Bays. Such a canal will be but the beginning of a grand inland water way throughout the entire distance of the Atlantic coast to the Gulf of Mexico, and possibly through the upper portions of Georgia, Alabama and even to the Mississippi river, some two or three hundred miles above New Orleans. Such thoughts are even now in the minds of enterprising, progressive capitalists and engineers.

Such a work may appear chimerical, just now, but there is no computing its value both in peace and war. When this nation again doubles its population, which it will do during the lives of many who are now in the meridian of life, and we number over 120,000,000 of people, no useful project will be too great or too costly to be accomplished.

Our lake shore traffic has already reached a magnitude which no one could hardly have dreamed of 50 years ago, and it is growing with a rapidity absolutely startling. What it will be by the middle of another century no man can tell—no man will venture to compute. The eyes of the entire nation are now turned in that direction and estimates and calculations are being made for improvements which are greatly needed, and which will soon become indispensable. Our neighbors on the other side are outstripping us in this direction, with possibly a more special eye to the probabilities of some future international conflict as well as to the needs of commerce.

A 21-foot channel around all obstructions to natural navigation, is what is needed and demanded from Lake Superior to the Atlantic, by those who are urging active measures in this direction. Canada, with her three millions of people, has already spent $60,000,000 in perfecting a deep water way on her side; while this country with its sixty millions has spent less than half that sum.

Even with that small expenditure the *saving* in transportation during the last year only, is said to have been $150,000,000 more than the total cost of those improvements. It is claimed that only $3,000,000 more of expenditure would give us 20 feet of water. Congress will be urged at its present session to grant that sum. Who would oppose it? Even if destiny should so order that our neighbors and ourselves should become one and the same country, the improvements on both sides will be an urgent necessity for commercial purposes alone, within a very few years.

At the recent Deep Water Way Convention held in Detroit, it was stated by one of the speakers that when Canada has completed her improvements now under way, unless corresponding improvements are made on this side, "the United States could no more compete with Canada than a wheelbarrow could with a freight train." Our shipping interests on the Lakes, large as they now are, would be vastly increased if our lake vessels could only get to the ocean and engage in ocean business during the five months of the year in which navigation is practically closed in those high northern regions.

The improvement of the Lakes also implies an early deepening and widening of the Erie canal to a deep water ship way. That work would also be as much needed under a political union of the two countries as now.

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Time and Date.

Time of day is expressed in either of two ways:

1. By düp (hour) followed by the proper ordinal.
2. By GLOK (clock) governed by the preposition SU or LEN.

Düp telid, two o'clock (second hour).
Tel su glok, two o'clock (two on the clock).
Düp telid e lafik } half-past two o'clock.
Tel e lafik su glok }

In expressing dates the order is year, month, day.

Balmil jöltum zülsetel balul telsekilid (or 1892 balul 23d).

January twenty-third, eighteen hundred and ninety-two (or January 23d, 1892).

Complements of time, measure, weight, etc., are expressed by the nominative.

Oblibos is dels fol, we shall stay here four days.

Paun de kaf kostom sentabs fols, a pound of coffee costs forty cents.

The suffixes UL (from MUL, month) and üdel to the cardinal numbers give respectively the names of the months and the days of the week.

Balul, January (first month).
Lulul, May (fifth month).
Kilüdel, Tuesday (third day).
Velüdel, Saturday (seventh day).

Exercises.

Malüdel binom del mälid viga—Velul binom mul velid yela—Man at ebinom is dels fol, äkömom al dom obik al selön obe dogis e nimis votik kelis älemom evigo—Dogs nemödik, binoms gudik ab votiks valik binoms vemo badik, no lemalöd omis—Golob ko ol len düp mälid e lafik—Kimna esedol evigo flolis jiblode omik?—Li-sevol plobo cilis et, binoms vemo flenik—Balul binom mul balid yela e velul binom velid kel labom delis kilsebal—Klöp äbinom ädelo düp kilid blod olik?—Kikod no goloms in fot kö nims so mödik binoms?—Binoms mälüdels lul in balul—Balüdel binom ai del balid viga, ab no ai del balid mula; del balid de balul at äbinom mälüdel.

Which day is the first of the week?—Will you come to my uncle's house to-morrow at four o'clock? Why do you ask me to buy coffee at forty cents a pound when my brother sells it at twenty-five cents a pound?—I was at your friend's house when your brother came there and gave the children some string with which to tie their flowers—I am at home to-day, but to-morrow I shall be at your grandfather's house, where I shall remain two or three days until his sister comes—What do you know of that man who sold your brother a horse day before yesterday?

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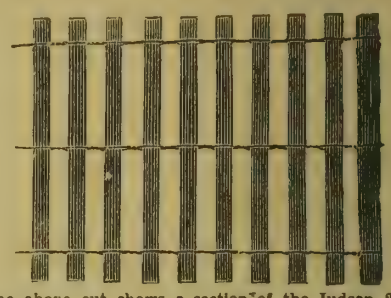
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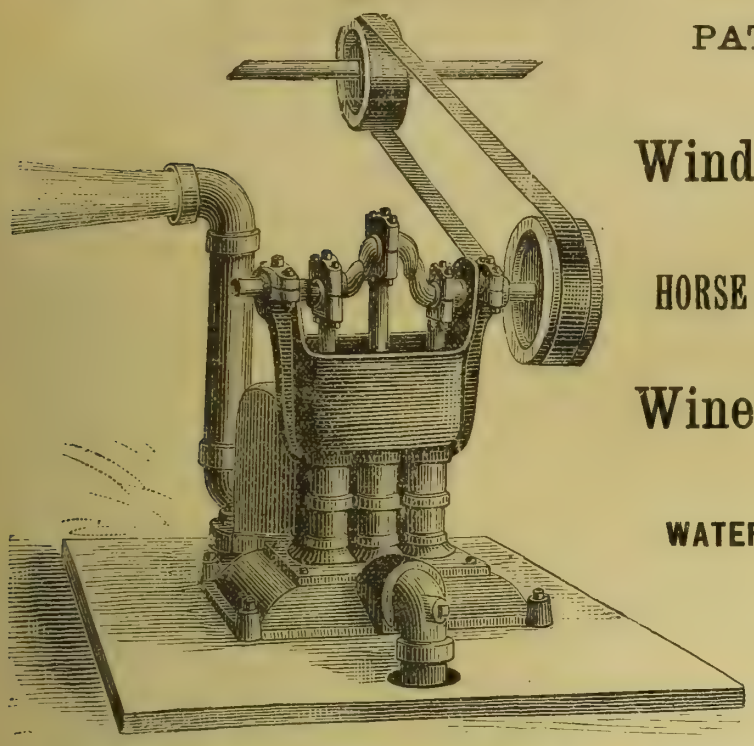
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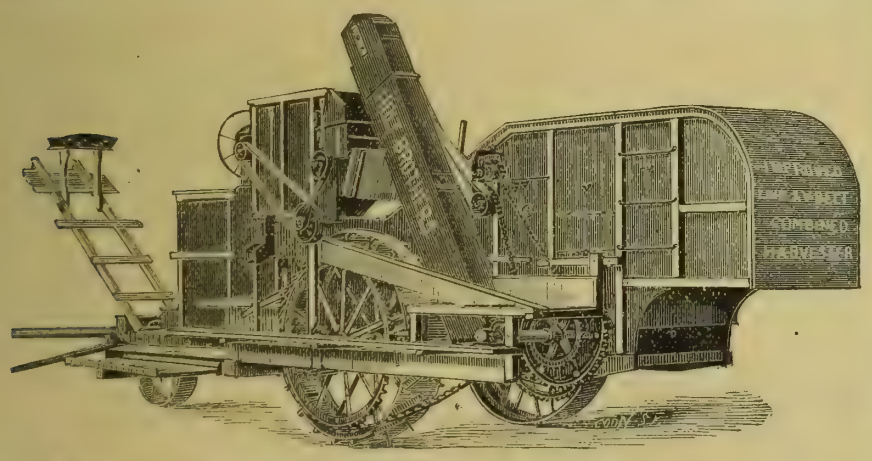
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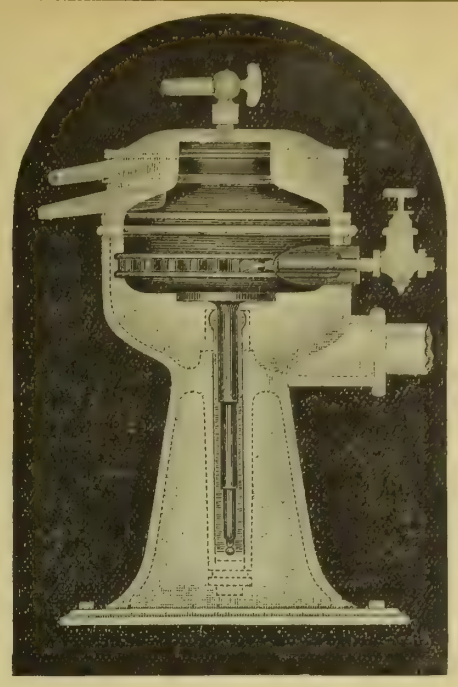
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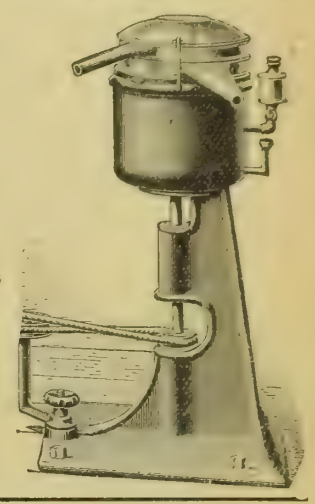
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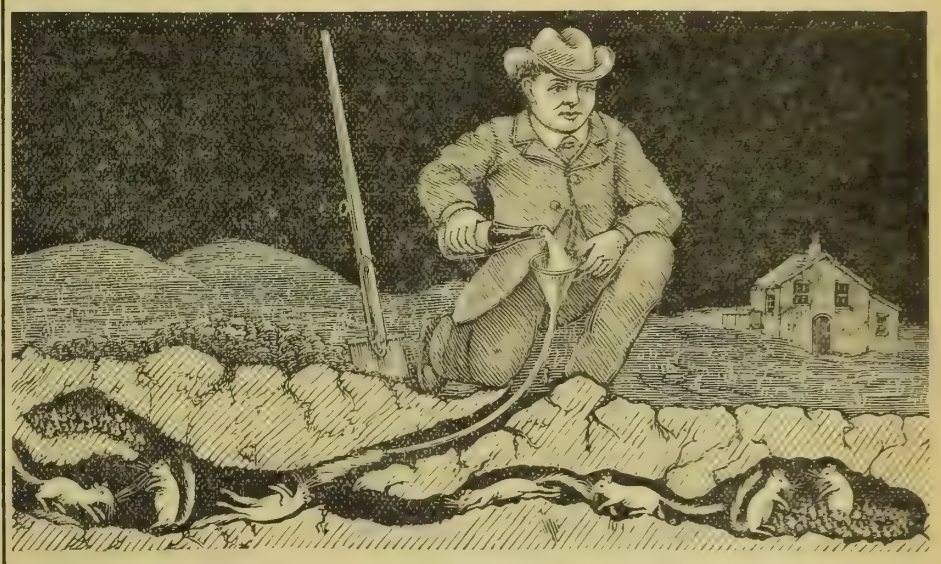
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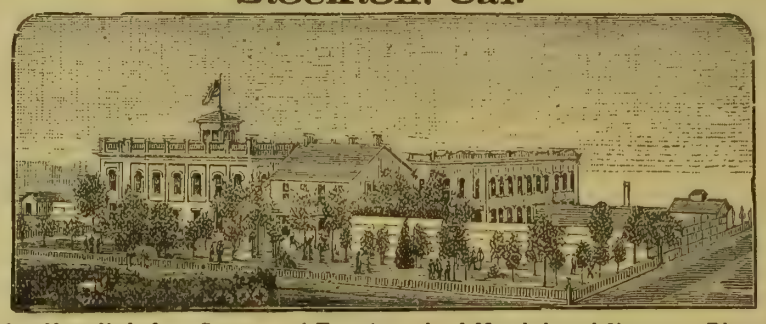
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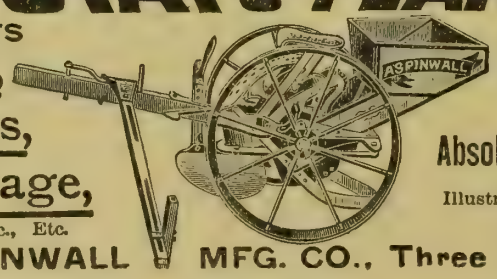
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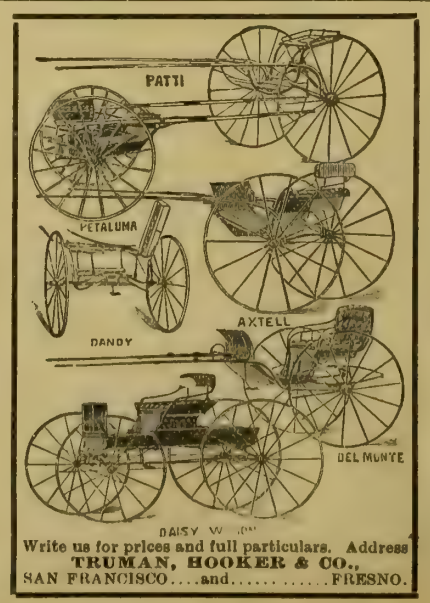
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PIANOS

Farmers' Institute Organization.

We insert the following for the information of those who have or are about to organize local associations for holding farmers' institutes:

Constitution of the Fresno County Farmers' Institution.

Preamble.—Realizing that in "union there is strength," in many counsels there is wisdom, and that the farmer has need of keeping pace with those engaged in other pursuits in intelligent and progressive movements; also that great benefit and pleasure have been derived from the session of the Farmers' Institute held here under the auspices of the Board of Regents of the State University: We, the people of Fresno county, hereby form a permanent organization, to be governed by the following Constitution and By-Laws:

Constitution.—*Article I.*—Section 1. This organization shall be known as the Fresno County Farmers' Institute.

Sec. 2. It shall have power to adopt its own Constitution and By-Laws, rules of order and order of business.

Article. II.—Section 1. The officers of the Institute shall consist of a President, two Vice-Presidents a Secretary and a Treasurer.

Sec. 2. These officers shall constitute an Executive Committee, for the transaction of all business that may come before the Institute when not in regular session.

Sec. 3. The term of office of each officer shall be one year, the officers to be elected by ballot.

Article.—III. Section 1. The annual meetings shall be held in April of each year, the exact date to be fixed by the Executive Committee, and shall be held in the city of Fresno, at which time officers shall be elected and other business transacted. Visitors shall be invited, both from home and abroad, and a program of exercises shall be previously prepared for the entertainment of those present, including addresses by noted individuals upon subjects of especial interest to farmers.

Sec. 2. Similar quarterly meetings shall be held in the months of January, July and October, the exact time and place of meeting to be determined by the Executive Committee.

Article IV.—Section 1. The duties of the Executive Committee will be to arrange programs for the Institute, audit bills and the books of the Secretary and Treasurer. Three members may form a quorum.

Article V.—Section 1. The duties of the President shall be to preside at all Institute meetings and at all meetings of the Executive Committee; to call such meetings when necessary; to appoint committees and to cast the deciding vote when there is a tie.

Sec. 2. The duty of the Vice-Presidents shall be to preside in the absence of the President.

Sec. 3. The duty of the Secretary shall be to keep a record of the proceedings of each meeting, keep a roll of its members, attend to the Institute correspondence, send to each of the county papers, one month in advance of each meeting, notice of such meeting, together with a program of exercises; to receive all moneys paid to the Institute and turn the same over to the Treasurer, taking the Treasurer's receipt for the same.

Sec. 4. The Treasurer's duty shall be to receive all moneys paid over by the Secretary and pay out the same on warrants drawn by the Secretary and approved by the President. The Treasurer may be required to give bonds.

Article VI.—Section 1. Any person of good moral character over 18 years of age may become a member of this Institute; if a lady, by signing the roll of membership; if a gentleman, by signing the roll and paying in advance the yearly dues, 50 cents; this being for the fiscal year of this Institute, no deduction being made for the first year, though it is less than twelve months.

Article VII. Section 1. All proposed amendments to the Constitution must be submitted at a regular meeting of the Institute and lay over for consideration for at least one quarter, and a majority vote of all members present will be required to adopt.

Danger in Wearing Rubbers.—A chiropodist says: Since the streets became so muddy I have had a number of sufferers apply to me for relief. If a man has a corn I can take it out and relieve him, but if he is suffering from what I call "rubber fever" I can't help him and can only prescribe liberal foot bathing and a removal of the cause of the trouble. Rubbers should only be worn to keep the wet out, and they should be removed the moment the wearer gets indoors. Failure to note this gives a man wet feet in a far worse sense than if he had waded through mud ankle deep. It was the trouble resulting from forcing the perspiration to soak the stockings and keep the feet perpetually damp that drove rubber-soled boots out of the market. Even loose rubbers are a source of danger and the cause of many more serious colds than they avert. —St. Louis Globe-Democrat,

A New Book for Farmers.

Readers of the Rural Press who desire to inform themselves of the modern machinery adapted to farm work, should write to Baker & Hamilton, San Francisco, for a copy of their latest catalogue. It is a handsomely illustrated book of 216 pages, and describes every implement used by the farmer. It will be sent free to any person sending for it. In writing, state that the catalogue mentioned in the Rural Press is desired.

Try.

A correspondent of the *Farm and Fireside* who has had considerable experience in such matters, suggests the following:

For sore throat, inflamed tonsils, quinzy and even diphtheria, try a gargle made of equal parts of soda and pulverized alum, with a little carbolic acid. Put in a large bottle and add water.

If any one should have occasion to use, as I have had, a poison antidote, it would be well to know that the white of an egg will absorb a metallic poison, giving a little time to procure the proper emetic. I have heard but recently that tobacco tea is an efficient antidote for arsenious poisons.

If an insect crawls into the ear, close the other with a finger, shut the mouth and pinch the nose. The insect will crawl rapidly out.

If the child pushes a bean, kernel of corn or other obstruction into its nose, rub the nostril with Scotch or other snuff to provoke sneezing.

If anything gets into the little one's eye, a mother would not refuse to wipe it out with her tongue when she has learned that it would cause an irritation to do so.

For catarrh I use one-third pulverized burnt alum and two-thirds refined borax. Mix well and snuff up the nose a very small pinch of it both night and morning. If the throat is inflamed I take a pinch of the mixture and let it dissolve in my mouth. For a cold in the head the above snuff is excellent when snuffed up the nose.

Another Horticultural Society.

Centerville, Feb. 27.

To the Editor:—A farmers' and fruit growers' society was started in Washington Township, Alameda county, on Wednesday evening, Feb. 24th. The officers elected for the ensuing term of six months were: H. Overacker, Jr., President; J. C. Shinn, Vice-President; H. E. Mosher, Treasurer; J. E. Jacobus, Secretary. Regular meetings will be held the third Saturday in eaeh month, and interesting speakers will be engaged whenever possible.

The society will be known as the Farmers' and Fruit Growers' Association of Washington Township, and the aim, as set forth in the constitution, adopted: "To improve ourselves by exchange of ideas at regular meetings, and guard the welfare of our business." Mr. Craw was present at this meeting with his microscope and a collection of scale insects and parasites that proved very interesting and instructive to all present. Member.

About San Jose.

In a recent trip to this charming city of orchards, rather than "Garden City" as they are accustomed to call it, the writer saw realized, his ideal of what the greater part of California fruit lands are likely to become some day. Grain fields have pushed back the pastures, fruit trees the grain fields, and now they are uprooting orchards to make room for residences. All property for sale seemed to be at steadily advancing values, and an air of general prosperity pervaded the city and surrounding country. Offices of great packing, shipping and fruit-drying houses gave every indication of the transaction of a large amount of business.

A GREAT HOTEL.

Probably these considerations, and a constantly increasing patronage prompted Tyler Beach, the veteran hotel proprieter, to add the annex to the St. James Hotel, which gives him 212 sleeping apartments besides large offices, dining-rooms, a new hydraulic elevator, etc. He has a farm three miles away, where a large part of the supplies are produced. The eggs are on the hotel table before the echoes of the cackle have died away. Milk comes in while it is still warm from the cow, and the butter has that quick, fresh flavor that you will not get at more than one place in a month's travel. Believing it to be an impression current among the ladies, that the shortest road to a man's heart is by way of the stomach, it occurred to us while noting the extensive improvements going on at the St. James in a city where there are so many good hotels, that the increase of business calling for the annex arose from the uniform excellence of all supplies provided for the table, coupled with fair rates and uniformly courteous attention. In future, when visiting San Jose, we shall remember the St. James.

F. S. C.

Good Butter.

Speaking of good butter, an English exchange says:

"There are five things to aim at in making butter for the best market. These are uniformity in color, in texture, in salting, in packing, and leaving no water in the butter."

Uniformity in color is the most important, and this cannot be had unless good coloring is used at this season. There are many colors on the market ranging from poor to good, but the best dairymen—those who have a reputation for choice butter—use and endorse Wells, Richardson & Co.'s Improved Butter Color. They unite in affirming that this color is the strongest, the most natural and the one make that is always the same in strength and color. When the best costs no more than inferior kinds, why not use the best?

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Its market reports are prepared thoroughly and with the greatest care possible for the benefit of the producer.

Its illustrations are probably the most practical, original and helpful of any agricultural journal in the world.

The Rural has long been noted for its fidelity to the farmers' cause and its vigorous advocacy of progressive principles, its exposure and denunciation, in unmistakable terms, of oppressive monopolies, corrupt legislative and judicial practices, political frauds and public abuses, wherever found, and has no occasion or disposition to take a back track as to discharging its representative duties.

To extend and solidify the farmers' organizations by better education and reliable information as to their natural rights and powers, the unwarrantable encroachments of powerful combinations and unscrupulous trade rings, political demagogues, and barefaced frauds and insidious enemies that beset the pathway of honest men, are leading objects of our vigilance.

California is a great and rapidly developing State. Its agricultural, horticultural and livestock interests are becoming second to none in the Union. The Rural will endeavor to do its whole duty in aiding its true progress.

To make our efforts effective, our enterprise must be supported by the great body of farmers, substantially, by prompt and liberal subscriptions to the paper, correspondence for its pages, and the unhesitating and unqualified backing and defense of its honest acts in behalf of the leading interests of our rural population

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In the inland valleys of the Pacific Coast the Combined harvester has become the universal machine for harvesting. There is a unanimity of opinion that makes this mode of harvesting a settled question and a necessity so vital, that our great grain growing farmers would hesitate to put in large crops if they had to harvest in the old way.

One of the great difficulties in using these Combined Harvesters has been that of cutting on hillsides and uneven land. For the last two years Holt Brothers' Company has given a great deal of time and thought to perfecting a machine that would cut on uneven ground, as a large portion of our fields are on the hillside. During the last year, one of these side-hill Combined Harvesters was thoroughly tested on rolling and hill lands, and proved itself capable of adjusting the machinery part so that it remained on a level.

This side-hill harvester went through the whole season of 1891, and in every way fulfilled the most sanguine expectations. In a word, men who raise grain on rolling and hill lands must have a side-hill Combined Harvester to harvest it, or be at the enormous expense of getting their crops in the old way.

Detailed and particular information can be had of the benefits of this side-hill Combined Harvester by addressing the Holt Manufacturing Company, Stockton.

Oliver Chilled Plows.

During all the years of civilization the plow has been the chief implement used by man to till the earth. The forked stick used by the Mexicans, and the so-called bull-plow used by our forefathers, have been superseded by the light-chilled steel plow of modern times.

It is a tribute to the genius of American industry and skilled mechanism to know that the manufactory at South Bend, Ind., has succeeded in making a plow that is used in all parts of the world, and the demand has become so large that their plant is now the largest manufactory in the United States of America, or the continent of Europe.

They make an exclusive business of manufacturing only plows, but their line of goods constitutes the gang for the prairies and the wheat fields of the northwest, as well as the single plow for the farmers in the East, and the vineyard plow for the horticulturists and the grape grower.

It is not too much to say that in economy, durability and efficiency, the Oliver Chilled Plow is equal to any.

This great American institution has gained a popularity, not only by the merit of their plow, but have followed a system of liberality and fair dealing to dealer and farmer, so that they are enabled to have agencies in all parts of the United States, and in the principal countries of Europe, Asia and Africa.

Their agency at 37 Market St., San Francisco, has been in the hands of men who have followed one line of fair dealing and liberality, till it has become one of the largest distributing points for the plows in California.

H. C. Shaw Plow Works.

The activity and bustle incident to filling orders and shipping agricultural implements from this great establishment was forcibly illustrated by the large line of goods that were packed, addressed and awaiting the draymen in front of their store. Our reporter, as a matter of interest and curiosity, made a record of the following addresses to which the goods were to be shipped, viz: Napa, Davisville, Ukiah, Healdsburg, Bakersfield, Hanford, New Zealand, Santa Barbara and Saticoy. Mr. Shaw has kept abreast of the times as a manufacturer and dealer in agricultural implements for the last 20 years, and sagacity and long experience have enabled him to provide for this season a full line of the best mowers, headers and cultivators, among which is the celebrated Morgan Spading Harrow.

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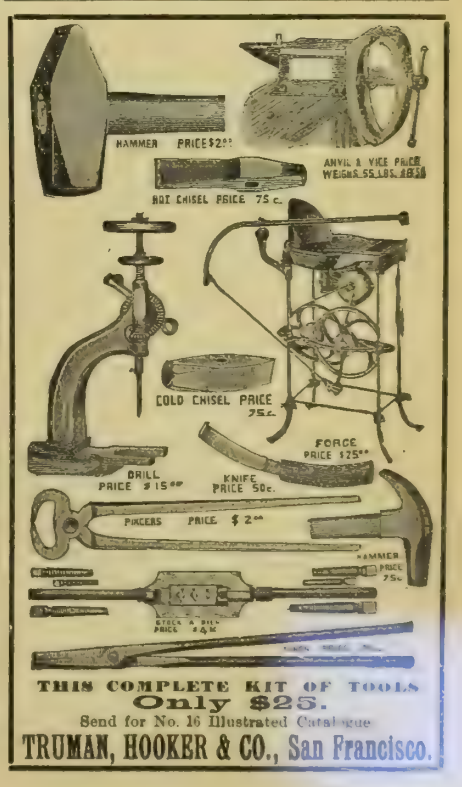
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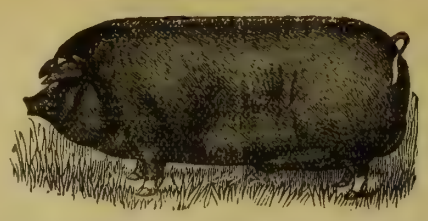


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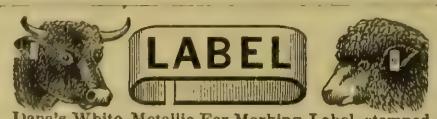
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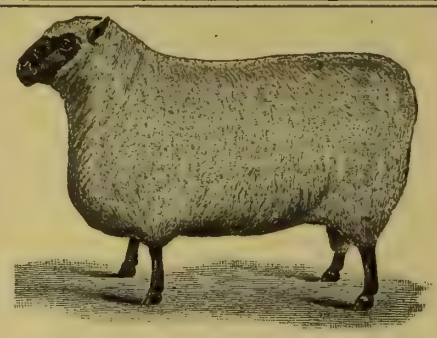
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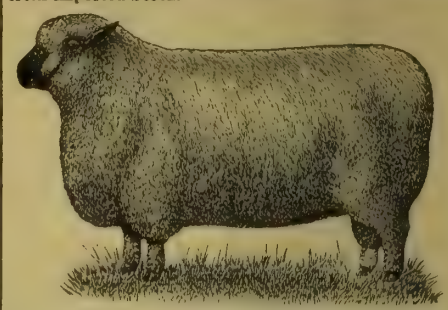
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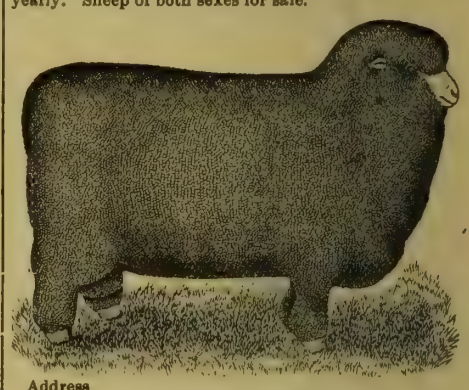
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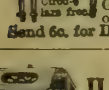


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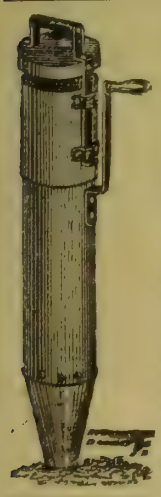
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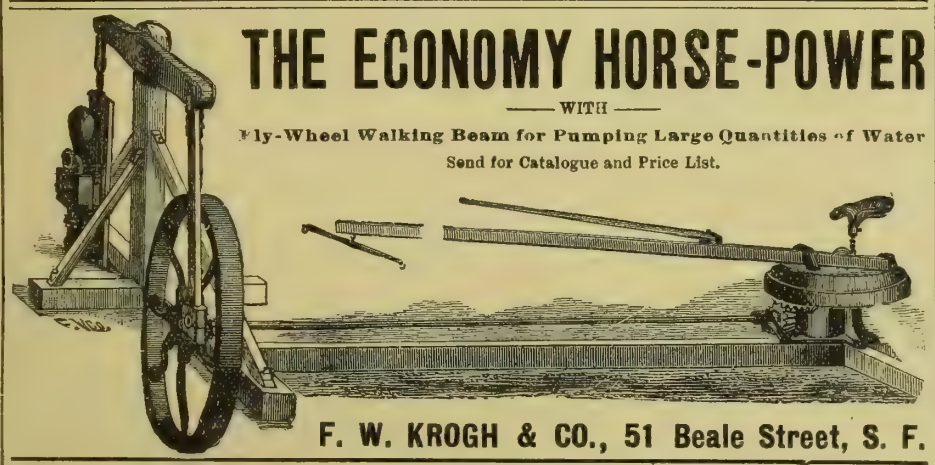
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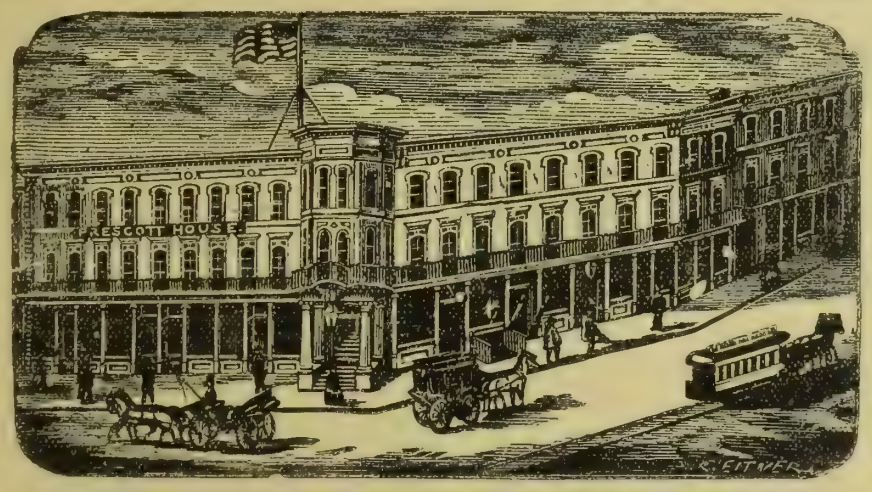
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, Feb. 29, 1892.

General trade in farm products continues only fair, being restricted by light obtainable supplies and buyers more or less offish. Weather continues unusually favorable for growing crops and outdoor work, causing interior exchanges to predict larger outturns of all kinds of crops than in any former season. There is a large list of deep-sea vessels in port which causes low outward charters to obtain. This large tonnage is rather a hopeful sign for next season's wheat growers, for it insures against exorbitant outward charters. The money market is fairly easy, with term loans securable after assessment day at favorable rates of interest to borrowers on gilt-edged security. The same conditions appear to obtain in the Central States, for a New York financial journal says: "It is doubtful whether the West as a whole has ever enjoyed a prolonged period of as low a rate for money as has prevailed there."

Foreign Hop Review.

Mark Lane Express, Feb. 8: A rather better demand for 1891 English hops has prevailed, but the principal transactions, however, have been in Californians, some heavy sales having been effected at prices fully equal to late quotations, Most of the Pacific Coast hops sent over to this market are already ordered, and, consequently, there is no accumulation in merchants' warehouses. Consumers appear pretty well salisfied with the quality and condition of these hops, and, moreover, the prices are considerably lower than for the leading grades of English, the latter being too scarce to admit of their sale at such values as Californians. Continental markets have become more active, and there is a corresponding improvement in the currencies, a general recovery being noted. Reverting to our own market, it may be mentioned that the few holders of last season's crop continue very firm in their demands, and it is probable that when the spring trade sets in they will be able to obtain the higher prices that they are now asking. In regard to old olds the situation remains unchanged. There is only a small inquiry, and values keep low.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

Day.	Feb.	Mar.	April.	May.	June.
Thursday	8s00½d	8s00½d	8s00 d	7s11½d	7s11 d
Friday	.....	7s11½d	7s11½d	7s11 d	7s10 d
Saturday	7s11d	7s11 d	7s11 d	7s11 d	7s09½d
Monday	.....	.....	.....	.....	.....
Tuesday	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	40s0d	40s3d	40s d	Steadier.
Friday	40s	40s d	40s	Quieter.
Saturday	40s	40s d	40s	Steady.
Monday	....	....	....	
Tuesday	....	....	....	

New York.

The following shows the closing prices of wheat for the past week:

Day.	Feb.	Mar.	Apr.	May	June
Thursday	175⅝	175¼	176	172⅝	170
Friday	174¼	174⅜	174½	171⅛	168⅜
Saturday	174⅛	174¼	174⅜	171⅛	168⅛
Monday	....	....	....	....	....
Tuesday	....	....	....	....	....

San Francisco.

WHEAT.

	Buyer Season.		Buyer Sept.		Seller 1892.	
	H.	L.	H	L.	H.	L.
Thursday	169½	167½	145¼	145¼	143⅝	143½
Friday	167¼	166⅝	....	....	143⅝	143⅜
Saturday	167¼	166½	....	....	143⅝	143½
Monday	....	....	....	....	....	....
Tuesday	....	....	....	....	....	....

BARLEY.

	Buyer Season.		Seller Season.		Seller 1892	
	H.	L.	H.	L.	H.	L.
Thursday	99⅜	99	....	....	....	....
Friday	100	99½	....	....	....	....
Saturday	101½	100½	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	....	....	....	....	....	....

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, Feb. 19.—Bradstreet's: Wool trade quiet, but prices hold steady at a decline. Goods market has been in such a sluggish condition that manufacturers are not inclined to buy wool beyond their immediate wants, and there now appears to be reason for believing that prices are going lower on both domestic and foreign wools. Importations of these wools have been large, and dealers have been forced through competition and the inferior quality of the wool to offer their stocks at much lower prices than they did last year. On choice Australians values are firm and unchanged, but the greater part of imports are defective wools and below the average of last year. While the buyer has obtained his wool at lower prices, concessions made by the dealer have not been in most instances commensurate with the difference in quality of wool bought now and in 1891. At the London sales over 9000 bales have been taken for this country and Canada. There has been a moderate demand for fleeces, and prices are said to be fairly firm, but it is noticed that dealers are becoming tired of holding their stocks. Very little is being done in either California or Texas wools.

NEW YORK, Feb. 26.—*Bradstreet's* says: The distribution of wool has been heavier in all the leading markets. The improved condition of the goods market has encouraged manufacturers to buy and dealers are now willing to make the desired concessions. The decline in prices has been caused largely by the buying of foreign wools. The manufacturers bought freely at the London sales, and a large part of the direct imports from Australia were purchases of the manufacturers. This, coupled with the dull market which we have had for months and a prospect that large stocks from last year's clip would be left over, has caused the dealers to weaken and accept the prices offered by buyers. Not only are domestic wools lower, but Australians show even a larger decline from prices of a year ago. The sales of California wool show good increase, but prices were lowered considerably, some lots of defective fall having sold at 2c. Stocks of Territory wool are large and holders are anxious to dispose of them. Good lots of Territory wool would not bring 58c, although 60c has been paid within a few weeks for the same. Carpet wools are quiet, owing to a better demand and higher prices for carpets; quotations are unchanged and firmer. Stocks are not excessive in any American markets.

NEW YORK, Feb. 28.—With the approaching date for the new clip, and more than possible outside additions to the supplies, there has been a decided pressure to place stocks, and manufacturers have taken advantage of what is unquestionably the lowest general market known for a number of years. Fortunately the business has closed out many lines of inferior wool that have clogged the market for some time. It is reported that Montevideo will seek this market. Importers claim that the product can sell here on a basis of 60@62c cleaned. This would be close to much of the Territory. The closing of the London auction, February 20th, showed a net decline of 10 per cent from December, which were barely above the lowest point ever reached. Sales at New York were 809,000 domestic, and 495,000 mostly common foreign. Sales at Boston were 3,500,000 pounds, 800,000 of which was foreign. Some choice Territory brought 23c, but 15c to 20c covers most of the sales. Six hundred and fifty thousand Australian was sold at 34@42c. Philadelphia did a fair trade with the assistance of Eastern buyers.

Eastern Hop Market.

NEW YORK, Feb. 28.—Hops met little brewing attention and no export call; spot Pacific and State ranged lower and alike; common to choice '91s, 20@25c; options have ruled closely to cash; California closing, April, 22¼@24c bid and asked; May, 23½@25c; June, 24¼@25¼; exports for the week, 490 bales. Revised crop figures put the State at 140,000 bales and Pacifics at 95,000.

Eastern Dried Fruit Market.

NEW YORK, Feb. 28.—The stock of unpeeled peaches has been perceptibly worked down by recent easy figures. Reports of 100 carloads of prunes on the Coast are credited to the extent that it makes buyers somewhat indifferent. Good ungraded small are quoted at 6@6¼c, and are scarce. Forties to fifties brought 10c; fifties to sixties, 9c. Raisins are a drug. Two-crown bags are quoted at 3⅞@4c; Three crown, 4¾@5. The lower price is for prime, but damp for keeping in stock. The large ones sell where they can be used and not displayed. Boxes range from $1.05@$1.35 for loose and the low style of layers here. Apricots have unaccountably lost their customary precedence, though cheap peaches may form an incident. Boxes, 8@8½c; bags, 6½@7c. There are offers to land them here at 6@6½c.

Miscellaneous.

NEW YORK, Feb. 28.—Honey, quiet; some Philadelphia owned was offered at 7¼c. Lima beans are in useful demand; choice are slow and weak; best foreign, $1.30@$1.31; California, $1.30.

General Remarks and Statistics.

Cereals.

The London *Times*, *Mark Lane Express* and *Dombusch* all agree that the wheat acreage of the United Kingdom this coming year will be the smallest on record. Not more than 2,250,000 acres are likely to be sown, and the normal outturn on such an area will not be more than 68 000,000 bushels.

The Cincinnati *Price Current* makes an estimate of the wheat surplus on hand for March 1st as follows: The visible supply and farmers' stocks last year, March 1st, were 135,000 000 bushels. Adding the crop of 1891, 612,000,000 bushels, makes a total of 744.000,000 bushels. The exports for the year ending March 1st are 205,000,000 bushels; consumption and seeding, 360,000,000; making a total of 565,000.000 bushels. This leaves 182,000,000 bushels as the logical indication of the farmers' stocks and visible supply on March 1st. If this is correct, the consumption during the next three months will absorb 100,000,000 bushels, spring seeding 15,000.000 bushels, leaving 67,000,000 bushels only for visible supply, farmers' reserves and exports.

The local call board wheat market continues to move in sympathy with the erratic course of the Chicago market for futures. There does not appear to be any well-grounded reason for it, seeing that the speculative option in Chicago is May. The statistical situation is in favor of better markets; the serious drawback is the very low price of silver, which, as stated by *Money*, a leading financial journal of London, England, insures to Great Britain cheap wheat from India. As India is our great wheat competitor with England, it is readiiy seen why the English are such strong gold bugs.

In the sample market, wheat has held fairly firm under low outward charters and firm holding. It now looks as if all the obtainable wheat before assessment day has been marketed, and that persons now holding will not press the market, There is a growing conviction in certain quarters that higher ranges in values will obtain before the close of April. Receipts from up north are lessening. This is due to low outward charters ruling at Portland and at Sound ports.

Barley in the sample market is firm, notwithstanding that the strong bear pressure heretofore reported appears to be stronger. Why this is the case, it is difficult to say. There are those in trade who claim that it is due to a general combination among large speculative dealers to keep the market depressed, to enable them to operate to better advantage at low prices in nezt season's grain. The feeding consumption is said to show no marked falling off and consequently the visible supply is growing beautifully less.

Oats are weak and generally in buyers' favor, notwithstanding receipts show a falling off There is a general desire among dealers not to operate much, if any beyond their immediate requirements. The supply up north is said to be light for the season.

Corn continues to hold its own under light receipts and a steady home and export inquiry. The stock in the State is reported light.

Rye and buckwheat are dull, but no lower.

Feedstuff.

The market for ground feed is fairly strong under a continued good feeding demand. The high range of prices for bullocks, mutton sheep and hogs, with green feed not well matured for fattening, causes feeders to use ground feed, which absorbs the output. This demand will probably soon begin to fall off.

With continued favorable growing weather, there has been and still is a general desire to market the surplus hay, yet even this strong selling pressure has not had very much of an unfavorable effect on market values. From all we can learn, it looks as if the next crop will come on a well cleaned up market.

Dairy Produce.

Butter has continued on the down grade, closing the week under large receipts and dealers not disposed to buy beyond immediate wants There is a continued free inquiry for hard pressed choice to gilt edge, for shipment up north.

Cheese has set off the past week, closing barely steady at the lowest prices. Receipts are not large, neither is the stock here, but buyers holding off cause sellers to make concessions so as to induce them to take hold.

For eggs, the market is more or less demoralized. Heavy receipts in this city with all interior distribution points supplied locally, cause dealers to look for slightly lower prices than are now quoted. The consumption is stimulated to a larger extent than usually obtains this early in the year.

Vegetables.

It is quite within the range of truth to claim that never before has the season been so favorable for gardening and the growth of vegetation. It now looks as if market prices for spring garden truck will be as low toward the last of March as usually obtaines a month later. Onions are lower and weak at the decline. Receipts are large and the mild growing weather causes consignees and dealers to force sales. It takes very choice good keepers to fetch one cent a pound. To say that the potato market is demoralized, faintly expresses the situation. Forced sales are the order of the day. It takes very choice to fetch outside quotations and even then they can only be placed in a small way. Sweets are weakening.

Fruit.

Common, poor keeping apples are hard to place, and for such, prices favor buyers. Choice, good keeping apples are wanted and fetch good prices.

Advices from all parts of the State are confirmatory of the outlook favorable for a very early season.

Limes and lemons are fairly firm at quotations.

The market for oranges is overstocked with trashy to fair, but good to choice are scarce, while fancy are seldom seen. The market for scrubby stock is demoralized and hard to quote. Even trucksters have a hard time to work off poor, trashy oranges, and as choice are too high for their trade, tney deal largely in bananas. In to-day's tour of the city, we found that the stock of oranges is very heavy and trade light.

The market for dried fruits is being slowly bnt surely cleaned up. Poor oranges and high apples cause consumers to take more kindly to dried fruits. Holders are disposed to clean up, fearing the early season for fresh fruits.

So far as we can learn, overland railroad freight rates have not been changed. It does appear singular that the railroad company wants to throttle the growing industry by their exorbitant freight charges

Live Stock.

The market, although quoted weak for bullocks and mutton sheep, appears to have an undertone of strength that may soon bring out better prices for the former. Hogs are firm, with those suitable for the block fetching full outside prices.

Miscellaneous.

From reliable advices up to Feb. 29, the following summary tonnage movement is compiled:

	On the way		In port	
	1892.	1891.	1892.	1891.
San Francisco	218,692	269,273	*†128,807	88,346
San Diego	21,221	10,905	2,377	.....
San Pedro	1,952	6,433	462	
Oregon	21,172	32,704	29,173	15,877
Puget Sound	12,718	17,809	.....	
Totals	275,755	337,124	160,819	104,223

*Engaged for wheat, 1892, 37,937; 1891, 73,915 †For new crop loading, 1,746.

The statistics of produce exports from this port compiled by the "Commercial News," from July 1st to Feb. 25th, are as follows:

	1891.	1890.
Wheat, ctls	11,247,025	8,228,850
Flour, bbls	743,436	787,313
Barley, ctls	785,340	205,476

Bags are strong at 7⅞ q 7¾c.

Poultry has ruled fairly firm, with choice, well-conditioned readily placed at full prices. Scrubby fowls, as usual, are hard to sell.

Beans are firm, with all indications pointing to better prices. High freight rates eastward are against growers. As yet the railroad has not been induced to lower freights Free shipments are being made to New York by seagoing vessels.

Hops are scarce and firmly held at full figures. For next season's crop the average contract prices range from 12 to 13 cts.

Wool is in light stock. With a continuance of present weather the clip will come in much earlier than usual.

Honey is in light supply. The market is reported firm.

Broom corn is very high, The best will fetch $150 a ton or 7½ cents a pound. The supply on this coast and at the East is cornered. Even second crop on this coast will fetch high prices.

Produce Receipts.

Receipts of produce at this port for 5 days ending Feb. 29, '92, were as follows:

Flour, qr. sks	65,318	Bran, sks	8,076
Wheat, ctls	76,497	Buckwheat "	.....
Barley, "	23,585	Middlings "	2,465
Rye, "	.....	Chicory, bbls	90
Oats, "	.....	Hops, "	.....
Corn, "	.....	‡Wool, "	6
*Butter, "	628	Hay, ton	1,390
do bxs	357	Straw, "	44
do bbls	.....	Wine, gals	169,350
do kegs	.....	Brandy, "	1,910
do tubs	.....	Raisins, bxs	300
do ½ bxs	192	Honey, cs	.....
†Cheese, ctls	347	Peanuts, sks	.....
do bxs	71	Walnuts "	25
Eggs, doz	43,582	Almonds "	12
do " Eastern	.....	Mustard "	.....
Beans, ctls	4,722	Flax "	.....
Potatoes, sks	12,572	Popcorn "	.....
Onions, "	1,352	Broom corn, bbls	.....

*Overl'd, — ctls. †Overl'd, — ctls. ‡905 bales, Australia.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to Feb. 21, '91.	July 1, '91 to Feb. 20, '92.
Flour, ½ sks	203,627	335,904
Wheat, ctls	995,347	1,136,083
Barley, "	231,396	29,099
Oats, "	266,482	329,754
Wool, bales	5,798	5,978
Hops, "	392	396
Rye, sks	.....	3,299
Potatoes, sks	45,397	72,073

Best's Agricultural Works.

A RURAL PRESS reporter visited the g reat agricultura works at San Leandro last week. A large force of men is engaged principally manufacturing Best's Model Combined Harvester Traction Engines and gas or gasoline engines. There were 12 New Model Combined Harvesters in the paint shop and yard ready for painting, and the foundation timbers for 12 more New Model (horse power) Combined Harvesters were laid and ready for woodwork. Four new boilers were set up and the parts of the engine and frame were being built around these boilers. In the center building the workmen were constructing 20 gas engines, one of these being a double engine for the motor running out from San Jose to Alum Rock, this being the second ordered for this motor road. Among the number of visitors at the Agricultural Works, numbering 10, were one from Fresno, one from Colusa, one from Grand Island, one from Marysville, one from Petaluma and one from San Francisco, who were negotiating for harvesters or other articles in the line of goods manufactured by Mr. Best.

It is a matter of much interest to any one concerned in the mechanical progress of our State to visit this great agricultural plant within a 40 minutes' ride from San Francisco.

Grown Popular.

The Ongerth Liquid Tree Protector has grown popular as a protection against scale bugs and all insect pests from its very effectiveness, and all who have used it have found it the best they have ever tried. The office of the Ongerth Grafting Compound Company is at No. 212 Davis Street.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 29, 1892

BEANS AND PEAS.			
Bayo, ctl	2	@	2 20
Butter	2 30	@	2 80
Pea	2 50	@	2 80
Red	2 20	@	2 50
Pink	1 90	@	2 05
Small White	2 40	@	2 70
Large White	2 30	@	2 60
Lima	1 80	@	2 15
Bld Peas, blk eye	1 30	@	1 50
Do green	1 30	@	1 50
Do Nies	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	15	@	22½
Do good to choice	28	@	—
Do Giltedged	—	@	30
Do Creamery rolls	—	@	30
Do do Giltedge	—	@	31
Eastern	16	@	20
CHEESE.			
Cal, choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	—
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	—	@	—
FEED.			
Bran, ton	20 00	@	22 50
Feedmeal	28 00	@	29 50
Gr'd Barley	23 00	@	24 00
Middlings	23 00	@	25 —
Oil Cake Meal	— 00	@	25 00
Manhattan Food ₰ cwt.	7	@	50
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oats	12 00	@	—
Wild Oats	11 00	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	50	@	60
GRAIN, ETC.			
Barley, feed, ctl	92½	@	1 01½
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 10	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 27½	@	1 32½
Yellow, large	1 22½	@	1 27½
Do small	1 26½	@	1 30
Oats, milling	1 37½	@	—
Feed, Choice	1 32½	@	—
Do good	1 30	@	—
Do fair	1 25	@	—
Surprise	1 50	@	—
Black Cal	1 35	@	1 75
Do Oregon	1 25	@	1 40
Gray	1 20	@	—
Rye	1 60	@	1 72½
Wheat, milling.			
Gilt edged	1 72½	@	—
Do Choice	1 70	@	—
Do fair to good	1 68½	@	—
Shipping, cho'ce	1 68½	@	—
Do good	1 66½	@	—
Do fair	1 63½	@	—
Common	1 57½	@	1 70
Sonora	1 57½	@	1 70
FLOUR.			
Extra, City Mills	5 00	@	5 25
Do Country Mills	5 00	@	5 25
Superfine	3 15	@	3 45
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
NUTS—JOBBING.			
Walnuts, Cal. lb	5	@	—
Do Choice	7	@	—
Do paper shell	7	@	—
Almonds, sft shl.	11	@	—
Paper shell	12	@	14
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	12	@	14
Do large	15	@	17½
Peanuts	3	@	4
Filberts	11½	@	14
Hickory	7	@	8
Chestnuts	11½	@	12
ONIONS.			
Silver Skin, Ch'e	95	@	1 05
Fair to Good	60	@	85
Cut	45	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	45
Do do Salinas	75	@	90
Do do Oregon	60	@	80
Do Humboldt	60	@	80
River Reds	25	@	40
Sweets	1 75	@	—
POULTRY.			
Hens, doz	5 50	@	8 00
Roosters, old	5 50	@	7 00
Do young	7 00	@	9 00
Broilers, small	4 00	@	—
Do large	5 00	@	—
Fryers	6 00	@	—
Ducks	6 50	@	—
Geese, pair	1 75	@	2 25
Turkeys, Gobl'r.	12	@	14
Turkeys, Hens	14	@	17
Do Dressed	15	@	19
Manhattan Egg Food ₰ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, be'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	7	@	8
Clover, Red	12	@	13
White	20	@	—
Flaxseed	2 50	@	2 80
Hemp	3½	@	4
Mustard, yellow	3 25	@	3 75
do Brown	3 00	@	3 25
WOOL.			
SPRING, 1891.			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	18	@	—
Cala'v & F'th'll	16	@	—
Oregon Eastern	14	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ¼c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com.	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	3	@	3½
Do unstemmed	2½	@	3
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	6	@	—
White, sun-dried	5	@	6½
Do evaporated	6½	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	5	@	—
Do do choice, do	6	@	—
Do do fancy	7	@	—
Evap, unpe'l'd, choice	7	@	—
Do do fancy	8	@	—
Do do extra fancy	8	@	—
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap, sliced, in boxes	6	@	—
Do ring do	10½	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES			
Cal. French, ungraded	5½	@	—
Do graded, 60 to 100	6	@	—
Do do 40 to 60	8	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₰ bx	$1 50	@	—
Do fancy, do	1 75	@	—
Layers, ₰ bx	1 25	@	—
Loose Muscatels, common, ₰ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ₰ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ₰ 20-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, February 29, 1892.

Limes, Mex	4 00	@	5 00
Do Cal	75	@	1 00
Lemons, box	1 25	@	3 50
Do Sicily	5	@	6 50
Oranges—			
Butte County	1 50	@	2 25
Yuba do	1 50	@	2 25
Do Seedlings			
*Riverside	85	@	1 50
*Los Angeles	65	@	1 25
Do Navels—			
*Los Angeles	50	@	1 25
*Riverside	1 00	@	3 00
*Duarte	1 00	@	3 00
*Oranges free from frost sell at an advance of $1@$1 50 per box on the above quotations.			
Apples, box	75	@	—
Do choice	1 50	@	—
Do extra choice	2 00	@	2 50
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	8	@	12½
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	60	@	—
Garlic, lb	2	@	3
Squash, Mrft, tn.	6 00	@	10 00
Do Summer, lb	20	@	25
Pumpkins, ton	7 00	@	—
Tomatoes, box	1 25	@	—
Asparagus, lb	7	@	12½
Do choice to ex.	15	@	4
Peas, green, lb	8	@	11
Rhubarb, lb	9	@	11
String Beans	15	@	—
Cucumbers, doz	1 00	@	—

Live Stock.

BEEF.			
Stall fed	7	@	—
Grass fed, extra	7	@	—
First quality	6½	@	—
Second quality	6	@	—
Third quality	5½	@	—
Bulls and thin Cows	2½	@	3½
VEAL.			
Range, heavy	5	@	6½
Do light	7	@	8
Dairy	8½	@	10
MUTTON.			
Wethers	10	@	10½
Ewes	9½	@	10½
Lamb, yearling	11	@	12½
Do Fall	15	@	—
HOGS.			
Light, ₰ lb, cents	4½	@	5
Heavy	4½	@	4½
Feeders	4½	@	4½
Stock Hogs	3½	@	3½

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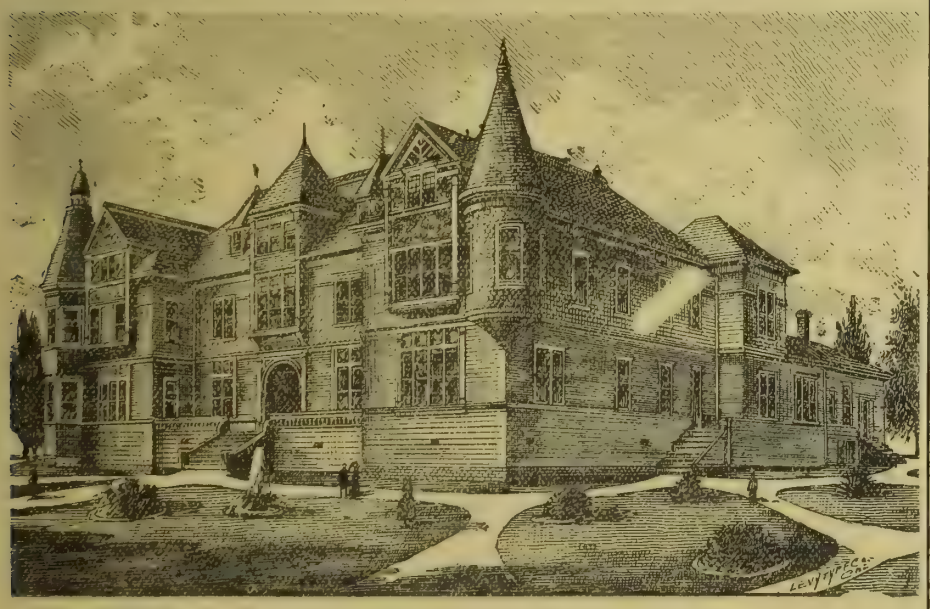
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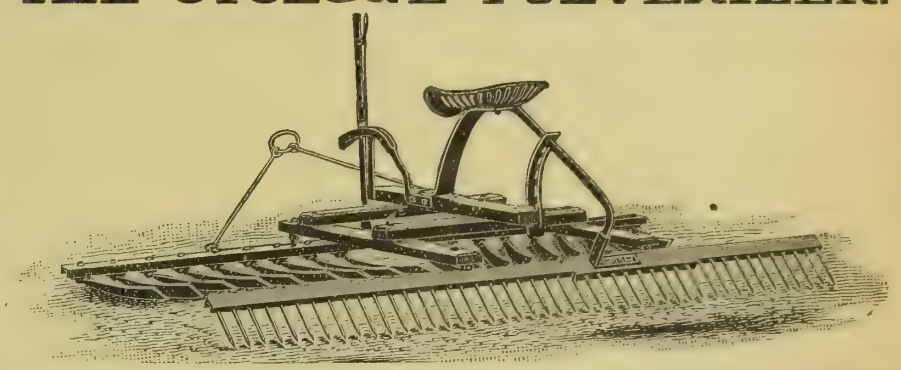
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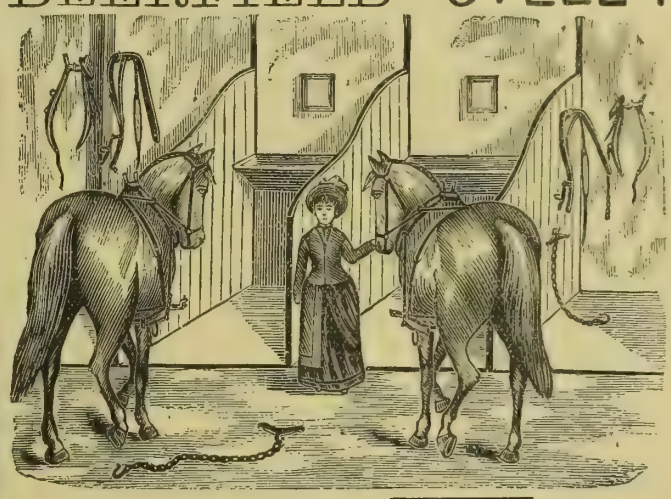
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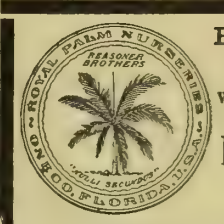
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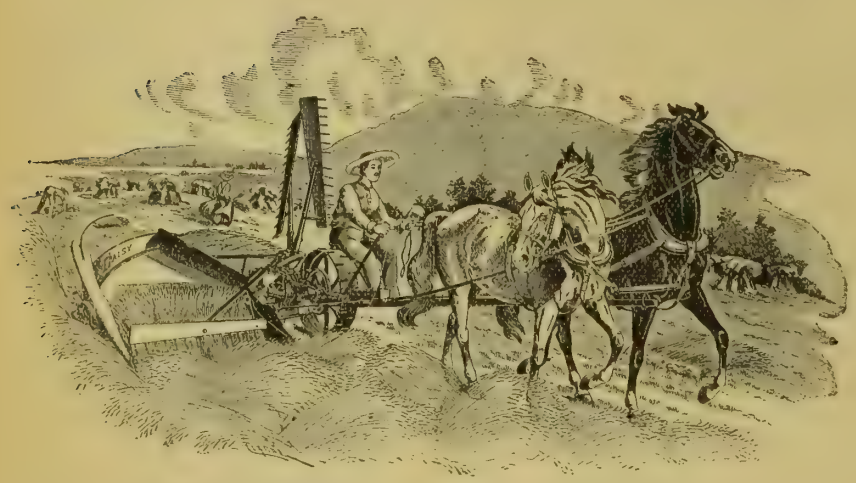


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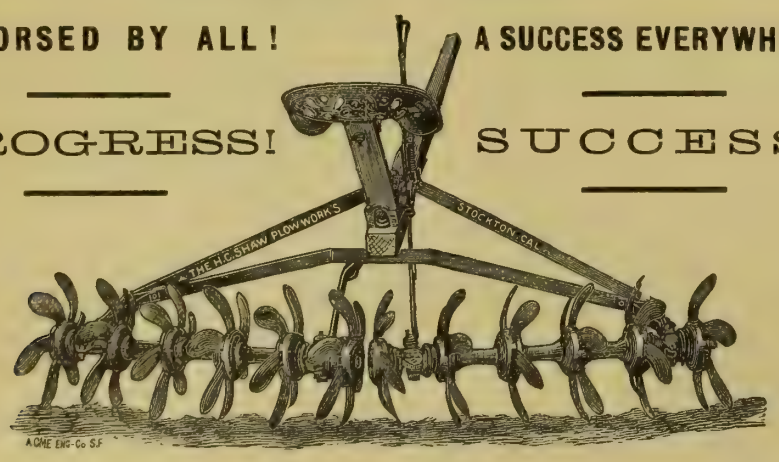
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DO NOT BE DECEIVED BY IMITATIONS.

TESTIMONIALS.

SACRAMENTO, CAL., April 23, 1891.

H. C. SHAW, ESQ., Stockton, Cal.—Dear Sir: The Spading Harrow, which you sent us to Sacramento, has given good satisfaction, and our foreman at Acampo says he likes the way the machine works very well. We shall be pleased to recommend it to any one who inquires of us. Yours truly, W. R. STRONG COMPANY.

MADERA, CAL., Dec. 22, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow we bought through your agents, Messrs. Cargile & Turnbaugh, is the best pulverizer in use. We have tried it in dry work and find it will do all that is claimed for it. Yours respectfully, D. E. LEWIS and L. W. FOX.

BERENDA, CAL., Dec. 17, 1891.

H. C. SHAW, ESQ., Stockton, Cal.—Dear Sir: Enclosed please find check to pay for the 12-foot Spading Harrow, the best implement ever invented for the cultivation of the soil. Respectfully, J. F. WARD.

VISALIA, CAL., Dec. 5, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Your Morgan Spading Harrow, as a cultivator, is a complete success, and I heartily recommend it to all orchardists and vineyardists as being a perfect machine. Respectfully yours, L. C. RICE.

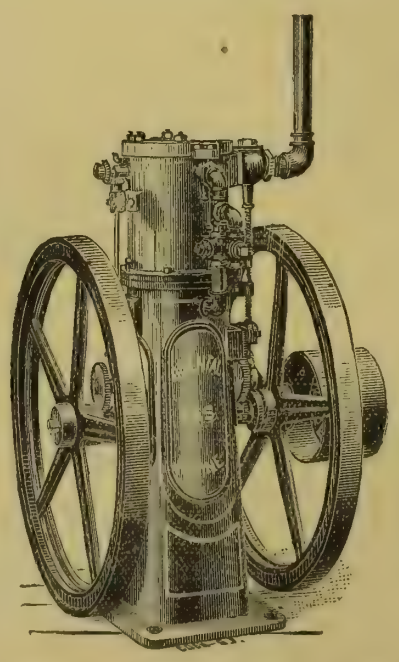
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PACIFIC RURAL PRESS

Vol. XLIII. No. 11. SAN FRANCISCO, SATURDAY, MARCH 12, 1892.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Business vs. Political Methods.

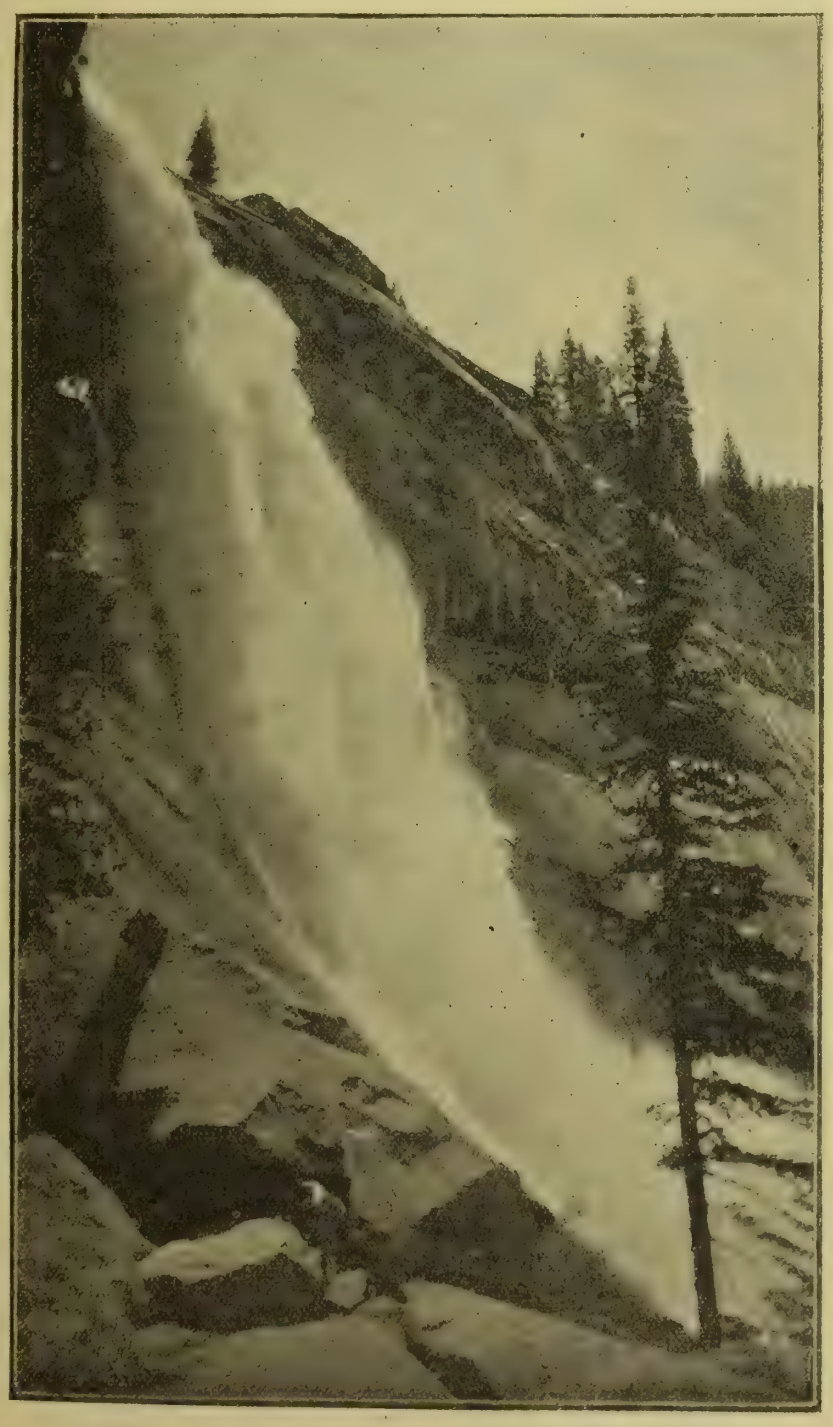
Mr. Sherman Hoar, of Massachusetts, has introduced a bill into the House of Representatives looking toward the organization of a permanent or promotive postal system. His plan is to appoint postmasters in the more important places from among those whose service in similar positions elsewhere has been most efficient. The idea is precisely the same as that upon which promotion in railroad and other business enterprises are made. Nobody thinks of selecting a manager for a railroad or a steamship line, or for a commercial house, because of his established citizenship in any particular locality, or because of his opinions respecting the tariff, or because of his personal preference as to Mr. Blaine or Mr. Cleveland. Managers of large business enterprises are chosen from motives very different and very much more rational than these. A man who has made a success in a small administrative way is usually called to larger affairs, and successively promoted as his experience and efficiency increase.

Why not so with the postal service? This vast business is now conducted upon principles which would be ruinous for any private enterprise, and nobody would think of applying such principles to ordinary business concerns. What the public wants in the postal service is not a series of "places" for political workers or for public or private favorites, but a systematic, businesslike management of the mail traffic. The efficiency of this service is related to the convenience and to the interest of every citizen, and the first consideration should be the work itself, and not by whom it is done.

Of course the professional politicians and office-holders will cry out against this plan as un-American. But it is no more un-American than the ordinary methods of carrying on general business. Surely we are carrying our "Americanism" too far if it makes the taxpayers of the country pay double rates for poor service in the postoffice or in any other department of governmental administration.

The proposition of Mr. Hoar respecting the postal service is one that should commend itself especially to those who are urging a broader relationship of governmental administration to public affairs. For example, those members of the Farmers' Alliance who want the Government to own and control the railroads, should hail with satisfaction a proposition that will test the plan of large governmental administration in a continuous line. The chief objection at this time to the governmental ownership of the railroads is that it would create a vast army of employes, subject to change with changing administrations, and of course interested in maintaining whatever political regime may be presently in existence. In other words, it is feared that, by multiplying the spoils of office, it would make it practicably impossible for the people to control their Government and to change its administration from time to time. But if a railroad service could be organized entirely apart from and entirely independent of ordinary political changes in the Government, this great objection would be removed and a long step would be made toward the end to which the reformers are so anxiously looking.

Mr. Hoar's plan should be given a trial. It proposes the application of a sound business principle to a department of administration which has no legitimate relations to ordinary politics, and which is purely and simply a matter of business. It is very much to be doubted if Congress can be brought at once to enact this measure, because it would, of course, destroy the political serviceability of the postoffice department. But we believe the plan will commend itself to the public at large, and that in time the postal service will be established on a right basis, and that its powerful and exceedingly bad influence will be eliminated from our politics.



PROFILE VIEW OF NEVADA FALL, YOSEMITE VALLEY.

GASOLINE FOR GROUND SQUIRRELS.—A correspondent living at San Jose writes us that "87° gravity gasoline will kill (by smothering them) squirrels just as readily as bisulphide of carbon, and it costs but little more than one-quarter as much." Who can advise us of results in this direction? Our opinion, without trial, would be that gasoline, because of the lightness of its vapor, would not behave in a squirrel hole as does the bisulphide vapor, which is heavier than air. However, experiment is the teacher. Who has satisfied himself in this line?

Nevada Fall in the Yosemite.

We return from our wandering amid the grand scenery of the Columbia river to view again the scenic resources of our own State, and we are prone to confess that, grand and charming as are nature's works in other States, California has no occasion to be envious of them. Our artist takes us again into the Yosemite and presents us a glimpse of a noted waterfall of that valley from a point of view unlike anything before enjoyed through our columns, although we have in past years paid due homage to the Nevada fall.

The picture gives a profile view of the upper half of the waterfall. It well presents its volume and grace but does not give adequate notion of its height, for the mass of water shown in the lower right hand corner of the picture has struck upon the ledge of rock from which it falls again in thinner sheet to the foot of the fall. In further characterization of the precipitation shown in the engraving, we shall use the appreciative words of W. G. Marshall, an English tourist, who gave an account of the Yosemite in his work, "Through America," which was published abroad eight or ten years ago.

The Nevada fall merits all the eulogy which has been heaped upon it by its admirers, for it is indeed a glorious leap, and one possessing some very remarkable and lovely features. It plunges 700 feet, yet this plunge is not perpendicular, for not many feet below where it has topped the precipice, it strikes with its full force against a ledge of rock, and this causes it to shoot out anew into a still wider sheet; for, expanding now to a width of 200 feet, it descends the remainder of the distance in a network of fleecy curls with an effect which is exquisitely beautiful, and which lends to the fall a peculiarly distinctive charm. The curled, crisp appearance of this fall constitutes one of the striking sights in the Yosemite. One might liken it to the arrangement or disposition of the sea waves as they gently break upon a flat, sandy shore. But to this must be added the active force with which each wave is thrown out; and then if it is also borne in mind that there are hundreds of such wave jets in this one grand sheet—hundreds shot out at the same time followed by hundreds more while these are dying out of sight—some idea, incomplete though it will be, may be obtained of the remarkable form of this most beautiful fall.

THE AUSTRALIAN BALLOT.—In the city election at Sacramento, on Tuesday of this week, the Australian system of voting was employed, and was found to work admirably. One thing which commends the process to the decent and honest citizen is the fact that it is heartily condemned by the "ward worker," who finds that it requires much more hard work to "fix" the voter than under the old system, and, consequently, progress in his unholy endeavor is necessarily curtailed. This feature of the matter is bound to popularize the Australian system among all people who would see an end to the ballot-box corruption which has long been a disgrace to our civilization.

PUTS AND CALLS.—The directors of the Chicago Board of Trade have issued an order intended to put a stop to dealings in puts and calls, which have been carried on in violation of the rules of the Board.

SWINE YARD.

Farrowing Time

NILES, ALAMEDA COUNTY, Feb. 27.

TO THE EDITOR:—The most common and, at the same time, most costly neglect of his live stock of which the average farmer is guilty, is at the time they are born. Confining our observations entirely to pigs, as that is what we are thinking about and where the neglect is most common, it is an everyday occurrence to lose by carelessness a litter worth $2.50 apiece, say $15 in all, at weaning time, equal to the value of many a scrub cow with her first calf.

It is caused by the farmer's sturdy refusal to recognize the fact that among brutes, as well as human beings, when the young are born the dam is ill and "out of sorts." She may pull through without help, but she may need it, and if she does she needs it badly. Yet the average farmer will go to bed and to sleep while his female animals of all species are in throes that often kill the hardiest of wild animals as well as the highest bred domestic ones. He pays $1000 for the sire and loses his offspring through neglect at the most trying time of its existence and its dam's.

There is probably not a lunatic asylum in the civilized world which does not contain more than one inmate whose insanity was initiated—I would hardly hesitate to say developed—at this trying time. There would be many more if medical skill were not called in to tide over the period.

Leaving this delicate subject, but profiting by the hint it gives us, how can we wonder that dams in that stage get down, and never get up? How can we wonder that sows lie on their pigs or eat them? To the farmer with a small herd, the pig she lies on or eats might have been worth hundreds of dollars before it died a natural death, but of course he cannot afford to spend any time on a mere sow, and goes to bed.

A little attention at farrowing time will avoid much of this loss. I have had a little experience which may help to prove my proposition, and thus save some trouble or loss to others.

Anticipating trouble, and being warned of it by the loss of a pig, I took the rest away from the dam, and kept them away until she got over her sickness, which was perfectly natural. I had them carried to her as often as they made signs of being hungry, and she was always glad to see them and prepared at once to give them what they wanted. She weighed 550 pounds, and during her illness could not command the strength and patience to take the care required to keep from lying down on some of them. In three days she was able to do what she had known all the time to be her duty, and took care to do it. The pigs were left with her, and not one was "overlaid."

The sow who eats her pigs usually does it during the hysterical excitement of the first few hours. A dose of camphor and laudanum in her ear to make her sleep, or taking the pigs away until she has got over the puerpural excitement, and got back to something like her natural condition, will almost invariably save the pigs, and she may prove the best of mothers.

What is more common, in the treatment of other animals as well as swine, is to give them a kick for every eccentricity due to the trying, often fatal, throes of parturition. The kicker ought to lose money, and I am glad to see him suffer the usual disastrous consequences of his heartlessness. But if anything I could say would save any poor dumb brute a pang of pain, I should be glad to know it, and glad I had said it.

HELP IN RINGING HOGS.

Mr. H. E. Dye (Feb. 13, page 134) wants help in ringing his hogs, and you invite suggestions. I offer two.

First, the lasso. A slipping noose on the upper jaw ought to hold the hog—at least it is the approved instrumentality for that purpose. Any way to get the noose in his mouth will do. I could do it with most of my hogs with my hand. It may sometimes be done with a stick or pole, as the butchers put the bull rope on beeves' horns. As described in his letter, I should think Mr. Dye had his hog in a place where he could have noosed him. Once in the noose he is helpless. The noose can be slipped in when he opens his mouth to squeal. Mr. Dye will know how far back to slip it. Piggie can be brought to any desired position. A stanchion trap is used for the same purpose. The catch-bar is sometimes bow-shaped, to fit the neck, and likewise the stationary bar against which the other side of the neck is pressed. When the trap is open, the hole is so large that the hog may put his head through in the hope of escape. The moment he does so the stanchion is closed and fastened adjustably to the size of his neck, and he is fast.

Suggestion No. 2 is a dose of laudanum taken in some slop, or 40 drops in 3 drachms of spirits of camphor injected into one ear. The latter is a treatment used for sows inclined to eat their pigs. They lie down on that side and take a long nap, during which the pigs nurse and get strong, and the dam wakes up with a subdued feeling toward them. Chloroform will conquer the hog, and both chloroform and laudanum are often found in the swine breeder's medicine chest. Both are dangerous in the hands of novices who decline to study their use, and especially the chloroform; but a little investigation and careful experimentation will make them safe and extremely valuable. They are merciful to the brute and make his master's life much better worth living. HENRY J. PHILPOTT.

Special Berkshire Premiums.

SPRINGFIELD, ILL., Feb. 10.

TO THE EDITOR:—The American Berkshire Association will, in accordance with resolution below, offer the following special premium at all State and Provincial fairs in 1892.

Resolved, That exhibits of Berkshire swine at all State and Provincial fairs, where separate classes are provided in 1892 for recorded Berkshires, be encouraged by the American Berkshire Association by the offer of a special prize of the first ten volumes of the American Berkshire Record, valued at $50. Said prize to be offered for the best recorded sow and litter of not less than five recorded pigs under six months of age.

The conditions of the competition for this premium to be as follows:

1st. That there shall be not less than three competitors for the prize of $50 offered above.

2d. That the competing animals be recorded in the American Berkshire Record prior to date of entry at the fairs, and that lists of such entries be furnished the Secretary of this association at the close of the fair.

3d. That a copy of these resolutions be printed in the premium list of the fairs in connection with the classification of swine, or that reference be made at the close of the classification of swine, to the publication of this announcement elsewhere in the premium list.

BERKSHIRE TRANSFERS.

The following are recent transfers of recorded Berkshires: Matilda 20,994, T. D. Allen, Silverton, Oregon, to R. W. Carey, Macleay, Oregon; Maid of Silverton 27087, T. D. Allen to J. W. Hobart, Silverton, Oregon; Champion 26,837, John Craig, Macleay, Oregon, to T. D. Allen, Silverton, Oregon; Dalmore 26,838, John Craig to J. M. Reene, Salem, Oregon; Hero 26,839, John Craig to Jasper Wilkins, Coburg, Oregon; Cherry Blossom Dale 26,877 and Utah Belle 26,878, A. J. Lovejoy & Son, Roscoe, Ill., to Ben R. Eldredge, Provo City, Utah; Ensign 22,281, James Dunn, Corvallis, Oregon, to H. C. Dunn, Corvallis, Oregon; Fred. Sevan 27,217, Henry Johnston, Frankfort, Kansas, to Tyler Beach, San Jose, Cal.; San Jose Belle 27,235, J. S. Conner, Santa Ciara, Cal., to Edward Younger, San Jose, Cal.; Annie Laurie 27,248 and Nanon 27,249, J. E. Pleasants, Santa Ana, Cal., to Geo. H. Clark, Fairview, Cal.

JNO. G. SPRINGER,
Sec'y American Berkshire Ass'n.

ARBORICULTURE.

Planting Pecans—Nuts vs. Trees.

FORT WORTH, TEXAS, Feb. 24.

TO THE EDITOR:—Will you kindly give me space in your columns to explain to your readers why the pecan tree is an exception to the general rule of transplanting trees. Like the hickory and black walnut, the pecan grows a long taproot, which must not be disturbed by attempting to transplant, the result being failure of ultimate success. When the young pecan tree is eight inches above ground, the taproot has grown to the length of two feet, and one foot below the surface is larger than at the top of the ground. This result of root growth prevents the removal of the young tree, which cannot be done without breaking or injuring this long taproot, which, if once destroyed, *will never grow another*. With the taproot broken, it is a waste of money and time to attempt transplanting.

Many nurserymen are not aware of these facts and are offering the pecan trees for sale, with no intent to defraud or mislead, supposing there would be no more difficulty than in ordinary transplanting. Experience shows that you may transplant them with apparent success, but trees have been taken up after seven years' growth and found without a semblance of a taproot. They had dwindled along and made but a sickly growth, while trees on the same ground raised from seed planted where they grew were vigorous and thrifty, and, though three years younger, were much larger than the transplanted trees.

In view of these lately developed facts, it is a waste of money to plant anything but the pecan nut where the tree is to stand. Those who want to plant pecans this spring will find a great gain in soaking the nut four or five days before planting, which gives nearly the same results as if you had planted last fall. You gain one year by planting now that you would lose if you waited until next fall to plant.

Domesticating the wild pecan is very easy, as it responds to cultivation, producing more and larger fruit, thinner shell and improved flavor, bearing at four and five years as productively as the wild tree does at six years. With wild trees here earning for their owners from $50 to $80 per annum, it don't take long to figure up their value under cultivation.

I paid a man last year $57.60 for the product of one tree, and the same tree had earned him for three previous years $50 annually. Here is one wild pecan tree, on which the owner had never expended one dollar, earning him on an average of four years $51.90 per annum, costing only the expense of gathering and taking the nuts to market. This tree is worth $519, because it is earning annually 10 per cent on that valuation. Take ten acres of such trees, and when they come into bearing they earn more clear money than either oranges, lemons, figs or olives can possibly do.

Planting 35 feet apart gives you 36 trees per acre. In between these you can grow other fruits with profit, making your ground vastly more valuable than if only in the ordinary orchard products. In planting the pecan, you are annually adding material wealth to your land, for when your other crops fail, you have here an income at very small cost, and one which lasts for generations. Taking the profits of the pecans on the above basis of earnings, and divide by four, and you have a sum of money per acre that would keep a good large-sized family from going to the poor-house.

Ten acres of 360 trees, with each bearing as much as this one wild tree earned annually for its owner, and your earnings are of more clear profit than a bank ordinarily earns with a capital of $200,000. Then, too, this wealth is obtained at a very small cost, either for the pecans for planting or the care of the trees. The planting per acre does not cost to exceed $3 for the pecans of the best Texas thin shell, which have the best reputation in all the markets, being favorites over all the others.

For windbreaks for orchards, the pecan is peculiarly valuable in this particular, that it rarely ever is torn up by the roots; the long taproot going so deep prevents it. Planted 35 to 40 feet apart, in a few years the branches touch, and by that time it has reached a height of 50 to 60 feet. Lasting for hundreds of years, its value can hardly be estimated as a protection for orchards, besides the crop of nuts annually, which earn a handsome sum of money. The enemies of the pecan are nothing compared with other nut and fruit trees—hardly worth taking into account.

Unlike ordinary orchard products, the pecan keeps for months, so that the market need not be overcrowded when they are first harvested. Here is an enterprise that can be carried on with great profit by cooperative companies, and plant hundreds of acres at small expense, but giving enormous earnings, lasting indefinitely. One thousand acres planted in pecans, when in bearing, earn, even if you cannot get but half earnings, of the above mentioned wild tree, upward of $90,000 per annum. Divide this sum by two and it is very satisfactory earnings. Nothing in the vegetable product pays handsomer profits for the cost of the enterprise, and California is well adapted to the growth of the pecan. HERBERT POST.

HORTICULTURE.

Prevention of Sunburn and Borers.

TO THE EDITOR:—Please give a recipe for preventing borers from killing young fruit trees—M. L. H. SELMA, Cal.

We suppose you refer to the small boring larva known as the "flat headed borer." It works in the stem and larger branches of trees which have been sunburned. There are other borers, as for example the crown borer of the peach which has gained access to some parts of the State. It works just at or a little below the surface of the ground and does not depend upon sunburn.

The cure for the common flat-headed borer and for other borers working in the stem, and branches is to prevent sunburn by protecting the bark from the sun on the south and southwest side. This may be done by wrapping with paper, sacking or other materials, or by the use of the advertised paper "tree protectors" providing they are not made of black paper, which has been found to absorb heat enough to scald the bark under them. Probably the most popular method at present is to cover the bark of the young tree with whitewash which reflects heat and prevents sunburn. Following is the remedy: "Take one pound of whale oil-soap and dissolve in one gallon of water and add whitening enough to make a good whitewash, and then applying to the body of the trees from the forks down to the surface of the ground, you will not be troubled with borers or sunburn."

This prescription has been largely used by other fruit growers and widely approved.

The Lemon in California.

No fruit grown in California is attracting as much attention as the lemon, and this is particularly true in the southern part of the State. Large areas are being planted, stimulated largely by the experiments that have been made by Dr. Gareelon of Riverside, Mr. Hatch of Ontario and others, in curing this fruit so that it can maintain a standing in the markets of the world when offered in competition with the imported article; and they demonstrated the fact that California grown lemons can be cured so that they will keep in perfect condition for six months at least. This gives our growers the choice of a market and is an important factor in inducing men of various trades and professions to engage in their culture.

When a person has determined that he will plant a lemon grove, the first thing that will present itself to his mind after securing the land, will be what variety shall he plant and on what stock shall they be budded, and much of his after success will depend on the answer to this question. There is hardly a variety of lemon grown which is not the favorite of some one.

Many will tell you to plant the Eureka, while it is well-known that it is a tree of straggling growth and scant foliage. Such a tree does not give proper protection from frost in winter or from sunburn in summer. Their are other objections. The fruit has a very bitter rind and is often coarse and overgrown. Its best quality is its early and prolific bearing.

What is known as the Sicily lemon is grown from seed from fruit imported from Sicily, hence the name, and as many varieties are grown under same general name they will not do to tie to. A safe procedure would be to take buds from a tree, no matter what the name, if in fruit, curing, and growth it meets your idea.

The Villa Franca, the favorite Florida variety, is a tree of much promise, it being a medium as to growth, foliage and early fruiting between the Eureka and the Lisbon. It is a new variety here, having fruited but two years in Southern California. The rind of this lemon though sweet is rather coarse and thick, but this is characteristic of the lemon on all young trees and will probably be cured as the trees attain age.

The Lisbon lemon tree was imported from Portugal and has been thoroughly tested and seems to meet the requirements better than any other. The tree is a vigorous grower and attains a large size; does not fruit much until the third year. Its habit is to put on wood rapidly. Trees are often found 10 to 12 feet in height and well proportioned at that age, giving abundant limb surface for the immense crops that are to follow. The only objection that is urged against this tree is that it is very thorny and it is claimed by persons well qualified to judge, that about 25 per cent of the fruit is made unsalable by thorning.

The fruit is oblong rather than roundish, very uniform in size, rind thin and sweet, cures perfectly and is the best keeper grown. As to thorns, prune them off. This will require labor, but believe me, it will be time well spent.

The Bonnie Bray is the most beautiful lemon grown. Its rind is smooth as a kid glove and so very thin that

many think it cannot be shipped to distant markets. I am not prepared to accept their judgment as final.

I feel very much like an importer of citrus fruits did whom I met at the southern district State citrus fair, and that is, that the appearance of the fruit will sell it in any market of the world and that I would take them to that market even though I were obliged to ship in egg boxes or those made on a similar plan.

The Belaire Premium lemon originated in Florida, and in form is the most perfect of any known. I have one tree, sent me by a friend, which has fruited a little for two years. The tree is perfectly thornless, but not a very vigorous grower; rind rather coarse and thick, but sweet; acid very strong and of excellent flavor. A lemonade made from it will retain its quality for 24 hours if kept cool.

I think it preferable to bud the lemon on some kind of sour stock, and would state as a reason, that most sweet stock is subject to foot rot or Mala de Goma to some extent.

As to cultivation, it cannot be too thorough. A medium amount of water and a thorough stirring of the soil after each application is the correct thing and trees so treated will be far ahead of those where the water is allowed to run along the rows for several days, chilling and souring the ground and often causing foot rot and gumming.—J. P. JONES, San Diego.

SHEEP AND WOOL.

Angora and Cashmere Goats.

COLUSA, CAL., Feb. 27, 1892.

TO THE EDITOR:—A gentleman at Vina, Tehama Co., has been residing in Asia Minor, later in France, and now is among us. His personal knowledge of the goat at his home is the cause of his interest taken, and a desire to present his enclosed article for publication in the RURAL (wherein he saw my report and memorial) was transmitted to me. The article may do us some good. Therefore, as scribes among goatmen are very scarce, I hope you will give our friend some space and have it appear in the RURAL at any time as soon as possible. The bill for a Government Breeding Farm of Angoras was presented by Hon. Felton in the U. S. Senate and by Herman in the House. It was referred to Committee on Agriculture, so I hope for success. JULIUS WEYAND.

VINA, Tehama Co.

TO THE ANGORA GOAT BREEDERS:—On the occasion of the Memorial presented to Congress at Washington by Mr. Julius Weyand, Secretary of the Angora Breeders' Association for the improvement of the Angora goat in this country, and also for the bettering at large of the mohair industry, I judge it timely to state some facts concerning the industry of the Angora.

I have followed with much interest the experiments you have been doing with the Angora goat, and certainly I will not be able to teach anything but a few particulars, and will consider myself well repaid if the following would prove of some interest.

Let us now enter the study of the caprine species, say the goat. The caprine species belongs to the group of *Artiodactyle Pachydermata, i. e.*, thick-skinned and double-fingered, or cud-chewing mammals. This group is divided by naturalists into two genera—the ovine genus, or the sheep, and the bovine genus, or cattle.

The genus Ovis or sheep comprises five species, but the one I have reference to is the Ovis Capra or the goat. This classification can systematically be represented as follows:

Artiodactyle Pachydermata Mammals... { Bovine genus { Ovis Aries; Ovis Montana } Ovine genus { Ovis Œgagrus; Ovis Ibex; Ovis Capra { European, Asiatic, Nubian } Goat. }

Of goats, there are three races named from their habitats. The European goat inhabits Europe, the Asiatic one, Asia, and the third race, Nubia, which one inhabits also Abyssinia, Egypt and other Mediterranean districts.

The Asiatic race is the one which has the most interest for us, and comprises the breed of Angora and the breed of Cashmere. This race is a native of the mountains of Himalaya and Thibet, and lives in dry, rocky, brushy districts of Asia.

The breed of Angora goat—the one you succeeded in acclimatizing in the United States—I am going to have reference to.

The Angora goat is found all over Asia Minor from the border of the Black sea up to the provinces of the Caucasus; but its center and the area where it seems to be at its best is the Vilayet of Angora and adjacent districts, and namely, on the plateaus at a good altitude in the districts of Angora where the best individuals of pure blood are to be found.

The body of the Angora goat is covered with hairs, and between is found the down or soft, fine woolly growth. The fleece is long, and has a bundle-like appearance namely on the flanks and under the belly, and reaches commonly up to 20 or 23 centimeters in length. The members are medium high, and the general stature is inferior to the European varieties of goat.

From the economical standpoint, there is no breed of goat superior for the mohair production. Its meat is more palatable than the meat of other goats. Its downy wool or fleece is made use of in the manufacture of shawls and other fine clothes and its hair also in the manufacture of second grade goods.

FECUNDITY AND BREEDING.

The doe is apt to reproduce its kind at the age of between nine and ten months, so is also the buck. The does and bucks intended for breeding have to be selected with great care among the individuals that represent the best characters of a good fleece producer in quantity and quality, and the pairing be watched. The time when the doe wants the male is very transient and seldom lasts over 35 hours. It is known by a peculiar bleating and by local manifestations. The buck is very prolific. The pairing occurs at large or in an enclosure. When in the field or at large, one leaves the buck roam together with the whole flock for two months, but the best way to do is to practice the pairing in an inclosure, putting into some kind of stall both doe and buck. By this method, no abortion can occur, as is many times the case in pairing in the field. If the contact has been successful, the doe shows a kind of quieting down, and the swelling of their organs do not more appear till *yeaning* time. From that time they have to be cared for to some extent and possibly be fed. The pregnancy lasts, as for the sheep, five months, and unlike the lamb, the kid is able to hustle for himself when he is only six weeks old, his digestive organs being much stronger than those of the lamb at the same age. Immediately after the weaning, selecting the best stock for breeding purposes has to be resorted to, and the balance or second grade stock has to undergo the castration.

In order that all these operations should be carried on satisfactorily, the breeders might give an interest in the business to the men managing the flock; and though this policy might seem hard to practice, still it is well worth thinking of, and its discussion might disclose whether there is advantage to put it into practice or not.

Let us say two words about the Cashmere goat. The Cashmere breed lives in the valleys of Persia, Afghanistan and Beloochistan. Her fleece is very valuable in those countries, and is put to use in the manufacturing of fine shawls and tissues. It would be very interesting to secure some individuals of this breed and give it a trial in the United States. This breed, besides its fine fleece, has this peculiarity—that the clip comes off spontaneously every year.

MODEL BREEDING FARM.

Establishing a model breeding farm, and keeping a pure-blood breed, is the surest and quickest way to infuse pure blood and to improve any kind of stock. In this same way the French Government undertook the introduction and the improvement of the Merinos. The Merinos have been imported from Spain into France since before 1760. At that date the French Government entered into negotiation with Spain and secured a flock of pure-blood Merinos that were placed at Montbard in the Department of Cote-d'Or and immediately after the model breeding farm of Rambouillet was established and skilfully managed by the Abbot Tessier. That institution did a great deal for the Merino industry to get a good footing in France, and subsequently contributed to her prosperity. Now, thoroughbred Merinos are found all over the world by millions—in France, Italy, Germany, Hungary, Russia, India, America and Australia.

We arrive at the conclusion that the introduction of thoroughbred stock and the establishing of a model breeding farm in the United States, as pointed out in the special Memorial presented to Congress by Mr. Julius Weyand in the name of the Angora Goat Breeders' Association, would promote the mohair industry and improve the breed and bring prosperity and riches into this favored country.

The plateaus and hilly districts are the best adapted for Angora raising. An investigation about the conditions of climate and soil of the Vilayet of Angora may be done, and would likely result in disclosing some facts hitherto unknown.

The analyzing of the soil, the observation of the Flora, the registration of the climatic conditions, the observation of some peculiarities in the care of the goats, if there is any, once known, it would not be impossible, in my opinion, to find in this vast United States similar climate and conditions to the plateau of Angora, where this valuable breed could be raised to perfection.

R. TCHERASSY,
Graduate of the College of Agr. of Lyons, France.

THE ORNITHOLOGIST.

The Game Birds of Lassen County.

We find in the *Weekly Mail* of Susanville, Lassen county, a very interesting popular article on the game birds of that portion of California, and as the same species are visitants or residents also in other parts of the State, the account will be generally interesting.

While the natural histories placed in the hands of our young people give much information concerning the game birds of all countries, there is no list showing the child what birds are found here. In this article we have called attention to the principal game birds of this county, giving at the same time, some data about their size, color, habits, number of young reared, etc.

These facts should be placed in the hands of every child in the county who is old enough to read well, and each schoolroom ought to contain this matter in some conspicuous form for the use of both teacher and pupils.

One of the finest game birds of Lassen is the dusky grouse which lives in the mountains, while the sage hen, another grouse, inhabits the valleys. The dusky grouse, during the summer, feeds upon berries, seeds and grain, but in the winter, when the mountains are covered with snow, it lives upon the buds of the fir trees. When it is flushed or started from the ground, it rises with a loud whirr and seeks shelter in a neighboring tree, where it remains so silent and motionless that it is almost impossible for the untrained eye to detect it. Should the sportsman see his game, he can often kill two or three birds, if he takes care to fire and bring down only the lowest bird first and then the next higher. This grouse is about 20 inches long, is dark brown above and lead color beneath. The mother bird makes her nest on the ground, using slender twigs and fine grass; lays 10 or 12 eggs and takes care of her young in the most watchful manner when they are hatched. These birds frequent the roughest and most difficult ground, and are not easy to find. Their flesh is dark colored, but is sweet and delicious.

The sage hen is another of the grouse family, and is one of the largest and finest. They have a varied plumage of black, brown, gray and white, their tails are long and pointed and contain 20 feathers. The male bird weighs five or six pounds, but the female is fully a third smaller. They do not fly readily when disturbed, but squat down or attempt to hide, apparently thinking they will not be seen. They fly with a loud whirr like the rest of the grouse family, but their flight is slow and laborious compared with the dusky grouse. They live in the dry, treeless and waterless plains of the Great Basin, but here are found both in the open valleys and in the timbered hills. The male bird has large flame-colored patches on the sides of its neck that are greatly distented during the mating season, but these are hidden by his feathers at other periods. They build their nests on the ground, beneath low bushes or high tufts of grass, and the mother bird lays from 13 to 17 eggs. These require from 21 to 22 days to hatch.

Owing to their food being very largely the leaves of the bitter sage brush, the flesh of the old birds, especially in winter, tastes very strong; but the young bird, in the fall of the year, is delicious. Hunters assert that by emptying the stomach and crop of the bird as soon as killed, the strong taste of the flesh is avoided. One curious fact about this grouse is that it has no gizzard like other birds.

THE QUAIL.

A third favorite game bird is the quail, and this is found in nearly every part of Lassen, from the open valleys to the highest mountains. These birds associate in flocks of from 15 to 20, and live upon seeds, berries and insects. Of the latter, they destroy immense numbers. They do not perch upon trees like other quail, but roost upon the ground. The upper parts of the birds are olive brown, the breast and neck lead colored and the abdomen white. They have two long, straight feathers rising from the back of the head like a plume.

Their nests are formed upon the ground, and from 10 to 15 eggs are usually laid, but some nests have been found with 20.

A quail, when shut up and the eggs taken away each day, has been known to lay in one season over 70 eggs. These eggs are speckled, like the eggs of a turkey. One of the most curious facts about the roosting of the mountain quail is its habit of watching against danger. The birds will all form in a circle, standing some distance apart, then they will back up till their tails touch each other and then they drop upon the ground, knowing that nothing can approach them without being seen or heard by some of the flock.

When the flock has been scattered, owing to an alarm, the birds call their mates with a clear, shrill whistle, much like a man whistling to his dog, and hunters take advantage of this to call these birds, for the purpose of killing them.

Each spring and fall there are many swans, for a short time, in the various valleys and lakes of the county. These birds stop for a few days to rest and feed, on their annual migrations north to Idaho, parts of Washington, and to British Columbia, where they breed and rear their young. Of the swans, there are but two varieties that visit our county—the American and the trumpeter. The flesh of the young birds, called Cygnets, is palatable; but that of the old swans is tough and stringy. The American species is five feet long from the point of its bill to the tip of its tail, and six feet across its extended wings. Its plumage is snowy white, but the feet and bill are black. It is a shy, wary and watchful bird and is seldom killed, but belongs to the game birds of Lassen. It builds its nest about two feet high and several feet across. The time required for hatching the eggs is from five to six weeks.

The trumpeter swan receives its name from a harsh, loud cry that it gives, and this is a larger bird than the American, measuring nearly five inches longer.

THE GEESE.

These birds pass through our county twice a year, both in going to their northern breeding grounds and south to their winter pastures. All varieties are noted for their sharp ears, sharp eyes and keen smell. They migrate in flocks of from 10 to 100. They always, like the swans and ducks, fly in the form of a triangle, with the strong and tough old ganders in the lead. Geese can readily detect noises that indicate danger. Thus, birds or fish may plash the water upon every hand, limbs may fall, and other noises be heard, and they will not indicate the slightest warning to their fellows; but let the step of a hunter be heard, or the swish of his paddle in the water, and instantly the leaders give warning and the geese quickly take wing. We have counted 29 flocks of geese in the air, at one time, moving toward the north. The largest and finest for table use is what is known as the "honkers" or Oregon geese. These on the Atlantic coast are known as Canada geese. They are 40 inches long, and a very large and fat one will weigh 16 pounds, or as much as a big turkey. The honkers usually fly by themselves, but the other geese may be seen in the same flock. The head, neck, feet and bill are black.

The brants are only about half the size of honkers; they are a dark-grayish goose, with black legs and feet.

The speckled breasts are next to the honkers in size, and are the next best for the table. They have pale or yellowish legs and feet.

The snow geese is a fourth species that is often seen. They have reddish-yellow legs and feet. While their plumage is snowy white and they are very attractive-looking birds, they are the poorest game bird among the ducks and geese that frequent our lakes.

In the Sacramento valley, all these geese make their homes in the vast tule swamps, but fly to the grain fields each day and have to be frightened away by men who shoot at them to keep them from eating up the grain. In our mountain valleys, occasionally, a goose will make her nest and rear her young, but this is seldom the case, and when it occurs, hunters think that the bird is a wounded one that is unable to keep up with its fellows in their northern migrations. In returning from the north, the geese make short halts, while the ducks remain in Modoc, Plumas and Lassen until about the second snowstorm, when they take wing for the Sacramento and San Joaquin valleys.

[*Concluded next week.*]

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

County Deputies have been named this week. They have much important work to do at once. All the meetings to be held by Grange speakers should be attended by the County Deputy. But better than that, he should see that the members of each subordinate Grange in his jurisdiction fully prepares for these meetings. See that local notices are posted, and that local newspapers give the matter some consideration. Of one thing all may feel sure, viz., the newspapers are true friends to the Grange. Let every County Deputy go to work at once, and with a will. Don't hesitate to help an Order that is the farmers' truest friend.

The Executive Committee is going to considerable expense to revive the Grange cause in California. It hopes every Patron will assist in the good work.

Look out for another Grange, and that soon!

San Joaquin County Pomona Grange had a very large class for the fifth degree at the meeting held in Lodi last month. Full particulars will no doubt appear in another column.

Help to revive some of our old time Granges! Look toward the dormants! The live Granges will care for themselves.

The Grange does not call on you to forsake your church, to abandon a well-founded creed, or to leave a political party; but it does ask its members to be temperate, studious, virtuous, independent, just and progressive, to strike a blow at anything that is wrong, and commend anybody or anything that is right.

Some of the Eastern States have a "Grange Opening Song Card." Seems to me a good idea. Then every Grange in the State would soon have an opening song with which every member of the Order is familiar. And oh, how nice it is if every member will but join in singing the opening and closing odes! The more familiar the tune, the more touching the song! There is something touchingly penetrating about the old tunes. Who does not like "Auld Lang Syne?"

The Michigan State Grange, at its December session, ordered the "Silver Wedding Proclamation" of the National Grange "printed in pamphlet form for free distribution among farmers and neighbors that they may learn what the Grange has accomplished for the farmers."

If your Grange meetings seem a trifle stupid or slow, or there is apparently nothing to do, just remember you are a member! Ask yourself whose is the fault. What have I done to make business for the Grange? Then remember there is always work for willing hands, and if there is nothing on the program, that perhaps it is your fault and you ought to put yourself down for some work. Try to make a short talk, one of these times, when there is nothing doing under Good of the Order.

Now that Grange speakers are to visit your Grange, try to have a class of candidates. One Grange has set out to have a class of 20 members, and they will succeed, for that Grange is a working body. The members know that to get results, work must be done; and they work in unity and with a will.

Congress has been in session three months. What has been done? Well, every member has drawn his salary; that is one thing that has been done. Now you please tell something that has been done by Congress at this session.

Fraternal Visit to Oregon.

By request of the Master of the National Grange, and repeated invitations from Master Hayes of Oregon State Grange, E. W. Davis, Overseer of the N. G. and W. M. of Cal. S. G., intends to visit (with Mrs. Davis, we hope) the annual session of Oregon S. G., at Albany on Tuesday, May 24th. For the four last sessions we have been promised (more or less positively) by a score or more of good Patrons in California, that they would attend the approaching session of Oregon State Grange, but the 700 miles distance over mountain barriers, at the cost of $50 per round trip including sleeping-car fare, has, with other drawbacks, prevented the appearance of over a half-dozen Californians at any session during the four years.

Now, California Patrons, please do your best to make up for the good, but broken, resolutions made to visit our northern neighbors, and accompany your Worthy Master on his fraternal pilgrimage, and our word for it you will not regret it. The Patrons of Albany are making due preparation, we learn from Mr. Train, to provide excellent entertainment for the coming session. No people on earth can be more cordial in their fraternal greetings than the P. of H. of Oregon and their neighbors of Washington. A. T. D.

From Washington.

Ella Wheelock writes from Vancouver, Feb. 24th, saying: "The RURAL PRESS makes its weekly rounds filled with many good things, but no department for Oregon or Washington. What ever is the matter; by our silence does the world think we are sleeping? I do not know how it is in Oregon, but in Washington the Order is as wide-awake as ever, and working for the good of the farmer and all mankind. Fruit Valley Grange elected at our last meeting 14 candidates to become members of our Order, also received applications for several more." I. Diedtrich is W. M. and Miss. Wheelock Sec. of Fruit Valley Grange.

EDEN GRANGE will soon announce a special meeting and Harvest Feast.

Monterey to Santa Barbara County.

J. V. Webster, P. M., writes that he will accompany W. L. Overhiser, P. M., in his special Grange meeting lecturing tour from San Miguel to Arroyo Grande, and Hon. Geo. Steele will be with W. L. O. at Salinas and so south according to the following appointments:

Salinas, Tuesday, March 22d; San Antonio Grange at Jolon, Thursday, 24th; San Lucas, Friday, 25th; Bradley, Saturday, 26th; San Miguel, Monday, 28th; Paso Robles, Wednesday, 30th; Creston, Saturday, April 2d; Arroyo Grande, Monday, 4th; Cambria, Wednesday, 6th; Carpenteria, Saturday, 9th.

KIBBESILAH GRANGE will consider the matter of the Patron's Relief Association at the next meeting, March 5th. Wm. Taylor, Sec'y, writes that some members think persons over 60 years of age should be admitted to its protecting fold. The limit of age for joining at 60 gives ten years more than most other safe associations on the plan adopted. On full consideration, we think all will admit it is best to keep within safe bounds and in our Grange business affairs not try to travel on what others have found to be unsafe ground. The organization is such that no one can lose much by joining it. They never pay but $1 for insurance in advance after the membership fee is paid. They can stop at any time, and there can be no claims made.

FROM PESCADERO.—A class of ten (five males and five females) were initiated in Pescadero Grange on the 5th of March, 1892, and two applications for membership (one male and one female) were received. The usual harvest feast and social enjoyment followed the labors of the day. The communications from S. G. Ex. Com. were received, and a committee appointed to carry out instructions. Pescadero Grange is certainly in a prosperous condition.

I. C. STEELE.

SONOMA COUNTY POMONA GRANGE.—The next regular meeting occurs on Wednesday, April 20th, at 10 o'clock A. M. in Two Rock Grange Hall. The fifth degree will be conferred on a large class. At the January meeting, Dillon's Beach was chosen as the place of meeting for the next "Children's Day" and Two Rock Grange requested to take charge of preparations therefor. A resolution opposing any appropriation being made by the Supervisors of Sonoma Co. for the Columbian Exposition was adopted.

CHANGE IN DATES.—To give longer notice in advance (or other cause), the special meetings to be addressed by E. W. Davis, W. M., and S. T. Coulter and Wm. Johnston, Past Masters, have been changed since the announcement was first made in the RURAL PRESS to the following dates in March: Roseville Grange, Monday, 14th; South Sutter, 15th; Wheatland, 16th; Yuba City, 17th; North Butte, 18th; Gridley, 19th.

CALIFORNIA GRANGE.—Ed. F. Mugler, W. M., writes from Athlone, March 5th, saying: "We expect a large class about the last of April, at which time we hope and expect J. D. Huffman, W. L., to be with us. A Grange picnic is contemplated for the same day." All Patrons of California and neighboring Granges should bear the above in mind, and use their best efforts to have successful meetings.

THE MASTER'S DESK and some other Grange matter was left over last week on account of closing our forms two days earlier than usual.

FARMERS' ALLIANCE.

Current Alliance Chat.

Homer (La.) *Farmer:* Sentiment encourages crime. It sheds tears for sin and makes it seem lovely.

Dallas (Tex.) *News:* Take out of politics the greed for office, and both the old parties will die in a week.

Omaha (Tex.) *Siftings:* The most expensive luxury in life is getting mad and using physical capital that can never be replaced.

Wytheville (Va.) *Alliance News:* It is a fact that national banks make 172 per cent on their investments, while the farmer—oh, pshaw.

Kosse (Tex.) *Cyclone:* Postmasters ought to be elected by the direct vote of the people in the territory in which the postoffice is located.

San Antonio (Tex.) *Stockman and Farmer:* Under our present system of railway management, discrimination is made in favor of those who need it least.

Wytheville (Va.) *Alliance News:* The financial question is the absorbing one of the hour. The fate of the republic depends upon its proper and speedy solution.

Chicago (Ill.) *Express:* It is a fact that about all the prosperity in this country of ours is enjoyed by those who do nothing but scheme and scheme to rob labor.

Grand View (Tex.) *Sentinel:* While you are interviewing the leading men of our Government, why don't you ask them the reason there are so many millionaires and tramps?

Kosse (Tex.) *Cyclone:* Senators should be elected by a popular vote of the people, for oftentimes their election by the legislature fails to reflect the wishes of the people.

Texas Farm and Ranch: There is such a thing as a naturally sensible man remaining in office until it makes a fool of him. You would not have to search the skies with a telescope to find an example.

Patterson (N. J.) *Labor Standard:* John Jacob Astor's baby boy will inherit more than $150,000,000 and yet his father did not earn $1000 of it. How is it? Who did earn it? How does so much of the people's money come to be in the possession of one man?

NOT AGAINST BUSINESS INTERESTS.—The Cincinnati *People's Aid and Alliance Review* says: Business men should stop long enough to study the demands of the farmers, before they decide that the farmers are working against their interests. What benefits the farmer benefits the business man. When the farmer prospers the business man will share his prosperity. Reduce the farmer to a mere living and who would expect him to buy luxuries? The demands of the farmer are as necessary to the success of the merchant as they are to the farmer. If any merchant will stop and think, he will find that the 15,000 failures of the year will teach him that bankruptcy is coming closer home every year, and that he has no time to lose, but should join the farmers in forcing their demands to adoption. We hope our readers will join with us in promulgating this great project of "unity" between the farmer, the merchant, and business men in general. When fully consummated it will be a grand thing. Why not?

MEMBERS of the F. A. & I. U. formed more than a sprinkling of the attendance at the Alameda County People's Party Convention at Niles, published in this issue.

Political Mention.

Political announcements published under this head at the rate of 25 cents per line of agate space.]

Alameda People's Party Organization.

Pursuant to the call of the Chairman, E. M. Wardall, through, H. B. Valpey, member for Alameda county of the State Central Committee of the People's Party, a mass convention was held in the town hall at Niles Saturday, March 5th. There was a comparatively fair attendance. H. B. Valpey, of Warm Springs, was chosen President and H. W. Finson of Oakland, Secretary.

Professor Henri Fairweather and wife enlivened the occasion with patriotic songs and music. Mrs. C. P. Stetson of Oakland read an admirable poem and made able remarks during the session. James Ashbury Johnson, delegate to the recent St. Louis Industrial Convention, gave an interesting account of the doings of that remarkable assemblage, which embraced leading minds of the progressive farmers' organization Knights of Labor, woman's suffrage and temperance national organizations. His report showed that it was a very inspiring gathering, whose work culminated well for the encouragement, future progress and final success of the People's party.

A noonday basket lunch was spread by the ladies, with abundance of good things, of which some fifty enthusiastic supporters of the cause partook. Toasts and minute speeches were indulged in, which made this a specially happy feature of the day to all fortunately present.

The proceedings of the convention were harmonious throughout. The following committees faithfully performed their duties: Enrolling Committee—A. R. Downing, of Pleasanton; M. L. Gray, of North Temescal; J. W. Craycroft, of Warm Springs. Order of Business—A. T. Dewey, A. R. Dunning, Mrs. K. S. Nevins, of Oakland. Ways and Means—A. R. Downing, N. A. Walker of Oakland, M. L. Gray. Resolutions—A. T. Dewey, E. Kelsey, of Oakland; A. F. Childs, East Oakland; C. C. Chase, of Irvington; Nominations—M. L. Gray, A. R. Downing, N. A. Walker. State Platform of party adopted.

Letters regretting absence were read from A. Cleveland of Alameda; Daniel Inman, of Livermore; and Liberty Perham, of Haywards.

Stirring speeches or brief remarks were made by Dr. Childs, Messrs. J. B. Rigdon, Walker, Kelsey, Dr. Renken, Dewey, Valpey, Finson, Gray, Craycroft, A. Huff, W. H. Buckley, E. J. Cole, James F. Ford, Chittendon, Shaw and Mrs. K. S. Nevins, Mrs. S. G. Smythe, Mrs. R. A. Loomis and others. Though meeting for the first time the meeting soon assumed the spirit of a pleasant gathering of old friends, earnest in the faithful performance of duty.

Several proposed amendments to the State and national platforms were received and by vote recommended to the favorable consideration of the next State convention of the People's party, viz:

To substitute the "Finance and Commerce bill" for the Sub-Treasury plan; to add to the section in favor of Government ownership of railroads, telegraphs, etc., a provision for a special department, the managers of which shall be elected by popular vote; to change the (Australian) ballot law so that important questions can be submitted and printed on the ballots under the same requirements as for placing the names of candidates thereon.

Complimentary resolutions were passed to the officers of the convention and speakers Johnson, Stetson, Rigdon and Nevins, and to Prof. and Madame Fairweather and the ladies' piano committee of Niles.

After adjournment of the convention, the County Central Committee elected, organized temporarily by the election of H. B. Valpey, chairman, and A. T. Dewey, secretary. It was voted to meet for permanent organization and transaction of business at Liberty hall, No. 1065 Broadway, Oakland, at 1 P. M., Thursday, March 17, and to hold a reception meeting at the same place in the evening to representatives from the St. Louis National Industrial Convention and members of the State Central Committee; also, a mass meeting to be called at Haywards, at 10 A. M., on Friday, March 25. At these meetings, all interested in the People's Party cause are invited to be present. Able speakers and excellent music will be provided.

The County Central Committee, to consist of 17 members, was appointed with power to fill vacancies, and now stands as follows:

Oakland—C.S. Lane, E. Kelsey, N. A. Walker, Mrs. O. M. Sanford. Oakland Township—M. L. Gray of N. Temescal, J. F. Ford. Alameda City—A. Cleveland. Brooklyn Township—A. F. Childs, H. Sedgwick of E. Oakland. Eden Township—Liberty Perham of Haywards. Washington Township—H. R. Shaw, J. W. Craycroft of Warm Springs. Murray Township—A. R. Downing of Pleasanton, Daniel Inman of Livermore. At Large—A. T. Dewey, Oakland, and H. P. Valpey, Warm Springs.

Agricultural Notes.

CALIFORNIA.

Alameda.

The Warfare on Scales.—Niles cor. San Francisco *Call*: For the past four years there has been a most systematic spraying of all orchards hereabouts, and without doubt the several scale enemies have been destroyed at the same time, thus it has hardly been possible to judge of the extent of their usefulness. Different bugs, in fact half a dozen different varieties of scale-eaters, three or four of them said to be the true Australian lady birds, have been brought into the valley from time to time, and fully as many more insects that have evidently made their appearance in the course of nature, have been busy the past two seasons in the unequal warfare. But what real good they have done it would be impossible to tell. It is, however, true that, taken generally, the trees are much freer from smut, that the first hatching of scale were not nearly so numerous this season, and the second hatching has been even less.

Butte.

Orange Planting Notes.—Oroville *Register:* E. A. Mount, who has had charge of the Villa Verona orange grove for the past four years, says that orange-growing here is yet in its infancy, and that he expects to see thousands of acres planted within the next few years. He says: "Men make a mistake by planting trees on unsuitable ground. They must learn to avoid cement beneath the surface or else blast it or put in a drain so that the water will not stand about the roots. I put a few trees on this land and the strong lower roots died and the tree had to live on a few surface roots. When I removed these trees and set them in good soil they at once made a vigorous and active growth. The V. V. Co., sent me last year a lot of Mexican fertilizer which I put on the trees at the rate of about three pounds per tree. It acted well and helped the trees wonderfully, but it does not make the soil mellow like common manure. The best orange in my estimation is the seedling for profit. After this I would place the Parson Brown, then the Mediterranean Sweets and then the Navels. The Browns and Sweets are heavy bearers and hang well upon the trees, while they are fine looking oranges and keep well. It is just four years since work at Ville Veron a began and next winter we ought to have considerable fruit.

A Splendid Outlook.—Biggs *Argus*: A drive westward from Biggs, eight miles to Butte creek through the adobe section, than which no finer body of wheat land can be found in the world, shows as fine a crop of growing wheat as Butte county, at this season of the year, has ever produced. The adobe farmers have made good use of their time this year and very little land has escaped their foot tread.

Manuring Orange Trees.—*Register*: Joe Gardella, who has had much experience in rearing all kinds of fruit trees, tells us that a friend applied too great quantities of ashes to two of his orange trees and nearly killed them. "At one time I put a large quantity of potato parings, cabbage stalks and other refuse vegetable matter in a hole near an orange tree, thinking the same would prove valuable manure. After a time I saw that the tree looked sickly, and I dug around it to ascertain the cause. I noticed that where I had placed the vegetable refuse the roots of the tree were dead. I at once dug all the stuff away from the roots and put some old iron, leather and good manure about the roots, and in a short time the tree looked as bright and healthy as any of my others."

Profit in Hens.—Oroville *Register:* Joel Garst figures out that his 30 hens have laid 3600 eggs in a little over four months. He sold these eggs for 30 cents a dozen or $36, which gives $1.20 each for his hens, or more than double the value of each fowl.

How and Where to Plant Olives.—Oroville *Register:* Superior Judge Gray says: "I have planted one hundred acres of olives for myself, and have set out trees all the way from four inches high and six or eight months old to trees from three to five feet high and three years old. The blunders which I have made have cost me many thousand dollars. Were I to set out another olive grove, I would not select a tree less than three years old nor less than three feet high, and I would endeavor to get the tree as near as possible to the land intended to be planted. By planting young and very small trees, one loses two or three years' time and not over 50 per cent of them can be saved. Planting box cuttings is sheer foolishness. I would select only good, strong, healthy trees taken from nurseries where but little water had been used. I would recommend the low foothills of Butte county, where the soil is of a red, gravelly character. If the ground had previously been covered with small trees and brush, so much the better. Clean off the ground well, plow and harrow till the soil is thoroughly mellow, and then plant your trees 22 feet apart, and without irrigation, you will be surprised after the first two years at the rapidity with which they will grow. The ground must be well cultivated each spring, the trees staked up and all the little twigs taken off. If you plant three-year-old trees, you will get a small crop the third year after planting, and the fourth year you will get nearly enough returns to pay for taking care of them. After that, you and your children's children may safely look for paying returns each year."

Humboldt.

Reclaiming Marsh Land.—Arcata *Union:* Thos. Bair is the owner of a half section of land about two miles west of Arcata, of which 200 acres is marsh. A contract has been let to build over 500 rods of dike, which will reclaim pretty much all the marsh land, and convert the entire 320 acres into one farm, all of which can be cultivated. The dike, as it is being built, is ten feet wide at the bottom, five feet at the top, with an average height of five feet, both sides being laid with cuts of marsh sod, which will grow as in its natural state, and make the dike impervious to the seepage or perforation by rodents. Another enterprise of the same kind is in course of preparation at this end of the bay, which will have a dike of the same dimensions, of which more will be said later. The Arcata bottom creamery is being built near where Mr. Bair is reclaiming his marsh land. No better clover land lies out doors than this marsh land when once redeemed from the effects of salt water, and as all our farmers are beginning to see that they have been working on an up grade by not putting their land in clover years ago, it is more than probable that one creamery will not meet the demands of our farmers in one or two years from now. Reclaiming our fine tillable land is a move in the right direction, and one that will add much to the wealth of this end of the bay.

Lake.

Crops.—Lower Lake *Bulletin*: Crops of all kinds in this vicinity are in a most flourishing state. They could not be otherwise under the life-giving and exhilarating conditions that have attended their growth the past three or four weeks. The acreage for cereals is much larger than common, a large area of new and hitherto unbroken lands being put to such growth this year. Much orchard planting has also been done this season, and the increase of that industry is something that cannot fail to attract business toward our isolated county and invite other improvements of a similar character.

Los Angeles.

Successful Hatching.—Covina *Argus*: Mrs. W. P. Watts has been very successful with chickens this winter. She has just turned out 200 downy little fellows, the result of one hatching, and has another lot ready to come out this week.

Orange Crop.—L. A. *Times*: It is estimated that the output from Riverside this season will amount to 600 cars, and that the total shipments to the East from Southern California will be about 1800 cars.

Monterey.

Crop Prospects at Paraiso Springs.—Cor. Salinas City *Democrat*: Farming operations are suspended and the prospects were never known to be better. Nearly an inch of rain fell during the recent storm. It is said the grain this year will be free from wild oats and foul stuff, and a large crop is measurably assured, with timely rains later on.

Mendocino.

To the Editor:—Seeding is finished and grain is looking finely. Feed on the ranges is abundant, and have never known better prospect for a big wool and lamb crop than at present. Loss of stock during winter has been smaller than usual. Rawles Bros., with their pack of trained dogs, are doing good work, having killed 11 bears, 10 panthers, and many smaller varmints during the past fall and winter. Tree-planting is progressing, and although prices for fruit the past season have been low, yet all feel confident of success, as we have raised as fine apples, pears and prunes in Mendocino Co. as in any part of the State. Weather warm and pleasant. Almonds and apricots in bloom.—L. Hoag, *Booneville.*

Napa.

The First Carload of Dried Fruit Shipped East.—Napa *Register*: A. L. Bryan, finding himself the possessor of some 12,000 pounds of dried fruit the other day, commenced a canvass among other orchardists and advised those having fruit on hand to join him in a shipment to St. Louis. In this way a car was loaded, and Wednesday it was started by the Central route eastward. The shippers are A. L. Bryan, E. A. Bernard, P. J. Siepel, J. A. McClelland and Dr. M. B. Pond. The consignees are J. W. Teasdale & Co.; shipment, 22,000 pounds. Peaches and prunes are the principal varieties of dried fruit forwarded. For them the ruling prices in Chicago run from 8½ to 9½ cents. The freight rate from here in carload lots is $1.40 per hundred.

San Luis Obispo.

Black Scale.—San Luis Obispo *Tribune:* Mr. G. Shinn, orchardist of Arroyo Grande, was in town Monday, and in the course of his remarks asserted that he had demonstrated to his entire satisfaction that the "black apricot scale" could be utterly conquered and wiped out of existence in any orchard by a wash which he had adopted, which is prepared as follows: Take 20 pounds of resin, 10 pounds sal soda and 5 pounds of whale-oil soap and boil for two hours in 20 gallons of water, then add 30 more gallons water. This, he has found, will clean the trees perfectly, without injury to the foliage or even the blossoms.

Santa Clara.

The Strawberry Industry.—Cor. S. J. *Mercury:* For the last 20 years the western portion of this county has been the chief reliance of the San Francisco market for strawberries. As early as 1860 A. L. Gould began growing this delicious fruit upon the property now owned by A. Block. At that period the berries readily retailed at from 50 cents to $1.50 per pound. J. P. Pierce, W. W. Montague and Corey Peoples also commenced strawberry culture at an early date. Other persons began to take an interest in this pursuit, and with the introduction of Chinese labor the profits became such as to warrant extensive berry-growing. About five years ago this industry had reached a stage when, during season, an average of 1100 chests a day were shipped to San Francisco. At this time W. O. Watson was perhaps the largest grower in the county, having almost 75 acres in small fruits. During the last few years less land has been devoted to this industry. There are several reasons for this. The extensive growing of other fruits has in a great measure affected the demand for strawberries. Land which a few years ago raised excellent berries, now will produce indifferent fruit. The condition of the labor market is also in a measure responsible for this. The Chinese are becoming more independent and unmanagable each year. In spite of these drawbacks, however, strawberry culture continues to be one of the main industries, and it is probable that the northwest part of this county will continue to furnish the choicest berries in the market. Growers in this vicinity report the prospects as favorable to a magnificent crop this year.

Santa Cruz.

Acreage in Sugar Beets.—Watsonville *Rustler:* Contracts for growing sugar beets are coming in daily at the Western Beet Sugar Company's factory in this city. At the present writing, 1600 acres have been contracted for beets in this valley at a straight price of $5 per ton, delivered at the factory, and the indications are that the acreage will be increased to 2000 acres. The company will put in 1200 acres on the Moro Cojo plantation, and an additional 1000 acres will be cultivated in Salinas valley. The prospects for an excellent beet crop were never brighter, and the factory will handle more beets this year than ever before.

Sonoma.

The Next Poultry Show.—Petaluma *Courier:* The Sonoma County Poultry and Pet Stock Association are starting in early to make their next exposition, to be held in this city in January of next year, the greatest exhibit of the kind ever held in the world. Geo. P. McNear has given a purse of $100 gold coin as a premium, to be known as the "Geo. P. McNear Special Premium." Hale Bros. have also put up $100, and the Petaluma Incubator Co. comes to the front with a like amount. It is expected that from $1200 to $1500 will be offered in prizes.

Bright Outlook.—Healdsburg *Enterprise:* At no time in the history of this town has there been more solid signs of prosperity than at the present time. There have been planted this season over 700 acres of new land to various crops, and the work of clearing land is going on in all directions. At least 200 acres of vineyard growing on bottom lands have been cleared of the vines, and the land planted to hay, grain, etc. This means that 1000 tons of grapes, at a low estimate, will be taken out of the market. The grape business looks more hopeful than it has for several years, and if the prices of grapes take a raise, the result would be marvelous in this district. The outlook for a good year in the fruit business is reasonably bright. Nearly all the canned goods of our local canneries have been sold, and but little dried fruit remains in the market. For the past two years our farmers have made money, and many have not only paid off their indebtedness, but now have nice bank accounts. From now on, their lot will be easier, and they will make more improvements.

Large Poultry Raiser.—Petaluma *Courier:* C. Nisson of Two Rock has a mammoth incubator of 2680 eggs capacity. He expects to market 10,000 broilers and other poultry this year.

Stanislaus.

Orange-Raising at Oakdale.—*Leader:* A. V. Stuart showed us a number of young orange trees, the branches of which showed a growth of more than two inches, reached in less than a week's time. Mr. Stuart is now more thoroughly convinced than ever that the Stanislaus valley is as good as any county for orange-raising. He says that the north winds are the only danger that need be feared here. Protect them from these winds and they will prosper.

Fine Stallions.—Modesto *Herald:* During the last year or two the raising of fine stock has been given much more attention than formerly in Stanislaus county. This county can now boast of some of the finest bred stallions in the State, including thoroughbreds, trotters, carriage and draft horses.

Sutter.

Steam-Cooking Outfit for Spraying.—Yuba City *Farmer:* A new steam-cooking outfit for preparing spraying material, etc., has been erected at Rancho Sutter orchard, and is a very complete arrangement for such purposes. A 12-horse boiler 14 feet long is set up on brickwork with good furnace, from which the steam pipes lead to two tanks of 300 gallons capacity, in which the spraying material is mixed and heated within a few minutes by the steam from the pipes. Another tank containing water is heated in the same way. The boiler is operated at 60 to 70 pounds pressure. Everything is convenient and requires but little labor to operate the same. The outfit will also be used during the prune-drying season for dipping and otherwise preparing the fruit.

Tulare.

Historical Tree-Planting.—Tulare City *Citizen:* In Frazier valley, at a place now owned by Mrs. L. L. Gill, a lady by the name of Mrs. H. M. White planted the seeds of a very fine orange which she got at the Fourth of July celebration in 1863, at Camp Babbit, near Visalia. From the seeds which she planted she raised a tree, which is known all over the county and over the State as the oldest orange tree in Frazier valley, and one of the oldest in the country. It stands near the house and is a very beautiful tree. And from this tree has expanded an orchard of about 40 trees. So you can see what, with a little care, the planting of the seeds of one orange comes to, in a few years. Another example is the story of the oldest orange tree in Plano. In 1863, Miss Gibbons proposed the planting of the seeds of a fine orange as an experiment as an ornamental tree, if it should prove too frosty for the fruit. Accordingly, a place near the house was prepared with much care, and the seeds planted. Mrs. Gibbons covered the young plants on frosty nights until learning, two or three years after planting, that orange trees were successfully raised north of there, the trees were left uncovered in frost as well as in sunshine. In eight years, two very fine well-flavored oranges were produced, the seeds of which were planted. After this, Mr. Gibbons planted 74 trees for the purpose of raising oranges. He also planted a number of lemon and lime trees, but the frost was too hard for them, killing trees an inch and a half in diameter. However, one lemon tree 20 feet high is a prolific bearer. The experiment of sending to Los Angeles for trees had been tried twice without success, the frost killing them, while seedling trees raised there were uninjured. In 1881 he took the first and second premiums at the Los Angeles Citrus Fair, in March, a large number being on exhibition. The oldest tree stands in front of the house and is now 29 years old. It has been bearing about 21 years and is known as one of the oldest orange trees in Tulare county. Near it stands an acre orchard of its prolific and profitable descendants.

Growing Crops.—Hanford *Journal:* Samuel Page says he never saw grain and alfalfa crops grow as fast at this season as they are growing this year. He sowed a piece of his land on Thursday, and by the following Monday the young alfalfa was growing nicely and evenly all over the tract. He says his barley crop, recently sown, is showing the same marvelous growth.

Ventura.

Growing Corn.—Cor. *Free Press:* In raising corn, my plan is first to begin with the best. If the ears are short, take the "eight-rowed" yellow corn (long-eared kind) and mix with the sweet. In the fall, pick out some of the longest ears of yellow corn having kernels of the sweet on them. Pick off these and plant them next season, and you will find that the length of your ear is much improved. The above rule always holds good, provided you have selected the long-eared kind to start with. To increase the number of rows on the cob, cross with any kind of corn having a large number of rows. If the corn used for "crossing" is later than the sweet corn, then plant it a week or two before you do the sweet, according to the difference in time of ripening, putting the sweet corn in every hill afterward. To make the corn earlier, pick off the ears as soon, or just before, they begin to "glaze," and strip up the husks and hang in the shade. A handful of wood ashes in each hill is of great benefit.

Success of the Starch Works.—Ventura *Free Press:* The Hueneme Starch Works have closed down for the season after making about 25 tons of fine potato starch. The company still has most of this product on hand yet, although several orders have come in for 10 to 20 barrel lots, the price being about 4½ cents a pound. Next year a portion of the plant will have to be enlarged in order to handle the potatoes with a profit. The facilities for drying are inadequate.

Yolo.

Crops at Clarksburg.—Woodland *Mail:* D. G. Webber says the people of Clarksburg and vicinity now feel comparatively safe against the ravages of the Sacramento. They have put up by their own exertions, "and no thanks to nobody," a levee that will withstand 31 feet of water in the river. Nearly all the land that was drowned out last year has been replanted, most of it to alfalfa. So large was the amount sowed that the stock of seed here became exhausted and much of it was ordered from Salt Lake City. Mr. Webber reports the crops to be in a most flourishing condition.

Yuba.

Grain Crop Prospects Never Brighter.—Marysville *Appeal:* The prospects for a plentiful harvest at this early date never looked brighter in Yuba and Sutter counties. Grain-growing in these counties has been advanced to a most prosperous condition, and from the soil and climate no other but a profitable result could be expected. They were the two first counties to engage in grain-growing in the higher plains, and they attained a prominence that they have never lost. It was in these two counties that the system of summer-fallowing the soil for grain was first employed. From all parts of both counties come most flattering reports. The summer-fallowed grain is in the finest condition, the cool weather having caused it to stool and root deeply. A large yield is also expected from the winter-sown grain. In a few weeks nothing will be seen in Yuba and Sutter counties but waving fields of golden grain, and orchards heavily laden with fruit. The ranchers have not much difficulty in sending their grain to the market. The farmers on the western border of Sutter county have the Sacramento river with its line of steamers; Yuba county and eastern Sutter have the Feather river and the railroad, the new Knight's Landing extension being a great benefit to many residents of that county.

NEVADA.

Arbor Day.—Reno *Gazette:* Governor R. K. Colcord has issued a proclamation setting apart Friday, the 8th day of April, now current, as Arbor Day. The Governor recommends that it be observed throughout the State by the planting of trees, shrubs and vines, in the promotion of forest growth and culture and in the adornment of public and private grounds. He suggests that the schools observe the day by suitable and appropriate exercises, but adds that nothing in his proclamation shall be so construed as to make the day a legal holiday so far as courts and civil contracts are concerned.

THE HOME CIRCLE.

The Farm at Sunset.

There's a delightful rustling in the poplar trees;
The flowers that languished all the afternoon
Are lifting up their heads, and, half revived,
They answer back the kisses of the breeze.

Deep-nestling in yonder darkling fir
A linnet trills her plaintive roundelay—
Low notes, created like a psalm of grief
As if the warbler mourned the dying day.

Slowly around yon sloping hillside green,
The lowing cows come on their homeward trail;
And blithely t'ward the kral with will serene
The dairy maid trips with her milking pail.

Within the vine-clad porch, after the evening meal,
The ploughman rests him in his low armchair;
Between his lips a pipe, with fire gone out,
And eyes fast-closed beneath his glasses, there.

He dreams of fresh-turned furrows, amply sown;
He dreams of new-pruned vines with tender shoots;
And burden-bloom on peach and apple tree
Hinting at what the summer's crop will be.

And as he lingers in that calm repose,
His head droops low upon his sun-browned breast;
And once his kind lips smile; they seem to say,
"The farmer's is a goodly life and blest."

Enchantment round the farm at sunset dwells,
With soft winds sighing midst the poplar leaves;
With linnet's roulade in the fir tree eaves;
With music of the cows' low-clanging bells;
With fragrant flower-elixir in the air,
And peace and sweet contentment everywhere.

—ADA L. HALSTEAD.

San Francisco, March, 1892.

Women in 1950.

NATIONAL CITY, SAN DIEGO CO.

TO THE EDITOR:—Having been invited to prepare a paper to be read before our local literary society on what I believed the position of women would be in the year 1950, I submitted the following, which if you consider of sufficient interest, you may give it to your readers:
FLORA M. KIMBALL.

As the wheels of progress never run backward, and we have no way of judging the future but by the past, we will cast a hasty glance at the dying century, note the position of women during that time, take a hurried look at their present, and, on the advancement made, base our opinions for the future.

In the world's dark ages, the unwritten law of humankind was "might makes right." Woman having less physical strength than man, was dominated by him, the finer elements of womanhood playing no part in her recognition, except to her disadvantage. As spiritual and mental forces came to be recognized as an essential part of the human being, and to predominate over animal and brute force, woman began to rise in her own estimation and that of the most refined of the other sex. From slaves, toys, drudges, harem, home and society ornaments, she has risen to be the leader of thought and counsellor of statesmen. The goal for which her nature and abilities qualify her is by no means reached, neither will the year 1950 find her occupying that exalted height. It will require ages to perfect nature's wise designs. Nor will woman's place in the distant future be far removed from man's. He will be by her side, advancing as she advances, and the saying of John Stuart Mill that "the majority of the male sex cannot tolerate the idea of living with an equal" will be set down to the discredit of that distinguished philosopher.

With no voice in making laws, woman has never been exempt from the penalty of their infringement. An expression of her convictions, if contrary to the party in political power, has cost her her liberty or life. Less than one hundred years ago, Madam Roland, for daring to express opinions conflicting with the popular ones, met her death at the guillotine, with the now famous words on her lips, "Oh, liberty! What crimes are committed in thy name."

For several years after 1825, Frances Wright, at the risk of her life, which was often imperiled, maintained advanced ideas on religion, slavery and the social position of her sex—views now held by men of high social and political rank.

In education, as well as politics, the lines for women were carefully drawn, and any venturing beyond their boundaries were ostracized and looked upon as dangerous to the community.

In 1819, Mrs. Emma Willard established a school in Troy, N. Y., it being the first girls' school in which the higher mathematics formed part of the course. Because of a public examination of a girl in geometry in her school in 1829, a storm of ridicule arose and raged with great fury. Mrs. Willard and her school were denounced unsparingly. So general and severe were the criticisms upon Mrs. Willard for allowing such an impropriety that Gov. Clinton, in his annual message to the State legislature, felt called upon to defend the injured lady and her school. He said: "I trust you will not be deterred by commonplace ridicule from extending your munificence to this meritorious institution." Woman's rapid advance is here conspicuously apparent. At the beginning of a half century, the Governor of the great State of New York was forced to use his executive influence to allay the excitement of the people because a girl had publicly passed an examination in geometry, and at its close, girls in all the colleges of the world, where admitted, won medals and honors for outdoing in the higher mathematics the young men with whom they competed.

Women as professors of mathematics in colleges, professors of astronomy, architecture and all branches requiring keen mathematical perceptions and skill, are no longer a novelty. My own mother, in her girlhood desiring to learn arithmetic, was punished for being found studying one, surreptitiously holding the book under her desk. Her granddaughters may with impunity attempt anything for which their attainments have fitted them.

In the practice of medicine, women in the distant past were carefully ignored. Prior to 1848, there was not a regular female medical practitioner in the United States. In that year, Elizabeth Blackwell graduated at Geneva, N. Y., having been denied admission to a college in Philadelphia. The Directors of the College of Maternity had her application under advisement ten days before they could decide as to the propriety of admitting her to that institution.

In reform movements, women were not wanted further than their influence at the fireside extended, but with a keen sense of justice and pity for the black slave, they were early enlisted in his behalf. The first book ever written denouncing the practice of buying and selling human beings was written by a woman—Lydia Maria Child. Others followed in her wake, but were denounced in the pulpit, where the clergy of that day attempted to prove by bible arguments that negro slavery was ordained by God and that women had no right to speak in public. Abby Kelly, an early anti-slavery advocate, could not obtain a public building in which to speak, more on account of her sex than the principles she proclaimed, and was fortunate in being able to secure a barn or to remain unmolested in the open air. Men and women were expelled from churches for listening to her.

In 1840, an anti-slavery convention was held in London, and Lucretia Mott, the intelligent Quaker preacher, was sent as a delegate. After the long and then perilous journey across the Atlantic, armed with credentials, she was confronted with expressions of horror at the indecency of Americans in sending her, and was refused admission to the convention. The occasion was a memorable one.

The clergy, although by no means alone, were foremost in denouncing the sacreligious innovation. Rev. Henry Grew of Philadelphia said: "The reception of women as a part of this convention would, in the view of many, be not only a violation of the customs of England, but of the ordinance of Almighty God," and Rev. A. Harvey of Glasgow remarked: "If I were to vote in favor of females sitting and deliberating in such an assembly as this, I should be acting in opposition to the plain teachings of the word of God." Rev. Dr. Morrison pathetically added: "I tremble at the thought of discussing this question in the presence of ladies." After a whole day spent in bitter discussion, the vote was overwhelmingly against the admission of women delegates. Neither were they allowed to sit as spectators. So, the refined, delightful Lucretia Mott was fenced off behind a railing and curtain to screen her from the gaze of men.

Previous to 1848 a married woman could not legally hold property separate from her husband, in most of the States at least. Judge Fine, fearing that his own estate might be squandered by a profligate son-in-law, introduced a bill into the New York Legislature, allowing married women the right to hold property. After a long and severe struggle, the bill became a law. Previous to this, in 1837, Ernestine L. Rose sent a petition to the New York Legislature, asking for the same right. She could obtain but five names to the petition and no attention from that honorable body.

About this time, when women began to feel the need of organization to carry on works of morality and benevolence, the Female Moral Reform Society of Philadelphia applied for the use of a church in that city in which to hold a meeting, and were refused the body of the church, but permitted the use of the basement, only on condition that no woman should be allowed to speak at the meeting. Imagine a woman's society of to-day with only gentlemen speakers.

Miss Antoinette L. Brown, who for many years has had charge of a church as its pastor, was appointed delegate to the World's Temperance Convention in Ohio, but, like Lucretia Mott, was refused a seat in the convention on account of her sex.

Less than 40 years ago, the same Miss Brown was appointed delegate to the World's Temperance Convention in New York, accompanied by Mrs. C. M. Severance, now of Los Angeles, and was not only refused a seat in the convention, but when she attempted to speak was hissed, and from all parts of the house was heard, "She shant speak;" "She shant be heard." Pious men were excited to the pitch of using oaths, and her friends urged her to leave the hall, fearing personal injury.

Sixty years ago, there was but one college in the world open to women, and that was in Brazil. Oberlin College, Ohio, was the second, and was founded in 1834. The heroism of girls, who at that time braved public opinion and overcame obstacles to acquire a college education, is interesting history, showing the great contrast to the popular methods of to-day. Lucy Stone, editor of the *Woman's Journal*, when a young girl, learned from her father that her brother was to be sent to college, and begged for herself the privilege of going to Oberlin. Her father was alarmed, fearing that his daughter had lost her mind. But having in her nature the stuff that martyrs are made of, she resolved to carry out her wishes by her own efforts. She picked wild berries and gathered chestnuts, and sold them to buy books. She taught district schools for very small pay until, by the strictest economy, she had saved money enough to make her college venture. Not wishing to invest her money in a stateroom when crossing the lake from Buffalo to Cleveland, the brave girl made her bed on a pile of grain sacks, among horses and freight of all kinds.

At the college she did housework for three cents an hour, and cooked her own food, her board costing her less than 50 cents a week. At the end of four years, in 1847, she graduated with honors, and in all that time she had but one new dress, a cheap calico. Look at our young ladies to-day as they receive the coveted parchment, radiant in graduating dresses, expenses paid by kind and proud friends, and see if but one conclusion can be reached, that woman's day has dawned.

In Boston, in 1852, there was not a college or professional school above the public high school where girls were admitted. Dr. Harriot K. Hunt of that city, after practicing medicine 12 years, was refused admission to the lectures before Harvard Medical College.

Less than 25 years ago, Mrs. Lucinda Stone met on the Mediterranean a company of missionary ladies returning to their work, after a visit to America, where they had learned of the opening of Vassar College to young women. They were greatly surprised at such a state of things, one of them remarking with much warmth, "The very idea of calling it a college for women is enough to condemn it. I am sure of one thing, that no refined Christian woman will ever send her daughter to Vassar." Already, 1000 girls, daughters of refined Christian mothers, have graduated there, and 700 at Wellesley.

Not so very many years ago Mr. Comer of Boston announced his intention of admitting women as pupils to his school of bookkeeping, and was met on every hand with ridicule and sneers, yet in 1885 there were in the State of Massachusetts 2370 women employed as bookkeepers, and the number has been greatly increased.

It was not until 1840 that women were seen at political meetings, and that was during Gen. Harrison's presidential campaign. For a woman to speak at a political meeting was so far beyond the bounds of feminine propriety that it scarcely entered the heads of the most daring.

In 1853, only 38 years ago, a State Teachers' Convention was held in New York, at which were present 1000 lady and 200 male teachers. Miss Susan B. Anthony, then engaged in teaching, having a thought she wished to express on the subject under discussion, arose and addressed the President, Prof. Davies, author of the algebra and arithmetic bearing his name.

"What will the lady have?" he asked, looking inquiringly at Miss Anthony, never dreaming that she could be so presumptuous as to address the convention.

"I would like to say a word on the subject under discussion," was her modest reply.

President Davies was shocked. He appealed to the convention, and for half an hour Miss Anthony was kept on her feet awaiting its decision whether she should be permitted to go on. The Professor violently opposed it, but finally she was permitted to make a few remarks that occupied about two minutes.

Fifty years ago, the only employments open to women were housework, sewing, factory work and teaching. At the present day every avenue to honorable independence is open to them, and the world is in a temper to applaud instead of scorn when unusual industries are adopted by them.

In educational circles, perhaps more than anywhere else, woman has shown her progress. Two ladies are on the Board of Regents of the State University of Wyoming, a lady is Secretary, and also the Professor of History. The State Librarian, a lady of culture, aceeptably earns her $2000 salary. Every County School Superintendent in Wyoming, except one, are women. Women enjoy full suffrage, and as the result the per cent of illiteracy is less than that of any other State in the Union.

Ladies have places in the faculty of Nebraska University; the Analytical Chemist, Professor of Art and History, instructors in modeling and wood carving are all ladies.

Women have served and are serving as trustees and professors in Smith, Vassar, Wellesley and Oberlin Colleges, and in the Northwestern University, Boston University and Woman's College of Baltimore. Many of the State Universities have women on their Boards of Trustees and filling chairs in this country, while foreign nations keep pace with ours, and in some instances run ahead. The women of Germany, Austria and Turkey are the only ones in all Europe excluded from university study. Australia and Japan have opened their college doors to women, and Canada gives them equal advantages with men in most of her educational institutions. The chair of oratory in the University of Honolulu has been tendered Miss Crawford, a Pennsylvania lady.

Mrs. Howell of Indiana has originated a plan to secure a fund for the educational display at the World's Fair, which is indorsed by State authorities.

The struggles of the first women for admission to medical colleges opened the way for the 2432 female physicians who were practicing medicine in the United States in 1880.

For the ministry, women have worked as hard and have been rewarded with equal success. Nearly all religious denominations number among their clergy ordained women.

The struggle for the bar came later, the first woman in the United States admitted to practice law in the courts being Arabella A. Mansfield of Mt. Pleasant, Iowa, in 1869. Seven women have been admitted by statute to practice before the U. S. Supreme Court, and in 1880 the whole number practicing in all the courts was 75. The number has since been largely increased.

The world has ceased to laugh or weep over new departures made by women in the work of the world. Police matrons, prison and factory inspectors, are a necessity. Railroad contractors, railroad presidents, mail contractors, engineers, architects, lighthouse keepers, pilots, bank presidents and directors, and women on city advisory boards are no longer novelties. Nearly every postoffice has lady clerks, and a large number serve as postmistresses. In Ohio women have been appointed by the Supreme Court as referees in railroad and insurance matters. Many and many a woman is at the head of large manufacturing establishments, publishing houses, etc. The Indiana World's Fair Committee unanimously indorsed Mrs. Virginia Merideth as Chief of the Live Stock Department of the World's Fair, and she is admitted to be the best judge of live stock of any person in the State.

In science, art, literature, oratory and the higher branches of learning, women are constantly earning and wearing laurels. Instead of being toys, slaves or merely social queens, they are recording heroic deeds on the nation's history. By force of their own moral and intellectual natures, they are fast coming to the front as politicians and statesmen. Already they have full suffrage in one State, school and municipal suffrage in more than half the States, and, allowing that there will be no adverse check to woman's advancement, before the year 1900, will have equal

political rights with men in every State of the Union. Before 1950 dawns, a grand, large brained, noble hearted woman will occupy the Presidential chair. The dresses, parties and receptions of "the first lady of the land" will be lost sight of in the absorbing topic of her administration of public affairs. The froth of fashionable life will be dissipated, and philanthrophy, politics, and every branch of education having a bearing on the well-being of the race, will take the place of the superficial veneer of society.

The women of the next half century will be mothers of a superior race of men, because, being patriots and statesmen, they will teach their children patriotism and statesmanship. In consequence of woman's enlarged sphere, her children will inherit greater intellectual power, finer physiques and moral tendencies. The wife will cease to be the property of her husband, and, where freedom is, there will be harmony, sobriety, purity and peace.

"The woman's cause is man's, they sink or rise
Together—dwarfed or godlike."

Looking into the future with eyes unblinded by prejudice, who cannot discern the sequel of woman's awakening in this the nineteenth century?

The Exiled Eugenie.

Upon her first visit to Paris Eugenie's beauty was ravishing. She was likened to a snow-flake on a July day; like the fairy-like mist that hangs over Niagara; like all that is purest, freshest, loveliest in nature was the impression that she produced upon people. Once at a great ball she was clad entirely in white, of the fleeciest, gauziest, mistiest description, and with a very simple parure of emeralds and diamonds glistening in her blonde hair, looping up her transparent sleeve, and shining on her lovely neck, she was as completely a vision of delight as eye ever rested on.

The remainder of the story is known, and her marriage, her reckless extravagance, the war, her downfall and escape are tales of history told again and again. She encouraged frivolity and spent money more recklessly, perhaps, than any other woman ever did. She was conceded to be the best dressed woman in the world. Her wardrobe cost $1,000,000, and her jewels were of fabulous value. She spent $10,000 a day for household expenses. It was the age of gold. She undoubtedly was the cause of her own downfall, but she did many kindly deeds. She was one of the first to recognize the merits of Rosa Bonheur, and it was by her wish that the talented artist was decorated. Her legacy of woe is unmatched by any woman in history. She is all alone. Her jewels have been scattered to the corners of the earth; her crown is torn asunder, and the precious stones are now used to decorate women she never saw. Her steps are dogged by spies when she steals like a house-breaker into beloved Paris. Her beauty and strength have faded. She has long waited for the end—Ada Chester Bond in the March Ladies Home Journal.

Spice of Life.

An Appeal to the Magazine Editors.—

Dear Mr. Editors, I pray, do let up on our feelin's,
An' with a happier set o' folks jist cultivate some dealin's.

The heroes an' the heroines 'at wunst used to delight us,
I 'clar' to gracious, now air naught but bugaboos to fright us.

Ye drown 'em, freeze em, burn 'em up, ye separate an' blight 'em,
Till it jist fairly makes me mad there's nobody to right 'em.

It's come to readin' magazines is sort o' sinful folly;
If a body 'scapes the 'sylum, why, they catch the melancholy.

What have we done that we should thus each month be set to weepin'?
Sure, many a bit o' happiness from life's real page is peepin'.

So, Mister Editors, I say, do let up on our feelin's,
An' with a happier set o' folks jist cultivate some dealin's.

Anna Pierpont Siviter, in Puck.

He (a poet)—Poets are born, not made. She—Don't say that; you will discourage matrimony.

Young Folks' Column.

A Big, Big Pie.

[Written for the Pacific Rural Press by Augusta E. Towner.]

"A story, eh!" and Uncle Robert pokes the coke in the fireplace vigorously. "Why, I'm most run out on stories seems to me."

"O, but it's such a cold night, and so cuddy here by the fire," pleads his pet niece, holding her little hands out to the blaze. "I just must have a story, Uncle; something to make it seem nicer and cuddier——"

"Ho!" chips in her wayward brother, "You think stories really'll make the lamp brighter and the fire warmer. Shucks!"

"I suppose you California children call this weather cold?" interposes Uncle Robert.

"Bet yer—awful!" cries the boy. "Why, we've had frosts nights and nights! Ice, even, two or three times. Whew! winter of '91 and '92'll be remembered. Old Mrs. Green's been here 20 years; says she never saw it so cold. Why it don't snow I can't see."

"Well, my little 'native son,' I wonder what you would say to a winter in Vermont, up north, where one has to dig their way out to the barn, and out their doorways, and where one is snowed in weeks together; thermometer down to zero, and way below. What do you know about cold cold weather?"

"O Uncle, were you ever there? Does it really feel colder?"

"Vermont," muses pretty Ruth. "It seems so far away—off in a corner. I never thought about life there; do tell us about it."

"The corners of the world are pretty well filled up, and Vermont was well known and settled long before California. It's been a grand State, and sent out fine people—sturdy, whole-souled, high-principled. I don't know as a nice easy place to live in as California can produce such characters as have come from Vermont. Adversity develops—though you youngsters won't understand that—but I might tell you something about a family I know of that lived there once——"

"O do!"

"——Who prospered, turned out fine men and women, spite of sorrows and hardships you children cannot conceive of, petted and favored as you are in a country where the poor and destitute cannot possibly suffer as they do where there are long cold winters."

"O Uncle, begin!" cries Ruth. "'Once on a time,' you know."

"Well, once on a time a poor farmer in Vermont lost his life by an accident. It was winter. He was out in the woods chopping trees, and one fell on him. He died before his companions could get him home. He had a large family—seven children, I believe, and a wee baby. It was terrible for the whole family to lose the head, the mainstay of the home. More terrible for the poor widow. They had to work hard, and contrive every way that winter, after the funeral. But they managed very comfortably. You wouldn't call it so. They did, for they kept warm the rest of that long, cold winter, their cow gave them milk, they had plenty of corn meal, and they were together."

"But not just mush and milk to eat?" exclaimed Ruth.

"Yes, 'just mush and milk.' But they were together, I tell you, the bereaved widow and her children. And such good, uncomplaining, industrious children. The next summer they raised vegetables in their garden as a change in their diet. One of the older boys got a chance to dig potatoes on shares, so the second winter they had potatoes besides mush and milk. Their chickens and eggs had all to go to the village store, or be sold to wealthier neighbors, that they might have clothes and other things money alone could get. But the second summer the mother died. Kind neighbors helped at the funeral—O well, I must skip all this, it is too sad for you children, and tell you of a funny, big pie that grew, as you might say, out of all this trouble."

"A pie! O my!" cries Freddy.

"Those poor orphans," murmured Ruth. "How many were they, did you say?"

"Seven, besides the little baby, and the oldest girl was sixteen." Of course they were talked about by the neighbors, after they lost their mother. What could that family do off on that lonely, rocky farm. There could be no other way. They must be divided. One neighbor take one, another one, to adopt or as help till they were old enough to shift for themselves. And those no one would take, the town must care for—in short they must go to the poorhouse. O you cannot dream how horrible such a thought as that was to these children, who, young as they were, were proud, self-reliant, independent. The oldest boy and girl found out in some way what was said about them, and had long consultations together—consultations that left them looking very determined.

One day a wagon came up the road, and two town officials dismounted therefrom and knocked at the front door of the little white house where these children lived. No one was in sight. All the doors and windows and blinds were shut. They looked at each other curiously. Then they knocked again, louder. There was a silence, then the door opened suddenly, only a little ways though. The oldest boy stepped out quickly on the porch, and they caught a glimpse of the oldest girl as the door was shut and locked. Then they noticed that the boy had a gun in his hand. He was pale, and looked strangely older and taller than usual. Before they could open their mouths to say anything, he pointed down the road, looking straight at them, and said:

"Go right straight back to town, you're not wanted here."

Then he cocked his gun.

"But—but—" one of the officials stammered, "we—"

"*Go right straight back to town, you're not wanted here.*"

"Why—we only—you see—" began the other official.

"Go right away I say, I'll shoot the first man that interferes with us. *Yes, I will.* You shan't have any of us. Sis' and I are going to take care of the children, and run this farm. We promised ma. She said she'd pray for us over there, and she taught us to pray for ourselves over here—and to work for ourselves, too. I tell you we won't be interfered with—divided up—sent to the poorhouse. I'll *shoot* if you don't leave us alone. Sis' and I'll run things. You'll see."

"There was no use trying to argue with this pale, determined boy. The grit of all his sturdy ancestors was aroused in him. The officials, perplexed, awed, touched, had to go, promising they would leave them alone, as far as breaking up the family was concerned. After this, all the town tried to help them, all that their self-respect would allow them to accept."

"But what about that pie?" impatient Freddy asks.

"Why, the pie comes in this way. The baby was always the pet of the family, petted as much as their straightened circumstances would allow. He was a nice boy, but smaller of his age and more delicate than the rest of the children. His oldest sister was always very tender of him, and by and by, when she married, had him come and visit her often, for she then could afford to indulge him as she never had at home. On one of these visits, the first, I guess, after her marriage, she said to him:

"'Now, bubby, tell me just what you would like best for me to get for you to eat while you are here?'

"'O sister,' cried the boy, 'a custard pie all to myself—big enough so I can have all I want for once!'

"'You shall have it. Go and play, and I'll call you when it's ready.'

"So the boy ran off to play, and his sister went into her pantry to make him a pie. She made a big batch of pie-crust. Then she took her biggest dripping-pan and lined it with the pastry. Then she took eggs and milk, sugar of course, enough to make a custard that would fill the dripping-pan. She saw that her oven was all right, and baked it. All the time she was doing this she was thinking, with a smile almost sad on her face, of those long years of poverty, when she and her brothers and sisters had such hard-working, self-denying lives, and she recalled how 'the baby' would come to her when the eggs had been gathered and say:

"'Any kakked eggs, tista? Me want a tustaard pie.'

"Custard pie was always his ideal of luxury—something he had never had enough of all his life. Now he was going to have one of a size beyond all his imaginings. When the pie was baked she set it in water to cool. Then she spread a newspaper on the floor, placed the pie on it, and laid a spoon by the pie. Then, going to the door, rang the bell.

"With a jump and hurrah, the boy came to the kitchen, flung his arms around his sister, giving her a hearty hug and pressing his cheek against hers as he was wont when very little, saying:

"'What a good sister!'

"Then he spied the pie. How he stared!

"'Whoopee! What a pie!'

"'It's all yours.

"'O——— my!'

"He sat right down on the floor, and ate, and ate. When he was ready to go to play again, his sister sat the pie on a chair, with the spoon in it, ready for him. That pie was his and he should have it all—if he wanted it. I have heard that it lasted him three days, and he didn't eat anything else."

"Could he ever eat any again?" asked Ruth.

"Yes, it didn't make him sick of pie. He always declared that the last mouthful tasted as good as the first, and custard pie was his favorite all his life."

"My, but that was a whopper," exclaimed Freddy.

Domestic Economy.

Tested Recipes.

[Written for the Rural Press by Ada E. Taylor.]

Pound Cake.—A good three-fourths cup of butter, creamed; one cup white sugar; two cups flour; three eggs, beaten separately; two teaspoons baking powder; one-half cup milk; flavor to taste.

Ice Cream Cake.—Two cups sugar, three cups flour, one scant cup butter, one small cup milk, whites of six eggs, two teaspoons yeast powder, two teaspoons vanilla. This makes five layers. Color enough to make two layers with carmine, dissolved in a little water. Put frosting between the layers, or make a cream of the six yolks, small cup milk, half cup sugar, teaspoon of vanilla. Set in a tin of hot water till thickened.

Frosting.—Three cups granulated sugar, one cup boiling water. Boil until it ropes. Stir the syrup gradually into the whites of three eggs. Flavor with vanilla. Before putting in the syrup, add one-quarter teaspoon of pulverized citric acid to the beaten whites.

Cream Puffs.—Two cups water, one cup butter, two cups flour. Boil the butter and water together, and stir in the flour while boiling. When cool, add six eggs, not beaten, and stir well. Drop in pans the size of an egg. Have a quick oven, and bake 25 minutes. Avoid opening the oven while baking.

Cream Filling for Above.—Two cups milk, one cup sugar, three-fourths cup of flour, two eggs beaten and mixed with the sugar. Then add the flour and stir all into the milk while boiling. Flavor to taste.

Snow Drops.—One cup butter, two cups sugar, whites of five eggs, one-half cup milk, three cups flour, two teaspoons yeast powder. Bake in small, round tins and frost.

Sunshine Cake.—Yolks of 11 eggs, one cup butter, one cup milk, two cups sugar, three cups flour, two teaspoons yeast powder. Flavor with lemon.

Chocolate Marble Cake.—Two cups sugar, one-half cup butter, one cup sweet milk, two and one-half cups flour, two eggs, three teaspoons baking powder. Dissolve two blocks chocolate in a little boiling water, and add one-half cup sugar, one teaspoon vanilla, and mix it into one-half of the batter.

Company Cake.—Sift two teaspoons yeast powder into hree cups sifted flour, beat four eggs, add two cups fine sugar. Now, stir gradually into the eggs and sugar a half cup of cold water. Next, add lightly the prepared flour. Last, stir in one-half cup melted butter. Melt over the tea-kettle, but do not allow it to get hot.

Frosting for Above Cake.—Take a teaspoonful of gelatine. Cover with hot water and set in another pan of hot water, upon the stove, until dissolved. Let it cool, and then stir in a cupful of powdered sugar. Flavor to taste.

Harlem Jumbles.—Three-quarters of a pound of butter, one pound of white sugar, one pound and a half of flour, three eggs.

Oranges for Lunch.—Soak half a box of gelatine in a cup of cold water. When soft, add two teacups boiling water. When entirely dissolved, add one teacup of sugar, the juice of six oranges and two lemons. Strain this. Have ready oranges, prepared by cutting the part next to the stem, about one-third from the top of the oranges. Carefully remove the inside, which may be used in making the jelly. Fill with the jelly. Replace the upper part and tie with a narrow ribbon.

A Delicious Dessert.—Bake a sponge cake in a shallow tin, so that the cake will be about two inches thick when done. Over this, pour some boiled custard. Just before serving, slice some peaches and put a layer over the cake. Then beat the whites of the eggs to a stiff froth. Add a little sugar and put over the top. Use only the yolks of the eggs for the custard. If peaches are not of season, oranges may be used. Bananas or strawberries are also very fine.

Lemon Tarts.—One lemon, juice squeezed and rind grated; three eggs, one teacup sugar, two tablespoons melted butter. Mix well and bake in small tins that have been lined with rich pastry. Orange juice may be used instead of lemon.

Corn Cakes.—One egg, one-half cup sugar, one cup of sour cream, one of cornmeal, one of flour, one-half teaspoon of soda.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 12, 1892.

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[NEW THIS ISSUE.]

Agricultural Implements—Baker & Hamilton.
Stump Puller—Geo. Harvey.
Cultivator—MacLeod & Denham, Los Angeles, Cal.
Poultry—E. H. Schaeffle, Murphys, Cal.
Lumber—Dickins-Hobart Lumber Co.
Hotel—American Exchange.
Garden Tools—J. A. Everett Seed Co., Indianapolis, Ind.
Poultry, etc.—J. R. Catlett, St. Helena, Cal.
Nursery Stock—Schwarz Bros., Sacramento, Cal.
Meeting Notice—Grangers' Business Association.
Drain Tile—James J. Searle.
Barb Wire—A. J. Robinson.
Assessment Notice—Grangers' Bank of California.
Windmills—Aermotor Co., Chicago, Ill.

See Advertising Columns.

The Week.

The Citrus Fair at Los Angeles, which is closing as we go to press, is unquestionably one of the greatest displays of the kind ever held in the State, and possibly the best ever held. Judged by the profusion of good fruit in variety, it has certainly never been surpassed, and to one who has seen the development of these displays, it was unquestionable evidence of the advancement which has been attained in the culture of citrus fruits in this State. The fruit shows the wide popularity of the improved varieties, both of local and foreign origin, and the masses of poor fruit which used to be relied upon to produce effects are now conspicuous by their absence.

It has come to a fortunate condition in which even for decorative purposes thoroughly good fruit is used. Another lesson from the fair is the great resources which we are now securing in semitropical fruits outside of the citrus family. Evidently, the uttermost parts of the earth are being ransacked to yield their best offerings to California horticulture. Upon another page of this issue, an esteemed RURAL contributor begins a descriptive account of the fair and of the deeds of those who ministered to its success.

The week has been marked by a hot wave, which has given us in San Francisco a degree higher than March ever reached before. North winds have been blowing and have licked up a part of the moisture given by preceding storms. It is, however, still early, and showers and heat may bring forward the growth which at most interior places still shows the effects of cold weather and short moisture.

DELAWARE'S PEACH CROP.—Private advices received in this city within the past few days are to the effect that the prospects for the Delaware peach crop are far from encouraging. The cold weather of the past winter, it is stated, played havoc in the orchards, and very few live buds are to be found. This "ill wind" can but "blow good" to the California orchardist, and our Eastern friends who wish to grow fruit may some time learn that to do so successfully they should seek a really good and reliable fruit country.

ENGLISH and German capitalists are seeking to form a trust in the American leather trade.

The Uses of Water.

When we write the uses of water, the reader may scent another exhortation to irrigation, but this is farthest from our purpose, for, strange as it may appear in the affairs of an arid State, there are uses of water in California which are perhaps of even greater general importance than its irrigation value. One of these is water as a means of transportation, water as a safeguard against railway extortion and as a friend of the producer of crops which afford but a narrow margin of profit.

Never before has the improvement of California streams and the development of unused waterways into avenues of traffic occupied a more prominent place in the public mind than at present. Such prominence is due to the important movement in which miners and farmers are now apparently in accord, and which aims to secure an adequate sum of money from the General Government for public works in California streams. Another issue which is making the subject of rivers and their tributaries prominent in the public mind arises from the need of freights upon valley products to tide water at lower rates than can be had from the railway.

A very strong report has just been presented to the State Board of Trade by General N. P. Chipman upon the necessity of comprehensive river work in this State. It is shown that California has had only three and one-half millions out of 184½ millions expended by the general Government for river and harbor improvements. This amount is much less than the share of the State by a simple question of division, and vastly less than we should receive in view of area and length of rivers which can easily be made navigable to twice the distances through which they now sustain traffic. It seems clear then that we should easily secure more generous consideration from the general Government if our claims and natural conditions be clearly set forth.

There is abundant evidence to show how the development of our waterways would stimulate production and trade beyond all extent which we can attain under existing conditions. Take for example a few points which Mr. Morrissey of Stockton furnished to the report, to which allusion has been made.

"No matter how complete may be the facilities for moving freights by rail, whenever a railroad parallels a line of water transportation, it cannot compete for the local traffic of the country easily accessible to the water route. * * * The amount of freights of all kinds carried between Stockton and San Francisco will aggregate 400,000 tons annually. Charges for moving wheat by rail from Stockton to Port Costa are $1.50 a ton, while by steamer 75 cents a ton. It is noticeable that the freight rate upon the railroad between Stockton and San Francisco is considerably less than is charged for the same service on portions of the line where there is no competition. For example, the charge for transporting wheat from Stockton to San Francisco by rail is $2 for a distance of 103 miles, while from Borden to Stockton it is $2.75 for the same distance. A careful comparison of the freight charges from different interior points to San Francisco or Oakland wharf by rail will invariably show that the rates per mile are less from such points as are accessible to water communication than from points where such competition does not exist."

What has been enjoyed by the Stockton region in the way of low freights, through competition between rail and water, can be extended to even remote regions of both the Sacramento and San Joaquin valleys, providing the people bestir themselves and secure public attention to their needs and the largess of the Government in meeting them. We believe there is no enterprise of greater industrial moment to our great valley than that which will secure water transportation, with all its direct benefits, from the remotest possible points. To accomplish it, agitation is needed, and every region should take steps to promote discussion and publication of facts and advantages.

EGYPTIAN CORN FOR PORK.—It is a matter of no little importance that E. C. Swift, a large pork-packer of Chicago, who recently visited California, has announced favorable conclusions on several points. He had understood that hogs for the best grade of pork could not be raised in California, except at a very few points where good Indian corn is raised. He has seen some splendid looking pork in the San Francisco markets, and in reply to questions he was told that the hogs were fattened on Egyptian corn. Further inquiry has led him to believe that this species of corn is nearly, if not fully, equal to the standard Indian corn of the East for food. If this be true, the raising of hogs by California farmers ought to prove exceedingly remunerative, as Egyptian corn grows well in most portions of the interior of the State, especially in the Sacramento and San Joaquin valleys.

A NEW BOOK FOR FARMERS.—Readers of the RURAL PRESS who desire to inform themselves of the modern machinery adapted to farm work, should write to Baker and Hamilton, San Francisco, for a copy of their latest catalogue. It is a handsomely illustrated book of 216 pages, and describes every implement used by the farmer. It will be sent free to any person sending for it. In writing, state that the catalogue mentioned in the RURAL PRESS is desired.

BLAINE'S FRIENDS STILL HOPEFUL.—When Mr. Blaine's letter announcing that he would not be a candidate for the presidency was given to the public a few weeks ago, the RURAL expressed the opinion that if Mr. Blaine should be in a fair state of health at the time of the convention, he would be nominated for the presidency in spite of all; that his enthusiastic admirers in the party would force him into the race whether he wished it or not. It was noted that he did not say, with the frankness of a man speaking absolutely without reserve, that he would not take the nomination under any circumstances, but simply that he was not a candidate, and that his name would not go before the convention. This view of the matter finds some confirmation in the fact that the immediate friends of Mr. Blaine are already taking steps to put the nomination upon him. Something like an organization looking to this end has been effected in New York and Washington, and its managers are now engaged actively in corresponding with Mr. Blaine's friends in the several States of the Union. It certainly appears to us that nothing can prevent Mr. Blaine's nomination if at the time the convention meets he shall be in a fair state of health. However, if it shall be demonstrated that Mr. Blaine was entirely sincere in his letter, and if after all he shall positively decline the nomination, it would take something like a miracle to defeat Mr. Harrison. The talk about Alger, Cullom, Lincoln and others, has no significance whatever. It grows out of the desire of newspaper correspondents at Washington to treat the public with a daily grist of more or less interesting gossip.

THE DEMOCRATIC QUARREL IN NEW YORK.—Senator Hill's convention assembled according to programme on Washington's birthday and selected delegates four months in advance from New York to the National Democratic Convention—all of course avowed partisans of Hill and his political schemes. But within a few days thereafter another convention of Democrats was held, protesting against the domination of Hill, declaring his convention to be out of keeping with all precedent and a violation of the rights of the members of the party at large, and naming another set of delegates to the national convention. It is not expected of course, even by those who were chosen by this second convention, that they will be accorded seats at the convention at Chicago. Every claim of party regularity and of party authority belongs to the Hill delegates, and they will unquestionably be admitted, while the protestants will be left out in the cold. On the other hand, the presence at Chicago of a considerable delegation backed by a large and respectable element of the New York Democracy, will bear evidence to the fact that Hill cannot carry the united strength of his party in the presidential contest, and it is as morally certain as anything in the future can be that it will result in the defeat of his presidential aspirations. It looks now as if Hill and Cleveland had succeeded in cutting each other's throats, for each has made it evident that the other cannot command the solid support of the Democrats of the Empire State.

TO EXPERIMENT WITH COFFEE.—James Dietrick of Tulare county has made arrangements for a novel experiment in the way of a twenty-acre coffee plantation in the county named. He has given the subject considerable study and practical investigation, and is convinced that there are many localities in California where this prized berry may be produced successfully. The experiment will be watched with great interest, and if Mr. Dietrick's theories be found correct, it will not be long ere another new and important industry will be inaugurated in our fruitful State. It must be borne in mind, however, that experiments with the coffee tree are not at all new in California, and that it has been pretty definitely settled that there are very few localities in which the plant will survive the winter frosts. We hope Mr. Dietrick has found a thermal belt to try his coffee plants upon. They are more tender than citrus fruits, and no commercial plantations should be made without careful investigation.

"HEALTH HINTS."—One of our Eastern exchanges devotes nearly a column of carefully prepared matter by way of advice to its readers on proper precautions during "the dangerous March weather." The ground might have been much better covered, whether applying to March or any other month, in a single line, thus: "Go to California to live."

THE CANAL AND THE FRUIT.—W. L. Merry suggests that inasmuch as fruit is successfully transported from the Cape of Good Hope for use in London, as recently reported, the opening of the Nicaragua Canal will open up to California in Europe a market sufficient to absorb a large share of the fruit grown here.

RINDERPEST is spreading in Germany.

The State Press.

Perris *New Era:* "It is clearly apparent that a change should be made in the Wright irrigation law by the next legislature regarding the manner of assessing property and the collection of irrigation taxes. At present this is done by local officers independent of the county officials, and results in great confusion, annoyance and delay."

Pomona *Progress:* "The Mongolian can never be Americanized; can never be enthused with the elevating patriotism that pervades this liberty-loving and progressive people; can never be made to regard with appreciation the laws and institutions of this country, only so far as they enable him to gather in the shekels, for which he will work early and late and live like a rat."

Kern County *Echo:* "In a general way, the whole State will gain by having the State and municipal elections in San Francisco separate as they are under the new law, We are not certain but it would be an improvement to have them separated in all counties. Constables and roadmasters have, in the past, exercised an undue influence over the elections of Governors and even the President."

Oroville *Register:* "We conjure every man who has any love of beauty in his heart to preserve the magnificent trees of our beloved State. Spare them as you would the bright stream, the green field, the noble mountain, the sheltered valley. Lay not the ax to their trunks, but let them stand as noble monuments, marks of grace and beauty, and emblems of something higher than the love of gain or greed of riches.

Salinas *Democrat:* "The rapacity of the Southern Pacific Co. has been so patent to persons shipping on their lines, that the company's motto of "charging all the traffic will bear" is now taken as a matter of course. This rule of robbery on the part of the Railroad Co. has had its blighting effect upon industrial development all over the State, but more especially at non-competitive points such as those in the upper part of the San Joaquin valley."

Dixon *Tribune:* "C. P. Huntington is proving himself a true philanthropist in purchasing large land tracts and by subdivision making it possible for the man of small means to build for himself a home. His frank confession that it pays him five-fold detracts nothing from his credit, for what need it matter to the community if Mr. Huntington multiplies his income a hundred-fold, if while doing so he places the people in a position to earn it."

San Jose *Herold:* "The time is fast approaching when the insolence and the lawlessness of the liquor traffic will be effectually suppressed. A public sentiment in that direction is rapidly developing, and nothing has done more to quicken it than the lower class of saloon keepers themselves. Their disregard of law; their interference in caucuses and conventions; their attempts to dictate to all public officials, have done more than all else to create a sentiment against the liquor traffic that will either control it or suppress it altogether. And such a sentiment is all-powerful when it once gets into action."

Hanford *Journal:* "There is certain information that the public is entitled to get in the most expeditious manner possible. There ought to be a law or custom making it compulsory on R. R. station agents to post up information about arrival and departure of trains in a manner intelligible to the ordinary public. Similarly, postmasters should be required to post up time-tables of the arrival and departure of mails, corrected to date, and any other information the public is entitled to. This would save lots of time in asking and answering questions, guard against uncivil answers, and facilitate business generally."

Gonzales *Tribune:* "Judge Dorn has earned the everlasting gratitude of the settlers of this county by handing down a decision in their favor which gives them the right to enter upon the so-called railroad land recently forfeited by Act of Congress. The learned Judge takes the view of the matter, that under the provisions of the Forfeiture Act of Sept. 29, 1890, the unearned portion of the grant to the Southern Pacific Railroad Company reverted to the Government, and that settlers should not be deprived of their rights through the neglect or refusal of the Secretary of the Interior to perform his duty by declaring the land open for entry."

San Jose *Phœnix:* "The Constitution of the United States should be a text-book in all our schools, public and private. Ask every man and woman you meet if they have ever read it, and how many could answer in the affirmative? Not one in a hundred. Few, indeed, have a fair comprehension of the theory of our Government. Thousands of people think that Congress created the States. They do not know that the States made the General Government, and that it has no powers except those granted to it by the States. No study can be so important as that which teaches pupils our plan of Government, the powers belonging to the United States, and the powers reserved to the States and the people. Everbody would be a better citizen by having this knowledge."

Bakersfield *Echo:* "The complaint that the wealthy do not pay a just proportion of taxes is undoubtedly well-founded. How can this be remedied? The *Echo* suggests a plan. It is known to be law that while the Supervisors sit as a Board of Equalization, any taxpayer may go before the Board and complain that a neighbor's assessment is too low. Now, if a dozen or more men will club together for the purpose of examining the assessment roll after it is made up, and if things are not found to be up to the scratch, go before the Board and have them corrected, this cause of complaint may be remedied to a great extent. We would suggest, however, that these dozen men look well to their own figures before starting in on this work."

Farmers and the Stanford University.

CARMEL VALLEY, March 7, 1892.

TO THE EDITOR:—In my last letter, I had hardly time to speak of more than the externals of L. S. J. U. I want now to add a few lines as to its teachers, teachings and taught.

And to put the last first, of the 500 students enrolled in its catalogue, there is *only one agricultural student.* Oh, what *is* the matter with the farmer? Or shall we say, what is the matter with a college course in agriculture? This one student was *not* a Californian, but an enthusiastic young German, and was making up his solitary course as best he could, now busying himself with chemical experiment, then rushing to a lecture on geology, or coming to hear Prof. Comstock expatiate on the bug question. I don't know how often he walks over to the breeding farms and training establishments of Senator Stanford, but there could be no better place in the world for the study of horse flesh, running or trotting, and the Senator permits free access to visitors except on Sundays. So, at present, as there is no set agricultural curriculum, perhaps our farmers are justified in thinking the best school of farm technology is on the farm. But I am writing this especially to impress on all readers one thing—that L. S. J. U. is really a new departure in educational life. No one need fear that L. S. J. U. is not an institution for the people.

"We will teach," said President Jordan, "anything to anybody" that really wants to learn, provided the applicant is over 20 years of age, and that without regard to any regular graduate course. Boys or girls under 20 must follow some recognized routine as laid down in the various bulletins. We find, therefore, students of very various ages and attainments. I even met one friend, who has been a university professor, sitting happily at the feet of Dr. Gilbert studying advanced zoology. So every farmer's daughter or son who is anxious to learn, may enjoy the privilege of studying not only classics and mathematics, but the whole range of natural sciences, physics, chemistry, botany, zoology, geology and any other ology her or his heart aches after; or any one with a mechanical bias will find a spacious workshop fitted with the neatest of carpenter's benches and provided with all needful tools, lathes, drills and needed machines, and power laid on from adjacent boiler house, where he can learn to adapt means to ends after the most approved methods. He will find more; he will find, as teachers, many kindly, earnest young men whose whole time is devoted to assisting him to gain the very knowledge he thirsts for, and he can't be too thirsty—the thirstier he is, the better the professors like it! And these professors, though men of foremost ability in their respective chairs, are quite willing to "condescend to men of low estate." and put their pupils in the way of making the most of their faculties, of using their lives—that is, to the best advantage. For L. S. J. U. is run on the principle that if Charity or Love is the greatest thing in the world, the next greatest are Faith and Hope—hope for the future development of a happy and enlightened humanity; faith that the dispersion of ignorance and the attainment of knowlege is the only way to that much-desired development. "Original research" is the watchword of L. S. J. U. In other words, *think—think for yourself.* Eat of the tree of knowledge of good and evil and digest it thoroughly, as the Lord God meant you to when he gave you a brain with reasoning powers. Happy is the student thus privileged at the close of this nineteenth century when he realizes that even in the '50s and '60s we were taught that to think and reason for one's self were certain damnation; that a *freethinker* was synonymous for all that was dangerous and devilish. And this grand opportunity for California's young folks is to be had by all for the mere asking. "Bubbles," said Lowell, "we seek with a whole soul's tasking.

"'Tis only God who is given away;
'Tis only Heaven may be had for the asking."

But *here* is a *heaven on earth* to the knowledge seeker, and offered without money and without price!

Students are of course expected to maintain themselves, and two large establishments have been erected—Encina Hall for male and Roble Hall for female students—where bed and board and washing can be had for $5 a week. The dormitories are spacious. Each contains, I believe, two beds. The dining hall is in charge of a caterer of great experience—Mr. Addison—who takes much pride in showing his department to visitors that they may be convinced that students are well cared for physically. In the store-room were large quantities of dried fruits from Senator Stanford's Vina ranch, pitted plums, peaches, apricots and prunes of excellent quality. We fruit growers had experience of the table set for the students, as we took several meals in the Hall and found them as good as any one could reasonably desire.

I have written these few lines that those who have had no opportunity of seeing L. S. J. U. may realize something of the boon Senator Stanford has conferred on young California. However much we may growl at high rates and freights, the Senator has offered, in L. S. J. U., to furnish young California with the highest educational freight possible at less than the lowest living rates, and I feel pleased to append my signature as one grateful therefor. EDWARD BERWICK.

An Irrigation Bill Favored.

WASHINGTON, March 6th.

The House Committee on Irrigation and Reclamation of Arid Lands has decided to report favorably on Representative Lanham's irrigation bill. It provides that, subject to all rights inchoate or perfected thereto, and all lands of whatever nature or description and rights thereto, including water rights now belonging or appertaining to the United States lying and being situated in the States of Nebraska, Nevada, South Dakota, North Dakota, Montana, Washington, Oregon, Wyoming, Idaho, Colorado, Kansas and California, and in the Territories of New Mexico, Arizona, Oklahoma and Utah severally, with full and complete jurisdiction thereover, be and are hereby granted, ceded and confirmed to said several States and Territories, the grant to each of said States and Territories to be of lands contained within its present boundaries and territorial limits, and the President of the United States shall issue letters patent for the same to said several States and Territories in this section designated wherever and as any of said States and Territories shall, by an act of its Legislature, accept the disposition of lands as herein provided within the time hereinafter specified.

This act shall in no manner affect any of the lands held by the United States for parks, naval, military or other public purposes, nor any Indian lands or lands held in trust for or for use by Indians, nor mineral lands, nor shall it apply in any manner to the Territory of Alaska.

Section 2 provides that the Governors of the Territories of Utah, Arizona, Oklahoma and New Mexico shall, within a reasonable time after the passage of this act, call special sessions if need be of their several Legislatures to take into consideration and pass upon the provisions of this act and the question herein submitted to them, and they may from time to time call such other sessions of their respective Legislatures as may be deemed necessary. The benefits of this act shall not accrue to any State or Territory which shall not have accepted the provisions thereof within four years from its approval.

Section 3 provides that as soon as practicable after the issuance of letters patent to any State or Territory herein mentioned for lands therein situated, and from time to time thereafter, as occasion may require, it shall be the duty of the Secretary of the Interior, at the expense of the United States, to cause to be delivered to the proper authorities of such State or Territory all maps, records, books and papers, or certified copies thereof, in case it may be necessary to retain originals in the general land office, which may be necessary to such State or Territory for proper control, administration and disposition of such lands.

Section 4 provides that no State or Territory accepting the cession of lands as therein provided shall in any case sell, lease or dispose of said lands in greater quantity than 160 acres to any one person, corporation or association; nor shall any such State or Territory impair or abridge the homestead privileges now granted to soldiers and sailors under the land laws of the United States.

Rain-Making.

SANDERS, Fresno County.

TO THE EDITOR:—I am a rain maker. I can speak of what I have done in the past tense, as something fully accomplished. When I awoke before daylight this morning and heard the patter of the rain on the roof, I asked my son, "How long has it been raining?" He answered, "'Tis only your make of rain; it's been rattling away ever since I woke up." What he meant by referring to it as my rain can be understood by a brief description. My house is shaded and completely covered by a grove of blue gum trees 140 feet in height. After a frost, or during foggy weather, there is such an amount of precipitation from their foliage that I kept two rain gauges during the winter of '90 and '91, one at my office, a hundred feet from the nearest blue gum, and one under the blue gum trees. In the open air we had a total of 8½ inches of rain; under the blue gums, less than a hundred yards away, there was a precipitation, including rain and melted frost and condensed fog, of 12 3-10 inches, showing that 3 8-10 inches of precipitation was from the foliage of the trees.

OTHER RAIN MAKERS.

I have to brag of the above while I can, as 'twill soon be so far surpassed by man's skill in causing the air to yield up its treasure wherever and whenever he wills, that the world will finally wonder how agriculture ever succeeded without the aid of this wondrous power. In the hottest, clearest summer weather more than a foot of water could at any time be precipitated from the atmosphere, if we were only master of the means to do it. The water is there, we've only to precipitate it, and that we will do in the future as surely as in the past. We have corraled the all-pervading electricity and made it do our bidding. When in the world's infancy of knowledge about electricity, Dr. Franklin, by his experiments, added to the knowledge of that subject, he remarked, when criticised, "'Tis only of such use as a helpless, new-born babe; it may grow to be a man." We see something to-day of the younger manhood of electricity, the babe of a century ago. A greater work than Franklin's bringing lightning from the clouds—the producing of clouds and bringing rain from them—is now being attempted near here in our valley. Whether the present effort will attain perfect success or not, we cannot yet determine; but this much is already positively known, the water is at all times in the atmosphere and it can be precipitated by artificial means. This is the babe; its manhood in the future is assured.

W. A. SANDERS.

A Great Irrigation Enterprise.

In October, 1889, A. H. Koebig, a civil engineer, and C. J. Perkins, an attorney-at-law, both of San Bernardino, commenced the preliminary surveys of four large reservoir sites on the north side of the San Bernardino range of mountains, about 12 miles from the city of San Bernardino. After completing the surveys and ascertaining the necessary expenditure, together with the probable capacity of the reservoirs, these gentlemen induced a number of Cincinnati capitalists to undertake the work of development.

In 1891 the Arrowhead Reservoir Company was incorporated, backed by some of the leading capitalists of Cincinnati. The company immediately took possession of the property in question, under its manager, Col. Adolph Wood, and has just recently let contracts for the construction of three tunnels—one 5700, another 3300, and the third 2070 feet in length.

Creighton & Duer, of San Francisco, have been awarded the contracts for the construction of these tunnels. They are now moving their plant into position, and expect to have four Burley drills at work within a week. Under the contract, the time allowed for the completion of this work is nine months from the 1st inst.

These tunnels involve an expenditure of over $250,000, and the first dam to be built, the contract for which will be let within a couple of months, will cost $200,000.

The company has already sold a large quantity of water, among other sales being one of 2000 inches to an irrigation district near Pomona. The water will be conveyed from reservoirs down the great Waterman canyon, where a fall will be obtained whereby over 4000-horse power will be developed on turbine wheels for electrical power purposes, and the water from these wheels conveyed through large steel pipes 33 miles west of San Bernardino over a tract containing 75,000 acres of the finest citrus fruit lands in Southern California.

This vast enterprise will bring under irrigation over 80,000 acres of land immediately surrounding San Bernardino on the north and west. The company will expend over $700,000 in its operations before obtaining any revenue whatever. It has already completed a mountain road at an expenditure of $43,000, and has at work a small army of men in the different branches of labor. There is no gainsaying the fact that this enterprise is bound to play a very important part in the development of the rich lands in the San Bernardino Valley.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

THE DAIRY.

Some Dairy Notes.

CAMPBELL, SANTA CLARA CO., Feb. 27.

TO THE EDITOR:—There seems to be an awakening in the dairy interest of California, and I am sure that those farmers who go into the business intelligently will not regret it. That there is money in butter and cheese-making in this State there does not seem to be any question; the great requisite to success is an intelligent understanding of the business in its various details. There are many advantages here that Eastern dairymen do not have, and it would seem, all things considered, that in California the business would pay a handsome profit. There need be no fear of overproduction for some years to come, as the coast has to import Eastern butter and cheese to supply the deficiency in the home make, and if more butter and cheese is made here, there may be hope of driving that rank fraud oleomargarine out of the market. Only a few days ago I saw on one of the streets of San Francisco a wagon covered with canvas signs inviting "economical housekeepers to call at No. —, and try oleomargarine." In its palmy days in the East this fraud never made such a wanton exhibition of itself, and it seems strange that California, with its large and steadily growing dairy interest, does not enact a more stringent law against the sale of this product. But some may say it is a legitimate article and should be tolerated. On the ground of economics, it should be prohibited, for it comes into direct competition with pure butter, and the stuff bears little or no share of the taxation necessary to support the State Government, while the dairy cows and the land upon which they graze, together with the apparatus used in making butter and cheese, are taxed and do help pay for the maintenance of the State Government. As California will elect a new legislature this fall, let those who are engaged in the dairy industry see to it that they elect such men as will give them a law that will protect them. Oleomargarine is not always sold under its true name, and I venture the assertion that much of the so-called Eastern creamery butter sold through this State is oleomargarine. When Eastern creamery was quoted in Chicago at 31@32c per pound in December last, it was being sold here at 30 cts. per pound. It may be possible to explain that difference, but it looks suspicious.

LOOKS AS THOUGH IT PAID.

From the Hollister *Advance* I take the following, which is an extract from the annual report of the operation of E. Vile's cheese factory at San Filipe, San Benito county, for 1891: "Total number pounds of milk received, 457,998; total number pounds of cheese made, 50,625; highest price received per pound, 15½ cents; lowest, 10 cents; average gross price per 100 pounds, $12.29; average number pounds of milk to one pound of cheese, 9.04; average net price to producer per 100 pounds of milk, $1.13 4-5; cost of making per 100 pounds of cheese, $1.80; number of cows milked, 85; average net income per cow, $63.50."

It would be interesting to know what the cows were fed, of what breed, and what proportion of them came in in the spring, or whether all came in in the fall. I have, in former articles in the PRESS, alluded to the fact that it takes much less milk in California to make a pound of cheese than is required in the Eastern States, and that is a decided advantage to the dairymen of this State.

A WORD OF CAUTION.

Dairymen who contemplate building creameries are cautioned against high-priced buildings—that is to say, that parties have tried in several instances to rope in dairymen by erecting buildings at a greater cost than is necessary. That good buildings and good machinery are necessary, no one questions, but when a plant exceeds $6000, in complete order for operation, some one is making a pretty good stake out of somebody. So, if dairymen do not know for themselves as to what a plant should cost, they should inquire of some reputable person who does know. Some years ago parties in some of the Central Western States contracted to put up creameries ready for operation at a cost of $10,000, and as evidence that they believed the plant would prove a good investment, they accepted as part pay $2000 in stock in each plant they put up. They rarely ever called for any dividends on their stock, and it was shown in a year or two that $5000 would have amply paid for the building and machinery. By their operations they pocketed $3000 on each plant, and they erected scores of them in Kansas, Nebraska, Missouri and Iowa, and probably in other States. The scheme paid the builders but did not pay the owners.

R. P. MCGLINCY.

TEXTILE INDUSTRIES.

Ramie and Its Culture.

SAN FRANCISCO, Feb. 26, 1892.

TO THE EDITOR:—In writing this article on the very important subject of ramie for this country, and the great State of California in particular, at your request, please pardon me if I confine myself, in a homely way, very closely to the important information on the subject closest to the people's interest. I shall endeavor to give the most important facts in the fewest and plainest words possible to make it understood, interesting and most useful.

Ramie is a species of nettle, but thornless. There are three different varieties all suitable for this climate; but they vary in excellence in the market from two to four cents a pound, the best, which I recommend, being worth six cents a pound here in the rough as it comes from the decorticators, dried and baled.

Decortication of itself is of a very simple nature, being to strip or peel the bark from the wood, to knock out the inner wood, which must be done as fast as leafed and cut, or on the same day of cutting. It can be done to pay by flail, treading with horses, or flax break, and shaken out; or more properly in these days, with a machine run by horse or steam power, and with four to six men working two acres a day, easily. One machine will run through 120 acres in two months, and keep a gang of men busy all the summer through. Ramie will grow in about that time if well supplied with water, irrigation or natural moisture.

Ramie should be cut green when about four or five feet high, and when it first begins to brown at the bottom of the stalks. Ramie will not ret like flax or hemp, and thus must be broken green before the gum or glue sets to the stalks. It should be run from the decorticator on an endless wire carrier through a drier and baled at the exit for shipping to the factory, where it is, by a process, ungummed and prepared for carding and spinning. It is excellent to knit or weave into goods of superior quality, pure or mixed with wool for cassimeres, woolen and worsted fabrics.

Ramie fiber is of a very firm texture and of uneven lengths, from two to six inches. It is a flat, hollow ribbon, and thus takes dyes in all shades of the brightest colors, as well as for black silk. It is not of such a glossy nature as common silk, but partakes more of what is called dead silk in black, which all ladies know is most desired in expensive goods. Silk is wound off the cocoons from 800 to 1000 yards long, and doubled in the winding seven strands, while ramie, being short, must be carded and spun like raw silk, or broken silk, and therefore is not mixed with line silk in the way sometimes spoken of, but often made into thread, is used to mix in the body, the strongest parts needed, for the warp or filling, and sometimes for the body of the goods when silk may be used for the raised glossy figures or flowers, giving a beautiful contrast and exquisite shading. In wool mixtures, it can be cut or graded to the even lengths and carded and spun as a complete mixture, benefiting the wool by its superior strength, gloss and finish, the wool making the nap and warmth, the ramie alone being porous and cool for summer wear.

Ramie is not adapted to be worked on linen, hemp cotton or jute machinery. It is estimated that some 30 million dollars' worth of worsted alone, and of wool and woolen good many more million dollars worth is imporported into the United States annually. Ramie fiber that can be grown in this country can take the place of this and excel in durability and finish, besides for all other purposes in ramie goods pure, mixed silk and other ways, I have no doubt, to amount to much more. There is no end or limit to the possibilities, apparently to the uses, to which it can be put. Why should we not hasten to reap the direct benefit, as well as the incidental impetus it would give to all other enterprises, employments and home market?

Ramie is now grown in China, Japan, India, Mexico, Cuba, Hawaii, Samoa, West Indies, Guatamala, Columbia and Brazil, and, in the United States, in Alabama, Louisiana, Texas, California, Washington and Oregon in small quantities. It is also grown in South France, Italy and Hungary, and is worth in China $100 to $200 per ton cleaned by hand. This is done there by scraping the pellicle off the outside of the stalk, cut green, then peeling the bark, and with a bamboo stick rubbing out the mucilaginous gummy matter over a log, and repeated washing and drying on scaffolds or roofs of their houses. For export, it is only partially ungummed. For their hand-weaving they strip this partially ungummed fiber into threads as long as possible, containing, of course, thousands of fibers, which they fasten, stick or tie together end to end, making long threads in imitation of silk, which they weave into goods, then boil and bleach out and color in the piece. This primitive way of working, which can only be done with the cheapest of labor, has deceived most of our experimenters into the belief that the fiber was long as the stalk, like flax and hemp, and of course prevented success in our working it to manufacture by machinery. But now that we have scientifically investigated the fibers before we undertook to build machinery, and found out just what was wanted, it was easy enough to solve the difficulty, which, of course, "was in a decorticator" (if a decorticator was to do, or could do, the whole business), which never has or never will be done economically by one. But when only decortication was wanted by a decorticator (see Webster), and we had a simple way to treat or finish it afterward, success was attained. The farmer is not bothered with the ungumming, which is the difficult part of the work.

AS TO PLANTING.

It can be done in various ways, but I have had early and extended experience in nursery and farming, as well as machinery and manufacturing, so looking to the end, that the greatest success and efficiency might be attained, I will suggest this plan: After properly moistening, plow and pulverize your ground well and deep, roll smooth, mark out as for corn, but make the rows six feet apart, plant in the furrows from one to three feet apart, dropped like potatoes, and cover like corn—or you can stick the roots, butt down, slanting sideways, two or three inches deep and cover the top about one inch, or let it come almost or quite to the surface if the ground is not mellow and sandy and is moist to the surface, or is liable to bake. Cultivate well between the rows until the sprouts are up two or three feet high, when layer out to cover the ground in a bed four feet wide, leaving a space two feet wide between the beds to cultivate, from which you can procure roots that spread out into these spaces to replant or sell without disturbing the beds. You will find it will pay you for some years to come to raise roots to sell, as a little demand will absorb all now on hand, and I have no doubt the price will double or treble before the rush is supplied.

The first crop after layering can be cut with a sickle by hand and all the poor or branchy shoots can be layered to fill up any vacancies or cut into cuttings and planted like grapevine cuttings.

Now these two-feet paths can be kept open and used for cultivation, or, after the four-foot beds have become solid, can be allowed to spread full.

I advise this plan as a four-foot bed can be grown solid thick sooner than six feet, and after that can be easily extended. When roots become plentiful and cheap you can plant thickly all over the ground at first planting, if you choose, but with roots $3.00 a piece, as at first in New Orleans, it could not be afforded. Although one planting lasts for a life-time it is supposed that 5 cents would be high, but two or three cents is reasonable, and $21.63 per thousand is very reasonable, delivered in good order, the purchaser running no risk in shipping at all. 2,500, 6 feet by 3 apart, or 7,500, 6 feet by 1 apart, makes the first cost enough on a large scale, and with layering and cuttings will so soon cover the beds. If planted this spring a scattering crop can be cut in the fall from the layers, and the next season three or four fair crops can be expected, and the next year your most sanguine hopes ought to be realized. Any one purchasing larger amounts, or where possible, can have my personal attention as to soil, preparation and care, and I will contract to buy all you will raise from roots purchased of me, for five or ten years at 6 cents a pound in bales delivered in San Francisco, Los Angeles, San Bernardino, Sacramento, Tulare or Bakersfield, California; El Paso, Dallas or Galveston, Texas; New Orleans, La..; or Mobile, Alabama; Atlanta, Ga.; or Jacksonville, Florida; Salem, Oregon; or Seattle, Washington. I will also agree to furnish decorticators at a reasonable cost; now 700 to 800 dollars for two acres a day, and give freely all necessary information and assistance possible personally; deposit a forfeit of $50,000 for every 2,000 acres planted from roots purchased from me and paid for, or leave that amount approved, due on the same at 8 per cent interest and accept notes payable in fibre; build manufactory and buy your crop for five or ten years at 6 cents a pound, paying cash 90 days for the same, each crop delivered as above.

Ramie is not a noxious weed, does not spread over the country by seed, is not hard to eradicate, dies with drought, flood, or plowing out to sell the roots or replant. As to its injury or drain on the soil, I must say that has been overestimated, as the comparisons have been made with grain and fruit that grow and ripen grain, wood, fruit, seed or pits, which makes the greater drain and from the surface. The ripening of seed or pits, hardening of stem or wood, is much more exhaustive of the soil than the first or green part of the growth. Ramie should be compared with alfalfa more properly, but has some very important advantages over that also. While alfalfa roots deep and draws its substance not mainly from the surface, but deep down in the subsoil, and far into subterranean depths for moisture, it does not materially exhaust the surface, though in cutting green it is all removed, stalk, leaves and all, sold or used, hardly, if ever, returned even in manure if fed on the place; yet, if ripened for seed, it exhausts the soil much more, while with ramie the roots also go down deep, not only one tap root, but many, each stalk supplying its own, every joint or piece supplying them if detached from the mother roots. Ramie is always properly cut green, all the leaves, about two-fifths of the whole weight, being stripped and left on the field; the wood and juice is separated and burned in dryers, and the ashes can be returned with little trouble, so that nothing but the pure fiber need be taken permanently away.

Now if an old overgrown stalk should be cut, weighed and burned to estimate the loss, the result multiplied by the number supposed to be on an acre, it might be that "50 tons per acre" might be estimated, which would give a very erroneous impression from the real facts. I think the leaves and wood being returned might add to the soil, together with irrigation, and the air all, or nearly all, removed in the fiber, and possibly more, in some cases at least. Something is taken from the air and water, and more brought up from the subsoil, or below. At any rate, I have seen as fine stalks on 10, 15 and 20 year old grown patches of ramie (that I have been told had not been fertilized and not much watered) as I could wish to raise. About five tons green stalks can be expected off an acre cutting, each making a thousand or more pounds of fiber, or three to four thousand pounds in a season of three or four cuts.

Ramie fiber must not be bleached before used in the factory, as it needs different treatment for different uses, and you must not be deceived by long, fine bleached or unbleached samples, as there is no practicability in them. Ramie is not ungummed if long, and cannot be used in that condition except by hand, and then must be prepared while green and fresh, by hand. We want no hand work, and cannot compete with foreign labor in that way. So do not be deceived by gaudy showings.

Bales of it have been made and shipped from the south, 12 to 20 years ago, and found unsalable for profit to this country, and spoiled for their uses in Europe, by hand or otherwise. We want plain, practical working material.

It must be thoroughly and economically ungummed, and then it is as free and pure as wool, camels' hair or alpaca, and cut to even lengths, or separated into two, four and six inch lengths, will card and spin as readily by machinery, and if properly done is of full strength and gloss. The farmer, except for curiosity or satisfaction, does not need to be a manufacturing expert to pass on the machinery or fiber. He simply, necessarily wants to be satisfied that he can put into bales and sell the raw material, and roots maybe, enough for several years to pay him for planting, raising and marketing, as well or better than anything else he can raise, and that he will get a better market for his other products, and be able to buy a superior article of goods for less money than is possible without it. If he can make $180 to $240 per acre on a large number of acres for several or many years, and never less than $50 clear and double or quadruple his market, and that at home, instead of the chances abroad; get his goods for less than half or one-fourth of the price he now pays; get a genuine, durable article that will wear four times the length of time the adulterated article he now pays a big price for, builds up his country, makes his property valuable, I think it is worth a little effort and faith, even if there is a good deal of work, and maybe some few mishaps to start with.

S. H. SLAUGHT.

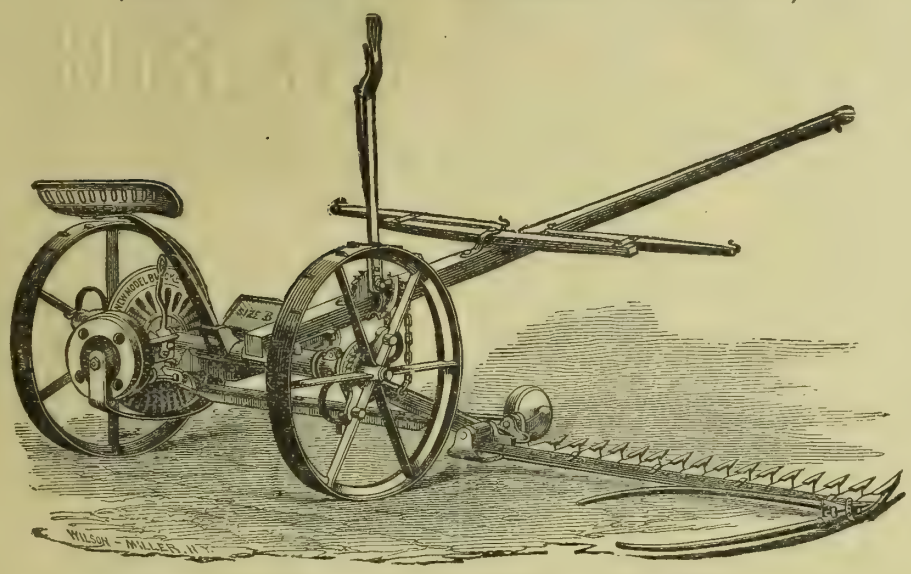
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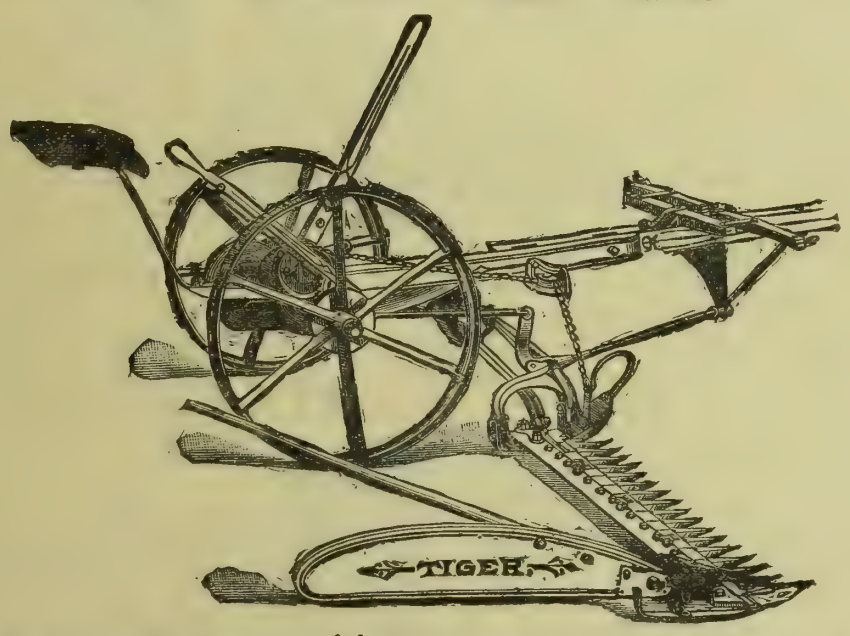
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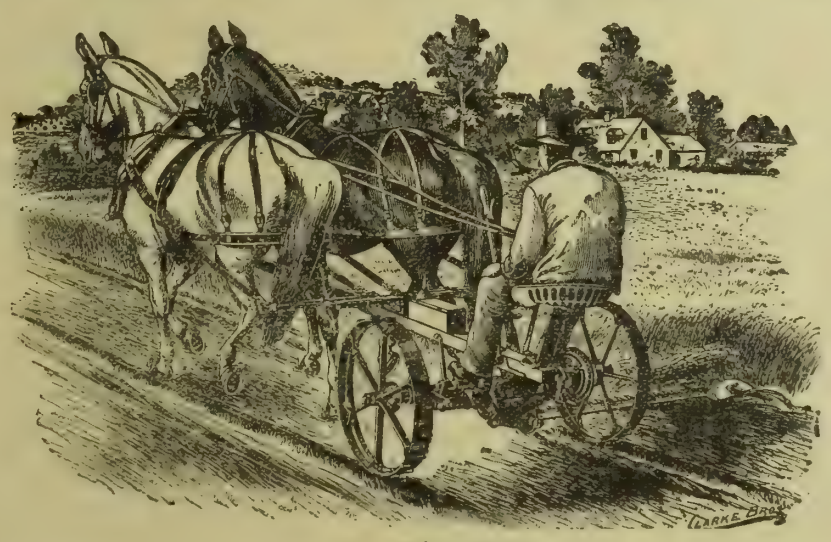
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ENTOMOLOGICAL.

The Smyrna Fig Insect.

The Reason Why All Attempts to Introduce It into California Have Failed.

SAN FRANCISCO, Feb. 20, 1892.

TO THE EDITOR:—Since the experiments conducted by George Roeding in Fresno have shown that the fecundation of the pistillate flowers is sufficient to produce an article equal to the Smyrna fig, several attempts have been made to introduce the insect, which in Smyrna is used to perform this office. This insect, already mentioned by Theophrastus, and for more than 3000 years known by the name Psen, belongs to the genus *Blastophaga*, one of the gallwasp family.

This insect carries the pollen of the staminate flowers to the stigma of the pistillate ones, of course unintentionally, because its real object in entering the fig is a very different one.

Before pointing out the cause of failure in the introduction of this insect, it will be necessary to discuss some generalities in the biology of the gallwasps, so that the nature of the mistakes may be discovered and in further experiments avoided.

All gallwasps known, produce but one generation a year; this statement refers only to gallwasps, not to gallflies (*Cecidomyia*), which develop several, and Aphidian gallbuilders (*Eriosoma*, *Pemphigus*), etc., which develop many generations.

The gallwasp begins its career as a maggot, in spring. This maggot comes from an egg laid by a wasp, hybernated and also impregnated for considerable time. The wasp is at all times ready to lay the egg, and the moment of laying it depends entirely on the development of those vegetable organs on which the gall, the future habitation of the maggot, has to be formed.

The gall, or the swelling which is formed by the sting of the wasp inserting the egg, is of different shapes and sizes, according to the species of the insect; and as the celebrated entomologist, Baron von Osten-Sacken, has observed, in some North American species, differs even in regard to the two sexes.

How the infinitesimal quantity of liquid inserted by the sting of the mother wasp is able to produce such a variety of forms, distinct according to species, and always the same in the same species, is one of the mysteries connected with the biology of this interesting group of insects.

We abstain here from all speculation about cause and effect, and state only the facts of practical importance.

The life of the gallwasp, in its maggot stage, is not a long one. Those of the Northern Temperate zone are, without exception, found in their winged state at the end of August. The tropical species are little studied, and the Southern hemisphere, although abounding in gallbuilders of other classes, exhibits but the few Australian gallwasps described by Schrader.

It is another curious instance in the life of the gallwasps that although winged, and otherwise perfectly qualified for out-door life, it does not quit its habitation, but remains inside the gall without food, and the monothalamous species, viz., *Cynips quercus folii L.*, even without mate.

Another element of mystery that enters the biology of these little beings is their propagation. We know the females of every species, but there is a considerable number whose males never have been found. The males of some species are wingless. Now the reverse, *i. e.*, winged males having wingless females, is of frequent occurrence in the insect kingdom, but a wingless male belonging to a winged female is of rather rare occurrence, and may under these circumstances be explained by the necessity of planting the eggs for the next generation on the exact spot and under the conditions which are indispensable for their development. A great many tropical relations of the *Blastophaga* possess such imperfect males. It is possible also that males exist even more imperfect than the wingless ones, never developing beyond the maggot form, although sexually perfect. We notice analogous phenomena in the history of the life of parasitical wasps, viz., *Microgaster* and other relations of *Ichneumon* and *Ophion*, etc., amongst whom in many cases males have not been observed. But there still remains the mystery of the monothalamous females, like *Cynips Agamos*, because it is difficult to imagine how the single inhabitant of a gall can be impregnated, and I incline very much to the theory that these instances of mateless females rest on imperfect observations. In these instances of mateless females the males exist perhaps even in the winged form of their mates but are very short lived and disappear before autumn, several months before we find the impregnated females crawling on the bark of oak trees and waiting for the budding of leaves into which to insert their offspring.

But this has little to do with our present object. We want to state—

I. That like the rest of the gallwasps the fig insects, *Blastophaga*, exist in their perfect state early in the fall;

II. That like the rest of the gallwasps it hybernates in the gall without food;

III. That this condition extends up to the time when the fig tree produces its buttons.

Now arises a complication. The *Blastophaga* partakes of the peculiarity of many organisms. It is capable of a limited degree of adaptation to abnormal circumstances under whose influences it develops an abnormal generation.

Caprification, practiced from time immemorial, rests on this peculiarity.

Let us now trace the history of the *Blastophaga* from the moment when the young brood in spring is planted by the impregnated female.

The female dies like a majority of insects does after this biological process, and old Theophrastus, who observed 3000 years ago the *Blastophaga*, states this phenomenon in his matter-of-fact style by saying: "They disappear from the fig, some leaving a wing, others a leg inside as a proof of their former presence."

The little insects die, but their offspring survives, and if left alone, develops about August, but remains in the wild fig in which it hybernates and shares its fate to repeat the cyclus of its own biology by entering, in spring, a budding wild fig and implanting into it its progeny.

That is the regular course, but if interfered with by caprification, viz., by the wild fig containing its offspring, the *Blastophaga* in its maggot state being removed from the tree and hung up on the domesticated fig, then, an abnormal development will succeed the interruption of the vegetable process on which the existence of the insect depended.

We ought to have stated before that the gallwasp maggot depends as much on the gall which it inhabits as the gall itself depends on the plant on which it grows. If the gall is separated from the plant, the gall begins to shrink in most instances. Its inhabitant, the maggot of the gallwasp, then dies, and this circumstance is the most serious obstacle in studying the life history of these insects as any practical entomologist has experienced; but there are a few species which, under such circumstances when already developed to a certain degree, are able to hasten their transformations in the same way as caterpillars when suffering from want of food, although not yet fully prepared, will undergo their transformation and yield a moth somewhat depauperated and generally sexually immature.

The same phenomenon takes place in regard to *Blastophaga* when used for caprification; the withering fruit of the wild fig tree, inhabited by the *Blastophaga* maggot, accelerates its transformation, the wasp emerges from the wild fig, and, following its instinct, enters the domesticated variety, where, by its movements, it carries the pollen to the pistils and fecundates the seeds. It serves to propagate the plant, but is not able to propagate its own species. We will leave here all speculation as to the causes of such a series of interesting biological phenomena, and will draw only our conclusions in regard to practical horticulture.

I. The generation accelerated for the purpose of caprification perishes, *i. e.*, it is useful for caprification but not for the reproduction of its own species.

II. If we do not want to go to the trouble of introducing the *Blastophaga* every year, we have to introduce the normal generation and colonize it on the wild fig, from which we may then draw our annual supply.

III. The normal generation can only be introduced during its hybernation, because that is the only time when the gall being ripe serves merely for protection, not for food.

As to the introduction of *Blastophaga*, we need not go to Smyrna. Lower California and New Mexico possess at least one species of *Blastophaga*. The keeping of the introduced insect during the first winter requires merely a cool place and some simple precaution to prevent escape, so that the insect may not get to wrong places, where it would perish without having left an offspring for the next year. H. H. BEHR.

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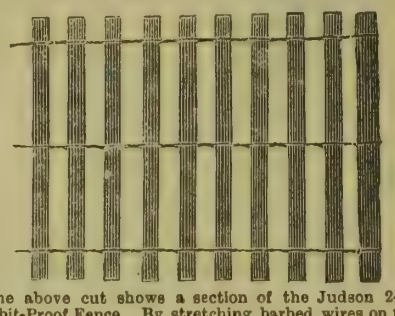
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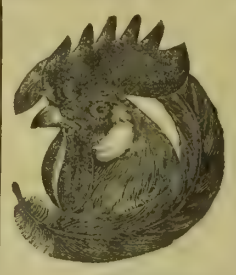
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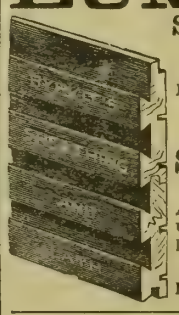
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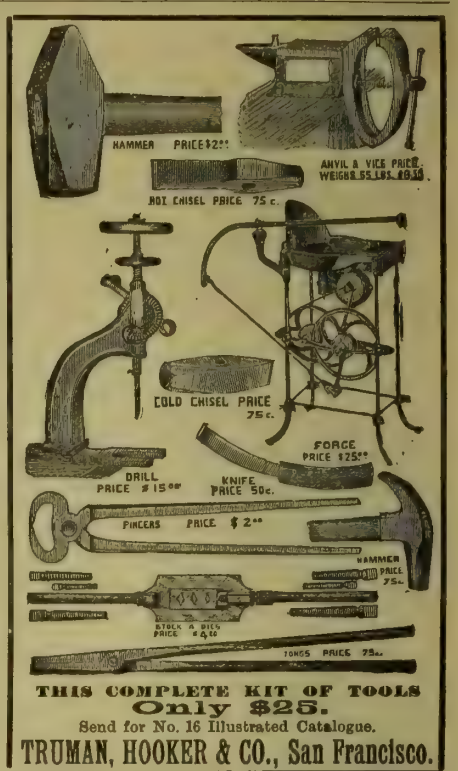


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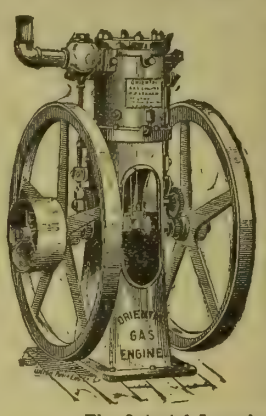
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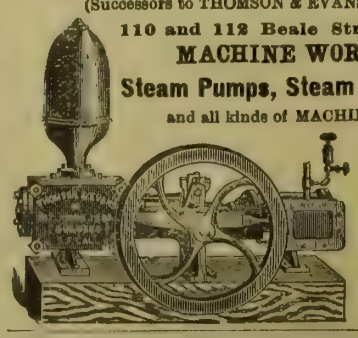
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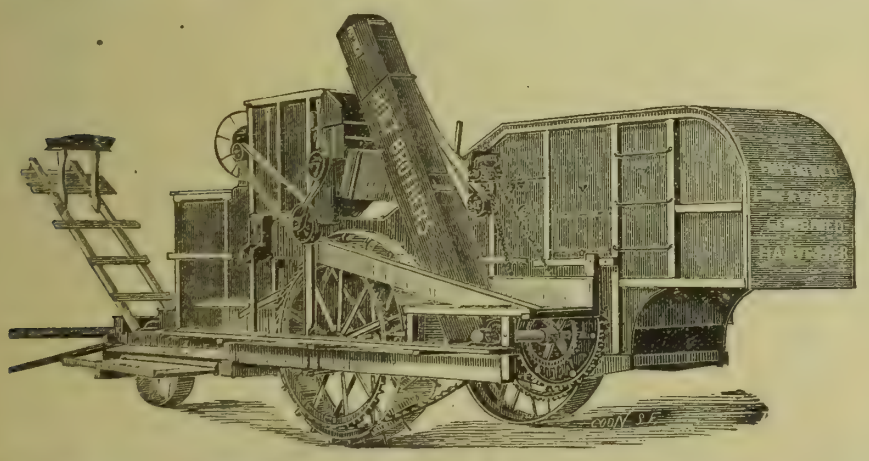
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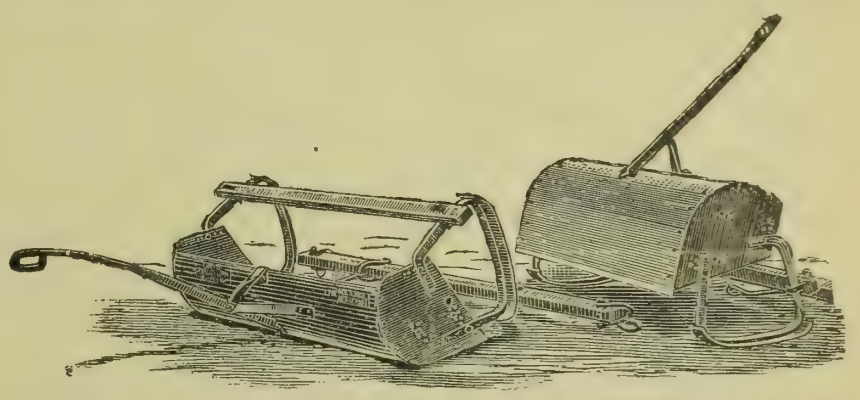
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MR. JAS. PORTEOUS, Fresno, Cal.—DEAR SIR: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,
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What We Guarantee Carbolineum Avenarius to Do:
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The Nicaragua Canal.

The entire country is becoming more and more awake to the great importance of the Nicaragua Canal, and to the fact that it is absolutely necessary to our commercial progress that it should become essentially a Government work. It would be most suicidal to allow any other country to secure a pecuniary control over it, and scarcely less so to allow its control to pass into the hands of the money kings of even our own country.

The canal, instead of being a competitor with our overland railroads, would, if rightly managed and in the interest of the people, be beneficial to them in building up the country and creating a vast business for them, which it could not itself conduct—and indeed, which it would not need.

Recent experience has shown that waterways, instead of being competitors to railroads, are a benefit to them. Warner Miller, the President of the Nicaragua Canal Company, in a recent address, while speaking of the benefits to arise from the canal, said its construction might easily double the output of the Pacific Coast States in agricultural productions and find a ready and profitable market for them in Europe, because the cost of transportation would be reduced by the reduction in distance. Furthermore, it had been estimated that the increased value of the timber now standing around Puget Sound would pay for the construction of the canal. The great forests in the central part of the country are becoming rapidly depleted and new timber fields are best found on the Pacific Coast. It goes without saying that the building of the canal will rapidly increase the population of all the Pacific States. Their soil and climate are the best in the world, and the Coast is capable of supporting a population of 100,000,000 if all the lands are taken up and cultivated.

Senator Dolph gives three excellent reasons why the Government should extend financial aid to the Nicaragua Canal Company. First, because he desired to have the canal speedily constructed; second, because he desired that when constructed it should be under the control of the United States, and third, because he desired the canal to be capitalized only at its actual cost.

In the event of war between naval powers, the control of the canal would be so decided an advantage that no one can predict what might happen. But if the United States furnishes the money to build it, there will be no question as to the right of the American Government to control it. The $100,000,000 the canal will cost is hardly a matter for consideration in view of the importance attached to the possession of the canal.

The simple and easy way to construct the canal is for the United States Government to endorse the canal company's bonds under conditions similar to those provided in the bill introduced into the last Congress, which placed, at least, the temporary management of the canal, especially the rates of toll to be collected, in the hands of the General Government. That bill furthermore gives to the Government the power to purchase and hold perpetually in its own right a majority of the stock of said company, in the proportion of 70 to 100 shares, if it shall decide it may be for the public interest that such purchase be made.

Under that bill the nation will thus acquire the right of control whenever it sees fit to assert its right. We do not want foreign capitalists to build it, nor transcontinental railroad men. The canal should be maintained as a competing route between the two American coasts, with tolls as light as the nature of the service will permit. The Nicaragua Canal is practically the only competitor to a transcontinental railroad. The Canadian road is always for sale to the highest bidder and consequently no competitor at all. The key to the value of the Nicaragua Canal as a competing route lies in the power to fix the rate of toll. The canal will always be open to vessels of all nations, but an excessive rate of toll would impair its usefulness as a competing route.

SIDE-WHEEL STEAMERS DISAPPEARING. It is probable that the magnificent side-wheel passenger vessels plying on the Long Island Sound will be succeeded by screw boats. One of the lines is having two propellers built, and if they prove successful it is believed that no more side-wheelers will be erected for this service.

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W. H. Johnson, Prominent Merchant, Cedar Rapids, [illegible] consider [Quinn's Ointment the greatest [illegible] the world. Has given great satisfaction.' [illegible], Splints, Spavins, Windpuffs, Bunches, use it." [illegible], 25 cents, silver or stamps. Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y

FIRST INSTALLATION AT THE WORLD'S FAIR.—To the Department of Horticulture belongs the distinction of installing the first exhibit for the World's Columbian Exposition. P. S. Peterson, a nurseryman of Rose Hill, Chicago, has during the past week planted six trees on the grounds near the horticultural building as a permanent exhibit, and as a practical illustration of the successful methods of transplanting large ornamental trees. They are an elm, 50 feet high and 2 feet in diameter, commemorative of General Sherman, brought from the woods in 1876, then 50 years old, and planted on the nursery grounds at Rose Hill; a hackberry, 40 feet high and 2 feet in diameter, commemorative of General Grant, also transplanted from the woods in 1876; a linden, 40 feet high and 18 inches bole; a willow 30 feet high and 30 feet spread; a sugar maple, 40 feet high and 10-foot stem; an ash, 35 feet high and 14-foot stem. It required a force of 22 men and 12 horses to transplant the trees, and the cost of the work was about $700.

CYPRESS OIL FOR WHOOPING COUGH.—A correspondent of the St. Louis *Medical Journal* recommends cypress oil, distilled from the needles of the cypress tree (*cupressus sempervirens*), for whooping cough. Drop a little oil on the collar or pillow of the child at night, so that the fumes may be gently inhaled. The writer sums up his experience as follows: Cypress oil is the most promptly successful remedy for whooping cough; it is perfectly free from the disadvantages of many of the other known remedies, such as Belladonna, various balsams, etc. It is very easy of application, and has a strong, but not disagreeable, odor, to which the children do not object, and which after a short time they even enjoy.

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It comes recommended by the most formidable list of authorities, both public and private, civil and military: and since its introduction on this coast has gained public favor and confidence rapidly. An important point in favor of Carbolineum is also that it removes the necessity for any inconvenient and costly appliances for subjecting the wood under pressure to the action of the composition, and, being very thin and liquid, readily soaks into the wood. Insects avoid wood treated with Carbolineum, and it is also a good remedy against louse, fungus, and therefore to be recommended for buildings in damp situations and humid climates. Lastly, as it costs less than other liquids in its application, it has thus the additional advantage of economy, as well as that of superior efficiency as a preservative, besides giving the wood a nice stain, showing the grain of wood favorably.

Any orders and correspondence will be promptly attended to by the general agents, Messrs. Muecke & Co., 319 California St., S. F.

The Aspinwall Potato Planter.

In the whole science of farming, invention has produced no more radical or beneficial change than in the method of planting potatoes. The old way was for the farmer to load himself down with a heavy bag of seed potatoes and amble laboriously through the furrowed field. That way is being supplanted by the machine method. The Aspinwall Manufacturing Company of Three Rivers, Mich., has put a machine on the market that has well been designated as one of the triumphs of modern invention. This potato planter does the entire work of marking, furrowing, dropping and covering at a single operation, and at the rate of from five to eight acres a day. The crop is much superior to that planted by hand, and the cost of raising potatoes is greatly reduced.

THE FIRST SUSPENSION BRIDGE in England was erected in 1741 across the Tees at Middleton. It was 70 feet span, and was erected for the use of miners. It consisted of two common chains stretched across the river and fixed into the rock at each side.

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To read long advertisements about things you do not want. We will only speak of one or two items which nearly everybody uses every day and we think you will appreciate the offer.

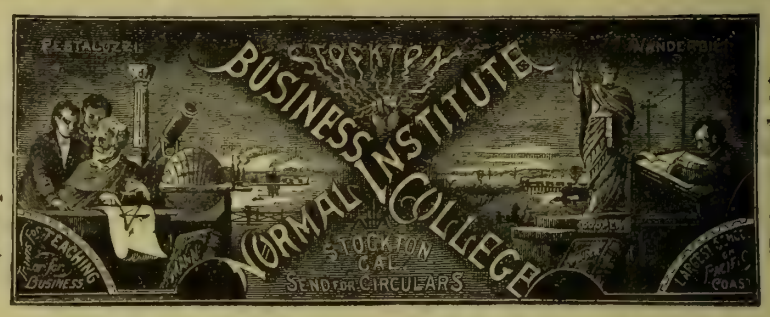
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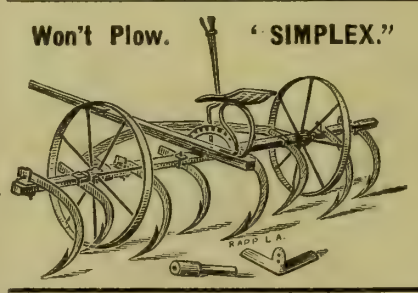


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PRICE ***Single Wheel Cultivator,*** with attachments, ***$6.*** ***Combined Single and Double Wheel Cultivator,*** with attachment, ***$8.*** ***Seed Drill,*** no cultivating attachment, ***$8.*** All 3 machines combined, ***$12.*** ***Sold by Dealers.*** Ask for them. Catalogues of the best ***seeds, tools,*** and the ***Agricultural Epitomist,*** the best farm paper, ***free.*** Send to-day. It will pay. Address,
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THE MacLEOD CULTIVATOR.
NEW MODEL.
For Orchard, Field and Vineyard.

D. EDSON SMITH writes: "A strong, light, easy draught, easily handled, adjustable cultivator and weed cutter—meets my idea of perfection."

Saves $10 cost, 200 pounds weight, one horse draught, half man's labor. 5 foot extends to 6, 7 or 8 feet. Send for testimonials and prices.

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SEEDSMEN and dealers in Nursery Stock, Fertilizers, Implements, Gas Engines, Etc.
245 S. MAIN STREET, LOS ANGELES, CAL.

Protect Your Trees from Sunburn, Borers, Rabbits, Etc., by Using

THE PACIFIC TREE PROTECTOR



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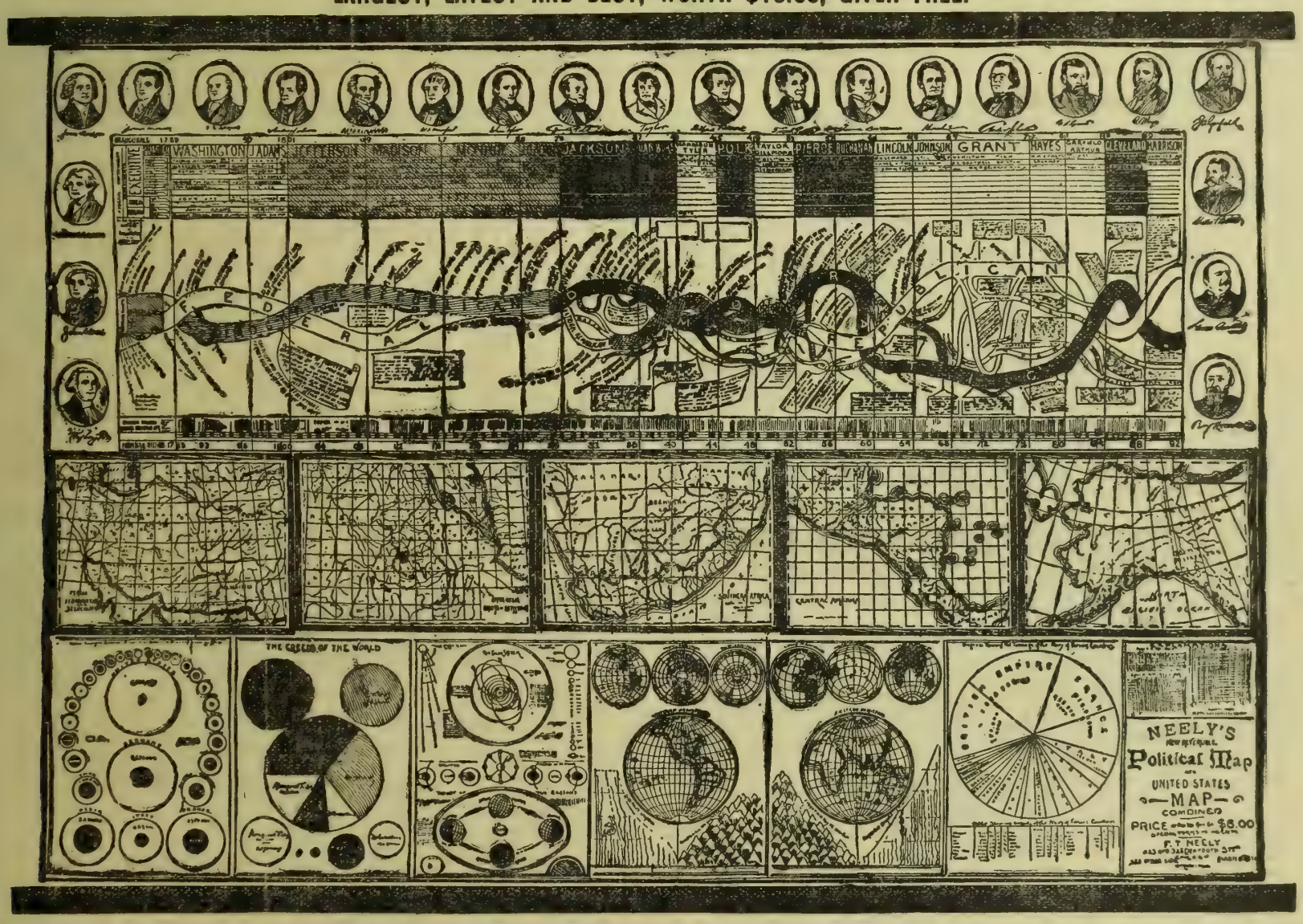
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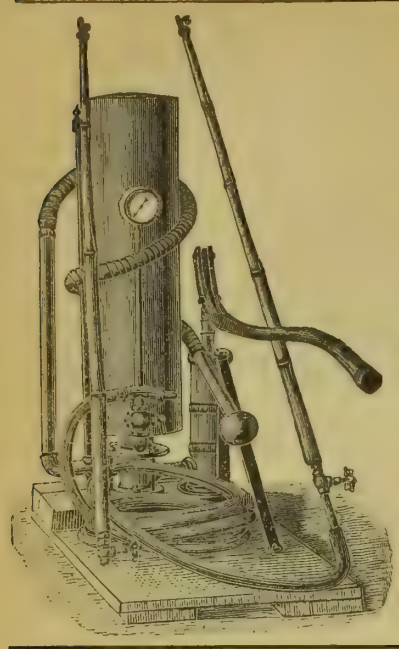
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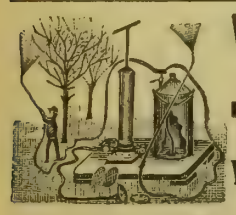
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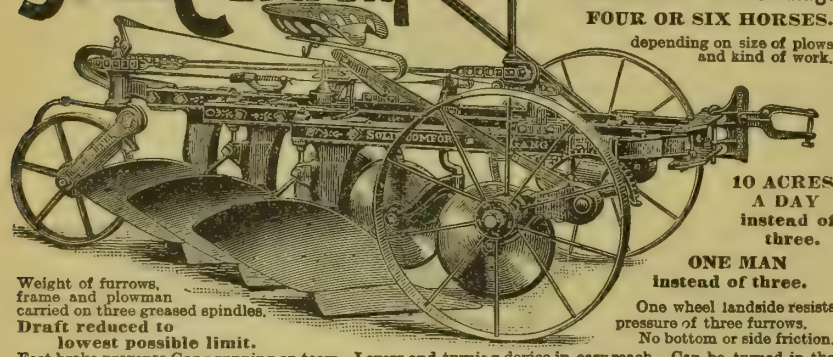
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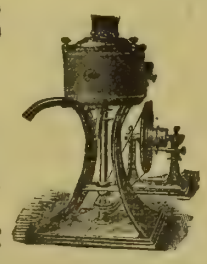


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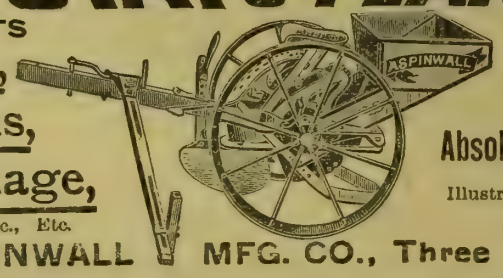
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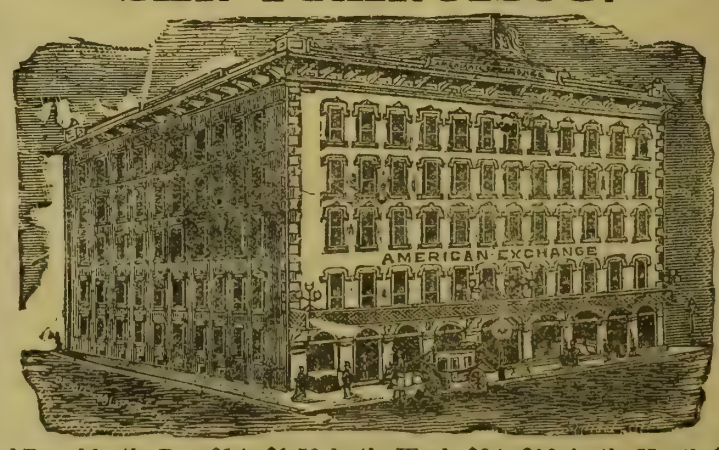
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The Southern Citrus Fair.

[Written for the RURAL PRESS by CLARA S. BROWN.]

The third annual Citrus Fair of Southern California impresses an observer of them all as the best one of the series. It avoids both the monotonous arrangement of the fruit in the first exhibit and the ornate questionably artistic designs that characterized the second fair and diverted attention from the main object of such shows — quality of fruit.

The decorations of the pavilion, which have been described in the RURAL PRESS, are more elaborate and appropriate than ever before, while the displays from localities are in designs not only beautiful but calculated to exhibit the orange and lemon to the best advantage. Eastern visitors confess that the result exceeds even the reports which have gone abroad regarding the unique exhibitions that belong to California alone.

There are more counties represented than last year, and Riverside has not absented herself as she did at that time. All demands for space had to be curtailed in order to make room for the 700 entries from over twenty localities. Even a brief report of everything that is in the building would take up far more space than a weekly publication has available; so I hope to be forgiven if, through inadvertency or mistaken judgment, any of my omissions are unfair.

SANTA BARBARA.

Entering the main room of the pavilion, one's view of the interior is intercepted by a semicircular row of tropical trees, over which is an arch bearing the letters of Santa Barbara.

The trees are from the nursery of John Spence, a rare and varied collection. Beyond them, in a conspicuous position, is a long table covered with a wonderful variety of tropical and semitropical fruits produced in Santa Barbara county, nearly all without irrigation. Citrus fruits do not predominate in this exhibit, but the wisdom of admitting it is manifest by the crowds of interested people surrounding the table. Among the curiosities are the seeds of *chamærops excelsor*, in large dark-blue clusters; Samoa fruit, or *lecheum;* Chinese lemons, and the alligator pear of Brazil, the latter shown by E. Sawyer of Montecito.

J. S. Bell of Santa Barbara exhibits large clusters of dates, which delight the eyes of tourists. Charles Hales of Goleta has Mediterranean sweet and Washington navel oranges and a basket of yellow New York pippins. The Misses Hixon of Montecito show olives dried in the Italian style. Olives in process of pickling are from the Rancho de los Olivos. Ellwood Cooper's famous olive oil is decked with blue ribbon. C. F. Eaton of Montecito displays a row of large palm trees in boxes of his design that will be taken to the World's Fair; also two bunches of bananas, Eureka lemons, French kid-glove mandarin oranges, tree tomatoes and *passiflora edulis* fruit. Joseph Sexton has pampas plumes, accompanied by a set of illustrations of the pampas industry, of which he claims to be the founder in this State; also green dates, Japanese persimmons, loquats, lemon guavas, cherimoyas or custard apples and improved soft-shell walnuts.

Kinton Stevens shows a curiosity to many visitors in the shape of a pineapple plant bearing fruit, also cherimoyas.

"Santa Barbara Sweets" is the brand of jellies and marmalades made at Montecito. In the orange marmalade is a mixture of a small and bitter variety called tne West India marmalade orange. It is said that this is used in the celebrated Dundee marmalade to give the bitter flavor thought to be essential, and that the Santa Barbara compound cannot be detected from the renowned Scotch brand. It is proposed to cultivate the West India orange for marmalade purposes.

C. F. Eaton and Goodrich & Johnston show orange wine; J. S. Johnston, orange vinegar. Eureka lemons are shown from trees only two years old. A lemon orchard of 300 acres has lately been planted on the Los Fuentes ranch, and an immense drying house has been built of stone, with tile roof, in the same style as the proposed California building at the World's Fair. The Bergamotte or Chinese lemon has an aromatic rind which is used in the manufacture of perfume in Italy, and as the experiments with it at Santa Barbara have been successful, it is hoped a new industry may be carried on there. Villafranca and Lisbon lemons are also shown and limes of several varieties. The above can give but a faint idea of the 300 exhibits entered by this county.

SAN BERNARDINO.

San Bernardino county has a large amount of space on the right of the hall and wins many premiums. Riverside's design of a gigantic lemon resting on a pedestal of oranges and lemons, which in turn rise from a large table of fruit, is a striking one. H. A. Puls has a generous exhibit of Mediterranean Sweet, seedling oranges, Australian and Washington Navels, and lemons. G. W. Garcelon makes a big showing of sweet rind, Lisbon and Eureka lemons. George Duncan and S. LaRue display St. Michael, Australian and Washington Navel, Ruby blood, Mediterranean Sweet, seedling, Majorca and Sanford oranges, also lemons.

Over this table is a blue silk banner inscribed thus: "Riverside, 1st Prem. Locality, 1st Prem. Lemons, 2d Prem. Display." Another wide table under the gallery belongs to Riverside, and on it J. S. Castleman shows 19 varieties of budded oranges, besides Washington Navels and seedlings and budded lemons.

W. H. Backus has a table upstairs all to himself, where he makes a beautiful display of Washington Navel oranges and blue-ribbon raisins, some of the latter being nearly as large as damsons.

Redlands comes next to Riverside with a structure representing the Union Depot of the C. S. R. R. The evergreen roof has cornices of oranges, and is supported by columns covered with oranges and lemons. The ceiling is of yellow cloth, and decorations of flowers and clustering olives have a pleasing effect. On the table underneath the building are great piles of choice citrus fruit rising from an evergreen ground. The exhibitors are F. P. Morrison, E. B. Cutts, C. H. Lathrop, Mr. Pears, J. E. Diffenbacher, Jacob & Waite, J. LeRoy Brown, Frank H. Edwards, John W. Roberts, J. D. Love, T. E. N. Eaton, E. J. Waite, C. E. Spencer, Geo. E. Otis, Mr. Gay, G. H. Lea and I. Mitchell. Among the varieties shown are Navel, Mediterranean Sweet, seedling, Mandarin, Ruby blood, Hall's Tardiff, St. Michael and other budded oranges, budded lemons and raisins. The Navel oranges are especially fine, and won a number of premiums among many competitors. Redlands has an annex to her exhibit under the gallery, with a booth of evergreen and oranges. Mr. I. N. Hoag is in charge.

Ontario has two large tables downstairs and one in the gallery, and displays a choice lot of fruit. A companion lemon to that of Riverside, but differently mounted, adorns one of the tables, and around it are placed about 75 boxes of lemons, comprising the Genoa, Lisbon, Eureka and Villafranca varieties. Washington and Australian navel, Mediterranean sweet, Malta blood, St. Michaels, Rio and seedling oranges complete the exhibit, which is made by E. M. Hatch, I. C. Wood, W. Friend, Mrs. A. Oakley, Mrs. B. Fisher and Chas. Buffington.

The Highlands table has a representation of the "kite-shaped track" of the Santa Fe railway company, worked out in lemons on a background of oranges. The stations are all marked out and the new route is studied by many people. Here are Mediterranean Sweet, Washington navel and seedling oranges, Lisbon and sweet lemons, pomelos and citrons, shown by W. H. Randall, W. R. Ingham, W. W. Godbold and E. F. Pierce.

"Rialto, Aged 3," does well for a competitor of such tender years, sending a lot of budded oranges, almonds, raisins, peanuts and walnuts. Her space was cramped or a still larger display could easily have been made. The growers represented are Perley King, A. A. Cox, A. W. Bemis, I. Van Nest, J. W. Tibbet and G. N. Turner.

Colton covers herself with credit by an exhibit of about 90 boxes of fruit, arranged in terrace form to show the lay of the land on which her oranges are produced, most of them having come from Colton Terrace. At the top, on a mound of oranges, is a colt in minature, further illustrating the name of the locality. A pagoda at one end of the table is covered with navel oranges. Other varieties shown are the paper-rind St. Michael, Malta blood, Konah, Seedling, Mediterranean Sweet, St. Michael and Australian navel oranges, grapes, fruit and raisins. The exhibitors are C. H. Hubbard, E. F. Van Luven, Jas. Barnhill, Samuel B. Fox, Wm. C. Fuller and Melville Archibald.

A beautiful exhibit of marble and onyx from the quarries near Colton is made by W. L. Hubbard. The specimens are divers in coloring and kind, but all of the first quality, and the supply is immense, coming from a mountain 500 feet high and four miles in circumference.

Colton takes pride in the fact that the output of her cannery last year was 1,500,000 cans.

SAN DIEGO.

San Diego county this year has a good location on the ground floor and has made the most of it. At the left of the stage stands a fort covered with oranges and lemons, which is one of the principal designs in the pavilion. Five tables are so well covered with exhibits that they go a long way to convince skeptics that there is something besides "bay and climate" to induce people to settle in that region. One man, E. P. Fowler, of National City, entered 50 boxes of oranges, which were used on the fort, also Washington Navel and Malta Blood oranges. Other exhibitors are F. A. Salmon of Pala, Mediterranean Sweet and Seedling oranges; Agua Tibia Ranch, limes; H. M. Higgins, Bonnie Brae lemons; Geo. Hanna, Sicily lemons; Frank Hyatt, National City, limes and Mediterranean Sweet oranges; W. O. Bowens, National City, limes; Sweetwater Fruit Co., Washington Navel oranges; Wm. D. Wooldredge, Escondido, same; T. J. Swayne, same; S. M. Marshall, El Cajon, raisins and Eureka lemons from trees three years old in orchard, pineapple and Hart's Tardiff oranges and Villafranca lemons. The La Vida Ranch, at Helix, shows a plateful of lemons picked April 15, 1891, in a fair state of preservation. Frank A. Kimball has a fine lot of olive oil and pickled olives. The latter are uncommonly large and of even color, as fine in flavor as in appearance—a fact I learned by the best of methods. Mrs. M. L. Webb of San Diego, wins first premium for her orange marmalade, and J. H. Ferry of El Cajon carries off the honors in dried figs, a premium of which San Diegans are especially proud. The L. E. Allen Co. shows guava jelly and jam, orange marmalade and preserved figs; D. P. Hale, Escondido, Tangerines and Villafranca lemons. Four varieties of the famous Julian apples were exhibited by J. E. Hamilton. A. F. Dimock, National City, shows Parson Brown oranges. The Orcutt Seed Co., a choice collection of cacti; J. S. Harbison, Dancy Tangerine oranges; Keen and Son, Tangerines, and Clark Bros., of Helix, Blood oranges.

VENTURA.

Ventura county has space in the left gallery. Along the center of the table is a row of large tropical plants from the nursery of Mrs. Theodosia B. Shepperd, who also exhibits a variety of cacti. There is a large display of Eureka and Lisbon lemons, noble in size and fine and solid to the touch, grown by N. W. Blanchard of Santa Paula. He also exhibits a lot of Washington Navel and Seedling oranges. There is a good showing of raisins from Sespe. Mrs. Robt. Lyon, Ventura, shows Wolfskill Seedling oranges and Sicily lemons. Del Valle Bros., of Camulos, exhibit 100 pounds of extra choice almonds, Navel and Seedling oranges. C. H. Sheldon, Ventura, Navels, Mediterranean Sweet and Seedling oranges; W. I. Reice, Ventura, Washington Navel and Parson Brown oranges; E. S. Thacher, Nordhoff, Valencia Late oranges; Knox & Burke, Ojai Valley, Ruby Blood oranges, attracting much attention with their crimson rinds and still more crimson pulp.

[Mention of the displays of other counties and the official list of premiums awarded will appear in next week's RURAL.—Ed. Press.]

Stump Pulling Extraordinary.

A correspondent of the Napa *Register* in describing what is being done on Dr. M. B. Pond's Monta Verda farm west of Napa City says: The clearing of land and the planting out of more vines and trees is the work now on hand on Green Mountain. To facilitate matters the Doctor some months ago bought one of Geo. Harvey's California Stump Pullers, and now the pulling of stumps, green or dry, large or small, topped or untopped, is but play. A system of English 5-8 inch plow steel cables with draught hooks, chains, and a sweep that guarantees a pressure of 72 tons for every horse attached to it, with three men to operate the outfit, do the business. In 18 minutes, recently, 18 stumps were pulled, every root, however long, coming clear out of the ground with each stump. With one setting of the machine five acres can be cleared. The timber, in stove wood and cord wood lengths, with stumps and roots, finds a ready market in town—a haul of ten miles—and the proceeds more than pay the expense of clearing and the preparing of the soil for trees and vines.

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45 sold in '88
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6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92

A Steel Windmill and Steel Tower every 3 minutes. ☞ These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermotor. Where one goes others follow, and we "take the country."

Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilting Tower?

1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vaneless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

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CHARLES WOOD, Secretary. I. C. STEELE, President.

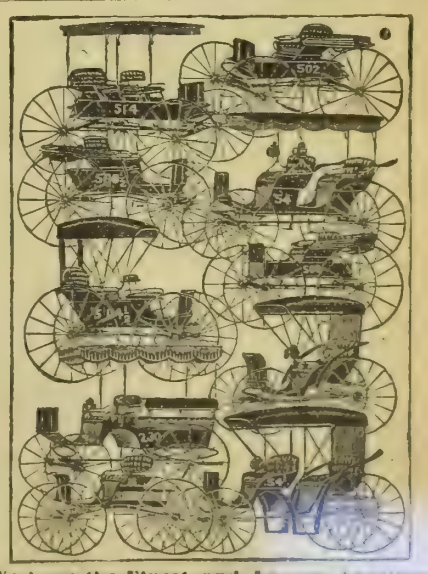
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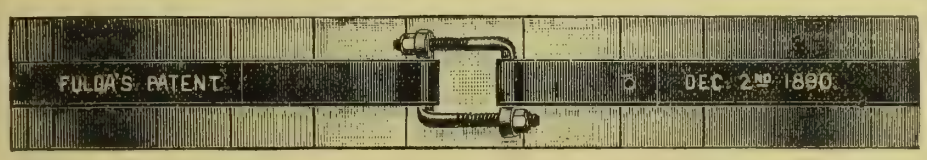
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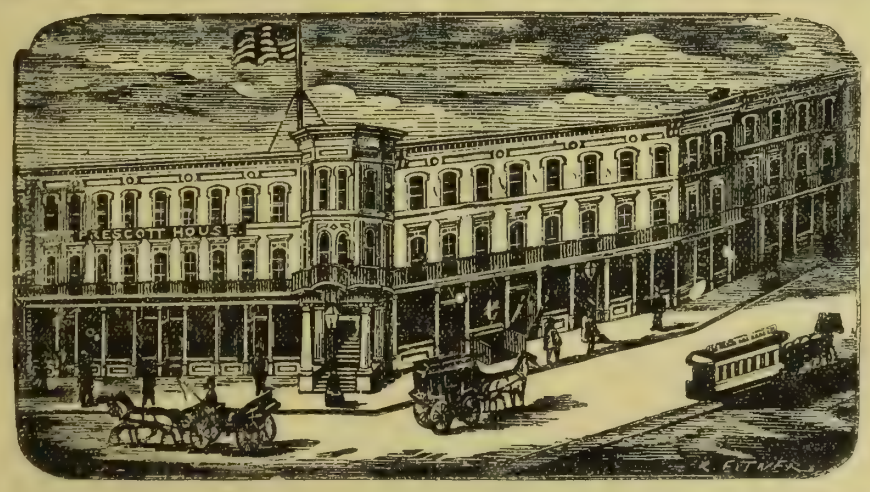
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 9, 1892.

Trade in farm products continues slow. Warm growing weather has caused garden truck and berry vines to make rapid growth. The market promises to be well supplied and at an early day, with both spring vegetables and strawberries. Hot weather in the interior causes fears that grain crops on adobe soil have been considerably injured.

British Grain Market.

LONDON, March 7.—The *Mark Lane Express* says: English Wheats are steady; foreign made, a fractional advance; California is 6d dearer and American Red Winter 3d dearer. Flour is weak, provincial markets quoting American 6d lower. Barley firm, rising 9d. Corn is up 3d; new American on passage is quoted at 20s 9d, and American Oats at 18s 6d. At to-day's market American Flour was 9d cheaper.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June.	July.
Thursday	8s03 d	8s01 d	8s02 d	7s11½d	.....
Friday	8s03½d	8s01½d	8s01 d	7s11 d	.....
Saturday	8s03½d	8s00 d	8s00 d	7s10½d	7s11½d
Monday	8s05 d	8s01½d	7s11½d	8s01 d	7s10 d
Tuesday	.....	8s01 d	7s10½d	7s07½d	7s10½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	40s0d	40s0d	40s d	Improving.
Friday	40s3d	40s3d	40s6d	Firm.—Frost.
Saturday	40s3d	40s3d	40s6d	Quiet.
Monday	39s9d	39s6d	40s	Steady.—Very cold.
Tuesday	39s6d	39s3d	39s6d	Firm.

To-day's cablegram is as follows:

LIVERPOOL, March 9.—Wheat quiet; California spot lots, 8s 1d; off coast, 39s 6d; just shipped, 39s 3d; nearly due, 39s 6d; cargoes off coast, nothing offering; on passage, slightly better; Mark Lane Wheat, quiet; weather in England, milder

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	172⅝	173¼	170	166⅝	164½
Friday	172½	173⅜	170⅜	167	165
Saturday	170½	171⅝	168⅜	165⅝	163½
Monday	167⅞	168⅜	165½	163⅜	161½
Tuesday	168⅜	168⅝	166	163¼	161⅝

The following is to-day's telegram:

NEW YORK, March 9.—Wheat, $1 01⅜ for March, $1 02⅛ for April, $1 00⅜ for May, 97⅞c for June and 97⅛c for July.

CHICAGO, March 9.—Wheat, 89½c for May.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	169½	169	150	149	146	145
Friday	171½	169½	.	....	146½	146
Saturday	168½	168½	....	....	145	145
Monday	168½	167½	....	....	145½	145
Tuesday	168½	168	....	....	144½	144½

The following are to-day's recorded sales on Call:

Informal Session.—Buyer season—200 tons, $1.69½; 100, $1.69¼; 100, $1.69⅜; 300, $1.69½; 1200, $1.70. Seller 1892—200 tons, $1.46¼. August—200 tons, $1.47½ per ctl. Regular session.—Buyer season—500 tons, $1.69¼; 100, $1.69⅜; 200, $1.69½; 100, $1.69¼; 100, $1.69 per ctl. Afternoon session.—Buyer season—100 tons, $1.69. Buyer August—100, $1.50 per ctl.

BARLEY.

	Buyer Season. H.	L.	*Buyer Season. H.	L.	Seller 1892 H.	L.
Thursday	102¼	101½	....	....	....	....
Friday	102½	101½	....	....	....	....
Saturday	101	101	....	....	....	....
Monday	102½	102	....	....	....	....
Tuesday	101½	101½	88	88	....	....

*New crop.

The following are to-day's recorded sales on Call:

Regular Session—Buyer season—800 tons, $1 01½; 600, $1 01⅝.

Seller 1892, new—100 tons, 89c; 100, 89½c ℔ ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

NEW YORK, March 6.—Unpeeled peaches are well out of first hands, and are quoted at 6½@7½c, the lower price for coarse.

Prices for prunes do not improve, but the demand is of a hopeful and stock-reducing form; 100 to 120 5¾c; four sizes—bags, 7@7¾c; boxes, 8@8½c. Large sizes extremely scarce. Both local and outside trade have deserted the raisin market. Buyers are fairly supplied and the bad condition of the roads interfere with many out-of-town orders. The top rate for best three-crown sacks is 5c. Apricots are down to prices that should move them faster; bags, 6½@7c; boxes, 7½@8c; fancy, 8½@9c. This fruit was never before in such quantity that permitted cheap peaches and prime sliced evaporated apples, the latter at 5@5½c, to make competitions.

CHICAGO, March 8.—Dried Fruits are quite steady all around. The trade in Raisins, however, has become quiet. Prunes are selling well, and since the larger sizes have been pretty well closed out, buyers are obliged to take to those not usually considered so desirable. There is quoted a good healthy market for Peaches, while Apricots are quiet, but the supply of these is rather small.

Eastern Hop Market.

NEW YORK, March 6.—Hops had another spiritless week; holders were firm for fine export grades at 25c; brewers piece out their wants from lower-priced '91s and best '90s; the latter are quoted at 17@18c; the feeling is listless in options, closing at 24c for May California.

Miscellaneous.

NEW YORK, March 6.—Honey—Easy; 7@7¼c for light amber.

Lima beans—Spot prime, $1.65; to arrive, $1.45 for wholesale parcels.

Eastern Wool Markets.

NEW YORK, March 6.—With a general disposition on the part of sellers to meet manufacturers, the large volumes of wool sold at the seaboards, and with the heavy offerings and numerous urgent orders to realize upon commission lots, the market has had no chance to harden. Manufacturers at current prices for goods were decidedly favored in the cost for material. The redeeming feature of the situation is that many remnant blocks below standard quality have gone out of sight, while general stocks are favorably relieved for the new clip and its attendant more attractive staples. The sales in New York were 622,000 pounds, half of which was foreign. The sales at Boston were 1 859,403 domestic. Philadelphia reports a weak market with the movement proportionate to the supply.

NEW YORK, March 4.—*Bradstreet's* says: The decline in wool values still continues. A number of [illegible] and each, no doubt, has had some [illegible] the market. As the falling off in price includes not only domestic but foreign wools, the predominating influence which has caused this depression must be found to exist abroad as well as in the United States. The large increase in the production of wool and particularly of fine fleece all over the world together with general depression in trade have produced accumulations in stocks, which could not be worked off at former prices before arrival of new wools. Sales of Ohio and Michigan wools have been fairly large, but dealers have been forced to lower the prices from 1c to 2c ℔ in order to dispose of their stock. Concessions have been made in both Texas and California wools and manufacturers have bought more freely. There is active movement in Territories, but prices are being made to suit buyers. Pulled wools are not firm, especially choice lots. The supply is so small that holders are able to maintain quotations. Australian wools are accumulating in American and European markets, sales being made as low as 61c for scoured ℔, and dealers cannot obtain over 75c for wool which sold a year ago for 82c. The decline in price of these wools is even greater than in domestic fleeces. Carpet wools are dull and quotations are unchanged.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 8 days ending March 9, '92, were as follows:

Flour, qr. sks	155,465	Bran, sks	14,540
Wheat, ctls	369,847	Buckwheat "	
Barley, "	61,853	Middlings "	5,213
Rye, "	469	Chicory, bbls	63
Oats, "	....	Hops, "	....
Corn, "	762	Wool, "	26
*Butter, "	900	Hay, ton	1,115
do bxs	422	Straw, "	39
do bbls	....	Wine, gals	171,260
do kegs	....	Brandy, "	2,260
do tubs	....	Raisins, bxs	1,644
do ½ bxs	582	Honey, cs	....
†Cheese, ctls	495	Peanuts, sks	18
do bxs	32	Walnuts "	69
Eggs, doz	53,760	Almonds "	30
do "Eastern"	....	Mustard "	....
Beans, ctls	7,003	Flax "	....
Potatoes, sks	15,079	Popcorn "	....
Onions, "	1,086	Broom corn, bbls	350

*Overl'd, — ctls. †Overl'd, — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to March 5, '91.	July 1, '91 to March 5, '92.
Flour, ½ sks	214,285	354,226
Wheat, ctls	1,052,229	1,158,362
Barley, "	247,436	29,099
Oats, "	279,036	344,905
Wool, bales	5,798	5,978
Hops, "	392	431
Rye, sks	....	3,352
Potatoes, sks	53,351	94,084

Cereals.

The Adelaide Milling Co. estimates the total surplus of wheat of South Australia this year at 5,860,000 bushels, against 9,920,000 bushels last year.

Reports from the Argentine are that although the area of wheat sown was larger than that of last year, the production will be practically no larger, and the export surplus will be about 11,500,000 bushels instead 20,000,000 bushels, as at first estimated.

The British Board of Agriculture reports the decrease in the area of wheat for the past season as follows: Scotland, 14 per cent; Wales, 10 per cent; Southwestern England, 9½ per cent, and the rest of England 2 per cent. The decrease occurred in countries where wheat-growing was the least profitable.

The official report of the Hungarian crops says that the damage from frost has not been serious. The actual outturn of the Hungarian corn crop the past year was 126,000,000 bushels against 85,600,000 bushels in 1890 and 97,520 000 bushels in 1889.

The latest reports from Roumania state that warm, foggy weather has been followed by a severe cold snap, damaging the growing wheat plant.

A dispatch to Reuter's Agency from St. Petersburg, the middle of February, states that the grain crops have suffered severely from the cold weather and damage from vermin. The London *Daily News* says that the prospects of wheat in Southern Russia are very discouraging.

Beerbohm, of Feb. 12th, says: Crop conditions at this date are as follows: New Zealand, unfavorable; South Australia, bad; Victoria, fair; Chili, short acreage; Argentine, less favorable; India, unfavorable, especially in the Bombay districts; United States, much below average; Russia and Roumania, discouraging; Austro-Hungary, fair; France, good as a whole, although the north is doubtful; England, short acreage; Germany, Italy, Spain and Portugal, good.

The Russian Department of Agriculture estimated the crop of wheat at 176,000,000 bushels. Added to this the crop of the Caucasus is now reported at 72,000,000 bushels more, much larger than expected, making a total of 248,000,000 bushels. The Liverpool *Corn and Trade News* says of this that inquiries of the various Zemstovs indicate that the next agricultural census will show a total production of wheat in European Russia, including Poland, of probably 400,000,000 bushels instead of about 200,000,000. Of the crop of the Caucasus, 16,000,000 bushels have been shipped to the famine districts, leaving about 20,000,000 bushels more for shipment. If this is true Russia becomes the second wheat-producing country in the world.

The *Daily Market Record* of Minneapolis says that its investigations as to the prospects of the winter wheat crop show that it will be only about 75 per cent of last year's crop. As far as the spring wheat is concerned there is, of course, no change. The *Farmers' Review* says the outlook for the growing wheat crop in Illinois is encouraging. In Indiana the condition is somewhat better than in Illinois. In Ohio it is below that of Indiana, but good. In Michigan it is good; In Kentucky good. In Missouri 42 per cent is reported as poor. In Kansas 40 per cent poor. Iowa fair. The *Milling World* says that its special investigations show that large areas of wheat the past year yielded from 61 to 65 pounds to the measured bushel, and over a thousand replies from country correspondents report that a yield below 60 pounds to the bushel was rare. The impression was steadily gaining ground that the wheat crop of the United States, instead of being 612,000,000 bushels, was close to 650,000,000 bushels.

Exporters and large operators in wheat are watching with unusual interest the proceedings of Congress on the bill providing for the free coinage of silver. The interest taken in the measure is based on the well-established fact that the price of silver is a large controller of the price of wheat. This is well illustrated by the following excerpt from an editorial in *Money*, a leading financial paper of London, England: "As soon as it became certain that there would be famine in Russia, and that the crops all over Europe were short, a wild speculation sprang up last summer in wheat, culminating at the beginning of September last. In the first week of September the average price of English wheat in the principal markets of England and Wales was as high as 41s 8d ℔ qr; since then the price has fallen almost continuously, until last week the average price of English wheat was as low as 32s 3d ℔ qr, a fall of 9s 5d ℔ qr, or about 22½ per cent. Of course the price of English wheat is not quite the same thing as the price of foreign imported wheat; but the figures show clearly enough the movement of the market, which is all we are concerned with just now. Now, it is obvious that in all gold-using countries the fall in wheat must check exports. Everyone was in a hurry to send wheat to market in August and September, and even for some considerable time afterward; but now, when the price is only about on a level with what it was 12 months ago, the inducement is to hold back, in the reasonable confidence that there must be a very considerable recovery before the next harvest is reaped. On the other hand, the case is very different with India. The value of the rupee in English money at the beginning of September was 1s 5½d; last week it was as low as 1s 3¾d. The value of the rupee had thus fallen 1¾d, or 10 per cent, while wheat fell over 22 per cent. But the Indian merchants exporting to Europe sell for gold, and the gold exchanges for 10 per cent more rupees than it did in September. Practically, therefore, the fall in the rupee has offset the fall in wheat to the extent of 10 per cent; in other words, while the American exporter of wheat now gets 22½ per cent less than at the beginning of September, the Indian exporter of wheat in reality only gets 12½ per cent less. Thus the Indian exporter has an enormous advantage over all his competitors."

The local wheat market ruled strong up to Monday, when an easier tone is said to have set in, but so far as the writer can learn the easier tone was one-sided for holders, did not relax in their strong views, and now that assessment day has passed, it is not likely that they will shade prices. The large disengaged list of vessels in port creates a weak feeling in charters, while the promising condition of the growing wheat crop will cause a steady increase in vessels on the way, which will be available for new crop loading. Hot weather, with more or less hot north winds, the past week, creates fears that the growing plant on adobe soil has been considerably damaged, but so far as we are able to learn the fears are not well grounded, but they would be with a continuance of hot weather for at least a week longer. Our advices state that the ground is well shaded by the plant, and therefore the moisture does not evaporate rapidly. On other soils the plant is making rapid growth, most too fast if anything. The market for barley has a strong tone, at a slight advance. The stock in the State is being depleted at a rapid rate, while the hot weather is against late sown grain. The consumption for feed does not show any marked falling off.

Oats are strong, with an advance obtainable. As usual in the spring months, there is a steady increase in the demand for feed. This call comes chiefly from breeders of fine horses, who have them mostly in training for spring races. The stock of oats in this State is light, as is the supply up north to draw from.

Rye is slow at unchanged figures.

Corn is steadier. Holders do not appear disposed to press the market. The demand for both home and shipping is fair.

Feedstuff.

There is a decided falling off in the demand for bran and middlings, and as receipts are full, concessions have been in order so as to place consignments. It is said that several flouring mills will shut down soon, which if proven correct will lessen receipts.

Ground barley and feedmeal are essentially unchanged. The demand does not show any marked falling off, for where one locally calls for less, another increases its demand.

The hay market continues strong. Receipts are falling off. The crop is expected to mature at an early date this year, yet with a change in the weather to cool and moist this will be radically changed and a late season obtain. So far, the growing crop promises to be quite large and generally of good quality.

Dairy Produce.

The butter market is demoralized and correct quotations difficult to give. It is claimed that cutting in prices has been done chiefly by a new firm or corporation seeking an outlet for its consignments, which necessitated their offerings to sell at lower figures than other firms had placed the same grades of butter. The hot weather is against holding supplies long. Firm, hard-pressed butter is wanted for shipment up north. In this connection, the following statistics are an interesting study:

Week ending	Boxes of butter received.	Price ℔ lb.
March 6, 1886	3,216	18c
March 5, 1887	2,182	19@20c
March 10, 1888	2,884	28c
March 9, 1889	2,893	17½@19c
March 8, 1890	2,982	17@18½c
March 7, 1891	2 618	19@23c
March 5, 1892	2,253	20@24c

Cheese is firm under moderate receipts. No material change in prices is looked for until new begins to come forward freely, which will be toward the close of this month.

Eggs have held steady. The consumption is larger than in March of last year.

The following shows the receipts of butter, cheese and eggs at this port in February:

Sources.	Butter, lbs.	Cheese, lbs.	Eggs, doz.
California	590,300	201,700	247.735
Oregon	11,550	600	3,030
Eastern	20,700	111,200	.....
Totals	622,550	313,500	250,765
January	502,200	476,900	420,345
Since Jan. 1st	1,124,750	790,400	671,110

The receipts according to sources during the past two months were as follows:

Sources.	Butter, lbs.	Cheese, lbs.	Eggs, doz.
California	1,004,000	373,800	424,810
Oregon	32,750	3,500	3,060
Eastern	88,000	413,100	243,240
Totals	1,124,750	790,400	671,110

Live Stock.

The market is quiet and slightly easier for Bullocks and mutton Sheep. The consumption is lighter, which promises further falling off as the supply of garden truck increases and prices become reasonable. Hogs are unchanged. Dairy Cows range around $25.

Fruit.

Apples begin to show the effect of a more liberal supply of Rhubarb on the market; for, with lower prices for the latter, the former, except for eating purposes, are more or less neglected. Choice to extra choice Apples continue scarce.

The market continues to be overstocked with trashy oranges, for which quotations are altogether nominal. Consumers are disgusted with the poor quality of the Oranges received and do not buy freely. Choice Oranges are still scarce.

It is claimed that fresh Strawberries will be in market by the last of the current month.

Bananas are in heavy supply. Consumers are attracted to them by their generally good quality and cheap prices.

Limes and Lemons are moving off more freely.

For dried Fruits the market shows more strength in Peaches and Apricots. While the more attractive samples can be placed at a slight advance on last week's quotations, yet the general run remains unchanged. Receipts consist of odds and ends, which is accepted as confirming previous statements that stocks are cleaning up.

Raisins continue to drag. The supply here consists largely if not entirely of poor grades.

Vegetables.

The prices for both asparagus and rhubarb continue to fall off. Receipts are increasing as the supply sources enlarge. It is claimed that string beans, peas, etc., will come into market at an earlier date than usual, owing to the forcing weather.

The market for both potatoes and onions is demoralized and hard to quote. The stock in this city is not only large, but the receipts continue in excess of the demand.

Miscellaneous.

Poultry is higher and strong at the advance.

Beans are generally lower, with Limas showing the most falling off. It looks as if the latter are being bought up at the lower prices.

Honey is scarce and strong.

Hops are firmer. Transactions in next season's crop are being made on a basis of 12@13c. Some have been sold higher and some lower than the above range.

In Wool there is nothing to report. The stock here is said to be smaller than usual even at this season of the year.

The market for Baling Rope has been advanced. The following is revised list: Duplex, 3 yarns and 2 yarns heavy, 10c ℔ lb; Sisal, 3 and 4 yarns, 10½c; Sisal, 2 yarns, light, 11c; Manila mixed, 2 yarns, heavy, 11c; pure Manila, 3 and 4 yarns and 2 yarns, heavy, 12½c.

From reliable advices up to March 8, the followin summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	206,306	259,714	*†137,346	94,399
San Diego	19,749	10,905	7,056	.....
San Pedro	5,440	6,046	....	21,862
Oregon	23,532	24,385	22,195	
Puget Sound	11,955	23,527	.....	
Totals	266,982	324,576	166,597	116,261

*Engaged for wheat, 1892, 32,392; 1891, 85,693 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to Feb. 25th, compiled from the most reliable sources aggregate as follows:

	1891.	1890.
Wheat, ctls	11,247,025	8,228,850
Flour, bbls	743,436	787,313
Barley, ctls	785,340	205,476

Bags are strong at 7⅛@7¼c.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 8, 1892.

BEANS AND PEAS.		**HOPS.**	
Bayo, ctl	1 80 @ 2 10	1891 Choice to Ex.	24 @ —
Butter	2 40 @ 2 80	Fair to Good	20 @ —
Pea	2 50 @ 2 80	**NUTS—JOBBING.**	
Red	1 90 @ 2 20	Walnuts, Cal. ℔	4 @ —
Pink	1 75 @ 2 00	Do Choice	6 @ —
Small White	2 40 @ 2 70	Do paper shell	7 @ —
Large White	2 30 @ 2 60	Almonds, sft shl.	10 @ —
Lima	1 60 @ 2 00	Paper shell	12 @ —
Fld Peas, blkeye	1 30 @ 1 50	Hard Shell	6 @ 7½
Do green	1 30 @ 1 50	Brazil	6½@ 8
Do Nlles	1 25 @ 1 40	Pecans small	11 @ 13
Split	3 85 @ 4 15	Do large	14½@ 16
BUTTER.		Peanuts	2 @ 3
Cal. Poor to fair, ℔	12½@ 20	Filberts	10½@ 12½
Do good to choice	21 @ —	Hickory	7 @ 8
Do Giltedged	— @ 22½	Chestnuts	11½@ 16
Do Creamery rolls	— @ 22	**ONIONS.**	
Do do Giltedge	— @ 23	Silver Skin, Ch'e	65 @ —
Eastern	— @ —	Fair to Good	50 @ —
CHEESE.		Cut	40 @ —
Cal. choice mild	12½@ 13½	**POTATOES.**	
Do fair to good	10 @ 12	Early Rose, ctl	25 @ 40
Do gilt edged	— @ 14	Burbank Seedling	30 @ 45
Young America	12 @ —	Do do Salinas	— @ —
EGGS.		Do do Oregon	40 @ 80
Cal. ranch, doz.	17 @ —	Do Humboldt	40 @ 75
Do do selected	— @ 19	River Reds	25 @ 40
Do store	16 @ —	Sweets	1 75 @ —
Eastern	— @ —	**POULTRY.**	
FEED.		Hens, doz	6 50 @ 8 50
Bran, ton	18 50 @20 00	Roosters, old	6 50 @ —
Feedmeal	27 00 @29 00	Do young	8 00 @ —
Gr'd Barley	22 50 @23 50	Broilers, small	5 00 @ —
Middlings	22 00 @23 —	Do large	7 00 @ —
Oil Cake Meal	— @25 00	Fryers	7 00 @ —
Manhattan Food ℔ cwt.	7 50	Ducks	8 00 @11 00
HAY.		Geese, pair	2 00 @ 2 50
Wheat, per ton	13 00 @ —	Turkeys, Gobl'r.	16 @ 17
Do choice	14 50 @ —	Turkeys, Hens	17 @ 19
Wheat and Oats	12 00 @ —	Do Dressed	17 @ 20
Wild Oats	11 00 @ —	Manhattan Egg Food ℔ cwt.	11 50 @ —
Cultivated do	12 00 @ —	**PROVISIONS.**	
Barley	11 00 @ —	Cal. Bacon, he'vy, ℔	9½@ —
Alfalfa	10 00 @ —	Medium	10½@ —
Clover	11 00 @ —	Light	12 @ —
Straw bale	45 @ 60	Lard	9 @ 11
GRAIN, ETC.		Cal. Sm'k'd Beef	11½@ —
Barley, feed, ctl	93¾@ 1 03¾	Hams, Cal salt'd	10 @ —
Do Choice	1 05 @ —	do Eastern	12½@ —
Do Brewing	1 07½@ —	**SEEDS.**	
Do do Choice	1 12½@ —	Alfalfa	9 @ 10½
Do do Giltedge	1 15 @ —	Clover, Red	12 @ 13
Do Chevalier	1 05 @ 1 40	White	20 @ —
Do do Giltedge	1 45 @ 1 50	Flaxseed	2 50 @ 2 80
Buckwheat	1 70 @ —	Hemp	3½@ 4
Corn, White	1 27½@ 1 32½	Mustard, yellow	3 25 @ 3 75
Yellow, large	1 22½@ 1 27½	do Brown	3 00 @ 3 25
Do small	1 26½@ 1 30	**WOOL.**	
Oats, milling	1 45 @ —	**SPRING, 1891.**	
Feed, Choice	1 40 @ —	Humb't & Men'cino	20 @ —
Do good	1 30 @ —	Sac'to valley	16 @ —
Do fair	1 22½@ —	Free Mountain	19 @ —
Surprise	1 50 @ —	S Joaquin valley	13 @ —
Black Cal	1 10 @ 1 40	do mountain	18 @ —
Do Oregon	1 20 @ 1 27½	Cala'v & F'th'l.	16 @ —
Gray	1 20 @ —	Oregon Eastern	14 @ —
Rye	1 60 @ 1 72½	do valley	21 @ —
Wheat, milling. Gilt edged	1 72½@ —	So'n Coast, def.	11 @ —
Do Choice	1 70 @ —	So'n Coast, free	13½@ —
Do fair to good	1 68½@ —	**FALL, 1891.**	
Shipping, cho'ce	1 68½@ —	San Joaquin	9 @ 12
Do good	1 66½@ —	Mountain	10 @ 15
Do fair	1 63½@ —	Humb't & Men'cino	14 @ 18
Common	1 57½@ —	**HONEY.**	
Sonora	1 57½@ 1 70	WhiteComb, 2-lb	10 @ 13
FLOUR.		do do 1-lb frame	12 @ 14
Extra, City Mills	4 90 @ 5 25	White extract'd	6½@ 7
Do Country Mills	4 90 @ 5 25	Amber do	5½@ 6½
Superfine	3 00 @ 3 45	Beeswax, lb	22 @ —

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 8, 1892.

Limes, Mex	4 00 @ 5 00	Beets, sk	— @ 1 00
Do Cal	60 @ 75	Carrots, sk	35 @ —
Lemons, box	1 00 @ 3 00	Okra, dry, lb	15 @ —
Do Sicily	5 50 @ 6 50	Parsnips, ctl	— @ 1 25
Oranges—		Peppers, dry, lb	8 @ 12½
Butte County	1 50 @ 2 25	Do green	20 @ 35
Yuba do	1 50 @ 2 25	Turnips, ctl	50 @ —
Do Seedlings		Cabbage, 100 lbs	45 @ —
*Riverside	85 @ 1 50	Garlic, lb	2 @ 3
*Los Angeles	65 @ 1 25	Squash, Mrft, tn	3 00 @ 6 00
Do Navels—		Do Summer, lb	20 @ 25
*Los Angeles	50 @ 1 25	Pumpkins, ton	— @ —
*Riverside	1 00 @ 3 00	Tomatoes, box	1 30½@ —
*Duarte	1 00 @ 3 00	Asparagus, lb	4 @ —
*Oranges free from frost sell at an advance of $1@$1 50 per box on the above quotations.		Do choice to ex.	7½ @ —
		Peas, green, lb	8 @ —
Apples, box	75 @ —	Rhubarb, lb	5½@ 11
Do choice	1 50 @ —	String Beans	15 @ —
Do extra choice	2 00 @ 2 50	Cucumbers, doz	1 00 @ —

Live Stock.

BEEF.		MUTTON.	
Stall fed	7 @ —	Wethers	10 @10½
Grass fed, extra	7 @ —	Ewes	9½@10½
First quality	6½@ —	Lamb, yearling	11 @12½
Second quality	6 @ —	Do Fall	15 @ —
Third quality	5½@ —	**HOGS.**	
Bulls and thin Cows	2½@ 3½	Light, ℔ lb, cents	4½@ 5
VEAL.		Heavy	4½@ 4½
Range, heavy	5@ 6½	Feeders	4½@ 4½
Do light	7@ 8	Stock Hogs	3½@ 3½
Dairy	8½@10		

List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR THE WEEK ENDING MARCH 1, 1892.

470,149.—FEED FOR NAIL MACHINES—M. Altmeyer, Oakland, Cal.

470,150.—NAIL-ROLLING MACHINERY—M. Altmeyer, Oakland, Cal.

469,891. — RIVETING MACHINE — M. Arnold, S. F.

469,848.—LAWN FOUNTAIN—W. N. Best, Los Angeles, Cal.

469,962.—MACHINE FOR UPSETTING TIRES—E. Chaquette, S. F.

469,734.—MACHINE FOR SAWING WOOD.—J. P. Currie, Marcus, Wash.

470,104. — WOOD-SPLITTING MACHINE—C. J. Dante. Hillsborough, Or.

469,833.—WASH BENCH AND WRINGER—R. Davis, Modesto, Cal.

469,777.—MANUFACTURE OF ASPHALTUM—H. A. Diehl, S. F.

470,153.—TUBULAR METALLIC POLE—D. Dorward, S. F.

469,896.—CASH AND PACKAGE CARRIER—Julius Finch, S. F.

469,783 —PUNCH—J. W. Graves, Lathrop, Cal.

470,125.—CAR—Heacock & Lovejoy, Portland, Or.

470,052.—BOILER FURNACE — E. W. Jones, Portland, Or.

470,053.—BOILER FURNACE — E. W. Jones, Portland, Or.

470,004.—FILTERING FAUCET — H. H. Luse, S. F.

470,059.—EARTH AUGER—B. Lane, Carlton, Oregon.

470,165. — CAN-LABELING MACHINE — C. E. Newell, S. F.

470,164.—FOUNTAIN FOR PASTING MACHINES—C. E. Newell, S. F.

470,166.—CAN-LABELING MACHINE—C. E. Newell, S. F.

469,900.—MAGAZINE SHOTGUN—W. H. Ostrander, Merced, Cal.

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469,899.—HOOP OR BAND TIGHTENER—Chas. Sparks Sacramento, Cal.

470,086.—HYDRAULIC STUMP EXTRACTOR—A. Taylor, S. F.

469,847.—PURIFYING GAS—J. Wiesender, S. F.

470,089.—CAR—D. W. B. Williams, Prescott, A. T.

The following brief list by telegraph, for March 1, will appear more complete on receipt of mail advices:

California—Virginia M. Cone, Alameda. heat regulator for cooking stoves; John D. Hooker, Los Angeles, hydrant valve; John Lamburn and R. Rickards, Dixon, wheel plow; Dr. F. Oliver, Oakland, cultivator; Robert F. Phillips, San Diego, dental mouth mirror; Francis A. Potter, San Francisco, fruit jar; Henri Vignoc, San Diego, time valves operating mechanism; William Wedgweed, San Francisco, can-capping machine. Oregon—David W. Freeman, Fishhawk, adjustable clutch or coupling device; Mathias Jensen, Astoria, can-capping and crimping machine. Washington—Frank P. Burkhardt, Spokane Falls, mechanical movement; Isaac N. Henness, Ilmaco, steam excavator; John Redmond, Seattle, electric car brake. Utah—James Hoop, Ogden, beam-holding apparatus.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

OFFICE OF THE

GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892, to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.

FRANK MCMULLEN, Secretary.

SECOND EDITION.

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PUBLISHERS PACIFIC RURAL PRESS.

220 Market Street, Elevator 12 Front Street.

SAN FRANCISCO, CAL.

The Season in Washington.

VANCOUVER, Wash., Feb. 24th.

TO THE EDITOR—We are enjoying a season of fine weather at present. Flowers are blooming in response to the rays of lovely sunshine. Farmers are busy sowing their grain, and orchardists are diligently preparing their trees for the coming fruit.

E. A. W.

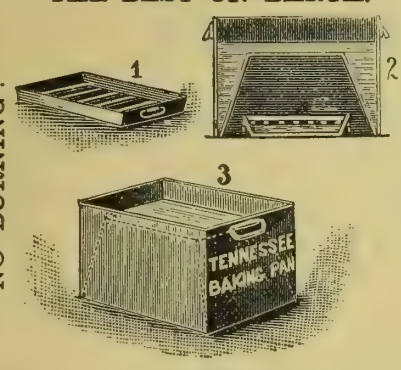
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EVERY FIRST PRIZE WINNER,

all classes—Stallions, Mares, Colts, Herds—of the

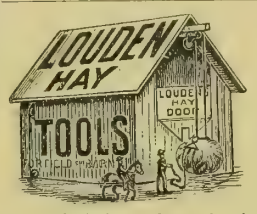
Great Percheron Show of France, 1891,

with two exceptions, also the **2d, 3d and 4th Prize Winners** in most of the classes, are included in our 1891 importations.

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INCORPORATED A. D. 1864. **San Francisco.**

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

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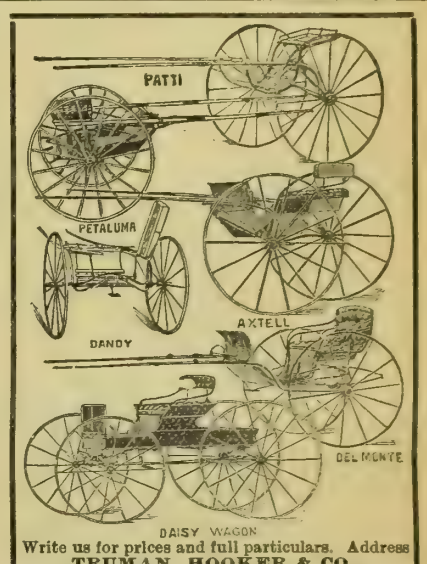
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THE SALTON LAKE.—A dispatch from Salton, San Diego county, says: From present indications the desert lake here will be much larger than last year. At present the lake is about half a mile wide, and after running along the Southern Pacific track for about two miles, extends off out of sight to the south. At this time last year there was not a drop of water visible, although there was a quantity a few inches below the surface of the sink. It was not until several months later that the floods occurred in the Gila and Colorado rivers, caused by melting snows, and it was only in August that the water in the Salton sink began to attract attract attention. The snow in the mountains at present is heavier than for years, and coming, as the water will when it melts, on land already in a large part saturated, a lake of unexampled extent will probably be created. Old residents believe that about 100 miles of the track of the Southern Pacific, which lies in the desert below the sea level, will be overflowed.

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20,000 Monterey Cypress

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Irish Yew Trees, from 4 to 7 ft.,

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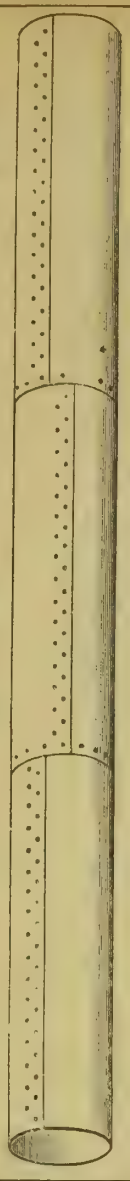
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Greatest Pulverizer of the Age.

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TESTIMONIALS.

(Copy.) TULARE, CAL., Nov. 27, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: Replying to yours of the 25th concerning the Morgan Spading Harrow would say, first we bought one on trial. It gave such perfect satisfaction that we bought two more. This number not being sufficient, we borrowed a fourth one from our neighbor. We take pleasure in saying that as an orchard and vineyard cultivator, as well as a pulverizer, we have seen nothing to equal it, it doing the work cheaper and nicer than any other cultivator we have had. We have laid all others aside, and next year will use nothing but the "Morgan Spading Harrow." Yours truly, PAIGE & MORTON.

FROM SECRETARY SMITH.

SACRAMENTO, CAL., Dec. 31, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Gents: In reply to your inquiry concerning the Morgan Spading Harrow purchased by me last spring, would say that I ordered it for the purpose of experimenting in my orchard to ascertain whether or not I could get an implement that would combine the qualities of the disc and cultivator. I find upon trial that the harrow above referred to is the most complete tool that can be used in an orchard. As a pulverizer, leveler, and cultivator, I do not hesitate to say it is the best I have ever seen. It thoroughly stirs the ground beneath the surface without opening it to the sun's rays and keeps the ground loose of sufficient depth to retain necessary surface moisture. I do not hesitate in recommending it. Very truly, EDWIN F. SMITH.

We are Sole Agents for the Coast.

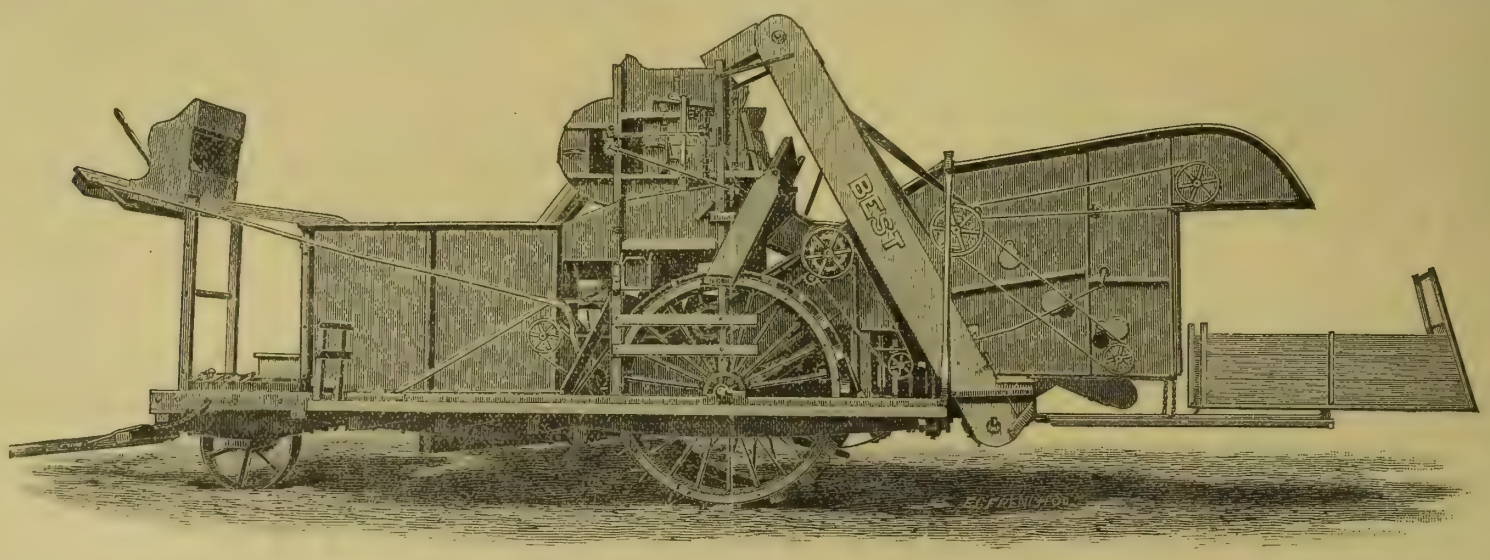
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AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



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NEW MODEL COMBINED HARVESTER

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Send for Circular. Send for Testimonials. Come and See the New Model for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

PACIFIC RURAL PRESS

Vol. XLIII. No. 12. SAN FRANCISCO, SATURDAY, MARCH 19, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Umbrella Tree.

A RURAL reader asked the other day that we say something about the umbrella tree, which has become so common a feature of the landscape since irrigated growths have arisen to be features, especially in the San Joaquin valley. The suggestion is a good one, for the tree has shown itself to be admirably adapted to produce the dense shade which is so grateful during the hot summer of our interior regions. The engraving shows a number of the trees as now growing in Fresno county. They have been too closely planted to secure the perfect symmetry which isolated specimens attain, but they show signs of the umbrella form, from which the tree takes its common name.

Botanically, the tree is *Melia azedarach* of Linnæus, and the sort we grow is a variety known as *umbraculiformis*. De Candolle distinguished 12 species of *Melia*, their range being from India to Japan and Polynesia. Baron Von Mueller describes the species *azedarach* as a native of Southern Asia, also of Northern and Eastern Australia and thence to far extra-tropical latitudes, ascending the Himalayas to 6000 feet. In height it is seldom over 40 feet, and the branches are very spreading. The variety *umbraculiformis* is particularly shady. Von Mueller remarks also that the tree commends itself for retaining the foliage till very late in the season without shriveling, and for producing early an abundance of very fragrant spring flowers, which may perhaps be worth distilling for essential oil.



THE UMBRELLA TREE AS GROWN IN FRESNO.

The umbrella grows readily from the, seed which is freely produced. It can also be grown from cuttings. The tree assumes its symmetrical umbrella form without pruning, and grows with gratifying rapidity in regions with adequate summer heat. Von Mueller mentions experiments showing that it will grow if furnished with sufficient moisture, twice as fast as the *grevillia robusta* or the *schinus molle*, our common pepper tree. We are not sure that these estimates will suit California conditions. Our own observation is that, though a rapid grower, it does not so far outstrip the other trees mentioned. Around the bay of San Francisco, it certainly does not show such superiority in rapid growth. We would like to have notes on this point from the interior. The tree has marked advantages in resisting drouth and enduring poor soil, though its growth in such cases is much reduced.

All parts of the plant are bitter; the bark, with caution, can be used as a purgative and anthelmintic; the leaves are said to be insecticidal. The wood is comparatively soft, light, and considered of value for cabinet work; also for some kinds of musical instruments.

The umbrella tree was early introduced in the Southern States and from this fact is frequently called the Texas umbrella tree. T. V. Munson, while admitting this introduction, says that scattered specimens are found in forests miles away from any habitation, and of the largest size. He says that the variety *umbraculiformis* was brought to notice about 50 years ago by J. Burke of Houston, Texas, "who found a tree of this form growing on an old place in the woods near Buffalo bayou." This would seem to indicate, by inference at least, that the variety we grow originated in Texas. This is not mentioned by Von Mueller in his notice of the variety *umbraculiformis*, and if the form did appear in Texas without introduction, it may have to be put down as another sport of a character similar to that which appeared in the Asiatic home of the tree, and which was there recognized as a superior form of the tree for ornamental planting.

The umbrella tree does not endure wintry climates, though it is hardy in California valleys. Munson says it fails in Kansas, though quite hardy in Northern Texas and southern Indian Territory.

RESULTS OF THE CITRUS FAIR.—A dispatch from Los Angeles, noting the close of the citrus fair, says the attendance was not as large as at previous fairs, but the expenses were cleared, with possibly a small surplus. It is generally conceded to have been the best exhibit of citrus fruits ever seen in the State.

HOLDING WHEAT.—The Minneapolis *Journal* has collected reports from 60 different points in Minnesota and the Dakotas, showing that there are, on a safe estimate, 32,000,000 bushels of wheat yet for sale in farmers' hands.

A Butter War.

It seems that a dairy conflict other than the old issue of pure butter *vs.* oleomargarine is now being waged. It was to be expected when an association including a large number of producers was formed for the purpose of marketing their own products, that there would come sooner or later an issue with the commission merchants who have hitherto handled the dairy trade of the city. The stronger the association the sooner the conflict might be expected, and if the association gains strength during the conflict, the sooner it will be over. Such is the history of all cooperative efforts, and if the Dairymen's Association is strong, and if its managers are wise and true, the cruel war will soon be over.

The managers of the association have issued a circular to dairymen charging the merchants with forming a combination to get the business at any hazard and at whatever reduction in price might be necessary to do it. The statement is that the merchants control many dairies outside of the association and dropped the price of butter nearly five cents a pound. The association was forced to meet this cut, and the producers suffered on both sides. The merchants deny the impeachment and answer that the reduction was necessary because of the large amount of butter in sight.

There is nothing particularly startling in this experience, although of course it is grievous to producers, and it should not be continued. If the Dairymen's Association can acquire strength enough to control supplies, it can secure better rates than have hitherto been had, no doubt, and will demonstrate its usefulness. If it does not secure such commandery of the situation, it should resist a cut and not drop to it unless the visible supply justifies it. The old line merchants will not be able to carry a long cut, and if they want to sacrifice their shippers it will not do them any good. We do not believe the local make of butter is so largely in excess of the demand that much of it can be hung up by the firm demand of a fair figure for it. If it be so, more attention should be given to working up outside markets, rather than to efforts to increase the product. The Dairymen's Association has a big problem on its hands, but if it is wise and firm it can win. Its success will of course depend upon the success it can attain in enlisting the dairy men in its support.

THE FIELD.

What a Mountain Farm Yields in a Year.

BECKWITH, PLUMAS CO., March, 10, 1892.

TO THE EDITOR:—A good many years ago an excellent editorial in the RURAL suggested that farmers frequently write for its columns, of their yearly successes or failures, that the knowledge of what we are doing might be a source of helpfulness to others. One reason this could not be done in any general way, is, so many farmers do not keep any accounts with their farms.

Mrs. Prentiss has said; "We would smile at an architect who having a noble structure to erect should begin to work in a hap-hazard way, putting in a brick here, and a stone there, weaving in straws or sticks if they came to hand, and when asked on what he was engaged, what manner of building he intended to erect, should reply, he had no plan, but thought something would come of it." But really this is but a few shades worse than some farming. The question presents itself to some people possessed of a little natural thrift and capacity for seeing what is going on about them. Is there any vocation under the sun in which so many people are engaged, who are by nature so unfitted for their work, or who do it so poorly? We feel to our sorrow, how many things are against the farmer, but are not our worst enemies those, not of our own household exactly, but of our lack of adaptability to our work? For there are farmers and farmers who are year after year working on and on as blind as any bat as to whether they are succeeding or failing, or if the latter, as to what the cause may be, or how to go about righting things.

The RURAL PRESS brought this subject again before its readers some few years ago in a good article entitled, "Keeping an Account with the Farm." There are doubtless other sections of the State where the yearly successes of the farmer are better than in this region where a few years ago we were afflicted with a prolonged visit from grasshoppers, and where summer drouths give us frequent seasons of poor crop returns, and our high altitude subjects us to frequent summer frosts. But here, as elsewhere, if we have sufficient pluck (that valuable commodity an ounce of which is worth a ton of luck) intelligent farming may bring satisfactory returns.

Even the poorer portions of our valley land may make a fair showing. Our own farm is less favored in the way of water than the average farms in this section. Our returns for the year 1891 are as follows. We milked 25 cows. Made cheese 153 days, in which time we made 8128 lbs., for which we realized $1112.75 or a trifle over 13 1-2 cts. per lb.; this is above the expense of marketing the cheese. What the exact net profit of the cheese is would be a little difficult to ascertain, as my husband makes the cheese, except from three to four hours spent by an assistant in washing up and in the curing room. The milking is of course done by other hands. But the profits from a cheese factory are materially larger than from butter making. As a rule a little over nine pounds of milk will make a pound of cured cheese. Aside from the 153 days spent in making cheese, the rest of the season, about nine months in all, was spent in making butter, but as the prices were at their lowest during some of the time we were making butter, the amount taken in from butter was proportionally small. We made 1289 lbs. from which we realized $242,87 or 18.8 cts. per pound, the prices being unusually low for the entire season. We sold 22 calves for $7.50 a piece, that is $165 for calves.

We sold from our dairy in cheese, butter and calves $1520.50 which is $60.82 to each cow; aside from the butter, cheese and milk consumed in our family, and 1000 lbs. of pork put by for future use. This we judge from our reading of agricultural and dairy papers compares favorably with other returns in other dairying sections, where the land is from double to ten times in value what this is.

Aside from dairy farming my husband put in 55 acres of barley, which gave us 1795 bushels, over 32 bushels to the acre; we had also some rye put in with disc harrow and seed sower the fall previous, part of which was cut for hay. The 170 bushels of rye thrashed with the barely when sold brought $174. Grain as well as various other farm products were unusually low last fall. We have left of our grain 10 or 12 tons for seed, feed, etc. Only 30 acres of the land in barley and rye received any irrigation.

The accounts kept with our farm show various small ways in which the farm income has been increased $121 from the sale of chickens and eggs, $125.97 from other sales of beef, etc., making $2541 income from the farm.

How much of this $2541 is net profit, I do not know. We paid out $630.50 for wages for hired help. The hired help also put up the hay, attended to repairs, and did something in the way of improvements. The board for our family (eight persons including help) is not a very important matter, when we consider that all the milk, butter, cheese and eggs and much of the meat, vegetables, fruit and honey consumed by the family, were provided by the farm.

We do not claim that what we have done is any unusual thing to do. We have had better years, when grain brought a higher price, and our income was considerably increased by the sale of several horses, as the raising of horses has been an important feature in our farming. But our income for 1891 represents what may be done on any ranch in this section where general farming is engaged in, and fair attention is given to business. All years do not of necessity make as good a showing as that given, as last year the grain crop was good and the yield of milk during most of the cheese making season was unusually fine.

No doubt there are other sections of the State where the income would be materially larger than in this region. But the price of land in such localities would be so much higher than here, that the advantages are not all on the side of the largest incomes. Still, the exceeding healthfulness of this mountain region is a very strong argument in its favor. In few places could manual labor be performed with such ease, for few places have so inviting a summer climate. M. P. A.

[This account is very interesting. Will other readers send us similar contributions and exercise similar care to make exact statements?—EDS. PRESS.]

THE ORNITHOLOGIST.

The Game Birds of Lassen County.

(*Concluded from last week.*)

Ducks.

There are found in California some 22 species of ducks, and of these, eight or ten visit the lakes, streams and ponds of Lassen each year. In size, beauty, and graceful attitude when swimming, the mallard duck stands at the head of the list. He is not so fine a table bird as the canvasback, but these are seldom seen here. The mallard is 24 inches long and weighs from four to four and a half pounds. The drake is handsomely marked with green, chestnut and white. The female is brown and destitute of the bright colors of the drake. The female makes her nest upon the ground amid rushes or weeds, or sometimes in a hollow log. The eggs vary from eight to fourteen in number and the ducklings are very active and alert from the moment they are hatched. The nests are often found fully half a mile from a stream or lake, yet the day the little ducks are hatched the old bird manages to escort all to the water, upon which they launch themselves with fearlessness. While the female is sitting the male bird remains near by, as if to watch for danger. The mallards are shy and cautious, and they fly in a circle several times around the spot where they intend to alight. If there is the slightest thing that looks suspicious, they will seek another spot. They have sentinels posted while feeding, and by old hunters it is said some of the flock are awake at all times during sleeping hours. They feed mostly at night and seek the waters of the creeks and streams during the day. A peculiarity of this duck is that the drake sits on the eggs during the absence of the duck while she is feeding.

A few mallards rear their young in our valleys, but the greater number go much farther north. They pass through our county in March and April going north and return in October or November.

The canvasback is 20 inches long and weighs about three pounds. It feeds upon wild celery and dives to get its food. It is a strong and rapid flyer, and we have seen this bird in the Sacramento valley rise some distance behind a railroad train in motion, follow and overtake the train and then pass ahead of it very rapidly. It is one of the most expert divers known, and remaining under water longer than a mud hen, our boys will understand that few birds can beat it diving. It goes as far as Alaska to breed during the summer.

The redhead is often sold for the canvasback and few can tell any difference in the taste. The redhead has a blue bill and is a smaller duck than the canvasback.

The duck most frequently seen is known as the Widgeon or "bally." This duck has a white patch on its head and in many localities is known as the Baldpate. It is 18 or 19 inches long and weighs about two and a half pounds. The head and neck is a reddish yellow, the forepart of the body a brownish red, and the under parts are white. The tail is brown and contains 14 feathers, while its bill is blue and has a black tip. The natural histories assert that this bird is a day feeder, but old hunters say that it feeds both during the day and at night. It gives a clear whistle that may be heard some distance. They can neither dive as quickly nor fly as swiftly as the mallards or other ducks we have named. About one-fourth of the ducks that are killed here are Widgeons.

The Teal is not so large as the other ducks already named but it is a fine table bird. There are two species, the green winged and the blue winged Teal. They are 14 or 15 inches long and weigh one and a half pounds. It has a narrow bill as long as its head and pointed wings. The head and shoulders are chestnut colored with a green stripe on the neck, while the under parts of the bird are white. It is one of the first birds to return from their northern migrations. Johnson's Natural History, one of newest and most complete ever published, says that the blue winged Teal is not found on this coast, but this is evidently taken from a very early report upon the birds of this coast, where such a statement is made. It is not a fact, for there are thousands of blue winged Teal ducks found all over California. It is a less shy and suspicious bird than the green winged duck and more easily shot. About 25 per cent of the ducks killed in Lassen are Teal ducks. The female duck lays from 11 to 17 eggs but as high as nineteen have been taken from a single nest.

The summer or wood duck is the most beautiful of the duck family found here. It receives its name of summer duck because the duck remains here during the summer, while it gets its name of wood duck from its habit of making its nest in trees or stumps. Dr. Brewer says that it is conspicuous for the swiftness, ease and elegance of its flight. It can pass through woods and among the branches of the trees with as much facility as the wild pigeon. Its splendid plumage shows a great variety of rich colors. Instead of congregating in flocks, like the Teals and Widgeons, the wood ducks are usually seen in little flocks of three or four; often they go in pairs and occasionally they are seen alone.

They live mostly upon acorns and will eat so greedily that they cannot swallow another one, yet will hold one in their mouths. They seek the deep pools along the creeks, where they are hidden by the dense bushes of the banks, and are shy and difficult to approach. They build their nests in hollow trees or stumps, and when the young are hatched the mother bird carries the little ones down to the ground by holding them by the back or wing with her bill. Hunters assert that the ducklings will ride to the ground on the back of the mother. The old bird lays from 12 to 20 eggs in a nest and some nests have been found with as many as 23 eggs in them.

Another duck found here is the Spoonbill, which derives its name from its large, flat bill. This duck is 20 inches long and weighs nearly two pounds. The head and neck are green, the back brown and the tail black. This duck feeds largely upon worms, frogs, etc. It makes its nest on the ground, lays from 10 to 12 eggs and rears its young in the marshes of the far north. It is a shy, suspicious, intelligent bird, with great powers of flight. But few of them are killed by hunters.

The Gadwell or Grey duck is 19 inches long and weighs two and a half pounds. It is a quick diver and rapid flyer, feeds during the day as well as at night, and makes its home mostly amid pools shut in by rushes and high weeds.

The Springtail or Pintail is a wilder and more wary bird than the mallard and not easily approached. It rides the water as buoyantly as a cork and bounds from it very quickly. Its length is 30 inches, its weight three pounds. It has a long and narrow bill and a pointed tail, the feathers of which slightly curl. The head and neck is a dark brown, glossed with green and purple. The tip of the tail is coal black while the breast is pure white, the wings are bluish grey while the bill is black above and blue beneath.

The Butter duck is a small and very fat little duck, not half the size of the mallard, and is common along most of the small streams of this State. It feeds on grass and grain and is so quick a diver that it is almost impossible to kill it, unless the hunter shoots it upon the wing or watches till the bird just puts its head out of the water. Its body is dark with white underneath and the bill is blue.

OTHER BIRDS.

The robin is unfortunately considered by many a game bird and suffers accordingly. The top and sides of the head are nearly black, the under parts of the body a chestnut brown, and the wings a dark brown. The bill is yellow. These birds are migratory, like the ducks and geese, and go far south during the winter. They do not make their nests or hatch their eggs lower than an altitude of about 3000 feet. Their nests are built in trees, four or five eggs are laid, and these eggs are dark bluish green. Two broods are often raised in one season. Their nest is composed of three layers, the outside of roots, shavings, etc., then a layer of leaves, moss and grass, and this is cemented by mud. Inside of this is a soft lining of fine, dry grass. They eat many insects and should be protected by every farmer and fruit grower.

The dove, like the robin, is migratory, going far south in winter. They are so common that any description of them would be useless. The nest consists of a few twigs carelessly placed together, and in this two eggs are laid.

While the blackbird and the lark are occasionally killed for game, they should not be classed among the list of game birds and descriptions of them are omitted.

The band-tailed pigeon is a large and beautiful bird, loving the dense woods of our mountains. The eggs are white and, like the doves, they lay but two before hatching. They collect in Southern Oregon in great flocks, but here only a limited number are ever seen together. This bird is 16 inches long, it feeds upon acorns and berries and furnishes a delicious table fowl.

The sandhill crane, when young, is a fine table fowl. Their food consists mostly of roots and plants. This bird stands nearly five feet high, owing to its long, stilt-like legs. They breed in Oregon and farther north and return before winter sets in. They are often tamed and kept as pets.

The Great Blue Heron is nearly as tall as the crane, but is smaller in its body. Owing to living mostly on fish it is rarely eaten except when young. The bird is found only along the streams and marshes, where it finds its favorite food. It builds its nest in trees and seeks its food at night. It is said of this bird that the feathers upon its breast give forth a bright light at night that attracts the fish toward the heron.

The Golden Plover is not infrequently killed and is a delicate table bird. Its body is a brownish black with yellow spots, while the under part of the body is almost black. Farther east they frequent grassy plains in large flocks. They are larger than the Mountain Plover which is found here, but are no finer eating. The Mountain Plover is a brownish gray bird, frequenting the dry plains of the Great Basin in pairs, and comes west of the Sierras during the winter. The length of the Plover is about ten inches, while its wings spread a foot. Both of these birds vary greatly in plumage during different seasons of the year.

The Grass Plover, about the size of a dove and a good table bird, is found here at times.

The Snipes are the best small game bird found here. They frequent the low marshy sections or wet fields, where they feed upon worms and insects. The female lays four pale greenish grey eggs with brown blotches upon them. One peculiarity of the snipe is the long bill, which is very sensitive, so that the bird can tell when probing with it in the mud whether the object it has touched is fit for eating or not.

The long billed Curlew is the largest of the snipe family, frequently measuring 18 inches without its bill, which is seven or eight inches long. The bird weighs about two pounds and is a fine game bird. Like the other members of this family, it frequents the low, wet, marshy grounds or flats, where it feeds upon insects and worms. They are, perhaps, more abundant on the Pit river plains than in any other part of the State. Like all the snipe family, the nests are placed on the marshy lands, four olive green eggs are laid by the female snipe, and the young are quick to run about when hatched from the shell.

Eagle lake is a favorite resting place for ducks and geese in their northern and southern migrations, and here in spring and fall large numbers of these birds can be found. In the tamarack swamps on the borders of the lake, many ducks lay their eggs and rear their young. To give details regarding the various localities where the different game birds are found would occupy more space than can be devoted to this subject.

Swine Yard.

Notes on Swine.

[Written for the Rural Press by Henry J. Philpott.]

The hog is not native to America. The first ones came over with Columbus on his second voyage. They were landed in Cuba in 1493. The next mentioned were landed in Florida in 1538, the next in 1553 in Nova Scotia, the next in Canada in 1604. In 1608 the London Company took 600 head to Jamestown, Virginia.

There have been 56 different breeds of swine in the United States, unless, in some cases, different names have been applied in different sections to the same breed, which is quite likely. No more than seven breeds were exhibited at any State fair in 1891, and that number only in Illinois.

The greatest curiosity among swine breeds is the Solipede, or "Mulefoot." Instead of the divided hoof, otherwise universal among swine, it has a solid single hoof, like that of the horse. As most people have never seen a specimen of the breed, and may reasonably doubt its existence, the writer hereof takes pleasure in vouching for it, having seen it himself. It was introduced into the Delaware Bay Colony at an early day by the Swedes. It is a very worthless breed, except to proprietors of "side shows" at fairs and circuses, where it is advertised as having just been found wild in the Rocky mountains or some distant or inaccessible region—no matter where.

Old accounts of large hogs must be taken with a grain of allowance. The earliest American claim is 1500 pounds, breed not given, date 1818. The largest is 1743 pounds, average of two hogs, raised in Lancaster county, Pa., exhibited in Baltimore in 1820. Ages 14 and 18 months. One measured six feet three inches girth, eight feet one inch length from tail to end of nose. Breed not given. The largest recent hog, age considered, was a Berkshire exhibited at the Iowa State fair in 1891. But the claim that it then weighed 650 pounds at 13½ months old is evidently not unquestioned by the *Swine Breeders' Journal*. The originator of the new Victoria breed claimed last year to have raised a litter of 10 pigs averaging 67 pounds apiece at eight weeks old, two of them weighing over 80 pounds each. But these were runts compared with four pigs, Grass and China breed, said to have been raised in Massachusetts in 1822; weights at four months old, 348, 318, 310 and 308 pounds.

I know of but two breeds of swine that were premeditatedly originated by a single person. 1. The Prince Consort, Queen Victoria's husband, originated the Tarnworth and on exhibition won some prizes with it. It is too long-nosed for American breeders, but liking it in other respects, they are at work trying to breed a few inches off the end of its nose. 2. About a dozen years ago, Mr. Geo. F. Davis of Dyer, Ind., originated the Victoria breed by a cross between four well-known existing breeds—a black and a white American and a black and a white English breed, namely, Poland-China, Chester White, Berkshire and Suffolk. The breed thus originated is not spotted, as one might expect, but "white, with occasional dark spots in *skin*," none in the hair. It has carried off some carcass prizes at the Chicago Fat Stock Show, and secured recognition as a distinct breed at some State fairs. Its color is against it, white hogs not being considered hardy, but the originator claims that it is "as hardy as any black hog."

Thirty years ago the American hog was generally white. He is still white everywhere east of Ohio, but in the West has changed to black. The color prejudice is about as strong in the one section as in the other.

The highest average value of swine in any State in 1890 was $9.61 in Massachusetts, and the lowest $2.42 in Florida. The average for the whole coun ry was $4 72. For California it was $4 91.

The greatest number of swine in any State in 1890 was 5,805,000 in Iowa. The smallest was 13,796 in Rhode Island. The whole country had 51,602,780. California had 647,000. The great State of New York had only 686,321.

Nebraska has a lady breeder of high-class Poland-China swine. At a recent auction sale she sold 100 head in one day at an average price of $50 per head. The highest price realized was $225. She thinks she would have done better if the day had been longer.

The sale of pedigreed swine at public auction is an innovation only five or six years old. Last year about 50 such sales were held.

So far as I am able to learn, the highest price paid for a hog last year, 1891, was $900 for Free Trade, the winner of first and sweepstakes at two successive State fairs in Iowa and Nebraska, and at one in Kansas.

The highest price ever paid for a hog under one year old at public auction, is said to have been $625 for Geo. Wilkes, a son of King Tecumseh and grandson of Tecumseh 4339.

First-class male swine are the cheapest breeding animals in existence. The price is very much less for the same degree of individual merit and breeding and the produce is very much greater than of other domestic males. One colt a year per dam, vigorous enough to reach maturity, is more than any stallion is good for, and a bull or a ram will hardly do better than one calf or lamb a year per dam. The hog will bring 10 per dam to maturity, in two litters of five strong pigs each; and one male suffices for as many females as in the case of the horse or cow, though not so many as the ram. A chicken-cock will fertilize a greater number of each hen's eggs in a year, but is limited to a third as many hens as there may be of sows in a herd. In order to equal in total reproduction, he should show his markings in 30 chicks a year, raised, for each hen. He will not do it. Half-bloods from a high-bred, $100 male hog will easily be worth $5 apiece more at a year old than extra-good scrub pigs, or pigs from a grade sire, the dams being scrubs, with the same care and feed, provided these are such as will make the common hog weigh 200 pounds at that age, which is the least any hog ought to weigh if in good flesh. And $5 added to each pig means $50 added to the produce of each dam. It has often been realized, and in a herd of 50 sows it means $2500 a year. But, of course, the sum realized on each pig depends on the size it is allowed to attain. If this be limited to say 200 pounds, the gain will express itself in the time and feed saved, and will be restricted accordingly. But it may be estimated at from $1 upward on each pig at weaning time; $10 on each dam, and $500 on the maximum number of dams to be safely coupled with one sire. He ought to live five years if worthy of it.

At the last Iowa State fair the leading breed of swine was represented by 1667 specimens; at the Missouri State fair by 133. The two States lie side by side, having nearly the same number of hogs, over 5 000,000, and raise about the same superabundance of the same kinds of swine feed. The average value of Iowa's swine, Jan. 1, 1890, as per the report of the Secretary of Agriculture, was $5.94; of Missouri's, $3.64; difference, $2.30 per head; difference on 5,000,000 head, $11,500,000. Can it be that this prodigious difference in the value of their swine has any relation to the difference in the number of thoroughbred ones at the respective State fairs? The Iowa farmers think so, and that is why so many of them would not put a gift hog at the head of their herds, unless he were a thoroughbred of just the breed they like, and of the best breeding the size of their herds will justify.

The Berkshire is an English breed, said to be 100 years old, named from Berks county, England, within driving distance of the London market. It is a cross between Siamese, Chinese and probably other foreign breeds, and the native hog of the county. Its great rival, the misnamed Poland-China, is strictly American, and originated 60 years ago, within driving distance of the world's then greatest hog market, Cincinnati. All known breeds were crossed in its make-up, including the Berkshire and the native descendants of the Jamestown, Massachusetts Bay, and other 17th century importations. No other breed has so many diverse lines of foreign blood in its veins, nor so many native strains, selected from so wide a field and occupying so long a time in the selection. The good old American name "Miami," by which it often used to be called, should not have been discarded for the foreign, false and misleading name of "Poland-China."

Track and Farm.

Talk About Trotters.

The national horse of America is a trotter. The national sport of America is as much in trotting contests as the "sport of Kings" was in running races. The trotter has come to stay and is regarded as an American institution.

The people of England commenced to train and develop their "Suffolk trotters" at about the same time that the Russians began on their "Orloffs" and America on her "Messengers," but at the end of 100 years, the first two nations were so far behind America that they were not in the race for supremacy—or as the boys say, "they were not in it." In the year 1800 the Norfolks were a long ways in the lead—especially in long distance races—for in July of that year a mare called Phenomenon trotted 20 miles in one hour and two minutes and twenty seconds. This was the record for that distance for 49 years, when our horse Trustee trotted the 20 miles in 59:35½. He is the first horse that ever trotted 20 miles within the hour and his time is very near the top notch to-day. A few of the Norfolks have trotted a little under 2:30 but the best one would be no matchfor someof our Petaluma raised horses—for instance, Nellie R, Dawn or Oaknut.

The fastest Orloff of which any authentic record can be found is 2:31½—a performance that would only be called good here if made by a two-year-old. A number of Orloffs were brought to this country at different times to mix with our trotting blood, but the results have always been unsatisfactory. Notwithstanding this fact, Gov. Stanford is going to give them another trial. He is to exchange a number of his Electioneers with the Emperor of Russia for an equal number of Orloffs. As the Orloffs are large and stout it is probable that Gov. Stanford expects to originate by this mixture a superior breed of carriage horses. At any rate he knows what he is about.

Nor have we improved our trotters by any infusion of Norfolk blood—with one single exception and that is imported Bellfounder. He had some of the Norfolk blood in his veins, though he was almost a thoroughbred. Bellfounder was the sire of the dam of Rysdyk's Hambletonian, the greatest of all trotting progenitors. Notwithstanding we are so far ahead of England and Russia, all three started from the same source, the Arabian. The Norfolks were largely made up of Arabian blood. History also tells us that in 1772, Count Alexis Orloff, a commander of the Russian fleet, obtained from a Turkish Pasha a large white Arabian stallion who founded the Orloff family of horses. In 1808, when Count Orloff died, his stud—or great family of horses—was turned over to the Russian Imperial government, and has ever since been kept as a distinct breed.

The pedigree of Messenger is like "household words" with the lovers of the trotter, but inasmuch as he is the fountain head of this great interest and has done more through immediate and remote descendants to promote the highest type of trotters, something more than a passing notice is due to this great horse. The English Studbook describes him as a gray horse foaled in 1780. He was sired by Mambrino, out of a daughter of Turf. Mambrino was by Engineer, son of Sampson, by Blaze, by Flying Childers, son of Darley Arabian, a horse imported into England from the Levant in the reign of Queen Ann. Turf, the sire of the dam of Messenger, was by Matchem, son of Cade by the Godolphin Arabian. Thus it will be seen—as above intimated—that the founders of the Norfolks, the Orloff and the American Trotters all originated in Arabia.

I will now deal with the American Trotter exclusively, and endeavor to show that the gilt-edge trotters of this county are of one family in reality, and that all the different branches trace back to grand old Messenger. He was only in this country about 20 years, having been imported to Philadelphia in 1788 and died on Long Island in 1808. About all the gilt-edged trotters descended from imported Messenger. A friend who is interested in, and an admirer of the Patchens asked me where they "got-off." It would be a long story to trace up the Clays and show the number of remote Messenger crosses in their dams. The Patchens were from the Clays. Andrew Jackson was the founder of the Clays. He was from the Arabian stock on his sire's side, the same as Messenger, and his grand-dam was by Messenger. The Clays and Patchens are good game horses and a fair proportion that were trained, turned out to be fair trotters. George M. Patchen 30, was the best of the Clays, for he sired what was extreme speed in his day—Lucy 2:18¼—and what was better he sired sons that "breed on" and the end is not yet. His son George M. Patchen Jr., sometimes called California Patchen, if measured by his opportunities, was certainly greater than his sire. He was brought to this State in 1862 when we had very few trotting brood mares, yet like all the other Clays and Patchens whenever crossed with mares that had the Messenger blood, through the Hambletonians or any other source the result was speed. His speediest California son was Wells Fargo, 2:18¾, out of a mare by Gen. Taylor, an inbred Messenger. But he did better than this he sired sons and daughters that "breed on." One of his sons was raised in Petaluma, and "like the prophet, not without honor save in his own country"—Alexander 490—who sired speed whenever he had a good mare, and also sired the sire of extreme speed in Alex. Button. Alexander was very near the front as a trotter in his day. This writer timed him a mile in 2:29½ in a heat won by Ajax when Alexander was in poor condition, and he then thought that if Alexander had been properly handled previously he would have been a first-class race-horse. I have devoted a lengthy paragraph to this horse because he deserves it, and for the further reason there are many Alexander mares in this vicinity that will one day be in demand for breeding purposes. Nothing crosses better with the Hambletonians and the Nutwoods than the Clays—unless it is the Hambletonians and the Nutwoods themselves—and most of the Petaluma Clay blood comes to us through Alexander.

But I must go back to my first proposition and endeavor to show the prepotency of the Messenger blood. Messenger sired Membrino, Membrino sired Abdallah, Abdallah sired Rysdyk's Hambletonian No. 10. It would take much space to tell what this great horse has done for the trotting world: how many of his sons and daughters—grandsons and granddaughters—down to the present day—have electrified the lovers of the trotting horse and how they have "bred on."

Electioneer, 125, measured by his present record, is the greatest son of Hambletonian 10. He has not only sired more 2:30 trotters than any other horse, he has 100 in the list—but he has sired earlier and more extreme speed. Yearlings that beat 2:30. A two-year old that beat 2:11; and aged horses that beat 2:09, and what is better for the public than all this is, that his sons "breed on;" Anteeo, as a proved breeder, is his best son. Anteeo has left this State, but he, like his illustrious sire, "breeds on," and has left producing sons behind that are probably as good as himself.

Fortunately for California, Palo Alto, the most rapid son of Electioneer, is owned by a man who can afford to keep him here. The horsemen of the East have plenty of money and they will have our best horses if they do come high. They offer such prices that our owners cannot afford to hold. But I do not regard this matter of our horses going East so much of a calamity as many others do, for I know that we have the material left to produce plenty more. I would like to ask those who are particularly fond of the Electioneers and are grieving over the departure of Anteeo, Mortimer, Hernanni and others, "what's the matter" with Eclectic? He is close-by and the best bred son of Electioneer on earth—except his full brother Arion, and his services are offered to you "for a song," considering his breeding and prospects. Any one of my readers who possesses a really good mare had better not tarry. Now is the accepted time! Now is the day of salvation if you wish to get into the swim. I am told that Mr. Page has already been offered such inducements to send Eclectic to the East that he is becoming a little nervous, and that by next season he will let go. Remember that Eclectic is an inbred Hambletonian, a representative of the two greatest families. His sire has an even hundred in the "charmed circle," while the sire of his dam has seventy, and is yet in the flesh and full of vigor, Nutwood with two-year-olds and yearlings, and the crop of 1892 yet to be heard from, which will swell his number beyond 100. Also that both sire and dam trace back through Hambletonian 10, to imported Messenger, and through him to the Arabs.

In the next article I propose to deal with the Nutwoods, Directors, Wilkes and other branches of the great family that descended from old Messenger and the Arabs, and if your readers don't tire of this "Horse Talk" I will have something to say about all of our horses "if it takes all summer."—J. H. McNabb in Petaluma Imprint.

Mrs. Annie Smith, of Richmond, Va., the wife of a lawyer and herself well qualified to practice, was refused admission to the bar on account of her sex. She has had a bill introduced in the Virginia Legislature to allow properly qualified women to practice law. The bill was favorably reported by the Senate Committee on courts and justice, and has passed the Senate.

"When have you leisure," said a caller to the city editor, "I would like to speak to you." "All right; come around after I am dead."—Cincinnati Post.

PATRONS OF HUSBANDRY.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

Now for the garden!

Look to the poultry yard! Did you see those pretty little chicks? Hear those little turkeys, and keep your hands off the downy, tiny ducks and goslings! But you may find much to amuse and profit you by close attention to the poultry yard.

Keep party politics outside the Grange; but inside the Grange, discuss pure Government, equal taxation, just laws, honest measures and the best means of obtaining these ends. Be honest, be just, and fear not!

Corporations have their friends and advocates. Who are the friends of and advocates for the farmers' cause?

The following named persons have been appointed County Deputies for the territory named: It is hoped each one will, at once, familiarize himself with the secret work of the Order and prepare fully to build up the Grange. There is much pleasant work for a Deputy to do. Let us see who can best work and best agree. The appointments are: Alameda Co., Julius Hollister of Eden Grange. Butte and Yuba Cos., Hon. C. P. Berry of Yuba City Grange. Colusa Co., to be supplied. Contra Costa Co., to be filled. El Dorado Co., Mrs. Kate Briggs of Placerville Grange. Los Angeles Co., Theodore Staley, P. M. of Santa Rosa Grange. Merced and Stanislaus Co., H. W. Brouse of Merced Grange. Monterey and San Benito Cos., Bates De Hart of Hollister Grange. Nevada Co., S. J. Alderman of Grass Valley Grange. Placer Co., B. A. Giantvalley of Eureka Grange. Sacramento Co., Eben Owen of Elk Grove Grange. San Joaquin Co., Robt. G. Williams of Woodbridge Grange. Santa Barbara Co., Delos Wood of Carpenteria Grange. Santa Clara Co., Amos Adams of San Jose Grange. Santa Cruz and San Mateo Co., to be supplied. Shasta Co., C. P. Dunham of Millville Grange. Solano Co., Joseph Kline of Dixon Grange. Sonoma Co., A. P. Martin of Two Rock Grange. Sutter Co., C. P. Williams of Yuba City Grange. Tulare Co., A. P. Merritt of Tulare Grange. Other appointments will soon be made. The Grange cause is in a healthy condition, and if the Deputies will put forth a reasonable effort, new Granges and new members will greet them on every hand. Please turn to the work in hand with both the spirit and the understanding.

Are you up with the times?

Keep two eyes, backed by an intelligent brain, on the acts of Congress! Do you know what your Congressman has done this session for the benefit of those who, in the sweat of the brow, eat their bread? What has he done? Ought he to be reelected? Congressmen are to be elected this fall.

Masters, Overseers, Lecturers, Stewards, Chaplains and Patrons, let me urge you to give Grange speakers a most cordial welcome. Get your fellow-farmers to come and hear the truth. Have application blanks, and when your good neighbors have been convinced, then ask them to sign the paper, pay the fee and thus become members of an Order that will strengthen them morally, socially, financially.

Now is the time to organize Granges. Go right to work. The harvest is ripe and ready for the gleaners.

Weigh all things in the scales of justice and tell me where some—yes, too many—of our public men will come out? How heavy a weight will counterbalance them? Surely, a very small weight will be too heavy for some of them.

VACA VALLEY.—W. L. Overhiser, P. M., writes that the horticulturists are now very busy plowing their orchards in Vaca Valley. More rain would be beneficial. He has spent several days visiting homes in different sections. Saturday last he visited and spoke at the Grange. Six new applications were received and a meeting held Monday to confer degrees on a new class of members. After visiting Dixon he was to return to Stockton, and start for Monterey and other southern counties on the 20th.

APPOINTMENTS ACCEPTED.—Past Master I. C. Steele accepts of the appointments made for him in the State canvass, saying: "I will do my best to fill the appointments made for me. My health is fairly good, and I hope my strength will be equal to the work." Hon. C. P. Berry states that he will fill all appointments made for him, with the exception of those at Eureka, Pilot Hill, Magnolia and Placerville Granges.

ENTERPRISE REUNION.—PERKINS, Sac. Co., March 8: Enterprise Grange, No. 129, will hold its annual reunion April 14th at Enterprise Hall, when a general good time is anticipated. All good Grangers are cordially invited to be with us.—MRS. FLORA HOLMES, Sec'y.

MANY Patrons will read in kindly remembrance the memorial of Alhambra Grange on the death of that venerable and faithful Patron, T. T. Hooper, which will appear in our next issue.

ACCEPTS.—Daniel Flint, P. M., accepts his appointment for work in the State canvas, and expresses satisfaction with his fellow speakers and the field assigned them.

WAKING UP LIVELY.—B. F. Walton, of Ex. Com. writes from Yuba City Grange March 9th: "We have a class of 23 to initiate on Saturday, the 12th inst."

CALIFORNIA PATRONS, in view of the State Grange canvas announced, should be present at every meeting of their subordinate Grange.

The Lecture Stand.

[By J. D. HUFFMAN, Lecturer State Grange, P. of H., of Cal.]

LODI, March 14, 1892.

Having just returned home, perhaps I had best give an account of myself for the last ten days. March 4th started for Selma Grange. Upon the train I found Bro. Frisbie, destined for the same place. Arrived safely at Selma and was there met by Bros. Holton and Roadhouse, and soon thereafter was placed under the kind care and protection of Bro. and Sister Holton at their home in the town. March 5th we attended a closed meeting of their Grange, the third and fourth degrees being conferred upon a class of four, after which a feast in the afternoon, and, in the evening, open meetings were held with flattering success, having secured 25 applications before leaving the town, and I feel quite sure they will have a class of 30 or more before their next meeting. Sunday, took a run down to Fresno to reconnoiter, and I think there is a good prospect there. On the 7th, we went to Tulare. Arriving there, we were met by the zealous Patron, Bro. A. J. Woods, and escorted to his home in the town, and were heartily welcomed by Sister Woods. March 8th, we attended a closed session and conferred the third and fourth degrees upon a class of four, I think, after which a feast was prepared at the hotel; in the afternoon an open meeting, the result of which was not so flattering as at Selma.

March 9th we left Tulare for Plainsburg or California Grange, but from neglect, oversight or mishap, there was no meeting held as per program, and we did not have the pleasure of meeting but two Patrons, and they were in the town of Plainsburg. One was boring a well for water so we could get something to drink when we got there, and the other one came in town after some plow points, and he left the town just as quick as the Lord would let him. Then Bro. F. and I set about for some means to get out of the place without going on foot. In due course of time, history and events that I have not the space to tell all about, suffice it to say, we reached Bro. J. A. Perry's home about 8:30 P. M. and gave them a complete surprise. Arriving there at that hour, we were much pleased to hear Sister J. A. Perry say she was glad we came, and we were welcomed as only true Patrons can welcome. Upon arriving there, I found Bro. Davis had assigned me to go to Madera, March 12th, to organize a Grange there, where Sister J. A. Perry had been and secured a charter list. March 11th, set about to get ready for that task. Upon going down to Merced, found Bro. and Sister Brouse. Sister Nettie Brouse then called upon Bro. and Sister A. Smith, and they with Sisters J. A. Perry and Emma Perry and Bro. Applegate, Master of Merced Grange, Bro. Frisbie and myself, made the arrangements for the move on Madera. On the evening of March 11th, all arrived there for work. Had some posters printed and circulated and held an open meeting on the 12th, and increased the charter list to 28. At 1 P. M., duly organized a Grange in that town and named the infant that day Madera, and the father's name is Grange, and elected and installed the officers. After adjournment, secured ten more applications. I see no reason why they cannot have as large a Grange there as at Merced. The officers for the remainder of the term are: W. M., F. J. Quant; W. O., E. S. Russell; W. Lect., B. W. Childs; W. Stew., A. E. Shedd; W. Ass't Stew., W. H. Dyer; W. Chap., J. J. Kerr; W. Treas., B. A. Maxson; W. Sec., Sister M. E. Quant; W. G. K., Oscar Eastin; W. C., Sister Addie Childs; W. P., Sister S. J. Arnold; W. F., Sister O. H. Eastin; W. L. A. S., Sister Rissa Kerr.

The Lesson of Spring.

It is only a leaf. But oh! how pretty it is. See it glisten in the bright spring sunshine! How nicely the hand of Nature has placed the varnish. Notice, if you please, its anatomy, study its physiology, and comprehend its hygienic power! Is it a paralleled, or an opposite veined-leaf? Do you know how much air its lungs purify for the plant or tree it ornaments, and for your lungs to inhale? Do you know how much nourishment that leaf gets from sun, moisture, air, for the stalk which is its parent? Have you ever thought what an ornament a leaf is? How dull and homely our trees, plants and vines are when the leaves are gone. How these same trees charm us with their beauty when the first leaves shoot forth! How we enjoy the cooling shade when the foliage is full and the hot days of summer are at hand!

Who does not love to sit beneath his vine and fig tree at early spring time, and enjoy the chorus which the feathered choir are ever ready to furnish? Among the leaves are the young birds; and the forest home or orchard bower seems almost a paradise in the early spring. But it is the leaf, the charming leaf, that has turned the desolate to the charming. It is the leaf that has added strength and beauty to the tree. Each leaf is an individuality; each leaf has a duty to perform, a work to do, a service to render. No one leaf completes the beauty of the plant, or gives more than a proper share to its development and growth. It is not the one leaf that makes the cooling shade or the life blood for vegetation. But it is all the leaves of the forest that go to make up this world of beauty, use and instruction.

Just so with our noble Order. Each member is one of the life-giving, health-producing, useful and ornamental leaves of the great fraternity of Patrons of Husbandry. With each spring our Order, like the trees and vines, ought to put on a new suit, and exhibit a new life and growth. New leaves—new members—full of life, health, growth and usefulness, ought to be found in every Grange. And new Granges, like the new trees, plants and vines, ought to be found in every community. Nature is not partial to this section or to that in the bestowal of the leaf. Neither is our Order partial to this county or to that in the organization of Granges. The world is the field both for leaves and for the Grange. And as the leaf purifies, ornaments and aids the tree or vine of which it is a part, so does the Grange purify, elevate and benefit any community in which it exists. What the leaf is to the vegetable world, the Grange is to the moral, financial, social and intellectual world. As you, in spring, love and admire the new leaf, so may you, fellow reader, love, admire and embrace the Grange. Let the leaf teach you its many lessons, and let the Grange assist you to enjoy and communicate the lesson thus learned. Study the leaf at the Grange school.

E. W. D.

Nicaragua Canal Matters.

Resolution Adopted by Watsonville Grange March 5, 1892.

WHEREAS, There is a canal company which has received a charter from the United States, Costa Rica and Nicaragua, for the purpose of constructing a ship canal from the Atlantic to the Pacific ocean, and

Whereas, Said company has called upon the United States to subscribe 70 per cent of the stock of the company, and

Whereas, It is of paramount interest to the agricultural and horticultural interests of the coast, and

Whereas, The railroad companies are doing all they can to prevent the construction of said canal, and are now about to build a railroad in opposition to it, therefore be it

Resolved by Watsonville Grange, in regular session assembled, that a copy of these resolutions be sent to the Secretary of the State Grange, and he be requested to correspond with said company as to present data, amount of capital stock, price per share, etc., believing as we do, that if the importance were fully understood, self-interest and protection would compel the farmer and fruit raiser of the Pacific Coast to subscribe for sufficient stock to elect a majority of the directors of said company and make the scheme a success and a perpetual menace to all carrying monopolies.

On receiving the above, I requested the desired information of Capt. W. L. Merry, the leading representative of the canal enterprise on this coast, who responded as follows:

SAN FRANCISCO, March 12, 1892.

A. T. Dewey, Esq., Sec. S. G of Cal.—DEAR SIR: Your esteemed favor of 10th [announcing the resolutions of Watsonville Grange asking information regarding the Nicaragua Canal Co.] is at hand. In compliance therewith I send you printed documents, which contain most of the information you want. The passage of the bill in Congress would largely modify the conditions existing between the Canal Co. and the Nicaragua Canal Construction Co., which has a contract for construction in case the Government does not act in the premises. In such event it is probable that the stock and bonds of the company will be negotiated in Europe in the near future, and I fear the canal will go under foreign control, which would be a blunder much more serious, however, politically than commercially. The Government will obtain for us the canal sooner and much cheaper than if constructed without Government control. Unfortunately, party politics and not legislation for the public good is the motive at Washington at present, and it will require united public opinion to force favorable action. In this the Grange can do much to aid the cause. The stock of the Canal Co. is selling in New York at about 60 per cent. The public will soon have a chance to subscribe to the first issue of five per cent bonds. A canal convention will be held here on March 29th, and I know that the Supervisors of the various counties will be pleased to have the State and subordinate Granges represented. Stockton Grange has already appointed delegates. If you will do so, please send me the names and I will see that they are welcomed. Yours very truly, WILLIAM L. MERRY.

One of the documents furnished by Capt. Merry contains much information concerning "The Inter-Oceanic Canal of Nicaragua," including its history, present plans and prospects, a copy of which volume we have mailed to Watsonville Grange. Next week, the RURAL will give more of the information requested by Watsonville Grange.

Recently, a letter was received by W. B. Ewer, M. A., of the RURAL PRESS, from Hon. M. M. Estee, recommending that the Master of the State Grange appoint delegates to the Convention in San Francisco mentioned by Capt. Merry, which letter was duly forwarded to Worthy Master Davis. Not feeling constitutionally authorized to appoint such delegates, the Worthy Master has expressed the desire that representative members of the Order be present and show the true interest of the Grange on that occasion.

A. T. DEWEY,
Sec. S. G. of Cal.

From Washington.

Mrs. Jennie Jewett, in recently writing from White Salmon, enclosing subscription for the RURAL PRESS, adds:

"Our Grange is doing well. We are to build a hall in the near future. We went to Lyall and installed their officers for them two weeks ago. Good speeches and recitations were enjoyed. As one of the Executive Committee of Washington State Grange, I had occasion to spend some time at Vancouver last summer. During that time I visited Fourth Plain Grange at the dedication of their fine new hall. I think it is one of the best Granges in the State. Henry Chint was Master. He is a power in his own right, and with a band of noble assistants, things have to move. During my sojourn there, State Master Russell and wife organized a Juvenile Grange at Fruit Valley, and a very earnest little band it seemed. So the good work goes on.

Mr. Jewett and myself hope soon to go to North Yakima to organize a Grange we have been working up by letter, also to look after Granges that we hope to encourage."

We hope to hear from Mrs. Jewett again, also Mr. Jewett, who is a horticultural farmer. Their place is beautifully located on the north side of the Columbia river, nearly opposite Hood River, the home of another able friend of the RURAL, Hon. E. L. Smith.

THE LECTURE CANVASS.—Granges over the State as a rule seem wide awake, with interest taken in the appointments recently published for a general State canvass. There has been an unusual number of orders received at the Secretary's office for blank applications for membership, song books and other evidences of general activity along the whole line. It is expected that all members will use their best efforts to make this first grand lecture canvass of the State Grange of California a splendid success.

PATRONS will find in another column an excellent original article on putting up fruit, etc., read by Mrs. Lizzie Hale recently before Stockton Grange. The reading of such original articles adds much to the value of Grange meetings, and when published, furnishes a still greater benefit to farmers' wives and households.

FARMERS' ALLIANCE.

Joined the People's Party.

TOPEKA, Kans., March 11.—The action of the Kansas Democratic State Central Committee in deciding to put no State electoral tickets in the field in the coming campaign, and to work for and vote with the People's Party, in consideration of certain Congressional candidates whom the People's Party agree shall be Democrats, has aroused the Republican leaders throughout the State.

It is now understood that in a few days a committee of prominent Kansas Republicans will go before the Republican National Committee and present a request for a retaliatory campaign in the South. The National Committee will be requested to organize a party in Georgia, North and South Carolina and Virginia, for united action with the Alliance, and in this way offset at least the action of the Kansas Democracy in trying to turn enough States in the People's Party column to throw the election of the next President into the next House of Representatives, which is Democratic.

An Alliance Campaign.

WASHINGTON, March 11.—The Alliance men in Congress have under consideration the establishment of a Congressional Campaign Committee on much the same basis as the Republican and Democratic committees, to look after their interests in the Congressional districts. It is also proposed to establish a national newspaper in Washington. These, and many other things of interest to the Alliance men, were discussed at a recent meeting at the home of Representative Watson of Georgia.

DENVER, March 11.—The Greystone Club has sent an invitation to the California delegation to the Democratic Convention to be guests of the club while in Denver en route to Chicago. It is expected the California delegation will arrive at Denver June 17, remain during the day and go to Chicago the next day with the Colorado delegation.

CONTROL OF LEGISLATION.—The Charlestown (W. Va.) *Farmers' Advocate* says: When the farmers owned this country 40 years ago, they controlled its legislation and rendered every class of business profitable. In 1892, when they own only 20 per cent of the wealth of the country, and every branch of the Government has passed out of their hands, paralysis of business of every character has followed, and it has become difficult for many to even obtain subsistence in a land of p'enty. Farmers, remember that the reins of government have simply passed out of your hands, but not beyond your control, if you make up your minds to influence their management or regain control of them. Isn't your situation a sufficient commentary on the wrongs you have endured, or do you wish to be further enslaved, ere you wake up. Verily, "a little more sleep; a little more slumber, and your poverty cometh as an armed man." Will you sleep on and lose your heritage?

ON A HIGHER PLANE.—The Georgia *People's Economist* says: The Alliance has no war to make on any profession or class except such as take away the fruits of the labor of the people under the guise of law. It seeks to place farming and farmers on a higher plane, and when this is done the country will be more uniformly prosperous. The decadence of England begun when the farmers of the seagirt isle began to fall behind and to grow restive under the unjust burdens they were bearing. Experience ought to suggest that the best time to forestall such results is to take time by the forelock and begin the work of reformation when the premonitory symptoms appear. This is what the Alliance has sought to do.

Cooper (Tex.) *People's Cause:* If the South and West must give up silver, genuine tariff reform, and every political principle, for a few Eastern votes, and under a threat of having a force bill, let us take the force bill along with other republican oppression, and make the most of it. Either we are for free silver coinage as a law or against it; either we are for a reduction of the tariff to a minimum on manufactured goods, as well as on raw material, or it is not an issue. This heathen Chinee political game of "now you see it and now you don't," is unworthy of the reputation of the South and West for vigor and honesty.

Chicago (Ill.) *Express:* By dividing the people into two camps, the privileged class on election day determines the result by buying the purchasable voters. Break away and keep in the middle of the straight road.

HORTICULTURE AT THE STANFORD UNIVERSITY.—It is announced that Emory E. Smith, who is well known to readers of the RURAL, has been placed in charge of the department of horticulture at the Stanford University. Horticulture is to be considered by itself and distinct from other branches of agriculture, and it is proposed to build up the department with all the advantages of the best facilities in the open air and under glass. In preparation for his work, Mr. Smith will spend some months in visiting horticultural establishments of all kinds at the East and abroad, and will aim at making the Stanford department the best of its kind anywhere. Mr. Smith's experience and training has been in this line hitherto, and he brings to the work youth, aspiration and a sincere love for the work. He is quick and energetic, a close observer and a good speaker, and we are glad this field has opened for the enlistment of his best efforts in California horticulture.

THE influx of tourists into Southern California this month has been greater than in the same period for several years. Several large excursion parties are expected during the coming two weeks.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CROP OUTLOOK.—Oroville *Register:* Reports upon crops up to the present time are of the most favorable nature. O. P. Ormsby says that toward Marysville everything is looking splendidly. G. H. Stout lately rode through Dayton and Durham grain fields and reports grain looking unusually fine. It has a good color and is stooling out well. Sam Patterson from Sundale says he has barley nearly knee high, and that Mr. Retson has rye heading out. Grain in all sections is very forward. Charley Hefner reports a good outlook for crops in Union district. B. Russell of Paradise says fruit and grain are very forward in his portion of the county. Reports from Gridley are very favorable, for all say grain is looking well. Near Moore Station the grass and grain are rank and vigorous. If the north wind does not injure crops, all that is needed will be moderate rains the latter part of this month or the first of next.

Colusa.

DRYING WIND JUST THE THING.—Colusa *Herald:* The north wind began to blow March 5th, continuing day and night for full three days, leaving no trace of the last bountiful rain in the brightening up of growing vegetation. The surface of the ground is hard and dry. Farmers say the wind is just the thing needed to check the too rapid growth of grain, and allow the stalk to gain strength and prevent it from falling down.

Los Angeles.

ORANGE CULTURE AT COVINA.—Cor. L. A. *Express:* Covina is surrounded by one of the very best and largest orange-growing districts in the county. Many of the settlers in this vicinity are now engaged in planting orange trees. The whole Phillips tract is destined soon to become a solid orange orchard.

LARGE DEMAND FOR DECIDUOUS FRUITS.—L. A. *Express:* Tree-planting for the season of 1892 is fairly under way. The supply of local stock is about exhausted, and importations must be relied upon. The daily receipts of nursery stock at the depots is very large—much greater than ever before. Great quantities of young trees are being shipped to Arizona and New Mexico. From these two Territories come orders of peach, apple, prune and apricot stock. The orders are more numerous and larger than during any previous season. So far, about three carloads of peach stock from the East have been received. They were carefully inspected before they were allowed to be unloaded. In fact, there is an inspector at the depots every day keeping an eye on diseased and bug-infested stock. Several consignments of peaches and apricots have developed the borer, a most dangerous pest. The trees were immediately destroyed. This year a good deal of almond stock has come from the East. The trees are a year old, and it is said the nurserymen find that the stock can be as easily grown there as in this State. The prospects for tree-planting are good. Hundreds of acres in this and adjoining counties have been prepared for fruit trees. In Antelope valley, a good many almonds have been set out. Commissioner Scott has in his office some specimens of the purple scale, which give an excellent idea of the destructiveness of that pest. The trees were imported from Florida three years ago, when there was no one to look after infested stock. These trees are literally eaten up with the purple scale. Oranges the size of waluuts are covered with the scale. The inspectors are doing all they can to clean up infested orchards. When the scale is very abundant, the better way is to burn the trees. Fumigation is also resorted to. In spite of all the inspectors are doing, the various scale bugs find lodgment. If orchardists and others were alive to their best interests, they would enter more heartily into the work of exterminating fruit pests. There is a great scarcity of olive stock. The demand has been so great as to exhaust the supply and prices have advanced. Good orange stock has also advanced in price. Olive culture has received considerable attention during the past two years.

Monterey.

CROP PROSPECTS.—Salinas City *Index:* J. P. Raymond, who has for years made it his business to collect local statistics of crop prospects for the information of dealers throughout the world, observes there is obvious need of a supply of water stored in the ground against the time when the grain fields are pumping large quantities for mature growth. It is now believed that the crop of this season will be unusually large, although some of our more cautious producers maintain that it is never safe to bet on a California crop until it is in the sack. The wheat granary of this section is in the southern end of the county, and the result of recent inquiries among producers has elicited the fact that the acreage is large and the present prospects never before so favorable as they are at the present time, especially on the mesa lands where production has never been so certain as upon the bottom lands.

Napa.

FRUIT GROWERS FEARFUL.—Calistoga *Calistogian:* Fruit growers are naturally alarmed at the outlook. Trees that should still be dormant are putting forth blossoms and foliage, and in some localities grape vines are already leafing. The supposition is, of course, that frost will follow the rains yet to come and that loss will result.

Sacramento.

HOP NOTES.—Sacramento *News*, March 10: The last few days of warm weather and north wind have alarmed many growers who fear a dry season. The result of a dry season would be a too rapid ripening of the catkins, hence a red hop. Old and experienced growers declare that there is a marked absence of moisture this year on the river bottoms. The snow in the mountains has not been sufficient to give the river the usual flood season. The river maintaining a low stage has not sufficient pressure to force the water through the levees and into the loose soil of adjacent fields. George Menke, Daniel Flint, W. H. Leeman, Russell Flint, E. Casselman and others have arranged to irrigate their yards. Pruning is progressing rapidly in the hop fields. No shoots have appeared as yet, and it is not expected that the earliest humulus twiners will begin their convolute journey up the poles for several weeks yet.

Solano.

FRUIT MEN IRRIGATING.—Davisville Cor. Dixon *Tribune:* Fruit men are preparing their machinery for irrigation. The Briggs vineyard has already started up, and the Oak Shade will follow in a few days. Mr. Gould has never resorted to artificial irrigation, relying solely upon the thorough cultivation of the soil, and in this he has never been disappointed, his vines yielding steadily a superior quality of raisins. Perhaps there is wisdom in this course; certainly the present season promises a fair test.

Stanislaus.

WEST SIDE CROP PROSPECTS.—Modesto *Herald*: The west side of the San Joaquin was more generously remembered by Jupiter Pluvius during the last storm than the east side. They had almost an inch of rain, and the plows are now at work summer-fallowing. The crops look well, and are growing rapidly under the genial rays of the warm sun; but C. C. Eastin says that unless they get two or three inches later on in the season, they will not reap a large harvest of grain away from the ditch.

Sutter.

RANK WINTER-SOWN GRAIN.—Woodland *Democrat:* J. B. Tisdale, a Sutter county farmer, says the crop prospects of that county were never better than at present. His farm is located 20 miles above Knight's Landing. The farmers never summerfallow any of the rich river bottom land of that vicinity. The winter-sown grain is thrifty and strong, and in many instances unusually rank. Mr. Tisdale is running sheep on his grain to prevent it from becoming too rank.

Tehama.

HOOKER.—*People's Cause:* One of the comparatively new and not the least prosperous of settlements in Tehama county is Hooker. Six years ago this small town in the northern confines of the county was unknown and the place was designated as Hooker creek. The creek is still there, a small, shallow stream, coursing through the canyons of the fertile hills, and along its banks are established a number of prosperous and picturesque homes, which bid fair to rival in beauty those of the older sections of the county. This settlement, within a radius of five miles, comprises over 100 families. A new depot has recently been built, an excellent school is maintained, and the small settlement promises to continue to grow in importance. Within half a mile of the depot, and on the bank of the creek from which the place takes its name, Dr. R. L. Hill, lately from Oakland, has built a home which has every appearance of affording pleasure, luxury and ease. The house is a handsome, two-story structure of modern architecture, with a broad veranda extending across the front. It is handsomely furnished and is provided with an extensive library. The grounds are sloping. Surrounding the house on three sides is a young and thrifty orchard of prune, peach, almond and other fruit trees. In front, the yard is handsomely laid out and planted to shrubbery. A large windmill and tank and pipe which are laid about the premises, form a convenient system of water works. It is the most pleasant country home to be found anywhere in the county. The homes here are all provided with young orchards which will come into bearing soon. S. D. Pierce has a pretty place. The Wilkinson Bros., three of them, all have nicely improved places, with young orchards growing on them. A colony of young Frenchmen are improving several tracts. Mr. John Hutchinson, an English gentlemen, lately purchased an 80-acre tract which he is putting in a high state of cultivation. He has erected a beautiful cottage on it, provided it with a large barn and outhouse, a tank and windmill, and has a force of men busy plowing and planting 12 acres to fruit. Mr. Wadsworth and Mr. Goff both have beautiful places at Hooker. The English gentlemen who recently purchased the Merrill place on South Fork, are planting 16,000 fruit trees this season and making many other improvements.

Tulare.

HOW TO PLANT TREES IN ALKALI LAND.—Grangeville Cor. Hanford *Journal:* The work of replanting trees on the Kimble prune ranch is about completed. About 20,000 trees were replanted. They were missing mostly in the spots where the alkali was strong. As the method of planting adopted on this ranch may be of benefit to others who contemplate planting trees in alkali land, we give it below: A hole is dug 2x2 feet and 2 feet deep, and good soil, sufficient to fill each hole, is hauled from land free from alkali and placed at each hole so as to be handy to fill in, and from one to three pounds of gypsum are mixed in with the dirt as it is thrown in, varying the amount according to the strength of alkali apparent in the land.

IRRIGATION DISTRICT ELECTION.—Traver *Advocate*: In response to inquiry relative to the election of directors from the Secretary of the Alta irrigation district in this county, Attorney-General Hart has rendered the following opinion, which is applicable to all irrigation districts in the State: "The act of March 20, 1891, provided that an election shall be held in each irrigation district on the first Wednesday in February, 1893. This would seem to repeal the law requiring an election to be held on the first Wednesday in April in even numbered years, and consequently the present directors will hold over until 1893. The term of the present directors expires in April, 1892, but as there is no provision for electing their successors until 1893, they will continue to hold over until the qualification of their successors. Section 879 of the Political Code, providing that every officer must continue to discharge the duties of his office, although his term has expired, until his successor has qualified, applies to irrigation districts as well as to other officers."

CROP PROSPECTS.—Visalia *Delta*: The prospect for the largest wheat crop in the history of this valley is exceedingly flattering at this day. From every part of the county come reports that the growing grain could not look better. The outlook is very favorable for the largest wheat crop of any county in the State, and Tulare promises to be the banner wheat county of the Golden State again. The grain men are making unusual preparations to handle the vast crop to be harvested. Warehouses will be erected at Reedley and Dinuba, and additions will be added to warehouses now constructed.

TO PROTECT TREES FROM SUNBURN.—C. J. Berry in Visalia *Times:* To the fruit grower, his best friend is the sun. It is the bright and continuous sunshine of California, particularly of Tulare county, that gives us these luscious and highly colored peaches, fine prunes and delicious pears, for which our district is becoming so rapidly famous. While the sun is our good friend when our trees are grown up, he must be guarded against in protecting the bodies of our young trees from his warm rays. There are several ways of doing this effectually. One way is the use of shakes, stood up alongside of the tree on its southwest side. If there are no rabbits to annoy you, the following is a better remedy than the shakes: Take one pound whale-oil soap; mix with one gallon water; add whiting enough to make a thick whitewash and daub on the trunk of your tree close down to the ground, even putting it a little way under the ground. The soap is a good protection against borers. The whiting deflects the rays of the sun. If it should rain after applying them, apply again. If, during the summer, you should have a sandstorm and the blowing of the sand whips the whiting off them, apply again. This remedy is no more protection against rabbits than the shake. In order to protect your trees against rabbits and sun, too, I have found the using of any paper that is free from tar, any old grain sack wrapped loosely about the tree's trunk, and a good tree wrap made out of a thin shaving of wood, now sold in the market for a small price. If you expect to grow an orchard, it is positively necessary that you protect the bodies of your young trees from sunburn.

NEVADA.

LIVE STOCK AND BUTTER INDUSTRIES.—Virginia *Chronicle*: While the silver market is lagging, not through a lack of the white metal in Nevada, the State is coming to the front as a producer of live stock and prime butter. Cattle shipments to the Golden State are of daily occurrence. The creamery business is also booming, and Nevada will soon supply a large proportion of the Pacific Slope with choice butter. Before the end of the year many new creameries will be erected. The Nevada Commercial Company will commence the erection of two more creameries at an early day—one in Jacks valley and the other near Baseman's ranch, at the head of Carson valley.

THE HOME CIRCLE.

The Old Folks' Longing.

Don't go to the theater, lecture or ball,
But stay in your room to-night;
Deny yourself to the friends that call,
And a good, long letter write—
Write to the sad old folks at home
Who sit, when the day is done,
With folded hands and downcast eyes,
And think of the absent one.

Don't selfishly scribble "Excuse my haste,
I've scarcely the time to write,"
Lest their brooding thoughts go wandering back
To many a by-gone night
When they lost their needed sleep and rest,
And every breath was a prayer
That God would leave their little babe
To their tender love and care.

Don't let them feel that you've no more need
Of their love and counsel wise,
For the heart grows strongly sensitive
When age has dimmed the eyes.
It might be well to let them believe
You never forget them quite—
That you deem it a pleasure when far away
Long letters home to write.

Don't think that the young and giddy friends,
Who make your pastime gay,
Have half the anxious thoughts for you
That the old folks have to-day.
The duty of writing do not put off;
Let sleep or pleasure wait,
Lest the letter for which they waited and longed
Be a day or an hour too late.

For the sad old folks at home,
With locks fast turning white,
Are longing to hear of the absent one,
So write them a letter to-night.

—Portland Oregonian.

Deacon Babcock's Second Wife.

Conversationally, Deacon Seth Babcock's second wife had shaken the village of Petit Hollow from center to circumference. From the moment she walked into church, quiet and unpretentious as her modest bridal garb, the people in general disliked her. Yet there was nothing offensive in the mild glance of her soft brown eyes, which were so near-sighted that she could scarcely tell one person from another. From the waves of her chestnut-hued hair to the tip of her dainty foot she was a lady. "A stranger at their gate."

It was a crime against the public in their opinion, that Deacon Babcock, the corner-stone of the church, religiously and financially should choose a wife out of his own town—and marry her unbeknown to anyone. The very atmosphere became heavily saturated with the subject, and the loungers in the store and at the postoffice talked it over daily. Even the schoolchildren felt that somehow the deacon, as supervisor of schools, had lowered himself in their estimation, and kept a sharp eye on the daily life of Mrs. Babcock, as seen from the porch of the brick edifice where they sought to walk in wisdom's ways for six hours out of the twenty-four, five days weekly.

Her first real offense was "making up" with the deacon's oldest daughter Harriet, who had married against his wishes. Somehow she showed the worthy man that it was wrong to be so unforgiving, and the daughter, who had not crossed his threshold for twelve years, spent Thanksgiving day with her father. He discovered that her husband was "quite a man, after all."

Secondly, she used the first Mrs. Babcock's parlor furniture every day, in the bare sitting room, which she had converted into almost a bower of beauty, with flowering plants and climbing vines showing between the soft folds of creamy falling curtains at the large staring windows. Here a picture, there a statue or vase, a bit of color in the shape of afghan for the slippery hair-cloth sofa, plump cushions and head rests, gay trifles of fancy work, a gilded cage with a gorgeously plumed parrot; and last but not least, the first plush parlor suit Petit Hollow had ever seen in *her* parlor.

But the third and greatest sin of her committing remains to be told. Society was indignant. A murder had been known to create less sensation. If mob law had been in vogue, Aunt Phrasie Gilly and Sister Eliza Sturgis would have advocated lynching little Mrs. Babcock. The former ladies were the leading gossips of the place, who were always excited in an inverse ratio to the real importance of the subject.

Down at the store, the village potentates talked it over. Reuel Smith, the deacon's first wife's cousin, was spokesman:

"Seems as ef Seth was kind o' henpecked, don't it?" leaning back lazily on his seat of grain bags.

"Does so," responded 'Lias Tarr, hitching around on his nail keg so as to have a better aim at the stove hearth. "Don't 'low him to drink no coffee now."

"On account of his dispepsy," said a mild little man behind the stove.

"Cat's foot!" exclaimed Reuel so contemptuously that the speaker drew back in affright and made no further remark.

"Tight-fisted, ain't she, Steve?" to the spruce trader behind the counter.

"Looks like it," assented Steve, carefully arranging the pencil over his right ear. "Looks like it. Did Sunday, anyhow. If you had been there you'd seen Deacon Babcock passing around the contribution box in a plain cotton shirt—no bosom—just a fold in front, buttoned up with cheap agate buttons, not even starched."

"Whew!" said 'Lias. "An' he's the man that always wore a stiff, boiled shirt and stand-up dicky to town meetin'."

"His fust wife always kept him spic an' span," said the man behind the stove.

"That's so," said Smith, feeling complimented by the tribute to his cousin's merits. "But I don't think much of schoolmarms for wives, anyway. They're too well posted; trip a fellow up, you know. Why, Sile Snow's wife, she that was Ellen Dawson, over to the Corners, would set right down, every time she spent an extra dollar, an' calkilate how much 'twould amount to put out to interest in, say forty years. Apt to be too savin' some ways, and then again extravagant other ways. Always wants good furnitoor an' books, and newspapers a plenty."

"Yes, sartin; but I allow they generally have smart children, an, their husbands get rather forehanded," said 'Lias Briggs with a sly chuckle, for the storekeeper's wife was an ex-schoolteacher. Smith's wife, a robust hired girl before marriage, was now the village washerwoman, doing her best to help her shiftless spouse support his family.

"Thet ain't here nor there! 'Twas real mean to send the poor old deacon to meetin' with a shirt on like that," retorted Smith, lighting his pipe and buttoning his coat preparatory to going home.

Mrs. Smith told the news at Squire Graham's, and Mrs. Graham "ran in" to several houses to repeat it. Aunt Selina Tarr had "observed it when the old saint passed round the sacrament," and all agreed that the worthy man was an abused person.

At the Thursday night prayer-meeting, poor Mrs. Babcock felt the social chill that pervaded the atmosphere and wondered what ailed every one. The deacon seemed odd, too. She strained her near-sighted eyes to be sure she had not spoken to the wrong people, and concluded that perhaps the wrong feeling was in her own breast.

Friday afternoon her husband's other daughter came over from Brompton to spend a day or two. Young Mrs. Lee was very kind and cordial to her step-mother and commented freely on the many improvements that had been made by the new mistress in the interior.

"I am so glad you came to-day; now you will go over to Mrs. Graham's to the church sociable to-night, won't you? exclaimed Mrs. Babcock.

"Yes, indeed; but here comes pa," and the daughter ran to meet the father as joyfully as a little child. As her eyes ran over his person, her face changed in expression and her manner became constrained.

Mrs. Babcock sighed as they sat down to the cheerful tea table with its snowy linen, gold-banded china and cut glass. She had found her husband rather silent lately—he seemed sulky—only she would not use the word even in thought.

It had not been a love match, only grounded in friendship and strengthened by respect. Deacon Babcock had been her father's best friend, and hers from childhood up to middle age. She was a lonely little schoolteacher without father, brother or any near relative. Her lover—the one love of her life—lay in an unknown grave somewhere on a Southern battle field. She felt it would be a rest, a change, to be the wife of such a good man; and, above all, she would once more be independent. She was trying to do her duty. The deacon had reached that time in life when the senses seem a little dulled and home comforts are the only refuge.

"I guess you found pa's wardrobe a little out of repair," said Mrs. Lee, with a disagreeable smile as she toyed with a spoonful of golden honey.

"Rather. His linen was, to say the least, deficient," smiling. "I have made him a dozen fine shirts, and am knitting him some woolen socks."

A cloud passed over her husband's face.

"Yes," said Mrs. Lee, with a peculiar inflection. "What nice corned beef this is, pa!"

Deacon Babcock declined to attend the sociable, and his wife, not a little hurt by the curtness of his refusal, departed with her step-daughter, feeling rather sober.

It was a very unpleasant evening for Mrs. Babcock. The ladies were severely cool, and one or two had slighted her openly. At length she withdrew in a cozy curtained alcove in the broad hall and sat down on the window shelf, looking out on the moonlit garden and gnarled old trees. Suddenly voices drew near—she recognized Harriet's.

"I tell you, Ellen, she is just as good to him as she can be," she was saying warmly.

"Perhaps so," returned Mrs. Lee, cautiously lowering her voice, "but she makes him cotton shirts for his best. He told me so—he hasn't worn but one of them yet—and Mrs. Graham told me, too. Said she thought 'she would cry to see him try to button up his coat with his trembling old fingers'—to hide it, you know."

"Don't believe a word of it," declared Harriet. "'Tain't a mite like her! Sh! Here comes Miss Tarr."

Mrs. Babcock winked very hard to keep back the tears, and her cheeks burned. Just before she bade her hostess good evening, she overheard some remarks about the deacon staying at home "because he hadn't a decent shirt to wear." Perhaps the women—Mrs. Gilly and Miss Sturgis—intended that she should hear. It was a very determined woman that invited the company, collectively, to spend the next evening with her and her husband, in honor of Mrs. Lee's presence at her old home.

Curiosity caused all to assemble at Deacon Babcock's at an early hour. Mrs. Babcock, and her husband in an immaculate shirt front, received the guests. She set all at ease by a pleasant tact of getting the right persons together. Music and conversation was the only entertainment until a dainty collation was served. After coffee and cake, most people feel good-natured.

Mrs. Babcock called Aunt Phrasie Gilly's attention to a collection of foreign photographs, and a group soon gathered around the table. "I will show you something I have been doing myself," she said, modestly, showing them a panel of pansies done in water colors, on which this stanza stood out in bold relief, being done in illuminated letters:

"Against the darkness outer,
God's light his likeness takes;
And He, from the mighty doubter,
The great believer makes."

The deacon cleared his throat as if about to make a mighty effort. "Hem! I want your attention, friends, individooally and collectively. She has got a meaning in them verses. You all mistrusted her an' ill-used her, 'mighty doubters;' now I want you to be 'great believers.' She's the best wife a man ever had, and you've all been making a great fuss, an' setting Harriet an' Ellen against her because I didn't—know—enough—not to wear a shirt *hind side ajore!*"

Amid shouts of laughter, the good man sat down. The men awkwardly joked him, and the women, one by one, stole off with Harriet to look at the drawer full of nice shirts, with glossy fronts, opening behind instead of in front, as the old gentleman had been accustomed to wear them.

To think of his being so stupid as not to see and "her being so near-sighted as not to see either," said Ellen, with a laugh.

"To think of our all being such fools," said Mrs. Graham, shortly, flouncing downstairs.

From that day, Mrs. Babcock had no cause to complain of her neighbors' coolness. Opinion veered as suddenly as a weather cock, and she became the village authority on manners, methods and modes. Some of the men growled and did not take kindly to the garments with which the clothes-lines in Petit Hollow were, ever after, weekly adorned, said garments *all buttoning behind*.—Sarah P. E. Hawthorne in Portland Transcript.

The Memory of Mag.

There was one more knot to tie, and after a little difficulty Mother Grubb tied it. Her wrinkled fingers were slow and clumsy, but the work was done at last, and then the old woman laid the bundle carefully on the table and looked at it. She stood silent for a moment and then began to grope clumsily in her pocket. Mother Grubb was crying.

After another tender look at the queer object, the old woman reached for the faded green shawl that hung on a lonesome nail in the corner, and tremblingly placed it upon her bent old back. It took time to get ready, to put on her shabby bonnet, and to get the snake-like crutch that stood against the wall. Old Mother Grubb was not so young as she had been, and a journey of this sort was not a common thing with her.

At last she was ready. With a tedious hobble she went to the table, took up the awkward bundle, kissed it and started off. The wind slammed the door as she crossed the sill. She saw the crowd of scapegraces ahead of her, ready to make fun of her faded clothes and her old-fashioned bonnet, as they had done in years gone by. But Mother Grubb set her teeth and hobbled on.

When the old woman saw that she was going to be bothered again she clasped her bundle more tightly and tried to hurry, but all in vain. The boys came up with malicious grins on their impish faces, all primed for sport.

"I say, Mother Grubb," said one youngster, with a saucy look on his dirty face, "what yer got in the bundle?"

"That's so," said another warty young one; "what is it?"

Mother Grubb did not appear to notice the boys, but clasped the roll passionately to her breast.

"Come, mammy," said the first little fellow, "show us, or we'll plague yer."

Mammy did not pay any attention, but, with an added effort, walked steadily on.

"I say, Mother Grubb, yer don't come out so much now as yer useter 'fore Mag died, do yer?" said another grimy urchin, as he prodded the old woman with a stick.

Mother Grubb did not seem to mind the stick, but the sound of Mag's name worked a change. The tears began to roll down her wrinkled cheeks, as she thought of the little child with her brown eyes and bright smile. Still she pressed on along the dreary road.

Her step was heavier now, and she was getting tired. The youngsters followed her closely, and plied her with all sorts of questions. "When are you going to sell the bonnet, Mammy?" and "How old is the shawl?" Still Mother Grubb pushed wearily on.

"Say, ain't yer goin' show us what yer got in the bundle?" said the curious lad who had spoken first. "Show us what yer got."

Mother Grubb stopped short and looked at her tormentors. The tears were still on her face, and such a face! It was old and homely and wrinkled, but there was such a loving look upon it. The tears seemed to add to the sadness. The boys were abashed. Old Mother Grubb had never cried that way before.

Without a word the old crone slowly untied the bundle. The knots were hard and yielded stiffly to the awkward attempts; but at last they were untied. The youngsters were still eager to see the contents of the curious bundle, and watched every movement of the withered hands. The wrapper came off slowly, but soon it was off. With a look of ineffable sadness the old woman lifted the object to her lips and then held it up to the boys. It was only a piece of wood in the form of a cross, with a few words straggling upon it.

The boys fell back. They had not expected that. They didn't know what to say. In a moment, however, one little fellow spoke, as he took his cap off: "We didn't know it was that Mammy. We won't trouble yer any more. Excuse us, ma'am." The old woman looked at the boys for an instant, and seemed to say yes. Then she slowly wrapped up her cross, and wearily hobbled on.

Her steps grew feebler as she neared the graveyard. Now and then she would stop with a twinge of pain as some obstinate stone got in her way and bruised her tired feet. Her face, however, became brighter the farther she went. The sunshine was kissing her aged cheeks. Slowly she plodded on amongst the gloomy headstones; but those marble slabs held no interest for her.

She pressed on, over turf and fallen leaves, until she came to one lonely grave. The ground crackled under her feet. The grass on the grave was fading and the few flowers on the top were now withered and old. Mother Grubb got down on her hands and knees after a painful effort, and brushed away the rotting leaves. Then she began to dig away the earth at the head of the grave with an old rusty

knife. The ground was getting hard, now that the fall had come, and the threads of frost covered the loam with silver. It was not easy for the old woman to dig. She seemed to grow tired, but she still kept on.

Her hands were trembling as she was finishing the work, and the tears began to come again. With a painful effort she reached for the cross, where it had fallen at her side. She kissed it again, and pressed it to her breast long and tenderly. With another effort she stuck the end into the hole which she had dug.

The cross dropped into place with a slight jar. Old Mother Grubb reached forward to touch it, and then tried to get up. A flush came over her face and a smile lighted her eyes—then she fell heavily downward on the grave. They found her the next day, with that loving look upon her wrinkled face, and the rusty old knife in her bony hand.—J. Walter Smith, in the Harvard Advocate.

YOUNG FOLKS' COLUMN.

Siskiyou Boys.

[Written for the RURAL PRESS by DUANE MORLEY.]

"Brad" and "Chet" Goodwin were mending the old hay rake out on the common before the doors of the big hay and cow barn, preparatory to the hay harvest. The long meadows were to be cut and their weight and bulk of choice provender stored away in the long mows for winter. The old Buckeye mower had been refitted, the sickles ground, and even then it was heard in the not distant field. "Brad" and "Chet" were brothers—Brad the leader, twenty-five past, quiet but amiable, and full of business when business was the order. Chet was younger by five years, though larger, and dark of skin, while his brother Bradford was fair. Chester, or "Chet," could give or take a joke with equal grace, wherever the laugh came in; he was as quick to join in as any, and for any misdeed, any little ebullition of temper, an excuse was always ready upon his lips for the offender.

You will have to look in more valleys than Broad Valley, Siskiyou county, California, to find better boys than the warm-hearted Goodwin boys.

Mr. Goodwin had made a fortune in the gold fields, and by speculation lost it. Now he was old and crippled. Mrs. Goodwin, though aged, was vigorous, superintending and managing, by the help of a daughter, and a Chinaman for all work, the manufacture of the butter. And such butter! One would have to go back to St. Albans for nicer or sweeter. Now everything had not been swept by speculation; there were cattle ranges, meadows and pastures, buildings and orchards, and mountain sides clad with pine, scrub oak, fir and cedar, while in the far distance were the mountain meadows where the wild deer fed and the springs gushing out from the rocks from which they drank. But Brad and Chet were mending the hay rake, tightening the irons and shaping back the stretched out teeth so that they would catch and carry the long, succulent sun-dried grasses. Whatever they had been talking about while working, the subject had dropped; in fact, both were thinking pretty seriously about the haying and the harvest which was to follow; so there was more thought than expression.

Finally Chet spoke up. "Where are we going to get a fellow to help us?"

"Don't know," answered Brad; "perhaps one will come along."

"Come along?" was Chet's rejoinder, "not much, up here where we are, at the head of the valley. If we were down to the 'Fort,' or over at 'Rough and Ready,' likely enough."

"Well," continued Brad, "if no one comes along before then I'll see the Budinger boys to-morrow night and have them look out around the 'Fort' for a good man for us."

While they were yet speaking, a solid-built boy seventeen years of age was rounding the bend of the road and coming into view from behind the clumps of chapparal and manzanita. I wish to add that he was red-headed and very determined in spirit, for he was then looking down and talking to himself about how he would find work somewhere. "Ef Brad and Chet," said he "don't give me work some one else shall." As he looked up he saw the boys, himself yet some distance away. "Ther's the boys now," said he. I'm glad Chet's ther for he'll be on my side." Brad he had seen but once or twice, and never to speak to.

"Hayin'?" he asked, as he came near.

"Yes," Chet answered, "we are just beginning; you hear the old Buckeye singing over there, don't you?"

"Yes," the boy replied, listening, "I du now; he's a rippin' it fer all thet's out, ain't he? It's Jud er mowin' ain't it?"

Chet answered "yes," and turning to Bradford said: "You know Will Bray, don't you Brad?"

"Yes, remember seeing him down to the lumber camp; Crabbe pointed him out to me one day. Glad to see you Bray. Are you going to the Fort?"

"No; nuthin' ter go ter town fer. I come over ter help yer through hayin' ef yer'll give me a chance."

"Why," said Brad with surprise, "I thought you were lumbering.

"Wus, but mills shet down fer want o logs, thet's what they makes ther lumber on, yer know. Father's gone ter Arcata; don't know how he'll find things ther, and mother says es how I must get something ter do, so I can clothe myself and start in with ther school when it takes up fer winter. She says it's er shame fer me ter grow up and know nuthin', an' I guess she's right. Yer can let me hev the work, can't ye?"

Then there was a long pause and not a little awkward, Brad scowling over the thought of taking on a green hand and Chet grinning and idly fingering the wrenches and other tools, while Will was nervously digging his toes into the dirt and unconsciously drawing a sigh. Finally Brad said: "You stay about until after dinner and I'll talk with mother about it." Then instantly, as if a point had been forgotten: "You are no milker are you Bray?"

"W'y yes," said Bray, "milk our ole cow all summer."

Then both Brad and Chet haw hawed long and loud, until Will got red in the face.

"Milking your old cow don't make you a milker! If you could milk your 'string' of cows that would do. 'String,' let me say, is a technical designation of the number usually alloted to a milker."

"I kin try," Will replied to Bradford; "gimme my cows, I'll do 'em somehow."

"Well, stay to dinner," said Brad, "and I will see mother about it."

As the hay rake was about mended, Chet took young Bray off to show him his nice young pigs, and as much to assure him that his chance for a job was a very good one. At noon Mrs. Goodwin's decision was "that the boy should have a chance if he was in real earnest about going to school and would work faithfully." So they came to terms and Will started in.

Will had good qualities, was strong, patient, persevering, able to bear ridicule, and not very hasty in temper, if his hair was red, and while at first he was clumsy, he finally became very apt—the making of a capable workman. He was better in the hay field than in the barn, yet in the latter place he soon equalled the rest. It was his dogged determination which carried him through. Three or four cows was Will's best score at the start, gradually increasing to eight, ten, twelve, and finally, when three months were past and gone, he scored his full "string." It is almost a marvel how he stayed with it, for his fingers were short and thick—little adapted to the work—and the cows, unaccustomed to him, abused him miserably, hooking him and sometimes kicking him clear across the shed floor and against the wall. He never complained, but readjusted stool and bucket, starting in again as though nothing unpleasant had occurred. Chet was always full of fun, poking ridicule at Will for being so slow, and he had a habit of pointing off his jokes with a comic rhyme. At first he used to sing:

"There sits Will by his one little cow,
He'll never get through, 'cause he don't know how."

In the hay field he sang a snatch something like this:

"If William Bray don't pitch that hay,
He'll go away without his pay;
Now William Bray, heed what I say,
Or rue you will that rueful day."

It was simply sport on Chet's part, and Will received it as such. One day the Chinaman fell ill, his skin turning nearly black. He refused food and kept his pallet, save as he went about through the brush gathering herbs, which he stewed, drinking off the liquor in great quantities. While he was off duty Will took his place about the house, helping at the butter and cheese-making. So faithful was he, that Mrs. Goodwin pronounced him a number one helper, and always afterward, whenever Chet would ridicule Will at the table, as he was likely to do, Mrs. Goodwin would defend him, not only with her tongue but with any weapon seizable.

Brad was more reserved than Chet, being older, and having, so to speak, the farm upon his shoulders; but there were times when he would mellow up like a sweet-bough apple in the sun. At such times he would get out his violin and play some of those quaint melodies which so readily catch the ear and hold the heart in thrall.

One evening, as I remember, we sat out on the south porch of the rambling old house, the moon hanging broad and full over a far away mountain gulch, and shedding her silver glory alike on mountain peak and pointed pine. Mrs. Goodwin entertained us with stories of the old days—"the days of forty-nine"—until we could almost see the forms of the departed miners gather in the shadows about us. Mingling in with the old lady's mellow words came the delicately ravishing notes of the violin. Never shall I forget that evening, and Bradford was very considerate. When the harvest was done and the threshing on and finished, that last night he collected the thresher boys into the long room—once a storehouse, a broad fireplace at one end brimmed and burning. He treated them royally to fruits and cakes, played the violin for their entertainment, and drew from each of them a song or a story. Of course it was rude, but it was warm with human-heartedness.

Will stayed right along until the fall plowing was done and the winter grain sown; then, there being a lull in the work, the boys, with one good recruit added, went up into the farther mountains after deer. While they were fitting themselves out for the trip, rigging up the camp tent and the cooking utensils, and, lastly cleaning their guns, Will happened to think he was without one. "Always behind," said Chet, with good natured sarcasm, "never think till the last minute of the thing most important. I'll tell you, Will," he added, "shoot the deer with a tent stake; you will get about as many that way."

"No," was Will's response, "it must be a gun, er no go fer me."

"I'll tell you," chimed in Mrs. Goodwin, who had heard it all and was waiting to know Will's conclusion in the matter, "I've got a good second-hand Henry and a full equipment with it. You can take that, Will, with the understanding that if you shoot a deer with it, that the deer shall be my present to your mother. I know the boys will agree to it."

They all agreed, Will included, and off they went, the others declaring that Will would not shoot one 'cause he was so slow.

To narrate the sport they had would take more space than the printer would be willing to yield, but they had a happy, glorious time, drinking in with the cold spring water the health-giving odors of the cedars and pines. They took turn about at camp-keeping and cooking, and out among the pines were very careful against accidents. Will's every shot went wrong up to the last day before breaking camp, and as that was Will's day to cook, he gave it up that his departure would be without deer—at least of his own shooting; but that last day he made full preparations for a fine supper for the boys upon their return, getting things over the fire in good season. When he started down the slope to the spring for the last bucket of water, it was without his gun, but he returned and got it. Arriving at the spring, and in the act of drawing himself up, bucket of water in hand, his gun leaning against the rocks, a magnificent stag walked leisurely out of the brush into an open place and stood stock still, looking Will calmly in the face. As for Will, he shook and trembled as with an ague, set down his bucket and grasped his gun. Then, realizing that it was his last chance to secure a deer, by a mighty effort he calmed his nerves, slid his gunbarrel across the rocks, took good aim and let drive. Down came the deer prone in his tracks. Will's feelings I will not attempt to analyze nor his actions describe, though I suppose both were of the kind called *capery*. When the boys came in, they were laden with game and in good spirits.

"Takes us to shoot deer," said Chet. "If you could do it, Will, there might be some fun for you; but to be a camp sutler, bah!"

"Take a good long year to practice," said Judson, and then come up next season and show your marksmanship—that's what I say.

Will waited a moment for Brad to put in a word, and he keeping still, blurted out: "Mebbe yer fellers thinks I can't shoot. Ef yer do, jest go down ter ther spring and se what you find in ther open space fifty yards on beyant et."

Brad, seeing that Will meant it, was the first to run down the slope, past the spring and over to the opening where the deer lay. They got it up to the camp, rough dressed it, and Will was so proud of it that next day he slung it on to his saddle and carried it in whole. It was a magnificent prize and it ended the sarcasm lavished on Will Bray. When he handed back the gun to Mrs. Goodwin, he told her "thet he wus proud of et, fer et hed fetched him the biggest deer of the season." Her answer was "that since he liked it so well, she would present it to him, if at the close of his winter schooling he won the first prize for good scholarship." Mrs. Goodwin sold the deer pelt to a peddler for a nice pair of shoes for Mrs. Bray, and took the carcass over to her in her carriage. So ended the hunting expedition.

(*Concluded next week*)

DOMESTIC ECONOMY.

Putting Up Fruit at Home.

STOCKTON, March 5, 1892.

TO THE EDITOR:—I have been requested to give my method of preparing fruits, jellies and pickles, and am aware that every housekeeper has her own way of canning fruits, and perhaps thinks it the best; but a comparison of methods often helps each to discover defects in her own way.

To have good canned fruit, one must have good fruit to can. In preparing fresh fruits, such as peaches, apricots and pears, I make a syrup of the proportion of one coffee cup of sugar to one and one-half cups of water, using a granite pan or kettle. When the syrup reaches the boiling heat, drop in fruit sufficient to fill three cans, so that it may cook evenly and not crowd together. When tender, fill the cans nearly full of the fruit, then fill with the syrup, wipe the groove dry and seal immediately with either rosin and beeswax or fruit sealing-wax which comes prepared for that purpose.

Berries, cherries and plums require more sugar, being more acid. I am aware that many are opposed to the use of cans, but my experience proves that the fruit is firmer, retains the natural flavor better, and keeps longer than when glass jars are used, providing the cans are perfectly air tight. I often find that fresh fruit, after having been kept for a few months, becomes soft, or a portion of the top layer, which seems to permeate the whole jar, destroying the good flavor. For preserves, berries, jams and sweet pickles, the glass jars are always desirable.

In preserving, the old time custom was to use a pound of sugar to a pound of fruit, and it required that amount to keep it; but since the self-sealing jar has superseded the stone, three quarters of a pound of sugar to one of fruit is sufficient, and I think more agreeable to the taste. After boiling and skimming the syrup, drop in the fruit which has been previously weighed, adding a few of the blanched pits (to improve the flavor), and cook until the fruit looks clear. Use one cup of water to each pound of fruit for the syrup. All fruits should be sealed hot, and after the fruit cools, give the tops an occasional turn as they loosen as the cooling glass contracts. When put away, the jars should be wrapped in paper or cloth and kept from the light. If it is desired to keep the fruit whole, fill the jar with it, then cover with warm (not hot) syrup and place in a kettle of water on the back of the stove, where it will cook slowly. Have an extra bottle filled with the fruit with which to refill the jar as the fruit shrinks, and when tender, fill with the boiling syrup and seal at once.

Fruits for jelly, such as berries and currants, require no water, simply mashing and cooking in their own juice, after which, strain through a flannel bag, letting it drip if wanted clear, as squeezing makes it cloudy. The rule is a pound of sugar to a pint of juice, but I find measuring more convenient—cup for cup or bowl for bowl. Before adding sugar to the juice, boil and skim; then add the sugar and boil and skim again. Then boil until it drops in thick drops from the spoon. For quince, apple, crabapple and apricot, I scant the measure of sugar. Fill the glasses, and when cool, put on the top a brandied paper, cover that with another paper sealed to the glass, and keep in a cool, dry place.

My rule for sweet pickles of all kinds (except figs, which require less sugar) is seven pounds of fruit, four of sugar and one quart of good vinegar, whole spices, a little of clove, cinnamon and allspice tied in a cloth, boiling it with the vinegar. When the fruit can be easily pierced with a straw, it is ready to bottle and seal. I have tested receipts for orange and fig marmalade, and also for crystallizing fruits, which any one can have if they wish.

LIZZIE D. HALE.

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BY THE DEWEY PUBLISHING CO.

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ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 19, 1892.

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[NEW THIS ISSUE.]

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Carriages, Harness, Etc.—California Wagon and Carriage Co.
Harrows—Allison, Neff & Co.
Combined Harvesters—Stockton C. H. & A. Works, Stockton.
Flour—Farmers' Union and Milling Co., Stockton.
Bookkeeping Taught—H. K. Starkweather Co.
Cultivator—S. W. Luitwieler, Santa Ana.
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Trusses—Magnetic Elastic Truss Co.
Windmills, Pumps, Etc.—Woodin & Little.
Analytical Chemists and Assayers—Wade & Wade, Los Angeles.
"Germania"—The J. C. Jens Co.
Catalogue of Seeds, Bulbs, Etc.—Mrs. Theodosia B. Shepherd, Ventura.

☞ *See Advertising Columns.*

The Week.

The season has righted itself on the rain record by the week's downpours, and in most parts of the State all that remains is to watch with confidence for the spring showers which will make the crop. It has been a glorious winter, barring the drop in temperature which hurt the oranges and gave a sorry look to some ornamentals of the tender kinds. It has been a fine winter for work, and very few days, indeed, have been unsuitable for outdoor occupations. The great area of grain and the large plantations of trees and vines can now proceed under good growing conditions to reward the industrious planter. The outlook is as fine as the State ever enjoyed at this season. There has been no waste from flood, nor likelihood of any. Nearly all lands have been available, and with favorable conditions henceforth, will yield their quota to the general prosperity.

Local politics are moving. The Republican State Convention will meet in Stockton, on May 3rd. As the coming winter will find a new legislature at the State capital, the preparations for the fall elections should receive careful attention from all citizens.

Traffic and Tariff.

We are glad that the Traffic Association of the San Francisco merchants is stirring up the useless railway commissioners. The actual game is hardly worth beating the bush for perhaps, but the game, judged by the legal description, should be big as an elephant. If a thing which was intended to be an elephant is only a mouse, it is some satisfaction to drive it out and have a look at it. This seems to be about what the Traffic Association is doing with the railway commissioners.

The present unpleasantness has been gradually brewing, but it began to foam when the manager of the Traffic Association forced upon the railway commissioners a carefully prepared statement, showing that California rates for moving wheat by rail are much higher than those prevailing in other States, notably in Kansas, where they have a set of railway commissioners who really seem to believe that it is their duty to do something. Although this statement would be enough to create in any mind an assurance that California rates for wheat ought to be investigated, the commissioners ruled that unless the document should be presented as a complaint, they were not called upon to take any notice of it. The reply of the manager of the Traffic Association was to this effect:

I don't agree with you that your duties are wholly judicial. Upon the proper information the board should, upon its own motion, take up a matter of such importance to the State and adjust it. On this basis I wrote that communication. I don't believe that the people of California should be obliged to file complaints against the carriers when the facts in the case are pretty evident to every one. I think that the charges are excessive and discriminative. It occurs to me that under the circumstances your board should be prosecutors rather than judges. Section 22 of Article XII of the Constitution is very plain. It states: "Said commissioners shall have the power *and it shall be their duty* to establish rates of charges for the transportation of passengers and freight," etc. I find nothing therein which says they shall wait for complaints.

The position taken by the manager of the traffic association is that held by the people of the State. If the commission is not for the purpose of doing some real work and of actually finding out whether railway rates in this State are fair or extortionate, then according to popular notion it is for no purpose under the sun. Producers know that the life is being ground out of them by transportation costs, but they do not know what the carriage can actually be done for and still give fair interest and profits to the railway owners. And how can the commissioners know it either without putting forth a little brain power and securing this knowledge on subjects in which they are supposed to be experts and to command all sources of information. The idea that they are to sit as a court and hear the lamentations of the producers and the specious pleas of the railway managers and then balance one off against the other, without knowing from their own study of the question where the right lies, is simply a shrewd scheme of theirs to determine how not to do anything.

It is a sublime spectacle indeed, a body of men endowed with great powers and ordained for high purposes fairly wearying themselves in the effor to kill time and to fight off any one who brings a suggestion which might lead them to do a stroke of work. On some points they are alert and incisive. If there come a complaint that a sidetrack somewhere is a hundred feet too far north or south, they fly in a body by special car and sit on that sidetrack till the rails bend beneath them, and then they rise in their might and command a change of the sidetrack to a point whose distance is described in feet and decimal fractions of a foot—but what it should cost to move produce over those rails they shudder to inquire.

How long is this State to have the expensive shadow of railway regulation which it now has? Is there not some way in which men can be placed upon that Board who will study the question of transportation and place before us the measure of the imposition placed upon us? It is not satisfactory to producers to be continually in the dark as to what certain service should cost and therefore be forced to cry in general terms for some relief they know not what. One or two bright men, backed on the Board by others with some backbone, honesty and energy, could give California a reputation for fair traffic, while now her name is notorious for the reverse. It seems almost a waste of time to mention it, or even to hope for it, and yet occasionally the disgrace of the State in this matter of railway regulation, which has endured ever since the creation of the Commission, comes to mind with such force that it compels comment.

Grain Bags.

Grain bags are attracting more attention and earlier in the season than for several years past. This is largely due to grain crop prospects in this State, which are of an exceptionally favorable character for a large outturn to the acre, creating fears that the supply available in time for next harvest will not meet our requirements. While this condition obtains at this writing, yet the fact must not be lost sight of that up north the acreage seeded to grain in both Oregon and Washington shows a falling off when compared with last year's acreage, and consequently it is quite reasonable to conclude that the requirements from those two States will be less this year, which is likely to partially offset any increase in the demand in this State. But, independent of this, it now looks as if we will not suffer very materially from a scarcity of bags, even though we have a large crop of cereals. This opinion is grounded on experience that with improved telegraphic and water communication with India, supplies are made available within a short period of time, and therefore any prospective shortage just before harvest can be made good before harvest work is over. This, of course, prevents speculators running successful corners. The San Quentin jute mill, when not run in the interest of dealers, is another important factor in the prevention of corners. The production of the mill this season is placed at 1,500,000 bags, which will be placed to farmers only as indicated by the action of the State Board of Prison Directors at their meeting held on March 12th. At this meeting the follow- was read and adopted:

The Warden is hereby directed to sell to *bona fide* farmers only, growers of wheat, for their own use solely, 250,000 bags upon the following conditions: The price shall be 7¾ cents per bag, and they shall be sold in lots of not more than 10,000 to each farmer; provided, that when the farmer files his order with the Warden it shall be accompanied by a certificate, blanks for which shall be provided by the Warden, from the postmaster of the section in which the farmer resides, setting forth the fact that the applicant is a farmer and a grower of wheat and is known as such to said postmaster. Said order shall be accompanied by a certified check for an amount equal to one cent per bag. Said bags shall be held by the Warden, at the farmer's risk, for a period not longer than June next, when the farmer shall take delivery of the bags and pay the balance of the price for them.

Ticks in the Ear.

About ten years ago we received from a RURAL subscriber in Tulare county specimens of cattle ticks which had been found in the ear of a horse which had given signs of loco poisoning, and at the time it was considered conclusive that the loco symptoms were due to the colony of ticks which had lodged in the animal's ear and by irritation gave rise to such distress that the animal acted as though "crazy" with loco.

Last summer we received from Monterey county another colony of ticks taken from the ear of a horse supposed to be "locoed," the ticks being found after the death of the animal, in a rude post mortem examination of the head made by the owner.

Still later there came to our knowledge the facts set forth in the paper which we publish below. The writer is Dr. H. N. Miner of Berkeley and the paper was presented with the specimens referred to at the meeting of the Alameda County Medical Society last week. The communication in full is as follows:

AN IXODES BOVIS IN THE HUMAN EAR.

While visiting in the family of a friend about Feb. 1st of the present year, my attention was called to the ear of a girl five years of age, in which there was supposed to be some foreign substance. There was no pain, no sign of inflamation, nor discharge. The child, by moving uneasily on her pillow and frequently putting her hand to the ear, had given signs of discomfort for 18 months previous to my visit; otherwise she had been well and vigorous. At the time the ear symptoms began, she lived in Arizona and was much of the time out of doors, frequently going to sleep and remaining in a hammock until 11 o'clock at night. She had been in the family where I saw her since September, 1890, during which time there had been more or less complaint about the ear. I straightened the meatus and observed a grayish-white disk projecting from the inner third of the canal. As the child was not suffering, and having no suitable instruments with me, I asked that she be brought to me the following day, and I could remove what I believed to be a button lodged in the inner third of the meatus. At breakfast the next morning the child in rubbing the ear dislodged the animal, which I exhibit, and it fell upon the table. I examined the meatus and *membranum tympani* carefully, and could find nothing pathological except the excessive dryness of the entire canal.

The animal belongs to the order *ixodidæ* of the class *arachnidæ* and is of the genus *ixodes bovis* or common cattle tick. The ordinary life history is about 2½ months. It is parasitic and lives upon the blood of the host by imbedding its beak in the skin. The specimen which I exhibit is a female in the adult stage, just before the egg-laying period. It is filled with eggs. It is the habit of the female to let go its hold upon its host during the ovipositing stage, when it shrivels up and dies. It has a digestive organ which may be likened to a liver when the blood is digested and stored.

I also show specimens of the same order in various stages of development. These were taken from the ear of a horse, supposed to have died from eating the loco weed, in June, 1891. A female who deposited her eggs recently, is dead. Two adults are still living. They have been kept in a tin box, without food. They moult twice in their life history, and two testes are shown.

In *Psyche*, Feb., 1891, Dr. H. A. Hagan reports having removed from the ear of a Texas cattleman, an *ixodes bovis* which had been in the ear from January till July and was living eight months later.

The case is interesting for several reasons: 1. It is rare for a living animal to remain in the external meatus of the human ear for 18 months. 2. That such a foreign substance should excite so little trouble to the patient; and, 3, that the ear is now in a normal condition.

I am indebted to Mr. Woodworth, instructor in entomology at the State University, for making the classification.

H. N. MINER.

This statement of facts is of interest to all residents of the coast where the insect species occurs, especially to those who keep stock. The question arises, in view of Dr. Miner's account of the comparatively small injury and discomfort occasioned by the long presence of this insect in the ear of the child, whether the ticks found in the ears of the horses really occasioned the distress accredited to them or whether the animals were really "locoed" and "ticked" as well. Further observation will be necessary to determine this point.

It seems to us remarkable that the tenancy of the ear by such a formidable insect as an adult tick should not occasion more disturbance than was found. The insect is an exceptionally ugly one, as large as a large coffee-grain or a medium-sized bean, and for its growth would seem to require not a little of the blood of its host.

The fact that the human species is liable to serve as host for these pests should be widely known, and ear distresses should be referred to the local physician for early examination, lest the cause be of the nature described.

ADVICES from Phœnix state that articles of incorporation have been filed for the Arizona Land and Irrigation Co. The company proposes to construct an immense dam at Pasten's Butte, on the Gila river and build 240 miles of canals,

The State Press.

Porterville *Enterprise:* "This is an age of combines and you need not expect competing roads, and the people must avail themselves of the advantage that Nature offers and engage in construction of canals throughout the valley for the purpose of having cheaper transportation."

Sacramento *Bee:* "Senator Vest says that Blaine stole reciprocity from the Democrats. A party that has only one good thing in its constitution then allows it to be stolen, and makes no kick about the theft for three years, hasn't sense enough to run a chicken coop, let alone a great nation."

San Leandro *Standard:* "There is a growing disposition on the part of newspaper writers to append their names to articles which have usually been published without signatures in the past. This is proper. It gives the public a chance to learn the identity of a good many gumdasted idiots."

Grass Valley *Union:* "J. K. Luttrell, one of the mining representatives sent to Washington, says that the bankers are interesting themselves in favor of the measure to restore hydraulic mining, as they think that an additional gold product of $10,000,000 per annum will be a solution of the silver question."

Central Californian: "The Traffic Association seems to be asleep to those who are for drastic measures in dealing with the railroad corporations. The people must not lose sight of the fact that this is to be a battle between giants, and that neither side can afford to commence hostilities until thoroughly 'fit,' to borrow a pugilistic expression. The people cannot afford to lose."

Otay *Press:* "Reciprocity has been in effect in Brazil a little more than nine months, and in that time our exports show an increase of a million and a half dollars over the corresponding period of last year. In Cuba and Porto Rico we have had reciprocity for but four months, yet in that time our export trade has increased more than a quarter-million over the corresponding period last year."

Central Californian: "There should be a determined effort to wrest the gardening business of this State from Chinese control. There are thousands of competent white gardeners in this country and they should be encouraged to engage in the business in California. The business is one of profit when properly conducted, and if it were in the hands of white citizens our State would be far better off."

Inyo *Independent:* "The public do not exactly see why they should be charged rates of fare and freight to enable the owners of one system of roads to accumulate private fortunes aggregating $100,000,000. They do not see why the cost of running a political campaign should be borne by patrons of a road. Neither have these patrons been able to see the justice of being compelled to pay money for the purchase of legislative bodies and courts. These are matters upon which Mr. Stanford, or some of the men who have charge of his political conscience, can throw considerable light."

Los Angeles *Express:* "The presence of thousands of Eastern visitors in Southern California indicates that this charming land has lost none of its attractiveness to the people of less favored regions. Travel to Southern California has never been a mere 'fad.' It is something more than a 'fashion' that brings multitudes here from the frozen East. They come seeking a respite from the ills of a harsh and rigorous climate, and to enjoy the charm of fresh verdure and luxuriance of bloom at a season when the mantle of winter still rests upon the Atlantic Slope. The popularity of this region will never decline. On the contrary, it is destined to increase. In time to come, Southern California will be visited by tens of thousands of people each winter; and, as at present, many who view the land will become permanent residents. The advantages of our climate are real and not fanciful, and they must always remain as fully appreciated as they now are."

Sulphuring Fruit.

LOS GATOS, CAL., March 7, 1892.

TO THE EDITOR:—In reply to University Bulletin 96., I would like to say a few words.

That sulphurous gas does drive off the volatile oils I do not pretend to deny, when the oil cells have been broken open by fermentation; but unless the oil cells have been bursted by decay, I claim that the volatile oils cannot be driven off by the amount of heat that is developed by the burning sulphur, except those cells that have been bursted by handling. I would also remark that I have doubts whether the oil passes from one cell to another, but I know that the flavor remains in the fruit, and I cannot see why we should imagine otherwise. In animals, when oil cells are broken, the oil runs out, but only from from those that are broken.

We must have light colored fruit to sell for good prices, and this can be obtained no other way than by bleaching, and if we use wooden trays there can be no harm done (unless we sublime sulphur upon our fruit) by bleaching 20 or 30 minutes in a strong smudge. If we wish to be very particular, we can wash our smudge by running our sulphurous gas through a tube or vessel containing water, and thus avoid all danger of sublimed sulphur. Then let our fruit be well dried and it will be free from taste of sulphur. The pitter can place his fruit directly upon the tray by this method and thus avoid twice handling, as he must do if bisulphide of soda is used.

This bleaching, from a grower's, dryer's, shipper's, seller's and consumer's standpoint, is not a "fad," but has come to stay. It is like Topsey—it has "just growed"—and is deeply rooted, so that it cannot be got rid of. The sanitary conditions are all right, just so long as we do not use zinc trays.

Bleaching cannot make a fourth grade fruit into a first; the grade remains just the same, and it does not require an expert to detect it. This has been demonstrated well in Santa Clara county this year, and, I think, all over the State. If you have small but good fruit, the trade wishes it bleached; if it is medium, the trade wishes it bleached; if it is extra, the trade wishes it bleached, and always without dark pieces mixed in.

The old world legally prohibited the bleaching of fruit because they found sulphate of zinc in the fruit. Now, if we use bisulphide of soda, we will have to avoid zinc trays, or we will have sulphate of soda or glauber's salts as well as sulphate of zinc. If we use wooden trays we will have glauber's salts, and our fruit sent to the old country will be found to contain sulphates, or have sulphuric acid in it; but if the sulphurous gas is used, and we keep our trays far enough from the burning sulphur, or wash the fumes, we will have no sulphur sublimed upon the fruit, and we know that the sulphurous gas will leave the fruit just as soon as the bulk of the uncombined water is removed, or just as soon as the fruit is dry enough to rattle on the wooden trays.

But should there be a small quantity of the gas remain in the fruit, and it is sent to England or the Eastern States, parents who use this fruit will not be under the necessity of feeding their children "treacle and sulphur." Nor need they fear cholera or malaria from eating California dried fruit.

The demand is increasing very rapidly, but our output is also increasing. In the year 1890 we shipped six cars of fruit; 1891, 21 cars; but I think the market will be bare of good dried fruit by the time we get ready to ship again. J. J. SHANER.

Comments by Prof. Hilgard.

STATE UNIVERSITY, BERKELEY, March 14.

TO THE EDITOR:—In commenting on the above remarks of Dr. Shaner, I state, first, that inasmuch as the flavor of our commercial fruit is not contained in separate "oil cells" at all, but is dissolved in the juice and circulates with it, his argument on that score falls to the ground. Whatever is imparted to the outside of the fruit will in due course of time be communicated to the whole, and vice versa, according to the well-known laws of "liquid diffusion." Hence in fruit which is oversulphured, the inside is no better than the outside.

Dr. S. is unnecessarily emphatic in his statement that bleached fruit brings a higher price than unbleached, as though I had asserted the contrary, or was not painfully aware of the fact, which appears on the face of every market report. It is precisely for this reason, and because of the consequent tendency of producers to sulphur more and more heavily and recklessly, that I think it high time to call a halt.

Dr. Shaner's statement that sulphuring in fruit-drying was prohibited in the Old World on account of the use of zinc ("galvanized") trays, is hardly consistent with the fact that the zinc trays themselves are also prohibited there on sanitary grounds. The acid of the fruit itself attacks the metal so energetically that they are sufficiently objectionable without sulphurous gas. But the sanitary conditions are not right, even with wooden trays, when fruit remains exposed to the sulphurous gas for an indefinite time, at the pleasure or convenience of an unskilled attendant.

Dr. Shaner, in discussing the use of sulphite or bisulphite of soda, forgets that I suggest it merely as a smaller evil (on account of the perfectly definite strength that can be given to the solution) than the process of sulphuring as conducted at present, placing the flavor of fruit at the mercy of a common laborer, who is not in the least interested in its quality. I have distinctly stated in my bulletin that it is the abuse, not the strictly moderate use of the sulphuring process, that is so objectionable, and utterly destroys the distinctive high quality of our fruit as compared with that of northern climates. He also, though evidently something of a chemist, forgets that if the sulph*ite* of soda is converted into sulph*ate* (Glaubers' salt), by the action of the air, so much more is the sulphur*ous* acid converted into sulphur*ic* acid, which does *not* go off by drying, as he asserts, but stays and is easily found in the fruit, as every analysis shows; even to an extent which will make the consumer's teeth stand on edge. Actual analytically ascertained facts cannot thus be set aside by mere assertion; and while, when sulphuring is done only to the extent strictly required, the amount of sulphuric acid introduced is hardly perceptible and not likely to be injurious, in "well-bleached" fruit I have found it to be present, in the free state, to the extent of nearly one-third of one per cent (see report of the Station for 1890, page 132). The only persons not likely to object to such a state of things are the dentists.

As to the Glauber's salt likely to be eaten with a pound of fruit treated as I have suggested, it would amount to considerably less than Dr. Shaner takes in his daily drinking water, in his locality, so that the nauseous taste alluded to in his former article has evidently not been perceived by his palate. In any case, between the same amount of sulphuric acid in the free state, and in combination with soda, few persons would have a doubt in their choice.

But I repeat, I am nowise anxious to have the sulphite, or any other chemical agent, used in fruit-drying. With the present perfected appliances, fruit can be dried with so fair a color that no sensible person will object to it, particularly if it insures the possession of a fine flavor. If, unfortunately, it is true that at present most persons *do* prefer the substance to the shadow, and are willing to pay double price for the doctored article, so much the more need is there that they should be better informed; and I for my part will continue to do my best to induce fruit driers to be chary of, and careful with, sulphuring, and to convince consumers that their preference for bleached fruit is as irrational as is that of a certain part of humanity for painted cheeks or enameled countenances. For aught we know, these also may have "come to stay;" but we do not on that account cease to denounce them as fads or evils, the disappearance of which all would be glad to see.

E. W. HILGARD.

A CALIFORNIA IDEA ABROAD.—It is announced from Washington that Postmaster-General Wanamaker is considering the adoption of the "ten block system" of numbering country houses in connection with his plan for rural free mail delivery. This idea was originated by A. L. Bancroft of this city for use in Contra Costa county, and was first described in detail in the RURAL of June 21, 1890. We believe the system will be of inestimable value in designating rural localities definitely, and we are glad Mr. Wanamaker is looking into it.

THE MUSTARD CROP.—We would like a few letters on the subject of mustard-growing in California. Will some readers who grow mustard, kindly write us of the kinds of soil they choose, their methods of culture, the kinds of seed used, the average product, the total amount grown, etc.? We shall be glad to publish such information.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company: 220 Market Street.*

California Land-Holdings.

Presentation of Most Interesting and Important Facts.

Some time since, Mr. W. H. Mills of San Francisco read before the "Chit Chat Club," a local society of thoughtful people, a paper on land-holdings in California. From this paper we make the following extract, showing how the evil of large land-holdings is increasing in the Sacramento valley and elsewhere, and how it is affecting the country. Next week we shall give Mr. Mills' concluding remarks, in which he suggests certain radical legislative measures for the protection of the State against this growing evil:

The four principal counties of the Sacramento valley are Yolo, Colusa, Butte and Tehama. They embrace an area of 8547 square miles, or 5,500,000 acres. This area comprises the broad agricultural districts of the Sacramento valley. The other counties within that geographical designation border upon the bays, and contain large commercial populations, as, for instance, Sacramento county itself. I have therefore left them out of the consideration, not because a different tendency in the direction of aggregating land has been there manifested, but because they do not afford a favorable observation as to the effect upon a purely rural community.

In the counties named there were, in 1880, 71 holders having 5000 acres and upward, and the aggregate of these 71 holdings was 797,761 acres. In 1885 there were 85 holders having 5000 acres and upward, and the aggregate of their holdings was 1,130,484 acres. In 1890, there were 106 holders having 5000 acres and upward, and the aggregate was 1,479,104 acres. The increase in the aggregate of the individual holdings of 5000 acres and upward was 700,000 acres. Thus there had fallen into this larger class 700,000 additional acres, and the class itself had increased from 71 to 106.

When the observation is taken by selecting the 50 largest holders in each of the counties, similar results are obtained, the most remarkable relating to Tehama county. In 1880, the 50 largest holders in that county held 264,435 acres. In 1885, they held 546,690 acres; in 1890, they held 687,248 acres. Aggregating the 50 in each county, that is to say, the 200 largest holders in the four counties, and the aggregate in 1880 was 1,162,635 acres, in 1885 it was 1,499,217 acres, and in 1890 it was 1,781,318 acres. Witness the result of a comparison of the largest holdings: In 1880 the largest holding was 31,167 acres; in 1885 the largest holding was 72,993 acres; and in 1890 it was 109,000 acres. The suggestion which obtrudes itself is: Was the increase of aggregates already given due to the increase of the very largest holdings? The answer is in the negative, as the following table will show:

	1880. Acres.	1885. Acres.	1890 Acres.
Twentieth largest holder	4,602	7,924	8,482
Fortieth largest holder	2,316	4,500	4,190
Sixtieth largest holder	1,413	2,742	2,932
Eightieth largest holder	915	1 920	2 040
One hundredth largest holder	640	1,446	1,521

Thus following down the list, the one hundredth largest holder had increased his holding nearly 300 per cent, while the twentieth largest holder had increased his holding but 90 per cent.

The effect of this upon the population was very startling. Tehama county had a population in 1880 of 9301. The natural gain in ten years should have been 1860. The actual gain, as shown by a comparison of the census reports of 1880 and 1890, was 615, of which Red Bluff gained 502 and the town of Vina 139. The actual loss of population in the county was 1245, notwithstanding the apparent gain of 615. In the townships of Paskenta and Tehama, running from the Sacramento river across the broadest area of agricultural land in the county, the actual loss as shown by the census was 1790.

To pursue the statistical facts, however, let us present an aggregate of the population in the four counties as shown by the census of 1880 and that of 1890. The four distinctively Sacramento valley counties had in 1880 a population of 52,852; in 1890 the population was 55,179. The natural increase of 52,852 in ten years would be 10,583; the increase shown by the census was 3049. There was, therefore, in the rural districts of the Sacramento valley, the fairest and most fertile valley of the State of California, an actual loss of population equal to 7534.

These facts do not relate to a remote country. The details of the operation are under our immediate observation. The process and the reason for it are not far to seek. In the first instance, large land-holding superinduces absenteeism. The owner of 10,000 acres of land derives an income which affords the opportunity for the gratification of the higher wants of his nature. The country which his large holding has made desolate of churches, schoolhouses and society, affords no opportunity for the gratification of wants called into being by opportunity. Hence, the family resides in the city. The small holder on the margin of the greater has no neighbors in one direction except the few very undesirable farm laborers, comprising chiefly tramps and Chinamen, and his growing family demands at his hands educational opportunities and higher social enjoyment. He declares that he is ready to sell rather than submit to this isolation. With each sale the unfavorable condition is intensified, and thus the land becomes cheaper as the social condition attending its ownership becomes more undesirable. During the last year, a citizen of Butte named John Crouch purchased of one Bowers 2100 acres of land adjoining the large ownership of Mr. Crouch. Upon the land purchased there stood a beautiful brick residence, which had cost Bowers $15,000. He was a social being, entertaining the belief that some embellishment might attend life in the country; that some of the exaltations of civilization might be enjoyed even in the rural district. But his neighbors were few, and he sold to his nearest neighbor and largest holder. Immediately upon obtaining possession of the land, John Crouch

destroyed that brick house, because the land was assessed at an additional sum in consequence of the improvement. He used some of the doors and windows for the construction of a shanty in which to entertain the men who would cultivate that broad area to wheat, and which the assessor would not value very high as improvements.

In Paskenta township there stands the remains of 12 houses and barns, untenanted because the owners of the land surrounding them have yielded to the inevitable, sold out and left the country. They fell victims to the extension of land monopoly in this State, one at a time. Some yielded reluctantly, for they were content with their homes. But these homes had become hermitages, and their families were being deprived of all social enjoyments, religious privileges and educational advantages.

In the Colusa *Sun* of December 15, 1891, is the following:

That portion of the county on the east side of the river, with Butte county as the business center, is unsurpassed in fertility by any spot on earth. Land is intrinsically worth from $60 to $75 an acre for the production of wheat alone. The large land owner is its only drawback.

Nearly the whole of the river front land, and for a distance of five miles back on the west side of the river, belongs to the Glenn estate, to the Chambers Bros. of St. Louis, and other large land holders. We believe that there is not a single child of school age belonging to the land on this entire district of 255 square miles. The soil is unsurpassed.

In a small tenement, of which mention was made in a recent publication, in the City of New York, there were 56 families, with 68 children under two years of age.

As has already been noted, the entire gain in the four counties, as shown by the census, was 3049. Of these, five towns in Colusa county gained 1116, one town in Yolo county gained 918, two towns in Tehama county gained 641, and two towns in Butte county gained 810. Here, then, in five or six towns of the counties there is a gain of 336 in excess of the entire gain of the district; and to this must be added the gain of villages not noted. The effect of this upon the commercial and industrial activities of the State is very far-reaching. When a single individual owns 100,000 acres, he enjoys the source of wealth derived from that vast area. At the end of a year, when the product of a region so vast is distributed back to the producer, the owner receives practically all, for what is paid to the farm laborer barely affords to him a subsistence. There is a single family capable of gratifying the higher desires of civilized life from the cultivation of land. In the entire Sacramento valley the 100 largest holdings embrace 1,654,000 acres of land. Ninety per cent of it, at least, is capable of supporting a family on each 100 acres, or employing the industry of a single agricultural cultivator, with the assistance of his family, on each 50 acres. Take the larger figure, however, and 100 holders in the Sacramento valley have 1654 farms, of 100 acres each. The proprietorship of 100 acres of fertile land under favoring climatic possibilities, would give to these 100 holdings, 1654 families. The urban population demanded by these would be more than double that number. Thus, 3200 families are displaced in the Sacramento valley by the holdings of 100 men. But, excluding these 100 largest holders in the valley, the next 200 below them own a still greater quantity. Thus, 300 men usurp the opportunity for subsistence of at least 6400 families. They displace civilization; they force the population into the cities, or offer the choice of emigration. Traveling through the region in question, the observer is struck with the great disparity between its fertile attractiveness and the infrequency of human habitation.

The influence of all this on the agricultural laborer is most degrading. He does not become a landed proprietor; that hope is denied to him forever. His usefulness in grain-growing, even, is being superceded by harvesting machinery. Breadstuffs are produced with corresponding cheapness; but this does not compensate for that broad displacement of civilization, and the relegation of the fairest portion of our beautiful State to its primitive solitude. If the barons of the Sacramento valley resided upon their holdings, there would be some compensation. If they erected beautiful dwellings and surrounded them with parks, there would be some relief from the monotony of present desolation. Wherever the soil is monopolized, the result is the same. In his admirable, recently published work, entitled "Siberia and the Exile System," George Kennan furnishes a description of the fertile region of Southern Siberia, which will be recognized as an exact reproduction of the Sacramento valley:

Almost the first peculiarity of a West Siberian landscape that strikes a traveler from America is the complete absence of fences and farmhouses. The cultivated land of the peasants is regularly laid out, but the fields are not inclosed, and one may ride for two or three hours at a time through a fertile and highly cultivated region without seeing a single fence, farmhouse or detached building. The absence of fences is due to the Siberian practice of inclosing the cattle in the common pasture which surrounds the village, instead of fencing the fields that lie outside. The absence of farmhouses is explained by the fact that the Siberian peasant does not own the land that he cultivates, and therefore has no inducement to build upon it. With a very few exceptions, all of the land in Siberia belongs to the Crown. The village communes enjoy the usufruct of it, but they have no legal title, and cannot dispose of it, nor reduce it to individual ownership. All that they have power to do is to divide it among their members by periodical allotments, and to give to each head of a family a sort of tenancy-at-will. Every time there is a new allotment the several tracts of arable land held under the crown by the commune may change tenants; so that if an individual should build a house or barn upon the tract of which he was the temporary occupant, he might, and probably would, be forced, sooner or later, to abandon it. The result of this system of land tenure, and this organization of society, is to aggregate the whole population in villages, and to leave all of the intervening land unsettled. In the United States such a farming region as that between the Urals and Tiumen would be dotted with houses, granaries and barns; and it seemed very strange to ride, as we rode, for more than 80 miles, through a country that was everywhere more or less cultivated, without seeing a single building of any kind outside of the villages.

Mr. Kennan's declaration that in the United States such a farming region would be dotted with farmhouses and granaries, relates to a past, not a present and coming condition. The tendency everywhere is to large holdings, and it makes no difference whether the monopolist is an individual land holder, a corporation or a government, the effect is the same. The land ceases to be the home of men and becomes simply a fertile waste—a waste where no human habitations exist, whatever its intrinsic fertility may be.

The question will naturally be asked whether the tendency observed in the Sacramento valley is common throughout the State. My observation has extended to most of the counties of California. Let us take for illustration one of the most progressive counties in the San Joaquin valley, the county of Fresno. In 1875 there were 44 holdings of 5000 acres and upward, aggregating 847,379 acres. In 1880 there were 50 holdings of 5000 acres and upward, aggregating 995,577 acres. In 1885 there were 48 holdings of 5000 acres and upward, and they aggregated 1,061,955 acres. In 1890 there were 41 holdings of 5000 acres and upward, and the aggregate was 943,557 acres. The largest land-holding in this county had increased from 169,464 acres in 1875 to 239,486 acres in 1890. Here a single firm of land holders had added 70,000 acres of land to their already large holding. The same firm held in Merced county in 1880, 200,386 acres, and in 1890, 223,232 acres. Thus, in Fresno and Merced counties, this single firm now own 462,718 acres.

The student of the statistics will be struck with one fact, everywhere apparent, to-wit: the land held by the estates is not divided up. There is but one single instance in the Sacramento valley where the amount of land set down opposite the holder decreases when the holding passes to the ownership of an estate; that instance relates to the holding of Hugh J. Glenn. In 1880, Mr. Glenn being alive, he appeared on the assessment roll as the owner of 58,000 acres of land. In 1890 the estate of Hugh J. Glenn appears for 42,000 acres. This decrease was wholly due to the fact that Mr. Glenn died leaving his estate heavily encumbered by debt and a portion had to be sold. There has been no sale of any land since the debts of the estate have been adjusted. In other instances, where the individual appeared first on the assessment roll and subsequently the same land is assessed to his estate, the holdings increased in the same ratio with private holdings. The instances of this are frequent. A large holding already cited, relating to Fresno, will serve as an illustration. The holding is that of Miller & Lux. In 1875, Miller & Lux appeared on the assessment roll for 169,464 acres. This holding rises steadily, notwithstanding the death of one of the partners, until upon the assessment roll of last year the firm of Miller & Lux appears for 239,486 acres. Like instances of this are found in Sacramento, Butte, Yolo, Colusa and other counties of the State.

EXPANSIBILITY OF THE ATMOSPHERE.—A cubic inch of air taken 4000 miles above the earth's surface would expand sufficiently to fill a sphere 2,000,000,000 miles in diameter. By the same law, if a well could be dug to the depth of 46 miles, the density of the air at the bottom would be as great as that of quicksilver.

The Southern Citrus Fair.

[Written for the RURAL PRESS by CLARA S. BROWN.]

(*Concluded from last week.*)

TULARE COUNTY,

Through the efforts of the Porterville Horticultural Society, has furnished proof of the capabilities of Central California for citrus culture. Her exhibit last year, though small, was so choice that it was a revelation to people who had an idea that the citrus belt was confined to the southern counties, and the favorable impression made at that time is renewed by the showing made this year. The seedling oranges grown by A. Miles were pronounced superior to any others in that class, among 30 entries. W. J. Prettyman shows St. Michael and Mediterranean Sweet oranges and Eureka lemons. The Lewis Creek Ranch sends seedling oranges and Eureka lemons, and Sam'l. Pogue & Son, Eureka and Lisbon lemons.

ORANGE COUNTY

Fittingly chose a mammoth orange for its design, and has mounted it handsomely above the large, square table alloted to this section. The amount of fruit entered is not large, but is of good quality. The town of Orange shows Washington Navel and seedling oranges, loquats and dried figs, entered by C. P. Taft and H. G. Hill. Tustin exhibits Washington Navel and seedling oranges, grown by W. H. Phillips, A. Guy Smith, H. K. Snow and C. F. Bennett. Mr. Snow's crop of seedlings from 22 acres sold last year for $7500, and this year realized $12,500. Mr. Gilman of Fullerton sent some extra fine St. Michael oranges, which experts say would have been awarded a premium if they had been properly entered. F. H. Daniels of Fullerton shows seedling oranges of high color and large size, also immense English walnuts. Geo. W. Ford of Santa Ana has an exhibit of improved soft-shell walnuts, and Ray Billingsley sends Washington Navels and Mediterranean Sweet oranges. A noteworthy display is that made by J. C. Joplin, who lives on a small ranch in Bell canyon, 25 miles from a town. He shows seedling and Washington Navel oranges, Eureka lemons, limes, orange jelly and marmalade, orange cider, preserved oranges and Japanese persimmons.

LOS ANGELES COUNTY'S EXHIBIT

Is mostly on the main floor. Duarte has a large table next that of Orange county and part of another adjoining. The latter is occupied by A. C. Thomson with 30 boxes of choice Washington navels, which were awarded the premium for best individual display of that variety. The next largest exhibitor is Ernest Watson, who shows a lot of seedlings, also Valencia late, St. Michaels and Navel oranges and lemons. All the fruit on the main table is entered as a locality display, and not in competition for individual premiums. It embraces the well known varieties and was grown by Walker H. Wrenn, H. A. Buttolple, John Scott, W. H. Young, Renneth Carter, J. L. Bradbury, Thos. Glenney, W. Chippendale, Jos. Fowler and Church & Arthur. Geo. H. Merriell shows the prize orange wine. F. M. Douglas has honorable mention for his grape fruit.

Pasadena, whose name signifies "crown of the valley," has a design in the shape of an orange covered crown, 20 feet high and 13 feet in diameter, supported by eight columns, under which is a conical pile of oranges and lemons. This exhibit is by the locality as a whole, principally from the orchards of Butler Talmadge, J. H. Baker, P. M. Green, Mrs. Suesserot, M. H. Waite and Henry Fessler, comprising the usual varieties. Pasadena suffered from an extraordinarily high wind in December, which injured so much of the citrus fruit that no effort toward premiums was made by individuals.

San Gabriel exhibits navel and seedling oranges on a part of the Duarte table. They were sent in by J. H. F. Jarchow, Geo. S. Patton, J. K. Dobbins and H. D. McDonald.

SAN DIEGO COUNTY.

Beginning at the stairs leading to the west gallery, and continuing around the pavilion to the San Diego exhibit, next the wall, a number of small exhibits are seen. First come the coast towns of Los Angeles county with a determination to show that oranges and lemons can be cultivated with some success near the ocean.

Long Beach exhibits Homasassa, Hart's Tardiff and Navel oranges, also lemons from the grounds of F. G. Butler and J. P. Colver. Ballona is represented by Harry Lowe, who sends seedling and paper-rind St. Michael oranges.

The Palms shows lemons and oranges, among them the Bergamot lemon, referred to in the Santa Barbara exhibit, raised by Mr. Osgood. Other exhibitors from The Palms are J. Brown, Mr. Lelong and Jos. Curtis.

Dan Freeman of the famous Centinela ranch shows a pyramid of seedling oranges. John Wolfskill of Buenos Ayres rancho has Mediterranean Sweet and Australian Navel oranges, citrons and budded lemons.

C. H. Hovey of Downey sends seedling oranges and lemons, and C. A. Teel has peanuts, English walnuts, limes, seedling oranges and lemons.

It is a good-sized jump to the foothill region of La Crescenta and La Canada, represented, respectively, by B. B. Briggs and J. L. Lauterman with several varieties of oranges and lemons.

Cahuenga, in the same frostless belt, sends eight boxes of Navel and seedling oranges and lemons raised by Henry Claussen; Sicily and sweet lemons, Mission olives and olive oil from the ranch of ex-Senator C. Cole; and oranges, lemons, cherimoyas and green coffee berries on twigs, cultivated by Jacob Miller.

Abbott Kinney of Lamanda Park enters a box of Tangerines.

McNeil & Vosburg of Azusa show a lot of Washington Navel oranges and seedless lemons.

The ladies of Vernon deserve unstinted praise for their ambition and industry in creating so attractive a design as their graceful gateway of oranges and lemons, relieved with wreaths of ivy and smilax. Within the gate is a floor of oranges. No individual exhibits were made.

S. M. Woodbridge of Los Angeles has the most complete display of the products of the orange, exhibiting wine, oil, bitters, extract, cordial and syrup of the orange and lemon.

IN THE GALLERY.

The remainder of the Los Angeles exhibit is in the first gallery. Here, Pomona has a long table that one delights in looking at. The fruit upon it is so uniform in size, so clean and smooth and beautiful in color that it well merits the distinction accorded it of being the best display from any locality. On the raised center of the table the word Pomona is spelled in huge letters, each letter being in a different variety of orange, and rising from a groundwork of lemons. There are 125 boxes of fruit in the display, sent in by J. Parsons, W. B. Dole, G. F. Ferris, G. W. McClary and others.

Alhambra makes for her a modest, though creditable, showing of Navel, Valencia Late, Malta Blood, Mediterranean Sweet, seedling, Satsuma, St. Michael and Tangerine oranges, and Eureka lemons, grown by A. Phillips, A. C. Weeks, J. A. Graves, G. B. Adams, E. Pollard, F. Z. Story and R. F. Bishop.

San Fernando is first and foremost a grain country, but does not propose to be left out of a citrus fair. The St. Michael and Washington Navel oranges entered by John Burr, compare favorably with those from other localities.

The design of the Ladies' Annex to the L. A. Chamber of Commerce must not be overlooked, as it shows up beautifully under the electric lights at night. A lovely wax figure, representing the Goddess of Plenty, stands picking oranges from a tree. At her feet is a cornucopia, overflowing with the fruits of Southern California. Near by, the Ship of Commerce is in her dock heavily laden with the products of this section, oranges predominating in her freight.

The preliminary arrangements of this fair were made easier and less expensive for exhibitors than ever before, and 50 per cent of the profits are to be divided pro rata among them to defray any expenditure that may have been incurred. The attendance numbers thousands every day, and there is no question of pecuniary success. Entertainments are provided both afternoon and evening. I should like to speak of many things not mentioned herein, if space permitted, and beg to submit this as merely a bird's-eye report.

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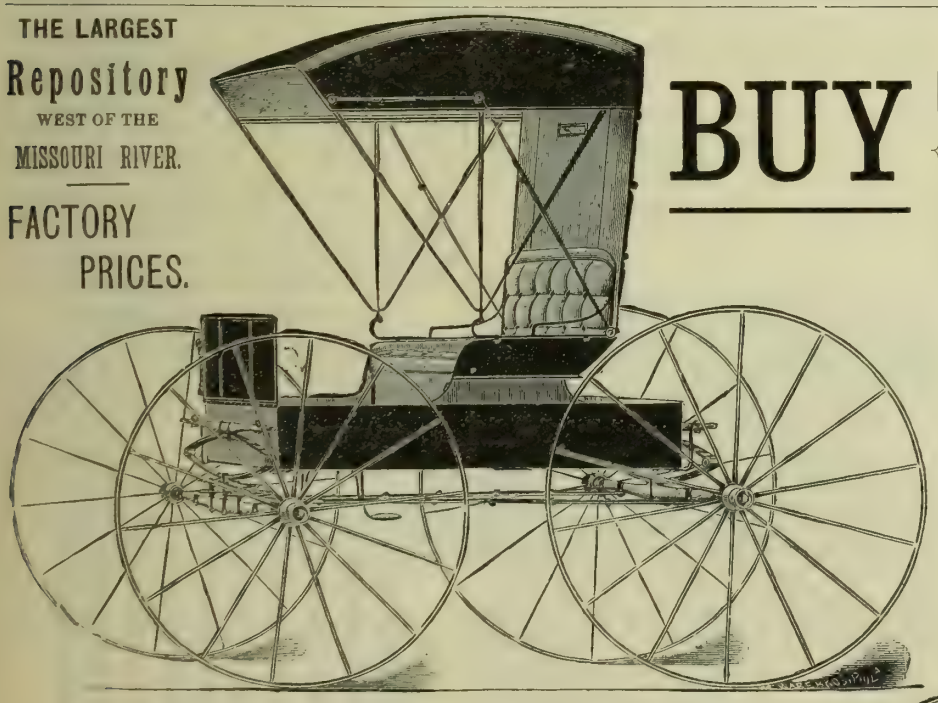
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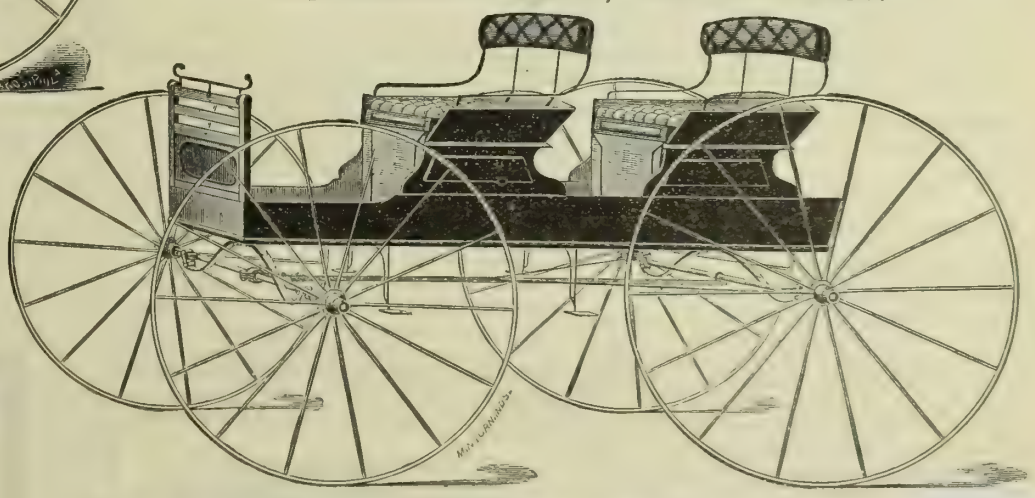
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The Irrigationist.

The Irrigation Movement in Congress.

On page 241 of last weeks RURAL we gave an outline of Representative Lanham's irrigation bill which provides for cession of the arid lands to the several States in whose borders they are situated, etc. This bill was favored by a majority of the House Committee to whom it was referred and a dissenting minority report was also presented.

The report and views of the majority are as follows:

Sundry bills, resolutions, memorials and petitions have been referred to this committee during the present Congress relating to the subject of irrigation and the proper disposition of arid lands, the general trend of which has been favorable to the proposition of relegating these lands and the problems involved to State and Territorial control and administration. The greater number of them has been of a general character, while others have been of local application, but all have been marked with the same distinct feature and uniform object, discovering a noticeable concurrence of opinion upon a subject matter of vast public importance.

VACANT PUBLIC DOMAIN.

The vacant public domain of the United States, exclusive of Alaska, the Cherokee Strip (not yet opened to settlement) and certain other lands now claimed by Indians, is estimated by the report of the Commissioner of the General Land Office, at 579,664,684 acres, surveyed and unsurveyed, in approximately equal proportions. The principal amount of this land is situated within what is known as the arid region, embracing a greater portion of territory west of the ninety-seventh meridian of longitude and contained chiefly within the boundaries of the States and Territories named in the bill, to which, respectively, it is proposed that a cession shall be made by the United States.

THE AREA OF THE ARID RFGION.

According to estimates of the Government officials, the arid region, including semiarid plains, embraces 1,340,000 square miles. Of this about one-fourth lies in the great plains region east of the Rocky Mountains, which is principally arable land. Another fourth is embraced in the Rocky Mountain belt, not more than one-third of which is arable; three-eighths lie in the great basin and plateau of the Rio Grande, between the Rocky Mountains and Sierra Nevada, about one-half of which is arable, while the remaining one-eighth is embraced in the ranges of the Sierras and is in the main rocky and unsusceptible of cultivation. It is estimated that about one-fourth of the arid region is composed of rocky or mountainous or nonarable land.

WHAT CAN BE REDEEMED.

Major Powell, Director of the Geological Survey, has expressed the opinion that 100,000,000 acres of this arid region can be redeemed by irrigation, through the utilization of stream waters. Mr. Newell, as shown in census bulletin, estimates that 70,000 acres of land are now irrigated in semiarid plains regions and that about 4,000,000 acres are irrigated in the arid region proper. It cannot be stated with accuracy what amount of irrigable lands yet remain unreclaimed.

The greater portion of land proposed by the bill to be ceded is in its present condition of little practical value, but is capable of being appreciated beyond computation by the process of irrigation. But to accomplish its reclamation and successful development it will require a long time of careful treatment and a great expenditure of money.

THE DEMAND FOR HOMES.

It is now comparatively an arid waste, forbidding to the homeseeker, though fraught with untold possibilities of our mighty civilization. The demand of our large and constantly increasing population for homes and the necessary development of its latent though incalculable resources, cries out for the redemption from its now unprofitable condition. It is not in keeping with the progress of the age, the growth and the dignity of our country, and the wants of our people that it should remain in its present unproductive condition. It must be rendered habitable. It cannot and ought not to remain a perpetual wilderness and destitute of useful results. Either the United States must sooner or later accomplish its reclamation by direct appropriations from the Federal Treasury, by the construction of irrigation works and the operation of manifold agencies for its development, or failing so to do, it must leave to the States and Territories within which it is embraced in their own way to work out that salvation which is possible.

THE GREAT COST

If the Federal Government is to do this work, it may well take notice that the ultimate demands upon its Treasury will be enormous, far beyond any present accurate calculation, but certainly at an expense greater than it has ever encountered yet for any specified object for international improvement, reaching even billions of dollars. Nor can the point be overlooked and ignored that if the National Government shall undertake the execution of this immense enterprise it must perform that function in an impartial and comprehensive manner. It cannot afford to lavish its expenditures on any favored locality, but it will be constrained in all fairness and propriety to treat distinct special and local problems of reclamation in a suitable way, where they may arise as well in one State or Territory as, in another. To do all that will be expected of it, and that the exigencies will require, will be simply impossible of accomplishment, nor is it believed that the tax-payers of country remote from the arid region will be induced to consent to the outlay necessary for such purposes?

THE GREATNESS OF THE WORK.

When the magnitude and far-reaching consequences of such a proposition are considered and understood in all their phases, it is reasonable to assume that thoughtful, prudent and economic men will conclude that the General Government essaying that object has a work upon its hands from which it may well pray deliverance; and if that deliverance can be made in a manner consistent with sound public policy, just to the whole people, advantageous to the people most directly concerned, and upon their voluntary acceptance of the burden and assumption of the responsibility involved, why should the Government desire to longer retain proprietorship of this arid region? Why, for that matter, should it now have a vast domain of unappropriated public land? It only holds lands as a trustee and until they can be suitably settled and occupied, and it is presumptively interested only to the extent that actual bona fide settlers may be accomodated. It is not supposed that it wants to retain them in order that they may be donated to corporations, or given away as subsidies. Enough of that has already been done. The system in the past has not escaped severe censure.

THE GREAT BENEFIT TO FOLLOW.

After a careful review of the whole question we have arrived at the conclusion that the General Government will be benefited by it, and will gain rather than lose by the proposed cession; that it will gain in the acquisition and increase of a strong, self-supporting western population; that it will be benefited by the opportunity that will be afforded an outlet for its present and prospective millions of landless and homeless people who now crowd, and will in future overflow its dense and more populous Eastern States; that additions to the popular well-being and prosperity will ensue; that fresh stimulus will be given to the States and Territories immediately interested to an earnest endeavor for their own development; that local self-government in all the problems involved will assert its forces; that civilization will be advanced; that the rich waving fields and comfortable homes will make glad the solitary places which now abound in this dormant and unproductive region.

THE LAND WILL GO TO THE PEOPLE.

What will—what can the Government lose? What citizen—what State will begrudge its proportionate contribution of heritage remaining in this fragment of public domain to people who are to redeem it? What sacrifice to either will be involved in surrendering these now barren wastes and hills and mountains? They will not go to aliens, but to our own people. It is worthy of notice that no serious protest from any Eastern States against the objects sought to be accomplished by this bill have found their way to your committee, notwithstanding the long time they have had the subject under consideration, and the public notice which has been given concerning the character of the measure upon which they have been deliberating.

THE PEOPLE WILL ACCEPT THE TRUST.

We have been forcibly impressed with the conviction that suitable legislation upon this subject is imperatively demanded and cannot well be longer postponed. That this policy will ultimately prevail we confidently predict. Can the States and Territories administer the trust which it is proposed to commit to their hands, and will they do so wisely and well? It is not contemplated that a burden shall be forced upon them. The voluntary acceptance must precede actual cession. It will be left to them in their own sovereign capacity to determine for themselves as to whether they will receive the grant. We are led to believe that they will accept it with conditions and reservations defined and stipulated. The Western people almost with one accord have united in asking this cession, They have signified their purpose and desire through legislative memorials, through the expression of large and representative conventions, through resolutions of the great irrigation congress held at Salt Lake City in last September, composed of delegates from ten States and two Territories, and through numerous petitions from different parts of the country. That they are in earnest about the matter there seems to be no room for doubt. If State legislatures are accessible to corrupt compassings the responsibility will rest upon the people who choose them. If the voters of the States can make a wise selection in the case of members of Congress no reason is perceived why they cannot exercise the same judgement in the election of a State legislature.

THE PEOPLE CAN BE TRUSTED.

Western people, as a rule, reflect as high types of real manhood, in all its better elements, as adorn the American character in any quarter of the Union. They are heroic, patriotic, energetic and self-reliant, and can be depended upon for the performance of all the duties and obligations which devolve upon them. If an illustration be required of the capacity of a State to administer its land system without supervision or interference on the part of the general government, the State of Texas, with its immense area, will furnish an instructive example. It has held out its own encouragement to immigration. It has invited capital in its own way. It has granted its lands at its own pleasure. Both in preemptions in aid of education and for internal improvements it has issued its own patents, and exercised without restraint its own judgment in the disposition of its public domain.

EARLY IRRIGATION.

The objection which may be urged against the cession to the Territories before they are admitted as States of the Union, the doubt that the people would act wisely in discharge of the trust; that the legislation on the subject might be reckless, and thus defeat the object to be attained, is largely met by pointing to the success which has attended the irrigation and reclamation of arid lands in the Territory of Utah. Irrigation in the United States by white men began in Utah in 1847, and has proved a most gratifying success under wise and conservative legislation, based largely upon actual experience. The waters have been so distributed and utilized by the settlers as to produce very good results. Considering the scarcity of water and vast area irrigated, there have comparatively few conflicts over water-rights.

UTAH'S DEVELOPMENT.

The showing in the recent United States census of agricultural development gives a fair conception of what has been accomplished in that Territory. Crops were raised by irrigation in the census year ending June 30, 1890, on 263 473 acres, or 411.68 square miles, a trifle over five-tenths of 1 per cent of the entire area of the Territory. The aggregate number of farms was 10.757, and of these, 9724, or about nine tenths depended on irrigation, the remaining tenth being either stock ranches or farms in the northern end of the Territory, where the climate is less arid, or situated so high on the mountain side that the crops can be raised by what is known as dry farming. The irrigated farms in Utah are small, averaging from 20 to 30 acres each. It has not been the policy of the people of Utah to encourage acquisition of large bodies of land, and the monopoly of water has been impossible. The laws were made to encourage and protect the settlers. The small holder has an equal opportunity for his proportional share of water with the large holder. The greatest good to the greatest number is the prevailing idea and has always been strictly enforced. Water-rights are considered sacred and no theft is regarded as more despicable than the theft of water in the irrigation season, and no misdemeanor is more quickly punished.

The quantum of land that may be disposed of to any person, corporation or association is limited to 160 acres. This, it was believed, would have the effect of preventing monopolies and syndicates from securing possession of large bodies of these lands to the detriment of the rest of the people, and might serve as a restraint upon rash legislation in this respect should the same be accepted.

THE MINERAL LANDS.

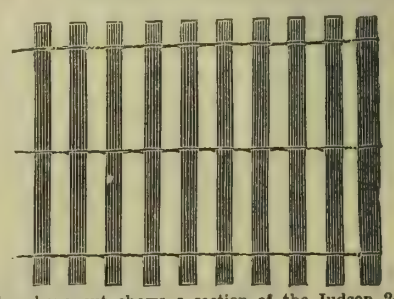
The mineral lands are reserved to the United States. Those lands have not been distinctly classified, and special localities where minerals may exist cannot be satisfactorily designated, but must be left in great measure to the discoveries of prospectors. From the nature of the case, it is impossible to specify the extent of these lands. Each State and Territory affected by the bill will, it is believed, better understand and more thoroughly appreciate its particular condition and the specific problems which require solution, than it will be possible for Congress to do; and when it accepts the cession proposed, it will do so with full knowledge of the responsibility assumed; it will take the grant *cum onera*. The hold upon its wise administration of the power conferred will depend its own prosperity and future success. The lands which will be ceded if the bill becomes a law and its provisions are accepted by all States and Territories therein named, will amount to 558,141,374 acres, less whatever number of acres may have been taken up since the estimate of the report of the Commissioner, dated September 23, 1891, and deducting also the mineral lands, which, for reasons before stated, cannot be differentiated nor their extent determined, and are distributed as follows: Arizona, 55,061,005 acres; California, 52,299,499; Colorado, 42,167,030; Idaho, 33.781,851; Kansas, 799,078; Montana, 74,372,769; Nebraska, 11,460,436; New Mexico, 54,893,679; Nevada, 53,689,524 North Dakota, 16,135 440; Oklahoma, 3,502 406; Oregon, 3,902,251; South Dakota, 1,485,394; Utah, 35,426,987; Washington, 2,040,691; Wyoming, 50 842,434.

What Cheapens Butter.

Many a dairyman does not get the price he should for his butter, owing to the fact that he has churnings of different colors in one tub.

The "trier" tells the tale, but in butter where Wells, Richardson & Co.'s Improved Butter Color is used, the "trier" shows the same rich color all the way through. There is nothing equal to this preparation for giving a golden June yellow of the same shade the year round. It possesses peculiar properties which prevent making a reddish shade even when too much is used. As this color is superior in strength, it is the most economical of all coloring preparations. It will win converts to the wisdom of coloring butter, and will fill with gold coin the pockets of dairymen and creamerymen who use it.

RABBIT-PROOF
STOCK FENCE!
Cheap, Durable and Effective.
Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to
JUDSON MFG. CO.,
14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on th posts above it, it will turn any stock whatever.

DEWEY & CO., PATENT AGENTS, 220 Market St., San Francisco. Elevator, 12 Front St.

LOST TIME.



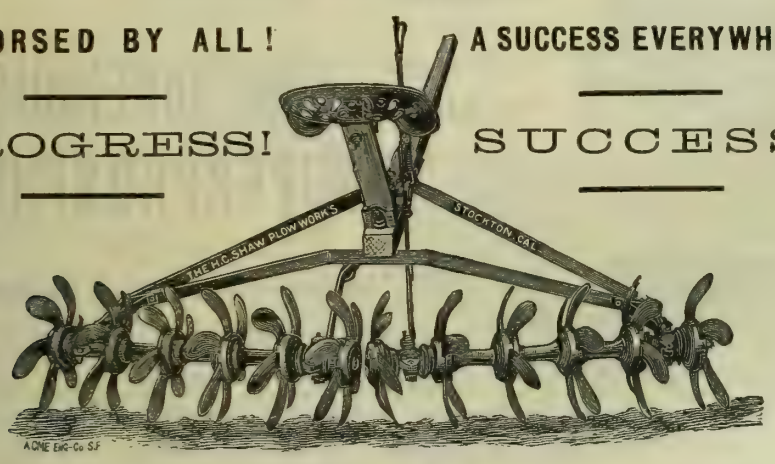
Newton, Ill.
From 1863 to 1885—about 22 years—I suffered with rheumatism of the hip. I was cured by the use of
St. Jacobs Oil. T. C. DODD.
"ALL RIGHT! ST. JACOBS OIL DID IT."

THE MORGAN SPADING HARROW.

(Formerly Called "TRIUMPH.")

ENDORSED BY ALL! **A SUCCESS EVERYWHERE**

PROGRESS! SUCCESS!



Style "A."

Greatest Pulverizer of the Age.

SOMETHING NEW AND ORIGINAL.

DO NOT BE DECEIVED BY IMITATIONS.

TESTIMONIALS.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: In response to yours of the 25th would say that I am pleased to give your Triumph Spading Harrow a good recommend. I have used two harrows to cultivate my orchard and vineyard for the past year, and they did my work better than any tool used to do like work on my ranch. I am very well pleased with the harrows. Yours truly, A. W. TOZER.

TULARE, CAL., Nov. 28, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: We have your favor of the 25th inst. In regard to the Morgan Spading Harrow would say that we have used the harrow cultivating our orchard and vineyard and find it just the tool. In fact, we know of no tool that will surpass it as a cultivator. Yours truly, HATCH & GIST.

VISALIA, CAL., Dec. 5, 1891.

H. C. SHAW PLOW WORKS, Stockton, Cal.—Dear Sir: The Spading Harrow I purchased from L. N. Wood, your agent, is a complete success. I have had considerable experience in the orchard and nursery business in this State, and I can from personal experience recommend the Morgan Spading Harrow to be the best cultivator in existence. Respectfully yours, CAIN FRUIT & NURSERY CO., Supt. GEO. F BEALES.

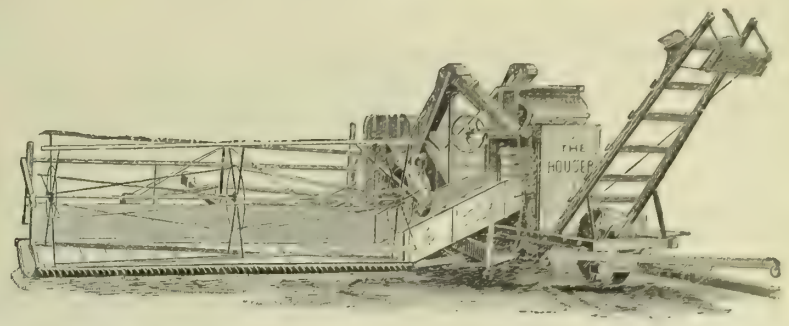
We are Sole Agents for the Coast.

H.C. SHAW PLOW WORKS

361, 363, 365, 367, 370, 389 and 390 El Dorado Street,

STOCKTON, CAL.

The "HOUSER"



LEADS ALL OTHERS.

Strongest & Most Durable.

Lightest Draft and Most Popular Machine on the Coast.

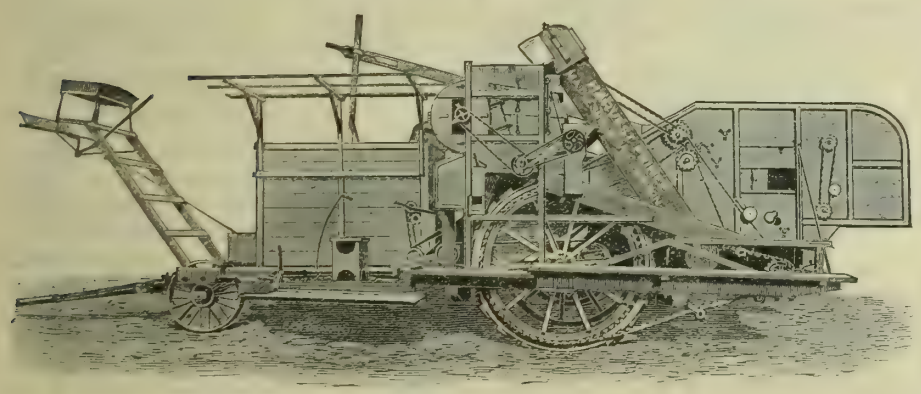
SEE OUR NEW ANGLE STEEL SICKLE BAR, LAUFENBURG SHOE AND "STAR" CLEANER AND NEW ANGLE HEADER.

SEND FOR CIRCULARS, ADDRESS

STOCKTON C. H. &. A. WORKS,

Box M. **STOCKTON, CAL.**

New Improved Belt Combined Harvester "PRINCE."



Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

HARVEST "PRINCE."

It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20 inch by ½-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

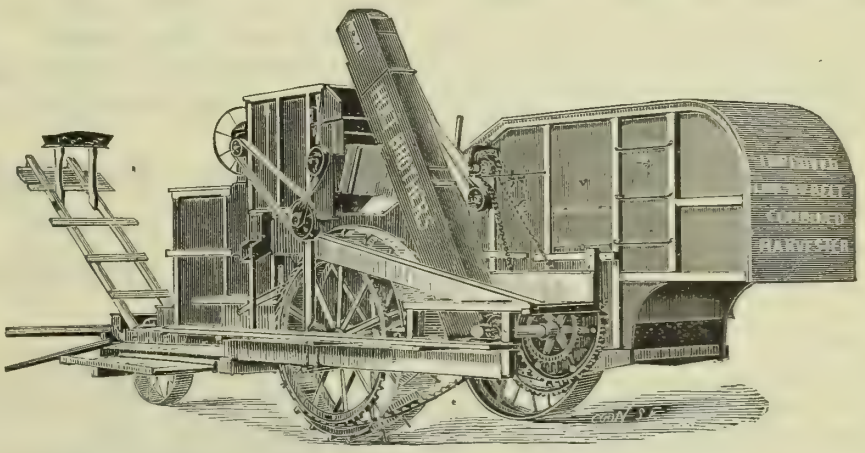
TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

MATTESON & WILLIAMSON MF'G CO.

STOCKTON, CAL.

HOLT BROTHERS' Improved Combined Harvester.



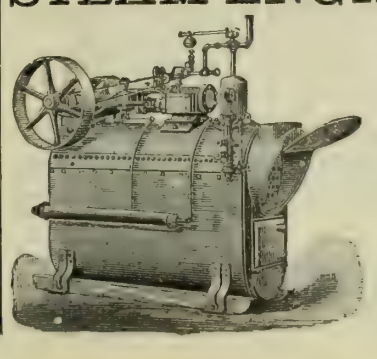
For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. or, **HOLT BROTHERS CO., 30 & 32 Main St., San Francisco.**

STEAM ENGINES AND BOILERS.



Strong and Reliable Steam Driving Power furnished with the Most Economical Consumption of Fuel.

PERFECT SAFETY ASSURED.

IMPROVED PATTERNS AND CONSTRUCTION

Especially Adapted for

DAIRY AND FARM PURPOSES.

Send for Illustrated Catalogue and Prices.

G. G. WICKSON & CO., 3 & 5 Front St., SAN FRANCISCO.

346 N. Main St., Los Angeles. 141 Front St., Portland, Or.

Something Fine from Sutter.

The latest acquisition to the grand display of California's products in the State Board of Trade rooms is the new exhibit made by Sutter county, placed in position on Tuesday last.

The main feature consists of a huge cornucopia, the base resting upon a large table and the point suspended in the air, midway between the floor and the ceiling. This "horn of plenty" well illustrates the happy idea which it represents. The outer surface is covered with green and dried fruits of almost endless variety, arranged in highly effective style, the principal features being oranges, peaches, prunes, apples, lemons, limes and apricots, wrought in fanciful designs and constituting a very novel display.

The "overflow" of the "horn" includes a large variety of green, dried and canned fruits, nuts, etc., embracing some especially fine qualities in dried peaches, raisins and prunes.

Besides the general display, the exhibit contains some notable individual contributions, the more important of which are as follows: Muscatel and Rose of Peru grapes, French prunes and Bartlett pears, R. O. McMillan; Gros prunes and White Heath cling peaches, J. W. Mills; McDevitt and Phillips cling peaches, J. T. Bogue; Gloria Mundi apples and White Heath cling peaches, N. B. Abbott; orange cling peaches, A. D. Cutts; Duchesse pears and Oregon cling peaches, B. G. Stabler; Bilyeau's Late peaches, T. B. Hull; Thompson's seedless grapes and Zante currants, J. P. Onstott; Bishop grapes, R. C. Kells; Flaming Tokay grapes, L. P. Farmer; Hungarian prunes, C. W. Hutchin; quinces, Robert Davis; Rose of Peru grapes, T. B. Hull; lemon cling peaches, J. M. C. Jasper.

All in all, the display may be called a thoroughly creditable one, and it cannot fail to emphasize in the minds of visitors to the Board of Trade rooms the pleasing possibilities of fruit-growing in Sutter county.

Francis Smith & Co.'s Steel and Sheet Iron Pipe Works.

In view of the wide-spread interest now being manifested in the subject of irrigation, and also the prospective speedy renewal of the hydraulic mining industry in California, the matter of conducting water from its various and limitless sources to points where it can be made available for power or fertilizing purposes becomes one of growing importance. In this connection, the attention of readers of the PRESS is called to one of the oldest and largest manufacturing concerns in this city, Francis Smith & Co., who have for more than 30 years been making a specialty of the manufacture of riveted sheet iron and steel pipe for the purposes above mentioned.

Since making the first iron pipe for hydraulic mining in California, back in the fifties, down to the present day, this firm has been steadily growing in popularity, and during this time it has furnished pipe to all the principal mining camps west of the Rocky Mountains, both for milling and hydraulic use. The firm has also put in place the supply pipe for water works in many cities and towns on the Pacific Slope, notably among which is the extensive plant at Ogden, Utah Ter., completed during the year just past. In this instance, the water was successfully conducted to the water works from Ogden canyon, in the Wahsatch Range, a distance of seven miles, along steep and rocky mountain sides where there were many difficulties to overcome. This pipe is very strong and durable, being made of the best quality of iron or steel, double riveted and thoroughly coated inside and out with a special preparation of asphaltum. In some instances, where the expense and difficulties of transportation are great, the iron is punched and formed ready for making; tools for the purpose being supplied. Of course its lightness affords many advantages over any other kind of pipe in the saving of freight and the comparative ease with which it may be conveyed to and placed in position, as frequently happens, in almost inaccessible places. So much has this fact alone been appreciated, that many miles of pipe from this factory have been sold in British America, Mexico, South America, Australia, South Africa, as well as in hundreds of valleys and canyons all over this coast, wherever water wheels for mining or electric plants are operated, or water is brought from a distance for city supply or irrigating purposes.

The works at 130 Beale street, this city, are extensive and amply equipped with skilled workmen and modern appliances of every kind for turning out first-class work upon short notice, and at the lowest prices compatible with fair business methods.

OFFICE OF THE
GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892, to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.
FRANK McMULLEN, Secretary.

FRANCIS SMITH & CO.,
Manufacturers of
Sheet Iron and Steel PIPE!
ALL SIZES.
130 Beale Street, San Francisco, Cal.

Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

TWENTY ACRES
CHOICE FRUIT LAND!
Near Haywards, Alameda Co.
TEN ACRES IN ORCHARD.
TREES FOUR YEARS OLD.
Cheap and Easy Terms. Will exchange for Oakland or San Francisco property.
JOHN F. BYXBEE, 42 Market St.,
SAN FRANCISCO.

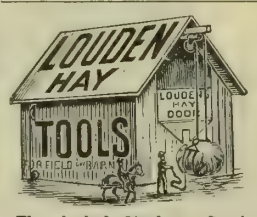
WALTER DICKINS. A. B. HINCKLEY. BENJ. HOBART.
Telephone No. 992.
DICKINS-HOBART LUMBER CO.,
Wholesale and Retail Lumber Dealers.
COUNTRY ORDERS A SPECIALTY.
Berry St., bet. 3d and 4th, San Francisco.
Selling Agents for the Western Mills of Seattle.

NOTICE.

The Annual Meeting of the Stockholders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis St., San Francisco, at 10 o'clock, A. M., Wednesday, April 13, 1892.

CHARLES WOOD, Secretary. I. C. STEELE, President.

A. J. ROBINSON,
AGENT FOR
CLIMAX 2 and 4-POINT BARB WIRE,
THE ASHLEY BOSS 2-POINT,
PLAIN WIRE AND STAPLES.
26 Beale St., San Francisco, Cal.



Make Money FOR Their Users.

They include Stackers, Carriers, Forks, Slings, Sweep Rakes, Hoisting Singletrees and a complete line of special fittings, and represent the practical experience of a quarter of a century. Special inducements for early orders. Send for illustrated catalogue and directions for building economical hay barns. Address
Louden Machinery Co., Fairfield, Iowa.

J. F. HOUGHTON, President, J. L. N. SHEPARD, Vice-Pres.
CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.
Home Mutual Insurance Company,
N. E. Cor. California and Sansome Sts.,
INCORPORATED A. D. 1864. San Francisco.

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

DRAIN TILE. ABOUT 15,000 FEET OF DRAIN TILE, with collars & 400 3-in. Y's with branches, to fit one or two-inch lateral drains. Boxed in straw, ready for shipment. Apply at once to **JAS. J. SEARLE,** Room 24, **402 Montgomery St, S. F.**

JOHN CAINE, 369 El Dorado St., Stockton.
1892—Wholesale and Retail—1892.
General Agent Winans' Pat. Carriage Co., Mich; also Stratton Carriage Co., Buffalo and Osborne Mowers, Rakes and Reapers. Every one guaranteed. Gang and Single Plows, Farm Implements, Hardware.

KNABE HAINES A. L. Bancroft & Co. 303 Sutter St., S. F.
Bush & Gerts Pianos
Parlor Organs
Installments Rentals
PIANOS

LOWEST PRICES. EASIEST TERMS. LARGEST STOCK. Oldest Music House.
PIANOS
DECKER BROS. FISCHER. KOHLER & CHASE, 25 O'Farrell St., S. F.



Rice's Patent CALF WEANER —AND— SUCKING COW MUZZLE.

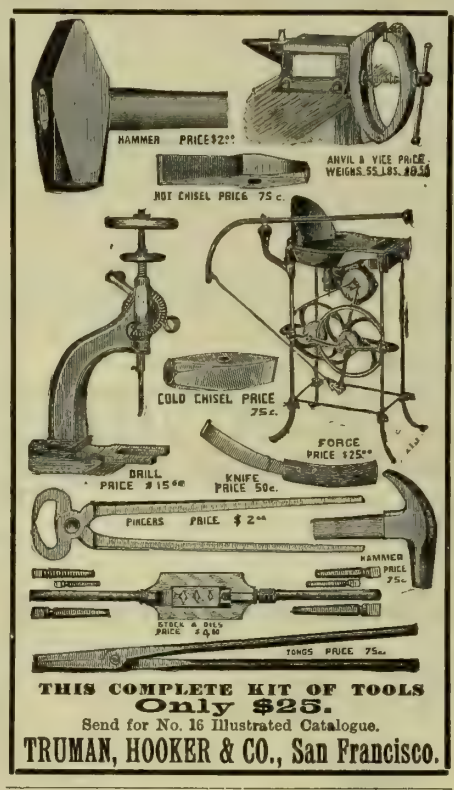
Prevents calf or cow from sucking themselves or each other. Thoroughly tested and endorsed by all. No hindrance in eating and drinking. No pain. Complete success. No. 1, for Calves, 50 cts. each; No. 2, for Yearlings, 75 cts. each; No. 3, for full grown animals, $1. All postpaid by mail.



FUNK'S PATENT CALF FEEDER.

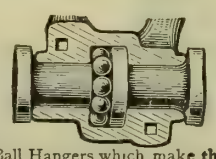
Raises calves better than the cow, on prepared feed and all the calf can eat.
No air swallowed; no fingers chewed; no ears sucked. Less trouble; greater success; easy to clean.
Sample Feeder mailed postpaid, $1.00; per dozen, $9.00.

G. G. WICKSON & CO., 3 & 5 Front St., San Francisco.
346 N. Main St., Los Angeles. 141 Front St., Portland, Or.

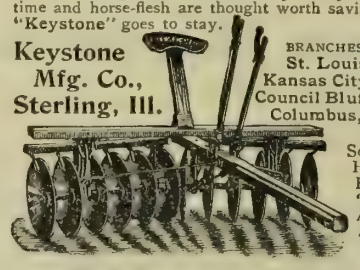


THIS COMPLETE KIT OF TOOLS Only $25.
Send for No. 16 Illustrated Catalogue.
TRUMAN, HOOKER & CO., San Francisco.

NOTICE THESE LITTLE BALLS!



They make the great Ball Hangers which make the
KEYSTONE DISC HARROW
The WONDER of all practical Farm People.
The same device which makes the Bicycle run easy, enables our Harrow to save one horse-power in use, beside cost for repairs. It conquers toughest sod—fits uneven ground. *Examine it yourself.* Where time and horse-flesh are thought worth saving, the "Keystone" goes to stay.



Keystone Mfg. Co., Sterling, Ill.
BRANCHES: St. Louis, Mo. Kansas City, Mo. Council Bluffs, Ia. Columbus, Ohio.
Send for Harrow Book—"*The Reason Why*," Free.

GALE CHILLED PLOWS
BAKER AND HAMILTON
SAN FRANCISCO-SACRAMENTO

ORANGE CULTURE A Practical Treatise by T. A. Garey giving the results of long experience in Southern California. 196 pages, cloth bound. Sent postpaid at reduced price of 75 cts. per copy. DEWEY PUB. CO., 220 Market, S. F.

It Stands the Test!

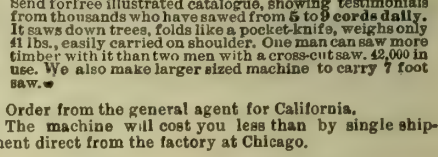
NITROGENOUS SUPERPHOSPHATE
—OF THE—
Mexican Phosphate & Sulphur Co.,

Now favorably known throughout the Citrus Growing Sections of the State, Stands Unrivaled as a True Fertilizer.
Certain in its Action, Great in Results, it maintains a high standard of fertility without undue stimulation.
Growers in San Bernardino County—notably Riverside—and Butte County—notably Palermo—can attest its merit.
We guarantee uniformity in its analysis, and seek correspondence with bonafide purchaser of a reliable fertilizer.

Mexican Phosphate & Sulphur Co.,
H. M. NEWHALL & CO., Agents,
309-311 Sansome Street, San Francisco, Cal.

FOLDING Sawing Machine.

9 CORDS IN 10 HOURS.



BY ONE MAN.
Send for free illustrated catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket-knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 42,000 in use. We also make larger sized machine to carry 7 foot saw.

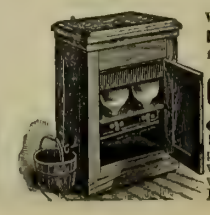
Order from the general agent for California.
The machine will cost you less than by single shipment direct from the factory at Chicago.

JAMES LINFORTH,
37 Market St., San Francisco.
HEADQUARTERS ALSO FOR
Blymyer Church, School and Fire Alarm Bells, Zimmerman Fruit Evaporators, Sorghum Mills, Butchers' Machinery and Tools, Rendering Tanks, Steam Jacket Kettles, Farmers' Boilers, Hawkeye Horse Powers, Hawkeye Saw Machines, Steam Engines, Windmills, Wine Presses, Cider Presses, Etc., Etc.
Send for Illustrated Catalogues of the goods you require.



BROWNE'S
—PATENT—
SQUIRREL EXTERMINATOR.

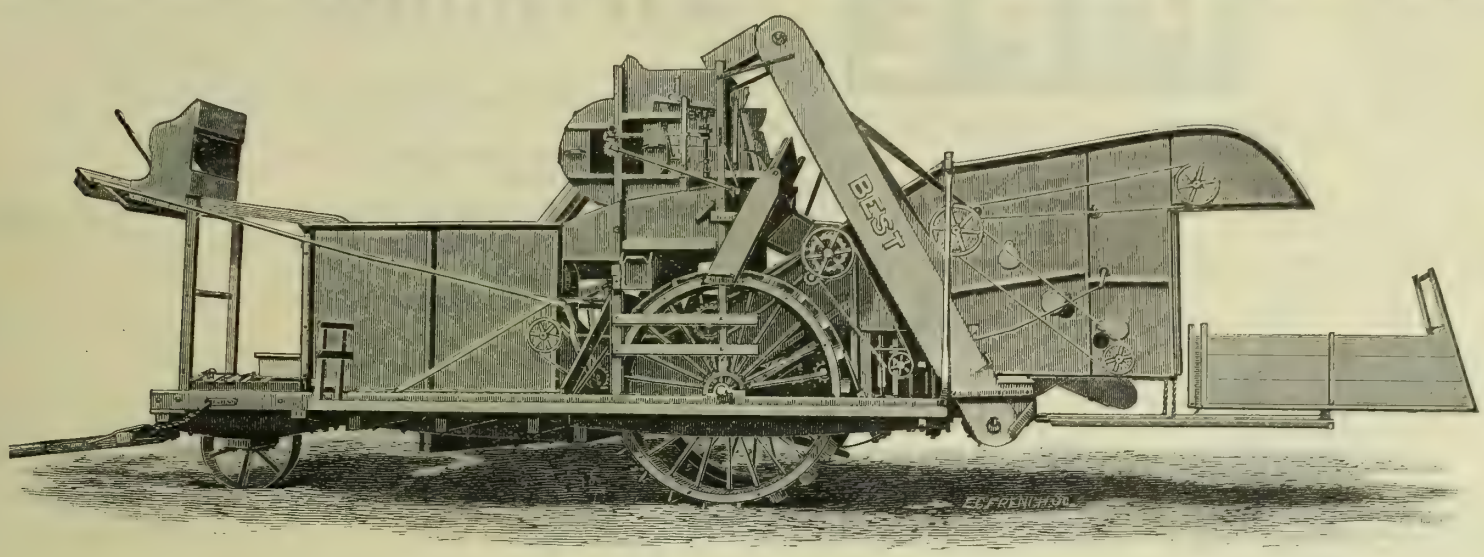
This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to
F. E. BROWNE,
314 & 316 So. Spring St, Los Angeles, Cal.



Write **CRYSTAL CREAMERY CO.,** LANSING, MICH., for Catalogues of
CREAMERIES, Etc.
Glass Milk Cans, Never Rust, Water Tanks of steel plate, everlasting. Cream without Ice or with Ice. We want agents everywhere. Big cut in prices.

AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND BREAK, THE CELEBRATED BEST'S CLEANER, LONG STRAW CARRIER, ADDITIONAL STRAW BEATERS, STRAW DUMP CART, ADJUSTABILITY FOR CUTTING HIGH OR LOW,

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circular. Send for Testimonials. Come and See the New Model for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

STANDARD MOWER

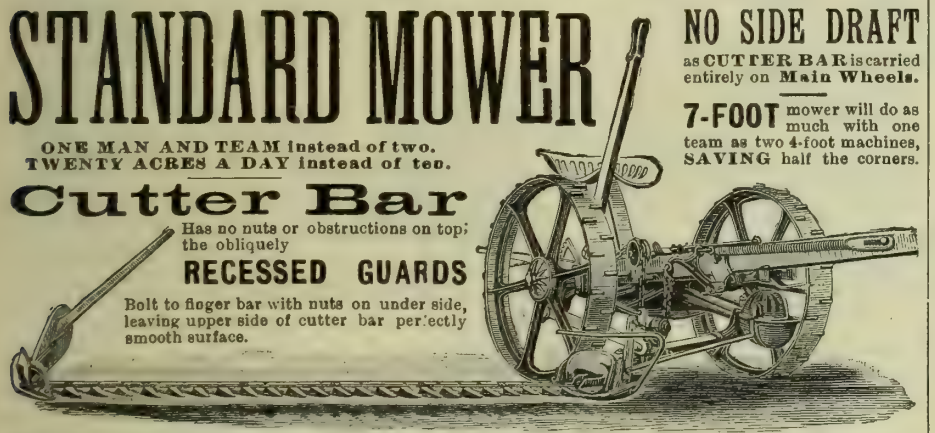
ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.

Cutter Bar

Has no nuts or obstructions on top; the obliquely

RECESSED GUARDS

Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.



NO SIDE DRAFT as CUTTER BAR is carried entirely on **Main Wheels.**

7-FOOT mower will do as much with one team as two 4-foot machines, **SAVING** half the corners.

MAIN WHEELS made interchangeable—one wheel fits either side of mower. **THE FOOT LIFT** raises cutter bar with perfect ease **without the aid** of hand lever, the first ever made. **EASILY TILTED.**
THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

Stanton, Thomson & Co.

SACRAMENTO, CAL.

AGENTS FOR NORTHERN CALIFORNIA.

Farmers' Union,

SAN JOSE, CAL.

AGENTS FOR CENTRAL CALIFORNIA

Newell Mathews,

LOS ANGELES, CAL.

AGENT FOR SOUTHERN CALIFORNIA.

CLUFF BROTHERS,

Wholesale and Retail Grocers.

Orders by Mail Promptly Filled. Packed and Shipped Free of Charge.

Send for Price List, or send us a list of what you want and we will put prices to it and mail it back for your approval, by which you can see what you save by ordering from us.

All Goods Guaranteed as Represented, with Special Terms to Grange Trade-Card Members.

— ADDRESS —

CLUFF BROTHERS, Grange Department, 9 Montgomery Ave., S. F.

DEWEY & CO. { 220 MARKET ST., S. F. / Elevator, 12 Front. } **PATENT AGENTS.**

If You are Interested in Purchasing Your Supplies

— AT —

BEDROCK RATES!

— WRITE TO THE —

Pacific Coast Home Supply Association,

132 MARKET STREET, SAN FRANCISCO.

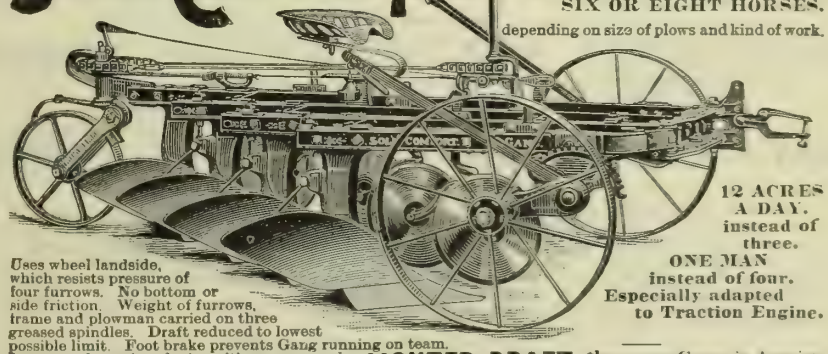
SOLID COMFORT

THE **"WONDER ON WHEELS"**

TONGUELESS. Self-Guiding.

SIX OR EIGHT HORSES.

depending on size of plows and kind of work.



12 ACRES A DAY, instead of three.

ONE MAN instead of four.

Especially adapted to Traction Engine.

Uses wheel landside, which resists pressure of four furrows. No bottom or side friction. Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit. Foot brake prevents Gang running on team. Levers and turning device within easy reach. **Easier Driving,** Straighter Furrows, and narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms. Ten or twelve inch cut.

LIGHTER DRAFT than any Gang in America. Adjustable Tongue—can be

ECONOMIST PLOW CO., SOUTH BEND, INDIANA.

☞ **Special prices and time for trial given** on first orders from points where we have no agents. Our book, **"FUN ON THE FARM,"** sent **Free** to all who mention this paper.



GREAT TRIAL of CENTRIFUGAL MACHINES

At Gottenburg, Sweden, August, 1891.

The EXTRACTOR-SEPARATOR, was awarded the

King's Cup and First Prize of Honor.



This is the **GREATEST CONTEST** in all Europe, and leaves the **EXTRACTOR-SEPARATOR** as the

VICTOR over All Competitors.

It is the **ONLY BUTTER EXTRACTOR.** It is the **Best Cream Separator,** and has a capacity of **2,000** to **3,000** pounds per hour. We guarantee this machine in every respect—material, workmanship and separation of the cream—**equal to any.** The bowl is made of **imported Swedish steel,** the best and strongest steel in the world. It is **superseding** other cream separators, because of the **larger amount of milk** separated with greater thoroughness. **Send For Full Illustrated Circulars.**

VERMONT FARM MACHINE CO., Bellows Falls, Vt.,

Manufacturers of Creamery, Cheese and Dairy Supplies.

SHEET IRON PIPE



IRON PIPE

ALL SIZES, FOR GAS, STEAM AND WATER.

— WE MANUFACTURE —

SHEET IRON AND STEEL PIPE,

ALL SIZES,

For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

The Cut shows a Section of Three Joints

DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a **high grade** o annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded accord'ng to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixtuie of **ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit.** It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



CORRUGATED IRON,

Black, Painted and Galvanized, for Roof and Sides of

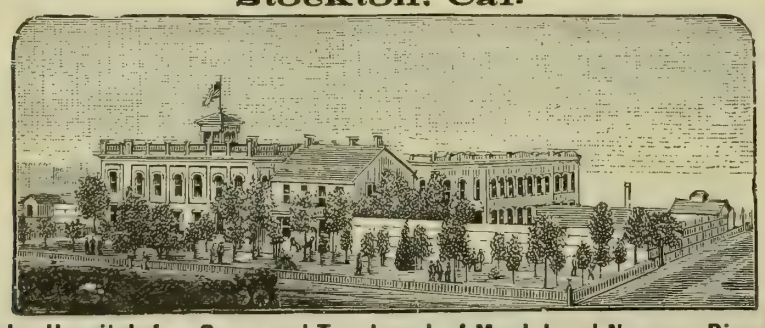
HAY BARNS, DRY HOUSES, STABLES, ETC.

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Stockton, Cal.



Private Hospital for Care and Treatment of Mental and Nervous Diseases.

Has been in existence for over 10 years and is favorably known as the model institution of the Pacific Coast. For terms and other particulars, apply to the Proprietor and Superintendent,

DR. ASA CLARK, Stockton, Cal.

REFERENCES: Dr. L. C. Lane, Dr. W. H. Mays (late Superintendent of State Asylum at Stockton), Dr. Robert A. A. McLean, Dr. I. S. Titus, Dr. R. H. Plummer, San Francisco; Dr. E. H. Woolsey, Surgeon S. P. Co. and Oakland Hospital; Dr. W. S. Thorne, San Jose; Dr. G. A. Shurtleff (late Superintendent State Insane Asylum), Napa.

CARBOLINEUM AVENARIUS.

PRESERVATIVE AGAINST ROTTING, DECAY,

FUNGUS, ETC., OF WOOD AND STONE.

REMEDY AGAINST DAMP WALLS. PROOF AGAINST TEREDOES.

What We Guarantee Carbolineum Avenarius to Do:

1—To preserve any kind of Wood above or under ground or water, and prolong its life at least 100 per cent.
2—To prevent moisture from penetrating into brick or stone walls and preserve them same as wood.
3—To keep off all sorts of Insects, Vermin or other enemies to wood or objectionable and destructive agencies.
4—To prevent Rats and Mice gnawing wood coated with Carbolineum Avenarius.
5—To disinfect barns, stables or residences and destroy Microbes.
6—To force all moisture out of the wood without closing the pores.
7—To prevent shingles coated with Carbolineum from rotting, warping or cracking.
8—To prevent Rope treated with Carbolineum from rotting, causing it to remain pliable and excelling Tar Coating.
9—IMPORTANT! Teredoes will not attack Timber coated with Carbolineum Avenarius.
10—It does not contain any acids or other poisonous ingredients injurious to fibers of wood.
11—It is the cheapest and best wood preserver in the world.

All the above statements are facts, and all our testimonials to that effect are genuine and indisputable.

CARBOLINEUM WOOD-PRESERVING CO.,

MUECKE & CO., Pacific Coast Agents. 319 California St., San Francisco, Cal.

PRINCESS CHILLED PLOWS

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TRUMAN, HOOKER & CO.,

SAN FRANCISCO.

BUSINESS CHANCE, FOR MAN OR WOMAN, Address, O. B. ORCUTT, Orcutt, California.

Tiresome

To read long advertisements about things you do not want. We will only speak of one or two items which nearly everybody uses every day and we think you will appreciate the offer.

Ladies' Fine Kid Shoes, $1.25, $1.35, $1.50.
Ladies' Kid Shoes, Extra Quality, $1.75, $2, $2.25, $2.50.
Tipped or Plain Toe, from $1.75 up.
Oxfords. Beautiful Style, Tipped, only $1.00.
Misses' Fine Oxfords, Tipped or Plain, $1.00.
Misses' Neat Sandals, 11 to 2, 50c.

Shoo!

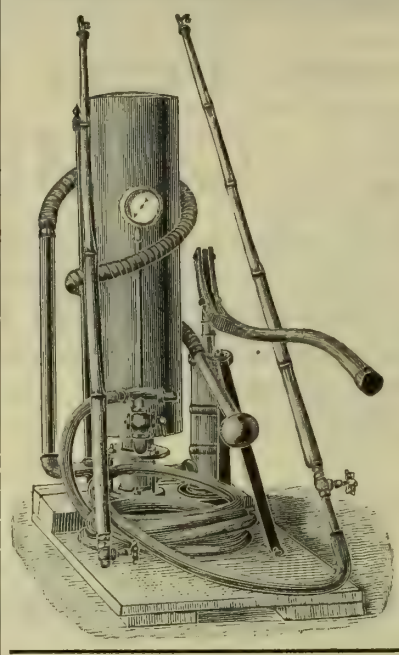
Shew!

Shoe!

Infant's shoes, 1 to 3, 25c up; Infants' 2½ to 6, at 50c up; Child's 5 to 7½, at 75c up; 8 to 10½, at 75c up; Boys' or Girls' 11 to 2, $1 up; 2½ to 6, at $1.25 up; Men's Sunday or every day shoes, $1-50 up. Every day boots, kip, at $1.75 up. Ask for full list, free, and save 50 per cent on Shoes at

SMITH'S CASH STORE,

416 & 418 Front St., S. F., Cal.



If you want a First-Class Spray Pump

—GET THE—

"BEAN"

WHICH IS SHOWN BY THE ACCOMPANYING CUT.

Every Year they are Improved, if Possible.

—THIS SEASON'S PUMPS HAVE—

HEAVY STEEL RECEPTACLES,

—AND—

Both Valves Can be got at in a Moment's Time with a Common Farm Wrench.

They ECONOMIZE LABOR and throw a penetrating spray. Send for Circulars.

THE BEAN SPRAY PUMP CO.,

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SURE DEATH

To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

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The only effectual remedy in the market. Indorsed by the University of California.

When Grafting or Budding use our Liquid Grafting Compound.

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Spraying Machinery.

BEST IN THE WORLD.

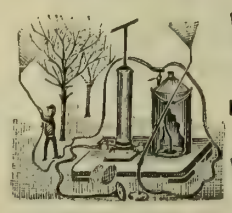
The Chapman-Climax No. 1, represented by the accompanying illustration, is the cheapest complete and reliable Orchard Spraying Pump Apparatus manufactured.

Equipped complete, ready for use, with hose, short-hand extension and our latest improved spray nozzle.

We refer to more than 1000 California orchards where our machinery is in satisfactory operation. In many instances single fruit growers have in use from five to fifteen Chapman outfits.

We manufacture several sizes and styles. Write for illustrated descriptive catalogue and price list.

R. S. CHAPMAN, Office & Works, 14 & 16 Fremont St., S. F., Cal.



Whitewashing Machines & Tree Cleansers.

Complete Outfits at prices from $3 to $50.

The Pumps are all BRASS, with BRASS AND RUBBER VALVES.

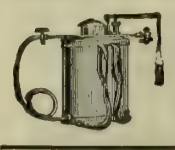
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THERE IS NOTHING LIKE THEM.

Pump sent complete as in cut for $14. Send for Illustrated Catalogue.

WAINWRIGHT SPRAYING APPARATUS CO., 10 Hayes St., S. F.

Contracts taken for Large Jobs of Whitewashing.



SPRAY YOUR FRUIT TREES AND VINES

Wormy Fruit and Leaf Blight of Apples, Pears, Cherries, Grape and Potato Rot, Plum Curculia prevented by using **EXCELSIOR SPRAYING OUTFITS.**

PERFECT FRUIT ALWAYS SELLS AT GOOD PRICES. Catalogue showing all injurious insects to Fruits mailed free. **Large stock of Fruit Trees, Vines, and Berry Plants at Bottom Prices. Address WM. STAHL, Quincy, Ills.**



BREED'S UNIVERSAL WEEDER and CULTIVATOR

Every farmer in our territory wants one. Every practical farmer will have one as soon as he learns its merits.

T. B. TERRY writes: "I must have two next season. While my man was hoeing one row, my son cultivated with the WEEDER and one horse, and more thoroughly 36 rows." Which method do you prefer? Send for illustrated pamphlet, "GROWTH AND CULTURE OF CROPS."

KNAPP, BURRELL & CO., GENERAL AGENTS, PORTLAND, OREGON.

People's Party Platform.

Following is the platform adopted by the People's Party National Convention recently held at St. Louis:

PREAMBLE.

"This, the first great labor conference of the United States, and of the world, representing all divisions of urban and rural organized industry, assembled in National Congress, invoking upon its action the blessing and protection of Almighty God, puts forth, to and for the producers of the nation, this declaration of union and independence.

"The conditions which surround us best justify our cooperation.

"We meet in the midst of a nation brought to the verge of moral, political and material ruin. Corruption dominates the ballot box, the legislatures, the Congress, and touches even the ermine of the bench. The people are demoralized. Many of the States have been compelled to isolate the voters at the polling places in order to prevent universal intimidation or bribery. The newspapers are subsidized or muzzled, public opinion silenced, business prostrated, our homes covered with mortgages, labor impoverished, and the land concentrating in the hands of capitalists. The urban workmen are denied the right of organization for self-protection; imported pauperized labor beats down their wages; a hireling standing army, unrecognized by our laws, is established to shoot them down, and they are rapidly degenerating to European conditions. The fruits of the toil of millions are boldly stolen to build up colossal fortunes, unprecedented in the history of the world, while their possessors despise the republic and endanger liberty. From the same prolific womb of governmental injustice we breed the two great classes—paupers and millionaires. The national power to create money is appropriated to enrich bondholders; silver, which has been accepted as coin since the dawn of history, has been demonetized to add to the purchasing power of gold by decreasing the value of all forms of property as well as human labor; and the supply of currency is purposely abridged to fatten usurers, bankrupt enterprise and enslave industry. A vast conspiracy against mankind has been organized on two continents and is taking possession of the world. If not met and overthrown at once it forebodes terrible social convulsions, the destruction or the establishment of an absolute despotism.

"In this crisis of human affairs the intelligent working people and producers of the United States have come together in the name of peace, order and society, to defend liberty, prosperity and justice.

"We declare our union and independence. We assert our purpose to support the political organization which represents our principles.

"We charge that the controlling influence dominating the old political parties have allowed the existing dreadful conditions to develop without serious effort to restrain or prevent them. They have agreed together to ignore in the coming campaign every issue but one. They propose to drown the outcries of a plundered people with the uproar of a sham battle over the tariff, so that corporations, national banks, rings, trusts, 'watered stocks,' the demonetization of silver and the oppressions of usurers, may all be lost sight of. They propose to sacrifice our homes and children upon the altar of Mammon; to destroy the hopes of the multitude in order to secure corruption funds from the great lords of plunder. We assert that a political organization, representing the political principles herein stated, is necessary to redress the grievances of which we complain.

"Assembled on the anniversary of the birth of the illustrious man who led the first great revolution on this continent against oppression, filled with the sentiments which actuated that grand generation, we seek to restore the Government of the Republic to the hands of the 'plain people,' with whom it originated. Our doors are open to all points of the compass. We ask all honest men to join with and help us."

PLATFORM.

FINANCE.

1st. We demand a national currency, safe, sound and flexible, issued by the General Government only, a full legal tender for all debts, public and private; and that without the use of banking corporations; a just, equitable and efficient means of distribution direct to the people at a tax not to exceed 2 per cent be provided, as set forth in the Sub-Treasury plan of the Farmers' Alliance or some better system; also, by payments in discharge of its obligations for public improvements.

a. We demand free and unlimited coinage of silver.

b. We demand that the amount of circulating medium be speedily increased to not less than $50 per capita.

c. We demand a graduated income tax.

d. We believe that the money of the country should be kept as much as possible in the hands of the people, and hence we demand all national and State revenue shall be limited to the necessary expenses of the Government economically and honestly administered.

e. We demand that postal savings banks be established by the Government for the safe deposit of the earnings of the people and to facilitate exchange.

LAND.

2d. The land, including all the natural resources of wealth, is the heritage of all the people and should not be monopolized for speculative purposes, and alien ownership of land should be prohibited. All land now held by railroads and other corporation in excess of their actual needs, and all lands now owned by aliens, should be reclaimed by the Government and held for actual settlers only.

TRANSPORTATION.

3d. Transportation being a means of exchange and a public necessity, the Government should own and operate the railroads in the interest of the people.

a. The telegraph and telephone, like the post-office system, being a necessity for transmission of news, should be owned and operated by the Government in the interest of the people.

RESOLUTIONS ADOPTED.

Resolved, That the question of female suffrage be referred to the legislatures of the different States for favorable consideration.

Resolved, That the Government should issue legal tender notes and pay the Union soldier the difference between the price of the depreciated money in which he was paid and gold.

Resolved, That we hail this conference as the consummation of a perfect union of hearts and hands of all sections of our common country. The men who wore the gray and the men who wore the blue meet here to extinguish the last smoldering embers of civil war in the tears of joy of a united and happy people, and we agree to carry the stars and stripes forward forever to the highest point of national greatness.

Political Mention.

[Political announcements published under this head at the rate of 25 cents per line of agate space.]

Call for County Organizations by the State Central Committee.

MONROVIA, CAL. March, 8th 1892.

To the menbers of the State Central Committee of the People's Party of California:

GREETING:--You are hereby notified to call a convention in your respective counties, on Saturday, March 26, 1892 (or as soon thereafter as sufficient notice can be given) for the purpose of organizing the People's Party in your various counties, by electing a County Central Committee of one from each voting precinct. Also to elect delegates to State convention (or district convention, as may be hereafter determined by the Executive Committee, due notice of which will be given); also to devise ways and means for carrying on a vigorous and aggressive campaign in every county in the State.

All persons, women as well as men, are eligible, to vote or be voted for, who endorse the Los Angeles platform of Oct. 22, 1891.

Counties in which members at large of the State Central Committee reside should hold a conference of all such members, and agree on time and place, and also whether a delegate or mass convention is most suited to their condition.

Each County Central Committeeman is ex-officio President of his county until said county is organized, and may call a convention of delegates from all Industrial and Reform organizations, and fix the ratio of representation; or he may call a mass convention of all men and women who will take the pledge of the Peoples Party platform of California.

Let each convention open with appropriate form and ceremony. Take up a collection and forward one-fourth (¼) to Treasurer State Central Committee People's Party, J. N. Barton, Loomis, Placer county, the remainder to be reserved to defray convention expenses, etc. To the State Convention elect two delegates at large for each county, and one additional for each five thousand (5000) votes or major fraction thereof as cast for Governor at the last election.

Brethren! Settle down to the work like veterans; close up the ranks and push forward to victory.

E. M. WARDALL,
Chairman State Central Com. of Peoples Party of Cal

The National Call.

TO THE PEOPLE OF THE UNITED STATES: The National Committee of the People's party of the United States, acting in conjunction with the following persons, C. H. Van Wyck; of Nebraska; C. W. Macune, Texas; M. J. Branch, Georgia; J. H. Powers, Nebraska, R. M. Humphreys, Texas; L. D. Laurent, Louisiana; Marion Cannon, California; T. H. Maguire, New York; J. H. Williams, Kansas; L. L. Polk, North Carolina; Pierce Hackett, Missouri; M. M. Garrett, Illinois; John Seitz, Ohio; Mary E. Lease, Kansas; Anna L. Diggs, District of Columbia; Anna Debbs, Texas; A. P. Parksen, Florida, and Ben Terrell, of Texas, representatives of a certain meeting of members of various organizations of this country, held in the city of St. Louis, Missouri, on the 24th day of February, 1892, respectfully submit to the people of the United States the published preamble and platform of the conference of said labor organizations of our nation, held on the 22d, 23d and 24th days of February, 1892, in the city of St. Louis.

We urge that all citizens who support the demands therein made shall meet on the last Saturday in March next, in their respective towns and villages, and hold public meetings and ratify these demands, and take steps to organize preparatory to electing delegates to a National Convention, and we call upon all duly qualified voters of the United States who are in favor of these principles, and of nominating candidates for President and Vice-President on the above platform, to send delegates to the convention of the People's party to be held in Omaha, Neb., July 4, 1892, at 10 o'clock in the forenoon.

MRS. THEODOSIA B. SHEPHERD, Ventura, California, has one of the rarest and most beautiful collections of plants, bulbs and cacti in the State. She has just issued a new catalogue of 52 pages, of bulbs, seeds, orchids, ferns and cacti, also a new trade list for dealers. See her advertisement on page 273 of this paper.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

CHOIR AND CLASS BOOKS.

FOR

Singing Schools, Clubs, Conventions, Etc.

Victory of Song.

L. O. Emerson's latest and best work, 192 pages of Glees, Part Songs, Choruses, Anthems, Male Quartettes, etc; with Rudimentary Exercises, Lessons in Note Reading, Hints in Regard to the Use of the Voice, Articulation, Pronunciation, etc. Price 60c, $6.00 per dozen.

Emerson's Anthems of Praise.

A new book containing nearly 100 choice Anthems. Price $1 00; $9.00 per dozen.

Gabriel's Anthems.

A deservedly popular collection. Price, $1.00; $9.00 per dozen.

Emerson's Easy Anthems.

One of the best selling collections. 80 cents; $7.20 per doz n.

Emerson's Choice Anthems.

Mr. Emerson's choice of the best 61 anthems of the of the last decade. Price, $1.00; $9.00 per dozen.

American Tune Book.

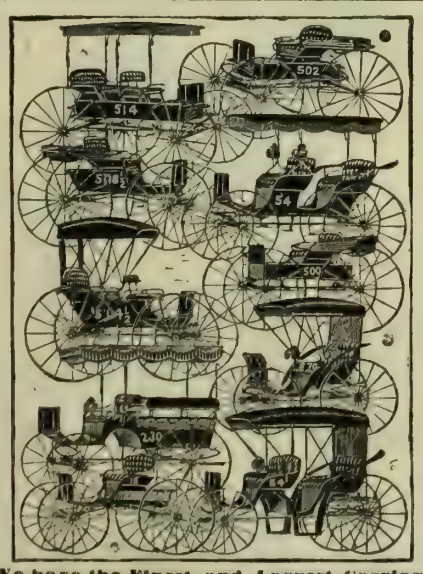
By Dr. Lowell Mason, assisted by 500 teachers and choir leaders. A complete collection of the tunes most widely popular, with the most popular anthems and set pieces—in fact, the cream of all other books. Price, $1.50; $13.50 per dozen.

Dow's Collection of Responses and Sentences.

By Howard M. Dow. Price, boards, 80 cents; $7.20 per dozen. Cloth, $1.00, or $9.00 per dozen.

(Any book sent postpaid upon receipt of retail price. When ordered at dozen rate transportation not prepaid.)

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School of Practical, Civil, Mechanical, Electrical and Mining Engineering,
Surveying, Architecture, Drawing and Assaying,
723 MARKET ST., SAN FRANCISCO, CAL.
Open All Year.
A. VAN DER NAILLEN, President.
Assaying of Ores, $25; Bullion and Chlorination Assay, $25; Blowpipe Assay, $10. Full course of assaying, $50.
ESTABLISHED 1864. Send for circular.

ACTUAL BUSINESS PRACTICE.
Established 1863 — PACIFIC Business College, 320 POST ST. SAN FRANCISCO. — Oldest and Best.
LIFE SCHOLARSHIPS, $75.
No VACATIONS. DAY AND EVENING SESSIONS.
Ladies admitted into all Departments.
Address: T. A. ROBINSON, M. A., President.

WADE & WADE,
Analytical Chemists and Assayers.
ESTABLISHED 1887—102 SOUTH BROADWAY, LOS Angeles, Cal. We have fitted up the best laboratory in Southern California and are prepared to make Assays and Analyses of all Metals, Minerals, Ores, Waters, Fertilizers, Etc. ASSAYING TAUGHT.



WICKSON'S
Orchard and Vineyard
SINGLETREE.

Sure Prevention against Damaging Trees or Vines.
Saves its Cost every day used.
Attaches Easily to any Trace.

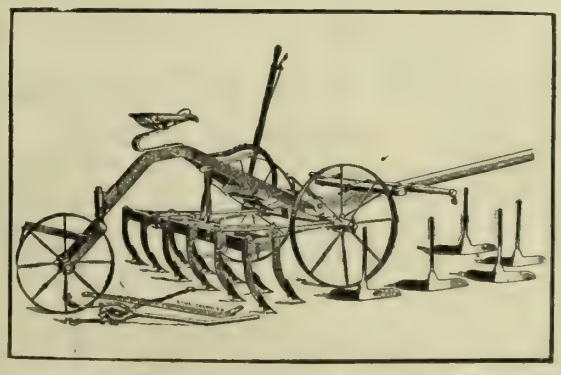
Singletree ..... 75c.
Attaching Leathers, pair.. 50c.
Singletree, with full Set Traces.... ..... $4.00

G. G. WICKSON & CO.,
3 & 5 FRONT STREET
SAN FRANCISCO.

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— SEND FOR —
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Ventura, California.
A TRADE LIST FOR DEALERS.

"GERMANIA."
The Only German Farmers' Magazine on the Pacific Coast.
AN ILLUSTRATED MONTHLY — ONLY $1.00 PER Year. Sample Copy Free. Address THE J. C. JENS CO., 1196 Treat Avenue, San Francisco, Cal.

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LUITWIELER CULTIVATOR.

Thousands of them in use. Strong, Durable and Effective. If your local dealer does not handle them, send to me for circulars. Car load order just received from Portland, Or., and a large order from Phoenix, Ariz.

S. W. LUITWIELER
200 B St., Santa Ana, Cal.

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To Learn Book-keeping
When you can learn it AT HOME without a Teacher. Send 2c Stamp for particulars. Mention this paper.
H. K. STARKWEATHER CO., 220 Sansome St., S. F.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

A. J. CHADBOURNE, Irvington, Alameda Co., Cal. The stallions Tommy C. and Fred Morgan of the potent Black Hawk blood for public service.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

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PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

J. H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

BREEDER OF REGISTERED JERSEY Cattle. H. A. Mayhew, Niles, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Importer and Breeder of Shorthorn Cattle and Poland China Hogs.

H. P. MOHR, Mount Eden, Alameda Co., Cal., breeder and importer of Registered Clydesdale Horses, Holstein-Friesian Cattle and Berkshire Pigs. Young stock always on hand and for sale. Correspondence solicited.

PETER SAXE & SON, Lick House, San Francisco, Cal Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

POULTRY.

DEER MOUNT POULTRY YARDS, St. Helena, Cal. S. C. White Leghorns, W. Holland Turkeys, Toulouse Geese and Pekin Ducks and Guinea Pigs.

J. R. CATLETT, Pleasant Grove, Cal. Thoroughbred S. C. B. Leghorns, 50c per setting.

CALIFORNIA POULTRY FARM, Stockton, Cal., send for illustrated and descriptive catalogue, free.

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MADISON H. CRITCHER, Santa Cruz, Santa Cruz Co., Cal. Thoroughbred Poultry. Settings, $3.

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JOHN McFARLING, Calistoga, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

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SHEEP AND GOATS.

ITALIAN SHEEP WASH. Free from poison. Cures thoroughly the scab of the sheep. The best and the cheapest. Chas. Duisenberg & Co., 314 Sacramento Street, San Francisco.

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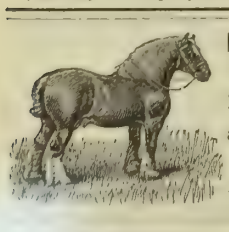
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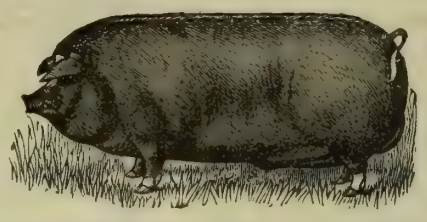
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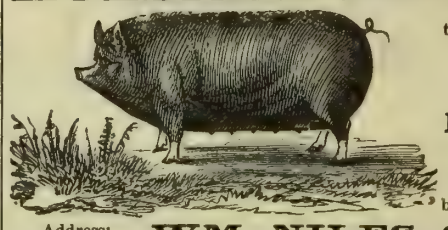
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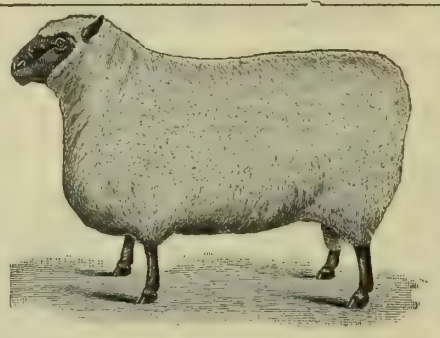
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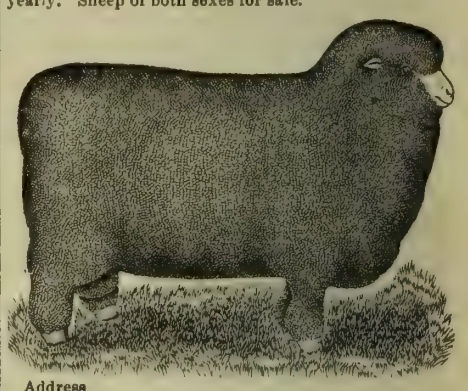
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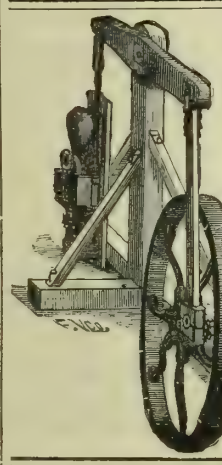
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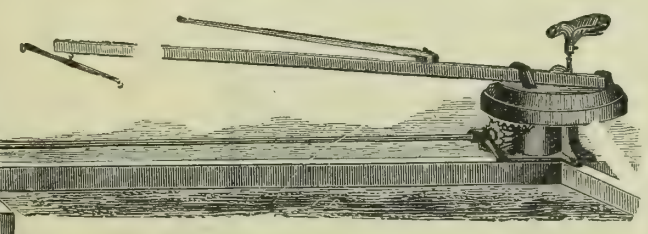
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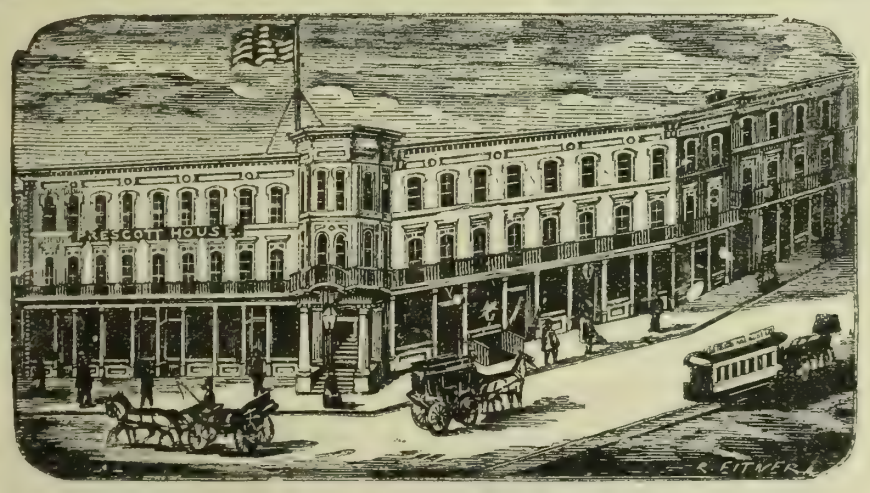


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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

There appears to be a gradual setting in of a better tone to the various branches of the produce market, and as this becomes more marked much better times may be reasonably looked for. This does not necessarily indicate better prices, but better cleaning up of the daily receipts. Rains the past week have, for the time being at least, allayed all fears regarding grain crops, and with usual spring weather a very large outturn to the acre is expected. Returns made to inquiries instituted by the S. P. R. R. Co. indicate an increase in acreage seeded to wheat over that of 1891 of from 10 to 15 per cent, while the prospective outturn is fully 20 per cent better than at the same time in last year. The west side of the San Joaquin promises to have very large crops. This of itself is an assurance of a very large wheat crop for the State as a whole. The local money market continues easy, with the supply of available funds in excess of the demand.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June	July.
Thursday	8s 1 d	7s 11½d	7s 11 d	7s 10 d	7s 10 d
Friday	7s 11½d	7s 10½d	7s 10 d	7s 9 d	7s 08½d
Saturday	.....	.....	7s 9⅝d	7s 08½d	7s 10 d
Monday	7s 11 d	7s 10½d	7s 09⅜d	7s 8⅝d	7s 08 d
Tuesday	7s 10 d	.....	7s 08½d	7s 08½d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	39s 6d	39s 0d	39s 6d	Firm but not active.
Friday	39s 6d	39s 0d	39s 6d	Quiet but steady.
Saturday	39s 3d	39s 0d	39s 3d	Weaker.
Monday	39s 3d	.....	39s 3d	
Tuesday	39s 3d	38s 6d	38s 9d	Heavy.

To-day's cablegram is as follows:

LIVERPOOL, March 16.—WHEAT—Depressed. California spot lots, 8s; off coast, 39s 3d; just shipped, 38s 6d; nearly due, 38s 9d; cargoes off coast, slow; on passage, weaker; Mark Lane wheat, turn easier; French country markets, very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	169¼	169¼	167	164½	163⅝
Friday	167½	167⅝	164⅝	162⅝	160⅞
Saturday	166½	166⅝	164½	161⅝	16 ⅜
Monday	166½	166⅝	163½	161	159⅝
Tuesday	164½	164½	161⅝	1 8⅛	158⅝

The following is to-day's telegram:

NEW YORK, March 16.—WHEAT—99⅞c for March, 99⅝c for April, 97⅞c for May, 96¼c for June and 96c for July.

CHICAGO, March 16.—WHEAT—86¼c for cash and 86c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	Buyer Season. L.	Buyer Aug. H	Buyer Aug. L.	Seller 1892. H.	Seller 1892. L.
Thursday	168½	167¾	....	....	....	....
Friday	168½	167½		....	....	....
Saturday	16 ⅝	167½	....	....	....	....
Monday	168	167⅝	....	....		....
Tuesday	166½	166½	....	....	144	14 ⅜

The following are to-day's recorded sales on Call:

WHEAT—Morning session — Buyer season — 100 tons, $1.66⅞; 500, $1.67; 500, $1.67½; 600, $1.67½ per ctl Afternoon session—Buyer season, 200 tons, $1.67; 1000, $1.66⅞; 700, $1.66¼ per ctl.

BARLEY.

	Buyer Season. H.	Buyer Season. L.	*Buyer Season. H.	*Buyer Season. L.	Seller 1892 H.	Seller 1892 L.
Thursday	101½	100⅝	....	....	....	....
Friday	101½	100⅝	....	....	....	....
Saturday	101½	100⅝	....	....	....	....
Mond y	100	99½	....	....	....	....
Tuesday	98⅝	98¼	88	88	....	....

*New crop.

The following are to-day's recorded sales on Call:

BARLEY—Regular session—Buyer season, 300 tons, 99c per ctl. Afternoon Session—Buyer season, 100 tons, 98¾c; 100, 98¼c; 100, 99c per ctl.

Markets by Telegraph.

Foreign Hop Review.

Mark Lane (London) *Express*, February 29, reports as follows: Very little business is now doing in any class of 1891 hops, and the market is hardly so firm, though merchants show a strong resistance to the attempts of buyers to bring down the prices. Were it not for the fact that there are scarcely any holders among the planters, which compels direct dealing with the merchants, values would most likely be lower than they are. Another, and very important factor in the situation is the fact that the stocks held by merchants are by no means large—only just sufficient perhaps, to last out till next autumn. In these circumstances it is hardly probable that quotations will decline; on the contrary, any unfavorable aspect of the 1892 growing crop, when the time arrives for crop prospects to be taken into account, may be expected to harden the market. There is at present no anxiety to sell, nor, indeed, is there any apparent desire to buy, except in the way of meeting immediate requirements. The market consequently is very quiet, and quotations are mainly nominal. On the Continent and in America trade is also confined to narrow limits, but values are steady, and there is nothing at present in the situation to indicate a change in the quotations.

Eastern Wool Markets.

NEW YORK, March 11.—*Bradstreet* says: The Wool sales continue large, but at the same low prices. Quotations, however, do not show any further decline. The dealers say that Wools are selling at cost. The markets have been relieved of a large amount of Wool, and reduced supply may cause a hardening of values. In domestic fleeces there has been a fair movement. The supply of delaine Wools is light, but the stock of X, XX and XXX combing Wools are ample to meet the immediate needs of manufacturers. One-quarter and three-eighths blood Woods are generally reported quiet. There has been some buying of both Texas and California Wools, but as the shearing will begin in these States next month, a large amount of Wool from last year's clip will be probably carried over. It is said that the output of Texas Wools will be smaller than usual, owing to the weather, which has destroyed a large number of sheep and injured the growth of the Wool. The Territories are moving moderately well, with prices unchanged but weak.

NEW YORK, March 14.—Wool continues to be released without hesitation at the low ruling rates. Unwashed hold their own when quality favors. There seems to be nothing to check the soft condition of the market. London's heavy accumulations leave only a cheap prospect, and New England dealers regard the unusual available offerings of foreign, as a serious menace to uphold the present "buyers' market situation. Sales at New York: 3,904,000 domestic; foreign, mostly Dauskvi. Sales at Boston: 2,120,000 domestic. Foreign is very active; 785,000 pounds of Australian sold at 32½@41c; and 181,000 carpet. Philadelphia sounds the prevailing low tone of seaboard prices. Sales and stocks are moderate.

Eastern Dried Fruit Market.

NEW YORK, March 13.—With only about six weeks remaining for natural trade in dried fruits, first-hand dealers are delighted with the fact that our heavy stocks are down to a point of quantity which at one time was hardly to be hoped for at this date. No matter what cheapness may have been forced upon prices, it is more satisfactory for goods of this kind to be in the hands of distributors than in indefinite warm weather storage. Unpeeled Peaches are firmer with a marked reduction in the supply. They range from 6½@8c. Large Prunes are scarce and wanted. There is a good trade demand for fifties and sixties at 8¾@9¼c; bags and boxes sixties and seventies, 8@8½c; small, 6@6¼c. Apricots are freely offered at 6 to 9c, boxes or bags as to quality. City grocers are carrying large lots of this fruit.

CHICAGO, March 15.—There has been such a liberal trade in raisins that offerings are only moderate and steadiness of values continues, though present sales are small. Other lines sell pretty well. Prunes are in good request. Peaches are in fair demand and being scarce, it turns a little more trade to apricots. Nectarines rule quiet.

Eastern Raisin Markets.

NEW YORK, March 14.—Raisins disclose a better feeeling in the demand, and fortunately the offering is brightened by recent arrivals. Prime three-crown bags are quick at 5c; two-crowns are slow at 4@4½c; boxes, loose, $1.05@1.40; layers, $1.10@1.60.

Eastern Markets for Miscellaneous Produce.

Honey—Steady at 7¼@7½c for light amber.

Lima Beans show better confidence; spot closed strong at $1 65@1.70 a bushel. 10,000 bushels were recently sold, to arrive by sail, at $1.45.

Hops—Quiet; 100 bales of common California sold at 17c. The range for Coast 91's is 20@25c; State, 20@24c. A number of olds at 6@9c have gone abroad. London is becoming steadier. The exports for the week are 412 bales. Options have been neglected all the week.

General Remarks and Statistics.

Cereals.

The crop advices from the West are quite favorable for the growing wheat crop, and state that in the last two or three weeks the crop has improved rather than deteriorated.

The recent advices from France are reported to be considerably more satisfactory than last year, when nearly one-half of the fall wheat needed to be resown. It is stated that in some cases as high as 30 per cent will have to be resown, but this possibly is exaggerated.

The Agricultural Department at Washington, D. C., reports the stock of wheat in growers hands at 171,000,000 bushels, or 28 ℔ cent of the crop, say 63,000,000 of spring and 108,000,000 of winter. This is the largest reserve ever reported, that of the largest previous crop (1884) being 169,000,000 bushels.

From mail advices just to hand we obtain the following summary of wheat crop prospects. In Illinois one-half of the correspondents report the crop in good condition. About 35 per cent represent the condition as fair, and 15 per cent report poor. In Indiana 55 per cent of the correspondents report good, 40 per cent fair and the others poor. The condition in Ohio is not so good. Only 20 per cent of the correspondents report good, 36 per cent report fair, and 24 per cent poor. A number of localities report damage by freezing and thawing, in some cases serious. Two-thirds of the correspondents in Michigan report the condition as good, 30 per cent fair, and the rest poor. In Kentucky 52 per cent of the correspondents give the condition as good, 36 per cent as fair, and 12 per cent as poor. Some damage by freezing is reported. In Missouri the outlook for the crop is not nearly so good as it was at this time last year. One-third of the correspondents report good, one-fifth fair and the rest poor. In Kansas 40 per cent of the correspondents report the condition good, 20 per cent as fair and the remainder as poor. In Iowa 60 per cent of the correspondents report good, 30 per cent report fair and the others poor In Wisconsin one-half of the correspondents report the condition as good, 42 per cent report fair and the rest poor. The condition in some places is critical, owing to freezing and thawing, with a poor outlook

In the local market for futures, wheat continues to be the leading speculative article, with barley a good second. The market acts very much as if speculators are largely at sea, and therefore fearful of operating too heavy until they can see farther ahead. While in this State, and up north, crop prospects are all that can be reasonably desired, yet in the Central States they are not up to the percentage which obtained at this time in 1891. European crop prospects are being watched with an unusual degree of interest, for upon them largely depends the future course of the wheat market.

In the sample market wheat has held its own, notwithstanding declining markets at the East and also abroad. The strength of the local market is a source of considerable surprise to the many and can be only accounted for by reason of the surplus being well concentrated and the market for future delivery in this season being oversold. If the latter supposition proves to be correct, then the strength of the market is readily accounted for. The engaged tonnage in port is steadily decreasing, while the disengaged tonnage is increasing. The latter has a carrying capacity of about 200,000 tons. The exports of wheat (flour reduced to wheat) to date aggregate over 700,000 tons, and we have nearly four months to run yet before new-crop season.

The barley market has held fairly firm. Receipts and demand have been about equal. A vessel sailed the past week for England with a cargo of 2745 tons of barley. The stock of barley in this city is being steadily reduced. It is claimed that volunteer and early sown barley will be in market at an earlier date in May than ever before, but of course this will depend largely on the weather within the next 30 or 45 days.

The receipts of oats continue light, which admits of the local stock being steadily reduced. Available supplies up north are said to be light.

Corn does not show any material change. The demand is only fair, while receipts are light. Crop prospects are said to be encouraging.

Rye is very slow and difficult to quote correctly owing to the light supplies and an offish demand.

Feedstuff.

The demand for both bran and middlings is light, causing lower prices to obtain. For rolled barley there is a fair demand.

The receipts of hay are ample for all present requirements. There is a growing impression that the carry over into next season will be larger than has been expected. Crop prospects could not be better.

Dairy Produce.

Receipts of butter are very heavy, but the cheap prices at which consignments are sold, with no competition, by the East, admits of the surplus being readily placed. When Oregon dairies are in the market with their product that demand source will be cut off or else very materially curtailed, and then we can look for slightly lower ranges in prices. This will be more severely felt when Nevada dairies fully set in and have to find a market for their surplus.

Cheese is barely steady. Receipts are increasing, as is the supply which will be available by the end of this month. The demand is good from up north, but only fair locally.

With continued good feed and warm weather, eggs rule in buyers' favor. Notwithstanding the low prices ruling for Californian, a carload of Eastern arrived the past week. The high prices ruling for hens may possibly induce freer marketing of the latter, which, if proven correct, will materially lessen the receipts of eggs.

Live Stock.

Increasing supplies of vegetables together with Lent, are against the free consumption of meat, which is being felt in the market prices for both bullocks and mutton sheep. The drought which prevailed in parts of Arizona and Texas very materially lessened the supply from the former and aided no little in promoting high prices in this State. It is now claimed that as shearing progresses in this State the offerings of mutton sheep will increase when lower prices are not at all unlikely to set in. Hogs are strong at full figures. Dairy cows are unchanged, ranging from $20 to $30 and over.

Fruit.

Apples are slow. A large percentage of receipts are poor keepers and have to be placed on receipts.

The first strawberries of the season were received on March 11. This is from one to three weeks earlier than ever before for berries grown in the open air. All kinds of fruit will be earlier this year than for several years past. In 1891 the crop was backward.

The orange market continues demoralized. Owing to so many frosted oranges being in the market many parents will not allow their children to eat them, and as the consumption is curtailed low prices prevail and seriously interfere even with choice fruit. Limes and lemons are steady at full figures.

The market for dried fruits is firmer for choice grades of all kinds. The stock is being cleaned up by shipments to distributive points on this coast and also to the East. It is now claimed that the new crop season will come on a market virtually bare of stocks, particularly of good to choice grades.

Miscellaneous.

Poultry is scarce and high for all kinds except turkeys and geese, which are steady. Choice well conditioned young poultry are readily sold at outside figures.

Honey and beeswax do not show any material change in prices.

Hops are reported strong. It is said that contracts for new crop hops are being made at 13 to 15 cts. Telegraphic advices received to-day report strengthening markets at the East and also abroad.

The strong bear pressure heretofore reported on beans does not seem to have relaxed. Shipments to the East both by water and rail continue to be large.

The receipts of wool are almost nothing. The market is virtually cleaned up of 1891 clip, but then the 1892 clip is coming in. So far the grade of the latter is said to be poorer than was that of the first receipts in 1891, which if correct will make buyers still more masters of the situation. It will be fully two weeks before a definite idea can be formed as to how the market will open and probably rule.

Miscellaneous.

From reliable advices up to March 16, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	200,498	283,637	*†149,616	83,207
San Diego	17, 22	10,905	7,255	.....
San Pedro	5,440	11,000	.....	22,716
Oregon	21,425	27,811	26,335	
Puget Sound	13,130	22,717	.....	
Totals	258,015	356,070	183,206	105,923

*Engaged for wheat, 1892, 21,324; 1891, 79,1.9 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to March 1 th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,488,210	8,939,850
Flour, bbls	743,436	787,314
Barley, ctls	786,338	208,535

Bags are strong at 7⅜ @7⅝c.

Produce Receipts.

Receipts of produce at this port for 7 days ending March 15, '92, were as follows:

Flour, qr. sks	103,265	Bran, sks	4,726
Wheat, ctls	136,906	Buckwheat "	.....
Barley, "	43,237	Middlings "	2,595
Rye, "	29.)	Chicory, bbls	100
Oats, "	7,330	Hops, "	....
Corn, "	1,945	Wool, "	118
*Butter, "	2,315	Hay, ton	1,838
do bxs	628	Straw, "	167
do bbls	....	Wine, gals	144,730
do kegs	10	Brandy, "	7,120
do tubs	....	Raisins, bxs	1,560
do ½ bxs	467	Honey, cs	650
†Cheese, ctls	610	Peanuts, sks	119
do bxs	106	Walnuts "	60
Eggs, doz	45,160	Almonds "	59
do "Eastern	....	Mustard "	....
Beans, sks	13,383	Flax "	....
Potatoes, sks	14,550	Popcorn "	....
Onions, "	253	Broom corn, bbls	10

*Overl'd, — ctls. †Overl'd, — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to March 14, '91.	July 1, '91 to March 12, '92.
Flour, ½ sks	216,111	363,272
Wheat, ctls	1,114,211	1,174,330
Barley, "	258,956	29,099
Oats, "	295,266	351,742
Wool, bales	5,911	5,978
Hops, "	392	431
Rye, sks	....	3,362
Potatoes, sks	61,706	99,226

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 16, 1892.

Limes, Mex	4 00	@	5 00
Do Cal	60	@	75
Lemons, box	1 00	@	3 00
Do Sicily	5 50	@	6 50
Oranges—			
Butte County	1 50	@	2 25
Yuba do	1 50	@	2 25
Do Seedlings—			
*Riverside	85	@	1 50
*Los Angeles	65	@	1 25
Do Navels—			
*Los Angeles	50	@	1 25
*Riverside	1 00	@	3 00
*Duarte	1 00	@	3 00
*Oranges free from frost sell at an advance of $1@$1 50 per box on the above quotations.			
Apples, box	75	@	—
Do choice	1 50	@	—
Do extra choice	2 00	@	2 50
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	8	@	12½
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	45	@	—
Garlic, lb	2	@	3
Squash, Mrft, tn.	3 00	@	6 00
Do Summer, lb	20	@	25
Pumpkins, ton	—	@	—
Tomatoes, box	50	@	1 50
Asparagus, box	1 00	@	—
Do choice to ex.	1 50	@	2 00
Peas, green, lb	3	@	5
Rhubarb, lb	3½	@	5
String Beans	1	@	20
Cucumbers, doz	40	@	—

Live Stock.

BEEF.			
Stall fed	7	@	—
Grass fed, extra	7	@	—
First quality	6½	@	—
Second quality	6	@	—
Third quality	5½	@	—
Bulls and thin Cows	2½	@	3½
VEAL.			
Range, heavy	5½	@	7
Do light	7	@	8
Dairy	7½	@	9
MUTTON.			
Wethers	10	@	11
Ewes	10	@	11
Do Spring	15	@	18
HOGS.			
Light, ℔ lb. cents	5	@	5½
Heavy	4½	@	5
Feeders	4½	@	4⅝
Stock Hogs	3½	@	4¼

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, March 16, 1892.

BEANS AND PEAS.			
Bayo, ctl	1 80	@	2 05
Butter	2 40	@	2 80
Pea	2 50	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 30	@	2 60
Lima	1 60	@	2 00
Fld Peas, blk eye	1 30	@	1 50
Do green	1 30	@	1 50
Do Niles	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	12½	@	20
Do good to choice	21	@	—
Do Giltedged	—	@	22
Do Creamery rolls	—	@	22
Do do Giltedge	—	@	22½
Eastern	—	@	—
CHEESE.			
Cal. choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	—
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	16	@	17
FEED.			
Bran, ton	17 00	@	18 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 50	@	23 50
Middlings	20 00	@	21 —
Oil Cake Meal	—	@	25 00
Manhattan Food ℔ cwt.			7 50
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oat	12 00	@	—
Wild Oats	11 00	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	93⅞	@	1 02½
Do Choice	1 03½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 12½	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 27½	@	1 32½
Yellow, large	1 22½	@	1 27½
Do small	1 26½	@	1 30
Oats, milling	1 42½	@	—
Feed, Choice	1 38½	@	—
Do good	1 30	@	—
Do fair	1 22½	@	—
Surprise	1 50	@	—
Black Cal	1 10	@	1 40
Do Oregon	1 20	@	1 27½
Gray	1 20	@	—
Rye	1 60	@	—
Wheat, milling. Gilt edged	1 72½	@	—
Do Choice	1 70	@	—
Do fair to good	1 68	@	—
Shipping, choice	1 68	@	—
Do good	1 66	@	—
Do fair	1 63	@	—
Common	1 57½	@	—
Sonora	1 57½	@	1 70
FLOUR.			
Extra, City Mills	4 90	@	5 25
Do Country Mills	4 90	@	5 25
Superfine	3 00	@	3 45
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	2	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	1 00	@	1 25
Fair to Good	75	@	—
Cut	40	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	45
Do do Oregon	65	@	1 05
Do Humboldt	40	@	75
River Reds	25	@	40
Sweets	2 00	@	4 00
POULTRY.			
Hens, doz	6 50	@	8 50
Roosters, old	7 00	@	8 50
Do young	8 50	@	10 50
Broilers, small	5 50	@	—
Do large	7 00	@	—
Fryers	7 50	@	—
Ducks	9 00	@	12 00
Geese, pair	2 00	@	2 50
Turkeys, Gob'r	14	@	16
Turkeys, Hens	15	@	18
Do Dressed	14	@	18
Manhattan Egg Food ℔ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	9½	@	10¼
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	3¾
do Brown	3	@	3½
WOOL.			
Spring, 1891			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	15	@	—
Cala'v & F'th'll	16	@	—
Oregon Eastern	14	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
Fall, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6¼
Beeswax, lb	22	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetch an advance on the highest quotations while poor sells slightly below the lowest quotations Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ¼c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com.	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	3	@	3½
Do unstemmed	2	@	3
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	6	@	—
White, sun-dried	5	@	6½
Do evaporated	6½	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	5	@	—
Do do choice, do	6	@	—
Do do fancy	7	@	—
Evap, unpe'l'd, choice	7	@	—
Do do fancy	8	@	—
Sun-dr, pl'd, prime, bl.	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap, peeled, in boxes, choice	15	@	—
Do do fancy	16	@	—
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap, sliced, in boxes	6	@	—
Do ring do	10	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, ungraded	5½	@	—
Do graded, 60 to 100	6	@	—
Do do 40 to 60	8	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ℔ bx	$1 50	@	—
Do fancy, do	1 75	@	—
Layers, ℔ bx	1 25	@	—
Loose Muscatels, common, ℔ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ℔ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ℔ 20-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes			

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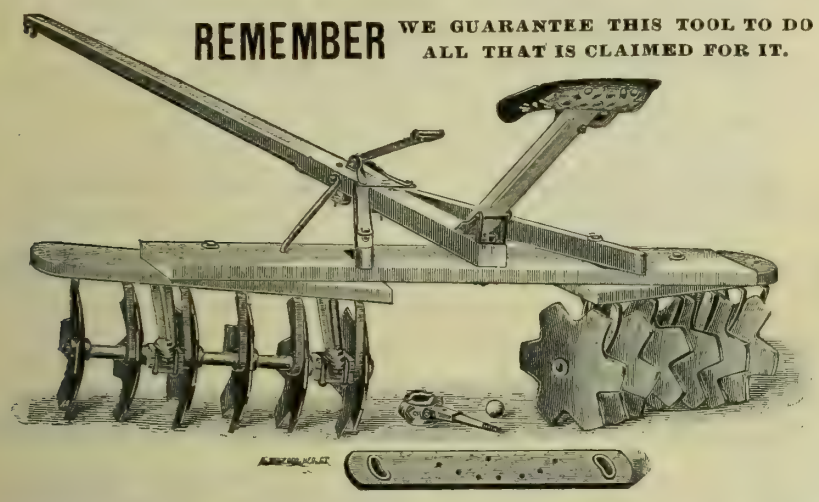
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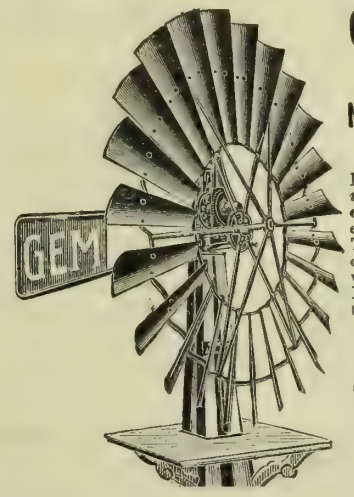


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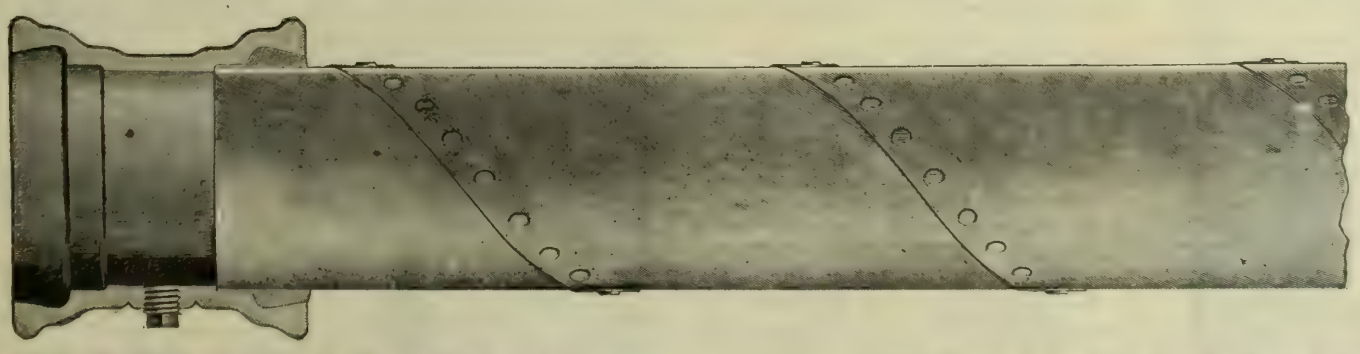
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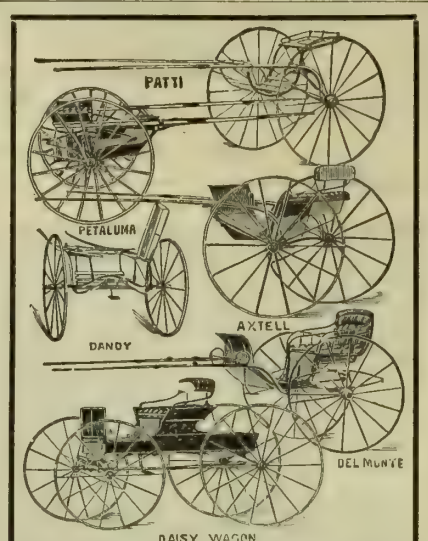
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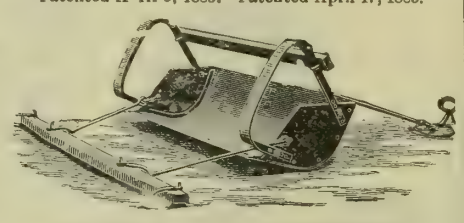


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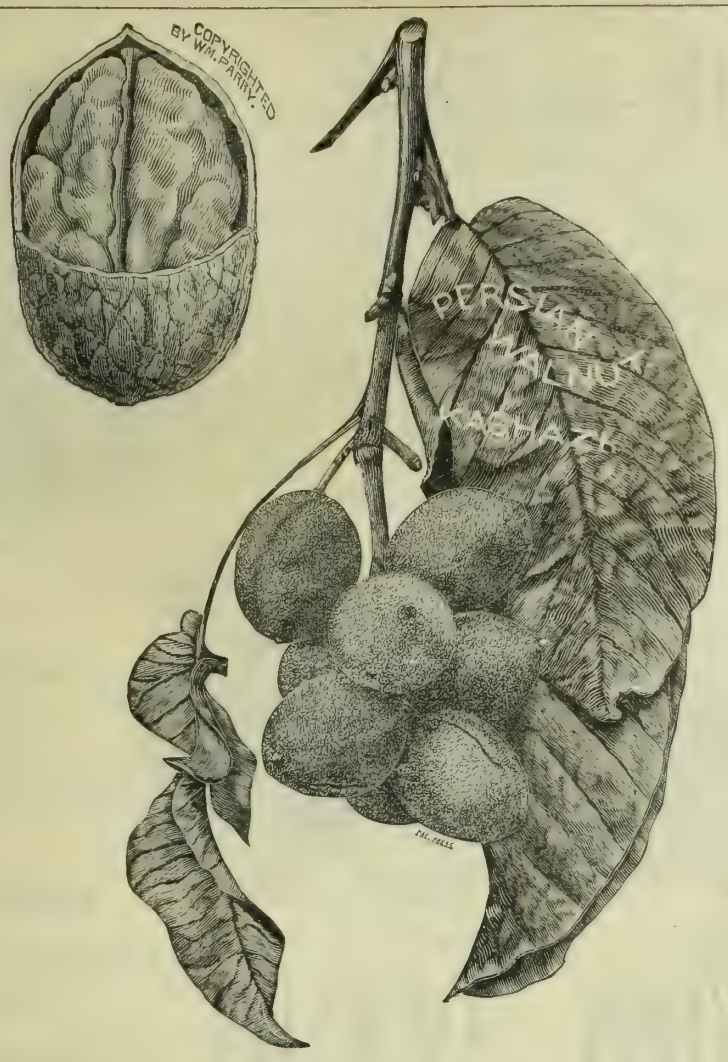
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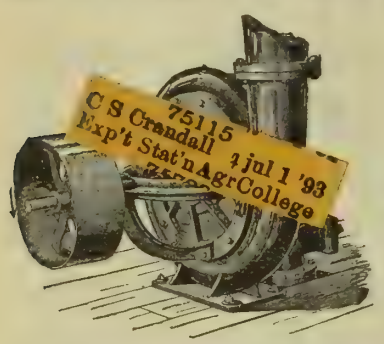
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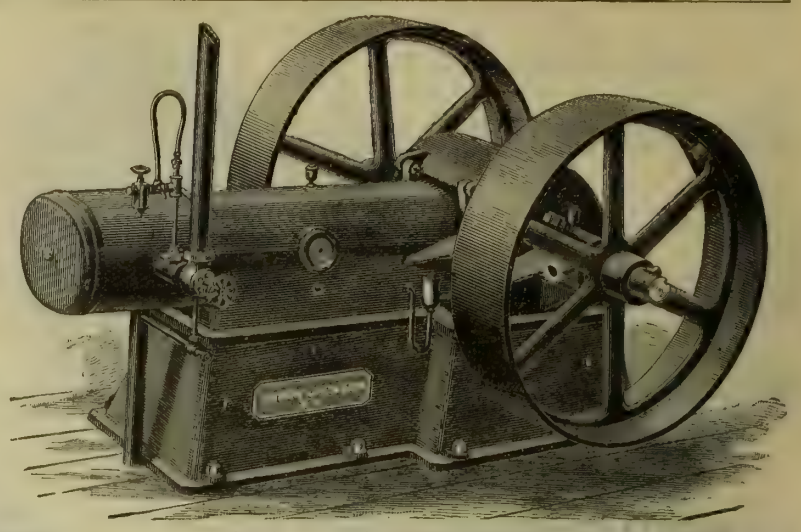
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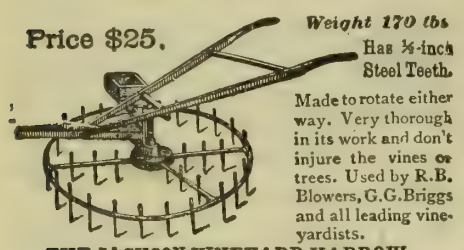
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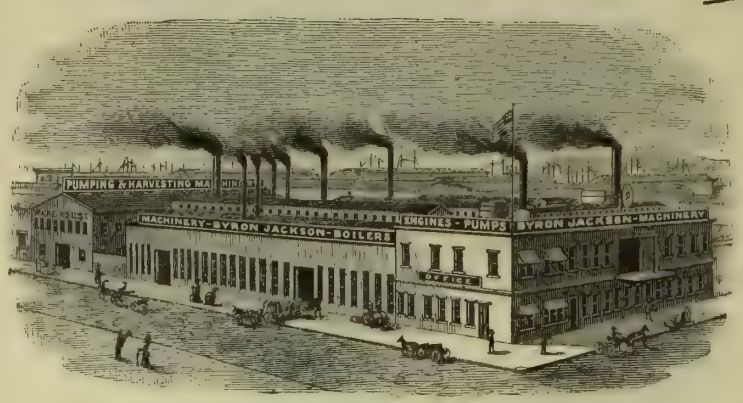
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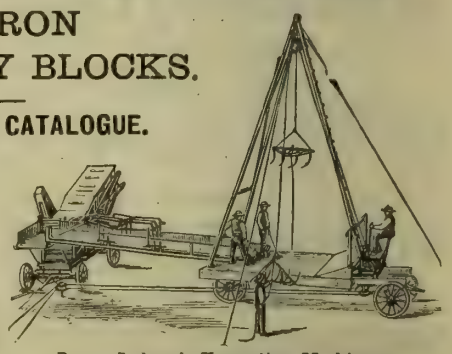
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Vol. XLIII. No. 13. SAN FRANCISCO, SATURDAY, MARCH 26, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Foolish Opposition.

Does it ever occur to those very earnest farmers and others who are attempting to antagonize the Nicaragua Canal project that they are playing directly into the hands of the railroad monopoly of which they complain so bitterly? Do they not know that there is no such foe to railway extortion as water competition? Do they not know that, with the canal an accomplished fact, every article which we import, and in whose value transportation is a factor, will be cheaper than now? Do they not know that every commodity which we export will yield us more money because the cost of carriage will be less? Do they not know that every acre of land in California will be more valuable when every commodity produced from it becomes more valuable? Can they not be made to realize that opposition to the canal project is foolish and inconsistent to the last degree?

What these protestants should do is to cease their absurd opposition to the canal project, and instead, to join in an effort to make the *terms* of the Government's part in it more clear and definite. The ownership by the Government of a majority of the stock should be made absolute and its supervisory authority permanent and unquestioned. This is a point upon which the public cannot be too solicitous; but in urging it, and in standing stubbornly upon it, there is no need to go to the length of opposition to the project itself.

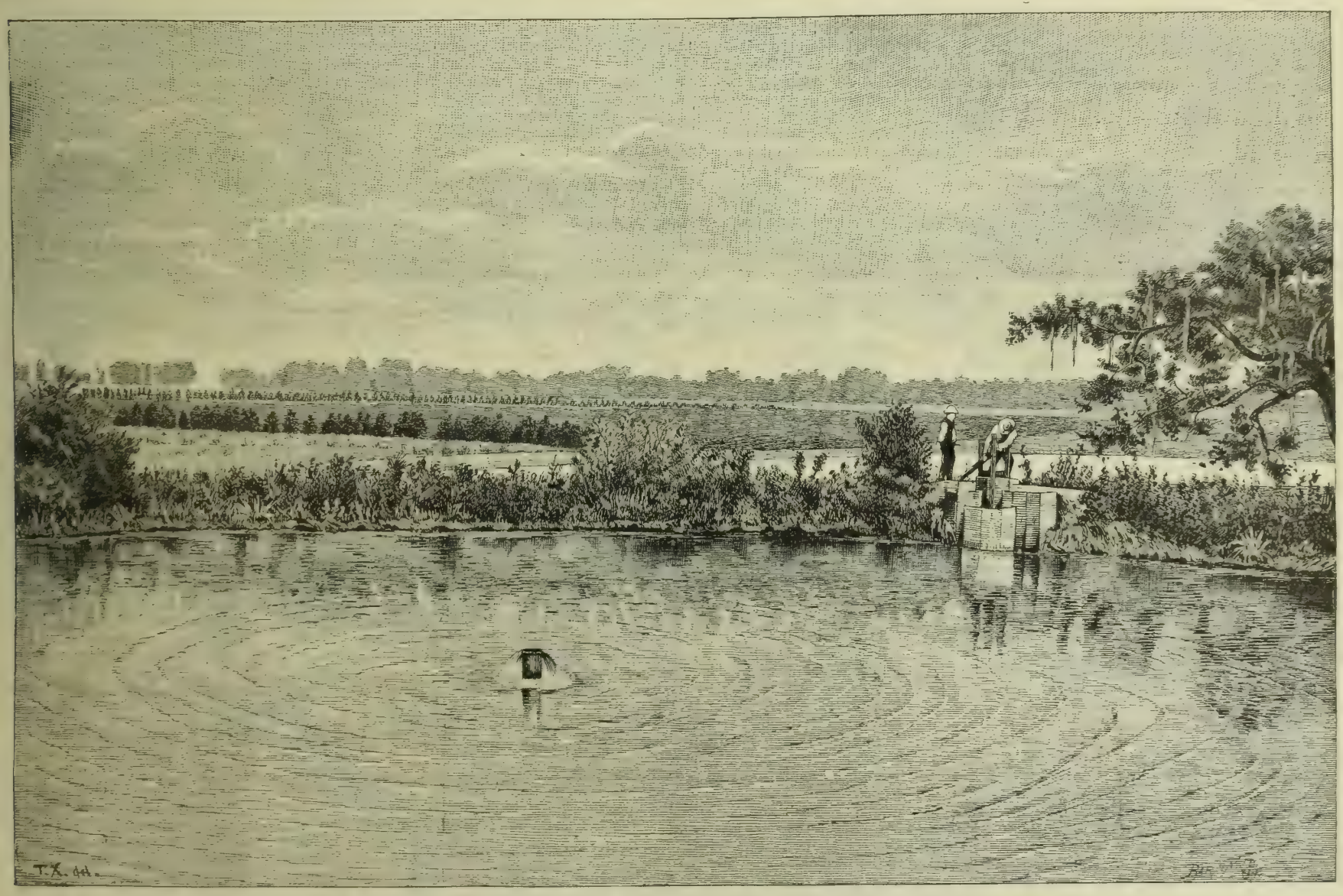
Monopoly of the Soil.

Not for many months has there been so important a contribution to current thought concerning contemporary affairs as the lecture by Mr. Mills on the subject of land monopolization, from which we have made liberal excerpts. The growth of large land-holdings in California has been rapid during the past ten years, and, while referred to now and again as an evil, has never before been roundly denounced as a real and imminent social danger. An alarm, heretofore merely gossiped about, is now sounded from the house-tops in a tone and by an authority that ought to attract public notice. By this discussion, Mr. Mills has done the State great service, for if, as he concludes, "large land-holding deteriorates the character of citizenship, impoverishes the general commonwealth, creates a caste in society, degrades the common people, deprives vast numbers of men of the opportunity of self-support, withholds from the masses the rights of life, liberty and the pursuit of happiness, the acquirement and enjoyment of property, and, beyond this, menaces the stability of free government itself"—if all this be true, as we believe it to be—Mr. Mills has raised up a political question, which, in its importance to the people of California, overshadows all other issues now before them.

There is no question as to the right of a community to preserve itself; and, this being true, there is no doubt as to the authority of the State to enact such legislation as will destroy this giant evil of monopoly of the soil. The plans suggested may not be the best, but they are worth thinking about, and we commend them to the public.

Irrigation by Artesian Wells.

We have had many paragraphs upon irrigation by artesian wells and have given engravings showing the flow of water from such sources, but the one upon this page representing a reservoir filled by a well, it seems to us gives a better idea of the amount of water thus secured from subterranean sources than any picture heretofore presented.



ARTESIAN WELL AND STORAGE RESERVOIR IN THE UPPER SAN JOAQUIN VALLEY.

The scene is in the artesian well region of the upper San Joaquin river where so much has been accomplished by means of well-boring during the last few years. It is a characteristic valley picture of the present day, and is in marked contrast to the preirrigation landscape. The water is drawn from the reservoir into ditches for distribution to adjacent fields or orchards, and in this way a single well of generous flow may render fertile quite a large acreage of valley soil.

To Resume.—It is announced that the affairs of A. Lusk & Co. have been settled and the business will go on the same as heretofore, with the addition on the Board of several local capitalists.

CORRESPONDENCE.

Correspondents are alone responsible for their opinions.—ED.

Napa Valley Notes.

NAPA, March 17, 1892.

TO THE EDITOR:—Our oldest inhabitant is racking his memory to see if he can bring to mind just such a pleasant, delightful winter and early spring as we have this year enjoyed. His memory fails him. Certain it is that a more enjoyable season could never have fallen to our lot. From the first rains in November to the present date, showers have come in good time and generally in just the amount needed; neither too large nor too meager.

There have been no cold, protracted storms, no heavy frosts. Although vegetation made slow growth during December and January, still, since the opening of February, grain of all kinds and pasturage in general, has forged ahead at a lively rate. Consequently, at this writing the prospects of excellent crops are good, could not be better.

The great danger now, is of frost, which has a habit of dropping down on orchard, garden and vineyard, some years as late as the first week in May. We trust this will prove an exceptional year in this respect, but the balmy air of March has caused the fruit to develop at a rapid rate, and our orchards present a most beautiful appearance. It will not be long before the vineyards will be draped in garments of a delicate shade of green. Barring frosts or blighting winds, we shall have a bountiful harvest.

Sunday the 13th inst. a searching norther swept down the valley, drying up, at a rapid rate, all surface moisture. Could we but know the volume of water these winds absorb from the soil during one day even that they prevail, it would most assuredly astonish us. That these winds are very disagreeable no one will deny. Even dumb brutes manifest their discomfort at such times. We hope that at an early date some of our learned meteorologists will make these, in very many ways singular winds, a study, and publish for the edification of an interested public an exhaustive report, embracing among other things the locality where they originate, the cause of their very depressing effects, the eccentricity of their waves—for we often have passed from a hot stroke to one very cool—and other singular ways of the northers which periodically visit us; though we opine they are less severe, and prevail not as often as 20 or 30 years ago. Or are we growing forgetful?

Long ago our farmers disposed of last season's crop of wheat; some at fair prices, some waited for a rise, and got a fall. Large quantities of hay were stored in this vicinity by farmers, on their premises, but of late, several hundred tons have been shipped by water to San Francisco, and sold for mere living prices. When hay brings $15 or $16 per ton, there is some money made in raising it, but where only $8 or $10 per ton is realized, the hard work of harvesting the crop is but poorly rewarded. Take one season with another, hay pays moderately well. Can we wonder that farmers often wish for "the good old times" when hay sold for $20 per ton and wheat for five cents per pound?

"Hard work and poor pay" is the cry of many a farmer, but the thrifty, industrious, prudent rancher, if he does not at once or never get rich, in the common acceptance of the term, does live a healthy, peaceful life, has scores of blessings the rich do not enjoy and acquires at least a competency. When his work on earth is finished and he, willingly or unwillingly, obeys his summons hence, he takes with him just as much in the way of this world's goods as any so-called bloated bondholder, and oftentimes in the way of character, in which consists the true riches, far more. After all, our farmers do not have so hard a time as some of them imagine they do. We never knew a man, in whatever business he followed, to prosper who neglected his interests and acted as if he did not care whether school kept or not. We never expect to.

Our fruit growers especially are interested in the subject of cheap rates of freight eastward, which subject is so much agitating the merchants of the metropolis of late. If only freight charges east were within reasonable bounds, our orchardists would have more courage to increase the number of their trees, and with more zeal and interest, place upon the market their excellent produce. As it is, the grower often receives but little for his labor, while the middleman and the railroads get the lion's share. Speed the day when lower transportation rates shall prevail. Our residents will hail it with joy. It will mean for this valley great enrichment. Speed the day, also, when the Nicaragua canal shall be completed. Then, certainly, if not before, will exorbitant charges give way to cheaper rates.

In this matter of letting our national authorities at Washington know how much the people of this coast desire the early completion of said canal, our Board of Supervisors have taken timely and commendable action by taking the initiatory steps toward holding a State Convention in San Francisco on the 29th inst. The papers of this coast can do the people at large no greater favor than to urge onward, with all their influence, this matter.

The condition of our roads has not been so much criticized this season as during the past two or three winters. In fact there has been no cause. They are and have been, generally, all through the season, very good indeed. Yet this is owing to the lack of heavy rains, in great measure; to be sure our highways are in better condition each succeeding year, but the cost of putting them thus is great; too great, say the taxpayers, who wish for a change in road laws. Who will give the people of this State a perfect road law? That man who will do so will be overwhelmed with thanks; his name will be written in book and newspaper in boldest type and his praises will be sung in every town and hamlet within our borders. Years and years of trial at this, and yet success has not yet been attained. Considering all this, we are tempted to ask; will it ever be?

R.

THE FIELD.

Peanuts.

OROVILLE, Butte Co., March 7, 1892.

TO THE EDITOR:—Tradition or the method followed by others has nothing sacred in the eyes of a Californian, and if he were asked to build a Noah's ark, or superintend the planting of a garden of Eden, he would confidently expect to make some decided improvements upon the originals.

It might seem that the growing of peanuts was a very simple matter and ranked alongside of raising potatoes or peas, but such is not the case. The region of country adapted to peanut culture is limited to Virginia, North Carolina and Tennessee, and during the past 40 years but few changes or improvements have been made in the planting or harvesting of this important crop.

Until recently, the Eastern planters placed the nuts in the ground by hand, which was a slow and laborious process. Now, they are planted with a machine which sows from six to eight acres a day, and is a vast improvement over the hand process. In the East, the old-fashioned method of pulling the nuts from the vines by hand is still in vogue, and this is an enormous expense, requiring the labor of 100 persons for a week or ten days to pick in this manner the crop of 50 acres of peanuts.

A Californian has invented a more expeditious plan for this work, though his device is very simple. A vine is held in one hand and a bit of hoop iron in the other; the vine is then laid across the edge of a board and a few blows with the piece of iron frees the nuts from the vines.

In the East the nuts are shelled before planting, and this is a slow and laborious process, because the work must be done by hand, for if the delicate pink skin of the nut is broken, then the nut is spoiled for planting. As many small farmers in the Atlantic peanut region raise this product, it is customary for them to invite their friends and neighbors to assist them in preparing the nuts for planting. These are called popping or shelling bees, and are as popular in North Carolina and Tennessee as apple bees were at one time in the North. The California planter has learned that it is not necessary to remove the shell, and, if he plants in the field at all, that he need only crush the shell and thus much time and labor is saved. The Eastern planter has to contend against many setbacks, for if the weather is too dry the nuts will not sprout; if too wet, they will rot. Birds of all kinds are greedy for the nuts, and moles make sad havoc of the planter's work. In California, a simpler, more expeditious and a cheaper plan is used in first planting the nuts in a hot bed. This enables the cultivator to confine his attention and diligence, against birds, moles, gophers and other enemies, to a small space. He can irrigate this bed or protect it from excessive rains at pleasure, and thus he finds this the preferable plan for starting the nuts. As soon as the little plants are large enough, they are transferred to the field and set out in the center of long beds about three feet wide. The ground should be a deep, rich, fertile, sandy loam; it must be cultivated thoroughly and kept free from grass and weeds. The vines must be irrigated, yet too much water will kill them. Here the nuts are planted in March and the vines pulled in September, while in the East they are planted from a month to six weeks or two months later. Our Eastern friends pull the vines after cutting the tap root and place the vines with the nuts adhering to them in the sun, so as to dry out the surplus moisture. Here, care must be taken that the sun is not too hot, for it will blacken and spoil the nut. If the heat is too great, then the vines should shade the nuts when hung up to dry.

The vines are used to fatten cattle, while hogs are turned into the field where the nuts were grown and root up every one that is left in the ground. The pork made from peanut food is exceedingly fat, but the meat is soft. After the nuts are removed from the vines they are run through a fanning mill to cast out the light and worthless ones, and to knock off as much of the dirt as possible. They are also turned in a barrel with cracks to let the dirt fall out. In factories they are run through large iron cylinders, kept constantly in motion to scour or brighten the shells. In the city of Norfolk there are no less than nine of these large factories. Here a million bushels of peanuts are cleaned, assorted and packed each year. The salable ones are packed in three grades: extra, 1 and 2. The small ones or those containing but a single kernel, are sent to the confectioner. They average about $1.45 a bushel, it taking 22 pounds of nuts to the bushel.

In 1886, Virginia raised five-sevenths of the total quantity of peanuts grown in the United States, there being in the whole country 3,500,000 bushels, with a valuation of about the same number of dollars. Even in Virginia, the successful cultivation of these nuts is confined to half a dozen counties in the southeast corner of the State. Now in California there is a vast area of land that will grow these nuts successfully and profitably. They have been grown in Shasta, Tehama, Colusa, Butte, Yuba, Sacramento, Lake, Alameda, Orange, Los Angeles, Tulare and other sections.

The profits in California are in most instances satisfactory. We select some instances where the profits realized are given: Twenty acres yielded 400 sacks or 16,000 pounds that sold at six cents a pound or $960, thus bringing $48 an acre. Nine acres yielded 191 sacks, valued at $458.40 or $51 an acre. A third tract returned 200 sacks on eight acres or $480 for the crop which was $60 an acre. A 10-acre tract yielded 400 sacks which sold for $960 or $96 an acre, while a fifth tract of three acres returned 200 sacks which brought $480 or $160 an acre.

One advantage in growing the peanut is that the crop can be produced year after year on the same land without danger from any disease.

The white and red peanuts are both grown, the red nuts being more easily produced than the white ones. The former runs near the ground while the latter is more of an upright bush. The white nuts are treated with sulphur like the walnuts and almonds, to whiten the shells.

The principal peanut regions in California are about Vina, San Jacinto, along the river bottoms in Sacramento county, at Pomona, Santa Ana and near Haywards.

In the United States the bulk of the crop is roasted and eaten, but in Europe it plays a more important part. The nuts are pressed and from them a clear, sweet oil is produced. This oil is good for almost every purpose that olive oil serves. It is a good lamp oil, burning with a bright, full light and a clear flame. The pressed nuts, called marc, is sent to England for manure.

This oil cake also serves for food for cattle. The nuts yield from 36 to 38 per cent of oil. This oil is a rich, sweet and delicate oil that is largely used in the manufacture of oleomargarine. It is one of the best lubricating oils in use and serves a variety of other purposes. Under a fancy French label the common peanut oil is sold largely in the United States for salad and table purposes. The nuts have other uses, for when ground up they are mixed with cacao in the preparation of chocolate. Confectioners buy immense quantities of the small nuts to be used in making peanut taffy, and in nougat being used as a substitute for almonds in the latter. The oil is largely used in the manufacture of soaps, and many a celebrated actress who gives a recommendation for some fine olive oil soap has simply recommended good peanut oil soap, for only an expert can tell the difference. The peanut is thought to be a native of Africa, but it is found wild in Brazil.

Marseilles is the great peanut market of the world, and it is stated that that city uses $6,000,000 worth of these nuts every year. Nuts are shipped to Marseilles from the coasts of Africa, South America and from various parts of Asia.

Vast quantities are also shipped to Antwerp, so that it will be seen the peanut plays quite an important part among the different crops of the world.

In the Southern States peanut flour is manufactured in considerable quantities, while in North Carolina the negroes have a peanut porridge that is quite popular. They also roast the nuts and use them as a substitute for coffee.

The production of peanuts in California is yearly increasing. The price obtained is usually satisfactory to the producers and the market is not easily overcome, so that we may look to see the quantity of nuts produced here largely in excess of the amount grown at the present time.

S. S. BOYNTON.

Richard Gird on Beet Sugar.

Richard H. Gird of Chino, who has been in the city for a few days, will leave for home this morning. He is probably the largest individual grower of sugar beets in the world. He has 50,000 acres of land surrounding Chino, and this year will have 4000 acres of it in sugar beets. He is under contract to raise all the beets that are required for the beet sugar factory at Chino. His contract requires him to raise 5000 acres of beets next year, and the same acreage the following year. About 1000 acres of this year's planting are up and ready to thin. This is considered a remarkable showing, for the reason that in the East and Europe planting will not begin for about two weeks. Within three or four weeks 400 men will be at work on the Chino land, thinning beets.

In conversation Mr. Gird repeated the oft-published statement of what an excellent field California is for the beet sugar industry, and emphasized his remarks by forcible comparisons. Taking the Chino factory as an average-sized plant, it will require about 750 factories to produce enough sugar for the consumption of the United States alone. There are only five factories in this country, three of them being in California, namely, at Chino, Alvarado and Watsonville. The other two are in Nebraska, one being at Norfolk and the other at Grand Island. The weather in Nebraska is now so cold that the beets in this State will be half grown when planting begins there.—Chronicle.

ENTOMOLOGICAL.

Applications to Prevent Borers.

CAMPBELL, SANTA CLARA CO., March 16, 1892.

TO THE EDITOR:—In your issue of 12th inst., you gave a remedy, *i. e.*, a "Prevention of Sunburn and Borers." We have been trying to find some remedy by which borers can be prevented from entering the bark of our trees. We have tried many so-called preventives. The result of this trial has not yet been fully reported. I tried three, but one of which I can recommend. It was furnished me by Prof. D. W. Coquillett of U. S. Department of Agriculture, Division of Entomology.

Prof. Coquillett's Advice.

I do not know of any other method of destroying the peach borer in growing trees except that of cutting out the borer with a sharp knife or other sharp instrument. To *prevent their attacks*, the portion of the tree where the borer usually enters should be painted over with a solution of Paris green and soap suds, care being taken not to allow any of this mixture to come in contact with the young fibrous roots. This should be applied to the trees prior to the middle of April of each year. The young borer, when hatched from the egg, will then be compelled to grow his way through this mixture on the bark of the tree, and will in this way eat a sufficient quantity of the Paris green to produce his death. I have never had an opportunity to test this remedy, but I should advise trying a bar of hard brown laundry soap dissolved in two gallons of hot water, and when cold adding to it one-fourth to one-half an ounce of Paris green, first making the latter into a paste by the use of a small quantity of water. This mixture should be repeatedly stirred while applying it to the tree.

Another Application to the Bark.

The other prevention is recommended by S. G. Rodeck,

Secretary Campbell Horticultural Society. He has used it and will use it again. It is as follows :

"Take stone lime, slack and prepare it as for an ordinary whitewash, in an old box or barrel. Take enough at a time to make a bucket two-thirds full of the proper consistency for ordinary whitewashing. Now add one pint of gas tar, one pound of whale oil soap dissolved in hot water, or one pound of potash, or strong lye from wood ashes, then add clay or loam enough to make the bucket full of the wash of the proper thickness to be applied with a whitewash brush. If trees have had the earth ridged up around them, take the earth away from around the collar and apply the wash to the body of the trees from the branches to the roots.

This wash, thus applied, will drive all borers out of the trees and prevent their eggs being deposited on or about the trees. Will also kill the bark louse. Should be applied annually in May (I think it should be applied a month earlier). All who grow apples, pears, quinces or peaches should use this wash. I have known peaches badly infested with borers, on which this remedy was applied but once, causing the borers to leave and the trees soon became vigorous."

I hope these preventions may benefit many of your readers. F. M. RIGHTER.

The Botanist.

Col. Armstrong's Munificent Gift to the People of California.

[S. F. Morning Call, March 18, 1892.]

California is to have a State Botanical Garden—has it already, in fact—for the preservation of her natural trees and the naturalization of foreign species.

Col. J. B. Armstrong of Santa Rosa is the donor. He has set aside 640 acres of the finest redwood timber land in Sonoma county for the purpose. The deeds to the property, and its transfer to the people of California in perpetuity, have all been arranged. The gift is an accomplished fact, and the following five trustees have been chosen to manage the trust and carry out the wishes of the donor: Miss Kate Armstrong, E. J. Wickson, Charles Howard Shinn, Luther Burbank, Robert Underwood Johnson.

These persons have already signified their acceptance of the trust and the duties it will impose, and have agreed to hold their first regular meeting during the coming summer. Col. Armstrong is quite an elderly man, but is still active, and will doubtless remain the nominal head of the institution during his lifetime. Miss Armstrong, the first trustee named, is the daughter of the donor. She is much interested in forestry, and shares her father's fondness for the great trees of California.

Prof. Wickson, the second trustee named, is well known throughout the State for his connection with the State University and as agricultural editor of the RURAL PRESS. The third trustee, Luther Burbank, is probably the leading experimental nurseryman in the United States. His home is in Santa Rosa. Charles Howard Shinn, another of the trustees, is one of the best known literary men and writers on the Pacific Coast. He is prominently connected with the *Overland Monthly* and a voluminous contributor to the Eastern magazines, usually on California topics, and not infrequently on subjects connected with the forestry of the State. His advocacy of the preservation of California forests, and his depth of learning on the subject, were doubtless the considerations which led Col. Armstrong to making this commendable selection.

Perhaps the most notable appointment made by Col. Armstrong was that of Robert Underwood Johnson, the assistant editor of the *Century Magazine*. Col. Armstrong makes no secret of the fact that this appointment was made because of his admiration for the plucky manner in which Mr. Johnson carried on his part of the fight for the preservation of Yosemite and Sequoia Parks, for his great knowledge of trees and the intense interest he has always manifested in the forests of the Golden State.

This is the first public announcement of Col. Armstrong's great gift to the people of this State. The donor is a modest man, who has shunned publicity as much as possible. His sole motive in making the donation has been his great interest in the future of California and his great desire to have her native trees preserved in all their pristine beauty and grandeur. From the fact that it is nearly a year now since the tract was formally deeded to the State by Mr. and Mrs. Armstrong, one may readily believe that the donors were only actuated by the most unselfish motives.

The tract comprises a mile square of redwood timber land on the north bank of the Russian river. Not a tree has been touched since nature planted them there centuries ago, though in the natural clearings several farmhouses and cottages have been erected for the accommodation of visitors and the men constantly employed on the place. Since its donation, Col. Armstrong has himself borne all the expenses of its proper maintenance, and it is fully expected that before long the Colonel will bestow upon it a considerable permanent endowment.

To the north, the tract is backed by a high mountain wall, sheltering it from the cold winds. A large portion of the tract is the bottom land of one of the tributaries of the Russian river, and is thickly covered with some of the finest redwood trees to be found in the State. One corner of the land reaches down to within a mile of the railroad at Guerneville. It is not far from the Bohemian Club's camping-grounds, but is said to excel in point of picturesque scenery and natural advantages even the famous Bohemian ground.

As yet, but little other work than that necessitated in keeping the place in thorough order has been done on the new botanical garden, but as soon as the trustees have met and decided upon the first steps to be taken toward carrying out the purposes for which the land was donated, active work will be begun and carried on aggressively.

The garden is to be thrown open to summer schools like the Chautauquas, and to be made the rendezvous for scientific and literary persons who desire to see something of California's great forests during their summer outings.

Col. Armstrong deserves great credit for his timely donation. He is one of the few men who are disposed to employ their riches for the public good before death has made their possessions worthless. Moreover, by his timely action, he has practically precluded the possibility of his wishes in this direction being miscarried either by the rapacity of near relatives or the law's technicalities. He has chosen wise and prudent trustees, and will have ample time to test their loyalty to the trust. The deed by which the transfer of this valuable land was made was signed not only by the donor himself, but by every member of his family who in after years might have a technical right to question its validity.

The property already has a small but certain income, and there is every prospect that it could soon be made self-supporting should it receive no further endowment. At present, its income is derived from a small prune orchard. That part of the land which is cleared boasts the most fertile of soils, and further orchards will be set out at once. As it stands to-day, the property is worth fully $150,000. It would bring that in the market. Its prospective value, of course, is far in excess of that figure, and those who have seen the ground declare that it will soon be one of the most valuable tracts in the county.

The donor of the California Botanical Gardens—for that will doubtless be its formal title—comes from one of the oldest and most respectable families in Ohio. He wore the blue uniform of a volunteer colonel all through the civil war, and upon its close came to California to live. He was a wealthy man in those days, as he is now, but the failure of one of the first of his California investments made him a poor man for the time being. He brought with him from Ohio an ample fortune of $200,000. Most of this—in fact, all except a few thousand dollars he invested in timber lands—he put in the old Duncan Bank. When this institution failed, Col. Armstrong lost all but his redwood interests. These, however, soon became very valuable.

For several years Col. Armstrong owned and edited the Santa Rosa *Republican*. With the increase of his redwood interests, the Colonel sold his paper and moved to Cloverdale, where he devoted his whole time to the latter industry. He has made a great deal of money from redwood, and aside from the tract donated to the Botanical Garden, he has large holdings in Sonoma county.

Sequoia Specimens for Distant Parts.

In a canyon of the Sierras, 48 miles east of Visalia, a splendid specimen of the Sequoia Gigantea has lain under the snowdrifts during the past few months. It was felled in October, and the task occupied two men 14 days.

Last summer, Prof. Sargent of Harvard University instituted inquiries regarding the best source from which to procure a section of one of the big trees, to be placed on exhibition in Central Park, New York. Subsequently, Prof. Dill of the same institution came to California, and, going first to Visalia, visited the Sequoia Mills. He selected a tree which met his requirements, and engaged the company to cut out a section.

The tree had to be undercut. The outer portion was removed by axes, and it was then sawed in the center, a cut 12 feet wide and 8 feet long being made. To fell this giant of the forest, one side was raised by steel wedges, and when it reached the ground, there was a crash and a vibration like the shock of an earthquake.

The tree fell clear of the stump, was perfectly sound, without fire marks, and the bark was uninjured. At the height of 240 feet it measured eight feet in diameter, and 60 men could form in a circle around the outer edge of the stump.

Near the base of the prostrate monarch of the forest, a section four feet long and 25 feet in diameter, and shaped like a cartwheel, was cut out. So far as known, this is the largest section of a Sequoia Gigantea ever procured from California for exhibition purposes.

Prof. Sargent was so pleased with the specimen obtained that he sent a second order to the mills asking that a section as nearly as possible of the same dimensions should be taken from the same tree, to be sent to the British Museum.

This was done, and both specimens now repose beside the trunk. The advent of winter prevented their shipment in October, but it is expected that by May they can be forwarded to their respective destinations. They will be divided into movable pieces, drawn in wagons to Visalia, and shipped on flat cars, first to this city and then to New York. It is believed that, in the transaction, Prof. Sargent has been the agent of C. P. Huntington, who is the real donor —Call.

Swine Yard.

Ringing Hogs.

GALT, CAL., March 14, 1892.

TO THE EDITOR :—In the RURAL of Feb. 13th, Mr. H. E. Dye asks for some practical information in regard to ringing hogs. As I have seen no answer so far that seemed practical to me, I will give him my plan for what it is worth.

First, my pen is about 20 feet long and 10 or 12 feet wide at one end and runs to a point at the other for convenience in catching. In the broad end is a small door easy to open and shut. This pen will hold 20 to 40 hogs, according to size, and leave room to work. The operator stands near the small door. If the hogs are small, one assistant will do, but if large two are necessary. They catch the hog by each one taking hold of one of its hind legs and draw it back to the operator, and hold it so that it stands upon its front feet, with its hind legs stretched out straight behind it and held firmly on the ground so that it cannot move backward. The operator steps astride of its neck with his face toward the hog's head, then, placing the palm or heel of the left hand upon the hog's snout with the fingers extended back out of danger, he presses down until he gets a reasonably firm pressure, then carefully closes his hand around under the hog's lower jaw and draws its head up between his knees until it looks him squarely in the face. A hog thus held is powerless to resist and seldom struggles, and you can with the right hand insert the ring in any position that you please. Then, with one hand and your feet, you bring the hog's head around toward the door, which you open with the other hand, so that when released he passes through out of the way. There is no worrying or bruising of the hogs. It is quickly done. Three active men will ring from 30 to 50 hogs in an hour. I use Hill's hog rings and pincers.

C. M. WEST.

Farmers' Institutes.

The Work in Los Angeles County.

A Farmers' Institute was held in Los Angeles on March 4 and 5, during the Southern Citrus Fair. The sessions were held in the hall of the Los Angeles Chamber of Commerce, and were conducted by Prof. Wickson of the State University, who opened the meeting with appropriate remarks.

The first paper read and discussed was by C. C. Thompson of Pasadena, who spoke upon "Fruit Production and a Market," calling particular attention to the fact that the price received by the grower and that paid by the consumer was altogether out of proportion, and that the rapidly growing fruit industry of Southern California, in order to afford a profitable outlet for its product, must devise ways and means for finding a larger and more remunerative market.

The discussion brought out several instructive points, Mr. T. J. Luccock and other speakers advocating the building of canneries and driers in the different localities upon the cooperative plan. Others contended that the establishment of agencies in the East, that would sell direct to the consumer, would do much toward lessening the margins that are now enjoyed by the middlemen and jobbers.

Time was also given to an interesting discussion upon numerous subjects presented in the form of questions by those present. Prof. Wickson delivered an address on "What Horticulture Has Done for California," showing the financial results, also the effects of horticulture on the development of health, intellect, morality and good citizenship, and he wound up with a description of the educational work now in progress at the State University, urging all to take an interest in the State institution and avail themselves of its benefits as far as possible.

The afternoon of the second day was largely given to a lecture by Prof. Hilgard of the State University on Soils and Fertilizers, which was pointedly illustrated by reference to many studies of Southern California soils, waters, products and fertilizing materials, which have been made in the agricultural laboratories at Berkeley. Direct advice was given in many important matters and the interest awakened was clearly shown by the questioning and discussion which followed.

Mr. C. M. Heintz, proprietor of the *Rural Californian*, also made an excellent address on the Peach Yellows, which awakened much interest.

PERMANENT ORGANIZATION.

For the purpose of arranging for institutes in the future, it was deemed advisable to effect a permanent organization, and a committee for that purpose was appointed, consisting of the following gentlemen: Messrs. Thompson of Pasadena, Luccock of Clearwater, Lee of Santa Monica, Dillon of Long Beach and Kruckeberg of Los Angeles. The report of the committee was adopted, and we publish the articles of association to show how simple they may be made:

PREAMBLE.

The objects of the Farmers' Institute of Los Angeles county shall be to promote agriculture, horticulture, the live stock industry, dairying, and kindred branches of rural life, aiming to advance the business and social relations of the farmers of this section; to show where wear and tear can be diminished, labor saved, methods of cultivation and production improved, and the general welfare of the soil-tiller advanced.

CONSTITUTION.

MEMBERSHIP.—Any person of good moral character over 18 years of age may become a member of this Institute; if a lady, by signing the roll of membership; if a gentleman, by signing the roll and paying in advance the yearly dues of 50 cents; this being for the fiscal year of this Institute, no deduction being made for the first year, though it be for less than 12 months.

OFFICERS.—The officers of this Institute shall be a president, two vice-presidents, a secretary and a treasurer, who shall constitute an executive committee for the transaction of all business that may come before the Institute when not in regular session, who shall be elected at the regular meeting in February of each year.

MEETINGS.—Meetings shall be held in different sections of the county in February, May, August and November of each year, and there shall be a committee of one or more appointed by the president in each township, whose duty it shall be to promote the holding of regular and special Institute meetings in each township, and in connection with the president and other officers of the county organization, make arrangements for holding the same.

DUTIES OF OFFICERS.—The duties of the officers shall be such as generally pertain to such offices, and to render a regular written report of the Institute proceedings pertaining to their respective duties, at the regular annual meeting.

VOTING.—Only members in good standing shall be entitled to vote at the annual election of officers, on amendments to the constitution, or the disbursement of funds.

AMENDMENTS.—All proposed amendments to the constitution must be submitted at a regular meeting of the Institute, and a two-thirds vote of all members present shall be necessary to adopt.

The following officers were then selected to serve for the ensuing year: President, C. C. Thompson, Pasadena; Vice-Presidents, T. J. Luccock, Clearwater; Abbot Kinney, Lamanda Park; Secretary, Henry W. Kruckeberg, Los Angeles; Treasurer, W. R. Barbour, Covina.

PATRONS OF HUSBANDRY.

The Secretary's Column.

[A. T. DEWEY, SEC'Y S. G. OF C., No. 220 MARKET ST., S. F.]

To the Leaders in the Field.

There are several important points to which we wish suggestively to call the attention of the State officers and Lecturers entered for the lecture field for a general canvass throughout the State of California.

First, the Trade-Card system, endorsed by the State Grange and now being patronized by quite a number of Granges, from some of which we learn that much benefit is being derived by individual Patrons. If better understood, we think every Grange in the State would make good use of the privilege of the Trade-Card plan on the part of at least some of its members. It is not as well understood in all its features as it ought to be. For that reason we hope every speaker who has not fully prepared himself to explain the subject and enlighten the members of every Grange, will take all pains to become fully informed, and will impress the importance of giving this system a thorough trial in all parts of the State as speedily as possible.

The Secretary of the State Grange will furnish each Lecturer, and in fact any member of the Order in good standing, on application, with the list of Trade-Card firms in San Francisco and other places, and with sample cards and such other printed matter as is now on hand in his office.

Another important subject for the Lecturers to bring forward in a clear and instructive manner, is that of the Patrons' Relief Association, just organized by worthy and reliable members of the Order, in accordance with the recommendation and authority of the last session of the State Grange at Haywards. Copies of the Constitution, Circular of Instruction and Information, and blank applications for the signature of eligible members under 60 years of age who are willing to join this life beneficiary association, will be furnished whenever desired, as above mentioned.

When the Grange gives its exclusive endorsement, as it has to these two auxiliary undertakings, it is the right and privilege, if not the duty, of each member to do his best to give them a full and fair trial.

It would seem certain that in most, if not all sections of California the privileges afforded through the Trade-Card system and the Patrons' Relief Fund can well be made proper and effective inducements for adding members to the Order, reviving dormant Granges and the establishment of new ones, if the advantages are duly set forth.

Patrons wishing further information on the above, or other matters relating to Grange affairs, should feel privileged to ask the same from their visiting Lecturers.

IN SOLANO COUNTY.

Past Master Overhiser visited Oakland on the 20th, en route for Salinas and the south. He was at Vacaville week before last, and spent several days in Vaca Valley, and reports the sentiment of those visited to be in favor of the Grange. Mr. Webster, Past Master, accommodated him with a ride about the valley, affording an opportunity of explaining the benefits of the Order. On Saturday, March 12th, the Grange met at Vacaville and received six applications. A communication from the U. S. Weather Bureau was read, asking the Grange to suggest the name of some person to receive and distribute telegrams, etc. The Grange selected Past Master Webster. Arrangements were made to raise a flag-staff for displaying signals in accordance with telegrams that might be received.

The horticulturists in the valley have a private telephone system, which is in very lively use in the fruit-harvesting season. Then teams are run during the night, and fruit is loaded into cars ready for transportation fresh and early in the morning. Before long electric light masts will be raised, along the highways in the valley, to accommodate and facilitate travel and night work when the shipping season comes on.

On Monday, March 14th, at a meeting (called not as a special but a general meeting) the first and second degrees were conferred on a class of seven, Mr. O. giving full instructions.

He afterwards visited Woodland, in Yolo county, stopping overnight with R. B. Blowers, who was confined to his house by sickness. Mr. Blowers expressed the belief that, with proper efforts, a Grange could be established at Woodland, and he would be pleased to render assistance in that line.

On Wednesday Mr. Overhiser visited Dixon, and at a called meeting in the evening gave instructions in the unwritten work. He was invited to attend the special canvass meeting on the 16th of April. He considers both Vaca Valley and Dixon Granges capable of being made strong and successful with a little more encouragement. Both are, in fact, in a fair way of becoming large and influential Granges.

Mrs. Peter Peterson of Antelope Valley (Sites P. O.), Colusa county, recently died of an internal tumor. For many years she has been an invalid in mind. She attended several sessions as a representative at the State Grange. Bro. P. and family have the sincere sympathy of many friends.

A. T. D.

QUESTIONS FOR DISCUSSION.—Sister Elizabeth Russell, member of the National Committee for the Pacific States on Woman's Work in the Grange, writes from Vancouver, Wash., March 19th, requesting the Committee on Woman's Work for the State of Oregon to name such questions as they think proper for discussion for the Granges of California, Oregon and Washington, for the months of April, May, June and July, according to previous announcements.

State Lecture Canvass.

Bro. B. F. Walton, Yuba City, March 20th, writes: "I feel well satisfied with the work of Bros. Davis and Coulter in Sutter county last week, and if we continue through our whole series of meetings the way we have begun, much will be done to strengthen and build up the Order in the State. Although somewhat stormy, not an appointment missed." He reports Past Master Flint as wide awake and ready for active work.

Past Master Overhiser writes from Salinas City, March 22d, concerning his belief that nothing can be done in that section short of a farm to farm canvass; in fact, he is decidedly inclined to favor extending that branch of the work generally. He left that afternoon with Hon. George Steele for Jolon, where they were to speak before San Antonio Grange and the public on the 24th. They expect to hold Grange and public meetings according to the following appointments, Hon. J. V. Webster joining them in the work at San Miguel:

San Lucas, Friday, 25th; Bradley, Saturday, 26th; San Miguel, Monday, 28th; Paso Robles, Wednesday, 30th; Creston, Saturday, April 2d; Arroyo Grande, Monday, 4th; Cambria, Wednesday, 6th; Carpenteria, Saturday, 9th.

Several of the lecturers have informed the Secretary of the State Grange that they will be unable to fill all the appointments given to them. Arrangements will be made, however, so that in case one or more of the speakers announced for any Grange are unable to attend, other able speakers will fill their places, and no uneasiness need be felt by patrons or other friends, but that one or more good speakers will be on hand to fill every appointment.

Oregon.

Linn County Business Council met at Tangent March 10th. Business matters were duly deliberated on. Mrs. S. Froman, Mrs. M. Payne and Mrs. M. J. Train were added to the general committee on arrangements for the State Grange. Thanks were extended to the ladies of Tangent Grange for their excellent repast and entertainment. The next meeting is to be held with Harrisburg Grange, April 2d. After adjournment, the following were elected delegates to the State Grange by a convention of Linn County Granges: F. M. Kizer and M. H. Wilds and their wives; alternates, R. A. Irvine and S. S. Train and their wives.

TEMESCAL GRANGE last Saturday indorsed the several memorials to Congress received from the N. G. Legislative Committee lately, and instructed the Master and Secretary to give official notice of the same to National Secretary Trimble. A Harvest Feast will be given, followed by a public meeting, on Thursday, April 14th, at I. O. O. F. hall, Oakland, on occasion of the State Grange canvass visitation of A. P. Roache, W. O. Eden Grange and other Patrons are cordially invited. Bro. Roache will be accompanied by other State Grange speakers, whom we hope to announce next week. They will also speak at Eden Grange, Haywards, on the following day, when the Harvest Feast will again be spread, and the usual liberal invitation extended to all Patrons to enjoy. Thanksgiving every day, you see!

THE NATIONAL EDITORIAL EXCURSION, comprising some 400 or more "eds" and "pubs," will enter California from the South, May 15th, to stay 12 days in the State. Through the Secretary, the Executive Committee of the State Grange is requested to appoint three members to act with like committees from other bodies to act as a General Reception and Information Committee, under the auspices of the Executive Committee of the California Press and Editorial Association. Due attention will be paid to their desires. We hope all hands around will give all worthy visitors a hearty welcome.

EXECUTIVE COMMITTEE MEETING — The Executive Committee of the State Grange of California will hold its semiannual meeting at the office of the Secretary, S. F., at 10 o'clock A. M., Tuesday, April 5th, for the transaction of general business.

FARMERS' ALLIANCE.

People's Party Leaders.

Pen-Pictures by a Bright California Lady Member of the Convention.

There was a wide-awake California woman in attendance upon the People's Party convention held recently at St. Louis—Mrs. Anette Nye— and her observations and impressions of the leaders in that meeting are very interesting, especially to Alliance readers. We print below her notes presented in a paper read before Duarte Alliance, No. 111, on the evening of March 12th:

By request, we give you some of our impressions of the men and women most prominent in the great industrial conference convened at St. Louis, February 22d to 24th. First on the list we will mention one well known to all of you as having been for many years prominent in work for the relief of the struggling masses, also in temperance work—Gen. J. B. Weaver of Iowa: a man whom to see is to respect; whose voice always commands attention; of medium height, well knit and sturdy as any farmer. Earnest purpose beams from a face of much power, yet one bearing evidence that success has not always crowned endeavor. Looking at the man we thought, "Battle scarred, but not vanquished." That he is ambitious there is little doubt, and we believe he is worthy also. Having had much experience in the past, he will undoubtedly be of great service in the struggle just begun.

Ignatius Donnelly of Minn.—Here we have an orator of the Beecher type, quite as flowery and more mirthful. Donnelly is not tall, but broad. A smooth faced, jolly, rollicking man; a good feeder, I should judge; one to make it lively at a picnic or a Fourth of July. He writes well, but talks better. Seeing the funny side of things does not prevent him from realizing the serious and pathetic quite as keenly. He has a gift for arousing both thought and action, and will prove of immense value to this new movement, by waking up the people and setting them to working out their own salvation.

L. L. Polk, of North Carolina.—It seems almost unnecessary to speak of this man to this audience, having met him personally as most of you have, no words of mine could add to his worth or cause you to more highly esteem him. A fine speaker, logical, persuasive and convincing in argument. His level head directs all he does or says so as to accomplish the greatest good, while his great heart beats in sympathy with all mankind. Loving all, he is beloved by all, and stands ever our ideal of an intelligent, noble Southern gentleman.

Ben Terrill, of Texas.—A fine looking man, a good presiding officer, and a good worker when in harness, though he was believed not to be so radically third party in his ideas as some others, yet he swung into line gracefully and will hereafter be found "keeping in the middle of the road."

Herman Tauberneck, of Ill.—Is a young man of fine physique, fully six feet I should think, and fair to look upon. Quiet and earnest in manner, impressing one with a feeling of trustfulness. A clean, straightforward, kindly gentleman, having strong convictions yet not caring to force them upon others; a modest man, yet one who will remain in the service long after many of the dazzling headlights have disappeared from view. We predict he will be heard from by and by.

Streeter, of Ill., and Davis, of Texas, are both striking figures. Able, eloquent and born leaders of men. Tall and impressive in appearance, one can but wish there were more of this type. Davis is witty and brilliant. He would not do discredit to the stage, and is sometimes dubbed "Cyclone Davis." Streeter is more quiet and a very clear reasoner, a polished gentleman.

McCune, of Texas.—This man has been assailed so unmercifully by the press of the country, that we felt curious to see what sort of a person he might be. Evidently he is a power, either for good or evil. Looking at the man, one would not pronounce him a rascal. Those most intimately acquainted with him honor him as much as any other man in this movement. Surely, if the "National Economist" is to be a witness, his works must be good, and as by their works we are commanded to judge men, we shall pronounce McCune one of our best as well as one of our ablest leaders.

The Georgia Delegation.—Alas! No pen can do them justice. Livingston, still believing in the virtue of one of the G. O. P's., has concluded to try it yet a little longer. He carried with him one other delegate, and so they are not "in it." The balance of the gentlemen from Georgia went into the People's Party with a vim. C. C. Post was one of them, and is a popular man among his friends, as is Livingston with his. These Georgia men made it lively at the Conference for an hour or two, but after the storm came peace and all went on again as usual.

(*Concluded next week*)

The Alliance Press

The Georgia Alliance will stand solid on the Ocala platform, and will support no man or party that does not accept these demands.—Southern Alliance Farmer.

There is a good time coming when no foreigner shall presume to own land in the United States. The soil belongs to the toilers, not to the spoilers.—Iowa Tribune.

After the two old parties have made up their platforms and declared against free silver, where will those Democrats and Republicans who believe in free coinage go? The door of the independent party stands open.—Nebraska Independent.

A Government has as much right to defend its people's lives from hunger as it has to defend them from death by foreign bullets. The Russian Government would not hesitate to ask a loan to prosecute a war; it could easily obtain a loan to obtain wheat for its starving people, and the United States could easily supply the wheat, taking Russia's notes for the food supply.—Truth.

What a grand platform we have got—the best ever promulgated in America. Read it carefully, paste it in your memorandum book and carry it along with you—it is good diet for the hungry. Now organize people's clubs in every township and school district. Don't lose any more time; organize at once and begin the fight—plutocracy's forces must be downed this year.—Butler (Mo.) Weekly Union.

IT is expected a number of leading Alliance speakers will address the People's party public meetings to be held at Livermore and Haywards about April 9th and 16th respectively. Some excellent Alliance meetings may naturally be expected in the central part of the State also, about the time of the State Executive Committee sessions.

EXECUTIVE COMMITTEE MEETING.—We understand the Executive Committee of the State Alliance will meet in San Francisco Tuesday, April 12th. No inconsiderable amount of important business is no doubt on the docket. Business Agent J. M. Moore, 221 Front street, can likely state the place of meeting.

A. D. CRIDGE of Lemoore, Tulare Co., offers to give "Plow-handle Talks" on timely subjects, on reasonable terms, etc.

STATE BUSINESS AGENT.—J. M. Moore states that business has been steadily improving the past few months.

A NEW F. A. & I. U. was lately organized by Prof. King, at Liberty schoolhouse, say Tulare citizens.

ALAMEDA COUNTY ALLIANCE quarterly meeting will be announced, probably in our next issue.

The State Fair.

Rules for 1892—Premiums and Purses To Be Offered.

Sacramento, March 23, 1892.

The regular March meeting of the Directors of the State Agricultural Society was held last Monday at the office of the Secretary, at Sacramento, for the purpose of revising the premium list, rules and other preliminary matters for the State Fair of 1892. The following named members were present: Frederick Cox (Pres.), John Boggs, C. M. Chase, W. P. Mathews, Christopher Green, O. W. Hancock, Richard Gird and L. U. Shippee.

The Committee on Premium List presented its report containing many changes and improvements over the list of 1891.

In the Live Stock Department, horses entered in races were barred from competing for premiums except as a sire, or dam, or junior member of a family, and another new provision prohibiting horses that have heretofore been awarded the first premium in any class for four years old and over from competing hereafter. The potency requirement was amended by accepting affidavit that the stallion six years old and over and jacks five years old and over had produced colts within two years.

The Standard Trotter and Roadster Classes were not changed. The Draft Horse Classes were rearranged somewhat. Normans and Percherons were classed together, and an additional class given for Suffolk Punch. Clydesdales and English Shire were made one class. The general sweepstakes class was stricken out, inasmuch as in the opinion of the Board, it is impracticable, owing to the great many breeds of horses and the special uses for which each class are desired. They deemed it unfair to declare any one breed of horses superior to all others.

The Board hopes to be able next year to provide a sweepstakes premium in each class. The premiums in each class for mares have heretofore been scheduled for best four years old and over with colt and best four years old and over without colt. Restriction has been made prohibiting mare that has shown with colt to show again for premium without colt, but the exhibitor may elect which premium to exhibit the mare for, but she cannot be exhibited for both premiums.

The colt, however, can compete for best suckling in its class, as it is believed this is due the sire to permit the colt to compete with the mare and separately.

In the cattle department, the same inhibition for premium stock in the older class was ordered; that is to say, any animal that has received first premium for best three-year-old and over, will not be allowed to compete for the same premium again. This, we think a wise provision, as it enables the younger stock to compete against those near their own age, and not be compelled to compete continually against stock that has prestige of former premiums.

The dairy prizes for butter test, offered by American Short-Horn Breeders' Association, of $100 to first and $50 to second, were again accepted by the board of directors for this season.

In the herd classes, the old herd was designated to consist of stock two years old and over, and the young herd to consist of stock under two years old. This is made plain, so that the breeders may know in which herd a two-year-old must go. It is now definitely settled, that the two-year-old animal must show with the old herd, and those under, with the young herds.

It was also ordered, that upon making entry of cattle, the date of birth must be given with entry. An old and young herd premium was given, for each class of cattle, of $60 to the old herd and $30 to the young herd.

The only additional change made in the cattle department was the striking out of class 9 (graded cattle) and class 11 (milch cows.)

In the swine department, the special premiums offered by the American Berkshire Association in addition to the regular premiums, were accepted by the board. They provide 10 volumes of the American Berkshire Records for the best recorded sow and litter, and not less than five recorded pigs under six months of age, owned and exhibited by resident of the State in which the Fair is held.

In the sheep department, affidavits will be required as to date of lambing and dates upon which sheep were sheared that are exhibited.

In the poultry department, premiums for nearly all the standard breeds bred on this coast were ordered to be given.

The pavilion premium list was amended to a considerable extent, some of the principal changes are here given.

Inasmuch as the sugar beet industry is assuming considerable importance, and as improved methods are necessary in the planting and harvesting of this crop, the board have offered a premium of $250 for a sugar beet harvester of California invention and manufacture that will prove a success; a field trial must be had under direction of this board. For best improved beet seeder $10. Best improved beet cultivator $10.

The conditions of the incubator exhibit were changed completely. The Board believe that it is practically impossible to satisfactorily test the different kinds of incubators manufactured, and award any preminm for "the best incubator," as it is certain to cause well-founded complaints of unfairness. No prize will therefore be given for the *best* incubators. Awards only will be made for displays about which there can be no question as to injustice. They have offered for the best display of incubators in operation $25. For the incubator hatching the greatest number of chicks during the exhibition, $10. For the best display of brooders, $10. For the best display of poultry houses, $10. For the best display of poultry fixtures, $10.

A special premium of 100 is offered for the best exhibit of electrical machinery in operation at the State Fair.

A special gold metal is offered for the best general display of brandies and wines. A premium of $20 is offered for the best barrel of wine vinegar exhibited by manufacturer; also a similar amount for cider vinegar.

Additional premiums were ordered for the following articles: Dried grapes, apple cider, clingstone pitters, free-stone pitters, apricot cutters and many other modern implements.

Mr. J. M. LaRue, the Stockton expert, who was appointed by the Board at the annual meeting last Friday to examine the books and accounts kept by the Secretary for the years 1890–91, made a report upon the receipts and disbursements and finances of the Society for the two years named, wherein he said:

"I find the books neat, clean, well kept and correct, with two exceptions, wherein the payment of $53 was made, for which the Secretary neglected to take credit. The system is excellent, and shows correctly at any time the condition of every summarized account. I had free access to all the books and made full comparison with all the Secretary's vouchers for the two years. I found the two balance sheets on file in the office correct and have so certified thereon. The manner in which the accounts are kept is a credit to the officer and the Society."

The Speed Program Committee reported progress and offered the following trotting and pacing portion of the program for the State Fair of 1892.

The colt stakes, closing March 15th, were satisfactorily filled (copy of entry sent herewith).

The following classes were recommended and adopted by the Board:

FOR TROTTERS.

Grand Stallion Stake for 2:15 class, of $150 each; payments divided as follows: $50 to accompany nomination; $50 payable August 1st, and the remaining $50 the day before the race. The Society to add $500 for three starters; $800 for six starters, and $1000 for seven or more starters. Stakes and added money to be divided 50, 25, 15 and 10 per cent. Entries to close April 16th.

Free for All, Purse $1500.
2:18 Class, Purse $1000.
2:20 Class, Purse $1000.
2:22 Class, Purse $1000.
2:25 Class, Purse $1000.
2:27 Class, Purse $1000.
2:30 Class, Purse $800.
2:40 Class, Purse $800.

FOR PACERS.

Free For All, Purse $800 and 2:20 Class Purse $800 were also agreed upon. The running portion of the programme will be formulated later on.

The Board of Directors abolished season tickets, and fixed the rate of admission at 50 cts. at the Park and 25 cts. at the Pavilion during the day, and 50 in the evening, with exhibitors tickets for single persons at $5.

The Directors have concluded that season tickets are a failure owing to the great abuse they are subjected to, and in making the change, the rates of admission were so fixed as to be within the reach of all.

The races given by this Association are of a high class, and in any other State would command an entrance fee of $1.

The expenses of the institution are quite large and the only way the Directors have to meet them is from its resources.

Life memberships were increased from $50 to $100.

After consideration of a few other matters of minor importance, the Board adjourned.

A Plea for California Youth.

The letter from Mr. James C. Kemp, visiting agent of the Boys and Girls' Aid Society of San Francisco, printed on another page, presents a question which ought to interest every citizen of California. Mr. Kemp points out one of the real social disadvantages of the State, namely, the lack of opportunity for boys and girls to gain industrial training. He writes, of course, with reference to boys and girls who have no parents, or whose parents take no heed concerning their future. But there is a much broader side to this interesting and important matter than he presents. It has not passed without notice that the children of California are not, in the mass, growing up to worthily succeed those who have come before them. While of course there are ten thousand exceptions to the rule, still it is the rule that the sons of California parents are not equal to the parents themselves. It is due very largely to the fact that there is here small opportunity to acquire the discipline which is essential to the formation of good character and correct habits of life—a discipline which can only be acquired through a drill of daily, monthly and yearly labor usefully applied. The machine shops and the factories are few. The labors of the farm, under the rule of indulgent parents, are too often without system, and factories there are none. There is in fact no organization of industry among us to provide work for the thousands of young people, who would be infinitely better in morals, as well as in pocket, if they had work to do. This opens up a broad field—too broad for discussion at this time. If public sentiment can be sufficiently aroused to correct the evil of which Mr. Kemp complains, it may be trusted to find a solution of the broader problem so closely related to it.

There is, as Mr. Kemp suggests, a great opportunity for some public-spirited man or association of public-spirited and benevolent people, to do for California industry what Senator Stanford is doing for California scholarship. An establishment such as Mr. Kemp proposes, that would take in one thousand or more boys and girls from fourteen to eighteen, teach them the practical methods of honorable industry, and at the same time give them that discipline, which, if not the basis, is always the complement of good character, would do a work which, in our judgment, would be better in its practical results than all that will be accomplished in those great schools where scholarship alone is promoted. We have in California great numbers of men whose vast fortunes have been acquired here largely through the bounty of Nature. Will not one of them take up Mr. Kemp's suggestion, and endow the industrial school which he proposes?

Agricultural Notes.

CALIFORNIA.

Butte.

Gigantic Fruit Trees.—Oroville *Register*: G. H. Stout visited Bidwell Bar, and while there was shown a gigantic fig tree by I. R. Ketchum that is 108 inches in circumference. Owing to immense spread of limb and the great weight of the limbs, Mr. Ketchum has recently been obliged to prune it back to prevent it breaking down. He measured the famous orange tree which is 37 years old, and found it to be 53 inches in circumference at the base. It is 26½ feet high and very wide spread of limb. He says that the tree blossoms and bears fruit in spiral belts or rings extending around the tree.

It Killed the Trees.—*Register*: An examination of some of the orange trees on which Paris green was used last year to kill grasshoppers, shows that the poison not only killed the insects but also killed the trees. The roots, where they came in contact with the poison, turned black, and the trees sickened and withered in a short time. Far more trees would have been living had the grasshoppers been let alone and no poison been used to exterminate them.

Contra Costa.

Grape Growers' Association.—Martinez *Democrat:* For a week past B. M. McKenna has been actively engaged in securing the signature of prominent grape growers in the vicinity of Martinez to call for a meeting at which a Grape Growers' Association shall be formed. The object of the association, we are informed, is for mutual protection and cooperation in the grape industry. Of late years our grape growers have had to contend against many things which have been detrimental to their interests, as well as injurious to the name of Contra Costa as a grape-producing county. Other counties have been receiving credit for the excellent grapes grown in this county, and the commission merchants of the metropolis have been reaping the benefit. It is proposed to stop this, as far as the grape growers in this vicinity are concerned. After the organization is effected, a depot for their produce will be secured in San Francisco, and a reliable agent secured to sell and handle all grapes shipped under the association brand. The grapes of this county, and especially those grown in the neighborhood of Martinez, are great favorites with consumers and bring the best of prices, but they should be sold as Contra Costa grapes, and not as coming from other counties which have a name for grape culture but do not grow as perfect and beautiful grapes as are grown in our county. It is very easy to change the grapes from one box to another with another county's label on it, but if the grapes are handled by a representative of the county, and sold in packages properly labeled, the quality of the grapes will speak for themselves, and credit will be given to whom credit is due.

Kern.

Sheep-Shearing Notes.—Bakersfield *Californian:* Great preparations are being made throughout the sheep-raising sections of the county for the shearing of the fleece, and, during the next week or two, those who have never witnessed a shearing on a mammoth scale can see that interesting process by visiting any one of the following camps. At Delano 80 shearers will be engaged by Cuevas & Valencia, with 80,000 head to shear. Just a short distance from Delano, Harry Quinn will have 20 shearers at work on 20,000 sheep. Over at Blanchard's camp at Poso bridge, 50 shearers will be at work taking the winter coats off the backs of 40,000 sheep. And at W. L. Smith's place, near Delano, 20 shearers and 20,000 bleating wool bearers can be seen.

Placer.

Early Fruit Season.—Auburn *Republican:* The ranchers in this section claim that the season is at least four weeks in advance of last year. This will prove a boon to the ranchers, as it insures them a top market for their early fruit, as there will be nothing but California fruit offered. There is every prospect at present for an excellent fruit crop in Placer county. Peaches and cherries are setting, and strawberries in almost endless quantities will soon be in the market.

Light Snowfall and Its Cause.—*Republican:* John Spaulding, general manager of the South Yuba Water Company, makes the prediction that the water in the river will be very low this season. He says that years ago it was often necessary to shovel snow during the month of June in order to pass on the road at the summit, but of late years the snow is usually all gone in April. His theory in accounting for the early melting of the snow is, that it is owing to the destruction of timber in the mountains.

San Luis Obispo.

Crop Estimates.—Arroyo Grande *Herald:* The rainfall has not been excessive, but it has come in a succession of warm showers and been all taken up by the earth. Good growing weather has followed every shower, and the grain is well advanced. The hay yield will certainly be phenomenal. In the mountains feed was very backward at the beginning, but it is putting in its best licks, with the result that all the foothill dairies are starting up. The bean crops around Arroyo Grande are not planted, of course, but the soil is ready and shows a mellowness seldom equaled. The area to beans will not be much above last year, but the yield will be fully one-third more if the season continues favorable. The area to hay and grain has been largely increased; every canyon shooting up from the valley shows abundant evidences of this. Hundreds of new tracts have been cleared off and planted. Corbit canyon alone will show an increase of over a thousand acres that have been cleared and put under cultivation. This is especially observable around Verde, where Mr. Beckett is dividing up a large tract and selling it out in small holdings. On the Nipomo, also, there is a large increase, and in the Santa Maria valley it is estimated that the area in grain is enlarged from six to eight thousand acres, but the area planted to beans will show a decrease of about a thousand acres.

Stanislaus.

Wheat-Growing.—Modesto *Herald:* We hear farmers assert that wheat-growing has ceased to be profitable in this county, owing to the lack of natural moisture and the low prices that have prevailed during the past few years. It is true that the wheat market, for several years, and until last season, has not inspired a large amount of confidence, but it is evident that bottom prices have been tapped, and prices will be high for several years to come. The moisture trouble is soon to be overcome by artificial application of water, which will be provided by the splendid system of irrigating canals now in process of construction, and which will be in practical operation inside of two years. Wheat can be produced by irrigation, if properly applied, just as well as fruits, vegetables and alfalfa; but these latter are just as important to successful farming as large crops and high prices.

Tulare.

Fruit Notes.—Grangeville Cor. Hanford *Journal:* The apricot trees are loaded with young fruit. If Jack Frost does not visit us any more this spring, the crop will be large. Raisin grapes are at least three weeks earlier this season than common. New growth, six inches long, with blooms for grapes, were found on the Richland colony on the 10th of March. I. A. Ritchey has sold his second crop of raisins for two cents per pound in the sweat box f. o. b. at Hanford.

THE HOME CIRCLE.

The Sweetness of Life.

It fell on a day I was happy,
And the winds, and the convex sky,
The flowers and the beasts in the meadow
Seemed happy even as I,
And I stretched my hands to the meadow,
To the bird, the beast, the tree;
"Why are ye all so happy?"
I cried, and they answered me.

What sayest thou, oh meadow,
That stretchest so wide, so far,
That none can say how many
Thy misty marguerites are?
And what say ye, red roses,
That o'er the sun-blanched wall
From your high black-shadowed trellis
Like flame or blood-drops fall?
"We are born, we are reared, and we linger
A various space and die;
We dream and are bright and happy,
But we cannot answer why."

What say thou, oh shadow,
That from the dreaming hill
All down the broadening valley
Lies so sharp and still?
And thou, oh murmuring brooklet,
Whereby in the noonday gleam
The loose strife burns like ruby,
And the branched asters dream?
"We are born, we are reared, and we linger
A various space and die;
We dream and are very happy,
But cannot answer why."

And then of myself I questioned,
That like a ghost the while
Stood from me and calmly answered
With a slow and curious smile:
"Thou art born as the flowers and wilt linger
Thine own short space and die;
Thou dreamest and are strangely happy,
But thou canst not answer why."

—Youth's Companion.

The Bad Editor-Man.

A woman whose years could not have numbered more than 25, and a little girl, sat in the library of a small house in Boston one morning late in spring.

A low fire burned in the grate, although the day was not cold. The child, whose deep violet eyes and cloud of curly, golden hair made a sweet picture, sat on a rug before the fire, and leaned against her mother's chair. Her head rested on her mother's lap, and every now and then the latter stooped to press a kiss upon the golden curls.

The little one was speaking; she was very small and could not have been more than five years old, but she spoke very plainly.

"When you sell all those beautiful stories, Liebchen," she murmured, with a fond upward glance, "what a jolly time we'll have! The story about the knight and the lady was too splendid! At first I was afraid she wouldn't love—" here the shrill whistle of the postman caused the child to spring up hastily from the rug and run to the door.

It was only a few steps from the front door to the library, but the child was unaccountably long in returning.

"Fredrica," called her mother, with an inflection as near impatience in her voice as she ever used toward her cherished child, "bring me the mail."

"Yes, mamma, I'm coming." But it was with slow footsteps that the little maid advanced and reluctantly laid a large, heavy envelope in her mother's outstretched hand.

Mrs. LeCharlton's lips quivered as she broke the seal and took out the contents of the envelope. It was a MS of some length, and the printed "declined with thanks" fluttered out and fell in the grate as she opened it.

She averted her face from Fredrica's anxious gaze, and the child knew she was crying. She sprang into her lap and put her arms around her neck. "Dearest, sweetest, don't cry. I know it is lovely, even if that editor don't. He is a bad, cruel man, and I will tell him so! You shan't ever write any more for him, even if he gets down on his knees and begs for it."

Then the violet eyes overflowed and Fredrica's sobs came fast and faster, and the mother forgot her own pain in soothing the child.

When she was comforted and calm again it was time for Mrs. LeCharlton to go out; so, calling Mrs. Johnson, the one help of the little household, to see after the child, she kissed her many times and hurried away, promising to return early.

Agnes LeCharlton was a fashion reporter for one of the large daily papers in the city.

She had aspirations and talents far above this work, but that was her main dependence; she could not afford to give up the position that brought the necessaries of life while she devoted herself to more congenial literary work, which might not find a ready sale.

Death had divorced her from the man whom she had wedded when but 18 years old. He had proven unworthy her love and had killed the last remnant of it ere he died, three years before our story begins. With what was left of her patrimony, and what her position on the paper brought, she supported herself and Fredrica. The deep, intense love her little daughter bore her was the light of her life.

Fredrica was old for her years. She was her mother's companion, except when the latter was at her work, and sympathized with her in everything. The stories and sketches Agnes managed to write "between whiles" were a source of delight to the child; the story returned that morning, one that really betrayed talent, was her favorite. No wonder the little heart swelled with indignation at the man who had rejected it!

As she thought about it after her mother was gone, Fredrica came to a sudden, bold determination. Running to a closet, she took down her hat. Going to the door and opening it softly, lest Mrs. Johnson should hear and stop her, she stepped out and closed the door very quietly. She ran quickly down the steps and disappeared around the nearest corner.

Almost miraculously the child was saved from accident, and pursued her way along the busy streets, until a large sign on a building opposite her attracted her attention. "That looks like the place mamma told me," she said to herself, stopping a moment on the edge of the pavement to spell the name on the sign. It was laborious work, but when finished she clapped her hands in joy, ran across the street and entered the building.

* * * * * * *

Eric Boynton sat writing a profound editorial at his desk in his private office. Suddenly the stillness of the room was broken by a clear, piping little voice saying: "You are a bad man! A *very* bad man!"

The busy editor dropped his pen full of ink on his half finished page, and looked around in astonishment to find the owner of the accusing voice.

Turning in his chair, he saw a diminutive figure before him; a tiny maid with deep blue eyes, with a halo of golden hair that curled round her head, her dainty white frock soiled by the dust of the city streets, stood gazing up at him.

The small hands were clasped and unclasped nervously as she felt the keen gaze of the editor upon her. Her composure was disturbed and her voice quivered, as, making an effort to be brave, she began again: "Why do you send back my sweet mamma's pretty stories and make her cry? She shant never, no, *never*, send you any more, and I've come to tell you you're a naughty, bad man—a bad editor-man. There!"

The quivering voice had gained strength, and the violet eyes now looked defiantly at the astonished Eric.

"What do you mean, little one?" he asked kindly, trying to draw Fredrica toward him.

But she resisted. "You made my mamma very unhappy; she cried, and she don't *ever* cry?" she said illogically.

"Tell me all about it, dear. I'm sure I'm not the bad, ugly man you're looking for," he begged, smiling down on her mother's brave champion. Drawn irresistibly toward him, Fredrica told her story, and before it was finished she was on Eric's knee, her little hand clasped in his big one, her burdened heart unaccountably lightened. At the end of her recital, the big editor gave a growl that frightened Fredrica greatly, and almost made her jump off his knee; but when she looked up he was smiling.

"I'm not the man who sees the stories, Fredrica," he said, "but we will see about your mamma's story and make it all right. It is high time now you were at home, for somebody will be terribly alarmed if she gets back and finds her Fredrica has mysteriously disappeared. Do you know the way home?"

"Oh, yes," Fredrica replied, "you just go down to the next corner, and the next one, *the same alike*, and another, and *maybe* another, and you're there."

Eric looked grave, but found that she knew their address, although she could not tell very accurately how to reach it. He took the child by the hand and passed out of the building. Fredrica talked gaily on the way, telling about Mrs. Johnson, the twins across the way, and of mamma. Of the latter she could not say half enough of praise and admiration. Her heart was full of joy, for she had the big man's promise that he would "see about" her mother's stories, and she was sure all would be right.

Boynton halted at a florist's and bought a pretty bunch of roses for her, that sent Fredrica into a perfect ecstacy of happiness. Arriving at the house, he rang, although Fredrica desired him to run around to the side door with her.

A lovely young woman, with an anxious look on her face, opened the door before the bell ceased to ring.

"Fredrica," she cried "how could you frighten mother so?" she stooped down and clasped the child passionately to her breast. Fredrica threw her arms around her mother's neck.

"Liebchen," she whispered audibly, "I've brought the bad editor-man with me, all except he isn't bad."

Puzzled and confused, Mrs. LeCharlton arose and looked at Eric Boynton, who stood, hat in hand, his face softened by the scene of mother and child.

"I must thank you," she said sweetly, extending her hand, "for bringing my little Fredrica to me. I had just come home, and had searched the rooms for her in vain, and was terribly alarmed. It is not like her to do anything to distress me."

"Fredrica and I have something to tell you, if you will allow me to come in. It is about a little matter of business your daughter has brought to my notice," said Eric.

Wonderingly, Agnes LeCharlton bade him enter, and he followed her into the little home that was destined to become a cherished retreat to the busy man of the world.

During the talk that followed, Agnes learned that Fredrica's new friend was an editor, and one of the proprietors of the big evening paper to which she had sent the story which was returned. It was not a part of his work to examine such matter, so Mrs. LeCharlton's manuscript had not come under his notice. This he explained as he asked her to show him her work.

She brought out the story and some other sketches with inward perturbation, and gave them to him. Before he had half finished the first, there was the light of approval in his eyes, and Agnes felt that he found something of worth in her writing. His words of praise were few, but sincere, and the criticisms he made were gratefully received.

When Eric Boynton left them, after an affectionate farewell from little Fredrica, he carried the story with him, promising to use his influence in getting it accepted. Within a week's time the story appeared in the columns of his paper. It was a simple, but skillfully drawn picture of life in the South, where Agnes had spent her girlhood. It pleased the public who were satiated with the sensational, unreal tales that were flooding the periodicals.

Thanks to Boynton's influence, Mrs. Le Charlton soon became a regular contributor to the paper. Their business relations—or what Eric Boynton insisted upon *calling* their business relations—brought them together frequently. He became a familiar visitor at the little home. Ere long Fredrica was almost as fond of him as of her mother, and the remembrances of fruits, flowers and bon-bons which he always brought her, did not diminish her affection.

One day when she sat upon his knee in the little drawing room, Eric said to her, "Fredrica, will your 'Liebchen' do what you ask her to do?"

"Yes, indeed, Mr. Eric. Why?" asked the child.

"Then go to her, dear, and ask her to bring you and come and live with me, in my great big, lonely house."

The big editor's voice was full of something which Fredrica could not understand; she looked at him to see what he meant, but his eyes were fixed on her mother's face, which was bent low over some flowers she held in her hand.

Slipping from his knee, Fredrica obediently advanced to her mother's side, and repeated his words. Then Eric followed; kneeling beside her, he took her hand in one of his, and Fredrica's in the other. "Agnes," he pleaded, "let the child be *my* champion, as she was once yours before me. Come with her and fill my life and my home with the light of your presence. My days shall be devoted to making you happy."

As Agnes gave him the answer he longed for, a wave of happiness swept over her. She felt that the man whose heart was large enough to take in her child and herself would be faithful to the promises he made.

Fredrica considerately left them alone, as she rushed off to tell the grand news to Mrs. Johnson in the kitchen. She wound up her recital with: "And so, Mrs. Johnson, mamma and I are all both together going to live at Mr. Eric's house always. Only you must remember, *he* wasn't the bad editor-man after all; only the very nicest and loveliest man in the whole wide world."—*Caroline Stratton Valentine in Womans Work.*

Women as Nail Drivers.

SUMMIT VALLEY, March 1, 1892.

TO THE EDITOR:—In your issue of Feb. 13, 1892, I find an article headed "Women as Nail Drivers," in which the editor of the Detroit *News* has taken special delight in ridiculing the way in which Mrs. Palmer will drive the last nail in the World's Fair buildings at Chicago. I will wager Mrs. Palmer can drive the aforesaid nail with much better grace and not use such forcible language as men usually do when driving a nail—cursing hammer, nail and board, finally ending up with, it was a blamed fool that would use such a hammer, and throwing the poor hammer as far as strength and temper would allow; then holding up a badly mashed thumb, saying to themselves, or nearest person, that cussed nail (meaning his thumb nail) will come off.

For my part, I can't see what good so much swearing does a man, but then he is a *man*, and judging from the way in which he utters the sentence, it does him lots of good.

I have driven a great many nails, and "hit them on the head," too, and did not hit my thumb. Perhaps Mrs. Palmer in childhood lived on a farm, or has done her own housework, where she found if a nail was needed to hang the dishcloth or Mr. P.'s coat on, she had to drive it herself, as the lord and master did not have time or is nursing that sore thumb "caused from the last nail I drove for you."

The Detroit *News* man had better come out to California and stay one season in some lone mountain gulch where no one can hear the little side jokes he gets off on himself, hammer, nail and his *thumb* before he writes any more about Mrs. Palmer's nail-driving. SIERRA MAB.

Spice of Life.

"MY BOY," said the aged poet to the son of a lately deceased publisher, "I owe your father a debt I can never repay. He threw my first book into the waste-basket."—Puck.

RETRACTION CHEERFULLY MADE—"Look here Mr. Editor," exclaimed an irate caller, "you referred to me yesterday as reformed drunkard. You must take it back, or I'll sue your paper for libel."

"Very well, sir," replied the editor. "I'll retract the statement cheerfully. I'll say you haven't reformed."—Brooklyn Life.

HORACE GREELEY, in his "Recollections of a Busy Life," tells the following story:

"A gushing youth once wrote to this effect:

"'Dear Sir—Among your literary treasures you have doubtless preserved several autographs of our country's late lamented poet, Edgar Allan Poe. If so, and can spare one, please enclose it to me, and receive the thanks of yours truly, '———.'

"I promptly responded as follows:

"'Dear Sir—Among my literary treasures there happens to be exactly one autograph of our country's late lamented poet, Edgar Allan Poe. It is a note of hand for fifty dollars, with my endorsement across the back. It cost me exactly fifty dollars seventy-five cents, including protest, and you may have it for half that amount.—Yours respectfully,

'HORACE GREELY.,

"That autograph, I regret to say, remains in my hands, and it is still for sale at the original price."—Life.

THE instinct for beauty is set in human nature as surely as the instinct for knowledge is set there or the instinct for conduct. If the instinct for beauty is served by Greek literature and art as it is served by no other literature and art, we may trust to the instinct of self-preservation in humanity for keeping Greek as a part of our culture. We may trust to it for even making the study of Greek more prevalent than it is now. Greek will come, I hope, some day to be studied more rationally than at present; but it will be increasingly studied as men increasingly feel the need in them for beauty, and how powerfully Greek art and Greek literature can serve this need.—Matthew Arnold.

Reading Aloud.

As a source of pleasure, few employments equal that of reading with some congenial companion. When she lends "the beauty of her voice" to high poetic thoughts or to the instructive volume, or with gay accents brings out the flavor of the humorous and quaint conceits of others, how intensely we enjoy, how thoroughly we appreciate! With little pauses for criticism and exchange of opinion, we go on, page after page, bringing fresh pleasure to our literary tete-a-tete. And, ever after the story or poem has for us an added charm. Years may elapse, yet when we see again the book, our memories recall the scene of its first perusal; the vine-shaded piazza, with the summer sounds and scents; or the snowy day, when a "tumultuous privacy of storm" enclosed us as in a sanctuary; or the long winter evening, when the lamp's glowing radiance and the bright fire enhanced our comfort, and mind and body were equally soothed and delighted.

Some women neither know nor care for this delightful pastime. They fancy that a special training by a teacher of elocution is essential to fit them for the proper rendering of the thoughts of others, and that it is not worth while to attempt to gain the accomplishment, as they have no special aptness for it, ignoring the fact that reading aloud is one of the talents to be secured by a judicious investment of the great talent of time. Clear and distinct enunciation, a well-trained eye and ready comprehension of the author's meaning are essentials easily acquired, and the practice of this delightful accomplishment gives so much pleasure, that it is recommended as an important contributor to that happiness which every loving heart would fain bring into the lives of others. To read to the dear ones who are weak or ill, to the sufferers in hospitals, and to aid those whose eyes are failing as the long shadows of life's afternoon cloud their brightness, these are blessings which we can easily bestow, and by which we are ourselves enriched.—Harper's Bazar.

True culture is the culture of strength, not of weakness. Who cares to bridle and teach the incomplete, the effete, the thin blooded and boned. Do not be deceived. Put your ear down to the rich earth and listen to the vast, gurgling blood of humanity, and learn whether it strives to flow, and what and where are its barriers. This is the culture worth getting, the culture that wins the love and shout of millions instead of the gush and drivel ot tens. Love and hope and strength and good are all in the crowd . . . and not in the diluted blood of esthetic critics.—Boyle O'Reilly.

It does not disgrace a gentleman to become an errand boy or a day laborer, but it disgraces him much to become a knave or a thief, and knavery is not the less knavery because it involves large interests, nor theft the less theft because it is countenanced by usage. It is an incomparably less guilty form of robbery to cut a purse out of a man's pocket than to take it out of his hand on the understanding that you are to steer his ship up channel when you do not know the soundings.—Ruskin.

Young Folks' Column.

Siskiyou Boys.

[Written for the Rural Press by Duane Morley.]

(*Concluded from last week's Rural.*)

Then the boys fell to at earnest hard work, plowed the barley ground for spring-seeding, hauled the cedar rails and firewood from the nearer mountains, gathered the broken rails into a dry place under cover, from both the upper and lower places—as the ranch was divided and designated—patched up the barn roofs and rebattened the cracks, making everything snug for the winter. To do Judson full justice, an incident should be narrated. While hauling the rails, it was his fortune to see several packs or bands of coyotes upon as many different occasions, while the other boys got sight of none. One night he came in with the tale that "he had counted no less than fifteen in one band and twelve in another, and great lusty fellows, too."

"How is it," asked Brad, "that the mountains are full of coyotes for you, and none at all for us. Blest if I can see any when I am out."

Of course Jud had nothing to answer, only that "what he saw he was sure of." The implied doubt of his veracity rankled him a little, and next trip he took his rifle with him. Brad, seeing it, asked what the gun was for.

"Coyotes," replied Judson. "I don't care to be eaten by wolves."

"If you shoot any," said Brad, "just take the pains to scalp them, and for each scalp I'll give you a dollar."

"I don't want your money," was Jud's reply; but if the varmints appear within as easy range as they did yesterday, I'll show you a scalp for certain."

Sure enough, when he came in at nightfall, he reported another band of the coyotes seen at the base of South mountain; and he showed two fresh scalps as proof. What was more, Will Bray was a witness. Brad promptly forked over the two dollars, but could not make Jud receive them.

When election day came, Brad and Jud took Mr. Goodwin in the carriage over to the polls, to vote and talk politics with some of his old cronies. Chet, being under age, did not go; but took Will with him for a scout among the hills. Their route lay across the old placer beds, where much fine gold had once been mined; over the little ridge, unfenced, where traces were still visible of miners' graves; then through a winding gulch northward, to a broad, massive hill covered with hazel and scrub pines. They had brought a gun; but, finding no game, they amused themselves by sitting in the warm afternoon sunshine telling stories.

After awhile Chet said, "If you wish to see a real mine, Bray, I'll show you one." He then led the way a little farther along through the thick brush to the mine. It was nothing but a hole or shaft cut into the solid wall of the hill, large enough for a man in a stooping posture to enter.

They crept in, half donbled up, walking forty or fifty feet. Then Will said, "It's gittin' dark, ain't it, Chet?" Chet's answer was, "Yes; but don't get skeery, Will. I'll strike a light in a minute." A little farther on, they came to a rough wooden box. Chet opened the box, felt inside, got matches and a candle which he lit. Some hundreds of feet farther they kept on, until they came to a corner in the shaft or corridor of the mine. This corner they turned, proceeding at a right angle to their former course for some distance farther to the end of the shaft. There they found a batch of drills, a canteen of water, a miner's sledge, and other tools. Chet showed Will how to mine; Will holding the drill while Chet struck it with the sledge.

"How that rock sounds when you strike it! Don't it, Chet?"

"Yes, Will; it does. It sounds like glass. Stand back a little and hold the candle forward while I hit it an awful blow, just to hear it ring."

Will stood back, and Chet let drive with all the strength he could use in the narrow space. As he struck it, the whole wall of rock before him caved in, the shore timbers loosened and fell in a mass, and the solid rock beneath his feet gave way, crumbling beneath him.

"Back Will! for your life!" sung out Chet; "I've done it," and just as the light was knocked out of Will's hand, he saw Chet going down feet first as into a well, the timbers and rock falling all about him. The disappearance of Chet, the falling of the rock which still crumbled, and the creaking of the timbers nearly dispossessed Will of his wits; but he managed to grope along the shaft toward the opening to get another candle and matches out of the box.

The junction of the main shaft with the lateral one not a little confused him, and it was many minutes before he got to the box; having to grope about in the darkness to find it. He searched it thoroughly, taking every article out of it; but found neither matches nor candles. Then he hurried back as fast as he could, realizing that he should have called out to Chet before leaving the place of the accident. When he got there again, in his haste, he ran against a broken board, which cut a gash in his cheek, barely missing his eye. He very coolly examined his injury, as he only could by the sense of touch, wiping off the blood with a rag he had in his pocket. Then he called as loudly as he could, "Chet! Chet! where are you?" No answer came, and he called again. After a moment he heard a faint answer, but too faint to distinguish the words. Then he set to, to move the timbers and rocks, but he couid not; the timbers and rocks being solidly wedged together. Then he made his way out into the open air, and taking the nearest cut to the highway, ran back to Goodwin's as quickly as he could for help. Judson and Brad had just got back from the voting place with Mr. Goodwin, who then was safely in the house, exhausted by the trip. The boys were taking the horse from the carriage, when their attention was attracted to Will, who came running up and exclaiming: "Don't unhitch, Brad! don't unhitch! Git er pick, an' er ax an' shovel, an' come quick!" Will's appearance was, with the blood all over his face and hands, alarming; exciting greatly both Judson and Brad. "Where's Chet?" cried out Brad. "In ther mine, an' ther mine's caved in. Git er ax an' er pick, an' come right off." An ax, pick, and shovel were handy by, which they put into the carriage; then they got in themselves and drove hurriedly away.

Their excitement had not been noticed at the house, and Brad, thinking it fortunate, cautioned Jud and Will upon their behavior as they passed by. They were not noticed, and the house cleared, they drove rapidly forward toward the place. Arriving at the nearest point by wagon road, Brad and Will got out, taking the tools—Judson driving on toward McDougalls', a couple of Scotch miners who shantied by their claim a mile farther down. Brad and Will hurried across to the mine opening; and no sooner were they there than Will exclaimed:

"Wut a fool I be! No candles and no matches."

"Both," said Brad; "I have them here in my coat. I am something of a miner myself," he said, drawing out a stick of matches and a candle-end.

They crept into the mine as far as the daylight would aid them, and then they struck a light. No sooner was it done than Chet himself called from the opening:

"Come out of that, boys! I am out here."

Brad and Will hurried out, rejoiced to find Chet unharmed. He was disposed to be a little reticent about his experience, or "his discovery," as he called it.

"Tell us about it," said Will, anxious to know.

"Tell or not," said Bradford, a little put out. "We must hurry back to milk and care for the stock. I'm thankful you're not hurt, though you act strangely."

"I'll tell you," said Chet. "Of course I ought to and must, but the mine is mine."

"It is not," said Brad; "Mr. Kirkson will be back again next week, when he will resume his mining again. You fellows were very presumptious in going into his mine in his absence."

"I mean the old mine," was Chet's reply. "You see, I burst right through into an old, old mine, no knowing how old."

Just then Judson came up with the McDougalls, whom he had met on the road. Chet started in afresh with his narrative, giving what the reader already knows. When he said that the floor crumbled and fell, taking him with it, one of the McDougalls exclaimed:

"Wonder it didn't kill you!"

"So I thought," was Chet's reply. "The fall stunned me for I do not know how long, and when I came to myself again I was in a large chamber—cut at the end of an old mining shaft—nearly as large as our kitchen."

"How could you see in the dark?" asked the other McDougall.

"Plain enough." I had taken the matches and candle-ends which were in the box in this mine, and I struck a match and looked about me, making an examination of the caving to see how it was that I was not killed outright. You see the—"

"Why not show us?" said one. "We'll have to see it."

"All right," said Chet; "but remember the mine's mine."

Then he led the way to where he had come out, about half way around the base of the hill, where there was a very dense growth of small timber in a little cove of the gulley, the hill shouldering closely against it. There had been much old-time prospecting there, and the drift of the hills had accumulated for years. Chet guided the way in, where he had pierced and dug his way out, showing them the long iron bar he had found inside, with which he had managed to break through the debris and tree branches, The shaft was low, so they had to stoop very low in going in; but at the end of the shaft, which ran quartering into the hill, they found the chamber into which Chet had fallen, cut well under and above the shaft of the more recent mine, where Chet took Will in the first instance. What saved Chet was the falling of the long shoring timbers, one end lodging upon the floor of the new mine and making a protection from the crumbling rock.

Quite a number of niches were found in the walls, a small iron stove and an iron kettle; and in one corner of the chamber a rude bed and some mildewed blankets, coats and overalls. They also found an old hardwood chest, small but heavy and portable, having handles at each end. Chet took possession of it, saying, "We'll take this home with us."

At home the contents of the chest were found to be a bunch of drills, a few old knives and forks and a butcher knife, also an old wallet, with nothing in it but some musty, stained papers, torn and illegible; and two much faded ambrotypes—one evidently of a man and the other of a woman. On close search there was found upon one of the papers, the name—as nearly as they could make out any name—"Burton." They referred it to Mrs. Goodwin, and rack her memory how she would, she could stir no recollection of such a miner.

Next day a more thorough search at the mine revealed, hidden away in a deep niche by itself, a small black, japanned tin box, in which were a rusty razor and a greasy bill book containing a roll of old-time bank bills, the value of which could only be determined by their shipment back East. That was all. They fully cleaned out the opening to the mine, tacked up the proper miner's notice and went away. To this day—and that was ten years ago—the mine bears the name of the "Chet and Will" mine.

Both boys, when I last saw them, were mine partners, and hoping some time to strike "pay rock" and make a fortune; but how they were to arrange matters with Mr. Kirkson, whose claim conjoined with theirs, I do not know.

Domestic Economy.

Care of Flatirons.

Any one who has attempted to iron with sticky, rough irons will appreciate these remarks from the *Housekeeper:*

Where there are many starched clothes to be done up weekly, it is a good plan to wash the irons once a week, but where plain clothes and only a few starched are to be done, once a month is often enough. Take some clean ammonia soapsuds, and with a cloth wash the irons well, afterward wiping with a dry cloth; then put them on the back part of the stove to dry thoroughly. To clean the irons, always have a piece of coarse sand-paper, or a handful of coarse table salt, or a piece of wrapping paper in which to rub them. Always have the top of the range perfectly clean before putting on the irons, and never allow them to get too hot. If such a thing does happen, cool them by setting up on edge on the hearth. Some women, when in a hurry, cool them by plunging them into cold water, which will very soon spoil them. Don't keep the irons on the stove when not in use, for it is sure to harm the temper of the iron, and don't have irons on the stove when cooking, more particularly when the article cooking is one that is apt to flow or boil over, or while frying. After taking an iron from the stove, when wanted for use, first rub it over a piece of heavy wrapping paper kept for that purpose, then rub the smooth part with a cloth in which is encased a bit of wax. Rub the iron well over a clean cloth, and then it is ready for the clothes. In ironing starched clothes, if any of the starch sticks to the iron, always scrape it off with a knife before placing it on the stove to heat. Irons should be kept in some closed, dry place. If kept on a shelf they are always dusty when wanted.

Bread Cakes.—Stale bread may be profitably disposed of in griddle cakes. For half a pound of bread use one egg, a tablespoonful of sugar, a teaspoonful of salt, two teaspoonfuls of baking powder, one pint of flour, and sufficient milk to make a smooth batter. Take the crust from the bread and put it to soak in some warm water; do not leave it too long in the water—just long enough to become soft, then squeeze the water from it, mix with the mentioned ingredients, and bake on the greased griddle. I find a pint of milk sufficient for thinning the cakes properly, but all do not favor the same thickness in cakes; a few trials will decide one's own need. The sugar may be omitted if desired. Sometimes I use brown sugar instead of white. For those who like sugar on cakes, they may be sprinkled with powdered sugar as they are taken from the griddle, and buttered also.

Cold Boiled Potatoes.—There are many possibilities lurking in a dish of cold boiled potatoes, says *Good Housekeeping*. The descent of company need cause slight uneasiness when these are already in the pantry. A good way is to reserve some before mashing those wanted for dinner. Get a wire potato masher; it will seem like mere play after having used an old-fashioned wooden one, and a flaky, creamy mass will reward dexterous handling.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MARCH 26, 1892.

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[NEW THIS ISSUE.]

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Sale of Trotting Stock—Killip & Co.
Sale of Mares and Fillies—Fred W. Loeber, St. Helena.
Gas and Gasoline Engines—Palmer & Rey.
Sheep Dip—Catton, Bell & Co.
Electric Belts—Dr. C. B. Judd, Detroit, Mich.
Trees and Plants—Oreodaphne Garden, Cloverdale.
Oakland Home for Sale—John F. Byxbee.
Agents Wanted—J. W. Jones, Springfield, Ohio.
Salesmen Wanted—Centennial Mfg. Co., Chicago, Ill.
Coffee Mills, Weather Vanes, Scales, Etc.—Howe Scale Co.
Assessment Notice—Gordon Orchard and Vineyard Co.

See Advertising Columns.

The Week.

More rain; more sunshine; more confidence and buoyancy in anticipation of exceptional production and prosperity—such are the cheery notes of the week, and under such inspiration one could write volumes, and yet hardly needs to write a word. There is no call to whistle up courage when every shoulder has a chip on it, nor to exhort to contentment when every face carries a smile. Love's labor is not lost when one captures an heiress, and such promises to be the result to all who have wooed the Californian Ceres or Pomona in this God-blessed season of 1892. It bids fair to be a year of great things in every way. See to it that no neglect or slothfulness of yours sacrifices your share in it.

Municipal Corruption.

On Monday of this week, seven members of the Chicago Board of Aldermen were arrested on charges of accepting bribes, and it is declared that the evidence of their guilt is positive. This is the third exposure of the kind in Chicago within two years, and other cities—including our own San Francisco—are not far behind in municipal corruption. No way has yet been found under our American system to secure good municipal government, and our delinquencies in this regard are the more pronounced when we compare the administration of our cities with those of Europe, notably, Edinburg, Dresden and Berlin. In view of the iniquities almost daily brought to light, we can almost pardon the recent assertion of a magazine writer that there are some good things in a monarchy not attainable under a Republican form of Government.

If the consequences of municipal corruption were confined to the cities; if they did not flow out and afflict the country, there would be less cause to complain. Then, the damage would be with those whose indifference and want of spirit permit it to thrive; but as it is, the country is made to support a grievous burden which it has no share in creating and no power to destroy. All the evils which afflict California politics, and through politics the administration of public affairs, have their origin and continue to exist through infamous corruptions of the ballot in the city of San Francisco. And the worst of it is that there seems no way to bring about a better condition of affairs. The only chance of reform lies through the revival of a public moral sentiment, and that seems hopeless.

Rural Prize Letters, No. 1.

The RURAL PRESS has always been strong in its voluntary contributors, who have freely written the results of their experience and observation, for the aid and instruction of others. Such direct contributions from the field of actual practice have given the RURAL an enviable reputation as a practical adviser of those who undertake different branches of agriculture under the peculiar conditions which prevail on this coast. But not to beginners alone has benefit come: even those of greatest experience have learned much by comparison of methods and experiences. It is our desire to greatly develop these sources of benefit in our publication.

The offering of prizes to induce effort in certain specific directions is a time-honored practice: even ancient and honorable institutions of learning employ it to stimulate honorable effort. We desire to employ similar means to interest RURAL readers in preparing for publication descriptions of their experience and observation in certain phases of agricultural production. If the results warrant it, we design to follow the plan until all leading departments of productive effort are covered.

Just at this season the hay product is uppermost in the minds of many of our readers, and we choose it as a theme for correspondents. We offer the following

Prizes for the four best letters on Haymaking on the Pacific Coast:

First Prize	Cash, $10
Second Prize	Cash, $5
Third Prize	RURAL PRESS, one year
Fourth Prize	Map of the U. S., and Chronological Chart of American Political History.

By "haymaking" we include all the acts which enter into the outturn of hay as an agricultural product, viz.: Choice of seed, soil and location; method of putting in the crop; condition of plant at cutting and methods of haying, including curing, gathering up, stacking, stowing away or baling; marketing, including hauling to local markets or to shipping point; cost of product per ton or acre, and customary prices.

We offer prizes for *letters* embracing personal experience in haymaking as thus defined. We say "letters" rather than "articles" or "essays," because we do not desire labored compositions or compilations, but plain, straightforward statements from practical men and women. Many such would hesitate to undertake an essay, but all can write letters telling plainly what they know about hay. If you have only grown one kind of hay, whether barley, wheat, oat, alfalfa or wild grass or clover, tell us how you proceed to secure the best results; and if you have used different plants, write of them all.

We do not place any limit upon the length of these letters. Write as long as you have anything to say which seems to you important in connection with haymaking. Writers' names need not be published with their letters if they desire otherwise and so state to us.

We desire letters competing for these prizes to be mailed to us *not later than April* 15, 1892. The method of awarding the prizes will be announced later.

The University of California.

Twenty-four years ago this week the legislature of California passed an Act which embodied an organic law for the establishment of a State University and thereby furnished a charter which gave it a right to exist. It required a decade or more of self-denying and devoted effort on the part of a number of citizens to create a popular sentiment favoring the establishment of an institution of high class and to acquire certain valuable property which was included in the equipment of the University. These pioneer works become of greater honor as the institution which proceeded from them attains greater breadth and depth and takes a firmer hold upon the respect and affections of Californians.

As the University enters this week upon the last year of the first quarter-century of its existence, it is timely to present a brief statement of its condition and attainments. Its early years were marked by hesitation within, and misunderstanding and misrepresentation without. It has largely outlived its own adolescence, though it is still a child among great institutions. It has won popular interest and approval in a marked degree. It has enjoyed most tangible evidence of public approval in the form of a regular and adequate income from the public treasury. Under these favoring influences, it has grown most gratifyingly; it has improved its facilities and methods; it has arranged and extended its work, so that, though but fairly of age, it is counted as among the great educational establishments of the country. This being the general fact of its condition, a few statements in support thereof will be appropriate.

First as to its educational scope: In the departments of instruction there are offered to the students of the University by lecture, by recitation, by laboratory practice or by field work: 6 courses in philosophy, 18 in history and political science, 2 in philology, 15 in Greek, 20 in Latin, 24 in English, 8 in German, 5 in French, 2 in Spanish, 1 in Italian, 22 in mathematics, 6 in physics, 2 in astronomy, 10 in chemistry, 4 in botany, 4 in zoology, 6 in geology, 3 in mineralogy, 7 in mechanical engineering, 7 in civil engineering, 4 in mining, metallurgy and assaying, 7 in drawing, 6 in agriculture, horticulture and entomology, 2 in military science, 3 in physical culture, 10 in law, 14 in medicine and surgery, 12 in dentistry and 8 in pharmacy. These together make a total of 238 courses in the University.

Second, its equipment: The library now contains over 47,000 volumes. The museums contain important collections in fine arts, classical archæology, ethnology, botany, zoology, palæontology, structural geology, economic geology, mineralogy, petrography, metallurgy, agriculture, models, and cabinet woods. At Berkeley, the following laboratories are in operation: 1—Physics. 2—Chemistry (occupying a new building to cost, when fully equipped, about $90,000). 3—Biology. 4—Mineralogy. 5—Petrography. 6—Mechanical engineering. 7—A students' observatory. 8—Assaying. 9—Metallurgy. 10—Agriculture. 11—Viticulture. At San Jose there is the Lick Observatory with its world-beating appliances.

Third, its student body: There have been in attendance during the present academic year 30 graduate students (including 16 candidates for higher degrees), and 517 undergraduate students, making a total of 547 students in the colleges at Berkeley; 4 students in the Lick Astronomical Department; 96 students in law; 89 students in medicine; 98 students in dentistry, and 107 students in pharmacy. Deducting for five names counted twice, there remains a total of 936 students in the University. In the attendance of students, there has been steady increase from year to year, the present number being almost double that of six years ago.

Fourth, University extension: There has, during the last two years, been a strong feeling among the regents and faculties of the institution to extend its work in such a way that some benefit may be derived by others than those who are able to enroll themselves as students in any of the established courses. The idea is to bring the University as close to the people as possible. The University has conducted during the present year in San Francisco, courses of instruction in philosophy, history, English, and mathematics. Many persons, especially teachers, have availed themselves of these privileges. Certificates of record will be issued for the work accomplished in these courses; and this work may be placed to the credit of such of the attendants as may subsequently become students of the University.

By special provision of the regents, extension of the agricultural work has been carried on by the holding of Farmers' Institutes wherever local interest has demanded them, and these meetings have, as a rule, proved both popular and profitable.

Such are a few facts of the growth and attainment of the University of California. It does not appear that the establishment of another great institution by private munificence has injured it, but rather has benefited it by the new impulse toward higher education which has been spread abroad by the equipment of another means thereto. The fact is that the Stanford University has secured a large student support and the University of California has increased its student list about 20 per cent at the same time. It seems to us that such a wide-spread culture desire has been created by the new stir which has been given to the body politic, that neither institution need fear the endurance of its pupil supply so long as it does good work and meets the demands of a discriminating and intelligent public. Rather is it likely that, spurred on by friendly emulation, each institution will help the other well up to its work and equipped therefor with the best talent and appliances attainable. In this educational activity and progress, the State has everything to gain.

As we go to press on Wednesday the University of California is celebrating at Berkeley the 24th anniversary of the granting of its charter. It is an interesting fact that President Eliot of Harvard University, the oldest University of the United States, comes by special invitation to participate in the charter-day celebration of the University of California. The greeting of the extreme East, now hoary with age as American affairs go, to the extreme West, youthful, strong and ambitious, will be a notable and happy event in our educational history.

TOO MANY POTATOES.—Potatoes are again in excess on the wharves of this city, and receivers have been informed that they would have to remove the potatoes from the dock, otherwise the Harbor Commissioners would dispose of them without delay. The potatoes are fast decaying, and fully 300 sacks will have to be thrown overboard, unless they are hauled away.

The State Press.

Merced *Express:* "The San Joaquin river and the Sacramento river should be converted into navigable canals, a task which could be performed at a cost that would be trifling in comparison to the benefits that would accrue to the State."

San Diego *Union*: "There is something wrong when a poor man who steals a coat gets five years at San Quentin, while Bernard Reiss, a rich man of San Francisco, pleads guilty to theft and perjury in defrauding the Government out of $100,000, is sentenced to pay a fine of only $5000."

Ventura *Unit:* "The transportation companies have thus far been very short-sighted in not aiding the producers by giving them a rate reasonable enough to insure them a profitable return for their products, and thereby aid them in the general prosperity of the State. They have always been of the opinion that it pays them better to handle our products at higher rates, and thereby limit the production and a demand for it, than an increased production at cheaper rates. Neither can they be made to see the rapid strides and growth of our industry, which is being impeded by the exorbitant rates charged."

Stockton *Mail:* "The poll-tax season is again at hand, and while the *Mail* hopes that the collectors of this iniquitous tax will be treated courteously by all those upon whom it is their duty to lay the unjust burden, it nevertheless seizes the occasion to again draw attention to a form of taxation which is the very worst that could be devised. The poll tax is a tax upon the privilege of being alive. The poor devil who has but $2 in all the world, having the misfortune to be alive under a system of government, which in this one respect is as bad as the very worst in the world, must yield up his last cent or suffer the consequences."

Tulare *Citizen:* "Whether the Nicaragua canal would be a benefit to this country or not is not the question at issue. If the canal is worth $100,000,000 to this Government, let the Government build and own it. The greater the Government's interest in the canal, if owned by private parties, the greater the evil results, as proved by our subsidized railroads, that, owing to their vital importance to the people, has resulted in their corrupting legislation, controlling elections and demoralizing the people. Such enterprises, of vital importance to the people, should be owned by the people or in time they will own and control the people. Which shall it be?"

San Diego *Union:* "An able Eastern writer, in discussing the road question, takes the novel but entirely reasonable position that the great railways should assist in the maintenance of fine highways, holding that, inasmuch as the business of railroads depends upon the productive activities of the country, the roads should aid in making the transport of agricultural products easier and more rapid. "Railroads need better wagon roads for feeders; farmers need them for access to the railroads; manufacturers need them for access to less populous areas, and for less cost of portage and transportation; merchants need them as an element in the cheapening of their wares; the people need them for the reduction of the expense of satisfying their wants, and for the more efficient distribution of the product of their activities."

The Kern County *Echo* has a plan to secure competition in transcontinental freights. It "would have the Government foreclose its mortgages on the Union and Central Pacific railways, sell off the rolling stock to the highest bidder for cash or good notes and then open these roads as public highways or toll roads; grant no exclusive privileges for the use of this iron way, but let every transportation company, either great or small, and every individual who wanted to, run trains over it by paying the fixed toll. This, the *Echo* declares, will put a quietus on the Pacific Mail subsidy, and give the country competition in transportation. The *Echo* does not favor paternalism in government; but it recognizes the fact that governments have certain functions to perform and believes that one of these functions is to provide highways over which the people may travel and move their products."

Better Roads.

We are in receipt of a new illustrated monthly publication, *Good Roads*, issued at New York by the League Roads Improvement Bureau. The plan and scope of the magazine is outlined in the following excerpts from the first number published:

Each monthly number will be illustrated by pictures carefully prepared to accompany the text, and designed to illustrate with special force the value of better roads and better streets. The general aim of this magazine will be to stimulate the interest of the public concerning the advantages of good roads and streets, and the best methods of constructing and maintaining them. In pursuance of this object we shall publish from time to time the best articles obtainable relating not only to the economic features of the movement, but showing also, by both text and illustration, the most approved methods of improving the public streets and roads. Special attention will be given to the subject of road laws and legislation, including outlines of existing laws and suggestions for local and general acts looking to the better making and maintaining of public highways.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

To Help the Young Men.

San Francisco, March 14, 1892.

To the Editor:—One of the great overshadowing wants of California is some positive means of giving her honest, sterling but poor young men of 16 years a practical, industrial education that at maturity will place them in complete consonance with the great agricultural, viticultural, dairy and stock-raising resources of the State. Her school system is of the highest order, while her colleges, the State and the Leland Stanford Jr. Universities, are among the best on earth.

What is now needed, however, is a comprehensive grain, fruit, dairy and stock ranch upon an immense scale. I say immense, because at least 4000 acres of good land would be necessary, where 1000 young men at a time could be taught in the most practical manner anything and everything connected with the four branches enumerated, to go forth at maturity an honor to the school and State, each qualified to make his way in the world and to become independent.

Fully one-fourth of the boys of California are growing up in idleness and utter demoralization. No one wants their services because they are not qualified, and to-day, if a boy of 15 or 16 years desired to go upon a ranch for a couple of years to learn the business, I do not hesitate to say emphatically that it would be next to impossible to find such an opportunity for him. I know whereof I speak, because my particular business for the past ten years has taken me into close consultation with thousands of distracted and heartbroken parents in every portion of California who, after having done all that fond, loving fathers and mothers could do for their boys' education, now see them going headlong to destruction, and all for the want of simple, honest, manly employment.

We spend millions in an effort to reform criminals; the State, too, gives $200,000 annually for the support of orphan, half-orphan and abandoned children under 14 years of age, while nothing whatever is being done to help an earnest, honest but poor boy of 16, who would gladly learn some way of making his living, in order that he may become a man among men. There are millions for the aid of the vicious and criminal classes, but not one dollar for the good, and if an honest young man or woman desires assistance, *he or she must first commit a crime.* Having done this, friends will rise up in every direction, as if by magic, their number being in exact proportion to the magnitude and wickedness of the offense committed.

Does the reader think I exaggerate, then allow me to cite a case in point. About a year ago, a boy of 18 years, more or less, was pardoned by the Governor from out one of the State prisons. He was sent to a well-known charitable institution but a couple of days after, told the superintendent that he preferred his old quarters—in substance, he said the prison was a fine place, the fare first-class, that he was well satisfied there, and he did not see why the Governor pardoned him, or why anybody, in fact, interfered in his behalf. As he had been pardoned, he could not be received again, and so the Warden made a statement of the case, which was published in the daily papers, whereupon at least 75 persons, all eager to help him, visited the home of the society referred to, and for a week afterward letters continued to arrive from distant parts of the State eager to help him. He was permitted to go with an exceedingly humane individual, who paid his fare to the interior and expended more or less in his behalf, but on the following day he ran away.

It is safe to say that, had the boy in question been good in every respect, not so much as one friend in all the State would have come forward to assist him.

A grand opportunity is now presented for some noble man, some second Leland Stanford, to do a deed good enough to cause the angels that stand around the throne of God (if possible) to shed tears of joy, and as one who has made this subject a study for a full decade, whose daily life for that period has been in the very midst of families bowed down with grief from the causes I have given, I ask why it is that nothing is done, or even attempted to be done, for the vast aggregate of good, sterling, honest boys of 15 to 16 years who have nothing but their two hands to help them. They cannot get work unless they are qualified to do it, and in God's name how and where are they to obtain the opportunity? A fearful state of things exists in this State in the direction I have outlined, and every minister of the gospel, every newspaper, every well-wisher of the race, should take the matter up and agitate it. Here is a living subject, and yet no one seems to have a word to say, and in the meantime that which should be the very bone and sinew of the State is going headlong to ruin. Will not all who read this revolve the matter over and over in their minds, and perhaps an abler person than the writer can elaborate on what he has written, and thus help the matter onward toward a most devoutly to be wished for consummation?

In what I have written in the foregoing, I wish it to be distinctly understood that I do not mean to infer even that nothing is being done for good and unfortunate children, as we have our various orphan asylums, Boys' and Girls' Aid Society and Youths' Directory, all of which, as well as very many others, are doing a grandly humane work; but, so far as I know, nothing whatever is being done for honest boys and girls of 15 to 16 years, especially the former, who have no chance whatever to qualify themselves so as to be able to get a living when they shall have reached maturity.

We have schools, academies, colleges and universities, but no such an industrial university as I have outlined, that, in my humble opinion, should take precedence to all others.

James C. Kemp,
Visiting Agent Boys' and Girls' Aid Society.

California Land Holdings.

Conclusion of Mr. W. H. Mills' Discussion of a Great Evil.

Last week we printed an extract from a lecture by Mr. W. H. Mills of this city on the evils of large land holdings in which he set forth the rapid progress of land monopolization in this state and particularly in the Sacramento valley. We now give further extracts from the same lecture in which Mr. Mills treats briefly of causes and remedies:

The question arises as to the details by which this aggregation of land has been achieved. The answer is not far to seek. It was through the facility with which land may be made the basis of security for the repayment of money borrowed. If you have followed the statistics you will observe that the increase of the holdings made the greatest progress between 1883 and 1890. The aggregate amount of the mortgages found on the assessment roll in 1882 was $82 953,826. In 1890 the amount had increased to $168,097,325. This, of course, included the mortgages upon city and country real estate; but a still more remarkable fact remains to be noted. In 1882, when the volume of mortgages reached but $83 000,000, the value of the property mortgaged was set down at $446 319 940. In 1890, when the value of the mortgages had reached $168,097,325, the value of the property affected by mortgages was set down at $200,000,000. Thus the value of the equity of redemption had decreased from 1882 to 1890 $246,000,000. A mortgage is treated as an interest in land affected thereby. The value of the mortgage is assessed to the mortgagee, and the value of the land to the owner thereof. In 1882 the full valuation of the land was given in to the Assessor, but eventually the owner of the mortgaged real estate had learned the art of narrowing the margin between the value of the mortgage and the value of the land affected ;thereby and hence, whereas in 1882 about $83,000,000 of the mortgages affected $446,000,000 worth of real estate, in 1890, $168 000,000 of mortgages affected only $200 000,000 of real estate. The facility, therefore, with which land may be used as the basis of security and a low rate of interest are the actual levers by which countries are depopulated and monopoly of the soil is effected.

As the land is monopolized the value of the improvements declines. An appeal again to the actual statistics in this State will establish this fact. During the period of the greatest progress in the direction of aggregating lands in California, to wit: from 1883 to 1890, the value of the country real estate rose from $231,000,000 to $388.440 000, and the improvements thereon from $37,000,000 to $53 000,000, an increase in round numbers of $16,000,000. In the same period of seven years the value of the city real estate arose from $183,000,000 to $295.000,000, and the value of the improvements from $100,000,000 to $153,000 000. Thus, while the improvements on $231.000 000 worth of real estate in the country increased but $16,000 000, the increase on the city real estate assessed at $183.000,000 was $52,000 000, or more than three times the aggregate amount, and more than 400 per cent on the increased value of improvements on country property. If the improvements on the country realty had kept pace with those on the city real estate. at the end of the period of seven years we reach an astonishing disproportion between the value of the improvements on country real estate and that observed in the cities. The figures are as follows: The value of the country property in 1890 was $388 440,000, improvements thereon. $53 951.000. Value of city real estate, $295.229 000; improvements on the same, $153,000,000. The relation of the value of improvements on country property to the whole value of the property is but 14 per cent, while the improvements on city real estate is approximately 52 per cent of the value of the real estate.

For a long time both population and wealth have been congested in the cities and towns. Absentee landlordism impoverishes a country. The money distributed back from the products of the land goes chiefly to a single family. That family resides in the nearest town if the holding aggregates three or four thousand acres; in the nearest city if the holding aggregates from five to ten thousand acres; and in the metropolis of the nation if the holding reaches fifty or a hundred thousand acres. Some of our largest holders reside in the cities of New York and Washington. These are men holding from fifty to two hundred thousand acres. A still larger number reside in San Francisco, the metropolis of the coast. These hold from ten to forty or fifty thousand acres. The annual wage bill of agriculture is paid to a labor which is not in any respect attached to the soil or identified with the country. As soon, therefore, as the crop is made and the money obtained from its sale distributed back to the labor and to the owner, the former disappears to the villages and towns where their only savings bank is the saloon; the latter deposit their surplus in the banks or use it for the purchase of more land, and their families spend their money in the city. Thus it is that the rural districts are impoverished while the great commercial cities are overcrowded.

AS TO THE REMEDY.

The rights of property are the creation of legislation. While men have the natural right to acquire property, the exercise of that right is subject to regulation. It is absurd to say that society has no right to protect itself against ultimate destruction through the regulation of the right of ownership. My investigation of this subject has led to two general conclusions: First, the lands are being aggregated through the rapidly increasing accumulation of wealth and the constantly augmenting volume of idle capital. This capital seeks safe investment. An acre of land that will pay $2 per annum is better than a Government bond for $100 with a two per cent coupon attached, and such a bond would be at a premium if issued for a fixed period of time. The land itself is preferred security. Loans are easily effected upon such

a basis. Values in land therefore become a preferred savings deposit, while the constantly decreasing rate of interest makes the acquisition of land more desirable. Legislation designed to prevent the mortgaging of land as security for the repayment of money and the interest thereon, would be a death blow at once to its further accumulation in large quantities. Limitation and restriction, as to the extent to which land may be mortgaged or used as a basis of security for the repayment of loans, would retard the process, as, for example, a law declaring that no mortgage should be collectable out of land for more than 25 per cent of the assessed value of the property would have the effect of raising the assessment on the land and limiting the power of its owner to make further accumulations. Next, a regulation that the interest accruing upon a mortgage should not go to the accumulation of the mortgage, nor be collectable out of the equity of redemption, for whatever amount it might be, would be exempt from execution in the collection of the interest on the mortgage. This would prevent the accumulation of land by landowners and withdraw the surplus idle capital from investment in that direction. The tendency under these regulations, would be to place the lands in the hands of men who will actually cultivate and use them.

The second conclusion derived from the statistics is that the death of the proprietor does not subdivide the landed estate. I suggest, as an appropriate remedy, a forced subdivision after the model of the code of Napoleon to the heirs of decedents. But all these suggestions of limitation and regulation are temporizing at best. I am in favor of a law absolutely prohibiting any man to devise in his will more than 1000 acres of land, and declaring that all in excess of that acreage shall be sold for the benefit of his estate, and in such a way as not to inflict loss; say one-fifth in each year for five years, and that the sales shall be directed by the court.

I would not have such an act take effect immediately, but rather gradual in its operation; for instance, let it take effect within five or ten years from the date of its passage. The slave trade was extirpated in this country by an ordinance enacted in 1787, which declared that the slave trade might be tolerated until 1808, when it should be regarded as piracy, punishable with death. This measure did not meet with the opposition of those engaged in it, chiefly because the date fixed gave them time to adjust their property to the new condition of things. Fearing the actual enforcement of the provision, no new capital was embarked in the enterprise, and the capital already engaged in the trade prepared to withdraw. In short, every traffic is kept up by the profit it affords to those engaged in it. The ordinance of 1787 gave those engaged in the traffic a practical monopoly during the period of toleration. It prevented others from entering upon the enterprise, and so for the season of great profit, the slave traders consented to the ultimate extinction of the traffic in which they were engaged.

THE RIGHT OF SOCIETY TO AVERT A DANGER.

But beyond all this, whenever a great danger threatens society, it has the right to avert it. That cannot be lawful in any true sense which destroys society, because laws are enacted for the good of the social compact. In a state of civilization the absolute freedom of men must be surrendered to the good of the body politic. This is the fundamental conception of all law. I find this so clearly stated in a decision rendered by the late ex-Chief Justice of this State, Silas W. Sanderson, that I choose to quote in preference to anything which I could myself present. Judge Sanderson said:

"Governments are formed for the purpose of securing and protecting men in the enjoyment of their natural rights, and they would fail to accomplish that object if the power to regulate or prescribe the mode in which such rights are to be exercised be not lodged in the law-making department. In short, there could be no government without such power, for without it all men would be in a state of nature; that is to say, without any restraint upon their conduct, except their own wills and the forcible opposition of their fellows. Hence, when men who come together for the purpose of adopting a form of government and establishing a system of laws, stipulate that the rights of life, liberty, property, and the pursuit of safety and happiness are inalienable, or shall remain inviolate for ever, they are not to be understood as meaning that those rights shall not be at all interfered with by the law-making power. On the contrary, their language is to be interpreted in view of the object which has called it forth, or as meaning that those rights are not to be interfered with, except so far as the ends and objects of government may require. This section is not to be read by itself, but as a part only of the Constitution; and thus read, the obvious import of the whole is, that in order that these rights may be made secure, and that we may be protected in their enjoyment, we agree that the government about to be established may pass all needful or reasonable rules and regulations for their security and enjoyment, without any power, however, to destroy or unnecessarily restrict or impair their reasonable exercise. Hence, this provision of the Constitution is not to be understood as putting life or liberty entirely beyond the reach of the Government, if from misconduct, the general welfare of the community demands its sacrifice or restraint; or as allowing every one to acquire, possess and enjoy property after his own unregulated manner, and according to his uncontrolled will, but in such manner and by such means as the general welfare of the community may require him to observe; or as allowing every one to seek safety and happiness in his own way according to his own notion, but by such ways and methods as the general good may demand. In short, while the exercise of these rights cannot be denied to any one, it may be regulated. The Constitution recognizes them as inalienable, and provides that they shall remain inviolate, but at the same time declares that they must be exercised according to the maxim, *Sic utere tuo, ut alienum non laedas*, which lies at the foundation of the social compact. While every man is free and independent, and may enjoy and defend life and liberty, still he must do so in a way which does not interfere with the same right in other persons; while he may acquire, possess and protect property, he must do so in a way and by means which will not prevent others from doing the like; while he may pursue and obtain safety and happiness, he cannot be allowed to do so in a manner which may endanger or unreasonably impair the safety and happiness of others; or, generally, while every one is to be secure in the exercise and enjoyment of all these rights, he may be restrained or prohibited from exercising them in any manner which will interfere with a reasonable exercise of the same rights by other persons. Hence it is that the Legislature is not only allowed, but required, among other things, to pass laws for the protection of life, liberty, property and the pursuit of safety and happiness. * * * Instead of being repugnant, such legislation is indispensable to the preservation and inviolability of the very rights in question. Every act which may tend to impair their exercise beyond what is needful for the general good may be prohibited. Of these there are some which, by the common consent of mankind, are bad and mischievous in themselves—the *mala in se* of the common law—and others which may become so under certain relations and conditions, and which, therefore, the Legislature may prohibit as necessity or occasion may require—the *mala prohibita* of statute law. It is not to be supposed that the entire field of public offense has yet been covered by apt legislation. Vice is ingenious, and disguises itself in a variety of forms, for the purpose of evading existing laws. Things once regarded as harmless become vicious when contemplated from the level of a higher civilization, and legislation, if not in advance, must keep even pace with public sentiment, and to that end the requisite power is not denied to the Legislature."

The doctrine announced in the foregoing, that men cannot be allowed to acquire, possess and enjoy property after their own unregulated manner and according to their own uncontrolled will, but in such a manner and by such means as the general welfare of the community may require him to observe, is a clear statement of the whole situation.

Large land-holding is an evil which must be eradicated. Nor is it an unreasonable restraint of the natural liberty of men to declare in law that land cannot be made the subject of private ownership in a single individual beyond a certain quantity.

The concluding sentence of the quotation from the eminent jurist puts a broad sky above the whole subject. It deserves the perspicuity of repetition:

"Things ones regarded as harmless become vicious when contemplated from the level of the higher civilization, and legislation, if not in advance, must keep even pace with public sentiment, and to that end the requisite power is not denied to the Legislature."

NOTICE.

The Annual Meeting of the Stockholders of the Grangers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis St., San Francisco, at 10 o'clock, A. M., Wednesday, April 13, 1892.

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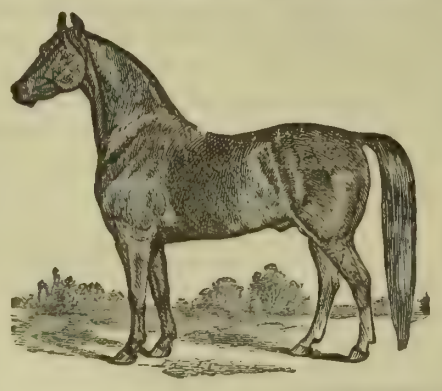
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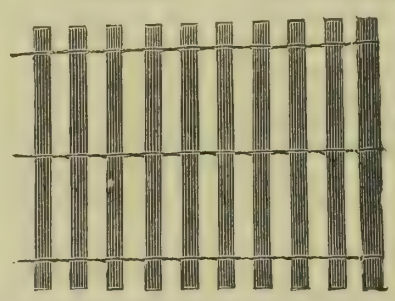
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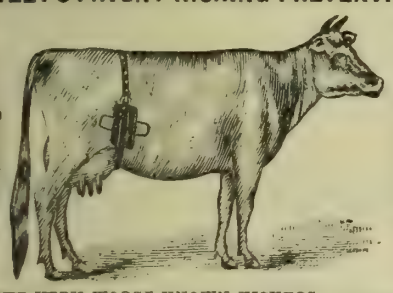
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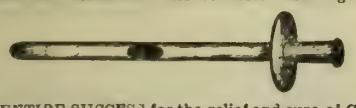


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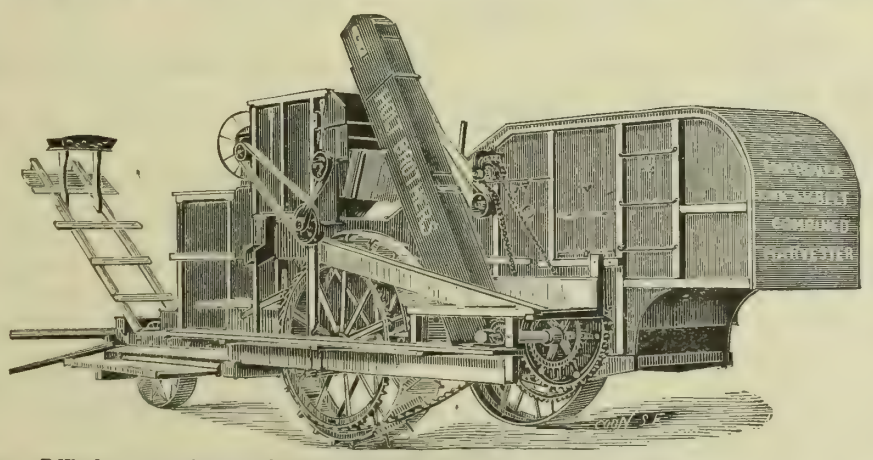
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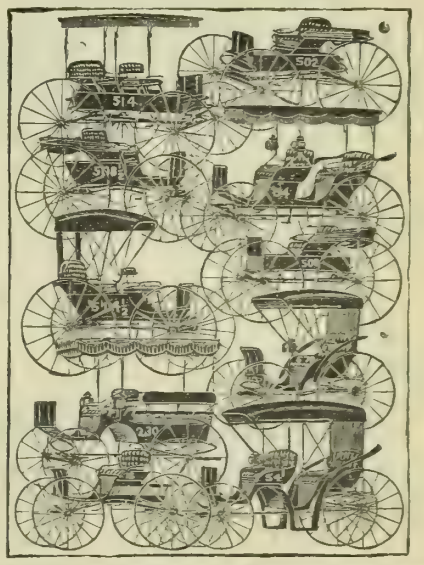
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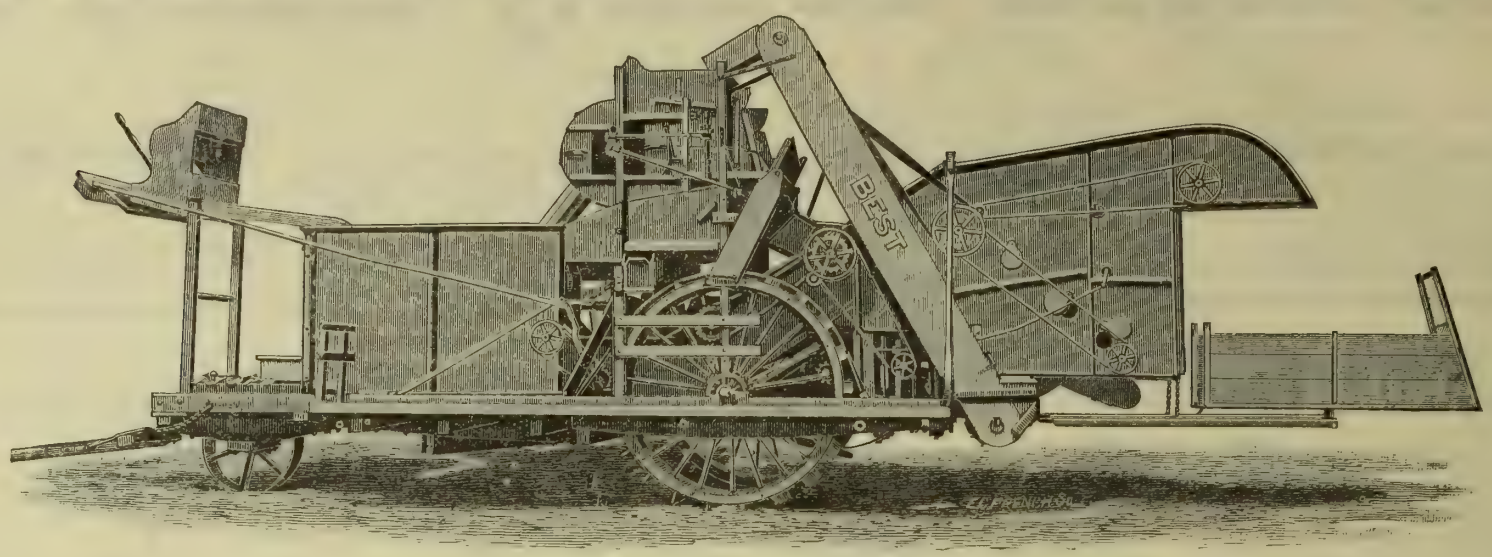
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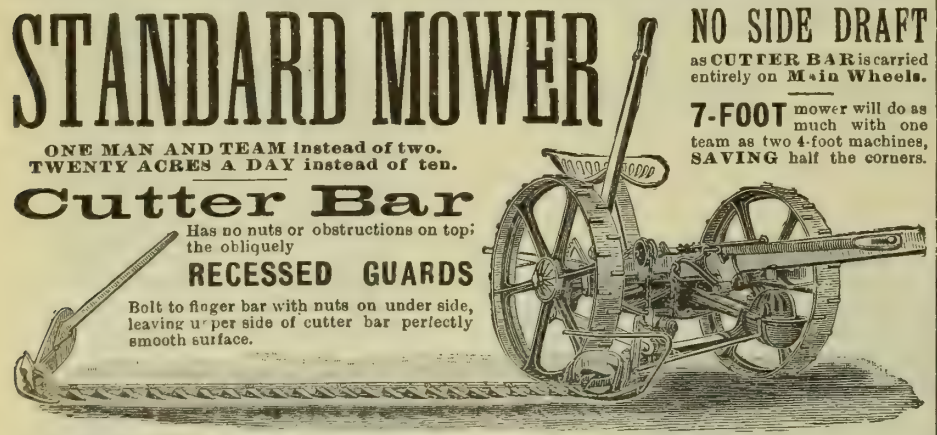
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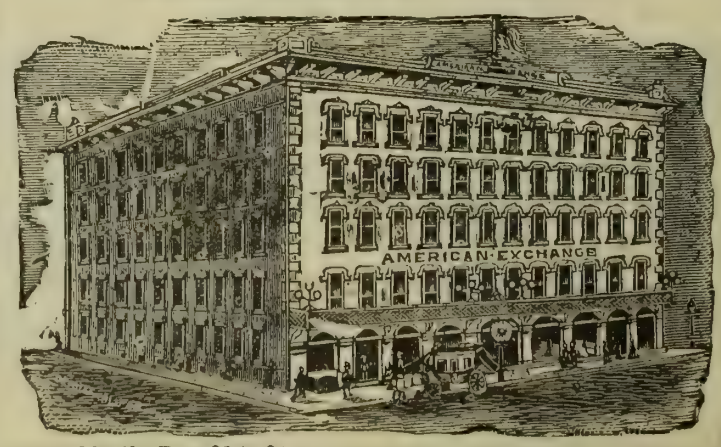
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Propagating Olives.

The various methods of propagating the olive, are by seed, or more properly "pit." This can only be done successfully by freeing it from oil, which prevents both air and water penetrating to the kernel. This may be done by caustic soda, which readily combines with the oil, or by cracking the pits and removing the kernel, which, being carefully treated and properly planted, will readily produce trees, but they will be as various in description as will apple trees. Grown from seed it is an unsatisfactory process, for only about seven or eight pits in a hundred contain any kernel, and consequently cannot produce their kind.

To produce trees that will bear the desired kind of fruit, take limbs of any size, or the trunks of the trees which produce the kind you want, cut in pieces ten inches long and plant in a vertical or in an oblique position in either nursery or orchard, and nearly cover with earth well packed around the cutting from top to bottom, or the trunk or limb may be cut in any length and planted horizontally about three inches deep; these will send up canes all along the cutting, in some cases not more than six inches apart. After the canes have reached a height of one or two feet, remove the earth between the canes and saw the cuttings off, leaving a section on each cane, or the canes may be removed from the cutting by taking a sharp chisel, or what is better, a gouge, and severing the connection, but taking care to leave all the roots on the cane, which secures an entirely independent tree of the desired variety, in bearing years quicker than if grown from seed. The cutting may still remain in the ground, another set of canes will be produced from dormant eyes which failed to start the first year, and even this may sometimes be repeated.

With artificial heat it is easy to secure a vast number of trees by taking the growing tips of twigs three or four inches long and planting them in moist sand; oftentimes these herbaceous cuttings will bring 90 per cent of trees suitable to plant in the nursery. And still another mode, the spherical protuberances, which are formed just above or below the collar of large trees, may be cut off with a chisel or gouge and planted in nursery or orchard; these make beautiful trees. Olive trees grown from pits may be changed to any variety by grafting or budding, which is done in many ways, all of which have been illustrated in a small pamphlet published by the California State Board of Horticulture, in which are also illustrated all the most desirable sorts of olive trees now produced in the State.—Frank A. Kimball, in San Diego Sun.

Veterinarians' Society.

The State Veterinary Association held its quarterly meeting at the Baldwin Hotel and in the absence of President W. D. Morrison of Los Angeles, Vice-President W. F. Egan of San Francisco presided.

The following were declared to be elected members of the association: Thomas Maclay, Petaluma; A. M. McCullum, Sacramento; H. A. Spencer, San Jose; R. T. Whittlesey, Los Angeles; J. G. Blackington, Los Angeles; Ward B. Rowland, Pasadena; F. E. Pierce, Oakland; W. J. Oliver, Los Angeles; C. Masnero, San Francisco; W. E. Wadams, Santa Clara; C. B. Orvis, Stockton; P. C. Davenport, Santa Rosa; P. P. Parent, Ukiah; Peter Burns, San Francisco; H. F. Spencer, San Jose; R. A. Archibald, Sacramento; D. F. Fox, Salinas; W. Davidson, San Bernardino.

After the transaction of routine business a general discussion on the treatment of glanders was indulged in. Dr. Maclay stated that in his opinion every city should have a veterinarian employed for the treatment of glanders in horses. He characterized the disease as being not only fatal to horses, but dangerous to humanity as well. He pointed out several cases of the death of persons in the upper part of the State from glanders, which might have been averted had proper veterinary precautions been taken.

Dr. Maclay reported a prevalence of pleurisy and pneumonia among horses, but that the indications were that the disease would be short-lived.

Chairman Egan announced that a veterinary college was to be established in this city in the near future, and that the project was one of considerable importance.

W. G. Layng also announced that a veterinary department was soon to be established at the Stanford University.—Chronicle.

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List of U. S. Patents for Pacific Coast Inventors.

Reported by Dewey & Co., Pioneer Patent Solicitors for Pacific Coast.

FOR WEEK ENDING MARCH 15, 1892.

470,972.—FEED WATER HEATER—Jos. Bell, Troutdale, Or.

470,655.—SASH BALANCE—W. Berry, Angel Island, Cal.

471,066.—DEVICE FOR DISPLAYING MANUSCRIPT, C. C. Bowen, S. F.

471,067.—MANUSCRIPT HOLDER—C. C. Bowen, S. F.

471,002.—INKSTAND — J. H. Hamill, Globe, A. T.

R 11,230.—SASH FASTENER—D. O. Livermore, Los Gatos, Cal.

471,009.—LOCOMOTIVE—J. B. Mahana, Freewater, Or.

470,765.—GAME APPARATUS—A. W. McArthur, S. F.

471,058.—COOKING UTENSIL — G. W. Merk, S. F.

470,714.—SOLUTION OF LACTIC ACID—A. Sommer, Berkeley, Cal.

470,715.—DISSOLVING LACTIC ACID—A. Sommer, Berkeley, Cal.

470,853.—ADJUSTABLE PICK POINT—H. Welisch, San Diego, Cal.

21,401.—DESIGN FOR GAME BOARD—Augusta M. Warner, S. F.

The following brief list by telegraph, for March 15 will appear more complete on receipt of mail advices:

California—Julius Finck, San Francisco, cash and package carrier; Taylor W. Heintzleman and T. C. Noyes, Sacramento, valve gear for compound engines; Merrill A. Howe, San Francisco, insertable saw bit; Joseph J. Lifebvre and J. O. Cessna, Redding, bar fixture; Charles W. Metcalfe, Santa Paula, centrifugal honey extractor; Rebecca E. Mills, Porterville, churn; John F. Myers, San Francisco, attachment for ranges; Edward North, Newhall, check or order book; James M. Thompson, San Francisco, arc concentrator; Jas. Tulloch, Angels Camp, concentrator. Oregon—Chas. Dickinson, Portland, paper weight.

NOTE.—Copies of U. S. and Foreign patents furnished by Dewey & Co. in the shortest time possible (by mail for telegraphic order). American and Foreign patents obtained, and general patent business for Pacific Coast inventors transacted with perfect security, at reasonable rates, and in the shortest possible time.

A Fruit Exchange in Santa Clara County.

CAMPBELL, SANTA CLARA CO., March 19.

TO THE EDITOR:—The committee appointed by Campbell Horticultural Society to take in hand the matter of organizing a Fruit Exchange in this county, has decided to invite the growers, dryers and canners to meet the committee at Campbell, Saturday, March 26th, at 1:30 P. M.

The committee desire all those interested in the fruit business to be present and present their views.

We are united in the belief that a Fruit Exchange would prove a great benefit to all of us.

As your paper will reach your subscribers in this county in time to notify them of this meeting, we hope you will publish the above notice. Committee: F. M. Righter, Benj. Campbell, Gilmore Duncan, Frank Buxton, Geo. W. Gardner.

Is Jersey Butter Colored?

Of course it is!

That is, at this season, and by progressive dairymen. Such people as George Jackson, formerly editor of the dairy department in the Jersey *Bulletin*, assert that "colored butter is more enjoyable and sells more readily at a better price, than white."

Mr. Jackson's experience with coloring preparations is thus summed up: "Wells, Richardson & Co.'s Improved Butter Color is far superior to any like preparation I have ever used. It gives winter butter the tint of Jersey butter in June, and does not affect either the taste or flavor, nor color the buttermilk."

Use this color in your dairy, and satisfy yourself in regard to the truth of Mr. Jackson's statement. If your experience is similar, and there is no reason why it should not be, you will find a gain in quality and price of your butter.

Great Horse Sale.

We would call especial attention to the sale of horses by Fred. W. Loebe, St. Helena, advertised elsewhere in the RURAL. The list of horses and the showing of their stock and breeding, makes this sale a tempting one to farmers, who should take particular notice of Whippleton's great qualities as a sire of carriage horses, the kind to be sold, without training or expense, at large prices, and the kind that are the best for the average farmer to raise.

The catalogue contains several noted producing brood mares, such as Madonna, dam of Alcona Jr. 2:24, sire of Silas Skinner 2:17; Del Rey 2:20, and the mare Vineland Maid, dam of Lookout 2:25, and others.

Herndon Stock Farm.

J. R. Sellers, Mgr. of above farm, Clarksville, Tenn., says: "I used Quinn's Ointment with good results and am highly pleased." This is the universal expression. For Curbs, Splints, Spavins, Windpuffs, Bunches, takes the lead. Trial box 25 cents, silver or stamps. Regular size $1.50 delivered. Address W. B. Eddy & Co., Whitehall, N. Y.

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FIFTY-SIX HEAD

Of Brood Mares and Fillies by such sires as Whippleton (sire of Lillie Stanley 2:17½); Woodnut 2:16¼; Alcona (a sire and grandsire of 2:30 trotters); Grandissimo 2:27¾; Director 2:17 (sire of Direct 2:06); Naubuc (full brother to Thomas Jefferson 2:23); Secretary; Alcona Clay (brother to Alcona Jr. 2:24, sire of Silas Skinner 2:17); Cassius M. Clay Jr. 2:22; Noonday; Mountain Boy; Milton Medium 2:25½, and others

The greatest lot of mares in California to cross on Electioneer and Wilkes stallions.

THIS SALE WILL TAKE PLACE AT

THE NAPA FAIR GROUNDS, MARCH 30, RAIN OR SHINE.

In case of rain the sale will be conducted in the Society's large tent.

THIS SALE IS ABSOLUTE, NO RESERVE OR BY-BIDDING. It comprises all the trotting stock I own, jointly and separately, except stallions.

If you want mares to raise trotters or carriage horses; if you want fillies for the track, road or harem, don't fail to come to this sale.

WHIPPLETON never had an equal as a carriage horse sire in California; he was known as the POOR MAN'S HORSE; good size, solid color and great general qualities.

Send for Catalogue.

FRED W. LOEBER, Proprietor.

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Lye-peeling Peaches.

SAN BERNARDINO.

TO THE EDITOR:—Can you give me the names of persons in your part of the State who practice dipping peaches to take off the skin; and do you know whether it is a success financially? If you can give me their names please do so. T. A. MAGEE.

[The practice of lye-peeling of peaches has, we understand, been largely abandoned. Perhaps some reader who succeeds with the method will write to our correspondent on the subject.—ED.]

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NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY. Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2.00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front Street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.
Office, 111 Front Street, San Francisco, California.



OUR NEW

76 page, Illustrated Pamphlet on Rupture, issued Jan'y, 1892, will be mailed to any address, on receipt of 4c in stamps. Mention this paper.

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OFFICE OF THE GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892 to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.
FRANK McMULLEN, Secretary.

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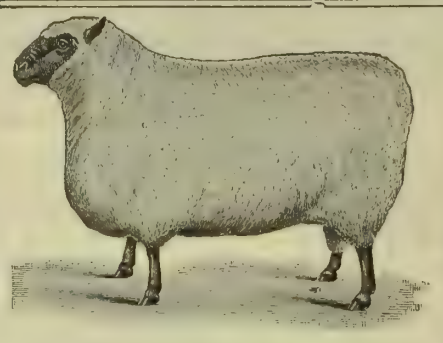
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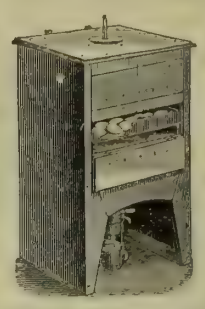
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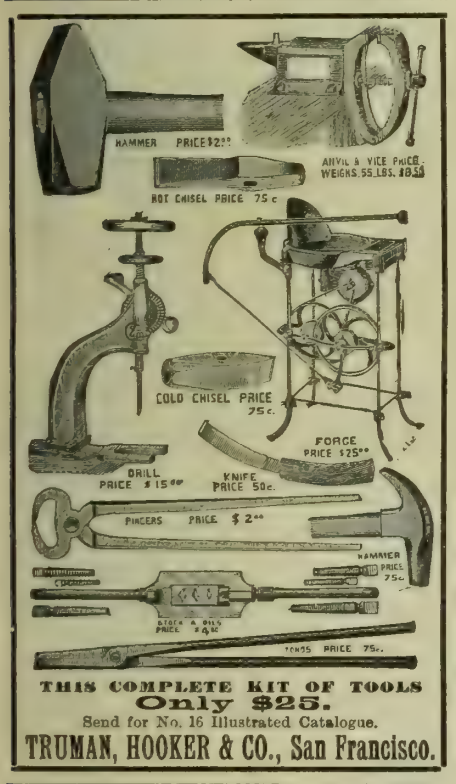
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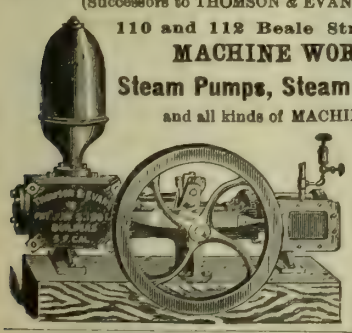
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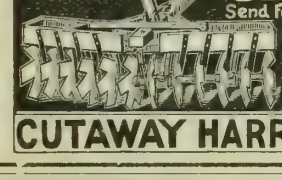
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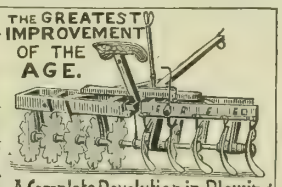
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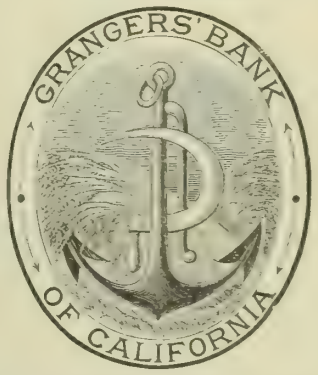
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, March 23, 1892.

The better feeling reported in last week's PRESS is not only continued, but appears to be more pronounced in all products outside of wheat. Prices are no better, but the market cleans up better. There is a growing impression that the season of 1892-93 will be one of, if not the most prosperous that has been enjoyed for many years. This opinion is emphasized in the fact that the various lumber camps have arranged to increase their cuts, so as to meet an expected enlarged demand for lumber, for improvement purposes. Mr. Filmore, general superintendent of the South Pacific Coast Railroad, says that his line will probably handle all of from two to three times more lumber in this year than they did in last year, and that the increased demand will come chiefly from the agricultural districts.

In the local market, money continues cheap.

Foreign Grain Review.

LONDON, March 21.—Mark Lane *Express* says: English Wheats are stronger. The average advance in London was 9d and in the provinces 6d. Foreign Wheats are exceedingly depressed by continued arrivals. The sales of California have been pressed at 38s 6d Flour is 6d lower. Corn is down 3d. Imports of corn since January aggregate 1,671,000 quarters, against 1,016,300 quarters for the corresponding time last year. Barley weak.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June	July.
Thursday	7s9 d	7s08 d	7s07½d	7s06½d	7s08 d
Friday	7s09 d	7s07 d	7s06½d	7s06 d	.....
Saturday	.....	7s07 d	7s07 d	7s05 d	.....
Monday	.....	7s08 d	7s07½d	7s06½d	7s05½d
Tuesday	7s09 d	7s07½d	7s07 d	7s06 d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	39s3d	38s6d	38s9d	Steady—Weather warm.
Friday	38s6d	38s3d	38s6d	Weaker.
Saturday	38s6d	38s3d	38s6d	Steady.
Monday	38s3d	38s d	38s6d	Easier—Weather colder.
Tuesday	38s d	38s d	38s d	Heavy—Cold and wet.

To-day's cablegram is as follows:

LIVERPOOL, March 23.—WHEAT—Easier. California spot lots, 7s 9½d; off coast, 38s; just shipped, 38s; nearly due, 38s; cargoes off coast, very slow; on passage, very dull; Mark Lane wheat, inactive; English country markets, mostly turn cheaper; French very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	163½	163½	160½	157½	157½
Friday	164	164	160½	157½	157⅝
Saturday	163½	163¾	160	156⅝	156⅝
Monday	162⅝	163½	159	156	156½
Tuesday	162½	161⅝	158½	155⅝	155⅝

The following is to-day's telegram:

NEW YORK, March 23.—WHEAT—95½c for May, 93½c for June, 93¾c for July, 92⅞c for August, and 91⅝c for September.

CHICAGO, March 23.—WHEAT—83¼c for May and 84c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	166⅞	165½	....	....	142½	143½
Friday	164½	163¾	....	....	1 43⅜	143⅜
Saturday	164½	163⅜	....	....	143⅜	143
Monday	164	163½	....	....	143½	143½
Tuesday	162½	161⅜	....	....	142½	142⅝

The following are to-day's recorded sales on Call:

Informal Session.—Buyer season—100 tons, $1.61½; 500, $1.62; 500, $1.62½; 1500, $1.62½ ₩ ctl. Regular Session,—Buyer season—500 tons, $1.62¼; 300, $1.61⅝; 600, $1.61½ ₩ ctl. Afternoon Session.—Buyer season—200 tons, $1,61; 800, $1.60⅝; 100, $1.61½; 700, $1.61¼. Seller 1892 - 100 tons, $1.42½ ₩ ctl.

BARLEY.

	Buyer Season. *Buyer Season. H.	L.	H.	L.	Seller 1892 H.	L.
Thursday	99	98½	....	....	....	...
Friday	98½	97½	....	....	....	....
Saturday	100	99½	....	....	....	....
Monday	99½	99	....	....	....	....
Tuesday	99	97⅝	88	88	....	....

*New crop.

The following are to-day's recorded sales on Call:

Regular Session.—Buyer season—100 tons, 98c; 100, 98½c; 200, 98¼c; 300, 98¾c; 300, 98½c ₩ ctl. Afternoon Session.—Buyer season—100 tons, 98½c; 200, 98¼c; 300, 98.c ₩ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, March 18.—*Bradstreet's:* Manufacturers continue to take wool quite freely and stocks are being rapidly reduced. Concessions have been made to induce manufacturers to take hold, and from the fact that they have bought so heavily when the goods market has been rather against them it is evident that they regarded present quotations as the bottom of the market. The mills, as a rule, are busy, and a large amount of wool is going into consumption. There has been more doing in fleeces, and about all of the choicest lots have been taken. In quarter and three-eighths blood wools there is a good steady demand. Delaine wools are selling slowly. A fair movement is noted in both Texas and California wools, but prices have been made to suit the views of buyers. It is too near the new clip for dealers to hold off for prices. Territory wools are more active; the supply of Montana, Utah and Wyoming wools has been greatly reduced within the last few weeks, but there are still ample stocks of Colorado wools. Australian wools, especially lots of light shrinkage and strong fiber, are in good demand and sell readily on a scoured basis from 67c to 73c.

Eastern Dried Fruit Market.

NEW YORK, March 21.—Unpeeled peaches are reduced to several carloads; sacks, 7@8c; peeled, 20c Prunes—Four sizes are freely offered at 7¼c; some grocery trade pays 8c for 60s and 70s, the fanciest now here, and 7½c for finest. Raisins—Buyers will pay 5@5½c for selected bags; other grades are neglected, though offered low. Apricots—Common to prime sacks range from 6½@7½c; boxes of Moorpark quality, 9c.

Miscellaneous.

NEW YORK, March 21.—Honey—Quiet and unchanged.

Lima beans—Spot is steady at $1.65@1.70 per bushel. Your reports of reduced acreage this year on account of recent unsatisfactory prices have been credited sufficiently to cause a speculative tone and some action here.

California mustard seed advanced during the week to 4¼c. It is not now as strong in price, as the ship San Joaquin has added to the supply.

Eastern Hop Markets.

Sales of hops continue unimportant. Malt spot business was for such grades as 20@22c would buy. The feeling among holders, however, is pretty strong as to the trend of the market ought to be favorable with the reappearance of the brewers, who can hardly stay away much longer. The stock of the State and Pacific in London is only 4300 bales. Exports for the week, 235 bales. The range of common to choice 91s is 20@25c; best Pacific is half a cent above State 80s, 13@18c; olds, 6@9c; sales, 300 at 6@7c. Option deals were almost blank, bidding and asking being wide apart.

General Remarks and Statistics.

Cereals.

The exports in bushels of breadstuffs from the United States, for the seven months ending January 31, 1892, compare as follows with the like time in 1890-91:

	1891-92.	1890-91.
Barley	*2,012,268	326,442
Corn	33,086,378	20,005,057
Oats	6,878,897	847,750
Oatmeal	†13,861,386	6,140,008
Rye	8,771,679	332,912
Wheat	111,145,278	27 826,993
Flour	‡8,489,679	6,317,925

*Chiefly from California. †In pounds. ‡Bbls.

The export value of the above aggregated as follows: In 1891-92, $193,549,034; in 1890-91, $67,634,073. This is the most remarkable gain within the history of the country.

In futures, trading on Call has been light in both wheat and barley. The absence of any degree of activity is accepted as indicating that the future of the markets is dependent largely on the weather abroad. So far, it is claimed that everything has favored the growing plant in Great Britain and on the Continent; but any change in this favorable condition will be met by renewed activity, with better prices for wheat futures, in which barley futures will sympathize.

Crop prospects in this State for all kinds of cereals are of the most favorable character. The only danger to be feared at this writing is that the plant will have too rank a growth in many sections, which will not only cause many fields to lodge, but will also cause a lessened yield of grain to the head. Up north, all advices point to a favorable season.

An iron vessel was taken the past week at 16s. 6d. spot to load wheat for U. K., H. A. or D. This is the lowest charter ever before reported at this port. The tonnage in port is large, while the list on the way begins to show signs of increasing. Vessels for new crop loading, it is said, are not obtainable under 30s. for U. K. f. o. b.

For wheat the local market continues to rule heavy, with a gradual settling in prices. The very low price ruling for silver enables English importers to supply their wants from India and other silver-using countries at low figures. Any advance in the price of silver will make itself soon felt in the wheat markets of the world. The extraordinary large available supply of wheat in the United States, combined with heavy shipments afloat, and also good growing weather abroad, are also against the wheat markets in this country and abroad.

The barley market has exhibited slightly more activity, but with no improvement in prices. The activity is due chiefly to a free demand for the more choice grades of bright brewing for shipment to England, where the supply of these grades is light. Low charters favor outward shipments.

Under lessened receipts and depleting stocks, oats are hardening. While quotations remain nominally unchanged, yet it is generally understood that a slight advance is obtainable for the better grades. Poor grades of oats continue to favor buyers.

The movements in corn are slow, yet the light stock causes a firm market.

Rye is fairly steady.

Feedstuff.

In ground feed, the market is lower for both bran and middlings, but steady for feed meal and ground barley. The demand for the latter is said to be exceptionally free, considering the improving pastures. Exports to the Hawaiian Islands are fairly free.

Straw is barely steady. Hay is said to be easy, yet the light available supplies and free feeding are against much shading in prices. The present outlook warrants the assertion that this year's crops will be quite heavy.

Fruit.

For the seven months ending with January 31, 1892, there was exported from the United States 17,710,335 lbs. of dried apples, against 2,392,281 lbs. during the like time in 1890-91. The export value of canned fruits compares as follows: 1891-92, $1,269,855, against $498,109 in 1890-91.

Apples are slow and easy for poor to good, but choice to fancy are firm. Receipts continue free for the season of the year.

Strawberries are coming in slightly freer. To-day's receipts were placed at from 25 to 35 cts. a basket.

Limes and lemons are essentially unchanged. The weather is against a free demand.

Oranges are cleaning up better. Receipts of choice to fancy continue light and fetch good prices. Poor continue slow.

Raisins are getting into better shape for sellers. This, of course, does not apply to poor grades. It now looks as if the season will go out with the market fairly well cleaned up of good to choice grades.

The market for dried fruits is in a fairly healthy condition. By this, it is not to be inferred that prices are higher, but that supplies are being worked off which will admit of new crop dried fruits coming on fairly hungry markets, both on this coast and at the East.

Live Stock.

The market is a shade easier for both bullocks and mutton sheep, under more selling offers and a falling off in consumption. Cheaper vegetables and the near approach of fruit season keep slaughterers from anticipating their wants. Hogs appear to be easing off, with feeders and stock quoted lower.

Vegetables.

Garden truck is coming in more freely, causing some shading in prices, although the large demand from up north keeps prices for asparagus and rhubarb from moving down fast as yet. Green peas are lower. The season is all of three weeks earlier than was that of 1891.

Onions continue weak. This is largely due to the poor keeping quality of those received, and also the advanced condition of the growing crop. Choice good keeping onions are fairly firm.

Sweet potatoes are scarce and high.

The potato market is weak, and easy for all kinds except choice Burbanks, from Oregon. The weather is against potatoes keeping long. New potatoes are coming in more freely, with quality showing a slight improvement.

This afternoon rhubarb sold at from 75 cts. to $1.25 per box, green peas 1¾ to 2¼ cts., and sweet peas 2½ to 3¼ cts. The market closed weak. New potatoes sold lower. Very choice sold at 2 cts. It now looks as if new potatoes will soon be a drug in the market.

Dairy Produce.

Butter is fairly steady, due to heavy shipments up north. The superior grade of this year's butter makes it attractive, and, therefore, causes it to force its way into the demand markets, which have been supplied by Eastern creameries. The cut-throat policy, inaugurated by a new institution to gain patronage, is not so pronounced—greatly to the relief of the trade, and to the benefit of dairymen.

Cheese is coming in more freely, and as available supplies are said to be large, dealers look for gradual shading prices; particularly when the demand from up north begins to slacken.

The receipts of eggs continue large, as does the demand. It is generally claimed that present prices will obtain until after Easter, when a lower range may set in.

Overland Produce Shipments.

The following is the official statement of Eastern overland shipments of California produce and the points from which they were forwarded during the month of February, 1892, via the Southern Pacific Co., and total shipments from Jan. 1, 1892, to March 1, 1892:

Produce, Tons.	San Francisco.	Oakland.	Sacramento.	San Jose.	Stockton.	Marysville.	Total.
Beans	470	.....	32	.....	10	.....	1303
Canned goods	417	24	186	157	27	121	2117
Fruit dried	376	.....	174	459	31	122	2467
Fruit citrus	.....	.....	.....	.....	.....	.....	869
Honey	16	.....	.....	.....	.....	.....	72
Hops	13	.....	38	.....	8	.....	232
Raisins	140	.....	61	7	452	5	1979
Vegetables	391	.....	.....	.....	10	.....	687
Wool grease	294	7	.....	.....	.....	.....	1253
Wool pulled	19	.....	30	.....	.....	.....	109
Wool scoured	107	.....	.....	.....	.....	.....	277

The shipments in February from Los Angeles were omitted, or else they are included in the shipments from other points.

Miscellaneous.

From reliable advices up to March 23, the following summary tonnage movement is compiled:

	On the way 1892.	1891.	In port 1892.	1891.
San Francisco	208,006	254,553	*†145,334	80,624
San Diego	17,522	10,905	3,084	.....
San Pedro	3,434	11,000	.....	.....
Oregon	22,773	23,904	24,432	21,874
Puget Sound	11,717	26,124	.....	
Totals	263,452	326,496	172,850	102,498

*Engaged for wheat, 1892, 23,46.; 1891, 74,624 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to March 1th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,488,210	8,989,850
Flour, bbls	743,436	787,310
Barley, ctls	786,338	208,535

Bags are strong at 7¼ @ 7½c.

Hens and roosters are weaker, but other poultry is firm, with geese wanted at an advance.

Beans are steadier, with a hardening tone reported.

Alfalfa is quoted at 1½ cts. This is the highest quotation for years. Short grass seed crops in England are said to have caused heavy shipments from the United States of both alfalfa and clover.

Nuts are easy, but not quoted lower.

Hops are essentially unchanged. For new, the contract price is quoted at 13 to 15 cts. as the range.

Wool is coming in quite freely, yet it is hardly safe to give quotations. Probably by next week we will be able to quote the market for 1892 wools.

Produce Receipts.

Receipts of produce at this port for 7 days ending March 22, '92, were as follows:

Flour, qr. sks	41,573	Bran, sks	5,969
Wheat, ctls	70,854	Buckwheat "	
Barley, "	52,62-	Middlings "	3,016
Rye, "	1,256	Chicory, bbls	265
Oats, "	.....	Hop, "	223
Corn, "	1,768	Wool, "	1,363
*Butter, "	1,12-	Hay, ton	2 306
do bxs	968	Straw, "	24
do bbls	.....	Wine, gals	154,685
do kgs	5	Brandy, "	11,400
do tubs	10	Raisins, bxs	270
do ½ bxs	55	Honey, cs	...
†Cheese, ctls	82c	Peanuts, sks	203
do bxs	121	Walnuts "	220
Eggs, doz	66,040	Almonds "	7
do "Eastern"	.	Mustard "	....
Beans, sks	6,537	Flax "	....
Potatoes, sks	12,605	Popcorn "	....
Onions, "	1,38-	Broom corn, bbls	371

*Overl'd, — ctls. †Overl'd, — ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90, to March 21, '91.	July 1, '91 to March 19, '92.
Flour, ½ sks	227,295	368,438
Wheat, ctls	1,149,277	1,185,022
Barley, "	26-,178	32,229
Oats, "	3 1,229	355,976
Wool, bales	5,917	5,978
Hops, "	392	431
Rye, sks	.....	3,352
Potatoes, sks	65,722	106,500

San Quentin Grain Bag Statistics.

W. E. Hale, Warden, State Prison, San Quentin, furnishes the following interesting statistics of the State Prison jute mill:

Replying to your request, I submit the following statement of the output of bags from the jute mill during 1891:

No. of bags on hand Jan. 1, 1891	1,021,800
" " " manufactured during the year	2.289,621
Total	3 311,421
No. of bags sold during the year	2,829,221
" " " remaining on hand Dec. 31, 1891	482,200
Probable output to end of coming season, say Aug. 30, 1892	1,500,000
Available for sale during the season	1,982,200

The prices of our bags during the past year ranged from 6½ to 7 cents.

T. T. Hooper.—In Memoriam.

Again has Alhambra Grange been called to mourn one of her number, one who was ripe in years of labor and of quiet thought. Three score years and ten is the allotted span, but when in the course of time almost another score is added, then ought the harvest to be ripe, and bend cheerfully as well as gratefully to the reaper Death, while brother and sister workers in the field should mourn not, but rather rejoice that an aged, full-rounded earth life is ended, and like unto the perfected sheaf is garnered and in kindness and mercy taken into our Divine Master's care, where is prepared a heavenly fitting for the withered, harvested and gathered sheaves of humanity.

Brother Thos. T. Hooper, once Master of Montezuma Grange, and Steward of State Grange, and, later, member of Alhambra Grange, No. 230, has gone to his long home. In the State Grange, as well as in the subordinate Grange, are vacant chairs, for in their councils 'twas his delight to be, but our loss is his gain. For this great change, his friends were prepared, for his feeble, tottering frame has long admonished us that the end was near.

To his daughter-in-law, grandchildren and adopted daughter, the Grange extends all sympathy and mourn with them in their bereavement, bidding them follow in his footsteps to the home of the faithful. Committee—MRS. M. B. LANDER, MRS. H. RAAP, JAMES KELLY.

Martinez, March 5, 1892.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 23, 1892.

BEANS AND PEAS.			
Bayo, ctl	1 80	@	2 05
Butter	2 40	@	2 80
Pea	2 50	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 20	@	2 45
Lima	1 60	@	2 00
Bl Peas, blkeye	1 30	@	1 50
Do green	1 30	@	1 50
Do Nlles	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	12½	@	20
Do good to choice	21	@	—
Do Giltedged	—	@	22
Do Creamery rolls	—	@	22
Do do Giltedge	—	@	22½
Eastern	15	@	—
CHEESE.			
Cal. choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	15
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	16	@	17
FEED.			
Bran, ton	15 50	@	16 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 00
Middlings	18 50	@	19 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7 50		
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oat	12 00	@	—
Wild Oats	11 00	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	93½	@	1 02½
Do Choice	1 03½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 12½	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 21½	@	1 26½
Yellow, large	1 23½	@	1 26½
Do small	1 23½	@	1 26½
Oats, milling	1 42½	@	—
Feed, Choice	1 38½	@	—
Do good	1 30	@	—
Do fair	1 22½	@	—
Surprise	1 50	@	—
Black Cal	1 10	@	1 40
Do Oregon	1 20	@	1 27½
Gray	1 20	@	—
Rye	1 60	@	—
Wheat, milling.			
Gilt edged	1 70	@	—
Do Choice	1 67½	@	—
Do fair to good	1 67½	@	—
Shipping, cho'ce	1 62½	@	—
Do good	1 60	@	—
Do fair	1 57½	@	—
Common	1 55	@	—
Sonora	1 55	@	1 67½
FLOUR			
Extra, City Mills	4 90	@	5 25
Do Country Mills	4 90	@	5 25
Superfine	3 00	@	3 45
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	2	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	90	@	—
Fair to Good	75	@	—
Cut	40	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	30	@	45
Do do Oregon	80	@	1 05
Do Humboldt	40	@	75
River Reds	25	@	40
New	1 00	@	2 00
Sweets	4 00	@	5 00
POULTRY			
Hens, doz	6 00	@	7 50
Roosters, old	6 00	@	7 00
Do young	8 00	@	10 00
Broilers, small	4 00	@	—
Do large	6 00	@	—
Fryers	6 50	@	—
Ducks	9 00	@	12 00
Geese, pair	2 50	@	3 00
Turkeys, Gob'r.	14	@	16
Turkeys, Hens	15	@	18
Do Dressed	16	@	21
Manhattan Egg Food ₩ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1891.			
Humb't & Men'cino	20	@	—
Sac'to valley	16	@	—
Free Mountain	19	@	—
S Joaquin valley	13	@	—
do mountain	15	@	—
Cala's'v & F'th'll	16	@	—
Oregon Eastern	1s	@	—
do valley	21	@	—
So'n Coast, def	11	@	—
So'n Coast, free	13½	@	—
FALL, 1891.			
San Joaquin	9	@	12
Mountain	10	@	15
Humb't & Men'cino	14	@	18
HONEY.			
White Comb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	7	@	8
APRICOTS.			
Sun-dried, unbl. com.	2½	@	4
Do do prime	5	@	5½
Do do choice	6	@	6½
Do bleached, prime	7	@	—
Do do choice	7½	@	—
Do do fancy	8½	@	9½
Evap. choice, in boxes	9½	@	10
Do fancy, do	10	@	10½
FIGS.			
Sun-dried, black	3	@	3½
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	2	@	4
Do unstemmed	1	@	2½
NECTARINES.			
Red, sun-dried	3½	@	5
Do Evap., in boxes	5	@	6
White, sun-dried	4	@	6
Do evaporated	6	@	7
PEACHES.			
Sun-dried, unpeeled, common, bleached	3½	@	—
Do do prime, do	5	@	—
Do do choice, do	6	@	—
Do do fancy	7	@	—
Evap, unpe'l'd, choice	7	@	—
Do do fancy	8	@	—
PEARS.			
Sun-dried, quarters	3	@	4½
Do sliced	4	@	5
Evap, sliced, in boxes	6	@	8
Do ring do	10½	@	—
PLUMS.			
Pitted, sun-dried	4½	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	2	@	2½
PRUNES.			
Cal. French, ungraded	5½	@	—
Do graded, 60 to 100	6	@	—
Do do 40 to 60	8	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₩ bx	$1 50	@	—
Do fancy, do	1 75	@	—
Layers, ₩ bx	1 25	@	—
Loose Muscatels, common, ₩ bx	1 00	@	—
Do choice, do	1 20	@	1 30
Do fancy, do	1 50	@	—
Unstem'ed Muscatels, in sacks, ₩ lb	4	@	5
Stemmed do do	5	@	5½
Seedless do do	6	@	—
Do do ₩ 20-lb bx	1 15	@	—
Sultanas, unbl, bxs	1 15	@	1 40
Do bleached, in bxs	1 30	@	1 60
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes			

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 23, 1892

Limes, Mex	4 00	@	5 00
Do Cal	60	@	75
Lemons, box	1 00	@	3 00
Do Sicily	5 50	@	6 50
Oranges, Seedlings	2 25	@	2 50
San Bernard'o	1 75	@	2 50
Riverside	1 25	@	2 00
Los Angeles			
Do Navels—			
San Bernard'o	3 00	@	4 50
Los Angeles	1 50	@	3 00
Riverside	3 00	@	4 50
Duarte	3 00	@	4 50
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Apples, box	75	@	—
Do choice	1 50	@	—
Do extra choice	2 00	@	2 50
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	8	@	12½
Do green	20	@	35
Turnips, ctl	50	@	—
Cabbage, 100 lbs	45	@	—
Garlic, lb	2	@	3
Squash, Mrft. tn.	3 00	@	6 00
Do Summer, lb	—	@	—
Tomatoes, box	50	@	1 50
Asparagus, box	1 00	@	—
Do choice to ex.	1 50	@	2 00
Peas, green, lb	2	@	4½
Rhubarb, box	8	@	1 25
String Beans	10	@	15
Cucumbers, doz	40	@	—

Live Stock.

BEEF.			
Stall fed	7	@	—
Grass fed, extra	7	@	—
First quality	6½	@	—
Second quality	6	@	—
Third quality	5½	@	—
Bulls and thin Cows	2½	@	3½
VEAL.			
Range, heavy	5½	@	6½
Do light	7	@	8
Dairy	7½	@	9
MUTTON.			
Wethers	10	@	10½
Ewes	9½	@	10
Do Spring	14	@	16
HOGS.			
Light, ₩ lb, cents	5	@	5½
Heavy	4½	@	5
Feeders	3½	@	4½
Stock Hogs	3½	@	3½

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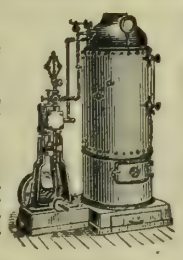
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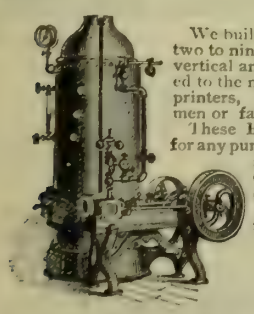
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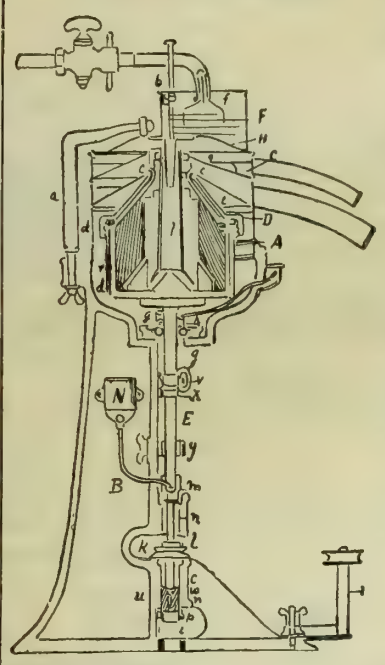
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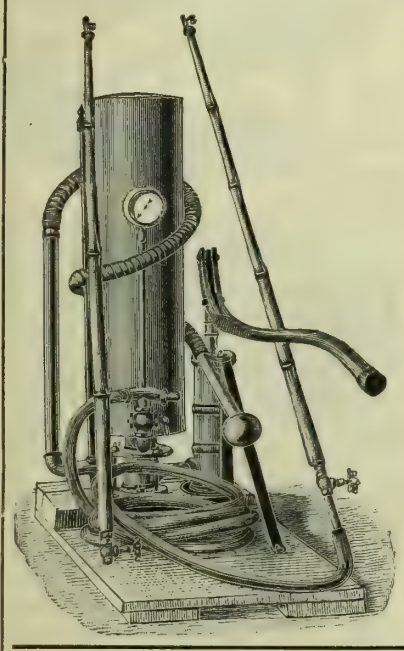
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Santa Clara Valley—West Side.

SAN JOSE, March 10, 1892.

TO THE EDITOR:—Can you make use of a few notes made on a ride from San Jose to the foothills on the west of this glorious valley?

As we pass O'Conner's Sanitarium and chapel we note their solid foundations and lines of beauty and realize what help, wealth can offer to the sick of body and soul; God bless our capitalists who use their wealth in his service.

Frank Shafter's drying and packing plant, wears an air of dreamy repose that suggests a young giant gathering vigor for the fast approaching days of activity. Fields of grain between San Jose and the western hills are not numerous, but what there are, are looking more than usually well for the season, yet all depends on the future rains for a paying harvest.

The orchards and vineyards are a surprise to even old orchardists. This is called the "off year" for apricots, but I see no signs of the "off" in the bloom or vigor of the trees. We are told that "we have the world for a market" for our prunes and other fruits; from the strength of the old and numbers of the new orchards it would seem that we could supply our market.

This side of the valley has a large proportion of warm loamy soil and many plows are now turning under a heavy growth of clover and other juicy plants; this seems a logical thing to do, and I know no other country where green manuring can be so easily practiced. Weeds or "thorns and thistles" treated in this way may be a great blessing rather than a curse, to the soil; they are one of the many curses that enlightened labor can change to blessings. Even heavy soils worked fine at the surface, to receive not only the first rains but the plant food ripened by the sun will often grow a crop of green manure well worth planning for.

Green manuring seems the only available remedy for many "soil impoverished" orchards. Our means of transportation and the high value of the land prevent the gathering of sufficient barnyard manure, and I expect the time will come when suitable seed will be sown (before the rains) in orchards for the express purpose of plowing it under for manure.

The orchardist's work may well be called a continuous experiment, and a notably successful one in this valley. The demand of our canneries and dryers for "the best" is showing in the large number of old trees that are grafted. In many cases the whole leaf-bearing top is taken off and a dozen or so of scions are inserted to furnish the leaf, or lungs of the tree.

Has the proportions of new or leaf-bearing wood, to the amount of root, as well as size and quality of fruit, been sufficiently experimented upon? I wish some of your readers who are close observers as well as active workers, would give us some of their experience in this matter.

CHAS. A WYMAN.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1; 10 mos., $2; 15 mos., $3 Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St. San Francisco.

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2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92

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☞ These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermotor. Where one goes others follow, and we "take the country."

Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

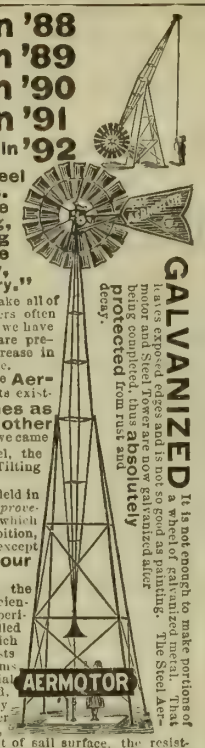
Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilting Tower?

1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

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(Patent applied for)

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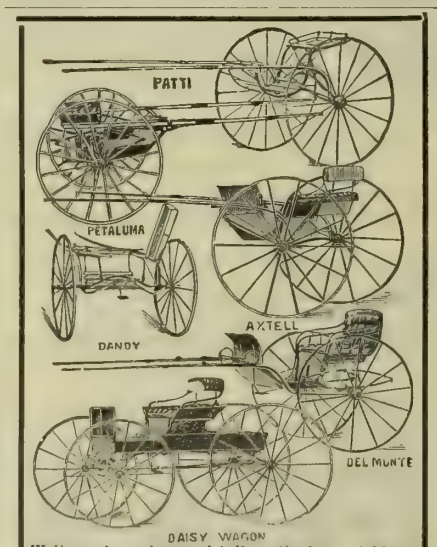
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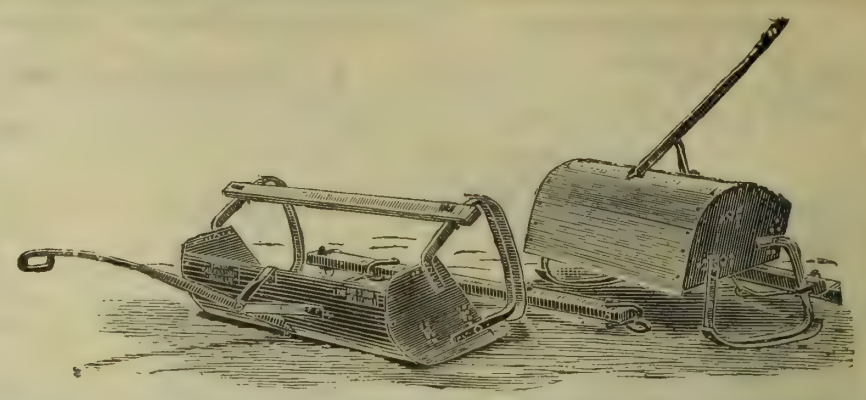
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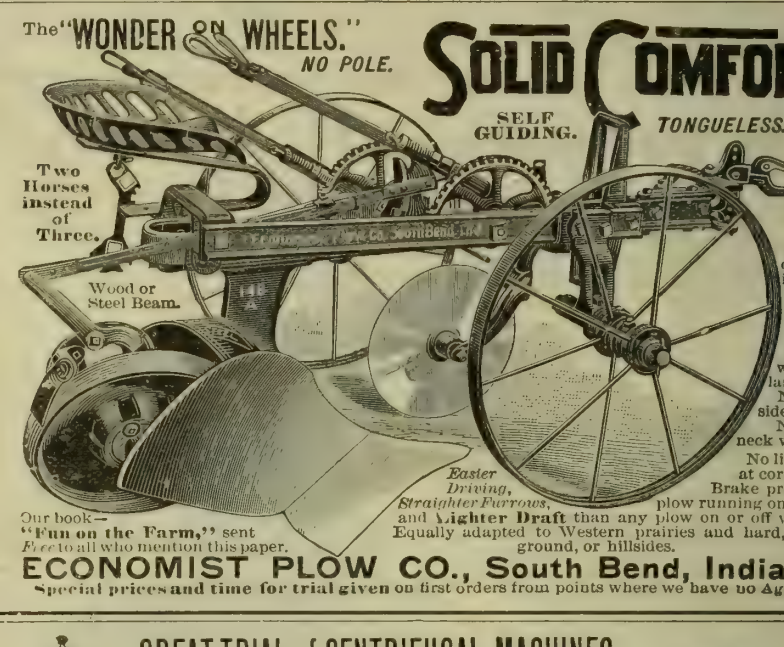
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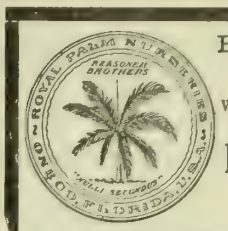
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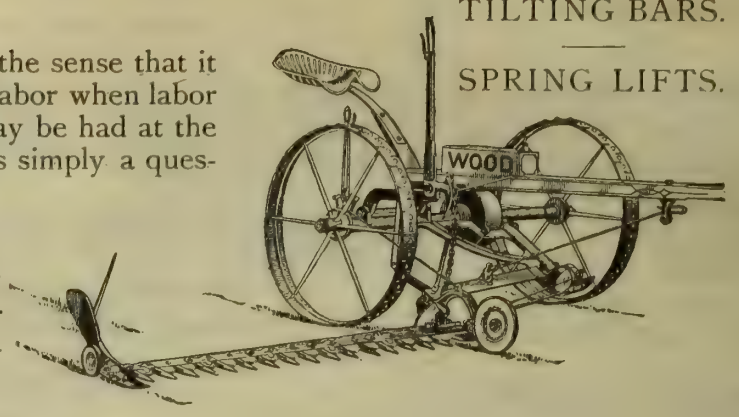
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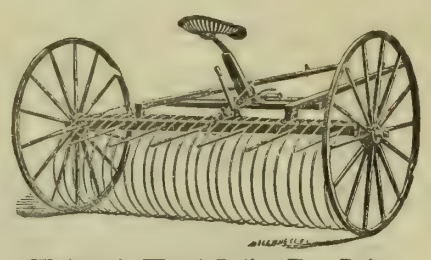
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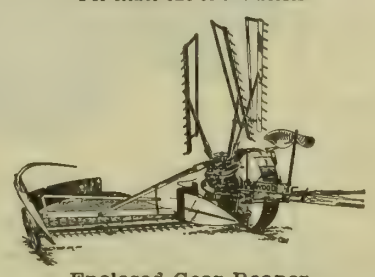


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For either one or two horses.



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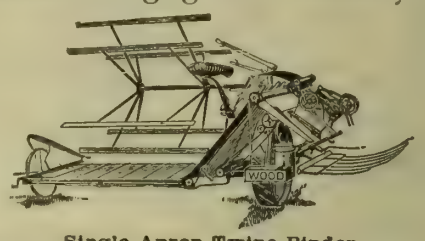
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H. C. SHAW PLOW WORKS.—Dear Sir: Your favor of the 22d, asking me how I liked the Triumph Spading Harrow I used on the "Oothout Vineyard and Orchard," received. In reply would say that I have used almost all the modern implements, but as a pulverizer and cultivator combined I never saw anything to equal them.

Yours truly, H. H. CLARKE,
Formerly Supt. and Manager of the "Oothout Orchard and Vineyard," Fresno, Cal.

FRESNO, Cal., Dec. 19, 1891.

H. C. SHAW PLOW WORKS.—Dear Sir: The "Morgan Spading Harrow" which I purchased last season I am well pleased with and I can recommend it as being a first class implement for orchard and vineyard work.

Yours truly, A. V. MORSE.

FRESNO, Cal., Dec. 10, 1891.

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Yours truly, GEO. C. ROEDING.
Manager for the Fancher Creek Nursery, Fresno, Cal.

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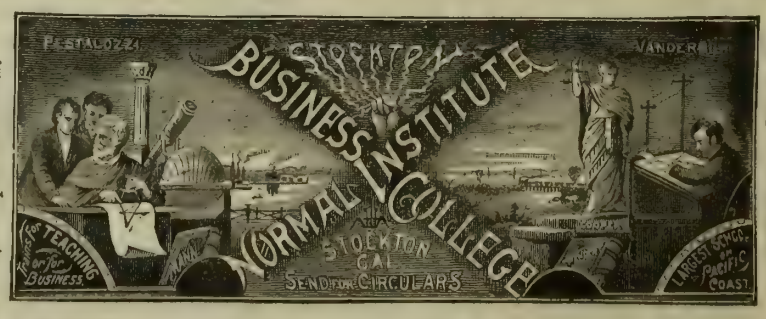
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PACIFIC RURAL PRESS

Vol. XLIII. No. 14. SAN FRANCISCO SATURDAY, APRIL 2, 1892. THE DEWEY PUBLISHING CO. Office, 22 Market St.

Artesian Wells.

We gave last week a picture of an artesian well which was allowed to flow fountain like in the midst of the reservoir in which its waters were stored. It is not always feasible or desirable to create such a reservoir—in fact it is customary to lead away the water without such storage. When, then, the planter has to deal with a well of great flow, and disposed to project its waters into the atmosphere, there comes a necessity to repress and divert the flow; indeed, as one may say, to harness the well down to strong quiet work devoid of display. The engravings on this page, which are made from photographs of wells in Kern county, show the various ways in which the flow from wells is repressed or diverted, or simply led away by gravity to lands on which the water is needed.

The upper left-hand corner of the composite plate shows a well handsomely equipped with a cement curb and a cap against which the water expends its upward force and quietly falls back and runs away into the ditch. The cement curb prevents the pond which exists around a well which is merely capped and allowed to gather in a hollow around the casing. Below this is a well of moderate flow, which is merely allowed to pour out of the top of the casing and make its pond below.

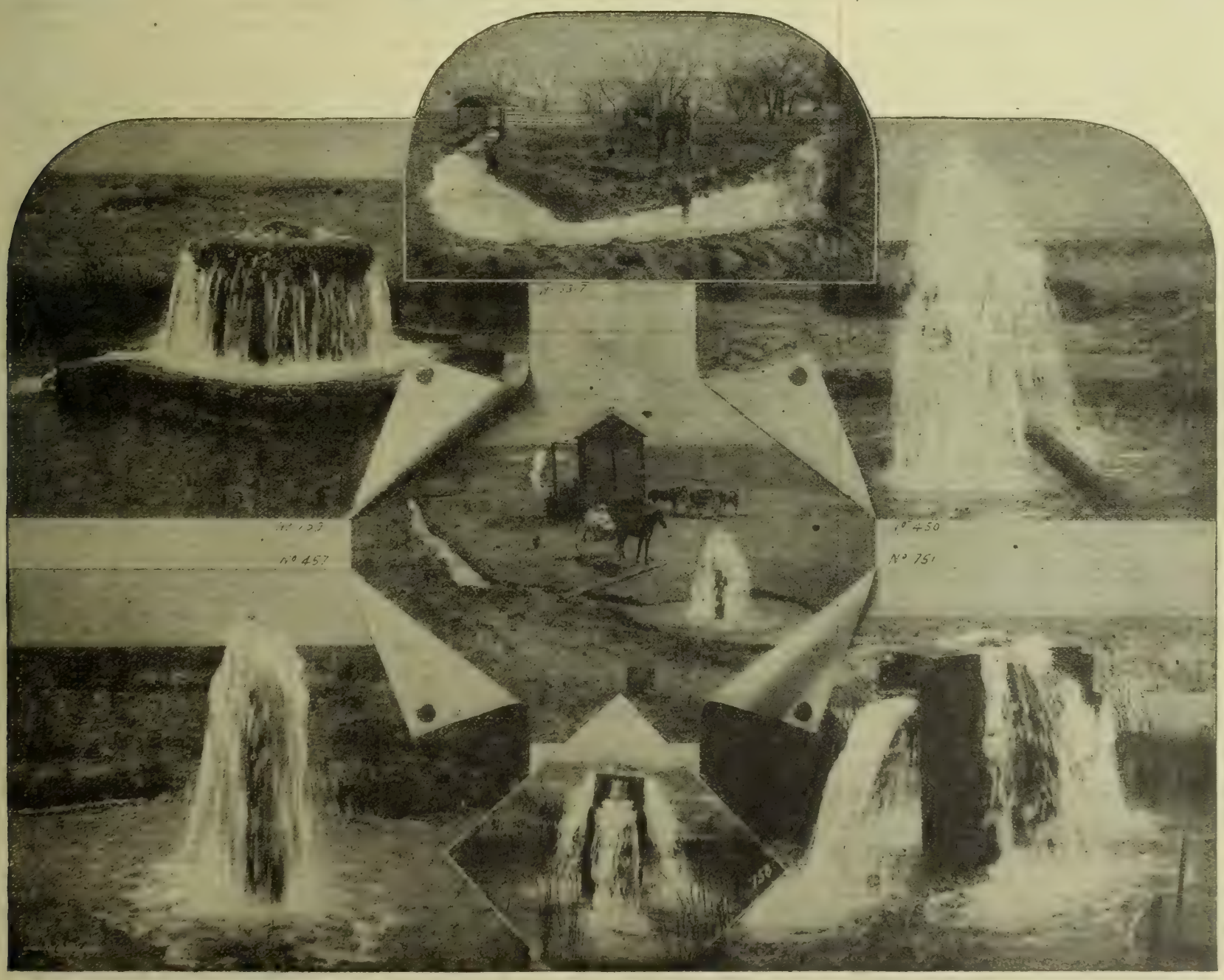
The upper central picture shows a large stream from a well flowing away in a ditch for distant use. Below it is a similar scene showing a longer ditch and a small cabin, which, at the time of the photographer's visit, was apparently the scene of a sort of a social reunion, for there are more people on the steps than could be possibly accommodated within, and the horses feeding from the wagon give additional indications of a friendly visit.

The three other sketches on the plate show arrangements for closing in wells with planks also, in the upper right hand corner a well fitted with a good valve, by which its flow may be reduced or stopped. The handling of an artesian well is much like handling of any other agricultural agency; it may be done with some style and neatness or it may be done rudely and carelessly. The water is just as wet in one case as another, and will in both cases make an acre fruitful or quench the thirst of a band of steers, as the owner desires. And yet one who likes to have everything around him neat and tidy and no slopping over, will see to it that his flowing well does not turn his place into a marsh or a malaria incubator.

There is another very important point which people are apt to forget. The following statement of it is condensed from a recent bulletin of the Colorado Experiment Station:

It is a rule, rather than an exception, throughout the artesian basins of this State to meet with wells whose pressure is decreasing. This is due either to too many wells or to defective construction. Indications point to the latter as the cause in the majority of cases. Many wells are improperly cased, and some not at all. Such methods of false economy may result in disaster in the future, not only to individual wells, but to the whole basin. This will be readily seen when one stops to consider the principles upon which artesian wells are based. The water is confined under great pressure between two impervious layers of earth. If the upper one is punctured, the water escapes to the one above or to the surface soil and wastes, thus reducing the pressure. This shows the necessity of thoroughly packing the casing at the impervious strata. The law should require every well sunk to be completely cased, and abandoned wells to be plugged.

The same state of affairs exists in this State. The more wells sunk into an artesian reservoir the less the flow from each. Long ago, this State enacted a law requiring the capping of wells when their flow was not being properly utilized. Not only was this to stop unnecessary draft upon valuable subterranean supplies, but to prevent excess of water in surface strata and the raising of the water level upon lower lands. We need wise use of water as of other natural resources.



VIEW OF KERN COUNTY ARTESIAN WELLS WITH ARRANGEMENTS FOR DIRECTING THEIR FLOW.

Agricultural Engineer

Good Roads—A Prime Necessity.

Oakland, March 22, 1892.

To the Editor:—In all the discussion of the question of adequate returns for his products, the farmer has generally overlooked one vital point. That is the facility of the first movement of the crop—how most readily to place it in the hands of the dealer or transportation company. Much has been said of the necessity for cheap railroad rates, and the protests against the present exorbitant tariff have been both earnest and well-founded.

When profoundly impressed by a more remote evil, are we not in danger of overlooking the one lying near our own doors? Is the farmer altogether without fault in the high cost of realizing upon his products? The presumption seems to have been that the cost of placing his fruit, hay or grain on board cars or boat is a legitimate part of the necessary expense of production, and as such, not worthy of close scrutiny. And what is the result? The almost invariable use of four horses where two ought to be ample and a largely enhanced cost for labor, and "wear and tear," as well as perpetual delay and disappointment as to time.

In point of fact, the work of "getting the crop to market" is a giant factor in running up the bill for incidentals and in standing in the way of quick returns, and this is the case by reason of the fact that, with few exceptions, we have no good roads in the country. Because the farmer performs the work himself, it has seemed to him of small moment whether the facilities be less or greater. True, he reasons in a general way upon the advantages of nearness to depot or landing, but does he sit down and figure up the actual difference in cost to his own pocket of hauling small loads over a dirt or mud "right of way"—which is all that most of our country roads are—and the easy traction with a big load over a macadamized or telfordized roadway?

The difference is so immense as to amount to poverty in place of wealth, distress in place of comfort, and continual worry instead of ease of mind. Give every ranchman today the difference between his present situation and the result I have hinted at, which is in effect a railroad at his own door, and you ensure him a desirable income at once.

The truth is that, outside cities, there are very few roads in this country. What are called roads are simply public rights of way, maintained in execrable condition, at an annual cost which is simply ruinous to rural communities. The net result is an apology for a road—a travesty upon the name highway. Wherever by chance a decent road exists in any section, the resultant growth and prosperity are marvelous. It is possible, or will be when our legislature permits counties to issue long-time bonds, for every county to construct good roads.

One county in New Jersey issued bonds for $300,000 to build only 30 miles of road, and the effect upon the real estate values has already justified the expenditure. A similar movement wisely inaugurated in every county would be equally fruitful of compensating results. Contra Costa county has commenced the work in the right way by listing and naming all her roads, preparatory to the application of the ten-block system of numbering country residences. It is to be hoped that other counties will adopt the "Contra Costa plan."

The State of California has a population of 1,200,000. The nine leading cities of the State number 500,000, showing that about one-half the population of the State is agricultural, or in small communities dependent thereon. The State debt is about $2 per capita. Four of the nine cities of the State, with a population of 390,000, have a bonded indebtedness of $3,100,000, or nearly $8 per capita.

The bulk of this expenditure has been to secure facilities not more essential to the urban population than are good roads to the suburban. Indeed, the actual wealth of the State is in its productions—the commodities to be moved, and ease and economy in handling these is a primal necessity.

The assessed valuation of the property of the State has very nearly doubled in the last 11 years, and there is every reason to believe that the ratio of improvement will not be much less in the future. At least, our ability in the coming years to meet obligations incurred for necessary improvements will be ample, and increasing with each year.

An approximate estimate of the weight of the leading products of the State shows that the farmers have to cart to market, or to cars or boat, each year, not less than eight million tons, or an average of 50 tons to each family. The average distance this load has to be hauled, I leave for the reader to estimate, also the weight of all the farmer consumes at home, the lumber he uses, etc.

The cost of fences has been estimated at the East as equivalent to the cost of buildings. This tax the people of California are seeking to escape. But they are following the old, not beaten track, but muddy net of the Eastern States in the slip-shod method of road-making and repairing. What is needed is a sweeping revolution in the way of handling roads. The best ability should be engaged, and all market roads be reconstructed upon the basis of a permanent roadway, all repairs to be made under competent superintendence and paid for in cash.

Next, the wagon tires should be broadened in proportion to the load to be carried, and the absurd plan of front and hind wheels tracking be abandoned. Mark the difference between a 2 or 2½ inch tire, both wheels running in the same narrow groove, and a 4 to 6 inch tire with a tread for both wheels of 8 to 12 inches! The one is necessarily destructive, the other essentially preservative, and the same team will handle 25 per cent heavier load with equal ease.

Let me close as I began, and suggest as a suitable theme for every Grange—How to make and keep good roads—and thus lessen this first and heaviest burden, the cost of getting our crops to market. C. M. Plumb.

Meteorological.

Pacific Storms.

San Francisco, March 19, 1892.

To the Editor:—The natural trend of storms advancing toward the Pacific Coast from the ocean is eastward and north of Washington. The territory north of Washington and Idaho shows by its denuded aspect that the fierce gales and rains to which the middle and southern coasts are but rarely subjected here have full sway. The excessive precipitation on the extreme upper coast of Washington, caused by the counter-currents of warm and cold air and the extreme wind velocities at the most northwest station of the Weather Bureau (Tatoosh Island) which sometimes blow at a velocity of 100 and more miles per hour, are a proof of the violence with which storms strike that coast. Such storms, if they were to strike the middle coast with any degree of frequency, would rapidly depopulate that district.

A storm advancing from the ocean and not hampered by mountain ranges, sweeps eastward; but meeting air currents with different temperatures as the land is approached, the deposition of moisture begins. The conditions over the land at such a time, whether there is a wave of high air pressure banked up over the Northwest territory, determines the period of the check in its eastward career. If the barometric conditions are favorable, *i. e.*, if the barometer is comparatively low over Montana, Idaho and over the Northwest, there is but little delay; but if the barometer is high over these districts, such fact, with the high lands to be traversed, oftentimes delays the storm on the upper coast, where its motion continues until either a falling pressure to the eastward permits, or a wave of air from the westward, forces it over its eastern path with greatly diminished energy, or it may move southward along the coast and rebound from here to there until its energy is wasted or finally find an eastward exit over the upper country, or be lost or filled up in the southern country.

A storm striking Washington, Oregon or Northern California differs decidedly in its effects on the weather on the coast, for with such a depression there is always a tendency for the winds to go to the southward, which direction, in the majority of cases, gives rains to California; and if the storm is decided in its character, it may cross to the southeastward and join the general low air pressure that hangs over Southern Nevada and Southeastern California, where it will remain until it is filled up by the winds from some wave of air that sweeps toward the interior.

In but very few cases do storms cross the Rockies between the British line and Mexico, and when they do cross it is with such diminished energy that unless reinforced by favorable conditions east of the Rockies, they retain but a remnant of the force with which they affected the Pacific country.

Storm frequency is variable, but a general average will place them at one in every five or six days, and when so-called weather prophets speak of a storm that is expected in a certain region between certain dates, ranging from four to six days, it is known that such "prophets" have just sufficient knowledge of meteorological affairs to forecast according to nature. That the severity of storms can be determined in advance is out of the question. There is a kind of a general rule that a very low pressure of air is followed by a comparatively high pressure, but either of such low or high pressures may be formed by merging of two storms or of two high areas.

There are no well-defined laws governing the movement of storms on the Pacific Slope. East of the rockies storms move from west to east with remarkable regularity, but west of the Rockies it is a question from the moment that the barometer begins falling on the upper Washington coast to the time of the disappearance of the storm as to what may result. At times the air pressure will begin to fall in the western portions of Washington and Oregon, with every indication of a storm that will sweep California, or at least give general rains. In less than 12 hours after such conditions have been noted, there will be entirely dissimilar conditions existing. Situated on the coast as we are, there are but few rules applicable to storm movements, and such few are embodied in the following:

A rising air pressure over the southern country and a falling over the upper country, indicates southerly wind and rain.

A rapidly falling pressure along the upper coast and a general slight fall southward to San Francisco will give a south to southeast wind movement and probable rains, even though the interior country (Idaho, Utah, Western Nevada and Northern Arizona) has fair weather with a high air pressure.

A high air pressure advancing from the ocean toward the California coast, south of San Francisco, will give rains to the upper country, and very likely to the Southern California coast.

A high air pressure advancing toward Northern California or Oregon and Washington, and settling over the upper country, will give fair weather with rising temperatures.

Fair weather signs during the winter season on the Pacific Slope are foretold by a generally high barometer over Utah, Idaho and the contiguous country, and with a lower pressure over Southern California and Arizona. Should a high pressure show an inclination to move southward and then westward to reverse the conditions (giving high pressure over the southern country and a low pressure over the upper country), general rains would result, since all winds would move in rain-bearing directions.

A fact worthy of remembrance to students of the weather charts of the Weather Bureau, is that when the isobars, or lines connecting places having an equal air pressure, are drawn from west to east, and the highest barometer readings are in the south, rains invariably follow, since the general air movement would then be from the southward.

Reverse the positions of the highest and lowest pressure, having the highest over the upper country and the lowest over the southern country, or if the isobars run longitudinal, fair weather is the rule.

Our cool or cold waves are very frequent, but when we do have them they result from an overflowing atmosphere from a great bank of air overhanging the Rocky mountain region, or immediately east, that is held in check by untoward circumstances from pursuing its usual eastward path, or it may be that a wave of cold air that is advancing southeastward from the British country splits on the main chain of the Rockies and a portion of such wave swoops over the eastern portions of Washington and Oregon, Idaho, Nevada, Utah, and probably Northern Arizona, before it is sufficiently warmed to lose its original frigidity and assimilate with our otherwise mild temperature. The greater the portion of the cold wave of the air that passes to the westward of the Rockies the greater the area that it will spread over. Waves of air advancing from the ocean toward the coast are tempered by contact with the surface water of the ocean, and when they strike the land north of Central California are forerunners of warm waves, since in such cases they are accompanied by cloudless conditions; north to west winds rule in California and the sun heat is the greater in consequence of no cloudiness intervening.

DEFINITIONS OF TERMS USED IN FORECASTS.

"Rain, general rain, scattering rains, local rains," etc., indicate that .01 inch or more rain will fall during the period for which rains have been forecasted.

"Fair, generally fair," etc., indicates that no appreciable rain will fall, but such terms do not indicate that there will be no cloudiness or fog. A day may be either cloudy or foggy and yet be fair, in the sense that the term is used by the Weather Bureau.

"Clearing weather" indicates that rain may fall, but will be followed by fair weather.

"Slight temperature changes, stationary temperature," or absence of a temperature forecast, indicates that there will be less than a difference of six degrees from the maximum or minimum temperature of the observation on which the forecast was based. If the P. M. forecasts are used, the difference applies to the maximum temperature. If the A. M. is used, it applies to the minimum temperature. "Warmer, slightly warmer," etc., indicates that the temperature will be one or more degrees higher than at the time of observation, and cooler, colder, falling temperature, etc., indicates that the temperature will be one or more degrees lower. Robert E. Kerkam,

Chief of Pacific Coast Division,
U. S. Department of Agr. Weather Bureau.

The Stable.

Educating the Horse.

The horse is an intelligent animal and is capable of being educated to a considerable degree. In fact, he must necessarily be educated by the treatment that he receives, although the education may not be that which would be best for him, and may have been of such a kind as to have spoiled him. Much of the horse's usefulness and value depend upon whether he has been properly educated. If he has been well educated and properly trained, he will be trusty, kind and useful. If, on the other hand, he has been badly educated and spoiled in the "breaking," he will be untrusty, vicious and endanger the life of any one who has anything to do with him.

Educating is all-important for an animal like the horse, and should be properly conducted. It should be begun early in life and carefully conducted all the way along. He should be made to regard man as his friend, and not as his enemy, as he too often has good reason to regard him. Abusive treatment is never called for and should never be tolerated. Abuse stops all good education for the time. The horse when enraged by blows and kicks is not in condition to learn anything. He is in too great excitment to understand what is wanted of him. Yet many managers of horses seem to act as though they thought they could beat something into their horse's understanding—in fact, appear to think, judging from their actions, that everything useful had to be beaten into the horse, in order to teach him anything. To such persons the lash seems to be the ever ready means of opening the understanding of the horse, and of showing him what is required of him. If the horse sees anything that he is afraid of, the whip is applied to make him understand that he is to go along and not be afraid. Does it make him so understand it, or does he associate the frightful object with the whipping received? If the latter, he will be more afraid of the some object next time, because he will expect the whipping to came with it, and it generally does come. The result is that instead of becoming accustomed to such objects, and ceasing to be afraid, he is really more afraid of them, and becomes what is called a "skittish" horse. Now if, instead of whipping the horse when he is afraid of an object he be given time to look at it, approach it carefully and smell of it, so as to be assured that it is really harmless, he will cease to fear it, and the next time he sees it will not be afraid. He has been educated so far as to know that the object he supposed was frightful, is harmless. The same remarks will apply to many other instances where a horse is abused, greatly to his injury. Kindness and gentleness should characterize the process of training and educating the horse.

The education of our horses, even when it is otherwise unobjectionable, is generally defective in regard to a few things which it is highly important that a horse should be well taught. Every horse should be taught to stop at the word "whoa," and stop instantly, right in his tracks. The word should only be used when it is intended to stop the horse, and not, as oftentimes, when it merely desires to steady him. By a little practice, any horse can be taught to stop at the word "whoa," and it will be well worth the trouble to any horse owner to teach this thing thoroughly. If thoroughly taught, it may be the means of saving whoever should be the driver from severe injury or even death, perhaps, sometimes, in case of accident. In case of accident, a horse which will stop at once when the word "whoa" is pronounced, is worth more than two or three horses which would start and run under like circumstances. So important a matter as this should never be neglected in any horse's education.

Another important matter for a horse to learn is not to be frightened by the pressure of the carriage from behind in case a hold-back breaks and lets the carriage upon him in going down hill. Probably seven-eighths of the horses in use would be frightened under such circumstances and run, yet they could be easily taught to stop and hold the load even under such circumstances. Every horse should be trained to do this. In

backing the horse into the shafts, let him look back gently till the whiffletree presses against his legs. Then, when he has become accustomed to this sensation, let some one take him by the bits, and you go behind and gently press the wagon against him without any holdbacks hitched to keep the wagon off. Get the horse to resist the pressure, and that is what you want. Soon he will hold the whole weight of the carriage against him, even going down hill. He should learn that the carriage pressing against him from behind will not push him, and then he will not be frightened. After he has learned this, he will not be frightened nor run in case a strap or an iron should break in going down hill, and let the carriage on to him. This bit of education will save a runaway and a smashup.

Any horse which has been educated to stop promptly at the word "whoa," and not to be frightened by the carriage coming upon him from behind, is worth a third more to any one than he would be without this training, yet comparatively few of the horses are taught these things, although it requires only a little time and patience to do it. Let us demand a better education for our horses.—H. Reynolds, M. D., in Mass. Ploughman.

The Stock Yard.

Domestic Live Stock and Its Relation to General Farming.

[Read by D. C. Stewart at Forest Grove, Oregon, Farmers' Institute.]

As much as in any other profession, farmers have need to be thinkers as well as to be workers. Many questions looking to the success of our calling offer themselves for consideration. We must solve these questions largely for ourselves.

Scientific advancement in agriculture has done much to assist us, and we may safely expect it to do much more in the future, but we have much to do, each for ourselves, that we may make intelligent and profitable application of the many principles given to us by the effort of others. Any question that appears to involve the maintaining of the original fertility of our soil, can but be of the greatest importance to every farmer.

We have been favored in the possession of a soil made by nature rich in the elements that contribute to the growing of a great variety of the most generally required agricultural productions of the earth, and that are demanded for the maintenance of its vast and rapidly increasing population.

The climatic conditions also are such as insure to us the greatest possible resistance to the necessary wear of our soil, arising from the constant use we are accustomed to make of it. Notwithstanding these natural advantages of soil and climate, that may as yet give a comparative feeling of security against future trouble, we can but know that a continuance of our present system of farming must soon begin to impair the present richness of our soil. We of course all know that when we have taken from our fields a crop of whatever kind, we have taken up and carried away therefrom a certain portion of the fertility of the soil. This makes a steady drain that must sooner or later impair its productiveness, and a drain for which nature has only in part provided a remedy. These conditions, too long continued, must in time seriously deplete the richness of the soil, and finally must quite ruin it for agricultural use. Already can we begin to see that our fields are many of them yielding more or less to the yearly draft made upon them. If all conditions of season are favorable, we may yet feel assured of a good crop. But recently it has been stated that certain land in this valley had been farmed to grain for 50 consecutive years without fertilizing in any way, and without perceptible wear; but this is undoubtedly an exceptional piece of land and cannot, I think, be safely considered as illustrating the durability of our land in a general way. All experience in all time has taught that whatever is grown and taken from the soil takes with it some portion of the fertility, and argument is unnecessary in this line. Something should be returned to the soil to replace what has been taken away, and the sooner we begin in this line the less difficulty will be had in the future. Some one has truly said that a worn-out farm is the worst possible inheritance that we can leave to our children. In older settled countries than our own the same conditions have existed, with perhaps in most cases but one difference, viz., that the farmers have had much less fertile soil to begin with and hence much sooner than we realized, the necessity of some means looking to the arrest of the gradual but sure wear of the soil.

To fully realize the great importance of this question, we may with profit look to the experience of farmers in the earlier settled portions of our own country. There we find farms that were once entirely worn out by the same conditions, too long continued, that exist with us to-day. And now we find these farms again producing good returns in the various agricultural lines and yet being yearly improved. It has required long years of persistent toil, and in most cases very material expense, to bring about this improved condition. In view of these facts, as related to us in the experience of others, would it not be well for us to begin in time to save and retain the original quality of our land, rather than to continue as we are now doing, until finally compelled to reclaim our worn-out land the same as they have done? Intelligent action is needed; without intelligent consideration none of the different requirements of life are successfully met. We should be able to increase the fertility of our soil and not lessen it. I believe it possible that every farm in this great valley might be annually increased in fertility. And this can best be attained by the keeping of domestic live stock in connection with, but not to the supplanting of, our general farming. Some means must be devised to return to the soil what has been taken away, as we have said. Commercial fertilizers may answer a good purpose in some degree, but are not in a general way well adapted to use in general farming. The expense and difficulty in procuring them would, with us, prevent any general use in our more extensive lines of agriculture. But, as said already, we have a remedy within our reach in the rearing and keeping of domestic live stock. No farmer is entirely ignorant of the value of barnyard manure when judiciously mixed with our soil, and the sooner we all learn to estimate its full and true value, the better for us and for our farms. Whenever we are willing to give credit to the barnyard, and compost that which should belong to it, then, and perhaps not until then, will we be able to figure in our farm accounts a profit in keeping of live stock on the farm.

We are wonted to say, that it does not pay to raise cattle or hogs or sheep, or to produce milk, butter or cheese at usually prevailing prices; but whether this be so or not, can we, I ask you, in view of the facts stated, afford to run our farms without them. The question for our consideration, in this connection, should not be as to whether or not the amount received on sale of an animal, or what may be produced from the sale of the same when kept for use on the farm, will serve to strike a profitable balance in our favor, but we should also carefully consider the reasonable estimated value to the farm arising from the rearing and keeping of the same. We agree, then, that in order to maintain the fertility of our farms, we must have manure. The keeping of live stock will be valuable to us and our farms in such degree as we can add to the productiveness of the soil, and this we must principally determine of our own experience. The question as to what particular class of animals may be made to effect the most for us in this line must also be decided, each for ourselves. Location and other conditions are necessary to be considered. Largely, I think, however, we should look to the dairy cow as the best means to the desired end. There are some good reasons, as I believe, why this should be so. The profits that may be directly derived from the production of milk, may be made an important item in meeting necessary expense of the farm. The degree of success in this must, of course, depend largely on the means, favorable or otherwise, we adopt in our management. We should have cows of the best quality, well supplied at all times with good, comfortable quarters, and a plentiful supply of feed or pasture, the best conveniences and appliances for handling, with a view always to economy and saving of both feed and labor. Add to these conditions a study of how to produce the very best article for market, to the end of procuring the best prices, and satisfactory results will be attained.

Cows on the farm are made to pay in many localities less favorably adapted than our own, and the better success may be largely accredited to a more economical and intelligent management on the part of the farmer.

The necessary conditions that will insure the successful management of dairy cattle are best calculated to maintain the fertility of the farm. More feed is necessarily consumed, and this must be of the best quality; and this implies more manure for the farm, and that of the best quality. It should be remembered that if all the stronger and richer productions are carried from the farm, and only the straw and unsalable portion is kept to be fed, we have retained but comparatively little of value to our land.

These, and many similar considerations, are of the greatest importance in the consideration of this subject.

The Vineyard.

Economy in Tying Vines.

It is surprising how much of the best material for this purpose is wasted annually which can be had for the asking and gathering. The leaves of the Druna Draco, or Dragon tree, erroneously called palm by some, are much better, if soaked in hot water for a few hours, than bale rope or grape twine, now generally used and for which thousands of dollars are spent annually by our vintners. The tree sheds its leaves annually, or rather, most of the old leaves remain on the branches dry, while new leaves take their place, and the dry leaves dropping continually are anything but ornamental in the garden or lawn, while the tree itself, if kept clean and tidy, is a beautiful and stately object anywhere. It can easily be propagated by offsets from the base of the tree, and every vintner should plant some of them. Even now, there are a great many scattered about in our lawns and gardens, and the owners are generally very glad to get rid of the dead leaves. I pulled enough from one large tree this winter to furnish all the material we needed in our vineyard, for each leaf torn into strips furnishes ties for several vines, and is stronger, more pliable and easier to tie than grape twine. All the drunas and yuccas, as well as the *Phormium tenax*, or New Zealand flax, furnish good material, and are among the most beautiful objects on a lawn. Now is the time to plant them, and though the tying in vineyards is done for this season, they will make good material to tie up grafts and for other purposes.

Another very cheap material is No. 16 annealed wire, cut into the proper length, to go around the cane and stake, and both ends simply hooked into each other by a twist of the finger and thumb which is done very quickly, more so than tying twine. It holds the vine very firmly, and in pruning in winter we simply unhook it, prune the vine and then use it again, pruning and tying at the same time. In our vineyard there is wire still which has been used for six years in succession. We thus save both time and money, quite an object when both are so scarce.

The golden willow (*Salix Nura*) is used very extensively in Germany and France, and is also very ornamental and easily grown from cuttings in some moist place. There is a willow growing wild along many of our creeks and streams which is just as tough and pliable, and is at the same time a beautiful weeping tree. I mean the silver willow (*Salix Glauca*), which is an object of beauty anywhere, and will furnish an abundance of good tying material in its long, slender branches.—George Husmann in St. Helena Star.

Horticulture.

Figs at the Culture Station.—Tulare *Register:* Persons interested in fig culture may get some interesting information at the Culture Station now. There were something over 40 varieties growing last fall, and these have been variously affected by the winter's frosts. Some have been killed at the top, some have been touched at the tips of branches only, while others are as sound as they were last September. These trees grow under about the conditions they would in the average orchard. They are away from buildings, other trees of size, and outside the smoke of town. Hence, frost had no opportunity to do its best, or its worst. The trees were irrigated but once, early in the summer, with a bucket. There are no ditches near, consequently there was no surplus moisture to make the trees unduly sappy late in the season. The various Smyrnas have proved most hardy. Other kinds, not generally grown here, came through in good condition. The White Adriatic suffered most. One tree three years old that had made a fine growth was nipped back to the trunk. These facts are good to know before extensive investment is made, loss thereby being avoided. This past winter has been unusual for continuous frosts, and that is why trees failed this year that passed through other seasons. It is just as easy and as cheap to plant any one of a dozen or more good varieties known to be reliable, as to experiment with doubtful kinds.

How to Plant Orange Trees.—J. Curtis, of Palermo, in Porterville *Enterprise*: First, have your land in the finest condition possible, all grading done, as to do this afterward is all wrong; second, don't dig your holes till you are ready to plant your trees within 15 minutes afterward, unless it is cloudy weather. Don't expose the roots to the sun or north wind a moment, as this is death to the small fibrous roots, and often to the tree. After the hole is dug the surface earth should be put in the bottom and center of the hole, filling it up nearly to within six inches of the top, then make a small hole in the center for the tap root, letting the laterals spread out as they were in the nursery, tamp the earth tight around the tap roots, then put some fine earth on top of the laterals, also tamp or press this down firm, then your trees are ready for some water, after which some dry earth on top of that. Your trees thus planted will grow. I would advise all those who plant orange trees to have a vessel—a tub is a good thing—to carry the trees out to plant, half full of water, and wash the puddle off the roots, as most trees are puddled in nurseries before shipping. I prefer this method to balling them, as you save more roots, as most nurserymen only sell their trees and not their soil at the same time, and the freight counts a little.

Poultry Yard.

Eggs and How to Get Them.

Lodi, San Joaquin Co.

To the Editor:—One would say, naturally enough, that to get eggs one should get good hens and take good care of them, which would be right; but taking good care of them is a very comprehensive phrase and means more than just giving them plenty of food and water. It means watching them closely and studying their requirements.

Climate and location being favorable and the range new, fowls will do well with comparatively little care, for they find what they want for themselves; that is, in the way of gravel, animal food, grass and grass seeds, and things of that nature, and their range being fresh, or not having been used for fowls for some years at least, and consequently free from impurities caused by the constant or continued occupation by fowls until the soil has become more or less impregnated with the odor from their droppings, and has become also exhausted of worms, bugs, gravel and things of that nature that they find for themselves on a suitable range. In saying this, I am considering the keeping of fowls on unlimited range and not in the confinement of yards, although the same conditions must obtain in greater or less degree also in the latter case. The frequent turning over of the soil sets free much of the impurity, but not all, and after a year or two of this it ceases to be effective. The same soil having been turned and returned, becomes so thoroughly impregnated and to such a depth that nothing will do then but moving them to new yards or new range, or at least where fowls have not been kept for several seasons, and which has meanwhile been cultivated and used for crops, and so purified and restored to freshness and suitable conditions.

So much for their helping themselves, and in a more satisfactory way really than in any other manner, I think, for I have observed that, as a rule, fowls kept in this manner are brighter, brisker and more healthy-looking than fowls which are dependent on their attendants for the supply of their natural requirements, and are consequently more productive. This, perhaps, leads up to the consideration of the much discussed inquiry "whether hens lay more in confinement or on open range."

As it has been so much discussed, and no satisfactory solution of the problem been arrived at, I will simply say, without further showing, that my hens have given me more eggs on free range, when we have been sufficiently active and careful in looking for the eggs at noon and at night, than when yarded and supplied with everything. True, they get any amount of fruit, both green and ripe, principally grapes, figs, apricots and berries, as well as watermelons, any or all of which I had heretofore been led to believe as altogether destructive to any hope or possibility of eggs.

The principal requirements to be observed, in my opinion, in order to get good supply of good eggs, is to keep your fowls in fine condition by the use of a requisite supply of good, rich, clean food in proper variety, and clean, fresh, pure water, together with a proper care for the cleanly, well ventilated condition of their houses or roosting places. Hens that are not properly cared for in these respects, and which have to "make their living" as best they can, with no very good show for doing it, cannot be expected to either lay good eggs or many of them or to furnish good meat for the table.

The flavor, richness and size of the egg, as well as the size, flavor and juicy tenderness of the carcass, are largely dependent upon the quality and supply of proper food and water and proper care otherwise, and not altogether on the breed of the fowl; that is, an inferior fowl, with proper treatment, may give more satisfactory results in the above particulars than a fowl of superior breed improperly cared for and simply allowed to do the best they can with what food and water you may give them.

I believe that one may impart a certain flavor and richness to the egg and meat of the fowl by a certain course of feeding. For example, where fowls, either wild or tame, feed largely on fish, both their flesh and their eggs carry a distinct fishy flavor, and birds are known to carry the flavor in their flesh of the vegetable matter they feed mostly upon, as the reed bird or rice bird.

I saw in an issue of the *Cackler* an article bearing on this point, and think that the writer has the right idea:

"It is suggested that a new industry might be created in the raising of poultry and various domestic animals upon certain kinds of food which will impart to their flesh new and palatable flavors. It is well known, for instance, that the exquisite flavor of the canvas-back duck is due to the wild celery it feeds upon in the southern marshes, and the delicious Congo chickens owe their superior excellence to the pineapples they eat. The grouse of the far western plains is aromatic with the wild sage; wild ducks and other sea fowls have a fishy flavor, and the fish fed to swine may be said to be eaten over again by the consumer of their pork. Milk is especially affected by whatever is eaten, as every farmer can testify whose cows give bitter milk whenever they eat the leaves of burdock, etc.

"There can be no doubt that the nature of their food modifies the taste and quality of the meat of most animals."

I think he is right; the egg that is laid by an insufficiently fed, half-starved fowl, "making its living" from the dumpheap and what grass it can pick, certainly cannot at all compare in flavor, richness or size with the egg of a properly fed and well cared for fowl, nor can they, for the same reason, lay as many of them in a certain given time.

The position taken by many, that if it does not cost much of anything to produce a thing, one can afford to sell it for less and realize as much profit, has, I think, to every one who desires to be a successful man in all respects, very little to recommend it. It certainly is more satisfactory to all rightly thinking minds to strive for and attain to excellence in whatever they may be engaged in, whether in the raising of fowls and eggs or in any other pursuit—the more especially as one cannot hope to be successful finally without it.

If one desires large rich eggs and a constant supply of them, the first requisite is to procure hens of an undoubted egg-producing breed; then, with clean, nourishing feed in proper variety and in needful supply and no more, clean, fresh water in clean vessels, odorless, well aired, comfortable quarters, and always a watchful care to keep them in fine condition, one may reasonably expect his desire satisfied.

Such eggs should be sold by weight (as should all eggs), as an egg of this kind contains really more substance, and of a richer quality, than what are commonly known as store eggs even when the size is the same.

The influx of Eastern eggs has had an effect on the prices of our own eggs, but for all that I do not think that there is any branch of industry that pays a larger return for the amount invested than does the production of eggs and fowls for market. Properly cared for in any favorable locality, they will pay readily $1 per head a year, and have been known to pay as high as $2.50. The keeping of fowls for profit I do not consider at all a lottery, as many contend that it is. Like all other pursuits, if there is not given it full attention, the results will be unsatisfactory.

T. B. Geffboy.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

SWIMMING TANK FOR HORSES.—Haywards *Journal:* Gilbert Tompkins of San Leandro has attained prominence by the introduction of his celebrated swimming tank for the benefit of his horses—this is the first one in use in this country. The practice of swimming horses to improve their condition for racing has been in vogue for many years in Australia and in parts of the United States, where the animals were swam in rivers and in the ocean, but Mr. Tompkins was the first to create a swimming tank. The tank is made of cement, with a gradual slope at the upper end, and is 90 feet long 20 feet wide and 8 feet deep. An engine pumps the water into the tank, and ocean salt is used to make it as near the strength of salt water as possible, the temperature being at a uniform heat. Over the tank is erected a light shed, and in the center extends a wooden platform, around which the horse swims. The effect of this swimming system upon the horse is quite apparent; it takes out all the soreness, keeps his skin in fine condition, and even cures rheumatism in many instances. It has just about the same effect on a horse as a salt water bath has on a man. It is the greatest thing to reduce flesh, and saves one-half the hard training necessary to put a horse in condition, as Mr. Tompkins said it is like putting in a charge of dynamite. We witnessed one or two horses take a swim, and it was astonishing to see how keenly they enjoyed it, and every one seemed to be natural swimmers, and when they came out they were at once blanketed, walked around, and it was not long before a sweat was started and the horse scraped, and when he next appeared he looked fit to make the race of his life. It would have taken many laps around the track to have produced the same sweating, but here the horse comes out invigorated and as active as a kitten. It greatly helps to develop their muscles and lung power. It is common sense treatment, and in time many other horsemen will follow his example.

Butte.

AN ORANGE SHIPPER.—Oroville *Mercury:* Oroville is destined to become one of the largest orange-shiping towns in California. Only five years ago we began to plant orange trees as a business, and to-day there are several thousand acres near the town. The trees, generally, are growing most luxuriantly. As the old ones that were set as ornaments years ago bear large crops annually, it is reasonable to suppose that those now coming to maturity will do the same. This being the case, it is easy to believe, that our shipments of oranges will increase annually, until we number the carloads by the thousand.

FINE PROSPECTS AT PALERMO.—Oroville *Register*: Eben Boalt says that the prospects for a big crop of fruit in that colony are excellent. He says that the peach and apricots are well filled with young fruit, and there is every indication that there will be a fine crop for the age of the trees. The orange trees are blooming very profusely, aud promise large returns next winter. The grapevines are showing up well, and the prunes and cherries look finely. Taken as a whole, Mr. Boalt regards the fruit outlook in Palermo as very encouraging.

NEW IRRIGATION SCHEME.—Palermo *Progress:* Capt. J. W. Smith of Oakland has formed a corporation called the Smith Construction, Land and Improvement Co., with a capital of $1,000,000, divided into 20,000 shares of $50 each. Capt. Smith is the general manager and president and largest stockholder. The company has acquired title to a large tract of land, and in addition has surveyed and located a line for a ditch to take water out of the middle fork of the Feather river. The right for 10,000 inches of water has also been secured. It is proposed to sell enough stock of the company to raise money sufficient to begin operations on the ditch and to bring water down as soon as possible to cover not only the tract of land already acquired, but also to cover all the land between Oroville and Marysville and between the Feather river and the mountains. This, when put through, will make thousands of acres more of orchards, and this country will be the richest and best portion of all California. Palermo, already established, will be in the heart of all this new development and will be the railroad center. We heartily welcome all this new development, for it will benefit our colony wonderfully.

ANOTHER CREAMERY.—Hanford *Journal:* The Lakeside Cheese and Butter Co. has filed articles of incorporation. It will at once erect a factory and begin the making of cheese. The directors are E. J. Dibble, Frank Frazier, G. W. Clute, T. E Howe and P. Bondson. The officers are: G W. Clute, Pres. and Business Manager; E. J. Dibble, Vice-Pres.; Frank Frazier, Sec'y; P. Bondson, Treas. This is the third cheese-making company organized in the Lucerne Valley, the home of "lucerne" or alfalfa, which is one of the greatest dairy feeds known.

Fresno.

WEST SIDE CEREAL AND FRUIT NOTES.—White's Bridge Cor. *Expositor:* On account of the abundant rains so far this season, several have sown Egyptian corn. The latest to indulge in this luxury are P. Dengler and the Fauntz Bros. They agree that if a few good showers fall during the balance of the season a crop is assured, on account of the damp condition of the ground at present. P. Dengler's experiment of two years ago in planting fruit trees and vines has been so successful that he is now engaged in enlarging his orchard, and also in planting shade trees on what will, in time, be an avenue leading to a county road. The old orchard is in a flourishing condition and proves what can be done by the possessor of a good well, with the expenditure of a little labor. Besides the fruit trees and vines, Mr. Dengler has growing alfalfa and vegetables of various kinds, and all doing remarkably well.

Los Angeles.

FRUIT AND BUGS.—L. A. *Express:* John Scott is still distributing the *Vedalia Cardinalis*, which is so fond of the cottony cushion scale bug. The latter is to be found in many parts of the county, in spite of the efforts made to wipe it out. The Vedalia is, however, keeping the pest in check. The recent importation of parasites from Australia to feed on the red scale have not turned out well. But few arrived alive. Those that came through safely are breeding slowly. However, the experts and those directly interested in the parasite are satisfied that in time large colonies will be established here. Reports from the country are to the effect that deciduous fruit trees are doing finely. The season is well advanced—much earlier than usual. The crop promises to be abundant. Citrus trees are growing finely this year. The frost seems to have done little damage to the trees.

Monterey.

A MODEL FARM.—Salinas City *Index:* On the ranch of Duncan McKinnon, about two miles northeast of Salinas, is a big windmill that is the wonder and admiration of the neighborhood. Built about the tower on which the mill rests is a two story building, in the lower story of which are bins to receive from the cutting and the chop mills above. Conveyors run from the lower story to carry up material to be chopped, and a derrick from the outside for straw to be cut. In the second story are the chop mill and the straw-cutting mill. The windmill was made in Illinois and required two freight cars to transport it to California. It cost at the factory $1500. It has a 27-horse power in a wind 18 miles to the hour. It works like a charm, easily running the chop and cutting mills. Mr. McKennon intends to connect the power with his turning lathes in his machine and carpenter shop. It was a surprise to find in his machine shop the finest lathe for iron in the county, and to find on a farm an establishment with lathes, forges and drills equipped for complete work in wood or iron. In the dairy barn 60 cows are fed and milked. The cows are polled and in stanchions during the day until they are milked and turned out at night. A tramway runs from the chop mill through the center of the barn, and a large car, from which the cattle can be fed on either side, brings in the feed. The arrangements for feeding and milking are the best that could be devised for economy of labor and to ensure each animal in getting the feed intended for it. At the dairy house, the milk is poured into a vessel provided with a strainer outside of the building, and led by a pipe to an inside tank above the cream extractor. The cream extractor is a wonderful machine, pot-shaped and made of the finest Sweedish steel. It is made to revolve at 7500 revolutions a minute, and nothing for this purpose has ever been made in the United States that would not go to pieces under this fearful centrifugal force. The milk is led by a pipe into this pot-shaped vessel when at its full speed. The milk, being heavier than the cream, keeps to the surface of the extractor, while the cream, being lighter, keeps to the inside of the rapidly revolving mass. The motion carries the liquid to the top of the extractor, where the milk is discharged through a hole a little larger than a knitting needle, and the cream from a similar hole a little higher up. Although these discharging holes look so small, it does not take long to put through a tankful of milk.

Placer.

TWENTIETH DISTRICT FAIR.—Auburn *Republican:* At a called meeting of the Board of Directors of Agricultural Association No. 20, committees were appointed to revise the premium list and ticket system. Ordered that the fair for 1892 commence Tuesday, August 30th, and end Saturday, September 3, 1892.

San Bernardino.

2500 ACRES PLANTED TO SUGAR BEETS.—Chino *Champion:* Beet-planting still continues unabated. During the past week 500 acres were planted on the ranch, and there are now fully 2500 acres planted altogether. Mr. Gird alone is planting 40 to 50 acres per day, and the other farmers are just now putting seed in as fast as possible. About 1500 acres will be planted by them. The fields are beginning to look green with the tops of the young beets, and thinning will commence next week. All the work on the fields this spring has been very thorough. The ground was all cleaned of weeds or rubbish, plowed deep and well, and now looks as clean and smooth as a huge garden. The planting was done remarkably straight, adding much to the appearance of the fields.

San Mateo.

PESCADERO DAIRY MATTERS.—Half Moon Bay *Advocate:* From reliable sources we learn that the aggregate daily output of cheese from the several cheese dairies in and about Pescadero, reaches the snug sum of 114 cheese, or about 2736 pounds, and this in the beginning of the season when the grass is lacking in nutriment. It is safe to say that the yield will amount to 150 cheeses per day during April and May, at least. The item of butter is also of considerable importance in the products of Pescadero. The yield per day at this time, from the various dairies, amounts to about 600 pounds. In connection with the dairy interests of Pescadero, the question arises: Do we realize for our products all that the market affords? From the many complaints heard from time to time, we are convinced that honest returns are rare.

Santa Cruz.

INCREASED ACREAGE TO BERRIES.—Watsonville *Pajaronian:* A considerable acreage has been placed in raspberries and blackberries during the past year. Wherever Chinamen have cleared land in the slough district they have put in raspberries, and they have leased desirable tracts of land in different parts of the valley, paying high cash rent in advance, to cultivate blackberries. On the Lake farm of Thurber, Stewart & Buckley, it is estimated that there are over one hundred acres in these berries. For some years the San Jose canneries have bought heavily of the Pajaro valley blackberry crop, and hence the rush into this business.

Sonoma.

HISTORIC OLIVE TREES.—Santa Rosa *Republican:* E. S. McClellan, residing about ten miles northwest of Santa Rosa, has 60 olive trees that were planted 15 years ago by some Italians who then occupied the place. They are of the Mission variety, and are on clay subsoil with sandy loam above. The trees are now about six inches in diameter and from 15 to 18 feet high, the spread of the tops of most of them being about 12 feet. They occupy less than half an acre of land. Mr. McClellan says that olive trees should be planted on land well sheltered from the dry, warm, north winds that often visit this section about the time this fruit is in bloom. His trees are exposed to these winds and the bloom is often killed by them, making the crop light. Olives should be highly manured for the best results and should be well cultivated. About every other year, coarse manure should be put into the ground about the roots of the trees. Fine manure burns the roots in hot weather and thus does injury. The coarse manure should be covered with dirt. By such manuring and cultivation, a splendid growth is promoted. Mr. McClellan picks his olives just as they begin to turn purple. He puts them into weak lye at once and keeps them there about 36 hours. This process is repeated every 36 hours until all bitter taste is removed from the fruit. It may be necessary to change the lye three or four times. When the pulp of the olive is free from the nut, pour off the lye and put on fresh water. Change the fresh water once a day until all the lye is gone and the water remains perfectly clear. Then make a brine of coarse Liverpool salt strong enough to bear an egg. Put the olives in a keg, filling it full, and through a hole in the head of the keg pour in brine until all the space is occupied. In all the work from the time the olives are picked, they should be exposed to the light as little as possible. Thus their color is preserved and they are more marketable.

APPLES.—Santa Rosa *Democrat:* Good winter apples are worth more in the market to-day than oranges. The coast country from Santa Cruz north is especially well adapted to the growth of apples. In Santa Cruz county there is a colony of Hungarians and Bulgarians, who are said to be making a specialty of apple culture, and are making a great success of it. They are not only planting orchards, but purchase all they can get from other orchards and put them on the market late in the season, thus realizing very handsome profits. Their favorite varieties are the Wagoner, Vandever Pippin, Ben Davis and Red-Cheeked Pippin. Apples do especially well on the hill lands around Santa Rosa. A grower, who has had large experience in their culture in this township, informs us that the best varieties are the Wagoner, Rhode Island Greening, Winter Green, Hoover and Spitzenburg. The last named kind is very popular in Australia, and find ready sale in the fall, at good prices, for shipment to that country. The Newtown Pippin is also a fine apple, but it does best in the Sebastopol country and nearer the coast, as it has a special affinity for the coast moisture. It depreciates in quality as you leave the coast.

Sutter.

CROP PROSPECTS.—Yuba City *Independent:* The prospects for abundant crops of all kinds continue good throughout Sutter county. In many fields the summerfallow wheat is very heavy, and in all, the grain is growing rapidly. The acreage is large and the stand excellent. The warm weather is forcing a rapid growth of alfalfa and other grasses, and the prospect is that haying will begin early. Indications are favorable for a very full fruit crop. With fairly favorable weather from this time on, the season's output will be the largest in the history of the county.

STEAM HARVESTING OUTFITS.—Yuba City *Farmer:* Henry Best has purchased a new harvester with steam engine on the same, which runs the machinery, the steam being supplied from the traction boiler and engine which draws the outfit. A 25 foot header is attached to the harvester. Geo. Walton and H. A. Walton Jr. have purchased a large steam traction engine and also a steam harvester with a 25 foot header attached. The engine will be up the latter part of this week, and will be ready for plowing. Messrs. Walton have about 700 acres of summerfallow plowing which they expect to do this spring with their new outfit.

Tulare.

GYPSUM AS A NEUTRALIZER.—Visalia *Delta:* F. A. Ziegler of the Traver *Advocate* informs us that gypsum is being used on the alkali lands between Kings river and Cross creek, and with every prospect of making the soil productive. When thrown into a pool of the black water that collects on alkaline lands, the water becomes clear almost immediately. Mr. Moreland, living southeast of Traver, has treated a patch of land with gypsum and seeded it with alfalfa which is coming up well and growing as rapidly as though on the best loamy soil. Where the hardpan is firm, holes are being blasted through it in order to give the water a chance to drain off, carrying the injurious salts with it. A. E. McClanahan has also tried it successfully on a patch of land that was too strongly alkaline for trees. Up to the present time about four carloads of land-plaster have been used about Traver, and if found to work as well as it promises, much land that has been considered almost worthless for farming will be made productive. There are several districts in the San Joaquin valley where this character of land predominates, and which, by the application of this neutralizing agent, can be made valuable.

HOW TO CURE HOG CHOLERA.—*Journal:* Hog cholera became infectious among J. H. Dopkins' herd recently, but he knocked the disease out by the use of carbolic acid, and he recommends it to any hog raiser who may be so unfortunate as to need it. He gave the medicine in ground barley, the latter being soaked in water containing two drops of carbolic acid to the pig or hog. Some of the animals were so far gone that they could scarcely walk, but the medicine has apparantly cured them and he lost but a few. The recipe is well worth remembering by hog men.

ALTA IRRIGATION SYSTEM COMPLETED.—Traver Cor.: The great Alta irrigation district system of canals, established under the Wright law, is completed and running full of water, practically irrigating 130,000 acres of land. This result has been brought about by the residents of this district purchasing bonds themselves. Five hundred miles of canals and distributing ditches are in operation. Five million feet of lumber has been used in headgates, drops, checks, bridges and flumes.

Yolo.

FRUIT CROPS.—Woodland *Mail:* The universal opinion of Yolo county fruit growers seems to be that indications point to good crops in everything but apricots. Now that the apricot trees are blooming, it is found that the blossoms are very light as compared with other years. The law of compensation will likely help a good many growers, however, in the increased prices which a shortage in this crop will undoubtedly produce. Many growers are still holding last year's crop of dried apricots, being loth to part with them at the prices which have ruled. These will be benefited by the advance in prices which the shortage will cause. Prunes promise well, and with a good spring the grape crop will come forward with its usual volume and quality.

NEVADA.

STOCK NOTES.—Reno *Gazette:* A stock special left Reno March 14th made up of the following shipments: Charles W. Welby of San Francisco, two cars of cattle from George W. Monks of Deeth, five cars from J. M. Tunnel of Halleck, one car from Blossom & Blossom of Battle Mountain, and one car from them at Halleck; to M. Brandenstein of San Francisco were consigned six cars of cattle from L. Piper of Ogden and six cars from Wm. Gifford of Ogden; to J. Hall of San Francisco were shipped six cars of cattle from Wm. Gifford of Corinne and five cars of sheep from Wm. Gifford at Ogden. * * * * The sheepmen in this vicinity are engaged in shearing. They report that the wool clip is unusually heavy and clean. The lamb crop is also very large, and the high price of mutton makes the industry very profitable. The sheep wintered splendidly, with little loss.

ARIZONA.

LARGEST HOG RANCH IN THE UNITED STATES.—Phœnix *Herald:* The Salt River valley has one of the largest and most complete hog ranches in the world, where the business of raising hogs for the great markets is systematically carried on. It comprises upward of 1000 acre of land under a "hog-tight" fence, constructed under direction of the owners, the Fowler Co. The early trouble in raising hogs in this valley arose from the difficulty of confining them anywhere, as lumber was scarce and expensive, and barbed wire fences could not be so constructed as to confine hogs. The result of these conditions was that the Fowler Co. devised a wire net fence perfectly hog-tight, and had enough of the fence constructed at an Eastern manufactory to enclose a thousand acres of land now devoted to the hog business exclusively. The land is almost entirely in alfalfa, and the company is engaged in raising what is known as "butcher's stock," or hogs weighing from 150 lbs. to 200 lbs. for current slaughter and use. These are entirely alfalfa fed, and make the finest kind of fresh pork, and the returns are more profitable than to raise "packing stock," or hogs for the the use of packing-houses. Aside from the quick and fair returns realized from raising "butcher's stock," the alfalfa keeps them ready for market the whole year around, so that there is scarcely a day in the year that a carload of fine "butcher's stock" cannot be selected from the herd. To Eastern stockmen this will be almost incredible, that hogs should be kept in marketable condition on green alfalfa feed alone, but the fact speaks for itself, and if nothing can convince them but their eyes, the business is here on the ground to convince them that way. In fact, all sorts of stock keep rolling fat on alfalfa all the time; the only limiting condition seems to be that there be enough of it. The 1000-acre hog ranch, covered as it is with what we would roughly estimate at 6000 hogs, big and little, is one of the sights of the valley.

Fruit Preservation.

The Chemistry of Sulphuring.

Los Gatos, Cal., March 25, 1892.

To the Editor:—In reply to Professor Hilgard's commenting I would say that I do not deny but that the oil circulates with the juices of the fruit, but do not the juices stay in the cells? I know that the veins or conduits ramify the fruit. To prove this all we have to do is to open a frozen apple.

Reader, if you think that the juices of the fruit are not contained in cells, just open a navel orange. I do not forget, nor did I forget, that sulphurous gas is converted by aid of the atmosphere into sulphuric acid, but all fair-minded chemists will bear me out in the statement that the presence of nascent oxygen is greatly desired for such a chemical change and almost absolutely required.

Wagoner says: "At ordinary temperature and pressure of the atmosphere sulphurous acid is a gas having a pungent odor and a specific gravity of 2.21. This gas dissolves readily and in large quantities in water, one volume absorbing at 18° C. 44 volumes of gas. When water is present all the higher oxides of nitrogen give up some of their oxygen to the sulphurous acid, converting it into sulphuric acid." This is not theory, it is a fact. We see by this that we cannot make sulphuric acid under ordinary temperature and pressure unless we have oxygen in some other form than ordinary atmosphere, and that as soon as the fruit is removed from the bleacher the pressure being relieved causes the acid to become a gas again.

On the same page Wagoner says: "Sulphurous acid is employed in some metallurgical processes, for preserving food, bleaching syrups, silks, wool, sponges, etc., which do not admit of being treated with chlorine."

All the sulphites of the alkalies and metals are very unstable salts, the tendency being to form sulphates since they are solids and have no chance to become gases, as sulphurous acid has at ordinary temperature and pressure. The sulphites' instability is in direct proportion to the amount of heat absorbed in their formation.

The two most general laws in nature are, 1st, all inorganic bodies tend toward crystallization under some one of the various systems; 2d, all organic bodies have been organized by cell growth.

Now, cells, to organize, must float in a liquid and this liquid must, after organization begins, flow through the organ; hence we will always find cells in this organ floating in its liquid, until the organ is perfect.

Wagoner says on page 481: "The essential oils largely met with enclosed in the cells of the skin of lemons, oranges, bergamot, and, in fact, all the fruit belonging to the citrus species are obtained by pressing the rind of these fruits."

If we take a plum that is ripe from the tree and lay it upon the ground in the sun, in a short time we will find that its acidity has, as far as the taste is involved, changed, so that before we could eat it, but now it soon sets our teeth on edge. What has produced this change? There is but one answer, heat. Other fruit act similarly. Many good cooks know this, and hence to save sugar sweeten their fruit after it is cool.

I have carefully analyzed some bleached fruit, using the best of reagents and soaking my fruit for twenty-four hours, but failed to find even a trace of sulphuric acid.

Fresenius says on page 175: "The characteristic and exceedingly delicate reaction of sulphuric acid with the salts of baryta renders the detection of this acid an easier task than that of almost any other. It is a rule that should never be departed from in testing for sulphuric acid with chloride of barium to dilute the fluid largely. A little hydrochloric acid should also be added, which counteracts the adverse influence of many salts, as for instance, citrates of the alkalies."

We would not expect to find citric acid nor citrate present, but we would expect to find succinic acid in large quantities; hence we should, in making this analysis, follow Fresenius closely.

I am fully in accord with Professor Hilgard's last statement, and that is why I protested against the use of bisulphite of soda, since any analysis of fruit bleached by this process would always give a trace, at least, either of sulphite of soda or sulphate of soda, and with zinc trays, sulphate or sulphite of zinc, in addition. This mode of bleaching doubles the work, hence it is not to be advised. J. J. Shaner.

Comments by Prof. Hilgard.

Berkeley, March 30, 1892.

To the Editor:—In regard to the above remarks of Dr. Shaner, I state briefly:

First: In his former communication, he spoke distinctly of "oil cells" as containing the flavor of the fruit, and in his present communication he still alludes to the *true* oil cells in the *rinds* of the citrus tribe as relevant to the question, which is certainly not the case. The essential difference is that the flavor, when dissolved in the juice, circulates with it by diffusion through the cell walls. That all vegetable tissues are composed of cells is so elementary a proposition that it was not worth while to mention it.

Second: When we desire to manufacture sulphuric acid *by the ton*, we require the use of "nascent" oxygen; but sulphurous gas dissolved in water or fruit juice will show the formation of sulphuric acid within a day, unless very strong so as to exclude access of air. Precisely the same is true of the solutions of sulphites, only in a *less* degree instead of in a *higher* one, as Dr. S. avers; a dilute solution of free sulphurous acid is more quickly transformed than any of its salts or sulphites. If Dr. S. has not been able to detect "even a trace" of sulphuric acid in the fruit he examined, his reagents or manipulations must have been grievously at fault, for by the very method he mentions, *any* fruit, sulphured or unsulphured, will show the presence of the very sulphates he so deprecates. They are part and parcel of the ashes of every fruit; but the quantitative determinations made both here and elsewhere settle the fact that a large excess of free sulphuric acid is present in sulphured fruit, all denials notwithstanding.

Third: The vegetable acids that may be produced when fruit is allowed to ferment, instead of drying promptly, do *not* set the teeth on edge, however they may affect the palate, because they are too weak to attack the enamel as does free sulphuric acid. Otherwise, fruit would be injurious to the teeth instead of being beneficial, as is well known. E. W. Hilgard.

Advisory Horticultural Board for the World's Fair.

Frank A. Kimball of National City writes to the *Great Southwest* as follows:

The personnel of the board includes:

Chairman—Prosper J. Breckmans, President of American Pomological Society, Augusta, Ga.

D. W. Adams of Tangerine, Fla., representing the Southern States.

Hon. C. L. Watrous of Des Moines, Ia., representing the Northwest.

Charles W. Garfield of Michigan, representing the West.

W. C. Barry of Rochester, N. Y., representing the North.

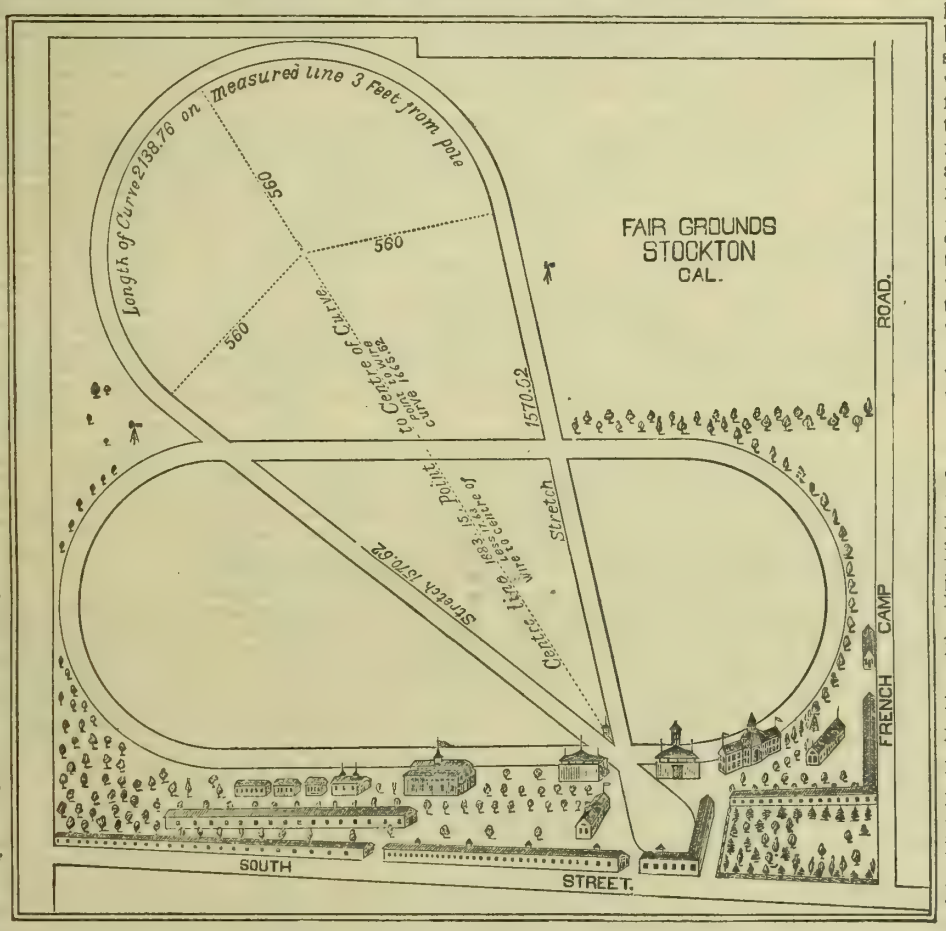
Frank A. Kimball of National City, Cal., representing the Pacific Coast.

It is hoped, and expected, that the board individually will be able to fully and fairly represent the various sections, and without unnecessary friction as a body secure such action by the department of horticulture as will advance the interests of the most obscure section to the position its importance entitles it. It was for this purpose the board was constituted, and its membership distributed at widely separated points—thus making a representative easily accessible, and the needs of a section easily and cheaply canvassed. A general meeting of the board was expected to have been held on the 20th of January, but it was found that the call would have been premature and it was not issued.

Growth of an Agricultural Society.

The San Joaquin Valley Agricultural Society was organized in 1859, and its first fair held in 1860. The Society bought 60 acres at the S. E. corner of the present city limits of Stockton, and a desirable piece of city property opposite Court House Square in the city, upon which a large brick pavilion was erected. This latter property was lost to the Society in 1864, but the ownership of the park was held and now comprizes 127 acres of very valuable land.

From the inception of the enterprise the park has been constantly improved for fair purposes, over $60,000 having been expended in improvements up to and including the year 1891—an average of about $2000 per year. The park and improvements are now richly worth $125,000, exclusive of the mammoth pavilion in the city which was built at a cost of $47,000 in 1887, and since then additions and improvements have been made amounting to an aggregate expenditure of $50,000.



STOCKTON FAIR GROUNDS—KITE-SHAPED AND ELLIPTICAL TRACKS.

The Board determined to build an additional track, kite shaped, in 1891 and it was completed in September, 1891, at a cost of $8300. Both the elliptical and the kite shaped track are now kept in order at all times. The phenomenal speed developed upon the "kite" from Oct. 6 to Nov. 30, 1891 (when 14 different days of racing were had) shows the sagacity of the directors in making the pioneer experiment of its kind on the coast. The result is that the Stockton kite shaped track at Stockton, holds the fastest trotting records of the whole world, and the same exhibition of pacing speed (2:06) which was made by "Direct" elsewhere, was by the same horse duplicated on this "kite".

In 1887 the new pavilion, having a floor room of over 75000 square feet, was jammed with exhibits and has been thoroughly well supported each successive year since. The building is in the form of a Greek cross, two stories and 276x80 feet each way.

This San Joaquin Valley Agricultural District, up to 1880, comprised nine counties; but being at that time placed under control of the State, it has by legislation been reduced so that it now comprises the counties San Joaquin and Calaveras only.

Notwithstanding this, however, and the formation of districts and the holding of annual fairs in many other places in the San Joaquin Valley, every succeeding fair at Stockton has been an improvement upon each preceding one.

Farmers' Institutes.

The Annual Institute at Fresno.

[Fresno *Expositor*, March 23.]

The first annual meeting of the Fresno County Farmers' Institute will be held in the Y. M. C. A. hall in Fresno city on April 7th and 8th.

Many eminent speakers will be present, including Prof. E. W. Hilgard of the State University, professor of agriculture and director of experimental stations. Prof. E. J. Wickson of the Department of Agriculture, who has been so capable and faithful a friend to the institute and knows just how to conduct one to the best advantage, will speak on "What Has the Farmer to Do with Science?"

Charles E. Aiken of San Francisco has a number on the program and the other literary and musical features alone should be a sufficient inducement to fill the hall, and as will be seen they are most generously distributed throughout the more practical work of the day.

B. M. Lelong of the State Board of Horticulture, will deliver an address on "Orange Culture." His duties, when here as Secretary of the Fruit Growers' Convention, kept him closely occupied throughout the day, but those who were present at that evening session and heard him there, will look forward with pleasure to hear him under more favorable conditions. Mr. Davis, Master of the State Grange, and possibly Marion Cannon, President of the State Alliance, are also expected. The impression that the first session is not of interest is a mistake. It is fully organized, and from the time of calling to order until final adjournment there is no time wasted. Topics of interest will arise, and people capable of discussing them to fill a program of far greater length, will be present.

Mayor Cole will deliver the address of welcome to the city, and President Laird will make the anniversary address.

The following is the program:

THURSDAY MORNING, April 7.

Called to order.....Pres. O. P. Laird
Musical duet, violin and piano.....
.....Mrs. Hollingsworth and Prof. Samelson
Invocation.....Rev. Mr. DeWitt
Address of welcome to the city.....Mayor Cole
Response and anniversary address.....Pres. Laird
Music, "Laughing Song".....Mrs. Southard
Reading of minutes.....Secretary Mrs. M. B. Stuart
Music, piano solo.....Mrs. Hollingsworth
Recess
Appointing committees and general business.
Music duet.....Mrs. Hollingsworth, Prof. Samelson
Recess.

THURSDAY AFTERNOON.

Music, violin and piano.....
.....Mrs. Hollingsworth and Prof. Samelson
Roll call, responded to by membership dues.....
..... Members
Paper on treatment of sunburned peach trees .....
.....Lineus Steuart
Discussion, five minute speeches.....Members
Music, vocal solo.....James Baird
Paper on orange culture.....B. M. Lelong
Discussion.....Institute
Recess
Music, piano solo.....Mrs. Hollingsworth
Address, "What Are We Trying to Do in Our.....
Schools?".....Supt. T. J. Kirk
Music, vocal solo.....James Baird
Address, "The Farmer and Taxation".....
.....George E. Church
Music; violin and piano.....
.....Mrs. Hollingsworth and Prof. Samelson

THURSDAY EVENING.

Music, instrumental trio.....The Misses Balthis
Lecture, "What Has the Farmer to Do With.....
Science?".....Prof. E. J. Wickson
Music, vocal solo.....Miss Kate Balthis
Essay, "The Culture and Love of Flowers".....
.....Mrs. Carnagham
Recitation, "The Knight and the Yeoman".....
.....Opal Stuart
Music, vocal solo.....Mr. Rophuro
Address.....Charles S. Aiken
Music, vocal solo, "Last Rose of Summer".....
..... Miss Kate Balthis
Recitation.....Miss Nellie Boyd
Instrumental solo.....Miss Connie Balthis

FRIDAY MORNING, APRIL 8.

Instrumental duet.....Mrs. Thayer and pupil
Invocation.....Rev. Mr. Phelps
Report of executive committe, election of officers
Music, vocal duet.....Mrs. Evans and Mrs. Kirk
Conclusion of subject of drainage...Miss L. H. Hatch
"Needs and Benefits of Ship Canal".....J. H. Harding
Discussion.....Institute
Music, vocal solo..... .....Mrs Evans
Paper on Olive Culture.....Geo. C. Roeding
Discussion.....Institute
Essay, "The Human Seasons".....Mrs. R. M. McLean
Instrumental solo..... .....Mrs Thayer
Recess.

FRIDAY AFTERNOON.

Instrumental solo.....Misses Foin and Covalt
Roll call, responded to by proverbs.....Institute
Address, "Relation of Board of Regents to Farmers'
Institutes".....Dr. Rowell
Vocal solo.....Miss Avilla
Paper on "Soils and Fertilizers,"..Prof. E. W. Hilgard
Instrumental solo. "La Somnambula,".....Miss Covalt
Address, "Work and its Results,".....
.....Rev. T. H. B. Anderson
Vocal duet.....Misses Avilla and Foin
Report of committees
Instrumental duet.....Misses Foin and Avilla
Adjournment.

Paris Green for Linnets.—The linnets have done great damage to the prune, apricot and peach buds this season. Poisoned wheat used freely about the trees has proved quite a good remedy, but it is understood that by spraying in January and adding a little Paris green to the wash the ravages of the birds may be checked.

The Home Circle.

The Mastery of Love.

Love was a stranger.
Without lock or key
He unlocked my bosom
And took my heart from me.
Now my heart is subject
Everywhere I go.
Be a gentle master, Love,
To one who loves you so.

In a few days and weeks,
In a few months or years,
Love brought me sorrow,
And the salt, salt tears.
Oh, Love, come with laughter,
Or, Love, come with woe.
Deal but gently with the heart
That leans upon you so.

The bee's wing is fragile,
The lark's egg is small;
That you took was little,
But it was my all.
Bear the captive where you will,
To high estate or low,
But be a gentle master, Love,
To one who loves you so.

Dora Read Goodale.

One in Forty.

The scene was an army post. It was one summer morning. Just after the new guard had relieved the old, a soldier, who had been ill for a month, came down from the hospital toward his barracks. He felt happy in being out in the open air again, in being strong and able bodied, and he felt impatient to carry his musket once more, to fall in line with the rest, to march out on the parade ground, and, above all, to hear the voice of his lieutenant give the orders for the manual of arms.

While Murray was crossing the parade ground, a private of the same company was returning from target practice. Just when Sanford had finished practicing, this particular morning, he saw a seagull hovering over the water. He reloaded and waited for a chance to fire, but the gull disappointed him, and so he shouldered his rifle and started for his quarters. He forgot to unload his gun.

Murray reported to the first sergeant and was allowed to attend drill that very morning. He hurried in for his musket, looked at it, then groaned. It was rusty. Just then Sanford came in. They shook hands.

"Don't you drill to-day?" Murray asked.

"No."

"Lend me your gun, will you, mine's rusty?"

With Sanford's gun in his hand, Murray hastened out, for the call for drill was sounding. The next moment he was standing in his old place. There were just 40 men in the line.

It was the duty of the first lieutenant to drill the men that morning. Lieut. Brooks had lately become engaged, and it happened that at just this time the girl to whom he was betrothed was visiting at the post. On the morning when Brooks had no drilling to do, he spent his time on Miss Colyon's porch or strolling about the ramparts with her. But when duty required him to drill his soldiers, Miss Colyon walked up and down the edge of the parade ground, listened to his words of command, admired the precision with which they were obeyed, and waited for the intervals of rest, when her lover would come up and talk to her.

Thus it was that, when the first sergeant of the company marched the men on the parade ground, Miss Colyon was standing beside Brooks. He said a few more words to her, then raised his cap and went forward to drill the men.

There was a preliminary order, signifying that the 40 men were to fire together. The men were merely to snap the triggers when the order came to fire.

"Ready!"

The muskets were raised and the muzzles tilted forward. Brooks was standing on a little bare spot, where, purely out of habit, it had become the custom for the officer to stand. He was directly in front of the center man in the line. Miss Colyon, though some distance beyond him, stood a few yards to his right.

"Aim!"

The forty rifles were pointed straight ahead. The men were waiting for the command to fire. One gun covered Miss Colyon, another covered Brooks. Murray's gun was loaded. Miss Colyon and Brooks each had one chance in forty of being hit by the bullet. Not a soldier anticipated the next command. Not a trigger snapped. Every man was waiting, listening for the word. Brooks stepped to the end of the line and looked down the row of guns. To his well-trained eye the position of the forty guns was not precisely to the regulation. He came forward again and stood on the grass-worn spot. Miss Colyon had not changed her position.

For about half an hour Brooks put the men through the different movements of wheeling to the right and the left, and the like, but did not go through the manual of arms. The company was drawing up in line when he ordered them to rest for a time. He went up to join Miss Colyon. He held her parasol over her and partly over himself, and she held his sword and made little marks on the ground with its point. The officers and their wives, seated on the porches near by, knew how happy the two were. When they had talked for about ten minutes, Brooks raised his cap again, and now went forward to put the soldiers through the manual of arms. Miss Colyon stood in front of the company.

The company drilled so well that morning that the officers on the porches stopped talking to admire the movements. Brooks walked up and down before the line, but halted after every order to see how accurately it was executed. The muskets were now at right shoulder arms.

"Carry arms!" was the next order.

The guns came down simultaneously.

"Fire by company!"

"Recover arms!"

The muskets came down again.

"Fire right oblique!"

The men turned as one man and pointed their rifles forty-five degrees to the right.

"Ready!"

Once more the forty guns were raised and the muzzles tilted forward.

"Aim!"

The first sergeant, at the head of the company, looked down the line. Every musket was now precisely in the regulation position. This new order for direction of fire brought two different guns to bear, the one upon Miss Colyon and the other upon Brooks. The gun which had just previously been aimed at her was now leveled at him. Both stood perfectly still. Brooks paused a moment before giving the order:

The bullet passed through his brain.—Harvard Advocate.

If I Were a Boy.

Somebody has sent me a conundrum—"What would you do if you were a boy, for your health, for your education, for your future career?" A three-leaf question like this always sets a fellow to thinking. It is so much easier to tell other boys what they should do than it was to do just those things, in exactly that way, when we were boys. St. Paul and myself agreeing in so many things, and resembling each other in so few, were never more harmonious than when we both declared—I repeating after him—"The good that I would do, I do not; but the evil which I would not, that I do." However, it is a foolish sailor who will run upon the rocks to find where they are, when by flying a signal he can get a pilot who knows all about them.

"For my health" I would do just as I did when I was a boy. Out of school hours, summer and winter, rain or shine, I would spend a great deal of time in the gymnasium. I am a strong believer in athletic scholarship and gymnastic training. I had the advantage, which you may not possess, of one of the best equipped gymnasiums in the country in which to build up my health. It extended over the greater portion of Peoria, Tazewell, Woodford and Stark counties, Illinois. I could walk, climb or coast where I pleased. When I went hunting, which was often, I didn't ride in a close railway car through clouds of dust and cinders to the hunting-grounds. I walked both ways. When I wanted to go anywhere, unless I had mislaid my legs and couldn't find them, which was frequently the case with my hat, I knew how to get there. At home I had a private gymnasium, in which I exercised most faithfully. My father was a gymnasiarch, and he furnished white oak and limb hickory, "buck," saw and ham-rind at his own expense. The ventilation in my gymnasium, private and public, was perfect. The air came with a sweep from the sunrise to the sunset. There was sunshine all the way from heaven in the clearings, and grateful shadows under the trees. I don't know so much about gymnasiums hedged in with walls and roof, and ventilated by machinery; but I know they are much better than none.

On my eighteenth birthday, I enlisted in an infantry regiment, and shouldered a man's musket. I was in active service three years, went into every fight and on every march with my regiment; never was marked off duty one day by reason of sickness; never saw the inside of a hospital; never but once failed to march into camp at night when my regiment did; and many a time when I saw some big fellow lying "played out" in the fence corner, as I marched past him, carrying as big a load as any man in the regiment, unless it might be a convalescent with a haversack like a feather-bed, I felt grateful for my schoolboy training in the gymnasium of prairie and forest. And to-day, with the tranquil digestive powers of an ostrich, as I think of past mercies, I thank the good Lord for the wood pile. Live out of doors all you can, my boy! "Walk a heap!" The open air, the free, pure air and sunshine are as good as the exercise—better.

"For your education?" Well, mine began at "Hinman's School" in Peoria and ended in the high school of that city. Naturally, I have the same love for the public schools that I have for my oldest and best friends. The discipline is much better in the public than in the private schools, and you can stand a great deal of discipline, my boy. It will do you good. There isn't a teacher in the public schools who doesn't know a great deal more than you do. Many, oh, a great many of them, know a great deal more than you will, even after you have been out of the university several years. If you remain in the public school until they teach you all they know, you will probably be in some grammar school until your children are married. So if you can't go to college, the public schools can and will give you an education that will equip you for the practical work of life; they will give you the ground work of any professional career; they will start you splendidly. But, if you have a hunger for books, a desire for knowledge, and you can go to college, by all means go. Give all the years to study that you can. A college education will make you a better blacksmith, a better farmer, a better carpenter. Other things being equal—natural ability, industry, ambition, tact, application—of two men, the college man will be the better equipped for any work he may engage in.

One day last week I took a drive with a farmer up in "York State." He wore "tailor-made" clothes, kid gloves, long cuffs, swell collar and a high hat. He drove a stepper to cart that made you feel proud and rich. His farm paid for all these things. When he wanted to go to the circus, he bought a dollar seat and went. He didn't drive to town, 17 miles, on a jag of wood, to sell it for 50 cents. He farmed because he liked the business, loved country life, and there was money in it. He was a graduate of Cornell University, and that is the kind of a farmer he was. It stands to reason that the more a man knows, the more sense he has, the better fitted he is for any position, except that of a petit juror. Of course there are some boys whom you can't educate. There are some boys who can learn books by heart; who go to college and graduate; go to Europe and finish; and come home knowing so much less than they did when they went away that they are disqualified even for sitting on a coroner's jury. If you are that kind of a boy, which you are not, why of course you had better not go to school at all. Schools are conducted for the purpose of furnishing instruction for the mind; they don't agree to furnish the mind itself also. You have to take that to school with you.

"For your future career?" Ah, my boy, who can tell you so much about that as yourself? You know your own tastes better than we do; you know what you can do best; you know the line of work that will give you most pleasure in doing—work, not play, mind you. Do that! Don't pick out something easy—the easiest things to make a living or reputation by. There isn't an easy "job" in the world—not one; but there is something in the world that you would like to do better than anything else. You will get tired at it, but never tired of it. It may sometimes bring weariness to the arm and brain and heart, but you will never want to give it up; you will never honestly wish you had chosen some other work. Find what that "something" is—the something that you can pursue with eager zest and ambition and unflagging earnestness all your life—and do that. Whether it be making shoes or making sermons, playing baseball, Hamlet or the pipe organ, the work that enlists all your desires and energies and awakens all your enthusiasm; the something which you believe Providence has designed that you can do better than anything else—that is the thing for you to do. Only, my dear boy, do try and get on the right side of Providence, so that this shining "something" shall be something better than playing billiards or the tennis championship.—Robt. J. Burdette in the "Standard."

ENGLISH WOMEN AND THE WORLD'S FAIR.—English women are active in preparation for their participation in the Exposition. At a meeting of the woman's committee in London, on March 31, it was announced that Queen Victoria had promised specimens of her own work in spinning and knitting, done when she was a girl; also some of her embroidering, fine drawing and water color painting. Princess Louise will contribute some clay modeling, Princess Beatrice several paintings, and princess Christian some embroidery. The committee assigned charge of various branches of woman's exhibits as follows: Irish exhibits, Countess of Aberdeen; Scotch, Lady Reay; philanthropy, Baroness Burdett-Coutts; education, Mrs. Fawcett, the writer on political economy; hospital nursing, Mrs. Fenwick; woman's art, Mrs. Robert Austin. Several women were selected to prepare papers on various educational and economic subjects.

Electricity in Decoration.

We read of the luxuriousness of the ancients, of the hanging gardens of Babylon, etc., but the nabobs of old never could imagine anything so gorgeous as the following, which is an account in the *American Florist* of the decorations at a dinner recently given in Washington by the Montana millionaire De Lamar to Mr. and Mrs. Russell Harrison:

The table was an elongated oval, set for 39 covers. In the center was an oval mound some five feet in length, made up of maidenhair ferns interspersed with clusters of La France and white lilacs. From the middle of the mound rose to the height of four feet above the table a superb specimen of *Areca lutescens*, the base resting on the floor, while its long and gracefully overhanging fronds were strung with innumerable closely wired miniature incandescent electric jets of various colors. Near ei her end of this table, opposite to one another, were two small round mounds of ferns, from the midst of which rose great clusters of long-stemmed Laings encircling sprays of white lilacs. Beneath the maidenhairs in these fern mounds, hid from view, incandescent lights imparted to the foliage a wonderfully vivid yet delicate green. Immediately above the areca, from the center of the ceiling, were suspended 16 electric cables—four larger than the rest, extending to the four corners of the room, entwined with smilax and studded with 16-candle power incandescent jets, while the intervening shorter cables were twined with Asparagus plumosis and studded with vari-colored miniature jets, the whole forming a marquee-shaped canopy, of which the central portion constituted a closely woven network of *A. plumosus*.

From the center, immediately over the areca, was suspended a large magnet, the sides of which were encased in steel springs clamped at the base by an iron catch, which adhered to the magnet by reason of its polarity, the catch being so arranged that any interruption of the electric current would cause it to drop, and the springs to suddenly fly from their perpendicular into a horizontal position, not unlike the sudden opening of a closed bud into a full bloom rose. And here the ingenuity of the decorator came into play. He wired innumerable short-stemmed, full-blown La France roses to bits of iron, which readily adhered to the strongly magnetized steel springs and iron plate clamp so as to form a huge ball of real roses, two similar balls or globes of roses being suspended over the table from chandeliers on either side, equal distance apart. These floral globes proved to be the feature and surprise of the evening, for, constructed as they were, it enabled Mrs. Harrison, seated at the right of the host, at the close of dinner, just as the guests were arising, by touching a concealed electric button to break the current of electricity and drop the clamp a few inches below the magnet, causing the springs suddenly, amid exclamations of wonder and delight, to fly open and rain down upon the assembled guests a veritable shower of roses.

Hints on Eating.

"If Senator Plumb's death teaches any lesson," writes Kate Field in Kate Field's Washington, "it is that eating and drinking are a science, a knowledge of which is absolutely necessary for the preservation of life, and that incessant work, combined with neglect of hygiene, is suicidal. Hard work does not kill if accompanied by an easily digested diet with proper distraction after meals. The greatest scientist I know labors from 8 in the morning until 11 at night with little outdoor exercise; but he eats simply and slowly, rarely touches stimulants, never drinks ice water, and lies down whenever he has a spare quarter of an hour. He knows the effect of foods, and never puts into his stomach what it cannot digest."

Miss Field adds that the last time she saw Senator Plumb was in a hotel dining-room. "It was past 9 o'clock when this big, strong man hurried to breakfast, after having been at work for three hours. Sitting down with the morning paper in hand, he gave his order while reading, and at one gulp disposed of a glass of ice water. It gave me a shiver to see this reckless disregard of his stomach, but if I had protested I should have been called a crank. Yet the man who gave no thought to his own diet had saved his wife's life by putting her in charge of a hygienist!

"Mr. Plumb's breakfast consisted of messes, swallowed without really masticating, and winding up with a glass of milk taken at a gulp. Then he strode off to more work. The spectacle frightened me, and I wondered how long even his iron physique could endure such a strain."

It is an instance which points the moral for a not unimpressive lesson, and one which is at the very root and foundation of hobsehold life. Not only are eating and drinking a science, but a moral science. It is a part of moral responsibility to keep the body in such perfect repair that it may serve as a perfect instrument through which, and by means of which, one may accomplish his appointed work in this world. People do not, of course, live to eat, but they do eat to live.

Yet as the average eating goes, people do not more than half live. They do not have over half the vital energy to which they are by right entitled. To contemplate the unhygienic quality and the excess of quantity that a very large proportion of people consume, is to be in a state of amazement that they overcome inertia at all, and contrive to accomplish what they do in the world.

The effect of foods should be a subject of careful study by intelligent people—by all people who hold worthy and intelligent ideals of life. The relation of food to achievement is a very near and direct one.

Government Seeds and Matrimony.

Secretary Rusk is thinking seriously of establishing a matrimonial bureau in connection with the Agricultural Department. The idea was suggested by a letter he recently received from a man out West who experimented with some of the cucumber seed sent him by the Department at the instance of his representative in Congress. It appears the farmer planted the cucumber seed and his wife afterward died from eating some of the cucumbers. The farmer in his letter to Secretary Rusk said:

"Your blamed cucumbers robbed me of my wife, so instead of sending me cucumber seeds this spring, send me another wife. I hear there are a number of likely women in your Department."

In reply, Secretary Rusk said he had no appropriation from which he could draw money to send a wife to the widower, but suggested that the latter come to Washington and pick out one for himself. The Secretary informed his correspondent that he has in the Department some beautiful maidens, many sprightly widows and several experienced old maids.—Chicago Herald.

THE dressmaker deals in figures rather than facts.

What to Give the Girls.

If you must give the object of your affections a gift, try to use some taste and discrimination in the matter. Never give too much or inappropriately.

Never suggest to any young lady that she has an appetite. The only edibles that may be presented to the object of even your slightest devotion are sweets, never fruit. A box of candy as a birthday gift or in payment of a forfeit or as a favor at odd times will never come amiss.

Jewelry from the poor young man to the rich young woman, or from the wealthy young man to the poor girl, is in exceedingly bad taste. Jewellers have attempted to get in on the philopena by manufacturing small gold and silver wishbones, some of which have a clover leaf design attached and others of which are the setting of a diamond. These give the young with money a chance. The novelty in jewelry is the small gold knot, of which some have a diamond-headed pin stuck through them or are studed with white enamelled marguerites.

A box of gloves, if you know her number, or a box of fine writing paper, has been considered a suitable birthday gift through many generations.

In selecting paper, avoid monograms, for their day, as that of the initial, has passed. A plain envelope of the baronial size and octavo note paper, with the street and number printed in small raised blue letters just at the top and in the middle of the sheet, is correct. The man of fashion will, as a rule, see that the crest appears on his gift.

Of the presents that a man of fashion may give to a young lady, flowers easily take precedence. They are always proper. No woman is callous to attention, but she is either passionately fond of buds and blossoms, or she pretends to such liking, if she have it or not, rather than be thought unnatural or eccentric. At any stage of an acquaintance an admirer may press his suit with flowers and run but little risk of being thought presumptuous. To a very young woman, a hand bouquet of friezia or French marguerites is appropriate. The dark pink American Beauty rose, at $2.50 apiece, is now much affected. Fortunately for those whose purses are light, one rose with a stem and foliage 18 inches long makes a corsage. Violets at $3 a hundred are still in season. For the theater, small corsages of violets, with two roses, are worn principally, though Roman hyacinths, tulips, lilies of the valley and the narcissus are popular.

A new fad is "peace offering" bouquets of spring flowers or roses, to be given the young lady you are especially devoted to upon making up a quarrel or a tiff.

Turning to the literary young lady, you will find the way to her heart paved on the sweetest and best books in the market. If she has a philosophical taste, send her something of that nature, something you feel she will appreciate. Never send a cheaply bound book; that is, as a rule, in abominable taste; and don't send anything that borders on the sensational or suggestive, for the average young woman of education is above such literature, or at least pretends to be.

Coming to the Easter season, an appropriate card or a finely bound volume of Tennyson, Longfellow, Whittier or Bryant will go far toward increasing the heartiness of your welcome on the next calling day.

On St. Valentine's Day, it is by no means amiss to send something exquisitely designed, although the custom seems to have gone out of vogue of late years.

Another occasion for gifts comes when the ladies you have been in the habit of calling upon leave for their country home or for a trip abroad. On both occasions flowers and the best sweets in the market should be sent with your compliments. On these occasions, light literature and copies of the latest and best illustrated woman's magazines would tend to while away the weary hour of many an evening on board ship or to gladden the time in the cosy rooms of a country home.—N. Y. World.

The Way to Learn.

"Well, I think that I would sit there deliberately, as you did, and say I didn't know a simple thing like that! The idea! It's perfectly ridiculous!" a would-be-smart young lady declared to a matron with whom she was on very intimate terms.

"What would you do, my dear?" said the other.

"Do?" was the reply. "I would keep still if I didn't know, and not frankly confess my ignorance."

"Well, that's where you and I differ," said the elder lady. "I never expect to see the time when I will be too old or too wise to learn some new thing every day. I think, of all the follies of life, the most foolish folly is to think one should know everything. I have frequently heard elderly men, with a great reputation for wisdom, declare that they often felt humiliated when they realized how little they knew. I assure you, my dear, that if your life is spared until you are three-quarters of a century old, you will often find yourself covered with humility at the things you don't know. The wisest way is to learn early in life that no human being can know everthing; therefor, never be too silly or too proud to ask what you want to know, and frankly confess your ignorance of things with which you are not familiar. No sensible person will respect you less for it, and wise people will value your opinion much more when they find that your utterances are based upon actual knowledge, and that you are not afraid or ashamed to admit that you do not know."—New York Ledger.

April Foolery.

"That young preacher we heard to-day was a fine pulpit orator, wasn't he?" "Yes, if he could only control his voice. He woke me twice during the sermon.

A clever woman listens to compliments, a foolish woman accepts them.

There is always a hand of welcome ready to be offered to the strange umbrella.

When you need a friend don't pick out the man whose dog never wants to follow him.

When you open a window on the railway train the first thing to catch your eye is a cinder.

Electricity is a great educator. Think what it has done to make men see things in a new light.

Stout Women's Dress.—The stout woman is always asking what she shall wear, says an exchange. Now these are some of the things she should not wear: She should not wear a tailor-made suit fitting her figure closely; it brings out every pound of flesh for the benefit of lookers-on. She should not wear a rosette at her belt, either at the back or front; it makes her look thicker through. She should not wear a lace or ribbon ruff about her neck, though the soft feather one is permissible if it have long ends. She should not wear a short skirt; it gives her a queer dumpy look that is especially undesirable. She should not wear her hair low on her neck; it should be high and arranged with great smoothness, though it need not look oily. She should not wear a string of beads about her neck, rings in her ears, or, if her fingers are short and fat, many rings on them.

Young Folks' Column.

The Dolls' Dressmaker.—After Dickens.

[Written for the Rural Press by Caroline E. Sanders.]

She was a strange, quaint, little figure, sitting, as she generally did, in a little, low, old-fashioned chair, with a kind of small working bench before it. She had a queer but not ugly face, with bright grey eyes, and an odd chin that was capable of great expression. For instance, she would give a weird kind of laugh, then look out of the corners of her eyes, and hitch up her chin, just as if her eyes and chin worked together on the same wires.

But the misshapen little form had a crown of beauty in her long, bright, golden hair which fell in a beautiful shower over the poor shoulders that were much in need of such an adorning rain. At the time we introduce you to her she has a kind friend living with her, a sweet, good, young lady, by the name of Lizzie Hexam.

One day, a boy knocked at her door; it promptly opened with a spring and a click, and as the visitor came in she said:

"I can't get up, because my back's bad and my legs are queer; but I'm the person of the house."

"Who else is at home?" asked the boy, staring.

"Nobody's at home at present," answered the child, with a glib assertion of her dignity, "but the person of the house. What did you want, young man?"

"I wanted to see my sister—Hexam is my name."

"Ah, indeed!" said the person of the house. "Your sister will be in in about 15 minutes; take a seat."

He complied in silence, and the little figure went on with its work of glueing together, with a camel's hair brush, certain pieces of cardboard, previously cut into various shapes. The scissors and knives upon the bench showed that the child herself had cut them, and the bright scraps of velvet and silk and ribbon also strewn upon the bench, showed that when duly stuffed she was to cover them smartly. The dexterity of her nimble fingers was remarkable, and as she brought two thin edges accurately together by giving them a bite, she would glance up out of the corners of her eyes with a sharp look.

"You can't tell me the name of my trade, I'll be bound," she said, after several of these odd glances.

"You make pin cushions," answered young Hexam.

"What else do I make?"

"Pen wipers."

"Ha! ha! what else do I make? You can't tell me."

"You do something with straw," he returned, pointing to a corner of the little bench. "I don't know what though."

"Well done, you," cried the little body. "I only make cushions and pen wipers to use up my waste, but my straw really does belong to my business; try again."

"Dinner mats."

"Ho, dinner mats! I'll give you a clue to my trade in a game of forfeits. I love my love with a B, because she is Beautiful; I hate my love with a B, because she's Brazen; I took her to the sign of the Blue Boar and treated her to Beer; her name's Bouncer and she lives in Bedlam—now what do I make with my straw?"

"Ladies' bonnets."

"Fine ladies," said she, nodding assent; "Dolls, I'm a dolls' dressmaker."

Yes, that was her business. Jennie Wren was a dolls' dressmaker. Her real name was Fanny Cleaver, but she called herself Jennie Wren, so that was the name she went by. The funny part of her business, she used to say, was the way she made the great ladies "try on" for her dolls; that is, if it was to be a grand day in the park, she would go and stand leaning on her crutch, peering through the gate or railing by the hour, until she had thoroughly studied up the different styles of ladies' garments. Sometimes she would make friends this way of little children, but the larger ones she disliked and avoided, because they often made fun of her. Getting the evening dresses was severe work on her, because as she had said "her back was bad and legs queer," and she had only the doorway for a full view of the costumes she wanted to copy, so in the crowd ran great danger of being thrown down or run over.

All this danger was run and hard work accomplished, not solely for her own support but for that of a drunken, worthless father who was a continual worry and care to the little creature.

Poor, poor little dolls' dressmaker.

But Jennie Wren had her happy moments, too. They would come to her as she sat working, always working; then for one moment she would stop and brush back the bright masses of golden hair that fell over her face and listen to strains of sweetest melody, breathe the fragrant perfume of lovely flowers, and in the slanting beams of the sunshine see beautiful children dressed in white with golden crowns upon their heads, who seemed to lift her in their arms far away above the pains and weakness of her poor deformed body.

At those times her face was beautiful, for it showed "the peace of God" which was in her heart. Now she has passed away and in that other world may be far more enviable than the grand and beautiful children we see here. Oh, blessed dolls' dressmaker!"

The Paper Chase—A True Tale.

[Written for the Rural Press by Phryne.]

Children, do you know what a paper chase is? perhaps some of you will say yes, and some no, so I may as well describe one for the benefit of those who do not. A paper chase usually takes place on Saturday afternoon, which is a holiday in all Christian countries. The boys who are going to engage in it, meet at a certain given time and place, one of them carrying a large bag full of paper, torn or cut into smallest fragments; a leader is selected, generally a strong, athletic boy; he carries the bag, and at a given signal, sets off running, gently at first, and then at the top of his speed, the others following pell-mell. As soon as the leader has gained a little distance, he begins to scatter the tiny pieces of paper so that, if the others lose sight of him, there may be no difficulty in keeping the same route; he chooses the roughest ways, over plowed fields and ditches, through hedges and stiles, wherever the leader goes the others are bound to follow, so long as their strength holds out; when this fails, the weaker ones drop out and follow at their leisure; in this way they frequently travel many miles between dinner and supper. Having now described a paper chase I will begin my story.

At a certain village in Yorkshire, England, there was, many years ago, and may be now for anything I know to the contrary, a boys' school where paper chasing was a favorite amusement in its season. On a warm afternoon in October the boys gathered for a chase, and following the usual course arrived at home, hot and tired, just in time to wash hands and faces and prepare for supper. When they were seated, one place was found to be vacant, the boy next to it called out, "Please, sir, Beggs isn't here!" Beggs not here," said the master, "why, where is he?" "Please sir, we don't know," cried out half a dozen voices. "Who saw him last?" "Please sir," said one of the boys, "I passed him about a mile from home, he seemed quite winded and greatly distressed and I called out to him to sit down and rest, the others were all in front." "Why did you not stay with him?" "I was in a hurry to catch up with some of the others before they got home." "Sulyard," said the master, turning to the head boy, "take a light and see if he is upstairs, perhaps he has gone to bed." The boys looked at each other and the supper remained untasted until Sulyard returned saying he could find no trace of him. The master rose, called to the man servant to bring some lanterns, chose two or three of the elder boys to go with them and bade the others remain in their places until they returned. They then left the house to search for the missing boy; they had not far to go, for just outside the garden wall, close to the gate, the poor little fellow lay dead; so near home and yet unable to reach it. What were his thoughts as he lay there, dying, almost within sight of the lights shining from the windows of the schoolhouse? He had been seriously warned by the family physician, before leaving home, that he must carefully avoid all excitement and engage in no athletic sports, and now, now, he must leave this world without one tender farewell to father or mother, or a word of forgiveness for this last act of disobedience; it is so hard for boys to remain passive when they see others in the full enjoyment of health and strength, indulging in the sports which make life so beautiful to the young. He was the only child of a clergyman living in the neighborhood, and the event caused a profound sensation throughout the county, for Mr. Beggs was greatly beloved and respected, and this great trouble drew toward him and his wife the sympathy of all classes. It was a long time before another paper chase took place in that school.

Domestic Economy.

Scrambled Eggs with Beef.—Chip dried beef very fine; put equal parts of lard and butter in the pan; break a few eggs and stir all in; season, and cook one minute.

Cream Cookies.—One egg, one cup sugar, one cup of sour cream, one-half nutmeg, one teaspoonful of soda, flour sufficient to roll. Sprinkle with sugar; bake quick.

Pork Pie.—One-half pound of of salt pork chopped fine, as many sliced apples as you have pork, mix together and put in crust. Sugar and spice to taste, bake slowly one hour.

Poverty Soup.—Pare and slice ten large potatoes and six large onions, then take six slices of salt pork fried crisp, and then mix contents together, and boil until about done, then thicken and add dumplings as for any soup.

Ginger Snaps.—One cup of molasses, one-half cup of butter or shortening, heated and put in the molasses; one-fourth cup of water, one teaspoonful of soda, 1½ teaspoonfuls of ginger. Flour enough to roll rather soft. Bake in a quick oven.

Orange Snow (with Cornstarch).—A pint of boiling water, two tablespoonfuls of cornstarch, the juice of two and a half oranges, half a lemon, a cupful of sugar. Remove when cooked thick, and add three whites of eggs when a little cold.

Cake Without Eggs.—Chop one cup of salt pork very fine, add one cup of boiling water, one cup of sugar and one cup of molasses, four and one-half cups of flour, one teaspoonful of soda, one-half pound of raisins, and other fruit if you prefer.

Baked Parsnips.—Scrape or pare the parsnips, and, if large, cut them in quarters; lay them on a flat baking-dish; add a little water, dredge with flour and salt; bake till soft and slightly browned. A little butter may be put on the top just before serving.

Reliable Cake.—One cup of sugar, one and one-half cups of flour, one-half cup of milk, one egg, two tablespoonfuls of butter, one and one-half teaspoonfuls of baking powder. Flavor to suit the taste. Beat eggs, sugar and butter together, then add rest of the ingredients.

A Bean Stew.—Here is something we always like. Take a good beef bone and boil until tender. Have some beans well parboiled, and to five pounds of beef take two quarts of beans, and salt and pepper to taste, and put in enough potatoes for dinner. Thicken with three tablespoonfuls of indian meal.

Sour Milk Corn Cake.—One cup flour, one-half cup corn meal, one-half teaspoon salt, one-half teaspoon soda, one-third cup sugar, two eggs, one tablespoon butter melted, one cup sour milk. Mix the flour, meal, salt, soda (sifted), and sugar; add sour milk, eggs beaten well, and butter. Bake in shallow cake-pan and cut in squares.

Celery Mayonnaise.—Cut off the root end of four heads of celery; separate them and wipe each piece; cut them in inch pieces, and then into small, narrow strips; put them in a salad bowl; add a mayonnaise sauce and serve. Mayonnaise is more satisfactory than a plain salad dressing in a celery salad, but the plain can be used if desired.

Raised Muffins.—One pint milk, one egg, one-half cup yeast, one saltspoon salt, one large tablespoon butter. Flour for a stiff batter. Mix in the order given; add flour gradually, beating it well, until so stiff you cannot beat. Let it rise over night. In the morning put it into buttered pans, taking it out with a spoon and knife, without stirring out the air. Bake about 15 minutes.

Cream Cornstarch Pudding.—Put a pint of milk in a double boiler. Measure four even tablespoonfuls of cornstarch, moisten with a little cold milk; add this to the hot milk; add a half-cup of sugar, stir and cook constantly for five minutes, then take from the fire; add hastily the beaten whites of four eggs, a teaspoonful of vanilla and turn into a mold to cool. Serve with the custard made from the yolks of the eggs poured around.

Dried Apples for Pies.—Pick and wash them well. Then pour over boiling water enough to cover them. Let them stand all night to soak. In the morning put the apples, with the water they were soaked in, into your stew-pan; if they have absorbed all the water and are nearly dry, add a little more; simmer them slowly, but do not let them boil. When perfectly soft, pass them through a sieve, and prepare them for pies according to the directions given for apples which have not been dried.

Pap or Grated Flour.—Take a quarter of a pound of flour and pour on just enough water to moisten it. Form it into a ball and tie it in a cloth, closely and firmly. Put it in a vessel of boiling water and let it boil the whole day. Then take it out, dip it in a pan of cold water, remove the cloth, and place it in a cool oven to dry, when it will be fit for use. To make the pap, grate some of this, mix it to a paste with cold milk, and stir it into some boiling milk; boil it slowly 10 or 15 minutes.

One Egg Mayonnaise.—One-half cupful of olive oil, one scant cupful of whipped cream, one tablespoonful of vinegar, one tablespoonful of lemon juice, as much cayenne pepper as can be taken up on the point of a penknife, one-quarter of a teaspoonful of salt, and the yolk of one egg. Beat the yolk with the salt and pepper until it is light and creamy, then add the oil, a few drops at a time, until about half of it is used. Add the remainder in larger quantities. As the sauce thickens, add the vinegar slowly, and then the lemon, and last the cupful of whipped cream. This will be sufficient for a pint and a half of fish or shrimps and three small heads of lettuce.

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By The Dewey Publishing Co.

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ALFRED HOLMAN.....General Manager

Saturday, April 2, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Sale of Live Stock—Gilbert Tompkins, San Leandro.
Windmills—Byron Jackson.
Mowers and Rakes—Frank Brothers.
Cultivators—Deere Implement Co
Mowers and Reapers—Baker & Hamilton.
Plants—W. R. Strong Co., Sacramento.
Fruit Evaporator—T. & W. A. Beck, Watsonville.
Hopkins Academy—W. W. Anderson, Oakland.
Lawn Sprinklers—Studebaker Mfg. Co., South Bend, Ind.
Stock Scales—C. H. Lindemann.
Fruit Paper—S. P. Taylor Paper Co.
Incubator and Brooder—Pacific Incubator Co., Oakland.
Fruit Evaporators—Blymyer Iron Works, Cincinnati, Ohio.

☞ *See Advertising Columns.*

The Week.

There has been a continuation of the favorable conditions which go to make a good season. The late rains make the crop, according to the experience of our closest observers, and we go into April with a good figure for late rains surely. The average for April is a little less than two inches, with a possibility of a good deal more.

Transportation affairs continue to engross public attention as they should. The Railway Commissioners have been endeavoring to assign reasons for their uselessness, and have made people still more weary of them.

A large convention held in this city has approved the Nicaragua canal project heartily, with a proviso for Government control, which is really a necessity. More railways are being continually projected. The air is full of rumors of action in the interests of producers, and action is certainly better than listlessness, though the outcome may not be all that is hoped for.

Report of the State Board of Horticulture.—We have received an advance copy of the 1891 Report of the State Board of Horticulture. It is the best volume of a very important series, and consists of nearly 500 pages copiously illustrated with cuts and colored plates. The subjects chiefly treated are the prune in all its aspects, new fruits, olive oil, lemon-curing, propagation of fruit trees of all kinds, insects injurious and beneficial, including the resistance of certain apple roots to the woolly aphis, and a long discussion of the fig blastophaga. All of the subjects mentioned are treated in detail, and the report becomes a compendium of valuable information. We advise all our fruit-growing readers to apply at once for a copy of this report, to B. M. Lelong, the author and secretary of the State Board, at 220 Sutter St., S. F. Applicants should send 12c in stamps, to pay postage. Make early application, for the supply will probably soon be exhausted.

Make Hay While the Sun Shines.

We trust our hay-making readers are getting their pencils sharpened for the straight-forward, practical letters on how to make hay, for which we offer rewards, not as the value of such service, but merely as a token that we appreciate and esteem such contribution. In last week's issue we endeavored to express our desires in this direction plainly, and we hope many readers have already determined to contribute to a result which must be widely useful if we succeed in drawing out the best experience on the subjects involved.

We repeat the announcement which we made last week in case any may have overlooked it. We offer the following

Prizes for the four best Letters on Haymaking on the Pacific Coast:

First Prize	Cash, $10
Second Prize	Cash, $5
Third Prize	Rural Press, one year
Fourth Prize	Map of the U. S. and Chronological Chart of American Political History.

By "haymaking," we include all the acts which enter into the outturn of hay as an agricultural product, viz.: Choice of seed, soil and location; method of putting in the crop; condition of plant at cutting and methods of haying, including curing, gathering up, stacking, stowing away or baling; marketing, including hauling to local markets or to shipping point; cost of product per ton or acre, and customary prices.

Each contributor is invited to write upon one or all the plants he has used for hay on this coast. The letters are not to be elaborate essays, but plain statements of experience, and they may be as long or as short as the writer chooses.

It is our plan to publish in a single issue, if practicable, all the letters which seem to us of public value, and to give our readers a grand symposium on the hay question. If our friends will kindly enter the lists we shall be able to give in one issue of the Rural more valuable information on the hay crop of the Pacific Coast than has ever been brought to light before. Our hay crop is peculiar, as are many other coast crops. Eastern haymaking materials and methods do not apply here. Let us have a grand write-up of hay from coast points of view. Each writer will have the benefit of all the methods and experiences described by others. Each can review his practice in the light of the experience of others, and if he is making mistakes he may find out what they are.

We hope this venture will awaken the interest of our readers. We desire to turn the same light upon every specialty of our agriculture. Even if making hay is not your main interest, write about it just the same, providing you make hay which you have confidence in. If the hay-letter contest succeeds, perhaps the next subject proposed may strike your special hobby. We want 500 letters on hay mailed to us before April 15th.

The Coyote Crop.

The coyote crop is probably turning out greater than any one anticipated. Even the sheepmen, with whom the reduction of these marauders seemed to be a prime necessity, hardly thought so many of the "varmints" could be captured in so short a time. It is currently believed that hunters have not strictly observed State lines when they pursued their game, but it is not yet claimed that scalp producers are breeding coyotes for the market. The time has been too short for such enterprise.

According to the Sacramento *Bee*, the office of the State Controller is very busy with the coyote business. County Clerks have sent in claims for 9 months, showing that 20,299 scalps have been taken during that period, which will pull $101,495 from the State Treasury.

The southern counties, especially, are reaping a harvest in this direction, as will be seen by the following amounts demanded by the several counties for the respective quarters:

Counties.	First Quarter.	Second Quarter.	Third Quarter.
Fresno	$3950	$2245	$2455
Kern	2605	5450	4590
Los Angeles	2040	2010	1935
Merced	2425	1515	1615
Monterey	1130	950	1875
Orange	670	1010	1120
San Bernardino	1865	2070	3700
San Diego	1185	2440	3120
San Joaquin	1170	2000	2210
Tulare	3920	3135	2885

Other counties are in for smaller amounts, which make the aggregate named above. Now, we should like to hear from our readers whether they notice less depredation on their flocks and poultry since the slaughter of coyotes has taken place. It looks as though the next legislature would revoke this expenditure, or largely reduce it, unless some commensurate benefit can be shown. Those who desire the continuance of the existing bounty should collect data to show the value secured by this large item of State expenditure.

More Blastophagas.—Prof. Gustav Eisen, who is now in Lower California, collected indigenous wild figs inhabited by the blastophaga, and he recently sent a collection of the figs full of insects to E. W. Maslin of this city. The insects have been placed on the wild figs at Mr. Shinn's orchard, in the hope that they would find an entrance to the fruit and propagate.

Great Horticultural Events.

The coming months offer the horticulturist, who can travel and admire, rare chances for gratification. Upon this coast, during the months of April and May, there will be held in this State two of the greatest floral exhibitions the State has yet seen. They are different in kind, though both largely appeal to the same tastes. At Santa Barbara, in the latter part of this month, there will be a floral carnival which, for wealth and beauty of scenic effect, bids fair to be exceptionally fine. For weeks past the telling features have been the enthusiastic study of the Santa Barbara flower lovers, and for uniqueness of design and intricacy of decoration the floral creations will be notable.

Another great floral display will be that by the State Floral Society in the Mechanics' Pavilion in this city during the second week in May. Premiums to the amount of $3000—a sum never before offered in such competition in this State—will be striven for. It is intended to produce many pleasing effects in the way of decoration, and to gratify the visitors with music and other charms; but the chief end will be a display of flowers for their own sakes—a systematic and creditable exhibition of the best plants and blooms according to the methods of the leading exhibitions of the older States. All flower growers are urged to contribute to the display and to assist the Floral Society in making its Seventh Show by far the best of the series.

Another undertaking which is ambitious in extent and scope may attract the interest of Californians. It is called an International Horticultural Exhibition, and will be held in London from May until October of this year. It will be a comprehensive exhibition of gardens, garden products, garden art—of everything, in fact, appertaining to horticulture. Its aim is to display the state of progress of horticultural science, taste, resources, implements and plant culture at the present date, and, in addition, the various departments and exhibits will serve as models for every one who loves a garden. Examples of the gardens of all ages will be prepared, including restorations of the ancient gardens of Egypt, Greece and Rome; copies of those of China and Japan, and types of the Baronial, Italian, Tudor, Jacobean, Georgian and Victorian eras. A large subtropical garden will also form a feature of the attractions offered. The tea gardens of India and Ceylon will be represented, illustrating the growth of the tea plant, etc. Arrangements have also been made, whereby foreign countries will cooperate to show the progress in horticulture in their respective lands. It is hoped California can do something for such a show, though distance and consequent expense are great.

State Horticultural Society.

The regular meeting was held at the rooms of the State Board of Horticulture March 25th, President Hilgard in the chair. The following were elected members: S. A. Earle, 765 Mission St.; N. P. Batchelder, 36 New Montgomery St.; C. W. Sawyer, 765 Mission St.; P. W. Butler, 430 Sansome St., S. F.

The Committee on Nomenclature and New Fruits reported as follows:

First—Requesting the President to appoint as additional members of the committee, C. H. Allen and E. W. Maslin.

Second—That the name "Mikado" be substituted for the names "Abundance" and "Botan," as applied to a Japanese plum, of which a specific description will be given later.

Third—That a grape heretofore known as "Isabella Regia," and which originated on the place of J. P. Pierce of Santa Clara previous to the year 1880, be named "Pierce," in accordance with the request of the originator; and that the committee understands that there are one or more varieties of grapes known as "Royal Isabella," "Isabella Regina," "Queen Isabella," etc., and will endeavor to correct their nomenclature hereafter, and for this purpose the committee requests samples and correspondence from growers of such varieties.—Leonard Coates, R. C. Kells, B. M. Lelong, Fred. C. Miles, Committee.

The report was adopted and the recommendations therein approved.

B. N. Rowley made a narrative report of the Fresno Fruit Growers' Convention, as one of the committee delegated to attend the meeting. The report was accepted, and the committee discharged.

Mr. Rowley also made some interesting remarks concerning the shipment of plants and trees to the World's Fair.

Mr. Coates called attention to an International Exhibition to be held in London from May to October, and suggested the advantage of exhibiting California products. Upon motion, Mr. Coates, Mr. Maslin and the Secretary were appointed a committee to look into the matter.

The greater part of the afternoon was devoted to a valuable lecture on fertilizers for fruit trees by Prof. Hilgard of the State University. The lecture was illustrated by a large table of analyses, and will be published by the State Board of Horticulture.

The subjects chosen for the April meeting were "Thinning Fruits," by R. C. Kells, and "Suckering Young Trees and Vines," by Ed. M. Ehrhorn.

The State Press.

Fresno *Expositor:* "The Supreme Court of California is probably the most remarkable judicial body that ever misinterpreted the law or upset common sense."

Colusa *Sun*: "It is so funny to us to see some papers howling 'r-a-i-l-r-o-a-d' from day to day where it can do the railroad no possible harm, and as soon as it is proposed to do anything real or practical against the interests of the great monopoly, these same papers bounce it like a duck on a June bug."

Lake County *Avalanche:* "The new system of voting, while it may at first seem cumbersome, will certainly prevent a large amount of that worst of all crimes against the purity of the ballot, 'fixing' votes. A man who would sell his vote would not be likely to command the necessary amount of confidence to justify the buyer in 'putting up' where he cannot know that the contract is carried out. A man who would sell his vote for a consideration, as a rule, may be relied on to sell it as many times as he can, and to as many parties, and then go and vote regardless of all of them."

Stockton *Mail:* "The Fresno county sheep-raisers declare that if the absurd Government reservation of high timber land in the mountains back of that region is insisted upon by the Washington authorities, who know nothing of the situation, the sheep-raising industry of these counties will be injured to the extent of at least a million dollars a year. The sheep have hitherto been driven into the mountains in summer time to graze upon the rich grasses which grow there and which will go to waste if stock be not permitted to eat them. This is in singular contrast to the Republican policy of protection for American wool."

Watsonville *Rustler:* "The riots in Berlin, the miners' strike in the north of England, and the undercurrent of dissatisfaction with the present condition of affairs that exists in this country, are the natural results of the concentration of power in the hands of the immensely rich. The contest between capital and labor in this country has not yet reached the point where violence takes the place of arbitration. The masses still retain the semblance of liberty of thought and freedom of speech, but that they are woefully lacking in judgment is evidenced by the ease with which corrupt men can secure their own election to offices of trust, and the shamelessness with which, once in office, they rob, directly and indirectly, the public treasury."

Biggs *Argus:* "Wherever an election has been held since the adoption of the new ballot law, under the Australian system, it has given satisfaction to every voter who wants to cast an honest vote. The man who will sell his vote and the man who buys the seller will lose his election-day profit to a great extent. The man who buys cannot now lead the ignoramus who sells his manhood to the polls and watch him cast the vote, and, knowing that the seller cannot be trusted, he will not buy; hence the ballot-box stuffing system which has so long disgraced our civilization will be averted. More particularly will the new system be a benefit in the protection of the honest poor man. The manufacturer and all others who in the past have held the rod over the head of the employe and compelled him to vote the ticket dictated by the oppressor or suffer the ultimatum of being discharged in disgrace and his family made to suffer for food or raiment, is also handicapped.

Extension of the Weather Service.

On July 1, 1891, in accordance with the Act of Congress, the Weather Bureau was transferred from the War Department to the Department of Agriculture. Only eight months have passed since that time, and yet the Bureau has been entirely reorganized and its efficiency greatly extended. In addition to nearly 200 official stations for observation, sending out and displaying the weather forecasts, there are now nearly 3000 voluntary stations distributed in all parts of our vast territory, and which number is constantly increasing. The Secretary of Agriculture and the Chief of the Weather Bureau particularly desire to have the weather forecasts of still greater usefulness to the farmer. To this end, and in hearty cooperation with a number of farmers' organizations that have made special requests for the service, the number of stations for the display of the weather forecasts, the sounding of steam whistles by mills and factories, etc., is now being greatly increased. By the use of the telegraph and telephone, the "Probabilities" will ere long reach a very large majority of the population of the entire country from 24 to 36 hours ahead of the coming changes for better or for worse.

Glanders.—Dr. A. E. Buzard, who has been employed by the Supervisors of several counties to make inspection for glanders, tells a reporter that he has, during the last two and a half years killed 150 glandered horses in the counties of Contra Costa, Monterey and Santa Barbara, and 22 of these horses he has destroyed this year alone. This is a large number for the area covered. If a human being is so unfortunate as to get inoculated with the virus of this dread disorder, it means certain death sooner or later, for it is absolutely incurable. During the past 12 months, to Dr. Buzard's certain knowledge, five persons have died of it—one in Soledad, one in Santa Cruz, two in San Bernardino county and one in Santa Ynez, and he has heard of several other cases also.

Training School for Farmers.

Further Discussion Concerning the Subject of Mr. Kemp's Letter.

Oakland, March 29, 1892.

To the Editor:—The writer was delighted to note that the able communication of Mr. Kemp in last issue of Rural, was so appreciated by the editor, and has no doubt that upon further consideration he will conclude that it opens a question more important to his readers and the future welfare of the State with which they are identified, than any probable solution of the four leading questions—currency, transportation, tariff and reciprocity—likely to absorb public interest for the next seven months. Upon this basis we think the question merits thoughtful and continued discussion and deserves a reasonable share of space. To awaken the public interest likely to result in such an enterprise requires agitation.

Attention was drawn to the small proportion of young men engaged in industries likely to make prosperous citizens. By studying the statistics of the Labor Bureau and enquiry among those whose line of work had qualified them especially to judge of this matter, showed that probably not less than ten thousand young men between 15 and 21 in the city of San Francisco, are without useful occupation at the very time of life when character is forming. As the urban population of California is about 600,000, it is very likely that we may double the above figures for the army of idlers in the State. As work is always so plenty at farms and mines we could not expect a like proportion of recruits from those districts. No statistics have been prepared to cover this point, but expert estimates will approximate these figures.

CAUSES OF IDLENESS.

1st. Circumstances of parents average better than those of other States, and parents feel less necessity for help in bread-winning.

2d. Introduction of machinery and division of labor make it more profitable for manufacturers to employ operatives who become skilled on a single machine or specialty, whose places can be easily filled, and who can never command high wages; than to foster an apprentice system designed to train thorough mechanics.

3d. Labor organizations consider it their policy to adopt regulations limiting the number of apprentices, in order to limit the supply of skilled labor and keep up wages at a high standard as long as possible. This in turn discourages the investment of capital in new enterprise, and so restricts demand for labor.

The results may readily be seen:

1st. The boys are just such as their fathers would have been had they grown up under the same conditions.

2d. We are sending to Europe, where they have long apprenticeships and thorough technical schools, for skilled mechanics. These are to be found as draughtsmen, foremen, superintendents and proprietors.

3d. We are graduating all too many of our own sons from the High School of Idleness, with the credentials of the court, to the Universities of San Quentin and Folsom.

WHERE IS THE DEMAND FOR SUCH LABOR?

The society which Mr. Kemp represents finds it by taking young offenders to their headquarters, giving them a short course in civilization, and finding homes for them in the country. His special work is to visit them at those homes, and see that they are receiving the training likely to make them good citizens; and, while meeting with his share of discouragement, he is able to point to many boys once apparently hopeless who are now successful and honored citizens. The very high esteem in which Mr. Kemp is held by those associated with him in the work, as a man of broad ideas, successful experience, and enthusiastic devotion, was the reason why the communication was solicited.

A STILL BROADER DEMAND.

We were interested in Mr. Mills' statesmanlike showing of the industrial conditions following the aggregation of large estates that is going on in Northern California, and hope for another communication showing the resulting loss to civilization. The development of irrigation, especially in the San Joaquin valley and the southern counties, has a marked tendency toward intensive farming. There is as good a prospect of finding books, pictures, carpets and music at the ten-acre cottage as at the thousand-acre mansion, and a far higher enjoyment of social life. To develop our State to the standard found in some others, it is estimated would require a ten-fold increase of population. Realizing the advantage of small holdings and increased population, we are making determined and persistent efforts to secure immigration, believing that we have better inducements to offer than any part of the world.

We think that a white citizen is worth as much to the State, as an increase of public wealth, as a black man was once worth on the auction block. For one in the prime of life, that was about the price of 100 month's service; so we may say, that the State, as a whole, can afford to spend on immigration as much as the immigrant brings, and the value of his services for a hundred months.

To make ten-acre homes a success, requires intensive agriculture, reinforced by high skill. If such an institution as Mr. Kemp has in mind can take boys before they are spoiled, and train those likely to follow in the footsteps of former idlers, to meet this special and great demand of the State, may we not fairly say that the gain in each case equals that of two average immigrants? With two great universities, of which every Californian is justly proud, we believe the demand for higher culture is fully provided for, but think that there is a field not less promising and useful, if less conspicuous, for the smaller colleges and high schools in preparatory work, joined with methods by which Eastern academies, in their palmy days, graduated so many intelligent farmers and excellent citizens.

Still, more inviting is the field for training schools that shall combine work and study to such advantage, as to take the 15-year-old boy, make him practically self-sustaining until 21 and graduate him with a good general knowledge of the practice and science that go to make a thoroughly well-informed farmer, with one or two years' training in some chosen rural specialty. To outline a plan adapted to accomplish this result in an economical and efficient manner, we shall ask your futher indulgence.

Frank S. Chapin.

Public Lands Questions.

To the Editor:—Please answer the following relating to land taken up as a Government homestead in June in 1877, proved upon according to law in the fall of 1882, and a Government patent secured in 1883.

Now, has any party or parties any right by law to upset or infringe on my right, if the Government gives me right according to the laws governing? Also, can any one open roads or trespass without paying for such privilege, or without my permission? Subscriber.

RESPONSE BY HAVEN & HAVEN.

San Francisco, March 25.

To the Editor:—In reply to the inquiries by you submitted to us, we would state:

First. If your correspondent has strictly complied with all the provisions of the laws of the United States, with reference to the acquiring of title to Government lands open to homestead entries, and a patent has been issued to him in the due course of procedure, and by the proper authorities, and no fraud has been practiced in obtaining the same, he then has a perfect title to the land covered by such patent. This title is, however, subject to attack, in a court of equity, on the ground of fraud practiced in any of the steps or proceedings by which the patent was secured. A Government patent is a final determination of the validity of the title of the premises covered thereby, so far as the Land Department of the Government is concerned; but a court of equity, which regards "that only as done which ought to have been done," will set aside even a Government patent if it can be proved that fraud was the means, or a portion of the means by which said patent was secured. Such fraud must, however, be clearly proved, and such that would mislead the officers of the Government, and not known to them before the issuance of the patent.

The courts are very loth to invalidate Government patents, and will do so only in clear cases.

The following quotations from decisions of the United States Courts will show their attitude upon this question:

"It is a startling proposition to those who hold patents to lands . . . that, after 25 years of compulsory litigation, intended, in the language of the various Acts of Congress, "to settle titles to lands in the State of California;" the holders of all such patents are liable to be called upon to re-litigate their claims with the Government in the ordinary courts of justice; and that the patent, instead of being conclusive evidence of a "settlement" of the title—the end of litigation—is but the foundation for the beginning of a new contest to unsettle it."

Sawyer, Circuit Judge, in "United States *vs.* Flint"—4 Sawyer's Reports 85:

"It is at war with the whole character of proceedings in courts of equity, to call in aid its extraordinary power to set aside, on these allegations, such a solemn public record as a patent of the United States."

Justice Miller of the United States Supreme Court, in "United States *vs.* Atherton," 102 U. S. Reports 374:

"It is idle at this day to suppose that the expensive machinery of a court of equity is to be put in operation for the purpose of reviewing and reversing the judgment of the tribunals to whom that question (the question of the validity of the right for the issuance of a patent) is by law entrusted, on such loose, untraversable allegations of fraud in general."

U. S. Justice Miller in "Marquez *vs.* Frisbie," 101 U. S. Reports 478.

Second. The holder of the legal title to land, who is in the possession of the same, has the absolute control thereof, and no other person has any legal right to "open roads or tresspass," without the consent of the owner of the premises, unless such right has been acquired by adverse user for the statutory period, or by some right of easement or other title superior to that of the person in possession. Respectfully yours, Haven & Haven.

530 California Street, San Francisco, California.

Improve the Waterways.

(*Letter by T. W. Hubbell.*)

The improvement of the waterways of the country has been a great element in the prosperity of the West. For instance, corn used to cost 25 cents per bushel from Chicago to Buffalo. The waterway in its shallowest point has been deepened from 9 to 16 feet, and in other ways improved, and the water competition has made it possible to ship corn from Chicago to New York at 6 cents per bushel and to Liverpool at only 11 cents per bushel.

If the water competition had not entered into the problem, the farmer would have yet had to give all the profit on his product to the railroads, and the people of Iowa, Illinois, Kansas and Nebraska would yet be burning corn for fuel. The railroads lobbied against appropriations for the improvement of waterways for many years and long prevented it. Now, the water advocates are very strong and get a great deal from the Government.

Yes, I believe that the Nicaragua Canal is a great scheme for the prosperity of the country, and that it will surely get the aid asked, and that not long from now it is capable of cutting in two the prices of transportation from east to west and vice versa.

Cheaper Rates to California.—The Santa Fe route has notified the Trans-Continental Association that after June 15th it will sell second-class westward tickets at these rates: From Chicago and common points, $34.30; from Mississippi river points, $20.81; from Missouri river points, $14.30.

Patrons of Husbandry.

The Master's Desk.

E. W. DAVIS, W. M. S. G. OF CALIFORNIA.

The State Grange of California has, through the Executive Committee, begun a thorough canvas of the State. From all sections where meetings have been held, come encouraging reports. A force of speakers well posted in the work of the farm and on the financial and political needs of the farmer, is engaged to speak to the members of the Order, and the farmers generally, at times and places where the greatest good can be done. If any section is omitted from the list, and there are farmers enough interested to secure a meeting at that point, a speaker will be sent on application. The object of this canvas is to arouse the farmers to their condition and to urge on them the necessity of organization. The Grange comes with substantial men and solid reasons, and urges the farmers to *act*.

The silver battle has waged hot in Congress during the past fortnight. In the lower House of Congress there were but *two* of the California delegation who voted for the Bland Silver Coinage bill. They are Representatives Caminetti and Bowers. Representatives Cutting, Geary, Loud and McKenna voted against the bill.

Bros. Brigham, Charters, Rhone and Trimble are doing good service for the farmers of the United States in appearing before the Committees of Congress. These gentlemen are giving *information* based on practice, and not *suggestions* based on theory. We hope much more good is yet to follow from the seed they are planting.

Testimonials about the success of the Trade-Card plan of purchasing are of every day occurrence. It is a feature peculiar to the Grange. Farmers who want to know more of it, or to get benefit from the plan, must join the Grange.

There ought to be a good Grange at Suisun City. Won't some of the thrifty farmers thereabout secure the necessary charter list and send for a Deputy?

The Supreme Court of Ohio has just decided that the "trust" existing between the Standard Oil Company and other smaller oil companies of that State is illegal. Thus the Goliah—"Trust"—has had another blow from the slungshot of justice. Keep after the combines, and sooner or later victory will come.

Mary's Little Lamb, with its fleece as white as snow, has done more to bring trouble to the home of the politician than any other of the domestic animals. McKinley with his bill, and Mills with his proposed law, found the wool clause a hard one to frame. And for all that, the dear little lamb is not all to blame. Democrats as well as Republicans are willing to have the spring lamb with the green peas; to wear good woolen clothes, and to sleep under the fine blanket. Then why, oh why fall out about the woolen clause!

What would the home on the farm amount to if there were no boy to hoe the garden, to milk the cows, to split the kindling, to turn the grindstone, to ride the horse, to lose the tools, to break the eggs, to do the whistling, to take the scoldings, to be late at school and to be on the deck when circus-day comes? Oh, yes, we must have the boy, in spite of all his foibles, for he is the kingpin that holds the home machinery all in place. Three cheers for the American farm boy. He may soon be a Governor or a Congressman. Bear that in mind when you see him, or when you feel like scolding the boy on the farm, who may perchance have a dirty face and ragged clothes. Maybe you were a farmer's boy once on a time yourself.

Very soon, nominations for the Assembly and for the State Senate will be made in this State. See to it, fellow farmer, that one of your own number is nominated. See to it that a man who will not sell his honor and his birthright for a small mess of pottage, gets that nomination. Then don't forget that seven Congressmen are to be elected this November. How would it do to send about *five* farmers to Congress? If you are to have a voice in these nominations you must attend the primary elections and see that proper delegates are sent to County, Congressional and State Conventions. If you want a mutual insurance law, if you want U. S. Senators elected by direct vote of the people, you must see to it that friends of these measures are sent to the State Legislature. Stand for your rights, farmers. Select farmers to help make the laws under which you must live and pay taxes.

The Secretary's Column.

[A. T. DEWEY, SEC'Y S. G OF C., No. 220 MARKET ST., S. F.]

From Oregon.

H. E. Hayes, Master of Oregon State Grange, writing to me, March 5th, says that Mrs. Hayes' health, while not recovered, is sufficiently improved to permit of his absence from home, and he is away on duty much of the time. He has appointed Mrs. B. Scofield of Cornelius, Washington Co., as Chairman of the State Committee on Woman's Work in place of Mrs. Hembree, whose death is deeply deplored by her many friends. Speaking regretfully of the lack of support of Grange papers, he states: "I hope that you will still continue, as you have in the past, to aid in improving the condition of agriculturists."

The letter closes with the following: "As the springtime is warning us that May will soon be here with all its grandeur, and that the Oregon State Grange will be called together Tuesday, May 24th, in Albany, Linn Co., the question arises 'What will be its work, and the objects to be accomplished?' I have just received a letter from Hon. Jno. H. Mitchell, our U. S. Senator, in answer to one I addressed him upon the resolutions we passed in the last National Grange, to wit, for free coinage of gold and silver; election U. S. Senators by the people; pure food; postal roads; also for the relief of those who fought our Indian wars and supplied their wants. He assures me that he agrees with me upon all of these questions and will give them hearty support.

"Our Order has been a great school for the farmers who belonged to and attended its meetings. Every member was their teacher, and all nature with its daily lessons enlarged their views, and those that have availed themselves of their grand institution of learning, know of the evils that have crept into our body politic, and the remedy. We need not be longer deceived by our billionists, nor be sold out by their wire pullings; but we must not divide our forces if we expect to make a success in restoring equal rights and protection to labor and production. We must select our servants for their qualification and honor instead of the name that they may sail under.

"I am in hopes that yourself and wife, Worthy Master and Sister Davis, and all of those honored brothers and sisters that have visited Oregon State Grange, and many others, will meet with Oregon State Grange the fourth Tuesday (24th) of May. In extending my heartfelt wish to California Patrons, I am sure I only voice the wishes of the Patrons of our State. Be assured you will meet with a hearty welcome.

"Mrs. Hayes wishes me to say that she fears her labor in the Woman's Work in our Order is past, her health, not her desire, preventing. Yours fraternally,

H. E. HAYES."

FARMERS' LECTURES.

The State Grange lecture canvass in California, now in progress, offers an opportunity for farmers and their families to receive much information in a pleasant and profitable way. Pending the public meeting of Paso Robles Grange, at which Bros. J. V. Webster, Geo. Steele and W. L. Overhiser were announced to speak, Editor Tuley of the local paper remarks:

"The farmers of this vicinity are congratulated upon the opportunity presented them by the grange of this place of hearing Mr. W. L. Overhiser, the Grange orator of this State. An open meeting has been arranged and will be held at the Masonic hall in this place on Wednesday next, March 30th, at 1 o'clock. Messrs. J. V. Webster and George Steele, of this county, will also speak. No one who can make it possible should fail to attend this meeting. The subjects to be discussed are of vital interest to the farmers. Great efforts are being made to educate the farmers in the affairs of government, and to put them in possession of facts that will aid them in distinguishing between what is and is not designed to be of benefit to them, and they should not miss an opportunity to hear good speakers whenever the occasion presents itself. The politicians and the partisan press charge the farmers with spending time sitting upon boxes and whittling pine sticks that ought to be spent in following the plow. It would suit the fancies of these gentry to have the farmers stay at home and give their attention to the raising of crops and paying taxes while they did the whittling and lived on the fat of the land. The American farmer has learned the fact that if he gets justice at the hands of his law-makers the demand for it must come from his own class. In order to make these demands intelligently, it is necessary for him to understand the situation. Time spent in discussing public questions is not always time thrown away. A day spent in hearing good speakers may be worth more in dollars and cents than if it were spent at home in hard labor upon the farm."

QUARTERLY REPORTS.—The following Granges have lately reported for quarter ending March 31: Santa Cruz, Two Rock, Lodi, Santa Rosa, Bennett Valley, Yuba City, Eden, Glen Ellen, Eureka, Stockton, Merced, Lockeford, Valley and Waterloo.

THE number of applications for membership in the Subordinate Granges of California, we judge, has been greater during the past month than any other within the past ten years. There is a decidedly lively working up in Granges in various parts of the State; evidently, the early result of the general lecture canvass going on along the whole line.

CHANGE IN APPOINTMENTS.—I have referred all notices received at this office from Lecturers unable to fill all their appointments, to the W. M., who will fill vacancies and report to all interested, through the RURAL or otherwise.

Farmers' Alliance.

People's Party Leaders.

Mrs. Nye's "Camera" Sizes Up Some of the Prominent Men at St. Louis.

Last week we printed the first half of a paper read by Mrs. Anette Nye before Duarte Alliance, in which she "pen-pictured" some of the leading members of the late People's Party convention at St. Louis. In this issue we give the concluding part of the paper:

Of our California men little need be said. President Cannon commands respect and admiration everywhere and always. He has the happy faculty of doing better than you thought he would, and thus surprising you agreeably. True as steel, firm, yet not arrogant, level-headed and conscientious, we have in him a leader to be proud of.

J. A. Johnson of San Francisco is an educated man of the broad gauge type. He went to St. Louis to work for the success of the People's Party; also to advance the interest in reform press work. He expects to give us soon, from San Francisco, a daily paper with the associated press news, as well as all other news, pertaining to this new movement. A weekly will also be published, and we hope to have the truth hereafter, at least a part of the time. State Lecturer Gilbert and Secretary Poundstone are also stanch and true, earnestly working for the cause they have espoused.

Terrence V. Powderly.—Close to our delegation of women sat the K. of L., and with them that grand man, so reviled and spat upon, so belied and threatened, yet holding his place in the hearts of those who know him best as no other man in these United States could hold it. Terrence V. Powderly of Pennsylvania, than whom we believe no more brave, no more conscientious man breathes to-day. He converts the offscourings of Europe into men who can be trusted as American citizens. Castle Garden of New York is his recruiting field. How much bloodshed he has prevented during his eighteen years of service as Grand Master Workman of the K. of L. no one can know. His men have learned to obey their commander, as one little incident at the conference proved. When he calls they follow. When he commands they obey most willingly, for he has a manner so gracious that he wins all hearts.

Hon. Jerry Simpson of Kansas.—Here is a character—an orator whose words ring in the ear long after his voice is hushed; a careful thinker who dives down to the bottom of facts and principles, then places them before his hearers so clearly and forcibly as to carry conviction to all who listen. As he is but 50 years of age, and these set so lightly on him, we may confidently expect much from him in the years to come. He will be popular, as well among his political enemies as among his friends, for he has the good sense and sagacity to turn everything to his own advantage. Humorous, quaint, odd if you please, he always amuses, pleases and instructs while he forces home the truths he handles. He makes a humorous point in a peculiar, slow way which is very telling. He always has a story or an illustration ready for use. A studious man, and one who does his own thinking on all subjects, religious as well as economic, he will command the respect of the whole country, and will be one of the immortal few, of this time, whose words and works will live in history.

(*Continued on page* 317.)

CHAMPION

GIMBAL JOINT

MOWERS

—AND—

REAPERS.



Three Sizes.

All Guaranteed.

Gearing Warranted

Not to Wear Out.

Will Cut Wherever

Any Mower Can.

TESTIMONIAL.

FERNDALE.

B. & H.—We are pleased to note that you have the agency for the renowned Champion Mowers and Reapers. For many years past we have sold these machines and do not hesitate to state that they are without a peer in the market. Count us among your agents in the future.

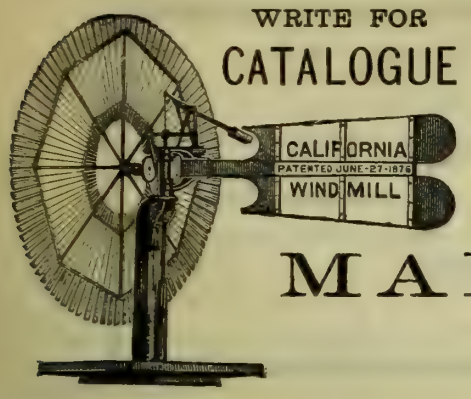
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WINDMILLS!

AT

MANUFACTURER'S COST!!

Byron Jackson's "California" Windmill.

In consequence of the pressure of other business, and a desire to clear out all "side issues," and to devote my entire energies to my lines of pumping and harvesting machinery, I have decided to discontinue manufacturing WINDMILLS; and to close that part of my business, I offer all the stock of them remaining on hand at the following UNPRECEDENTED PRICES:

10-Foot Wheel, Weight 650 lbs	**$35.00**
12-Foot Wheel, Weight 700 lbs	**45.00**
14-Foot Wheel, Weight 930 lbs	**55.00**

These prices have never been approached in America. Jackson's "California" Windmill is guaranteed first-class, equal to the best. The terms are: Cash with order only.

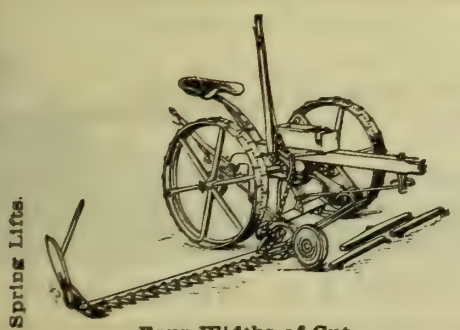
I have also a large stock of "RED JACKET" WINDMILL PUMPS which I desire to close out promptly at MANUFACTURER'S COST. SEE THEM! WRITE FOR PRICES!

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625-631 Sixth Street.....SAN FRANCISCO, CAL.....149-169 Bluxome Street.

Do You Think Your Farm Pays You Enough?



Spring Lifts.

Four Widths of Cut.

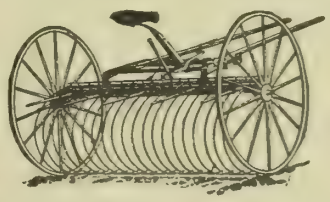
No: If you are working and worried with machinery good once, but out of date, as now manufactured, or machinery claimed to be good, because it's so novel or new.

Yes: Or, at any rate, farming pays better when you use the best you can get for your money—reliable machinery, improved to date, as good as the best in EVERY PART.

Machinery That More Than Pays for Itself.

That is what you will have when you use

Walter A. Wood Mowers and Rakes.



Walter A. Wood Machines have been steadily growing in perfection for forty years. Every part works right. They are durable, simple, light draft and up to date.

If your dealer cannot supply you, address

FRANK BROTHERS, 33 & 35 MAIN STREET, SAN FRANCISCO, CAL.

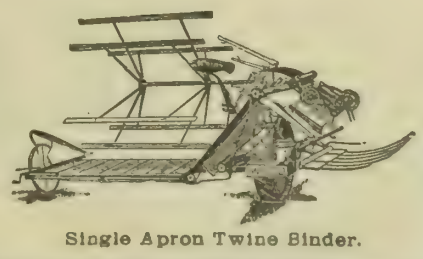
WALTER A. WOOD M. & R. M. Co.,

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Factories at Hoosick Falls, N. Y., and Minneapolis.



Single Apron Twine Binder.

The Field.

Where Futures Hurt the Farmer.

The Washburn anti-option bill, now under consideration by a House committee, has developed some ardent friends of the farmer in entirely unexpected quarters. Grain gamblers and cereal poker players, whose occupations are threatened, forgetting their own danger, have flocked to Washington to assist in protecting the poor, misguided and friendless farmer. Of course, they have no ax to grind, no personal purpose to serve! They are only actuated by that high and noble charity of soul, that stern sense of justice, that so characterizes their dealings among themselves. Their only fear is, that the bill under consideration may reduce the price at which the farmer can sell his grain—the annihilation of their own business does not trouble them. They are public benefactors, who struggle and shout in the wheat pits, vociferously selling wind and greedily buying grain, which is sown, grown, harvested, threshed and sold in a second's time, only that the price of the actual article, when grown and marketed in the old-fashioned way, may not get so low as to discourage growers and leave us all to starve.

The tender solicitude of these self-constituted custodians of the public weal is most touching, and their tears put to shame the immortal Pecksniff. Practically, the only argument advanced against the bill by the presidents, secretaries, members and hangers-on of the boards of trade who have appeared, is the assertion that trading in futures is necessary to maintain values. An examination of the testimony adduced, shows that almost without exception, witnesses have persisted in ignoring the whole core of the matter, by talking entirely of the effect of stopping sales of actual grain for future delivery, and ignoring the practice at which the bill is aimed of betting day by day of the value of a bushel of wind on some future date. Sales of actual grain for delivery as wanted, or on some specified date in the future, are necessary in distributing the crop, and it is expressly provided that such transactions do not come within the purview of the measure. It is aimed at those men who do not see or own a bushel of grain from one year's end to another, and yet profess every day to sell and buy as much wheat as could be grown in one or perhaps a dozen counties. The honest grain dealer has no personal interest in the bill, because it in no way affects his business, which is legitimate, but his living has been stolen by the gambler, and is now being used in the service of the devil of speculation.

To give a semblance of legitimacy to their transactions, it is declared that every board of trade man who makes a contract for future delivery is bound to deliver the actual grain, and that, therefore, in his frantic efforts to keep his contract, he helps to sustain prices. This is all cant and subterfuge. When he sells his promise, he watches his chance and buys a similar promise from another trader who, in turn, hedges by a like purchase from a third, and so on back to the first man. When settling time comes, A finds that he has agreed to deliver to B, 100,000 bushels of wheat at 65 cents, but B has sold the promise to C at 65¼ cents, and he in turn has sold it back to A at 65⅜ cents. Here are three sales aggregating 300,000 bushels of wheat. How much of the farmer's grain is needed to fill the contracts? Not a bushel. They get together and solemnly agree that for the wind which has been bartered, B owes A $65,000, but A owes C $65,375 and C owes B $65,250. In this little jack-pot, A has lost $375, of which $250 goes to B and $125 to C, while A recoups by fleecing some other broker or shearing some outside lamb in another similar transaction. Not a bushel of wheat has been needed, and yet men have gravely asserted that this little betting ring has helped to sustain the price of the actual grain. Occasionally, a big gambler makes a break in this little ring by taking all offers and selling nothing. He becomes a reservoir of promises, and when settling time comes, purchases have stopped at him and sellers have no promises to balance against their sales. If ever the theory of an actual delivery works, it should here; yet at every corner sellers buy back their own promises at whatever rate the Napoleon sees fit to charge, and settle by paying the difference in cash. The amount of grain actually offered is insignificant. It could not be otherwise. The city of Chicago never contained at one time more than the merest fraction of the grain represented by the holdings of Old Hutch, in the corner of September, 1888. The whole thing is pure and simple betting on the course of prices, and the only use operators have for a bushel of wheat is in the form of bread or cake, as they have struck or missed the combination.

So far, the business of the speculator does not affect the actual holder of grain, and some supporters of the system have vigorously called attention to the fact, not noticing that, by so doing, they upset the first contention that a positive benefit is bestowed. There is a point, however, in which the business touches the farmer's pocket, and touches it deeply. The man who sells his promise to deliver wheat in a certain future month has now an interest in nothing connected with wheat except the course of prices. His interest is to keep values below the point at which he sold. How? By creating the impression that prices are too high. A large *proportion* of his prospective profits can profitably be spent in making the public see it in this light. When he is successful, however, he has affected somebody besides the holder of his promise. He works by means of stories of large stocks just ready to come into sight, by tales of increased supplies in other lands, by prophecies of immense crops soon to be garnered, by creating the feeling that money invested in wheat is not safely placed. When settling time comes, he has frightened his fellow operators until they have sold him promises at a figure lower than that at which he disposed of his; balances are struck, and checks, not wheat, delivered. The influence has been operating elsewhere. The farmer has been persuaded that the o'er told tales of abundance are true, and he rushes to dispose of his stock before the decline, which he believes to be inevitable shall fully reach him. This brings a sudden increase in visible stocks; purchasers begin to see an actual fulfillment of the prophecies, and hold off in order to buy at the bottom. The bottom falls out and the farmer parts with his grain at the lowest point reached, yet thinking that he has been specially fortunate in getting in before the deluge. At this point the millers and middlemen stock up, the panic is over and nobody but the farmer has suffered. The board of trade man who toppled over the first brick has probably got nothing from the losses of the farmer. He has succeeded in his purposes by shearing the lamb which has ventured into the ring, but he has created an excitement during which every man who handles the grain between the field and the table has picked the farmer's bones, and yet neither he nor his associates have needed an ounce of wheat to settle their little transaction.

Now a change comes over his dream. This little venture has paid well. He is ready to sell again and things look altogether different. From *ursus despondent* he becomes *taurus rampant*. Prices are too low. A foreign war is a certainty just three months away, and he will sell you a promise to deliver wheat then. Farmers' stocks are exhausted, the granaries swept bare, while the drouth, rust and chinch bugs have destroyed the coming crop. We are bound to go hungry. Instead of exporting wheat, the necessity of importing it stares us in the face. Again he sells and settles up contracts for thousands of millions of bushels without using a peck of grain, but again he has disturbed values of the actual grain. The holders who bought when the farmer sold at the bottom take the cue and hoard their supplies, prices go up and up, the consumer at last settling the bill. The farmer is not in at this performance. The matinee of the downfall of wheat was played for him. He can see his 60-cent wheat go to the table in flour at $6 to $8 per barrel, and wonder why there is no profit in wheat-growing. The consumer can look at it from the other end of the line and wonder where the difference has gone.

It is a significant fact that almost all bear raids for the purpose of depressing prices are made in the fall and early winter, while the farmer still has or is just parting with his crop, while the bull movements come later after farm stocks are safely gathered into commercial hands. The gouge works both ways, the grower getting too little and the consumer paying too much.

This constant play between the animals in the pit, while it does not necessarily or actually call for the purchase of any grain, molds public opinion, disturbs values, lessens the influence of the law of supply and demand, and gives abundant opportunity for the middleman, who only handles the grain, to gouge the farmer who worked a year for it on the one hand, and squeeze the consumer, who has no alternative but to buy, on the other.—B. W. Snow in Country Gentleman.

Unitarian Literature

Sent free by the Channing Auxiliary of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mr. P. F. Giddings as above

IN A DAY.



Lawrence, Kans., Aug. 9, 1888.

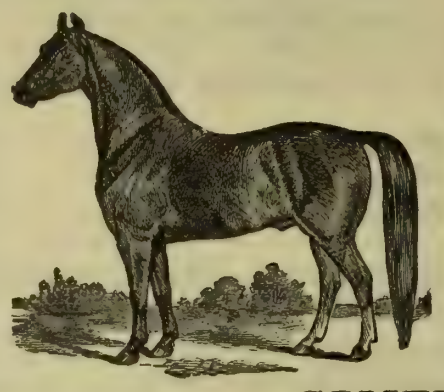
George Patterson fell from a second-story window, striking a fence. I found him using

ST. JACOBS OIL.

He used it freely all over his bruises. I saw him next morning at work. All the blue spots rapidly disappeared, leaving neither pain, scar nor swelling. C. K. NEUMANN, M. D.

"ALL RIGHT! ST. JACOBS OIL DID IT."

GRAND AUCTION SALE
OF
CHOICELY BRED TROTTING STOCK.



The following well known Standard Trotting Stallions will be represented:

BAY ROSE....2:20½
SIDNEY....2:19¾
STAMBOUL....2:11
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DIRECT....2:06
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And other Noted Stallions.

Trotting Geldings, Horses and Mares for all Work.

COMPRISING

STALLIONS, BROOD MARES (In foal to Bay Rose, Sidney and Direct), COLTS AND FILLIES,

And G. Valensin Mares, heavy with foal to Sidney,

PROPERTY OF

HENRY and IRA PIERCE, OF SANTA ROSA STOCK FARM,

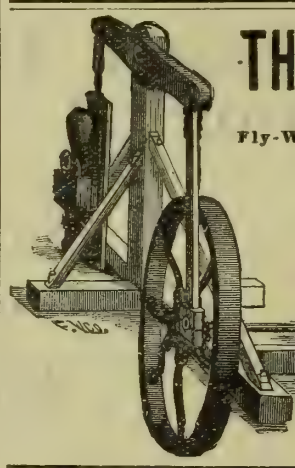
ON

WEDNESDAY, APRIL 13, 1892, AT 12 O'CLOCK, AT OAKLAND TROTTING PARK.

Catalogues ready April 1st, which will be sent upon application to

KILLIP & CO., 22 MONTGOMERY ST., SAN FRANCISCO, CAL.

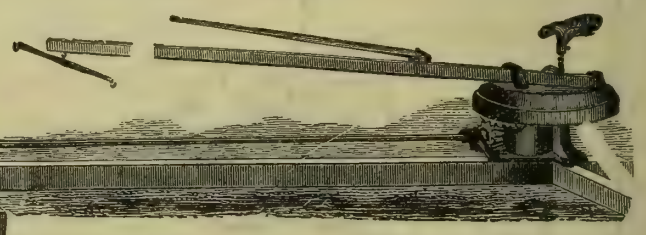
THE ECONOMY HORSE-POWER



—WITH—

Fly-Wheel Walking Beam for Pumping Large Quantities of Water

Send for Catalogue and Price List.



F. W. KROGH & CO., 51 Beale Street, S. F.

THE ROCHESTER STEEL FRAME
ORCHARD and VINYEARD GANG.

LIGHT WEIGHT, EASY DRAFT, AMPLE STRENGTH.

STEEL FRAME OUTSIDE OF WHEEL

Prevents Injury During Close Cultivation.

LEVER ADJUSTS DEPTH WHILE PLOWING.



A simple adjustment permits plow nearest vines or trees to make shallow furrow, say two inches, thus avoiding danger to the roots, the others plowing required depth.

Weight of Three-Gang 7-inch only 200 pounds, and amply strong for hard soils. Price complete, $48 00.

The only implement with advantages of both Plow and Cultivator, thus satisfying the advocates of either.

Send for Catalogue and Testimonials.

G. G. WICKSON & CO., 3 & 5 Front St., San Francisco.

346 N. Main St., Los Angeles. 141 Front St., Portland.

Short time only I will send my Electric Belts and Trusses

DR. JUDD'S

On 6 Months' Trial

If You Wish Health, Address DR. C. B. JUDD, Detroit, Mich.

ELECTRIC BELT

WILL CURE: RHEUMATISM, INDIGESTION, LAME BACK, HEADACHE, INSOMNIA, LIVER COMPLAINT, KIDNEY COMPLAINT, NERVOUSNESS, DYSPEPSIA, PARALYSIS.

THE SECOND

SOUTHER FARM SALE

WILL TAKE PLACE AT THE

SOUTHER FARM,

NEAR SAN LEANDRO, ALAMEDA COUNTY, CALIFORNIA.

The Sale includes the ENTIRE COLLECTION OF BROOD MARES, COLTS AND FILLIES. Only the Stallions, Work Stock, Road Animals and Pensioners will be retained. The business of Boarding, Training and Swimming Horses will be carried on more completely than ever.

Stock will be shown on two Saturdays, April 9th and 16th. Sale takes place on

WEDNESDAY, APRIL 20, 1892.

Promptly at Noon, rain or shine. Lunch at 11. Sale and Lunch under cover if it rains.

THERE WILL BE SOLD

Colts by Glen Fortune, Mountain Boy, Figaro, Jester D., Etc.

Fillies by Sydney, Wildnut, Dexter Prince, Etc.

Brood Mares in Foal to Glen Fortune, Mt. Hood, Jester D., Figaro, Etc.

Young Horses that will make Splendid Road Animals, Single or in Team.

EVERY ANIMAL PUT UP WILL BE SOLD without limit or reserve, exactly after the manner of the First Souther Farm Sale.

ON EXHIBITION DAYS, April 9th and 16th, Saturdays take 12 o'clock broad gauge boat from foot of Market Street, San Francisco, connecting with San Leandro train, which leaves First and Broadway, Oakland, at 12:30. Special train leaves City at 9:30, Oakland at 10 on sales day.

CATALOGUES, ETC., OF

KILLIP & CO., 22 Montgomery Street, San Francisco,

OR OF

GILBERT TOMPKINS, Souther Farm, San Leandro.

FLORIST AND GARDENER.

Carnations in Southern California.

[Paper prepared by C. J. Haettel, Redondo Beach, Cal., and read before the American Carnation Society, February 16, 1892.]

The following notes are not designed to be a systematic treatise on the cultivation of the "Divine Flower" in this section, but will outline briefly a few points that may be of interest to those not conversant with methods differing materially from those of other localities.

Our soil is almost pure sand, of a dark color. Plants grown from cuttings and pinched back once, attain a growth of about two feet in diameter and produce hundreds of fine flowers. We never lift them, but keep them always in the ground.

Plants set out in February will bloom until the young plants commence blooming. These will be set out in January, direct from the cutting boxes out of the sand to the open ground, and come in bloom in June, when the old plants will be destroyed.

Seedlings I never pinch back, but let them bloom at once. They are set out in rows three feet apart and six inches in the row, and we take cuttings from the best and destroy the balance.

In planting carnations here, the loss is about one-fourth from the borers. They are very troublesome during the months of July and August, but later in the season their ravages cease altogether. We are not troubled with any disease as yet. In making cuttings we use no fire heat, but always choose the coldest season in the year, and cuttings will root successfully in three or four weeks, while in the summer time they damp off in about one week.

January 27 we had our first rain since early in March, 1891, and during November, December and January, our carnations suffered much from the drought, the ground having become so dry that irrigation was of little value. After such a long dry spell, the first flowers will split, but in a short time they will be all perfect again, and from now on until May or June we will have an abundance of flowers on our old plants; by that time the young plants will come in bloom, when we will burn the old plants.

This season I shall make a planting about the middle of July to first of August for a succession of bloom.

Our method of fertilization is probably different from that employed by other growers, and while it is more complicated and expensive than some other modes, I believe it to be very effective.

From 7 to 9 o'clock A. M., according to the amount of moisture in the air, the flowers will be ready to pick for the purpose of extracting the pollen, which should then be dry. I use a clean plate to receive it. The easiest way to extract it from the flowers is to turn the petals back and, with a sharp pair of scissors, cut the stamens off. After all is gathered, cover the plate with a clean pane of glass, and turn it over occasionally, as some moisture will collect on the glass. Under ordinary circumstances, the pollen will be ready to put away early in the afternoon. It is then put through a fine sieve and allowed to fall gently upon a clean sheet of paper, from which it is transferred to a one-ounce bottle.

When we are ready to hybridize, we make use of a pair of pincers, such as jewellers use. With these we extract the stamens, early in the morning, before the flowers have been fertilized by insects or self-fertilized. A little later we pass with the pollen bottle and shake a little of it in the calyx, covering the pistils when the operation is complete. The same method is employed in fertilization for seedlings of roses, gladioli, amarvllis, cannas, dahlias, etc. We use the best flowers for seedling purposes and retain only the best from which to propagate.

Experience during our past dry winter shows us that we would have better success in sowing carnation seed the latter part of February because, as we use no fire heat, many of our seedling plants are lost during the cold, dry winter, if the seed is sown in the fall.

Pansy Growing.

There is probably no place better adapted to the production of magnificent pansies than Southern California, especially during the first half of the year. The weather from January to July is more or less cool and moist, conditions favorable to the growth of the pansy, and with proper management the plants will produce an immense crop of blossoms of large size.

In order to have them come into bloom in January or February, the seed must be started in August. Considerable care is necessary to success at this stage, but after the plants are large enough to remove from the seed bed, the directions for culture are simple, though imperative. They may be expressed in a negative way, and if you cannot comply with the requirements, let me candidly advise you not to undertake it. In the first place, don't believe the threadbare and absurd statement that "pansies like a shady place." Set them where they will receive the full sun but no reflected heat from the buildings. When the weather begins to warm up in June, it is well enough to shade them with light muslin.

Secondly, don't set them where you have to dig holes with a pick or blast them with dynamite. Select a good gravelly loam, moderately compact, excavate to the depth of a foot, and as the earth is replaced mix in a goodly quantity of cleanings from the cowyard or chicken house (not too much of the latter). Then thoroughly saturate the mass, and as soon as dry enough to handle, work it over again with spade, hoe and rake and set your plants about a foot apart; and, lastly, don't give them a shower bath with the hose every day or two. It is folly. It hardens and packs the ground while the roots may be suffering for moisture. Once in a week or two make holes or furrows among the plants and keep water therein until the ground is thoroughly soaked. When sufficiently dry, cultivate and pulverize the surface. Remove all blossoms as they begin to wilt. If these instructions are heeded, the rainbow will paint your pansy bed and make it the envy of your neighbor and the delight of the wayfarer. If they are not heeded, you will be heard in the doleful chorus: "I never had no success with pansies nohow."—W. M. Bristol in Redlands Facts.

POTATO SHIPPING CASES.—The potato, says the *Prairie Farmer*, may be valuable for sending grafts and other material of a succulent nature, even including flowers carefully pressed in. The potato should be carefully scooped out, leaving a layer around the outside thick enough to be pretty firm. In these two halves the flower buds or grafts may be safely carried if the halves are placed together. Mr. John Thorpe, Chief of the Bureau of Floriculture of the World's Fair, informs us that he has repeatedly sent to and received from England herbaceous cuttings inside of scooped out potatoes and wrapped in waxed paper, in perfect condition, and in some cases they had begun to form roots in their prison.

NURSERY STOCK AT THE WORLD'S FAIR. It is announced that five acres of space in the Midway Plaisance have been reserved for a nursery exhibit.

Stump Pullers.

Result of Inquiries as to the Best Stump Puller.

A recent notice of the Harvey Stump Puller in the RURAL PRESS brought a great many inquiries about the qualities of this machine, and there seems to be a general desire for enlightenment on stump pullers. In order to satisfy this desire, some inquiries were made among those who have bought and used the Harvey Stump Puller, and we publish the first letter received in answer to our inquiries.

GUERNEVILLE, Cal., March 16, 1892.

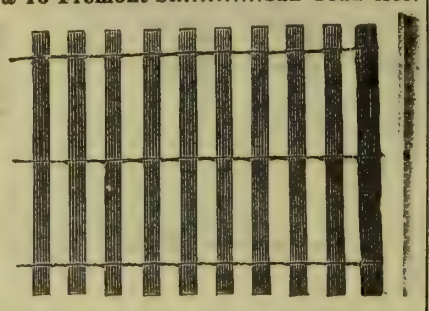
Dewey Pub. Co.—DEAR SIRS: Yours of recent date is at hand, and in answer I will say that it has been a conceded fact that redwood stumps could not be pulled, but I was a new comer in this community and did not know how hard they were to pull out. I bought a piece of bottom land that was full of stumps and I made up my mind to pull them, notwithstanding all the neighbors said I was foolish to try it. I bought a Harvey Stump Puller and thought I would pull the smaller ones and blast the large ones. But to the surprise of myself, as well as my neighbors, I pulled stumps that were from 8 to 15 feet in circumference, and did it in a short time and easily, using four single blocks. I pulled one stump in particular that I will mention. It was about 14 feet in circumference and was filled in around about three feet, and the roots were at least ten feet across. We had to anchor, so that we could use but two blocks on the stump, but out it came and left a hole at least ten feet across and eight feet deep. Aside from the immense power of the Harvey Stump Puller it has improved capstans, that no other capstan I know of has, the pawl to hold all that is gained and also the gear to let a horse go up hill idle and pull down hill. I believe that it is the cheapest and best as well as the most powerful land-clearing machine in existence, and for clearing land will save the labor of 30 men, as I pulled 50 redwood stumps and blasted them up, and piled them up in seven days with the labor of two men. These facts can all be proven by many people, as we had from one to twenty visitors every day that we worked. I think that the machine is a perfect success. If I have left out anything write me and mention just what you want to know, and I will cheerfully give all the information in my power. Yours very respectfully, CHAS. E. OGBURN.

NOTICE.

The Annual Meeting of the Stockholders of the Growers' Business Association, a corporation, for the election of a Board of Directors, and for the transaction of such other business as may properly come before it, will be held at No. 108 Davis St., San Francisco, at 10 o'clock, A. M., Wednesday, April 13, 1892.

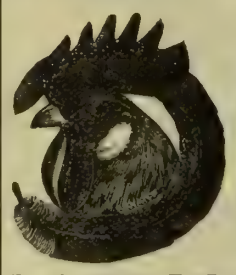
CHARLES WOOD, Secretary. I. C. STEELE, President.

RABBIT-PROOF
STOCK FENCE!
Cheap, Durable and Effective.
Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to
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The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

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Mature Earlier,
Lay Earlier,
Produce More Eggs.
Consume Less Food,
Are the Most Hardy,
Are the Most Beautiful,
Are the Most profitable of all Fowls.

Choice Selection and expensive purchases for ten years make my fowls equal to any, excelled by none.

Eggs, $2.50 for 13.

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ALL SIZES.
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Iron cut, punched and formed, for making pipe on ground. All kinds of Tools supplied for making Pipe Estimates given. Are prepared for coating all sizes of Pipe with a composition of Coal Tar and Asphaltum.

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Four choice varieties free by mail.....50 Cents
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AGENT FOR
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PLAIN WIRE AND STAPLES.
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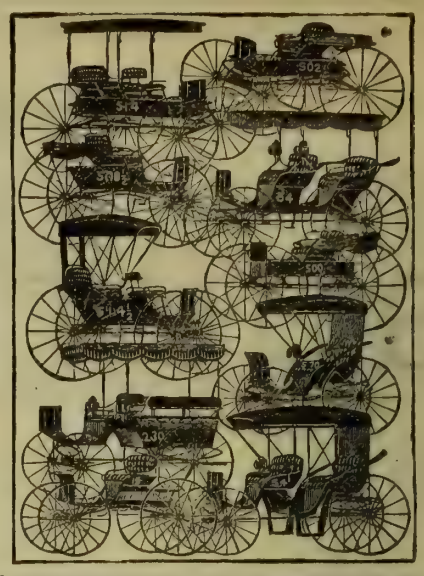


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SIGHTLY AND CHEERFUL, EASY OF ACCESS. Corner lot, 50x100. House, ten rooms, nearly new. Price, $6500, or will sell the quarter block, 140x150, including house, fine barn etc, for $12,000. JOHN F. BYXBEE, 42 Market St., San Francisco.

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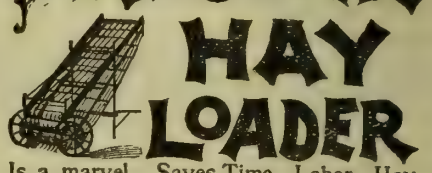
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AWAITS YOU
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One Horse Farm, Garden, Flower-Bed and Lawn Sprinkler (Capacity 150 gallons, 4 inch tires). Insures you a luxury of growth of Crops never before dreamed of. Your arch enemy,
DROUTH, COMPLETELY CONQUERED.
The hotter the season the more abundant the crop. Nothing like it for sprinkling private roadways, for the distribution of liquid manure—it will not clog—or for sprinkling liquids for poisoning insects.
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Is a marvel. Saves Time—Labor—Hay.
An economical remedy for scarce help.
Will Load a Ton of Hay in 5 minutes.
Gathers the Hay clean. Loads loose Grain.
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Strong, Light, Easily Hitched to Wagon.
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ALL UNDER IRRIGATION.

Produces all Fruits Possible to the Temperate and Semi-Tropic Zones.

THE COMPANY OWNS EVERY ACRE OF THIS LAND. NO MORTGAGE. TITLE PERFECT.

CAPITAL, TEN MILLION ($10,000,000) DOLLARS.

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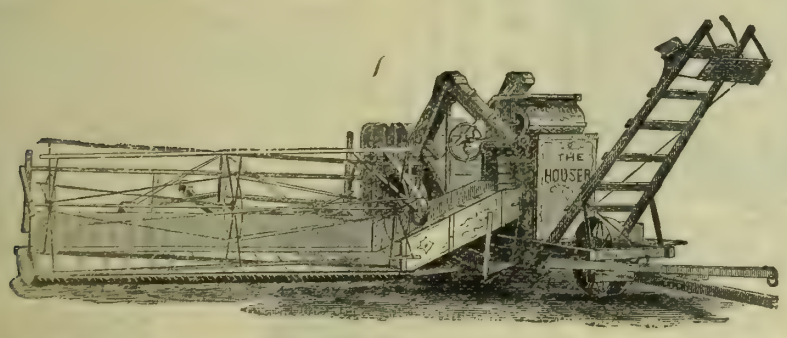
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The "HOUSER"



LEADS ALL OTHERS.

Strongest & Most Durable.

Lightest Draft and Most Popular Machine on the Coast.

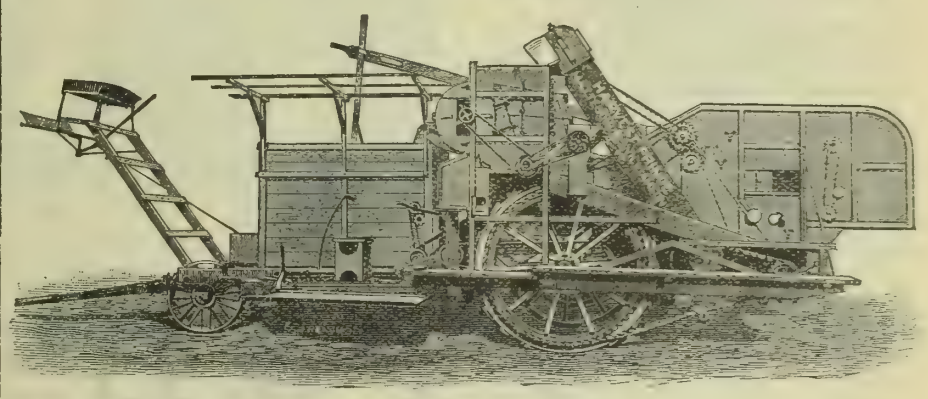
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New Improved Belt Combined Harvest r "PRINCE."



Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

HARVEST "PRINCE."

It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by ½-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

MATTESON & WILLIAMSON MF'G CO.

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PRACTICAL, ELECTRICAL, HYDRAULIC, CIVIL, MECHANICAL, and MINING Engineering, Surveying, Architecture, Drawing, Assaying and Navigation, GRAPHICS, Drawing and Mathematics for the trades. Send for circulars. Day and evening.



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OAKLAND, CALIFORNIA. A FIRST-CLASS, SELECT School. Early application necessary. During year 1891-92, TWENTY-FOUR APPLICANTS were refused for want of room. Next term begins August 2, 1892. W. W. ANDERSON, Principal.

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Surveying, Architecture, Drawing and Assaying,
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Open All Year.
A. VAN DER NAILLEN, President.
Assaying of Ores, $25; Bullion and Chlorination Assay $25; Blowpipe Assay, $10. Full course of assaying, $50
ESTABLISHED 1864 Send for circular.

HEALD'S

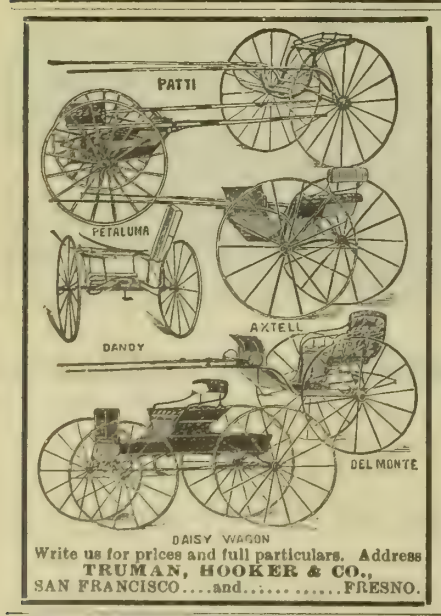
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Ladies admitted into all Departments.
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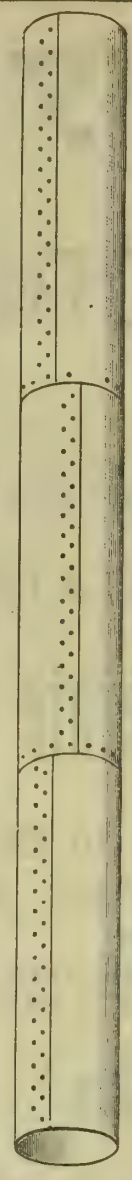
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ALL SIZES, FOR GAS, STEAM AND WATER.
— WE MANUFACTURE —
SHEET IRON AND STEEL PIPE,
ALL SIZES,
For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.
Made in Lengths Desired from 16 to 30 feet.

The Cut shows a Section of Three Joints

DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a high grade of annealed Charcoal Iron of great tensile strength.
The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit. It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



CORRUGATED IRON,

Black, Painted and Galvanized, for Roof and Sides of
HAY BARNS, DRY HOUSES STABLES, ETC.

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SAN FRANCISCO—SAN JOSE—LOS ANGELES.



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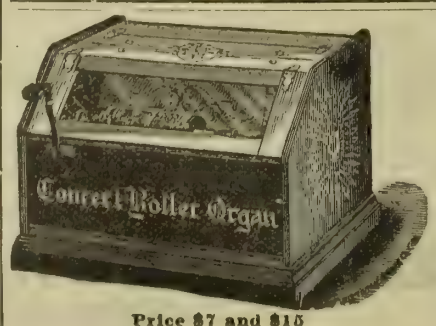
WATER ALKALI ACID PROOF!

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SAMPLES AND CIRCULARS FREE.

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MAKE HOME HAPPY!

THE ROLLER ORGANS HAVE NO EQUAL.

For dance music save their cost in one night. Any one can play them. Over 600 tunes to select from. Plays sacred, popular songs and dance music. Also

Pianos and Organs.

Terms Moderate. We also keep Accordeons, Banjos, Mandolins, Violins, Strings and Sheet Music. Circulars free.

HAMMOND'S MUSIC STORE,

2257 MISSION STREET,
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WHEN YOU BUY,

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THE BEST!

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H. H. H.

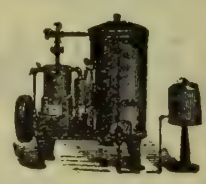
Horse Liniment

Is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

MANUFACTURED BY
H. H. MOORE & SONS,
THE DRUGGISTS,
248 MAIN STREET, STOCKTON, CAL.

Acme Automatic Safety Engine.



With Patent
SECTIONAL BOILER.
Uses Oil as Fuel.
1, 2, 3, and 4-Horse Power Developed at only Nominal Expense.

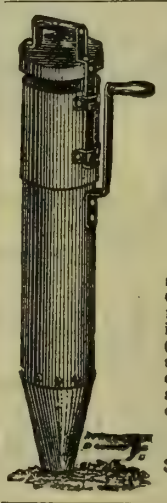
SAFE! RELIABLE! ECONOMICAL!

These Driving Powers are in General Use by
BOATMEN, for Marine Purposes
BLACKSMITHS, for Blowers, Drills and Machinery.
BUTCHERS, for Meat Cutters, Grinding, Cooking Sausage, Rendering Lard by Steam.
DAIRYMEN, for Cream Separators Churns, Workers, Pumping, Cutting Feed and Grinding Grain.
FRUIT GROWERS, for Sawing Box Material, Operating Dryers, Pumping Water, Grinding Tools.
GROCERS, for Coffee and Spice Mills, Roasters and Ventilators.
GRAIN BUYERS, for Cleaning and Elevating Grain.
FARMERS, for Cutting and Steaming Feed, Cleaning and Grinding Grain, Sawing Wood, Pumping Water, Churning, Grinding Tools, Elevating Grain and Hay.
MACHINISTS AND CARPENTERS, for Saws, Lathes, Drills, Planers, Grindstones, Emery Wheels, etc.
PRINTERS, for Presses, Paper Cutters and Elevators.
And Many Other Purposes too numerous to mention.

THE ACME AUTOMATIC SAFETY ENGINE is the only oil-burning Engine made that will successfully run an Electric Light.
You will never know how cheaply it runs, nor how well it operates, until you give one a trial. Write for further information.

G. G. WICKSON & CO.,

3 & 5 Front Street, San Francisco.
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BROWNE'S

—PATENT—
SQUIRREL EXTERMINATOR.

This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3 00. Send for circulars to

F. E. BROWNE,
314 & 316 So. Spring St.,
Los Angeles, Cal.



Write CRYSTAL CREAMERY CO., LANSING, MICH., for Catalogues of

CREAMERIES, Etc.

Glass Milk Cans, Never Rust, Water Tanks of steel plate, everlasting. Cream without Ice or with Ice. We want agents everywhere. Big cut in prices.



The Armstrong Automatic PORTABLE ENGINE and BOILER.

The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 5 or 8 H.P. Mounted on skids or on wheels.

TRUMAN, HOOKER & CO San Francisco.

People's Party Leaders.

(*Continued from page* 310.)

Humphries, Pres. of the National Colored Alliance, is a very quiet, fine-appearing man. He is very popular among the members of the Colored Alliance, and is the Moses who will lead them on to victory.

Hamland Garland, our novelist, was there. He is just as you would expect to find the author of "Many Traveled Roads," "A Spoil of Office," etc. A keen observer and a young man of fine personal appearance, and most genial manner, he won many friends at the convention. We advise all who want a rare treat to get his books and read them.

The National Woman's Alliance.—The N. W. A. was represented by more than 20 delegates, from nearly as many States. Among those present were Mrs. Lease from Kansas; Anna L. Diggs, D. C.; Mrs. Weaver, Iowa; Mrs. Geffs, Ohio; Mrs. Helen M. Gougar, Mrs. Emery, Mrs. Dubbs, Mrs. Elizabeth M Wardall, S. D.; Mrs. Curtis, Neb.; Mrs. McCormick and Mrs. Pack and many others, all representative women and all equal suffragists, you may be sure. They went home saddened and disappointed, but not discouraged. They went to the conference from far and near, hoping by their influence and votes to get an equal suffrage plank into the People's Party Platform. As it was not deemed wise to insert such a plank into the National platform, they went home to work for equal suffrage, each in her own State, hoping at no distant time to see it adopted in the National. Of lady lecturers, will mention as worthy of hearing, should they pass this way, our good sister Mrs. Lease of Kansas, our Queen Mary as she is sometimes called. A fine speaker and most gracious woman, tall and queenly, she carries conviction to all hearts and will be one of the best speakers of the campaign. "The little woman" from D. C., Mrs. Anna L. Diggs, is also one of the best in the field. Marion Todd is too well known to need recommendation. She, too, may come this way. Hoping you may listen to the eloquence of these and many more, I thank you all for your kind attention.

Cannon Sat Down Upon.

The Nicaragua canal conference, held in San Francisco on Tuesday of this week, passed resolutions warmly endorsing the canal scheme. Mr. Cannon, President of the Alliance, introduced the following substitute, which was promptly laid on the table. The spirit of the daily press of San Francisco is shown by the fact that not one of the city papers printed Mr. Cannon's resolutions:

WHEREAS, This Convention assembled in San Francisco, on the 29th day of March, 1892, to devise ways and means for the speedy construction of the Nicaragua Canal, and,

WHEREAS, The people of this State must have relief from the excessive rates of transportation now filched from them by the grasping railroad corporations built with the government credit. Therefore

Resolved: That we earnestly request the President of the United States to renew the treaty with the government of Nicaragua that was negotiated by President Arthur in December, 1884, and withdrawn from the Senate by President Cleveland; and make such terms with the Maritime Canal Company of Nicaragua as may be just and honorable, for the purchase of their rights in the concessions and privileges granted them by the governments of Nicaragua and Costa Rica.

Resolved: That the government of the United States take all necessary steps for the speedy construction of the said canal, and own and operate it in the interests of the commerce of the United States, and of the world, and for the relief of the people of the Pacific Coast from the bandit railroad corporations.

Resolved: That we demand that the House of Representatives enforce a resolution recently adopted by them declaring it "to be the judgment of the House that the granting of subsidies or bonuses by Congress, in public moneys bonds, or by pledging of the public credit, to promote private enterprise, is unjust, impolitic, and in manifest conflict with the spirit of Republican institutions."

Resolved: That a copy of these resolutions signed by the president and secretary of this Convention, be forwarded to the President of the United States, and to the Speaker of the House of Representatives.

Alameda Co. Farmers' Alliance.

WARM SPRINGS, Mar. 21st, 1892.

The regular quarterly meeting of the Alameda Co. F. A. & I. U. will be held at Clark's Hall, Irvington, on Saturday, April 9th at 10 o'clock A. M. Basket lunch and lively speeches will be in order at noon time.

Let every Sub Alliance send its full number of delegates, and special committees come fully prepared to report.

H. B. VALPEY, Pres.
MRS. L. A. SHAW, Sec.

President Cannon's Appointments.

Mass meeting at Santa Barbara	April 8th
Fresno	April 13th
Tulare Co., Alliance	April 12th
Merced (probably)	April 14 h
Winters, Yolo Co.	April 15 h
Colusa	April 16th
State Ex. Com. Mt'g. S. F. (probably)	April 18th

Any changes occuring in above will be noted, if possible in later issues.

THE EXECUTIVE COMMITTEE of the State Farmers' Alliance will met in San Francisco Monday, April 18th, a little later than first contemplated.

STATE SECRETARY BARBEE, writes Mar. 26: The order is still on the forward, march. Two new Alliance charters, secured through the work of Bro. G. D. King, are sent by this mail for Tulare Co.

FRANK S. CHAPIN of Tulare Grange, a valued correspondent of the RURAL, who had a successful surgical operation performed upon his body at the Fabiola Hospital, Oakland, some weeks since, is now nearly recovered. He expects soon to resume active duties as a correspondent and agent for this paper in Tulare county. With many other sincere friends, we heartily congratulate our correspondent on his fortunate lot in being treated so well at the Fabiola.

Fashions in Children's Clothes.

An invaluable help for those mothers who strive to keep their children well and fashionably dressed at small expense is Diamond Dyes. It is through their use that so many children have clothes of the fashionable colors. Little suits, cloaks, etc., are easily made from faded or half-worn clothes, and when colored with these dyes cannot be told from new.

"It's easy to dye with Diamond Dyes" is a familiar saying in thousands of homes. They are the great money-savers of the age, and never fail to give satisfaction when the simple directions are followed. Old fashioned dye stuffs, and crude imitations of Diamond Dyes should be avoided, as they lead to trouble and disappointment. Prudent people prefer to do their dyeing with Diamond Dyes rather than be to the trouble and expense of sending to a dyer.



The Louden Hay Slings.

The above is an illustration of a new Self Compressing Center Trip Hay Sling, which is manufactured by the Louden Machinery Co. of Fairfield, Iowa. It is laid upon the rack and the hay built upon it. It will roll up 500 to 1000 lbs. of hay, as shown in the cut, and drop it in the mow or on the stack just as it lay on the load, leaving no litterings. They are especially adapted for unloading headed grain from the header wagon, and for handling all kinds of hay raised on the Pacific Slope. The company makes this Sling in several styles and sizes to suit all kinds of hay, straw, fodder and bound or unbound grain, either for loading on to the wagon or unloading from it, or from the sweep rake. No farmer who puts up 50 tons of hay or cuts 40 acres of wheat can afford to be without them. They also make a complete line of other Hay Tools, and it will pay any one to write them for their large, 40-page catalogue, containing 100 illustrations. Address, Louden Machinery Co., Fairfield, Iowa.

CATTLE RAISING CORPORATION.—The Otay Jersey Cattle Company is now thoroughly organized, for the purpose of importing and raising thoroughbred stock, and Jersey cattle in particular. The capital stock is $25,000, with Westley Smith of San Diego as president, and Mrs. A. M. Chittenden, secretary and manager. The company have already some of the finest Jersey stock, and are fast adding to their number by importation and home purchase of calves, and have now under their control 1800 acres of pasturage and alfalfa lands, preparatory to carrying on an extensive business in raising beef and dairy cattle.—Otay Press.

A. P. ROACHE, W. O., writes regretfully that, owing to repeated attacks of la grippe during the past month, he will be unable to make the tour of appointments made for him in the State Grange canvass. We shall still hope to see him at Oakland and Haywards at least.

Our Agents.

J. C. HOAG—San Francisco.
R. G. BAILEY—San Francisco.
GEO. WILSON—Sacramento Co.
SAMUEL B. CLIFF—Creston, Cal.
A. C. GODFREY—Oregon.
MRS. BRUCE B. LEE—Tehama Co.
M. H. TRUETT—Alameda and Contra Costa Co's.
THOS. OSBORN—Santa Clara Co.
L. J. SELLON—Sacramento.
H. A. LEHNDORFF—California.

POLITICAL MENTION.

People's Party Announcements.

Public meetings in Alameda county, to be addressed by Mrs. K L. Nevins (and in most instances by volunteer speakers also), will be opened at about 7:30 P. M., as follows

Warm Springs	Friday, April 1
Irvington	Saturday, April 2
Sunol, at Schoolhouse	Wednesday, April 6
Livermore, at Schoolhouse	Thursday, April 7
Altamont, at Schoolhouse	Friday, April 8
Pleasanton, at Hall	Saturday, April 9

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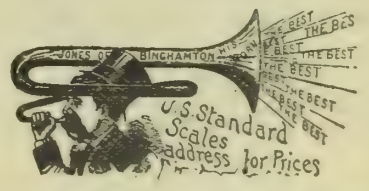
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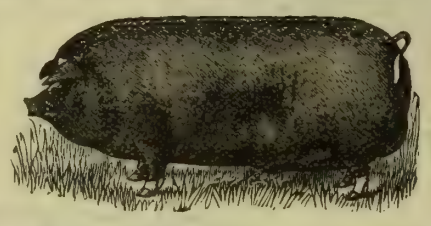
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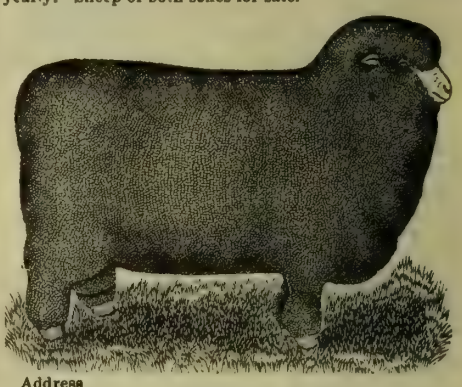
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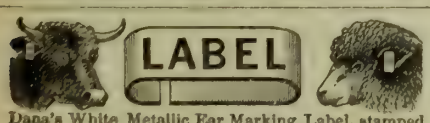
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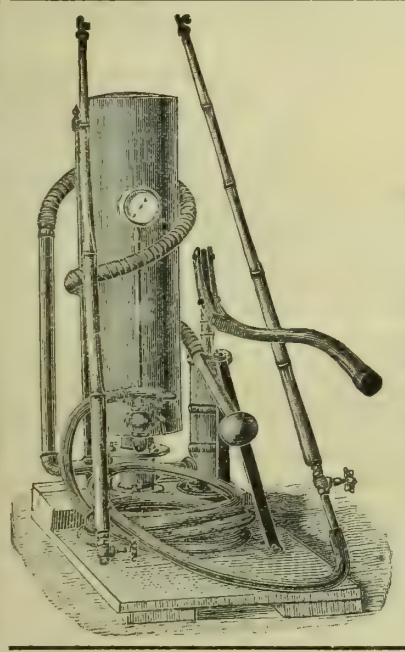
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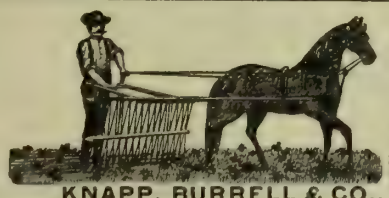
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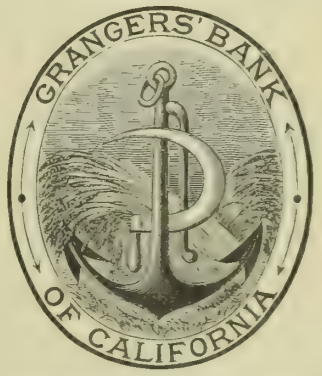
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OF CALIFORNIA,
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Incorporated April, 1874.



Authorized Capital	$1,000 000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders...	720,000

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I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.
January 1 1892 A. MONTPELLIER, Manager.

JAMES M. HAVEN. THOMAS E. HAVEN, Notary Public.
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

Blustering and stormy weather the past two or three days have added largely to the confident feeling that without some unforeseen, unfavorable, climatic influences within the next 60 or 90 days, our crops, particularly that of cereals, will be phenomenally large. The rapid decline in the price of silver is, at this writing, exerting an unfavorable influence on the market price of wheat which both directly and indirectly causes other farm products to weaken in sympathy. English importers are taking advantage of the present situation and buying all that India has to spare of wheat, cotton, etc. The exports of wheat from the latter country to England and the Continent are on an unexampled large scale. The local money market continues easy, with no increase in the demand either for legitimate business or speculative purposes.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Mar.	April.	May.	June.	July.
Thursday	.....	7s06½d	7s05½d	7s05 d	7s04½d
Friday	.....	7s06½d	7s06 d	7s05½d	7s04½d
Saturday	.....	7s7 d	7s06½d	7s05½d	7s05½d
Monday	.....	7s06½d	7s05½d	7s04½d	7s03½d
Tuesday	.....	7s06 d	7s05 d	7s03½d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	37s9d	37s9 d	37s9d	Steady.
Friday	37s9 d	37s9d	37s9d	Quiet but steady.
Saturday	37s9d	37s9 d	37s9d	Firmer.
Monday	37s9d	37s9d	37s9d	Steady.
Tuesday	37s9 d	37s9d	37s9d	Quiet.

To-day's cablegram is as follows:

LIVERPOOL, March 30.—WHEAT—Quiet. California spot lots, 7s 8d; off coast, 37s 6d; just shipped, 37s 6d; nearly due, 37s 6d; cargoes off coast, steadily held; on passage, steadier; Mark Lane wheat, quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Mar.	Apr.	May	June	July
Thursday	159	158⅝	154⅝	151¼	151⅝
Friday	161⅜	161	156⅝	152⅝	154
Saturday	160	159⅜	154	151	151⅝
Monday	...	157¼	152¼	149⅜	149¼
Tuesday	160	158⅛	153½	150½	150⅝

The following is to-day's telegram:

NEW YORK, March 30.—WHEAT—97c for March, 95c for April, 92⅝c for May, 90⅛c for June, 89⅝ for July, 89½c for August, and 91⅜c for September.

CHICAGO, March 30.—WHEAT—89c for May and 86⅝c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H	L.	Seller 1892. H.	L.
Thursday	161¾	160	....	....	143½	142⅝
Friday	162¼	160⅝	....	....	144	144
Saturday	161¾	160½	....	....	144⅝	143⅝
Monday	159½	157	146	146	....	....
Tuesday	158⅜	156⅝	....	....	141	140⅝

The following are to-day's recorded sales on Call:

Informal Session.—Buyer season—500 tons, $1.56½; 100, $1.56⅝; 100, $1.56½; seller 1892—400 to ship, $1.40½ per ctl. Regular session.—Buyer season—300 tons, $1.56⅝; 100, $1.56; 100, $1.56; seller 1892—300 tons, $1.40⅝; 100, $1.41; 100, $1.41½ per ctl. Afternoon session.—Buyer season—400 tons, $1.55½; 200, $1.55⅝; 100, $1.55¼. Seller 1892—800 tons, $1.41½ per ctl.

BARLEY.

	Buyer Season. H.	L.	*May H.	L.	June. H.	L.
Thursday	99¼	98½	....	....	93½	93½
Friday	99	98½	96½	96½	93½	93½
Saturday	98½	98½	....	....	....	....
Monday	97½	97½	....	....	....	....
Tuesday	97	96¼	....	....	92½	92½

*New crop.

The following are to-day's recorded sales on Call:

Regular session.—Buyer season—300 tons, 96 c; 300, 96⅜c; 100, 96¼c; 100, 96⅛c; 600, 97c; 100, 97⅛c; 500, 97½c; 600, 97¼c. Seller season—100 tons, 94½c; 100, 94⅜c; 100, 94½c. May 100 tons, 95c per ctl. Afternoon session.—Buyer season—100 tons, 98c; 400, 96½c; 100, 98½c; 100, 98c. June, new—200 tons, 92½c per ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

NEW YORK, March 27.—Unpeeled peaches are higher for our light remnant, and good to fancy range from 7½c to 10c. Best sizes of prunes are tending higher. Sellers are glad to move unattractive smalls at old rates. Apricots, owing to the depleted stock, are doing better; bags, 7½@9½c; boxes ¼@½c above.

Eastern Raisin Markets.

NEW YORK, March 27.—There is a decidedly good trade, local and outward, for the season. One hundred bag lots are frequently named at 4½@5c, the latter three crowns. Half a car of boxed layers and a good line of five loose sold to go out at $1.30. This is 15 cents more than demanded for the same grades a month ago. Wholesale grocers have pushed the trade commendably this season, by accepting a narrow margin, which has helped the consumption.

CHICAGO, March 29.—Outside of a moderate demand for choice Peaches and fine large Plums the trade is quiet and slow. The above descriptions are in small supply and firm. Other lines rule quiet. They meet with but a limited demand. There is a fair stock of Raisins and the market for them is easy, though in values there has been little or no change in the last few days.

Eastern Wool Markets.

NEW YORK, March 28.—About the same features of last week prevail. Prices are considered to have have touched bottom, with stocks noticeably diminished. This ought to be favorable for farmers in new clip, unless manufacturers have obtained a reserve in late liberal dealings, that will have a governing effect upon the future situation. The condition of goods, however, modifies this possibility. Deliveries of goods were very heavy this week. Boston sold 2,961,000 domestic and 600,000 foreign. Philadelphia is doing enough to indorse the general easy state of affairs.

Eastern Hop Markets.

NEW YORK, March 26.—Best Coast and State are firm at 25c; other grades are unchanged. The market is still neglected, but holders seem convinced that all will be needed, and do not try to revive trade with material concessions. Foreign advices are not [illegible].

Miscellaneous.

NEW YORK, March 26.—Honey is firm and active. [illegible] There is a good demand. Spot is fairly firm at $1.75@1.85 a bushel; the latter for re[illegible]

Mustard seed obtains a better share of demand [illegible] for California. Brown, 4¾@5c.

General Remarks and Statistics.

Cereals.

Mark Lane *Express*, March 7. The American shipments continue large to the Continent, which help to support the British market, seeing that the total American surplus is a fixed quantity, and the more the continent takes the less is likely to be pressed on the English market. India is shipping freely for the time of year, but this is balanced by Australia being only a very moderate exporter.

London Agricultural *Gazette*.—It is important to note that the United States can generally meet a deficiency of "produce" in Europe, whatever it may be. The unusual demand for oats and rye in Europe could not possibly have been foreseen in time to grow these articles in excess; yet under the influence of a few shillings per qr. above the usual level of values Uncle Sam has sent to Europe, during the seven months from July, 1891, to January, 1892, inclusive, 811,250 qrs. of oats and 1,089,725 qrs. of rye, as against 101,950 qrs. of oats, and 40,500 qrs. of rye in the corresponding period of the preceding cereal year.

The official report of stocks of rye in the principal Russian ports Feb. 14, made a total of 10,000,000 bushels, oats 8,500,000 bushels, barley 4,000,000 bushels, maize 160,000 bushels, and flour, rye and wheat, 760,000 sacks. The official report of stocks and requirements of the famine districts give the supplies on hand as 22,000,000 poods. The average requirements have been 6,000,000 poods per month, but would reach 10,000,000 poods for the three months ending April 30. Seed requirements were 36,000 000 poods. The net requirements were 19 000,000 poods, of which 9,000 000 poods were required to be delivered within the first six weeks leaving the balance to be delivered during March and April. Of this amount part could be obtained immediately in other provinces, while the balance could be supplied after the opening of navigation.

The government report of the foreign crops states that after severe weather vegetation in France is making excellent progress. In Germany there is no complaint as to the present condition. In Austria-Hungary changeable weather over unprotected grain fields has had an unfavorable effect. In Italy and Spain the conditions are favorable. In Russia the condition of the winter wheat is reported as beyond repair, but this is possibly exaggerated. The conditions are certainly unfavorable, even more so than last fall.

The speculative market for wheat made quite a bad break the past week, closing barely steady. The main cause for the decline is traceable to a drop in silver; the latter touching 39d in London and 85c in New York, which is lower than ever before known in the world's history of silver. The decline in silver is said to be due entirely to the machinations of speculative Europeans, headed by the Rothschilds. It is claimed that even without a free coinage bill the market price of silver will be advanced in the near future and that the price of wheat will move up in sympathy. It is the scarcity of metallic currency that enables moneyed speculators to combine and make successful deals.

The local wheat market has ruled dull and heavy throughout the week with still lower figures looked for before an encouraging up move sets in. The disengaged tonnage in port and tonnage on the way are in favor of wheat growers, but this is more than offset by the low price of silver. Oregon and Washington advices report a small surplus of wheat, but that the growing crop promises to be nearly as large as was that in last year.

Barley futures have sold lower, but cash or sample parcels have held to fairly firm prices. Free exporting of the more choice grades of brewing are still continued to England where malting barley is in light supply. It is claimed that new barley will be in the market at an earlier day than before known. This year's crop promises to be large and of most excellent quality.

Light receipts of oats and a fair demand cause a steady market to obtain. The crop up North, it is claimed, will show a decided increase over that in 1891 while its grade promises to be uniformly good.

Corn is steady at unchanged figures. An increased acreage is reported in the States. Rye is weak as is buckwheat.

Mark Lane *Express* just to hand says: The view on Sunday, March 13, instead of being of fields in their natural colours of green and brown, was still of white. Such an outlook, with the equinox close at hand and all the operations of springtide to engross farmers' attention, might well be expected to strengthen the markets. Why it fails to do so is probably that the wheat grower does not think much of what his crop will be till May is past; that dangerous and critical month so often blights the promise of a forward season, that farmers are often almost relieved when a cold March has assured us of a backward May. The French and Italian crops are promising, and the winter in the Mediterranean countries having been wet, not cold, the harvest from Andalusia to Turkey is expected to be rather early than late. A heavy snowfall in central Europe has recently occured and is welcomed as protecting the autum-sown grain. These advices seem for the moment to outweigh the news of unfavorable t nor which comes both from Russia and from the United States. The attitude of the latter region is certainly curious, for, despite a blizzard of terrible intensity and of vast area, the latest markets are against the seller, both of wheat and of maize. An undoubtedly weakening effect on the British markets has been exerted by India, which is shipping the old crop with a feverish haste to clear before a new harvest comes in.

The quantities of wheat and flour on passage to the United Kingdom and continent have been stated this month as follows:

Week Ending—	United Kingdom.	Continent.
March 1st, quarters	3,081,000	1,144 000
March 8th, "	3,207,000	1,201,000
March 15th, "	3,489,000	1,360,000
March 22d, "	3,324,000	1,427,000
March 29th, "	3,257,000	1,330,000

During the same week the imports into the United Kingdom were as follows:

Week Ending—	Wheat. Quarters.	Flour. Barrels.
March 1st	195,000	208,000
March 8th	169,000	206,000
March 15th	100,000	211.000
March 22d	217,000	268 000
March 29th	163,000	439,000

Feedstuff.

Bran and middlings are lower, the decline is due largely to liberal supplies and decreasing demand owing to improving pastures. Rolled and ground barley continue in good demand with the Hawaiian Islands continuing to draw freely from us.

Hay is weakening under the near approach of the new season and a well grounded belief that the outturn will not only be very large to the acre, but that an increased acreage will be cut. The grade it is said will show a decided improvement for the better.

Dairy Produce.

The receipts of butter continue large and as the distribution points are falling off, the market does not show a firm strong tone. The most relief at present is still found in the markets up north, which take large quantities each week. The quality of this season's butter is exceptionally good.

Cheese continues to go out fairly well, which causes a fairly steady market in the face of large receipts. Dealers, as a rule, look for a shading in prices before the middle of April.

Eggs are steady. The consumption is very large which keeps the market fairly well cleaned up. Receipts, as a general thing, are large and with a falling off in the demand after Easter, it is only reasonable to conclude that slightly lower prices will set in. Eggs so far this year average larger than has been the rule.

Live Stock.

Bullocks are steady, but mutton sheep and lambs are weak with a downward tendency under freer offerings. Hogs are firmer for the block, but for packing they appear to be easier. Dairy cows are about as heretofore reported.

Fruit.

Orchard advices are confirmatory of an advanced season from two to three weeks earlier than it was in 1891. It is claimed that apricots will not be so many to the tree, which will be offset by the fruit being of larger size. It is claimed that other tree fruit crop, will also be of larger size owing to a lessened yield to the tree. The berry crop promises to be large, owing to an increased yield to the acre and also to an increased average.

Fears are quite generally expressed that in April we may have heavy frosts. There are too many people in this State crossing streams before they get to them.

Alppes are in large supply. So plentiful and cheap are California and Oregon apples, it is not at all likely that Australia will send us any this season. Shipments from the East did not turn out well, and consequently they were stopped.

Oranges continue to rule at around last week's quotations. The demand is still light. Lemons and limes are unchanged.

Raisins are shaping into better position for holders, as are all kinds of dried fruits. Quotations are essentially unchanged.

Vegetables.

Continued favorable weather is causing garden stuff to make rapid growth. All advices point to the certainty that the supplies this year of all kinds of garden truck will be very large, provided we escape heavy frosts in April. There are fears among large dealers that in April we will be visited by heavy frosts.

The price of seasonable vegetables continues to shade off under increasing supplies. We continue to find an outlet in both Oregon and Washington for large quantities which keep prices from sinking much for rhubarb, asparagus and peas.

Onions, if choice good keepers, can be placed at around 1½c a pound, but the general run is not quotable at over our outside quotations.

The receipts of potatoes continue heavy. Increasing supplies of new cause holders of old to press the market, and in doing so, low prices rule for all kinds that do not come up to the highest standard.

Miscellaneous.

From reliable advices up to March 20, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	207,834	250,833	*130,554	63,794
San Diego	19,791	14,356	4,437	.....
San Pedro	2,980	10,669	.....	
Oregon	23,857	27,720	24,688	25,464
Puget Sound	11,176	26,134	.....	
Totals	265,638	329,715	159,679	89,258

*Engaged for wheat, 1892, 18,330; 1891, 61,334 †For new crop loading, 1,746.

The statistics of produce exports from this port from July 1st to March 1 th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,779 975	9,324,190
Flour, bbls	816,626	896,811
Barley, ctls	786,338	208,535

Poultry has held to fairly firm prices under moderate receipts and a good demand.

Hops are firmly held, but as far as this is concerned there are very few hops to be had on this coast. The yards are said to be looking well in this State, but Oregon advices report lice in some yards and also that a small animal is doing considerable injury to the vine.

Beans are showing more strength.

Mustard seeds ought to sell for more money as the New York market continues to advance.

Alfalfa and other grass seeds move off quite freely. The former is higher than for years.

The receipts of wool are steadily increasing, but as yet holders are slow to accept the lower prices quoted by buyers. Wools suitable for luster goods are wanted and fetch better prices than fine to fine medium wools. Chicago *Wool and Hide Shipper*, March 26th, reports as follows: "Stocks in general are all greatly reduced. The wools now left in the hands of the sellers are undesirable wools, chiefly the fine and fine medium grades, concessions on the heaviest of these have had to be made to move them, the clean value of these wools has however, shown no decline, on the contrary has been well maintained and in few instances slightly enhanced. Eastern worsted manufacturers from Pennsylvania and Western New York have constituted the largest buyers in this market the past week, and they have devoted the bulk of their attention to combing wool and well-grown clothing wools that make but little noil. Western mills continue to enter the market freely pursuing the hand to mouth policy of buying stocks as needed. Sales to these people continue the same as they have for months past. Parties having Shropshire, grade Cotswold and Cotswold wool or wools of a similar class will find now to be the best time to place them on the market, as commission men can now readily find sale for this class of wool at nearly outside figures and bring quick returns."

Produce Receipts.

Receipts of produce at this port for 7 days ending March 29, '92, were as follows:

Flour, qr. sks	99,043	Bran, sks	11,640
Wheat, ctls	187,854	Buckwheat "	
Barley, "	23,800	Middlings "	3,444
Rye, "	....	Chicory, bbls	120
Oats, "	272	Hops, "	84
Corn, "	872	Wool, "	2,229
*Butter, "	1,288	Hay, ton	1,966
do bxs	853	Straw, "	142
do bbls	....	Wine, gals	205,470
do kgs	11	Brandy, "	1,520
do tubs	2	Raisins, bxs	2,650
do ½ bxs	489	Honey, cs	10
*Cheese, ctls	789	Peanuts, sks	30
do bxs	15	Walnuts "	26
Eggs, doz	65,000	Almonds "	30
do " Eastern	....	Mustard "	....
Beans, sks	8,804	Flax "	....
Potatoes, sks	10,842	Popcorn "	....
Onions, "	548	Broom corn, bbls	....

*Overl'd, 100 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '91 to March 28, '91.	July 1, '91 to March 26, '92.
Flour, ½ sks	237,409	378,558
Wheat, ctls	1,225,880	1,205,038
Barley, "	263,837	39,491
Oats, "	3 9,925	363,519
Wool, bales	5,918	6,011
Hops, "	443	431
Rye, sks	....	3,352
Potatoes sks	71,319	114,559

Live Stock.

BEEF.		MUTTON.	
Stall fed	7 @ –	Wethers	9½@10
Grass fed, extra	7 @ –	Ewes	9 @ 9½
First quality	6½@ –	Do Spring	12 @13
Second quality	6 @ –		
Third quality	5½ @ –	HOGS.	
Bulls and thin Cows	2½@ 5½	Light, ₰ lb, cents	5 @ 5½
VEAL.		Heavy	4½@ –
Range, heavy	5½@ 6½	Feeders	3½ @ 4½
Do light	7 @ 8	Stock Hogs	3½@ 3½
Dairy	7½@ 8		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, March 30, 1892.

BEANS AND PEAS.			
Bayo, ctl	1 80	@	2 05
Butter	2 40	@	2 80
Pea	2 20	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 20	@	2 45
Lima	1 60	@	2 15
Fld Peas, blkeye	1 30	@	1 60
Do green	1 30	@	1 50
Do Nies	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, ₰	12½	@	18
Do good to choice	19	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	21
Eastern	15	@	—
CHEESE.			
Cal. choice mild	12½	@	13½
Do fair to good	10	@	12
Do gilt edged	—	@	14
Young America	12	@	15
EGGS.			
Cal. ranch, doz	17	@	—
Do do selected	—	@	19
Do store	16	@	—
Eastern	16	@	17
FEED.			
Bran, ton	15 50	@	16 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 00
Middlings	17 50	@	18 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₰ cwt	7	@	50
HAY.			
Wheat, per ton	13 00	@	—
Do choice	14 50	@	—
Wheat and Oats	12 00	@	—
Wild Oats	11 00	@	—
Cultivated do	12 00	@	—
Barley	11 00	@	—
Alfalfa	10 00	@	—
Clover	11 00	@	—
Straw bale	45	@	60
GRAIN, ETC			
Barley, feed, ctl	93¾	@	1 02½
Do Choice	1 03¾	@	—
Do Brewing	1 05	@	—
Do do Choice	1 12½	@	—
Do do Giltedge	1 15	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 21½	@	1 26½
Yellow, large	1 23½	@	1 26½
Do small	1 23½	@	1 26½
Oats, milling	1 42½	@	—
Feed, Choice	1 38½	@	—
Do good	1 30	@	—
Do fair	1 22½	@	—
Surprise	1 50	@	—
Black Cal	1 10	@	1 40
Do Oregon	1 20	@	1 27½
Gray	1 20	@	—
Rye	1 60	@	—
Wheat, milling.			
Gilt edged	1 63½	@	—
Do Choice	1 61½	@	—
Do fair to good	1 57½	@	—
Shipping, choice	1 56½	@	—
Do good	1 53½	@	—
Do fair	1 51½	@	—
Common	1 50	@	—
Sonora	1 50	@	1 60
HOPS.			
1891 Choice to Ex.	24	@	—
Fair to Good	20	@	—
FLOUR.			
Extra, City Mills	4 90	@	5 15
Do Country Mills	4 90	@	5 15
Superfine	3 00	@	3 45
NUTS—JOBBING.			
Walnuts, Cal. ₰	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, soft shl	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	90	@	1 00
Fair to Good	75	@	—
Cut	40	@	—
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	20	@	45
Do do Oregon	50	@	1 00
Do Humboldt	40	@	75
River Reds	15	@	35
New	60	@	1 25
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@	7 50
Roosters, old	6 00	@	7 00
Do young	8 00	@	10 00
Broilers, small	4 00	@	—
Do large	6 00	@	—
Fryers	6 50	@	—
Ducks	9 00	@	12 00
Geese, pair	2 00	@	3 00
Turkeys, Gob'r	14	@	16
Turkeys, Hens	15	@	19
Do Dressed	16	@	21
Manhattan Egg Food ₰ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, ₰	9½	@	—
Medium	11	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1¾	@	2
Hemp	3¾	@	4
Mustard, yellow	3¾	@	4
do Brown	3	@	3¾
WOOL.			
SPRING, 1891.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	14
Cala'v & F'th'll.	14	@	16
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def.	10	@	12
HONEY.			
WhiteComb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6¼	@	7
Amber do	5¼	@	6¼
Beeswax, lb	22	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, March 30, 1892.

Limes, Mex	4 00	@	5 00	Do extra choice	2 00	@ —
Do Cal	60	@	75	S'wberries, pr dr	1 00	@ 1 50
Lemons, box	1 00	@	3 00	Beets, sk	—	@ 1 00
Do Sicily	5 50	@	6 50	Carrots, sk	35	@ —
Oranges, Seedlings				Okra, dry, lb	15	@ —
				Parsnips, ctl	—	@ 1 25
San Bernard'o	1 50	@	2 25	Peppers, dry, lb	8	@ 12½
River side	1 50	@	2 25	Do green	20	@ 35
Los Angeles	1 25	@	2 00	Turnips, ctl	50	@ —
Do Navels—				Cabbage, 100 lbs	40	@ —
San Bernard'o	3 00	@	4 00	Garlic, lb	2	@ 3
Los Angeles	1 50	@	3 00	Squash, Mrft, tn	3 00	@ 6 00
Riverside	3 00	@	4 00	Do Summer, lb	—	@ —
Duarte	3 00	@	4 00	Tomatoes, box	1 25	@ 1 75
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.				Asparagus, box	1 00	@ —
				Do choice to ex	1 25	@ 1 75
				Peas, green, lb	2	@ 4½
				Rhubarb, box	75	@ 1 25
Apples, box	50	@	—	String Beans	10	@ 15
Do choice	1 50	@	—	Cucumbers, doz	40	@ —

NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY, Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2 00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.

Office, 111 Front Street, San Francisco, California.

OFFICE OF THE GRANGERS' BANK OF CALIFORNIA

SAN FRANCISCO, March 9th, 1892.

To the Stockholders of the Grangers' Bank of California:

EIGHTH ASSESSMENT.

You are hereby notified that at a meeting of the Board of Directors of the Grangers' Bank of California, held on the 8th instant, an assessment of 10 per cent ($10 per share) was levied upon the Capital Stock of said Bank, payable immediately, in U. S. Gold Coin, to the Cashier, at the office of the Bank, N. W. corner California and Battery streets, San Francisco. Any stock upon which this assessment shall remain unpaid on the seventh day of April, 1892, will be delinquent, and advertised for sale, at public auction, and unless payment is made before, will be sold on the 7th day of May, 1892, to pay said assessment, advertising and expenses of sale.

A. D. LOGAN, President.

FRANK McMULLEN, Secretary.

J. F. HOUGHTON, President, J. L. N. SHEPARD, Vice-Pres.
CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,

N. E. Cor. California and Sansome Sts.,

INCORPORATED A. D. 1864. **San Francisco.**

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

STOCK SCALES



4 Ton $45.

U. S. STANDARD. FULLY WARRANTED.

☞ Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON, Binghamton, N. Y.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

Twenty-five per cent cheaper than any other on the market. Send for Catalogue.

C. H. LINDEMANN, Agent,

126 KEARNY STREET, SAN FRANCISCO.

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Paper Manufacturers and Dealers.

FRUIT PAPER!

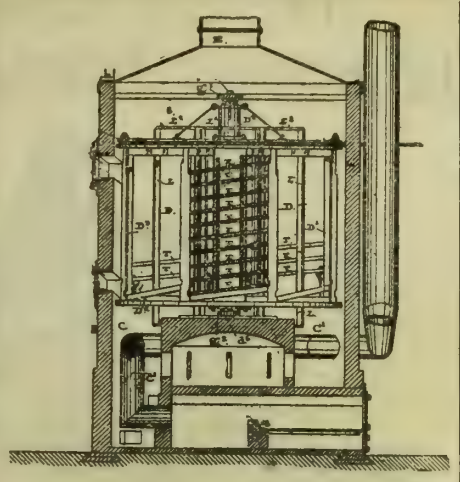
Lining Paper of every description for Dried Fruit Boxes.

RAISIN WRAPS AND SWEAT PAPERS.

Manilla and Straw Paper in Rolls and Sheets.

Manufacturers of "Eagle" Paper Bags.

416 Clay Street, San Francisco.



— THE —

BECK FRUIT EVAPORATOR

This unequaled apparatus is constructed on a new and novel principle, by which its capacity for rapid and uniform evaporation of fruit is attained to a degree that is wonderful. Send for circulars. Address

T. & W. A. BECK,

Watsonville.



THE RELIABLE CYCLONE WINDMILL.

No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

Send for Illustrated Catalogue to

Pacific Manufacturing Company,

575 MISSION ST., SAN FRANCISCO, CAL.

Manufacturers and Jobbers of Windmills, Pumps, Tanks, TUBULAR WELL TOOLS, Pipe, Fittings, Etc., Etc.

WAKELEE'S

THE BEST —IS THE— CHEAPEST.



DON'T BUY —AN— INFERIOR ARTICLE

Because it is more profitable to some one else.

SQUIRREL AND GOPHER EXTERMINATOR!

IN 1-LB. AND 5-LB. CANS.

STANDARD MOWER

NO SIDE DRAFT as CUTTER BAR is carried entirely on Main Wheels.

7-FOOT mower will do as much with one team as two 4-foot machines, SAVING half the corners.

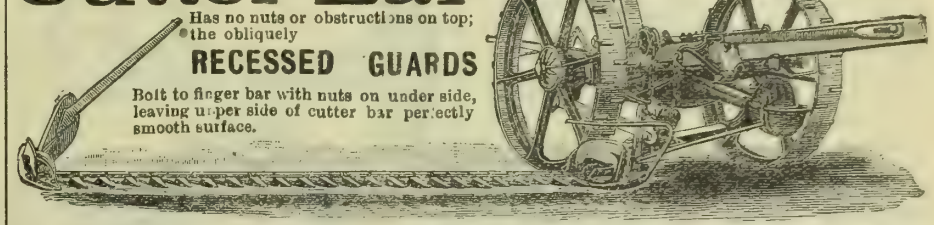
ONE MAN AND TEAM instead of two.
TWENTY ACRES A DAY instead of ten.

Cutter Bar

Has no nuts or obstructions on top; the obliquely

RECESSED GUARDS

Bolt to finger bar with nuts on under side, leaving upper side of cutter bar perfectly smooth surface.



MAIN WHEELS made interchangeable—one wheel fits either side of mower. THE FOOT LIFT raises cutter bar with perfect ease without the aid of hand lever, the first ever made. EASILY TILTED. THE STANDARD MOWER can be entirely taken apart and put together again by the farmer with a common wrench. SEND FOR SPECIAL CIRCULAR.

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Farmers' Union,

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PLANTS! PLANTS! PLANTS!

We have an unusually large assortment of Vegetable Plants, embracing the different varieties of Tomato, Cabbage, Cauliflower, Egg, Pepper, Celery, Sweet Potato Plants, &c., now ready for shipment in large or small lots, and specially packed to carry by freight or express.

PANSIES! PANSIES! PANSIES!

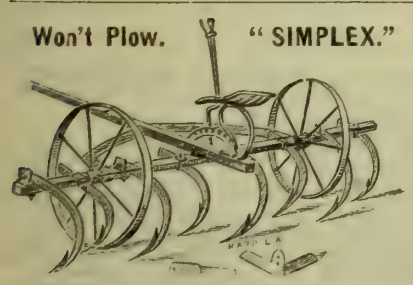
Now ready for shipment, well grown, stalky plants of richest shades, grown from choicest German seed, and extra large flowered.

SEND FOR SPECIAL PLANT CIRCULAR. ADDRESS

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SACRAMENTO, CAL.

Won't Plow. "SIMPLEX."



THE MACLEOD CULTIVATOR.

NEW MODEL.

For Orchard, Field and Vineyard.

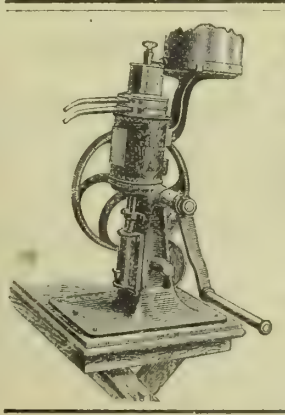
D. EDSON SMITH writes: "A strong, light, easy draught, easily handled, adjustable cultivator and weed cutter—meets my idea of perfect one."

Saves $10 cost, 200 pounds weight, one horse draught, half man's labor. 5-foot extends to 6, 7 or 8 feet. Send for testimonials and prices.

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"Baby" Cream Separator

FOR HAND POWER

A Grand Machine for Small Dairies.

Turns Easy, Simple, Practical for All who Milk.

Will extract all the Cream from 300 pounds of Sweet Milk per hour Dairying no longer an uncertain drudgery, but PROFITABLE AND EASY. The Baby De Laval is as perfect throughout as our Large Power Separators and proves a source of great profit to purchasers. Send for further information.

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DEWEY & CO.

AMERICAN AND FOREIGN PATENT SOLICITORS

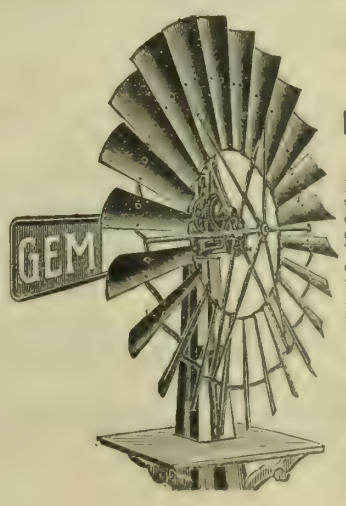
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No. 220 Market St.

TAKE ELEVATOR No. 12 FRONT ST.

SAN FRANCISCO, CAL.



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WITH GRAPHITE BOXES.

NEVER REQUIRES OILING OR CLIMBING OF TOWERS.

Guaranteed more Durable without oil than other mills that are oiled.

Practically these mills require no attention. *Truly a Gem and worth its weight in gold.* It combines *beauty, strength, durability and simplicity.* Governs itself perfectly, is easily erected and is sold on its merits. In fact it is the best mill on earth. They are geared back three to one—the wheel making three revolutions to one stroke of pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Wind Mills is warranted. If not satisfactory, freight will be paid both ways and money refunded.

SEND FOR CATALOGUE—MAILED FREE.

We also carry

Pumps of all kinds, Tanks, Pipe, Fittings, Hose, etc.

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A Ships' Compass.

It is said that much of the unsteadiness of ships' magnetic compass needles can be obviated by the following device: In place of one needle, or set of needles, there are several mounted concentrically one above another. The vibrational period of each needle, or set of needles, is slightly different from that of the others. The lowermost needle carries a pair of stops, which project upward so far as to embrace all of the other needles of different vibrational periods, and so as to prevent them from moving independently through more than a limited number of degrees. The weights of the several needles are so proportioned as that the momentum of each is, in the normal condition of vibration, about equal to that of the others. The swing of each magnetized needle is, of course, hampered not only by their mutual attractions, but also by the stops before mentioned, that are affixed to the lowermost needle. The result is that —the vibrational periods of the several needles not being commensurate one with another—the whole combination has virtually *no* vibrational period. The combination is not free to respond to any single isochronous swing. The attempts of any individual needle to assume such isochronous motion are frustrated by the interferences of the other members of the combination. There are various methods of mounting the needles, which, however, it is hardly necessary that we should describe. One objection that we see to the device is possible derangement by a sudden jerk, etc.

Ocean Depths.—The eight or nine mile depths in mid-ocean, declared very probable by Maury, are not found by later actual investigation, according to the *Engineering News*. A depth of five to six miles is very exceptional, and the average appears to be about 2,500 fathoms for the waters of the globe. The greatest depth yet found is 4,575 fathoms (5.2 miles) south of the Ladrones, and 4,561 fathoms north of Porto Rico, near St. Thomas. The deepest sounding, then, in the North Atlantic, is 4,561 fathoms, and in the South Atlantic bottom is always found at a less depth. The Mediterranean gives 2,150 fathoms as a maximum to date, and the deepest known water in the Indian Ocean is 3,199 fathoms. The polar basin seems to grow shallower as the North Pole is approached, and bottom was found at 72 fathoms in the most northern sounding made. These soundings, so far as made, also disprove the theory that the ocean bottom is a counterpart of the dry land in its irregularity of surface. It has its peaks and deep gorges, but as a rule, the surface lies in very gentle undulations, without abrupt or steep slopes.

The Watch as a Compass.—It may not be known to many, says *Iron*, that the points of the compass can be determined with the aid of an ordinary watch. It is simply necessary to bring the watch in a position so that the hour hand is directed toward the sun. The south then lies exactly midway between whatever hour it may happen to be and the numeral XII on the dial. Let us suppose, for instance, that it is four o'clock,and that the timepiece is held in the position indicated. The direction of the numeral II will then be the exact south. If it be eight o'clock, the numeral X will indicate the exact southerly point.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscri, tion, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1; 10 mos., $2; 15 mos., $3 Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St, San Francisco.

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NITROGENOUS SUPERPHOSPHATE

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Now favorably known throughout the Citrus Growing Sections of the State, Stands Unrivaled as a True Fertilizer.

Certain in its Action, Great in Results, it maintains a high standard of fertility without undue stimulation.

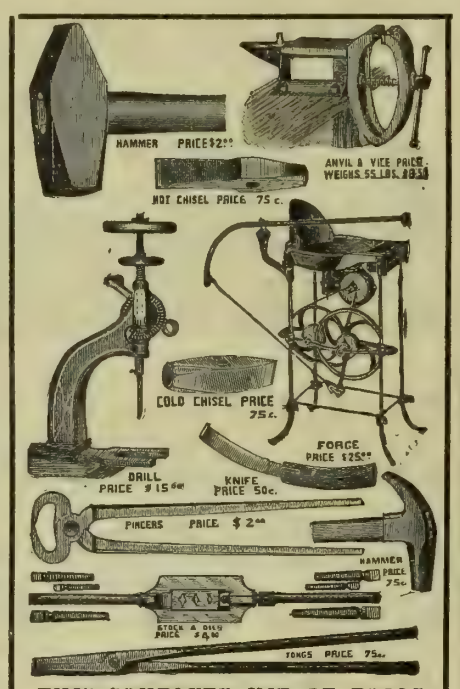
Growers in San Bernardino County—notably Riversi le—and Butte County—notably Palermo—can attest its merit.

We guarantee uniformity in its analysis, and seek correspondence with bonafide purchaser of a reliable fertilizer.

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Only $25.

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HERCULES Gas and Gasoline ENGINES

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MAKES NO SMELL OR DIRT.

No double or false explosions, so frequent with the unreliable spark,

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It Oils itself Automatically,

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It runs with a Cheaper Grade of Gasoline than any other Engine.

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PALMER & REY, Manufacturers,

San Francisco, Cal. and Portland, Or.

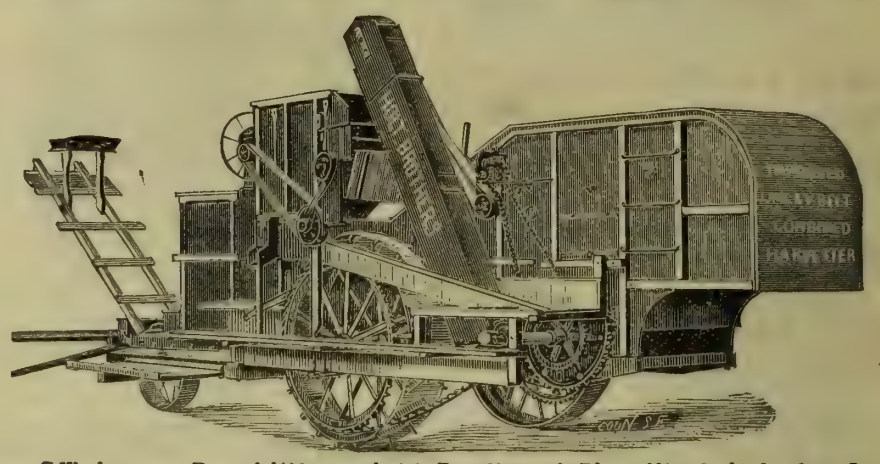
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For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

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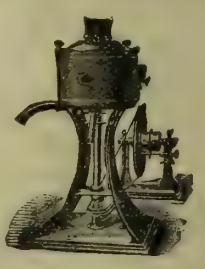


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The EXTRACTOR-SEPARATOR, was awarded the

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This is the GREATEST CONTEST in all Europe, and leaves the EXTRACTOR-SEPARATOR as the

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CLEANLINESS —AND— HOME COMFORTS.

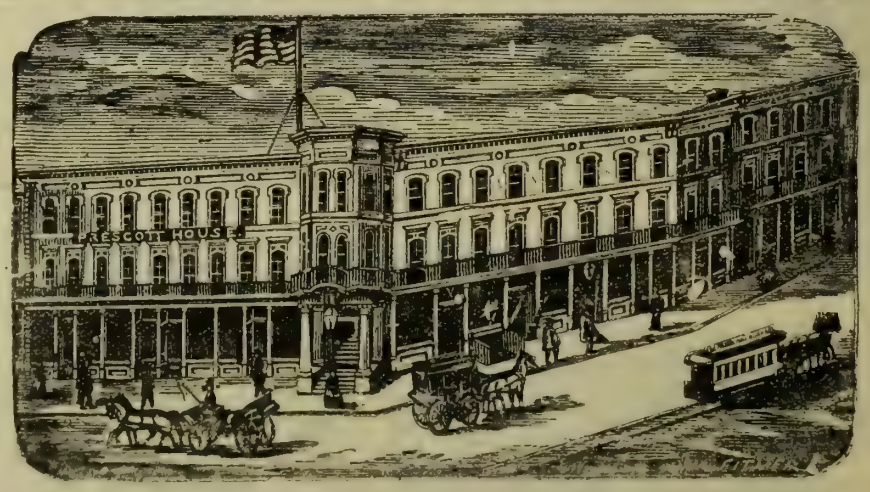


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Rooms and Board by the Day, $1 to $1.50; by the Week, $6 to $10; by the Month, $25 to $40.

Good Rooms and Elegant Table. Meals, 25c. Single Rooms, 50c. Free 'Bus.

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When you can learn it AT HOME without a Teacher. Send 2c Stamp for particulars. Mention this paper.

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The machine will cost you less than by single shipment direct from the factory at Chicago.

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THE PACIFIC TREE PROTECTOR



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AT A COST OF FROM 1 CT. TO 2 CTS. PER TREE.

It is the only Perfect Tree Protector, and is being used by many of the Largest Growers in the United States. Waterproof, adjustable and convenient. Saves time and trouble and expense.
Write for samples of above; also for samples and catalogue

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CEILING, SIDING, SHEATHING AND CARPETING. Easy to apply—just the thing for Houses, Barns, Ice Houses and Outbuildings—Durable and Cheap.

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Patronized by the Grange and Farmers Alliance of California
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Improved for 1892.
Never fail. Fish hook jaws Double triggers. No loose joints to be repaired. Any child can set them. 25 cts. ea. or $3 a doz deliver'd
Ask or write for them & take no other. We also make the **SUICIDE DOUBLE-END TRAP.** Price 30 cts. each. The only trap which catches coming from either end. Send for both traps.
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Growing the Texas Thin Shell Pecan pays better than Banking, Real Estate, Bonds or Stocks. One acre earns more than 10 acres in most farm products. Send for Circular.

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GRASS, GARDEN AND FLOWER SEEDS,
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Northern Seed Co.,

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Camellias, Azaleas, Iris Kaempferi (over 150 varieties), **Ferns, Palms, Cycas Revoluta, Zamia, Japan Orange, Persimmon and other fruit trees, Lilies, Nerine Japonica, Chrysanthemums, New and Rare Evergreen and Deciduous Trees, New and Rare Plants, Shrub and Palm Seeds.**

All plants acclimated. Send us your Business Card and we will quote Trade Prices for 1000, 100, 10 or single plants
Retail prices on application.

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— AN EXCEPTIONALLY FINE —

GENERAL NURSERY STOCK

— FOR —

SEASON 1892-3.

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Nurseries at Napa, near R. R. Depot. Residence of Proprietor at Shusal Fruit Farm, 4½ miles north of Napa

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We have the Largest Collection
—OF—
Fruits, Palms, Ferns, Economic Plants,
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RARE NEW PLANTS,
From the **FOUR CORNERS** of the Earth, grown for sale in the U. S. No nursery like ours. **Supply Customers all over the Whole World, by MAIL, EXPRESS or FREIGHT.**

REASONER BROS.,
Established 1883. ONECO, FLORIDA.



Fine Small Fruits a Specialty.

CUTHBERT RASPBERRY.

BEST MARKET BERRY KNOWN; LARGE, FIRM and luscious, stands travel finely, bears immensely, and has two crops a year; 50 cents per dozen; $3 per 100 Also Strawberries, Blackberries, Gooseberries, Currants, etc., of the finest imported varieties. Prices on application. **L. U. McCANN, Santa Cruz Cal.**



BUSINESS CHANCE, FOR MAN OR WOMAN. Address, O. R. OROUTT, Orcutt, California.

NURSERY STOCK.

FULL AND COMPLETE STOCK OF

Fruit, Shade and Ornamental Trees,

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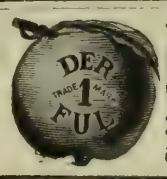
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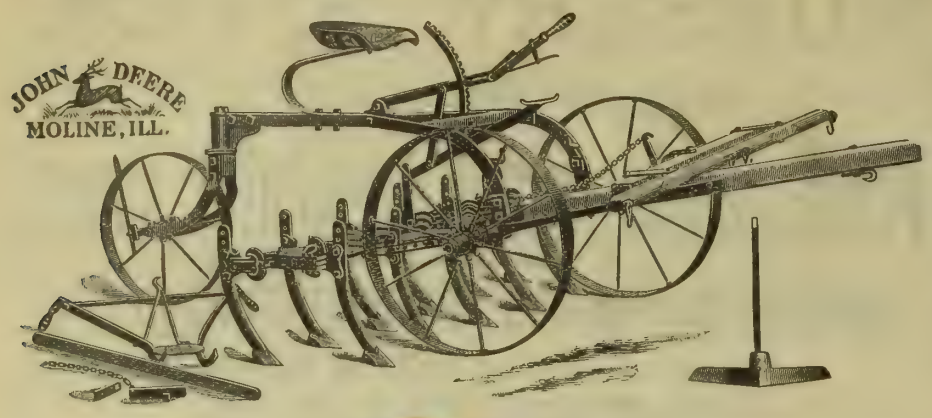
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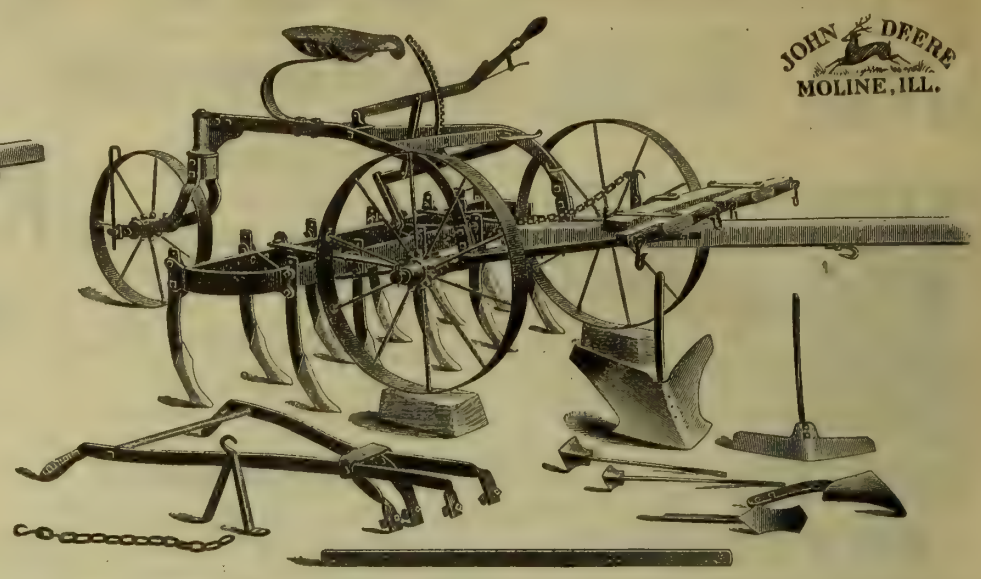


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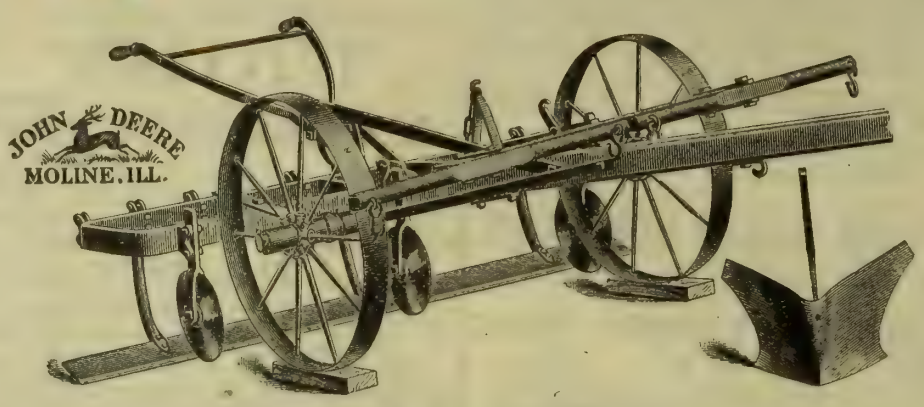
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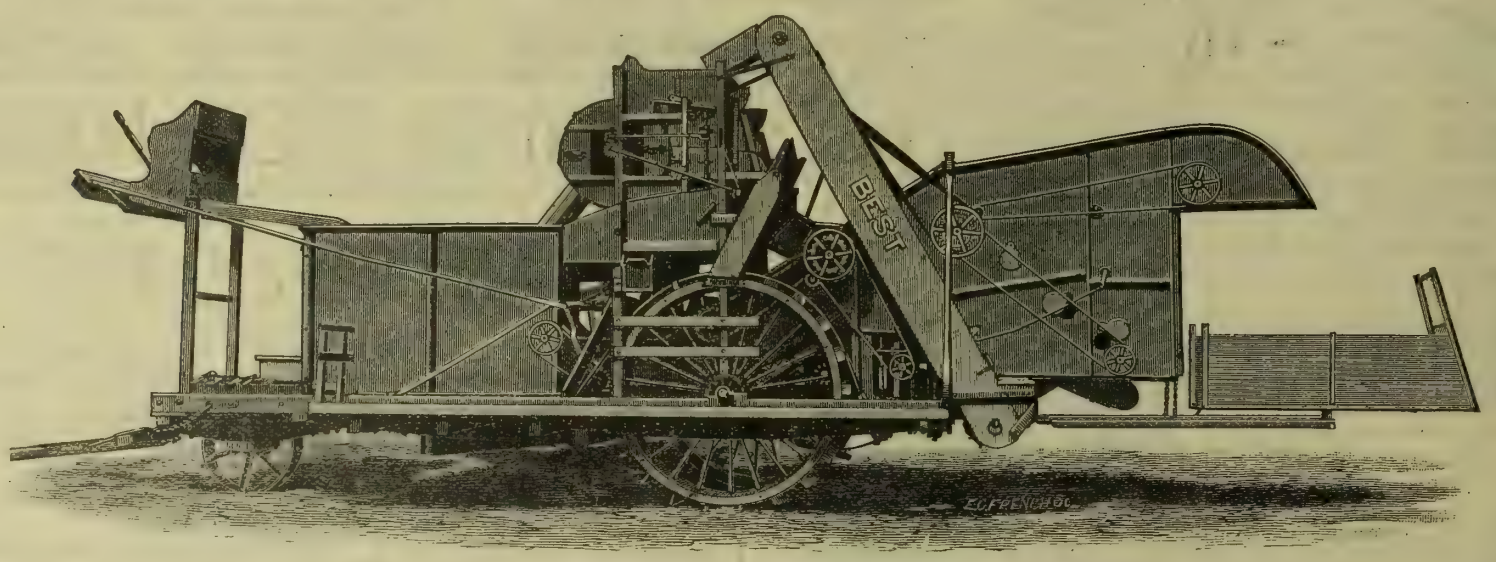
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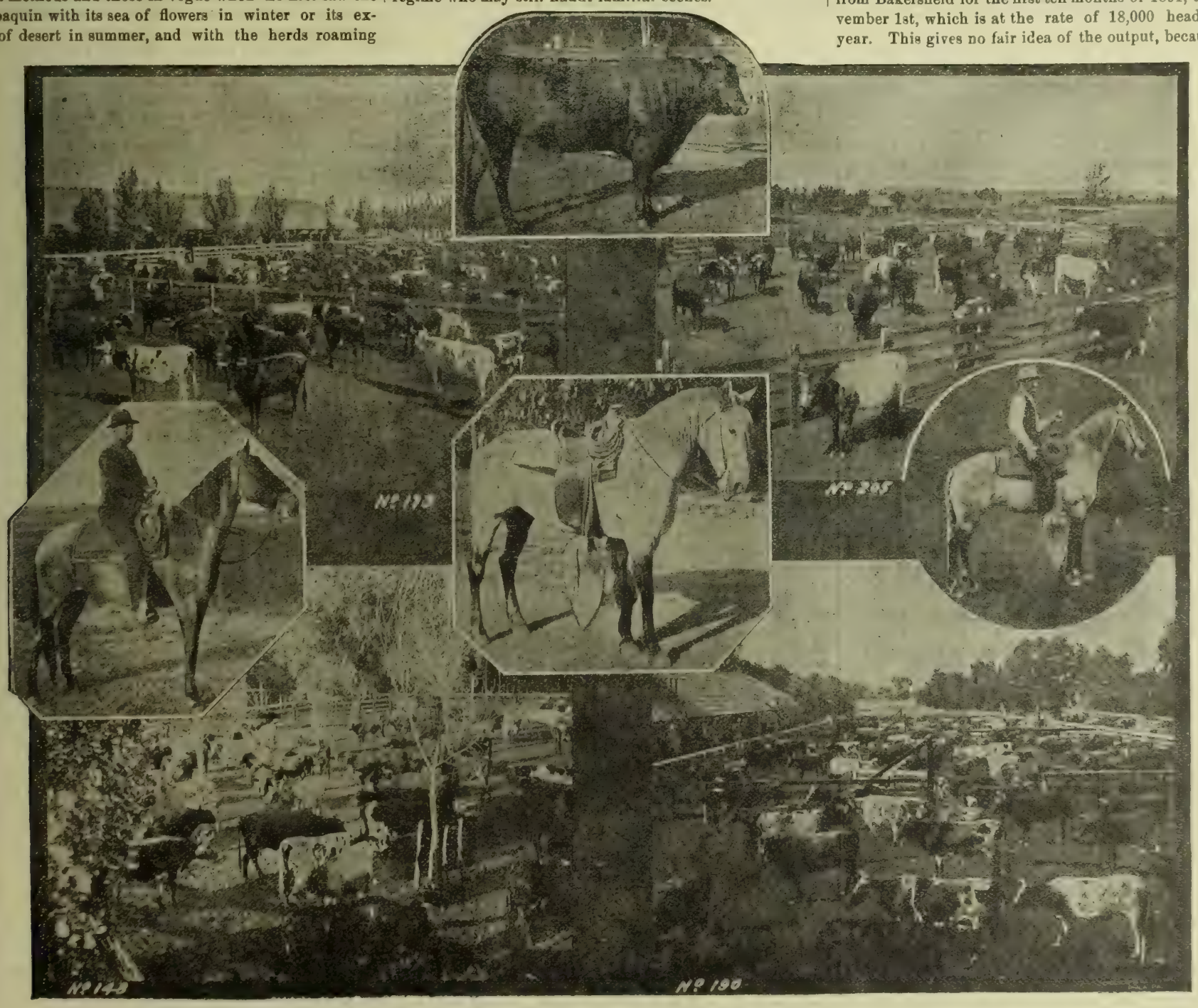
PACIFIC RURAL PRESS

Vol. XLIII. No. 15. SAN FRANCISCO, SATURDAY, APRIL 9, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Cattle-Growing in the San Joaquin Valley.

The composite plate upon this page affords a glimpse of stock-ranching in the upper San Joaquin valley. Perhaps the first impression which the scenes will make upon an old Californian will be one of the marked contrast between present methods and those in vogue when he first saw the San Joaquin with its sea of flowers in winter or its expanse of desert in summer, and with the herds roaming at will up to their knees in lush wild feed or enveloped in a cloud of dust, according to the season. Very different from such scenes as these now greet the visitor to the improved parts of the upper valley, where irrigation has transformed the country into a region of thrifty, well-kept farms. As a matter of fact, he who thinks of the improvement and advancement of the San Joaquin only in the line of fruits and fruit products has only a partial idea of its greatness and wealth-producing capacity. It is to be a vast region of diversified farming.

The pictures illustrate cattle-farming as followed upon the farm plan rather than upon the range plan of the early years. And yet the work of the photographer shows that enough remains of the old life to render it picturesque and interesting to the distant reader. The vaquero still lives, his saddle and riata have the ancient glamour still about them, but what an anachronism is the vaquero himself—a vaquero with a "biled shirt"—hide your shame ye mounted spectres of the old regime who may still haunt familiar scenes.



SCENES ON THE CATTLE FARMS OF KERN COUNTY.

And yet less change has come to the vaquero than to the scenes amid which he now pursues his vocation. The pictures show well-built corrals of sawed lumber, with swinging gates, fine cattle and hay sheds, groves of trees for shelter. All these things are common on the irrigated farms of the Kern County Land Co., on whose properties the photographs were taken. The cattle also show notable improvement through the use of thoroughbred sires of most of the popular breeds which have been introduced. Nor would glances at the fields show less progress than the cattle, for the square miles of alfalfa, Egyptian corn and other forage plants show that the owners have due respect to the old maxim that feed makes breed—only their practice shows still greater wisdom in relying upon both feed and breed as the twin factors of success.

The development of the cattle interest on improved lines is attaining respectable figures. A current issue of the Bakersfield *Californian* says: "The railway tables show a total of 666 cars, containing 15,000 head of cattle, shipped from Bakersfield for the first ten months of 1891, up to November 1st, which is at the rate of 18,000 head for the year. This gives no fair idea of the output, because there are three head driven out afoot for every one that leaves here by rail. The assessment roll of 1891 showed a total of 80,063 head of cattle in Kern county, of which 68 were work-oxen."

PLANTING AT THE WORLD'S FAIR.—Reports state that the "wooded island" in the Chicago Exposition grounds is beginning to assume the character which in great part it will have during the Fair—that of a gigantic flower garden. Already the Floricultural Department has received 27,000 rose bushes and other plants, several thousand of which came from abroad. These are being transplanted on the island.

AGRICULTURAL SCIENCE.

The Cienegas of Southern California.

[A paper read at the last meeting of the American Geological Society by PROF. E. W. HILGARD of the University of California.]

A *cienega*, in the parlance of the native Californian, is a limited area showing a growth of water-loving plants, appearing sporadically in otherwise arid surroundings—usually hillsides or valley margins—and occasionally giving rise to flowing springs. The economic importance lately attained by these cienegas as sources of irrigation water by the aid of artesian borings, and some peculiarities of structure upon which their occurrence in that particular region seems to depend, justify at least a brief presentation of the facts to this body.

A simple and typical case in point is presented, for instance, by San Antonio creek, a stream issuing from a canyon in the Sierra Madre near the town of Pomona, in the San Bernardino valley, Los Angeles county. It is near the present divide between the adjacent drainage basins of the San Gabriel river on the west and the Santa Ana river on the east. Though a small stream, carrying only from 700 to 800 miner's inches of water in summer time, it has formed in front of its exit from the canyon a debris cone or "fan" having a radius of seven or eight miles, of which the apex, near the canyon mouth, is between 400 and 500 feet above its base. On the slopes of this fan, as well as near its base, there appear numerous cienegas, some less than an acre in area, while others range up to 20 acres and over. In some of these, large sycamore trees are the only unusual indication amid the "bee-pastures" of white sage, cactus and other plants characteristic of the dry mesas of the South. In others there is added the willow and clumps of "tule" (cat-tail) and other swamp plants. From some, springs issue naturally; in all, shallow dug wells find water; in many of them, artesian bores have been made with good success. The deposits penetrated in these bores are, of course, such as may be expected in a debris-fan; but they vary so quickly and completely in wells only a short distance apart as to show that the ancient portions of the fan have been formed under a regime exactly like the present—namely, an alternation of very coarse deposits of gravel and large cobbles, such as are now carried by the stream during the torrential floods to which the high ranges are subject, with fine silt and even clay, which are practically impervious to water. The abrupt diminution of velocity on emergence from the canyon results in the quick accumulation of cobble ridges or "kames," which sometimes change the main channel, within a few hours, to a totally different direction. It is obvious that in past times such changes of channel have thrown the water of the creek from one drainage basin to the other; at present it discharges toward the Santa Ana basin, but unless artificially prevented, there is no reason why it may not some time revert to the San Gabriel watershed.

If we imagine the structure that must result from such a mode of accumulation of a debris-fan, the sporadic appearance and peculiar localization of the cienegas (being the point at which the water fed into the cone at the mouth of the canyon is forced near to the surface, either by a cross ridge or by the termination of a water-bearing cobble bed underlain by an impervious layer) is easy to understand. But it is also obvious that the continued supply of water from the stream into the various old channels of the debris cone must depend upon the maintenance of the open gravel surface at the apex of the cone. When this is wholly or partially closed, whether by natural or artificial processes, then, the source of supply being stopped, the springs or artesian wells dependent upon it must diminish or cease to flow. Such variations and stoppages have already been experienced at several points, and as they may prove very costly, if not disastrous, to heavy investments already made, it is quite important that the need of keeping the area of infiltration open for the winter floods should be fully understood by the populations concerned. When this is attended to, it is obvious that we have here natural storage reservoirs for flood waters, annually replenished and likely to be fully refilled each season, no matter how heavy may have been the drafts made upon them during the preceding irrigation season.

The most extensive example of debris-fan storage of flood waters thus far known to me occurs in the upper San Bernardino valley, at the head of which two large streams, the Santa Ana river and Mill creek, emerge from narrow canyons, at whose outlets there are truly phenomenal accumulations of huge bowlders, which in time of flood are tossed about by the torrents with a thundering noise sometimes audible miles away. Here are many square miles of open cobble surface, into which flood waters can be and are absorbed with the greatest ease, although in the usual channels of the summer flow the bottom is made sensibly waterproof by finer sediments. Costly tunnels have been driven through these cobble-beds under the impression that large amounts of water could be thus collected; but while the constant drip proves the perviousness and absorbent nature of the deposit, that very circumstance prevents the gathering together of any very large supply of water in the relatively insignificant areas of the artificial drifts.

From the head of the debris-fan of Mill creek to its base, near the town of San Bernardino, the distance is between 12 and 14 miles, according to the initial point chosen; the fall of the surface within the same distance is between 600 and 700 feet. The average width of the valley is about 10 miles, and artesian borings have shown the gravels and cobbles to be nearly a thousand feet in thickness within a mile of the southeastern edge. This enormous gravel mass, filled with water from the floods of the two streams, forms a natural reservoir of such magnitude that the drafts thus far made upon it by the numerous boreholes sunk in the lower valley have failed to show any such degree of mutual interdependence as is usually observed in wells situated short distances apart—a fact which I have ascertained by experimental measurements made under proper conditions. This relative independence of the flow of contiguous wells also indicates that the water-bearing stratum consists of gravel so large and so open that the water mass may be considered as exerting its pressure rather freely in all directions; yet on reopening a closed well there always exists a material accumulation of pressure, which takes several hours to recede to its normal amount.

Besides the artificial outlets mentioned, however, there is a number of natural outlets on the slope of this great gravel reservoir. The most conspicuous is the source of Warm creek, the stream which has been appropriated for the purpose of irrigating the well-known colony of Riverside. Warm creek has no visible connection with any of the streams that descend from the Sierra Madre; it rises in the valley itself, fully three miles away from the foot of the range. There is no obvious reason for its being there, but the water gathers from little rills and ditches within a space of about a quarter of a mile, acquiring within that distance nearly its full volume of from 2000 to 2500 inches during the dry season. At other points, also, "artesian" springs rise with considerable force and volume, and in the immediate floodplain of the Santa Ana river, rivulets gather at many points on the margins, at the foot of the bluff, some 7 or 8 feet above the river channel, and flow toward the latter to increase the volume of the stream. It thus happens that "the entire flow of the Santa Ana river" has been appropriated at at least three different points, each appropriator receiving a good flow, and that in the absence of any obvious important additions from incoming streams. As may be supposed, boreholes sunk in this region of spontaneous flows encounter at very small depths (from 120 to 150 feet) very copious flows of artesian water, in cobble-beds; while near the border of the valley not only is a greater depth required and the outflow less, but the materials penetrated are much finer.

Since the terraces of reddish loam that border the foot of the Sierra Madre from the head of the valley to the San Gabriel river indicate plainly that the subdivision of the valley into two drainage basins is a comparatively recent event, it does not seem improbable that the artesian reserve referred to might be tapped by deep borings much farther westward than has heretofore been attempted; perhaps within easy reach of the city of Los Angeles.

A very striking exemplification of the origin of cienegas exists in the valley of Temescal Creek, one of the southern affluents of the Santa Ana river, in San Bernardino county. This creek is really the natural continuation of the San Jacinto river of San Diego county, but an intervening lake basin (Lake Elsinore) prevents actual flow from the latter stream to the Temescal valley, save in seasons of extraordinary rainfall. Its water is supplied almost entirely from the canyons of the Santa Ana mountains, which have a rather copious rainfall in their higher portions. At the head of the valley there is a small lake (Lee Lake), which, with no visible inflow, nevertheless has at its lower end a steady outflow of about 400 miners' inches of water during the dry season, thus forming part of the water supply of the "South Riverside" Colony. Examination shows that the lake is fed entirely by a series of springs, or rather an almost continuous ooze, from the enormous masses of granitic and other debris that have accumulated in front of the two uppermost canyons of the Temescal valley, and which reach entirely across the valley to the foot of the (Temescal) range opposite. These debris masses are so porous that actual surface flow very rarely occurs, and no well-defined bed for a stream exists save where, close to the lake basin, the materials are relatively fine. Evidently the main body of the rainfall gathered into these canyons is stored in the coarser portions of the debris-fans above.

Below this lake basin the Temescal valley is divided lengthwise by a series of low ridges formed of materials mostly impervious to water, of Tertiary age. In front of the canyons of this lower portion of the valley similar great debris masses have accumulated also; but since the impervious ridges mentioned prevent the outflow of water save during actual freshets (when small streams pass through the gaps in the ridges), extensive cienegas have been formed between the valley ridges and the foot of the Santa Ana range. In these, as in the upper San Bernardino valley, "artesian" springs rise at many points, and vegetation remains bright green all summer. Borings thus far made have developed a very copious artesian flow, and a tunnel driven through one of the clay ridges toward the cienega was suddenly inundated when its face reached the gravel of the debris mass, about 40 feet below the surface. The artesian wells and natural surface flow from these cienegas, so far as developed, yield an aggregate flow of nearly 600 miners' inches, which can doubtless be materially increased; and this, with the flow from the lake above, constitutes the water supply for the colonies below.

These examples, which could be greatly multiplied, show sufficiently both the nature and origin of the cienegas, and also their practical importance as sources of water supply, which calls for a more careful survey of their extent of occurrence than has heretofore been made. While they do not render the establishment of artificial storage reservoirs superfluous, they do supplement them locally to a very material extent, rendering it possible to occupy for agriculture large areas that otherwise would have remained arid for many years to come. But there arises the question as to the geographic limits within which these natural storage reservoirs may reasonably be sought, for it is notorious that they are not usually found, and the name and idea of the cienega is not generally known in the northern portions of California.

The essential condition of cienega formation is manifestly the opportunity for the abundant formation of deposits of exceptionally coarse and pervious gravel and cobbles near the points where the canyons emerge from the mountains. This, again, is necessarily conditioned upon the occasional occurrence of violent, torrential rainfall in the mountains, alternating with periods when quiet deposition allows of the formation of water-shedding layers. Another condition appears to be the ready weathering of the parent rocks into rounded forms, by which close packing is prevented, so that abundant interspaces are permanently maintained.

Both conditions are fulfilled to an unusual extent in the granitic ranges of Southern California. The rock is rather easily disintegrated, first into larger and then into smaller rounded massses, from which large quantities of very coarse angular sand have been detached, and which continue to disintegrate rapidly when exposed to the air, but are relatively stable when submerged in the debris mass, and so maintain porosity. Such granitic or granitoid material forms the main body of all the larger cienegas I have examined in Southern California, and the remarkably large proportion of potash contained in their waters in consequence is of no small economic importance.

It is therefore reasonable to presume, and it seems *a priori* probable, that a concurrence of the two conditions, climatic and petrographic, is requisite for the formation of cienegas upon a practically useful scale, and the extent to which this concurrence actually exists, geographically, is a question of no little practical interest.

FORESTRY.

Notes on Wattle-Growing.

As the wattle acacias thrive in this State, and are to some extent already growing in different regions, there is not a little interest manifested from time to time in the possibility of a local product of wattle bark for tanning. We find in *Garden and Field* of South Australia an essay read by Mr. von Doussa before an agricultural assembly in that colony, from which we make the following extracts:

From nearly 20 years' close observation and 10 years' practical experience, I think I can with confidence speak on a subject which is every day increasing in importance, and one which is greatly helping to develop our country and producing interests, namely, the cultivation of the wattle. Mr. J. H. Maiden, Curator of the Technological Museum, Sydney, in his book on "Wattles and Wattle Barks," states that there are over 300 kinds of wattles (acacias) in Australia—good, bad and indifferent—and that the broad leaved wattle of South Australia (*Acacia pycnantha*) has one of the richest tanning barks in the world. The district of Echunga is in the very heart of the country producing this wonderful tanning material, and as so many colonists are making, and intending to make, their livelihood by wattle-growing, it is essential that in doing so the very best information on the subject should be obtained.

According to Mr. J. E. Brown, lately our Conservator of Forests, there is not the remotest possibility of the market being oversupplied. British and Continental tanners are languishing for ample and continuous supply, and South Australia exports in such driblets that many of the large firms in Great Britain have given over using our bark, and have fallen back on Valonia and other barks more fully and regularly supplied.

The export of bark from South Australia for the last six years amounted to 27,450 tons, representing a value of £286,272, and when it is considered that in that period one-fifth of the quantity exported could be taken by one yard alone, it will be easily seen that growers need not fear being able to produce more than would supply the demand. Even in Tasmania, which exports nearly three times the quantity of bark per annum that we do, the necessity of cultivating the wattle is receiving the attention of the authorities, and Mr. F. Abbot, the Superintendent of the Botanic Gardens at Hobart, says: "We have so many wattles growing naturally that we have no need to cultivate them, but the destruction is so great that we shall have to do it before long." Both in Victoria and New South Wales the cultivation of the wattle is receiving marked attention, as throughout Australia the species of wattles richest in tannin are becoming seriously diminished, and there is a concensus of opinion among persons interested in the matter that the various Governments should encourage the replanting of them.

The subject of wattle-growing will bear calm discussion, for we have much to learn in regard to it yet. So far, we have had to depend chiefly on estimates (which look very taking on paper) in lieu of statements of results attained. As an example of the estimates on paper which were given before the "Victorian Royal Commission on Vegetable Products," Mr. W. Ferguson, Inspector of State Forests, Victoria, says: "I calculate that from the time the seed was sown at the Majorca Plantations, Ballarat, in seven years we should get ten tons of bark to the acre—that is, off trees that were fit for barking at the time. This would be the first thinning out; then each succeeding year, and for years and years to come, we would get the same result." The soil on which this wonderful result was to be obtained was stated to be so poor that neither grass nor anything else would grow. All you who have had anything to do with growing wattles will be able to form your own opinion of the above statement. They may be able to obtain such results in Victoria, but in South Australia, even on the very best and most suitable land, this would be impossible. The best result I know of is from a ten acre paddock at Friedrichstadt, near Hahndorf, which, after it had been cropped for over 20 years, was given a spell, and in about two years the whole became covered with young wattles, thus showing how long the seed will remain in the ground. These were conserved, and in 11 years after the last cropping, the wattles being then nine years old, the paddock was stripped, yielding 27 tons of bark, for which the owner got over £300.

The soil most suitable for the growth of wattles is of a sandy nature, lying upon a clay subsoil, or on ironstone gravel ridges, which generally produce the best and thickest bark. One frequently notices wattles flourishing naturally on the poorest soil, therefore farmers should not hesitate, when they have such land, which produces them nothing, to put it under wattle cultivation. On the Echunga Wattle Plantation Company's property, wattles

can be seen growing luxuriantly on land of the poorest description—in fact, it was considered wasting time and labor when this portion of the property was put under cultivation, but the result so far has proved quite the contrary.

Preparing virgin soil for cultivation is a question on which there are different opinions, but I think results will prove that the plan adopted by the Echunga Wattle Plantation Company is the most correct and cheapest method. Here several experiments have been tried—plowing in ridges, putting in seeds with hoes and scarifying. The scarifying has proved the most successful and cheapest plan. The ground proposed to be put under cultivation—say a piece of 100 acres—is cleared during the summer months, all useless saplings and scrub timber are cut down, and with the dead timber and logs lying about the ground are stacked in heaps, ready for burning later on. All the large trees, reserving the best and those useful for timber purposes, are killed by ringing. Then in the month of May, when the fire can be easily controlled by three or four men, the whole patch is burnt out, and the ground will then be found suitable for a stump-jumping scarifier, with a team of six good bullocks to go over the whole 100 acres in from 25 to 28 days. The ground in this state forms a protection of no mean value to the young wattles in their early growth, the useful timber trees that are left and the standing dead timber being a great protection against severe frosts in the winter and the hot sun in the summer.

Before putting the seed into the ground, it is necessary, on account of the extreme hardness of the outer covering of the seed, to prepare it for quicker germination. This is best done by putting what is required for one day's sowing into a saucepan or boiler, with sufficient water to well cover the seed; it is then placed on not too fierce a fire until it commences to simmer, and is kept at that point from three to five minutes, when it has to be taken off the fire and left standing till cool. The seeds are then fit for use with a guarantee that nearly every one will grow in a few weeks after being put into the ground. From a series of experiments instituted I obtained the following results:—100 seeds treated in the above manner were planted, and 98 germinated; with only boiling water poured on them 53 germinated, and out of 100 seeds planted without any preparation only 18 grew. The seeds were all planted on the same day and one plot of ground. The whole 98 of the prepared seeds that grew appeared before one of the unprepared seeds germinated.

The best time for putting the seed into the ground is in the months of July and August, and when sowing the prepared seed broadcast, previous to running the scarifer over the ground, if on virgin soil, or the harrows over ploughed or formerly cultivated ground, care shou'd be taken not to put more than 1½ pounds seed to the acre. Say four acres are gone over in a day, the whole should not be sown at one sowing, as on a dry, windy day, before all the seeds could be covered, those assisted in their germination through the boiling process would become useless when dried up.

Wattle-growers will find the pruning of their trees when four or five years old of great advantage, for the tree when pruned (which must not be done too heavily, and only the lower branches should be cut off) will grow quicker, give a cleaner stem, hence easier stripping and at less expense, and the bark will be found to be of better quality and thicker growth than on unpruned trees. The best period for pruning is during the months of April and May.

The stripping season generally commences in October, and in wet years continues till April. Should the season be favorable for late stripping, I would recommend growers not to commence too early, as during the months of September, October, and November the trees grow more than in the remaining nine months of the year, and from an analysis of bark (taken from one tree) made by Mr. J. H. Haycraft, of Echunga, the following results were obtained: For the six months from May to October, inclusive, the percentage of tannin was from 33 to 36 per cent., and from November to April, 38 to 39 per cent., thus showing that out of the season there is a depreciation of tannin in the bark. The exact age at which wattles should be stripped can only be decided by the cultivator's common sense. Some growers allow their trees to stand until the bark on them becomes quite black and scaly. This, I think, is very poor policy, as the bark in that state becomes too fibrous and woody, and certainly does not contain the same amount of tannin as the smooth-skinned bark from trees aged from seven to ten years. As soon as the tree shows signs of the bark becoming scaly it should be stripped. The time is not far distant when bark will be judged as critically as wool, and price paid for it will be according to its strength, age and condition.

Since the erection of Messrs. Barrow and Haycraft's tannage factories at Echunga and Little Hampton, wattle growers have been able to make use of their waste (tops, thinnings, and pruning) in a most profitable manner, and those factories have, to a great extent, caused the cultivation of the wattle to be more seriously considered. The tops, etc., in former years, were during or after the stripping collected, put in heaps, and burnt; but in thickly wattled country this could not be done without risk, and very often these heaps would remain for years, covering large areas in paddocks, and preventing the growth of either grass or wattles on those patches. With the advent of those factories, growers now have an opportunity when stripping to at once clear the land, the tops being collected in their green state, tied in bundles, and carted to the factories, when a former nuisance and useless article is turned into a profitable commodity, causing a large amount of money to be annually circulated, and being a great boon to the working classes. In this natural wattle-bearing area there is room for at least seven or eight factories such as that erected at Echunga; and it is only a question of time and capital to see them established.

[The reader will bear in mind that the months named for sowing, pruning, etc., are for the southern hemisphere. —Ed.]

The Dairy.

Eastern Notes on Creaming Milk.

From current issues of Eastern journals we have collated several paragraphs to show how dairy practice east of the Rockies is running in cream separation.

Prof. J. W. Robertson writes to *Hoard's Dairyman* as follows:

"When a cow has been milking about nine months or more, I do not know of any system of setting the milk, in deep setting pails, which will enable the dairyman to recover much more than two-thirds of the butter fat in his milk, but the use of the centrifugal separator, will enable the dairyman to recover practically the whole of it. The use of shallow pans, for milk obtained during that advanced period of lactation, has given us much better results than the deep-setting pails."

And the *Dairy Messenger* remarks: "It is well to remember the following rule for setting: The depth of the milk must be modified according to the temperature available. Thus, with no ice in warm weather, set very shallow (2 to 3 inches); if colder, say 50 to 60 deg., or if running cold water is at disposal, set 5 to 6 inches deep. If water below 48 deg. or ice is available, set in cans of 8 inches in diameter, and 20 inches deep, submerge or not, as you may prefer. Plenty of crushed ice should be used, so as to cool quickly and intensely. The losses of butterfat by neglecting to have the water cold enough, are enormous; that the experiments of the late Professor Fjord have amply proved. Experiments, both here and in Europe, have also demonstrated that all the difficulties in creameries are overcome by the centrifugal force, and that there is no need to leave more than from 0.1 to 0.2 per cent. fat in the skim-milk, irrespective of breed, feed or period of lactation." [This shows that in California, without cold water, the old shallow pan system is best until one gets a centrifugal.—Ed. Press.]

At a Farmers' Institute in Western New York, George Smith, a practical dairyman, in answer to the question, "Which is the most economical, and at the same time, thorough process of creaming milk in a dairy having ten cows that will make 250 pounds of butter in a year?" said: "If you have ten cows that will produce that amount of butter, or, if you are going to purchase them, and have no creamer, and wish to choose between processes, and must buy one, by all means choose the hand separator. With one of the hand power size, you can easily skim the milk from such a herd in an hour for each milking, all seasons and conditions considered, much closer than by any gravity process yet brought out that I know of."

In answer to a dairyman who had been using a deep-setting arrangement, C. P. Goodrich replied: "It will pay you to get a hand separator, but I would advise you to get one with power attachment, for, although you can turn it by hand,—as it does not turn hard,—yet it takes time, and time is money nowadays, and you will be sure to use a power before a great while. A light tread power, run by any animal of 400 or 500 pounds weight, will answer the purpose.

"How much more butter you will get by its use than by your present system, of course I cannot tell, but I *know* you will get some more. I have tested with the Babcock tester hundreds of samples of skim-milk both in my dairy and in different parts of the State. Under the most favorable circumstances in summer, with the milk of fresh cows, set immediately after milking, in ice water, there is at least ¼ of 1 per cent left, and this winter, I have found .4 to .8 of 1 per cent., and where it had been set in cold air instead of water, and unskillful skimming had been done, very much more had been left. I think it safe to say, that with the use of the separator, you will save at least 20 pounds of butter per cow a year, giving as they do 2000 or more quarts each, which, at 25 cents per pound, would, in a year, pay for the separator; besides, if you run it by a tread power, you would save some labor."

It is interesting to note that the writer of the above uses his bull to run his hand separator.—Ed.]

How to Make Good Skim Milk Calves.

This is one of the most important propositions in dairy economy. The Iowa Experiment Station has been making some interesting trials along this line which are detailed in a late *Bulletin* as follows:

Farmers are aware that there are two critical periods in the life of the calf. The first four months when it requires care to carry it, by judicious feeding, to the point where it will develop on the common fare of the farm. All farmers know that a weaned calf loses condition rapidly if it is forgotton and turned upon pasture.

We made this trial with two thoroughbred Shorthorn calves—a heifer, No. 227, 64 days old, that weighed 179 pounds; a bull, No. 229, 45 days old, that weighed 158 pounds.

Two Holstein—a high grade heifer, No. 34, 33 days old, that weighed 151 pounds; a thoroughbred bull, No. 173, 53 days old, that weighed 200 pounds.

All were in good condition for growth. They were fed under trial three months in periods of 15 days each. The milk fed was taken from three special cows. It was thoroughly mixed and divided into equal portions. One-half was given to the Shorthorn bull, No. 229, and to the Holstein bull, No. 173, in equal parts, and the other half was set 12 hours for creaming, when all the cream was skimmed off and the milk warmed and fed to the heifers at the temperature of the new milk. The new milk and skim milk were sampled each day before feeding, and analyzed by the chemist in five day composite samples and a record kept of the analysis. We had flax ground and analyzed, so as to ascertain as near as possible the amount necessary to feed with the skim milk to replace the fat taken away in the cream.

The whole milk calves had seventeen and one-half pounds per day of fresh milk, and the skim milk calves had 16 pounds per day of milk skimmed after 12 hours setting. The whole milk feed during the period contained 9.24 pounds of fat, and the skim milk contained 2.76 pounds. To the skim milk was added one and one-half pounds of ground flaxseed per day, that by analysis showed 35 per cent fat or 7.87 pounds of vegetable fat in the 22 and a half pounds of the flaxseed meal fed during the period, thus making a total of 10.73 pounds of fat fed to the calves on skim milk and 9.24 pounds fed to those on whole milk. Owing to a variation of the butter fat in the milk fresh from the cows and also in the milk after setting, it was impossible to fix rations that would contain uniformly equal amounts of fat. One and a half pounds per day of the flaxseed meal was found to be about all that the calves could take without scouring, and sufficient to replace as much, or more, of the butter fat as was taken out by skimming. Analysis showed that the solids aside from fat contained by the skimmed and unskimmed milk were practically the same; and that the ground flaxseed contained 35 per cent fat and 24 45 per cent crude protein, hence some albuminoids as well as fat are added.

RESULTS.

These are stated as follows:

1. The experiment indicates that a ration of skim milk and ground flaxseed compares favorably with a new milk ration for young calves.

2. The larger gain came from the whole milk, but a part of it was probably due to the individuality of the calves, and good results and a thrifty growth were made on skim milk and ground flaxseed.

3. The skim milk calves were interrupted less in their growth by weaning than the whole milk calves.

4. A saving in value of butter fat alone of $1.11 per month on each calf was effected by substituting the ground flaxseed.

5. The cost of producing a pound of gain (estimating new milk at 87 and a half cents per hundred pounds, and skim milk at 15 cents per hundred pounds; grain one cent per pound, hay $5 per ton, and flaxseed meal three and a half cents per pound) was 76 cents for the fresh milk ration and five cents for the skim milk ration.

How to best and most economically develop the calf during the first six months of its life and fit it for the greatest usefulness as a breeding or feeding animal, is one of the difficult problems that confronts the farmer and stock raiser. The power of the average well developed calf of six months and upward to convert grass and grain into dollars and cents is well known. Until the age of four months is reached, however, the milk of the dam is superior to any other food, but in this experiment good results have been obtained from a more economical ration.

The Stable.

Items about Horses.

The British Government is trying to find some way of improving the breed of horses in Ireland.

Rats eat horses' hoofs. Sometimes lameness is caused by the attacks of these vicious rodents. A layer of tar on the hoofs will keep them away.

The Shire horse importers of America are up in arms against the late ruling of the Treasury Department requiring so many crosses to secure the entry of imported stallions free of duty. They consider the ruling unjust and unbusinesslike.

The breeder who carefully and correctly mates his animals, with reference not only to individual qualities, but with reference to known characteristics, will, in the majority of cases, be more successful than the hap-hazard, happy-go-lucky breeder who pays no attention to blood lines, but unites his sires and dams only with reference to individual qualities.

Breeders who cannot afford to buy high-priced stock can console themselves with the reflection that the dams of many of the fastest horses in the world have been low-priced mares. Oliver K. was sold with his dam for $150; Jack's dam sold for $75; McDoel's for $140; Allerton's for $200; Axtell's dam cost $150, and the list might be continued up in the hundreds.

C. W. Williams of Independence, Iowa, owner of Allerton, recently issued a challenge to trot Allerton against any stallion in the world a race of mile heats, three in five, in harness, at the trotting meeting to be held at Independence in August, for a purse of $10,000. Budd Doble, in last month, accepted the challenge on behalf of Axtell, providing the entire purse of $10,000 should go to the winner, to which Williams assented.

Up to the time that Mr. Robert Bonner purchased Dexter and retired him to his private stable, no horse had ever appeared that could give him a race. He was truly king. He was as much superior to any trotter then as Arion was superior to any two-year-old in 1891. Great as were other sons and daughters of Hambletonian, it was but play for him to beat them. He retired with a record of 2:17¼. What his real capacity was will never be known, but no horseman familiar with the trotting of that day and the ease with which he then did his work, believes that under present improvements in tracks and appliances he would have fallen much, if any, short of the best that has been accomplished to date. Many a regret was expressed that Dexter was a gelding, and had he been entire he could have gone into the stud and commanded his own price to unlimited patronage, but those who wanted the blood had to turn to his full brother Dictator, also a horse of excellent conformation and quality, but with nothing like the speed and personality of Dexter.

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

FRUIT AND GRAIN.—Haywards *Journal:* The heavy rains were a glorious thing for both grain and fruit trees, though of course it has caused some damage to certain kinds of fruit, but the trees needed just such a nourishment as well as the grain. The promise for a large yield in this valley is now assured; never before have we seen such a bright grain outlook. The rain has naturally done some damage to fruit, but, as near as we can learn, it will not be half as bad as reported. Beyond damage done to Black Tartarians, no uneasiness is felt regarding other kinds. The almonds are not injured, nor the plum or prune crop, as far as we can learn, and apricots are all right.

Amador.

GROWING STRAWBERRIES IN BARRELS.—Jackson *Ledger*: Dr. Norman of Plymouth has a strawberry garden in the shape of a barrel. It is made by boring holes around the barrel, say 100 in all, from the bottom up; then put in dirt, and fill up to the first row of holes. Then stick the plant in the hole and fill dirt over and up to the next row, and so on, until you fill the barrel with dirt, and around the outer side, the strawberries. By this method, the plants are free from weeds, and make a nice ornament.

Butte.

THE MOST PROFITABLE ORANGE.—Oroville *Register:* Hon. John M. Ward some 20 years ago purchased a dozen or more orange trees and planted them around his residence in Oroville. He trimmed the trees up so as to make them look attractive. One Mediterranean Sweet tree he did not touch with a knife, but simply kept the suckers broken off. This tree bore 500 oranges before either of his other trees bore a single one, yet all had the same care. He has two trees of this variety that are 20 years old, and a number of Navels that are 10 years old. He is convinced that his Mediterranean Sweets of the same age will bear ten times as many oranges as the Navels. He and Mr. St. Sure own an orchard together just below town. In this 50 orange trees were set in shallow holes, about 20 inches deep. Two years later, 150 additional trees were planted, but the holes were dug fully four feet deep. He says that the last lot of trees have made a remarkably strong and vigorous growth, much more so than the other trees, and that they require less water. He is positive that planters here make a mistake in digging shallow holes, for the trees will not do well unless irrigated about three times a month, while those planted in deep holes require but two or three irrigations during the summer.

Colusa.

CROP PROSPECTS NEVER BETTER.—Colusa *Sun*: It has cleared off with a small frost and without high water, and everything is lovely. The only setback coming with the late storm was the hail. The hail beat the wheat down, but we are inclined to think it did no material damage. The only thing now is that some wheat will fall, but with improved machinery now in use nearly all that grows will be saved. It will now require rust, or something out of the ordinary weather, to prevent a very large grain crop, and on all sorts of land. It is safe to say that the Sacramento valley has never had as fine a prospect, even including 1880, taking all kinds of land into the account. It is too soon to make a guess at the fruit crop, but it, too, ought to be good.

Contra Costa.

GRAPE GROWERS ORGANIZE.—Martinez *Democrat:* A meeting of the grape growers of Martinez and vicinity was held at the Opera House on Saturday afternoon last, about 25 being present. L. C. Wittenmyer was elected Chairman and A. A. Bailey Sec'y. G. Magliavacca, the well-known winery man of Napa, was present. He presented a blank contract for the consideration of the grape growers, in which he agreed to purchase all wine grapes of the first crop containing not less than 22 per cent of sugar, to be delivered at his office in Martinez, and agreed to give bonds for the fulfilling of the contract, the sellers to give bonds also for the deliverance of grapes. The following prices were offered by Mr. Migliavacca, the sellers to furnish their own boxes:

Variety.	Per ton.	Variety.	Per ton.
Zinfandel	$10	Burger	$ 7
Black Malvoisie	8	Mission	7
Burgundy	11	Matero	9
Gray Riesling	8	Grosse Blanc	9
Sauvignon Vert	8	Cabernet	11
Grenache	11	Rose of Peru	7
Chasselas	8		

Mr. Migliavacca offered to establish a winery in Martinez if the grape growers would guarantee to furnish 2000 tons of grapes for his use, and then he amended it to 1500 tons, but would have to receive an assurance of getting that amount of grapes annually.

El Dorado.

APPLE PLANTING.—Blair's District Cor. Placerville *Democrat:* Mr. Turner and Surveyor Austin of Placerville were here three days last week surveying the property the former has purchased from John Dench. Mr. Turner intends to set out 1200 apple and pear trees within the next year.

Lassen.

WOOL NOTES.—Amedee *Geyser*: Ninety-six thousand pounds of wool were shipped from Amedee last week. This is from one herd only, that of P. Flannagan. Two more bands remain to await the skill of the 20 shearers now at work. These bands contain 25,000, and will make speedy shipments a necessity.

THE APPLE SHIPMENTS.—Lassen *Advocate:* W. M. McClelland says that, in his opinion, it is safe to say that 20,000 boxes of Honey Lake apples have been shipped from this valley to the lower country—Sacramento San Francisco and Los Angeles—the past season. He places the average selling price of these apples at $1 per box of 50 lbs. It would, doubtless, be fair to figure a profit of at least one-half to the grower, so it seems our apple men—and they are few in number—have done fairly well this season. A little more care for the trees, better systems of grading, culling and packing, and there is no reason why they should not do better from year to year hereafter.

Santa Barbara.

THIRTY-SEVENTH DISTRICT FAIR.—*Times:* At a meeting of the Directors of the 37th Agricultural District, held at Los Alamos on Monday last, it was decided to hold the next District Fair at Lompoc on the last four days of September next. The fair will open on Tuesday. This gives everybody from this end of the district a chance to get there on Monday, make their entries and other preparations, and be ready to assist in opening a full-fledged fair on Tuesday morning, which will, if properly managed, far outstrip any fair ever before held in this c[illegible].

CROP PROSPECTS ON THE MESA.—Santa Maria *Times:* A *Times* representative took a drive on to the South Side mesas during the past week, and was surprised to see all kinds of vegetation so far advanced. Grain, grasses and fruit are two to four weeks ahead of what they were at this time last year. Early settlers found it very difficult to grow fruit trees at all, owing to bleak conditions. All this has changed and eucalyptus trees did it. We need all the trees we have for windbrakes, shade and shelter. They have assisted materially in increasing our average rainfall and have added more to the attractions of our valley than all other improvements combined. They have already paid well for the land occupied. Our orchards are coming on and rapidly changing general appearances, but they can never take the place of our tall evergreen gum trees. We need more of them. There are several different varieties of gums, all hardy, rapid growers, and some of them are very beautiful in foliage and flower.

Sonoma

FRUIT PROSPECTS.—Santa Rosa, April 2: TO THE EDITOR:—Another wet April seems to be at hand. It is feared that the fruit blossoms may have been chilled by cold and drop off; at least one-half can be spared and then we will have plenty left. Nearly all the fruit trees in this section have been sprayed with lime, salt and sulphur, and now, in their full bloom, present as white, pure and spotless attire as the lilies of the field. The RURAL continues to make its weekly visit like a beam of sunshine, cheering the hearts of its readers alike in fair or stormy weather. May it still cheer us on in the years to come is the hearty wish of the writer.—A. T. DAVIDSON.

Sutter.

ACTUAL TEST OF PLOWING BY STEAM.—Yuba City *Farmer:* Henry Best is getting his steam-plowing outfit ready for work, and will begin this week. The engine draws 12 ten-inch plows and does good work. During winter plowing, over 40 acres per day were plowed with the engine drawing 16 plows. Bray Bros. of Southeast Sutter and Trayner Bros. at North Butte are also running similar outfits this spring.

Tulare.

THE FRUIT CROP.—Visalia *Times:* The prospect of a big yield of the fruit trees in our Visalia district was never better. The apricot, which in the Hanford and Tulare district will be only about one-third of a crop, will be a full crop here. Peaches are promising all over the county. Visalians will have to thin this fruit on their trees. To us, these continuous yields year after year seem to be regarded as a matter of course, but to an outsider they would be regarded as phenomenal, and by many doubting Thomases as exaggerated statement. We invite the doubting ones to make a personal inspection of our orchards; they too will then believe the facts as we know them to exist. Our prune crop bids fair to be immense; just simply wonderful. Even our one-year-old trees will have some fruit on, and he who has pruned his orchard properly will have a crop on his three-year-old trees that will surprise the nations. The pear crop is also good. In the early part of the blossoming season, some few orchards were bothered with the aphis louse, but the cool weather played havoc with that pest, and, as he can't hurt anything but only the most tender foliage, I think we are done with him for this year. The cutworm has been a nuisance in some places, but he too seems to have taken his departure, although it is cool weather that suits him. He may show up again when the sun does not shine too hot. He is a night worker, and the remedy is to catch and kill him.

NOVEL WAY OF LIFTING WATER.—Reedley *Exponent:* W. P. Musaus and Will Love have built a novel concern for lifting water from an irrigating canal on to high ground. In the ditch they have constructed a large water wheel 16 feet long and 9½ feet in diameter, at both ends of which there are attached six buckets made from five-gallon oil cans. As the wheel turns the buckets dip up the water and empty it into a box or flume, from which it is conveyed to the land. The water is raised five feet, and the wheel is so supported by a frame that it can be raised or lowered as the occasion may require.

TREE AND VINE PLANTING.—Hanford *Journal:* The planting out of the 200-acre Sunset vineyard was completed on March 28th by the 40 or more men who have been employed thereon for the past seven days under the superintendency of F. T. Bush. The gang had previously been at work replanting on the Peerless and Grangeville vineyards, and putting in half a section of prunes, peach and almond trees and Thompson's and Sultana seedless vines for the Armona Orchard and Vineyard Co.

Yuba.

STEAM-PLOWING.—Yuba City *Farmer:* The new steam traction engine of Geo. Walton has been at work below Marysville on that gentleman's farm, and is doing good work drawing a number of gang plows. The rain put a stop to the plowing for a few days, but it will be resumed.

OREGON.

RAISING PHEASANTS.—Salem *Statesman*: Mongolian pheasants' eggs can be found by the thousands in Benton county between now and next July, and any old setting hen can raise a brood of a dozen like a daisy. The young birds are delicate and very shy, but with proper enclosures and attention they can be raised successfully. They are in great demand, at a fair price, all over America for breeding purposes. The rod and gun club of Union received five pair from Linn county a short time ago, for which they paid $15 a pair and expressage amounting to $4, making a total of $79 for ten birds.

BIRDS DESTROYING THE WOOLLY APHIS.—Eugene *Register:* There is a little bird in the valley that destroys the woolly aphis, and a discussion is going on as to whether it is the English sparrow or the green finch. No matter what it is, if it destroys the woolly aphis let it work.

NEVADA.

BIG IRRIGATION PROJECT.—Truckee *Republican:* The big irrigation canal calculated to inestimably benefit Nevada State, is an assured success. Frank G. Newlands and others are at the head of the project. It is proposed to take the water from the Truckee river at a point near Cuba, Nevada county, and to carry it a maximum distance of 60 miles, irrigating 75,000 acres of land in Lemmon, Long, Prosser, Spanish and other sagebrush valleys. The promoters already own ample reservoir sites and water rights, and it is calculated that from $500,000 to $1,000,000 will build the canal, which is to be 20 feet wide and 4 feet deep, carrying 21,000 inches of water. Considerable fluming would be necessary. The canal could also be used for floating lumber.

Kentuckians are eminently a sporting people, as their ancestors in Virginia were before them. In looking over the early history of Kentucky we find that as far back as 1775, before there was a turnpike road, a brick house or a factory of any kind, they had made a race track at Shallow Ford station, and one morning while a jockey was exercising a horse an Indian crept up in the cane and shot him dead on his horse. In the same year a legislative body was elected to frame certain laws for the country which was then a part of Virginia, and this legislature, the first ever held in Kentucky, passed nine acts, the eighth act was for preserving the breed of horses and the ninth was for the preservation of game.

Great Premium Offer.

The most notable publication of its kind of the current year, is Neely's Reversible, Political and United States Map. It is 46 by 66 inches in size, and presents on one side the latest and most correct map of the United States, and on the other a political chart of the United States from the beginning of the Government until now. It contains portraits of all the Presidents from Washington to Harrison, and shows at a glance the history of all political parties and the political complexion of each Congress. It gives the Cabinet of each President of the United States—this and very much more in a form so simple and convenient that a child of ten can study it with perfect intelligence and with great profit. It is in our judgement, and in the opinion of all who have seen it, the most complete and valuable publication of its kind given to the American public for many years. This map is sold in the book stores for $5.

We have engaged with the publisher for an edition of several thousand, and will furnish it, mounted upon rollers, postage prepaid, for ONE DOLLAR in addition to the regular price of the Rural Press. That is: the Rural Press for 15 months and the map for $4.00; the Rural Press and the map for one year, $3.40; the Rural Press and the map for six months, $2.20.

Any subscriber to the Rural Press whose name stands upon our books credited with an advance payment may secure the map by sending $1 to this office. But the map will not be sold to any delinquent subscriber, unless he shall pay up his delinquency and extend his subscription to a future date by payment in advance.

No premium offer equal to this has ever been made in California and no better offer can possibly be made.

To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

Agents Wanted.

It is proposed during the current year of 1892 to add 10,000 names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company: 220 Market Street.

Gen. Wm. H. Jackson of Belle Meade was one of the dashing cavalry leaders on the losing side of the late war. When the struggle came to an end he accepted the result in good faith, and that the magnanimous course of General Grant toward the South at the close of hostilities commanded his admiration and has not been forgotten is shown by the liberal entries, 25 in number, which he has made to the Grant Stakes, to be raced for at Garfield Park, Chicago, in 1893. As he has made no nominations for other stakes, it can be taken for granted that in subscribing to the one named in honor of the hero of Appomattox, he desires to show his good fellowship toward the North.

Whether the Electioneers are race horses, or whether they are not, the prices brought for Baby McKee, Worth, Election Bell, and Palo Alto Belle at the recent auction sales show most conclusively that wealthy horsemen believe that they are likely to race a little. The aggregate amount for the four mentioned was $69 600, an average of $17,400. With the numerous new trotting associations daily being organized throughout the country, and the increasing demand for this class of horses in foreign lands, it looks as if the demand will exceed the supply. Every day, reports of sales of American trotters to foreign parties are made.

Not Likely.—Barrister: What! you have the audacity to ask me to take you on as my servant after I have defended you in a case of robbery? Rogue and vagabond: That's just the reason why, sir! You told the jury so many things about me, such as nobody else ever did, that of course I thought as how you would only be too pleased if I made you the offer.—Zur Erheiterung.

One branch of the Virginia Legislature has passed a bill authorizing or directing the appointment of women physicians on the staff of all insane hospitals where women are among the patients. This is a humane and sensible measure, which has been adopted in several other States.

HOW IT WORKS.—A bushel of corn makes four gallons of whisky, which retails at $16; of this the farmer gets 40 cents, the railroad company $1, the United States $3, the manufacturer $4 and the vender $7, and the drinker—sixty days and the delirium tremens.

Fruit Preservation.

Experiments Wanted in Cooking Dried Fruit.

To the Editor:—Intensified farming is the cornerstone of progress in California. To dispose of the products of such farming profitably, is perhaps the most important problem we have now to consider. It is a vital matter that transportation be as rapid, economical and careful as possible, but we must not concentrate our attention upon the cost of transportation so closely as to ignore all other factors in the problem of producing something that a good customer wants, and getting it to him in proper condition at reasonable cost.

Every year it becomes more apparent that the principal outlet for our fruits must be in the dried form. In that shape, we can put on the table of the English laborer, peaches for himself and wife, a supper for a penny. On that basis, he can afford them as a daily luxury. That means that we can feed the millions. But obstacles stand in the way. When the fruit is shipped round the Horn, peaches acquire a rusty flavor and cease to be luxuries. Again, English people are very tenacious of custom, and have been in the habit of using jams already prepared for the table and want to buy something that will relieve them from the cost and trouble of a fire and cooking.

As Pres. Huntington is so anxious, as his late interview in the *Examiner* shows, to promote the industries of California, and thinks of establishing a line of steamers to connect at New Orleans with the Liverpool market, he may be able to carry by that route and deliver them in good condition. At any rate, we may expect good service upon the completion of the Nicaragua Canal.

With that point gained we would be helpless unless we can contrive some means to get the people to use the fruit, and the regular trade in this country and much more in England will never take an extra step or waste a word to deal in anything that their customers do not call for. We must contrive to send the consumers to the dealers on the same principle that the manufacturers of the ivory soap hired agents and watched them to see that they gave a cake to each housekeeper in San Francisco. The soap might have been the best in the world, and stood in the boxes in the warehouse until they rotted and the building tumbled down upon them, unless some way had been planned to make the goods known. As it was, it cost more than $10,000 to distribute those samples over San Francisco, but they have created a steady demand for soap in carload lots. *It paid!*

Now, it has been pretty generally settled by those who have paid most attention to the matter, that we want to reach the English market with our dried fruits, but the people are not inquiring for them at their shops. It is a good time for us to discuss means of bringing this about and to start the ball rolling. Suppose we introduce

A NEW SYSTEM.

Let us try different methods of soaking and cooking dried fruit at our homes. Whenever we think we have it right, send a few jars of the fruit prepared for the table and sealed with a sample of the dried fruit from which it was prepared, accompanied by the recipe, to some such public place as the State Board of Trade, where it will meet the attention of producers, consumers and dealers who will make their suggestions. We name the State Board of Trade because its manager has shown a leading interest in movements already started in this direction, and would be most likely to digest the information thus derived and publish it in such shape that packers of dried fruit could send the recipe on a printed slip with every package of fruit they sent out next fall. Then, if the English people must have their fruit ready for the table, suggest to the grocer that he fix up his back room so that he can prepare as much fruit as he can sell for a week or two at a time, put it up in some of the jars he has for sale, and display it all ready for the table on his shelves. Perhaps it would be well to send him in each box a show card calling attention to the excellence and economy of the goods. It would not be much trouble to open such a jar, so that the customers could get a taste and find how much difference cooking makes with dried fruit.

The jars could be returned to be used over time and again. There is no store where there is not some one who has a few spare hours every week, and with explicit directions and proper conveniences, almost anybody could be instructed so as to put up quite a quantity of dried fruit in this way in a short time. Probably the inferior grades could be run through a colander when cooked and sold in the form of marmalades or jams, and the better grades could be soaked out to look almost as well as canned fruit. After reading the above, the silurian will say: "Visionary talk! Looks well enough on paper, but we can't afford to educate the masses. We will do our business through the regular channels of trade."

Yes, you farm along the river bank and the stream runs in its old channels, while your crops keep failing and your mortgage increasing. By and by the sheriff sells off a piece of your farm. Some one puts in a dam, strikes out some new channels, runs the water over the land and gets rich. In like manner, almost every fortune that you ever heard of was made by striking out new channels in some direction. We are so situated that continued prosperity depends upon seeking new channels by united effort. In the first place, the value of our land depends upon its net proceeds, and again the prosperity of almost every branch of business depends upon the prosperity of the farmer. Frank S. Chapin.

An Advocate of Natural Color.

Tracy, March 20, 1892.

To the Editor.—The articles in the Rural of the 19th on sulphuring fruits for drying, prompt me to say a few words. I am glad to see the subject discussed, hoping it will bring about some change.

When white dried apples first came into use we bought them, but I soon discovered that the fruit flavor was gone, though they looked very nice. As my family was fond of fruit I searched the market for dark-colored sun-dried fruit but finally found it difficult to obtain any; the trade not deeming it best to handle it, because so many persons buy for the looks, regardless of taste.

In 1881 I had in Shasta Co. a lot of fine ripe peaches, which I dried in the sun. It was my first experience in drying fruit, and just as I was nearly through a gentleman hapened in the orchard who had had experience, and he remarked, "why, you know nothing about drying fruit, see how dark your fruit is; it is too ripe. You should dry it just as soon as you can break it from the pit and it will be much whiter and sell better." But I put it up in good shape and sent a number of sacks to the city to be sold. Time passed and no account of sales came. So in 1882 I commenced drying just as soon as it would break from the pits. I got a much lighter colored fruit but at the expense of the flavor; so in the fall I moved back to this county and shipped all my new crop to the city, and told them to ship the old fruit to me at Tracy. When it came I loaded it into my wagon and started out among my neighbors, and soon had disposed of all, after reserving a good supply for the family.

I think likely some bought to accomodate me, but soon after when I met my neighbors, the querry would be, "have you any more of those dried peaches, they were the best I ever saw?"

If I was drying fruit for my own family now, I should pick it just when it was nice and ripe, dry it in the sun without bleaching. My experience the last year has been as follows: We bought last fall eight lbs. of apricots which looked beautiful, but when cooked, after a meal or two they would stand untouched either by the family or the hired men. The result was that these eight pounds was the extent of our supply of dried fruit for the last seven months, except dried grapes and prunes and probably from five to eight lbs. of peaches. The trouble is there is so little unbleached fruit in the market that we cannot find it when we want it. J. M. Keblinger.

California Dried Fruits in Cambridge, England.

To the Editor: I send you a part of a letter from a brother in England, with a line or two on our dried fruits that may interest your readers, as it speaks from a thoroughly English point of taste. Edw. Berwick.

"I have meant in the last three or four letters to tell you about the dried fruits that have come into the English market from California. The apricots are the coming success, and the dried peaches have been turned out of the lists because no one cares for them; so that if you are planting at Lodi fruits for drying, *apricots* are the friend, not peaches. The apricots sell at the stores in London at 8d a pound; at the retail shops here 1s a pound. They are well worth 8d, as half a pound, when really well soaked and well cooked, makes a pie that will go round our family of nine souls, and we can't buy fresh apples to do that. The dried apples sell at 6d a pound (the rings), and we have found them very useful in spring before rhubarb comes in, for many years, but I don't know whether they are produced in California or not. The dried apricots can give the canned ones fits, as far as flavor is concerned. Cases of California pears, I see, are quoted regularly now in the Covent Garden market list at 12s to 20s a case, London, whatever size that means."

Queries and Replies.

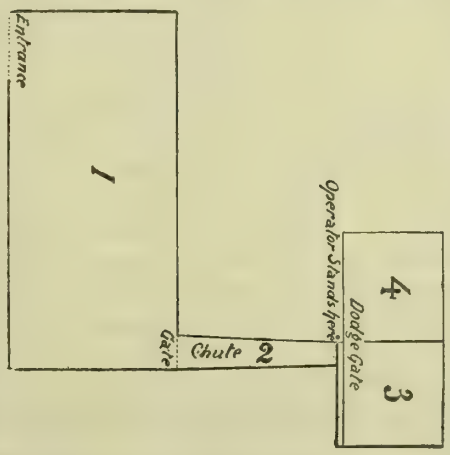
Tulare County Hog-Ringing Devices.

Visalia, March 28, 1892.

To the Editor:—I have read the inquiry of Mr. H. E. Dye of Tulare for the best method of ringing hogs, in your paper of Feb. 13th, also the answer of Mr. C. M. West in the Rural of 26th inst.

I thought almost every hog raiser of Tulare Co. was familiar with the mode of ringing hogs by the use of a frame or lever attached to a chute and dodge-gate in corrals. As I have been a hog raiser for 15 years, and used this apparatus for 12 years continuously, I think I am prepared to say it is the most convenient means of handling hogs. My little son has made a drawing in his way, of the apparatus, which I enclose.

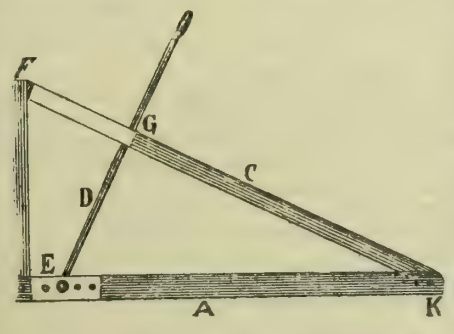
The arrangement consists of a piece of



Corrals and Chute for Hog Ringing.

timber, 2x6, eight feet long, for a sill, marked *A* in the drawing; with a post, 4x4, three feet high, mortised into the sill at *I*; then two braces, *C*, *C*, extending from the top of the post at *F* to the other end of the sill *K*, which should be 2x4, edge up to give strength. Now place the lever *D* in the slot in the sill near *I*, pass a half-inch bolt through the sill and lower end of lever; the upper end of lever passing between the braces *C*, *C*. A bolt should be put through the sill at *L* and *K* and the upper end of post *F*.

The sill should be buried in the ground crosswise the end of the chute at *H*, *H*, as



Lever for Holding Hogs for Ringing.

shown in the diagram of the corrals; the post placed where the operator stands, which leaves the opening between the post and the lever at *E* for the hogs to pass from the chute through the opening *E* to the dodge-gate into the smaller corrals. As the hogs pass through the opening at *E*, the operator draws the lever *D* quickly from *G* to *F*, which catches the hog behind the ear and before the shoulder, holding him tight. Now the man with rings and ringers stands in the dodge-gate in front of the hog, inserts his ring, steps to one side to allow the hog to pass out, while the man with the lever slacks his lever and at the same time reaches over into the chute and slaps the hog with the other hand, when he will jump through the opening at *E*, and another will run in, to be caught instantly in the same way.

Three men can ring 100 to 150 per hour without taking hold of a single hog, after they learn to use the lever properly. The hogs should pass from the large corral 1 to the chute 2; thence to the small corrals 3 or 4, as may be desired, by using the dodge-gate. W. G. Pennebaker.

Cattle to Break Prunings.

Tulare, Cal., March, 15, 1892.

To the Editor:—Perhaps a year ago, in some paper, I saw some one express a wish for a machine to be invented to chop off grape vine prunings. I thought I would see if I couldn't make my cattle do that job. My intention was to pile the vines in the pasture, and when they got dry and brittle to occasionally throw some hay on them to induce the cattle to trample over and break them up. I piled them in a high pile, and without the hay the cattle were soon on top, and by fall the brush was broken up short and nice to go in a chip bucket.

I had a hundred head of cattle to do it, still I believe one cow, if hay was used on the pile, would break up several acres of brush, and thus I believe all tree trimmings can be converted into nice light fuel. The larger pieces will not break, but will be easily chopped up after all the small limbs are broken off.—H. E. Dye.

This experience may be useful, or at least suggestive. What was wanted was a machine which would cut up the prunings so fine that they could be used as a fertilizer, plowed into the orchard or vineyard, and thus restore to the soil some of the fertility taken from it by the growth of the wood. If the prunings can be thus cut up finely, they might be used on heavy soil in regions of heavy rainfall, but probably on loose soils they would do more harm than good. The subject is still commended to our readers.—Ed. Press.

A Leaking Cistern.

Los Gatos, March 22, 1892.

To the Editor:—Last year I had a cistern built of stone and Portland cement—the inside well plastered with the cement to cover the stone. Under a pressure of over five feet, the water seeps through. I was told if I would wash the surface with cement the thickness of cream it would stop the seepage. I applied two coats of wash, which adhered thoroughly well, but the water still oozes out. Now, I wish readers of the Rural Press who have had experience with cisterns would tell me what to do to make the cistern proof against loss of water by seepage. Please answer through the Press columns, that others, as well as myself, may be benefited thereby.—S. H. Herring.

California Beet Sugar.

Los Angeles, March 25, 1892.

To the Editor:—An article on the sugar beet in the N. Y. *Independent* of Jan. 28, 1892, contains an analysis of the beet grown in numerous localities in the United States, but no mention is made of California's interest in the industry. Can it be that the sugar beet business of this State is so insignificant in comparison with that of other States as to be unworthy of notice in a general statement covering analyses of samples from a dozen other sections?—J. F.

We did not see the article referred to. The beet sugar interest in California is the greatest in the United States. If the writer of the article did not state this, he either knew little of his subject or thought it best not to state all his knowledge. There are many sugar beet analyses available in the Reports of the University Experiment Station and elsewhere, or our beet sugar makers could have furnished hundreds of analyses if asked for them. California sugar beets are of exceptionally high sugar value, as any one knows who has any decent information on the subject.

What Shall Be Done with the Well?

Aptos, Santa Cruz Co.

To the Editor:—Kindly enlighten a subscriber on the following subject:

A well has been dug on my place four feet square and water was found at a depth of 60 feet in quicksand. A common wooden curb has been extended into this sand several feet, but I find the supply of water getting regularly lower, until about one foot of it remains. This has happened twice, and deepening the well a second time only results in plenty water for a short time. Shutting off the sand with a tight wooden curb evidently shuts off the water supply at the same time. Query:—What is to be done under the circumstances?—E. C. Willekes MacDonald.

Peanut Growing.

Visalia, Tulare Co.

To the Editor:—We have read with interest Mr. Boynton's article on peanuts. We would be pleased if Mr. B. would give us some information in regard to the mode of cultivation, the proper time to irrigate, and whether the bloom should be covered over every morning with loose dirt, as some parties contend, or will they bury themselves in the earth after the bloom falls off.—W. G. Pennebaker.

We would like to hear more about cultivation and irrigation of the peanut. It may be said at once, however, that the bloom does not have to be covered. This is a superannuated practice. The plant will do its own covering if the ground is loose.

The dairies of California are doing a rushing business just now. Fresh butter, yellow, rich and pure, is so cheap that no one need to buy or to eat oleomarg[illegible]

The Home Circle.

The Measure of Our Days.

In all our walks, in all our ways,
Think not the measure of our days
Is gauged by figures and by rules,
As erst was taught us in the schools;
But, as we help a brother's needs
By noble acts and generous deeds,
By giving comfort where we may,
By lighting up a mourner's way;
The sum of means that we employ
To turn a fellow's ills to joy—
This is the measure of our days.

A veteran in the wars of life,
A prisoned soldier in the strife
Of soul with stingy, envious Time
Is he who makes his actions rhyme
To universal brotherhood.
Though long or short hath been his road,
Centuries or decades his abode
Among his kind, it matters least
So fellows by him have been blest.
His life is measured by his plan
Of dealing with his fellow man.
This is the measure of his days.

And much methinks of time he gains,
For all his labors, all his pains,
For reaching outward far and near
To succor want and shelter fear.
No stingy paddock hems him in,
To mean desires and groveling sin.
A widow's blessing him avails,
An orphan's prayer some good entails,
While stretching outward over man
He converse holds with Nature's plan,
And solving life's deep mysteries,
He grasps eternal verities.
This is the measure of his days. T. C. Rice.

A Soldier's Daughter.

"We cannot hold out much longer."

It was a man's voice in troubled accents that fell on the ears of a young girl, who stood with her shoulder leaning against a hut, within a small stockade in Southeastern Arizona.

Time, soon after the close of the Rebellion, when wars and rumors of wars were still floating in the air along the Mexican border.

"Is it, then, so bad as that, Captain Dashwood?" said Edith Searle, as she approached the stout figure in blue who stood near. "I thought we were in no immediate danger. You so stated this morning, and surely nothing has since occurred to change the situation."

"Ah, is that you, Miss Searle?" said the commandant of the little post. "I was not aware that anybody was within hearing distance. Forget what I said, Miss. We can only hope for the best. We may come out all right yet."

"But is there real danger, Captain?"

"Of course," hesitatingly. "We have never been free from that, and now—"

"And now?" she questioned eagerly, as he hesitated.

"The truth is, Miss Searle, I have just learned that the ammunition is low—almost out, in fact, and, you see, we cannot expect to do much without that."

Captain Dashwood's voice had a tremor in it that did not escape the notice of the young girl. She could see that the danger was even greater than he was willing to acknowledge.

"When the ammunition is exhausted the enemy will come in and take possession, Captain?"

"Certainly, unless something unforseen occurs."

"What is within the range of possibilities, Captain Dashwood?"

"Well, it is possible for Lieutenant Hargle to be on the road westward about this time, and he may take this trail instead of the one to the north. It is only a bare possibility, however, and I dare not entertain hope."

The captain was certainly cast down, as Miss Searle could see, and yet, somehow, the girl had not permitted fear to enter her heart up to this time. Miss Edith Searle was the daughter of a soldier, and had spent several years of her life in a Western fort with her parents. Her father was now dead, and her mother lived in an Eastern State. Edith was now visiting her uncle, Sewall Persons, who lived on a sheep ranch in the Southwest. Indian hostilities compelled the Persons family to seek safety at the nearest military post at Darkwood, where was a small detachment of soldiers under Captain Dashwood, a brave officer, who had seen service in the war for the Union.

On the afternoon of the day Mr. Persons, wife, niece and two sons found shelter behind the stockade at Darkwood, several hundred hostiles appeared and made an attack on the place. They were repulsed, with considerable loss to the savages, and the captain would have had little fear of holding the place against a long siege but for the fact that on the fourth day he made the alarming discovery that the ammunition was nearly exhausted. He was in a gloomy mood at the outlook, when Miss Searles addressed him on the morning in question.

"How far is it to Lieutenant Hargle's post, Captain Dashwood?" questioned the girl.

"Thirty miles."

"So near and yet so far," sighed she, with a pensive look in her dark eyes. "Captain, how would it do to send a messenger to the lieutenant informing him of our condition?"

A half smile raised the drooping moustache of the captain.

"That would do if circumstances permitted," returned he, "but they do not."

"I should think somebody might go—Sergeant Ingham, for instance."

A smile touched his lips at mention of the name of one who had made desperate love to Miss Searle since her advent at the fort. She had met him on several occasions, and quite a flirtation was under way at the time we write.

But the captain shook his head.

"I will not send any one," he said. "It would be certain death for a man to venture outside the stockade."

"Yet it is sure to be destruction to us all in any event," said Edith. "I think some one ought to volunteer to go for help. One might succeed in escaping the Indians; besides, what is one life compared to a hundred? I think I'll speak to the sergeant."

The captain said no more, and a short time later he saw Miss Searle in conversation with the sergeant. That her appeal did not move the young soldier the captain could see at a glance.

"You are a coward!" He heard these words as Miss Searle turned and left Sergeant Ingham, but Captain Dashwood considered the Sergeant prudent rather than cowardly. Young Ingham had proved his courage on many a hard-fought field, and the taunt flung at him by the soldier's daughter cut him to the quick.

"If she cared for me," he thought, "she would not ask me to sacrifice my life in this manner. If my superior should send me, of course I should go, but I will not be made the sacrifice of a girl's whim. It is by no means so desperate a case as the girl imagines."

The "case" was a desperate one, however, as the sergeant learned when he consulted with his captain a short time later.

"It is highly necessary that the siege should be raised, captain," said Sergeant Ingham, "and I would advise one of two things."

"I am ready to receive advice," returned the captain.

"We might make a sortie and perhaps rout the enemy," suggested the sergeant.

"I am fearful to attempt it. Some of the men are sick, and but twenty responded for duty this morning. We have two score women and children dependent on our protection, and it would never do to send our whole force against the enemy. What could ten or a dozen men do against a hundred concealed Indians and renegade Mexicans?"

"A serious outlook, surely," admitted the sergeant. "I see no other way only to send a messenger to-night in search of help."

"I will not ask one of my men to take so terrible a risk," declared Captain Dashwood.

"I am willing to take the risk, captain."

"You, Ingham? I thought ——"

"Never mind what you thought," interrupted Ingham. "I would not allow myself to be influenced by the whim of a girl. I see the danger is real, and I will undertake to find aid for Darkwood to-night. I do not reckon the danger as great as do you, captain. I have a disguise that may aid me, and once beyond the enemy's line, on a fleet horse, I shall be safe."

After considerable discussion, Captain Dashwood consented to the plan outlined by his young friend, and shortly after midnight all plans were ready to be carried into effect. It was a moonlight night, and to cover the movements of the messenger, a sudden and furious fire was opened by the garrison on the position held by the enemy.

Meantime, Sergeant Ingham was not the only one astir on this summer night. Edith Searle, without consulting her uncle, resolved to brave the dangers outside, and seek aid for the beleaguered garrison.

She was an excellent horsewoman, and inherited the courage of her soldier father, and it was not a hard matter for her to resolve upon the course she had marked out. In the small hours of the night the besiegers would be wrapped in slumber, save those left to guard the camp. A quick dash on a fleet steed would quickly carry her beyond danger, and then, with the open prairie before her, she could easily elude the foe.

It was thus that the young girl resolved, and in furtherance of such thoughts she saddled her own fleet horse, and made every preparation for departure.

To get through the gate without discovery was the main trouble. Edith knew full well that she would not be permitted to go should her mad plans be discovered. It was fully two hours after midnight when she ventured to make the sally.

When she approached the man on duty at the gate, leading the horse, she was inwardly trembling for fear her mad project would now be nipped in the bud. What, then, was her astonishment to see the guard unfasten the gate and swing it quickly.

"Go quickly, and may Heaven aid you, Dick! Your disguise is complete."

A moment later the soldier's daughter found herself outside. The crash of guns from the little fort filled her ears as she sprang to the saddle.

"Now, Vim, go!" cried she, giving free rein to her horse.

Away they dashed, followed not a minute later by a horseman from the stockade. Inside of a minute the yells of savages filled the air, and the fire from the little fort was returned. This was on the opposite side, however, and Edith Searle was in the midst of the enemy before her presence was discovered. The fire from the little fort amazed the Indians and Mexicans so much, Edith dashed through their lines and reached the open prairie beyond without receiving a scratch.

Once here the girl tightened her rein, drew a long breath of relief, and galloped like the wind across the moonlit prairie.

She felt that the worst was over, and that she would have little difficulty in reaching Lieut. Hargle, thirty miles away. The morning air fanned her cheek and played with now and then a stray curl that fluttered about her face.

"It wasn't so dangerous after all," declared the girl, as she drew in long, sweet draughts of air. "Captain Dashwood isn't like the soldiers who trained under father, else he would have seen how easy it was to send out a messenger for help."

Even as the words fell from her lips a bullet whistled past her ear, reminding her of the fact that she was not yet out of danger.

Glancing backward, she saw three mounted men in hot pursuit. A thrill of alarm struck to her heart then, and she spoke to her horse, urging him to greater speed. A yell from the pursuers was borne faintly to her ears, assuring the girl that the Indians were satisfied with the situation.

It soon resolved itself into a race for life. Edith Searle was a soldier's daughter, however, and knowing full well she had a fleet steed, she believed she should be able to keep beyond reach of her pursuers, consequently, she did not feel terrified as another might under similar circumstances.

On over the vast stretch of plain raced the beautitul girl and her three dusky pursuers. Morning broke in the east, yet still the race kept up, with scarcely a change in the situation. Edith's horse was laboring heavily, however, and she feared he could not keep to the work much longer.

Occasionally, yells and shouts came from the rear, but the young girl rode on unharmed. This could not last. The end must come soon. The pursuers were now gaining perceptibly.

Edith glanced backward to note the fact that one of the Apaches was several rods in advance of his companions; in fact, he was rapidly gaining on her, and must soon come up, a fact that sent a chill over the young girl, who knew too well the merciless nature of the American savage.

"Ah! Heaven have mercy!"

Edith's horse reeled and fell prostrate, nearly crushing his rider, at which, demoniacal yells fell from the throats of the pursuing savages, who were now sure of their victim.

Poor Edith! The fall partially stunned her, yet she managed to release herself, and struggle to a standing position as the redmen dashed forward, brandishing their tomahawks in anticipation of the bloody work at hand. The girl had only a small pocket pistol with which to defend herself; this she drew and held in a trembling hand, determined to surrender only with death.

A strange thing then occurred. The Apache warrior in advance suddenly turned in his saddle facing his fellows, and began emptying a revolver in their faces. Once, twice, thrice he fired, and the next instant two riderless horses dashed over the plain. The foremost savage had saved the beautiful victim for himself alone, a fact that did not in the least mitigate the danger in which Edith Searle found herself.

The act of the Apache warrior in slaying his fellows did not reassure the young girl in the least. She held her pistol clutched tightly, resolved on selling her life dearly.

Just before reaching Miss Searle, the Indian drew rein and sprang from the saddle, walking swiftly forward. When within a few yards, Edith thrust forward her pistol suddenly and fired.

"Ah! I am shot!" cried the savage in good English, at the same time reeling and falling to the ground.

Edith trembled like a leaf in the wind. An awful weakness seemed to possess her limbs. What had she done? Slain a human being with her own hand! The thought was a terrible one. She dared not look at the prostrate Apache, but turned away.

"Edith!"

It was a faint yet startling voice calling her name. The girl turned and staggered to the side of the man on the ground.

"Edith, I meant to save you," said the man in a husky voice. The girl knelt quickly and peered into the painted face.

"My God!" she exclaimed, "it is Sergeant Ingham!"

She now understood the meaning of the shooting of the two Indians. The revulsion of feeling in Edith's bosom was great. She came near fainting outright. With the memory that she was a soldier's daughter she controlled her feeling, and bent her energies to aiding the wounded man. With her handkerchief she staunched the flow of blood from a wound in the Sergeant's breast.

There was a horrible fear upon her. If Sergeant Ingham died, she was a murderess. It was a terrible thought.

With desperate fear and hope, Edith Searle worked over the man she had shot, and in a little time he seemed better.

Glancing to the south, she saw a troop of horsemen, Indians perhaps. In any event, she should soon know the worst.

The horsemen proved to be the command of Lieut. Hargle. That officer was on his way westward, and had not thought of touching at Darkwood Post. Edith's news, of course, changed his plans.

Leaving two men with Sergeant Ingham, the lieutenant pushed on to the rescue. The siege of Darkwood was successfully raised, and when Sergeant Ingham recovered from his wound, he had won the consent of the soldier's daughter to be his wife.—J. McK. Merrill in Portland Transcript.

The Gospel of Rest.

"'Tis life wherewith our nerves are scant;
'Tis life, not death, for which we pant—
More life, and fuller, that we want."

The gospel of rest that is being preached here and there seems to originate in the merest fragmentary contemplation of life, as if it were viewed, indeed, through the wrong end of an opera glass. Seeing life in its wholeness, we see it is not vacuity, but intensity, that it requires; not inertia, but activity; not idleness, but work; not emptiness, but fullness. The ideal life is not to crowd out and exclude, but to take in, to include. It is he who has many irons in the fire who keeps them all moving. It is he who has many demands who rises equal to each and all. Not a clam lying on the beach, but Victory, flying, is the emblem of the ideal life. It is achievement, not mere existence, that is the true aim.

But the sources of power are to be sought on the spiritual, not on the physical, side of life. Not athletics nor gymnastics, nor diet nor refraining from this thing or doing that thing, give to the individual the strength on which he may at all times rely, and which can be infinitely renewed and infinitely multiplied. Its springs are on the other side of life They are to be found in the World Beautiful—in all that makes for art, for exaltation and for spiritual illumination. Not but that physical and material causes produce certain corresponding effects on their own plane; but these effects are so infinitely transcended by those on the

higher plane that the less is altogether swallowed up in the greater when the greater can be attained. And that it is not attained; that its existence is too often not even recognized by multitudes to whom it would come as the transfiguration of life, is the cause of many a failure, and of a vast amount of misery that might as well be happiness, if only the conditions that produce happiness were recognized and observed.

And in pointing out happiness as an ideal condition, it is not meant to use the term as synonymous with mere pleasure or even enjoyment. Happiness is a spiritual condition, while enjoyment is of the material plane. It is very possible to conceive of one's higher nature as being supremely happy under conditions far from enjoyable to the senses; and it is equally possible to conceive of unhappiness and dissatisfaction of the higher self when in the very midst of the current of worldly pleasures. Personal enjoyment can never be held as a high or a noble or in any sense a worthy aim, but personal happiness implies satisfaction of a higher kind—the satisfaction of feeling one's self in accord with the diviner order, and of longing, however feebly, to be in and of its forces.

Unless a man's higher nature is absolutely benumbed and inarticulate there is no possible happiness in any form of self-indulgence. To enjoy pleasures to which he has no right, which involve extravagance of expense unsuited to his means, or the crowding out of some one else, is an experience which has in it nothing in common with true happiness. The poet Wordsworth well remarked "that there is no real happiness in this life but in intellect and virtue." Only in that high sense can the term be used at all. To mistake happiness for mere pleasure is to mistake the heavenly for the earthly.

"Life is a search after power," said Emerson. But to seek this power through physical culture alone is as if one should seek to increase the speed of an engine by oiling and polishing it, neglecting the application of the steam, which is the only source of its power. True, the machine will be far better for being in perfect repair, but all the utmost perfection of its parts would be useless until the motive power is added. An electric car may come from the shop of the mechanician a marvel of perfect and beautiful completeness, but until the subtle current that propels it is added, it will stand dull and inert on the track.

The motive power of life is spirit, the spirit of man, fed constantly from the infinite strength of the Divine spirit, and when one would increase his forces of activity and usefulness the essential means is to increase spiritual force; and it is increased by drawing on it. The more it is used the larger the resources. "There is that scattereth, yet increaseth." Infinite belief would be infinite force, and then would the days be set to magic and music.

And this is the life that we want, the fuller life of force and ecstasy. The life that is radiant and abounding, and that sees all noble achievements as in vision. If there are days "when the great are near us, when they take us by the hand, and we share their thought," these days may be indefinitely multiplied and become the rule and not the exception. They may become habitual and not phenomenal.

"We ask for long life," said Emerson, "but 'tis deep life, or grand moments, that signify. Let the measure of time be spiritual, not mechanical. Life culminates and concentrates; and Homer said: "The Gods ever give to mortals their apportioned share of reason only on one day."

To gain this life "wherewith our nerves are scant"; to make each day the best of the year; to render the present hour the one that is critical and decisive, is achieved only by spiritual stimulus. The power inflows from art, from divine contemplation, from the uplifting of the heart. Then, only, does one stand in such harmony with all his related forces that he is in the magnetic currents of achievement and of happiness. The body becomes the perfect instrument through which the spirit works. There is not only health, but life, abounding life, because it is fed from the Source of the life more abundant.—Lilian Whiting.

Spice of Life.

—Smith: Did you reply to one of those personal advertisements? Brown: Yes, I once answered one from a lady who pined for congenial companionship. Smith: With what result? Brown: She turned out to be Mrs. Brown.—Boston Jester.

—Intuition.—Fangle: What sort of a dress was that Mrs. Snooper wore to-night? Mrs. Fangle: Demi-train. "That's precisely what Cumso said when he trod on it, but how did he know its name.—New York Sun.

—Mudge: What a paradox woman is! Wickwire: You—don't—say? Mudge: Consider her foot, for instance. The larger it is, the less it appears.—Indianapolis Journal.

—Miss Von Gimp: I wouldn't marry the best man living. Dr. Perkins: No—ah—er—perhaps not, but—er—that is really no obstacle to your marriage with me.—St. Paul Globe.

—"Wasn't it awful? She married a poor dry goods clerk!" "Yes; but just think how handy he will be to send down town to match goods!"—Puck.

CHINESE FARMHOUSE.—A recent traveler remarks that a Chinese farmhouse is a curious looking abode. Usually it is sheltered with groves of feathery bamboo and thick spreading banyans. The walls are of clay or wood, and the interior of the house consists of one man's room, extending from the floor to the tiled roof, with closet-like apartments in the corners for sleeping-rooms. There is a sliding window on the roof made out of oyster shells arranged in rows, while the side windows are mere wooden shutters. The floor is the bare earth, where at night there often gather together a miscellaneous family of dirty children, fowls, ducks, pigeons and a litter of pigs, all living together in delightful harmony. In some districts, infested by marauding bands, houses are strongly fortified with high walls, containing apertures for firearms, and protected by a moat crossed by a rude drawbridge.

Young Folks' Column.

Rose and Lily.

An Easter Story.

[Written for the RURAL PRESS by CAROLINE E. SANDERS.]

Rose and Lily were twins and were just six years old. Why Rose should not have been called Lily, when she was almost as white as our own California lilies, or why Lily should not have been called Rose, when her cheeks were just the color of roses, was hard to tell. They each had bright, blue eyes and curly, golden hair, so no wonder their papa called them his pretty blossoms. He thought them just alike, but their mamma knew there was quite a difference in the little girls, for one thing Rose always led and Lily followed; so, when they got into mischief, it did not take long to find out who started it.

One bright, sunny morning the two little, curly heads were lying close together on the white pillow, when suddenly one pair of blue eyes blinked and then opened wide. Raising her head Rose said, "Oh, Lily, do you know what day this is?"

Another pair of blue eyes slowly opened and she answered lazily, "No, I don't."

"Why, it's Easter," said Rose, enthusiastically.

"Maybe we will get some pretty colored eggs and some Easter cards then," replied Lily, getting a little roused up.

"Oh, I was not thinking of that; but what do you think Dinah told me?" Dinah was the colored cook. "She said the Lawd is rised to-day, so I do 'spect that is what they are trimming the church so bootiful for."

"Do you think, Rose, he will be rised there?"

"Why in course, or what would they fix it up so pretty for?" she answered, contemptuously.

"Then I hope mamma will take us with her."

"But she won't, for don't you 'member how you fidgeted last Sunday, and I heard her tell papa she would leave the *chillen* at home next time. But maybe we could go by ourselves; Dinah says the Lawd loves little chillen, so he *might* take us up in his arms and then I 'spect we would never be naughty any more."

In her excitement Rose sat up in bed and clasped her hands as she talked.

"Well, then, let's go and find Him," replied Lily.

An hour or so later two little girls dressed in white, and wearing garden hats with long blue streamers, stood tightly holding hands at the corner of a crowded street.

"I know we turned a corner like that one, and when we got here we turned another," said Rose in a very confident voice, but looking at the same time rather bewildered.

"O Rose! I am afraid we are lost and will never get home again," said Lily, as her eyes filled with tears.

Oh! don't be a baby, Lil. I'll ask that gentleman to show us the way," and suiting the action to the word, she stepped in front of the gentleman who was coming along and said: "Please stop a minute."

"Why, my little daisies, what are you doing here alone?" he asked, looking somewhat astonished. "What can I do for you?"

"We want to ask you to please tell us where the church is," replied Rose.

"Which church, dear? There are so many."

"The church they are trimming so bootifully because the Laud is to be rised to-day," answered both almost in the same breath.

The gentleman looked puzzled at first, then seemed to have a clearer understanding, as he said to himself: "Yes, this is Easter. How long it is since I have remembered the day!" Then, giving a hand to each of the children, he said:

"Come with me, little girls. There is a church just around the corner; perhaps that is the one you are seeking."

Service had commenced when they entered, and the children quietly took a seat, as they had been taught to do. Feeling sure they had strayed away from home, their guide would not leave them, so stayed until the close.

"The Laud did not rise. This was the wrong church," cried the children as they left. But in the heart of the man who held their little hands, He had risen once more. Light had come again to a soul that for long years had been in doubt and darkness, willfully closing the door to such glad tidings.

A few inquiries from the children enabled him to restore them to their home, where he found distress and consternation prevailing at their absence.

"Do not chide them, madam," said he to their mother. "They strayed off, but not so badly as I have done, and in losing their way, have shown me mine once more."

Up in a Balloon.

N. R. Briggs gives the boys and girls of the *American Agriculturist* the following balloon stories as told by Mamie Allen, whose father is a balloonist. The first trip was made on a public holiday and from their own city, and Mamie says:

"Father had been engaged to give a balloon ascension as one of the attractions of the day. There were six in our party, and at 10 A. M., the appointed hour, we stepped into the big basket or car of the balloon, and while the people were cheering and the band playing we shot up into the clouds. The sight of the balloon to those we had left below was of short duration, for the clouds hung low and threatened rain, and in a few minutes we were sailing along above them in the sunshine and a clear sky. We had a large fish horn that we blew occasionally, wondering what the people below who heard it would think. We could hear plainly the rumbling of trains and the whistles of the locomotives. It was very warm, being in the latter part of June, and we had to fan ourselves to keep comfortable. After sailing along and enjoying this novel sport above the clouds for over two hours, and not once during this time getting a sight of the earth, papa let out some gas and we began to descend slowly through the clouds, landing safely in a field near Cumberland Hill. A cow was grazing near, and seeing our big balloon, she became so frightened that she ran into the woods. We were told afterward that it was three days before she could be induced to come out into the open pasture again.

"Of course, it is decidedly more pleasant to go up on a fair day, when the atmosphere is clear; it is then that one can see long distances. Such a day we afterward enjoyed. It was clear and beautiful, and fully 4 o'clock when our party, which again consisted of six, climbed into the car and ascended toward the sky. In passing over the Providence river, we could see the fishes and the rocks at the bottom of the river plainly; such a thing would have been impossible had we stood on the banks of the river. We could see nearly the whole length of the river, while the shore resorts and a beautiful view of Narragansett bay gave a grand panoramic effect. We landed after a delightful trip near Bridgewater, thirty miles from our starting place. Do we get dizzy when looking down from such lofty heights? No, not at all; there is no such feeling, and none of that unpleasant sensation generally experienced when looking down from the top of some high building or observatory."

An amusing incident took place near Saratoga some time ago, in which two little boys played a prominent part. A well-known lady æronaut gave a grand balloon ascension at that place. After traveling over the country for thirteen miles or more, she concluded to make a landing, and, seeing three little boys playing in a field, she called to them to help her. As soon as the balloon touched the ground, two of the little boys, who had hastened to her assistance, grasped hold of the ropes and basket and held fast, but the third little fellow was afraid of the balloon and would not go near it. The other two were not heavy enough to hold the balloon down till the lady could let out the gas, and as there was a little wind, the balloon bounced up into the air again, then down to the ground, and then up, sometimes a hundred feet or more. All this time the two plucky little boys held fast to the ropes and basket. After skipping and hopping up and down over the fields and fences for over a mile, the lady finally ripped the balloon open with a rope fixed for this purpose, when the great balloon fell flat on the ground like a big bag.

Domestic Economy.

SWISS PUDDING.—One cup fine bread crumbs, two cups milk, three eggs, one tablespoon butter, melted, one-half teaspoon salt, one-half saltspoon pepper, one-half pound cheese, grated. Soak the crumbs in the milk, add the other ingredients, cover with dry crumbs, and bake in a quick oven till browned.

CAULIFLOWER WITH CHEESE.—Shorten the stems of cold boiled cauliflower; place it on a flat dish and set it in the oven; when a little warmed pour over it about an ounce of hot clarified butter mixed with some grated Parmesan or other cheese; put it again into the oven, and let it brown; serve immediately.

PLUM PUDDING.—A small stale loaf, well broken, leaving out any hard part. Pour over it one quart of boiling milk, one cupful of sugar, one tablespoonful of molasses, one teaspoonful each of salt and cinnamon, one-half a nutmeg, one pint of stoned raisins. When cool add four well-beaten eggs. Bake or boil three or four hours. It is very good cold.

BANANA ICE CREAM.—One pint of cream, one pint of milk, half-pound of sugar, yolks of six eggs, four bananas. Scald the milk. Beat yolks and sugar together until light; add to the milk and cook until it thickens, stirring constantly. Add the cream, and when cool the bananas, which should be mashed through a colander.

VEGETABLE SOUP.—Two potatoes, two onions, two turnips, one carrot, a little parsley chopped fine, salt to the taste. Cut the potatoes in quarters, slice the onions, cut the turnips in quarters, slice the carrots. Put all in a stewpan with three pints of water, and salt to taste. Boil it down to one quart. About 15 minutes before it is done add the parsley. Strain it, and serve with light bread or toast.

SPINACH.—Wash thoroughly one-half peck spinach. Cook until tender. Drain, and chop fine. Melt two tablespoons butter and add the spinach, and cook five minutes; then add one tablespoon flour, one teaspoon salt, one saltspoon pepper and one-half cup milk. Simmer ten minutes. The best way to clean spinach is to look it over very carefully while it is dry and then wash in water until there is not a speck of grit to be found. Serve with slices of cold boiled or grated eggs.

BRAISED FOWL.—Singe, draw, wipe and truss. Fry a light brown in one tablespoon oil and one tablespoon butter. Add one small onion, one slice carrot, one sprig parsley, one bay leaf and one quart hot water. Cover, and cook one and one-half hours, basting often. Run a skewer through the legs just below the hip joint and also through the wings of the fowl. Prepare it as for roasting, but do not carry the strings across the breast. By searing in the butter, all the juices of the meat are retained. Do not pierce the chicken with a fork.

FRENCH ROLLS.—Take one-half pint of scalded milk and one yeast cake. Allow this to cool, then add one-half tablespoonful of butter, melted, and the same of lard, a tablespoonful of sugar, a teaspoonful of salt, and a quart of sifted flour. Mix and let this stand over night in a warm place. Knead hard in the morning, then roll it out about an inch thick. Spread this over with butter, and cut as if for biscuit, fold together, put them in a pan, and let them rise again. They must be very light each time. Bake as you would biscuits. Unless you have a late breakfast it is difficult to serve these on time, but they are very nice for dinner, and can be warmed over for breakfast. If desired for dinner, set the sponge about 9 A. M.

STUFFED CUCUMBERS.—Pare four cucumbers, cut in two crosswise. Take out the seeds with an apple corer. Keep in cold salted water until ready for use. Chop enough raw veal to make one-half cup. Cook one-fourth cup milk and a scant one-fourth cup bread crumbs to a paste. Add one-half teaspoon salt, one-half saltspoon pepper, a few drops of onion juice, one teaspoon butter and one egg well beaten. Fill the cucumber with the forcemeat. Put them into a stew pan, add three cups white stock and a bay leaf. Simmer three-fourths of an hour. Melt two tablespoons butter, add one tablespoon flour, pour on slowly one and one-half cups white stock. Add one slice carrot, one slice onion, one sprig parsley, one clove, one bay leaf, one-half teaspoon salt, one saltspoon pepper. Simmer one-fourth of an hour. Strain and add one teaspoon lemon juice. It is not necessary to have a very rich stock for any of these made dishes. Trimmings from any white meat may be utilized for this purpose, as only a slight flavor is required.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, APRIL 9, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—H. C Shaw Plow Works, Stockton.
Agricultural Implements—Baker & Hamilton.
Steel and Iron Pipe—The Geo. F. Eberhard Co.
Hay Presses—J. F. Hill, Sacramento.
Water Pipe, Pumps, Engines, Etc.—Joshua Hendy Machine Works.
Hay Presses—Hawley, King & Co., Los Angeles.
Green Bone Cutter—Petaluma Incubator Co., Petaluma.
Floral Show—California State Floral Society.

☞ *See Advertising Columns.*

The Week.

The serenity of the Pacific Coast weather becomes more notable as the distressing news has come from day to day during the past week, of the hurricanes, cyclones and other meteorological disturbances which have visited the whole interior regions, from Colorado eastward to Chicago Small country hamlets have been almost obliterated, and larger towns and cities have lost many structures. Notable losses of life have occurred and great property values destroyed. Not only for a day, but day after day, such storms prevailed and a conspicuous act of the last day was the passage of a tornado through the World's Fair grounds at Chicago, doing considerable damage to smaller structures but fortunately only demonstrating the strength of the large ones. While all these depressing events are transpiring, the clear skies and warm sunshine of California become more precious and the delights of residence beneath them more apparent.

All crops are progressing favorably under most propitious conditions. Fruits are coming on rapidly and the outlook is for early maturity, which is always of value to us in our competition with the Eastern fruit product. Another favoring condition may be found in the reports that the Eastern fruit crop promises to be late this year. Last year there was a coincidence in ripening east and west which operated to the disadvantage of our shippers. It bids fair to be different this yerr.

THE SHEEPMEN PROTEST.—Last week a large number of flock owners appeared before the Fresno County Supervisors asking them to urge the Secretary of the Interior to hold the matter of setting aside certain mountain lands in Fresno, Tulare and Kern counties for a national park in abeyance. The sheepmen are very much opposed to the measure, and say it was taken in consequence of information supplied to the Government by persons here who are ignorant of the ill it would work. It is estimated that if the relief sought be refused and the park is established, the loss to the sheep industry of that region would be about [illegible] annually.

For Lower Freight Rates.

The issue for lower freight rates is being energetically pushed, and judging from appearances the chairs in which the useless Railway Commissioners have so long reposed are becoming somewhat uncomfortable. They are speaking to the public in reply to the onsets of the Traffic Association, and without attempting to judge of the force of their utterances, we must express satisfaction at the fact that they have been sufficiently awakened to say something. Anything is better than silence.

It looks very much as though the Commissioners would have plenty to do to explain why they permit our local railways to charge so much more for transportation than Eastern roads charge for the same articles for similar distances on similar grades. The Traffic Association has furnished them yards of comparative statistics showing that such is really the case, as all intelligent people have long held. We have not space to go into these showings exhaustively, but take a single line of comparisons which come close to the agricultural producers of this State. Here are some of these differences on 100-pound lots in agricultural implements, the distance in Nebraska being 106 miles and the California distance only 99 miles, the figures representing cents:

	Nebraska rates.	California rates.
Self-binders	.35	.50
Horse rakes	.35	.74
Mowers	.35	.50
Plows	.35	.50
Potato diggers	.70	.74
Gang shovel and sulky	.70	.74
Potato planters	.35	.50
Reapers	.35	.50
Field rollers	.27	.50
Seed drills	.70	.74
Hand corn planters	.35	.74
Reaping sickles, in bundles	.35	.50
Scythes, in bundles	.35	.50
Scythe snaths	.35	.50

So it goes through a long list, and on longer distances the differences are even more marked. In feed-cutters: In Nebraska they are carried at the rate of 35 cents per 100 pounds for a distance of 106 miles, and in this State the charge from San Francisco to Pajaro, 99 miles, is 74 cents per 100 pounds. The rate is double the Nebraska rate and more. In harrows, the rate in Nebraska for 106 miles is 52½ cents per 100 pounds, and from San Francisco to Pajaro the rate is 74 cents per 100 pounds.

It would seem that such showings would convince the Railway Commissioners, if anything can move them, that it is time they did something to inform themselves what are current prices for transportation, and not sit idly by and allow local railway managers to charge all the traffic will bear without any regard whatever to what the service is really worth.

The State Floral Show.

We alluded incidentally last week to the flower show of the State Floral Society, which will be held in the Mechanics' Pavilion in this city, on May 11th to 14th, inclusive. In our advertising columns this week, the formal announcement of the exhibition is made, showing that the affair is to be made acceptable to visitors, both by music and flowers. There is much more, however, which will appeal directly to the interest of RURAL readers. There will be awarded premiums to a value of $3000. These will be divided into classes, so that amateurs employing skilled labor, amateurs who do not indulge in professional gardeners and professional florists do not compete with each, but each class of flower growers is in competition with itself, except in certain open awards, for which all can strive. The premiums are also hung up for different plants and flowers in each class, so that each grower can choose his line of exhibit according to his own taste or hobby. The awards are generous in amount, as something over $400 is offered for roses alone in the different classes.

It is to be hoped that the coming show will attract attention throughout the State. The society does not adopt the carnival features of other displays, but shows flowers for their own sakes, the idea being to increase a love for floriculture, and to elevate the art itself, by educating all flower growers and flower lovers. It is the only display of the kind, which is maintained upon this plan, on the coast, and the society aims to make it worthy of the State and as popular as similar shows are in the great Eastern cities. To do this, the cooperation of all is desired, both in competition for the awards, in patronage of the fair and in membership in the society and attendance upon its monthly meetings. In all these lines of favor, it appeals to the public.

A CHANGE IN THE WEATHER SERVICE.—It is announced that Mr. Kerkham, who has been in charge of the Pacific Weather Bureau, will now return to his position in the Central office at Washington. Mr. Kerkham has made many important changes in the local service, and has extended it in many directions. It is reported that Lieut. Finley will return to this coast, and he will be cordially welcomed.

The Wool Industry.

The low range of prices quoted for this season's wool is inducing holding by growers in the hope of securing better prices later on in the year. Whether this hope will be realized is, as yet, an open question, and each side of it has strong advocates. There is not the least question of a doubt but what the consumption of wool shows a large gain per capita compared with two decades ago, yet it must also be conceded, with the concession based on statistical returns and other equally as reliable facts, that there has been a phenomenal increase in the number of sheep the world over, which causes the wool clip to exceed the world's requirements. This is particularly the case with cotton-selling at very low figures, and also with the introduction of improved machinery, not only making it possible, but actually practicable, to turn out goods mixed with shoddy and also with cotton, bearing a close resemblance to woolen goods, which can be, and are being sold at retail at from one-third to one-fifth of the price woolen goods can be placed at to net a profit.

In the United States and the older settled countries, there has been no marked increase in the number of sheep, due largely, if not entirely, to former cattle and sheep ranges being too valuable, owing to the steady expansion of the country's railroad system, to admit of keeping pasture for the exclusive use of large bands of sheep; but in Australasia, South America and Africa, the large waste of land admits of sheep husbandry to an almost unlimited extent. This is the better understood by referring to the latest returns. Australasia, in 1860, had, in round numbers, 20,000,000 sheep; in 1870, 50,000,000, and in 1891, 114,000,000. These figures, taking the average fleece at six pounds each, show a most remarkable gain in the wool clip. The Argentine Republic, Cape Colony, Africa and Asia, while not showing quite so rapid an increase as does Australasia, yet the gain is said to be very considerably ahead of the United States.

Great Britain and the United States being the largest consumers of wool, to them we naturally turn for the key to the present situation. In 1870 the clip in this country aggregated 163,000,000 lbs. and the imports 38,634,000 lbs., against in last year (1891) a clip of 303,401,507 lbs. and imports of 119,390,280 lbs. While the domestic clip increased in 21 years about 250 per cent, the imports within the same time increased over 300 per cent. The data for Great Britain we have not at hand, but it is safe to say that the figures for the past 21 years do not show so large a gain. This opinion is based on the fact that in 1889 Great Britain's clip aggregated 316,667 bales (over 200 lbs. to the bale) and the imports 2,091,894 bales, while in last year (1891) they aggregated domestic 352,381 bales and imports 2,186,155 bales, an increase of only about 5 per cent. In 1872 the average price of wool in the English markets was $135 per bale and in 1891 $65 per bale. In this country the average price of domestic Merino wool was 64 cents per pound and in 1891 33 cents per pound, so that the decline in the United States has been very nearly as great as has been the decline in England. The decline in prices is due to the causes given in the fore part of this article.

ALFALFA.—The high prices now prevailing for alfalfa seed will give another impulse to the ruling disposition toward alfalfa-seeding in regions well adapted to the plant. There will be made a considerable addition to the alfalfa area this year. The tendency toward decreased profits from raisins and other dried fruits has naturally drawn the attention of interior valley farmers to the profits from well-kept alfalfa fields, and alfalfa has shown up well in the comparisons which have been made. While we fully believe that the depression in fruit prices is only temporary and quite surmountable, it is just as well to have more alfalfa and more animals to eat it. In the midst of the rush after special lines of production, we have never lost faith that a wise diversification of products will be the surety of our agricultural prosperity.

FARMERS' INSTITUTE AT LIVERMORE.—Arrangements are progressing for the holding of a Farmers' Institute at Livermore on Friday and Saturday, April 15th and 16th. It will be announced by the officers of the Alameda County organization in the county papers at the close of this week, and we hope all our readers in the district will give attention to it. A good number of prominent speakers has been secured, but the list is not available as we go to press. Many subjects of interest to the people of Southern Alameda county will be discussed.

SAGE BRUSH LAND FOR CHICAGO.—A feature of Idaho's exhibit at the World's Fair will be a practical illustration of the system and benefits of irrigation. A large section of sage brush soil will be transported to Chicago. Through this ditches will be run, and trees, fruits and flowers will be grown in the soil by the irrigation system. Prospective Idaho settlers are expected to be especially attracted by this exhibit.

The State Press.

San Diegan: "The opening of the canal will compel American railway managers to prepare for competition."

Stockton *Mail:* "Nothing could be of greater advantage to the increasing commerce of this valley than the construction of a waterway for the cheap transportation of its products to market."

Stockton *Mail:* "The general opinion appears to be that the Board of Railroad Commissioners is an expensive fifth wheel to the vehicle of State. Experience proves that it is impossible to elect a board that will not fall under the influence of the railroad company, which is a sad reflection upon the prevailing morali'y in official life in this State."

Kern County *Gazette:* "Among other things to be voted for at the coming election is a proposed amendment to the Constitution, extending the sessions of the Legislature from 60 to 100 days. It is to be hoped that the proposition will be defeated. A sufficient amount of injury can be done in 60 days, and there is no good reason for extending the time."

Visalia *Delta:* "The chief of the Bureau of Forestry in the Agricultural Department at Washington has presented the draft of a bill to the Congressional Joint Sub-Committee on Agriculture, Forestry and Public Lands, which, if it becomes a law, will effectually preserve the forests from destruction, and, at the same time, accord to the lumberman, miner, farmer, stockraiser and sheepman all the privileges that could in reason be asked."

Biggs *Argus:* "The bill prepared for the protection of forests on Government lands has been well designed, and if it becomes an enforced law, which of right it should, it will be the means of not only protecting the young trees, but it will perpetuate the flow of springs, streams and rivers. It recognizes Government forest lands not only as watersheds, but as a source of convenience and wealth in their use by the people within proper limits. The licensing system, properly administered, will prevent the wholesale destruction of forests by lumbermen."

Looking to California.

New York *Sun:* The people of the United States are to-day looking to California as the great fruit State of the Union from which to draw their supplies of fresh, canned and dried fruit. They are also looking to California as the great winter resort, possessing the finest climate in the world. They are looking to California as the State to furnish them trainloads of oranges. And now the Italian Government declares that California is the only place on the green earth that they need fear as a competitor in raising citrus fruits. In the near future California will command the markets of the world, having left ancient and modern Rome and her succeeding country far behind in the great citrus race.

The Poor Farmer of To-Day.

[An address before the Farmers' Institute at Medford, Oregon, by Hon. T. T. Geer, of Macleay, Oregon.]

In 1836, when my honored uncle, R. C. Geer, of the Waldo Hills, was a single man, he became infatuated, as was quite natural, with a neighboring farmer's daughter, and he decided that nothing would adequately satisfy his sense of gallantry toward her that would fall anywhere short of making her a present commensurate with the warmth and extent of his budding passion. Other considerations might come and go, but he was determined that his present should at least be costly. It was one of those peculiar junctures in life when money is no particular object. He looked about him, and finally decided that, come what might, his girl should have a new calico dress at his expense. It was during those good old times before the farmers were imposed upon by anybody; in short, it was during those days when farmers were having everything just about their own way. He was a man grown then, and had hired out for a year to a neighboring farmer, but was only getting $6 per month for his work. It was singular, too, seeing that now, during these days of degeneracy, farm hands get from $15 to $20 per month; but any comparison would spoil my story.

His next move was to inquire the price of calico, and the merchant told him that, since he wanted it for so worthy an object, he could have it for 30 cents a yard. This would have been a stunner under ordinary circumstances, but it only spurred him into renewed determination. He then consulted his charmer to know the fewest number of yards it would require to make her a dress, and she told him in all candor that, seeing it was him, she would try and make six yards meet the requirements of the case; and she did it, but it took him several months to recover from his financial setback, which was only rendered endurable by the knowledge, as he now says, that she looked better in that dress, to him, than any woman does nowadays in the most gorgeous array, though the finer dresses cost less now than the calico dress did then.

He worked eight days to pay for a calico dress of six yards. His girl was at that time doing farmhouse work for 75 cents per week—the customary pay for such work. I have, in recent years, known many girls to receive $4 per week for similar work. With calico at fifteen yards for a dollar, the present average price, a farmer's hired girl can buy sixty yards for a week's wages. In the good old times, my future aunt could buy two and a half yards for her week's work.

The difference between 60 and 2½ is the exact extent to which, in this respect, we farmers are groaning under increased burdens during these latter days. Since I have been a married man I have paid for calico at the rate of seven yards for $1. If my memory is not faulty, my wife in those days made herself very pretty dresses with the dollar's worth of calico. A few years after, however, we could get 12 yards of calico for $1. The greatest change I have noticed, though, was that while the number of yards in a dollar's worth increased 40 per cent, it still required the entire dollar's worth to make the women folks a pretty dress. Several times during the past few years I have bought twenty yards of calico for $1; but what exhausts my powers of comprehension is why it still took a dollar's worth to make the same woman a dress. So, out of sheer desperation born of necessity, we farmers do sometimes feel justified in crying over "growing" girls.

Now, this sample of decrease in the price of calico is only a counterpart of what has occurred in nearly every other article which comes into daily use in the farmer's household. If we buy nails at four cents per pound, which we do, and less, and our fathers paid twice as much, which they did, then let us as farmers rejoice together over the fact. If we buy, as we do, all kinds of agricultural implements made now largely of steel for 40 per cent less money than we did ten years ago for similar ones of inferior make, we should cheerfully say so and congratulate each other that we, too, are sharing the benefits of modern civilization.

Eleven years ago I bought a wire self-binder for $300, and paid for it with wheat at 66 cents per bushel. This last year my neighbor bought improved twine binders of steel frames for $165, and paid for them with wheat at 90 cents. In other words, 11 years ago it took 460 bushels of wheat to pay for a wire binder, while now 160 bushels will buy a steel frame twine binder. To make it still plainer, one bushel of wheat this year has three times the purchasing power that it had 11 years ago, and the decrease in price of all kinds of agricultural implements has been equal to that as to harvesters. Should we not rejoice over these facts? I move that we do.

The winter before I was married I was living alone in one of the most thickly settled portions of Eastern Oregon; namely, Grand Ronde valley. I read several books through that winter, and among them Josephus' works, which were in very fine print, and I did all my reading by firelight made of pine knots. I bought coal oil then in quart bottle lots—that is, one quart at a time—and it cost me three bits a quart, so I could not afford to read by its aid when pine knots were lying around loose. I kept that same bottle for the same purpose for more than two years after I was married, and we rarely lit the lamp except when we had company. Now we have in our house three or four lamps, and most farmers have, each of which will hold as much as that bottle did, and a can doesn't last as long as a quart did then. It then cost $1.50 a gallon, while now it sells for 20 cents. Let us rejoice.

I also remember the first wagon I ever owned. I had been married several years and we had always gone to church, etc., on foot; but I had a chance one day to trade two horses for an old wagon that had evidently crossed the plains in '47, so I traded. It had no bed nor brake, but if I remember correctly, it had a tongue and four wheels; so I made a buckboard seat, and the next Sunday we (that is, my wife and two babies and I) went to church under the new dispensation. I was actually ashamed to drive up to the church door, for I knew there were dozens there who would say to each other that I was putting on style. But when I first hitched to that wagon and drove away, I was as happy as I will ever be again until I reach and enter the shining portals of Paradise.

We used that wagon for several years, and were as well fixed as anybody in the community, with very few exceptions. During those years there was but one buggy in the whole country, and its owner was regarded as a nabob. The improvement in the condition of farmers is shown by the fact that when at our country church three weeks ago, there were 32 teams hitched around the church and but one wagon, the others were either buggies or carriages. Since then I saw a funeral procession wending its way to our country churchyard with 27 teams in line, and each one was hitched to either a buggy or carriage, and they were all owned by farmers. Thirty years ago such a sight as this would have been impossible.

Now, I believe it does us good to stop in our work sometimes long enough to recall these facts and look them over. We are surrounded by so many luxuries that our fathers never dreamed of that we are somewhat spoiled, and we are sometimes disposed to neglect returning thanks. If any class of men in the world should be contented and stimulated by a cheerful ambition, it is the farmers of Oregon. We are masters of the situation, for the reason that any man who owns 40 acres of land, or even 10 acres, is a king among men. It is a possession that neither succumbs to flood nor flame, nor do thieves break in and steal; it is "incorruptible and fadeth not away."

I rejoice that I live in a time that enjoys all the blessings that follow civilization—Christianity, churches, schools, books, newspapers and universal education. Our fathers and grandfathers, especially those of them who were pioneers in the great march which plucked "this Oregon of Ours" from the blight of the wilderness and the grasp of barbarism, were men of noble mould, and I never tire of rehearsing their numberless virtues. They sacrificed their comforts, and even their lives, that we might live under better conditions; and while we render them unceasing homage, let us also not fail to appreciate to the fullest extent the manifold blessings and privileges of our own time.

Being a devout Christian myself, I believe, in common with all other Christians, that it is the preconceived intention of the divine economy that the children of men should grow better as generation succeeds generation. There is no place in my heart for the doctrine of mental or moral despondency. I believe there are millions of men living to-day who are better morally than Adam ever was, because he fell the very first time he was tempted, and men nowadays sometimes do not. My message to the farmers of Jackson county is to cultivate cheerfulness and contentment, because the times and conditions justify it. The gospel of gloom is as repelling in its influences when applied to agriculture, as to theology.

Of all the centuries that have rolled from the hand of God, like grains of sand, the nineteenth stands preeminent for matchless results in contributing to human comfort.

The State Agricultural Society and the World's Fair Display.

Sacramento, April 2, 1892.

To the Editor:—From press reports I note that the World's Fair Commission have decided to join with the Mechanics' Institute Fair, in San Francisco, this year for the purpose of encouraging a congregation of agricultural exhibits from which to select California's show of products; as an inducement for which the Institute will issue medals for premiums. I also notice that some of the daily papers have designated the action as a "blow at the State Agricultural Society as they wanted the show made at the State Fair."

This idea of getting together an exhibit of agricultural products in 1892, to be shown at the World's Columbian Exposition in 1893, originated with the State Agricultural Society, as will be seen by our report to the Governor for 1891. In this report we offered the World's Fair Commission our assistance and the benefit of our experience in collecting agricultural exhibits, and invited correspondence upon the subject. As we are the direct representative of the State in matters of this character, we desire in every way possible to lend our aid in the collecting of a representative exhibit of agricultural products, and being in touch with this interest, deemed it an advantage not to be overlooked by the World's Fair Commission who are using the same funds as we are, and who should cater to some extent to the class of people they expect reciprocation from, and use some of their funds in such a way as the producer may obtain a little direct benefit.

In our Society we have a formulated plan, in fact a regular organized system for collecting and exhibiting agricultural products by counties, for which is given cash awards to the extent of $5000,

Our suggestion to the World's Fair Commission was to add about $2000 of the State's money to be used in conjunction with our amount as premiums; the best use it could be put to in the way of preliminary expenses, as by the time inexperienced men are sent throughout the country to gather exhibits, twice, yes three times this amount will be expended, and an inferior exhibit obtained, and we would perform all the work, and have it distinctly understood with exhibitors that their exhibits would be forwarded to the World's Columbian Fair, thereby giving the Commission the advantage of showing a collection of premium agricultural products.

Had our suggestion been received with favor, the additional inducement to the producers would have been sufficient to warrant them in spending a little time in getting together the cream of this year's production, which would have given the Commission a larger variety to select from, that could in no other way be as easily obtained,

Medals and diplomas as premiums are better fitted for industrial products than are they for agricultural exhibits, as the manufacturer by his display attracts trade; but the agricultural exhibitor must have cash awards to partly pay expenses of gathering, packing and handling his productions, which cannot be realized upon in any manner after exhibition uses.

The exhibitor of agricultural products is actuated four-fifths by public spirit, loyalty to his State and pride for his particular locality. It is not a question of trade with him; hence the State makes annual cash appropriations to assist the cultivator of the soil in showing California's capabilities, that the entire State may be benefited thereby.

No, the State Fair is in no way injured, or likely to be injured, by any action of the World's Fair Commission. We offered (not solicited) them cooperation, and the benefit of the $5000 cash premiums of the State's money offered through us, which, by the addition of some of the same money, they could obtain a more extensive and comprehensive exhibit than by the plan they have adopted. We speak from experience, which the Commission may have more of after it is too late to make amends.

In our offer we were not actuated by any desire to increase our resources, but only to enlarge the possibilities for a grand e xhibit, which, of course, would inure to the benefit of the Commission.

As far as the State Fair is individually concerned, we have no fear of the result, as we know the exhibitors of agricultural products will be on hand as usual to contend in sufficient numbers for the cash awards, and to make the State Fair a success.

Our endeavors will be, as they have been in the past, to enhance the value of California's soil by encouraging the exhibition of products, which during the existence of the California State Agricultural Society have been made more prominent, and attracted more attention than any other plan yet devised. The money appropriated by the State is used exclusively for awards to the producers of our commonwealth, and the expenses of conducting the institution, together with permanent improvements necessary, comes entirely from our own resources, and for the amount of benefit this institution is to California, it costs less to maintain than the cheapest of the many commissions supported entirely by the State.

Edwin F. Smith, Sec'y.

Concerning roads, the Inyo *Register* says: "It is a simple matter of business foresight; simply a question between bolstering up a road this year, doing the same next season, and the next, or by spending a little more money at one time, secure roads that are no longer bills of undiminished expense and sources of annoyance or danger. When will this subject receive the general consideration its importance demands?" So far, good; but the *Register* does not go far enough. Roads full of mudholes are more costly than good roads, because the expense of transportation over them is greatly increased.

PATRONS OF HUSBANDRY.

What's Woman's Work.

[By MRS. H. H. WOODMAN.]

We've heard the cry, from sea to sea,
What's Woman s work? what shall it be?
Yet every Patron in the land,
Knows we've always had a hand
In organizing every Grange,
And why these questions? it seems strange.

We've worked in every way we cou'd,
And done what every sister should
To help along this noble work,
And never have been known to shirk;
We've made our speeches, essays read,
And often in the singing led.

We've helped our brothers build our halls,
And decorate the barren walls,
And placed therein our emblems true,
For Husbandman and Matron too;
We've voted with our brothers there,
And helped to count the ballot fair.

We've brought our flowers rich and rare,
And put them under Flora's care;
Ripe fruits we've gathered in their prime,
And placed upon Pomona's shrine;
The grains and grasses fully ripe
Fair Ceres guards with sickle bright.

The *Juveniles* we've watched with care,
That naught but good should enter there;
For well we know their plastic mind,
If molded right will soon combine
And keep our Mystic Grange secure,
From evil doers we are sure.

But as we work with brothers true,
We find there's more and more to do;
For work has been the lot of man,
And woman too, since *time began.*
I'm *sure* we've always done our share—
No Grange can work unless we're there.

Paw Paw, Michigan.

The Secretary's Column.

[A. T. DEWEY, SEC'Y S. G OF C., No. 220 MARKET ST., S. F.]

Committe on Legislation.

In accordance with the requirements of a resolution of the last session of the State Grange, P. of. H., recorded on page 100 of the printed Journal, the following committee is hereby named to do the work provided for by the resolution: J. V. Webster, Chairman, S. T. Coulter, J. H. McKune, Chas. Wood, C. W. Norton.

The Chairman and members will please attend *at once* to the important work before the committee, and the Secretary will notify, under seal of the State Grange, each member of his appointment.

E. W. DAVIS,
W. M. C. S. G.

Santa Rosa, March 22, 1892.

Patrons who have suggestions to make to this committee should forward them to the Chairman or some member at once. It is expected all Patrons will do their duty and assist this committee and all others promptly.

JAMES D. MCDIARMID, member of Pleasanton Grange, Manistee Co., Mich., has lately settled with his family at San Jacinto, San Diego Co., and wishes information about the Grange in California, being hopeful of establishing a new Grange. Encourage him, all who can.

STATE LECTURER HUFFMAN, Brothers Ketchum and Noyes of Stockton, Mary Merrill of Waterloo, A. N. Judd of Watsonville, and W. B. Ewer of Temescal were among the P. of H. at the Nicaragua Canal meeting, S. F., March 29th.

LIVE OAK GRANGE turned out splendidly at the recent meeting addressed by Master Davis and Past Master Coulter.

What the Grange Has Done.

Grand Master Davis was present at the meeting of San Jose Grange on Saturday last, but was suffering from the shock of the news of the death of a favorite nephew. He spoke briefly as follows:

People sometimes say that they knew no value attached to the Grange. Now, if we can show one good thing it has done, we completely answer this objection. During the 25 years' life of the Grange there are 25 prominent mile-stones, showing not only one good thing, but 25 good and remarkable things, and these are some of them:

It organized the farmers never before organized. There are now 1,500,000 meetings of Grangers held every year—estimate the power of these.

It has opened a field of usefulness for women and brings them forward so that man can say of woman, "You are the peer of anything that draws the breath of life."

It prevented the reissuing of the patent on the sewing machine, a saving of a round million a year, and will see that the telephone follows in the same line, or that it be taxed in some measure equal to its protective value.

It secured the passage of the Interstate Commerce bill, of which we do not receive the benefit received by the people of the East. The Grange will oppose its repeal.

It secured a position in the Cabinet for a Secretary of Agriculture.

It has done much to secure the new ballot laws, of which California has adopted a very good one.

It has caused a great increase in the appropriation for public schools. He who thinks to do anything in the world without a complete education deceives himself.

And along this same line the Grange proposes to work. There are trusts to oppose. It will denounce credit, mortgages, fashion and everything else that induces prodigality of expenditure. It will labor hard for a mutual insurance plan to take the place of the organized robbery now going on. It will strive to send only farmers to the legislature and to Congress—send men who have families and homes, and reforms will come.

From Master of National Grange.

DELTA, OHIO, March 21, 1892.

To the Members of the Order of Patrons of Husbandry:—The National, State, Pomona and Subordinate Granges of our country have repeatedly indorsed the policy of electing United States Senators by a direct vote of the people. The amendment providing for it will be submitted to the various State legislatures in the near future, and be ratified by those bodies, if the people do their duty.

But why wait for this change in the Constitution? We need this reform now! The people should have more live men in the Senate who are in close touch with them! There are several members of that body who should be retired to enjoy the wealth which was the means of their elevation to an important position, for which they had no especial fitness.

These men never would have been chosen by popular vote. We should do the next best thing to a direct vote under an amended Constitution, which is to insist upon the nomination of candidates for United States Senator in States which will elect this year, by the various political parties with which our members are connected.

If we will agitate this matter sufficiently at once, political parties will hardly disregard the wishes of the people. If we will move, others will join us, and the movement will become irresistible. The farmer fills a larger space in the eye of the shrewd politician than ever before; and now is the time for action. A few weeks more, and it will be too late for this year.

We should also take a lively interest in the nomination and election of representatives. It is of no use to petition to men who turn a deaf ear to our cries. Nominate friendly men in your party conventions! Elect friendly men at the pools, and then all your reasonable demands will be granted. Retire every "people-be-damned" man, in convention if you can, at the polls if you fail in convention. Ballots are even more effective than bullets. If the people fail to make proper use of the former, the time may come when the latter must be used to "Keep the Jewel of Liberty in the Family of Freedom."

No more important campaign was ever entered upon by a patriotic people than the one just before us. The people must learn to distinguish between sound argument and sophistry. They must not mistake the railing of the demagogue for the inspired eloquence of the true patriot and honest citizen. No Order or organization has done more to qualify farmers to make wise use of their political power than that of the Patrons of Husbandry. We are proud of our past, intensely earnest at the present, very hopeful of the future. Fraternally yours,

J. H. BRIGHAM.

The Picnic Season.

The Grangers of California will open their season of picnics about April 14th. The first picnic will be under the auspices of Enterprise Grange, Sacramento county, April 14th. April 30th, Chico Grange will picnic. Yuba City Grange will have its picnic May 4th. Pacheco Grange, Contra Costa county, will celebrate May 2d; Pescadero, May 7th; Glen Ellen, May 7th; Dixon, May 6th; Merced, May 14th. Two Rock and Lodi will celebrate about the middle of May.

The Grange and Its Work.

At a meeting of San Jose Grange, on Saturday, 2d inst., Rev. S. Goodencugh, Chaplain of the State Grange, spoke as follows:

The Grange is not a new institution. It has been tried. When a new machine is built the test is looked forward to with interest. When a cruiser is launched there may be some doubts as to its performance, but a trial will clear them away, and if successful, the nation feels safe to trust it. The Grange has long ago passed this trial stage, and appears before the country as a tested institution. The Grange has never failed. In its history there is no record of defeat. It is known as an intelligent body, and when it takes a stand the people know that their stand means something. When a committee of the Grange goes before the Legislature or Congress to ask for anything in the interest of farmers, all the parties are willing to grant them a respectful hearing and to grant their request, if possible. The farmers demand their fair share of the benefits of their labor—to receive a fair equivalent for what they produce. This is not selfish, for they rob no one in doing it. The farming interest is the largest in the country. The farmers of the country and their families number at least 35,000,000. When the farmer is prosperous every branch of business and every class of people are also prosperous. Then, in seeking their own benefit, they assure the profit of every one, and are thus not selfish, for all are prosperous in return. Labor represents everything. Labor is all there is of anything. There is no value that is not represented by labor. Once in the history of the world there was but little in the way of population. Then the command went forth, "Replenish the earth; have dominion over everything," etc., and in obeying this command, all value came to the world. My coat suggests the labor of the tailor. The cloth suggests the labor of the weaver, and the wool the labor of the farmer, the foundation of all value. It is said that the average value of the labor of every person is $600. Not every one receives the value of his labor—it may go to enrich some one else. Hope and peace are the weapons of the Grange, and working these on the principle of justice and friendship, it must be respected and must succeed.

FARMERS' ALLIANCE.

An Omission.

The following introductory paragraph of the National People's Party platform, adopted at St. Louis, got left out of the daily reports published at the time and has recently been furnished by President Cannon:

"In order to restrain the extortions of aggregated capital, to drive the money-changers out of the temple; 'to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty for ourselves and our posterity,' we do ordain and establish the following platform of principles:

"We declare the union of the labor forces of the United States, this day accomplished, permanent and perpetual. May its spirit enter into all hearts for the elevation of the Republic and the uplifting of mankind.

"Wealth belongs to him who creates it. Every dollar taken from industry without an equivalent is robbery. 'If any will not work neither shall he eat.' The interests of rural and urban labor are the same, their enemies are identical."

Cannon For Congress.

Ventura Observer.

It is our candid judgment that the Alliance can elect a Congressman from this district, and State President Cannon, as we have previously said, should be the man. He is well qualified for the place, and would make a faithful and industrious member, far superior to the man now there. We do not know that Mr. Cannon would want the nomination, but he has certainly earned it and could in consequence of the present position he holds to the Alliance and his general qualifications to make a canvass and to fill the place, command a larger vote than any other man in the organization in this district. He can get a large vote in this county from all parties.

Mr Geary and the Canal.

At the Napa County Alliance meeting, held at Calistoga on the 21 inst., a letter from Congressman Geary was read, wherein Mr. Geary stated that he approved the Alliance's stand on the Nicaragua Canal, and would vote that way. He also approved the idea that fractional lands in California be donated by the General Government to the State to sell to holders of land to which it joined for road purposes—that is, the proceeds to go entirely into the county road fund.

Alliance Meetings in Yolo.

On the evening of the 15th of April there will be a mass meeting in the Opera House at Winters, under the auspices of the Yolo County Alliance. Marion Cannon will be present. A convention will be held on April 16th, in Odd Fellows' Hall, conjointly by delegates from Yolo, Napa and Solano County Sub-Alliances.

Napa County Alliance.

The following are among the resolutions adopted at Calistoga on Saturday last by the Napa County Alliance Convention.

WHEREAS, W. H. Mills, President of the State Board of Trade, and General Land Agent of the C. P. R. R. Co., inspired by the manager of the company he represents, has written several articles and made several able speeches, showing the astounding increase instead of decrease in the concentration of land in California into the hands of the few, which is so inimical to the growth of the State; therefore,

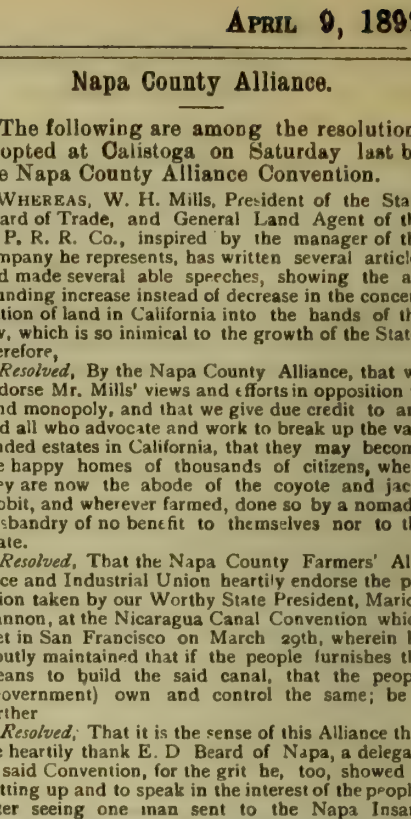
Resolved, By the Napa County Alliance, that we endorse Mr. Mills' views and efforts in opposition to land monopoly, and that we give due credit to any and all who advocate and work to break up the vast landed estates in California, that they may become the happy homes of thousands of citizens, where they are now the abode of the coyote and jack-rabbit, and wherever farmed, done so by a nomadic husbandry of no benefit to themselves nor to the State.

Resolved, That the Napa County Farmers' Alliance and Industrial Union heartily endorse the position taken by our Worthy State President, Marion Cannon, at the Nicaragua Canal Convention which met in San Francisco on March 29th, wherein he stoutly maintained that if the people furnishes the means to build the said canal, that the people (Government) own and control the same; be it further

Resolved, That it is the sense of this Alliance that we heartily thank E. D Beard of Napa, a delegate to said Convention, for the grit he, too, showed in getting up and to speak in the interest of the people, after seeing one man sent to the Napa Insane Asylum for speaking in the interest of the people (Cannon) by the chronic office seeker, M. M. Estee; and be it further

Resolved, That we censure M. M. Estee for the course he pursued in said Convention, in the sole interest of the privileged few, as against the people, and that we have reason to rejoice and congratulate the people of California that M. M. Estee's long drawn out chase after office has never given him a more responsible office to betray than our Board of Supervisors (no doubt at his request) in the so-called Traffic Association of San Francisco.

THE Farmers' Alliance people are pushing their organization and cause. Marion Cannon, the State President, is out and is making fine speeches. Mr. Cannon used to live in Nevada county. He carried on a blacksmith shop in Omega in the early days and was County Recorder one term.—Grass Valley Telegraph.



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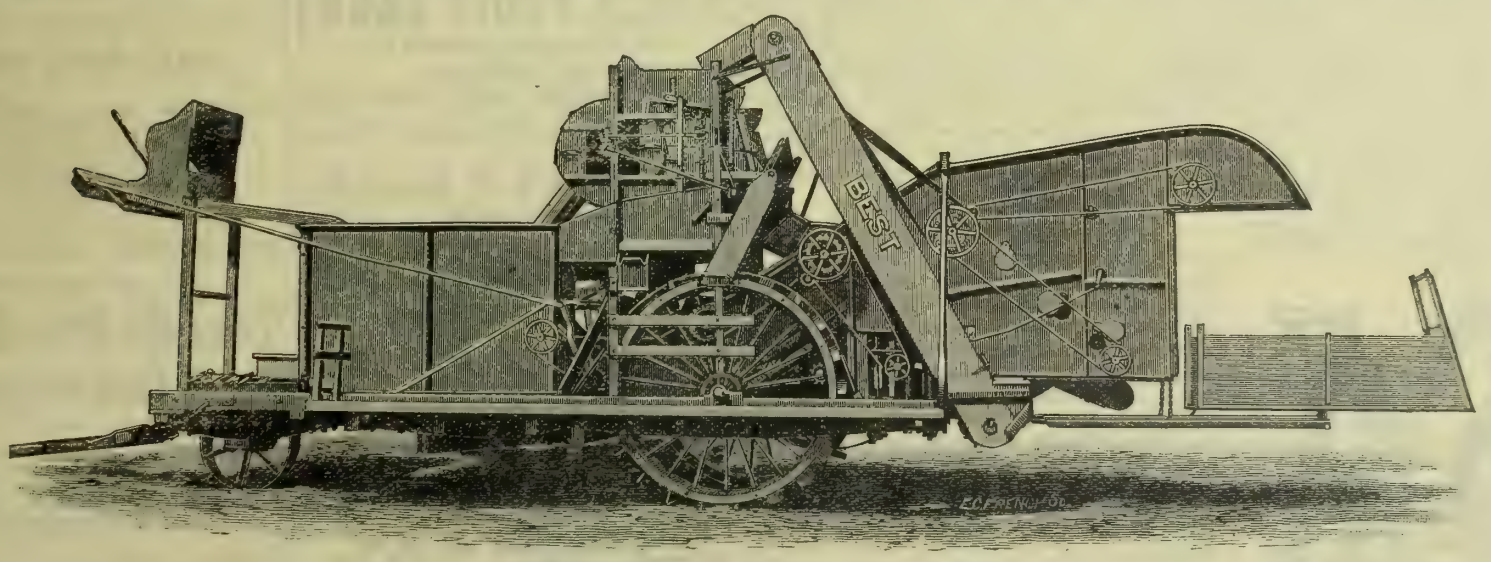
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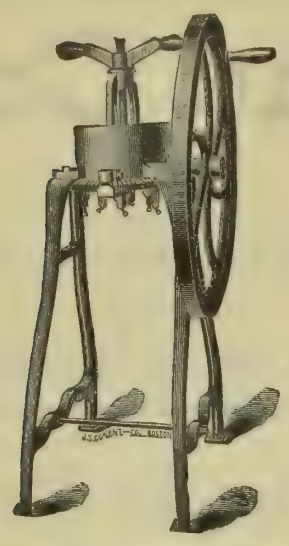
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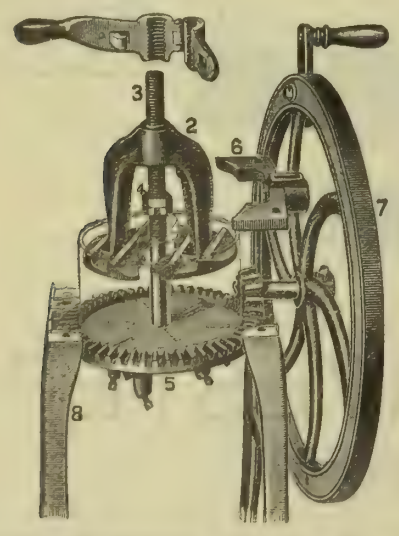
The Mann Bone Cutter.

It is gratifying to have one's good opinion of an article endorsed by his readers, says *Farm-Poultry* for December, as our frequently expressed good opinion of Mann's Bone Cutter has been endorsed by users, both by letter and by word of mouth. A recent case was that of a poultry farmer in North Middlesex, whose farm we visited last week. As we were looking through the buildings, he stopped beside his No. 8 cutter, put his hand affectionately upon it and said: "*There's* something, now, that you cannot praise too highly. It is *a perfect* machine, admirably adapted to its purpose, and as nearly right as though it grew so!"

The steady increase in orders has compelled Mr. Mann to move his machine shop to larger quarters, and he is fortunate in being now located in a roomy, well-lighted building of three stories and basement, he has purchased for his purpose. Here we see the various sizes and styles of machines in process of putting together and shipping in one department, while the various "parts" are being manufactured in blocks of 50 or 100, as circumstances require.

The different experiments required to determine the best size or shape of each piece or part are well illustrated by the different specimens Mr. Mann takes pleasure in showing his visitors, and one realizes how costly these experiments must be when he sees machine after machine that was built, tested, and thrown aside as "not right." It would puzzle a mechanical engineer to suggest improvements without their carrying with them some sacrifice in weight or increase of friction which would more than counterbalance the advantage gained, the points of ease of working (avoiding friction) combined with the perfect performing of the task assigned are kept constantly in view.

Mr. Mann makes two sizes of power machines for factories cutting bone and shipping it away to poultrymen who prefer to buy the cut product rather than cut it themselves, and this branch of his business is doubtless destined to increase. It isn't easy or convenient for every poultryman to get a supply of fresh bones, or spare the time to go for them, or cut them after they are got. They can be collected in large quantities more economically and cut by power very rapidly, and it will become a customary thing for establishments handling butchers' trimmings and waste to cut up the bones and gristle into food for fowls; to convert waste material valued at half a cent a pound into poultry food worth three cents a pound, would seem to be a profitable business, and it is sure to extend rapidly.

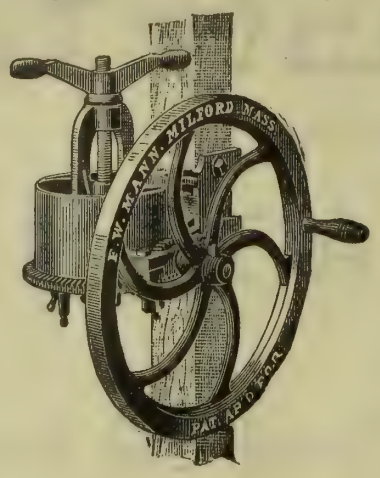


Skeleton Cut, showing construction, the cutter plate, the six knives and a late improvement—the split-nut feed handle.

Mr. Mann makes two styles of hand cutters, one having one balance wheel and crank, the other two. Another style of machine is without legs, being fitted to be bolted securely to a post in the barn, or some convenient outbuilding.

This post machine can be made for somewhat less money than the one on a stand. Many men have a convenient corner or niche in which such a machine can be permanently secured to advantage, and where it is instantly available when wanted; we incline to think the post machine destined to great popularity.

That the manufacturer has full confidence in this machine is shown by his giving a written warranty with every one sold, guaranteeing to replace any part breaking within two years.



Of the value of cut bone for poultry food we have frequently spoken, and need not speak at length here. It furnishes a most essential food-element, promotes egg-laying, promotes the physical health so that the fowls will be in "better condition," and their eggs will not only show a higher average of fertility, but the chicks hatched from them will be stronger, more vigorous. It is an *economical* as well as a most valuable food, hence we are serving our readers' best interests in urging them to buy a bone cutter, and giving their fowls this treat. They will pay well for it in better health, greater egg yield, more profit; in short, cut bone is a substantial "lift" along the road of "profit from poultry."

We will add that we have seen letters from some of the most prominent poultry men in the State, who are using these cutters and who pronounce them to be all that is claimed for them.

Petaluma Incubator Co., Petaluma, Cal., are Pacific Coast Agents, and will mail free a Catalogue.

Carbolineum is attracting a good deal of attention as a Wood-Preserving Paint, and it will therefore be of interest to our readers to learn that continued experiments and trials have fully demonstrated the important qualities of this antiseptic compound, which so thoroughly protects all kinds of wood. The adulteration of paints and oils, now so extensively practiced, has done much to give *Carbolineum* such a strong hold, because it is cheaper than ordinary so-called oil paints, and affords a much better protection against dampness and against the changes of weather. In support of this claim, Messrs. Muecke & Co., 319 California St., S. F., the general agents for the Pacific Coast, have documentary evidence showing that wood impregnated with Carbolineum was as sound as ever after a lapse of 17 years. The article is invaluable on Shingle Roofs, Posts, Weatherboards, Sills, Barns, and for like purposes. Carbolineum imparts a nice brown (nut brown) color, and prevents the shrinking or swelling of lumber so treated. But in other directions Carbolineum merits also attention. In Germany the farmer gives his plows, if rusty, an application of Carbolineum shortly before plowing. The friction of the soil against the shares will at once make them shine brightly. *Chicken Ranchers* treat the Sills, Walls and Perches of chicken houses with Carbolineum, because it is proven that the fowls will not be troubled any further by lice, on account of the disinfecting properties of the stuff.

A Cowhide Horseshoe.—In England and on the continent they have been for a long time using a horseshoe made by compressing common cowhide. It is composed of three thicknesses of cowskin pressed in a steel mold, and then subjected to a chemical preparation. It is claimed for it that it is much lighter, that it lasts longer, and that split hoofs are never known in horses using it. It is perfectly smooth at the bottom, no calks being required, the shoe adhering firmly to the most polished surface. Its elasticity prevents many sprains, the horse's steps being lighter and surer.—Memphis Scimitar.

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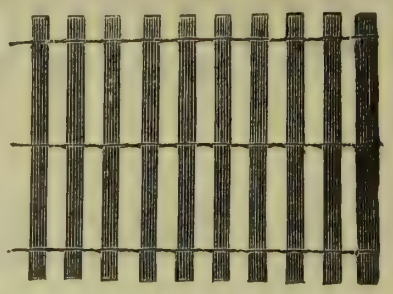


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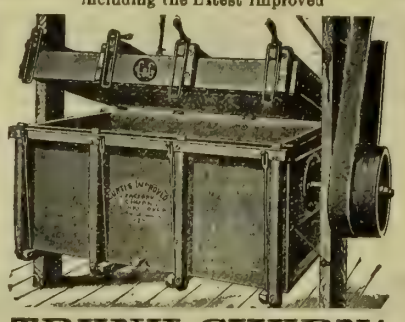
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Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.
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Stock will be shown on two Saturdays, April 9th and 16th. Sale takes place on

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Promptly at Noon, rain or shine. Lunch at 11. Sale and Lunch under cover if it rains.

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Colts by Glen Fortune, Mountain Boy, Figaro, Jester D., Etc.

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Young Horses that will make Splendid Road Animals, Single or in Team.

EVERY ANIMAL PUT UP WILL BE SOLD without limit or reserve, exactly after the manner of the First Souther Farm Sale.

ON EXHIBITION DAYS, April 9th and 16th, Saturdays, take 12 o'clock broad gauge boat from foot of Market Street, San Francisco, connecting with San Leandro train, which leaves First and Broadway, Oakland, at 12:30. Special train leaves City at 9:30, Oakland at 10 on sales day.

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Good Health.

Artificial Light and the Eyes.

Medical men consider that forced and undue recourse to artificial light must have a permanently deleterious effect on the eyes. Eye defects are, it is said, unusually prevalent. Oculists testify to an immense increase in their practice during the last quarter; on the other hand, however, we hear of no abnormal demand for spectacles. The best artificial light for the eyes, says the *Optician*, is a subject that should prove of interest to all classes. It has been dealt with very fully by Mr. Gustavus Hartridge, who deems it essential that a good artificial light should have the following qualities, in order that it may have no injurious effects upon our eyes: 1. It should be of sufficient intensity to produce a good illumination, while it is important that no direct rays shall fall upon the eyes; for in the case of a very strong light such as the arc, if the unprotected light be exposed to it for any length of time, congestion of the eyes, with spasm of the pupil and considerable temporary exhaustion of the retina will take place, and will make itself evident by great dazzling and obscurations of the vision, together with swelling of the eyelids; while in some cases serious injury has been inflicted on the retina, and permanent loss of central vision has occurred. This result may occur from exposure of the eyes to any very intense illumination, and even gazing at the sun has produced the same permanent injury in a few cases. 2. That the light should be absolutely steady and of constant quantity; nothing is more fatiguing to the eyes than the constant flickering which occurs with many gas lights and with unprotected candles. The interruptions which are so liable to occur in the "arc" light is one of its great disadvantages, while the incandescent light has been, by improved mechanical arrangements, rendered nearly absolutely steady. 3. As little heat should be generated by the illuminator as possible, the oxygen contained in the air should not be used up, and the products of combustion should be reduced to a minimum, since heat and the products of combustion are extremely irritating to many eyes. These conditions, Mr. Hartridge considers, are most nearly fulfilled by the incandescent electric light, since it contains only a small amount of irritating rays, is fairly steady, gives off but little heat and no products of combustion, while at the same time the oxygen is not consumed. The difficulties at present are in placing the light in such a position, and in shading them in such a manner, that no direct rays can fall on the eyes; experience alone can overcome this difficulty. The point always to be aimed at is to arrange the light in accordance with the requirements of the room; a system of lights intended to illuminate equally a whole room cannot be expected to be the best illumination for special purposes, such as reading and writing. When the light is required for reading or writing, it should be conveniently placed so as to throw the rays on the book by means of a suitable shade. The light should, in all cases, be subdued. The present mode of hanging the incandescent light with a small porcelain saucer shaped shade above, though probably economical as regards the illumination, is decidedly objectionable. It must be conceded that the electric light, judiciously placed, and carefully shaded, has advantages not possessed by any other artificial illumination. Not only is it the best light for strong and healthy eyes, but even those eyes that are unduly sensitive or the victims of disease may work longer, and with less risk and discomfort, than with gas, oil or candles.

Treatment of Influenza.—Cyrus Edson of the Health Department of the City of New York, publishes a monograph on la grippe and its treatment (D. Appleton & Co.). Three indications are to be fulfilled: 1, means must be taken to assist the system to rid itself of the poison to which the attack is due; 2, pain must be relieved, and 3, not the least important, depression must be counteracted. The first indication is obtained by means of castor oil, or two compound rhubarb pills. Three or four three-grain powders of phenacetine are usually sufficient to relieve headache and muscular pains. Salol, two and one-half grains to each dose, may be added to the phenacetine with advantage. He deprecates antipyrine and its congeners, which serve to augment the depression, and recommends instead Hoffman's anodyne, which is diaphoretic, diuretic and stimulant. To overcome depression during and after the disease, he recommends the free use of tonics. He repeats Prof. Laffont's (of Lille) recommendation of coca preparations, those of Mariani being given the preference. During the disease a hot grog, one-third Mariani wine of coca and two-thirds sweetened water, is administered, taken very hot, several times a day, the slight diaphoresis induced being a valuable addition to the tonic action. The editor of the *Satellite*, from which this excerpt is taken, recommends the exhibition of coca in the early stages of the disease, with a view to counteract the impending asthenia and curtail the disease.

Reduction in Postage.

March 28, 1892.

To the Editor:—Our Postmaster General is working hard to secure the passage of a system of free delivery to every farmer's door. This will call for a large increase in the present force, and an enormous additional expense to the postal system. I doubt very much if the average farmer desires it or will really be benefited to an extent at all proportionate to the cost. If our worthy Postmaster General desires to serve the isolated farmer, let him introduce a bill renewing the postage rate on parcels that was in force in 1870, but was repealed by the efforts of the express companies. That rate of 8 cents a pound on merchandise enabled the farmer and all the members of his family to secure the thousand and one little necessities or luxuries that are now denied him by the high postal and express rates. At present, the postoffice charges are 16 cents a pound, while the express companies *very* liberally charge 15 cents for points in the State removed from the railroad, and as much more from distant points as the traffic will bear. The nurserymen, seedsmen and florists patiently waited for relief, but when they found the express lobby all powerful and their efforts useless, they established agencies in Canada, shipped their goods there in bulk and had them mailed back to the United States at the Canadian postal rates. Immediately, the express companies set up a hue and cry about the smuggling system, and the government sent agents to detect the parties that they might be severely punished. They experienced no difficulty in finding them and in discovering that an American citizen had a perfect right to avail himself of the privileges granted a Canadian by the United States, but denied an American, and the natural result was, the express companies lost their case, and the seedsmen got a reduction of 8 cents a pound on postage. The government has lost nothing, on the contrary, it has been the gainer; and so, too, it would be, if the people, as a whole, were given a rate on merchandise in 5 pounds and under packages of 8 cents a pound. Our Postmaster General is one of the largest merchants in the United States and would himself be immensely benefited by it. The Alliance now has its representatives in Congress to work for it, and California at last has, in Mr. Caminetti, a representative whose time is not all taken up in looking after his private railroad interests but one that, knowing the wants of his people, is ever ready and willing to introduce and secure the passage of any bill that will benefit the masses. To-day, more than ever, the agricultural classes need all the help that can be given them; and to-day, more than ever, they are in a position to secure what they ask for, and if a general demand were made for an 8 cents a pound rate on packages to 5 pounds of merchandise, the farmers would be granted it, and every home be benefitted in its ability to supply themselves with innumerable articles that go to make home home-like and life worth living.

E. H. Schaeffle.

Stone should never be used immediately after quarrying. It should be exposed to the weather for a month anyhow before it is used. It thus becomes seasoned and will wear much better. When left to season the under side of the rock as it lay in the quarry should be exposed to the sun When you buy stone for paving or similar purposes insist on its being turned over, that is reversed from the way it was in the quarry before it is laid. The reason for this is that the top surface is much softer, it being of later formation, stone forming from the bottom.

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Sent free by the Channing Auxiliary of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

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You are exposed to sudden changes of temperature, and to injuries.

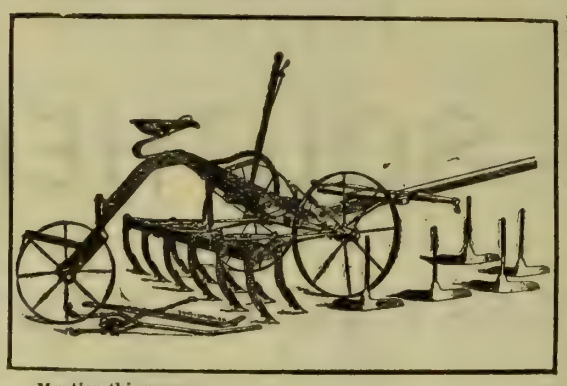
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Cures **RHEUMATISM,**

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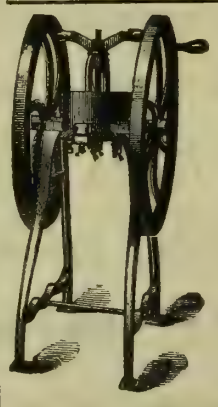
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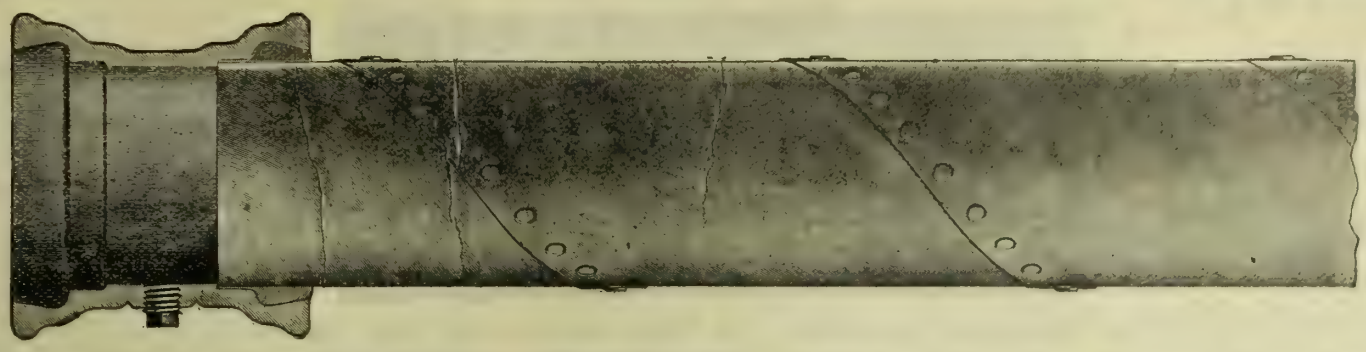
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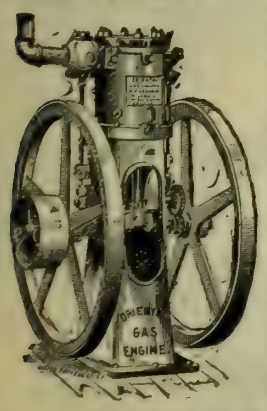
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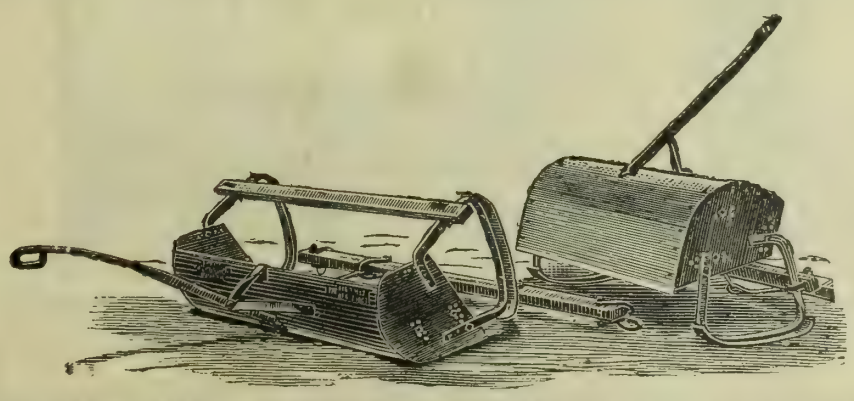
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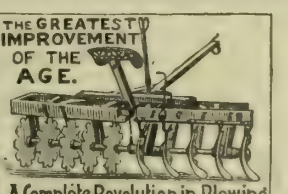
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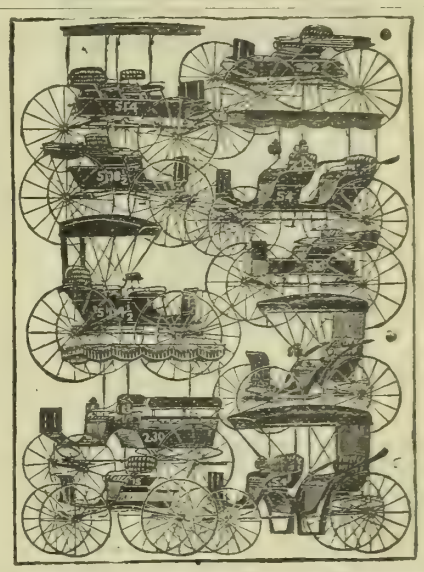
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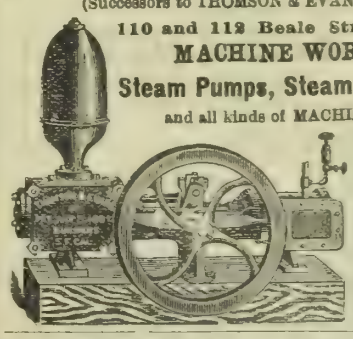
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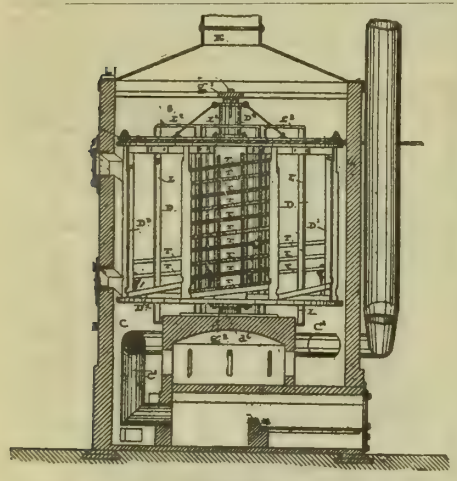
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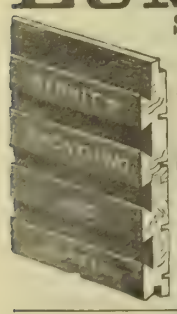


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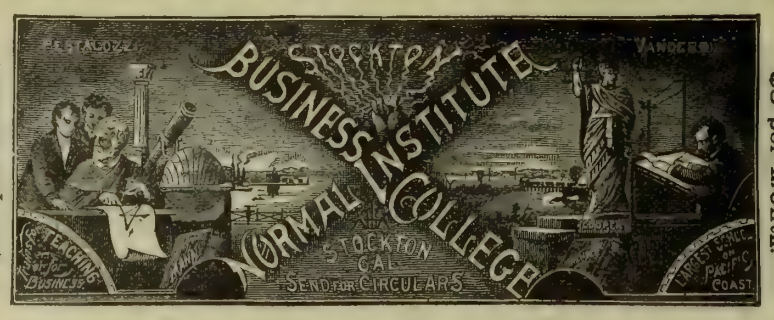
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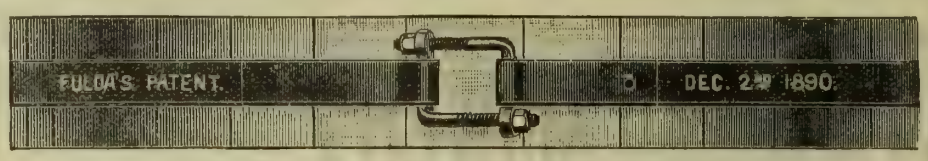
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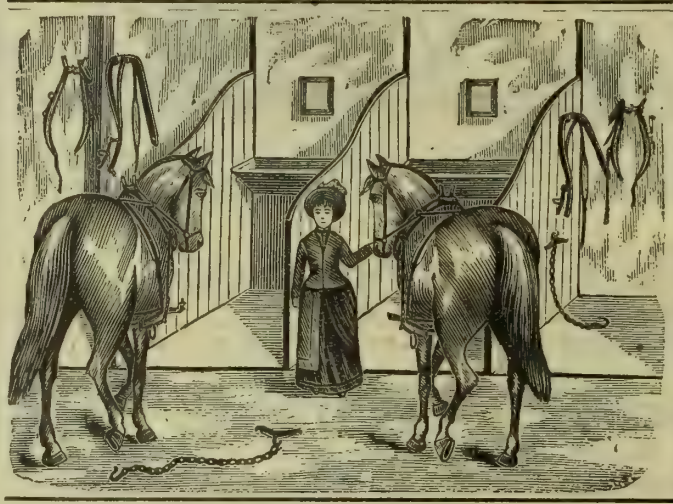
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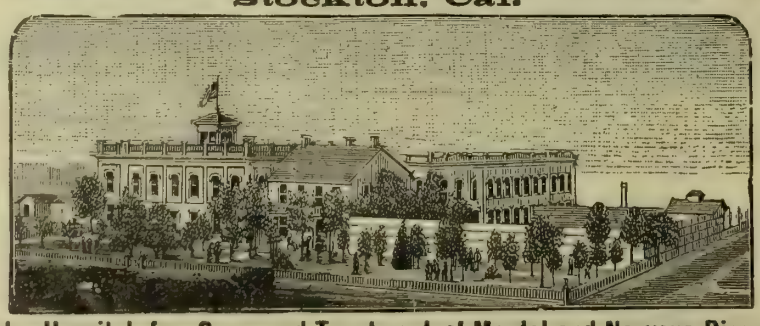


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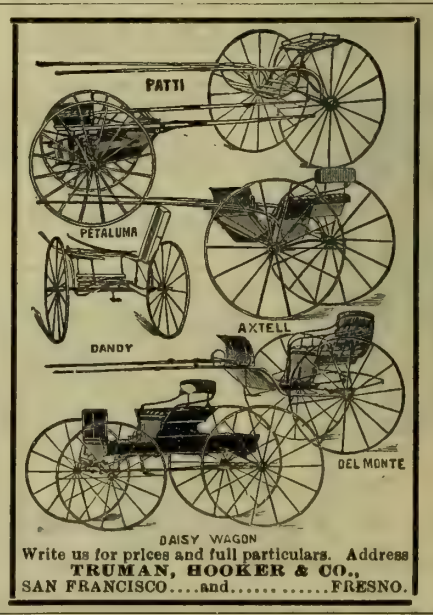
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76 page, Illustrated Pamphlet on **Rupture**, issued Jan'y, 1892, will be mailed to any address, on receipt of 4c in stamps. Mention this paper.
Address: MAGNETIC ELASTIC TRUSS COMPY., Dr Pierce & Son, San Francisco, Cal. or St. Louis, Mo.

Entomological.

Remedies for Insects and Fungi.

STATE UNIVERSITY,
BERKELEY, April 4, 1892.

TO THE EDITOR:—The many requests for information regarding remedies for insects and fungi induces us to bring together a few of the more valuable remedies which do not seem to be generally known or used in this State.

For all insects that eat the leaves of plants there is no better or cheaper remedy than one of the arsenites. Under most conditions Paris green is the safest to use. London purple is also usually satisfactory. Sometimes injury to the plant results—a sort of burning of the leaves, and it does not always depend on the strength of the mixture. The arsenites are, however, safer than the caustic compounds which have been so much used. One pound to 200 gallons of water is generally used in the Eastern States, and will be safe here with the proper method of spraying. Peaches and other stone plants, however, require a weaker mixture, say one pound to 300 gallons. For applying Paris green or London purple the nozzle should not be held close to the plant, but far enough off so that the force of the stream will just carry the drops to the leaves, and no more should be applied after it begins to drip. Finally, the vessel from which the mixture is pumped should be kept constantly stirred, for the poison settles very quickly.

For codlin moth the same can be said, and there is no danger from the poison on the fruit if a moth or so passes between spraying and picking.

A very little white arsenic added to the ordinary washes for scale insects makes them more effectual, but care must be had not to put in too much so as to injure the foliage.

For all insects that live exposed on the plants, whether they eat the leaves or suck the sap, a very satisfactory remedy is kerosene in the form of an emulsion. There are several methods of making emulsions. The most satisfactory are as follows:

1.

Milk.....One part.
Kerosene.....Two parts.

Heat the milk to boiling, add the kerosene and mix it for five to ten minutes by pumping through a spray pump. The emulsion so produced is like clabber and when cool becomes almost as thick as butter. When mixed with water the whole becomes milky and no oil is found on the surface. To use this emulsion add 10 to 15 times as much water and spray. If only a little is wanted for garden plants, the stirring can be done in a bowl with an egg beater.

2.

Soap solution.....One part.
Kerosene.....Two parts.

Make the soap solution by dissolving soap in water at the rate of one-half pound to the gallon. Prepare the emulsion in the same way as the milk emulsion. These proportions are for good soap; a larger quantity should be used in the case of poor soaps, especially with the soft mixtures sold as whale oil soap.

3.

Soap solution.....Eight parts.
Kerosene.....One part.

This emulsion does not require so much stirring, and for using add only about twice as much water as emulsion. It is somewhat easier to make, but is more expensive.

For most fungi, as a preventive measure, Bordeaux mixture is the best thing known. This is made of equal parts of lime and copper sulphate or bluestone. Slake the lime and dissolve the bluestone, and when they are cool pour the whitewash into the bluestone solution. Use about a pound each of the two substances for making five gallons of the mixture. After mixing well and straining, it is ready for use.

C. W. WOODWORTH.

Protecting Trees from Sunburn and Borers.

JULIAN, SAN DIEGO CO., 1892.

TO THE EDITOR: I notice occasionally in the PRESS an article on how to protect young trees from the borer. We, the people of the Julian apple country, have had a long experience with the borer, so I will write you what we now have decided is the best remedies used by us, after trying a great number of washes.

The first trees set out here some twenty years ago nearly all died by the borers, but we being of little experience in fruit-raising, laid it to the nurserymen selling us refuse stock of old and wormy trees. Many were the curses that the nurserymen got.

Now we wrap with newspapers, digging the dirt away at the bottom of the trees, and wrapping the young tree with a newspaper from about three inches below the surface up to the first limbs. When the paper is wrapped tight we crowd the dirt back at the bottom and never tie the paper. In most every case the paper stays on until the next spring. Rabbits will never eat through the paper.

Another good way is to take old barrel staves, or nail-keg staves, or any pieces of worthless boards, put them in a wheelbarrow with a saw and go along the row of young trees. Shove a piece of board down in the dirt on four sides of the tree; cut a notch on each side of each board about one inch from top; then take two strings and tie a hard knot at each notch, and you have a shade that will keep the borer's eggs from hatching and the rabbits away for years; and also it will keep the singletree, to quite an extent, from barking the tree. Thrifty trees after three years in the orchard will not need wrapping.

H. F. WILCOX.

Guavas.

Since the advertisement of the Aloha nurseries was printed on page 347 of this issue, Mr. Fred C. Miles, manager, writes us that they wish to withdraw Villa Franca, Lisbon and Eureka lemons, Shamrock orange and banana bulbs from their present offering, as these supplies have run out. Next week, an announcement of strawberry guava plants, five and six years old and bearing, will appear in their advertisement. The production of guavas has constantly increased in this State during the last few years, and fine guava jelly has been made for home use and for sale. One variety at least, the strawberry guava (*Psidium cattleyanum*), has been proved hardy and productive over a large area of the State. Those desiring to try the plant should note the offer by the Aloha nurseries at Penryn.

Rural Health Retreat.

This large and leading medical and surgical sanitarium, near St. Helena, has steadily increased in dimensions and importance during the past 15 years. It is conducted more upon the principle of a large and well regulated home for those seeking pleasure and health who are merely a little overworked, (or for other not overpressing reasons require a slight change only) to those who are suffering serious ills or difficulties.

Its location, within three miles of the center of the town of St. Helena, on a spur of Mount Howell, is most decidedly picturesque, healthful and pleasant. Having frequently visited this institution during years past, the writer can conscientiously, and with pleasure, speak very favorably of the straightforward, as well as kindly, manner in which both the gentleman and lady managers and their faithful helpers attend to their daily duties, sincerely evincing a true regard for the comfort and welfare of their guests, whether of modest or high station in life.

Marked success has attended the Rural Health Retreat the past year. Its patronage has been very large and has naturally demanded more help in the medical department. The Board has now secured the assistance of Dr. Maxson and wife. Doctors W. H. and Hattie Maxson's long experience in the large sanitarium at Battle Creek, Mich., the success of their sanitarium at Fresno, and their past two years' experience traveling in Europe, warrant the managers in promising the most efficient medical assistance at the Rural Health Retreat of any institution on the coast. They are confident that their lady patrons will find in Doctor Hattie Maxson all they could desire in kind attendance and competent medical advice.

Doctor Burke, who has been laboring hard in the Retreat for over two years, with little or no recreation, we learn, has found it incumbent upon him to take a rest for a time. However, he will not leave until the new physicians have fully gotten hold of the work, so that all who come may feel assured of being well cared for.

A Successful Land-Clearing Machine.

We learn from Joseph Trays that he is using a land-clearing device on his place known as the California Stump Puller, with which he is highly pleased and speaks of it as the greatest labor-saving device of the age. Mr. Trays has used the machine sufficiently to clear ten acres, which was thickly covered with oak stumps, and says he can pull a stump six feet in circumference in two minutes.

The machine is operated by horse power, and when set will clear from 2 to 5 acres, according to the length of cable used, without changing its position.

The cable, which is not much larger than a clothesline, yet having enormous strength, is what is known as English patent plow steel cable and is imported by the manufacturer of the machine specially for his purpose. Mr. Trays says that the work done is much better than it would be possible to do it by hand, as all the roots are taken out clean, the ground is well broken up, and the plow meets with no obstructions.

Fine American Chromos.

L. Prang & Co. seem to have taken unusual pains in their Easter art presentations to the public this year. The firm is steadily progressing, in fact, in all its varied and extensive lines of fine art productions and a standing credit to American enterprise the world around.

Additional Fraternal Matter.

The Secretary's Column.

EXECUTIVE COMMITTEE MEETING.

The full board met at the office of the Secretary, April 5th. Visitors: Amos Adams, H. A. Brainard, S. E. Watson, Mr. Mills, Mr. Stone and D. A. Ostrom.

The subject of Grange lecture appointments was discussed and changes in the programme announced made, providing that E. W. Davis and B. F. Walton shall address a public meeting of March Grange at Pennington on Monday, May 2d, and Gridley Grange on Tuesday, May 3d. Some other necessary changes will probably be decided on and published later.

The matter of Grange papers was discussed with H. A. Brainard, Amos Adams, S. E. Watson and others, and the *California Orchard and Farm* and *Pacific Tree and Vine* were recommended.

Bills (including expenses, etc., of lecturers in the field) to the amount of $292.10 were allowed.

Under authority of the last session the committee appointed Thursday evening, October 6th, for conferring the Fifth and Sixth Degrees at the next annual meeting in San Jose.

FINANCIAL STATEMENT.—The funds of the State Grange, April 1st, stood as follows: General fund, $682.59; Lecturer fund, $2233.78. Total, $2916.37.

SPEAKING AND FEASTING.—Temescal and Eden Granges will receive State Grange lecturers (names not yet positively decided upon) and hold meetings in the forenoon, Harvest Feasts at noon, and open meetings in the afternoon, respectively, on Thursday and Friday of next week. It is hoped that there will be a large attendance of visiting Patrons, farmers and their families. Able speakers will certainly be present, including, most likely, the State Grange Master and Overseer. Dixon Grange will have more of the same kind on Saturday the 16th.

SUDDEN AFFLICTION.—E. W. Davis, W. M. of S. G., on Saturday, April 2d, while just arranging notes for speaking at the public meeting of San Jose Grange, received a telegram containing the sad news of the death of his little nephew, son of ex-Mayor Davis of Oakland. Mr. Davis, completely overcome, immediately started for Oakland. The child's illness was very sudden, and the sympathizers of its parents and relatives, numerous and sincere.

JOINT STATE DISCUSSIONS.—Mrs. B. Scofield, of Cornelius, Oregon, Chairman of State Committee on Woman's Work in the Grange, by joint arrangement of the California, Oregon and Washington Granges, furnishes the following questions for discussion in the Subordinate Granges during April and May:

1. Is it a fact that the farmer of to-day is more oppressed than in former years? If so, what are the causes?
2. How can the farmer receive a better return for his industry?
3. Should the farmers unite and control the offices of the nation?

It is expected that each Grange in these States will debate these questions and report to the local and fraternal press.

Lecturers in the Field.

Thos. M. McConnell reports a good meeting at West San Joaquin Grange, at which he says Dr. Caples made a telling speech. Daniel Flint, B. F. Walton and C. P. Berry have met with good cheer along the line of their march. Overhiser, Webster and Geo. Steele have been doing good work in Monterey and San Luis Obispo counties.

FRATERNAL VISITATION.—Tulare Grange paid a fraternal visit to Selma Grange on the 2d inst. Addresses were made by Mrs. Kinney, Mrs. Smith and the venerable Mr. Tuohy. There was the usual social accompaniment, and the occasion was an entire success.

President Cannon on the Canal Convention.

In a private letter to a friend and associate in the Alliance, President Marion Cannon writes from Ventura, date April 4th, as follows:

"I will make that a black day for the canal company. When I gave my approval to the memorial they had spent a month in writing, they knew there must be something wrong in it, and after recess they found the little joker in this sentence: 'It should be *built* and *forever managed* and controlled by the United States.' This would not do. It would deprive them of millions in building it with their 'Construction Co.,' and if the Government should '*manage*' it forever, their power to rob the commerce of the world would be destroyed. So they struck out the words 'built and managed,' which left them in full control of the construction and management, and of course I would not vote for it after these words were stricken out. This amendment exposes their hypocrisy in claiming that they were willing for the Government to control it. When I had shown them how the Pacific railroads had treated the Government and the people after building and giving that corporation the road, and how they had used the money filched from labor to corrupt our people, our legislators and our courts, and after I had shown them the futile attempt of the Traffic Association, with their $10,000 expert, to get any relief even from the Railroad Commission,—when I had shown these facts and attempted to apply them to the Canal Company, they choked me off and would not give me five minutes to finish my speech. I stood upon that floor the representative of over sixty thousand wealth producers of this State, who are more directly interested in the construction of that canal than all the lawyers and politicians in the State. I also stood there the representative of over ten millions of the wealth producers of the United States, and was denied five minutes of their precious time, and then all the subsidized press howled that the State President was most effectually sat down on. Well, I want all these people to understand they have not hurt the State President, but when the wealth producers of this State sit down on these would-be millionaires, they will come to the conclusion that a Kansas cyclone has struck them. I am satisfied with the proceedings of the convention. It gave the Canal Company a black eye, and they will be totally blind after a few more rounds with the Farmers' Alliance."

PRESIDENT CANNON will doubtless be among the visitors from abroad at the quarterly session of the State Executive Committee of the F. A. & I. U., opening in S. F. Monday A. M., April 18th. Chairman E. M. Wardall, of the State Central Committee of the People's Party, will be in attendance at their meeting at People's Party Hall on Saturday A. M., April 16. Mrs. C. E. Kinney (lady member) will be present for the first time.

A PEOPLE'S PARTY CLUB of 20 members, including a number of young men, was organized last Saturday evening at Irvington by Mrs. K. L. Nevins. This is the first club formed outside of Oakland in the county.

RARE PLANTS.—Mr. H. J. Rhodes has made another return from the Hawaiian Islands, and will go to his home in Los Angeles. Mr. Rhodes brings some rare plants, among them two magnificent *cycas media* in full frond and standing nine feet high. He has not yet decided what disposition to make of these specimens. He brings also others of the same species of smaller size and other plants and bulbs.

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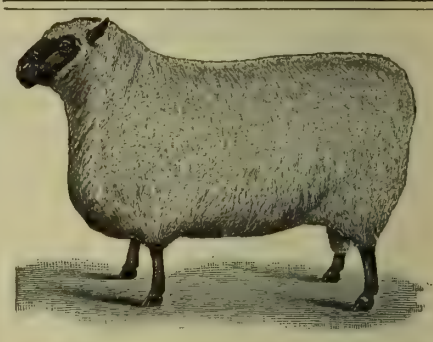
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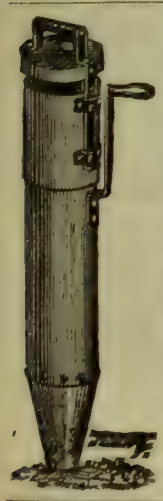
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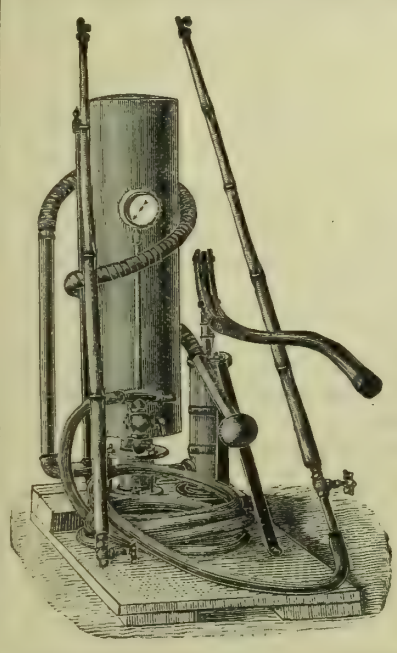
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

San Francisco, April 6, 1892.

General trade the past week has been restricted by light obtainable supplies of wheat, higher prices and light supplies of barley, and wool growers not disposed to sell at current quotations put out by buyers. The increasing supplies of spring vegetables are attracting more buyers, who will increase steadily in numbers as the season advances. The money market is slow in the absence of any marked demand. This is witnessed in the falling off in exchange balances, the past week, of over $5,000,000 when compared with the like week in 1891. In that latter week there was an engaged tonnage for wheat loading in port aggregating over 60,000 tons register against a little over 18,000 in this year. This is a serious falling off, which is readily reflected in the money market. Other farm products were moving freely in 1891, while now they are slow; but then better times are looked for with a feeling of confidence based on past experience. The low price and unsettled markets for silver has very much to do with the present dull situation in leading farm products.

Foreign Grain Review.

New York, April 4.—The Mark Lane *Express* says: There is an average decline of 1s in English and foreign wheats. California cargoes are pressed for sale at 3s 9d. American flour has lost 1s. Corn is weak; American on passage, 20s. Barley is depressed, foreign grinding, 21s. At to-day's market English and American flour dropped 6d.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June.	July.	Aug
Thursday	.....	7s03 d	7s03 d	7s03 d	.....
Friday	7s03 d	7s02½d	7s01½d	7s01½d	7s01d
Saturday	.....	.....	.....	.....	7s00d
Monday	7s05 d	7s02 d	7s00½d	7s00½d	.....
Tuesday	7s03½d	7s01½d	7s03½d	7s00½d	7s01d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	37s3d	37s3 1	37s3d	Weaker.
Friday	37s3d	37s00	37s0d	Inactive weather fine.
Saturday	.....	.....	.....	
Monday	36s6d	37s00	37s0d	Weaker weather brilliant.
Tuesday	35s91	36s3d	36s3d	Slow.

To-day's cablegram is as follows:

Liverpool, April 6.—Wheat—Red is firmly held while white is very dull. California spot lots, 7s 5d; off coast, 35s 6d; just shipped, 35s 6d; nearly due, 35s 6d; cargoes off coast, more demand; on passage, slightly better; Mark Lane wheat, very slow.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug
Thursday	154⅜	147⅞	147⅞	146⅝	....
Friday	155⅜	149⅞	149⅞	148⅛	....
Saturday	....	....	151¼	....	....
Monday	156	151	148⅝	148⅛	14 ⅜
Tuesday	156½	151½	148⅝	148⅛	148⅛

The following are to-days' telegram:

New York, April 6.—Wheat—91½c for April, 91⅝c for May, 89½c for June, 89⅝c for July, 89¼c for August, and 87½c for September.

Chicago, April 6.—Wheat—80⅛c for May and 80⅝c for July.

San Francisco.

WHEAT.

	Buyer Season.		Buyer Aug.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	154⅜	154½	143½	143½	140⅜	139⅞
Friday	154½	133⅜	141⅛	141⅝	139½	138½
Saturday	153	152⅜	....	....	138⅜	138
Monday	153⅜	152	142½	142½	139	138
Tuesday	1°2⅞	153½	....	....	138½	138

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal Session; Buyer season—100 tons, $1.53; 1000, $1 52½ ₱ ctl. Regular session: Buyer season—700 tons, $1.53; 400, $1.52½; 100, $1.52½. Buyer August, 100 tons, $1.42 ₱ ctl. Afternoon—September—100 tons, $1.04. Seller 1892—100 tons, $1.38½ ₱ ctl.

BARLEY.

	Buyer Season.		*May		June.	
	H.	L.	H.	L.	H.	L.
Thursday	99	97½	93½	93½	....	....
Friday	97½	97½	....	....	....	....
Saturday	98½	98	....	....	....	....
Monday	103½	100	....	....	....	....
Tuesday	105	102½	....	....	93¼	93¼

*New crop.

The following are to-days' recorded sales on Call.

Informal: Buyer season—200 tons, $1.07½; 200, $1.07½; 100, $1.07; 100, $1.06½ ₱ ctl Regular session: Buyer season—300 tons, $1.06⅞; 500, $1.06½; 200, $1.06½; 100, $1.0 ⅜; 100, $1.06 ₱ ctl. Afternoon—Seller 1892 — 100 tons, 88½c; 100, 88½c. Buyer season—100 tons, $1.05½; 200, $1.05½; 100, $1.05⅝; 100, $1.06½; 300, $1.06 ₱ ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

New York, April 4.—Unpeeled peaches are not in stock. Prunes are active and firm. Five carloads were taken this week. Fifties to sixties, 9c; sixties to seventies, 8c; seventies to eighties, 7¼c; eighties to nineties, 7c; smaller, 5½@6c. Raisins, unchanged. The movement is unimportant. Apricots—Light supply; strong as last quoted.

Eastern Wool Markets.

New York, April 4.—The demand is generally tame. Buyers are well stocked. The outlook for the new clip is not brilliant at this moment. Sales at New York—328,500 domestic; 89,000 of white was Spring California at private terms; 408,000 foreign. At London sales opened at 2½@5 per cent lower, with some recovery at the close. Cloths are in good demand. Underwear is quiet. Boston sales, 1,366,000 domestic; 710,000 foreign. There is little California pull on hand The Philadelphia market is dull and easy for buyers.

Eastern Hop Markets.

New York, April 4.—Hops went up Thursday, closing strong, helped by a steady but not large local demand. There is an advance for Coast and State 9@ [illegible]c; choice, 26½@27c; fair to prime, 24@25½c; common, 20@23c. Nineties range from 13@18c; olds, 6@10c. Exports for the week are 549 bales. Exchange call price closed, May, bid, 24½@27c; June, 26¾@28c; July, 27@28¾; August, 25@29c. Little was done, but sellers are confident.

Miscellaneous.

New York, April 4.—Lima beans are weaker; $1.75 per bushel is the extreme; $1.60 was refused for 5000 bags of recent Pacific Mail arrival, which were held at $1 65.

Mustard seed—California brown, 4¾@5c; yellow, 5@6½c. These rates are only exceeded by choice Trieste.

Wheat Crop of the World.

The U. S. Agricultural Department furnishes the following comparative tables of the production of wheat:

WINCHESTER BUSHELS OF SIXTY POUNDS.

	1891.	1890.	1889.
North America:			
United States.....*	611,780,000	399,262,000	490,560,000
Canada:			
Ontario.....*	33,611,074	25,262,000	19,288,983
Manitoba.....*	23,922,598	14,000,000	11,928,511
Total	669,313,672	438,493,412	521,777,494
South America:			
Argentine Republic	33,069,000	41,703,683	11,350,000
Chili	14,187,500	18,567,360	12,768,750
Total	47,256,500	60,271,043	24,118,750
Europe:			
Austria	41,143,75.	51,440,667	42,000,000
Hungary.....*	126,268,750	165,345,000	94,020,333
Belgium	14 187,500	19,573,075	19,000,000
Denmark	3,713,472	5,776,512	5,000,000
France	232,360,236	338,902,124	316,268,369
Germany.....*	126,253,563	94,899,840	82,000,000
Great Britain.....*	74,400,714	75,696,617	75,576,383
Ireland .....*	2,615,437	2,639,399	2,680,838
Greece	5,675,000	12,378,210	5,000,000
Italy.....*	126,254,563	126,610,746	103,832,354
Netherlands	3,713,47.	6,189,120	5,675,000
Portugal	8,252,160	8,252,160	8,512,500
Roumania	53,073,684	63 954,240	44,784,853
Russia.....*	169,108,708	197,739,200	188,535,989
Poland .....*	12,68 ,920	22,313,125	
Servia	7,345,000	10,315,200	5,000,000
Spain	71,349,694	70,143,360	75,622,213
Sweden	4,551,350	3,956,043	3,708,045
Norway	412,698	412,608	283,750
Switzerland.....*	4,041,766	2,475,648	2,270,000
Turkey	33,008,640	37, 35,720	39,725,000
Total	1,121,558,740	1,316,177,644	1,119,495,627
Asia:			
India.....*	255,434,667	235,345,6'0	243,076,549
Asia Minor	37,029,375	37,134,720	36,887,500
Persia	20,63 ,400	22 693,440	22,500,000
Syria	12,343,125	12,378,24	12,768,750
Total	325,437,567	307,552,000	315,232,799
Africa:			
Algeria	21 281,250	22,693,440	22,500,000
Cape Colony	4,126,081	3,713,472	3,800,000
Egypt	11,140,416	8,252,160	7,945,000
Tunis	4,256,250	4,256,250	
Total	40,803,996	38,915,322	34,245,000
Australasia: *	33,874,606	42,480,131	26,205,957
Grand Total	2,238,245,081	2,203,889,552	2,041,075,627

* Official.

Cereals.

Geo. A. Abel, official inspector of the Produce Exchange Call Board, reports the following stocks of grain, etc., in city Call Board warehouses at the close of March, and on the first of that month:

	March 1,	March 31,	March 31,
Tons.	1892.	1892.	1891.
Wheat	1,008	2,182	6,904
Barley	13,837	12,718	7,997
Oats	4,609	2,566	2,020
Corn	2,564	1,893	1,638
Bran	225	249	275

The receipts in March, 1892, were 33 674 tons wheat, 10,837 barley, 1340 oats, 460 corn and 2831 bran.

The stock of wheat March 31, 1892, in all Call Board warehouses was as follows:

	Tons.
San Francisco	2,182
Stockton	39,136
Port Costa	24,505
Total	65,823

As against 126,491 tons on March 31, 1891.

The report of the Belgium Department of Agriculture makes the yield of the Belgium crops 21 hectolitres per hectare against an average of 25 hectolitres for the two previous years. Taking the official figures of the production of wheat in Minnesota and the two Dakotas, the movement and estimated consumption indicates that the farmers have sold all their grain. The production of the three States is 131,300,000. The receipts at principal points, country elevator stocks and estimated consumption and seed, as given by the Minneapolis *Market Record*, amount to a total of 132,600,000, an apparent deficit of 1,300,000. As there seems to be no lack of supplies in the country, something must be wrong with the figures for the crop. The first revised figures for the population of British India are given at 288,159 000. The number of people per square mile is 168, against 165 ten years ago. The production of wheat in India is less than one bushel per capita, the crop last year being 255,000,000, and this year it is estimated at 225,000,000.

London, March 26.—*Dornbusch* says that the latest reports from France are that serious damage has been done by cold weather in several provinces and unsettled weather is materially retarding spring work.

The imports of wheat into Germany for the month of January were 5,808,000 bushels, as against 2,224,000 bushels for the corresponding month last year. The imports of rye were 1,056,000 and corn 1,656,000 bushels.

The Melbourne *Argus* says that the weight of wheat for the new crop in Victoria has been settled upon as 63 pounds to the bushel, the same as the South Australian average. The new crop is estimated at 13,387,000 bushels, with 375,000 bushels remaining from last year's production.

It is estimated that 8,600,000 bushels of wheat can be supplied by Eastern Siberia as soon as navigation opens.

Dornbusch, published at London, Eng., says that at the middle of March it was seldom the condition of agriculture had been so backward as it was this season.

Yesterday's cable from London gives the following: Wheat and flour on passage to United Kingdom, 3,216,000 qrs; Continent, 1,270.000. Imports of wheat into the United Kingdom during the past week, 171,000 qrs.; flour, 305,000 bbls. Shipments of Indian wheat during the past week. United Kingdom, 42,500 qrs; Continent, 42,500. English country markets, mostly slow. Stocks in London, April 1st: Wheat, 525,000@550,000 qrs.; flour, 700,000@725,000 bbls.

There are several more charters reported for next season loading. The large disengaged tonnage in port assures us of a liberal supply of freight room for next season's large wheat crop. Present advices from the agricultural districts warrant the assertion that the crop will be the largest on record. Considerable is said to have been beaten down by recent storms; but with the improved machinery now in use, this counts for little, for it can be harvested.

The local wheat market has continued sluggish. While prices moved up slightly in sympathy with an advance in the market value of silver, yet as soon as the latter began to decline, wheat eased off more in proportion. The writer is firmly impressed with the belief that while the range of prices for wheat will probably go slightly lower, yet it will be temporary only, and that when a recovery sets in, we will see much higher prices for both that cereal and silver, and that, too, before harvest sets in. There is nothing, at this writing, to justify prices going below $1 50 per cental on Call for buyer season wheat, and this option is hardly likely to fall below this figure except through cross orders. There is a strong bear selling chiefly by leading English houses for their correspondents abroad; and of course silver and everything else, to unfavorably affect the market, are brought into play with which to facilitate their movement on the bear side. The available supply of wheat in this State, Oregon and Washington is very small for this season of the year.

The local barley market continued to rule low up to and including Saturday last, but on Monday, under strong bull manipulation, prices on Call were advanced, with still higher ranges for buyer options on Tuesday. The available supply in this State, and also up North, is conceded to be light, barely enough to meet current wants up to the time when new will be available. This opinion is in keeping with the writer's heretofore expressed views on the situation. The export movement continues free, as does the home consumption. Crop prospects are of the best.

With better prices for barley, and light receipts with depleting stocks, oats show a stronger tone. The consumption or feed demand is large, if anything considerably more than it was at this time in 1891. The crop outlook on this coast is favorable for an increased yield over last year's outturn.

Corn is steady. The demand is slow, but, then, receipts are light. It is said that the crop this year in California will show a decided increase over that in last year.

Buckwheat and rye are firm, with a fair inquiry ruling for the latter.

Feedstuff.

The market for ground feed shows more strength, with an advance in bran, middlings and roll barley. The consumption is free for the time of year. With natural pasturage so good as it is at present, prices should go down, but they do not. This fact is accepted as going to prove that there is a large increase in the consumption requirement.

Hay shows a stronger tone under moderate supplies and a good demand. Crop advices continue uniformly good. It is generally claimed that the yield will be all of from 20 to 30 per cent more than it was in 1891, but this is more than offset by an increase in feeding to work animals, dairy cows, and for fattening purposes.

Live Stock.

The market for mutton sheep is lower under freer offerings and a lighter demand. It is said that cold rains in last week killed large numbers of sheared sheep in Nevada, but we are unable to get the report verified. Bullocks are barely steady. It now looks as if lower prices will soon rule. Calves are lower. Hogs are steady.

Dairy Produce.

The following shows the receipts of butter, cheese and eggs at this port in March:

Sources—	Butter, lbs.	Cheese, lbs.	Eggs, doz.
California	1,180,9.0	381,000	287,146
Oregon	6,500	1,400	360
Eastern	900	191,800	71,250
Totals	1,188,700	574,200	358,756
January	502,200	476,900	420,345
February	622,550	313,500	250,765
Three months	2,312,850	1,364,600	1.029,866

During the first three months of 1891 the receipts were 2,466,300 lbs butter, 1,427,400 lbs cheese, and 891,285 doz. eggs. In the past quarter there was a comparative decrease in butter and cheese and an increase in eggs.

Butter is weak, with shading in prices the order. Creamery (square rolls) is in good demand at from 1 to 1¼ cts. over the range for dairy or round rolls. The demand from up North begins to show signs of falling off.

Cheese continues firm, which does not often occur at this season of the year. Receipts are large and steadily increasing, but somehow or other it goes out, and consequently stocks do not show any decided increase.

On Friday and Saturday last the egg market strengthened and sold to higher figures, with 21@22 cts. touched for very choice. Yesterday the demand was slower, with no increase noted to-day. It is claimed that supplies are being held back in expectation of better prices next week.

Fruit.

Strawberries are coming in more freely, causing prices to shade off. With warm and clear weather, the receipts will show a decided increase, which will necessarily cause lower prices to rule.

Choice to fancy apples are about out of the market. The varieties offered are poor to good. The demand is slow.

Limes and lemons are in fair supply only, but as the demand is slow the market does not show much if any firmness,

The receipts of oranges are lighter, particularly that of frosted, which are creating a stronger market with better prices paid for choice to extra choice. Highland and Redland (San Bernardino county) oranges are fetching the highest figures.

The dried fruit market is firmer for the more choice of each kind of fruit, but as the season is towards its close, sellers do not haggle for an advance, believing it to be the better policy to clean up all available supplies before the new season sets in, and it now looks as if they will be successful.

Raisins are unchanged. The stock in this State is said to be lighter than it was at this time in 1891. Shipments to the East and to distributive points up north are fair for this time of the year.

Vegetables.

In garden truck there are increasing receipts of peas with lower prices ruling. Asparagus is higher under a free local demand together with free shipments up north. Rhubarb is fairly steady. String beans are slow coming in. We still have to depend on Los Angeles for cucumbers, tomatoes and green peppers, and in consequence high prices rule.

Onions if choice good keepers are readily placed at outside figures; poor keepers continue in buyers' favor.

Old potatoes are a drug in the market. Only choice good keepers of the best varieties find customers. New potatoes are declining steadily. The receipts are heavy.

For poultry the market is strong and higher for all kinds, under light receipts and a good demand.

The receipts of beans are free, but prices are no lower.

Nuts are steady with a fair demand for the season.

Honey is scarce and higher.

Mustard seed will fetch an advance on quotations, but there is none offering for sale.

Hops are in good demand, but like everything else, when prices are higher growers have very little to sell. For next season's crop an advance is bid on previously reported sales.

The wool market is sluggish. Growers are slow to accept the lower bids and buyers say that in view of the offish markets at the East they do not feel justified in paying more.

Miscellaneous.

From reliable advices up to April 6, the following summary tonnage movement is compiled:

	On the way—		In port—	
	1892.	1891.	1892.	1891.
San Francisco	200,390	251,573	*125,724	64,566
San Diego	15,686	14,717	8,510	.....
San Pedro	3,547	8,717	.....	
Oregon	23,857	27,720	23,674	21,593
Puget Sound	9,899	27,903	.....	
Totals	253,379	330,637	157,908	86,156

*Engaged for wheat, 1892, 13,267; 1891, 60,691 †For new crop loading, 5,161

The statistics of produce exports from this port from July 1st to March 31st, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	11,976,073	10,295,780
Flour, bbls	838,605	896,811
Barley, ctls	786,338	908,535

Produce Receipts.

Receipts of produce at this port for 7 days ending April 4, '92, were as follows:

Flour, qr. sks	32,649	Bran, sks	6,094
Wheat, ctls	22,9 9	Buckwheat "	....
Barley, "	43,638	Middlings "	2,936
Rye, "	67	Chicory, bbls	50
Oats, "	....	Hops, "	....
Corn, "	2,358	Wool, "	4,767
*Butter, "	1,150	Hay, ton	1,316
do bxs	734	Straw, "	79
do bbls	....	Wine, gals	211,310
do kgs	....	Brandy, "	4,100
do tubs	70	Raisins, bxs	2,576
do ½ bxs	403	Honey, cs	....
*Cheese, ctls	811	Peanuts, sks	63
do bxs	25	Walnuts "	....
Eggs, doz	39,460	Almonds "	121
do "Eastern	12,000	Mustard "	....
Beans, sks	1,932	Flax "	....
Potatoes, sks	284	Popcorn "	....
Onions, "	1,490	Broom corn, bbls	....

*Overl'd, 100 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to April 4, '91.	July 1, '91 to April 2, '92.
Flour, ½ sks	245,975	381,562
Wheat, ctls	1,267,239	1,206,284
Barley, "	265,057	39,491
Oats, "	312,450	370,359
Wool, bales	5,918	6,011
Hops, "	443	431
Rye, sks	....	3,352
Potatoes sks	73,558	117,248

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. Wednesday, April 6, 1892.

BEANS AND PEAS.		**FLOUR.**	
Bayo, ctl	1 80 @ 2 05	Extra, City Mills	4 80 @ 5 00
Butter	2 40 @ 2 80	Do Country Mills	4 75 @ 5 00
Pea	2 20 @ 2 80	Superfine	3 00 @ 3 30
Red	1 90 @ 2 15	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	4 @ —
Small White	2 25 @ 2 65	Do Choice	6 @ —
Large White	2 20 @ 2 45	Do paper shell	7 @ —
Lima	1 60 @ 2 10	Almonds, sft shl.	10 @ —
Wid Peas, blk eye	1 30 @ 1 50	Paper shell	12 @ —
Do green	1 30 @ 1 50	Hard Shell	6 @ 7½
Do Niles	1 25 @ 1 40	Brazil,	6½ @ 8
Split	3 85 @ 4 15	Pecans small	11 @ 13
BUTTER.		Do large	14½ @ 16
Cal. Poor to fair, lb	12½ @ —	Peanuts	1½ @ 3
Do good to choice	18 @ —	Filberts	10½ @ 12½
Do Giltedged	— @ 19½	Hickory	7 @ 8
Do Creamery rolls	19 @ —	Chestnuts	11½ @ 16
Do do Giltedge	— @ 20½	**ONIONS.**	
Eastern	15 @ —	Silver Skin, Choice per ctl	1 00 @ 1 25
CHEESE.		Fair to Good	75 @ —
Cal. choice mild	11½ @ 12	Cut	40 @ —
Do fair to good	9½ @ 11	**POTATOES.**	
Do gilt edged	— @ 13	Early Rose, ctl	25 @ 40
Young America	— @ 14	Burbank Seedling	20 @ 45
EGGS.		Do do Oregon	50 @ 1 00
Cal. ranch, doz	19 @ —	Do Humboldt	40 @ 75
Do do selected	— @ 21	River Reds	15 @ 35
Do store	18 @ —	New	60 @ 1 25
Eastern	18 @ 20	Sweets	— @ —
FEED.		**POULTRY.**	
Bran, ton	16 00 @17 00	Hens, doz	7 00 @ 9 00
Feedmeal	26 00 @28 00	Roosters, old	6 00 @ 8 00
Gr'd Barley	23 00 @24 00	Do young	9 00 @12 00
Middlings	18 00 @19 50	Broilers, small	4 50 @ —
Oil Cake Meal	— @25 00	Do large	6 50 @ —
Manhattan Food ₱ cwt.	7 50	Fryers	7 00 @ —
HAY.		Ducks	9 00 @12 00
Wheat, per ton	13 00 @ —	Geese, pair	2 00 @ 3 00
Do choice	14 50 @ —	Goslings	3 00 @ 3 50
Wheat and Oats	12 00 @ —	Turkeys, Gobl'r.	18 @ 19
Wild Oats	11 00 @ —	Turkeys, Hens	19 @ 21
Cultivated do	12 00 @ —	Manhattan Egg Food ₱ cwt	11 50 @ —
Barley	11 00 @ —	**PROVISIONS.**	
Alfalfa	10 00 @ —	Cal. Bacon, he'vy, lb	9½ @ —
Clover	11 00 @ —	Medium	10½ @ —
Straw bale	45 @ 60	Light	12 @ —
GRAIN, ETC		Lard	9 @ 11
Barley, feed, ctl	96 @ 1 05	Cal. Sm'k'd Beef	11½ @ —
Do Choice	1 00 @ —	Hams, Cal salt'd	10 @ —
Do Brewing	1 06 @ —	do Eastern	12½ @ —
Do do Choice	1 15 @ —	**SEEDS.**	
Do do Giltedge	1 17½ @ —	Alfalfa	12 @ 12½
Do Chevalier	1 05 @ 1 40	Clover, Red	14 @ 15
Do do Giltedge	1 45 @ 1 50	White	20 @ —
Buckwheat	1 70 @ —	Flaxseed	1½ @ 2
Corn, White	1 21½ @ 1 26½	Hemp	3½ @ 4
Yellow, large	1 23½ @ 1 26½	Mustard, yellow	3½ @ 4
Do small	1 23½ @ 1 26½	do Brown	3 @ 3½
Oats, milling	1 42½ @ —	**WOOL.**	
Feed, Choice	1 38½ @ —	**SPRING, 1892.**	
Do good	1 30 @ —	Humb't & Men'cino	— @ —
Do fair	1 22½ @ —	Sac'to valley	16 @ —
Surprise	1 50 @ —	S Joaquin valley	11 @ 14
Black Cal	1 10 @ 1 40	Cala'v & F'th'l.	14 @ 16
Do Oregon	1 20 @ 1 27½	Oregon Eastern.	10 @ 17
Gray	1 20 @ —	do valley	— @ —
Rye	1 60 @ —	So'n Coast, def.	10 @ 12
Wheat, milling. Gilt edged	1 61½ @ —	**HONEY.**	
Do Choice	1 58½ @ —	White Comb, 2-lb	10 @ 13
Do fair to good	1 56½ @ —	do do 1-lb frame	12 @ 14
Shipping, cho'ce	1 52½ @ —	White extract'd	6½ @ 7
Do good	1 50 @ —	Amber do	5½ @ 6½
Do fair	1 47½ @ —	Beeswax, lb	22 @ —
Common	1 45 @ —		
Sonora	1 45 @ 1 57½		
HOPS.			
1891 Choice to Ex.	24 @ —		
Fair to Good	20 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. Wednesday, April 6, 1892.

Limes, Mex	4 00 @ 4 75	Strawberries, pr dr	50 @ 1 00
Do Cal	60 @ 75	Beets, sk	— @ 1 00
Lemons, box	1 00 @ 3 00	Carrots, sk	35 @ —
Do Sicily	5 50 @ 6 50	Okra, dry, lb	15 @ —
Oranges, Seedlings		Parsnips, ctl	— @ 1 25
San Bernard'o	2 00 @ 2 75	Peppers, dry, lb	8 @ 12½
Riverside	1 75 @ 2 25	Do green	20 @ 35
Los Angeles	1 50 @ 2 00	Turnips, ctl	50 @ —
Do Navels—		Cabbage, 100 lbs	40 @ —
San Bernard'o	3 50 @ 4 50	Garlic, lb	2 @ 3
Los Angeles	1 50 @ 3 00	Squash, Mrft, tn	9 00 @11 00
Riverside	3 00 @ 4 00	Do Summer, lb	1 00 @ —
Duarte	3 00 @ 4 00	Tomatoes, box	1 75 @ 2 25
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Asparagus, box	1 25 @ —
		Do choice to ex	2 00 @ 2 25
		Peas, green, lb	1 20 @ —
Apples, box	50 @ —	Do sweet	2½ @ 3
Do choice	1 50 @ —	Rhubarb, box	75 @ 1 25
Do extra choice	2 00 @ —	String Beans	15 @ 15½
		Cucumbers, doz	40 @ —
		Mushrooms	10 @ 30

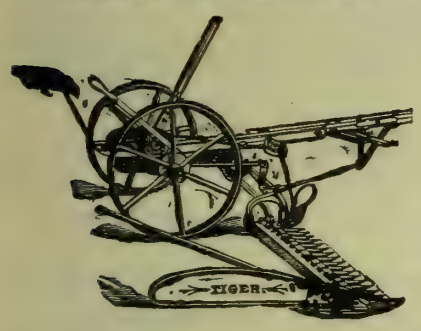
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BEEF.		MUTTON.	
Stall fed	6½ @ 7½	Wethers	9 @ —
Grass fed, extra	6½ @ 7½	Ewes	8½ @ —
First quality	6½ @ —	Do Spring	10 @ 12½
Second quality	6 @ —	**HOGS.**	
Third quality	5½ @ —	Light, ₱ lb, cents	5 @ 5½
Bulls and thin Cows	2½ @ 3½	Heavy	4½ @ —
VEAL.		Feeders	3½ @ 4½
Range, heavy	5 @ —	Stock Hogs	3½ @ 3½
Do light	6 @ —		
Dairy	7½ @ 9		

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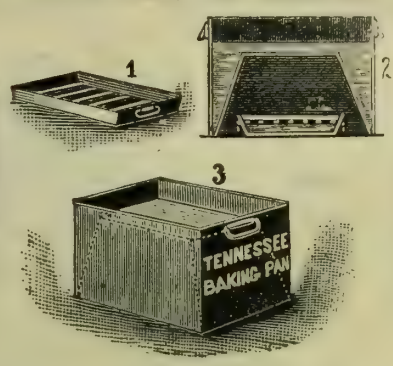
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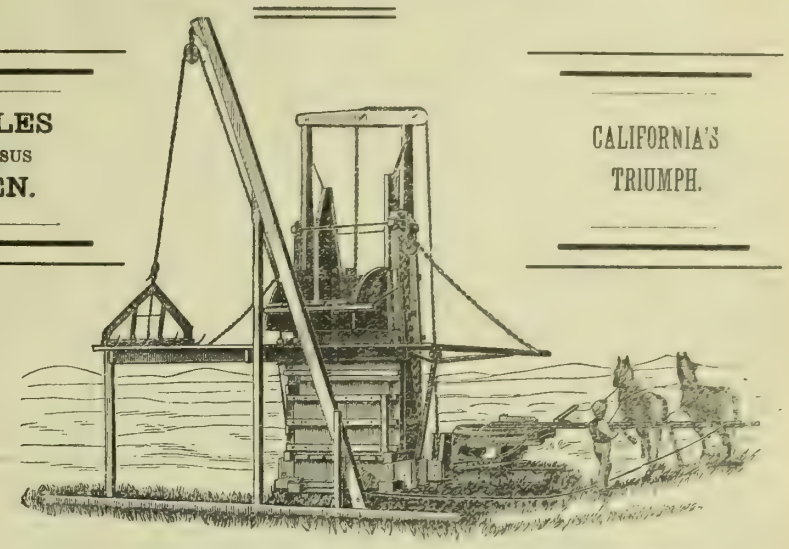
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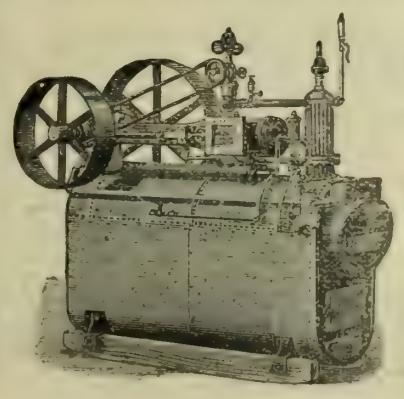
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Making Mulley Cattle.—P. L. Sprague of upper Carson valley has been experimenting on the hornless cattle proposition for a year past, and pronounces his method a perfect success. He simply moistens the little raised spot on the calf where the horn is to appear and rubs the end of a stick of potash over it, taking care to touch only the horn. The spot where the potash is rubbed turns red and the horn never grows. The method is supposed to be applied only to calves less than a month old, but Mr. Sprague tried it on a couple of calves between two and three months old and their horns stopped growing. This plan of preventing the growth of horns is surely much better than dehorning the cattle after they are grown. Twenty-five cents worth of pot ash is sufficient for a whole band of calves.—Genoa (Nev.) Courier.

Raising Fish for Market.—S. F. Hoover has two reservoirs well stocked with carp and catfish. The first were planted about two years ago, and now he thinks there must be two or three thousand. They are fed nothing, but do well. Some of them are lusty fellows, one caught by Mrs. Hoover the other day weighing nearly eight pounds. There is a good demand for them in town, there being no trouble to sell as many as can be caught. The fish are much better than those taken from the warm, sluggish water. The reservoirs are fed by an artesian well, from which supplies are drawn for irrigation, hence the ponds are pure at all times. The fish multiply and grow rapidly.—Tulare Register.

Oats vs. Coal.—It has been suggested that engineers try another method of comparing electric power with horse power. Electric power is calculated on the basis of a pound of coal—that is, the greatest amount of energy that can be obtained from a pound of coal and converted into mechanical energy. This being so, it is argued, why not calculate animal horse power on the basis of oats and hay? How much mechanical energy can be obtained from a pound of oats or hay? That is the question, and what is the relative cost of hay and oats and coal? These are economic questions, and many stockholders of street railroads would like to know the answer.—Electrical Age.

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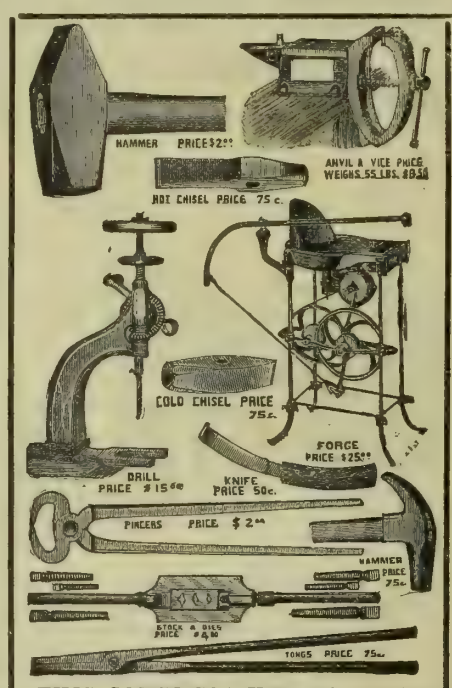
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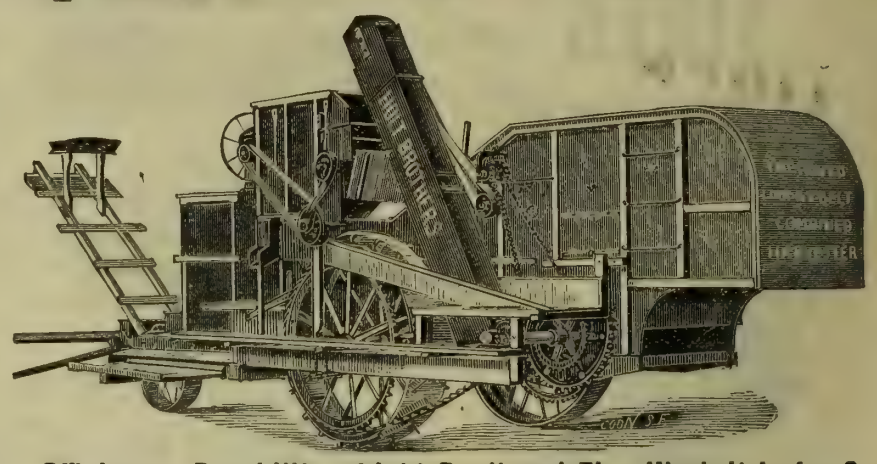
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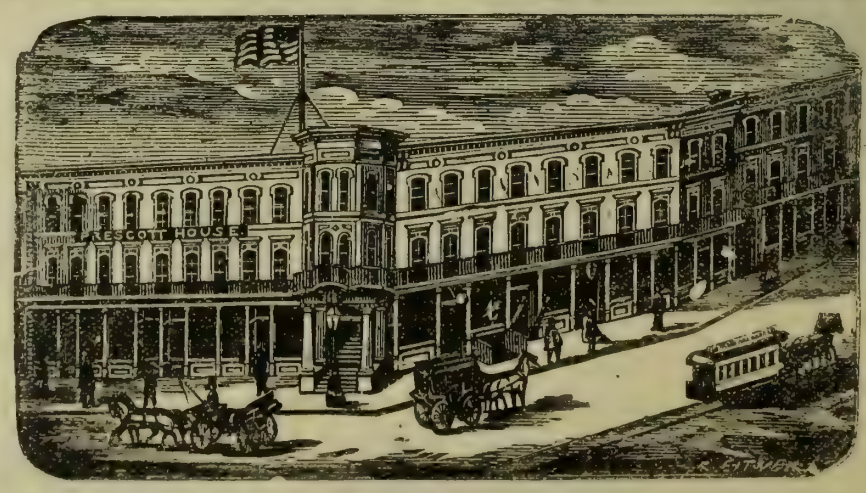


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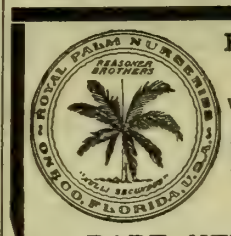
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THE TRUE SMYRNA FIG, ALSO THE WILD OR CAPRI FIG.

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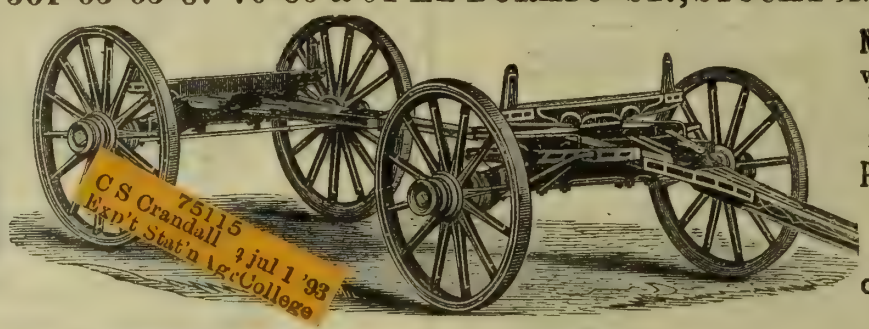
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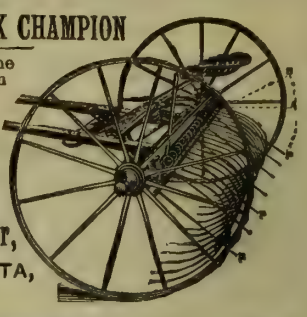


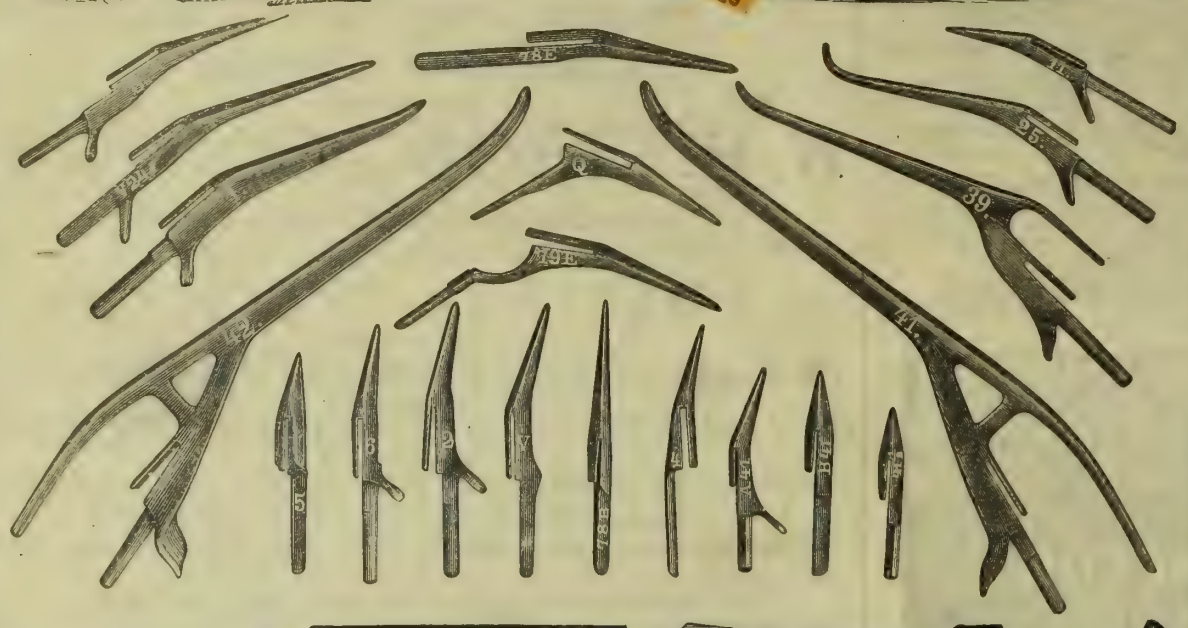
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Warranted the Best Rake on Earth.

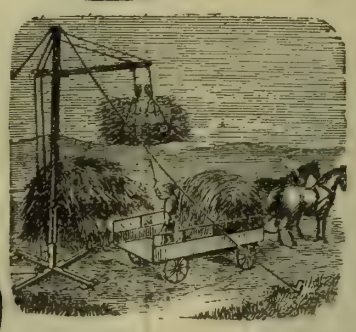
Man'f'd by Patten, Stafford & Myer, CANASTOTA, N. Y.





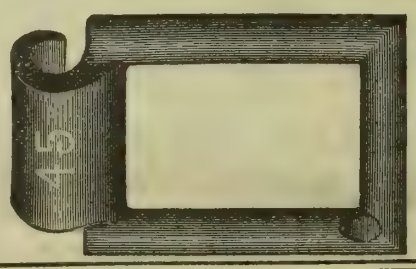


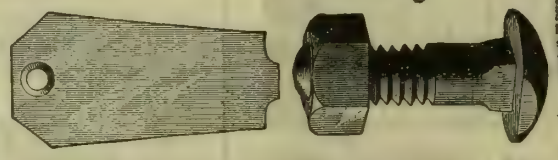






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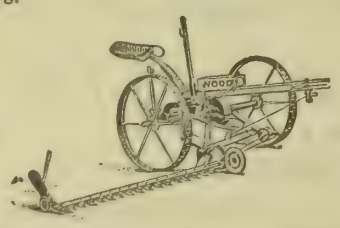
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THE BEST.

WE BELIEVE the Walter A. Wood Mower without an equal.

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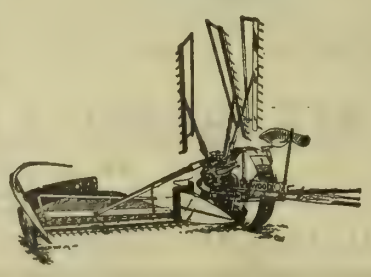


Cornwall, Cal., Feb. 2, 1892.

Messrs. FRANK BROTHERS, San Francisco, Cal. Gentlemen:—THE WALTER A. WOOD MOWER that I bought of your agent, Mr. Markey, is a splendid machine. The low draft makes it a light running mower. I DID LARGE AND HEAVY WORK WITH IT LAST YEAR, and, with the exception of the natural wear, it is as good as new. I doubt if it has a superior. Respectfully yours, A. F. HERRICK.

LIGHT COST.
LIGHT WEIGHT.
LIGHT RUNNING.

LIGHT ENCLOSED GEAR REAPER.



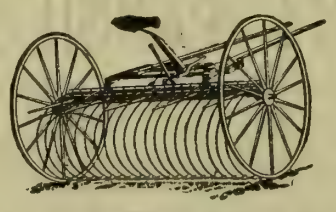
Adapted to any and all crop conditions and fitted for work where other reapers fail

Easily adjusted while running, simple and very strong.

WOOD SELF-DUMP RAKE.

8, 10, 12 FT. SIZES.

Shafts on 8 ft. Rake can be changed for 2 horses



NO JERK, NO JAR.

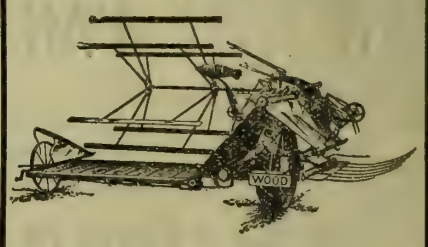
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Manufactured for long service and good work.

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Messrs. FRANK BROTHERS, San Francisco, Cal. Gentlemen:—THE WALTER A. WOOD MOWING MACHINE that I purchased of you was duly received, and we started it up this morning, and find that it has not lost any of its old prestige, and THE IMPROVEMENTS ADD TO ITS LUSTRE. I have claimed for the last 20 years, and do yet, that THE WALTER A. WOOD MOWING MACHINE IS THE BEST sent to California, and would rather have it by $20 than any other machine now in use. Very truly yours, W. N. ROBERTS.



SINGLE APRON BINDER.

Platform Frame and Drive Wheel of Steel.

Using but oneD raper it is Wonderfully Light Draft.

The Binder is Entire'y Automatic, is sure in its work and a great saver of twine over other types.

The Walter A. Wood Binder affords a cheap and easy method of harvesting.

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WALTER A. WOOD M. & R. M. CO.,

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Factories at Hoosick Falls, N. Y., and Minneapolis.

Worked on Steep Hills Where Others Failed.

Half Moon Bay, Jan. 29, 1892.

Messrs. FRANK BROTHERS — Gentlemen:—Your letter received stating that you are desirous of hearing from us regarding the WALTER A. WOOD TWINE BINDER. We think it is the best binder made. We cut grain on steep hills where other binders could not cut the year before, and hardly ever misses a bundle Regarding its draft and elevation, it is the best we have seen, in fact, we prefer the Walter A. Wood binder to any binder made yet Yours truly,

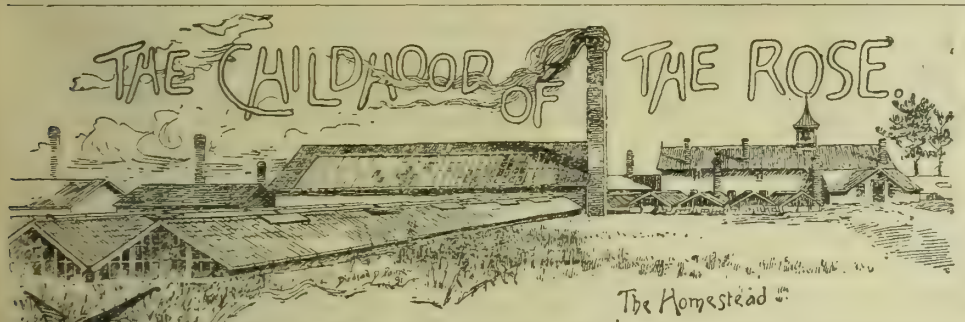
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PACIFIC RURAL PRESS

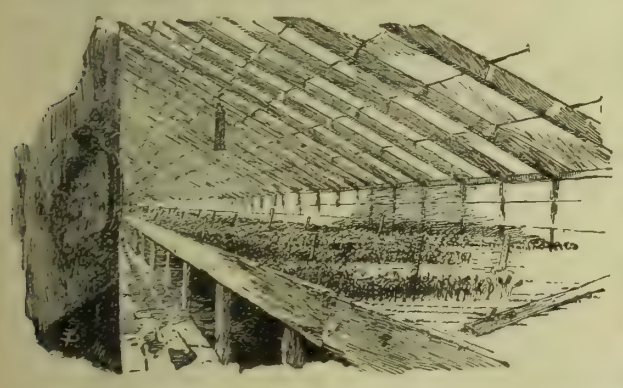
Vol. XLIII. No. 16. SAN FRANCISCO, SATURDAY, APRIL 16, 1892.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

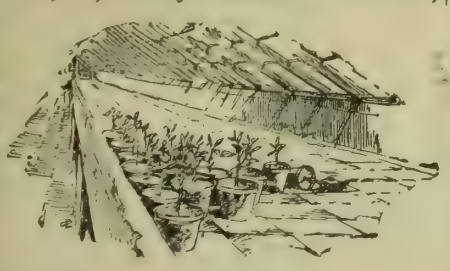
THE CHILDHOOD OF THE ROSE.



ANY readers of the RURAL who received the neat packages in which Eastern rose growers send their plants by mail in as fresh verdure as they displayed in the far-away propagating houses, will be interested in an illustrated account of the way in which the plants are grown for the mailing trade. Perhaps, also, some California propagators, who are thinking about the arts of small-plant shipping, may also get a point from the views we present.



It should be stated at the outset that there is probably no rosebush in the world which can compare in vigor and quick returns to the planter with the rose plants grown in the open air, which are furnished by our California propagators. Their prices, too, are very reasonable. There are, however, planters whose means are small and whose remoteness makes express charges appalling, who are greatly benefited by the possibility of securing, postpaid, desirable plants at a cost of a few cents each. It is true they require time to establish themselves, and must also be more carefully planted and cultivated; but usually the amateur of limited means is patient and a good gardener. While, then, we have a strong preference for a good-sized bush, grown from a strong cutting in the open air, we still recognize the fact that many could have few roses except by the cheap free-by-mail route.





The establishment of which partial views appear on this page, is the largest and best known in this country—that of the Dingee & Conard Company of West Grove, Pa. Their roses are finding their way by thousands to all parts of this coast, and their beautiful publications are always welcome in California homes, where floriculture is appreciated and enjoyed.

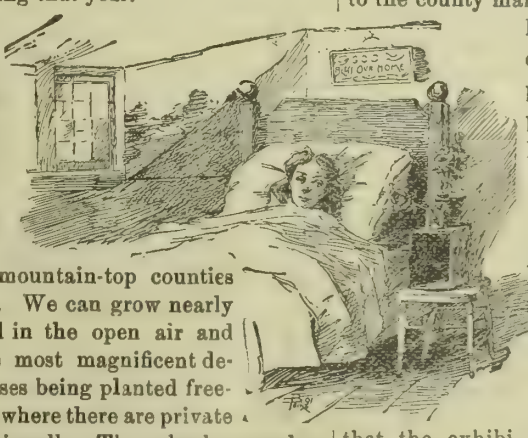
First, there appears a corner of the great glass-covered farm devoted to roses and other ornamental plants. Next below is a stretch of bench, upon which the tiny twigs are set in sand, as closely as they can stand, to strike their first rootlets. Then comes a bunch of small pots in which the rooted twig finds its first solitary habitation, solitary, except as interlopers in the form of weeds and other undesirable growths may dispute the space with them. Another picture shows how their privacy is secured by the friendly hand which plucks away the intruders. Next comes the last stage of the rose beneath the glass, and where, having attained good size and strong foliage, through changes to fresh soil and larger pots, it awaits among its fellows, the hands of the packer, who gently knocks off its shell, washes its roots, and packs it, in cool, damp moss, in a box in which it can traverse a continent or an ocean, and show its bright green foliage to the eager eyes which have counted the days since the order was sent to the propagator.

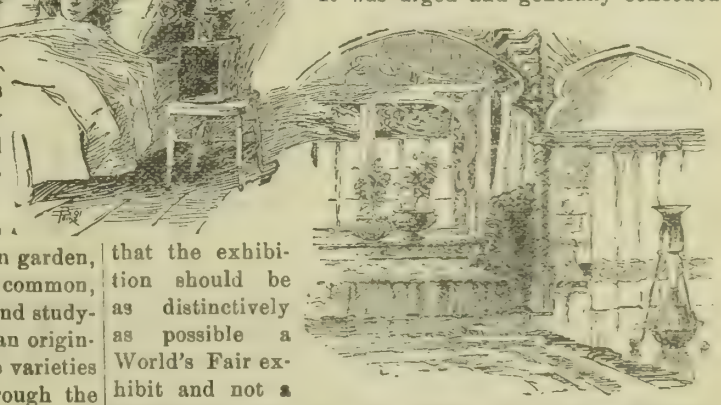


Last of all is the sentiment of the story. The tiny bush has found its way to the bedside of the poor sufferer in a hovel, on a mission of cheer, or has found lodgment in a rich vase in the window of the mansion.

The Dingee & Conard Company are, as has been stated, the largest growers of roses in this country, and they were first to develop the mail business. There are, however, other establishments working in the same line and contributing to a vast result, viewed commercially or otherwise. Unfortunately, the commercial phase is the only one which we can measure accurately. The census bulletin on floriculture shows that, of all plants grown, roses are in greatest demand, and a single firm sent out a million of them in 1889. There were, in fact, nearly fifty million rosebushes propagated during that year.

Of this vast number of new rose plants, California, no doubt, took far more than her share would be upon a basis of comparative population. Rose-growing is rapidly advancing in nearly all parts of the State, and it is little wonder, because only the mountain-top counties have to consider hardiness. We can grow nearly everything of the rose kind in the open air and have winter bloom of the most magnificent description. Not only are roses being planted freely in all gardens, but everywhere there are private collections, increasing continually. The suburban garden, with upward of 200 named varieties, is becoming common, and the growers take deep delight in acquiring and studying the new varieties which Eastern and European originators are bringing out in such numbers. These varieties usually find first entrance to our gardens through the mailed package, and the fancier can well afford the time and care required to build up the infants into bushes of magnificent proportions.





FRUIT FREIGHTS.—At a meeting of the Transcontinental Association in Chicago, April 19th, fruit freight rates for the coming season will be decided upon: $1.50 per 100 pounds, eight day's time to New York, is needed.

A Dress Rehearsal for the World's Fair.

It is an excellent idea to have a preliminary collection and exhibition of the material which will be sent as the California State exhibit at the World's Fair. It will give form and definiteness to the proposition which could not be otherwise secured. Having the material which is offered on display, will show in what respects it should be supplemented and in what way also the installment at Chicago can be improved in style or arrangement. Even if the effort in this city in connection with the Mechanics' Institute should have the special authorization of the California Commission, the opportunity at the State Fair for display should not be disregarded, but should be employed to the fullest extent by the Commission. In fact, it would seem the part of wisdom for the Commission to work all along the lines of the county and district fairs this fall, and make the Chicago exhibit the grand resultant of all local forces.

Arrangements for the dress rehearsal in the Mechanics' Pavilion are increasing. It is especially desirable that the display should be as large and complete as possible on the opening day, and, to secure that result, as well as to spur the various counties toefforts to excel it, was decided to offer the following prizes: To the county having the best exhibit in place by September 3rd, $500; to the county making the most effective and original exhibit by that date, $250; to the county exhibiting the widest range of useful products by that date, $250. The regular prizes, aggregating several thousand dollars, will be arranged hereafter.

It was urged and generally conceded that the exhibition should be as distinctively as possible a World's Fair exhibit and not a Mechanics' Fair. It was decided that the exhibition should be known as "The World's Fair Exhibit for California."

We trust this matter will command the attention of the County Commissioners and others. It should be the greatest exhibition this State has ever seen, and it will be a boon to see it to all who will never get nearer to Chicago.

Correspondence.

Correspondents are alone responsible for their opinions.—Ed.

Benefits from the Coyote Bounty.

Nordhoff, Ventura Co., April 5, 1892.

To the Editor:—In the issue of April 2d the Rural invites correspondence on the practicability and merits of the present law offering a bounty for the destruction of the coyote. As to the proportionate ravages before and since the passage of the "scalp law," it would, perhaps, be somewhat difficult to give, or even to approximate the true ratio or percentage of damage. The observations of the actual settlers of the various localities would, of course, be the only mode of determination; hence the invitation issued by the Rural. In some localities few, if any, wolves have been destroyed, while in other localities the notorious pests have been made to feel "the strong arm of the law."

In this locality, I think the ravages have been not more than one-third to one-half so great as it was before the enactment was passed. But we are suffering yet from the coyote. The question may be asked, Who are suffering from this sly and treacherous animal? The answer is, Every man, woman and child in the State. One of the prominent journals of the State asserts that it is a protection to the few and must be paid by all. That is not true. Every stock-raiser suffers, as every young calf, sheep of any age, goat, pig, and poultry of all kinds may fall a prey to this marauder; neither are small children safe from its attack, when passing to and from school through a sage-brush region. Notwithstanding they seldom attack children, yet who would be willing to send a small, lone child through a woodland or brushy country infested by a band of wolves that had been, through extreme vigilance, kept from the flocks or farmyard for a few days. I have, myself, lost from the ravages of this animal enough hogs and poultry to reduce the profits thousands of dollars. One of the citizens of this county lost 100 turkeys during one summer, although he lived in a wide valley many miles from hills or timber. The turkey will not bear close confinement; death is a mere matter of time if it is closely confined. Yet the townsman, even if he is not a Russian, wants a "slice off Turkey." If the above producer had saved five of his 100 turkeys, and been able to sell them for $10 each, he would still be the loser. But this loss makes the price of turkeys higher. Now, who is the loser! The consumer feels the loss as prices advance, and the producer never makes so much off a mere remnant at the highest price offered, as there is a limit, above which the public cease to be consumers; then both producer and consumer are losers. Thousands of dozens of eggs are at times shipped to this coast from the Atlantic States, principally from ravages from this sly wolf; many hundreds of thousands of dollars are sent East for hams and bacon and lard. Who is the loser? The consumer feels the loss through the increase in price, and the California producer feels it still more, and last of all the State feels the loss of these hundreds of thousands, while the bounty is but little more than one hundred thousand for the destruction of this animal. Who is the gainer while every individual in this State is the loser? The Eastern trader, of course; he makes money out of our misfortune.

We say, kill off the wolf, and if it costs us some little money to do so, it will cost us much more to keep him. Of course this scalp bounty is not expected to last long, as the coyotes will be few in number, and consequently, the bounty merely nominal. Or, if they are still plentiful, do as men do in other warfare—kill them off, as it is cheaper than to keep them.

It is said that over 20,000 have been killed. We hope it is more. But suppose none had been killed, would they not have multiplied to 50,000 or more? Great heavens! What would the people of California pay to prevent the turning loose of 50,000 ravenous wolves in addition to what we already have? We know what it has cost the people of this State, which is not much over ten cents for each individual. Yet we hear more talk about this small amount than we have ever heard of extravagant salaries and other useless State and Governmental excesses, although they are not so very great.

If this notorious animal that can look up and down, sidewise and behind him, all at the same time, could only be trapped easily (as other animals can), his destruction would be swift; but seldom can he be caught in this way. Again, it is only now and then he can be poisoned. Dare touch anything with your hand and he stands aloof; he will "touch not, taste not" of that poisoned article, unless desperately starved.

Perhaps it is because he gets every day what man gets Sundays and holidays only—chicken and turkey. One was shot on my farm whose aesthetic palate had been tickled by that portion of animated nature known as the bovidæ, oveæ and gallus, for in his capacious stomach was found a portion of a cow or calf, a piece of sheep, and a piece of Plymouth Rock fowl. Yes, it was all there; the beef was covered with hair, the mutton with wool, and the Plymouth Rock chicken with white speckled feathers; and he had just killed a duck at my place for variety. We have heard that the coyote has one redeeming quality, and that is, he loves the flesh of the rabbit. We are not acquainted with any kind of flesh that he does not like, if he can kill it himself; but every one knows how difficult it is for a dog to catch a rabbit in chaparral or very thick, heavy brush, where the rabbits generally stay. They seldom if ever catch them; neither does this animal, known as the wild canine, often take one; he finds other flesh which falls an easier prey. If he found no other prey but rabbit, he would soon become extinct.

I, myself, have been a sufferer from the ravages of rabbits in vineyard and orchard; but either from disease among rabbits or something unknown to us, the destruction has been decidedly less since the "scalp law" passed than it was before, or even 20 years since, as I have been continually planting trees and vines and had ample opportunity for observation.

From coyotes there is undoubtedly more than $10 loss to the State in stock and poultry, where there is a gain of $1 by devouring rabbits. H. J. Dennison.

[It is important to bring out such facts as these and to have the subject thoroughly discussed before the next meeting of the legislature. We hope others will participate in the discussion.—Eds. Press.]

Notes from Sierra Valley.

Beckwith, Plumas Co., April 8, 1892.

To the Editor:—Our winter closed in about us unusually early, the first snow coming Dec. 3rd. Prophesies were soon made that the early storms would secure us a good season. For many weeks however, there was no more storm, and our winter was as near an ideal winter in a north land as can be imagined. The valley lay under from a foot to eighteen inches of snow, from early in December until the last of February; this being very good for the grain sown in the fall. The roads were smooth as glass and there was from 50 to 60 days of nearly perfect sleighing. There were some very cold days in December, but after that there was just enough stinging cold in the air to set one's blood to circulating finely. There was little wind and the whole winter was thoroughly enjoyable. The winter was also an unusually fine one for feeding beef stock.

The very first of March, while there was still snow in the valley, the sandy loam of our side hill ranches was ready for the plow, and all the push which every ranch could command was utilized in the turning the furrows. By the 27th of March most of the plowing, and a little of the seeding was done. On that date there began a storm, which heavy skies had been for same time forecasting. The threatening finally culminated on March 26th, in one of our heavy southwesters, such as we had not had all the winter, and which brought a fall of 12 or 14 inches of snow on the 27th. Since that time (that is for the last eight days) there has been but one day free from storm. A massive snow man now rears his ungainly form near our house, giving evidence of the rare sport the storm gives to the children.

The first of April, meadows and newly plowed fields laid under two or three inches of snow. The weather is still blustery with occasional flurries of snow. Could the flowers which came to visit us so early this spring, have had thoughts, they must have felt, tucked away as they were under nature's white counterpane, they they too were made victims of All Fools' Day. Birds too, came earlier than usual this season. Meadow larks and robins have frequently been brought to grief from seeking our valley for their summer quarters, while our winter had not yet lost its hold. But this year the sparrows have come earlier than I have ever known them, and have seemed to have an unusual sense of comradeship in coming close about ourdoors, and a bluebird driven by the storm, sought shelter in one of our bedrooms. We tried in vain to coax it into some feelings of neighborliness, but after a time we gave it its liberty, the storm having for the time passed by. The little creature showed its enjoyment of its freedom by flying far and long, we did not know it so resembled the swallow in its length of flight.

There is one question which has been presenting itself over and over in these long stormy days. That is, where does this multitude of birds secure sleeping apartments? We accept the song and brightness of our feathered friends, why should we not inquire as to their sleeping accomodations? Those who have investigated the matter, find the general opinion that most birds roost in trees and bushes, wide of the truth. Snowbirds in the East make for themselves funny little dug-outs under the roots of grass, or what is more likely, make use of those the field mice have dug, or they roost under crooked sticks which they arch over with dry leaves, and form for themselves small spaces sheltered from the rain. The meadow larks, long before nest building time, have been found roosting in the grass; and several varieties of sparrows have their bedchambers on the ground, and not in trees. This is true in the East, and I am sure the same is the case here. The devices of our feathered friends to secure comfortable sleeping quarters, is so interesting as to make one feel almost sorry that advancing years and accompanying rheumatism keeps us from investigating their habits. But of one thing I am sure that our numberless feathered visitors have not had their bedchambers in our trees, for the nightly snows which have come during this long storm, have so laden the trees that they have assumed fantastic shapes and forms, their branches sometimes coming near the ground.

The account of all this snow may make those in warm climates feel like shivering, but it is better for us than rain, and is all going straight into the ground. The people in this locality feel some interest in the boom at Amadee. The town at the termini of the N. C. & O. R. R. has sprung up like a mushroom in a night. Fine medicinal springs are one of the features of which it boasts.

Mary P. Arms.

The Dairy.

A Progressive Dairyman in Orange County.

Among the efforts being put forth to develop the resources of Orange county there is none more worthy of notice and public encouragment than the graded stock farm and creamery of Henry West, of McPherson. Mr. West is one of the earliest settlers of that village, and enjoys an enviable reputation for honesty and indefatigable industry.

Six years ago he owned one of the most productive fruit ranches in the Santa Ana valley, which he had brought into bearing by sheer hard work at the carpenter's bench and the practice of the strictest economy. The vine disease, scale bug, and a slap from the tail end of the boom, left him with an unproductive ranch and a lively mortgage which pegged away night and day, Sundays included; but these adverse circumstances have only succeeded in spurring him on to renewed efforts, and if his vital system does not snap with the strain imposed upon it he will certainly come out on top.

In procuring animals to stock his ranch, Mr. West journeyed east to Pennsylvania and other points, and purchased two registered Jersey bulls, one registered Holstein bull and several registered Jersey and Holstein cows. He was not satisfied merely to obtain the pure breeds, but examined pedigrees and selected descendants from the aristocrats of the Jersey and Holstein families who had made the highest record in qualities that make those breeds so valuable and profitable. As a matter of course he had to pay fancy prices; his freight bill alone would have purchased double the number of ordinary stock in this State.

Mr. West takes pardonable pride in exhibiting his stock, pointing out to the uninitiated, the distinctive features and marks that are peculiar to the best families of those beautiful animals, and also in producing documentary evidence in proof of their high claims.

The creamery which is under the supervision of Mrs. West, is a perfect model of cleanliness and system, although at present on a small scale it is furnished with the most elaborate and expensive machinery, refrigerator, etc., for the production of cream and butter. The cream is separated from the new milk by centrifugal force; it is poured into a cylinder that is revolved by a crank. The cylinder has a rotary motion of over 6,000 revolutions per minute, which separates the cream from the milk and ejects them into separate streams into vessels set to receive them. The cream is then laid away in the refrigerator till it is reduced to the proper temperature to churn. Everything is reduced to a perfect system in which the clock, thermometer and weights and measures take an important part.

Mr. and Mrs. West read all kinds of books and newspapers that relate to their business and make its technics their constant study. As a result, their butter has already gained an established reputation, and has a ready sale of ten cents per pound in excess of common butter. J. E. Curry, of Tustin, takes the whole product of Mr. West's creamery, and Sam Tustin, the manager of the Tustin store, recently informed me that he would take a ton a week if he could get it, for, exclaimed that gentleman, there is always a demand for good butter.

Mr. West uses the same precise methods in feeding and tending his stock as are used in the creamery. The food is all weighed and fed at stated intervals. He crushes his own grain and cuts his fodder by treadmill, using his bulls for motive power. The bulls do not seem to object, and it is an excellent means of exercising them.

A silo for making ensilage will be erected by Mr. West as soon as his means will allow. Apropos of the silo there is certainly an easy income to a man who is the owner of a few acres of land under the irrigating system who will raise corn and make ensilage for sale to families who keep one or two cows.

Through the efforts of Mr. West, our valley will soon be in possession of a superior breed of milch cows which will eventually run out the old Texas and mongrel stock. He is surely a benefactor to the neighborhood, and deserves to be financially successful. Contrast the nature of the man, who, with nothing but pure grit, muscle and borrowed capital, is building up the resources of our county, with the tight-fisted parasite who will venture his hoarded capital upon nothing that will bring him heavier returns than our present exorbitant rate of interest for loaned money.—Cor. Santa Ana Blade.

Records of Pure Butter-Fat.

Yorkville, N. Y., March 28.

To the Editor:—The Holstein-Friesian Association of America has taken another forward step that must commend itself to every one interested in the improvement of dairy cattle. At its annual meeting held on the 16th inst., it adopted the following amendment to its Advanced Registry Rules:

"A cow shall also be eligible, to this registry, on a record of pure butter-fat, determined by a composite test of samples of her milk, of equal quantities, taken from each and every milking for a period of seven consecutive days; the sample, in each and every instance to be taken from the whole milking after it is thoroughly stirred and mixed. This composite test shall be made by the Babcock, or other equally accurate apparatus or method, approved by the American Association of Official Agricultural Chemists. The total amount of milk produced by the cow during this period of seven consecutive days, shall be multiplied by the per cent of pure butter-fat thus found in the milk, and the product shall be the record. The requirement for entry on such a record shall be —— per cent of the present requirement for entry on a record of marketable butter, of a cow of the same age at calving. Full particulars shall be reported and affidavits made as in cases of milk records and marketable butter records."

A committee, consisting of Messrs. S. Hoxie, L. T. Yeomans and David H. Burrell, was appointed to fill the blank in the above amendment. This committee is corresponding with practical butter-makers, and with scientific men, for the purpose of ascertaining the proper per cent to be inserted. Letters have been received urging that it be filled with 83⅓. This would make the requirement of a full age cow 12½ lbs. of pure butter-fat. A prominent investigator has suggested 13 pounds. These amounts would be equivalent to perhaps from 14 to 16 pounds of marketable butter, as records are usually made, the variation depending on the amount of water and other matter, other than pure butter-fat, that butter, as variously made, contains. The requirement for a heifer calving at just two

years old, if the blank be filled with 83⅓, would be 7½ lbs. of pure butter-fat; between this age and full age, the requirements would increase in the same ratio as those of marketable butter records. Perhaps I ought to add that a brief report of the care and food is a matter of record at the option of owners in all cases of advanced registry.

This amendment will greatly reduce the trouble and expense of making records, and if universally adopted, will do away with all injustice between breeders, resulting from the varying per cent of water and other foreign matter, that records of marketable butter necessarily contain. Besides these advantages, if other associations of breeders of dairy cattle will adopt a similar record, it will afford a basis of comparison of the different breeds, that will go far toward settling their relative merits as butter producers. Further, we might reasonably hope, in such an event, that the making of "wild cat" or unsubstantiated records would be abandoned. S. HOXIE, Supt. Advanced Registry.

The Botanist.

The Ferns of Napa.

Many readers will recognize the initials appended to the following article as belonging to the RURAL'S Napa correspondent, who writes so fluently of field crops and other industries. In the article below, from the Napa *Register*, A. W. R. shows another side of his make-up, and one in possession of which many RURAL readers will sympathize with him. Fortunately, many of the forms described occur in other parts of the State and will be recognized by readers.

In shaded canyon, in sheltered dell, in many a rocky, moist nook in this county grow, in charming gracefulness and in goodly variety, that class of plants which for all lovers of beautiful vegetation have a peculiar fascination—lovely ferns. Even on the rough, barren, rocky, mountain sides may be found one or more varieties seemingly setting at naught one law that seems to govern fern life, that of abundant moisture.

Probably few counties in this State, other than our own, possess a greater variety of fern life. Commencing to put forth the delicate fronds soon after the first rains of autumn, one kind succeeds another, in their appointed season, with the regularity of clock work, till, in the late spring months, all have sent up their tender shoots from the dark ground to the light and warmth of the cloudless sun. By the time the tardy comers have made their appearance the *avant couriers* of the yearly-recurring procession have passed their prime and have made preparations for closely folding together their fronds and retiring from view.

The coarser varieties of ferns one may readily find in most any shaded, moist locality; the finer, more delicate kinds, in secluded nooks. Not promiscously does nature bestow her favors. Not to the careless eye does she reveal her choicest treasures. Patient, careful search in out-of-the-way places often reveals a surprising wealth of vegetation, which well repays the effort required for its finding.

It has been said that in the whole United States there are probably less than 100 varieties of ferns, and of these about one-half are found in California. Scarcely 20 of them can be considered peculiar to the Pacific coast.

POLYPODIEÆ.

The fern that earliest responds to the long deferred fall rains is the *Polypodium Californicum*, a leathery, evergreen fern, whose life is prolonged till late in the season. It is often found growing on rocky surfaces where the soil is thin, its large rootstalk creeping here and there beneath a thick carpet of velvety moss. This variety is found in California, from San Diego northward. The fronds are usually of ample size, from 10 to 18 inches high and from 3 to 5 inches broad.

By far the finest of all our *Polypodia* is the *Polypodium Scouleri*, which grows on trees and stumps, more rarely on the ground. It sometimes grows to the height of two feet; fleshy, evergreen, with sori (or fruit dots) one-fifth of an inch in diameter. This fern has been noticed growing on fir trees, at a height of from 150 to 200 feet above the ground, in Oregon.

THE GOLD FERN.

The beautiful gold-back fern (*Gymnogramme triangularis*) is an old acquaintance with ramblers in our woods and canyons. They are now growing rapidly, and frequently, fine specimens may be obtained. Later in the season they will be numerous. The stalks are slender, blackish brown, polished, and, in full-grown specimens, from six to eight inches long, with fronds five angled, from two to five inches long and nearly as broad. The upper surface of the fronds is of a deep green color, with surface nearly smooth. The greatest beauty of this fern lies in the wonderful coloring of the under side of the frond, which is usually a clear, sulphur yellow, but varies from a deep orange to a pure white, owing to the powdery coating. Specimens which are of a very light color, are frequently called silver ferns, but are considered by botanists to be a variety of the gold fern. Only two species are known to exist in the United States. This fern is common to California, and is said to occur as far north as Vancouver Island.

ADIANTUMS.

Just now the *Adiantums*, or family of Maiden-hair ferns, are making rapid growth in sheltered, moist localities. No bouquet of ferns gathered in our woods or canyons is considered complete without many fronds of the bewitchingly graceful variety, *Adiantum Emarginatum*, of which variety we have three species.

By far the most beautiful species of the whole genus is *Adiantum pedatum*, the so-called five-fingered fern. It grows in moist, rocky places, from Santa Cruz northward as far as Unalaska. It is common in the Atlantic States, from North Carolina to Canada, and is also found in Japan. This is one of the most delicate and graceful of our ferns. Like several other varieties found in this county, it has its peculiar habitation and is obtained only in favored localities, as in Sarcos Creek canyon, at the falls of Spencer creek, and a few other places near Napa. It makes, when potted, a beautiful ornament for the conservatory or the drawing-room, its feathery fronds being perennially green.

THE WOODWARDIA.

The tall *Woodwardia*, or "Chain fern," so popular for decorative purposes, is quite a common fern, evergreen, hardy, growing to perfection in shaded, well-watered ravines. Through the winter months, when it is difficult to obtain other ferns, this vigorous-growing variety can be found in considerable quantity in the localities it selects for its home.

This variety is a member of the genus *Aspleniæ*, of which there are about 60 species, finding its greatest development in the Southern hemisphere.

Woodwardia Radicans, full grown, has strong stalks, 8 to 12 inches long, with fronds standing 3 to 5 feet high, the pinnæ being from 8 to 15 inches long, and from 2 to 4 broad. The sori are oblong. It is found from Long valley to Southern California. The type is found in Maderia and along the Mediterranean countries in India and Java. In our own country it is found in almost every State. It bears transplanting readily, as the roots are always vigorous.

THE LADY FERNS.

One of our most graceful ferns, delicate, finely serrated, is the Lady fern. There are to be found, within a short distance of Napa, several varieties of these.

Asp. Felix foemina and *Asp. commune* are the ones most common, but they are not found in every locality. Like several other kinds of ferns they choose their own company. Some fine specimens have been gathered along Sarcos creek that would rank with choice specimens from foreign lands. The frond is ample, delicate, from 2 to 4 feet high, the pinnæ being from 4 to 8 inches long, sori short. They make splendid plants for the house and have a silent though expressive language, all their own.

The sword fern, *Aspidium munitum*, is one of our hardiest varieties, and is popular for decorative purposes. The stalks are often a foot long, pinnæ very many, 3 to 4 inches long. It is one of the handsomest American ferns, and like many others, subject to considerable variation, sometimes called Shield ferns. *A. Californicum* has fronds long and narrow, and is quite common.

LACE FERNS.

Near the falls of Sarcos creek may be found, at this season of the year, the delicate *Cheilanthes gracillima*, appropriately called the "Lace fern." This fern grows in crevices of rocks or cliffs where there is considerable moisture, and is found in many portions of California. *Ch California* resembles the above and may readily be taken for it. This variety is found in moist, shady ravines in the Coast Range.

One naturally seeks for ferns in moist, shady places, but the home of the genus *Pellæ*, *P. Ornithopus*, seems to be partial to rocky, mountain sides. The latter variety is often called the Birdtrack fern. The fronds are very rigid, from a few inches to a foot long, the lower pinnæ bearing from a few up to 15 or 16 pairs of trifoliate pinnules. This is an odd kind of fern, devoid of gracefulness, but having an individuality all its own. It is common throughout California, growing mostly on dry hillsides, in tufts, among rocks, exposed to a long summer's sun The pinnæ, when trifoliate, as they almost always are in a state of nature, strangely suggest the claws of a bird's foot, whence the specific name.

This fern belongs to the family of Cliff brakes, and a cousin is *P. Andromedæfolia*, which, though often found among dry rocks, loves moisture more than the former. It sometimes is called the "Coffee fern," as the pinnæ, when well fruited, resemble the coffee bean in shape and color. The stalks, growing in a clump, are from 2 to 12 inches long, about equaling the ovate, usually tri-pinnate fronds. It makes a very pretty pot-fern. This comprise the varieties of the "Cliff ferns," found near Napa, though *P. densa* is said to be found in the Coast Range. Our local varieties are easily obtained along the hills bordering this valley on the east.

BRACKEN.

Everybody who has ever strolled along the foothills or on the sides of our mountains is well acquainted with *Pteris aquilina* (Linnæus), the common brake, or "Eagle fern." It is too coarse for bouquets or for nice decoration. It is to be found throughout this State and northward to Sitka. In one form or another the common brake occurs in almost every region of the earth. In Northern California and Oregon it forms thickets as high or higher than a man's head, and of many acres extent. In some localities the young fronds are boiled and eaten as a substitute for asparagus.

There are to be found in our county a few other species of ferns, most of which are small, delicate, fragile, but quite attractive. The principal species have been named. In the canyon back of the "Hermitage" (Asylum farm), along Sarcos creek, by the shaded banks of Spencer creek, and near the falls of that stream; in Hagen's canyon, and also in a rough gorge on the west face of Bald mountain, back of the Plass place; in Milliken canyon, along Dry creek and by streams that have their source in the redwoods, the above-named ferns may be found in greater or less profusion in their individual habitats.

No more attractive plants can be obtained for the house or conservatory than some of these wonderful creations, and all, or nearly all, will grow well in shaded, moist nooks in the flower garden. For little care, no plant of our fields or canyons will afford more pleasure or satisfaction than these. A. W. R.

Poultry Yard.

Poultry for Commerce.

This topic comprehends poultry for market and eggs for quoted prices. Any of the breeds will give handsome returns if provided quarters suitable to their needs, and proper care; but experience with thirty seven different kinds, running through a series of many years, leads me to the conclusion that light Brahmas, Plymouth Rocks, Wyandottes, Langshans and Leghorns are the most desirable of all domestic fowls. For market eggs, sold by the dozen, Leghorns lead all others; if sold by the pound, the light Brahmas would lead, as they are a better winter layer, when prices are higher; their eggs are also very large, and are heavier according to size than many others. They reach broiler age at eight to ten weeks; roaster age at seven to eight months. The cockerels are more tender and juicy at eleven months than a dunghill at seven, and are sought for by hotel men and restauranters in lieu of turkeys. The

PLYMOUTH ROCKS

Are good average layers, if not bred too large. The medium-sized birds are better producers than the overgrown ones. They are an excellent breed from which to produce early broilers and summer roasters at seaside resorts. They will each lay 120 to 130 eggs and raise a clutch of chicks. Allowed to indulge the instinct of incubation nearly all sitting breeds will lay more eggs that if deprived of it, so that the brood is so much clear gain. The Rock is a rapid grower, an excellent eater and forager, and if well bred is on middle ground between the larger and smaller breeds; handsome, alert, clean-legged, and, like the Brahma, yellow of skin, a feature greatly desired nearly everywhere in this country, but shunned in Europe, for table purposes. I find the Rock but poorly bred in Southern California, from an esthetic view, they being a smoky, dirty cuckoo color, instead of that bright, attractive, violet hue so much prized and cultivated by the true fancier. Very ugly is the Rock if this color is not attained; very beautiful, when blue.

WYANDOTTES.

I do not believe the Wyandottes will ever become as popular as the Rocks, for the reason that they are not so easily bred to beauty of feather, the cuckoo being the easiest of all parti-colors to breed true. In the North, however, they are bred very true to ground color and lacing in a few hands, and are sought after because of their rose comb, which seldom becomes frosted with mercury at 20° below zero. Wyandottes are 8½, 7½, 6½ and 5½ pounds in weight; if "standard," being about one pound lighter than the Rocks. Nothing except a Langshan grows into good, fat broilers sooner than a Wyandotte, and by many they are known as "the broiler bird." They lay from 130 to 140 eggs, hatch and rear a brood of chicks, moult quickly and begin business in early spring. They are not as nervous as the Rocks, and are better mothers. And yet, if not bred to "standard" requirements they are but a scraggy lot, and the owner quickly disposes of them. When the ground color of feather is silver grey, or golden, as the variety may determine, with a black lacing, the bird is handsome indeed—clean of legs, yellow of skin, plump and square of body; they have merit.

THE BLACK LANGSHAN.

No bird among fanciers has become so popular in so short a time as the black Langshan. It is a large bird, among the best of winter layers, handsome of plumage if bred to the green-black, rapid growers into broilers, have pink-white feet and white skin. This latter feature detracts from their market value in this country, but makes them a favorite in England. Breeders of this bird are numbered by tens of thousands in this country. Its national club has issued the best and completest catalogue ever put out upon poultry.

Here we have the large breeds, the medium size and the small, and such as will insure eggs the year round, for as the large breeds are in moult and do not lay, the Leghorn has not begun to moult and is yet dropping eggs; and by the time the former are through moulting and have begun to lay, the Leghorn will have begun to moult and stop laying. These breeds give the largest carcass, the quickest growers into broilers, the greatest number of eggs. There is little or no need to add any other breed for table—that is for table use alone—as the Langshans and Wyandottes and even the light Brahmas are greatly to be prized for this alone; but if birds are desired for table especially, either the Houdan, Indian Game or Dorking are the best, in the order named. With these birds the average yearly product should be—

12½ dozen eggs at 30 cents a dozen	$ 3 75
4 pairs chicks, 28 lbs., at 25 cents a lb	7 00
Total	$10 75

Cost of production—

Keeping of hen	$ 1 25
15 eggs for incubation	35
Growing 8 chicks to 35 lbs. live weight, at 9½ cents per lb	3 32
Interest on investment and casualties	75
Total	$ 5 67
Net gain	$ 5 08

These figures may be relied upon. There is money in poultry. It is not child's work. It is business when business is made of it. It can't be overdone. Look at prices in the far East—Massachusetts, for instance. I received a letter on March 8th, from a friend, who asks: "What is the matter with the East? Eggs have been 55 cents per dozen for two months, and never lower than 30 cents." And yet there are 50 birds there to one here. They are bred there by hundreds of thousands every year.—S. I Roberts in Great Southwest.

Horticulture.

Pruning Deciduous Fruit Trees.

J. Luther Bowers, the field manager of the California Land and Improvement Company, in Little Lake valley, Mendocino county, writes for the Willets *News* as follows:

"Nature has her own way of pruning. When we go out into the timber, there we find the work of nature. Our huge redwood trees have been touched by the hand of Nature. When young, these trees were crowded, and the small branches along the trunk die and drop off, and in this way the tree is pruned, and if it was not for this mode of pruning we would not have any of the nice clean lumber free from knots. In many other ways nature prunes our fruit trees; for instance, go out during the season of peaches and look at a loaded peach tree that has never been pruned, and what will you see? A portion, if not all, of the tree broke down from the load of fruit it has borne, the next season we will see nice vigorous sprouts, while another tree, under similar circumstances, that did not break down with its fruit, we will see scarcely any growth at all.

We will now follow these two trees up another season and see how they will show up. On our tree that broke down we will see some very fine peaches, and on the other one we will find a lot of poor ones; the latter tree has made but very little wood growth, and the former has made a good wood growth and has been increasing in vigor, and if kept pruned will become a fine fruit tree. In our large orchards that we are setting this season, we are cutting all of our trees back to 15 inches, so as to try and have our trees head out as close to the ground as possible. Our prunes, peaches and plums will prune so as to have them in the form of an egg set on the large end, and apples, pears and cherries to the form of an egg set on the small end. These two systems of pruning takes great a deal of care and patience, and must be followed up every year on the following plan: The first year, cut back to within 15 inches of the ground; the second year, during the early winter months,—November and December,—cut back last year's growth at least two thirds, leaving a central shoot at least six inches higher than the rest; this one shoot is the foundation for the future tree. Always avoid forks; or, in other words, avoid having two limbs of equal diameter coming out at the same place. Cut one off a great deal shorter than the other, or cut it off entirely. Any limb that has a less angle than 45 degrees from the leading shoot should be cut off. If the limb or branch is anything near the diameter of the leading shoot, if smaller, there is no danger of it splitting off, and should be so pruned as to make a side limb. Some of what might have been the finest orchards in the State, were spoiled when they were or were not pruned the second year. The third year, our leading shoot will have formed a nice top. Always prune early. Now, in November or December, when the ground is in the right condition to plow. Never prune when frozen. We will cut the last year's growth with a sharp pair of good shears, commencing on the lower branches, and here we will give our tree its egg-shape form. At this time, it requires a great deal of judgment, for the same treatment will not do for all trees.

"A cherry tree and a peach tree cannot be pruned alike. Plum, prune and cherry grow on spurs and require two years to develop fruit buds, while the peach forms its fruit buds on the first year's growth. The sharp thorns found on the prune and plum should never be cut off, for these are the fruit spurs. At this pruning, we will cut out every branch that crosses another one; for if we do not do it now, in after years we will have to cut off a large limb.

"This year, on our peaches, prunes and pears, we will leave on every one that the trees will bring to perfection. We do not believe that a tree properly pruned will ever be hurt by the fruit that it bears. The fourth year, we will prune about the same as we did the third year, only we will cut every branch back two thirds. This year, we expect a good crop of fruit. All following years, we will prune as we have this fourth year, and our trees will stand any load of fruit they will bear, and never break down under the load of half-ripe fruit. Our trees will bear large specimen fruits, such as will bring the highest price on any market.

"An orchard pruned on the above plan, will be something pleasing to the eye; and the straight rows will look as though they had been pruned to a line. At some future time, we will show how we are going to cultivate this orchard."

Boxes for Moving Large Plants.

J. M. Samuels, chief of the horticultural department of the World's Fair has issued an illustrated circular which will be of interest to all our readers who may desire to take up growing trees for transmission to Chicago or for other exhibition purposes.

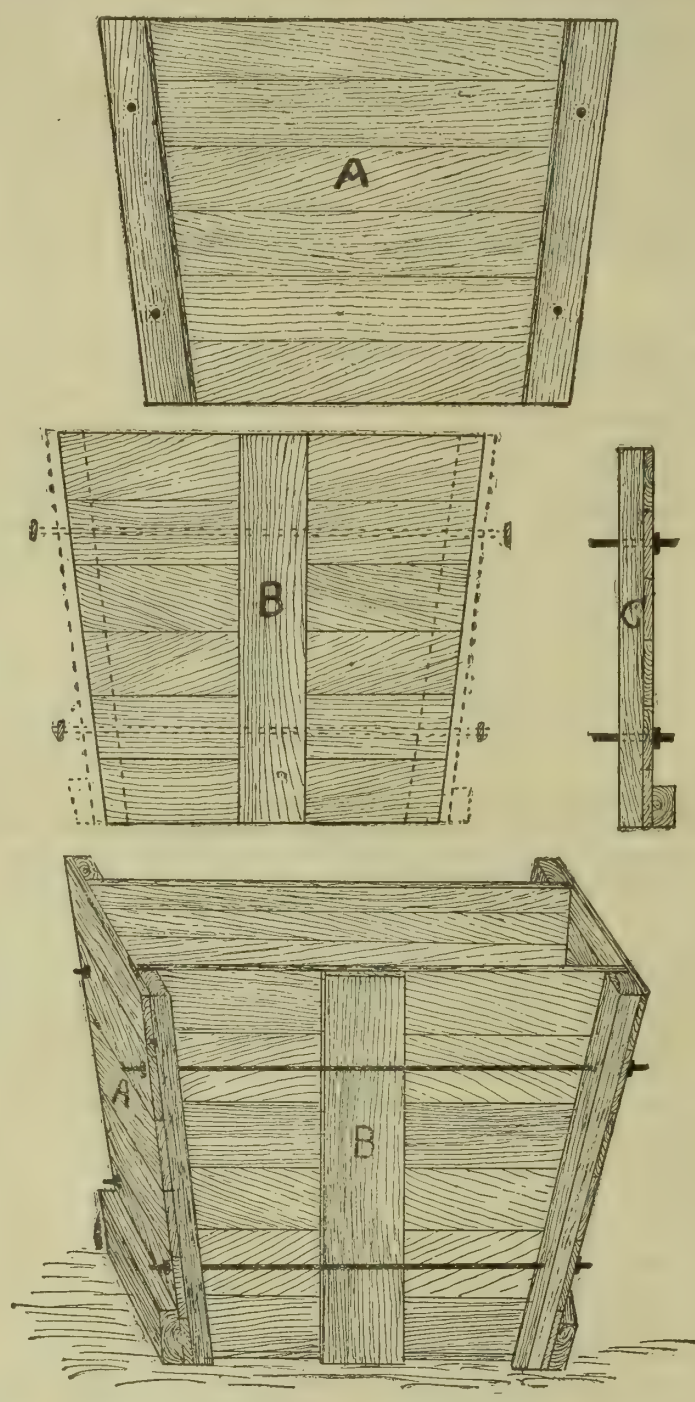
The box represented is the one most commonly used for good-size specimens, but the dimensions must, necessarily, vary according to the size of the plant to be moved.

The box is made in four sections, and for one of the following description 1½-inch boards should be used.

"A" shows the inside of two opposite sections; 4 feet wide at top, 3 feet at bottom, and 3 feet deep. 2x4 scantlings are nailed to each end, through which are bored holes to correspond with the size of the iron rods to be used.

"B" gives the outside view of the other two sections; 3 feet 4 inches wide at the top, 2 feet four inches at bottom, and 3 feet deep. A strip 1x6 is nailed across the center to strengthen them.

"C" gives an end view of section "A," showing the position of the iron rods, and a 2x4-inch strip on the outside, to which to nail the bottom of the box.



BOX FOR TRANSPORTING LARGE PLANTS TO THE WORLD'S FAIR.

REMOVING SPECIMENS TO THE BOXES.

Prepare to remove the specimen by carefully digging around it with a sharp spade, in such a manner that the sides of the adhering earth will conform to the shape of the box to be used. Do not attempt to remove the specimen before fixing the box permanently. This should be done by first fixing the sections "A" on opposite sides of the ball, passing the rods through the holes already bored in the ends of each section to hold them in position; then drop the two sections "B" in place on the insides of the rods, and screw up the nuts sufficiently to secure the earth. If any soil has broken away from the outside of the ball, fill in carefully with fine soil and ram tightly with a pointed stick. Then cut the roots off carefully level with the bottom of the box, lay the specimen over on its side and nail on the bottom firmly, leaving spaces for water to escape. The sides of the box should then be nailed firmly all round. In boxes of the size given as an example, or larger ones, the rods should remain in place, but if of smaller size they may be removed after nailing. Water the specimens thoroughly and remove to a shady place to prevent too rapid evaporating.

Before their final disposition, the boxes should be filled with soil level with the top; boards should then be placed to form a cover and to protect the ball from fracture, and strong protecting strips nailed across this cover.

Whatever sized boxes are used, they should be uniform in shape and proportionately on the same lines as in the example here given. Some deep-rooted specimens will require boxes of greater depth.

Eastern Fruit Crops.

CARBONDALE, ILL., April 5, 1892.

TO THE EDITOR:—A few notes on the fruit prospects of Southern Illinois may be of interest to your readers again this year. Last year there was a good fruit crop through this region, as well as the most of the Mississippi valley. As a result, but little California fruits have found sale here the past winter in proportion to what were sold last year. To make it more definite, it is probable that one-third as many cases of canned goods have found a market here during 1891–2 as did the season of 1890–1. Some green California fruits have been sold here. I should say about the same quantity as a year ago.

Now, as to the prospect for the coming season. In strawberries, I do not think the crop is going to be near as large as last year. Plants set last spring were in many places injured by the dry summer following, so that many fields have been plowed up this spring. As to peaches, all budded fruit was killed at this place by the low temperature of January 20th. It was reported that they were not injured farther south, but the cold wave about the middle of March did a great deal of damage then, as the enclosed slip will show, to the pears and early vegetables:

The 13 inches of snow last Thursday was followed by the coldest night of the year, and as a result, over one-half of the tomato plants were lost. Some growers lost every plant. It was intended to have an increased acreage of about 50 per cent this year, the acreage cannot now come up to last season. To the south of us, great damage was not only done to plants under glass and in cold frames, but to the fruit buds, so that the peaches and pears are ruined as far south as Louisiana and Southern Texas. In Mississippi and Louisiana, the strawberry crop is about ruined, and the loss on early vegetables is over 50 per cent.—Humboldt (Tenn.) Messenger, March 25th.

With us, the pear, apple, plum and cherry buds seem to be uninjured, but I do not predict a full crop, because of there having been a full crop of these last year. The trees would not form a heavy complement of fruit buds under the adverse condition of a rather dry season. This gives us at this writing a prospect for a fair crop of apples, pears, plums and cherries over a small portion of the Mississippi valley, but a shortage of these over the southern part, and a shortage of peaches and strawberries here. This, of course, means a call upon other sections for what home production cannot supply, and California will supply a large share of our deficiency.

As to green fruits, only a small amount is sold here, usually. Each fall, grapes from Ohio and New York are sold here in considerable quantity, eight-pound baskets selling at from 40 to 50 cents each.

But when it comes to the canned fruits, the excellence of most of the brands of California canning that have been placed on our market has crowded out nearly all canned goods from other States.

G. H. FRENCH.

Florist and Gardener.

Eschscholtzia.

[Written for the RURAL PRESS by ADA S. HALSTEAD.]

Mantling our hills in wondrous beauty,
Hearts of gladness; stars of purest gold;
Interspersed o'er meadow land and valley
In bright constellations manifold.

Long ago, when our ambitious fathers
Named this State the "golden" of the west,
'Twas thy light that gave them inspiration,
'Twas thy beauty their fond hearts impressed.

So their children, born beneath the kindness
Of the sun that gave thee thy glad fate,
Weave of thee a diadem imperial,
Circumscribe thee to the "Golden State."

Queen Eschshholtzia! thou art a fitting symbol
Of our Eldorado land. No flower could be
Half so emblematic of her country,
Half so regal in her ministry.

The Eschscholtzia or California Poppy.

[By MRS. JANE KLEE, read at the April meeting of the State Floral Society.

Already, the world over, the California poppy is known as typical of California skies. It is the child of the long, sunny, summer day. To the glowing sunrise it doffs its long, green cap, and turns its radiant face to the light, and, when the brilliant sunset comes, it folds its warm petals close and awaits the sunny sky of the morrow.

The world over, there is nothing like it among flowers. For those who have seen it in the fields abloom, there is a recollection of dashes of flame color in among the wheat and the barley stalks; sheets of flame in the meadow—a bit flashing here, a great stretch blazing there. Indeed, yes, a reflection of our skies, almost tropical at times in warmth. Truly, the flower is the child of our summer days.

From early springtime until late in the fall, on the trains, in the carriages in the pathway, you will see people, old and young, with their hands full of our bright poppies. The pleasure seekers, going out for a day's rest in the fields and by the roadsides, come home laden with the poppies, and fill the vases throughout the house with their brightness.

Whether the soil be rich or poor, upland or valley, shaded or clear, our brave poppy takes hold of life like the brave pioneer of early times, like the vigorous youth of the present, and makes sunshine everywhere that its happy face can find a place to shine. Glowing and bright, it fulfills its destiny, "a thing of beauty and a joy forever."

From its clustering mass of pale green, fern-like foliage, it rises on a slender, flexile stalk, holding its cup upright to the sky, ready for all the sunshine that comes its way.

Painters of flowers speak of the difficulty they have in catching the satiny sheen and the peculiar bright orange color of the poppy petals. The gray green of the foliage is

easy enough of imitation, but the vivid orange satin sheen of the petals is difficult.

Since it is so peculiarly distinctive of California climate, it is well that it has been chosen as "our own" emblem, and the California State Floral Society has reason to congratulate itself upon the happy choice.

Farmers' Institutes.

Meeting this Week at Livermore.

NILES, April 5.

TO THE EDITOR: The next meeting of the Alameda County Farmer's Institute has been arranged for April 15th and 16th.

A first-class program is assured for we are promised able assistance from the State University and from the Leland Stanford Jr. University, as well as by a number of the leading viticulturists, horticulturists, stock growers and farmers in general throughout the county.

Prof. Hilgard will lecture on the subject of crops and fertilizers. This is a subject on which all farmers should post themselves, as the time is rapidly approaching when the wise, or unwise use of manure of various kinds will be a simple test of how good a farmer a man is. We are very fond of saying that we "have the best soil in the world," but can the best soil in the world stand the regular California style of one crop and no fertilizer forever? Prof. Hilgard can tell us better than any other man living what is lacking in our soil, because he has for years been analyzing specimens of soil from all over the State, and he can also tell us what to use to renew it. This is a live subject and one that farmers in this State cannot ignore much longer. As Prof. Hilgard is soon to be away on a years leave of absence, we had better "make hay while the sun shines," and get posted while we may.

Prof. E. J. Wickson will conduct the exercises in his usual competent and pleasing way. He will deliver the opening address on the subject of "The Farmers' Institute," its history, purpose, and accomplishments.

C. H. Shinn, Inspector of U. S. agricultural stations in this State, will read a paper from the results of his observations at the various experimental grounds on, "The Climatic Adaption of Varieties of Figs."

From the Leland Stanford University we are to have Dr. John C. Branner, who will address the Institute on "Agriculture in Brazil," with reflections on our trade with South America.

It may not be out of place to explain a little what the Farmers' Institute is and what it is not.

It is a convention of farmers and others, meeting periodically for educational and social purposes, and is just like a Teachers' Institute in that it plans, and succeeds, when well managed and patronized, in waking up and keeping up to date all its members. It plans to call on the best farmers in each branch taken up, to give their views and methods before the assembly, and then discuss them.

No one can go to one of these meetings with his ears open, without learning enough to pay him many times over for the time used.

THE EXERCISES.

The Livermore Institute will open in Odd Fellows Hall at 7:30 P. M. on Friday evening, April 15th, with remarks by Howard Overacker Jr. president, who will afterward give an address on "The Family Garden." The "Vegetable Garden" will be presented by J. E. Jacobus and "Poultry" by Messrs. Hatch and Dow-Kerrell.

On Saturday at 9 A. M. Prof. Wickson will speak on the "Farmers' Institute;" H. J. Philpott on Poland China hogs; G. E. Crittenden on Summer Feeding of Milch Cows; H. P. Mohr on Draft Horses; Dr. A. E. Buzard on Glanders and Farcy; C. J. Wetmore on Statistics of Wine Production; F. L. Fowler on Grape Growing.

On Saturday at 1 P. M. Prof. Hilgard on Soils and Fertilizers; W. H. Tyson on Winter Spraying of Fruit Trees; W. P. Bartlett on Success and Failure with Different Fruits in Livermore Valley; Prof. J. C. Branner of Stanford University on Agriculture in Brazil; C. H. Shinn on Varieties of Figs and their Climatic Adaptability.

The sessions will be enlivened by music and time for discussion and answers to questions will be given so far as possible.

J. C. SHINN, Secretary.

PARTICULAR ATTENTION is called to the advertisement of Theodosia B. Shepherd, announcing a new catalogue of new seedling canna. The advertisement is on page 371.

THE Truman, Hooker & Co. catalogue is just out and is bigger and better than ever. Everybody should see it.

Grangers' Union of San Joaquin Valley.

Incorporated May 14, 1874.



The above named corporation was organized under the Statute of 1872, known as the Civil Code. Its capital stock is fixed at $100,000, divided into 4000 shares of the par value of $25 each. Its principal place of business is in the city of Stockton, county of San Joaquin, State of California, and it was organized for the purpose of enabling the farmers of the San Joaquin valley to secure to themselves such advantages in purchasing agricultural implements and all articles consumed by the farmer as can only be secured by bringing consumer and producer as near together as practicable, thus doing away with the army of middlemen that have heretofore taxed the farmer enormous profits for such articles as he might be obliged to purchase.

The directors respectfully solicit all farmers to assist in building up an institution especially established in the interest of the agricultural community.

In the management of this corporation it is intended by the Directors that the rights of the smaller stockholders shall receive the same consideration and attention at their hands as the larger, it being the intention of the management to conduct the business affairs of the corporation with equal justice to all, whether shareholder or not.

The lease of the store which the corporation has occupied for the past 15 years expired September 30, 1891, at which time they moved into their elegant three-story building, corner of California street and Weber avenue, built for and owned by the corporation. The upper story is one grand hall 100 feet square.

The present Directors are: James Marsh, President; H. W. Cowell; J. B. Harelson, Treasurer; H. S. Sargent, Secretary; B. F. Langford, W. L. Overhiser, J. H. Hickey, J. B. Boody, E. Fiske.

Geo. A. Earle, Business Manager; T. E. Connolly, Bookkeeper and Cashier.

W. H. E. Leffler, Salesman Hardware Department; Arthur Howell, Salesman Agricultural Implement Department; Harry Marsh, Assistant Bookkeeper; George Haub, Drayman.

Since moving into the new store the business of the corporation has increased wonderfully; in fact, sales have nearly doubled over the corresponding months of 1889, 1890 and 1891.

The President, Mr. Jas. Marsh, gives his personal and undivided attention to the business, and, with his efficient Manager and corps of attentive clerks and other assistants, is making the Grangers' Union a decided success.

Pure Food in Congress.

Action Which Has Resulted in the Official Determination of the Best Baking Powder.

The act of Congress authorizing the examination of the baking powders has resulted in a most unprecedented compliment to the Royal Baking Powder. The tests were made in the Government Laboratory at Washington, and the official report shows that the Royal is superior to all others in leavening strength—being over thirty per cent. above the average. The report also shows the purity of the Royal Powder and the wholesomeness of its ingredients.

This is probably the highest compliment of an official character ever paid to a proprietary article, though no more than the great army of baking powder consumers would expect in behalf of their old friend and favorite.

The result of the official examination, as thus determined, will, of course, make the "Royal" the standard for Government purchases.

THE INSTITUTE AT FRESNO.—The institute meetings held at Fresno on Friday and Saturday of last week were very interesting and profitable. We give on other pages of this issue some of the papers presented and will present others later. The lectures by Prof. Hilgard and by B. M. Lelong, secretary of the State Board of Horticulture, excited great interest. Mr. Lelong supplemented his essay with a demonstration of the qualities of the different varieties of citrus fruits and their adaptations and requirements, which was especially satisfactory to the people. The institute resolved to continue quarterly meetings and elected a new board of officers, viz: President, D. T. Fowler; vice-presidents, Mrs. McLean and J. H. Harding; treasurer, L. B. Holton; secretary, John S. Dore. Dr. Chester Rowell, a regent of the State University, gave a very interesting talk on University extension and the cordial relations which the institution desires to maintain with meetings in the interest of agricultural progress.

THE RIVER IMPROVEMENT MOVEMENT—It is telegraphed from Washington that the committee of the California Miners' Association in Washington has by no means given up its intention of passing the debris bill during this session, if possible, though there will be no undue haste in the matter. The manner in which the Chinese exclusion bill was put through the House, under suspension of the rules, has encouraged them in the belief that a day can be secured and that it can go through. Assurances have been received from a majority of the members of the House that they will support the bill, but it would be considered foolhardy to try to pass the measure when a two-thirds vote is required.

WE call attention to the advertisement of Geo. Ertel & Co., Quincy, Ill., in another column of this issue. That the Victor press is one of the most perfect presses on the market is shown by the fact that Messrs. Ertel & Co. have the largest factory in the world devoted exclusively to the manufacture of baling presses. They offer to ship a press on trial to any point in the United States or Canada to work against any other make, the party testing them to agree to buy the one doing the most and best work for the least money.

Agricultural Notes.

CALIFORNIA.

Butte.

AN ALMOND ORCHARD CHALLENGE.—Biggs *Argus:* We defy the world to show a more thrifty, larger growth, cleaner and better laid out almond orchard than that 300 acres of Hatch & Rock on Rio Bonito. Trees three years old so large that the limbs almost interlap in every direction, every twig loaded with nuts and 300 acres of them in a body. It is a sight worth seeing and the crop this year will be worth thousands of dollars.

SAVING GIRDLED TREES.—Oroville *Register:* Most persons who find valuable fruit trees girdled by gophers, or from any other cause, consider the trees lost. Chas. Charvet of Thermalito told us this week how he recently saved a five-year-old budded orange tree that had been completely girdled by gophers and fully three inches of the bark stripped from the trunk. He put a rope under the limbs so as to support the weight and propped up the tree with four stout sticks. He then dug away all the earth from about the roots till the girdled section was fully uncovered, when he took some common rubber paint and with a brush gave the trunk a coat of this paint, completely covering the section that had been stripped of its bark. He then quickly covered the roots with earth, not having them exposed any longer to the sun than possible, removed his props and rope and left to the tree to live or die. It was in full bud when he tried the experiment and it has continued to bud and bloom, and its leaves appear as fresh, green and bright as though the tree had never been injured.

Fresno.

OLD CITRUS TREES.—Reedley *Exponent:* At Lewis Creek, on the ranch formerly owned by John Tuohy, a lemon tree 12 years old this year produced 10½ boxes, each box holding about 210 lemons, making the number on this tree about 2100. Several orange trees of the same place have produced well for a number of years and the trees are clean and healthy.

CROP PROSPECTS BAD.—White's Bridge Cor. *Expositor:* We who have been blowing about our great grain fields all winter will, I fear, have to cease soon, unless rain comes at once. There is no doubt that a better stand of grain never existed than we had this season, but the fact of not having had a decent rain since March 1st is now showing the grain in a different light. All last week we suffered a heavy northwest wind, and what moisture was in the ground was soon gone.

CROP PROSPECTS.—Sanger *Herald:* In many fields the summerfallow wheat is very heavy, and in all the grain is growing rapidly. The acreage is large and the stand excellent. The warm weather is forcing a rapid growth of alfalfa and other grasses, and the prospect is that haying will begin early. Indications are favorable for a very full fruit crop. With fairly favorable weather from this time on, the season's output will be the largest in the history of the county.

Inyo.

AGRICULTURAL DISTRICT FAIR, No. 18.—Inyo *Index:* Board of Directors met in Independence on Tuesday, April 5, 1892. Robert Love was elected president for the ensuing year by unanimous vote. With but one dissenting voice, it was resolved to hold the Sixth Annual Fair at Independence, the date being fixed for September 27, 28, 29 and 30, 1892. The only condition is that the citizens here give as much for race purses as was given at Bishop last year. Failing in this, the directors will consider that Independence does not want the Fair.

Kern.

SIGNS OF RETURNING PROSPERITY.—Bakersfield *Echo:* No greater indication of the prosperity of a section could be given than to have the farmers realize that the old structures (built for the most part in the old cattle days) are entirely inadequate for the product of this and coming years. Besides, while they were in debt to the store keepers, they virtually had to dispose of their product at the latter's figures. Now the aspect of affairs has materially changed. Those who did not get out of debt last year are almost certain to do so this year and have something left. That a new era of prosperity will dawn is apparent from the fact that last year most of the farmers were compelled to sell their wheat for less than $1.45 per cental, when in two months' time wheat reached $1.90 per cental, and hay from $11.50 to $15, and none to be had at the latter figure.

Nevada.

FRUIT CROP.—Grass Valley *Telegram:* Bradbury Perkins, who is one of the best posted cultivators of fauit in this section, is pretty certain that the peaches and cherries of this section were killed by the hard freeze of Thursday night of last week. Mr. Perkins will have some pears, probably a good crop, although the pear trees did not escape entirely. Some others of our fruit growers think pretty much everything in their line was killed. David Bryan was even fearing that many of his trees were killed.

Orange.

WOOL NOTES.—Chino *Champion:* Michel Barcellona, Beneito Ochoa and Jean Arguina have been pasturing a flock of 7000 sheep on the east side of the ranch the past winter, and are now taking the fleeces. They have 27 men busy shearing, and up to yesterday they had finished 2000 head. They expect the entire clip to amount to about 140 sacks of 350 pounds each, or 49,000 pounds.

San Diego.

TREE PLANTING. — Otay *Press:* Capt. J. H. Folks is planting out 20,000 seedlings on his place at Nestor. J. C. Long is planting 100,000 seedlings in his Highland nursery. Hinch, Heckett and Peterson are each planting ten acres to trees in the Highland district. Col. J. C. Moore, is putting out five acres of lemons on his place west of town. G. S. Woolsey, who has planted 1000 trees this season, is now preparing to plant several acres more. Uri Decker is putting out 150 citrus trees. P. H. Evans is planting his five acres to citrus fruit. David Smallcomb, in the Tia Juana valley is planting out five acres to figs and citrus trees. W. G. Evans is planting several acres of his Highland ranch to trees and nursery stock. J. M. Sharp is setting out ten acres to peaches and oranges. Mr. Endly is planting his five-acre tract, recently purchased at San Diego, to trees.

San Mateo.

VEGETABLE NOTES.—Redwood City *Gazette:* The outlook for the early potato crop was never better. It is feared that the first crop will be materially shortened by the late heavy winds, which have beaten off the bloom. Colma is shipping large quantities of cabbage to Eastern markets. All kinds of vegetables are grown here in great profusion. This branch of industry is chiefly conducted by Italians, who are, as a rule, a very industrious, frugal, yet obliging people, and growing wealth is a reward of their untiring industry.

Shasta.

INDIANS TAKING UP LAND. — Redding *Free Press:* All the Indians in the country seem to be taking up land. It costs them nothing, and the copper-colored native sons of the forest are like every one else, willing to take anything as a gift. In a little while all the choice little valleys and nooks for miles around will be owned by the Indians, and the fear has been expressed that it will cause trouble with the whites, inasmuch as the whites cannot get these lands so taken either by purchase or otherwise, as the law does not allow the Indians to sell under 25 years. If this provision was not made, it would only be a short time when the lands would fall into the hands of the whites by purchase.

Sonoma.

A THRIFTY FARM.— Healdsburg *Enterprise*: Across the long bridge at Geyserville is the farm of L. G. Ellis of 550 acres. It is a beautiful spot, located on the east bank of the river and stretching away to the hills, whose wooded slopes gradually rise until they terminate in the Geyser Peak. There are 130 acres of as rich bottom land as can be seen anywhere in this tract. While there is a vineyard and orchard of bearing trees, Mr. Ellis continues to enlarge the same. Last year he set out 530 prune trees and 600 peach trees. He has a thrifty young nursery, where he raises trees for his own use. There is a field 50 acres in extent covered with a heavy crop of growing wheat and barley, joining which is a field of oats of 30 acres in extent.

Ventura.

FILLMORE, April 9—TO THE EDITOR: We are raising more barley and less beans this year. We have not had quite our usual allowance of rains, at least in some parts of the county, and barley will be light. As a general thing, we are prospering fairly well; new lands are being cleared and fruit trees and vines are being set in all parts of the county. We were not afflicted much with the boom of two or three years ago, and we keep moderately and steadily on our course to prosperity. All are contented and busy.—S. P. SNOW.

THE HOME CIRCLE.

California's Emblem.

Golden-hued eschscholtzia, fair,
Blooming on the hillsides, where
The breezes softly kiss thy velvet cheek;
In thy dress of molten gold,
Gazing on thee, we behold
Jeweled rosaries, heaven's richest treasure to the meek.

Thou art queen among them all!
E'en the sturdy sunflower, tall,
Bends to thee his sunny, beaming face;
Wrought in gold, and jeweled tipped,
Sunny heart, and smiling lipped,
Thine willingly, we kneel before thy grace.

In thy gold and amber dye,
Nodding midst wild wheat and rye,
Thou dost wave above a carpet green;
Heaven's cup distills the dew,
Each day, jewels, bright and new,
Nestle round thy stem, and brightly gleam.

Light, dancing in the summer air,
The skies are blue; the world is fair;
Thy home, the broad and boundless realm of space;
The hills, thy beautiful palace hall;
Thy friends, the lofty trees so tall;
And hill and dale alike, thy fit abiding place.

Ah, yes, to us thou art doubly dear;
California's fields thy native sphere;
The "Golden State;" the garden of the West;
Sunny-born eschscholtzia, fair,
Nodding here, and waving there,
Of all, *thou* art the one we love the best.

San Francisco, March 28, 1892. —R. Johnson.

Old Dudley Thurman—A Vanished Type.

To many of those who daily see the dark masses of ignorant, restless, unkempt people that beat ceaselessly up against the dominant race of the States like the waves of a dark, pent-up channel beating against stalwart white cliffs, there is nothing in the negro as he is seen to appeal to any artistic sense in the beholder. To others, his ignorant, shiftless state appeals for and levies from sincerely good and earnest hearts an immense flow of intensest pity. Others find in the masses moving about them, with barbarous, undeveloped profile, with awkward gait and gesture, with clipping tongue, only subject matter for mirth.

But look at the masses as we may (for in this instance, as in every other, it is true that "the eye sees only that which it brings with it the power of seeing"), all must admit that now and then from out the seething, restless mass, there springs to light some well-rounded wave filtered through and through with the light of heaven.

These individuals, lifted above their kind, and enlightened not mentally but morally, are usually those old creatures who bore the yoke of slavery, but felt less its pressure than they felt the pressure of the sustaining, friendly, able hand of the master reached ever out toward these humble ones dependent upon him.

I wish that a gallery of simple portraitures of these simple people could be made. They drop one by one out of Southern life, the last links that bind together two utterly alien races. The worth of them to the South is incalculable. They carry ripples of light over the dark sea of seething political and impossible aspirations. They act as most powerful motors in the present adjustment of our grievously troubled labor questions.

I wish that many portraits of these good old people might be made, for I can scarcely believe that the world has ever before held such a class as this. One such old creature, quintessence of quaintness, I have now in mind, old Dudley Thurman.

Old Dudley came to our home on Mondays to carry off a laundry bag and contents to his daughter. His daughter made great pretensions to style; she was a constant displayer of fashions that never were on sea or land.

I had often been told how old Dudley made his first trips for the clothes to wash at earliest dawn, awaking sleepers with a marvelously queer plat! plat! plat! plat! on a door, a quaint knock with the finger balls. Such deprecatory knocks the African makes, utterly differing from those ringing demands for admittance that an Anglo-Saxon gives.

When a door opened at old Dudley's humble and apologetic taps, he began what became known to our household as the song of Dudley, a long and monotonous chant that ran like this:

"Mornin', mornin'! Dis is de man dat comes fer de cloze. Dis is de father of 'Liza Ann. Dis is ole Dudley Thurman."

"Dudley is your name?"

"Yes'm! Yes'm! Dudley. Dat's hit. Dis is de man dat's name' Dudley Thurman. Dis is de man dat sweeps Mrs. L.'s yard. Dis is de man dat cuts up her wood. Dis is ole Dudley Thurman!"

I thought this relation of old Dudley's chant rather an exaggeration made to please me, since I so loved any exhibition of the old-time, before-the-war negro, with his quaintness of humor, his sweetness of great humility, but not so. I myself was destined to hear many times the song of Dudley. I was delighted when its first soft notes struck my ear.

"Mornin', missy, mornin'! I been fer de cloze six times dis mornin'. Yes'm; hit's 'leven o'clock now, it is. Dat house gal er yourn she won't gimme de cloze, dat she won't. Yes'm!

"Dis is de man what comes fer de cloze.

"Dis is de father of 'Liza Ann. Dis is de ole Dudley Thurman."

The song of Dudley was like most songs made by an individual of a race in its earliest youth—a song almost endless and changeless. Any question or suggestion from the listener thereto would turn on a flood of monotonous melody with the suggestion for subject. For instance, I asked the old man: "Was it your crib that burned last week?"

"Yes'm!

"Dis is de man whose corn crib cotched afire. Dis is de man knows a enemy done it.

"Dis is de man didn't know twel right den dat nobody all de round worril hated him.

"Dis is de man whose oxen got burnt, too; dis is ole Dudley Thurman.

"Dis wus de man dat wuz sleepin', sleepin'. I think my heart in my breast wuz sleep, too. While I slept, fire cotch crib, oxen, wagin. My oxen wuz hitch right side my crib. Lo and beholst! All de crib, year's corn, and de wagin, wuz all in ashes, and my two oxen wuz burnt 'fo' I waked good ter my senses.

"Yes'm! Dis is de man dat los' in dat fire a hundred dollars and mo'. Dis is ole Dudley Thurman."

"You have a nice name, uncle."

"Ma'm? Yes'm! Dudley's my name. Dudley Thurman. My teefs out. I can't talk like I useter talk. I useter be a stylish talker twel all my teef left me. Dat how come you don't al'as un'stan' me when I talk, 'caze my teef gone. I guine spell my name fer yer, dat's what I guine ter do."

Then he braced himself for a mighty effort. I knew that I was going to have exhibited to me next moment the result of years of earnest mental effort. I knew that a great part of 'Liza Ann's odd times had been given to those lessons, devotion to which from both teacher and pupil, daughter and father, had enabled old Dudley almost to spell his own name.

"Now, Miss!" holding up one awkward hand, "I guine ter begin: D! u! d! Dud!—and er-er—Missey it goes on and continoos ter er-er—l! e! y! ly. And all dat put toge'e'r makes a Dudley! Da's it, ain't it, missy? Dat's all correct, ain't it? Den we begins, and we sez: "T! h! and hit runs on dat way—" (here a gesture vast enough to take in all the field of orthography)—"twel it gits ter—Lemmesee! T? h? o? dat's hit? T? h! o! r! and er-er—Missy! Thurman!"

Poor old man! As many times as I heard him endeavor to "spell out" his name, I never heard that last name Thurman finished out by letter, only a grand sweep of hands magnificently awkward filled in the deficiency.

His own name, he said, repeatedly, was Dudley, and he always added: "Arter de war, when all de niggers wuz free an' tuck ter choosin' uv names fer deyse'ves, I choosed my name back, Dudley! and I choosed my master's name ter put right sider hit—Thurman. And dem what speaks dat name, des so: Dudley Thurman! der speaks my name." He came one day in autumn, this old Dudley, to, as he said, "Des beg a few biscuits and ter talk des a little mockin' bird talk ef de gre't house folks want ter hear him."

I was of course anxious to hear "mockin' bird talk," so that I might know what that was, therefore the biscuits were presented in hot haste, howbeit they themselves were cold enough, and the old man began:

"I made 'Liza Jane des laff. Yes I did. Yes m. Dis is de father of 'Liza Ann. I tolt her how yistiddy mornin' I was in de fiel'. I wuz tryin' ter pick out my cotton, but de clouds des rolt deyse'ves round over my little patch, des did, and de rain hit fall on my open cotton—drap! drap! drap! Ef I let dat cotton stay in de field, den rain guine best it on the ground and in de dirt, den I gwine los' it. If I pick dat cotton it gwine take a mildew; den I gwine des natchally los' it ag'in. Den what is I gwine do?

"Den I tell 'Liza Ann how I did talk ter myse'f in de cotton fiel', sez I, 'Lord,' sez I, 'what make you does do me like you does do me? You done gin me good 'ield er cotton. You done gin me in dis heah fiel' mo'n a 100 open bolls ter ev'y lick I done put dar. But now Lord,' sez I, 'I can't git dis cotton out dis fiel', 'count er dis rain. How come you done gin me dis cotton, den sen' on dis rain 'leaze ef dis cotton don't do me no good 'tain't gwine do you no good, neither nobody else gwine git it; den why, oh Lord, don't you let de sun shine, sence de cotton is hangin' in fiel'? Lord,' sez I, 'please let de sun shine,' and den right den and dar de sun it shin!

"Yes'm! Hit did. De sun hit shin! But when I say dat ter 'Liza Ann, when I do say the sun hit shin, den 'Liza Ann she des keel over and laff and laff. She say: Pa, Pa! who ever hearn of anybody a-sayin' de sun shin. Pa, how come you to say shin?' Den 'Liza Ann she do laff. She des laff and laff.

"You know, Missy, I des say dat fer ter make her laff.

"I oughter had said: De sun hit shine! not shin! oughten I, Missy? I knowed dat.

"I useter be a fancy and fine talker when I was young.

"But my teefs out, Missy, dey is out, and dat how come I don't talk so good.

"Dar now.

"I des wanter make you laff like I done make 'Liza Ann laff. Dat how come I talks' much dat mockin' bird talk fer you, make you laff."

This is line by line the sketch of that simple, humble, kind-hearted old Negro, Dudley Thurman. Long may he live to make the earth brighter by his good work in our gardens. Long may he live to make the world gayer with his quaint "mockin' bird talk."—Martha Young, in N. Y. Home Journal.

CONTEMPORARY HEROISM.—"All this talk about the heroic age of our grandfathers is unadulterated nonsense," says Walter Blackburn Harte in the April *New England Magazine*. "We are quite as heroic in this generation as were the men of any generation; and this is not saying very much. There are, however, heroes in our midst all the time; but the only heroes we know anything of are those of history and literature. We are torn and swayed by the same passions and fears as actuated the people of ancient Egypt; and a tragedy in a Broadway restaurant is just as much a tragedy, and just as full of the human element necessary for poetry, as if it took place on the banks of the Nile. The engineer who stands in his cab, at the risk of his life, in a railroad crash is quite as heroic a figure as Columbus, threatened by his mutinous sailors. As long as the human drama continues, there will be tragedies and there will be heroes. The critics who say that this age is too prosaic for the production of poets and poetry do not not appear to realize that as long as birth and death, and the essential solitariness of every individual existence remain, human life can never become commonplace. The fact is, in reading about our ancestors we accept shadows, continually elongating with the years, for men."

An Old Maid's Enlightenment.

I can remember when I used to think it would be so nice to be "Mrs. Somebody," and so unfortunate never to be "Mrs. Anybody," but that was years ago; I won't say how many. I live with my brother Simon Andrew, in one of the farming districts of Western Connectciut. Simon Andrew is a bachelor, in the true sense of the word, for I have known him to walk a mile out of his way to avoi speaking to a woman.

One day when I was tying up my catnip and boneset into bunches to dry for winter use, who should come in but the Spriggins girls brimful of fun and laughter. I knew they had come in quietly, thinking to catch Simon Andrew in the house, but he was clear down in the lower lots before they had the gate unfastened.

Of course they had an errand—they almost always have. I've known 'em to come in as many as three times a week to get my receipt for preserves, and I haven't a doubt, if you had asked 'em the next morning how the receipt read, they couldn't have told a word of it. I wonder why it is that bachelors are such a curiosity and so much sought after by young folks?

Well, as I said, the Spriggins girls came in, and just as they were going they almost took my breath away by saying, "O, Miss. Rachel, did you know that Roscoe Miller and his family are in town—just came from out West to visit Roscoe's father?" I managed not to show my astonishment much and the girls finally started for home.

You see everybody has his or her little story sometime in life, and I had had mine. This news brought it all back to me. I thought of the four-leafed clover Roscoe had given me so long ago, that I had carried in my bosom for a year after, and as time passed I had finally consigned to the bottom of the old chest in the garret. I had thought of burning it, but somehow I didn't. It was the only souvenir of my youthful dream.

Roscoe didn't spring from a very high family, and his older brothers had all turned out "black sheep," so everyone looked down on Roscoe and thought it wrong in me to accept attentions from him; but I was young, only seventeen, and the more they said against him, the more I loved him and the surer I was that he was all that I would wish him to be. Wouldn't I believe Roscoe before all the world? What if folks did say he frequented the tavern? And what if his breath did sometimes have a peculiar smell? Didn't he solemly swear that he did not taste liquor? What if his family did have black sheep? Was that Roscoe's fault?

Some seem to think it is particular credit to themselves because the Lord saw fit to give them a right minded ancestry. I don't think it is right to condemn the whole flock because of the color of one, so, although I have lived to be thankful that Roscoe and I parted at last, I hold to it that his case was the exception rather than the rule.

When I look back through the mists of time, it seems to me like a silly little dream that I would like to forget forever, but it was hard to bear then, and even now the mention of his name had set me into an uneasy state of mind, and I found myself wondering how he looked, and what sort of a wife he had chosen.

Well, the next day was Sunday and I felt a little curious to see Roscoe and his family. I knew they would come to church, so I hurried Simon Andrew and went early so as to be there when they came. And they did come! I heard the old familiar step, which time had not yet changed. I felt, rather than saw, him pass our pew, followed by the click of several pairs of feet of assorted sizes.

I took a fleeting glance. And O! to think I had saved that clover leaf all these years. Did I, Rachel Welton, ever dream of marrying such a man as that? Old, gray and unkempt, with the unmistakable marks of dissipation on his face; an insignificant-looking, shabbily-dressed woman on one side and several open-mouthed, stupid-looking children on the other.

I looked at Simon Andrew, but he was contemplating the scratch he got on his boot while walking down and I knew he would be in agony till he got home and polished it over. I looked over at Deacon Hobb's widow sitting with her scapegrace of a son, that had brought the deacon's gray hairs down in sorrow to the grave. Then my eyes wandered over to the Dobson's pew where Mrs. Dobson's three-years-old boy was mussing her bonnet-strings and worrying the life out of her. I finished my survey with a glance at the Spriggins girls, "sweet and fresh as the morning dawn," brimful of life and health and fun, with the making or marring of their future lives in their own innocent hands, and I thought to myself, "I would not change places even with them." Then I fell to folding my best handkerchief, and I think I folded more of contentment into that small square before the service began, than I ever knew in my life before, and I am sure I raised a heartfelt prayer of thankfulness to Heaven that I was an "old maid."

When I reached home, the first thing I did was to throw that clover leaf into the fire which I lighted on the old stone hearth, and when the ashes and smoke went up the broad mouth of the old stone chimney they took with them the last of an old maids dream.—Anna D. Gray in Farm and Home.

San Francisco Fashions.

[Written for the RURAL PRESS by MARIE EVELYN.]

SAN FRANCISCO, April, 1892.

DEAR DAISY:—One of the most noticeable features in the new spring fashions is the preponderance of ribbons. Long streamers are worn floating from hats, shoulders and waists—from any point, in fact, to which it is possible to attach them. Skirts are lavishly trimmed with ribbon, or ribbon velvet, arranged in fantastic trellis patterns, or in plain bands strewn with bows. Many of the pretty lace flounces on the spring gowns are ornamented every few inches with bows of ribbon and hanging ends. There is nothing strikingly new in the cut of the dresses; waists are still elaborately trimmed, and skirts continue to be long and clinging. The bell skirt is perhaps the most worn at present. Nothing is more simple to make, as it is merely the plain skirt cut with the back seams on the bias, from the hem to the waist, thereby avoiding superfluous drapery being gathered into the belt, and insuring a train with less material than by cutting the back breadth plain. The bell skirt has the advantage of setting back naturally, without being tied, and of being easily gathered together to hold up. Since walking dresses have been lined throughout, instead of having foundations, it has become an absolute necessity to wear a pretty underskirt that just clears the ground. Every one who aspires to be fashionable wears a silk underskirt trimmed with one or two frills, probably because silk has the advantage of not being at all clinging, whereas a woolen skirt attaches itself to the dress and makes it a matter of difficulty to hold up the one without the other. Of course, rich and extravagant people trail their long dresses through the mud and dust, but poorer and wiser ones object to sweeping the roads with their wearing apparel.

Some of the prettiest bell skirts being worn are long and perfectly plain, save for two or three narrow frills round the edge. A few of the latest are slashed or raised a few inches at the sides, showing another material; and a new, but so far not very popular, skirt consists of two or three very deep flounces. As for waists, the more fantastically they are trimmed, the more fashionable they are. Long ruffles or ruchings hanging from the neck and wrists are much worn, so also are silk vests, ribbon bows or festooned ribbon, chemisettes, etc. A pretty dress consists of heliotrope cashmere and velvet ribbon about two inches wide. The plain, tightly fitting waist and long bell skirt trimmed with three narrow frills are of the cashmere. The collar and cuffs are of violet velvet. Across each shoulder is a strap of the velvet ribbon, kept in place by a bow. In the front, these straps go to a point a little below the waist, meeting a strap from the neck and one from under each arm. The straps that cross the shoulders almost meet at the back of the waist, where they are looped in long bows and ends that hang to the edge of the skirt.

Belts are more worn than ever. Nearly all are deep and some assume the dimensions of corsets. Short waists edged with ribbon or a puff are very fashionable, but perhaps the long blouse is newer. This is often half the length of the skirt, and while sometimes tight-fitting at the waist, is more becoming to a slight figure if made loose and drawn in with a belt.

Some of the spring outdoor jackets are made with a full loose back drawn in with a strap that is attached to the seams under each arm, and buttons at the back.

Flats and bonnets are very transparent; tinsel, jet, gilded openwork frames and many kinds of fancy straw are shown. These are extensively trimmed with flowers and festooned ribbons, and some of the streamers are so long as to make mischievous children itch to seize upon them and cry "Gee up."

P. C. W. P. A.

[Written for the RURAL PRESS by MAUD MANSFIELD S. PEASLEE.]

The work done by the Women's Press Association of this coast is quite varied in its nature.

Numbering nearly 150 from the northern to the southern limit of the coast, engaged in all the different lines included in the term, legitimate press work, their influence is very considerable.

Because of this great diversity in the nature of their work, in no other way could the concentrated force of their energy be felt.

The best good of the Pacific Coast is the earnest desire of every member, and "In Union is Strength," their unwritten motto.

The Constitution and By-laws provide for two meetings each month, on the second and fourth Mondays of each month.

The business meeting on the second Monday is often a a very lively one as the pros and cons of many disputed questions are discussed.

The strictest parliamentary rulings prevail at such times.

The social meeting is open to invited friends of the members, and highly interesting are they to all who attend.

The W. P. A. will contribute largely to the entertainment of the National Editorial Association which meets here in May. This will prevent their holding the customary W. P. A. convention in March.

The official seal of the W. P. A. is a fac-simile of the badge, the five-pointed star, bearing the initials of the Association and the date of inauguration.

It is a point of considerable interest as evidence of the high nature of the work done by members of the W. P. A., that of the eight delegates allowed them for representation at the Editorial Convention to be held in San Francisco in May, all except the President are *bona fide* active editors. The same is true of the alternates.

PERSONALS.

Mrs. Maggie D. Braniard of the Santa Clara Valley is writing an article on the Commercial possibilities of Horticulture as a profession for women of the Pacific Coast. This will soon appear in *The Californian*.

Mrs. Parkhurst has accepted a position on the staff of the *National Journalist* of Chicago. She will hereafter represent the business interests of that periodical on this coast. This however will not conflict with her duties on *The Californian*.

Mrs. Nellie B. Eyster is lecturing throughout the State on Scientific Temperance.

A goodly number of the W. P. A. are very actively engaged in work on different Boards for the World's Fair to be held in Chicago during '92.

April Jokes.

"SINGULAR idea that about our growing shorter as we grow older," said Snagg, "I don't half believe it myself." "There must be exceptions to the rule," answered Boggs. "If I should live to be a hundred, I couldn't be any shorter than I am now.—Detroit Free Press.

FRIEND.—What did he say to you when he proposed to you? Miss ROX—He said life without me meant nothing. Friend—He was sincere in that. That's just what his possessions amount to.—New York Press.

TEACHER—I am surprised that you are not further advanced. You are extremely backward for your age. Little Girl—Yes'm. Mamma wants to marry again.—Good News.

MISTRESS.—"I am surprised. You say you were married six months ago, divorced three months ago, and remarried to your husband last night." Domestic—"Yes'm. You see, at the first place he had they wanted a married man so we got married; but the next place they wanted a single man, so we got divorced and I came here. Now he's found a place where they want a man for gardening and wife to cook, so we got married again, and I'm going there with him.

PAPA: See the spider, my boy, spinning his web. Is it not wonderful? Do you reflect that, try as he may, no man could spin a web? Johnny: What of it? See me spin this top! Do you reflect that, try as he may, no spider could spin this top?—Chicago Inter-Ocean.

A LITTLE GIRL listening to her father as he read aloud from a newspaper the long string of deaths, including those of the Duke of Clarence and Cardinal Manning and Simeoni, and when he was through, she quietly observed: "Papa, it must have been a great day in heaven."

YOUNG FOLKS' COLUMN.

The Dinner that Wasn't.

[Written for the RURAL PRESS by ALICE KINGSBURY COOLEY.]

It was Easter Sunday and the mother had prepared a couple of nice pies, and the celery was washed and the cranberries cooked to a stiff jelly, so she only had to cook the turkey and vegetables and the dinner would be worth giving thanks for, and it wasn't so very wicked to have a nice dinner for the little ones after the rather restricted diet of Lent. Everything was cooking nicely, and the aroma filled the kitchen and penetrated even to the garden, where the little ones were at play; but the garden wasn't a garden now. Away up in Cisco the mountains have snow on them; yes, the road is sometimes ten feet thick with it, even in May, so instead of flowers to play with they were having a little game of snowball.

"Ah, ma, but the dinner smells nice," cried King, entering the kitchen. "I—I should like to just taste the dressing."

As the mother had just opened the oven to see how the turkey was cooking, King had a good view of it that made his mouth water.

"Hold out your hand—there, taste it."

"Ouch, ah!" and King slipped it rapidly from one hand to the other to cool it for eating.

"Oh, get a saucer," said the mother, and King was not slow to obey. The piece of dressing was soon eaten.

"Um! shouldn't I like to taste of the meat."

"Don't be bashful, dear, here's a leg," and the mother cut off a nice brown leg. This he took in his fingers, and with a mild war-whoop he went into the yard to show his good luck to the rest of the children.

"Ma'll give me a piece, I know, cried Mignonne, the little beauty of the family, rushing in.

"What is it, dear," asked the mother.

"A little tintsy piece of the lovely smelling turkey, dear ma."

"Of course," and a fine piece of the breast was placed on a saucer, and just a little cranberry sauce.

"Ain't you a sweet mother," and Mignonne took her prize into the yard too.

"That ain't fair!" cried Sailor Walker. They called him "Sailor" because he wore a blouse suit with little anchors worked in the corners, and said when he was a man he was "agoin' to join the nevvy."

"Ma, please give your sailor a piece; it smells good clear out of doors."

A wing and a piece of the breast was laid on the plate that he fetched from the cupboard. "Now a little dressing and a little bit of sauce," and he remained by the fire and ate his "bit." But it tasted so good that he asked for more, and then the twins ran in. "Turkey, mamma, turkey," they shouted, holding out their hands, and mother soon filled them with the choicest bits put on a couple of slices of bread. Then Polly came in.

"I don't think it fair you should give them all some turkey and me none," she pouted.

"Of course not, my dear," and she heaped her plate full.

"Oh, ma!" and she darted out of doors to show King that she had more than he had.

"So you have; that's just like a girl," and King went back for a second little piece and came out with a plate full; and the "baby"—but he wasn't a baby, you know, only the youngest—left off making a snow man and ran in.

"Wi, ma! give me some too," he cried, and some for Dick."

"What do you say?"

"Give me some turkey, please?"

"Oh, hold your saucer," and she piled it full.

"What's got into ma to-day?" whispered Polly to King. "I've often wanted her to cut off a bit of turkey or chicken and she never would before."

"I guess it's 'cause its Easter. Let's have a game of snowball."

"No, you build a fort and we'll make a pile of balls and we'll see who can knock it down."

So the rest of the children, including little neighbor Dick, were called, and for an hour they had a capital game; then, one by one, they slipped into the house, and this is what each one said:

"Ma, *please* give me my piece of pie, and I won't ask for any at dinner," and each got his piece and went off, so that the rest should not see. Soon they were all ready for more fun, and the "baby" said they could fire at his man, as he might want some of the good dinner that continued to tempt their olfactories as the door was ever and anon opened and shut.

"Whew! but I'm getting hungry," cried King. I wonder why ma doesn't call 'dinner'?"

After another hour, mother called them in to get ready, wash their hands and brush their hair. Then they all rushed into the dining room, where their father sat at the head of the table smiling, and a big bouquet—some friend had sent up from Frisco for Easter—in the middle, and a beautiful pyramid of mashed potatoes stood at one end, and a lovely dish of cranberry sauce, but there was only a couple of spoonfuls in it, stood at the other. Then there was stewed onions and beans—you see there are no green vegetables growing away up in Cisco in April—and in front of their father was the skeleton of an immense turkey.

As each passed his or her plate the father put on a bone, and the mother filled their plates with potatoes.

"No onions, ma," was the cry from nearly all, and "no beans" from several.

"Ain't there no gravy," asked Sailor Walker.

"No, dear, you all ate that before dinner."

"I should like a little meat of the turkey, please," said Polly, as she watched her father and mother enjoying theirs.

"You all ate your portion before dinner, my dear. Won't you have some onions?"

"Dis bone won't chew. I can't swallow it," cried "Baby."

"Here's some bread and butter that's nice," said their father.

"Give us the dessert, ma," cried the twins, and she put an apple on each of their plates.

"No, no, pie!" they cried.

"Oho! you are going back on your bargain," said their mother.

But the pie was put on the table, but there were only two pieces, so mother and father ate them. While the children looked on King and the Beauty got up disgusted; then suddenly they both burst out laughing.

"I know now, cried King, ma has been teaching us a lesson—"

"Yes, an object lesson," said Polly under her breath—"That we can't eat our dinner beforehand and then have it to sit down to and eat all the same."

So, as it was a good lesson and was to save much future trouble, their mother got them up a splendid supper, and told them one of her best stories, so that they always remembered with pleasure "the dinner that wasn't."

DOMESTIC ECONOMY.

POTATOES IN BALLS.—Boil and dry the potatoes in the usual way, and mash them quite fine, adding a little cream, pepper and salt and a small piece of butter; roll them in balls with a little flour and brown them with a little butter, or fry them.

SARDINE SANDWICH.—Remove the skin of half a dozen sardines, split and take out the bones. Spread stale slices of bread very thinly with butter, place on each two halves of the fish, squeeze a little lemon juice over them, add a crisp leaf of lettuce to each, and put a slice of buttered bread on top.

PARK HOUSE GRAHAM MUFFINS.—Four eggs, one teacupful of brown sugar, two tablespoonfuls of melted butter or lard, one-half teacupful of good yeast, a pinch of salt, two quarts of graham flour, milk enough to make a stiff batter. Mix, and let it rise over night. In the morning, fill the muffin rings half full, and bake in a quick oven.

GOLD CAKE.—Rub a generous half cup of butter to a cream, add a teacupful of powdered sugar, the beaten yolks of four eggs, and half a cup of milk, in the order given. Sift together a pint of flour, half a teaspoonful of salt, and a teaspoonful and a half of baking powder, and stir it into the mixture. Beat until perfectly smooth, add a teaspoonful of lemon extract, and bake in a shallow tin, lined with buttered paper, from 20 minutes to half an hour, in a steady oven, being careful not to open the oven door suddenly upon it. Powdered sugar sifted thickly over the top, just before baking, improves its appearance, or you can cover it with icing. Cut it in square blocks.

ROLLS.—Into a pint of milk put two tablespoonfuls of butter. Let it come to the boiling point. Dissolve a cake of compressed yeast in a coffee cup half full of cold water. Sift two quarts of flour into a wooden bowl. Add one tablespoonful of sugar, one teaspoonful of salt. Pour in milk and yeast, and mix together; but do not add any more flour. Do this over night. Roll out and cut and put into baking pan, and allow it to rise until ready to cook it. Never lift the cover to look at it, because it chills the dough.

VANILLA KISSES.—Half a pound of pulverized white sugar, the whites of six eggs, one vanilla bean. Pound the bean in a mortar until it is completely pulverized. Whisk the eggs to a stiff froth, add the sugar very gradually, then stir in the vanilla. Drop the mixture on white paper so as not to touch each other. You may make them any size you choose. About a dessertspoonful makes a pretty sized cake. Take care to have them sufficiently far apart. Place them on tins with several thicknesses of stout paper under them, set them in a hot oven, and as soon as they have a tinge of brown, take them out with a broad-bladed knife, slip them off the paper, and place the under sides of two together.

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	1 Week.	1 Month.	3 Months.	1 Year.
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Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

Saturday, April 16, 1892.

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[NEW THIS ISSUE.]

Engines, Boilers, Pumps, Etc.—Byron Jackson.
Farm Implements—Deere Implement Co.
Vehicles and Harness—California Wagon & Carriage Co.
Horse Sale—Killip & Co.
California Illustrated Magazine.
Sheep Dip—Shoobert, Beale & Co.
Plants, Bulbs, Seeds, Etc.—Theodosia B. Shepherd, Ventura.
Cocoanut Meal—L. G. Sresovich & Co.
Sheep—Wilmans Bros., Newman.
Agents Wanted—Oregon Indian Medicine Co., Corry, Pa.
Harness—Liebold Harness Co.
Land for Sale—Pecos Irrigation & Improvement Co., Eddy, New Mexico.
Tanks, General Mill Work, Etc.—P. A. Buell & Co., Stockton.
Rakes—Baker & Hamilton.
Hay Presses—Geo. Ertell, Quincy, Ill.
Poultry—W. O. Bowen, National City.
Thrashing Engine for Sale—T. Liliencrantz, Aptos.
Horticultural Position Wanted—Harvey C. Stiles, San Diego.

☞ *See Advertising Columns.*

The Week.

Our fruit crop has taken a good step forward this week. Apricots are coming on fast and thinning should not be neglected. Peaches are also coming out of their baby fur, and they too, must have space enough on the twigs to assume good size. There was two much small fruit last year; in fact there is too much small fruit every year. As soon as it is well set, thin it out. With peaches especially, some of this work should have been obviated by twig-shortening at pruning time.

Reports are still of reduced fruit crops at the East this season. The March frosts did great injury, and the situation has not been improved, we supppose, by the April 1st blizzards. This means that the East will want more California fruit, and they can have all they want if lower freights and faster time can be had. It will be the great event of the week, if it be true as remarked, that 30 San Franciscans have subscribed three millions to push a new non-combine non-sell-out kind of a railroad, clean through to Salt Lake. It is either Salt Lake or Salt river with some of our prospects about these times.

Artesian Wells.—The Superintendent of Census has sent to press a bulletin on artesian wells for irrigation, prepared by Mr. F. H. Newell, special agent in charge of statistics of irrigation. The total number of artesian wells on farms in June, 1890, in the States and Territories forming the western half of the United States, numbered 8097, representing an estimated aggregate investment of $1,988,-461.26. Of that number, 3990 are employed in irrigation. The average depth per well is 210.41 feet; the average cost per well, $245.58; the total discharge of water per minute, 440,719.71 gallons, or 54.43 gallons per well per minute; the average area irrigated per well, 13.02 acres; and the average cost of water per acre irrigated, $18.82. Over one-half of these wells are in the State of California, where 38,378 acres of agricultural land were irrigated by artesian water. Utah stands second in the number of artesian wells used for irrigation purposes, and Colorado in the area of land thus irrigated.

The Protest Against the Canal.

We have received a long letter from Mr. William Pool, of Fresno, being in effect an indictment of pretty much the whole of American history in recent times. Scarcely anything has been done, in Mr. Pool's judgment, which has not been done wrong. He is at present alarmed lest the crowning act of national maladministration shall be effected through Government aid to the Nicaragua canal project. We can only print that part of Mr. Pool's letter which criticises an article recently published in the Rural concerning the canal. Mr. Pool apparently does not understand the proposition. He ought to know that the canal company is a private organization, that it has already spent five or six millions of dollars in furthering its plans, and that it will complete the work whether the United States Government aids it or not. The important question now before the American people is whether the work shall be done under conditions that will make it vastly more expensive than it ought to be, and leave the canal subject to foreign control when completed, or whether it shall be done in the cheapest possible way, and when done, remain under the control of the United States. If the canal company shall be left to its own resources, it will seek financial aid in the money markets of Europe, and in that event it will have to pay heavy bonuses of stock, all of which must be represented in the capitalization of the company when the canal shall be finished. To get returns upon this excess capitalization, there will be heavy charges against tonnage using the canal; and just as the canal charges are increased, the value of the canal to the commerce of the world and incidentally to the people of California, will be diminished.

Mr. Pool and every other producer is interested in having the canal built for the least possible money, because the cost of its construction will forevermore be figured in the price of his wheat, his fruit, his wool, or whatever else he produces, and which must seek a market beyond the range of the State. Furthermore, if the money with which the canal is built comes from England, then the control of the canal will remain with England. In this day and age of the world, whoever puts up the money for any project, directly or indirectly, bosses the job. And, if we Americans want to control this canal, we must not permit it to be built with British gold.

It is manifestly of the greatest importance that the canal should be built as cheaply as possible, and that when built it shall be subject to control by Americans in the American interest. And for these reasons, it is very generally desired that the United States Government shall promote the work; that is, that it shall so assist the canal company as to enable them to carry on their project. This is the purpose of the bill now before Congress. We entirely agree with those who criticise this bill as not sufficiently protecting the interests of the Government, and we would have it materially modified before it becomes a law. There should be no question as to the Government's control; and we believe those who drafted the bill and those who were most earnest in advocating it, will gladly readjust it to meet this criticism. But we cannot fail to see what evidently Mr. Pool fails to see; that for the Government to take the project and make it its own absolutely, is a practical impossibility.

The fault of Mr. Pool and those who stand with him is that they are demanding what cannot be done at this time. The Government cannot take up the project and make it its own, because there is at the present no sentiment in the country that would support such a violent change in our national policy. If either party were to attempt so complete a departure from all precedent, it would surely be beaten at the next election. Therefore, neither of the great political parties would dare to attempt this thing. Consequently, it will not be done. To insist, therefore, that the Government shall do this work, absolutely, is to insist that it shall not be done at all.

Obviously, as we look at it, the only practical thing to do is to secure such modification of the present bill as will completely secure the interests of the Government in the canal. Nothing more is practicable, and those who demand more are asking for the impossible. The Rural Press regards the canal as a most important thing. It considers, in fact, that it is the thing most essential for the interests of the Pacific Coast. It believes that the canal should be built cheaply, and it holds that when built, it should be controlled in the interests of the United States. It does not seek impossibilities. Therefore, it most heartily supports the project of governmental aid, provided always that the interests of the Government be adequately and permanently protected.

The Cooper Olive Oil Property.—The negotiations for the sale of Elwood Cooper's ranch to an English company, which have been pending since January, have been perfected. Forfeit money has been paid, and the ranch will hereafter be known as the Elwood Syndicate (limited). The purchase price is said to be $200,000.

The Price of Prison Bags.

At the last regular monthly meeting of the State Prison Directors, held at San Quentin on Saturday, April 9th, an effort was made by J. D. Huffman, C. H. Wakefield and J. L Bercher Jr. representing the Grangers of San Joaquin county, to have the price of San Quentin grain bags reduced, the applicants claiming "that 7⅞ cents is too high and that the price should be slightly above actual cost to the State." In reply to the Grange Committee, Director Develin is reported to have presented a statement showing that the actual cost of each bag at present produced is upwards of ten cents. He says:

The factors entering into the cost of a bag are, with jute at the present market price, 5¼ cents per pound; cost of the jute in a bag, 4.76 cents; spinning and weaving, 1.733 cents; sewing, 2-10 of one cent; baling and shipping to San Francisco, 15-100 of 1 cent, the total cost of manufacturing one bag being 6.843 cents.

The cost of the maintenance of the 420 men who work on bags at 45 cents per day, each for 365 days, should be $68,935; the wear and tear on the machinery worth $250,000, at three per cent per annum, equals $7,500. Interest at four per cent on the $250,000 invested in the machinery of the jutemill equals $10,000 yearly, making the total cost of the present yearly output of 2,500,000 bags, $257,560, or a little more than 10 cents each.

Director Develin's statement shows a most remarkable increase in the cost of manufacturing, or else he deals with data which is not based on facts. The jutemill at Oakland manufactures this year grain bags at a profit with the price not exceeding seven cents a bag and the company pays for its help. Why cannot the San Quentin prison bags be manufactured at a profit even with the market price below seven cents? The labor, outside of three or four persons, it is claimed, is done by prisoners, the only expense being for their maintenance, and this should not be much if any over 30 cents a day for each hand, and not 45 cents, as claimed by the Directors. This opinion is grounded on official reports, which show that in 1873 the cost of maintaining a prisoner was 53⅓ cents a day, which fell by degrees to 32½ cents a day in 1881. The above cost included subsistence, clothing and pay of officers. It is only reasonable to conclude that the cost now does not reach the latter figure (32½ cents), since many articles of food and clothing are now sold much cheaper, while none are sold any higher than they were in 1881.

As to the price of jute (5½ cents per pound) claimed to have been paid for that used at San Quentin this year, it seems unreasonably high. In 1889 the market value of jute in India was materially advanced, owing to a short crop, yet the State Prison Directors then in office contracted for jute at an average of four cents per pound delivered at San Francisco; adding the duty of 20 per cent, the material did not cost over $4.80 per 100 pounds. With jute coming in free of duty, and the price of jute in India in 1891 not showing any material advance over that which ruled in 1889, we fail to see where the extra cost, about 1½ cents per pound, comes in.

In the Rural Press of February 15, 1890, the cost of grain bags was placed as follows:

To manufacture 1000 standard-sized, 13-ounce grain bags, it takes nearly 900 pounds of jute (this includes waste), which, at 4 cents a pound, costs for the raw material alone about $3.60 per 100 bags; add to this the expense of maintaining prisoners, and it brings the cost of the bags up to about 5½ cents each.

To substantiate the above, that the cost at that time was not placed too low, we give the following excerpt from a communication on this subject from Hon. D. A. Ostrom, which appeared in the Rural of April 5, 1890:

Being a member of a Special Committee of the Senate and Assembly of 1889, I was in position to gain much knowledge as to the actual cost of sacks at San Quentin prison, and also in regard to the way in which they reach the farmer. * * * * It is is in evidence before the committee mentioned above that bags can be and are manufactured for 5 cents apiece or less. One witness testified that they could be manufactured for considerably less (4.3 cents).

When the establishing of a jutemill at San Quentin for the manufacture of grain bags by prison labor was nnder discussion, Hon. George C. Perkins was Governor of California, and in his several messages to the Legislature on the subject, he advanced the argument that it would give employment to prisoners and make them self-sustaining, and, at the same time, break the grain-bag ring. After the mill was in successful running order, in his biennial message to the Legislature, twenty-fifth session, 1883, Governor Perkins said:

The success of the jutemill is now assured; not only are its products superior to the usually imported article, but our farmers can congratulate themselves that the sack monopoly is effectually destroyed.

The above makes it clear, as stated in the Rural Press of Feb. 15, 1890, that the object in establishing the State Prison jutemill was twofold, viz., the turning out of grain bags at cost (covering the expenses of the State Prison) and to break the grain bag pool or monopoly in the interest of farmers—both very important considerations; besides which, it would give to prisoners a trade that can be utilized to advantage after having served out their term of imprisonment. It is the general belief that the jutemill was established to lower the price of grain bags, which justly causes farmers to feel sore over their knowledge that the establishment is run as a money-making scheme in the interest of the State, by making them pay a good margin over and above the cost of manufacture.

Reciprocity and the Farmer.

Hon. Hilary A. Herbert, Chairman of the House Committee on naval affairs, gives in the April *North American Review* the findings of a study of "reciprocity" in its relations to the interests of the American farmer. He writes as a free-trader and deals with results as they already appear. Our reciprocal arrangement with Brazil had been nine months in operation on December 1st of last year, and from reports of that date he shows that in the period of nine months we sold to Brazil $4,682,546 in agricultural products against $5,208,001 as compared with the same months of the preceding year before the rule of reciprocity. Here is a falling off in our exports of farm products under the reciprocal arrangement of $525,455 in nine months. During the period in question Brazil bought of us $2,009,000 of other than farm products more than during the corresponding period of 1890.

The conventions covering Cuba, Puerto Rico and San Domingo went into operation September 1, 1891, and Mr. Herbert gives the statistics covering our trade with these countries under the agreements for the four months ending December 31st last. Grouping these three with Brazil, and aggregating the trade with them all under reciprocity, as compared with that of corresponding periods for the previous year when we had no commercial arrangements, we have the following results:

1891. Exports other than agricultural to reciprocating countries	$12,016,066
1890. Exports other than agricultural to reciprocating countries	7,892,531
1890. Increase under reciprocity	$ 4,123,535
1891. Export agricultural products to reciprocating countries	$ 7,832,531
1890. Export agricultural products to reciprocating countries	7,321,057
Increase	$ 511,474

This shows a gain in the sale of farm products under reciprocity of seven per cent, whereas the increase in the exports of other products, principally manufactures, is a fraction over 39 per cent—not a flattering result from the farmer's standpoint. Viewing these facts as they relate to the interest of the farmer, Mr. Herbert concludes that this "is not fair and profitable reciprocity."

Of course, the judgment of one who writes as Mr. Herbert does, giving only such facts as support his own theories of the subject, and having partisan rather than economic ends in view, should not be too readily received.

It is yet too soon to give judgment. It is not in the nature of things to demonstrate either the wisdom or folly of commercial conventions between distant nations in the fractional part of a year. Two, three or five years may tell a very different story. However, the figures as they now stand make interesting reading, and it will not be surprising if they check the ready popular acquiescence in reciprocity, won for it not less by its own good-sounding name than by the credit of its author Mr. Blaine. It is the obvious fault of the reciprocal plan that it proposes to deal with nations which, like ourselves, have abundant and cheap lands, and which, in the warfare of commerce, are more likely to be our rivals than our allies. Those who are hoping and looking for economic results rather than political effects will calmly wait for results, in the meantime reserving their judgment.

The Farmer in Politics.

What the farmer has to do with politics and whether he is to have any more to do with them than every other good citizen should have, are questions of no little importance. It is manifestly the duty of every honorable man to exert his full influence in behalf of good government, and against all extortions and abuses. Whether the farmer can fulfill his duty in this respect better in one way than another, is a fair subject for thought, discussion and action, and sayings which are striking and suggestive are interesting and sometimes valuable. The following, which Secretary Rusk is reported to have said to a N. Y. *Herald* reporter, is in that line:

The new organizations of the farmers are an indication of the growth of their intellectual life. They are thinking for themselves and their ideas show that they are awake and that they are studying their own interests. I am glad to see it. I think the country is to be congratulated upon the awakening interest which they have in political affairs, and I believe that they are by their numbers and their peculiar position, especially well fitted to serve as a balance wheel in political matters. Extremists may be found in their ranks as in the ranks of all other classes, but in our future the capitalist will learn to trust the farmer as a man who owns property and can never be a communist; and, on the other hand, the laborer will have a confidence in him as a workingman who will never become a monopolist. I do not apprehend that the farmers will ever be a political party of themselves in the United States. Their interests are wrapped up in those of the rest of the country, and their success forms the foundation of the success of all classes and all industries. They will continue to support such great ideas and public questions as come before the country, and the differences of opinion will be as great among them as among the members of the other classes. They are the most conservative element of the United States. They do more honest thinking than the people of the towns. They generate public sentiment, and the majority of them is seldom wrong.

There is a good deal to think about in those few sentences.

The State Press.

Bodie *Miner:* "Experience has demonstrated that flaws in and evasions of our present naturalization laws render it necessary that there should be greater safeguards about American citizenship."

Oroville *Register:* "Bad roads cost the farmer each year $15 for every mule and horse he has in his employ. This means a loss to the farmers of this country of $250,000,000 dollars. Bad roads cost the farmers of Butte county an enormous sum, for double the number of animals must be kept that would be required if we had first-class roads. With good roads there would be a vast saving in the wear and tear of vehicles and teams could haul larger loads with less exertion."

Colusa *Herald:* "Although according to Sec. 1083, a native born 21 years of age, who has been a resident of the State one year, is entitled to vote, yet if he attains his majority a few days after the great register has been printed, he is thereby disfranchised until he is 23 years of age. The same section confers citizenship upon a man coming from another State after a residence of one year, but if he arrives one month after the great register is printed, it requires two years before he can vote."

Sonoma *Democrat:* "Altogether the San Francisco postoffice war is one of the queerest episodes of that queer city. They howled for a postoffice site and got it within a block of their city hall. As soon as they got it they jumped on it and began throwing mud at everybody connected with getting it. They will probably get a new site and will jump that and throw more mud. There is no such thing as cooperation in San Francisco to help a public enterprise. It is every man for himself, and he wants it all. This is true in trade and commerce, in politics, postoffice sites and all else that would promote the general welfare of the city. It is unwise policy and has done much to retard the growth of the city in the past and, unless changed, will do more in the future."

Fresno *Republican*: If the Southern Pacific Railroad Company has acquired title to several thousand acres of land in this county now occupied by settlers, who have taken up the land under the homestead law and in good faith fulfilled, or are in process of fulfilling the requirements of the law, why was not a notification served upon the settlers some time ago, instead of taking a snap judgment proceeding demanding their appearance in Los Angeles within a few days after the service of the subpœnas? Many of these men have expended every cent they have the means of getting in improvlng these lands, and it would be almost impossible for some of them to get to Los Angeles on such short notice. It looks very much like an attempt to take a despicably mean advantage of men who are practically defenseless."

President Jordan on Fish Interests.

San Francisco, April 12, 1892.

To the Editor:—In a lecture before the Sportsman's Club, early in April, were brought out many facts of interest bearing upon an important source of food and revenue not generally appreciated. From a scientific standpoint, it was shown how nicely each species was adapted to its surroundings. A slight change in depth or temperature of water involves a fish of different structure. No depths have yet been explored where some kind of fish does not exist. Those which inhabit great depths are subjected to an immense pressure, and are flexible in proportion. Some of the specimens were as limp as dish-rags. More than 400 distinct varieties inhabit our coast, and among them about 130 are used as food. In this food product there are many sources of waste. Some of these arise from ignorance or carelessness regarding conditions of propagation. The Chinese in San Diego supposed that fish that only inhabited the bay came in as freely as the water, and that it was as absurd to talk of destroying the supply of one as of the other. Others claim that fish are destroyed in the bays and rivers by dragging nets outside by which no fish are taken of the varieties that run in the rivers and harbors.

Many tons of fish are wasted every year by taking more than the market demands, and many are wasted by careless methods and foul stalls where they are marketed. The consumption of fish might be considerably increased by methods to make them more attractive and palatable.

In other countries, fishermen have wells connected with their boats where the fish are kept alive until called for. The fish markets are along the water front. The buyer selects his fish when living. It is taken out for him and killed by a sharp stroke just back of the head as soon as removed from the water. Fish kept in this way have a superior flavor. Again, it would be a great improvement if ice was more generally used in keeping fish. In many of the stalls, a vast advance is possible in cleanliness. Buyers are not likely to prove eager customers where the appearance of the market disgusts them.

FISHING AS A COMMERCIAL VENTURE.

Many outfits are very poorly equipped. There is room for a great improvement in boats and tackle. Again, when those regularly in the trade have a good season, many amateurs are tempted to make ventures next year on borrowed capital. This overstocks the market with the most dangerous sort of competition. Their catch must be forced upon the market to satisfy those who have loaned money, and prices are broken. In one instance, a man new to the business brought in his catch in a foreign vessel, subjecting him to a tariff of $2800. The fish brought $500 at a forced sale, and were spoiled from improper curing when they reached the market to which they were consigned. In spite of many instances of similar discouragement, we inferred that there is a vast field for development in this industry, and that it may help to sustain a greatly increased population. Adequate capital should be managed by those having practical knowledge of the habits of the fish and requirements of the markets. They should also have approved appliances.

F. S. Chapin.

The Canal Project.

Fresno City, April 10, 1892.

To the Editor.—In your issue of March 26th, on the first page of the same issue, I noticed an article headed "Foolish Opposition." Upon reading the article, I find that certain farmers are accused of opposing the Nicaragua Canal scheme. In all my intercourse with farmers, both in and out of the Alliance, I have never found a dissenting voice against the project, but simply dissent against the Government aiding a private corporation to complete the canal. They are unanimous in favor of the canal, but want the Government to own and control it in such a manner that it cannot be subsidized against our interest, as the Southern Pacific has done in the past. We all know that the Government aided and assisted in building the Central and Southern Pacific, which should have been a blessing to the Pacific Coast, but have been a grinding monopoly.

They have subsidized the Northern Pacific and steamer lines with their ill-gotten gains, and in turn themselves were subsidized by Claus Spreckles when the Government effected a free trade with the Sandwich Islands and he monopolized the sugar trade and subsidized in such a way that their freights were so heavy on Eastern sugar that it could not be brought here and sold at a profit; consequently the people of this coast have been in the hands of Claus Spreckles ever since, as far as sugar is concerned. He charges the people of this coast more for sugar than he does the people of Chicago and New York, after transporting it there. Hence, you can see it is high time the people are kicking, and kicking hard, too. If the Government builds, owns and controls the canal, and it is run in the interest of the people, you will find no farmer or producer kicking. The farmer has lain still and said nothing too long.

* * * * * * * * *

Don't say that the farmers are protesting against the canal project. We are against the scheme to make the Government go in partnership with a lot of these Shylocks and put up all the money, and, after it is built, then they (Shylocks) get the benefit at the expense of the farmer and laboring classes. No, no, we are a little too enlightened for that. The Southern and Central Pacific R. R. have opened our eyes. We don't want any more, and by the eternal we are not going to have it, and don' you forget it. I tell you the day of reckoning is close at hand, and don't you forget.

Wm. Pool.

National Legislation for Forest Conservation.

Washington, March 27.—Before the joint Sub Committee on Agriculture and Forestry and Public Lands at the meeting yesterday, Mr. Fernow, chief of the Bureau of Forestry in the Agricultural Department; Mr. Brewer, Secretary of the Forestry Association; and Mr. Ogden of the Forestry Division of Timber in the Interior Department, were heard. Mr. Fernow presented the bills which had been drafted by himself and Brewer, covering the points under consideration by the joint Sub Committee, one of which will probably be adopted unanimously.

The particular measure is "for the protection and preservation of the public forests of the United States," and it may be said to fully meet with the approval of the joint committee.

It provides that all lands heretofore proclaimed by the President, under the Act of March 3, 1891, as forest reservations, or that may hereafter be set aside as such, shall be exclusively controlled by the provisions of this Act for protection and improvement; that there shall be established in the Interior Department a Commissioner of Forests who shall be versed in matters of forestry and who shall be appointed by the President; that he shall have sufficient assistants to enable him to enforce the provisions of this law; that rangers shall be employed on every reservation, not more than one for every ten thousand acres of reservations, to act as police, to prevent trespass and fires, to apprehend trespassers. These rangers shall issue permits and shall supervise the cutting and removal of timber, and shall be under the direct control of a superintendent and live near the district assigned to their supervision.

The Secretary of War shall make such details of trooops as the Secretary of the Interior, with the approval of the President, may require for the additional protection of the reservations. Officers on reservations shall have commissions as Deputy United States Marshals. The Commissioner of Forests shall cause a survey and description of the lands in the reservations to be made, shall formulate rules and regulations for the preservation of reservations, which rules and regulations shall be posted in public places and published in newspapers.

Persons desiring to occupy reservations longer than one day shall be required to obtain a permit from the superintendent or other officer in charge, and shall strictly obey the regulations. There shall be no restrictions to prevent prospecting for minerals, but no exclusive right to prospect, hunt or fish shall be given. The opening of mines shall be permitted only under licenses granted by the Secretary of the Interior. Pasturage may be leased by the superintendent, when desirable, under restrictions. The construction of water reservoirs, ditches and other necessary adjuncts of irrigation works may be permitted by the Secretary of the Interior, but no roads or trails shall be opened by any one except as designated by the superintendent.

All cutting of wood on reservations is to be under a system of licenses, and every year, on or before the first of April, the superintendent of reservations shall make a report in regard to areas on which timber may be cut under licenses, the same to be advertised for bids not later than July 1st. Timber for domestic purposes shall be had by means of a prospector's license upon the payment of $2, or by a settler's license to any bona fide settler having any timber on his claim upon like payment. Applications for licenses are to be numbered in their order of receipt and acted on in the order of their filing, and the licenses shall be nontransferable.

Such timber on forest reservations as the commissioner shall decide is not needed for mineral or agricultural development, in the neighborhood, shall be disposed of to lumbermen or others who may apply for it under lumbermen's licenses in quantities not less nor more than that standing or being in one section, or that standing or being on 25 contiguous sections, such licenses to be granted upon a fee of $25, and $1 an acre to be paid for the timber before operations are begun.

The bill provides in detail for the disposition of all timber, wood, etc., and provides amply against frauds and misrepresentation. Absolute jurisdiction is given over the reservations to the United States authorities. The punishments to be imposed for violations of the law are fixed, and provision is made for the enforcement of the law and the detection of frauds. The complete revenues derived from licenses, rents, fines, etc., are to be used in part or whole payment for expenses incurred.

The bill proposes an appropriation of $500,000 for the beginning of operations under its provisions.

PATRONS OF HUSBANDRY.

The Week.

The past week has been rather a dull season in the Grange canvass. The Worthy Master has been temporarily out of the field, and Past Master Overhiser has been practically the only member of the canvassing force actually at work. Of his meetings, Hon. Geo. Steele writes from Edna as follows:

"Our meeting at the Arroyo Grande on the 4th was a great success. Bro. Overhiser exemplified the work in a closed meeting in the morning, and in the afternoon there was a feast and an open meeting. Bro. Overhiser told us what the Grange has done and what it is now doing. Bro. Webster treated the money question and the transportation question in a very able, clear and entertaining manner. Everybody went home well pleased. A new interest has been created in the Grange work and cause by this visit."

The Secretary of the Arroyo Grande Grange, writing of this same meeting, characterizes it as the best field day the Grange ever had, and one that it will always remember.

This current week opens up the picnic season, the first of which was to have been held on the 14th by Enterprise Grange, in Sacramento county. The Worthy Master is booked for this occasion, and other prominent Grangers will be present. It is impossible to print a report, since, in going to press two days in advance of its date, the RURAL will be in process of printing while the picnic is in progress.

The next picnic will be under the auspices of Chico Grange, April 30th. Yuba City Grange will have its picnic May 4th; Pacheco Grange, Contra Costa county, will celebrate May 2d; Pescadero, May 7th; Glen Ellen, May 7th; Dixon, May 6th; Merced, May 14th. The dates of the Two Rock and Lodi picnics have not yet been named, but will be about the middle of May.

These spring picnics will have unusual importance, since they will, in a measure, partake of the interest excited by the current Grange canvass. Speakers prominent in the Order and distinguished for ability, will be present at each of them, and whoever attends may be sure of an attractive program.

Reports from Lodi up to April 9th speak enthusiastically of the meeting held on the previous Wednesday. Among the speakers were Daniel Flint, Past Master B. F. Walton, member of the State Executive Committee, Mr. McConnell and others. They discussed the leading questions of the day in their relations to the farmer, and urged the necessity of thorough organization in order that the farmer should occupy his proper influential place in the direction of national as well as of State and county affairs, and also in order that he may better himself.

The hospitality shown the visitors was of the warmest, and Grange sentiment was never more earnest and cordial in San Joaquin valley than at the present time.

A note from Yuba City states that a letter has been received from Gen. Chipman of Red Bluff, accepting the invitation of Yuba City Grange to deliver an address at a picnic and reunion to be held there on May 4th. Worthy Master Davis has also signified his intention of being present, and elaborate preparations are being made for the day.

The Secretary of the National Grange reports the number of the New Grange at Madera to be 300.

The following Granges have reported to the Secretary of the State Grange for the quarter ending March 31st: Santa Cruz Two Rock, Lodi, Santa Rosa, Bennett Valley, Yuba City, Eden, Glen Ellen, Eureka, Stockton, Merced, Lockeford Valley, California, Waterloo, Sebastopol, Kibesillah, Enterprise, Washington, San Jose, Tulare, Pescadero, Selma, Danville, North Butte, Woodbridge, Watsonville, Pilot Hill, West San Joaquin, Florin.

PUBLIC GRANGE MEETINGS.—Temescal Grange meets at 10 A. M. Thursday at I. O. O. F. Hall, Oakland, and Eden Grange at I. O. O. F. Hall, Haywards, on Friday of this week. Both have harvest feast at noon and invite all farmers and others interested, to public meetings in the afternoon. E. W. Davis, Master, and S. T. Coulter, P. M., will speak at both places. Past Masters I. C. Steele, and Daniel Flint and Mrs. C. E. Kinney are also expected at one or both Granges.

A Good Circular.

Mr. A. P. Martin, County Deputy for Sonoma county, has issued the following attractive circular. Although sent out only for Sonoma county, it applies with equal point to every other county in the State and is worthy of the widest circulation:

Wanted—A score or more bright, active, sensible farmers' wives, daughters and sweethearts to help organize a Grange in Petaluma, and, as all the ladies on farms in this county are of the above named, the invitation embraces any or all the farmers' wives, daughters and sweethearts in this vicinity.

Ladies, the Grange is for you. It is preeminently a social order. Do not imagine that it is a dull, uninteresting meeting, where cows, cabbage and cultivation are the only subjects discussed. On the contrary, a Grange can be made one of the brightest and most interesting of assemblings. The range of subjects coming before you is almost limitless, embracing the home, the school, care of flowers and fruits and all the diversified industries and amusements peculiar to a farmer's life.

The Grange tells you how to make home brighter and happier, how to lift up and embellish your calling.

By bringing you together and comparing notes and experiences a new life is infused, a new zest is added to your daily vocations. A higher and a nobler womanhood is infused into your being. The little cares and worries that by isolation and brooding are magnified into real afflictions, are blown away as the mists of a morning, when you come into the Grange home.

The homes on too many farms are like prisons to the female members therein. By constantly doing the same thing daily and yearly, without change or recreation, in the same old treadmill style, their natures become narrowed and cramped, failing to develop into that full fruition that the creation intended. But when they meet weekly in the Grange their horizons are broadened, their thoughts are lifted up to the better and nobler things of life, and they thereby become better and more competent companions and helpmates to their husbands Then talk to your husbands and brothers about the Grange. Talk it up among yourselves and be ready on the 11th of May to organize a good rousing Grange in Petaluma.

Next week I will have something to say on this subject to the lords of creation.

A. P. MARTIN,
County Deputy.

From Oregon.

Reports from Oregon indicate an exceptional interest in the State meeting which comes in May. It is anticipated that the attendance will be even larger than ever before, and there is a cordial anxiety on the part of our web-footed brethren that there shall be a goodly number of visitors from this State. Worthy Master Davis has partially accepted an invitation, and the chances are favorable for his attendance. There is no definite information that others will go with him, but it is hoped that there will be a considerable party. Those who have visited the Oregon State Grange on former occasions remember most gratefully the pleasant attentions paid them, and can cordially recommend this excursion to all who wish for a good time and who would like to see a lovely country at its loveliest.

The meeting will be held at Albany, in the heart of the Willamette valley, and only three hours distant from Portland.

LEGISLATION BEFORE CONGRESS.

Turner (Oregon) Grange recently adopted memorials to Congress which were forwarded to Senator Mitchell, and the following letter from him addressed to the Master of the Grange is given to the public.

My Dear Sirs:—I beg respectfully to acknowledge receipt of memorials from Turner Grange, No. 18, praying Congress to pass the following bills:

1st. To prevent gambling in farm products, known as "options" or "futures."

2d. To prevent the adulteration of food and drugs, and

3d. Defining lard and imposing a tax thereon.

All of which shall be brought to the attention of the Senate and the appropriation committee, and each and all of which bills has my cordial support. I am very respectfully,

(Signed) JOHN H. MITCHELL.

(*Continued on page* 365.)

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A 15 horse power Payne. Has been used but little and is in first-class condition. Cost $900. Will sell for $500 on account of having no use for it. For particulars address

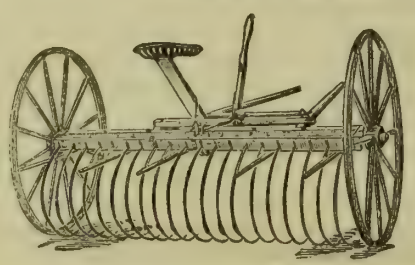
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SEND FOR CIRCULAR.
E. P. HEALD, President.
C. S. HALEY, Secretary.

NOTICE OF ASSESSMENT.

GORDON ORCHARD AND VINEYARD COMPANY, Location of principal place of business, San Francisco, California; location of works, Hanford, Tulare County, California.

Notice is hereby given that at a meeting of the Board of Directors, held on the 22d day of March, 1892, an assessment (No. 2) of $2.00 per share was levied upon the capital stock of the corporation, payable immediately in United States gold coin, to the Secretary, at the office of the Company, 111 Front Street, San Francisco, Cal.

Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

CHAS. MERSFELDER, Secretary.
Office, 111 Front Street, San Francisco, California.

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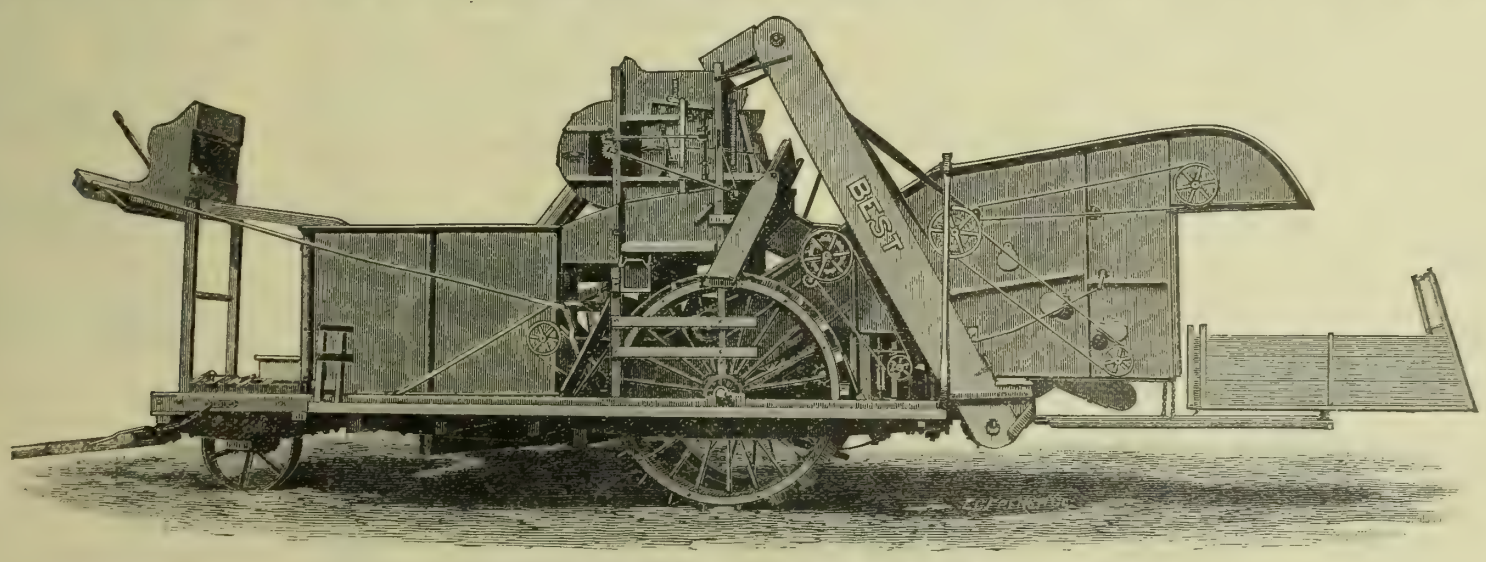
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NEW MODEL COMBINED HARVESTER

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THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

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And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS.

SAN LEANDRO, CAL.

The Field.

Methods and Cost of Drainage.

[By Miss L. H. Hatch at the Fresno Farmers' Institute.]

On a former occasion I presented to the Farmers' Institute ten good reasons why farmers should drain their land, namely:

Drainage deepens the soil; assists pulverization; prevents surface draining; lengthens the season for labor and vegetation; permits absorption of fertilizing substances from the air; supplies air to the roots; warms the soil; improves crops; prevents drouth; increases crops.

For these good reasons draining will be prosecuted because of its pecuniary profit. Yet in a larger view of the case there are advantages of greater moment than its mere money profit. "It is the foundation and the commencement of the most intelligent farming." "It opens the way for improvements, which without it would produce only temporary benefits." Plowing the land, planting the seed and trusting to the chances is drudgery, but to one who studies the causes of success or failure and strives to overcome everything that interferes with his success, he ennobles his profession and renders it the most progressive of industries.

By request of the members of your Executive Committee, who believe in the necessity of agitating the question of drainage both for profit and health, I bring you a compilation of facts from the writings of Waring and French concerning the methods and cost of drainage. The history of land-draining is a history of the gradual progress of an improvement, and, like all improvements, has become more valuable than was at first conceived possible. The earliest devices for opening a conduit for surface water, such as brush drains, sod drains and mole plow tracks, have each performed their mission and given place to the more expensive yet more economical tile drain.

We may wisely consider, first, the method of open drains, as they are sometimes practicable and necessary for temporary purpose, and while convenient at the outlet of our tile drains, yet their expense in excavating, cleaning, the loss of space they occupy, the hindrance in plowing and cultivating the land, together with their lack of permanence, renders them undesirable except as a last resort. The worst of all drains is an open ditch of equal width from top to bottom, as all open drains should be sloping. When lands are too wet to ditch properly, at first an open ditch may be employed for drawing off part of the surplus water. Again, in sloping districts where water runs in large quantities at certain seasons, open ditches may be a necessity; yet for permanent improvement and economy there is nothing as good as well-laid tile drains.

ESSENTIALS TO DRAINAGE.

To insure a well-laid tile drain, three essentials must be considered: 1st. A free outlet for the discharge of all water which may run through it. 2d. That it has an opening at its joints sufficient for the admission of all the water, which may rise to the level of its floor. 3d. That its floor is laid on a regulated line of descent, so that its current may flow uniformly through its whole length. Too great stress cannot be laid on the carefulness and completeness of this most important operation. The system of drains must be first laid out by a practical surveyor or engineer, one who is skilled in laying out an economical plan for draining agricultural lands, staking out lines, determining the grade of the drains and the size of the tile to be employed. This is no place for amateur work. The work of tile drainage needs skilled labor and the greatest care. Preliminary details may not be expected in this paper, but as any imperfect work would add heavily to the expense and insure failure, it may not be amiss to introduce them.

1st. Let a map of the land, on a scale suitable for the purpose—say of 50 to 100 feet, locating the line of equal elevation—be made from careful survey and observation in the field. With this map, one can prepare a system of drainage, mature a plan for the work with the least expenditure of labor and material, and insure a rapid and satisfactory execution of the work. This work accomplished, these special points must be considered:

1. Where and at what depth shall the outlet be placed,
2. What shall be the location, the length and the depth of the main drain.
3. What subsidiary or collecting drains.
4. What depth, what distance apart, what direction and what rate of fall of the lateral drains.
5. What kind and sizes of tiles should be used.
6. Making provision for preserving the drains from any obstruction.

The outlet should be at the lowest point of the boundary, and deep enough to take the water from the main drain, and should, if the fall is sufficient, deliver the water over a step a few inches in height to prevent its being clogged by any growth or gathered mud.

The main drain should be run as nearly the lowest part of the valley as can be, and made straight. The main should continue from the outlet to the most convenient point for collecting the remote submains which gather the water from several sets of laterals.

The collecting drains should be placed on the line first reached by the water flowing directly over its surface, before it commences its lateral movement down the valley, and have, if possible, a uniform descent for its whole distance.

Lateral drains are important factors in the drainage system, and on their arrangement depend the economy and success of the undertaking.

The depth of drains has been fixed by the most experienced as four feet, and if any one fact connected with tile drainage is established beyond a doubt, it is that the stiffest clay soils drain four feet deep effectually.

The distance between the drains is not so well established as the depth. In tolerably porous soils, 40, 50 and even 60 feet is considered near enough for four-foot drains; but in compact clay soils, all distances from 15 to 50 feet are recommended. Many circumstances affect the distance apart—the nature of the soil, climate, cost of labor and materials, as well as the depth, as in a porous soil, the rule is, the deeper the drain, the farther it will drain.

The direction of the laterals should be right up and down the slope of the land, in the line of steepest descent, always remembering that by the force of gravitation, water constantly seeks a lower level; and the whole object of drains is to open lower and still lower passages into which the water may fall lower and lower until it is discharged to a safe depth.

The fall required in well-made tile drains is very much less than would be supposed. It is desirable, whenever practicable, to have a fall of one foot in 100 feet; one-half of that amount of fall, or six inches in 100 feet, is quite sufficient if the execution of the work is carefully attended to. The least rate which it is prudent to give in using ordinary tiles is 2½ feet in 1000 feet, or 3 inches in 100 feet. Some of the drains in Central Park have a fall of only one foot in 1000, and they work perfectly.

KINDS AND SIZES OF TILES.

Drain tiles are made of clay similar to that which is used for bricks, molded by a machine, and burnt in a furnace, as hard as hard-burnt bricks. They are usually a foot long, with an interior diameter of from one to eight inches, with thickness of from one-fourth inch to more than an inch. The water enters them, not through the walls, but at their joints, which cannot be made so tight that they will not admit the very small amount of water that will need to enter at each space. There are several varieties: The "horseshoe tile," the "sole," the "double sole" and the "round" pipes and collars. Practice and experience both prove the best yet invented is the pipe or round tile and collar.

The usual sizes are 1½ inches, 2½ inches and 3½ inches in interior diameter, running on to 8 inches. The 1½ or 1½ inch are recommended for the smallest drains, and they are considered ample for the draining of two acres after a very heavy rain. It is well to use the smallest that will effect the object which is to convey the water which will ordinarily reach it after a heavy rain. Drains that are 40 feet apart require 1000 feet of tiles per acre; those that are 50 feet apart, 860 feet of tiles; and 60 feet apart require 750 feet of tiles. Tiles should be hard-burned, and if they do not give a clean ring when struck with a metallic edge, or if the edge is easily cut, it should be rejected.

For the discharge of water through the tiles of different sizes, this statement is made as perfectly reliable for drains four feet or more in depth, laid on a well-regulated fall of even 3 inches in 100 feet.

1½ inch pipes with collars will drain 2 acres.
2½ inch pipes with collars, 8 acres.
3½ inch pipes with collars, 20 acres.
5 inch sole tile, 40 acres.
6 inch sole tile, 50 acres.
8 inch or two 6 inch, 100 acres.

PREVENTING OBSTRUCTIONS.

For preserving the drains from obstructions, such as silt, vermin and roots, every precaution should be taken.

When possible no drain should have a decreasing rate of fall, as it approaches the outlet. Silt becomes dangerous when it is accumulated within a short distance, by a decreasing fall or by a badly laid tile, or imperfect joint, as it arrests the flow, but this is easily overcome with a silt basin or chamber below the grade of the drain and by the use of muslin bands.

To prevent vermin from entering the pipe, a coarse wire cloth or grating in front of the outlet hinders them.

There are water-loving trees, willows, elms and swamp-maples, whose roots will force their entrance into the joints of the tiles. This may be guarded against by allowing no young trees to grow near a drain. Gisboom, an English authority, affirms that roots never obstruct a pipe through which there is not a perennial stream.

COST OF DRAINAGE.

Drainage is expensive work, and as facts are stubborn things, this must be accepted at the start, and he who hesitates at this argument, will do nothing, yet as compared with building and maintaining fences it is a small matter.

The items of cost include

1. Engineering and superintending.
2. Digging of ditches.
3. Grading the bottom.
4. Tiles and tile laying.
5. Covering the tile and filling ditches.
6. Outlet of silt drains.

English tables of cost of drainage, give an estimate of $1.25 per acre for superintendence which includes engineering, supervision of opening, laying tile and filling ditches, securing outfalls and all other incidental work, till it is complete. The general estimate of cost of labor is $25 per acre of which the excavating and filling are the chief expense, yet that depends on the nature of the soil. A four-foot drain in moist soils need be only 20 inches at top and 4 inches at bottom, giving mean width of 12 inches, then with labor at one dollar per day, the cost per rod will vary from 20 to 50 cents per rod.

Tiles at the Albany N. Y. tile works are for sole tile and round pipe the same, 2 inch tile $12 per thousand; 3 inch tile $18; 4 inch tile $40; 5 inch tile $60; 6 inch tile $80; 8 inch tile $125, and are estimated to lay about one foot each 1000 tiles, that is, 1000 tiles lay 1000 feet of drain.

At Lincoln, Placer county, Cal., tiles are manufactured at the following prices. The round tile, 2 inch diameter $25 per thousand; 3 inch diameter $30; 4 inch diameter $40; 5 inch diameter $60; 6 inch diameter $90; 8 inch diameter $150.

From these statements it is evident we cannot have cheap drainage till we can have cheap tiles, and we can have cheap tiles only by having them made with the most perfect machine and at the lowest price of computation. It is stated that there are parties who will enter into the local manufacture of tile if they have adequate encouragement.

For outlets, about 37 cents per acre is ample, and collars if used, are about half the cost of the tiles, yet as smaller tiles can be employed and a drain with 1½ inch tiles with collars is no doubt better in any soil than 2 inch tiles with collars, there is compensation at once.

The cost of laying tiles after the trench is dug is only two cents a rod, and our author (French) believes an active man may lay from 60 to 100 rods per day. We will assume labor at one dollar per day, tiles at $10 per thousand and ditches four feet deep opened and filled at one-third of a day's labor, the principal items of the cost of drainage by the rod, thus: Cutting and filling per rod, 33⅓cents, tiles, 16⅔cents—$3.50 per rod. Then with drains at 42 feet distance (62 5-7 rods per acre) the cost will be $31.42 per acre; at 30 feet (88 rods per acre) $44; at 60 feet $22.

Or taking half the number of rods per acre in dollars, the cost is found.

WILL IT PAY?

To answer this question is somewhat difficult, for we have not demonstrated the fact but it will be undoubtedly true, here, as in other sections of the world where crops have been doubled by under-drainage.

I will cite one case which proves the benefit of under-drainage. Mr. John Johnston, a venerable Scotch farmer in the wheat region of western New York, who was almost the pioneer of tile draining in America, has laid over 50 miles of tile draining in 30 years. He is a hardworking man who began poor and borrowed money to drain his land, and has reaped the benefit of 40 bushels of wheat to the acre, while his neighbors were harvesting on undrained lands, eight, ten or 15 bushels to the acre. His testimony is that tile draining pays for itself in two seasons, sometimes in one, and that he never made money till he drained his land.

I might add hundreds of well established cases, but time will not admit and this is sufficient. Draining makes the farmer, to a great extent, master of his vocation. What is true of wheat is equally true of rye, barley, fruit and vegetables.

For practical application, we will assume that the cost of draining an acre here is $60. As labor, tiles, and the fall of less than one foot to the thousand will add greatly to our expense, from this standpoint let us ask, will it pay? Our soil is considered unusually fertile, worth the best methods of cultivating by deep plowing, ample manuring and thorough working. Our climate is exceptional, and our returns from each acre sometimes generous. With all these advantages, our crops are subject to damage from disastrous changes of weather. The interest on $60 at eight per cent, is $4.80, the yearly charge on the land for the benefits accruing. Will the benefits accruing from one year to another, in wet seasons and in dry, from hay, grain and root crops, and from fruit, not only in quantity but in quality, be worth $4.80 per acre? What is not profitable in farming is not practical, and there is no doubt that each acre will produce enough, and more by draining, to counterbalance this added cost. To obtain these advantages, our land must be drained, and how shall we reach it? England protects her farmers by legislation. In America where individual right is usually compelled to yield to the good of the whole, we are behind England in legal facilities for promoting the improvement of land culture. Possibly it is because attention has not been especially called to that subject.

In closing, let me suggest, that by petition or any way that is practical, the attention of our supervisors or the legislative body of the State of California, or both, be drawn to this matter because of its necessity and because of the pecuniary inability of the farmers to carry it on under circumstances and conditions which widely prevail.



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WILL TAKE PLACE AT THE

SOUTHER FARM,

NEAR SAN LEANDRO, ALAMEDA COUNTY, CALIFORNIA.

The Sale includes the **ENTIRE COLLECTION OF BROOD MARES, COLTS AND FILLIES.** Only the Stallions, Work Stock, Road Animals and Pensioners will be retained. The business of Boarding, Training and Swimming Horses will be carried on more completely than ever.

Stock will be shown on two Saturdays, April 9th and 16th. Sale takes place on

WEDNESDAY, APRIL 20, 1892.

Promptly at Noon, rain or shine. Lunch at 11. Sale and Lunch under cover if it rains.

THERE WILL BE SOLD

Colts by Glen Fortune, Mountain Boy, Figaro, Jester D., Etc.

Fillies by Sydney, Wildnut, Dexter Prince, Etc.

Brood Mares in Foal to Glen Fortune, Mt. Hood, Jester D., Figaro, Etc.

Young Horses that will make Splendid Road Animals, Single or in Team.

EVERY ANIMAL PUT UP WILL BE SOLD without limit or reserve, exactly after the manner of the First Souther Farm Sale.

ON EXHIBITION DAYS, April 9th and 16th, Saturdays, take 12 o'clock broad gauge boat from foot of Market Street, San Francisco, connecting with San Leandro train, which leaves First and Broadway, Oakland, at 12:30. Special train leaves City at 9:30, Oakland at 10 on sales day.

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AGRICULTURAL ENGINEER

A Ship Canal for the San Joaquin Valley.

[By I. H. HARDING, before the Fresno County Farmer's Institute, April 9, 1892.]

It is a trite saying that "God helps those who help themselves." When we look around upon the broad and grand landscape lying north, south, east and west of us, does not the question revolve in our minds whether providence has not done more for this people than they are doing for themselves?

This vast and fertile valley, with its gently receding level dropping away from the foothills of the lofty Sierras, where nature's great storehouse holds untold millions of life-giving wealth, all wanting but the touch and direction of man to give up its boundless treasures.

It does not need the poet's pen nor artist's brush to portray or paint a scene to fill us with admiration, wonder and reverence. None can look upon those mighty mountains, wrapped in their mantle of snow, and then upon these plains of purple, gold and emerald green, without adoring the God of nature and rendering thanks for his bounties. But the practical question arises: Do we utilize all these advantages and forces so bountifully supplied by nature? Are we taking advantage of our favored surroundings, to lay any solid foundation for continued and permanent prosperity? Or, are we not rather looking only to the present, and give little heed to our future welfare.

The experimental stages through which we have been passing during the past few decades, render a partial excuse for lack of interest in all that is essential to our continued and future prosperity. The practical solution of one problem is closely followed by another that demands more than a passing consideration. Intelligent application of water upon the rich valley soil has worked miracles in the agricultural and horticultural industries of our county; but have we given proper heed to the evils that may arise, or even have arisen by the excess of water that has percolated through the porous soil and filled the substrata, up to and over many of the low levels of land, creating marshes and even small lakes upon the plains?

This unavoidable rise of the subwater level over the area of lands, so abundantly supplied with it for irrigation, is leading to a question of serious moment, and some means must be devised soon to hold in check or draw off the surplus through a proper system of drainage canals, with an outlet upon the lower level of the valley, or be utilized in a waterway for the transportation of our products to the seaboard.

The proposed ship canal, connecting this part of the valley with the river below and thence to tide water, would not only give the proper outlet for a drainage system, but would repay all cost as a waterway and competing line of transportation to the present system that continues to levy an almost prohibitory tribute upon all our industries, and makes it almost imperative on our part to rise en masse in our desperation and shake off the galling chains.

The building of a ship canal is no new question with our people, and it would seem that no great proof were required to show the benefits that would be derived by it. Conventions have been held, plans proposed and the great good to the people has been discussed, and the whole question made seemingly plain. But has anything tangible, or anything tending to a practical solution of the proposed enterprise resulted from all these conferences, or must it end in simple discussion and talk?

How much longer must this people be oppressed and ground down by a soulless monopoly, that gets the price of our commodities and then fixes a rate to absorb the profits? How many more thousands and hundreds of thousands hard-earned dollars must we dump into their coffers before we will take courage and turn into a channel that will give us the much-needed relief? To promote an enterprise of this kind is not in the nature of a speculation, but fostering that which will give direct relief from tyrannical oppression.

The building of a ship canal from Fresno, or any point upon the lower portion of our irrigated country, to the river, is not only feasible but practical, and would add millions above the cost to the wealth and prosperity of our county. What has been the universal answer to all our petitions, appeals and appointed committees to make this city a terminal point for shipping and receiving freights?

It has always been: "We can't accede to your request until there is competition by rail or waterway." "We cannot deviate from our established rule, though your patronage amounted to millions." Is not an edict like that sufficient to establish the fact that there will be no permanent relief for us until some other and independent route of transportation is established for our products.

The question has been asked, Where will be the necessary supply of water needed for a canal heading so far out from any natural channel? I think there would be little difficulty in obtaining an abundant supply for all needed purposes of a ship canal at least 60 feet wide and from 10 to 15 feet deep. The serious question that even at the present time is confronting the horticulturist is how to check the continual use of the subwater level, and save the inundation of established orchards and vineyards as well as large areas of agricultural lands. Since the first irrigation canals and lateral ditches were built and the water turned upon these plains, there has been an annual rise of the water level toward the surface, until at the present time thousands acres of valuable lands are standing lakes, or marshes filled with rank and decaying vegetation, emitting unhealthy odors and malarious poisons. Also thousands of valuable fruit trees and vines have perished on account of too much water and tne excess of alkali driven to the surface by the same agency.

Now, this being the case, it would seem the proper remedy to cut canals through the lower levels, paralleling the irrigation canals as near as possible (as they are generally carried upon the higher ground) and draw off the surplus, dropping the water level to the desired depth and holding it in check, using the ship canal as an outlet for our drainage system and utilizing the surplus water to supply the canal.

Those who are acquainted with the geological formation of our valley say that the top soil rests upon a deep stratum of sand and drift, that this in turn rests upon a substratum or ledge of clay that seems almost impervious to water. That the water level is very uniform throughout the irrigated portion of the valley, and it has been noted that in a very short period after water is turned into the irrigation canals and lateral ditches, that the rise in the water level is apparent, showing conclusively that there is one solid body of water under the whole area of irrigated lands and those contiguous thereto.

When such a condition of things exists whereby we can gain such direct and immediate benefits, both commercial and industrial, adding so much to the wealth, permanent prosperity and health of our country, it is only a matter of wonder that we are not more alive to these questions, and are not up and doing that, and that only, which will give us the greatest relief and the greatest benefits of any undertaking we could promote or carry to a successful end.

We are confronted upon one hand with a grasping, tyranical monopoly, holding us in its iron grasp, and will so continue until we rise in open rebellion, or devise ways and means independent of it to transport our products to the seaboard. On the other we are confronted with the apalling fact that our country is being slowly but surely inundated by an excess of water rising to the surface and destroying by its agencies millions of valuable property. You may consider this strong language, but you cannot dispute the fact that every country that has adopted an extensive system of irrigation without proper drainage has been nearly, if not hopelessly, ruined in course of time.

No people in any part of the world has been surrounded with such advantages or has prospered as the people of this valley in the last few decades. It has been almost spontaneous, and we must not now rest upon our laurels, but must push onward and upward, ever on the alert, taking advantage of surroundings, and place our industries upon a solid and permanent basis.

This can only be accomplished by standing man to man, putting our shoulders to the wheel, lifting ourselves out of the slough of despond and upon a higher plane of substantial and lasting prosperity.

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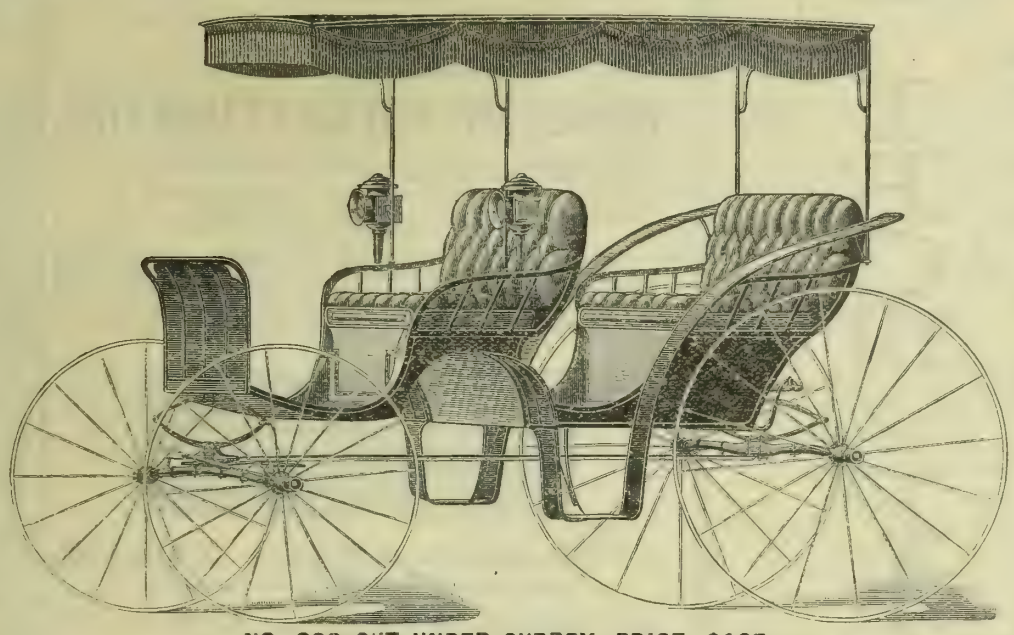
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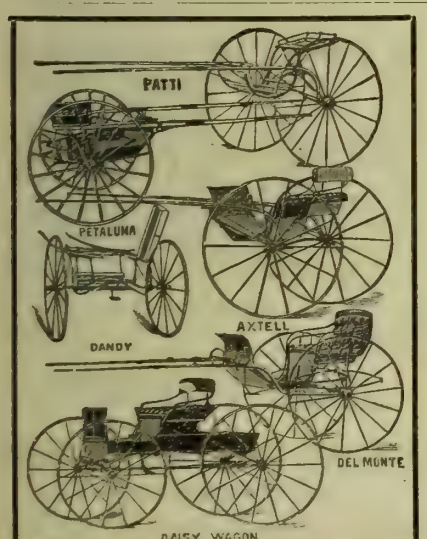
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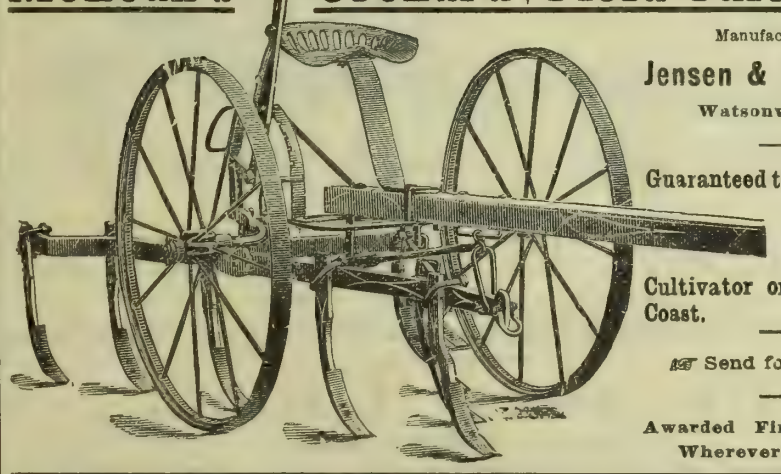
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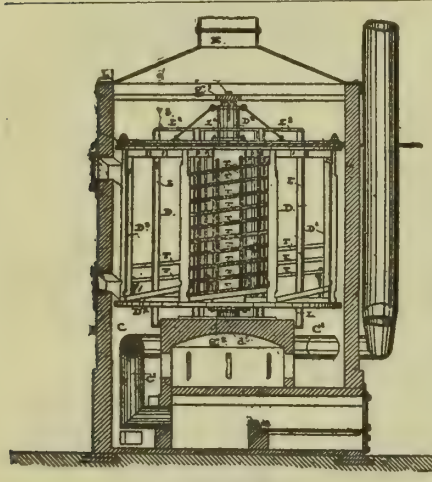
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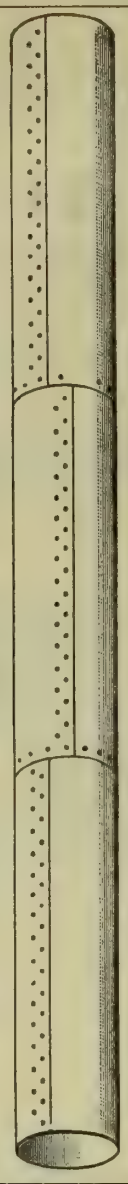
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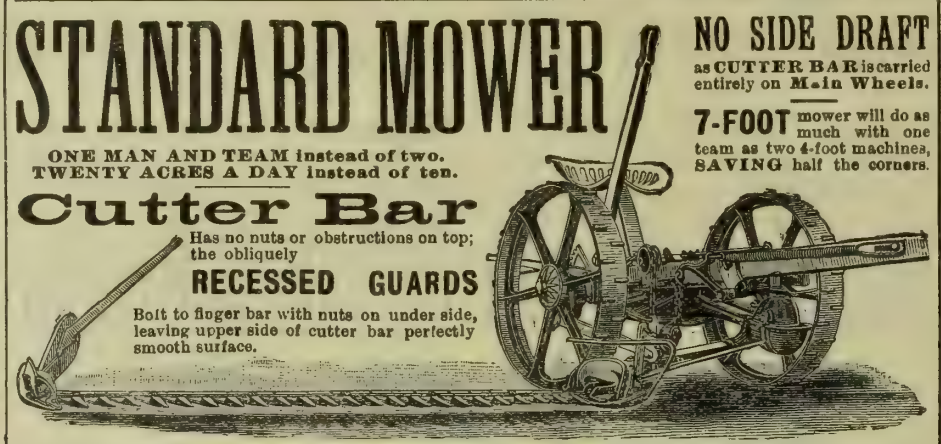
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The Canal Matter.

The RURAL PRESS is among those who hold that the attitude of President Cannon toward the Nicaragua canal (which seems to be identical with that of Mr. Wm. Pool of Fresno, whose letter we print in our editorial page) is practically in opposition to the Nicaragua canal. However, as we intend to be perfectly fair and give not only our own view of the matter, but that of those whose ideas or motives may be different, we pladly print the following from the Ventura *Observer*, seeking to defend President Cannon's position:

Mr. Cannon, as president of the State Farmers' Alliance, declares that any man who is opposed to the construction of the Nicaragua canal is a fit subject for an insane asylum, and he further declares that anyone who is in favor of building it with Government money and turning it over to a private corporation is also a fit subject to be locked up in a lunatic asylum. He says further that there are thousands of people in this State who look upon such a person as more of a criminal than a lunatic, and the proper place to lock him up is in San Quentin.

The bill before Congress does not give the stockholders the right to select the board of directors, but places it in the hands of the President of the United States to appoint six directors to represent this country and the Government of Nicaragua to appoint one to represent it. This leaves eight in the hands of the Maratime Canal Company. In this way they propose to take the control out of the hands of this Government. In the memorial to Congress they strike out the words *build* and *manage*. The bonds that they wish the Government to indorse will run for twenty years. In other words will not become due until the expiration of that time, and according to a ruling of the Supreme Court of the United States in the case of the Central Pacific Railway the Government could not collect a dollar, either in principal or interest, until the expiration of twenty years. We repeat that President Cannon is not opposed to the Government building the canal, but simply wants it to control it. And if the Clayton-Bulwer treaty, which was made nearly 40 years ago, stands in the way, let it be abrogated. This can easily be done by the United States informing Great Britain that it desires it. The fact is any impartial observer can easily see that a class of interested men about San Francisco want to slip through Congress a bill to build up a great monopoly that will generate a crop of millionaires at the expense of this Government.

ALAMEDA ALLIANCE MEETING. — The Alliance met in the new and neat brick hall, at 10 A. M. on Saturday last, at Irvington. Among the speakers from abroad were D. C. Vestal and G. B. Johnson of San Jose, C. W. Pedlar of Gilroy, J. M. Moore of San Francisco, and Mrs. K. L. Nevins of Oakland. After lunch an open meeting was held, at which political reform matters were enthusiastically discussed by the several speakers above named and Dr. C. S. Lane and M. L. Gray of Oakland. At the afternoon session, H. R. shaw was selected to attend the coming meeting of the State Executive committee in San Francisco next week, whenever the subject of incorporating and capitalizing the State Alliance shall be discussed (according to the recommendation of some other County Alliances). It was voted to hold the next meeting at Pleasanton, on such Saturday in July as the Pleasanton Alliance may designate.

THE TRAFFIC ASSOCIATION ENDORSED. At a meeting of the San Luis Obispo County Alliance at Templeton, on April 5th, a set of resolutions were printed, from which we excerpt the following:

Resolved, That we appreciate and endorse the work of the Traffic Assocfation of San Francisco in their efforts to reduce freight charges.

CONCERNING ASSESSMENT.—At a meeting of the Monterey Co. Alliance, held on the 8th inst., the following resolution was adopted:

WHEREAS, There is reason to believe that in making up the assesement roll of this county, the assessor does not assess the small property holders on the same basis of valuation that he does the large holders; therefore be it

Resolved, That Equity Alliance instruct its delegates to the County Alliance to use their votes and influence to have the County Alliance appoint three members to look over the assessment roll of this county to see if such is the case.

AN ALLIANCE ENTERPRISE.—The San Miguel flour mill, started by the Alliance, seems to have worked a complete reform in its immediate neighborhood. Concerning it, the Watsonville *Pajaronian* says:

Since the Alliance flour mill started at San Miguel, flour has been cheap in that part of the Salinas valley. The Central Milling Co. has cut the price to crowd out the farmers' mill, and the fight is being watched with interest to see if the projectors of the opposing mill will patronize it at a higher price than is asked for similar products by the old company. Some of the Alliances of that section have instituted a boycott against the flour of the Central Milling Co., and will not patronize dealers who handle it.

SAN JOAQUIN RESENTS THE AFFRONT. Reviewing the proceedings of the Nicaragua Canal Convention, recently held in San Francisco, the San Joaquin Co. Alliance has resolved as follows:

That it is the sense of the San Joaquin Co. Alliance in session assembled that the Alliance throughont the State was outraged by the insult to its State President.

AT a recent meeting of Monterey County Farmers' Alliance at Salinas, a recess was declared, during which (under authority of Salinas Alliance)—by request of Alliances from different parts of the county—candidates were initiated by officers of the County Alliance, in the presence of the delegates and visitors. Good music and speaking by Prof. Fairweather and wife added much pleasure to the session.

NOTES.—The People's Party Central Committee of Alameda County met at Irvington, April 9th, and elected G. W. Kraft as a member at large. R. A. Downing was appointed to lead in the matter o holding a People's Party Picnic at Livermore next month. The members of Washington township were requested, if feasible, to arrange for a picnic in the vicinity of Niles, or elsewhere in the township.

The holding of a picnic near Oakland will be discussed by the Oakland Central Club. The County Committee will meet at 3 P. M., at Oakland, April 23d, a public meeting, with speakers from abroad, to be held in the evening.

GEO. T. ELLIOTT, of Hollister, an able speaking farmer, will address the people at Byron, on Friday night, April 15th, after the close of the Contra Costa County Farmer's Alliance quarterly meeting.

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It is the equal, typographically, of the best Eastern magazines, and from a literary point of view, it is more interesting to the people of California than any other publication we have yet seen. This magazine is a credit to the editor aud publishers.

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It is the best effort in the magazine line yet attempted in this State. It has a local triune and every promise of success.

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The most distinctively Californian of any magazine ever published west of the Rocky Mountains.

Los Angeles Journal
The success of the publication is assured, for the Pacific Coast has long waited for a magazine of some literary merit, and will not be slow to appreciate it, now it has materialized.

Ventura Observer
We commend this beautiful monthly to the readers of the *Observer*.

Pasadena Star
Has earned for itself a place within the pale of American magazine literature.

Santa Clara Valley
Up to the full standard of a high-grade magazine.

Woodland Mail
Is finely gotten up and compares very favorably with its Eastern competitors.

St. Louis Observer
Starts off with articles of a high literary character, showing that there is a great deal of enterprise behind it.

Hartford Post
Among the best literary monthlies of the country. It is well illustrated, and the fact that it comes from the extreme western border of our land gives it additional interest.

Eureka Standard
It maintains the high standard which its initial number indicated . . . The magazine takes rank among the first in the Nation.

New Orleans Picayune
The CALIFORNIA ILLUSTRATED MAGAZINE is a welcome addition to the usual monthly file, and shows that the West Coast in matter and manner is not far distanced by the East.

New York Christian Intelligencer
It certainly is the leading magazine of the Pacific Coast.

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New York Christian Advocate
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New York Congregationalist
It is bright and enjoyable in substance and externally attractive.

The California Crown Vista
Equal to the leading magazines of the East.

Coast Advocate
It ranks with the leading magazines of the country—equal in tone, contents and appearance to any of the Eastern productions.

Los Angeles Porcupine
At last we have a distinctively Californian Illustrated Magazine, in which we may take a just and pardonable pride. THE CALIFORNIAN for April is a number that should be found in every home in the State.

The Antioch Ledger, Cal.
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Monterey New Era
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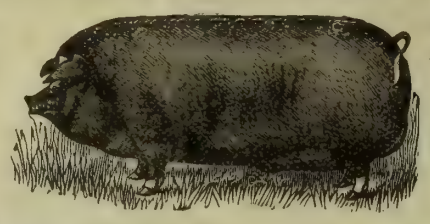
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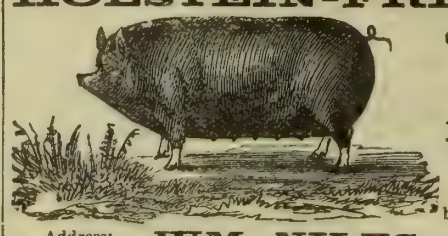
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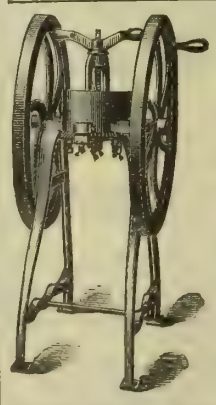
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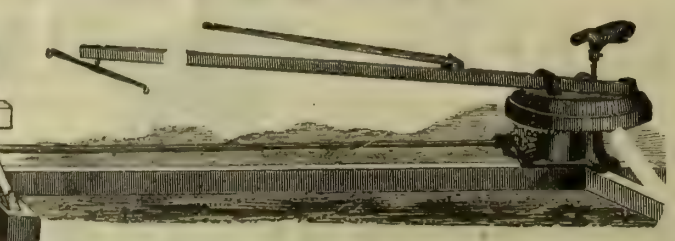
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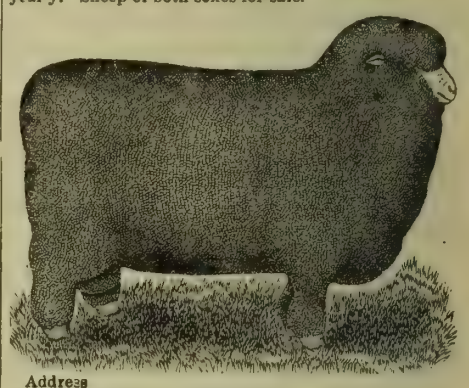
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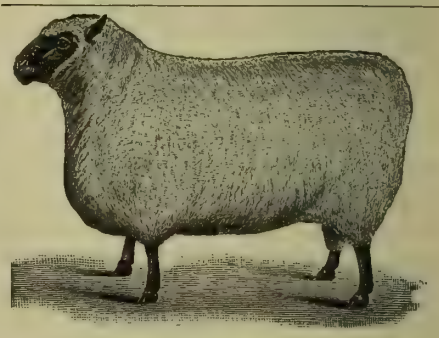
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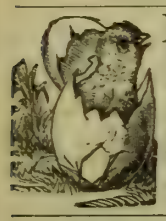


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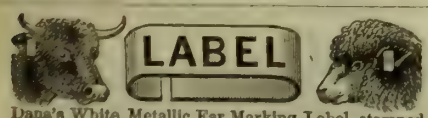
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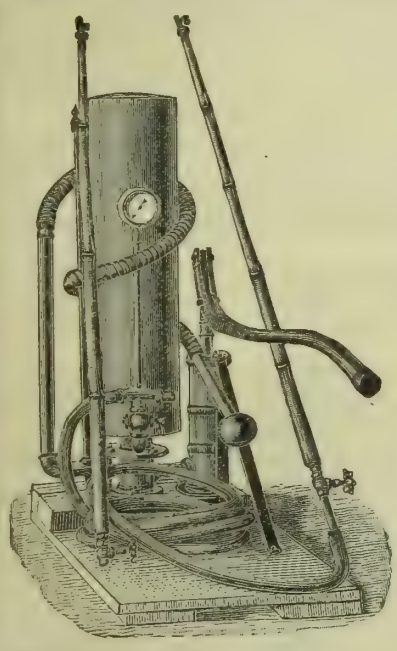
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 13, 1892.

General trade continues stagnant. Crop prospects are being closely watched. The weather will continue throughout this month an important factor in directing business ventures. With favorable crop weather up to toward the middle of May, there can be no doubt but renewed activity will be witnessed in all branches of trade. The local money market continues easy, with no free inquiry reported from any particular source, speculative or otherwise.

Foreign Grain Review.

LONDON, April 11.—The *Mark Lane Express* says: English wheats are steadier at 32s, but holders are not willing to sell at these low figures. Foreign wheats are a shade firmer, but there is a small prospect for values advancing, owing to enormous stocks and influx of arrivals. The average weekly imports of wheat and flour since September is 437,000 quarters, against 352,000 quarters weekly during the preceding year. The chief increase was from Atlantic points, amounting to 221,000 quarters this year against 79,792 last season. Corn is a turn dearer; barley and oats are dull; beans and peas are 3d cheaper. At today's market foreign wheats were better; holders of American flour ask 1s more, but is not often obtained.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June.	July.	Aug
Thursday	....	7s02 d	7s01½d	7s01 d	7s01½d
Friday	7s03¾d	7s03½d	7s02 d	7s03½d	7s02¾d
Saturday	7s04¼d	7s04½d	7s04½d	7s04 d	7s04 d
Monday	*7s05½d	7s03½d	7s01½d	7s01½d	7s01½d
Tuesday	7s04¼d	7s02 d	7s00½d	7s00½d	7s00½d

No. 2 Red Winter will be quoted hereafter, and not No. 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. O.	P. S.	N. D.	
Thursday	35s6d	35s6d	35s6d	Steady. Weather fine.
Friday	35s9d	35s9d	35s9d	Steadier.
Saturday	36s3d	36s3d	36s3d	Firm.
Monday	37s0d	36s9d	36s9d	Buyers hesitate to operate
Tuesday	36s9d	36s6d	36s6d	Depressed, weather colder

To-day's cablegram is as follows:

LIVERPOOL, April 13.—Wheat—To press sales less money would have to be taken. California spot lots, 7s 5d; off coast, 36s 9d; just shipped, 36s 6d; nearly due, 36s 6d; cargoes off coast, steadily held; on passage, rather more inquiry; Mark Lane wheat, firm; French country markets, weaker; weather in England, cold and wet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug.
Thursday	158⅜	153⅞	150	150	148¾
Friday	163	158	154⅝	155	151⅞
Saturday	164⅛	159⅜	156⅛	156⅛	154⅛
Monday	157⅛	153¾	151⅛	151⅛	152⅝
Tuesday	155	151¼	149⅝	149¾	148¾

The following are to-days' telegram:

NEW YORK, April 13.—Wheat—91½c for April, 92½c for May, 91½c for June, 91½c for July, and 90⅝c for August.

CHICAGO, April 13.—Wheat—81c for May, and 81½ for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	153⅜	152⅞	....	....	139½	138½
Friday	157	155	....	....	....	....
Saturday	156	154½	143½	143½	....	....
Monday	154¼	151½	....	....	139½	138⅜
Tuesday	152½	151⅜	....	....	139½	138⅜

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal session: Buyer season—100 tons, $1.53⅜; 200, $1.53½; 800, $1.53⅜ ₩ ctl. Regular session: Buyer season—100 tons, $1.53½; 500, $1.53½; 400, $1.53⅜; 1000, $1.53⅜; 800, $1.54; 700, $1.53⅜; 100, $1.53¾. Seller 1892—800 tons, $1.40; 200, $1.39⅞ ₩ ctl. Afternoon—Buyer season—100 tons, $1.53½ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	*May H.	L.	June. H.	L.
Thursday	110⅞	105½	....	....	....	....
Friday	112	109	90	89½	....	....
Saturday	110	110	....	....	....	....
Monday	105	100½	....	....	....	....
Tuesday	101½	100½	....	....	....	....

*New crop.

The following are to-day's recorded sales on Call:

Barley—Morning—Informal session: Buyer season—400 tons, $1.02½; 100, $1.02. Seller 1892 new—200 tons, 90c ₩ ctl. Regular session: Buyer season 400 tons, $1.01½; 300, $1.01½; 100, $1.01½; 100, $1.01½. Seller 1892, new—100 tons, 89½c; 100, 89½c ₩ ctl. Buyer season—800 tons, $1.01½; 100, $1.01½; 200, $1.01½; 200, $1.01½; 100, $1.01½; 100, $1.01½ ₩ ctl.

Markets by Telegraph.

Eastern Dried Fruit Market.

NEW YORK, April 12.—Several good lines of unpeeled peaches have turned up, offered at 6c to 7⅓c. The activity in prunes has subsided. Fifties and sixties hold at 9c, other sizes are ¼c off; sixties to seventses, 7⅞c; seventies to eighties, 7¼c; eighties to nineties, 6¾c; nineties to one hundred, 6¼c; small, 5@5½c. Raisins are neglected in a wholesale way. There are sellers of three crown bags at 4½@4¾c. Apricots are steady at 6c for common to 7¼c for fancy sacks. Boxes range from 7c to 9c. A good grocery outgo is noted.

CHICAGO, April 12.—Choice large prunes are fair of sale and steady; small are quiet. Some lots a little damp are offered, and these are slow and easy. Choice peaches are of moderate sale and steady, but small lots, tail ends of complements, are full and slow. Apricots are of moderate sale, and choice nectarines and pears are quiet.

Fresh Fruit Market Prospects.

NEW YORK, April 12.—George L. Threlkel of Newcastle, Cal., is here in the interest of Coast fruits His statement that they are promising well and will be early, is a welcome one to the trade. A half-crop estimate of our peninsular peach yield is now accepted by some trustworthy investigators.

Eastern Hop Markets.

NEW YORK, April 12.—Hops made a strong general advance on Thursday, the new figures being well supported at the close. Choice are scarce, a few being released to the home trade. English cables are strong. Exports for the week are 123 State and Pacific 91's, at 23c to 30c; common to choice olds 7c to 12c. There were brisk dealings in the futures, the closing bid and asked being: March, 27½@30c; June, 28¼@30¾c; July, 28¾@31c; August, 27c bid.

NEW YORK, April 12.—Hops are fairly active, and spot business is at 1@2c advance. The feeling is quite buoyant, and 28 bales Pacifics went at 26c London is firm. On Exchange a rise of about 2c in futures is noted. Twenty-five bags of prime California 92s, October delivery, sold at 25c, buyer's option.

Eastern Wool Markets.

NEW YORK, April 12.—Liverpool advices and small domestic receipts of raw wool, and influenced by London wool sales, inclined prices upward, but as yet hat not advanced. New clip California wool is held above Eastern market prices. Sales at the seaboard are fair, but the demand seems more to provide against the possible late marketing of new than for actual prompt wants. Prices are unchanged; in fact, the shabby conditions of offerings permit buyers to dictate the terms for most parcels. The cleaned basis of Territory is down to 53@55c for fine, and 48c for medium London's prices for Colonial wool have flashed up to January's rates, imparting a ray of encouragement to our hitherto dismal market. Cloths are doing well; dress goods are active when the grades compete with foreign, which are now quoted upward. The wool sales at New York are 557,000 domestic and 739,000 foreign, chiefly Cape, to go to Canada. Boston sales are 1,741,500 domestic, and 480,000 foreign. A number of buyers have gone West to negotiate the new clip. Philadelphia feels encouraged by the advance abroad, but there is no material business to report.

Miscellaneous.

NEW YORK, April 12.—Mustard seed has not quotably changed for prime. Honey—There is no new interest, Lima beans—The supply is somewhat oppressive; prices are easier; spot, per bushel, $1.55@$1.65.

Foreign Hop Markets by Mail.

Mark Lane *Express*, March 28th, says: There is practically no change in the trade, the course of which is marked by a quiet demand for consumption, and to supply deficiencies in cases where brewers had not purchased in quantities sufficient to carry them over a certain period. This refers more particularly to 1891 hops, the stocks of which unsold continue to lessen week by week. These descriptions are mostly held by merchants, and occasionally brewers who have got more in hand than they are likely to require resell a few pockets at a substantial profit on the price they paid for them last autumn. The market values are unaltered and the tone generally is firm. There have again been considerable transactions in old odds at the low rates that have prevailed for a long time past. Growers, who are relieved of all anxiety respecting last season's growth, having, with very rare exceptions, disposed of that crop, are now turning their attention to their plantations, where operations are considerably in arrear on account of the long spell of wintry weather, the severe frost having rendered it inadvisable to commence cutting the stocks. Now, however, the weather has become milder, this work has been begun in earnest, and there will be good progress made with the work if the present conditions continue. On the Continent there is an improved inquiry for hops, and values are maintained, being all round higher than the prices that are obtainable on this side. American markets are quiet but values are fairly steady, and there is confident expectation of an early advance.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending April 11, '92, were as follows:

Flour, qr. sks	54,020	Bran, sks	11,545
Wheat, ctls	20,978	Buckwheat "	....
Barley, "	36,921	Middlings "	5,735
Rye, "	833	Chicory, bbls	151
Oats, "	938	Hops, "	....
Corn, "	803	Wool, "	2,836
Butter, "	1,555	Hay, ton	2,528
do bxs	465	Straw, "	208
do bbls	....	Wine, gals	169,776
do kgs	....	Brandy, "	8,907
do tubs	....	Raisins, bxs	25
do ½ bxs	44	Honey, cs	68
*Cheese, ctls	1,001	Peanuts, sks	54
do bxs	28	Walnuts "	....
Eggs, doz	57,501	Almonds "	....
do "Eastern	12,000	Mustard "	12
Beans, sks	17,814	Flax "	....
Potatoes, sks	5,231	Popcorn "	....
Onions, "	665	Broom corn, bbls	242

*Overl'd, ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to April 11, '91.	July 1, '91 to April 9, '92.
Flour, ½ sks	251,911	385,178
Wheat, ctls	1,274,996	1,219,487
Barley, "	265,057	39,806
Oats, "	312,549	371,212
Wool, bales	5,940	6,011
Hops, "	443	431
Rye, sks	210	3,352
Potatoes sks	81,725	119,196

Cereals.

Prime says that there has been very little farm work yet done in the Central States. In the spring wheat region there will probably be a great deal of the acreage put into oats, barley and other crops, reducing the wheat acreage. Another fact which will tell against a large area of wheat is that there is a great deal of ground to be plowed this spring, farmers not being able to do the usual fall plowing last autumn. The development of the winter wheat is slow, but the conditions are favorable. The wheat, however, bears no comparison with last year, and it is very important that the month of April be a very favorable one.

Some of the latest reports from Russia are very conflicting. The Liverpool *Corn Trade News* says that the production of wheat last year was 248,000,000 bushels, whereas previous estimates seldom exceeded 240,000,000 bushels for an average, making the crop of the past year in excess of the average production. The previous estimates of last year's crop have been 184,000,000 bushels. The home consumption is estimated anywhere from 140,000,000 to 216,000,000 bushels. Mulhall gives the area of wheat in Russia at 29,000,000 acres, and Broch the average yield at 9 bushels, making a total average crop of 261,000,000 bushels. If the 1891 crop was 20 per cent deficient, the total yield would be a little over 200,000,000.

The production and exportation of cereals is the chief source from Russia; from 1867 to 1889 the exportations have steadily increased. The exports from 1867 to 1871 were 2,448,000 tons of different kinds of grain, while for the two years 1887 to 1889 the exports were about three times as much, amounting to 7,325,000 tons. The exports of grain, which in the early part of the period referred to represented only 14.7 per cent of the production, rose to 20.5 during the period from 1883 to 1889. The only rival to Russia is the United States. Together, Russia and the United States provide 68 tons of grain out of every 100 tons brought into European markets. After this comes Roumania with 8 tons, India 7.5, Austro-Hungary 4.3, the Argentine 3 6, Canada, 2.8, Australia 2.3, Sweden 1.6, Chile 0.8, Servia 0.7.

London cables of April 12th report as follows: Wheat and flour on passage to United Kingdom, 3,178,000 qrs.; Continent, 1,409,000. Imports of wheat into the United Kingdom during the past week, 181,000 qrs.; flour, 254,000 bbls. Indian shipments of wheat during the past week: United Kingdom, 55,000 qrs.; Continent, 60,000.

The local wheat market made a slight spurt in sympathy with a bull movement in Chicago, but the upmove was of short duration. The market, both here and at the East, acts very much as if it is about bottom, and that better prices can be looked for in the near future. The available supply of wheat in this State, and also up north, is light, and as there is a large short interest on Call out, the sellers may not be able to cover except at a good round advance. The same remarks, it is claimed, are also applicable to the Eastern markets. The engaged tonnage in port for wheat loading is small, but the disengaged tonnage available for new crop loading is large, while the tonnage on the way is steadily increasing.

Crop advices are uniformly favorable for large outturns in the northern, central counties, but on the west side of the San Joaquin more rains are wanted, and that soon, to insure a fair to a good yield. From Oregon and Washington all advices are favorable for an average outturn to the acre.

Barley made an unexpected upmove the past week, but toward the close the market fell back, closing the week under review weak and heavy. The movement was due to manipulation. The higher prices induced free shipments to this city from coast ports, and also from up north. The feed consumption is very large. A vessel is loading for England, but the cargo, it is said, is secured.

The oat market is steady, without any special change during the week to note. Receipts, which had fallen off, are increasing slightly from up north. The feed consumption is quite large, and as horses go into training a steady increase is expected to rule for several weeks to come.

Corn is slow at unchanged quotations, as are rye and buckwheat.

The general memoranda regarding the wheat crop in certain parts of India is at hand. The report shows that in parts of the Bombay presidency the area of wheat is all the way from 3 to 45 per cent below the average, owing to the dry weather which prevailed during a greater part of the season. The estimated area in Berar is 884,000 acres. The condition of the crop is not satisfactory, owing to dry weather, and the outturn is estimated at only about 62½ per cent of a full crop. The area of wheat in the Punjab is 6,948,000 acres against 7,074,000 acres last year. This is a falling off of 1 8-10 per cent from last year and 2.9 from the first estimate, owing to dry weather. Without rain in March the final outturn of the crop was expected to be very poor. In the northwest provinces and Oudh the crop is reported as very fair, the condition ranging from 80 to 90 per cent, 100 indicating a full condition. The crop is said to be the best seen for years in these districts.

Feedstuff.

The market for ground feed shows considerable strength for the season of the year, owing to an enlarged demand brought about by an increased attention to dairying through the establishing of creameries in various parts of this State and Nevada. Our quotations cover to-day's selling prices.

Hay is weak at slightly lower prices. Receipts are heavy for the season of the year. This is contrary to the heretofore expressed belief that supplies in the country were light. Dealers in this city say that considerable hay will be carried over, but that the carryover, and as for that all received, does not belong to farmers, but to parties who purchased in last year, expecting that very much higher prices would rule than did obtain. For new crop hay $10 to $11 is named.

Dairy Produce.

With heavy receipts and a smaller demand the butter market settled to lower figures, with, at the close, a weak tone and buyers trying to get concessions. Distributive points up north are taking less, and as feed is becoming more plentiful in Oregon and Washington, many dealers expect that outlet to be cut off very soon. Considerable packing is being done.

Cheese, like butter, is selling at lower figures. It takes very choice full cream to fetch 12½ cts. With increasing receipts from California dairies and decreasing orders from up north, lower prices will rule. Eastern cheese continues to come to hand in a small way.

Eggs are higher It is generally claimed that heavy receipts will be in order the remainder of the week. Dealers generally look for lower range of prices after this week.

Vegetables.

Seasonable garden truck is in liberal supply and generally lower. Both asparagus and rhubarb have met with quite a decline, but peas advanced. We noticed at Wetmore Bros. a small consignment of green peppers, which they expected to sell at a big price. Everything points to a large crop of all kinds of vegetables this year.

Onions are high and in demand at the advance. It is claimed that still higher prices will rule. A leading dealer, it is said, has cornered the market. The supply is reported light both in this State and Oregon.

The market for old potatoes is demoralized, with that for new not showing to a much better advantage. It takes the best Oregon Burbanks (old crop) to fetch 1 cent a pound on the wharf.

Fruit.

The receipts of strawberries are increasing, which causes a shading in prices. The crop this year will show a very large increase over that in 1891. The increase will be due to the replanted vines coming into bearing and also to a larger acreage being devoted to the industry. The general opinion is that there is a marked increase in the acreage devoted to raspberries, blackberries and currants.

Apples are scarce, and as there is a fair demand, higher prices are asked. It is claimed that the improved prices will draw in freer receipts.

Limes and oranges are weak at slightly lower prices. Even the shading in prices for oranges does not stimulate the demand much, owing to consumers fearing being bitten by frosted fruit.

In dried fruits and raisins there is very little new to offer. Stocks are slowly but surely cleaning up. Choice, good-sized fruits are hard to get.

Live Stock.

The market for bullocks is weak at slightly lower prices. Mutton sheep are weak at a decline. Slightly lower prices are looked for in both bullocks and sheep. The decline in the latter will be due to larger offerings before driving to the mountain ranges. Hogs for the block show a slight advance, but for packing, the market appears to be a shade weaker.

Miscellaneous.

From reliable advices up to April 13, the following summary tonnage movement is compiled:

	On the way 1892.	1891.	In port 1892.	1891.
San Francisco	202,055	201,870	*†128,532	67,875
San Diego	17,162	15,483	5,592	.....
San Pedro	5,020	2,773	....	17,530
Oregon	25,320	36,408	10,211	
Puget Sound	8,415	23,166	....	
Totals	257,972	279,700	144,335	85,405

*Engaged for wheat, 1892, 16,16¼; 1891, 66,102 †For new crop loading, 5,161

The statistics of produce exports from this port from July 1st to April 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1892-91.
Wheat, ctls	12,068,524	10,676,149
Flour, bbls	873,072	931,020
Barley, ctls	786,338	208,535

Poultry, after selling for slightly higher prices, closes weak at around prices current last week. Geese are in good demand for the Jewish holiday. Large, well-conditioned hens and roosters are also wanted for the same purpose.

Beans, as a rule, show a stronger tone, but trading is light.

Honey is scarce. It is claimed that there will be a larger crop this year than there was in 1891.

About all the hops on this coast is in the hands of one firm in this city. They hold for 25 to 30 cents. For new crop hops 12½ to 15 cents is bid.

Wool continues to drag. Fears are expressed that the railroad company will advance the freight on scoured wools. This fear undoubtedly causes scourers to be offish and not bid up much for wools in the grease. There has been a steadily increasing business in scoured wools. Buyers and well-informed growers prefer dealing when wools are scoured.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 13, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 40	@	2 80
Pea	2 20	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 25	@	2 65
Large White	2 20	@	2 45
Lima	1 80	@	2 15
Fld Peas, blkeye	1 30	@	1 50
Do green	1 30	@	1 50
Do Nlles	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	12½	@	—
Do good to choice	15	@	—
Do Giltedged	—	@	18
Do Creamery rolls	—	@	18½
Do do Giltedge	—	@	19
Eastern	—	@	—
CHEESE.			
Cal, choice mild	11½	@	12
Do fair to good	9½	@	11
Do gilt edged	—	@	12½
Young America	—	@	14
EGGS.			
Cal. ranch, doz	20	@	—
Do do selected	—	@	22½
Do store	19	@	—
Eastern	19	@	21
FEED.			
Bran, ton	16 50	@	17 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 50
Middlings	19 00	@	20 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7 50		
HAY.			
Wheat, per ton	12 00	@	—
Do choice	14 00	@	—
Wheat and Oat	11 50	@	—
Wild Oats	10 00	@	—
Cultivated do	11 00	@	—
Barley	9 00	@	—
Alfalfa	8 00	@	—
Clover	10 00	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	92½	@	1 00
Do Choice	1 01½	@	—
Do Brewing	1 02½	@	—
Do do Choice	1 12½	@	—
Do do Giltedge	1 17½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 21½	@	1 27½
Yellow, large	1 27½	@	1 31½
Do small	1 32½	@	1 36½
Oats, milling	1 42½	@	—
Feed, Choice	1 38½	@	—
Do good	1 30	@	—
Do fair	1 22½	@	—
Surprise	1 50	@	—
Black Cal	1 10	@	1 40
Do Oregon	1 20	@	1 27½
Gray	1 20	@	—
Rye	1 60	@	—
Wheat, milling.			
Gilt edged	1 60	@	—
Do Choice	1 57½	@	—
Do fair to good	1 55	@	—
Shipping, cho'ce	1 51½	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 45	@	—
Sonora	1 45	@	1 57½
HOPS.			
1891 Choice to Ex.	26	@	30
Fair to Good	22	@	—
FLOUR.			
Extra, City Mills	4 80	@	5 00
Do Country Mills	4 65	@	5 00
Superfine	3 00	@	3 30
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	2 00	@	3 00
Fair to Good	1 20	@	—
Cut	75	@	—
POTATOES.			
Early Rose, ctl.	25	@	40
Burbank Seedling,	20	@	45
Do do Oregon	50	@	1 00
Do Humboldt	40	@	75
River Reds	15	@	35
New	50	@	1 00
Sweets	—	@	—
POULTRY.			
Hens, doz	6 50	@	8 50
Roosters, old	6 50	@	8 50
Do young	9 00	@	12 00
Broilers, small	3 50	@	5 50
Do large	6 00	@	—
Fryers	7 00	@	—
Ducks	9 00	@	12 00
Geese, pair	2 00	@	3 00
Goslings	3 00	@	3 50
Turkeys, Gob'r	15	@	17
Turkeys, Hens	17	@	20
Manhattan Egg Food ₩ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	14
Cala'v & F'th'll.	14	@	16
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def.	10	@	12
HONEY.			
WhiteComb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 13, 1892.

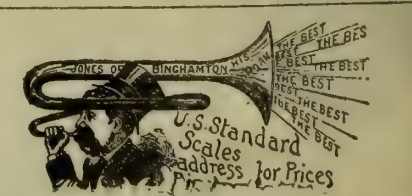
Limes, Mex	4 00	@	4 75
Do Cal	60	@	75
Lemons, box	1 00	@	3 00
Do Sicily	5 00	@	6 00
Oranges, Seedlings—			
Redlands	2 00	@	2 25
Riverside	1 75	@	2 00
Los Angeles	1 50	@	2 00
Do Navels—			
Redlands	3 50	@	4 00
Los Angeles	1 50	@	3 00
Riverside	3 00	@	3 50
Duarte	3 00	@	3 50
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Apples, box	1 00	@	—
Do choice	2 25	@	—
Do extra choice	2 75	@	—
Beets, sk	—	@	1 00
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	8	@	12½
Do green	50	@	—
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	—
Garlic, lb	2	@	3
Squash, Mrft, tn.	9 00	@	11 00
Do Summer, lb	1 00	@	—
Tomatoes, box	2 50	@	—
Asparagus, box	75	@	—
Do choice to ex	1 25	@	—
Peas, green, lb	2 00	@	2 50
Do sweet	3	@	4
Rhubarb, box	50	@	75
String Beans	8	@	12½
Cucumbers, doz	75	@	1 25
Mushrooms	10	@	30

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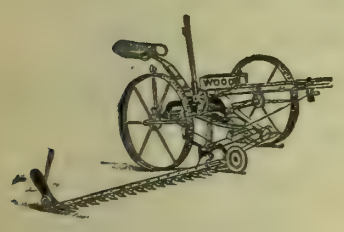


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GENTLEMEN:—Your Mr. J. M. Johnson started to-day the Walter A. Wood Single Apron Harvester and Binder, and I want to say that I consider that this **is the First Binder** that ever came into this country that is a success. I have been farming and harvesting my crop with a Binder for the last ten years, and have had all kinds of Binders, but this beats them all. We have run a half day, first in a heavy crop of oats, then in wheat that might go forty bushels to the acre, and it has **not missed a single bundle, nor made a skip. The Single Apron is the boss elevator**—will elevate anything in the way of grain; the bundle carrier is all you claim for it. It is very light draft, and easy handled with three horses. In fact, I can not recommend it too highly to farmers that want to buy a first-class machine. Yours truly,

ALBERT LEACH.

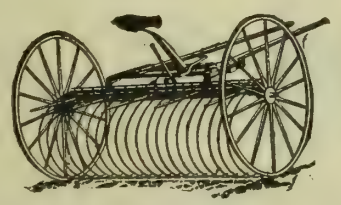
CHOKING IS OUT OF THE QUESTION.

BAY POINT, Cal., Feb. 5, 1892.

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DEAR SIRS:—I bought one of Walter A. Wood's Mowers from your agent, P. H. Markey, last season. I can recommend the machine to any farmer who wants a good Mower that will **do the work in every particular**; would also say it is the **lightest running Mower that ever I hitched a team to**, and choking it down is out of the question.

Yours truly, E. LUDGERING.



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Walter A. Wood Harvest Machines,

BECAUSE they are made of the best and strongest materials.

BECAUSE great care is taken in their manufacture.

BECAUSE they are simple in construction.

BECAUSE they are easily operated.

BECAUSE they do not require the aid of an expert.

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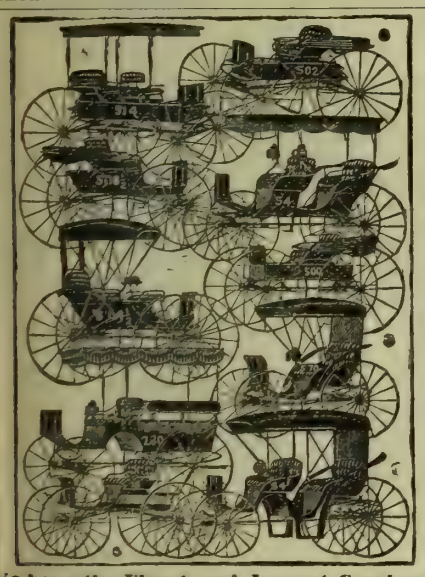
BECAUSE they are light of draft.

BECAUSE they contain all the latest improvements.

BECAUSE with care they will last a lifetime.

BECAUSE they have a world-wide reputation.

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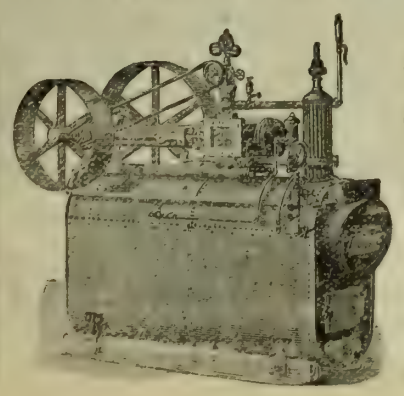
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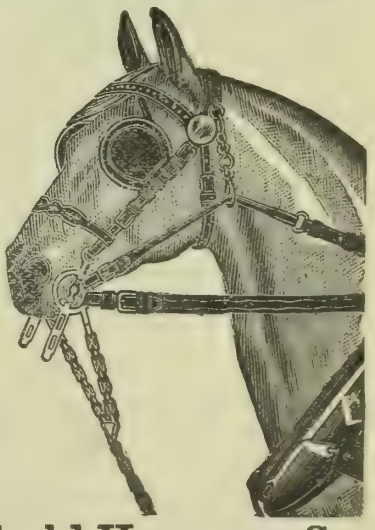
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Uses of Wood Pulp.

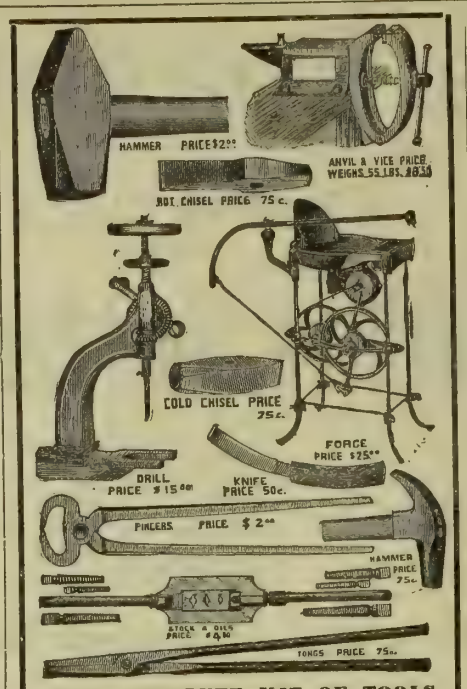
Wood pulp is now extensively used as a composition for moldings and decorative work in private and public buildings. In the manipulation of this composition, beautiful effects can be obtained by mixing in it the various aniline colors—strong or tinted—or those known as metallic colors. Bronze powders, of various colors, may also be used with pleasing results. By the use of this material all the better qualities of fine-grained wood are obtained without any of the drawbacks of shrinking or expanding on account of atmospheric conditions.

The extent to which the wood pulp business has been developed in this country is not generally known. The inroads on our forests, which its growing consumption for railway ties, building and the requirements of the press involve, are numerous. So serious has this matter become, it is stated, that unless each State passes a law for the encouragement of tree planting, there will some day be a tree famine.

As giving an inkling of the magnitude of the general consumption of wood pulp, a correspondent states that for a single edition of a prominent daily in New York 17 tons of blank paper were required. This was the product of 67 cords of poplar. In 22 hours from the time of felling the trees it had been turned into printed papers. The process is thus divided with respect to a test case: Chopping one a half cords of wood, three hours; manufacturing into pulp, 12 hours; transporting to printing office, one hour and twenty minutes; wetting paper preparatory to printing, 30 minutes; printing 10,000 copies, ten minutes. This shows the rapidity with which raw material can be turned into a finished article. When it is considered that the foregoing figures refer to only one paper in one city, and that almost every newspaper is printed from material consisting largely, and often almost wholly, of wood pulp, which is also used in the production of nearly all common and medium grade of paper for almost all uses, the magnitude of the consumption of wood in pulp-making becomes apparent.

Dust in the Atmosphere.

Prof. Aitkins, an English Scientist, shows the air to be full of minute particles of dust. Outside air at Colmonell in Ayrshire contained from 8000 to 155,000 particles. Near Falkirk the smoky atmosphere showed from 180,000 to 2,296,000 particles per cubic inch. Glasgow air showed from 2,750,000 to 7,500,000 per cubic inch, and Edinburgh air from 750,000 to 4,000,000. In the meeting-room of the Royal Society, when showing the Fellows his experiments, 4,500,000 were counted just before the meeting, 6,500,000 near the close of the meeting, 49,000,000 near the ceiling just before the meeting, and 57,500,000 near the ceiling at the end of the meeting. In his own laboratory he calculated 30,000,000 of dust particles in the cubic inch of air; near the ceiling, 88,000,000; and above a Bunsen flame the infinite number of 489,000,000. A cigarete smoker sends 4,000,000 of particles into the air with every puff he makes. Mr. Aitkens' observations, during the summer of 1889, were made on the Continent to find out the minimum number of particles in natural air untouched by artificial causes. At Hyeres, near Toulon, the number per cubic inch varied from 48,000 to 384,000; the latter when the wind was blowing from the town. At Cannes the lowest observation was 24,000, when the wind was blowing from the town. The sea air at Hyeres contained 28,000; at Mentone, 80,000, with a steady wind from the sea, and at Cannes double that number. At Lucerne, in Switzerland, the specimens of air tested were remarkably free from dust; on the Rhighi mountains the minimum was 3360 particles. In the purest Highland air in Scotland, tested by Mr. Aitkins, he found the minimum to be 32,000 particles per cubic inch.



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No double or false explosions, so frequent with the unreliable spark,

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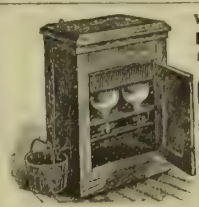
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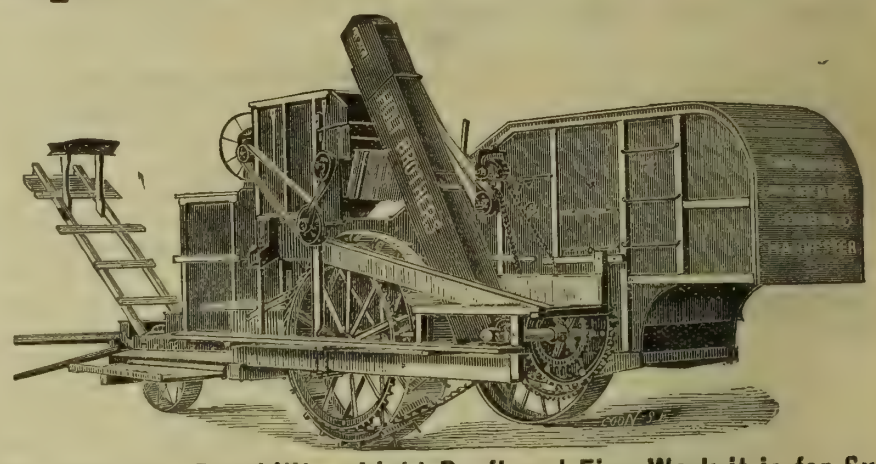


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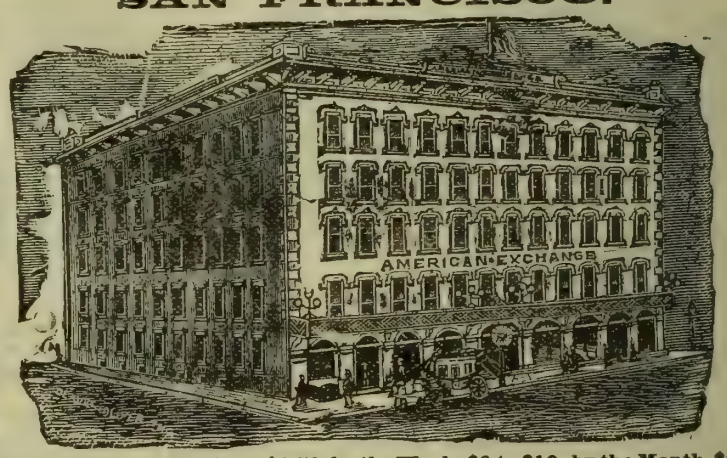
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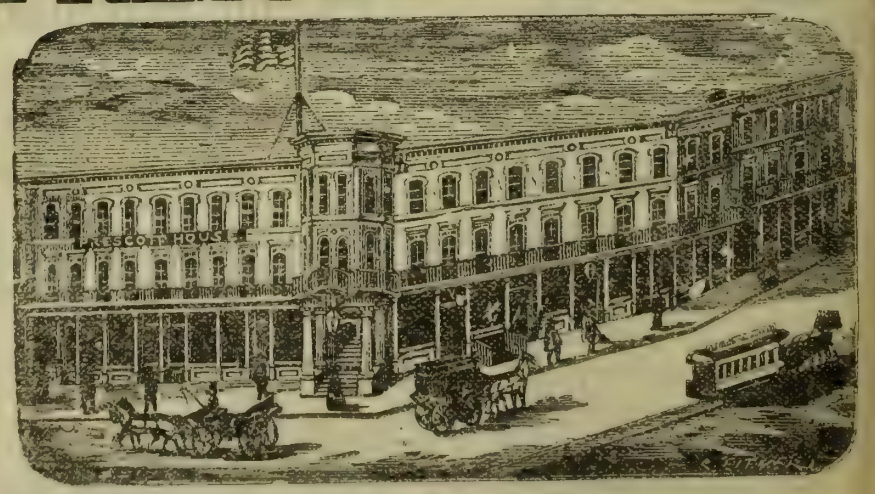
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California Fish.

At a meeting of the directors of the Mechanics' Institute this week, during a discussion concerning new features for the next fair, Director Stott made a good suggestion. He wanted to see an aquarium for salt water fishes, and one for fresh water fishes, placed in the Pavilion, where living specimens of our local fishes could be seen by the people. The Fish Commissioners would doubtless aid this project, and the whole thing would be a decided novelty.

There are upward of 400 varieties of fish found in California waters, and over 100 of these are known in our markets. Very few people indeed, however, can recognize the fish except when cooked—and when they are apt to get sturgeon for sole. But they have had no opportunity to see these fish. It would not take long to make a collection, and the Institute could well afford the outlay necessary to exhibit them. The fishing industry is an important one for this city. Some thousands of our citizens live by it. Thousands of tons of fish are brought to this city every year, yet we have never had any exhibit which would show people the appearance of even our commonest fish alive.

The excellent suggestion of Director Stott was a natural one for him to make, as he is an ardent angler, and has been for years. But it is not alone trout, salmon or bass that he wants to see, but all the varieties obtainable. Such an exhibition would be much more attractive than an artistic pile of yeast-powder cans or boxes of soap, and would be more instructive as well. Let the Institute consider the suggestion which would at once take it out of the old rut and furnish one decided novelty for the fair at least.

BORING HOLES.—For boring long, deep holes that do not go clear through the pieces so as to permit of using a boring bar, use a tool having right back of it a set screw which may be run out so as to touch the opposite side of the bore from the one the tool is working on; and have half way between these two, so as to touch the circumference of the bore hole 90 degrees from the tool and 90 degrees from the first screw, a similar screw which may be adjusted so that the tool will be kept centrally, and the hole kept straight. If the job be such as to permit the hole being bored vertically, there will be no trouble about getting out the borings or having them crowd under either of the set screws; but if it must be a horizontal job, the tool must be rigged so that one of the screws shall be at the top and the other at one side, the tool being on the other side.—Engineering Magazine.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

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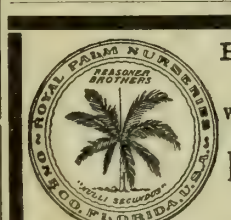
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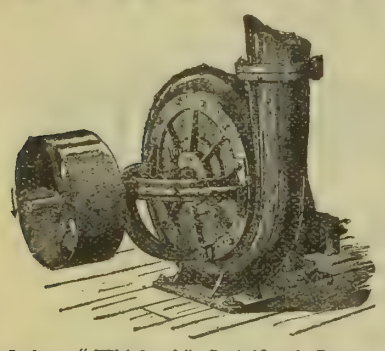
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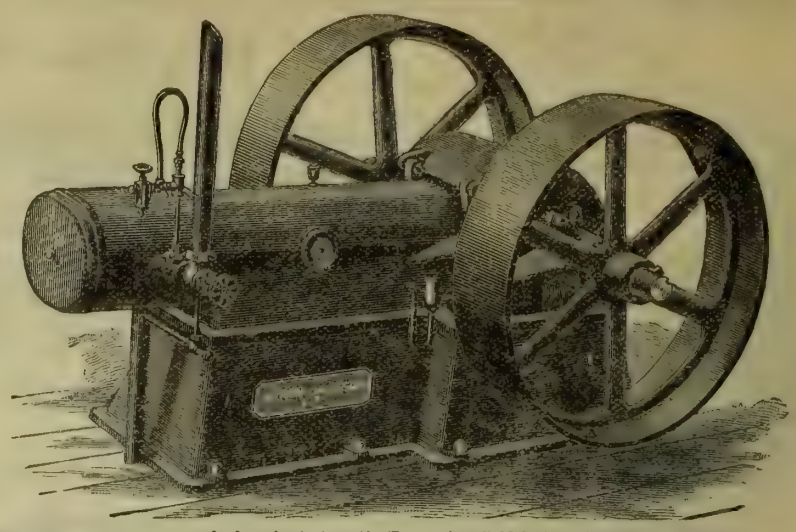
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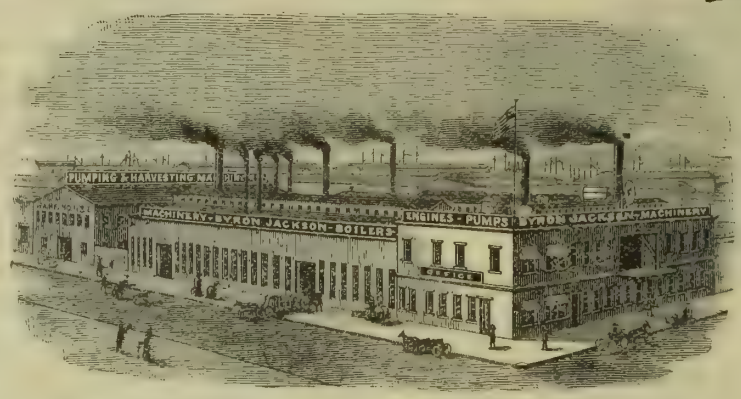


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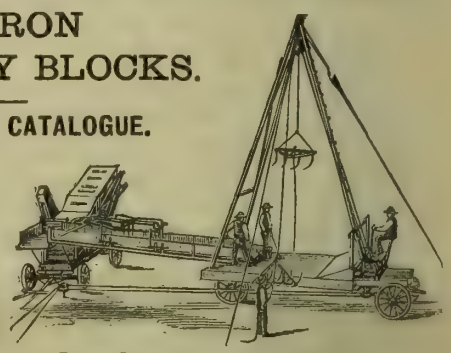
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Farmers, especially, when about to buy an Engine, should consider the merits of Jackson's. They are enclosed, self-oiling, and require less attention than others.



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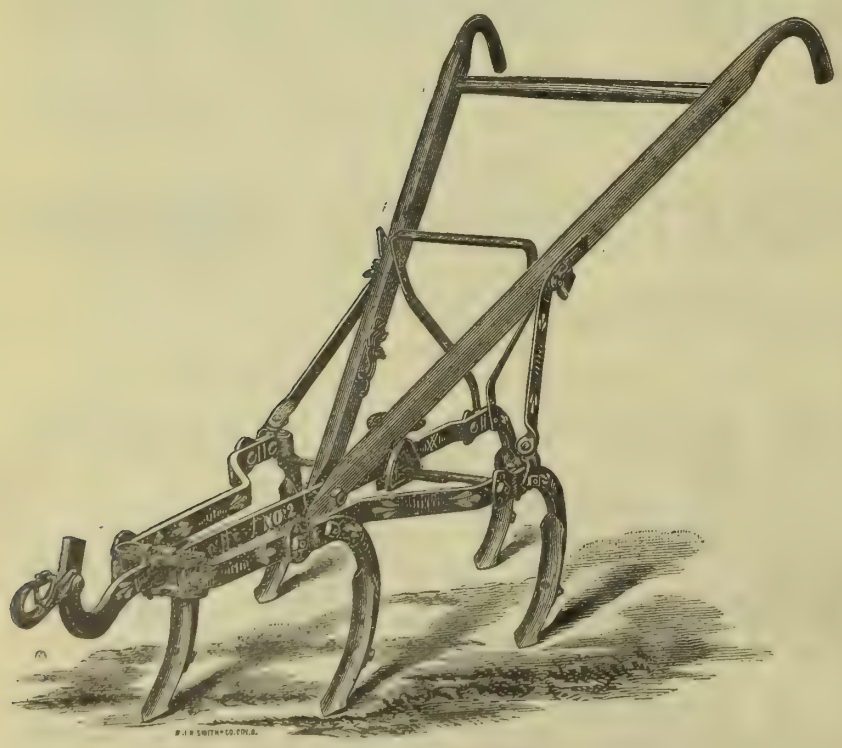
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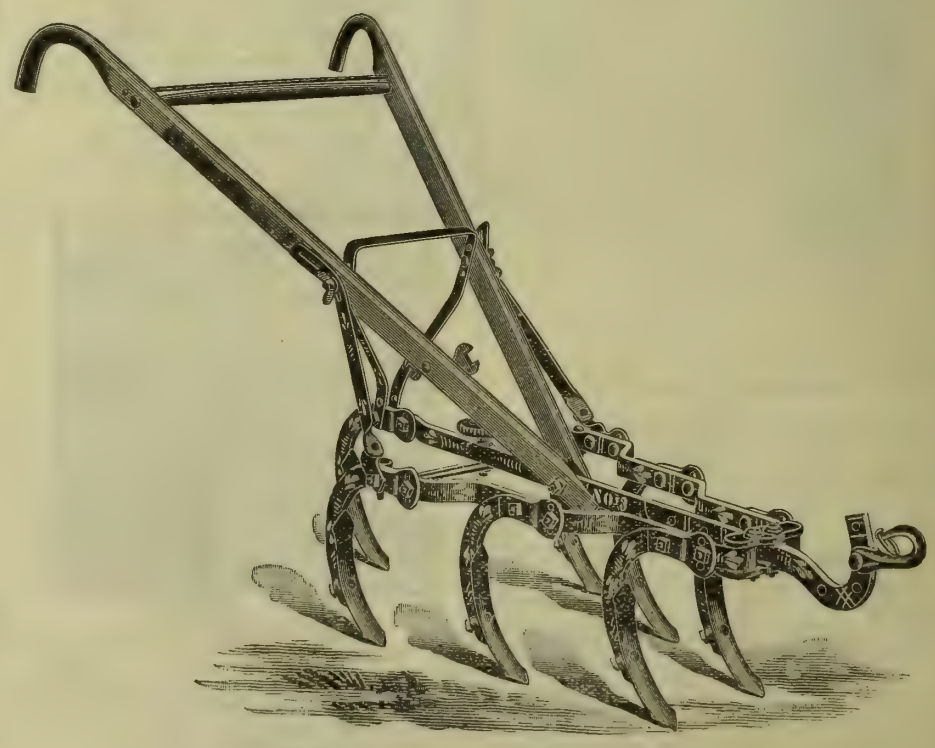
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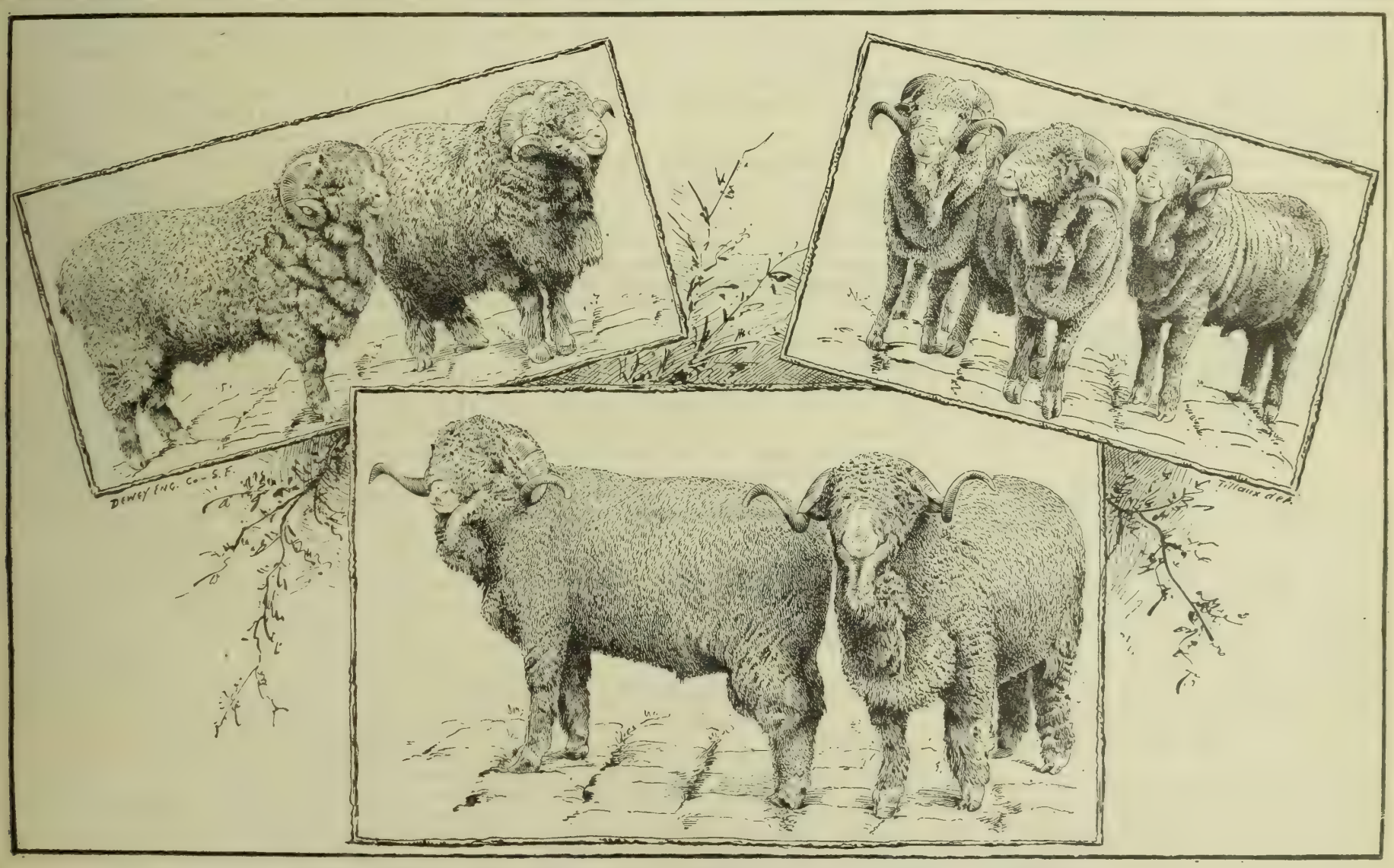
THE DEWEY PUBLISHING CO.
Office, 220 Market St

French Merino Sheep in California.

We have often commented upon the position which California is fitted to take, and should take, in the production of the finest specimens of the ovine race. Our climate and pastures favor the attainment of the finest animal form and the rarest qualities. This is as true of sheep as of other kinds of live stock. It has been demonstrated by the experience of our breeders. We have argued that, as there were selections of sheep made in this country for export to Australia, for example, California should have a share in the trade. We believe, as California-bred sheep of the most popular breeds become better known, there will be a profitable export demand not only to the interior States and Territories, where considerable sales have been made for years past, but to the countries around the Pacific which may develop a wool interest.

California has as fine American or improved Spanish Merinos as have the Eastern States, and probably finer French Merinos than can be found elsewhere in this country. And, by the way, we had a talk recently with a prominent sheep grower of Western New York, who has made several trips to Australia with shipments of American Merinos. He remarked that Eastern sheepmen were coming to think that French Merinos could be used to advantage in the Eastern effort to produce the best type of a fine wooled sheep. We told him what was being done in the same direction in this State, and that the French Merino had always been held here in high esteem.

As this is the fact, we are glad to present to our readers, upon this page, portraits from photographs of some French Merinos recently purchased in France for shipment to this State. They were secured by one of the Wilmans Bros., who is now in France, and made his selection personally from the government flocks at Rambouillet. Purchases from the government are, we understand, not common nor easy to effect. We are glad California is to have this great accession to its stock of French Merino blood. On page 376 of this issue, a correspondent of the RURAL gives an account of a visit to the ranch where these sheep will find their new home, and the character of the establishment to which they will be welcomed. Messrs. Wilmans are entitled to much credit for their enterprise in the interest of California sheep-breeding.



FRENCH MERINO SHEEP SELECTED AT RAMBOUILLET FOR SHIPMENT TO CALIFORNIA.

THE FARMERS' INSTITUTE AT LIVERMORE.—The meetings on Friday and Saturday of last week were very satisfactory in point of interest, and some of the sessions were excellent in point of attendance. The Alameda county association has good reason to go forward. There were many essays and discussions, some of which we shall give in early issues of the RURAL. Lectures were given by Prof. E. W. Hilgard of the State University and Dr. Branner of Stanford University, both of whom were received with marks of appreciation. The next Institute in Alameda county will be in September at Niles.

THE HOP LOUSE IN OREGON.—A dispatch from Salem, Oregon, says that William Wells, an extensive hop-grower, who has large hop fields at Buena Vista, says that the genuine hop louse is to be found on the vines again. Nearly every leaf has eight or ten of them.

IRRIGATION BONDS.—Pomona *Progress* reports great interest in the bonds of the irrigation districts. Leading Eastern insurance companies are investigating them as a line of investment. *Progress* says that there are now about $170,000 worth of bonds for sale by nine irrigation districts in Southern California, and about $800,000 more in bonds will be put upon the market before July 1st. San Francisco and Chicago bankers now hold between $700,000 and $800,000 worth of irrigation bonds issued in this region of California. Many secretaries of irrigation districts in Southern California say that they have had an unusual number of requests for information concerning the bonds and their legality from New York and Boston capitalists during the past few months.

MORE INFESTED TREES.—It is reported that about 50,000 peach, plum and apricot trees from Delaware are now in quarantine in Antelope valley, Los Angeles county. The horticultural authorities have declared them infested with "black aphis" and "peach borer," and the owners have appealed to the courts to get the trees out of limbo. The trial is on this week. Los Angeles county is proving the battle-ground upon which many points of importance will be settled.

PORTERVILLE ORANGES.—After the Institute meeting in Fresno, Mr. Lelong visited the Porterville region of Tulare county and other foothill sections of Fresno county. He reports remarkable growth of citrus fruits and absence of frost marks. This is evidenced by lime trees at Porterville laden with fruit. These trees are 20 feet high, and show no sign of damage from frost.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Regis'ered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

Saturday, April 23, 1892.

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BUSINESS ANNOUNCEMENTS.

[new this issue.]

Mowers, Rakes, Etc.—Truman Hooker & Co.
Books—Henry Carey Baird & Co., Philadelphia, Pa.
Live Stock for Sale—Mrs. Mary C. Smith, Redwood City.
Fly-Shuttle Loom—C. W. Newcomb, Davenport, Iowa.
Sickle Grinder—Deere Implement Co.
Irrigating Machinery—S. F. Tool Co.
Mowers—Baker & Hamilton.
Windmills—Challenge Windmill & Feed Mill Co.
Trees, Plants, Seeds. Bulbs—Sherwood Hall Nursery Co.
Situation Wanted—M. S. W.
Annual Flower Plants—Schwarz Bros., Sacramento.
Dairy Produce Wanted—Dairyman's Union.
Berkshire Swine—Sessions & Co., Los Angeles.

See Advertising Columns.

The Week.

As we go to press, the greatest floral carnival ever held in California is in progress in Santa Barbara. The telegrams speak of the deep stirring of the community by the exceptional manifestation of devotion to the goddess Flora. Throngs of people have collected from near and far, and the public houses, the streets and the gardens are populous even to crowding. It is festival time almost to the forsaking of ordinary vocations. Everything, from the warships in the channel to the retirement of the padres at the old mission, is thrown open to the gayety of the flower worshipers. It is a great opportunity for relaxation and helpful rejoicing. We hope its influence may be felt in other California towns, and that such flower festivals will multiply.

The event at Santa Barbara reminds us of a different affair which will open in the Mechanics' Pavilion in this city on May 11th and fill the balance of the week. The State Floral Society will then hold the greatest display of its kind ever given on this coast. It will not have the carnival features of the Santa Barbara festival, but will be a high-class flower show, for the express purpose of displaying the higher arts of floriculture, and for rewarding those who excel in them. For months, flowers and plants have been training for this great occasion. It is hoped that the show will draw both exhibitors and visitors from all parts of the State.

The great out-door season of California life is now beginning. Henceforward, hardly a shower will cause one to seek shelter until the fruits of autumn are gathered. It will be a stretch of long, busy days—days which are well worth living.

High Art in Tax-Paying.

The Southern Pacific is a unique sort of a tax payer. It makes its own assessments and then pays such taxes as it sees fit. It also accompanies its donations to the public treasury with an oration upon its own generosity in paying any taxes at all. A notable instance of this behavior is the railroad's astounding sacrifice in the matter of taxes, which was so great that some counties had to close their schools temporarily for lack of funds. It was not considered much of a sacrifice by the people, but then the people in gross prejudice looked so angrily at the pittance paid that they did not hear the oration which accompanied it, and of course they did not know how generous the railroad really was. The same popular misapprehension is, we fear, to be repeated in the matter of railway assessments in irrigation districts. The statement is that the company denies that it is legally bound to pay anything, but as irrigation is rather a good thing, the managers are willing to subscribe something. They consider $2000 a mile all they ought to pay, even if assessable under the law, and on this they are willing to pay. The assessment of 1891 varied in the several districts from $6000 to $17,000 a mile. Inasmuch as it would create a deficiency in the interest account if this year's assessment is not paid in full, the railway will pay this year in full; but they warn the districts not to let it occur again. Hereafter, they will not go above $2000 per mile. The Santa Fe is a little more liberal, and will stand an assessment of $2500 per mile.

This is really an exemplification of a higher art in tax-paying. The poor land owner or shop owner has to stumble up clumsily and hand over what the County Assessor and Board of Equalization think he ought to pay. No matter if his feet are hurt by the gravel in his unmended shoes, he has to pay over his last dime or pull his property out of disgrace afterward through delinquent percentages. That is a coarse art of tax-paying; anybody can do that.

A little higher art of tax-paying is to swear that you haven't any property worth mentioning. This is the skill displayed by the millionaire who lies himself out of the payment. The highest art of all is to boldly deny that the State is entitled to anything, but out of sheer love of the public and hoping it will succeed, to hand in a small percentage of the assessed taxes as a gift to the people. Nothing but a dictatorial corporation has the nerve for such art.

Better Time to Eastern Markets.

During the week the air has been full of rumors of reductions in overland freight rates on California fruits. Some journals have, by a singular mistake, set forth the rates asked for by shippers as the rates the Southern Pacific proposed to secure from the transcontinental association. The mistake is singular because the railway has never yet shown such celerity in granting the petitions of shippers, although in their own way they have made wonderful reductions during the last decade.

Many glowing paragraphs were printed showing what glorious results would accrue to the State from such a reduction in rates as was promised. These bright anticipations were true enough, but the trouble with them was that they were based upon nothing, for the Southern Pacific promptly denied that it proposed to urge any reduction in rates. There is however, a very important change to be made, and that is in time. As the situation seemed somewhat involved and likely to puzzle the fruit growers, we wrote several notes to leading fruit shippers asking their understanding of the prospective arrangements and the effects likely to be produced upon the fruit interests. We acknowledge with thanks the following:

Sacramento, Cal., April 19, 1892.

To the Editor:—Replying to your favor of April 18th, as to the effect which might be expected to follow a material reduction in the rate of overland freight on green fruits, I have to say that in my opinion the grandest possible results to California would ensue.

In connection with other fruit shippers and parties interested, I have been engaged for some time in the matter of presenting to the railroad companies, here and in the East, the absolute necessity of adopting a better service, especially in the way of making shorter time.

The rate of freight to New York on green fruits is $1.50 per hundred pounds, or $300 per car of 10 tons; to Chicago, it is 1¼ cents per pound, or $250 per car. These rates in themselves are not excessive, although I believe the companies interested will eventually make these rates still lower.

But unfortunately, under the old system, these rates were not available for the reason that the time consumed by the ordinary freight trains was so long that fruit could not be shipped that way except in refrigerator cars, which add very materially to the traffic charge. I understand that recently the Southern Pacific Company has agreed to run a special fast fruit train during the fruit season, at the rates above mentioned, making the time to Ogden from Sacramento in 40 hours.

I am also informed that the roads east of Ogden will make the same proportionate time, with the result that fruit will be landed in Chicago in about 5½ days and in New York in from 8 to 9 days. If this is accomplished, as we have every reason to believe it will be, the question of getting fruit through to the East in proper condition will have been solved, and that is nine-tenths of the battle. In my opinion, California, by reason of its superior advantages as a fruit-producing country, must eventually become the orchard ground of the United States; and with proper encouragement, which we seem now in a fair way to realize through the transportation companies, I have no doubt of the future absolute success of fruit-growing here.

I believe that the changes already announced, as above set forth, will benefit the fruit industry a round million dollars this present season, directly and indirectly, and certainly we all have cause for congratulations. P. E. Platt
Of W. R. Strong Co.

This assurance will be received with pleasure by all who now have large amounts of fruit coming forward splendidly under favorable conditions.

The Spring Markets.

General trade the world over is reported lifeless, with no encouraging feature. This condition obtains in the face of a plethora of money at home and abroad. Under the circumstances, it is hardly reasonable to look for any marked movement in the leading products of the farm.

So far, the spring markets have proven a disappointment, for in comparing prices now ruling with those which obtained at this time in last year, we find that there is in nearly all branches an average falling off of from five to ten per cent. This statement refers to the local or San Francisco market, but of course our market is largely controlled by the markets at the East and in Europe.

Cereals with us are very dull, yet prices do not shade off as much as many shrewd large operators appear to expect, in view of a large increase in the acreage seeded to grain. There can be no doubt but the uncertainty regarding our climate has much to do in promoting the present firmness. Yet there are other causes, not the least of which, as in the case of wheat, is the large disengaged tonnage in port and an increasing supply on the way. This supply of tonnage, combined with the light stock of old wheat, gives assurance that no corner in ships can be run successfully so as to create high charters. In barley there is a well-grounded belief that the outturn this year will not be as large as heretofore claimed, owing to crop prospects in the southern part of the State not being of an encouraging character. With only an average crop outturn, and a steadily growing consumption, it looks as if prices for the season of 1892–93 will average about the same as for the season now drawing to a close. It is rather too early to forecast the future for oats, corn or rye. The value of oats is largely controlled by the crop outturn in Oregon and Washington, while corn is governed by the markets in the Central States.

While the wool clip averages better, so far as the condition is concerned, than it did in last year, the prices show a decline of from one to two cents a pound when compared with the opening prices in 1891. Whether there will be an advance later on, is a disputed point. The general opinion among dealers is that owing to this being a presidential election year there will not be that demand for woolen goods which might otherwise obtain. On the other hand, there are many close observers of the times who contend that owing to the very fact of this being a presidential election year, people will generally dress better so as to appear to better advantage while attending political meetings. Other influences on the wool market were noted at length in the Rural Press of April 9th.

Last year's hops are about cleaned up, the few persons who have any on hand can get from 20 to 30 cents a pound for fair to giltedged. For new crop hops contract prices have been steadily advancing until at this writing the range is from 15 to 20 cents a pound. The wide range in prices is due to the locality where the hops are grown and also to the reputation the individual grower has for careful picking, assorting and packing.

In dairy products, the market, as usual at this time of the year, is weak, with sellers forcing sales to close out consignments of poor keeping grades. The general introduction of creameries on this coast is revolutionizing the trade, and until the new conditions become general, it looks as if the market will continue more or less demoralized. The grades of butter and cheese manufactured are far in advance of former seasons, which leaves a poor market for everything below choice.

The fruit season will open early this year, which will give to California orchardists a decided advantage in marketing their surplus at the East, where the season will be late. While it is too early to predict prices, yet it looks as if much better values will rule than obtained in 1891, but of course this will depend largely on the size and flavor of the fruits. The days for small-sized and also for poor flavored fruits are numbered with the past, so far as marketing them at a profit is concerned. There are conflicting reports regarding crop prospects, but even with only an average yield to the tree, there will be a large increase in the aggregate outturn, owing to so many more trees coming into bearing. This applies to each kind of fruit cultivated.

More attention has been given to the cultivation of vegetables, looking to the supplying of Eastern markets with early garden stuff from this coast. This industry has grown into prominence, and promises to enlarge as transportation facilities cheapen and improve. The crop of potatoes this year is the largest on record, while the quality will, it is said, average better than it did last year. The crops of other root and also of plant vegetables, it is claimed, will be larger this year than they were in 1891.

Returned to His Post.—Lieut. Finley has returned to the charge of the Pacific Coast Division of the Weather Service. Mr. Kerkham made a good winter of it, and all we need from Mr. Finley is a few good showers to fill out the grain.

The State Press.

San Jose *Herald:* "The proper way to deal with the liquor traffic is to lay aside all fanaticism and consider it solely as it affects the interests of the community."

Escondido *Times:* "It is with satisfaction we note the growing interest among the farmers in road improvements In nearly every neighborhood a spirit of rivalry to have the best grad d roads has sprung up, not only among the road overseers but the people."

Tulare *Citizen:* "Our past experience teaches us that when a corporation becomes the custodian of large sums of Government money, much of it is used for corrupt purposes. Often large amounts are used to control legislation, changing the laws that were to govern its use, and changing a loan to virtually a gift. If a corporation owned the canal, it would quickly pool with the railroad magnates, and competition would exist only in name."

Vacaville *Enterprise:* "If there is one reform more than another needed by California, it is a system of registration of titles such as is attained under what is known as the Torry system. Under its provisions the owner of real estate is permitted to prove his evidences of title to land, and if the properly constituted authorities find them to be complete, that fact is certified by registration, which is a legal guarantee of its perfection which cannot be disputed."

Fresno *Republican:* "The struggle between decency and boodleism in San Francisco is becoming sensational. It has been a very interesting contest ever since the impaneling of the illegal Wallace jury, which was a volcano under the mountain of corruption, and was smoth red just in time to prevent an eruption that would have been a holy terror to the army which fattens upon the spoils of official degradation and crime, the shame of municipality and State.

San Jose *Herald:* "It is strange that the Treasury Department cannot see any way to protect the country from an influx of coolies after the ninth day of May, when, it is said, the present exclusion laws expire. The Treasury Department has never made much difficulty about evading and nullifying the law in favor of the coolies while it was in existence, but the moment it expires, or, rather, the moment it can be made to appear that it expires, the officials of that Department fold their hands complacently and declare that the whole Pacific Coast may be overrun with coolies for aught they can do to prevent it. In a word, they always construe the situation in favor of the coolies and against the people of the Pacific Coast. The Democratic House of Representatives has passed a bill that, if honestly enforced, will effectually exclude all coolies, and it is only for the Republican Senate to pass it and for the Republican President to approve it, and coolie immigration will be at an end."

Park *Record:* Just why a text book, written by a recognized authority this year should become worthless in 12 months or two years, and meet with the disapproval of many State and Territorial teachers organizations, and especially of a majority of the pedagogues in rural districts, is found in the fact that the large publishing houses that make a specialty of text books, offer commissions to parties of influence to inaugurate a demand for a change. The wires are set in motion, the village schoolmaster is flattered that his opinion is asked and regarded with much interest, and almost unconsciously finds himself supporting a movement that he knows is uncalled for and bound to work a hardship on nine out of ten patrons of the schools. The men of influence do the scheming and reap the profit, while the large mass of honest teachers unconsciously furnish the power to perpetuate the imposition—just as voters unthinkingly boost wily politicians into lucrative positions.

Irrigated and Irrigable Lands in the U. S.

The telegraph brings an outline of a report just filed at Washington by Special Agent R. J. Hinton, who has, for the last few years, been giving his time to irrigation inquiries. He is credited with showing that in the last seven years the United States has increased its area of irrigable land by 3,500,000 acres. The amount of land under "ditch" is reported for 1891 to be of an estimated area of 18,286,207 acres. The largest proportion of this will be made available for use in the next year, and by the time of the opening of the World's Fair, the United States may anticipate the cultivation by means of irrigation of at least 17,000,000 acres of land that within the last decade has been declared by learned authority wholly irreclaimable. Under projected works, or partially constructed, nearly 5,000,000 acres will be added, making in all, as now reclaimed or in process of reclamation, not less than 25,000,000 acres.

No wonder such figures appall the Eastern producer and incite him to fear starvation because of the vast prospective food to be produced from Western lands. He fears ruin to him because of the cheapness with which food products can be secured from cheap, new and fertile Western lands. But such ruin will not come to him nor to any one. The improvement and development of the West are but the surety of Eastern prosperity, and not a menace to it. The development of the West is but opening the way for the assured growth of the country, and if the present Eastern farmer does not feel its direct benefits, his sons will have reason to rejoice that liberal and broad views prevailed in this decade. All that has to be assured is that the great Government enterprises are honestly and unselfishly carried out, and, to secure this, Eastern watchfulness and conservatism will be valuable agencies.

The Presidential Outlook.

If Mr. Blaine had any idea that he was doing a shrewd thing three months ago in putting aside the crown, he was for once woefully wrong. The public has taken him at his word, or rather has accepted something less than his word, and he is now hardly looked upon as a presidential possibility. He could perhaps carry the convention "with a whoop," but it would be considered a trick by the better sort of voters, and would put him and his party at a disadvantage in the campaign. Mr. Blaine remains the idol of the Republican party, but he seems finally and effectually out of the race; and since Mr. Harrison never had any other formidable competitor, the way is broad and open before him. If not nominated by acclamation, he will be, in all likelihood, by a vote practically unanimous; and he will go before the country backed by every consideration that assisted his first election, and additionally supported by the record of an administration notably clean and efficient.

The Democratic situation has been almost revolutionized within the past few weeks. Mr. Cleveland, whose prospects a little while back seemed hopeless, is again the foremost man, and, as matters now stand, the probable nominee. The Hill boom died almost before fully born, and it is debatable if its supporters can muster negative force enough to prevent their dearest enemy from getting the nominating votes of New York. The failure of the Democratic majority in Congress to accomplish anything on the silver question further than to demonstrate the discord of Democratic sentiment on that question, makes the party hopeless of success with silver as an issue. They must have New York, and New York will demand an antisilver man—hence Cleveland. Furthermore, it is beginning to dawn on the party leaders that Cleveland is far and away their strongest man before the country. They do not love Cleveland so much as they love success, and if he is nominated, it will be a signal triumph of the Democratic public over the Democratic leaders.

The truth is that Cleveland is not liked by the leaders of his party. Gorman, Brice and others, would like a more pliable and politic man, one who could be made to speak at proper times and hold his tongue at proper times, and who in the event of election could be depended upon to turn over the patronage of the Government to those who could "put it to the best use." On the other hand there is natural and undisguised admiration on the part of the public, Republican as well as Democratic, of a man who upon occasion is not afraid to speak out his opinions in plain terms. Cleveland's famous antisilver letter actually gained him personal admirers, even among silver men, for all mankind takes off its hat to Courage whenever and wherever it may be displayed. It is true that in his own party as well as out of it there are many who cannot reconcile all of Mr. Cleveland's conduct with some of his principles, but on the whole he has grown prodigiously in public consideration. Next to Mr. Blaine he is our most popular man of national affairs, and if the Democrats are wise enough to play their highest card, he will be their candidate.

It is a very evident, and, as we view it, a very happy sign of the times that the fate of the coming national campaign will rest with the independent voter. There are many evidences that this is true. Less and less, autocratic party authority is respected, and more and more the better sort of voters are doing their own thinking and choosing for themselves, quite independent of party conventions. Thanks to the despised Mugwump, who led the way to this new order of things, it is no longer heresy to speak plainly against wrongs within one's party, or upon occasion to vote openly against its nominees. When so conspicuous a champion of party regularity, and of the rule of expedients over principles, as Mr. J. C. Clarkson dares openly censure an administration put into power by his party, and of which he is himself a servant, surely plain people who are not politicians, and whose interest in politics simply reflect their interest in the Government, may speak and act for themselves without rebuke. More and more, men of the better and wiser sort are coming to stand upon the rule of supporting party when party is right; and therein dwells the best hope of American politics.

The Earthquake.—A tremblor of unusual severity visited a limited area of the State at a few minutes before three o'clock on Tuesday morning. The region of greatest disturbance was on the west side of the Sacramento valley in the counties of Solano and Yolo, and the shock was felt over a region about 100 miles in diameter, its southern arc including San Francisco and the suburban towns around the bay. In the towns of Vacaville, Dixon and Winters and their vicinities there was great injury done to town buildings and farm residences. Many constructed of brick and stone are reported as wrecked and beyond repair. Frame building were only injured by being moved from their foundations or crushed by falling brick walls. Fortunately, there were no lives lost, even in the wrecked brick buildings, and most marvelous escapes from falling bricks and other debris are reported. Losses will aggregate thousands of dollars; possibly a hundred thousand or more. One lesson of the affair seems to teach preference for frame structures, or at least an avoidance of the insecure brick structures which are too frequently cheaply run up in country towns.

The New Chinese Bill.

It is a very serious misfortune when questions of public policy become so involved in politics as to tempt those who make the laws to aim at pleasing voters rather than at economic ends. Unfortunately the Chinese question has gotten into thes shape. Apparently the effort of each member of Congress who addresses himself to this matter is to devise a measure appealing more strongly to local and race prejudices than any that have preceded him, with a view to tickling some particular "element" whose votes he may be in need of next election. All the broader relationships of the question, as connected with national good faith, humanity, commerce and the other interests of the country, are disregarded utterly. The latest effort in Chinese legislation follows the rule of going one step further than anything that has come before it; so that we now have a proposition from Representative Geary of this State to positively close the door against Chinese of all classes and kinds, save and alone diplomatic agents and their immediate servants. It is, perhaps, not surprising that a cheap, small-bore demagogue like Mr. Geary should originate and urge such a measure, but strangely enough this extreme and absurd bill has been passed by a large vote in the House of Representatives, and has gone to the Senate for consideration by that body.

The absurdity of the measure lies in the fact that its inevitable effect, if it shall become a law, will be the withdrawal of diplomatic relations by the Chinese Government, the expulsion of all American merchants and missionaries from China, and the curtailment or destruction of our Asiatic trade or the turning over of the trade of San Francisco to British Columbia. These were reasons enough, surely, why the bill should not have passed the House, and they remain reasons enough why it should not pass the Senate. To make this bill a law would be in effect to close our ports to a trade which is vastly profitable to us and which is essential to our supremacy in the commerce of the Pacific ocean. We would be doing over again by legal enactment the vast folly done centuries ago by the Chinese Government, with brick and stone, on their western border.

In opposing this extreme and manifestly absurd measure, whose aim is simply to gain political favor through unreasoning popular prejudice, we do not wish to be misunderstood as advocating unrestricted Chinese immigration. The objections to the Chinese as an element of population are rational enough. They have no affinities with our people, no capacity for assimilation of our civilization. There is no promise in them of becoming useful American citizens, and their presence here is in very many ways harmful to us. If they do not positively cheapen labor, they serve to put it in contempt, and the results of their industry do not remain to upbuild and support the country. The Chinese build no churches, they organize no schools, the activity of their lives is a drain upon the country rather than a help to it. To bar out the Chinese as undesirable is just as legitimate but not one whit more important than to bar out paupers from England, mafia from Italy, socialists from Germany, communists from France, nihilists from Russia, and scalawags from everywhere. The right to close our doors against such races or classes as may not be desirable is simply the right of self-protection and self-preservation which belongs not only to individuals but to nations.

We approve most heartily the spirit of the present law, which seeks to accomplish the prohibition of miscellaneous Chinese immigration. If it has failed in some limited respects of proper enforcement, it is subject to amendment; but to throw it over entirely and substitute for it a measure which means absolute prohibition not only to the cooley but to the merchant, and which will involve correspondingly severe retaliatory laws on the part of the Chinese, barring out our merchants and our missionaries and closing Chinese ports against our ships of commerce, is absurdity run mad. It cannot be that the United States Senate, which, in spite of its deteriorated character, at least retains some measure of rational conservatism, will follow the course of the House and pass this utterly foolish measure. Business prudence and common sense are united in disapproval and condemnation of it. If it shall successfully run the gantlet and become a law, it will be the most serious triumph yet of demagogic politics in American affairs.

French Merino Sheep.

SAN FRANCISCO.

TO THE EDITOR:—While visiting in the San Joaquin valley last week, we had the pleasure of inspecting the "Woodside Stock Farm," the home of the French Merino sheep. This magnificent farm borders on the San Joaquin river three miles north of the town of Newman, in Stanislaus county, and consists of 1000 acres of river bottom, all in luxuriant alfalfa, and, in conjunction with several thousand acres of hill range, rank with the nutritious herbage of the grasses indigenous to our State, comprise within themselves a small principality.

The bands of sheep on the ranch are all the descendants of the celebrated band of 161 French Merino sheep imported between the years 1847 and 1853 by Mr. A. L. Bingham of Cornwall, Vermont, at a cost of $37,500. These sheep were the choicest selection from the flocks of M. Cughnot and M. Gilbert, celebrated breeders in France. Meeting the eye of Sam Brannan, the Ralston of his day in San Francisco, and without whose name a history of the State would be incomplete, they were brought to California, and afterward sold to A. G. Stonesifer of Hills Ferry (which town has since been rechristened Newman), and here they have ever since pursued the even tenor of their way, undisturbed, except when buyers came from near and distant points, carrying back to their homes some of the young bucks, to raise the standard of their own flocks.

In all these years the pristine purity of the breed has been maintained. The only times when new individuals crossed the portals of the ranch was when a personal visit to France has resulted in bringing out some of the choicest of the breed to mingle their blood with their relatives on this far distant shore. One of the present proprietors is at this writing in France, making selections to this end.

In 1880 Mr. Stonesifer, feeling his years bear heavily, retired from active life, and, building himself a magnificent country house in the suburbs of Newman, retired to take his well earned rest, and sold his band, complete and entire, to Messrs. Wilmans Bros., the present proprietors.

On entering the farm, one is struck with the substantial character of the improvements. Nothing for show, everything for use. There are no petted bucks, pampered and combed preparatory to being put on exhibition, that a leaden medal may be handed to their owner as testimony that they had been housed, blanketed and pampered to improve their appearance and thereby take away the natural hardiness of the animals; but all run out the whole year round, without protection of any kind at any time, and when called upon to take their place in the world as individuals, they are thoroughly inured to all the vicissitudes they may be expected to meet.

The bucks weigh from 175 to 225 pounds and clip from 35 to 45 pounds of wool. In this connection, an excerpt from the first annual bulletin of the Montana Wool Growers' Association is not out of place, in which Mr. E. Beach states as follows:

"In November, 1880, I bought of Stonesifer 700 ewes and 15 rams of this thoroughbred French stock and came with them to Montana. A careful research in regard to these sheep shows that these breeders have exercised the greatest care to keep the blood pure, and have allowed no foreign blood to be introduced, hence making my sheep the pure and direct descendants of the French importations of Bingham."

Mr. Beach goes on further to say:

My own flock of thoroughbred French Merinos has now been run in Montana for three years. They have run upon the range winter and summer and received practically the same treatment given to my common sheep. In this time and under this treatment they have done well and refute the theory that there are no thoroughbred Merino sheep that will stand the treatment given to common sheep upon the range.

Year after year enterprising breeders of Utah, Montana, Washington, Oregon, Arizona, New Mexico and Texas have competed with our own people for the young bucks from the Woodside farm, and it has been no unusual circumstance that intending buyers have been obliged to await another season. Meanwhile Mr. J. M. Wilmans, the senior partner in the enterprise, was showing us the many points of interest about the farm, at the same time giving us the above information in a chatty way, and at the conclusion we reluctantly said good-bye as we turned our horses' heads toward Newman to take the train, but well pleased to have had an opportunity of getting an insight into this important branch of stock-raising in California, namely, the breeding of thoroughbred French Merino sheep.

VISITOR.

Oregon Weather and Crops.

B. S. Pague of the Oregon State Weather Service issues, under date of April 12th, his first weekly crop weather report of the season of 1892. This is the fourth year that these reports have been issued in Oregon. That they have met with popular favor is shown by the interest manifested in them by the general public. In the past seasons there have been a good corps of correspondents, and these have been increased in numbers until now there is not a county that is not represented by correspondents.

THE PAST WINTER.—During October, the rains were well distributed and about the average amount. During November and December, the rains were heavy and general throughout the State, there being an absence of the usual amount of sunshine. January, February and up to March 20th, the rains were light, sufficient, however, to keep the soil in good condition. There was an absence of any heavy snowfall east of the Cascade mountains, while to the west there were few days that the temperature was below the freezing point. In Eastern Oregon, there was an entire absence of any severe cold weather, a temperature of zero occurring but a few times in the more elevated regions.

There was not the usual acreage of fall-sown wheat put in, owing to the heavy November and December rainfall, but that which was sown did remarkably well. Plowing and seeding were pushed to their utmost during January, February and the forepart of March, so that now the acreage of cereals is fully up to the average, and it is all reported to be in first-class condition. A more favorable winter for the stock has seldom been experienced. There is no loss reported, the grass and feed were plentiful, and the stock all came through the winter in excellent condition. The growing season of 1892 opens most favorably for a bountiful harvest, even surpassing the wonderful yields and products of 1891. It should, however, be borne in mind that the success of the cereal crop in Eastern and Southern Oregon, especially, depends more upon the distribution and amount of rainfall in the months of May and June, and the temperature conditions in those months, than the conditions of the soil and prospects at the present time.

WESTERN OREGON CROPS.—Cereals are all in good condition, though more growth would obtain if there should be more sunshine, which has been very deficient. The rainy weather stopped, almost entirely, plowing and seeding. The reports indicate excellent prospects for a large acreage and the present conditions to be first-class for all the cereals.

The peach, apricot, some varieties of prunes, pears and cherries are generally in full bloom, and so far are in good condition, though the weather for the past week has been unfavorable. The present weather conditions, if continued, will seriously injure the prospective crop. Less rain, more sunshine and warmer weather are needed to protect and develop the fruit buds. The smaller fruits and berries are developing nicely.

The hopmen are busily engaged in working their yards preparing for the coming crop. The acreage is being increased in most of the counties.

The weather has not been favorable to the lambing season, though the losses are much less than usual.

Warmth and sunshine during the coming week will materially benefit all crops and products.

EASTERN OREGON CROPS.—The weather has been unfavorable to the growth of all vegetation, though no damage has been done save in a very few exposed places. The frosts of March 27th, 28th and 29th nipped the more advanced and tender vegetation.

Plowing and seeding are nearly done, and the acreage is somewhat larger than last year. The soil is in first-class condition, the wheat has a good stand, and the prospects are excellent.

Peaches, apricots, almonds and apples are in full bloom except in the interior. The fruit prospects are, so far, very good.

Sheep shearing is being pushed. In some sections it has been finished. An extra good clip and staple have been secured. The weather is too cold for the newly sheared sheep. Lambing is now in progress.

The general prospects for cereals, fruit and stock are very good—much better than usual at this period of the year.

PICNICS for April 30th are Dixon, Elk Grove and Merced. Some of these dates have been changed since your list was published in RURAL,

E. W. DAVIS, W. M. S. G. of Cal.

Santa Rosa, April 18th.

The Prison Grain-Bag Question.

A Presentation of the Farmers' Side of the Matter by Mr. C. P. Berry of Yolo Co.

The following letter, written by Mr. C. P. Berry of Woodland to the State Prison directors, concerning the question of prison grain bags, their price and the general policy of their manufacture by prison labor, has been furnished us for publication. We print it gladly, because it embodies briefly and plainly the principles upon which the jute industry was organized at the State prison, and upon which that industry originally found support among farmers and others throughout the State. We commend the points set forth in Mr. Berry's letter not only to prison directors to whom the letter is directed, but to all the people of California.

WHEATLAND, CAL., April 14, 1892.

To the Prison Directors, San Quentin, Cal.—GENTLEMEN: As a member of a committee appointed by the State Grange of California to confer with you in regard to the price and distribution of grain bags for the season of 1892, finding it impossible to attend your meeting on the 9th inst., I respectfully offer the following suggestions for your consideration:

1st. I believe the maximum number of bags sold to any one farmer should not be more than 3000, and that no bags should be sold to any person other than the actual grain grower, for his own use. I believe further that the price of bags should be determined by the actual cost of production, with an addition of, say, one cent per bag.

I believe the policy of selling bags at the market price, unless the market price be no more than from 10 to 20 per cent above the cost of production, is wrong.

1st. Because I believe the said percentage is a fair and equitable profit, and as great as consumers should be compelled to pay. All institutions, and especially those supported by the State, should be run upon a basis of justice and equity.

I believe the policy of selling prison bags at the market price, regardless of cost, often permits the market price to be fixed by rings and combines to the detriment of consumers, and when it is understood to be the policy that the State will change its price from time to time to correspond to the so-called market price, fixed by the bag rings or combines, it becomes a party to the wrong and renders it easier for any combination to fix unjust prices, because they will require less capital to accomplish their purpose.

The State should fix the market price of bags in so far as her limited production will permit, and I believe it should be the policy of the State to so increase the output of bags as to be able to fix and hold the price of bags at a reasonable and just figure.

The argument that the manufacture of grain bags is the only labor to which the prisoners can be put that will give profit to the State and not come directly in competition with free labor, and that hence the State is justified in taking advantage of the market, or perhaps aid in "bulling" the market and making as great a profit as she can, is not a sound one. It is easily seen that the State could take control of the market by increasing the output of bags sufficiently, and thus be in position to fix the price. Were it to do so, and then demand excessive figures (all the traffic will bear, or more properly speaking all the farmers could pay), we are satisfied that no honest man would approve of such an action.

If, therefore, having control of the market, the State would not be justified in fixing excessive prices, certainly she is not justified in pursuing the policy that will aid others to take advantage of the demand caused by large crops or otherwise, and fixing extortionate prices for bags, and that without any regard to their cost, or the ability of consumers to pay. It has been the case in this State when the supply of bags was largely in excess of the demand, by combinations the surplus was withdrawn from the market, and the remainder sold at exorbitant prices.

Again, the expense of maintaining all State institutions should be paid from the taxes collected from all the people, and it is doubtful if any policy is justifiable that will cast the burden of support of any State institution upon one class of consumers, which would be the case if the State prison was made self-sustaining by the manufacture of bags, sold at excessive prices.

At present there are but a small number of prisoners engaged in the jute mills; it is possible that were all the prison labor engaged in the manufacture of jute bags, the prison might be made to pay something of its running expenses. To this the consumers would not object, provided sacks were placed at cost, with the said 10 to 20 per cent added.

However, in behalf of the producers I enter my protest against the policy of attempting to make large and excessive profits by changing the price of bags from time to time to correspond with the prices fixed by dealers who resort to every device and combination possible to increase the prices and add to their profits. I think the only true and just policy for the State to pursue in the price and distribution of bags is to furnish them to farmers only, in limited quantities, and at a small percentage above cost, and thus, as far as possible, control the price of grain bags in the State.

I think further that, as soon as possible, the State should prepare to employ all the prison labor in the manufacture of jute. She would then be in a position to control prices of bags and to hold them at reasonable figures, and do much toward making the prison self-sustaining. Respectfully yours,

C. P. BERRY.

VITICULTURAL COMMISSIONERS.—Governor Markham has appointed Viticultural Commissioners as follows: John T. Doyle of San Francisco, commissioner at large (reappointed); Allen Towle of Placer county, commissioner for the El Dorado District, vice George G. Blanchard, deceased; Geo. West for San Joaquin District (reappointed); E. C. Bichowsky of San Gabriel, Los Angeles county, to succeed L. J. Rose, term expired; Isaac de Turk for the Sonoma District.

QUERIES AND REPLIES.

Other Benefits from the Coyote Bounty.

VALLEY CENTER, San Diego Co.

TO THE EDITOR:—In a late issue of the PRESS, you invite comment on the coyote scalp law by those concerned. In response, I would say that I am a rancher and live somewhat remote from market. We keep cattle, horses, etc. on our ranch. (I have no sheep.) I endeavor to raise poultry to consume the grain we grow. Previous to the Scalp Act and the diminution of the coyotes, our loss was about 50 cents per day from the ravages of the coyotes on the poultry. By a liberal use of poisons, guns and a little vigilance, we can keep the rabbits and squirrels under control, but coyotes were always out of our range. We have never killed any of the varmints since the act was passed, consequently are not pecuniarily benefited by the act, only so far as it saves us the loss of so much poultry. Two years ago, during a busy time in harvest, we lost 13 fine young Pekin ducks at one time within 40 steps of the house with two good watchdogs just at hand.

I have resided in these rugged mountains for 13 years. In that time, we have killed scores and scores of foxes and wildcats, but in all that time have only killed one coyote.

As one interested farmer and tax payer, I am highly in favor of the Coyote Scalp bounty. I would suggest that our next legislature increase the scalp bounty and reduce by $200,000 the World's Fair appropriation. These are my and my neighbor's sentiments.

There is a large stock ranch near us where hunting is prohibited, and the covotes stay and breed there. W. F. JAMES.

Canalgre Weed Roots Wanted.

SAN DIEGO, April 8, 1892.

TO THE EDITOR:—Among the weeds found in California is a coarse species of dock, known to Mexicans as *Canaigre*, botanically known as *Rumex hymenosepalus*. The plant has large tuberous roots, most common in rich bottom land. With some Mexicans the leaves are used as a substitute for pie plant in making pies. The root is credited with curative properties, owing its repute to the amount of tannin contained. The writer would be glad to learn concerning the distribution of this plant in California or elsewhere. Any one in a position to obtain a large quantity of the roots (a ton or more) is invited to correspond, with a view to learning if it can be turned to some useful account, instead of remaining a weed.

C. R. ORCUTT.

To Stop a Leaky Cistern.

LINDEN, CAL., April 12, 1892.

TO THE EDITOR:—In reply to Mr. S. H. Herring, who asks how to stop the seeping of water through a stone and cement tank, will say: I built a tank of brick and cement which seemed water-tight. After holding 5000 gallons for a week it began to seep a little, and the next day bursted a portion of the bottom out. I then removed more of the bottom, replaced the washed out foundation with a concrete made of broken stones and cement, plastered the bottom with cement, then painted the inside of tank with two coats of white rubber paint (for outside work), and have had no seepage since—nearly a year. If two coats of paint did not seem sufficient I would put on more.

J. M. GILLIS.

The Sour Orange.

BLOCKSBURG, Humboldt Co.

TO THE EDITOR:—Will the gentleman who wrote for your paper, two weeks ago, of sour oranges tell me if it is identical with the Seville orange of Europe, which is only used for marmalade or wine and is a dark, thick, rough-skinned and bitter fruit, and where to buy the trees? Will some of your readers tell me how to raise sea kale?—MRS. E. HOPE.

The sour orange is identical with the orange of Seville. Trees can be had, probably, from any nurseryman advertising citrus trees.

Growers of sea kale will please reply.

THE OLIVE PRODUCT.—It is estimated that Southern California altogether produced $65,000 worth of olive oil and pickled fruit last November. To-day not $1000 worth of this oil or pickles remains in the market. The Eastern demand has been enormous. There are many orders for California olive oil and pickles from Chicago and New York wholesale grocers already made for the year's product.—Pomona Progress.

Horticulture.

Irrigated Strawberries in Colorado.

Our growers of small fruits will be interested to compare their methods with those successfully followed by another irrigated State. At a Farmers' Institute meeting at Brighton, Colorado, R. L. Edwards read an essay from which we give the following extracts:

Knowing the strawberry to be an extraordinary grass feeder and a great drinker, I always try to prepare my land in the fall for spring planting, and in the spring for autumn planting, by applying from 30 to 40 loads of manure to the acre, plow it under, harrow and cross harrow, and make the ground as mellow as I would for a crop of seed onions. I mark out for the rows 40 inches from row to row; plants are set about 15 inches in rows, and have crowns just level with surface. Use nothing but your hands to plant with, spread roots naturally and make soil firm around plants; better walk on and put your foot on each plant after planting.

Irrigate immediately after planting if soil is dry, keep plants moist during planting—in short, never expose the roots one moment, when dry, to the parching winds and the sun. Ninety-nine per cent of my plants always grow. Hoe and cultivate frequently during the summer, irrigate before the land gets dry, do not turn water on very rapidly and avoid washing, turn off water soon as wet enough and thus avoid souring the land. When runners appear, cut them off; when others appear, move them around where you want them and put a little soil on them. Try and have plants growing six inches from each other in matted row 16 or 18 inches wide; this makes an ideal row. Cultivate and hoe out all surplus runners and plants if you do not wish them for plants.

I am in favor of fall planting if I have plenty of water to irrigate after planting. Plant before the first of October; before first of September is better. Always let your plants go into winter quarters with plenty of moisture. As soon as the land is frozen, cover with light straw manure; if fall-planted, cover before any frost with a light coat, and add more if you wish afterward. After my last cultivation, I leave a good mark in center between rows. When I uncover in spring, there is a place to put my long manure. When I irrigate, the water runs under this covering, washes out the element in the manure, and makes available plant food, of which plants soon take advantage.

After crop is gathered, I run mowing machine as high as I can and cut off tops of leaves and the weeds. The latter are sure to grow during the rush of picking season. Rake up and throw away the rubbish; cultivate with two horses through the centers or the paths which are made very solid by the pickers walking over them; then apply a good coat of well rotted manure; spread it all over the ground, harrow and cross harrow with weight on harrows, flood the water all over the land, let it soak for two days, when dry enough cultivate often, use as little water as possible, and thus avoid washing out the element as little as possible.

Irrigate often and keep surface moist; object, I am now encouraging the new fibrous roots to grow, which are now just starting from the upper part of the crown. Just below the surface of the ground, the under part of the crown will soon die if attended to rightly. In the meantime, my new or renewed plants make very rapid growth, make few or no runners, but are rapidly making fruit crowns for the next year's crop. I let my strawberries rest for two or three weeks after fruiting, for there is danger of forcing the plants too fast and causing them to bloom. Should it be a mild fall, all kinds may not do this; some may. I have had Captain Jack and the Favorite to bloom very thickly in October, and I consider that the following crop was somewhat less in consequence of it. To avoid fall blooming, I now start the fall cultivation the first of August instead of the middle of July, as I have done.

HOW TO MARKET BERRIES.

Do not use old boxes and crates for berries, for there is stain on the cases caused by the juice of berries that have been shipped long distances. For months previous to the ripening of Colorado berries, you can buy those cases for one-third the price of new ones; but the sharp eye of the purchaser will object to them. Mold is present in the wood on their arrival from distant points, and sure to be present as soon as fresh fruit is put in them. I have often seen berries, 24 hours from picking, commence to mold when such cases contain them. It must cause dissatisfaction to purchasers, as berries are very susceptible to injury and sensible to the surroundings, and old crates and boxes are a pest house for their reception. By all means, always use new and attractive cases.

I will state another objection I have against our retail dealers. They scatter the fruit out of the boxes on their counters, scoop them into a quart measure, and throw them into paper bags for their customers. By the time the bag reaches the home of the consumer, the berries are a mass of mush. After berries are treated in this way, the consumption to a great extent is curtailed, the appetite decreases, the good housewife becomes disgusted, and she wants no more strawberries in the house. She stops buying them, and the market becomes glutted. Such is the case with our market. In Denver, consumers are disgusted with using a berry the color of a strawberry, but they do not deserve the name. Frequently, last summer, I tasted those berries, some of which were shipped from Florida, and with my eyes shut I would imagine I was eating a berry Edison speaks of manufacturing out of New Jersey soil. Edison says they lack fiber, but I thought they were deficient in every element they ought to have but color.

It is pertinent for our Colorado strawberry growers to put in practice and produce berries superior in quality, tempting in color and uniformly large. Grade your berries; throw out all damaged and small berries, if there are any. Use nothing but attractive boxes and crates with your name and location on each. Pick your berries with a portion of the stem left on them. Berries appear more attractive and keep better when picked this way. If to be shipped, pick them a little under-ripe but fully colored. Jesse and Warfield No. 2 require picking every day to obtain best results. If the above suggestions are complied with, there is very little fear that the Denver market will be glutted with Colorado strawberries. To keep tally with 25 or more pickers, I found it necessary to have cards printed—three kinds, three colors; one for one box, another for five boxes. When pickers have a dollar's worth, they return them for a dollar card with my name endorsed on the back. There was no mistake, and it gave good satisfaction. Before closing my remarks, let me again impress on the minds of all the Colorado strawberry producers: Grow them for quality, grow them aiming for large berries, grow them attractive in color, grade them, and put your fruit in attractive cases before offering for sale.

The Olive in the Interior.

Extracts from an essay by George C. Roeding at Fresno Farmers' Institute.

Some contend that the sea breeze is an essential factor for the olive. This is a mistaken idea. The olive is grown in Smyrna 70 and 80 miles inland. It also produces large crops of fruit in soils where other fruits would be a failure. The olive is not a success on heavy, wet land.

Most of us, both raisin and fruit growers, know by sad experience, how important a part labor plays in profitable fruit-growing here, and especially is this brought to our attention during the picking season when labor is at a premium. How to overcome this difficulty has had the careful consideration of many fruit growers, as the high wages demanded and received by laborers, and especially the Chinese, is entirely out of proportion to their real value.

I think a simple solution to that question will be found in a greater diversity of crops, so that as soon as one has been handled and disposed of, another will follow, and thus employment will be given to men for more months in the year, with the result that wages will not, during the fruit season, be as high as in past years.

The olive ripens when all other crops have been gathered, some varieties commencing to ripen with us November 1st and continuing until January 1st, thus giving ample time to gather the crop, providing you will plant varieties in accordance with their time of ripening. Labor at this season of the year is easily obtained at much lower rates, and furthermore, the fruit can hang on the tree several weeks without being damaged; rains are a benefit, are actually required; the trees gather increased vigor in the fall, and the fruit fills out and ripens much more readily than it otherwise would.

True, the olive does not come into bearing as soon as other trees, but taking into consideration the difference between the profits of an olive orchard and that of some other variety of fruit on the same soil, I feel satisfied when your trees do come into bearing you will be amply repaid for the time you have had to wait before receiving any returns. The olive commences to bear when about four years old, and from that time on will increase in productiveness every succeeding year for an indefinite period. There are trees in Europe said to be 1000 years old, and still bearing large crops annually. A number of my trees commenced to bear a few olives when three years old, and since that time I have never known the crop to fail.

Just such soils as are not adapted to the raisin grape are suited to the olive. I refer, of course, to the sandy, light loam, of which there are many thousands of acres in this valley, and which, in my opinion, is best for the olive.

In making this statement, I speak from actual experience and observation. I had about 75 acres planted to the olive on such soil as mentioned above. The oldest of my trees are not more than seven years, and for three years have been loaded with fruit, while olive trees of the Mission variety, growing on the Fresno Vineyard Company's place, on heavy argillaceous soil, have never had on any one of their trees, now fully ten years old, as many olives as have been gathered from my trees when only six.

In planting an olive orchard, the first step to be taken is to plow your land good and deep, not less than 12 inches; the deeper you plow the better the results. I have planted trees at the Fancher Creek nursery 25 feet apart, many, however, recommend 30 and 36 feet. In such soil as I have 25 feet is a good distance, and if eventually the trees do become too much crowded (it will take at least 15 years) every other tree can be cut out and then the trees will not be too far apart. Mr. Roeding gave it as his opinion that the interior counties are better suited to the olive than any other portion of the State. He said that olives may readily be transplanted when four or five years old, and instances are known of their being successfully transplanted when 20 years of age.

PICKLING OLIVES.

Take a can of concentrated lye; dissolve about one can in a gallon of water, using an earthen vessel for that purpose. The strength of the solution should be tested with a hydrometer. The specific gravity should not be more than ten degrees.

If the olives are in a green state this strength can be safely used. If ripe, the hydrometer should not register more than six or seven degrees at the outside. It will take from four to five hours for the lye to penetrate the olive. After the olives have been submerged for two hours you should examine them every 15 minutes. Take one out, cut into it and as soon as the lye has penetrated to the pit drain it off, which may be ascertained by a discoloration of the flesh. Now pour fresh water over the olives, and change this at least three times a day for four days, or until the taste of the lye has entirely disappeared.

Then dissolve salt in water, taking about twelve ounces to every gallon, and after boiling for ten minutes add one ounce of alum to every gallon to clarify the solution. This mixture should be poured over the olives and in a few days they will be fit to be eaten.

Thus far no insect pests have attacked the olives here.

Treatment after Sunburn.

Lineus Stewart at the Fresno Farmers' Institute.

"In the spring of 1890, I became the owner of a ranch, at that time known as the Hoag ranch, 30 acres of which are in peach and nectarine trees from five to eight years old. In the fall of that year I noticed that a great many trees had been badly sunburned in former years, leaving the trunks of the trees bare of bark from three to six inches in width and from 18 to 20 inches in height. The ragged edges of the bark were infested with bugs of all kinds and in some instances fungi had made such ravages that the decayed parts could be removed with the hand.

Knowing that insects attack wood for the sugar or gum contained therein, and that fungi subsist on the albumen of the wood, I determined to give a coating of pine tar to protect the trees from these ravages.

In March, 1891, I thoroughly cleaned away all the decayed wood, stripped off all the loose bark, and then covered the wounds with the pine tar. Insects and worms came out by hundreds.

The effect of the treatment is a new growth closing around the bare spaces, no bark peeling away, and the trees are healthy and bear well. I gave another coating of the tar in February of this year, and found a few limbs that had escaped my observation last year; the difference between them and those that had been treated was remarkable; no new growth of wood, the bark all rough and curled up and insects under all. J. R. Baird, horticultural commissioner, visited the orchard February 22d, and was very much impressed with the benefits of the treament.

I would advise two applications yearly, one in the fall to protect the injured trees from the rain, and one in the spring to keep out the insects.

In the discussion which followed this paper it was clearly shown that tar should not be put upon live bark but only on the wounds caused by sunburn. Tar kills live bark. —Ed. Press.

The California Strawberry.

We have to go away from home to learn the news. Perhaps some of our readers need not go so far, and if so, we should like to have them tell us what they know of a strawberry called the "California." We find the following letter from Chas. Wright of Seaford, Delaware, in the *American Farm* of Richmond, Va.

A subscriber from Mt. Holly, N. J., asks about the California strawberry. I have it, and will try to tell him what I know of it. Several years ago an agent from Ohio came through here selling nursery stock, and claimed to have two valuable new strawberries—Topeka and California. He sold a good many plants, and when they afterward came into bearing, all, with one or two exceptions, turned out to be the the old Crescent. One man in Carolina county, Md., got a berry altogether different from anything we had before, and this proved to be the California. It has become quite popular lately, and will be largely planted here this spring. I heard of it through a party some ten miles from me, who had shipped the finest berries that went from his station, and on investigation I found them to be the California. It is large, rather long, firm, a good grower, quite productive, and is used here as a very suitable fertilizer for Bubach; season medium early. Altogether it is considered a first-class market sort by those who know it best. The Topeka turned out the same way. I have not yet fruited it, but a friend of mine here, who was fortunate enough to get his true to name, finds it very fine, and asked me to propagate it, he furnishing me the plants. Whether there ever were two such varieties I don't know, but they are not like any of the varieties I know or have fruited.

Now what is the California Strawberry? Is it the old Longworth Prolific which retained its popularity here so long after it was lost sight of at the East that it may have been sent back East with a new name? We would like to know more about it.

Horticulture at the World's Fair.

Appropriations for exhibits for the World's Columbian Exposition from foreign countries now aggregate more than $4,500,000.

The Placer County World's Fair Association has authorized Alex. Keller to secure a horticultural collection and was allowed a per diem and expense for the work.

The ladies of San Diego City and the surrounding towns are organizing and doing excellent work, especially in the way of gathering rare plants, vines, shrubs, etc.

A lady at Oceanside, San Diego Co., is growing some calla lillies for exhibition at the World's Fair. Some of the blossoms recently shown were fully a foot across and the stocks five feet in height.

A recent letter from J. M. Samuels, Chief of the Department of Horticulture, states that one acre of ground on the beautiful spot known as the Wooded Island, will be devoted to a rose garden. The California Nursery Co., at Niles, has agreed to furnish 900 plants to be used in this space.

Miss F. Butler, who has been chosen by the California Commission to collect and arrange studies of the Natural flora of California, is actively at work. There are upward of 5000 varieties of wild flowers in California, and she expects to furnish for exhibition at Chicago, studies of 600 wild flowers and grasses in both oil and water colors.

Taking the State as a whole, much interest is being shown in matters relating to an exhibit of California's products at Chicago. Exhibits are being collected and stored at central points ready for transportation. Young trees and vines have been transplanted into boxes in order to be hardy for next year, while those remaining in the orchards and vineyards have been carefully pruned and well fertilized, in order that only the choicest specimens of fruit may be grown. Great care has been given to the cereals and other agricultural products, while at least one county has growing for a display, over 50 different varieties of wheat. Exhibits under the department of horticulture are well under way.

The Stock Yard.

The "Red, White and Roan."

Baden Station, San Mateo Co., April 13, 1862.

To the Editor:—The season is at hand when farmers and dairymen will be looking around with a view to replenishing their herds with new blood by the purchase of bulls for future use. Of course there is the usual outcry about color, some not being satisfied unless they can have a red bull. By all means let such have their fancies gratified; but most of us know that it is hard to get everything perfect in a bull, as well as in other things, and I, for one, believe that the proportion of really good animals is less among red Shorthorns than among those of other colors.

Since the year 1810, when the roan bull Comet (155) was sold for 1000 guineas, until the present time when Queen Victoria's roan bull New Year's Gift (57,796) has just been sold for the same sum of money (being more than $5000), roan cattle have sold for the highest prices and won the most prizes. Let any man tell me of a herd that has been bred successfully and altogether to red for the space of 20 years, which is not too long a time in which to establish a herd of any fixed type, and I will name 20 or more breeders who have been more successful by not being bound to any one color, and whose cattle have been more in demand, for every breeder that has been equally successful by confining himself to using only red bulls.

Another noticeable fact about the Queen's recent sale is that a *white* yearling heifer "of rare proportions and of great beauty" sold for $530—a price which exceeded that of any other female in the sale by about $155, and that in a lot of 26 head, which sold for the high average of $242.

When I refer to roans as selling for the largest prices, it is also inferred that not only the breeding is good, but the animals are also individually of the best, not because of the color, but rather for their better shape and greater thriving qualities, coupled occasionally, but not necessarily, with what is called *style*. I say not necessarily, because it is a fact that the so-called stylish cattle are very seldom of the best type and symmetry. However taking to the eye of some people they may be, they are apt to be inclined to legginess and too frequently narrow and flat in the foreribs and through the heart, faults that indicate a delicate constitution in an animal, which no amount of upstanding style can compensate for. Style counts for nothing at the shambles, but often worse, as those of that kind of cattle invariably look bigger than they really are, especially to the eye of the inexperienced.

Most of your readers who take an interest in cattle know that I have written on this subject before, and to show that I do not stand alone in my ideas as regards the superior quality of the lighter colored cattle, I commend the following, written by one of the most successful breeders of Shorthorns in the United States and reproduced in a recent number of the *Breeders' Gazette* and also in the *Live Stock Report:*

Breeding for Color.

FROM AGRICULTURAL DEPARTMENT KANSAS WEEKLY CAPITAL.

In your issue of Jan. 28th, I notice a reference to myself in the article by "D. P. N." on "Breeding for Color in Shorthorns," which prompts me to ask for a word or two. Had "D. P. N." visited the Linwood herd any time in the last two years, he would have found three bulls in service, two roans and one red. Had he been here today, he would have found us deciding the selection of three calves to keep for future use out of 21 head, and the result again two roans and one red out of a roan cow, the entire lot containing only four roans. Now in neither case has the selection been made on account of the color, but because they were the best and in every way the most perfect animals, and the odds were largely in favor of those with mellow, mossy, roan coats. I fully appreciate the difficulty he speaks of as existing here in the West, and here only, in the preference of a majority of buyers for red at all hazards and at any sacrifice of quality; but I think it has reached a point where it involves the ruin of the grandest breed of cattle in taking an inferior animal because it is red.

In Kentucky I have often seen grade cattle superior to the "blue blood" herds, and found that for years the farmer took as his sires the cheap roan bulls instead of the high-priced reds. In Canada I have never seen a farmer using other than roan bulls, as they say they are perfectly willing to let the Americans buy the red ones. Some of their professional breeders have, like us, yielded to the demands from our side for red, and when persisted in for several generations, the effect is plain. As an American, I am ashamed to say that, so far as the show rings are concerned, for several years the Shorthorns would not have been "in it" at all had it not been for imported roan cattle and the sons and daughters of roan cows and bulls from the other side. All the mystery of breeding may be summed up as William Houseman puts it, "to be able to understand the fitness of similarities and the unfitness of dissimilarities," and persistently "breed to the best." The "feed lot" and the "show ring" will then soon convince the other fellows. W. A. Harris.

Linwood, Kan.

So much for the beefy side, and now a few facts on the milking qualities of some of the old sorts, some of them taken from the reports of the American Shorthorn Breeders' Association on cows milked for their premiums at different State Fairs.

A good sample to begin with is one of my own heifers, Baden Ruby 4th, roan, calved March 4, 1889. She produced her first calf (a bull) on the day she was three years old. Her milk was weighed from the morning of the 7th March to the morning of the 12th, nine milkings. She gave 164 pounds of milk, being a fraction over 18 pounds for each milking. Her sire was a white bull and all the dams in the pedigree were roan for the next preceding five generations, and the seven sires preceding the white one were six roans and one yellow-red in color—a real old-fashioned Shorthorn color, however much despised by some people.

Baden Ruby 4th is of the same family as Baden Ruby, yellow, red and white, that averaged a fraction over 40½ pounds of milk a day, for seven days, at the California State Fair in 1890, giving as much as 44 pounds on the sixth day of the trial. She had averaged over 50 pounds a day at home from the time of calving till the time of starting for the fair, a period of six weeks.

This family of Shorthorns was bred for useful qualities, symmetrical shape, milk and beef, but without regard to the maintenance of any one color, by the late Sir Charles Knightley as much as 50 years ago, the bulk of his herd being sold off in 1856, at an average price of $385 for 77 head.

White Maid, milked at the same time as Baden Ruby, gave a fraction over 30½ pounds a day for the seven days' trial, 3½ months after calving. In the spring of 1888, this cow gave an average of over 50 pounds of milk a day for 100 days, after calving, on good grass. She is descended from one of the earlier importations of Shorthorns into the United States, and has for her sire a white bull whose sire and dam (both roan) I brought from England in 1875.

I could give other proofs of the good milking qualities of Shorthorns from my own herd, particularly some of the descendants of the imported cows: *Frantic* by 4th Duke of York (10,167), *Pansy* by Blaize (76), and *Lady Jane* by Whittington (12,299). I have had cows of these old families give as much as seven gallons of milk a day, while 20 quarts a day is an ordinary quantity for any cow of the families named to give when in full milk and on fairly good feed.

OTHER STATE FAIR RECORDS.

I will now turn to the reports on cows milked for premiums offered by the American Shorthorn Breeders' Association, through the agency of various State Fairs during the last three years.

The best record for 1889 at the New York State Fair was made by Messrs. Spencer & Son's Fillpail 3d, roan. She gave 30¼ pounds of milk, which made 1½ pounds of butter for the 24 hours, 197 days after calving.

The same firm also had three other good cows, viz.: Cherry Lass 4th, roan, gave 28½ pounds milk and 1 7-16 pounds of butter 177 days after calving. Kitty Clay 3d gave 28½ pounds of milk and 1 5-16 pounds of butter 140 days after calving; and Kitty Clay 4th, 21¾ pounds milk and 1 1-16 pounds of butter 197 days after calving. Cows that will make over one pound of butter a day, six months after calving, and when away from home, and, as the report says, after having been shipped 400 miles, cannot but be looked upon as good cows.

At the Indiana State Fair, Mrs. Virginia C. Meredith exhibited Wild Duchess of Oxford, where she made a record of 32 lbs. 7½ ozs. of milk for the 24 hours.

The above are the only records of milk given by the Shorthorn cows exhibited in 1889, although several premiums were awarded for dairy Shorthorns at some other fairs which were not really dairy cows, but the greater part of them animals which took the premiums in the classes where they had been judged by the beef standard.

In 1890, one of the best cows, if not the best, was exhibited at the Michigan State Fair, viz., Moss Rose 4th, red and white (vol. 35, p. 579), and of the old Pansy by Blaize (76) tribe. Two pounds of butter were made from her milk of one day, the weight of milk not being given.

The first prize cow at the New York State Fair was Kitty Clay 2d, yellow roan (vol. 21 p. 16,553), and, as the name indicates, of the old "Henry Clay stock." She is also the dam of the cows Kitty Clay 3d and 4th, named above, and gave 42 lbs. 13 ozs. of milk in one day, from which 1 lb. 11 ozs. of butter was made. She had her last calf August 1, 1890. The second prize was awarded to Constance of Brookdale 28th, red and little white (vol. 33 p. 596), her sire, dam and great dam all being roan. She gave 42 lbs. 3 ozs. of milk, which made 1 lb. 8 ozs. of butter (unsalted), and had her last calf Aug. 23, 1890. She is a descendant of imported Constance by Bridegroom—a family of Shorthorns which have been much more favorably looked upon as beef producers than as dairy cattle.

The next best cow at the same fair was Fillpail 3d, roan (the premier cow of 1889), her milk for the 24 hours being 31 lbs. 6 ozs.; butter, 1 lb. 4½ ozs. She had her last calf on April 17, 1890, and was again in calf from June 10th, thus being placed at a great disadvantage when compared with the two first prize cows.

The best heifer on the record is Chautauqua Belle, red (vol. 36), which gave 23 lbs. 10 ozs. of milk, 12 ozs. butter, in one day. She had her last calf April 15, 1890.

All other cows reported as receiving premiums at any of the fairs gave less than 30 pounds a day, excepting three that gave respectively 36, 33 and 32½ pounds of milk.

The premiums for 1891 were awarded to the cow giving the most butter in two days (according to the Babcock tester), the quantity made from one cow varying all the way from .321 lb. (less than half a pound a day) up to 4.2 lbs., or at the rate of 2.1 lbs. a day, the next best record being 3.857 lbs. for the two days. These latter were the first and second prize cows at the Western Pennsylvania State Fair, and were the best exhibits at 12 different State Fairs, including California, which ought to have done better.

The third best cow was Fillpail 3d, before mentioned, with 3.29 pounds butter to her credit at the New York State Fair, and the fourth best showing was made by Moss Rose 4th, with 3.25 pounds for the two days at the Michigan State Fair, where she made 2 pounds in one day in 1890, as before stated.

Fifteen of the nineteen cows that were awarded first and second premiums at the different State Fairs made over one pound of butter a day, five of these having over 1½ lbs. a day and less than 2 pounds, while only one cow gave 2 lbs. a day or over (4.2 lbs. in two days).

The two best cows for 1891 were red ones; of the six next best, four were red and white and two roan. As the weight of each cow's milk is not given, neither the time of last calving, both of which I think ought to be made known (as at the New York State Fair in 1890), we have not all the means by which we can form an opinion of what is a first-class dairy cow. As is well known, some cows give a large quantity of milk for a few months and dry up quickly after they are in calf again, while others will give a steady flow for several months and milk well up to or near the time of calving again, giving in the aggregate much more milk than many cows that make a better showing soon after calving.

GOOD CATTLE IN DULL TIMES.

In several articles that I wrote for the Rural Press last year, I brought out facts to prove that Shorthorn cattle are in no way behind any other breed for the production of beef on a given quantity of food, as well as for quantity of milk of a good or even superior quality. For these reasons there has been, through all these years of depression in cattle breeding, a steady demand for Shorthorn bulls, at paying prices, particularly for use on medium-sized farms, where dairying is one of the chief factors in making ends meet. It is true that the prices at which cattle have been selling of late years have afforded but little encouragement for investment in high-priced bulls, and many have held back from using even good bulls on that account, not, perhaps, bearing in mind that "the bull is half the herd."

Good bulls can be bought now for less money than ever, and for that reason it is to be feared that some breeders of pure-bred stock are being deterred from making any little extra outlay that may be required for either the improvement or keeping up of their herds to the past or present standard. Cattle cannot keep so low as they have been for much longer. For one reason, it has not been paying to raise them, and people cannot or will not keep long at a thing that does not pay, at least if they can help it. Therefore, now is the time to buy good stock, "before the boom," as the real estate men say, though there may be few that are looking for one in cattle just yet; but they are bound to have their turn sooner or later, just as horses have had, and sheep are having it now.

Whatever I may have said about color, I want it understood that I have nothing against red; but I do object to the absurd course of sacrificing useful qualities for the sake of having a herd of one color, thus practically breeding out one of the distinguishing characteristics of the breed.

As well might breeders of Holstein cattle aim to breed their cattle all black, or Hereford breeders do away with the white faces peculiar to that breed, as breeders of Shorthorns attempt to breed out the white color that is naturally in them. But, fortunately for the cattle, there has been no such foolish attempt made by breeders of the two former breeds, so far as I am aware at least, but they have sensibly stuck to developing the leading characteristics of the respective breeds—milk in one and beef in the "white faces." If a red Shorthorn is a better animal than one of another color, for that reason, and that only, he will be worth more money.

The low prices of cattle ought to have the stimulating effect of encouraging the breeding and rearing of only such cattle, whatever the breed, as will make profitable returns for the food consumed, in beef or milk, or both together.

Whatever we have of useful qualities in our herds, let us endeavor to keep and improve upon, if possible, by every means in our power, and stick to the old and tried blood, while we despise not her true and ancient colors.

Robt. Ashburner.

Southern Oregon Cattle.—Letters received from Southeastern Oregon state that the past winter has been very favorable for the cattle on the ranges in that section. Stockmen have been stocking their ranges with young cattle from California, and their herds are beginning to be as numerous as before the heavy loss of the hard winter of 1889 and 1890. In Warner Valley the cattle are now luxuriating on the sweet young grass. Farther north, in Baker county, the winter has not been so favorable, and in Idaho it has been still worse; and on all the ranges from Idaho to Salt Lake there has been a heavy percentage of loss. Montana, which used to be a large buyer of young cattle in the Willamette Valley, is not buying any here now, and has had a succession of such cold winters as to be very injurious to her cattle interests. The young cattle of this valley will be needed to stock the ranges of Eastern Oregon and Washington.—Salem Statesman.

Horestry.

Notes on Eucalyptus Species.

La Manda Park, Los Angeles Co.

To the Editor:—The last report sent in to me showing the experience of tree planters in difficult belts, comes from a district, not in the Antelope valley, but under the same climatic conditions.

This report shows that, among the eucalyptus, the *E. pilularis*, *E. corynocalyx* and *E. diversicolor* will not stand much frost—about the same as the blue gum. When growing on a slope or otherwise protected from heavy frost the *Eucalyptus corynocalyx* or "sugar gum" was found to stand the drought and heat the best. The *E. Viminalis*, "manna gum," and *E. rostrata*, "red gum," resisted frost the best.

It may be well to recall the fact that the *E. Viminalis*, "manna gum," has been very extensively sold in California for the red gum. The *Viminalis* has long lanceolate leaves of greenish-grey color; it is drooping and graceful in its new growth. The new wood and young branches are a bright mahogany red. The tree is a little more rapid grower than the red gum, but it is by no means so valuable a tree. The lanceolate leaves of the red gum are less long and narrow than those of the *Viminalis;* they are also grayer in color. The red gum is stiffer in its habit of growth than the manna, and generally not so attractive in its early years. How the mistake originally happened it is now impossible to say, but we may congratulate ourselves that the tree substituted for the red gum, while inferior, is still a fine tree, with excellent adaptive powers to our climate.

It is fortunate that our seedsmen and nurserymen are so generally careful and reliable. Most of the cases where seeds and trees of one variety have been sent out as belonging to some other, were doubtless the result of mistake. It is, however, a mistake of a most serious character. A farmer who plants forest or fruit trees cannot afford to devote his land and attention over a number of years to find, after all, that instead of the valuable timber or crop he might legitimately expect from his selected variety, he has an inferior variety with a comparatively worthless crop. Carelessness that permits this deception and injury approaches crime. Abbot Kinney.

Poultry Yard.

What Shall the Chicken-House Floor Be?

Although the true way to keep fowls on a commercial scale in this State is the itinerary method, where the house floor shall be continually fresh ground, there must be fowls kept in some places in stationary houses. Of what shall the floor be made? is therefore a matter of considerable importance. The experience of a number of correspondents to the *Rural New Yorker* will be found to reflect the experience of our own readers to a great extent and will therefore be useful to beginners. The name of the writer will be found at the ends of the several paragraphs:

I have given considerable time and study to the subject of poultry-house floors. In the beginning of my present poultry business and in building my first poultry house, I was firm in the belief that a floor of earth would be just the thing needed if properly constructed and dry. I was careful, therefore to place a good drain under the foundation walls and fill inside to a depth of two feet with stone and gravel, with a foot of dry loam on top to be changed twice a year if necessary. The house was built at odd spells during the summer, and was thoroughly dry when the hens were put in it on September 1—50 in each apartment, 12x20 feet. At first all went well; the hens were out in the parks a good share of the time; the windows were open on warm, sunny days, and the floors kept dry and in good condition; but as the winter set in with a fall of snow that remained all the season, and the hens were consequently confined entirely to the house, the floor soon began to show dampness from the droppings, which condition grew continually worse until about February 1, when, in spite of my efforts to keep the floor in proper shape by using cut straw, chaff and other absorbents freely, it was far from satisfactory, being damp and sticky to a depth of five or six inches. Although dry below that, there was continually arising a strong, disagreeable odor, which I finally succeeded in checking by a free use of plaster; but the floor remained damp and grew worse until spring came, when, with warm days and open windows, it dried into a hard crust six or eight inches deep, which it was something of a job to dig up and carry out.

The condition of the hens as to health and egg production during the fall and fore part of the winter was quite satisfactory, with a flattering prospect for the entire winter. The condition rapidly fell off, however, as the floor grew damp, and along toward spring, when they should have been laying nearly at their best, I was getting few eggs and there were many sick and ailing hens, and, in fact, I lost a number.

The conclusion that I was able to draw from this experience was that while an earth floor which could not conveniently be changed at least two or three times during the winter, might answer for a small flock in a house large enough to allow the dry earth of the floor to absorb all the moisture from the droppings without becoming damp and disagreeable until the spring came with its conveniences for changing it, I should have to use a solid floor with absorbents to cover it, that could be changed often to enable me to keep in proper condition so large a number in so small a space.

In looking around for a material for the purpose, it seemed to me that grout or concrete would be the proper thing; but as I found that I could put in a board floor somewhat cheaper, I concluded to use it, as I considered its employment only an experiment; in fact I was rapidly finding out that nearly all of my work in connection with poultry keeping was as yet more or less experimental. I bought a lot of cheap but sound hemlock and laid the floor, being careful to join the edges as closely as possible without planing or matching. This I kept well littered with a layer of dry earth and cut straw, which was changed as often as needed, with the best results all through the next winter, which was severe, and the hens were kept closely confined all of the time. So well was I pleased with this floor and the method of keeping the house dry and clean through the winter that I have not looked for a better.

I know of no real objection to grout or concrete for the purpose. Some, however, have raised the objection that a floor of that kind is always cold and disagreeable to the touch and consequently uncomfortable for the fowls confined upon it. Without having had any experience with it, I am strongly of the opinion, however, that if properly covered with dry earth and litter of some sort, as all poultry-house floors should be, this objection would be entirely overcome. This being true, the facts that it is far more durable than boards, and that it is proof against rats and similar vermin, combine to make it the best as well as the cheapest in the end. There may be other objections to it of which I am not aware, and were I to adopt its use, I should do so in an experimental way at first.

In building and arranging for my present poultry business, I was obliged to build cheaply or not at all. This seemed very inconvenient at the time, as it compelled me to go slow and carefully study all sides of the question; but now I look back to that time with no feeling of regret, as I am quite sure that had I been possessed of ample means, I should have built too much without the necessary study to have made my building a success.—*C. H. Wyckoff.*

I find boards better than earth or concrete for poultry floors, as they can be renewed, and are easily cleaned, and are warmer. Earth floors become foul, and must be frequently renewed. Concrete floors are cold to the feet, unless well littered, but for preventing rats from entering the poultry house they are excellent. Were it not that they provide a harboring place for rats, boards cannot be excelled.—*P. H. Jacobs.*

I think the best floor for a poultry house is sand. If I could have one as I want it, I would concrete or cement the bottom up to the sill and then put on four inches of quite course beach sand. My reason for this opinion is that fowls eat a great quantity of sand or grit, and in the winter when they cannot range at large they always have the sand to pick. I also believe one-half of the diseases of poultry are caused by their not having grit, and the best kind of grit is sand. I do not believe there would be much, if any chicken cholera if the fowls had access to it.—*P. Williams.*

According to our experience, a floor made of good, matched and planed lumber gives the best satisfaction in a hennery, as it can he kept dry and clean more easily than any other with which we have been familiar. We always keep our floors well littered with fine straw having as much chaff in it as possible. We see no objection to a cement or concrete floor if it can be kept equally dry and be built as cheaply.—*Knapp Bros.*

Fruit Marketing.

Cooperative Fruit Marketing.

C. C. Agee of Solano county, who was one of the committee appointed by the Fresno Convention to develop a plan for the cooperative marketing of California fruits, writes the following article for the Dixon *Tribune* of April 15:

We all realize the necessity for fruit growers to have a system by which they can sustain this branch of industry, which, if properly sustained is worth millions to this State (the county of Solano alone producing more than a million dollars worth of fruit annually). In our present condition and with the prevailing manner of marketing, it is found to retrograde to a serious extent, which will cripple the finances and prosperity of this State. It is in the power of producers to sustain this industry by uniting in a cooperative body of our own people and thus do our own business, and if we thus unite, the organization will be larger and more influential than any other in the State of California, and why should it not be accomplished?

I would make the suggestion that the fruit-growing localities of the State take stock in an organization of this kind to the amount of one dollar per acre of bearing fruit and the stockholders to select from among their number a competent business man to represent the district, and from these a board of directors shall be chosen to serve one year, only stockholders to be eligible to hold office. All fruit raisers may become stockholders by taking stock to the amount of one dollar per share, fruit producers also who have young trees or vines may take stock on the same terms as their trees come into bearing. I would suggest for carrying out this work that each local company or producer pack in suitable condition for market a sample package of their product, accompanied by the name of the producer and the probable amount of the yield, said packages to be on exhibition at the principal office in San Francisco, where purchasers may buy the fruit of any part of the State through the agency.

The duties of the Board of Directors shall be to rent suitable office rooms, exhibit the samples and sell the fruit as markets and purchasers shall be found. It would be advisable to have the Directors establish branch offices in large cities, where there is a demand for our goods and have a limited amount kept on hand to supply the market at any time. It shall also be the duty of the managers of these agencies to attend to the delivering of any shipments made from any of our companies or agencies, and to see that payments are made and sent to the shippers, retaining five per cent of the sales, which amount is to be sent to the head office in San Francisco to defray the necessary expenses. The prices must be set by the parent board through the representatives of the local board and are not in any case to be undersold, the price to be made in San Francisco, with transportation added.

Some of the advantages to be derived by this corporation are as follows:

1. A permanent price on each grade of goods.
2. The goods to be handled by men of our own choosing, not speculators but men of our own vocation from various parts of the State.
3. To have our own agent in cities to deliver goods and receive payments and forward same to the producer without risk or loss.
4. There being at present a difference of 100 to 150 per cent between the producer and consumer after the freight has been paid, the producer is thereby unjustly deprived of a legitimate living.
5. To prevent overloading markets and being compelled to reship to other localities by shipping from the packing houses in various parts of the State, direct to the consumer.
6. Having our headquarters in San Francisco we will be prepared to show samples while our goods may be stored at home, and be under no expense until the fruit is started for its destination.
7. In case of unusually large production we might ask the railroads to make reductions for a season to help market our products. In case they refuse to make any concession we could retain more at home and save expenses and losses.
8. In sustaining our vocation it means millions to our State; it affords labor to men, women and children; it diversfies our crops, thereby strengthing all our producers.
9. No individual corporation can expect a permanent price as it would come into direct competition with itself.
10. While the producer works 16 hours a day to cultivate and prepare his products and eke out a bare living, the speculator works eight hours and takes all the profits. Now are we to become slaves to such men or are we going to transact our own business. Some say that the farmers are the biggest fools on earth, since they have the power and will not use it. Let's break the record. It is of the utmost importance for reasons already stated that every fruit grower should come up and help to inaugurate this important movement. A committee authorized by the citizens of the State have the necessary papers to take stock, incorporate and call stockholders together to effect a permanent organization, and they are now ready for signatures. Do not hesitate; there is nothing to lose but an opportunity to maintain your calling in an honorable manner.

Swine Yard.

Pull the Cord and the Hog Does the Rest.

Wilder Ranch, Santa Cruz.

To the Editor:—In the first place, get the hogs in a small pen, so you can get among them conveniently. Now take a bale rope and make a slip noose or loop. With the rope in one hand and the loop in the other, work up to a hog gently and drop the loop over his nose. With a little manœuvering, you can get him to take it in his mouth; then draw the loop back so as to get it over his tusks and draw it tight and you have him fast by the upper jaw, and he will set back for all he is worth. Now make the rope tight and fast and you can ring the hog at your leisure and he will hold still. D. D. Wilder.

Another Play on the Hog's Nose.

Plymouth, Mich., April 6.

To the Editor:—There appeared in the Press, some time since, an inquiry as to the way of holding hogs while ringing them. As a hog's nose is the most sensitive part, a good way is to slip a small cord, with a slip noose in it, over his nose just back of the tusks and fasten the cord to a stake or let another hold it, and the hog can be handled in any way with no danger of struggling, or he may be easily led anywhere with but little force. A large Chester White boar was once loaded into a wagon at one of our State Fairs by a man pulling on the cord and leading him up an inclined plank, when four strapping fellows failed to handle him in the ordinary way, the owner offering to bet $50 that I could not load him alone. J. S. Tibbits.

A Noose and a Chute.

Covina, Los Angeles Co.

To the Editor:—In the Rural practical information in ringing hogs is being given, and I will give mine. No matter what size the pen is, but leading from it there should be a narrow passageway, so that only one hog can enter at a time. Have the passageway open at the top, and when the hog gets to the farther end have a silde door to shut down behind him, and you are ready for work. Take a stout cord, make a slip noose and place it in his mouth around the upper jaw. Fasten to a post in front and the hog will at once pull back and hold perfectly still. After ringing, open the door in front and let him pass out. Pull your slide door and let in another hog. You can do it very rapidly. It is easy work and there is no danger of injuring your hogs. Should the hog refuse to open his mouth, stir him up a little with a stick. R. Baldridge.

The Field.

Send the Weeds to the World's Fair.

N. J. Experiment Station,
Brunswick, N. J.

To the Editor:—In order that the exhibition of weeds at the World's Columbian Exposition may be large, and representative of all sections of the country, the undersigned (having this feature in charge) respectfully asks for specimens of the worst weeds from all States and Territories.

It is suggested that each botanist or local collector, who may be pleased to assist in the work, secure at least three specimens of the worst weeds in his State or section. In making the specimens it is important that the following points be considered: 1, seeds are especially desired; 2, seedlings important in various stages of development; 3, the root system is essential; also, 4, the flower and flower cluster, and, 5, the seed vessel.

It may be necessary, therefore, to secure these various essentials at different times during the coming season. If the weed is a large one, stress is laid upon the procuring of specimens while they are small enough, so that the whole plant, roots and all, can be mounted, without bending, upon an herbarian sheet of ordinary size, that is, not over a foot in length. They are not to be mounted, however, by the collector.

That unnecessary duplication may be avoided, persons who contemplate collecting specimens should signify their intention to the undersigned, and allotments will then be made, the assignments depending largely upon the locality. It is hoped that each State in the Union may be represented by specimens, in this national exhibit, of our worst weeds.

The collecting must all be done during the present season, and the specimens sent in for mounting, labeling, etc., by December 1st. Correspondence is solicited.

Byron D. Halsted.

Prof. Hilgard of the State University is preparing a comprehensive exhibit of California weeds for Mr. Halsted's exhibit.—Ed. Press.

The Court in the Horticultural Building at Chicago intended for the California Citrus Orchard is now being filled to a depth of several feet with rich soil, the purpose being that the trees shall be well protected and show themselves to the best advantage. More than double the amount of available space in the Horticultural Building has been applied for, and great pressure was brought to bear to have a portion of the court roofed over and used for exhibit rooms, but Chief Samuels has fulfilled his promise that one of the courts should be reserved for the California Citrus Orchard.

The Home Circle.

Our Childhood's Faith.

O the summer long ago!
When we saw with laughing eyes,
Crowned with gems of rosy light,
Each new morn in splendor rise.
O the swift-winged radiant days!
Earth, caressed by sun and dew,
Donned her fairest robe of bloom,
Over all heaven's tender blue.

O the warm and languid eves!
Filled with fragrance, rich and sweet,
From the dewy, scented flowers,
Crushed by lingering little feet.
O the dark-browed solemn nights!
When we murmured drowsily,
"Now we lay us down to sleep,"
Heads bent low at mother's knee.

Now the patient mother rests
Calmly 'neath the churchyard sod,
Gone for aye from clinging hands,
Hers the endless peace of God.
Years, long years, have come and gone,
Swept the glamour f om our eyes;
Now the earth is bare and brown,
Pitiless the cold gray skies.

Still, amidst the clash and clang
Of the world's bewildering strife,
Soothing every anxious care
Of this restless, burdened life,
We can hear an undertone,
Echoing from the long ago,
Trembling through world-hardened hearts,
With a rhythm sweet and low.

O those blessed early days!
Listening to that soft refrain,
We forget all pains and loss;
Heaven seems near us once again.
Then, with heads low bent, we pray
As we prayed at mother's knee,
While our childhood's happy faith
O'er the soul broods tenderly.

—*Eva Douglas.*

Duties Near at Hand.

The north wind roared loudly. Showers of sharp, cutting icy snow sprinkled down thickly. A hired man had just returned from Payson, bringing to Julie and Ralph Waldo a generous mail—letters and favorite periodicals. In the bright warm library the two young people enjoyed their good things, drawing near to the fire in the big heater. Julie said:

"Dear Uncle Sam, how much I love him and his mail bags. Waldo farm isn't lonesome if we are almost 'shut in' when the winter storms and deep mud make driving a wearisome task."

"What is it, Sis?" inquired Ralph as Julie exclaimed emphatically, "Oh!"

"It's this, Ralph," sighed Julie, her round, rosy face lengthening: "One reads of so much kindly, helpful work being done. Brother, I cannot think of a single person who needs our ministrations. Nobody that's within our reach needs doing for."

"That they don't, Sis," returned Ralph earnestly, with the air of one who knows whereof he speaks.

"Our neighbors are in better circumstances than we are. My! but the wind roars loudly. Silver Hill will be sleet covered in the morning. I wish everbody was snugly sheltered from this storm."

"Ralph! Julie! Come into the dining room to the south and east windows," called Cousin Edith, the housekeeper during Mrs. Waldo's long stay in the South.

"I see nothing," said Ralph, polishing the glass in the east window, "but old Dobbin, the rick o' bones that neighbor Rogers doesn't value sufficiently to shelter and feed decently. Oh, yes! there's our ponies, Lady Bird and Yellow Mane, out from their shed."

Julie looked out of the south window. Sancho Panza, an ancient donkey, stood with his back to the nipping wind, with head downward, shivering and feebly resisting the gale that spared no man or beast.

Mouse Ear and Diadem, two yearlings, were exposed to the storm.

Rover, old and stiff, crept about the house searching an aperture in the underpinning that he might creep under the piazza or find his old corner near the big brick chimney.

Ann Sullivan limped down the kitchen stairs saying to Jonas Wing:

"If misthress Waldo was at home, she'd know of somethin' that 'ud soothe me itchin', burnin' fate. They've been frosted when I milked the contrary Jerseys that'll not bide a mon near 'em. The shed bees cowld for me fate, an' now I must shlip around aisy in me loose rubbers, not being able to wear a boot. It's dreadin' the comin' sthorm an' gettin me toes nipped again that I am."

"Poor old Dobbin looks friendless. I wonder if he was a faithful horse," said Cousin Edith.

"A dear, good, honest old friend. The Rogers children loved him. Mr. Rogers should be ashamed of being so mean and heartless," cried Julia indignantly.

"His valuable Nimbletoes doesn't lack for care and a warm stall. Poor, forsaken, old Dobbin."

"I-I am not sure, Sis, that we have been kind and careful with our four-footed friends," said Ralph thoughtfully, watching Sancho's feeble effort to resist the wind and storm.

"Sancho doesn't look any too comfortable. Our ponies are not warmly sheltered. The yearlings haven't good quarters. Rover hasn't a kennel. The blooded stock have the warm stalls and the hired men look after them, not caring for these old wornout creatures, the ponies or the yearlings. When you and I, Julie, ride to school, we tether the ponies in a convenient place. They stand three hours in the sun, storm and cold. When we are in the humor for a race we run them, not thinking that they have stood several hours cramped, dinnerless, and often without water.

"By denying ourselves a little we may have them cared for near the schoolhouse.

"Two of the largest Plymouth Rock chicks stub around toeless. During last winter's cold weather their feet were frozen. We have laughed often as they get about in their queer, clumsy fashion."

"The poor things. I'll see after the chicks that they have a warm place," said Julie sympathetically.

"And I will look after Ann s frozen feet," added Cousin Edith.

"And I," said Ralph, "will take care of Dobbin to-night, and Sancho shall not hump up to keep warm ten minutes longer.

"I'll see Tom Rogers to-morrow and between us we'll look after the old and less valuable animals that the hired men neglect."

The clock struck nine when Ralph, with Jonas Wing, came into the farm kitchen and extinguished their lanterns.

Julie's hands had not been idle ones. Dick Brand, a chore boy, was suffering accutely in a fireless room, threatened with an illness.

The homeless lad had suffered in silence uncomplainingly, until intense pain wrung from him a humble appeal to Cousin Edith for help.

"Julie dear," said Ralph, "we needent stir from Waldo farm in father and mother's absence to find work.

Our ministrations are needed. Sancho and Dobbin are enjoying the quarters that Jonas and I fitted up for them, in a way that makes me ashamed of my previous selfishness."—Ella Guernsey in Prairie Farmer.

In All Things Charity.

The immortal poet never said anything truer than that

Things without remedy
Should be without regard.

The art of not referring to things distasteful, unpleasant or disastrous is a very fine one in household life. However greatly an occurrence is to be regretted, if it is inevitable, if no amount of discussion or allusion to it can in the least affect the result, then let it be ignored, and the sooner it is forgotten, the better. Regrets over this, that or the other are not only idle, but they are absolutely demoralizing. The crash of the best china, or the burglary of the silver may be a most disastrous and inconvenient affair; the loss may be a serious one, and one even impossible to replace; and still, life should always be regarded as a question of values, and a mere accident and material loss should be very distinctively separated from a sorrow or from a moral failure. "The life is more than meat;" wholeness of character is infinitely removed from mere material prosperity, and may exist without it quite as well as with.

To hold the tone of life in the home as something high, pure, consecrated, indeed, is the one desirable thing. For consecration is not too high a term. The ideal of character and the supreme value of achievement in constant spiritual victory, day by day, is the ideal to which domestic life should be amenable. A child should not be made to feel as badly because he carelessly breaks a vase or does some other mischief as if he had yielded to ill temper, or untruth, or unkindness. Moral wrong, mental inertia, are serious faults, to be constantly striven against and rebuked and exterminated so far as education and influence can make it possible, while the accidents and incidents of life, however well it is to teach caution and care, should not be assumed to be as serious as a fault that has to do with moral character or intellectual growth. To define very clearly this scale of values is perhaps the best part of a child's education.

Faults are often best corrected indirectly. Stimulate the virtues, and faults diminish of themselves. The good crowds out the evil. The first cure for darkness is to admit the light. The surest way to eradicate evil is to call forth the good. A child should have the inestimable advantage of always breathing the atmosphere in which generous and heroic aims are held as the essential and the significant elements of life, while material successes or gains, however desirable, are still recognized as being on a lower plane, and while they may be reasonably desired, are yet not to be widely sought.

The grace of gentle breeding is the one best gift and grace that can be conferred upon the child, and the key to this is a just appreciation of the true values of life; the relative values of essential qualities of character. "Thus, in life, too," says Epictetus, "this is the chief business, to consider and discriminate things; and say, 'Externals are not in my power; choice is, where shall I seek good and evil? Within is what is my aim.' But in what is controlled by others, count nothing good or evil, profitable or hurtful, or any such thing."—The Budget.

Spice of Life.

—Better late than never—Husbands.

—It is not safe to judge a man's courage by the tone of voice he employs when he speaks to the office boy. Wait until you hear him address his wife.

—Mr. Jones—I move that Mr. Smith's resignation be accepted. The Chairman (surprised)—What resignation? Mr. Jones—The one he ought to send in.

—Mr. Tozer (sadly)—Nothing equals the scepticism of married women. Mrs. Tozer—You're mistaken, my dear; there is one thing. What is it? The credulity of the unmarried ones.

—Mrs. Van Pelt—If you work for me, Bridget, you will have to wear caps. I suppose you do not object. Bridget—Sure not, mum. I can borry wan from me cousin. It has ear taps and a 'possum tail on top.

—He took her fancy when he came; he took her hand; he took a kiss; he took no notice of the shame that glowed her happy cheeks at this. He took to coming afternoons; he took an oath he'd ne'er deceive; he took her father's silver spoons, and after that he took his leave.

Let Us Tell The Truth.

Written for the RURAL PRESS by ISABEL DARLING.

Let us tell the truth, at least when we profess to do so. When writing stories, building, in one sense creating, we are allowed and expected to take more or less liberties with names, places and circumstances, but even then readers are more honorably treated if all that is asserted has been or might be under the given conditions.

There is nothing disgraceful in the making of oleomargarine, but let us not call it butter, thereby disturbing the market for both. To represent a dairyman as slaughtering a fresh cow every day for butter material would be ridiculous and certainly not poetical or true; but it is just as ridiculous to picture, as present, old-time simplicity which was generally wearisome in convenience. Especially is this true in descriptions of farm life, which is as little benefited by an imported sham gorgeousness as is the face of our native lumber by a coat of paint that is zig-zaged and spotted by combs or thumb nails, or some other contrivance, in imitation of a grain that was much more beautiful before. We have read poem after poem on farm life, and felt that between the poetry from afar and the prose of experience there had been "a great gulf fixed." One published lately was dated, I was glad to see, from the city, so the writer was more excusable for asserting that "The dairymaid trips with her milking pail." *Where* does she do that and *who* is the dairymaid? The use of the word corral in mentioning the cattle yard shows that Pacific Coast, probably California farm life was meant, so we will hunt for her up the hills and down the valleys. Through inland or wheat counties, where miles of grain stretch out like a broad green sea without a break or fence, wandering cows would be nuisances, therefore the one or two kept at the house to supply milk not butter usually circulate around a picket pin with no larger sphere of operations than that swept by a stout rope fastened around the horns. They may "low" enough, but they have no "trail" to follow, and a professional milkmaid, though she might be an ornament, would not be a necessity for these one or two cows. If she was, who would she be? The American girl seldom learns to milk, and the Irish girl "ditto." The Chinaman "No sabbys," if he can help himsef, and no stretch of the imagination can make a tripping dairymaid out of him.

If we go through the wheat lands to the dairies of the coast, she is not there, for only men were advertised for and only men presented themselves. On foothill places, where the cultivated area is small and the products various as to kind or uncertain as to quantity, the wife and daughters may help, but generally for economy and not for fun.

There are parts of the world, of the United States, where the suggestion of a milkmaid would not seem so much out of place. That reminds me of an Ohio family among the pioneers who settled on a certain Minnesota prairie many years ago. There was a large and increasing number of children, all boys except two, and the mother waded about (it was nothing less, for the grass was tall and dews very heavy) night and morning to do the milking. If she was belated, perhaps the father would say pleasantly, "Come, mother, it is time to pail the cows." All the neighbors were indignant, not because the work was degrading, but because the men were better able to do it, and in that place it had always been considered a man's work. Where they had lived it was not. But neither Ohio nor Minnesota are California in customs any more than in scenery, and when we prepare supplies for agricultural papers, should we not label foreign products and not exhibit a rare specimen as a type of the whole? Is it worth while to sacrifice truth for a sentimental gloss over prosy facts? It does little good to represent the country as one great Eden without even the serpent, hoping in that way to turn some part of the city into the fields. Those who have had experience know better, and those who had not soon learn. There is poverty which means hunger, rags and poor shelter, inconvenience, debt and other miseries, in the country as well as in the city, as there are also the opposite conditions in both. Not every farmer sits contentedly on the porch blowing smoke in the face of the setting sun. That is the time to be taking care of the animals, if the regular day's work is done, and in that old pipe I see nothing poetical, but should say that the farther he flung it from him the better it would be for the atmosphere about the place.

In this State the farmer occupies a higher social position than in any other where I have lived, often being a leading power in town, county or the State at large, and does not need to be shown by these false lights. Here he does not always smoke a cob or any other pipe nor use ungrammatical language, although he might do just as good work if he did say he "haint got no time to look none at pooty posies nohow." He is not a distinctive character; he is one among others, looks and acts like any other man, or perhaps better, and his wife and daughters cannot always be told from others by their ignorance, nor are they invarlably uniformed in calico and sweet simplicity.

The country is beautiful, of course it is, each locality in a different way, and if we look we can find beauty in apparently unlovely things. To many it offers enjoyments that more than balance the discomforts, but others see there only loneliness, inconvenience, misery, and they will not be converted by pictures that are untrue to life.

A farmer who thinks of changing his Eastern home for one here will naturally examine the literature of the agricultural papers for something by which to judge of what life here is like. He cannot find it unless we tell the truth, the truth as it is in California, not in Massachusetts, in Louisiana or in England.

—A certain clergyman would not believe the eggs brought by the milkmaid in the morning were new laid unless they were warm. On one occasion they were cold, and on his asking for an explanation, she replied: "Well, sir, the reason is that the cat that usually sits on them to make them warm has been out all night and did not return in time."

Young Folks' Column.

Joe and Nell.

Written for the Rural Press by Aunt Susie.

"Poor little birdie, you look so cold. I'm cold myself, but I'm bigger 'n you and can stand it better. If you'll let me catch you, I'll warm you."

So said a ragged little bootblack in New York one cold day. He was watching the numerous little birds that swarm in Union Square, where there are many little houses for them, and where they are fed every day by the keeper of the park. Sometimes a little bird gets so chilled he can't hop or fly; then, if no helping hand comes, he soon ceases to feel the cold, and becomes chilled beyond all warming.

But Joe, our bootblack, reached out his hand carefully and picked up the poor little half frozen birdie, and, hailing a companion, said:

"Come, Sam, let's take this poor little fellow over to the grating, where the steam comes up, and warm him and ourselves at the same time. These little fellows can't stand as much as we can."

So the two boys sat down by the grating and stretched their hands out over the bars. It was a vent for steam and heat from the underground kitchen of a restaurant, and while the tired and overheated cook was grateful for the escape of the hot air, the two little cold urchins were as grateful for the hot air that warmed their poor half frozen bodies. The dear little bird soon began to twitter and chirp as it became warm, and it looked about this way and that, and seeing the two boys, turned its little head on one side and seemed to say:

"Did you bring me here to get me warm? If so, I thank you very much, but I do hope I can go back to the birds in the park. I'd be awful lonesome all by myself, no matter how good you were to me."

Then he twittered some more, but seemed content to sit on Joe's hand while he stroked its feathers.

"What yer going to do with it, Joe; take it home to yer sister Nell, when it gits good and warm?"

"No, indeed; may be its got a sister over in the park, and it would feel bad, anyway, to be shut up in the house. I'd lots rather let it go and be with the other birds than to try to keep it, even if I had a cage, which I haven't, so now, little birdie, here you go."

Joe opened his hand, and away flew the bird with a glad chirp of thanks.

Just then Joe saw a young lady watching him, and fearing she thought he tried to keep the bird, he said:

"I didn't hurt him, miss; I warmed him and let him go."

"I know you did. I have been watching you ever since you sat by the grating, and I want to talk to you, but I can't do it here, the sidewalk is so crowded with people. I know the man who keeps the shoe store: come in here and let me talk with you," said Miss Holmes.

"I wasn't doin' nothin' mean; don't yer send for a p'liceman to 'rest me, will yer, miss?"

"No, indeed; I know you were kind to the bird, and I wan't to be kind to you."

So Joe followed Miss Holmes into the store. She said a few words to the clerk, and he put a chair for her where she could talk without disturbing the customers.

"I heard your friend call you Joe, so suppose that is your name?"

"Yesum."

"Well now, Joe, have you a home and parents?"

"No'm, I hain't got no father nor mother, but I've got a sister named Nell. She 'n me lives with a woman named Mrs. McCarty, since mother died. She is good to us, but often we don't have no fire nor much to eat. That's what made me want to warm the little bird. I'm cold so much myself I know how bad it is."

"Do you love animals? Would you like to leave the city and live in the country?"

"O yes'um, but I couldn't go unless Nell went. I promised mother I'd never leave Nell."

"Where does Mrs. McCarty live?"

"On Tenth avenue and Sixth street. It's an awful old tenement house, and she has only one little room, but it's lots better 'n sleepin' out doors these cold nights."

"Well, Joe, I have a plan in my mind for you and Nell, and perhaps for Mrs. McCarty too, but it will be several days before I shall know certainly about it, but you take me to see Mrs. McCarty now."

So the two started off, and at last they reached the house. It was indeed a terrible place. They climbed several rickety stairs, and at last Joe opened a door. The room was very small, and the two straw beds were on the floor, but they were neatly made up and the room was clean. Even the one little window had a white curtain to it. Joe said:

"This is Miss Holmes; she seen me up town and wanted to see you, Mrs. McCarty."

"Sure an' it's a bright day for the loikes o' me that fetches sich an illigant leddy to me room. Take a chair, miss, it's clane, I scrubbed it the day."

"Yes, Mrs. McCarty, your room looks clean, and I am very glad to see it. Now, Joe, you run off and get as many "shines" as you can. I want to talk with Mrs. McCarty. Where is Nell?"

As Joe passed out Nell came in. She was a bright-looking child, very poorly dressed, but her face was clean and her hair neatly braided, though tied with a piece of string. Nell handed Mrs. McCarty a package of tea and three potatoes. Miss Holmes said:

"Have you enough for dinner to-day?"

"We war just agoin' ter have these three praters and a cup o' tay."

"Well, Nell, you take this 25 cents and get some meat. What do you want?"

"O, me 'n Joe would ruther have bacon nor anything, the gravy is so good."

"Well, then, get 15 cents worth of bacon and ten cents worth of potatoes."

So Nell ran off with a hearty "Thank ye, miss," and as soon as she reached the street, exclaimed to the urchins swarming about:

"There's a grand lady in our room, and she just gimme 25 cents to buy bacon and potatoes with," and was soon out of sight.

"Well, Mrs. McCarty," said Miss Holmes, "I saw Joe warming a poor, half frozen bird, and it made me think he must be fond of birds, animals and all such things, and that he would be happy in the country, and perhaps I can find a home for him, but I don't know about Nell. Are you fond of the children? Would you mind giving them up?"

"Sure an' indade an' I do jist loves thim childers. I lost all me own, a bye and a girrul, and thin me ould man died, may the saints rist his saul! an' so it seems loike as if thim mitherless childers is all I have in the worruld. I do the bist I can fer um. I go out washin' and house-clanin', and arne all I can, but coal is so high we don't allers have a fire. To-day I was paid a dollar that has been owin' me sometime, so I bought some coal and sint Nell after some tay and the praters. There's nothin' loike a cup o' hot tay to warrum a body on a could day."

Just then Nell burst in the room, with her hands full. As she put the bacon and potatoes on the table, Mrs. McCarty exclaimed, "Sure an' its foine dinner we'll have the day! Now, Nell, ye jist rin out and git in the sun somewhere, whilst me'n this foine leddy has a tark."

When Nell was gone, Miss Holmes said, "I know a farmer who lives in Vermont, by the name of Brown, and it may be I can get a home for you all there; would you go if I can?"

"Sure an' would I go! Indade an' I would that. Jist to think o' seein' the grane grass and praters a growin' makes me heart jump and go back to me home in the ould counthry. I was only a slip o' a girrul whin I come to Ameriky, but niver can I forgit the ould counthry."

"Well, I will write to Mrs. Brown and see if she thinks she could find work for you. There is a little house on their farm that they don't use; if you could live in that with the children, and they go to school, how nice it would be. If I hadn't found your room clean, I shouldn't think of doing this."

"Thank ye, Miss. I tries to kape clane, but its not an asy thing to do in a room the loikes o' this."

"I must go now. In a few days I will come again."

"Good day to ye, Miss. May the sints bliss ye for yer gude heart. If ye don't git us a home in the counthry I thank yer for lettin' me see yer pritty face an' hear yer swate voice. May the howly vargin protect ye!"

Miss Holmes went home and told her mother all about these people and her plan for them. One summer, she and her mother had boarded with Mrs. Brown on their farm, so she wrote to her, giving a full description of Mrs. McCarty and the children, and asked, if she would pay their traveling expenses, could they live in the little house on the farm, helping Mr. and Mrs. Brown in any way they could, being paid for what they did in food, clothes, or money, and pay her a little rent for the house, so they would feel some object in working.

In a few days an answer came. "Mrs. Brown was not very well and wanted some one to work for her two days in the week, and there was plenty for the children to do and go to school besides. She would be glad to have them all come, only please not let them bring many things. She had her own idea of tenement houses and would rather provide beds, etc., than have them bring things."

Miss Holmes was delighted that her plan was developing so quickly, and went at once to see Mrs. McCarty. After telling her what Mrs. Brown had written, she said, "Sure, Miss, an' I don't wonder she don't warnt me ould duds in her house; indade an' I'll give 'em all to Mrs. O'Brien what has little enough o' her own, but whatever shall we do for clothes? Nather of us has a dud that is fit to go on the cares with at all, at all."

"I thought of that, and my mother says if you will work for her, house-cleaning for three days, she will fit you and the children all out with good clothes and pay your traveling expenses."

"Sure an' indade, Miss, I'd worruk me fingers to the bone for the loikes of yez and ye mither before ye."

So, after several very busy days for them all, Miss Holmes, Mrs. McCarty and the children started for Vermont. The children enjoyed the journey very much, and when they arrived at the little country station there was good-hearted Mr. Brown with his big sleigh, ready to take them all out to his farm. The children were nearly wild with delight; the merry jingle of the sleigh bells and the swift motion were a great delight to them. They laughed and clapped their hands. Mr. Brown asked if it was their first sleigh ride, and Joe said, "Yes, sir; me'n Nell never had a ride at all before, and the snow in New York gets dirty so quick. It never shines and sparkles in the sun, as this does."

Mrs. McCarty was, of course, more quiet about it, but enjoyed it, nevertheless, and said, "Sure an' I niver see the loikes o' this before; sames as if we was jist a flyin' over the snow."

When they arrived at the little house Mrs. Brown was there to greet them, and her motherly heart went out at once to the children, they looked so happy.

The house had three rooms. In one was a cooking stove and many things to make a kitchen comfortable. In the first bedroom they found an old-fashioned, high-post bedstead with a thick, feather bed on it, and made up with clean comforters. In a smaller room was a single bed for Joe, as clean and comfortable as the big one. A little pantry opened from the kitchen and on its shelves were a pan of rich milk, a pat of golden butter, and many good things the children had never tasted in their lives. After they had seen everything, Mrs. Brown said, "I know you are all tired. We will leave you to have supper. The tea-kettle is boiling and you will find plenty to eat in the pantry. Hope you will have a good night's rest. After breakfast come up to the house and we will tell you the plan we have for you."

"Good night to yez; sure an' may the howly vargin watch over yez and all the saints bliss yez for yer gudeness to a poor widdy woman and the mitherless childers."

Mrs. Brown and Miss Holmes went on to the big farm-house. The old-fashioned fireplace, with its strong fire-irons and big backlog, gave the sitting room a most cheerful look. Mr. Brown came in and they had a long talk.

The next morning, bright and early, came Mrs. McCarty and the "children." "The top o' the marning to yez," was her greeting to them.

"Good morning; come in here by the fire. It is too cold to talk out there. How did you all sleep last night?"

"Och! Sure an' indade we shlept that sound we niver wane o' us waked up at all, at all, till a rooster crowed this blissid marning, and Nell, the poor childer, niver heered the loikes o' it before, and was that scared she grabbed holt o' me. I tould her it was a pritty rooster a sayin' good marning' to her. Thin we all got up an' the childers they found the six hins and the foine rooster in the little yarrd, and I jist thought Joe'd fly out o' his skin, he was that glad. Are the chickens to stay there all the toime?"

"Yes; they are worth fifty cents each in the market, and Joe must help me feed my chickens, at fifty cents a week, till he has paid for his, and Mr. Brown will sell him wheat and corn to feed his. We want you to earn all you have here, you will enjoy it so much more. Joe is 11 years old and he can do many things to help Mr. Brown. He will pay him fifty cents a week. Nell is so little and only seven years old, but she can bring in chips for me and do many little things and shall have 15 cents a week for the present. You, Mrs. McCarty, can work for me two days in the week at $1.00 a day. If you like, you can buy all your food of us, and we will charge you $2.00 a month rent for your house. If you want me to, I'll keep account of it all in a little book, and pay you each month what you have left, after taking out your rent and supplies."

"Sure, marm, an' I shall be as rich as a quane an' I'm that proud o' me little house. I'll kape it as clane as snow all the toime, sure indade, an' that I will."

"The children must go to school when spring comes, and I have three friends who live not far from here and would like to have you work for them one day each week, and they will pay you $1.00 a day, so it seems to me you will have a good living for yourself and the children."

"Indade an' we will that, sure, an' I shall save all I can for Nell so she can larrun to play on the pianny and be a foine leddy when I'm dead an' gone. May the sints rist me saul."

Miss Holmes went home the next day, and the children had a fine sleigh ride to the station and back. The days went quickly and happily. They were all so busy, and the pure air and good food made the children grow rapidly.

The next Christmas, Mr. Brown gave Joe a pretty little Jersey calf. He was so gentle with her and loved her so, she soon learned to follow him all about the barnyard. Joe had a good chance to show his love for animals and was soon able to milk the cows and earn more wages.

Years passed and good, kind Mrs. McCarthy grew too old and feeble to work, but Joe and Nell earned enough to give them all they needed, and Nell kept the little home bright and clean. Joe had a sitting room built on, so they were very comfortable.

Mr. Brown grew feeble and needed more help, so Joe went to New York and hunted up Sam, who had grown into a good looking young man. After he had been at the farm a few years, he and Joe built more room to the house, and Sam and Nell were married one bright, June day in the little village church. She looked very pretty in her snow-white muslin dress. They all lived together and Mrs. McCarty never tired of telling Nell's children how "Joe warrumed the little birrud an' the foine leddy seen him, and was that plased wid him for it she wrote a letther and got this foine home for 'em all. Sure an' we can niver be thankful enough an' can niver pay her at all, at all."

A few years after Joe wooed and won a rosy-cheeked maiden in the village and built a good house. Mr. and Mrs. Brown gave up the care of the farm to Joe, Sam and Nell, and never regretted having opened their hearts and helped them to a good home.

Domestic Economy.

Tested Recipes.

Written for the Rural Press by Ada E. Taylor.

Strawberry Cream.—Cover half a box of gelatine with half a cup of cold water, and let soak half an hour. Mash a quart can of strawberries and press through a sieve to remove the seeds; add a cup of sugar and stir until dissolved. Stand the gelatine over boiling water, and when melted, strain it into the strawberry juice; mix; turn into a tin pan, set on ice and stir until it thickens, then add a pint of whipped cream; stir until thoroughly mixed, pour into a mould and stand in a cold place to harden.

Chocolate Pudding.—Boil one pint of milk, add half a teacup of butter, a teacup of sugar and three ounces of grated chocolate. Put on to boil, let cool, and add the beaten yolks of three eggs. Bake a sponge cake about an inch thick, pour the custard over it, and bake. When done, cover with meringue made of the whites of the three eggs stiffly beaten, with half a teacup of sugar and a teaspoonful of vanilla. Set in the oven until slighly browned.

Cocoanut Balls.—Bake plain white cake in sheets and cut out when cold, with a sharp biscuit-cutter. Dip them in frosting and then in cocoanut, until they look like a ball of snow.

Tartare Sauce.—Rub the yolks of two eggs to a paste with a tablespoonful of dry mustard, a teaspoonful of salt and a quarter of a teaspoonful of pepper. Add gradually, four tablespoonfuls of oil, beating until a thick jelly, then very gradually, three tablespoonfuls of vinegar, and a teaspoonful of onion juice. Lastly add a tablespoonful of chopped capers and one of pickles.

PATRONS OF HUSBANDRY.

The Week.

The past week has been another quiet time in the Grange canvass. For various reasons, Worthy Master Davis was unable to keep his appointments with Temescal and Eden Granges, and the meetings were only fairly successful. In addition to Mr. Davis, Past Master Coulter and Past Master Flint were expected to be present, but only Mr. Coulter was able to keep the faith. He did his best, and two very enjoyable meetings are reported, although it must be confessed that the attendance was small and the interest confined chiefly to persons already enthusiastic Patrons. Perhaps, on the whole, these meetings of a few faithful members are as useful and productive in their ultimate results as larger assemblages, and it is as true in fraternal work as in the Service of a higher sort that there is always a blessing when two or three are gathered together. Mr. Davis attended the Dixon meeting, and there was a large crowd and an exceptionally interesting occasion. The meetings to have been held by Alhambra Grange at Martinez on the 11th and Valley Grange at Pacheco on the 12th, were postponed on account of sickness in the neighborhood, which made it impossible for many members to attend. During the coming week, Mr. Davis has no appointments, and will probably remain at home in St. Helena attending to the desk duties of his office.

Past Master Overhiser and Worthy Lecturer Huffman have already started on their northern trip, heretofore announced in connection with the Grange canvass, and were to have been at Vaca Valley on the 18th. They are booked for Grimes on the 20th, Antelope on the 22d, Orland on the 23d, Millville on the 25th, Anderson on the 26th and 27th, Red Bluff the 28th, Nord the 29th and Chico on the 30th. Wherever either Overhiser or Huffman may chance to be, there is always a good Grange meeting; and when they combine to pull in double harness, as they are doing on this trip, no assurances need be offered of a series of meetings exceptional in their interest to Grangers and farmers generally.

The Grain-Bag Committee, whose interview with the Director of San Quentin Prison we referred to last week, have made no formal report. It is understood that they do not consider the question closed by any means, and that they will not cease their efforts until the price of prison bags is put down or the prison director can give a better reason than he has yet set forth for not doing so. We print on another page a very notable communication from Hon. C. P. Berry, a member of the committee, who was unable to join his fellow members in a visit to San Quentin. He states very clearly and forcibly the view held by the Grangers interested in this movement. The logic of his position is simply unanswerable.

The Picnic Season.

We fell into an error last week in the matter of picnic dates, due to no fault of our own but to a mistake of a printer who published the official circular of announcements. The dates were all wrong, and even the State Secretary, at whose office we have made inquiry, is unable to set them right. We trust the picnics will go on just the same, that the sky will be as blue, the lunch baskets as full and the laughter as merry as if the State officers at large knew all about it.

The *Marysville Democrat* has the following to say concerning the picnic to be given at Yuba City on May 4th: "The annual spring reunion and picnic to be given in Yuba City on Wednesday, May 4th, by the Grangers, bids fair to eclipse any previous demonstration given by that Order. While the usual order of exercises will be carried out, many new features will be introduced to entertain and amuse the public who will assemble on that occasion. The principal speakers will be Gen. N. P. Chipman and Grand Master, E. W. Davis. A May-pole dance by 16 little girls, will also be a part of the program. Brass and string music will be in attendance, and games, races, etc., have been arranged. Further particulars will be given later on." Concerning the same above, the Sutter *Independent* has the following: "The time has come when our people should begin to think about, talk about, and prepare for the grand Grange Reunion which is to take place in Yuba City, May 4th. This is to be not a picnic for Yuba City, but for the whole county and all the surrounding counties. It will be held under the auspices of Yuba City Grange, but it is to be a reunion of all Granges within accessible distances and of all the people who choose to come. This annual gathering is already celebrated for the excellent manner in which it has been conducted, and though it will be difficult to excel former efforts, the attempt will be made this year. The whole category of possibilities in the way of entertaining features will be overhauled and such selections made as long practice and observation in such matters may dictate as most attractive. Gen. N. P. Chipman of Red Bluff has consented to be present and deliver an address, and we can assure our readers who have not heard him that that alone will be worth coming many miles to hear. The Master of the State Grange, E. W. Davis, will also deliver one of his splendid addresses. Now you want to begin to talk it up and arrange your plans and business so that you can be sure to come and bring all your folks along."

The Attitude of the Grange.

Iowa Homestead.

The attitude of the Grange and its work is explained far better by the following letter to State Lecturer J. W. Stockwell of Massachusetts, and his reply, than it can be done in any other way, as they were written without any expectation of publication:

"*To the Lecturer of the Massachusetts State Grange:*—It was with pleasure I received your communication to the Lecturers of the local Granges of the State, setting before us so clearly the work needed to be done severally and mutually by us in order to succeed, that the advantages of the Grange may become so apparent to the members as to arouse intense enthusiasm and abiding interest among them, and so apparent to those outside the Order that every worthy family in agricultural communities shall find a home in our Order. Then can the great objects of this organization be realized, and not till then. God speed the day! So far as possible, I will use my best efforts to second yours for the bringing about of this desired end, by raising the standard of Grange work and of literary work, and any communication will be most thankfully received. My duties as pastor of a scattered flock limit the time I would like to devote to the work. I accepted it with a desire especially to help the young people. Yours fraternally, A. B."

In reply, Mr. Stockwell writes: "DEAR BROTHER: Your letter is at hand and its contents gladly noted. It seems strange that such an organization as the Grange—so helpful, so in accord with the highest instincts of our better natures, and the teachings of God's word, should not be more generally embraced by those whom it seeks to serve. It is profitable to every man, intellectually, morally and financially. Appealing to the lowest, it has benefited and is benefiting every farmer by the laws it has helped to enact and the benefits that are secured under them more than all the dues or other expenses incident to membership tenfold. Besides, in its ritual founded so entirely on God's word, every line so imbued with His spirit, every teaching so filled with brotherly kindness and unselfish love, it cannot but draw us nearer to our Heavenly Father, better fitting us to do His work here, and doing that, we shall be prepared for His praise in the Heavenly Grange. When the teachings of the Grange in their fullness become the living of us all in our work, we shall realize, as we cannot now, the fulfillment of the prayer, 'Thy kingdom come.' Thanking you for your earnest work and inspiring hopes, I am very truly and fraternally yours, J. W. STOCKWELL."

Grange Meeting at Lodi.

The Lodi *Sentinel* of April 16th reports that an interesting meeting was held there on the previous Saturday under the auspices of Washington Grange. In the morning the Grange initiated seven members in the third and fourth degrees, at the conclusion of which the Grange and invited friends enjoyed a splendid banquet at the Clements Hotel. At 2 o'clock the exercises were renewed in the town hall. After several selections by the Clements Brass Band, Messrs. Flint and Walton addressed the assembled farmers and discussed the questions which affect their material welfare. Hon. B. F. Langford, in a forcible and logical address, won the sympathy and convictions of his hearers, after which the meeting closed with a renewal of the bonds which hold the farmers together.

Chaplain Goodenough at Watsonville.

Chaplain Goodenough, whose eloquent and able presentation of Grange doctrine won such hearty applause in San Jose last week, has continued his travels in the counties farther south, and was reported on the 8th as having addressed a splendid meeting of Watsonville Grange, held at the Opera House. Walter H. Bowman presided. There was music by a Grange orchestra, singing by a Grange choir, and recitation by Mrs. Josie French.

Mr. Goodenough spoke of the necessity of organization to protect and promote the interests of labor, and admitted that the lack of organization was a detriment to the agricultural industry. One of the principal things accomplished by the Grange was that it had taught, and is still teaching, the farmers how to organize for their own protection and make their power as an important factor in the Government felt. The isolated condition of the farmer had a tendency to make him self-reliant and independent. He was too apt to hold aloof from the organized forms of other labor associations, and be content to take care of his own individual interests. This peculiar independence of action had its peculiar drawbacks, and it was the duty of the Grange to divert it into other channels.

He was pleased to say that the Grange had passed through the period of test and uncertainty and was now recognized as an established and permanent institution. Its members were no longer "crazed" or "cranky." They were able to study out the conditions that met them and determine with good judgment their course of action. They had impressed the legislators of the land with the fact that they were backed by brain and judgment, so that when the National Grange sent a delegation to Congress to demand the rights of the farmer, it was listened to with attention. The Grange really represented the farmers of the land, and it was accordingly respected by Congress. Of the beneficial legislation secured by the Grange, the speaker mentioned the passage of the Interstate Commerce Act, and the checks that had been placed on that gigantic trust, the Standard Oil Company. Among the matters that the Grange proposed to call to the attention of the Government were the suffrage of woman and a system of rural mail delivery. It was also proposed to obtain the right to establish a cooperative system of fire insurance for farmers.

Mr. Goodenough urged his fellow Grangers to work for the reforms they needed in spirit of Christian charity, brotherly love and kindness. He cautioned them to remember that they were made of common clay with those against whom they complained, and added that perhaps there was not one of them who would not pile up millions as fast as Jay Gould if they had the ability. He protested against unjust exactions, but he protested in a spirit of good-will. Hate and violence never accomplished anything good in this world. To gain good it was necessary to learn wisdom and be loyal to the cause.

FOR KILLING CATTLE.—One of the indirect results of the adoption of electricity for the execution of criminals, says the *Electrical Review*, is the consideration of its suitability for superseding the poleax for the killing of cattle. Humanity can be as well served by the use of electricity in public slaughter-houses as in prisons, and the question is shortly to be set at rest in Scotland. The abattoir at Aberdeen is about to be lighted by electricity, and as soon as the alternating plant, which will be employed, is installed, a trial will be made of the capabilities of the electric current for dispatching oxen. If it is proved that the current has no detrimental effect on the quality of the meat, it is anticipated that this new application will soon become general.

CITY REFUSE.—The disposal of city refuse is no more profitable in Edinburgh than in other large cities, notwithstanding the glib talk of some who find great profit—theoretically—in disposing of it to farmers. The Edinburgh Councils lately sent out 1521 circulars to farmers in their vicinity, inviting tenders for about 51,900 tons of refuse and manure, or about one-half of the yearly product. Only 47 tenders came in, and these under conditions that practically required the city to pay all expenses of transport, and even, in some cases, to pay the farmers so much a ton for accepting it.

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GALE CHILLED PLOWS
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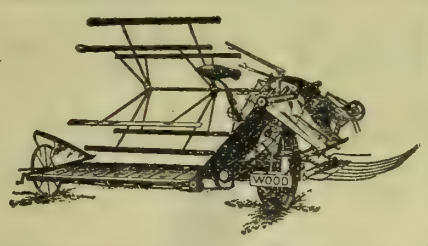
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IN USING WALTER A. WOOD MACHINES.

Menlo Park, Cal., Jan 27, 1892.

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Gentlemen—On the 23d instant you wrote asking about the new Single Apron Twine Binding Harvester that we bought from you last year. Will say that we ran the machine for about 20 days, and found that the Single Apron was a great improvement over the old way of elevating long straw, as there is nothing to retard the free flow of the straw to the Binder. Three four-year-old colts pulled the machine all the time, without any exertion more than would be necessary for two of them to pull an ordinary mowing machine; there is no perceptible side draft, and the machine can be perfectly balanced by the driver's weight so there is no weight on the horse's necks. **The Binder is as near perfect as possible, and never gives any bother** more than to shift it to place the band in the middle of the bundle.



We find the Single Apron a great improvement over the old machines of three aprons, and think that **the machine will save its price in one season,** on account of not threshing out the grain, as do two aprons running together. Will say we are perfectly satisfied with the machine.

Yours truly, COOLEY BROTHERS.

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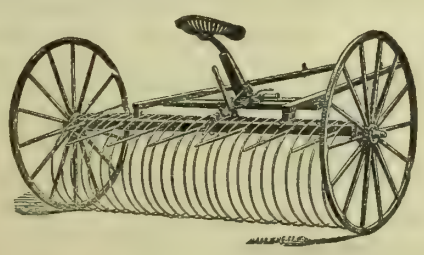
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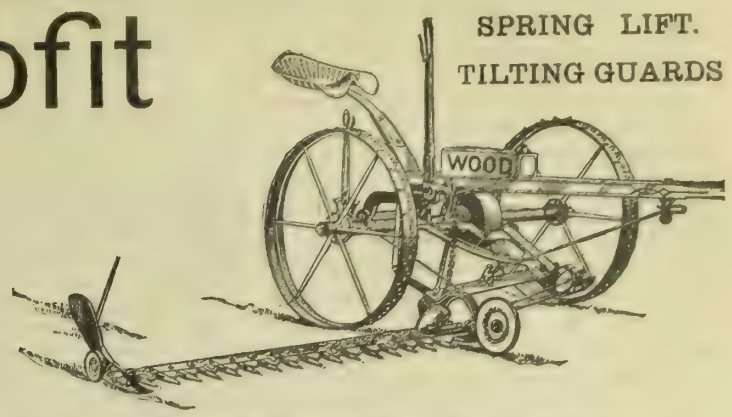
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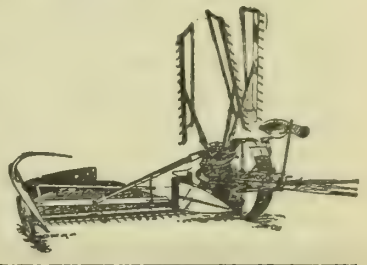
Livermore, Cal.

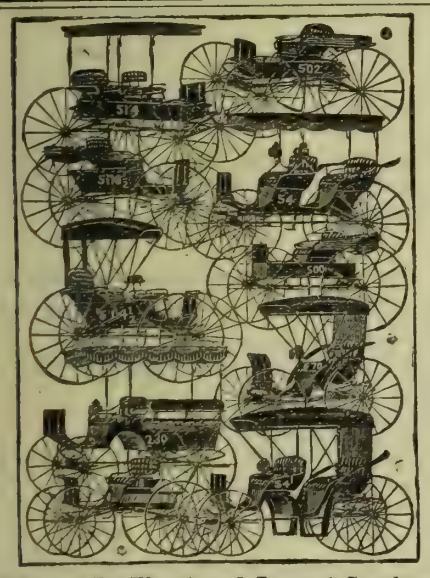
After trying to cut my crop last year with a good ——— mower, and could not on account of the squirrel grass and clover, I purchased from J. H. Dutcher one of his **Walter A. Wood Mowers, with which I cut all my crop, and also very difficult pieces of hay for others,** and will say that it is the **very lightest running mower** and the **least liable** to get out of repair of any I ever used or saw in use.

HENRY R. CRANE.

WE SUM UP BELOW WHAT ARE CONSIDERED THE CAUSES OF THE SUPREMACY OF THE WALTER A. WOOD INCLOSED GEAR MOWER:

Tremendous strength.
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Direct underdraught through the floating droop frame.
Only purely floating cutting apparatus.
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Freedom from choking with grass in the guard fingers.
Milled malleable guards bolted on.
Wrench tight nuts and tightly fitting bolts---driving fits.
Wood's special steel sections and guard plates.
Brass boxing, lock nuts, guarded pitman.
High wheels.
Comfortable double-spring seat.



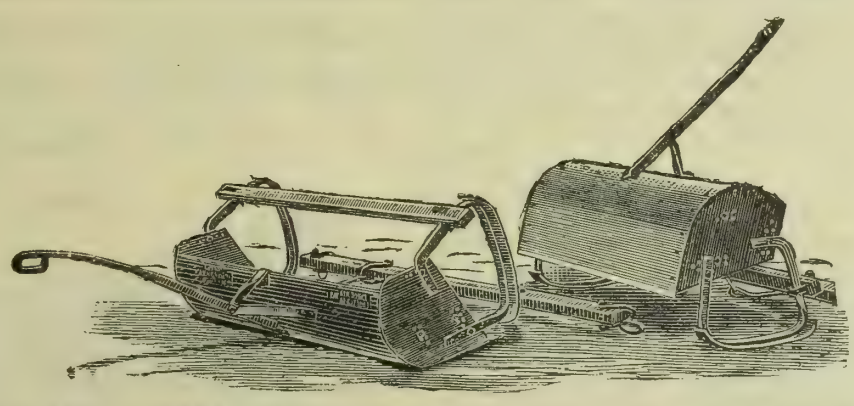


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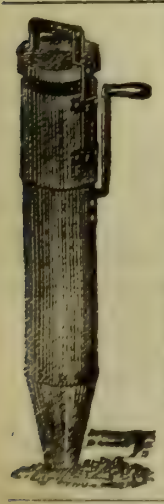
Mr. Jas. Porteous, Fresno, Cal.—Dear Sir: In answer to yours of 6th inst., will say that I have found your new style four-horse Scraper the best all-round Scraper I have yet tried. Respectfully yours,

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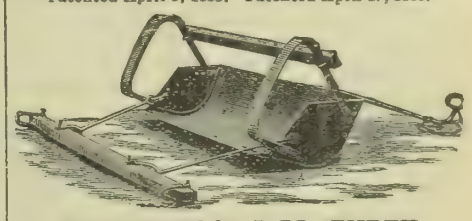
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The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

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City vs. Country Life.

Advantages Possessed by Rural Dwellers.

There is no room for doubt that moral and material interests will be served by attracting population from the city to the country. To do this something more than the beauties and blandishments of the country are needed, for these come in competition with the attractions of the city. On its streets by day pass processions of humanity. In work and in pleasure a keenly increasing competition appeals to the gain-getting ingenuity of men, and from the fakir on the corner who lathers himself with magic soap, or imitates birds on a bit of tin, or shouts to sell magic medicines that cure every thing from a bad breath to bad manners, clear around to the merchant who enlists art in the decoration of his windows and the display of his fabrics, and from him to the politician whose picturesque lies are a part of the kaleidoscope of a city, there is a concert of sights and sounds and sensations, that, put behind and lost, leave a sensation of loneliness. More than this there are refinements in great cities, and the means of polishing the taste and the manners which are strong attractions to many.

But the discriminating eye looks upon the city as an effect and penetrates beyond its shows and shams, its vices and virtues, its sorrows and successes to its cause. What put one stone upon another, and paved wide and far-stretching streets, and carved columns, frescoed ceilings and made the city? It is but a transmutation. The city was dug out of the ground by country people. All that is in it ripened in yellow fields, blushed in orchards and purpled on vines. Labor produces the wealth that builds cities, and without rural production the refinements of cities would be impossible. Men admire architecture, that art of poetry in stone which makes cities attractive. But the country plodder is more than an architect. He studies nature, and wise in her ways draws the furrow and plants the tree and vine, and following his foot marks in the fresh ground rise structures that art cannot imitate. The building of a single head of wheat, the planning of a blossom or a leaf are beyond the power of artist or mechanic. Nor can oil and brush, square and compass, plane and saw combined, gather the conditions which coax nature to their construction. The farmer, the rural laborer, touches the button, and unless he touch it, who will do the rest? He swings his hoe or drives his team afield, and cities rise like the mirage. When and where he is not, they are not. Stop rural production in California and the coyote would sleep on the housetops of our cities within five years. But dismantle the cites and distribute their population and the plow boy would still chorus with the whistle of the meadow lark and seed-time and harvest would witness the planting and the gathering into barns. The farmer in California can produce all that he needs to eat and drink and wear. Effects may disappear in one place and reappear in another, the freaks of commerce, deflections of trade and rise and fall of mercantile fortunes are not as easily estimated as the flight of a bird, but the cause of commerce, the cause of cities, the cause of trade, is steadfast as the soil which shelters it. That cause is rural production.

In no other part of the earth are its conditions as constant and the needful toil to promote it as light as in California.

Why will not the youth of cities exchange the cigarette and dice box for the plow and pruning hook?

By this is meant that the life-sapping cigarette and devotion to the goddess of chance are the special vices to which boys are exposed. They represent that hideous train of temptations and transgressions which deform city life.

These surplus boys who are not absorbed into the industries and activities of the cities should be taken up by the country. They should breathe the better air, partake of the higher moralities and put their hands to the noble productions of the country. Every ranch in California should have room for the employment of boys and young men. I regret that this is not the case. I regret that rural labor in this State, in the quarters furnished to it and in many other respects, approximates the conditions of rural labor on the European continent.

In the East the "hired men" on the farm are part of the family. Their conduct is under domestic restraint and discipline. Their manners are formed in the atmosphere of a home. When their earnings have accumulated so that they may own land and marry, they carry into their own homes the example of virtue and gentleness that has been before them during the years of toil that have led to independence.

No attention need be called to the different economic organization in this State. Here the daughter of one farmer does not take service in the household duties of another farmer on terms of perfect social equality and recognition, nor do the sons of farmers take work and wages of their neighbors on like equal terms.

Whether the fault be in large landholding, and the distance it puts between neighbors, with its bar to rural society, or whether the reason lie elsewhere, the fact remains.

My own judgment is, the remedy is to appear in that multiplication of small, highly farmed, and fertile plantations which I see is in process in Kern county.

The trend of population from country to city is surely somewhat due to a desire to escape the isolation of rural life, where the homes are so far apart that the evening lamplight is not seen from one home to another and the watch dog's bark wakes no answer but the echoes of the night.

This accounts for the absence of a coherent public opinion, a continuity of public purposes, a tendency of each individual to retain his atomic angles uncombined with other atoms.

When Daniel Webster was in full glory, in important respects the foremost intellectural character of the age, he returned to Boston at the close of a session of Congress, worn with work and fixed upon nothing but rest. Just as he had arranged for his vacation, a number of plain men from his old home in New Hampshire called on him with the request that he go back with them and defend a man who was about to be put on trial for crime, in a matter where purely circumstantial evidence seemed to foreshadow his conviction while his friends believed him innocent. Then ambassadors flattered Webster's professional pride, appealed to him in the name of his native State, and sought by every means, even to a large fee, to induce him to go with them. But Webster was obdurate. He was tired and his refusal grew firmer as the importunity grew stronger and finally reached the ultimatum. He would not go and no inducement would move him. The disappointed committee rose, with sad faces, and as they shook hands in parting, one old man said, "Webster, under the circumstances, after it was all talked over, the neighbors thought you would come."

Instantly Webster's whole manner changed. The word "neighbors" brought before him the vision of the New Hampshire hills and the homes clinging to them, and the wholesome rural life of the people who were neighbors to each other, and between whom was the higher law that legislatures cannot make, the ineffable authority of the neighborhood, which is called public opinion. He begged the committee to wait a moment while his luggage was packed and the committee bore the divine Daniel back to the granite hills in triumph, and in obedience to the wish of "the neighbors," he defended and delivered the man from bonds and prison.

Small holdings, social neighborhood association, the sense of social equality are the refining and civilizing influences which make for the elevation of a community, and are the wholesome substitutes for the close contact of great cities.

Kern county is making pleasing progress toward the conditions outlined. It is a region that has great charms for the lover of rural life, and the fertility of its soil is a bond endorsed by God, promising to redeem every obligation that it owes to the toiling farmer for the labor he invests upon it.

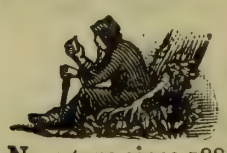
You may not draw those now in the fever of city life, but your region, with its large possibilities developed on the line now evident, will save to robust and honest rural life, the youth born in the midst of your inspiring scenery.—John P. Irish in The Californian.

BRANDY DISTILLATION.—Those engaged in brandy production will be interested in a pamphlet just issued by the Viticultural Commission on the subject. It contains a good historical sketch of brandy production in California, the grapes best for this purpose, the most popular forms of stills manufactured in this State and description of European methods, including an illustrated treatise translated from the German on cognac manufacture. It is a timely publication and should be secured by all who are engaged in any branch of the brandy interest. Application for copies should be made to the Viticultural Commission, 317 Pine street, San Francisco, enclosing postage of 4 cents for each copy.

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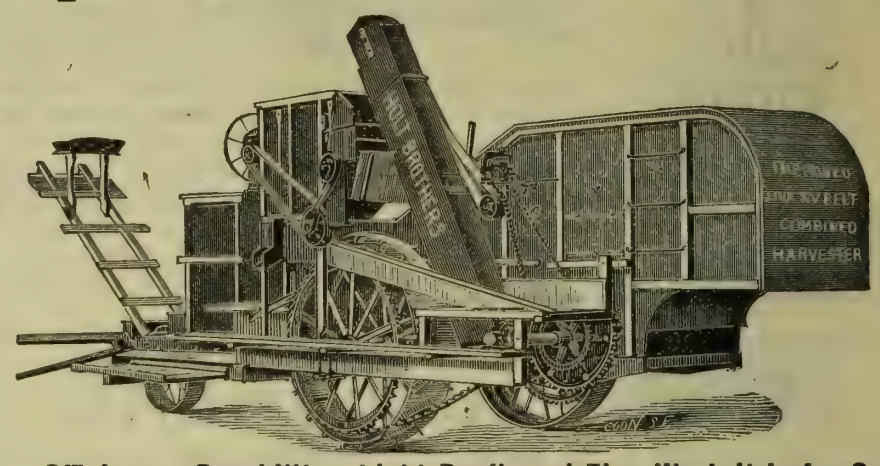


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Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

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WILL CURE: RHEUMATISM, LAME BACK, HEADACHE, LOSS OF MANHOOD, CONGESTION, LIVER COMPLAINT, KIDNEY COMPLAINT, NERVOUSNESS, DYSPEPSIA, PARALYSIS.

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ONE HUNDRED THOUSAND!!!

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Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

ALL UNDER IRRIGATION, ALL FOR SALE.

SOIL A RICH SEDIMENT DEPOSIT FROM TWENTY TO ONE HUNDRED FEET DEEP.

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The home of the peach, apricot, nectarine, pear and raisin grape.
Fine farming and stock raising country.
Land ready for cultivation when you buy.
On main line of the Southern Pacific railroad.
Land under the largest irrigation system in America.
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The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

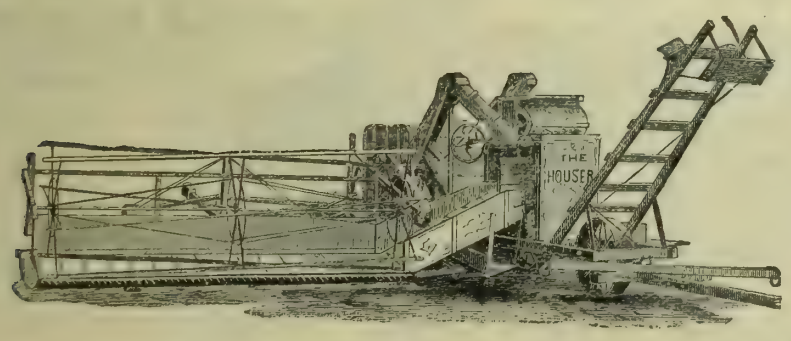
This Company is incorporated and has a capital of ten million ($10,000,000) dollars. Can give better prices and terms than any other land company in California or elsewhere.

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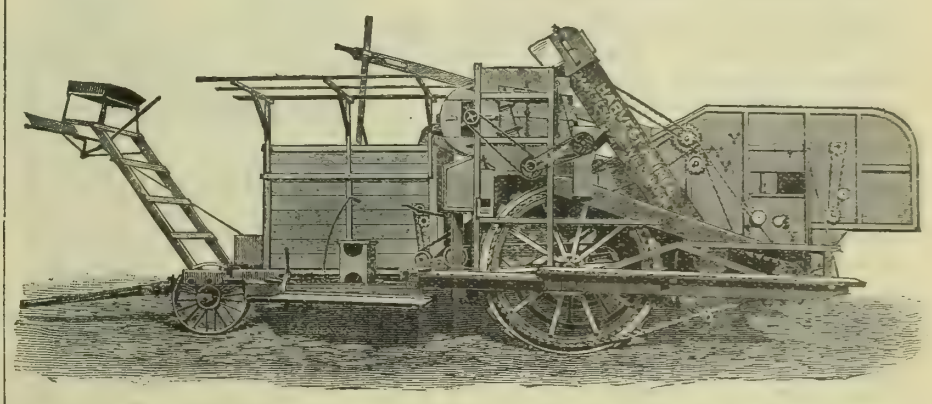
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Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

HARVEST "PRINCE."

It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by ½-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON.—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

MATTESON & WILLIAMSON MF'G CO.

STOCKTON, CAL.

Farmers' Alliance.

Executive Committee Meeting.

The Executive Committee of the Farmers' Alliance held its first session of the quarterly meeting, which will last about a week, at the rooms of the Chamber of Commerce Monday.

The members present were John S. Dore of Fresno, Chairman E. M. Wardall, of Los Angeles, J. B. Johnson of San Jose, L. M. Landsborough of Sacramento, and Secretary Jesse Poundstone of Colusa.

The meeting, of course, was executive, at which the main proposition discussed was the Nicaragua canal question, upon which President Marion Cannon has taken a pronounced position, who feels that the various bills before Congress upon that question will result, so far as the producing classes are concerned, in the control of the company by capitalists and schemers, just as the great transcontinental railroads have been.

The project of building the canal was indorsed by the adoption of the following resolution without dissent:

WHEREAS, The Farmers' Alliance and Industrial Union of California, through its various organizations, State, county and subordinate, has unmistakably placed itself on record in regard to the Nicaragua canal; and, whereas, it has been the policy of the press of the State to misrepresent the position of the Alliance as taken on this question; therefore be it

Resolved, That the Farmers' Alliance and Industrial Union of California, speaking through its Executive Committee, positively and emphatically declares that it is in favor of the canal, and demands that the Government of the United States take all necessary steps for the speedy construction of said canal, and own and operate it in the interest of the commerce of the United States and the world.

The committee will hold meetings every day this week, and, following out the platform and policy of the St. Louis Convention, will discuss what is the best course to pursue with respect to the political situation in California. The St. Louis Convention of last year decided to place a third ticket in the field. The two most prominent candidates in the field named for President are James B. Weaver of Iowa, and L. L. Polk of North Carolina. Whether the delegates to be selected from California shall favor one or the other is a matter which shall come up for discussion. What is likely to be done in giving moral support to one gentleman or the other is something that the members of the committee will not discuss with outsiders, but there is no disguising the fact that the majority lean toward General Weaver because he is a Northern man. At any rate, it is the general opinion that Weaver will be the nominee.

The committee, it is said, will go over the lines upon which the campaign should be conducted in California very thoroughly, and the necessity of having a newspaper in San Francisco will bear no unimportant part in the deliberations. The committee is uncertain whether it is best to establish a daily or weekly in this city.

There seems to be no question that Mr. Cannon will be put up for Congress in the Ventura district, and Mr. Dore in the new district, of which Fresno is regarded as the central political point.

At the convention of the Ventura Co. Alliance, held at Ventura, April 1st, Mr. J. B. Alvord was particularly happy in his introductory remarks, which we find reported as follows in the Ventura *Unit:*

I suppose there is not an organization or body of men on the face of the earth just now who are receiving so much advice as the Farmers' Alliance. It is all gratis, which is very peculiar, considering that a great share of it comes from those whose advice usually comes very high, the legal fraternity. Everybody, nearly, outside the Citizens' Alliance and labor organizations, chips in. The banker, the merchant, the manufacturer, the capitalist, the spectator, the railroad man, and even the ministers of the gospel, especially those whose congregations seek to cross the Jordan in palace cars, volunteer whole volumes of advice. None are quite so generous as the third-rate politician and the fourth-rate country newspaper. At first we were told that there was no need of the Alliance anyhow; that all the evils which called it into existence were imaginary; that the way to prosper was to raise something to sell; to raise more corn and less hell, etc.

When the Alliance became a fact, when its numbers climbed into the millions, it was patted on the back and told that, as a social and brotherly sort of an affair, it was all right; that after working 12 or 14 hours every day in the week, it was a fine thing for farmers to brush a little of the hayseed out of their hair and to spend a few hours of a Saturday evening in cultivating neighborly feelings and the social graces. But they should not go beyond this; they should not trench on the domain of the speculator and middleman; that it was wrong to make combinations in buying and selling, that would be trying to corner the food of the poor, etc.

But, behold! Now they say that as long as the Alliance confined itself to its social and business features, it was a good thing; but they should never go into politics, that is, except to follow the experienced fellows. There the line should be drawn and drawn hard. Yes, you cannot take up a partisan newspaper now without finding whole columns devoted to showing what bad policy and what bad taste it is for farmers to go into the third party.

The third party! What a nightmare that phrase seems to be to the old politicians. To the Republican, it is political blasphemy; to the Democrat, sin against the Holy Ghost. I am not sure that they will not be recommending it to keep owls out of the henroost and crows out of the corn.

But, my dear friends, why should there not be a third or fourth or fifth party, if they be necessary, that honest men may vote according to their convictions? For my part, I am willing to vote with any party which I believe, if successful, will strive to legislate for equal rights for all and special privileges to none. And when the purpose which called any party into existence is accomplished, I am willing it should die. Yes, I am even willing to hurry its exit a little and help bury the corpse.

Is the Alliance Doing Good?

Correspondence American Stockman.

This is a proper and practical question such as every practical farmer who contemplates joining the organization should ask, and we propose to devote a few moments to an affirmative answer.

First—It is an organization with a State and a national head and therefore brings the agricultural classes in conjunction with one other. All departments of labor and trade are organized and have mediums through which they express their demands, let other classes know their desires, and especially what resolutions they wish enacted into laws.

* * * * * *

Second—The farmer does not wish an elaborate and expensive organization. It is available power he is after. Now, the Alliance of the north is simple in ritual, has the elements of power, and now offers all secrecy necessary for a reserve force in case of an emergency.

Third—Among the long-felt needs of the farmer and his family is a place for literary cultivation, the exchange of views and comparison of experiments. Too often after the farm boy has quit school he ceases to practice public speaking. He has no place to go where he can exercise this talent, and when he finds himself with other men, in a political convention, he is silent from force of habit rather than from the lack of having something to say.



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45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92

A Steel Windmill and Steel Tower every 3 minutes.

☞ These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermotor. Where one goes others follow, and we "take the country."

Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

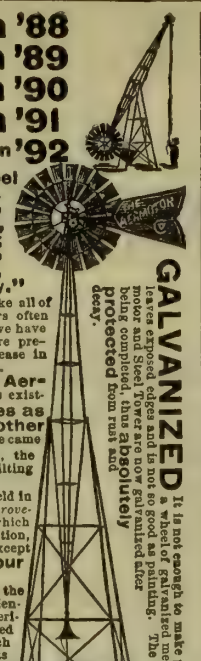
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1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vaneless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilting Tower) and the Wheel that runs when all others stand still that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one ($100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the AERMOTOR CO. 12th and Rockwell Sts., Chicago, or 12 Main St., San Francisco.



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Julian Smith sold **over $300** worth of garden products **from half an acre** of ground.

W. W. Paul raised 211 bushels of oats on 2 1-5 acres of ground, sold at 70 cents a bushel—**cash yield $67 an acre.**

John W. Poe cut 600 tons of alfalfa from 110 acres; value $15 a ton, $9,000. **Cash yield per acre $80.**

L. W. Holt raised 11¼ tons of sorghum on 1½ acres, and 450 tons of alfalfa on 90 acres. The alfalfa sold at $15 a ton—**cash yield $112.50 per acre.**

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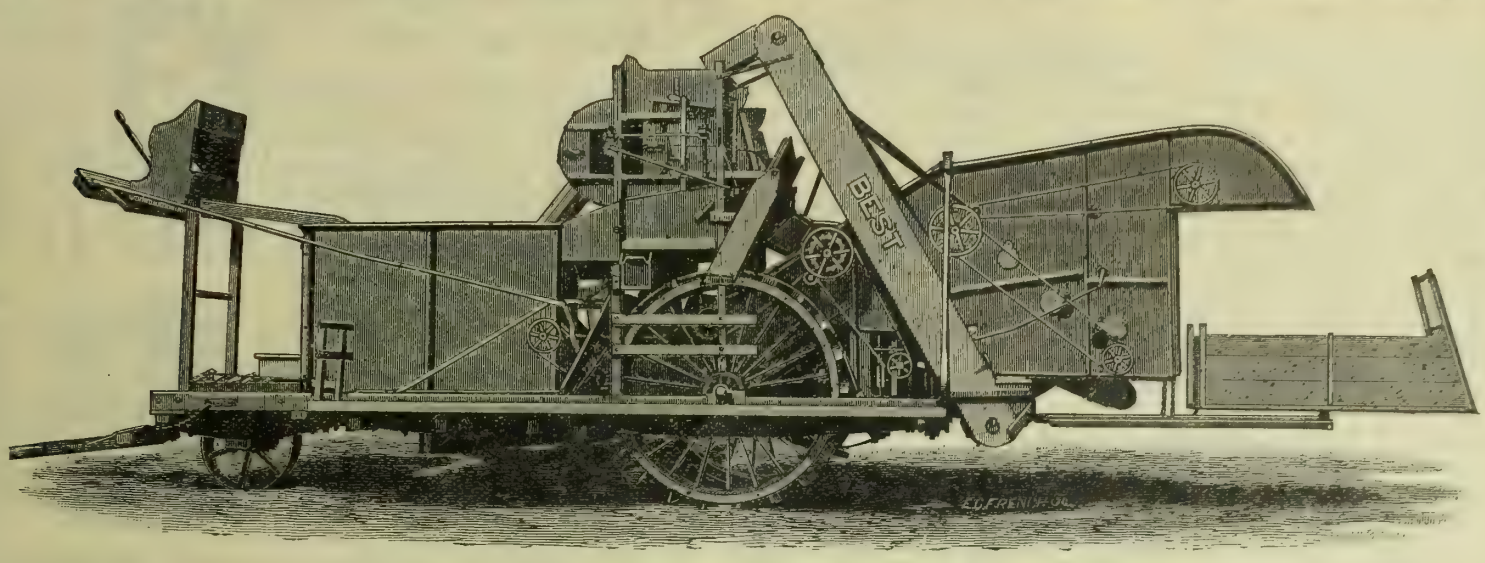
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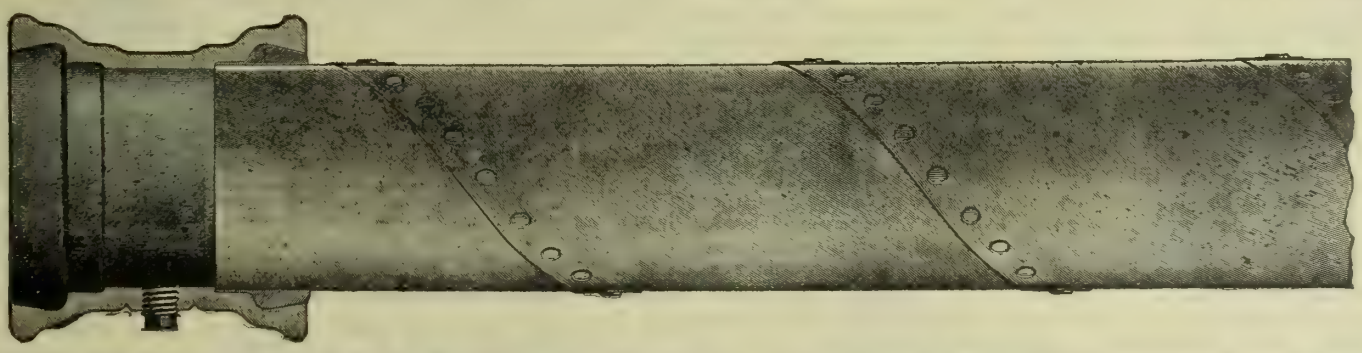
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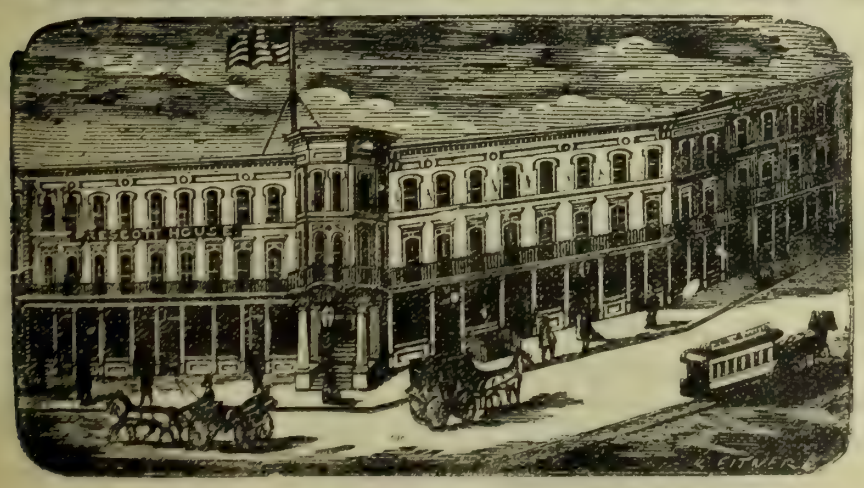
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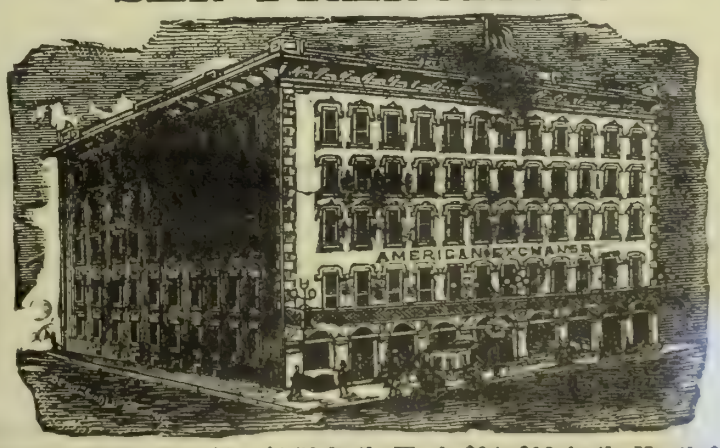


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Good Health.

Massage Treatment.

The word massage signifies motion and pressure applied to parts of the living body for curative purposes. Massage is the application of motion and pressure to the soft tissues of the body by the hand of the operator, and should be given under the guidance of the educated and experienced physician. Massage is not good for every disease which afflicts the human family, and a knowledge of anatomy and physiology is essential to the proper application of massage, which is based on plain physiological laws, and has nothing in common with magnetism; nor is it a form of exercise or gymnastics, or a system of rubbings. There should be no surface friction or skin rubbings in the proper massage treatment. In a general way, without going into details, it may be described as a system of kneading, compression, rolling, wringing, percussion, and vibrating the soft tissues of the body. The Swedish movements are a system of slow motions, with and without resistance, made by the director or physician. They are often combined with the massage treatment. The rationale of this method of treatment is that the circulation is invigorated, oxygen is carried to the tissues more rapidly, the blood is purified more effectually, and the carbon and debris of the body are liberated more freely. This is done without any expenditure of will power or nerve force. Old adhesions are broken up, and inactive muscles are brought into action. The forces of the organism are mostly expended through the circulatory and muscular systems, and less vital energy is exhibited in the nervous. The expenditure of vital power is accelerated. It is a law of vitality—of all living things—that the development of vital power and strength is accomplished only by augmenting the expenditure of this same power. The athlete knows by continuous effort and exertion that by great expenditure of vital power he can gain the strength and power to perform his herculean task. So the horse trainer is aware of this law, and takes advantage of it in developing his horses. This is the philosophy of the massage and Swedish movement treatment. It is not only adapted to the sick and diseased, but is a method of treatment highly beneficial to the business man or woman whose incessant application in the office has enfeebled his or her vital energies, and made them feel the need of recuperating their physical powers.

"Seeing Snakes."

There is an optical illusion, usually the result of debilitated health, consequent on over-indulgence in alcoholic liquors, that frequently takes the form of "seeing snakes." An authority thus explains this phenomenon to the *Optician:* The eyeball is covered by a network of veins, ordinarily so small that that they do not intrude themselves visibly in the path of the light that enters the sight, but in the course of some disease these veins are frequently congested and swollen to such a size as to become visible, and when this happens the effect generally is to appear as if there were an object of considerable size at a distance from the eye. Of course, this vein is generally long, thin, and sinuous, like a serpent, and the figure seen is frequently startling like a snake. That they seem to live is due to the fact that they are often not in perfect line with the direct front of sight. They are either to the side, up or down from the focus, therefore, when discovered, the victim naturally turns his eyes toward the effect, and the effect, of course, moves away. The eye follows, and thus a continuous and realistic motion is obtained. Now, if the eye be quickly turned to the front again, it will see another snake, which, if watched, will glide away in the same manner. One individual who was afflicted with malarial disease, and had his eyes thus congested, had strange shapes and clouds pass before his vision, which, if he were in a state of nervous collapse, might easily have taken the form of the shapes seen by those suffering from delirium tremens.

BACTERIOLOGY.—The recent advances in our knowledge as to the action of certain microorganisms in the production of disease in animals and man have been largely made by laboratory methods, and indicate clearly that the study of bacteria and microzoa, and of their development, products and effects, must be an essential part of the work of a hygienic laboratory, which should provide the peculiar arrangements and apparatus which are required for this sort of work. In fact, several so-called hygienic laboratories are simply bacteriologic laboratories, the interest in this particular branch of investigation having, for the time being, overshadowed all others.

Fabiola Hospital.

TO THE EDITOR:—In Oakland, the ladies have built and now maintain a hospital and training school for nurses. This institution is one deserving notice as a good place to go when sick and a good place for the girls to learn how to make themselves useful and independent.

The writer had two terms of sickness of about equal length within the past two years, one of which was passed in a country town in a private house near physician's office and the other at the hospital. The expense at Fabiola was about one-third as great and the attention superior to what can be had at any private place. Resident physicians can be summoned at a moment in case of any change of symptoms, and expert nurses are in attendance working under constant direction of physician. In any critical case, this is a marked advantage. Sanitary arrangements and freedom from anxiety are marked advantages in favor of a hospital thus conducted. The girls in the training school devote about half their time, for two years, to study and the balance to actual practice. Their pay while there gives them a comfortable support, and after graduation, they can do better than the average teacher, type-writer or book-keeper. It is an education specially desirable in the family or community. Graduates have been well received and steadily employed by physicians. As the institution depends on private charity, and assists many deserving people in need of help, it would be well for farmers to remember that butter, eggs, fruit and vegetables cost about as much at retail when commission merchants are dumping them in the bay as at any other time, and it is a good thing to help those who stand ready to help others. At Fabiola, everybody has a good word and a pleasant smile for everybody else. A PATIENT.

Jugglery in the Kitchen.

Some of the Tricks Practiced in the Sale of Adulterated Baking Powders.

Chronicle, San Francisco.

Is there not some city ordinance that will protect housekeepers from the peripatetic female with the baking powder tests? Nobody wishes to turn a woman from the door, but really the frequency with which this one, or her sister, is sent around by the baking powder concern that employs her makes her, even if the cleverest of her sex, a bit tiresome.

Then the tests she makes are so unscientific, not to say fraudulent, that they are likewise becoming a bore. Here, for instance, is one of them: A sample of the baking powder found in the kitchen visited, and which it is intended to defame, is placed in a glass, mixed with a little water and stirred. Being a pure powder it foams up like champagne, although the bubbles of carbonic acid gas will continue to rise for a long time. The tester then takes a sample of the powder which she is trying to introduce and treats it in the same manner. The result is a glassful of yeast-like foam. This action, she claims, is evidence of the superiorty and greater strength of her powder, whereas it is caused solely by the flour with which the powder is largely adulterated, and it is indisputable evidence of such adulteration. To prove this, add a little flour to the other powder, mix thoroughly, add the water, stir it up, and the same result will be produced to a degree dependent upon the quantity of flour used.

Another "test" consists in placing the can on a hot stove or over a lamp or gas jet, or in boiling the baking powder with water. If the baking powder is good for anything, the heat will, of course, expel the gas, which is apparent to the sense of smell. The claim is then made that this gas indicates something detrimental, although, as a matter of fact, a baking powder that would give off no gas when subjected to heat would be without leavening power and valueless.

The object of these people is, of course, to deceive the consumers as to the qualities of their baking powder and the baking powder used in the kitchen visited.

The attempt to injure honest goods and make a market for an adulterated article by such methods is dishonest and despicable. But to try to palm off upon any woman such silly tricks for a scientific test is an insult to her intelligence.

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap. will be sent direct from warerooms, if desired. Address, H. F. D., Box 2517, San Francisco, Cal.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

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JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

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P. H. MURPHY, Perkins, Sac. Co., Cal., Importer and Breeder of Shorthorn Cattle and Poland China Hogs.

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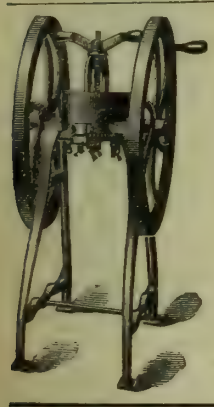
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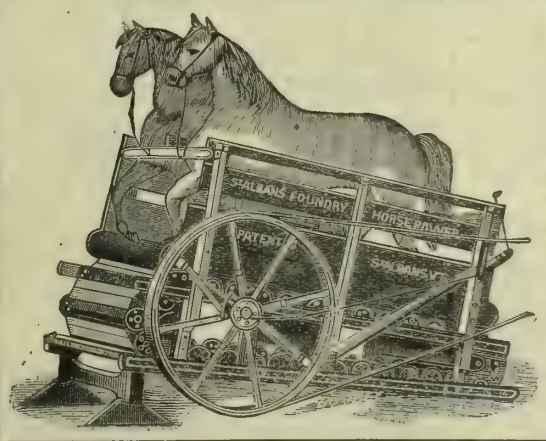
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Agricultural Notes.

CALIFORNIA.

Butte.

Olive and Fig Planting.—Oroville *Register:* H. S. Langdon has now 20 men at work putting out trees and vines on the fine tract of Col. E. S. Weeden in Thermalito. Sixty acres will be in olives, and many trees are already planted. The varieties will be Mission and Picholine. There are now 40 acres set to White Adriatic figs, and five more will be planted. One hundred acres will be set to vines. Of these, 40 acres will be to Flame Tokay and 20 acres to Seedless Sultana and 40 acres to White Muscat, the last two varieties being for raisins. About 40 acres of vines have already been planted. The recent heavy rains have retarded the work, as the ground is very full of water. Mr. Langdon is putting out 20 acres in oranges, olives and vines for Miss A. C. Biggs of Chicago and 10 acres in olives and vines for Mr. Frank Biggs of the same city.

Small Fruit Crops.—Oroville *Mercury:* An idea has prevailed throughout th Sacramento valley that there would be a large fruit crop this year. But in conversation with extensive fruit growers, the *Mercury* learns that this is a grave error. Last year there was a large crop, generally, and according to the rule, this is evidence that the crop this year will be smaller. It is also true that the continued rains and the recent hailstorm knocked off a large percentage of the crop set upon the trees. In many localities, of course, where the trees escaped the recent hail, small orchards are loaded with young fruit; but generally speaking, the deciduous fruit will not average more than one-half of what we had last year. T. B. Hutchins of Central House and B. F. Allen of Chico, two of Butte's most prominent and successful fruit growers, bear us out in the above statement.

Humboldt.

Creamery Notes.—Eureka *Watchman:* Peter Heally & Bro., of Eel river bottom, near Dungan's Ferry, have just perfected and put in operation a most complete creamery capable of handling five tons of milk a day. The brothers will milk about 120 cows this season, and will buy milk from all who wish to sell. They have christened the new venture the Pacific Creamery, and it is equipped with a ten-horse power engine, two separators, and most complete creamery appointments. This is the only creamery this side of the river. A correspondent at Grizzly Bluff writes: The cheese factory is running but Mr. Early has hired Mr. Vedder to make the cheese, while he (Mr. Early) buys the milk. Several of our dairymen wanted to make cheese, but he will give them no chance. Our creamery is up and inclosed, the boiler set and the engine house will soon be finished. We have been detained this week on account of not getting the separators and other machinery in time. The milk fever is taking off the best cows from many of our herds. There has been a greater loss this season than in any former season.

Arcata Creamery. — Arcata *Union*: The Arcata bottom creamery opened its doors to customers on April 6th, and commenced operations. Everything worked as well as could be expected for a beginning. On the first day 3000 pounds of milk was received, and on the second day 4000 pounds.

Inyo.

Large Creamery at Bishop. — Inyo *Register*: At a meeting of the Directors of the creamery, the bid of G. G. Wickson, of San Francisco, to furnish machinery was accepted, the next best figure being from Chicago. It seems that the report of a price for milk having been placed at a stated low rate is not true, as no price has yet been fixed. The Directors will pay all the business will reasonably bear for the milk used. It is safe to assume this without a statement from them. The primary object of the enterprise being to convert into coin to the best advantage all the dairy products of the valley, the stockholders will not complain at a good price being paid for milk.

Kern.

Well-Managed Farm. — Bakersfield *Echo:* W. J. Price at Mountain View tried a variety of crops between the rows of trees last year and found several that yielded well. This was the case with bayo beans; still he does not like to raise them, as it is almost impossible to keep the weeds down. This year he will plant several acres to squash and feed the crop to his hogs. A year ago he started in with two sows and 16 pigs. During the year he sold $169 worth of hogs and had 40 or 50 shoats left. All the feed for these grew on his 40-acre farm, 30 acres of which were planted to orchard. On 8 or 10 acres of alfalfa he kept his hogs and three cows and six mules. That shows what can be done with a little alfalfa and some good management.

Los Angeles.

Nectar-Bearing Flowers.—L. A. *Express:* At the last regular meeting of the Southern California Horticultural Society, C. N. Wilson read an instructive paper on nectar-bearing flowers. He remarked that the number of these flowers is so great that it would be far easier to enumerate the flowers which do not furnish nectar. Special reference was made to the plants which possess the highest value for bee keepers in Southern California. First, the manzanita, with reddish, smooth bark, oval evergreen leaves and clusters of red berries. The leaves are small and tea-green on the upper side. The shrub grows to a height of 25 feet. It is often used for walking sticks. The plant blossoms from January to the last of April. The California lilac is another plant of great value to the honey industry. It is a low shrub with dense clusters of purplish flowers—*ceanothus thyrsiflorus.* The blossoms and their nectar exhale a most delightful fragrance. It blooms freely in the month of April. The delicate perfume gives a peculiar charm to the lilac honey. Bees linger longer on its blossoms than on any other flowers. The honey from these blooms has a very clear appearance. The third plant mentioned was the Yerba Santa, an evergreen shrub, seldom more than three or four feet in height. It blossoms from April 1st to the latter part of May. It furnishes excellent food for bees, being specially valuable for the production of honey of superior flavor and color. Its leaf resembles the peach leaf. Mr. Wilson, in reply to questions, stated that the aroma of honey is not materially changed by any action of the bees. Sage honey is superior to that from sunflowers. Orange blossoms yield honey of a fine flavor and odor. But the pepper tree near orange groves often nullifies the good qualities of orange honey. Tar weed has a nectar of a very dark color. Much honey is taken from sweet corn after a shower. Very little honey is taken from the nightshade or other poisonous plants.

Mendocino.

Dairy Notes.—Ukiah *Press*: Hopland and vicinity supports two of the largest dairies of the State. Mr. C. E. Brooks has a thoroughly equipped cheese manufactory, and Mr. Foster, the San Rafael capitalist, a butter dairy. The output of both is in great demand. Mr. Foster is putting in a fine dairy house and concrete building for a milk house. He has also just received an engine for pumping purposes, etc., and will shortly put in a machine which immediately separates the cream and milk.

San Bernardino.

Coffee-Growing.—Redlands *Citrograph:* J. T. Benjamin, proprietor of the Hotel San Carlos, at Retalhuleu, Guatemala, has been in this section for some days and has investigated the Alessandro valley in regard to coffee-growing. He is of the opinion that it can be made a success. He offers to take stock in the company for the purpose of starting a plantation and making a test of this industry. Mr. Benjamin furnishes us the following figures in regard to the expense and income from a 40-acre plantation: His idea would be to put two acres in nursery which would yield 80,000 sprouts per year, worth 25 cents each, and to set 38 acres to trees. This would require 30,400 trees, and the estimated yield on the third year would be 91,200 pounds, valued at 20 cents per pound, or a total of $18,240. The fourth year after planting the yield would be $24,340, figuring four pounds to the tree.

San Diego.

The Wool Olip.—National Ranch Cor, *San Diegan:* The wool clip this spring will far exceed that of last year by several thousand pounds. The lateness of the season has caused a delay in shearing, but with all the drawbacks, it is safe to say that the clip will be of excellent quality, the herds in the majority of cases being entirely free from scab. The flocks of S. Echeneque & Bro. of National ranch are models of cleanliness; also the flocks of N. Echeneque & Bro. of Otay ranch. These gentlemen have more sheep than any other stock raisers in San Diego county, and I can safely say the lambs are healthy, big and fat, and as playful as a basket of kittens. The following list will give the quantity of sheep to be shorn in this part of the county: Echeneque Bros., close on 10,000; Gambette & Co., 5000; Andreas Bros., 5000; P. Hagie, 4000; J. Sausaal, 5000. This does not include flocks at San Bernardo, San Jacinto and other points. The number to be shorn will aggregate 65,000 head. The entire spring clip is consigned to W. W. Stewart & Co. of San Diego.

Santa Clara.

Fruit-Crop Prospects at Los Gatos.— Cor. San Jose *Mercury*, April 16: The small rain of yesterday increases the prospects for bounteous crops of fruit. Grandall, of Crandall & West, fruit driers, has been examining the orchards in the country around and reports an abundant setting. The Moorepark apricot, as usual, is uneven, but all other varieties are in excess, needing much thinning out. Complaint is made that the prune is falling off. He says that in no instance was there enough blasting of the young fruit to affect the yield. All varieties of fruit show the same abundance. The prospects for a big crop were never better. Crandall & West (formerly Crandall & Rice), have put up buildings that nearly double the capacity of their drying works.

Sacramento.

Preparing for River Freights. — Sacramento *News:* The steamer San Joaquin No. 4 was launched April 5th. It will be several weeks before the vessel will be ready for traffic. Many other steamers are undergoing refitting and repairs. Arrangements are being made by both the Sacramento Transportation Company and the Southern Pacific Company for a heavy freighting business on the river this summer. The heaviest shipments of fruit in the history of river navigation is anticipated. Almost all the warehouses along the river are being enlarged. The many hundred acres of reclaimed land which will yield the first crop this season will add to the river freights thousands of tons of hay, grain and other products.

Sonoma.

Crop Prospects. — Healdsburg *Enterprise:* Abundant crops are assured in the Healdsburg district, and it has been many a year since we had a more favorable prospect. The winter has been a mild one, and our stockmen report no losses. In fact, the increase is a large one; hence cattlemen and sheepmen are jubilant. The spring clip of wool, in point of quality, will be first-class and in quantity a large one. There has been an immense acreage planted to grain this season in the districts tributary to Healdsburg. Much new land has been sown, and many acres of hill land will grow a crop of grain for the first time this season. Many new orchards have been planted, and the yield of fruit promises to be enormous. The outlook for good prices seem favorable, still it is yet early to safely predict in this regard. It is also probable that all the canneries in the county will run largely.

Creamery Machinery.—Petaluma *Courier*: A carload of creamery machinery has arrived for Charles Martin, proprietor of the Tomales creamery. The shipment consists of engines, boilers, separators, milk coolers, cheese vats, etc., and fills a very large car. From the character of the machinery he is putting in, it is evident that Mr. Martin has decided on having one of the best equipped creameries in the country, which is none too good for the best dairying section on the coast.

Sutter.

Fruit Crop.—Yuba City *Farmer*: The season for thinning fruit will soon begin. Several varieties of apricots will have to be thinned as they are too thick. Almost all kinds of peaches are bearing heavily and some of our orchardists will begin thinning them in a week or two. In some orchards are noticed peaches growing in doublets, and even four or five in one cluster, but only a few varieties are forming in that way.

Alfalfa and Hops to be Taxed.—Yuba City *Independent*: The State Board of Equalization have had under consideration the matter of assessing alfalfa and hop fields, and have instructed County Assessors to assess them. Heretofore, they have been regarded as growing crops and were exempt, but under these instructions they will be treated the same as orchards and vineyards. The State Board decided thus on the ground that hop and alfalfa fields improve with age and do not require an annual planting. In some counties the Assessors have decided to assess alfalfa at about $10 an acre and hops at from $25 to $50, in addition to the value of the land.

Tulare.

Raisins at the East.—Hanford *Sentinel:* Andy Buckner of Lemoore has returned from a trip East, where he was sent by the Lemoore Packing Company to investigate the fruit business, particularly the raisin trade. He visited Chicago, St. Paul and other cities in the interest of his company. He says that prices in the retail market in Eastern cities are from 5 cents to 30 cents per pound. There is occasionally a firm who will make raisins a "leader" to attract trade for a time and mark the price of the article down to as low as 5 cents per pound, but the ruling price at which raisins sell is strong and the people generally are not getting the article any cheaper than when California growers were getting 5 cents in the sweat-boxes for them. Mr. Buckner said that he found the wholesalers very desirous of purchasing direct from the producers, and that, as a rule, they disliked the commission men as bad as the producers do. The way out of the present depression is for the producers to stop consigning to the commission men, and sell direct to the wholesalers. Fred Winstanley, who has a large raisin vineyard in the southern part of the State, returned several weeks ago from a mission East to sell the raisins from the Winstanley vineyard, which had been packed under Mr. Winstanley's personal supervision. In speaking of his trip, Mr. W. said that, while Eastern dealers admitted that California could produce excellent raisins, and that good California raisins were in demand, they had been swindled so often that they positively refused to purchase from samples, in many instances the goods being almost worthless; and in his opinion Californians will have to restore confidence in their product before the market will be what it once was. Until none but first-class goods are shipped as such, this confidence will not be obtained, and the market will suffer, even though middlemen are headed off.

Large Acreage to Raisin Grapes.—*Sentinel*: The Providence Raisin Co., of Providence, Rhode Island, was organized in 1891, under a charter from Rhode Island. The stockholders are among some of the most prominent men of Providence, R. I., and Boston, Mass. The company purchased of the West Coast Development Co. 300 acres, which is now in process of improvement by the latter company. The force engaged in plowing, harrowing, floating and planting was composed of about 50 men and 80 horses. The plows were running at a depth of 12 inches, drawn by 8 to 10 horses to each two-gang plow. The harrowing and floating with heavy planks pulverized the soil in fine shape, so that the planting of raisin grape roots, which was then in progress on the south side of the tract where fitting the ground first began, was, as a matter of course, easy to accomplish in a thorough manner.

Rockyford Orchard and Packing Co.—Porterville *Enterprise*: Tuesday afternoon we paid a visit to the Rockyford Orchard and Packing Company's orchards, six miles west of town. The 160 acres known as the Boatman tract has been all levelled, fenced with a rabbit-proof fencing and put out—143 acres to prunes, 8 to peaches and 5 to pears—some 15,000 trees being planted in all. A 60-foot avenue runs right through the property, which leads to the Rhodes tract, consisting of a further 160 acres, also belonging to the company, and on which 20,000 prunes, which were in a nursery on the grounds, will shortly be planted. R. L. Wilson says that the company intends putting in 800 acres in all.

Bright Prospects.—Visalia *Times*: Fortune has favored our county this year. From all parts come the cheering word that a good crop is almost certain, and that all classes of people are buoyed up by the bright prospects ahead. Every branch of industry is estimated by the certainty of an abundant harvest. This is a country of great fertility and having a soil that produces a variety of products, Tulare is at once among the banner wheat counties; her oranges and lemons are attracting the attention of the State; our raisins are known to be among the finest, and in the culture of choice fruit our place is in the front rank. Yet being but partially planted to trees and vines, the great income of this county is the revenue from the grain fields. With a reasonable amount of rainfall, our wheat fields return ample compensation for labor performed, and the area seeded this year is large. In many previous years there has been a dry spell in February and March which has several times greatly stunted the growing grain and prevented an otherwise certain large yield. This year has seen no such drouth, and showers have come at short intervals ever since rains began last fall. During a good wheat year the cereal yield of this county is immense.

Ventura.

The Honey Yield.—Santa Paula *Chronicle*: According to the estimates of J. F. McIntyre, of Fillmore, who is thoroughly acquainted with the subject, there are some 10,000 colonies of bees in this county, and the average yield for 16 years of one large apiary has been 74 pounds per colony. The average price is four cents per pound. The honey is extracted by machinery and sold in 60-pound cans, and the comb returned to the hive. Ventura county ships honey by the ton and has shipped 3,000,000 pounds in one year. The immense tracts of unclaimed mountain land covered with sage are the favorite foraging ground of the busy bee, and many persons are supported by this industry with comparatively little outlay.

Yuba.

Hop Notes.—Wheatland *Four Corners:* — In the yards the vines are almost ready to tie up. Hopmen are busy stretching their wire and tying down string; over 50 white men and as many Chinese being employed in the yards. The white men are preferable when the trash is sifted out, but growers are not prepared to feed and lodge very large crews.

ARIZONA.

Large Increase in the Number of Orange Trees.—Phœnix (Maricopa Co.) *Herald:* Figures taken from the books of the M. & P. railroad show that ten carloads of trees have been received, containing an average of 15,500 per car, or 155,000, which swells the total number of trees set out this spring considerably. This does not include the many smaller lots received by private individuals, which, at the lowest calculation, will make up another car, or a grand total of 170,500 trees. This, upon careful estimating, makes the total acreage of orange trees planted in the season just passed, fully 2000.

Large Land Purchase. — Yuma *Times:* Recent visitors to Yuma county were several Detroit capitalists, who visited the Mohawk ranch and other properties; among them were Allan M. Fletcher of the firm of Geo. M. Fletcher & Sons, Detroit, Mich.; and Alfred M. Low, a real estate man of Chicago. Mr. Fletcher is one of the proprietors of the Mammoth mine. They have arranged to organize a company in Detroit to purchase 2500 acres of the Mohawk ranch, one-half being bottom land and the rest on the mesa. It is proposed to commence this fall and set out 300 acres in fruits and vines, and also 200 acres in vegetables for shipment to Eastern markets. The remaining 2000 acres will be divided into 20-acre tracts for Michigan and other Eastern parties.

NEVADA.

Encouraging Apple Culture. — Reno *Gazette*: With a view of promoting the industry of raising apples in this section of Western Nevada, the Southern Pacific Company has joined the Virginia and Truckee railroad in a reduced rate from Carson and Franktown to Sacramento and San Francisco of 37½ cents, and to Los Angeles of 57½ cents per hundred pounds, for carload shipments, the rate heretofore having been 62½ cents to San Francisco and 92½ cents to Los Angeles. Under this reduced rate a number of apples have been shipped, during the past month, to San Francisco, by Ross Lewers and M. Lamb of Franktown, and H. F. Danberg of Carson valley, all of whom have received such satisfactory returns as to warrant them in sending East for the choicest and best varieties of trees to enlarge their orchards.

The Vail Ranch Creamery.—Dayton *Times:* The building for the creamery of the Vail ranch on the Carson river, below Dayton, is nearly completed, and machinery will be placed there in a few weeks. The creamery is located on what was formerly the Fitch ranch, about a mile below the Vail ranch, and will be supplied with milk from the Stinson, Vail and Pray ranches. Probably a thousand cows will be milked to supply it.

WASHINGTON.

A Large Canal. — Tacoma *News*: The Yakana ditch is now completed for 25 miles, into which the waters of the Yakima river will be turned within two weeks. The plan is to make the system, arteries and veins, 65 miles long, and bring directly under irrigation 80,000 acres of land. What those figures mean to the commerce and wealth of this State only those can appreciate who know the wonders which irrigation has worked in California. We need not go so far from home, however, to realize the promise of irrigation to this State. Dr. Blalock of Walla Walla bought land at $2.50 an acre a few years ago, to which he brought water, and from 40 acres of which he last year obtained a return of $400 per acre. He has now 400 acres in prunes and other fruit, which, when it comes into full bearing two or three years hence, will yield not less than $150,000 per year net, averaging the prices and crops of years together.

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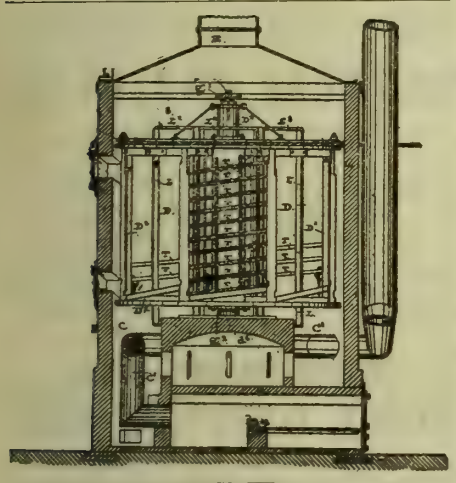
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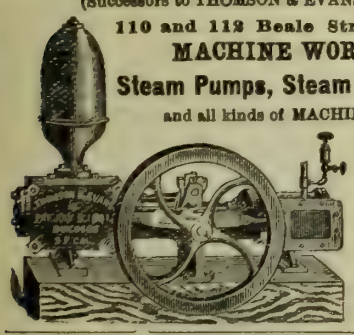
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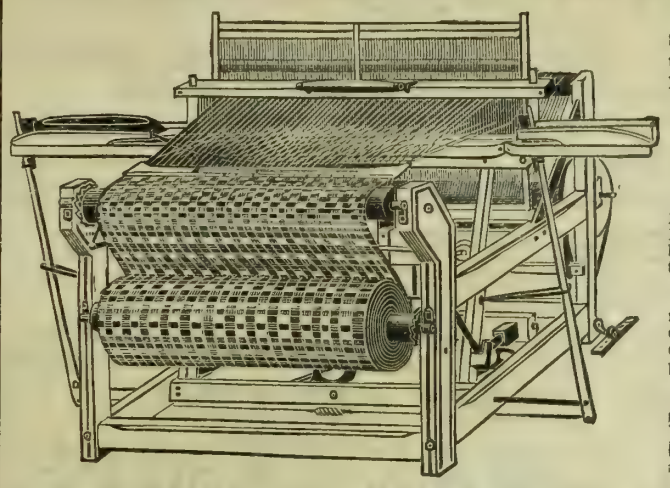


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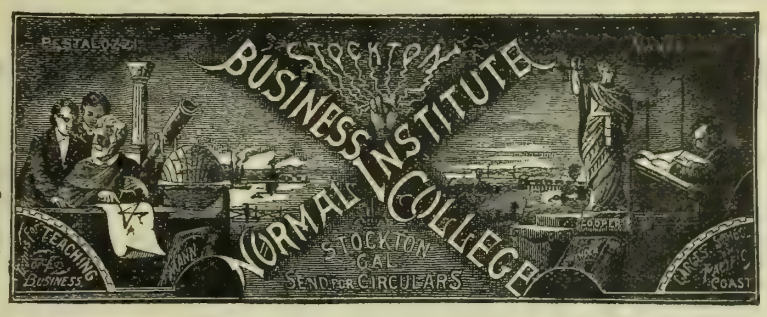
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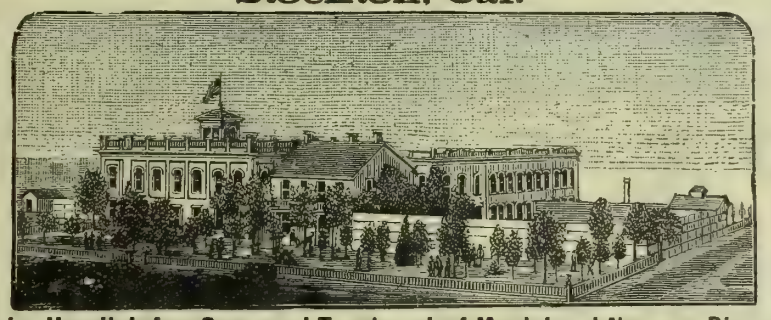
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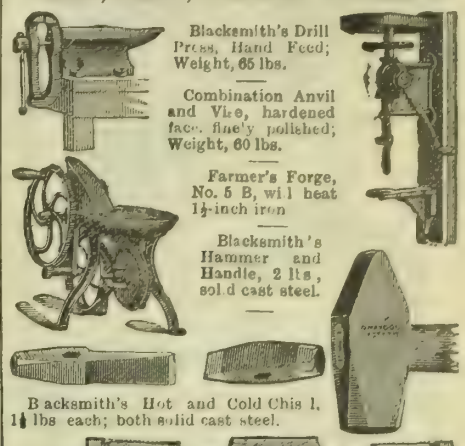
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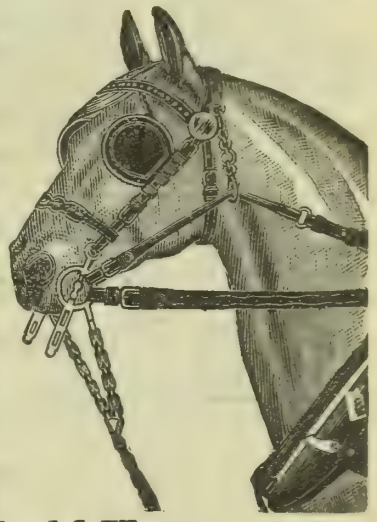
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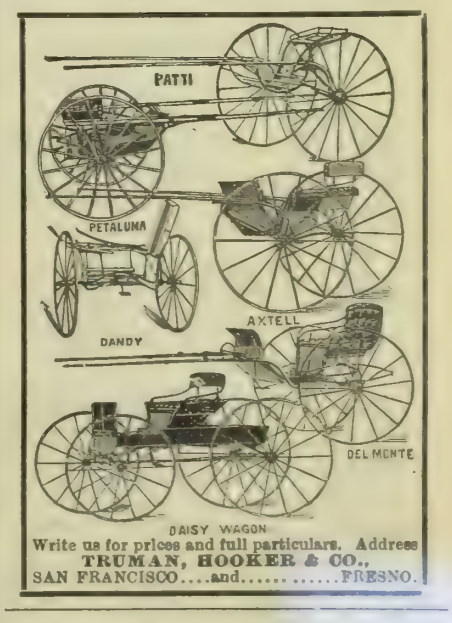


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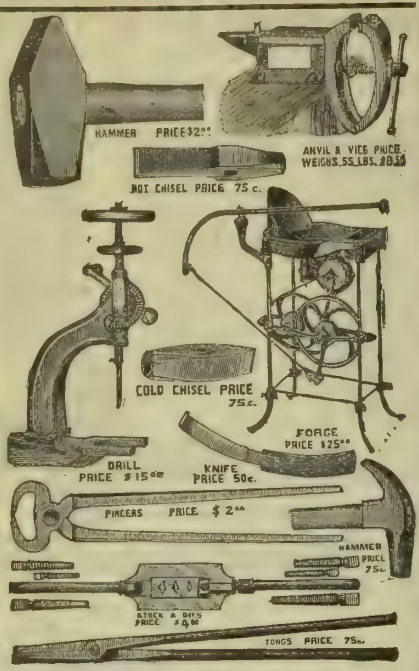
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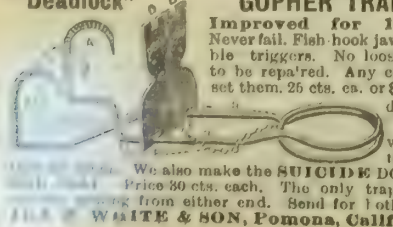


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SAN FRANCISCO, CAL.
Incorporated April, 1874.



Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	720,000

OFFICERS.

A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary

General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.
January 1, 1892. A. MONTPELLIER, Manager.

JAMES M. HAVEN. THOMAS E. HAVEN, Notary Public.
HAVEN & HAVEN,
ATTORNEYS AND COUNSELORS AT LAW,
No. 530 California Street,
Telephone No. 1746. SAN FRANCISCO, CAL.

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All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind & Steam Mach'y. Encyclopedia 25c.
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S. F. MARKET REPORT

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 20, 1892.

General trade continues inactive, with trading in farm products being no exception thereto. Money continues easy, with no marked call from any particular source. The general inactivity is reflected in bank clearances, which show a falling off for each week compared with the like week in 1891. Although the present situation is not favorable, yet the future holds out encouragement for expecting much better times to set in soon, provided crop prospects continue favorable.

Foreign Grain Review.

LONDON, April, 18.—Mark Lane *Express* says: The average price of wheat throughout the country is 31s 4d, a decline of 5s since January 1st. Foreign wheats remain quiet at a recovery of 6d. Both France and Germany were buying. California left off firm at 38s. Indian was depressed, the fall in silver causing forced sales at 32s. Corn is weak; cargoes of mixed American are quoted at 20s. Oats are 3d dearer and barley is dull.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June.	July.	Aug.
Thursday	7s04½d	7s02½d	7s01 d	7s01 d	7s.1½d
Friday	.....	.....	.....	.....	.....
Saturday	.....	.....	.....	.....	.....
Monday	.....	.....	.....	.....	.....
Tuesday	7s04½d	7s01½d	7s00½d	7s00½d	7s01 d

No. 2 Red Winter are quoted and not No 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	
Thursday	36s9d	36s6d	36s6d	Market for P. S.
Friday	.....	.....	.....	Firmer.
Saturday	.....	.....	.....	
Monday	.....	.....	.....	
Tuesday	36s9d	36s3d	36s6d	Generally dearer.

To-day's cablegram is as follows:

LIVERPOOL, April 20—WHEAT—Cheaper to sell. California spot lots, 7s 5d; off coast, 36s 3d@36s 6d; just shipped, 36s; nearly due, 36s 3d; cargoes off coast, quiet; on passage, quieter; Mark Lane wheat steady; French country markets, very quiet; weather in England, cold and wet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug.
Thursday	....	....	....	....	....
Friday	....	....	....	....	....
Saturday	153⅜	151⅝	150	150	149½
Monday	155⅜	152¼	151½	151½	149⅝
Tuesday	154⅛	150⅝	149½	149⅜	149⅜

The following are to-days' telegram:

NEW YORK, April 20 WHEAT—92¾c for April, 90¼c for May, 89¼c for June, 89½c for July, 89¼c for August, and 91¾c for December.

CHICAGO, April 20—WHEAT—80¼c for May, and 80c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H	L.	Seller 1892. H.	L.
Thursday	153½	152½	....	....	139¾	139
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	154½	153	....	....	140½	139½
Tuesday	154¼	153¾	....	....	140½	140¾

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal session: Buyer season—500 tons, $1 53¾; 100, $1.53⅝ ₩ ctl. Regular session: Seller 1892—100 tons, $1.40¼ ₩ ctl. Afternoon—Seller 1892—200 tons, $1.40¼; 300, $1.40½ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	*May H.	L.	June. H.	L.
Thursday	101½	100	....	....	....	....
Friday	....	....	....	....	....	....
Saturday	....	....	....	....	....	....
Monday	102¾	101½	....	....	....	....
Tuesday	103¾	103⅜	....	....	....	....

*New crop.

The following are to-day's recorded sales on Call:

Barley—Regular session: Buyer season—200 tons, $1.02½; 100, $1.02¾. Seller 1892, new—100 tons, 93½c; 200, 93c ₩ ctl. Buyer season—100 tons, $1.02½. Seller 1892, new—100 tons, 93c ₩ ctl

Bran—Seller 1892—100 tons, $15.62½ per ton.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, April 17.—Offerings of domestic are unimportant, with our supplies reduced and strong. With London prices sellers are satisfied, and the market is at bottom figures, but all seem willing to close out their remnant at the late low prices, to be ready for the new clip. Depressed prices have ruled now nearly a year. One benefit has attended them, for at the low cost manufacturers have been enabled to make experimental combinations of material to a degree that has permitted the outturn of a quality of goods which satisfies the claims of the trade, which formerly adhered to imported stuffs. It is to be hoped in another season the grower will get his share of a prosperity to which he has contributed so prominently.

Boston sold 1,106,000 domestic and 1,411,000 foreign, half the latter Australian, the rest mainly carpet. Philadelphia reports stock going out readily with a more confident tone.

NEW YORK, April 19.—The demand for print cloths at the East has declined and stocks with first hands are larger. Coarse ginghams are selling slowly, wool dress goods are fairly active, and the blanket mills are busy. The advance at the London wool sales is about 2 cents, contrasted with the opening which strengthens the staple here. Dealers and manufacturers differ as to the probable permanence of this improvement. Eastern market prices are below a parity with Western dealers. Raw cotton is ⅞ cents higher on widespread renewed investment purchases and a demand for "shorts."

Eastern Dried Fruit Market.

NEW YORK, April 18.—Unpeeled peaches are readily parted with at 6@6½c. Prunes are weaker, and small sizes are the great detriment to sales. It is difficult to get buyers to indulge in much of them. The named sizes of last week are ⅛ cent to ¼ cent off, with choice fifties and sixties unchanged. A block of 6000 boxes sold at 7¾c for four sizes. Raisins—Slow and offered low. Some good Three Crown boxes were slaughtered at 90c. Three Crown "E" bags sold at 4¼@4¾c, full prices. Apricots—Moving fairly at low figures. Boxes sell at 6½@8c; bags, 6@7. Several round lots 1890 crop, sold at 3½@4c.

CHICAGO, April 19 —California Dried Fruits—Large transactions are not heard of at present. It is rather late in the season for anything of this kind. Certain lines, however, sell very well, in fact there may be said to continue a moderate to fair demand for choice goods of all lines, with the exception of raisins. The market for this line is ruling quiet and slow, with considerable stock on hand.

Eastern Hop Markets.

Hops advanced under an active speculation and strong interior feeling. Fancy State still tend upward. State '90's common to choice are held at 25@32c; Pacific, 25@31c; all-winter '90's 16@23c. Closing option rates for May, 29c bid, and 33¼@33½c was asked; June, 29¾@32c; July, 29¼@34c. Exports for the week were 471 bales.

Miscellaneous.

NEW YORK, April 17.—Lima beans—Much to the relief of receivers the heavy lots, ex-Mineola and those of this week by the Pacific Mail are pretty much placed. The market is firmer, $1.65@$1.70 per bushel spot.

NEW YORK, April 19.—Lima Beans.—The stock of California lima beans is reported small, and $1.75 per bushel is quoted on strictly choice spot.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending April 18, '92, were as follows:

Flour, qr. sks	88,539	Bran, sks	11,766
Wheat, ctls	73,310	Buckwheat "	....
Barley, "	38,150	Middlings "	2,512
Rye, "	505	Chicory, bbls	155
Oats, "	492	Hops, "	....
Corn, "	1,542	Wool, "	6,107
Butter, "	1,959	Hay, ton	1,436
do bxs	1,048	Straw, "	48
do bbls	....	Wine, gals	182,440
do kegs	37	Brandy, "	3,330
do tubs	....	Raisins, bxs	1,431
do ½ bxs	269	Honey, cs	24
*Cheese, ctls	1,061	Peanuts, sks	....
do bxs	381	Walnuts "	....
Eggs, doz	56,740	Almonds "	62
do "Eastern"	....	Mustard "	....
Beans, sks	2,756	Flax "	36
Potatoes, sks	5,479	Popcorn "	....
Onions, "	481	Broom corn, bbls	....

*Overl'd, 203 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '91 to April 18, '92.	July 1, '91 to April 16, '92.
Flour, ½ sks	251,343	386,690
Wheat, ctls	1,304,132	1,224,221
Barley, "	265,057	51,533
Oats, "	315,409	373,058
Wool, bales	5,949	6,813
Hops, "	443	431
Rye, sks	210	3,352
Potatoes sks	89,874	123,027

Oregon Crop Advices.

The Portland, Oregon, circular letter for the week ending April 16, of Oregon State Weather Service in cooperation with U. S. Weather Bureau of the Department of Agriculture, reports as follows.

In Western Oregon the weather conditions have been unfavorable to all crops. Fall wheat is generally in good condition, though in wet places it is obtaining a bad color, it has little growth, but is reported to have stooled well and as being well-rooted. The spring seeding has been delayed and in many sections it is not over half done yet; reports indicate a general tendency towards a much larger acreage than usual. The frosts have undoubtedly done damage to the fruit buds, though the exact damage cannot now be ascertained. A freezing temperature existed on the mornings of the 11th and 12th in many localities and it was then that the supposed damage was done; it is however surmised that not more than the necessary pruning of fruit was done by the frost. The hopmen are busy in their yards and preparations are being made to prevent, if possible, the ravages of the hoplouse. The Agricultural College at Corvallis is issuing valuable information to the hop growers of the State on the subject of the hop louse, which should be heeded. Sheep shearing and lambing are in progress. The wool clip has never been excelled for quality. Strawberries are in blossom; small berries are formed and garden truck is growing slowly, though promising.

In Eastern Oregon the soil is in first-class condition, being unusually moist. Spring seeding is nearly completed. The acreage of spring grain is the largest on record. There has been a marked increase in acreage in Grant county, owing to two flour roller mills being erected. All the reports indicate the wheat prospects to be better than ever before. Stock is in excellent condition and the range furnishes good feed. The frosts did damage to fruit and tender vegetables, though not to any great or serious extent. The lambing season continues and with most excellent results. Wool growers report the heaviest and best grade of wool clipped this year that has ever been secured. Cereal, stock and wool interests were never more promising than they are at present throughout Oregon.

Cereals.

London cables of April 19th report as follows: Wheat and flour on passage to United Kingdom, 3,009,000 qrs.; Continent, 1,296,000.

New York mail advices to April 13th report as follows: Recent crop reports from France are more favorable. Some damage is believed to have been done in Germany, but it is said that fine, warm weather would remedy it. In Belgium the outlook is favorable. In Northern Holland the prospects are satisfactory, but reseeding is necessary in some other parts. In Hungary wheat is looking exceedingly well, and the prospects are good in Spain and Italy. In Russia, owing to the reduced acreage, an average crop cannot be reaped under the most favorable circumstances. The weather in India has favored the wheat crop.

The local wheat market the past week, under review, was interrupted by a two days' holiday, but as far as trading on Call is concerned, the holiday season might just as well have continued up to this writing. In futures not only very little is being done, but there is not likely to be improvement until silver advances in prices and other unfavorable influences are removed. The trade is watching with considerable interest the weather at home and abroad. It now looks as if the wheat crop in the United States will be short by fully 100,000,000 bushels when compared with the yield in last year. There are those in the trade who contend that this shortage will be largely offset by a large carryover. There is no doubt but that this country will have a large carryover, yet it is not at all likely that it will equal the shortage in the crop. With this being the present situation, foreign crop prospects become an important factor in shaping future values.

The barley market continues to fluctuate. The receipts are heavy, but the bulk coming to hand is off colored. The feed consumption demand continues very free, considerably larger than ever before at this time of the year. Crop prospects in the southern part of the State are poor, and unless that section is visited by rains soon the yield to the acre will be less than any within several years past. In the central counties the yield will be large.

Oats are firm, with a fair demand ruling. The stock in this city is being depleted under a steady withdrawal. The tendency of the market appears to be upward.

In corn, continued light receipts and a fair export movement create a strong market at the recent advance. Crop prospects in this State are not of a very promising character.

Rye continues slow and heavy.

Feedstuff.

The market for feedstuff holds strong. Some dealers are looking for slightly higher prices. The feed consumption demand is free, with the supply of bran and middlings lessened very materially.

Hay is reported weak for all kinds. The supply of compressed is in excess of the demand, owing to there not being much of a demand for shipment either by sea or overland. It is claimed that if the dry weather continues in the southern part of the State, and at several points in the central counties, there will be a large increased acreage cut for hay.

Dairy Produce.

Butter is weak at unchanged quotations. The receipts continue to increase, and as the outlets up north are being cut off, it looks as if further concessions will have to be made soon so as to clean up consignments. A firm in this city which receives large consignments is said to be packing quite heavily.

Cheese is weak at the lower quotations. The decline is due to heavy receipts and buyers' offishness. Buyers are expecting still lower ranges in quotations, and therefore they will not take hold unless offered concessions

Eggs show signs of receding under free receipts of California and liberal supplies of Eastern on the way. The consumption has fallen off very materially,

Vegetables.

In garden stuff the market shows slightly more strength for both rhubarb and asparagus. Peas and string beans are weaker. The weakness is due to free receipts and rapidly increasing supplies from which to draw. Shipments to up north ports are quite free. Marrowfat squash are scarce and higher.

Onions made a slight advance the past week, but eased off again and closed at our quotations. The higher prices are causing freer shipments to this port. New onions put in an appearance the past week.

New potatoes are in heavy supply. The more matured, which are of good size, are readily placed at the outside figure and sometimes at even higher prices. For old potatoes the market shows more strength for both California and Oregon Burbank. Other kinds of potatoes do not show any material change.

Fruit.

One basket of raspberries and a few gooseberries came in the past week.

Strawberries fluctuate daily, the price being dependent on receipts. Yesterday the outside price for the more choice was $12 a chest, and to-day it was $9. The quality shows an improvement.

There are not enough apples coming in to justify quoting. Those received come from Honey Lake Valley and the State of Nevada.

Limes and lemons are weak and lower.

The demand for oranges is quite heavy, but owing to free receipts the market is lower. The quality averages better than it did one month ago, yet there is room for further improvement. Redland and Highland oranges continue masters of the situation.

In dried fruits there is absolutely nothing new to report. Receipts are light. Supplies to draw from are said to be light, being about cleaned up. The inquiry is chiefly for jobbing lots. The same remarks apply to raisins.

Live Stock.

Mutton sheep are weak at the lower quotations. Bullocks are barely steady. Dairy hogs for the block are firm, but heavy packing hogs are in buyers' favor. Dairy calves are fairly steady, but range calves favor buyers.

Wool.

The market is slow. While we do not quote any higher prices, yet it is said that a few sales of choice clips have been made at a slight advance on outside quotations. The situation of the markets at the East and abroad does not, at this writing, warrant expecting much of an improvement for the better unless it be later on in the season. The very low price of silver, it is claimed by English papers just to hand, has cut off several large demand markets for woolen goods, which has made itself felt in the textile industry. The clip on this coast averages better in cleanliness, strength, etc., than for years. That coming from Nevada is exceptionally good. The six months' wool from the southern part of the State is shorter than usual, owing to scant feed for sheep during the winter.

Miscellaneous.

From reliable advices up to April 20, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	223,004	258,308	*†135,756	54,594
San Diego	14,753	17,454	5,592	.....
San Pedro	1,571	2,773	....	17,530
Oregon	24,205	30,405	10,211	
Puget Sound	9,164	35,004	.....	
Totals	272,697	343,946	144,335	85,405

*Engaged for wheat, 1892, 19,974; 1891, 52,521 †For new crop loading, 6,803.

The statistics of produce exports from this port from July 1st to April 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,018,524	10,676,149
Flour, bbls	373,072	931,020
Barley, ctls	786,338	208,535

Poultry is slightly lower, with still lower prices looked for, owing to liberal receipts expected from the Central States.

Beans are slow, but firm.

Alfalfa is about out of market.

Hops are strong, with sales reported as high as 30 cents for a giltedged article. For new crop hops contracts are reported as high as 20 cents. This is said to be an exceptional high price.

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ¼c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	8 @—
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pl'd, prime, bl.	11 @—
Do do prime	3¼@ 4	Do do choice	12 @—
Do do choice	4 @ 4½	Do do fancy	13 @—
Do sliced, common	3½@ 4	Evap, peeled, in boxes, choice	15 @—
Do do prime	4 @ 4½	Do do fancy	16 @—
Do do choice	4½@ 5½	**PEARS.**	
Evap. bleached, ring. 50-lb boxes	7 @ 8	Sun-dried, quarters	3 @ 4½
APRICOTS.		Do sliced	4 @ 5
Sun-dried, unbl. com.	2½@ 4	Evap, sliced, in boxes.	6 @ 8
Do do prime	5 @ 5½	Do ring do	10½@—
Do do choice	6 @ 6½	**PLUMS.**	
Do bleached, prime	7 @—	Pitted, sun-dried	4½@—
Do do choice	7½@—	Do evap. boxes, choice.	—@—
Do do fancy	8½@ 9½	Do do do fancy	—@—
Evap. choice, in boxes.	9½@10	Unpitted	2 @ 2½
Do fancy, do	10 @10½	**PRUNES.**	
FIGS.		Cal. French, ungraded	5½@—
Sun-dried, black	3 @ 3½	Do graded, 60 to 100	6 @—
Do white	3½@ —	Do do 40 to 60	8 @—
Do do washed	— @	Fancy sell for more money.	
Do do fancy	— @—	**RAISINS.**	
Do do pressed	— @—	London Layers, choice ₩ bx	$1 50@ —
Smyrna boxes	— @—	Do fancy, do	1 75@ —
Do sacks	— @—	Layers, ₩ bx	1 25@ —
GRAPES.		Loose Muscatels, common, ₩ bx	1 00@ —
Sun-dried, stemless	2 @ 4	Do choice, do	1 20@1 30
Do unstemmed	1 @ 2½	Do fancy, do	1 50@ —
NECTARINES.		Unstem'd Muscatels, in sacks, ₩ lb	4@ 5
Red, sun-dried	3½@ 5	Stemmed do do	5@ 5½
Do Evap., in boxes	5 @ 6	Seedless do do	6@ —
White, sun-dried	4 @ 6	Do do ₩ 20-lb bx	1 15@ —
Do evaporated	6 @ 7	Sultanas, unbl, bxs	1 15@1 40
PEACHES.		Do bleached, in bxs	1 30@1 60
Sun-dried, unpeeled, common, bleached	3½@—	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes	
Do do prime, do	5 @—		
Do do choice, do	6 @—		
Do do fancy	7 @—		
Evap, unpe'd, choice	7 @—		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

WEDNESDAY, April 20, 1892

BEANS AND PEAS		**FLOUR.**	
Bayo, ctl	2 00 @ 2 20	Extra, City Mills	4 80 @ 5 00
Butter	2 40 @ 2 80	Do Country Mills	4 65 @ 5 00
Pea	2 20 @ 2 80	Superfine	3 00 @ 3 30
Red	1 90 @ 2 15	**NUTS—JOBBING.**	
Pink	1 75 @ 2 00	Walnuts, Cal. lb	4 @ —
Small White	2 20 @ 2 55	Do Choice	6 @ —
Large White	2 20 @ 2 45	Do paper shell	7 @ —
Lima	1 95 @ 2 20	Almonds, sft shl.	10 @ —
Eld Peas, blk eye	1 30 @ 1 50	Paper shell	12 @ —
Do green	1 30 @ 1 50	Hard Shell	6 @ 7½
Do Nies	1 25 @ 1 40	Brazil	6½@ 8
Split	3 85 @ 4 15	Pecans small	11 @ 13
BUTTER.		Do large	14@ 16
Cal. Poor to fair, lb	12½@ —	Peanuts	1½@ 3
Do good to choice	15 @—	Filberts	11@12
Do Giltedged	— @ 18½	Hickory	7 @ 8
Do Creamery rolls	— @ 18½	Chestnuts	11½@ 16
Do do Giltedge	— @ 19	**ONIONS.**	
Eastern	— @ —	Silver Skin, Choice per ctl	2 00 @ 3 00
CHEESE.		Fair to Good	1 25 @ —
Cal. choice mild	10½@ 11	Cut	75 @ —
Do fair to good	9 @ 10	**POTATOES.**	
Do gilt edged	— @ 11½	Early Rose, ctl	25 @ 40
Young America	— @ 13	Burbank Seedling	50 @ 70
EGGS.		Do do Oregon	90 @ 1 15
Cal. ranch, doz	19½@ —	Do Humboldt	40 @ 75
Do do selected	— @ 21	River Reds	15 @ 35
Do store	17 @ —	New	50 @ 80
Eastern	16 @ 19	Sweets	— @ —
FEED.		**POULTRY.**	
Bran, ton	16 50 @17 50	Hens, doz	6 00 @ 8 00
Feedmeal	26 00 @28 00	Roosters, old	6 50 @ 8 00
Gr'd Barley	22 00 @23 50	Do young	8 00 @12 00
Middlings	19 00 @20 50	Broilers, small	3 50 @ 5 50
Oil Cake Meal	— — @25 00	Do large	6 00 @ —
Manhattan Food ₩ cwt	7 50	Fryers	7 00 @ —
HAY.		Ducks	6 00 @ 9 00
Wheat, per ton	12 00 @ —	Geese, pair	1 75 @2 25
Do choice	14 00 @ —	Goslings	2 50 @ 3 50
Wheat and Oats	10 00 @ 13	Turkeys, Gobbler	15 @ 17½
Wild Oats	10 00 @ —	Turkeys, Hens	17 @ 19
Cultivated do	11 00 @ —	Manhattan Egg Food ₩ cwt	11 50 @ —
Barley	8 00 @ 12	**PROVISIONS.**	
Alfalfa	8 00 @ 10	Cal. Bacon, he'vy, lb	9½@ —
Clover	— — @ —	Medium	11@ —
Straw bale	45 @ 60	Light	12 @ —
GRAIN, ETC.		Lard	9 @ 11
Barley, feed, ctl	1 00 @ 1 02½	Cal. Sm'k'd Beef	11½@ —
Do Choice	1 05 @ —	Hams, Cal salt'd	10 @ —
Do Brewing	1 05 @ —	do Eastern	12½@ —
Do do Choice	1 15 @ —	**SEEDS.**	
Do do Giltedge	1 18½@ —	Alfalfa	12 @ 12½
Do Chevalier	1 05 @ 1 40	Clover, Red	14 @ 15
Do do Giltedge	1 45 @ 1 50	White	20 @ —
Buckwheat	1 70 @ —	Flaxseed	1½ @ 2
Corn, White	1 25 @ 1 30	Hemp	3½@ 4
Yellow, large	1 30 @ 1 36	Mustard, yellow	3½@ 4
Do small	1 32½@ 1 36	do Brown	3 @ 3½
Oats, milling	1 42½@ —	**WOOL.**	
Feed, Choice	1 38½@ —	**SPRING, 1892.**	
Do good	1 30 @ —	Humb't & Mend'cino	— @ —
Do fair	1 22½@ —	Sac'to valley	16 @ —
Surprise	1 50 @ —	S Joaquin valley	11 @ 14
Black Cal	1 10 @ 1 40	Cala'v & F'th'll	14 @ 16
Do Oregon	1 20 @ 1 27½	Oregon Eastern	10 @ 17
Gray	1 20 @ —	do valley	— @ —
Rye	1 47½@ —	So'n Coast, def	10 @ 12
Wheat, milling. Gilt edged	1 57½@ —	**HONEY.**	
Do Choice	1 55 @ —	White Comb, 2-lb	10 @ 12
Do fair to good	1 51½@ —	do do 1-lb frame	12 @ 14
Shipping, choice	1 51½@ —	White extract'd	6½@ 7
Do good	1 50 @ —	Amber do	5½@ 6½
Do fair	1 47½@ —	Beeswax, lb	22 @ —
Common	1 45 @ —		
Sonora	1 45 @ 1 57½		
HOPS.			
1891 Choice to Ex.	26 @ 30		
Fair to Good	22 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 20, 1892.

Limes, Mex	3 00 @ 4 00	Beets, sk	— @ 1 00
Do Cal	— @ —	Carrots, sk	35 @ —
Lemons, box	1 00 @ 3 00	Okra, dry, lb	15 @ —
Do Sicily	5 00 @ —	Parsnips, ctl	— @ 1 25
Oranges, Seedlings—		Peppers, dry, lb	10 @ —
Redlands	1 75 @ 2 00	Do green	— @ —
Riverside	1 50 @ 1 75	Turnips, ctl	50 @ —
Los Angeles	1 25 @ 1 50	Cabbage, 100 lbs	40 @ —
Do Navels—		Garlic, lb	2 @ 3
Redlands	3 00 @ 3 50	Squash, Mrft, tn	12 00 @15 00
Los Angeles	2 50 @ 2 75	Do Summer, lb	1 00 @ —
Riverside	2 50 @ 3 00	Tomatoes, box	2 50 @ —
Duarte	2 50 @ 3 00	Asparagus, box	1 00 @ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Do choice to ex	2 00 @ —
		Peas, green, sk	1 00 @ —
		Do sweet	2 @ 3
Strawberries, per chest—		Rhubarb, box	25 @ 1 00
Longworth	7 00 @ 9 00	String Beans	8 @ 10
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Any stock upon which this assessment shall remain unpaid on the 28th day of April, 1892, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on SATURDAY, the 21st day of May, 1892, to pay the delinquent assessment, together with costs of advertising and expenses of sale. By order of the Board of Directors.

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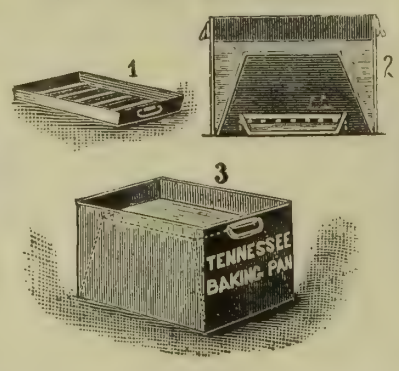
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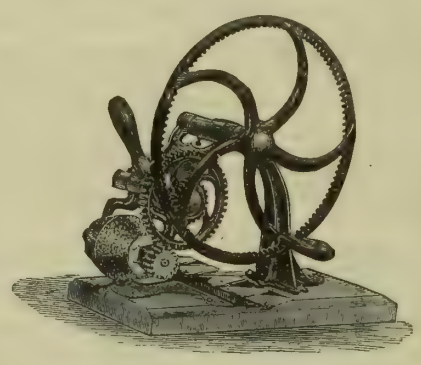
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It maintains the high standard which its initial number indicated . . . The magazine takes rank among the first in the Nation.

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THE CALIFORNIA ILLUSTRATED MAGAZINE is a welcome addition to the usual monthly file, and shows that the West Coast in matter and manner is not far distanced by the East.

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It certainly is the leading magazine of the Pacific Coast.

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THE CALIFORNIAN will rank with *Harper's*, *The Century*, *Scribner's*, and other first-class monthlies.

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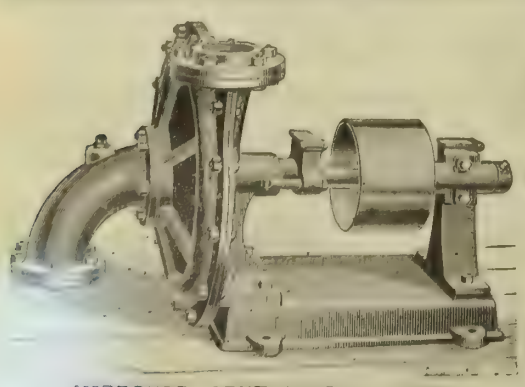
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Woodland Mail

THE CALIFORNIAN ILLUSTRATED MAGAZINE for April is beautifully illustrated, many of its articles being embellished by artistic sketches making the issue the peer of any of the elaborately illustrated magazines of the East. The magazine is an honor to California and we bespeak for it long life and prosperity.

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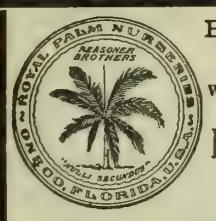
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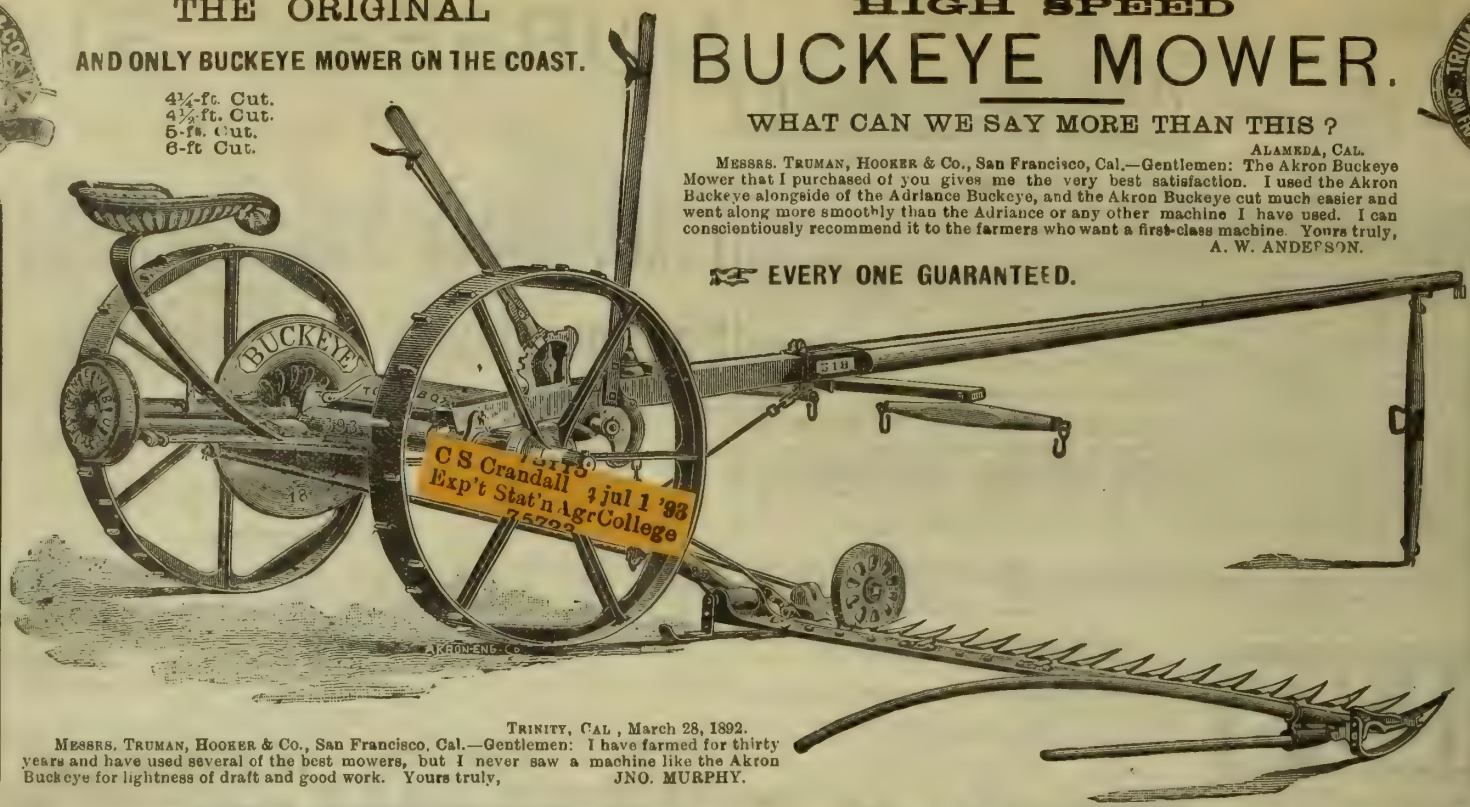
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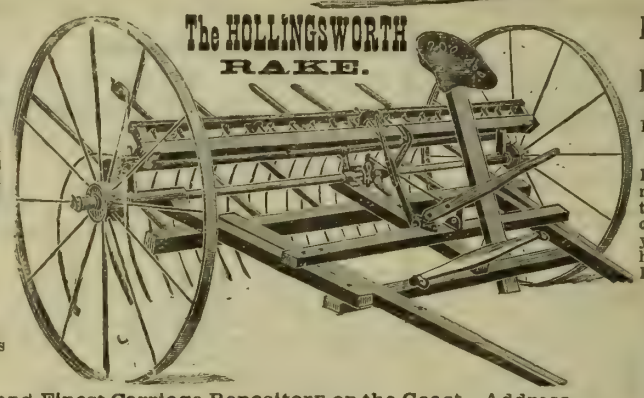
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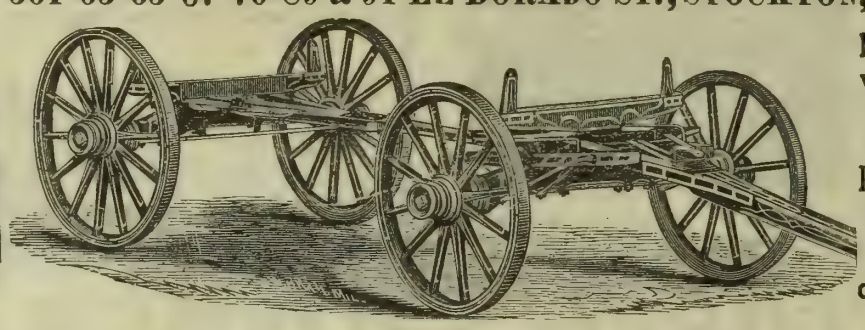
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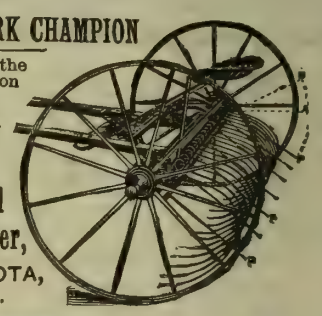




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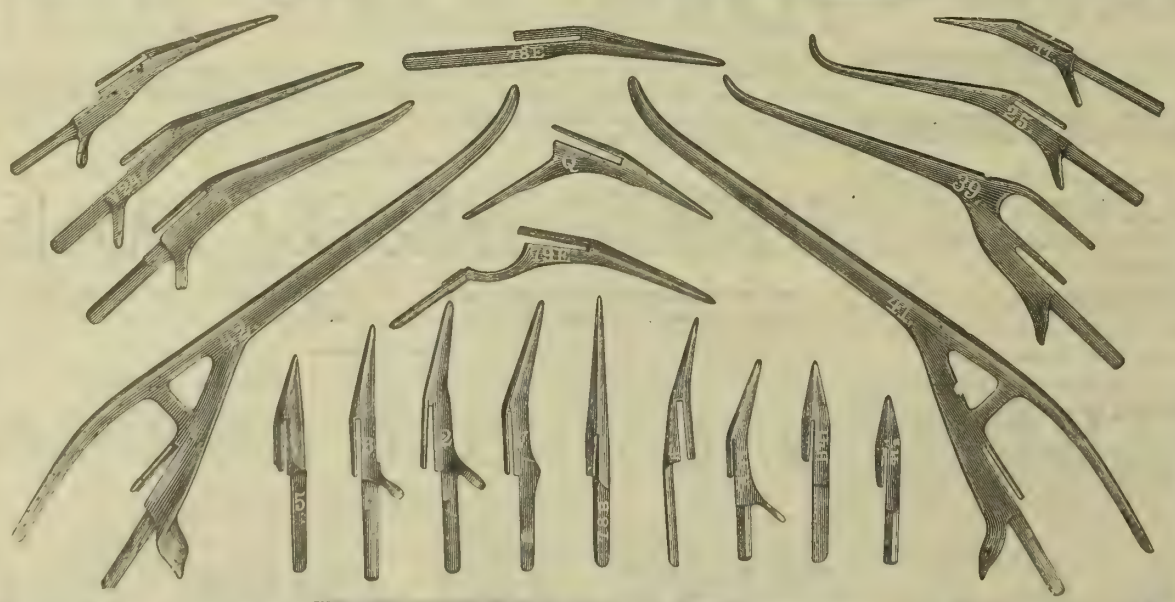
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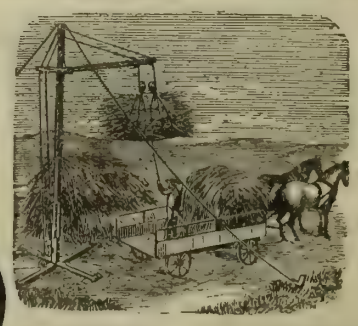
HODGE * HAINES * HEADERS *

LATEST STYLE





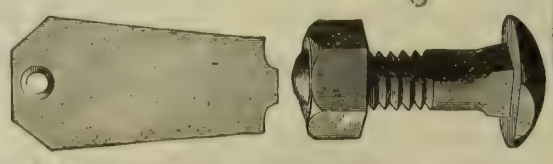






TRIUMPH MOWERS — AND — REAPERS.





SEND FOR CIRCULARS.

GENERAL RANCH, VINEYARD AND ORCHARD SUPPLIES.

ILLUSTRATED CATALOGUE MAILED ON APPLICATION.

PACIFIC RURAL PRESS

Vol. XLIII. No. 18. SAN FRANCISCO, SATURDAY, APRIL 30, 1892.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Alfalfa-Haying in the San Joaquin Valley.

As pertinent to an issue which deals largely with the hay product of the State, we give upon this page a composite plate illustrative of alfalfa-haying in Kern county. The scenes are laid upon the various rich farms of the Kern County Land Company of Bakersfield, but they are representative also of other counties where alfalfa is grown upon a large scale. In fact, the scenes are distinctively Californian in the glimpses of the valley landscape and in the scale and methods of the haying operations which are portrayed. Nowhere, probably, are means employed which bring vast quantities of good hay into permanent form so cheaply as in this State. This is in part owing to the enterprises and resources which characterize some of our large-scale producers, but probably greater credit must be given to the peculiarly favoring climate which makes such simple and cheap arrangements safe and satisfactory, and to the irrigation system which puts the moisture into the ground where it does most good without dropping it through the air where it may do much harm. The distant reader can hardly realize the comfort of haying leisurely where no storm is feared, in an atmosphere for curing which reduces the handling of the hay to a minimum and almost banishes turning and tedding, and the industrial advantage of stacking the hay in stacks a quarter of a mile long, if you please, without a shred or a shingle to protect it. California is, in most of its area, an ideal hay country, for the same agencies which produce peerless raisins and dried fruits for human food are equally kind to the beast of burden in peerless provender.



ALFALFA HAY MAKING IN THE SAN JOAQUIN VALLEY.

Grass and Hay.

Bread is called the staff of life with reference to the human species, but it bears a light burden as compared with the weight which another great division of the animal kingdom throws upon grass. A large proportion of the human family never sees bread of any kind. The fruit eaters of the tropics and the flesh eaters of the frigids know little of the mill or the bake oven. On the other hand, the countless hordes of the graminivora go to grass as a food supply, which meets all the requirements of their organisms. Remembering, then, the relations of the graminivora to the human species, both in its highest civilization and its lowest barbarism, and remembering also the incalculable value of the products of the graminivora to mankind, it becomes apparent that bread is rather a dress cane than a staff of reliance, and that an older writing, that "all flesh is grass," is a truer generalization—though perhaps in a different sense than the writer intended.

In view of this, it is not remarkable, though often forgotten, that the grass crop, green and dried, is by far the greatest single source of wealth in this country. It is the foundation of all kinds of farming, for there is no line of field production which does not employ the labor of the grass and hay-eating animal. For this reason, we believe that the discussion of hay production, which may be found to occupy large space in this issue of the RURAL, will awaken wider interest than any other single subject which could be mentioned, and will afford to all practical information which they cannot otherwise obtain.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

Saturday, April 30, 1892.

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[new this issue.]

Agricultural Implements—Deere Implement Co.
Agricultural Implements—P. P. Mast & Co.
Agricultural Implements—D. M. Osborne & Co.
Agricultural Implements—Allison, Neff & Co.
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Agricultural Implements—Byron Jackson.
Agricultural Implements—Baker & Hamilton.
Hay Presses—L. C. Morehouse, San Leandro.
Fruit Tree Protector—Bonesteil & Co.
Jersey Cattle—Henry Pierce.
Sewing Machines—White Sewing Machine Co.
Agricultural Machinery—G. G. Wickson & Co.

See Advertising Columns.

The Week.

These bright days have been sharply ushered in and the blight of frosts has rested upon many valley areas. Upon another page a brief sketch of the visitation is given. Fortunately, such ills prove usually somewhat less grievous than early conclusions indicate, and we trust such may be the experience this year.

Some have held the prevailing low temperature and the sharp frosts as surety that another storm is needed to settle the weather. We do not guarantee the deduction, but certainly more rain is needed to finish out a good crop. Some parts will have very small returns unless more moisture falls, and nearly everywhere more rain would be welcome to field crops, at least.

Damage by Frost.

Frosts, the past week, did considerable damage to the more tender vegetables and fruits in the central and northern counties. Many gardens devoted to the cultivation of tomatoes will have to be reset, and similar reports are coming to hand regarding potatoes. It has been several years since frosts have done such extended damage to garden truck and fruit.

The damage to tree fruit is reported quite heavy in many localities as far down as Fresno county. While considerable damage has been done, yet there is a general opinion that the uninjured fruit on each tree will grow to larger size and be of much better flavor than it otherwise would. The vineyards, more particularly in the lowlands in Sonoma, Napa, Alameda, Contra Costa, Yolo, and in counties farther north, are reported to have suffered quite heavily. It is stated by conservative persons that the grape crop in the above counties will be from 20 to 50 per cent less than it would have been with a frostless season. Outside of the damage done by frost, wine-growing grapevines did not bid to have a full crop, owing to a lack of moisture in the soil. The fruit did not set for much more than a three-quarter crop. It is now claimed that if very hot weather is experienced in June and July next, that fully one-half of the vine fruit left by the frost will be dried up, owing to a lack of foliage for protection. Taken at its best, the fruit crop in the central and northern counties promises to be short from 10 to 15 per cent in tree, and from 30 to 60 per cent in vine, the shortage ranging according to locality. From the southern counties we are not advised of any damage by frosts.

Our Premium Letters—No. 1.

We are gratified at being able to lay before our readers this week the best exposition of haymaking in California which has ever been published. We are aware that there are important local particulars and methods which are not included in the statements we publish this week, but we hope to draw out the information necessary to round out the subject as will be described below. Still, as it now stands in our columns this week, the group of letters embodies more straightforward, practical information on California hay production than has ever been given in type before.

It is perhaps remarkable that a subject of such universal importance as the hay crop, has received so little attention from agricultural writers, but such is the case. To the general reader the hay crop has been looked upon as a crop which grew itself and afforded little chance for interesting study. Hay growers have known better of course, and have learned from their own experience, and from roadside discussions with their neighbors, that the way the crop was handled from plow to stack, really made much difference in the results. But there is very little glamour about as common a thing as hay, and so pencils were sharpened and pens dipped to write about a host of fashionable farm subjects of far less importance, and the hay crop was allowed to come along as best it could, Topsy-like.

We are very glad that it occured to the Rural Press to break in upon this monotony, and we are sure that all will agree from the persual of the hay letters we publish this week, that the subject has not been neglected from any lack of interest in its methods or because there is nothing to learn about it. The discussion shows that haymaking, all the way from choice of land to choice of market, is full of opportunities for close observation earnest thought and prompt action. Thus it enrolls itself amid all our progressive agricultural branches and we trust it will continue to occupy space in our columns in the future.

We are under great obligations to our subscribers who wrote for us their experience and observation in answer to our offer of awards. We are aware that some of them at least wrote as much or more to aid us in carrying out what seemed to them a progressive idea than for the award offered. While we thank them for so doing, we are troubled that some of them should have attained what seems to us nearly an equality in point of merit, because this makes a decision very difficult. Still we have the decision to make and trust it will commend itself to our readers. Our awards are as follows:

First Prize $10—For the letter signed "R.," written by A. W. Robinson Jr., of Napa.

Second Prize $5—For the letter signed "Farmer," written by R. A. Berry, Westland, Yuba Co.

Third Prize: One Year's Subscription to Rural Press—For the letter of H. Brocklhurst, Orinda Park, Contra Costa Co.

Fourth Prize: Neeley's Great Historical Chart, Political and United States Map—For the letter of Edward Berwick, Monterey.

Besides the above premium essays, we publish a few others this week, and several more will appear later. The writers should take to themselves the assurance that they have done a public service in bringing forward interesting and important facts which will help others in their work and increase their comforts and prosperity.

We have remarked that the letters submitted for the awards do not cover all the points of California haymaking. For this reason we make the following new offer:

Five Dollars in Cash to the Rural subscriber who writes the best letter in the review and discussion of haymaking which will follow the publication of these prize essays.

We shall rely upon this critical review of the subject to embody the following points:

1—Statements and advice of the essayists which do not accord with your own experience or with the general experience of your locality.

2—Methods of practice which are not as satisfactory as those you have adopted.

3—Important considerations in any branch of the subject which the essayists have overlooked or omitted.

We trust this invitation will lead to a full and free discussion, and the award will be based upon the importance of the points advanced by the reviewer. We shall expect to receive these letters promptly, for we desire to make other announcements of prize subjects as soon as possible.

Santa Clara Valley fruit growers and as many more as can attend should not overlook the announcement of a convention in San Jose on May 7th, of which full particulars may be found on page 414 of this issue. The time seems ripe for fuller cooperation among fruit producers, and the movement should be a strong one.

Hay From a Commercial Standpoint.

With more attention to fruit culture, comes a larger demand for hay, owing to the large increase in the number of work horses used by orchardists. A few years ago it was claimed by those in position to know that for every ton of hay fed out in this city, Oakland and Alameda, fully three tons were fed in the remainder of the State. Now it is estimated that for each ton fed out in the abovenamed cities, at least seven tons are fed out in the rest of the State. In this estimate, no reckoning is made of pasture-feeding, only of hay that is cut and cured. A fair idea of the hay crop can be gained by the following statistics of acreage devoted to it as returned for the year 1891 by county assessors:

County.	Acres.	County.	Acres.
Alameda	92,344	Placer	9,845
Alpine	250	San Bernardino	33,205
Amador	7,000	San Diego	18,762
Butte	11,000	San Luis Obispo	36,620
Calaveras	9,500	San Mateo	10,500
Colusa	3,896	Santa Barbara	13,500
Contra Costa	48,400	Santa Clara	35,178
Del Norte	135	Santa Cruz	5,285
El Dorado	4,927	Shasta	11,496
Humboldt	25,275	Siskiyou	52,686
Inyo	6 972	Sonoma	8,470
Los Angeles	13,300	Stanislaus	1,500
Marin	10,120	Sutter	4,555
Mariposa	6,330	Tehama	15,466
Merced	11,300	Trinity	3,500
Modoc	107,000	Yolo	11,500
Monterey	27,000	Yuba	10,000
Napa	16 765		
Nevada	4,289	Total	682,851

The remaining counties, from which no returns were received, it is estimated brought the acreage up to fully 800,000 acres. This year the acreage is claimed to be considerably larger than was that in 1891; but how much, no one appears willing to state. The amount of alfalfa seed sold the past winter is about 30 per cent more than ever before, and that of clover about 20 per cent greater. The increased acreage seeded to alfalfa and clover is due largely to more attention given to dairying, owing to creameries growing into favor. Alfalfa is also growing in favor for hog-feeding.

From George Morrow and other large handlers of hay in this city, we learn that the principal demand is for wheat hay, which is chiefly fed out to work animals and private teams. The next in demand is oat hay, which is principally fed out by owners of driving horses, roadsters and fast horses. Chevalier barley hay is growing in favor, and bids fair to soon take rank with that of wheat hay. Bald barley hay is considered very choice for feeding, but it is hard to raise, owing to very few localities being adapted to its cultivation. Timothy hay is unsalable. Of clover hay, the blue and red tops are the favorites with dairymen, with burr clover hay a good second. Alfalfa hay is used quite largely by dairymen in cold weather. Many of them claim that in warm weather the milk from cows feeding on it has an unpleasant flavor. Considerable stock hay is fed out here by butchers and stockmen. Experienced horsemen in this city claim that wheat and wild oat hay is the best all around feed for horses. They claim that new wheat hay is too laxative and when it is old it is too binding, both of which are neutralized by wild oats.

Dealers in hay claim that the best prices are obtained for hay when it is cut just as the milk begins to harden, and after being cut and properly cured, then stacked, and in stacking slightly sprinkled with salt. The salt is said to sweeten the hay and make it more palatable. The hay, they claim, should remain in the stack a certain length of time before baling, the length of time being due to the kind of hay, when cut, and also the locality where grown.

The receipts of hay at San Francisco in 1891 aggregate 43,694 tons the first six months and 78,853 the last half of the year, making a total of 122 547 tons for the year. This includes all kinds, for it is nearly impossible to segregate the varieties. Nevada farmers sent large quantities into this State in 1891. This was due to heavy losses of stock by the hard winter of 1889-90, and the hay crop being largely in excess of the home requirements. They were also able to market their hay in this State owing to the railroad giving them special freight rates, and also to the high prices that ruled for hay throughout California. For the first five months of 1891 the market in this city held around at a range of from $12 to $19 per ton. In the forepart of July prices for new at $9 to $14.50 per ton. When it became known that the crop in this State was short, buyers came in the market and bought quite heavily in the country, causing prices to move up from 50 cents to $1 a ton, and this advance held its ground in the market the remainder of 1891 and well into March of this year.

The market now is weak for old with poor grades hard to sell. For new-crop hay, offers are made at from $8 to $11 per ton, according to kind and quality. It is claimed that very little hay will come from now on from Nevada. This opinion is based on the well established fact that large numbers of sheep and meat animals have been driven into that State, and also to a very large increase in the number of milch cows owing to a rapid increase in creameries.

The State Press.

Yuba City *Independent*: "At no time in the history of this nation have so many active human agencies for good to the race been in operation."

Sacramento *News:* "Manifestly there is a lack of interest, especially by the farmers and fruit growers, in the Sacramento County World's Fair Association. There is not that genuine enthusiasm which marks deep appreciation of the objects of so important an organization."

Visalia *Times:* "The question as to whether the United States Senators should be chosen by the people will be voted upon at the coming election. If two-thirds of the States vote in favor of the change, it will be made. For the last 25 years there has been a tendency to centralize the Government. This change would be in the opposite direction and ought to carry."

Woodland *Democrat:* "The defense of the Pacific States in time of war should demand the thoughtful and patriotic consideration of the whole country. The Pacific Coast industries are now so large and varied, the population of that part of the Union so sparse, the distance around Cape Horn by sea so great, the long time required to reach there by water, the increasing needs of that part of the American Union, all point to and make necessary, as a matter of national safety, the building of the Nicaragua canal."

Central Californian: "The rate on nursery stock from Fresno to Redlands, in San Bernardino county, a distance of 300 miles over the tortuous windings of the Southern Pacific system is $2.58 per 100 pounds in less than carload lots. The rate on like freight from Los Angeles to Chicago, a distance of over 2986 miles, is $2.70 per 100 pounds in less than carload lots. Will any friend of the Southern Pacific Company say that the rate between Fre no and Redlands is just? When this matter is brought to the attention of our Railroad Commissioners, as it will be, will they do anything to right existing wrongs? Trade in the interior of California is in the grasp of a merciless corporation, and the State Board of Railroad Commissioners has the power to free it. Will the Board extend the relief which the people ask?"

Stockton *Mail:* "Look at the idiosyncracies of the average reputable elector. He does not attend primaries nor preliminary political meetings—not he. On the evening of the primary, caucus or slate-arranging meeting, you will find him at home with his newspaper, or on the street attempting to 'see a man.' The wheels within wheels of a republican form of government are being operated and the striker and political tough are out in force to see that the wheels are fixed to run as they desire, but the so-called 'good citizen' is apparently not interested in the way those wheels are manipulated; he is content to leave their operation in the hands of the striker and his boss. And so their fair political structure of the republic is built on a foundation which is rottenness itself. This is the chief cause of the corruption which is seen permeating official circles from the highest to the lowest. It behooves Americans to remember that a house which is founded on the sand cannot stand when flood comes."

NUTRITIVE VALUE OF CALIFORNIA HAY CROPS.—The fact that hay is usually made from different plants than used at the East and in Europe, and that the hay is grown under different conditions of soil and climate, it becomes very important to have chemical analyses of California hays, so that their nutritive value and equivalents can be intelligently set forth. This is the more important in view of the fact that we are tending toward the compounding of food rations for different animals performing different kinds of service, and this cannot be done upon Eastern formulas because our materials are known in a general way to be somewhat different. The University Experiment Station proposes, during the coming year, to give as much time as possible to investigations of this kind, with a view of making its work of especial value to the stock-grower and dairymen. Some analyses have already been made, but more are necessary to serve as data for generalizations.

SOUTHER FARM HORSE SALE.—The horse sale by Gilbert Tompkins of Souther Farm, San Leandro, held last week, was a notable event from several points of view. The attendance was very large and yet the hospitality of the proprietor was adequate thereto, both in material and sentiment. The sale was fairly satisfactory, we are told by visitors, both in aggregate and average. The appointments of Souther Farm as a breeding and training establishment, received very high praise from those who visited it. Mr. Tompkins is conducting his establishment on a liberal plan and with high aims, and merits the attention which he is securing from the public.

HAND BOOK OF WEST AMERICAN CONIFERS.—Prof. J. G. Lemmon, of Oakland, has published in pamphlet with the above title his plan for the adoption of approved English names for the cone-bearing trees of the Pacific Coast. The matter is similar to that contributed for the RURAL PRESS of Jan. 23d and 30th, and is now in good form for reference and preservation. Copies of the pamphlet are sold at 25 cents each. Prof. Lemmon has now in preparation a volume of about 350 pages, to be entitled "West American Cone Bearers," fully illustrated. It will command wide attention.

The Premium Map.

THE RURAL PRESS map proves to be the most popular and successful newspaper premium ever offered in California. It was given to the public about the middle of February, and already nearly two thousand have been distributed. Calls for it have come from all parts of the coast, and more than a few from the farthest corners of the United States. Through its aid the circulation of the RURAL is being widely extended, not only in California, but in other States, where California ideas and methods are read with interest. The map, with the historical chart which covers its reverse side, is, in our opinion, the most valuable publication of the kind ever given to the public, and its intrinsic value is many times greater than the price we ask for it. It was, in fact, originally sold by the publisher for $5.00. Many of those to whom the premium has been sent have acknowledged its receipt, and from a heap of several hundred letters we select the following at random:

Mr. E. S. Barney writes from Drytown, Cal.: "The Neely Historical Chart sent me came duly to hand. The more I examine it, the better I like it. Think it very fine."

Mr. Chas. E. Bapp writes from San Jose: "I am surprised to find your map such a complete ne. I thought it might be a map of general outlines, but such an instructive map I did not expect you could give away. I have read your paper, the RURAL PRESS, for 18 years or more, and have many times found the price of it by reading one copy. I would not do without it as long as I could raise the money, and I do not see how any one who is interested in agriculture can get along without such a paper as the RURAL PRESS."

Mr. M. W. Woodard, 914 Sixteenth St., Oakland, writes: "Your premium map proves a family delight, relieving the mind of the burden of dates, and thus divesting historical study of its terror. As a bird in its flight sees all beneath clearly, so on this map one sweep of the eye gives all the prominent facts of American politics and history in their correct relations and order of sequence. My children make daily use of it."

Mr. W. W. Smith, of Vacaville, Cal., writes: "The map came to hand all right. I like it very much. I cannot understand how such a map can be sold so cheaply."

Mr. H. Bish, of Lompoc, Cal., writes: "The map is a good one—a valuable map for the household or office. It should be in every family, as it is a valuable compendium. I regard it, all in all, as one of the most useful maps extant."

D. V. Thompson, of Upper Lake, writes: "The map received and far exceeds expectations."

L. A. Finney, of Modesto, writes: "I have received your premium map, and am very much pleased with it. We think it a very valuable map."

John Gibson, of Glen Ellen, writes: "The premium map received. It is just what I have wanted in my house for several years past."

G. W. Elkins, at Palermo, writes: "The map received, and must say that I am pleased with it. I consider it a very valuable addition to my library, worth much more than the price of the map and the newspaper together."

J. K. Hale, of Lodi, writes: "I cannot see how so good a map can be sold so cheap. I think it the most perfect I have ever seen. It has more than paid the cost already for the use of my children. I thank you for sending them out so cheaply."

D. W. Power writes from Chico: "The map is fine indeed. I have been wondering how it could be sold for the price."

J. A. Wilcox writes from Santa Clara: "Your map received. So far as I have had time to examine the political chart, I regard it as perfectly reliable and valuable to any one who cares to study the political history of the country. The origin of parties and their history during the last 60 years was given more reliably and specifically than in any standard history I have seen during my remembrance through this period of personal observation. It is unique in design, and especially valuable for reference. The map complete is a superior production.'

E. H. Freeman writes from Santa Clara: "The Neely map came safely to hand, and I am well pleased with it."

W. C. D. Body writes from Grass Valley: "The premium map received, and I am highly pleased with it."

P. H. Atkinson writes from Sebastopol: "I have received Neely's map, and am very pleased with it."

M. Fallon writes from Forestville: "The map you sent has been received, and I think it a very fine one."

C. F. Agee writes from Dixon: "We are highly pleased with the map."

G. M. Coulter writes from Batavia, Solano Co.: "I am much pleased with the map, and as ever with the RURAL PRESS."

E. F. Ward writes from Escondido: "I have received the map and chart. The children say that it is of great value in studying history, and I am of the same opinion. Besides, it is a very fine ornament for a room, and I would not want to part with it for four times its cost. How it can be furnished so cheap is more than I know."

A. M. De Spain of Hot Lake, Oregon, writes: "Received the map in good shape. Will say that I am very much pleased with it, and consider it one of the most complete I have ever seen."

Wm. Schuld of La Porte, Cal., writes: "I received Neely's map to-day, and am greatly pleased with the same."

J. L. Robertson of Newcastle, Cal., writes: "Map received and I am *well* pleased with it. It is a history in itself."

James Dougherty, Tuscarora, Nev., writes: "Your Neely's historical chart and map was received in good condition. It is magnificent."

We might give hundreds more all joining in the chorus of compliment. No, not all—there is one, but only one, exception to the rule. In acknowledging the receipt of the map, Mr. N. H. Thomasson of Chico: "We received the map all right. We do not like it very well, but it will do." We feel that it would be unfair to give only one side of the picture, and so print this one note of dissatisfaction along with the others.

The premium map is supplied *to subscribers only* for one dollar, in addition to the regular price of the paper. The rates are as follows: One year, $2.40; six months, $1.20. Those who are already subscribers, and who stand credited upon our books with an advance payment, will be supplied with the map for $1.

The China Trade and the California Farmer.

The United Stater Senate has very wisely refused to pass the Geary bill which provides for total exclusion of the Chinese, and will extend the present restriction law for another period of ten years, and will recommend changes in the regulations, designed to make it more effective. This is really all that was required. The purpose of the restriction law was to prevent the incoming to the United States of hordes of Chinese laborers to compete with our own people at cheaper rates of wages, but it did not propose to prevent the residence here of merchants, through whom much of our Chinese trade is carried on. It has been argued by the political press, and by those members of Congress who are anxious to tickle race prejudice and so gain votes, that the Chinese trade was of small value. But they have not been able to impress this view upon the Senate, which chose rather to study the facts, from which they find that, in one way or another, we gain immense advantages through this important branch of our commerce. Another influence, possibly a paramount influence, with the Senate, was the consideration of the question in its relation to national good faith, a view to which mere politicians are never inclined to attach much weight.

The value of the China trade to California is very much greater than to any other part of the country, since pretty much all of the exports to China are products of California labor. The list of these exports for the year 1891 is at hand, and includes a great many products. We cannot print the whole list, but a few items will show the California farmer how important a factor this trade is in his prosperity. It includes beans, bread, flour, wheat, canned fruits, canned meats, oranges, drugs, fish in various forms, hay, hops, meal, iron pipe, copper, butter, cheese, hams, bacon, lard, beef, potatoes, seeds, salmon, not to mention manufactured goods, liquors, etc. The total aggregates $3,172,497, and when it is remembered that most of these things are produced in California, it will be seen that the China trode is a large factor in our general market.

Furthermore, the China trade assists in maintaining the lines of traffic which extend not only to China but to Japan, the Sandwich Islands and the South Sea Islands. To shut off the China trade would greatly limit our Pacific Ocean commerce, because the steamships require for their support the whole of the ocean business, and could not be operated as they are now with an important part of it left out. To shut off this trade—the inevitable result of the Geary proposition—would simply transfer it to British Columbia in connection with the Canadian Pacific railroad; and with the China trade would go in part or in whole the trade with Japan and the Southern Islands.

We say the Senate has acted wisely, because it has refused in response to mere prejudice to enact a law whose inevitable consequence would be the limitation of our ocean commerce. The Senate was right also in its recommendation with reference to the enforcement of the present law. There have unquestionably been serious evasions of this regulation, but they have been only such as may be prevented by more thorough police surveillance along the northern border. It is absurd to say that no method can be devised to make the law effective, and nobody assumes to say this excepting those who have some cheap political motive for misrepresentation.

Land Holdings and Grain Prices.

DIXON, April 22, 1892.

TO THE EDITOR:—I notice in your paper that a resolution has been passed by the Napa County Alliance endorsing the opinions expressed by Mr. W. H. Mills of San Francisco in opposition to land monopoly. Mr. Mills advises the breaking up of the vast landed estates in California, that happy homes and thousands of citizens may occupy the land which is now the abode of coyotes and jackrabbits, and so husbanded as to be of small benefit to the State and in fact a disgrace to it.

Now, I am not one of those who can be classed under the head of land monopolists, but I cannot endorse Mr. Mills' argument. He gives a long array of figures going to show that our lands are falling into the hands of a few, but he does not show the cause, and he offers no radical remedy or preventive. Now it seems to me that the cause is reasonably plain. The lands that have been massed in large estates are mostly grain lands. Ten or twelve years back, our grain merchants were satisfied with one dollar per ton for purchasing and turning our grain over to shippers; but a change took place when the Call Board system was inaugurated. Before this system came into practice, the average price of wheat was at least $1.65 per hundred. Since the system spoken of, the price is hardly one and one-quarter cents per pound, which involves a loss of 40 cents on the hundred, which amounts to $8 per ton less to the producer. A man with 160 acres loses under this system about $8 on the ton, or about $1280 per year. So much of a profit taken off makes it impossible for him to support a family by raising grain. Consequently, he sells to a neighbor who has teams and machinery to cultivate large tracts at small expense, and who, therefore, can make a profit by cultivating to the capacity of his teams and machinery.

Now, why abuse men who are the bone and sinew of the country? Why not abuse the system that unjustly deprives the smaller producers of their hard earnings?

SOLANO C[illegible]

Our correspondent views the matter in a wrong light. While it is true that the Call system has worked to the disadvantage of the producer and the advantage of the speculator, it has by no means been the controlling fact in regulating the price of wheat. All the world over, of late years,

wheat has been less valuable than formerly, because the cheap lands and cheap labor of India and of other countries have been brought into competition with our own. The Call Board system is responsible for some of the damage, but it is the smaller part of it. The chief loss Is due to conditions in no way related to anything originating or under the control of dealers or producers either in California or the United States.

Surely a Solano county farmer, who has abundant opportunity of witnessing near at home the demoralizing influence of large land holdings, cannot wish to see the extension of the monopoly system, with still wider fields depopulated and turned over to the monopolist land holders.

While it is possibly true that the large holdings are for the greater part grain lands, is it not true that under a system of diversified farming many of these lands could be made fruitful in a multitude of ways, and be made to yield much richer returns than under the present looser system of grain cultivation?

A New System of Handling Alfalfa Hay.

There has come into use in the San Joaquin valley a method of cutting alfalfa hay, and stacking the cut hay ready for feeding out, which is in marked contrast to the old system of stacking just as it leaves the mower, and running it through the feed-cutter just before feeding. This new practice has become possible through the introduction of mammoth feed-cutters with elevating attachments, and it appears that the new plan has decided advantages for large scale work. The following are extracts from a letter from S. L. Akins, superintendent of the Paige West Side Stock Ranch, Newman, Stanislaus county:

I will give you, as requested, our experience with the new process of cutting up and stacking our hay crop at one operation, using a 26-inch Ross Giant hay-cutter with self-feeder and stacking elevator.

After receiving the machine, we at once put it into operation, and although we were very doubtful as to the success of the undertaking, a few hours practical work demonstrated to the entire satisfaction of all that success was assured. This first season we handled our three last crops of alfalfa amounting to 3000 tons of hay, hauling from the field right to the machine and pitching the loads from the wagons to the self-feeder, and the machine delivered the hay all cut the desired length up the 35-foot elevator to top of stack. With the Ross machine and six wagons, we gathered, cut up and stacked from 75 to 100 tons of alfalfa hay each day; but six wagons were not able to keep the machine busy, as some of them traveled a mile, part of the time, and the machine easily cuts and stacks 150 tons a day when kept supplied with hay.

The cost of cutting and stacking our hay with the Ross machine this season was less than it has always cost us simply to stack it without cutting with a derrick, and in order to account for the saving, will give you the account of help we employ in each process:

To operate Ross self-feeding cutter with elevator:	
Fireman and engineer for engine	2
Men on stack	2
Extra pitcher to help drivers unload wagons	1
"Roustabout" to help drivers unload wagons	1
Pitcher to assist self-feeder when necessary	1
Total	7
To operate derrick when stacking whole hay:	
Men on stack	8
Man to drive derrick team	1
Total	9

Showing a saving of two men and the hay all cut ready to feed in the bargain.

As to the advantage of this process over stacking the hay whole, and hauling it at feeding time to the cutter, will say that it not only saves all the expense of winter cutting, but in our past experience we often had to haul hay in very wet weather to the cutter, and when wet, it cut so hard that we could not handle it fast enough to feed 2000 head, and our stock sometimes suffered for feed, while now we can supply it all cut and in any quantity as fast as desired, no matter how bad the weather may be. Feeding by this process, six men can now feed our stock where before it took 18 men to feed the same stock with whole hay, and this is a great saving of help in winter.

As to the condition of feed handled by this process, after being kept in the stack for several months we find that we never fed better feed to our stock. This season of 1890 was one of the most severe on record, and the condition of our stacks after all the wet weather proves that the process is a great success, and we can depend upon stacked cut feed serving our purpose at all times. One stack we covered over with whole hay, but those not covered at all, being simply ridged high in the middle, did just as well. The moisture only wet down from two to four inches, and the whole stacks were perfectly sweet and fresh. We mounted the Ross machine on a truck, and as fast as the stack reached it, drew the machine away so that we could make the stacks as long as we wished.

We also used the machine and a horse power to cut and store away 200 tons into our horse barn, running the elevator into a loft door and the feed being stored as fast as cut. This feed we fed to our horses, and found they did better on it than whole hay.

The cutting reduces the bulk of our hay as from five to one, and this is a great saving of space. We used no salt in putting down the crop, but it would be very easy to salt in the stack if desired.

Of all our crops handled this season with the Ross machine, both in stacking and feeding, we do not think there was a ton wasted, while heretofore there has always been much wasted, especially in feeding, no matter how careful we may have been.

We used our 20 horse power thrashing engine to drive the Ross machine, but it ran it easily with only 45 pounds of steam, and feel satisfied that 12 horse power engine would do the work as well. On the whole, we find the process a great saving of labor and expense and a splendid

The Canal Question.

Menlo Park, April 26, 1892.

To the Editor:—The course of Mr. Cannon, in the Canal Convention, and the letter of Mr. Pool, in your issue of April 16th, shows that there is among the farming community serious misapprehension on the subject of the Nicaragua canal project. I request space in your columns for an explanation. To the farmers, fruit raisers, wine growers—in a word, to the producers of this coast, an interoceanic canal is the most interesting and important project before the public. Great as would be the benefit of such a work to the rest of the country, to the whole west coast it signifies the progress of a century compressed into a space of five years. We ought to be on all questions affecting it a unit.

Mr. Pool, Mr. Cannon and others who concur with them lose sight, I think, when they express fear of a monopoly, of the essential difference between a railroad and a canal. On the former a special form of carriage and motive power are required for transportation. These are expensive and useless for any other purpose, so that their ownership is confined to the corporation which owns and operates the road; hence transportation over railroads, as at present operated, is essentially a monopoly in the hands of the company. A canal, on the other hand, is an open waterway, through which all sorts of ve sels are capable of passing, and are entitled to pass on paying the tolls, which are equal on all—*so many tons burden, so many dollars toll.* Such a channel of commerce never can become a monopoly any more than an arm of the sea, a navigable river or a turnpike road. We may safely defy Mr. Huntington himself to make it such. Perhaps that is one reason why Mr. Huntington and his adherents are so much opposed to the undertaking in question.

As to a canal across Nicaragua, built and owned by the United States Government, I, too, was in favor of that plan, so long as it was a possible thing. I favored Government construction, however, not because I feared any monopoly arising out of it if owned by a corporation, but because the Government, having the highest credit and unlimited means, could secure its completion at the earliest date and the least cost possible, thus securing the maximum of benefit to the public. But there proved to be difficulties in the way of this plan which were unsurmountable. Let me explain a little in detail.

This interoceanic canal question is by no means a new one, and it is affected by a variety of things over which we, of the Pacific coast, have and can have no control. It is really a part of the general continental policy of our Government which does not change with changing administrations, but is steadily adhered to, being founded on traditions coming down from the time of Washington. The improvement of communication between the Atlantic and Pacific coasts occupied the attention of our Government as early as Jefferson's administrat on, and led to the dispatch of Lewis and Clarke's expedition, that of Major Long, and others now almost forgotten, to explore the passes across the continent. With the acquisition of California came the more urgent need of it, and the project of a canal across the isthmus came prominently forward. British statesmen had long before perceived the importance, in view of the introduction of ocean steam navigation, of possessing such pivotal commercial points as Aden, Singapore, etc., and from 1847 on, British agents became especially active on the coast of Central Ameri a. A mosquito Indian chief was dubbed with the title of king, fitted out with a post captain's uniform, and taken under British protection. His majesty was supplied with whiskey *ad libitum*, and his government run for him by a British consul. The port of San Juan de Nicaragua, then the finest harbor on the Atlantic coast from Porto Bello up to Hampton Roads, was seized under a claim trumped up for the Mosquito King, and wrested from the control of the Nic. ragua government. American statesmen looked with apprehension upon these high-handed proceedings, which seemed to many to portend an English lodgment on the Nicaragua shore, analagous to that of a century and a half previous, which had since matured into what is called British Honduras. Such was the alarm among the Central American States that a cession of Tigre island in the Gulf of Fonseca was offered by treaty to the United States, to induce them to interpose for the protection of the menaced sovereignty of Nicaragua. Our Government declined to accept the grant, but communications were made to the British government which resulted in a convention of April, 1850, commonly called the Clayton-Bulwer treaty. By it the two governments agreed to give their protection to any ship canal across the American isthmus, both during its construction and after its completion; each also agreed not to colonize, occupy, fortify or exercise dominion over any part of the isthmus, nor to make use of its alliance with, or protection over, any Isthmian State, or in any other way to secure or exercise any exclusive control of the canal, nor to erect fortifications commanding it or in its vicinity, with other similar provisions. The treaty is to be found in Vol. IX of the U. S. Statutes at Large, at page 995, and I recommend Mr. Pool and all who think with him to read it carefully, for it distinctly enunciates and contracts for a policy wholly at variance with the ownership of the proposed canal by the United States Government.

From that time forward, then, the policy of the United States, clearly declared, was to procure the construction of a ship canal across some part of the American isthmus. The quarrel over slavery in the Territories, the Civil war, interrupted the efforts toward the realization of this policy for some years, but, after the close of the war, the question was again taken up, and careful, elaborate and thorough surveys and explorations were made of the five possible routes, which resulted in demonstrating that the only point at which a canal was practicable, without an outlay entirely forbidding, was by the river San Juan and the lake of Nicaragua, and that route was decided on. Hence, from the time of General Grant's administration, when that conclusion was reached, the policy of the United States has been "*A Ship Canal across Nicaragua.*" Our Government looked with perfect composure on the French attempt, under De Lesseps, to cut a canal at Panama, simply because it was well advised that the undertaking was predestined to failure. A canal across Nicaragua, however, continued to occupy its attention under the administration of Mr. Hayes, who recommended it most earnestly to Congress, and under that of Mr. Arthur, who negotiated a treaty with Nicaragua by which the U. S. Government was to build and own the canal and a strip of land three miles wide on each side of it. This treaty was sent to the Senate in the winter of 1884–85. The British Government made repres ntations to ours against its adoption, deeming it a violation of the Clayton-Bulwer treaty—a view which appears to have at first escaped the notice of our negotiators. If the Senate had ratified that convention, we should have had the canal built by the United States, but it would probably have been at the expense of a rupture with Great Britain. The Senate, however, did not ratify the treaty. In deference to the claim of Great Britain, they postponed consideration of it till after the 4th of March, 1885. Perhaps it was thought best by the Senate (which was Repu lican) before adopting so radical a change in our foreigh policy, and one involving such grave consequences, to make sure of the consent and cooperation of both the great political parties. However this may be, action on the treaty was postponed by the Republican Senate until after March 4th, and within a few days or hours after his inauguration, Mr. Cleveland, the newly elected Democratic President, withdrew it from their consideration and pigeon-holed it forever. That was seven years ago. If Mr. Pool and Mr. Cannon then paid as close attention to this enterprise as I did, they were probably as indignant as I was at the course of Mr. Cleveland in reference to it. I denounced him for it publicly, because I perceived clearly that it threw away the last chance of having the canal built and owned by our own Government. The leaders of the Republican party, however, acquiesced in Mr. Cleveland's policy, and the chance of a canal owned by the United States was gone forever. Thereafter, on the suggestion of men high in our Government, and belonging to both parties, a grant of the right to build the canal was sought and obtained by a party of American citizens, to whom Congress has since granted a charter of incorporation. They are the present Maritime Canal Company. They have a grant, from the Governments of Nicaragua and Costa Rica, of the exclusive right to build the canal, and a lease of it tor 198 years. They are forbidden expressly to assign their lease to any foreign Government. The United States has incorporated them with this distinct condition in their grant. This is a declaration by Congress, explicit and emphatic, that henceforth the policy of our Government on that question is settled; it is *the construction of a ship canal across Nicaragua by the Maritime Canal Company, an American corporation.* This state of things is a matter of public history and public law, and we must acquiesce in because we cannot change them. The day when a canal built and owned by our Government was possible passed forever when Mr. Cleveland withdrew the Nicaragua treaty from the Senate, never to return it again. We might at this time just as well wish for the moon as ask for a canal so built. If we seriously desire to see the canal built at all, we must help the present company to build it, for they alone have the right to do so. To say we want it built and owned by our Government is simply another way of saying we prefer to go without it. I would therefore respectfully urge upon Mr. Pool, Mr. Cannon, and all who represent any of the producing interests of California, Oregon or Washington, to come forward and give their powerful aid toward the building of a work so pregnant with benefit to all sections of our country, but especially to the west coast; and to us California producers beyond all others. At a future day I shall, with the permission of the editor of the Rural Press, discuss briefly the legislation pending before Congress.

John T. Doyle.

Other Benefits From the Coyote Bounty.

Merced, April 25.

To the Editor:—Since you invited comment on the coyote scalp law I have only noticed two articles in reply to your request. Those that are opposing the law, claim that only the sheep industry will be benefited by destroying the coyotes, when the real facts are, that where one sheepman suffers there are hundreds of familes suffer from the loss of poultry of all kinds and young pigs, and though the individual loss might seem small, to some, in the aggregate, it would be large. I can assure you the loss is really serious to many familes that are depending in a great measure on their poultry as a source of income.

Before the enactment of the State Bounty Law it was no uncommon sight to see the coyotes in droves of five and six about my ranch, often two and three times that number, and by using every precaution we could, our loss in poultry, pigs and calves for the past six or eight years would amount to a pretty big bill. For the past six weeks or two months I have heard of but one coyote being seen and the nights are no more made hideous by his unearthly yells. I do not believe the tax on the State Treasury would be one-fourth for the ensuing year that it has been the past, and now to talk of repealing the law, would, in my estimation, be an unwise and unbusiness like act.

All this talk about the coyote being any greater help about exterminating the jack rabbit is too ridiculous to talk about. I for one believe in giving his satanic majesty his due, and of all the hatred I have for the meanest of all mean animals that ever had an existence, I certainly would not do him the injustice of showing such inferior taste or judgment of wearing himself out in the unequal contest with the fleet jack rabbit while by a little adroitness (which is an inbred quality to the last degree in this sly beast) and in the early dawn before the Granger has come on deck, he can slip up and help himself to a fat duck, chicken, turkey, pig or lamb as his taste for the occasion might dictate.

One word about the ability of this so-called exterminator of the jack rabbit to propagate his species, and for this time I am done. A year ago, and before the law took effect, we caught two of the female persuasion that were about to replenish their kind to the round number of twenty-two.—M. D. Atwater.

Progress in Santa Clara County.

At a meeting held at Doyle, Santa Clara county, the subject of wider cooperation among fruit growers was under discussion. At the close, a committee was appointed to consider ways and means—Col. Hersey, S. P. Sanders and D. W. Miller.

Col. Hersey explained the working of the West Side Association, and it was evident that it had been a success and benefit. He suggested that associations be formed at Campbell, Los Gatos, the Willows and other points in the county, and all work under one agent, and eventually under one brand. He also suggested the idea of a Congress or Convention of Fruit Growers to be held in San Jose at an early date, for the purpose of organizing. He would select five or more representative growers from each school district and let them invite all their neighbors to meet and see if they cannot present a feasible plan of organization that will be beneficial to all growers. He stated that all the telegrams and letters relating to the condition of the market, received by the West Side Association, were at all times open to inspection of the members, of which there are 75, so that they could be as well posted as any one. Nothing of that nature was kept secret.

President Glendening called upon Mrs. McGlincy for her views, and she responded by saying that she liked the idea of the Congress of Fruit Growers spoken of by Col. Hersey and others, and said if they can have one like it at Campbell, and four or five more scattered over the valley, and will act in harmony, she was sure it would be of great benefit.

CALIFORNIA HAY-MAKERS.

The Lessons of Thirty Year's Experience in the Field.

A SERIES OF LETTERS FROM PRACTICAL MEN.

NOTES ON THE HAY CROP OF THE CURRENT YEAR 1892.

Points on Preparing the Soil and on Growing and Curing the Crop From Men Engaged in Hay Production—The Experience of Many Practical Farmers Set Forth in Plain Terms.

To obtain the best crop of hay possible, both in quantity and quality, in an economical manner, and to house it in excellent condition, should be the aim of every farmer who raises this staple crop.

When, in the rotation of crops as generally practiced by our farmers, any certain field is set apart for a crop of hay, there is to be taken into consideration whether it will be best to "volunteer" it, to sow seed and cultivate it in, to dry plow, sowing before or after the operation, or to wait until the early rains have moistened the ground sufficiently for good plowing and, on the fresh upturned soil, to broadcast the seed. Whatever course is taken, all hay raisers will be in favor of the earliest possible seeding.

VOLUNTEER.—Unless the ground be very well seeded from last year's crop, it is not worth while to volunteer land. Sowing seed on the surface before the rains, and either plowing or cultivating it in, or using the disc or cutaway harrow, is not to be considered the best method. There is often a strong temptation to do either one or the other if the fall rains are late, for work on the farm in the advanced autumn is generally slack. But one should endeavor to get as clean hay as possible, and this will not be the case if the land is dry-seeded. The seeds of thistles and other obnoxious plants often live in our soil for several years before sprouting, those near the surface only waiting for the first rains in order to germinate and rapidly grow. A considerable quantity of the seed sown previous to the rains is thus crowded out by weeds, and, in any event, "foul stuff" will appear in the crop when harvested, the result being hay of deteriorated quality and, if sold, will bring but a small figure.

PLOWING.—Our opinion is that the best way of seeding for hay is to plow after the early rains, allowing sufficient time to elapse to let the weeds start and then turn them under. The hay will be much cleaner for this, and one will be well repaid for waiting. Turn the soil to a depth of from four to six inches; then, if the surface be very rough, harrow before sowing. But this is not always necessary. It is always best, though, to have a good level bed on which to sow the seed, as, if the ground be cloddy or the furrows have but partially broken as they left the mold board, quite a quantity of seed will be covered so deep as to be lost.

SEED.—As regards the best grain to sow for hay, our farmers differ. While some prefer wheat, others are in favor of oats. Barley is not generally considered very good except, possibly, bald barley, which makes a fair quality of hay and yields well, as a rule. Clear wheat makes a very sweet, nutritious hay, though the plant has a tendency to grow too coarse on rich soils. Oat hay, both wild and tame, is in general favor, notwithstanding market reports generally show that wheat hay rules higher. Black oats are preferable to white for this crop, and are yearly growing in favor. Wheat and oats mixed makes a good, rich substantial quality of hay that cannot be excelled, and will give satisfaction anywhere. The objection to our common barley is the stiff beards, which often irritate the mouths of stock and prove in other ways objectionable.

If it is deemed best to sow wheat for hay, Chile wheat will be found preferable to other varieties. The stalks are more tender, there are more and larger blades, and stock eat it better. It is the only A 1 variety of wheat for hay. Australia makes too coarse hay, and club wheat is too stiff and wiry.

SOWING.—How much seed to the acre? Sow liberally always. Never stint! To be of the best quality, grain destined for hay should not grow too coarse. If it does, there is, unavoidably, considerable waste, stock refusing the large, woody stalks if fed whole, and even if put through the hay-cutter, a good deal will be left in the manger. Therefore, it is well to sow at least 140 pounds of wheat or 150 pounds of oats per acre. Of course, there is a possibility, if too large a quantity of seed is sown, of having the hay too fine. But this is seldom the case. Seek the golden mean.

Even if the hay is very fine from too heavy seeding, or from other causes, it often commands a better price in the San Francisco market than medium coarse, as there is a demand for this very fine hay for packing. Thus, hay that has been thought very poor for feeding by the farmer, has brought two or three dollars more per ton than that usually marketed. A friend of the writer sold some of this fine hay here last fall for ten dollars per ton, and thought he was doing well. All he had left he sent to San Francisco a month ago, where it brought $15 per ton.

HARROWING AND ROLLING.—Cover the seed well, using a light harrow if on light soil, a heavier one if the soil be of a stiff nature, and roll well, going over the ground with the clodmasher previously if you choose. Rolling is very necessary in order that all unevenness of the field may be leveled, as this enables the mower to do better work and prevents clods from being raked up with the hay—a serious objection. Avoid dirty hay! Rolling hay land is deferred by some until the grain is three or four inches high. This will not damage the plants in the least, neither will a light harrowing just before rolling. Both practices will be found beneficial.

Before leaving the field, see that all surface water can readily drain off. Otherwise, if the land is low, there may be spots that will be drowned out.

The grain is now growing, and if one has done his work well, if rains be timely and the ground be in fair tilth, the plants will make good headway, will rapidly forge ahead, and will be ready to cut in May or June, according to the locality.

HAYING.—The proper time for cutting hay is a matter about which there is some difference of opinion. It is an item of importance, for upon this depends greatly the quality of hay as harvested. If cut too early, the hay lacks much of the nutritive quality it should possess; if too late, it is too stiff and woody, and in feeding there is much waste. These are points to bear in mind. We opine the best time for cutting is when the berry of the grain is in a moderately stiff dough. In this condition the berry dries and the hay is heartier than if mowed earlier. The stalks are not as woody as when cut later. Stock thrive better on it. Of course, if one has a large acreage to cut and only a limited force to do the work, either of teams or of men, one must cut some portion of his crop when it is not just in prime condition. One must be governed by circumstances. It is also best to defer cutting a few days, even if the grass seems in just the right condition for mowing, if rain is in prospect, as less damage will accrue to standing grass if the weather be lowery than to have it drenched by a soaking rain when in the swath, windrow or cock. Some of us have learned this by experience.

If the weather be propitious, put the mower in the field and push things. The machine should be one having a rapid motion, easy draft and strongly put together. Be sure to keep all bearings well oiled and the knives sharp. Have a few extra sections and rivets in the tool box, as also some bolts. You may need them in the field.

The team should be fast walkers. In good drying weather, grass cut in the morning ought to be raked in the afternoon into good-sized windrows with a horse hay rake. As soon as it will do, put the hay into large cocks that the sun may not bleach the fast curing crop. One secret in making good hay in our State is to cure the crop in bulk, not leaving the grass in swath or windrow long enough to become bleached. When well cured, hay should be of a bright, greenish color, devoid of any musty odor. There is less danger in curing hay too slow, if we have bright, sunshiny weather, than too fast.

A BUNCHING RAKE.—In putting hay in cocks or bunches, use a bunching rake of 4x4 scantling, 12 feet long, having six teeth of good size placed on the under side, flush with the surface, the two outer teeth on either side a trifle shorter than the two middle ones, all well bolted in position. Put in two handles, firmly braced. Use no nails in the construction of this rake, only bolts. The rake is to be drawn by two horses hitched wide apart. To the eye of each whiffletree attach strong ropes, long enough to allow a large quantity of hay to be gathered, the other end of the ropes to be fastened to swivels on either end of the 4x4 piece. The horses straddle the windrow. When the driver has as large an amount of hay gathered as can be well hauled, he turns his rake over by allowing the longer teeth to catch in the ground. Then, pulling it to one side of the windrow, he skips a distance equal to that he has raked, when he again commences raking. Returning on the same windrow, the operation is reversed. In this way, bunches as large as are deemed best are put up. Trim up with fork afterward. In these bunches the hay should remain until well cured. Don't run any risk of having a moldy article by stacking or putting in the mow too quickly.

STACKING AND STOWING AWAY.—If the hay is intended for market, or if one has limited storeroom for that destined for his stock, we think the preferable way is to put it in as large stacks as convenient, there to remain until it is baled; but if one has plenty of room in the barn, the hay to be used on the farm can readily be hauled from the cock. If so hauled, use horse fork and carrier in unloading from the wagon. After all, the question as to whether hay destined for market shall be baled from the cock or from the stack must depend on circumstances. Other things being equal, stacking is preferable, especially if one has to wait a considerable length of time for the press. Thus, the crop becomes of a better quality, is thoroughly cured, and is of a more even color. If left any great length of time in the cock, the outside is bleached by sun and dew to a considerable extent, and, in the aggregate, this amounts to a good deal, materially lessening the value of the hay.

Avoid as much hand labor as possible in gathering, curing and storing the hay. Make use of labor saving appliances as much as possible. Here, as elsewhere in farming, wise economy should be used in every stage of proceeding, from commencement to close.

DERRICK FOR STACKING.—Haul the hay to the spot chosen for the stack with the bunching rake above mentioned. To put up the hay with the least labor possible, use a derrick made as follows: The upright to be of 4x6 Oregon pine, 30 feet long. Four feet from the top fix an arm 14 feet long, in the upper end of which place a ring bolt for block and tackle, this arm to be well braced. On top of the standard, place a flat piece of iron with holes therein, to which are fastened the three rope guys when the derrick is in use. This flat piece of iron is attached to the standard so that it may revolve. In the lower end of the upright is a piece of one-inch iron, ten inches long, on which the derrick swings. With this derrick, a force of five men—one to haul hay in cock to the stack, one man to manage the horse fork, one to handle the team and two to stack—can put up in good shape 40 tons per day, or even more if the hay be very heavy. Stacks thus put up can be made 25 feet high and 20 feet broad. They can be made as long as one desires by moving the derrick.

BALING.—If the crop is to be baled from the cock, set the press in convenient positions in the field, hauling the cocks thereto with the bunching rake. If baled from the stacks, have them as high as possible, rather than low and long, as thus the press will have to be moved less frequently. Those machines which have horse forks and other labor-saving appliances are preferable. Some farmers object to the "beater press," but we see no very serious objection to their use. The hay will sell as well, and certainly it is less laborious to bale with them than with the old-fashioned tread presses. "Let every one be fully persuaded in his own mind."

What material—rope or wire—is preferable to use in baling, is a debatable question. We are quite sure that the farmer who has once used wire, and fed the hay so baled on his premises, will forever after discard it. It becomes a perfect nuisance; gets into the hay cutter, finds its way into the stockyard, turns up in unlooked-for places. We much prefer rope. If rope is used, it may be wound from the coil upon a reel whose circumference is equal to the length of the piece required. Wire ties can be purchased already for use, or can be easily and cheaply made with a small, portable machine. On an average, rope will cost from 70 to 75 cents per ton; wire about half that amount. But as an offset, hay baled with rope commands a better price in the San Francisco market—more than enough to pay the difference of cost between the two materials.

When baled, weigh, tag and pile as compactly as possible, especially if the hay is to remain in the field any length of time. We prefer to haul the crop from the field, soon after baling, either to market or to storehouse rather than let it remain for weeks in the field.

MARKETING.—If it be deemed advisable to hold for higher prices than rule when the hay is baled, it is best to store in warehouses near the railroad or boat landing, as thereby, if the hay be kept till into winter, immediate advantage may be taken of any rise in the market, which would not be the case if the hay had to be stored any great distance from shipping points, the roads being muddy. But if one is located only a short distance from any good station or landing, the hay may be stored in barns on the premises. Hay should sell for $14 to $15 per ton to pay the farmer reasonably well in this valley. There is little encouragement to raise hay when only $9 or $10 can be obtained. Prices vary from year to year, and one must be his own judge as to the best time to sell. Generally speaking, this is when a fair price is offered. With us, hay sells from $10 to $15 per ton, according to the season. We reckon the cost of plowing, seeding and harrowing per acre $5; cutting and putting in cock, $1.25 per acre; stacking, per ton, 25 cents; baling (rope per ton, 75 cents; board of men, 25 cents per ton; press, $1.15 per ton), $2.15 per ton. If wire is used instead of rope, deduct 30 cents per ton.

We have reckoned on two tons per acre, which is a fair average. If the yield be larger, the expenses will be less in proportion. The above figures apply to the bay counties. On the large, sandy plains of the San Joaquin and other valleys, where the expense of plowing is reduced to a minimum, and a large acreage is harvested, the expense would be less.

ALFALFA HAY.—Alfalfa, if intended for hay, should be cut when the plant is in bloom. Care must be taken that it does not become too dry before raking or putting in the cock, otherwise many of the leaves will fall off, lessening the value of the hay. The quicker it is gotten in the bale or the mow, care being exercised not to have it green enough to become moldy, the better. Handle as little as possible. For alfalfa hay there is little demand in this valley, and not much is raised for the market. It sells for $9 to $10 per ton.

R.

Suggestions on Hay-Making in California.

WHEATLAND, YUBA CO.

TO THE EDITOR.—In speaking of the subject of hay-making I shall discuss it in the order the farmer is called upon to deal with it in its actual production, *i. e.*; planting, cutting, curing and marketing.

The three hay crops most commonly grown in this State and which may be taken as representatives of the whole are, 1st, the volunteer crop, 2d, the plowed and sowed crop, 3d, the alfalfa crop.

VOLUNTEER.—The crop generally spoken of as the volunteer hay crop, is the one most common to the grain producers all through the Sacramento and San Joaquin valleys. It is a cheap crop to grow and is generally an excellent hay for the work stock of farms.

To produce this crop, the farmer will select some piece of land that grain had been harvested from the preceding summer, generally land that had been plowed and sowed late. It is usually of rough surface and but little stubble on it, and in such cases much seed has been scattered over the ground in the act of harvesting. The farmer examines his ground and determines how much more seed will be needed, if any, to insure him a good stand. Forty to sixty pounds of seed to the acre is an average of what is sown

If the previous crop has been wheat, he usually sows barley or *vice versa*. Sometimes the farmer sows mixed seed, *i. e.*, wheat, barley and oats. He seldom sows oats for volunteer hay as he generally finds he will have his proportion of them without it.

SOWING.—The seeding is usually done in the months of September and October.

The seed is sown broadcast with our common seeders mounted on wagons. One can sow from 60 to 80 acres per day with such machines. To insure having clean hay some farmers rake the ground to free it of stubble and

trash, then follow with a pulverizer sufficiently weighted to work up the ground to the depth of three or four inches. The ground should be worked both ways, *i. e.*, pulverizing crossed. If not smooth enough it can then be harrowed or rolled. Thus far the farmer has striven to accomplish the following results:

1. His land is free from stubble or trash that would be raked up in the haying process, and condemn the quality of the hay.

2. His seed is all in at a shallow depth which insures it all starting to grow at the first rains, which means a thick stand.

3. The ground smooth, so that when he mows, his mower will cut close to the ground, getting the most hay possible and so there will be little waste in raking. These two points are often overlooked by farmers and the loss of hay, even after it is grown, is considerable. He has a thick stand which will yield a heavy crop and fine quality, the heavy stand preventing it from growing too rank and coarse. He has a mixed hay—wheat, barley and oats—a hay much prized by the majority of grain raisers, and one that sells well in the market.

HAYING.—As the time for harvest arrives, the farmer must have all his machinery and help in readiness to commence work at once, as much depends upon the time and manner in which it is harvested. With his machinery and help in readiness, the farmer has but two things to consider—the ripeness of his crop and the state of the weather. With the weather fair he means to cut the wheat when it is in the bloom or early dough. The barley, just before it begins to turn yellow, while the berry is still soft, and the oats while they are in the dough. When he has a mixed crop, which is the case in volunteer, they will not all be in prime condition for cutting at the same time, and the farmer will have to exercise good judgment to get the best results.

Another way of determining the time for cutting is to examine the straw. Take some of the straw, chew and taste it and test it as to its sweetness. If it is sweet and juicy, the materials which are going to concentrate in and form the seeds are then scattered through the straw and this is the time that it will make the best hay. If you cut too early, the juices of the straw are too much water, and in the curing process will evaporate and you will have a light hay, which is not relished by stock, as it lacks sweetness and also heating and strength ingredients. If hay ripens too much before it is cut, in wheat you have grain in the head, straw that is hard, tasteless and without strength ingredients. In barley, you have grain in the head, with beards that are hardened, which are ruinous to the mouths of stock, straw similar to wheat. In the case of oats, the seeds shatter out and are lost, in other words, this is the important period of your crop. It is at a stage in its growth when the changes in it are most rapid, the starches, sugars, etc., going to form the berries while the silicate compounds are forming the straw, beards, chaff, etc.

The right time will give good results—too early or too late, bad results.

There are many kinds of mowers to be found in the market, all of which will do good work in this kind of hay if kept in order and properly run. Sharp knives are the secret of good cutting; without them one cannot do good work. The average work for a mower, 4-foot cut, is about eight to ten acres per day. In mowing, one should make no skips, and if the knife is sharp it will cut clean; this will enable one to do good work raking.

CURING.—The curing process commences from the time the hay falls behind the knife and lasts until it goes through the sweat in the cock or in the stack. When it should be raked after mowing will depend upon the weather, thickness of the crop and ripeness of hay when cut. Under ordinary conditions one to two days is ample time. If it dries too much, it becomes bleached and burnt; in the first case it presents a bad appearance, and although it may possess good qualities, it will not sell to an advantage. In the second case it becomes brittle and breaks easily in handling, and much of the best of the hay is lost. It is best to rake in the windrow and let most of the curing be done there. After being in the windrow two or three days it is then put into shocks by hand, *i. e.*, by men with forks, in shocks that will average about 100 pounds, or as is common among farmers and a saving of time and expense, it is taken from the windrow and bunched with a hay buck in piles from 200 to 400 pounds.

A HAY BUCK.—Any farmer can make a hay buck at little cost. Take a good piece of timber 6 inches by 6 inches by 12 feet. Bore auger holes about 18 inches apart, in which put wooden teeth two feet long. Near center put two upright pieces for handles and to prevent hay slipping over, attach to each end rope or chain about 14 feet. Use two horses with one of these bunches, one man and a span of horses will put up as much hay as six men in the ordinary way. You have your hay in larger piles, less subject to damage by showers, less exposed to the sun and to bleaching, and in a shape that it can be stacked faster.

STACKING.—If the hay is to be stacked in the field, much of the hay can be bucked to the stack. The remainder loaded on wagons carrying large flat racks and thus conveyed to the stack. It is usually unloaded on the stacks or in barns by means of derricks worked by horses. Where haying is done on a large scale it can be done cheaper as division of labor comes into play. A crew of three men and two or three wagons will generally take from the shock and put in the stack or barn, 10 to 12 tons per day.

The cost of baling hay is from $1.35 to $1.50 per ton. The cost of marketing depends upon the distance it has to be drawn.

CROPS SOWN FOR HAY.—The hay crops that are grown on land that is plowed and sown in the winter are, wheat, oats, rye and timothy. The quality of the soil, the location and the tastes of the consumers in that section, will govern one in decision as to which of the above crops to grow.

The ground is plowed and harrowed and usually more seed sown than one would sow for grain. This crop is usually heavier than the volunteer crop, and ripens later. On good rich land one can expect from two to three tons yield per acre. What has been said regarding the cutting and curing of the volunteer crop is applicable to this. This hay properly cut and cured, makes the finest quality of hay and commands the highest price. It is mostly used by livery men and on fine stock farms. Going to a class of customers that are particular, one should produce a hay of good color, taste and strength.

ALFALFA HAY.

This crop can be grown successfully only on moist, rich lands. On river bottoms where the roots reach down to water and on lands that can be irrigated, a good stand of alfalfa usually lasts from seven to ten years when it is either replanted or a change of crop made. The annual crops cut from the same piece of land are from three to to six, owing to the soil and season. The average yield per season is from six to ten tons per acre. Near Wheatland, on Bear River bottom land, Mr. Tindal cut from one piece of ground, during the season of 1891, six crops, which yielded nine tons per acre, average price delivered loose, eight dollars per ton. This I consider above the average.

Alfalfa is usually planted as follows. Land plowed twice and harrowed until it is mellow and loose like a garden bed. Twice plowing and harrowing will kill most of the weeds. It should be sowed late in the spring—late enough to avoid heavy frosts, which would kill the young plant, and early enough to get the spring showers. About thirty to forty pounds of seed per acre. The seeds must be covered only a shallow depth and it is usually put in by a brush rake. One to two light crops are often cut the first year; after that more.

Starting with a piece of ground well set to alfalfa, we will speak of the manner of cutting, curing and marketing.

The first crop in the spring is usually foul and rank before the weather is warm and dry enough to permit of curing it. In some cases the first crop has to be cut and moved off before it can be cured. It is either fed green to stock or spread upon other ground and plowed under as a fertilizer. As a rule it is cut early and cured as best one can, and sold as second class hay. The succeeding crops are cut when the alfalfa is in the bloom. It should be cut close to the ground to prevent waste and in order to have as little green hay on the ground as possible while curing the crop. It is usually raked on the following day, the later crops in midsummer can be raked the same day. It is taken from the windrow and put in small cocks. It must be hauled in two or three days. The curing is done in the swath-windrow and cock. Alfalfa hay is easy to bleach and burn. If it is burnt by the sun or overdry, the leaves and tender twigs crumble and fall off and are lost, the stems break up, and you have a dusty, worthless hay. If it remains too long in the windrow or cock, you have in a degree the same results, and besides, the hay next to the ground, which is moist, molds and makes a musty hay. If it remains too long in one place it not only spoils but frequently kills out the alfalfa roots under it. It is often necessary, when the weather is damp and cloudy and the curing is slow, that one will have to turn over and re-turn the cocks to avoid the above dangers.

The points to attain in the curing of alfalfa hay are; a good green color, soft pliable stems with leaves and tender twigs intact, and at the same time not allow it to mold or get musty. It requires experience and great care to obtain the best results.

POINTS OF A GOOD HAY FARMER.

No set of rules can be given to govern the production of any hay crop. More than almost any other crop it is subject to variations—we have a variety of hay crops, variety of soils and variety of climates.

But in the production of the three crops mentioned at the beginning, there are a few things which are absolutely necessary for success.

First—To have good stock and machinery and to have them always in order and readiness.

Second—To have an abundance of help at the time needed

Third—One *head* that understands the capabilities of his soil, the nature and characteristics of his plants, a knowledge of what is to be attained in the quality of his crop and good judgment and industry to conduct his operations to that end.

COST OF PRODUCTION.

As to the cost of production of these different crops, I will make what I consider a fair comparison, based on personal experience and observation, taking in each case an average crop on one acre.

VOLUNTEER CROP.

One acre—yield 1½ tons per acre, price $10 per ton.

COST OF PRODUCTION.

Pulverizing	$ .60
Fifty lbs. seed	.60
Sowing	.10
Mowing and Raking	.50
Cocking	.30
Stacking	1.125
Baling	2.25
Marketing	1.125
Rent	3.00
Total	$9.60
Cost per ton	$6.40

GROSS RECEIPTS.

One and one half tons at $10	$15.00
Profit per acre	5.40

PLOWED AND SOWED HAY CROP.

One acre—yield, two tons per acre, price $12.

COST OF PRODUCTION.

Plowing and Harrowing	$2.00
Seed	1.25
Sowing	.10
Mowing and Raking	.65
Cocking	.40
Stacking	1.50
Baling	3.00
Marketing	1.50
Rent	4.00
Total	$14.40
Cost per ton	$7.20

GROSS RECEIPTS.

Two tons at $12	$24.00
Profit per acre	$9.60

ALFALFA HAY.

One acre—yield per season, 8 tons, 4 crops, price per ton $8.

COST OF PRODUCTION OF EACH CROP.

Mowing and Raking	$ .75
Cocking	.50
Stacking	1.50
Baling	3.00
Marketing	1.50
Rent	3.00
Total	$10.25
Cost per ton	$5.125

Rent $12 per year.

GROSS RECEIPTS.

Two tons at $8	$16.00
Profit per crop	5.75
Four crops, profit per acre	23.00

FARMER.

California Haying.

MONTEREY, Cal.

TO THE EDITOR:—The thing most needful in California hay-making is a good head on a good farmer. The good farmer's first thought is what do I want hay for. To feed stock or for market? If for stock, for what kind of stock? If for market, for what market?

A certain class of hay will serve to save horned stock from starvation, but which well-fed animals would hardly touch. Markets are equally various in demand, as San Francisco price lists testify. California has developed classes of hay peculiar to itself. Barley hay, wheat hay, wild oat hay, alfalfa hay, alfilarila hay, are all Pacific Coast specialties. A treatise would be wanted to fully describe the growth and harvesting of all, and their various virtues.

Another remarkable feature in California haying is that it is prolonged over half the year; from April, when in some seasons and sections early-sown barley, wild oats and first crop alfalfa, are ready for the mower, until October for the last cutting of alfalfa.

Assuming that the hay is for market, the thing of first importance is to know the kind of hay your market wants and pays highest for. The next is to find suitable land as near as possible to that market, or made near by cheap transportation facilities.

Hay, like almost all vegetable products, prefers a rich loam, with enough sand to insure easy tilth, well-drained and with a southern exposure. But it can be, and is, grown on every variety of soil from the stiffest clay to the lightest sand, on exposures east, west, north and south, with every intermediate point of the compass. Plowing cannot, as a rule, be done too early in the southern and central parts of the State, and it is usual to begin as soon as the rains permit. Some even decline to await the mellowing of the soil by the early rains, but plow dry. If summer crops have been thoroughly cultivated and kept free from weeds, the seed may be harrowed in when the crop is harvested, without any plowing, and a good hay crop almost invariably follows. Gang plows are in general use throughout the State and are run at all depths from two to eight inches, according to class of soil, previous crop and farmer's fad.

The sowing is sometimes by drill, sometimes by broadcast machine, drawn and operated by horse-power; sometimes by broadcast hand-machine, and, not infrequently, on small farms, direct from the hand of the sower. The drill, of course, carries the palm as far as regularity is concerned, but the horse-power broad-cast machine takes the cake for speed.

The quantity of seed per acre should be regulated altogether by the class of soil and time of year. The richer the soil and the earlier in the season the less seed is required. Of wheat and barley from 40 to 140 pounds are used. The common six-rowed barley is that preferred, the use of bald barley having been discontinued on account of the hardness of the grain when the hay got at all near ripe before cutting. Of wild oats there is a white variety grown which gives a more saleable hay than the common black. In sowing alfalfa, a few pounds of barley per acre is sometimes sown at the same time; it protects the young plant, draws it up and stiffens the crop for cutting. Harrowing can be done with any one of an infinite variety of toothed, disked, coultered, spading or pulverizing implements, and subsequently rolled or clod-mashed as the condition of the soil indicates. The one thing needful is to leave it as fine and smooth as possible that all the seed may get through and the mower make good running.

The chief enemies of the hay crop are drouth and chinch bugs. The rain-makers have not yet succeeded in overcoming the former, while a well-judged rotation of crops is probably the best remedy for the latter.

Farmers differ as to the best time for cutting hay. Some like it cut very green, others prefer it well in the dough. There is no doubt that stock like it best cut quite green. When so cut, and well-cured, they will eat every spire; but when well-grained they are apt to bite off the heads and leave the straw, especially if fed liberally. Wild oat hay *must* be cut tolerably green or the seed will all fall out and the hay lack nutritive value. It is well to bear in mind that when the strength of the plant is finally concentrated in the grain the straw has but little food value or inviting taste. When the plant's substance is fairly divided between the seed and the straw is probably the best time for haying—most profitable for the farmer, most palatable and healthy for his beast.

As to mowers their name is legion. The columns of the RURAL present ample choice. The recent wide cutters commend themselves to those possessed of heavy horses and stiff soils; but a wide cutter on a loose, sandy soil, and

only a medium team, is not desirable. Keep your mower well oiled, the knife sharp, take up all lost motion and go ahead, cut.

The old revolving rake that we prized so highly years ago has given place to the spring-tooth, wheeled rake which has lately been improved by being adapted for two horses.

In California, hay is raked into windrows very soon after cutting. Sometimes, when the crop is light, full ripe and under a hot sun, the rake almost immediately follows the mower. Heavy green crop and foggy weather demand a longer interval, or the hay may mold even in the windrows. Similar conditions rule the time for cocking the crop. When so dry that danger of molding is past, the windrows are sometimes raked into cocks with the horse-rake, but the cocks resist rain better when made by forks in the old way. There is usually no tedding or turning required in our glorious climate. On the coast there is frequently a "hay shower" or two, bnt as a rule only enough to wet the outside of the cocks, and subsequent sunshine soon absorbs the moisture. If these showers prove continuous or heavy it may be needful to open the cocks and remake them when the hay is again dry enough.

With fine weather, two weeks will usually cure the crop fit for storing in stack or barn. This is for coast counties; in the heated interior of course the time is less. When the hay is ready it cannot be housed too quickly, as mice, rats, gophers, the sun and the rest of its natural enemies soon cause deterioration.

Where the crop is heavy and is to be stacked in the field a "go-devil" is sometimes used to haul to the stack instead of a wagon, and a horse fork and derrick supplant the old-time gang of pitchers with hand forks. Most modern barns are fitted with hay railroads overhead and these are used in connection with the horse fork to unload the hay wagons and store the hay. Almost all the heavy work of haying is now relegated to horses on all well-equipped California farms.

Baling for market is usually done by contract, gangs of men with presses going from farm to farm just as the thresher and his outfit travel round for threshing. The charge is usually about $1.25 per ton, the farmer finding his own rope or wire.

In our local market baled hay ranges in price from $10 at midsummer, in seasons of abundance, to $20 at Christmas in seasons of scarcity. The cost of production also varies greatly, as rent and quality of land, price of seed and conditions of labor vary. As a whole, the crop is not very lucrative here, and the bulk of the hay used is brought by car from Salinas City, Hollister and adjacent districts.

But, I care not how large a temporary profit any balance sheet shows, the California hay-ranch system (where the hay is all sold off the farm) is essentially a vicious system. You may call it farming; it is certainly *not husbandry*. There lacks every feature of that wise management of the soil which alone is the crowning glory of the real husbandman. The true farmer's plot of land should increase in productiveness year by year. It is a prime curse of our one-year renter plan that the soil is skinned for all it is worth, and it not unnaturally resents the outrage by annually yielding less, and decreasing in intrinsic value. The hay grown on a farm should be fed on the same farm, or, if sold, there should be an ample replacement of its fertilizing value by manure, artificial or barnyard, produced elsewhere.

EDW. BERWICK.

Deductions from Thirty Years' Experience in Hay-Making.

ORINDA PARK, CONTRA COSTA CO., April 11, 1892.

TO THE EDITOR:—Having had 30 years or more experience of raising hay, and having for the last eight or nine years made it my sole business and am making a success of it, I feel somewhat prepared to discuss the subject and give it justice.

CHOICE OF SEED.—In selecting seed for hay, I want the best and cleanest I can get, whether wheat, oats or barley, but I do not take the plumpest grain but a medium sized grain. All seed should be run through a fanning mill to take all the small and foul seed out of it.

I raise wheat, oat and barley hay, but I raise oat hay for my principal crop, for it produces the most crop to the acre. I take the white California or the Oregon oats. I prefer the white oats because they will stand the wet and cold the best. I have tried the gray or brown oats, but they don't stand the cold or wet as well, and the hay is not as good in color as the white oat hay, and will shell out much easier; but if you are late in the season, it will come in much sooner than the white oat. The black oats are good but I prefer the white oats for all purposes.

I prefer the medium-sized white Australian wheat, as it will make heavy crops and good hay. I take the common medium-sized barley, and if it is sown thick will make good hay.

SOIL AND LOCATION.—I take my wettest land for oats and my driest land for barley, and the medium driest land for wheat.

A cool climate will make the heaviest crops, but a warm sunny climate will produce the best and brightest hay.

METHOD OF PUTTING IN MY CROP.—I plow deep, but do not plow all or nearly all my ranch before I sow, as many people do, for in that case the land gets foul and the crop will be weedy and stunted, but I plow a part and sow it. I like to have one rain on the land after it is plowed, before it is sown, but if the rain should lie too long it will get packed hard and weedy. In that case, it should be cultivated, and here let me say that instead of sowing grain just before a big rain, I wait until the ground is dry enough after the rain, and then I sow so that it will be up before another rain. I always try to avoid as much as I can having rain come just after the grain is sown, for that is the worst time to have the rain when the grain is just coming up, and more so if the land is wet or if it is a wet season. After the grain is up, it will stand more rain.

Before I sow my seed, I soak the wheat in bluestone water. Do not take more than one pound of bluestone to a ton of wheat, for if it is too strong it will injure the wheat. Oats and barley I soak in copperas water, about the same quantity of copperas to a ton of grain.

QUANTITY OF SEED TO SOW.—I sow plenty of seed to the acre. I sow from 100 pounds to 200 pounds, or usually from 120 to 150 pounds, but if it is good rich bottom land, I would sow 200 pounds to the acre, for if there is not enough seed there will be weeds instead.

HARROWING.—Where it can be, the land should be harrowed the same way that it is plowed for the first time, and the second time it should be cross-harrowed, and if the land is not in good order it should be harrowed the third time, but it should not be harrowed when the land is too wet.

DRAINING THE LAND.—If there are some low places in the land, I take a one-horse plow and run shallow furrows in the low places; they should not be run deep, for that will endanger the machine in cutting the hay.

ROLLING THE GRAIN.—The grain should be rolled, but care should be taken when the land is too wet, for if it is too wet it will bake or pack the land; and it should not be rolled when it is too dry, for it will tread the land without doing much good.

CONDITION OF HAY AT TIME FOR CUTTING.—Barley hay should be cut in good time, as soon as it is well in the dough, and should be handled quick, for if it gets too dry it makes poor hay on account of the beards. Wheat and oat hay will stand a little longer than barley hay before it is cut, but when it has got its full growth and is well in the dough, it is ready to cut. Hay should never be cut in bad weather if it can be helped.

MOWING HAY.—My way in fine weather is to cut one day and rake the next day, and bunch or shock the following day. I usually shock with one horse and a rake. I put about one bale in a shock, or about 250 pounds, and have a man with a fork the same day to trim them up. I leave the hay in the shock from 6 to 10 days, according to the weather, but it should not be left longer.

STACKING.—I haul the hay to the stack with a bunching rake. Three men will stack about 20 tons in one day. We leave the hay in the stack not less than one month, and then have it baled with a good Petaluma press. We put five bands of new rope on the bales. The bales should not weigh more than 250 pounds. I raise most of my hay for sale, and it gives better satisfaction if the bales are not too heavy.

After the hay is baled, it should not be left in the field longer than two weeks. The best way is to fill the barns before commencing to haul to market. It is a big mistake to leave the hay in the field for two or three months, as some do, for it not only loses a great deal in weight, but spoils the looks of it for market. We haul most of our hay to market with our own teams. We raise the best hay going to market and we get good prices. (I say *we* because two of my sons are with me.) We have good demand for our hay. I am careful in taking the hay to market, and if a bale is in bad shape or any of the bands off, we use those at home. I always try to give satisfaction to the buyers, and nearly always take a load for a sample before I sell much, and then haul the same as the sample. By so doing I can sell where I have sold before.

COST OF HAY PER TON.—We get from two to five tons of hay to the acre, or about three tons on an average. Cost of plowing is $1.50 per acre, seed $2, sowing and harrowing 60 cents; rolling is 25 cents, cutting and trimming 75 cents, shocking and trimming 50 cents an acre, or $5.60 an acre at three tons to the acre would be $1.86 a ton; added to this, stacking, bale rope and baling, $1.75 a ton. We haul our hay about 16 miles, and for hauling $2 a ton, or in all $5.60 a ton.

I have put this at full figures for first-class work, and where we do our own work we would save a good deal of this money. I have figured on good work and good hay. For good hay we get from $10 to $16 a ton. I have figured nothing for the use of the land.

As I have had but litttle experience with other kinds of hay, I leave that for some one else to write. I wish to compete for a prize, but that is not my sole object in writing these lines. I write for the good of others.

H. BROCKHURST.

Notes on the Hay Crop.

FILMORE, Ventura Co.

TO THE EDITOR:—In 1875 we had copious rains in October, and I sowed 10 acres to barley near Santa Barbara; about 60 pounds per acre. It was fit to cut for green feed before Christmas. It grew very rank and heavy; made only second-class hay. If sown the latter part of winter, it would have been good. There was mustard in the seed and it is there yet, although I have, for years, gone over the field and pulled out every stock I could see. It always pays to get good clean seed, not only for hay, but for all other crops. Here on the Sespe, last year, my hay was almost perfectly clean; so of many other crops hereabout.

If the winter be wet, hay is best sown late; if dry, the reverse. In any event, it must be cut before the berry fully matures; exposed to the sun as little as possible, put in barn or stack before too dry, or stock will reject much of it. It should be so managed in all these respects that stock will eat almost every particle of it, not only for economy's sake, but for the stock's sake. Where stock is fed more then is eaten clean, the appetite is interfered with, picking and mussing is resorted to and less is eaten.

I have occasionally raised wheat hay near Santa Barbara, but it rusts and makes but indifferent hay. Here at Sespe, last year, I raised a little alfalfa hay, and my stock was all extremely greedy for it, perhaps only because it was a change from the everlasting barley. Still, I would recommend every one, who has suitable land, to have a patch of it; it is excellent for green feed.

The only way to raise good hay, and none other should be raised, is to sprinkle in a generous allowance of brains in all the various manipulations. Then the event is almost certain.

S. P. SNOW.

Haying in the Sacramento Valley.

YUBA CITY, CAL.

TO THE EDITOR:—There are more varieties of hay grown in California, perhaps, than in any other State of the Union. Among them we find oats, wheat, barley, alfalfa, timothy, clover, and the natural grass grown on the bottom lands commonly called tule hay. Oats proper, timothy and clover, are confined mostly to the mountain valleys in different parts of the State, and is seldom seen far from the place where it is raised owing to the immense cost of transportation.

Wheat, barley, alfalfa and the volunteer crops, wheat and oats, barley and oats, and wheat, barley and oats, are more familiar than the others, being raised in all parts of the State. Wheat hay is nothing more than the unripened grain. In many places the wheat farmer cuts from his grain field at the proper time such parts as he thinks will be of the least value as wheat.

Hay should be cut when just out of blossom, but before the kernels begin to form, commonly spoken of as wheat in the dough, because the forming of the head and grain takes from the stem all the nourishment, leaving it rank, tough and woody.

The manner of curing is no less important than the time of cutting. After cutting, if the sun is shining and there are no indications of stormy or damp weather, the hay should be raked into windrows and cocked up as soon as possible; the sooner the better. If exposed to the sun and dried rapidly and thoroughly, hay will be found to be harsh and brittle, the leaves will fall off, the sweet odor will be gone and a great part of the value of the hay lost. The object is not to dry hay so it will keep, but to cure it so that it will be the most nutritious, and be dry enough for storing. Slow drying, with sufficient exposure to the air to prevent heating, causes the juices to become thickened, and when such a degree of inspissation is reached that the hay will not heat or mold when placed in stacks or in the mow—a point not difficult to determine with sufficient accuracy—the process is complete. However, if the weather is threatening or damp, it should be left on the ground until past all danger of heating when in the cocks. The cocks should be conical shape, about four or five feet high and five or six at the base. Hay properly cured should be green, fragrant and tough, the leaves of clover not even breaking off; a greater weight will be obtained, and will prove more nutritious and better relished by the animals.

The process of curing applies to all grasses cut for hay. The time of cutting differs, however. Barley should not be cut till the beards become brittle and break when rubbed in the hands. If cut green, the beards become tough and wiry, causing the mouths of the stock to become raw and sore. The volunteer crops are obtained by sowing wheat or barley, or both, on uncultivated land early in the fall, and covered by shallow, dry plowing, or better still, a revolving disc harrow. Though some may sow oats, yet, as a rule, the ground is thickly strewn with the seed from the previous summer, the wild oats ripening and shelling out before the wheat harvest. In cutting these crops, particular attention should be paid to the oats; they should stand till matured, yet not till the husk or pod turns white, for then they are threshed out by the winds and lost.

Alfalfa, if irrigated or grown on rich, moist bottom land, should produce from three to six crops every year, yet it depends entirely on the nature of the soil and the amount of water. Alfalfa should be cut when from fifteen inches to two feet high, but it should not be allowed to grow too rank, as it becomes coarse and strong, thereby destroying its value.

Tule hay is the long, rank grass cut from the overflowed lands and is used principally for cattle through the winter where a large amount of cheap hay is required.

Hay varies greatly in composition and nutritive value according to the plants from which it is made, the growth and period of cutting, the method of, and the good or ill fortune attending its curing. The money value of the hay crop, in all countries where cattle cannot graze during the winter and spring, is fully equal to any other farm crop, as generally estimated. Its intrinsic value is really greater, for the value of farm crops in money is fixed chiefly by the convenience and expense of marketing, and this places hay at a disadvantage. To be marketed at a distance, it must be pressed into as small a compass as possible by hay presses worked either by hand or power, and even in this form hay is a bulky article and expensive to transport to a market. Ordinary bales measure two feet to two feet six inches across the ends and four to five feet in length and usually weigh from 200 to 350 pounds, while those made by the most powerful presses, though of the same size, weigh 400 to 500 pounds.

J. T. O.

Practical Points on Hay Making.

CHICO, April 15th, 1892.

TO THE EDITOR:—My experience in hay making dates back to 1852, on the same place near Chico. I find the most nutritious and economical hay is made after a grain crop, burning the straw clean, as much depends on a clean burn. The stubble should be burnt in the fall of the year. Then sow 50 lbs. barley following wheat, and 40 lbs. wheat following barley of the previous year. Cultivate thoroughly with a *sharp* harrow or spring tooth cultivator, both ways.

I cut the barley when in the stiff dough or as near as possible. Wheat about the time it drops the bloom. If it is drying weather never more than 24 hours ahead of the rakes. Pile in shocks in 24 to 48 hours, loading the rake one way in the windrow and top out on returning. This makes a handy shock to handle. As soon as the straw on the outside of the shocks will break, I commence to haul. In storing I use five lbs. of salt to each load.

If the above is followed there will be no hay left to bed the horses. My land is principally sandy loam, producing about two tons per acre.—J. H. GUILL.

THE STOCK YARD.

Benefits of the Coyote Bounty.

TULARE, April 20, 1892.

TO THE EDITOR:—I hope your article, "The Coyote Crop," may stir up farmers to tell of the benefit of the bounty. I hope it may continue and be raised as they grow scarce, and when we have them all but the last pair, offer a thousand dollars and stop the increase.

I have suffered a great deal from coyotes and spent a great deal of time trying to poison them, and yet never had the satisfaction of knowing I killed one. I did think some time ago, when told of a new plan, that I would yet have that satisfaction, but I live midway between Visalia and Tulare, where the land is all farmed and thickly settled, and they are getting scarce since the bounty law came.

I want to tell the plan. It is to play you have broke camp. Coyotes delight in picking up the scraps that campers leave, so the idea that struck some one here was the chance to get coyotes. A man named Marrow, living near Tulare lake, said it was very successful. He said the coyotes would reason that if these scraps were scattered carelessly about they were safe from the campers and they became "perfectly reckless."

I wish I could give the figures of returns for poultry, eggs, hogs and sheep from this county. If I could give them, seems to me it would be safe to say it would have been one-third more but for the coyote. It is not alone, or maybe I ought to say so much, what coyotes destroy as what they prevent us doing that hurts. So long as farmers know they must spend a long time each evening seeing that all is safe and out of reach of coyotes, they will engage sparingly and do but little to what they might if so much care was not required.

How nice it is now to raise hogs now that I don't have to bring each little pig up close enough to hear if he grunts. And the saving in time! Hogs, like chickens, to do well in summer should start out at the peep of day, and if they are penned to hold them they cannot do well, or if one rises and goes out with them to keep off coyotes, what a hardship it is to get up so early. It is the same with chickens. What a lot of time it takes to go around each evening and chase chickens a half hour to have all inside and door closed or else high on the roost, and then to get up at the peep of day to protect them, for that is the worst time; as they fly from the roost the coyote stands ready.

All I fear in the destruction of the coyote is overproduction. There will certainly be a tremendous increase in poultry, eggs, hogs and sheep.

The tremendous hardship thousands of poor people drag through when they take up land would be greatly reduced if the coyote did not stand ready to take everything not safely housed every night. How easily could the poultry be made to make the living but for the coyote. Away with him, hunt him down. After awhile raise the bounty (the farmer's friend) and exterminate him.

Coyotes cannot be raised in a corner; make it a crime, and there will be no danger from that source, and if a few should be brought in from other States, let's not do away with the law. People are sometimes killed by the cars, yet we never think of doing away with the railroads.

H. E. DYE.

SWINE YARD.

Poland-China Swine.

An essay by HENRY J. PHILPOTT of Niles, read at the Livermore Farmers' Institute.

I have to thank the committee most cordially for its invitation to address my neighbors on this fascinating subject. If what I have to say gives them as much pleasure in hearing as me in saying it, mine will be the most popular address on the program, which I cannot expect, for when we mortals get on our hobbies, to ride in the public hippodrome, the spectators have some entertainment, but the rider gets the most of it.

The first thing to say about the Poland-China hog is that he is grossly misnamed. He is distinctively the American type of swine, a genuine American idea. His name hints that he is a cross between two breeds—the Poland and the Chinese. The historic fact is that he is a cross between all the breeds of swine ever seen within driving distance of Cincinnati, when that city was the porkopolis of the world. The most intelligent and enterprising pork raisers in the world lived and farmed there at that time. They ransacked the United States and Europe for new breeds, and then drew on Asia and Africa. They had the Irish Grazier or Grass hog, the English breeds called Berkshire, Suffolk, Hampshire, Leicester and others, the Spanish Black, the Neapolitan from Italy, the Angus from Scotland, two breeds from Africa, and three from Asia—the Chinese, Siamese and Calcutta. This is only a partial list of the regions from which the ancestors of the Poland-China came. They crossed these with their own native breeds, much improved by intelligent selection and good feeding, which means that our modern American hog has in his veins the blood of those that came over with Columbus on his second voyage, of those that came over with the Pilgrim Fathers, and those that came early to the Virginia settlement. He is thus half American, as truly as any white man is American, and the other half a mixture of all respectable breeds of all foreign countries. Whether among them all there was a Polish, or Poland breed, is a question not settled. Yet this all-conquering type of swine, made of all the types in the world, was named Poland-China by the first national swine-breeders' convention ever held in America.

The type was established, and the crossing stopped, 60 years ago. Then began the improvement of the type itself. This process is still going on. In fact, it seems to be going on more rapidly than ever. The latest improved Poland-China is a curiosity, even to those who have always raised Poland-Chinas. More improvement has been made in the last ten years than in the preceding 50. One of my visitors the other day said he did not see how any further improvement could be made. If the nose were much shorter, the pig could not eat; if his legs were much shorter, his bacon would drag on the ground; if his ears were much smaller, they would stand up; there is no room for any more ham or shoulder; the bone is as small as you want it; the coat is glossy blackness itself and can't be blacker; it is thick enough for this climate; the ribs are sprung wide and the chest six inches between the front legs—room enough surely for lungs, heart and stomach—no room for improvement there; the foot is strong and stands up firmly on the two toes, whether it carry 10 pounds or 800, instead of sprawling over the ground; the gait is regular and straight, not wobbling; all these things have been attended to and apparentiy brought to perfection in the same hog.

How has this perfection been attained? The story reads like magic. Our American hog had been slowly evolving for many years. The national convention which named him at Indianapolis in 1872, appointed a committee to call another convention whenever the time seemed ripe. It waited 11 years, and then called one for Chicago. It met eight short years ago, and brought forth the National Swine Breeders' Association. There was but one journal in America devoted to swine-breeding. There was but one book on the subject, "Harris on the Pig." A dozen years ago there was but one pedigree record—the Berkshire.

What a change! There are now a dozen pedigree records, five of them devoted to Poland-Chinas alone; and these five last year recorded and printed in bulky volumes the pedigrees of more than 20,000 Poland-China swine. Now, we have many State swine associations, even county associations, besides institutes, clubs and so on. Their printed proceedings are widely circulated and diligently studied by breeders, old and young. We still have "Harris on the Pig," but he is not there alone. Later, better, much more complete books there are in plenty, and more coming. We have several prosperous swine journals. A whole swine literature has grown up, of wonderful proportions.

Standards of judging swine have been established, and detailed descriptions of each breed are printed and widely circulated. A score card has been invented, and every feature of the pig, from his nose to his toes and the tip of his tail, is scored, according to its importance—one point for his tail and 15 for his back and loin; altogether, 100 points for the perfect hog. None has yet scored 100 points; 80 is a high scoring.

The score card revealed the fact that no young breeders, and few old ones, knew how to judge a hog. They all scored too high. It revealed also where the weak points were, in the judge as well as in the pig. So, what do they do but organize expert associations and teach men to judge hogs. Six of these, in different States, meet once or twice a year and take classes through a regular course. Expert licenses are issued to those who pass examination. At Muncie, Indiana, last summer, you might have seen 50 men standing around a Poland-China hog, card and pencil in hand, going over him, point by point, and scoring each according to his judgment. This done, you would have seen these men pass in their cards to a committee, which had made its scoring also, for comparison, and every man examined before the whole class as to why he scored this point so high, that one so low.

Now, the inevitable result of all this organizing, writing, reading, teaching themselves and teaching the people, is that the best hog is going to the front, and will get there with lightning rapidity. In 1888 there were 418 swine at the Illinois State Fair, 66 Poland-Chinas and 66 Berkshires. Last year there were 487 Poland-Chinas and 96 Berkshires. In three years the American hog had so far outstripped the English breed, that instead of an equal number of each there were five to one. In the Iowa fair there were 1667 Poland-Chinas to 125 Berkshires, and of all other breeds together only 369; almost four-fifths Poland-Chinas. In Nebraska, 70 per cent were Poland-Chinas; in Illinois over 50 per cent.

In short, the exhibits of swine at State Fairs have, in five years, doubled in some, and more than doubled in other States. The whole increase is in Poland-Chinas alone. In Illinois, for instance, 110 Berkshires in 1887 and only 96 in 1891, a loss of 14; Poland-Chinas, 121 in 1887 and 487 in 1891, an increase of 366—four times as many in the last as in the first of a short period of five years.

Count the herds of swine advertised in the farm papers! Here is one, not a swine journal—120 herds advertised, of which 83 are Poland-Chinas. Here is a swine journal, 293 herds advertised, of which 201 are Poland-Chinas. So this loyal, free born, enterprising American hog is the main guy and prop of the swine journals, which did not exist until he came, and would all perish in a month if he ceased to support them. He has built up for us a literature of books and papers, besides filling our pork barrels and bringing us every year millions on millions of foreign gold to lift the mortgages from Western farms. They call him there the mortgage lifter.

I have given so many figures because the truth of history is so marvelous that I could not ask anybody to believe it unsupported. I have used the Berkshire for comparison because it would be tedious to compare all, and the Berkshire is generally considered the best of the breeds that have been left in the rear, and it is the most widely known. It is the standard of comparison. I never waste any time dilating on its faults. After stating the facts I have here given, it is not necessary to enumerate the merits of the Poland-China. It is enough to record, as I have, the verdict of the American people. It is in favor of the American hog, as was natural, though he marched under a false foreign name.

The crowning merit of any swine is to make much valuable meat out of small, cheap rations, with little care. Innumerable experiments, official and private, have demonstrated that this Poland-China makes more meat, higher priced because so much of it is ham, than any other with the same care and feed. Of old, he was too large a hog for California, but as now improved, not by crossing, he is smaller-boned and much shorter-legged than the Berkshire. The large-boned type still prevails west of the Mississippi, but on his native heath in southwestern Ohio and all that region, he is what my California neighbors all declare to be "just the right size."

One more interesting characteristic of this our true blue American hog, traveling under a false, hyphenated, foreign name, is worthy of notice. I speak of his disposition—his intellectual nature, we might say. Even this is attended to, and is down on the score card for three points. He is quiet, gentle, docile, affectionate. He likes to be caressed, will lie down when stroked. He knows his master's voice and step. Cleaner in his habits than any other domestic animal, he is always found with a clean, dry nest if given an opportunity to keep it clean. He likes to browse on a meadow, and will keep fat there; but he is also eminently adapted to petting about yards. A lady can easily handle him. A Nebraska lady keeps the finest herd in that State. She held an auction sale in January, refreshments duly provided. She thought she might have done better if the days had been longer. But she sold 100 hogs and pigs, at an average price of $53 per head. A good many California ladies with small capital, looking about for something to do, might emulate her example with more profit than they can make out of chickens, and find it cleaner and more lady-like, as well as much easier work. That is, they could do it with the same kind of swine. And why could not the whole State of California, if it had swine that would make double the meat out of the same feed, raise all its own pork instead of shipping trainloads of Poland-China hams and bacon from the East? I say double! Last fall, I kept two hogs on the same rations—a Poland-China and a "blooded" California hog called extra good. The Poland-China gained 57 pounds in 50 days; the other 14 pounds in 110 days. Difference in favor of the Poland-China, exactly one pound a day by actual weight. Is it a difference worth figuring into the account? Or is it likely to increase the profits of swine-growing in a State where feed costs so much? Might it not turn loss into profit on many a mortgaged farm? Iowa's 5,000,000 hogs in 1890 were worth by the Government reports $11,500,000 more than the same number in Missouri. Iowa has about the same number of swine, but 20 times as large a proportion of them are Poland-Chinas; hence the $11,500,000. Her hogs are worth more than those of the adjoining State, which raises practically the same kind and amount of hog feed. Is this worth looking after? Will it pay California, where feed is so dear, to cling to her long-nosed, long-legged, thin-chested, weak-stomached, consumptive-looking tule splitters? That is the question.

THE VETERINARIAN.

Glanders and Farcy.

By DR. A. E. BUZARD, M. R. C. V. S. L.—Read at the Farmers' Institute at Livermore.

The subject I have chosen for this occasion is Glanders and Farcy, diseases especially affecting the horse, at the same time is readily transmissible to man, sheep, goats, felines and rodents. Cattle, pigs and fowls are not affected by this disease.

The word glanders is derived from the Latin root, *glandula*, signifying a fruit kernel. Glanders is described by Aristotle, and we read of it as far back as the time of Constantine the Great. The definition of glanders is, a specific contagious disease of a malignant type; the spontaneous origin, though not clearly understood, is found to arise from debilitating influences, such as bad food, exhausting diseases, old age, overwork, badly ventillated stables. All these causes, essentially exhausting and depressing, favor the development of this or any other disease characterized by vitiated and depraved blood, resulting in serious structural alterations. In the horse, the specific effects of the implanted virus are shown on the mucus membrane of the nose, from which an aqueous, viscid or purulent fluid is discharged. The mucus membrane of the sinuses of the head, the larynx, and windpipe, and also the tissue of the lungs are specifically affected. There may also be a general or local inflamation of the lymphatic vessels, lymphatic glands and skin, with a tendency to form small tumors, called farcy buds or buttons, which develop into pustules.

The poison seems to exist in greatest potency in the discharges from the nose, and in the blood. Inoculation can be effected through the medium of the skin when abraded, or by injecting the virus into blood vessels. It can also be developed if infected material is given in the water or food.

THE CAUSE OF GLANDERS

May be considered under two heads—predisposing and exciting. Predisposition may lurk in breed, in constitution. It is evident there exists in the animal economy of some subjects, peculiarities of constitution termed idiosyncracies, which, under certain circumstances, and on application of the cause (indirect), develop the latent fire. Horses inherit constitutions; they also become predisposed to certain diseases, particularly affecting the organs of respiration, and with these to glanders. As I have before stated, horses that are kept in badly ventilated stables, or are overworked, badly fed, exposed to wet or cold, are more susceptible to any disease; so constitutional predisposition may be natural or acquired. It is universally admitted that glanders is a contagious malady, yet it is certain that some horses are more disposed to the disease than others. Neither from experimenting nor from observation in practice can we come to positive conclusions as to the exact method by which the poison finds an entrance into the system. The general opinion is that the virus of glanders becomes attached to some exposed or external surface of the body,

where, by some wound, however small, it finds its way into the general circulation. It is a well-known fact that glanders may be propagated by horses which have not shown any unmistakable symptoms of the malady, and where, on post mortem examination, the lesions were confined wholly to the lungs. So we must not overlook the fact of the long period of incubation in certain developments of the disease, and not depend too much upon the first symptoms noticeable being the characteristic ulcers on the membrane of the nose, as we well know that in many cases the primary lesions are met with in the lungs. In some cases no ulcers have been discovered in the nose.

GLANDERS MAY OCCUR IN FOUR FORMS,

Namely, acute and chronic glanders, and acute farcy, commonly called bud farcy, and chronic farcy, called by some button farcy.

The symptoms of acute glanders (which form of the disease is generally a sequel of the chronic form) are as follows: It is generally ushered in like a common cold. First, there is a slight discharge from the nose, at the commencement it is scanty and limpid, amounting to nothing beyond a little aqueous fluid. In the course of a day or two this watery discharge appears streaked with ropes of mucus, and in a day or two after that it will most likely have become altogether mucus in its character and glairy in appearance, after which it gradually assumes a yellow tinge. There is great febrile disturbance, shivering fits, a dry, staring coat, the pulse is quick and weak, the breathing becomes frequent, and the temperature rapidly rises—I have known it to reach as high as 107° Fahrenheit—mouth hot and dry. There is much exhaustion and great emaciation. The membrane of the nose is congested, at first of a yellowish color, shortly becoming darker. In the course of a few days, from three to five, there is a diminution of these symptoms, and a development of the specific local lesions. We have now the membrane of the nose studded with small irregular-shaped tubercles, either in groups or scattered less thickly. These tubercles vary in size from a pin's head to a hemp seed. In a few days the covering of the tubercles becomes removed and results in the production of a chancrous ulcer. These ulcers are not disposed to heal, but extend, and if the animal should live long enough, will penetrate to the bone, producing a disgustingly offensive smell. The discharge from the nose is now thick and mingled with puriform matter. The lymphatic glands under the jaw become swollen, sometimes only on one side, occasionally on both, depending upon the fact whether both or only one nasal cavity is involved. At first the swollen glands feel soft and slightly painful, as if they might suppurate, which they very rarely do; shortly they become hard and more defined, and less painful. In case of inoculation the glands are generally swollen on the third day. The pneumonia and bronchitis attendant on acute glanders are often overlooked; they may be easily made out by a careful physical examination of the chest. When the lungs become involved, exhaustion is rapid, blood poisoning sets in, and the animal generally dies in 20 to 30 days.

Chronic glanders (the form of the disease most frequently met with in this country), attacks the horse in a mild form, the animal appears in good health and spirits and his appetite remains good. In this form the disease may continue for many months without apparently affecting the animal's constitution.

SYMPTOMS OF CHRONIC GLANDERS.

In chronic glanders the local symptoms are the most prominent, and, unlike the acute form, the chronic is more liable to develop constitutional disturbances at the latter than in the early stage of the disease. In the early stages, the discharge from the nose is similar to what we observe in common cold, only it may be discharged from one nostril, the left, and when from both, it is evidence that the disease has attacked both nostrils; gradually it becomes thicker, and mingled with purulent matter, greenish in color and adheres around the margin of the nostril. The peculiar character of the discharge must never of itself, be depended upon as furnishing undoubted evidence of the existence of glanders; its physiological character being alone diagnostic. The popular idea, that matter from a glandered horse when placed in water always sinks, is simply bosh. If you now carefully examine inside the nostril, in all probability you will find chancres, but their discovery is not always attended with success. It is often necessary to aid exploration by means of a reflector, or by introducing the finger along the septum nasi, when the ulcers can be detected by the touch. There is also a marked change taken place in the lymphatic glands between the lower jaw bones; they are enlarged and indurated and generally, as it were, hug the bone. When both nostrils are affected, the glands on either side are enlarged.

Without telling you in a positive manner the great danger there is in attending to animals affected with glanders, or, in fact, coming in contact with them in any way, I would be doing you a great injustice, as this is a fell, dreadful, baneful, horrible and fatal disease, when man happens to be the victim. It is no less so in the case of the noble horse, but though a noble, useful and admirable animal, he is still of less importance than man, his quasi master. Any of you who may have seen a man die from this disease do not need to be spoken to on this subject, and to those who have not I will only say, that I heartily and sincerely hope that they never will see such a sight.

SYMPTOMS MISTAKEN FOR GLANDERS.

Glanders is liable, and I am sure often is mistaken for catarrh, nasal gleet and distemper. The late Dr. Percivall, Principal Veterinary surgeon of the British Army, says that "our diagnosis must be grounded first on the circumstances of the discharge coming from one or both sides of the head; secondly, on the nature of the discharges; thirdly, on the presence of ulceration, and the character of it; fourthly, on the presence and character of glandular tumefaction; fifthly, on the state of the animal's health; sixthly, on the presence of farcy; seventhly, on the absence of symptoms proper to other diseases."

A decayed molar tooth has, no doubt, in some instances, led to a fatal diagnosis. So, you see, we must not think that every horse that has a discharge from the nose for a length of time is suffering from glanders, for he may be suffering from nasal gleet, or some other chronic disease of the air passages. On my tours of investigation in different parts of the State, I have been frequently sent for, miles away, to reported cases of glanders, and when I arrived there found no glanders, but cases of nasal gleet.

I may here state that nasal gleet and colds never terminate into glanders. Glanders and farcy is a specific disease, and distinct from others, and no other disease will run into glanders or farcy. Aged horses seem to suffer most from glanders, but at no period are horses regarded as exempt from taking the malady. In the treatment of glanders I regret to say that all the experiments on this disease have proved useless. Confirmed glanders has baffled all skill.

FARCY

Is a form of glanders in which the lymphatic glands of the skin are especially involved. Farcy may occur as the result of inoculation with the discharges of farcy or glanders. In the acute form there is the usual febrile symptoms. There is local swellings, generally of the legs. The whole limb becomes engorged, and resembles the swellings in acute lymphangitis. The leg is hot and painful, and the animal is very lame. As the swelling subsides, specific nodules, *i. e.*, "farcy buds," and an enlarged condition of the veins and lymphatics become more manifest. These "buds" vary in size from a pea to a marble. In a few days these buds develop into sores. These farcy ulcers have ragged edges, and discharge a creamy fluid tinged with blood. The swollen lymphatic glands, as in glanders, very rarely form matter. Chronic farcy differs only from the acute in intensity and duration. It is a common form of equinia, and is more easily treated successfully than the other manifestations. The special features are local. Correctly to diagnose the existence of equinia in any of its varied forms, or as a general diseased specific condition, is for us, as experts and scientific veterinary surgeons, of infinite importance. In chronic farcy, nodules, which vary in size, are developed in connection with the skin, they afterwards ulcerate and discharge a purulent fluid, and the ulcers have little tendency to heal. These ulcers invade the skin where it is thin and vascular, as over the face, inside the thigh and forearm and flank. The lymphatic glands are also affected, as in acute farcy. In the treatment of chronic farcy, recoveries may appear to result from the judicious employment of medicines and sanitary measures, but it is probably better, considering the risks incurred, that farcy should be classed with glanders, that all should be prevented from doing further mischief by ensuring their destruction.

VALUE OF PREVENTIVE MEASURES.

When we consider the fatal nature of this disease, and its acknowledged contagiousness in every form of its development, the great pecuniary loss entailed upon the community by its existence and distribution, not to mention the more serious danger to human life, the importance of well considered and energetically carried out preventive and suppressive measures becomes obvious to all but the most thoughtless and ignorant. Until, however, veterinary medicine is duly recognized and takes its proper place (as in Europe) in that considerable section of "social science," public health, we can scarcely expect that executive measures suffiently comprehensive to satisfy even our present knowledge will be adopted and carried out. So far some of the officials of different counties of this State have taken a proper step in this direction, and have employed competent veterinary surgeons to inspect the horses of their county to see whether glanders existed, and when found, the surgeon has had power to have the diseased animals shot and burned. It is also very necessary that the inspector should be able to advise as to its prevention. We should be able to give directions to owners of animals, which, if carried out faithfully, are calculated to give as large a measure of protection as our present knowledge will admit of. All animals affected with the various forms of glanders or farcy, in the interests of the community should be destroyed, in order to prevent further spread. Other rules must be carefully observed.

The stables should be thoroughly disinfected with sulphurous oxide gas, or by means of chlorine generated by the action of sulphuric acid on common salt. The walls of the stables should be thoroughly washed, and may be cleansed with lime-wash containing one pint of carbolic acid to each bucketful of water. The harness and other articles which have been in contact with the animal should also be thoroughly cleaned with carbolized water. The remedies which have been used in equinia are arsenic, iodine, biniodide of copper, iodide of potassium, sulphite of soda, and many other. Of all internal medicines, iodine is, in all probability, the most potent in the various forms of glanders and farcy. It has been given in acute glanders in man with success.

GLANDERS IN SAN FRANCISCO.

The article which appeared in the *Examiner* last week, stating that glanders was epidemic in San Francisco, was false in every particular. Certainly, several cases are found every year, but very few indeed, and I may say that, from five years experience as a practicing veterinary surgeon in San Francisco, that that city is singularly free from all contagious diseases of the horse. There has, however, been a great deal of glanders in different parts of this State, particularly in the counties of Monterey, Humboldt, Contra Costa, Santa Barbara, San Diego and Ventura; but I believe that those counties are now almost free from the disease. I felt that it was my duty to the people of San Francisco, especially to the keepers of livery and boarding stables, to comment before the members of the Farmers' Institute upon the unjustifiable statements made by a young and inexperienced veterinary surgeon. I again repeat the glanders scare in San Francisco is entirely without foundation.

The Vineyard.

Vine Statistics and Their Teachings.

An essay by C. J. Wetmore, Executive Officer of the Viticultural Commission, at the Livermore Farmers' Institute.

The subject of "Statistical Information," that has been given me to say a few words about, is an important one both to producers and merchants. The producer is not in as good a position to obtain statistics as the merchant is, and unless he can obtain them from a reliable source, he remains ignorant of what the State produces and of what the markets are for our products. He can find out from his neighbors and local paper what the prospects of a crop are in his vicinity, but unless he takes all the papers in the State he cannot learn what the whole State will produce. What the producers need is some State officer to furnish them accurate statistics free of charge. The State Viticultural Commission has undertaken to do this, and has furnished to the viticulturists of the State as accurate statistics as they have been able to obtain. Each year a considerable portion of its appropriation has been spent in obtaining statistics, and if the producers would respond more readily to the requests of the Commission, more accurate statistics could be given. If in every county a society was formed having for one of its purposes the gathering of statistics, and if each society would send such statistics to the Viticultural Commission, it would make it an easy matter for that Commission to furnish accurate statistics from the whole State to each and every viticulturist. The State is too large for the Commission to do more in this matter than it is now doing with its present appropriation. Let the producers do their share and the work will be an easy one.

The actual progress of the viticultural industry is best shown by giving figures, and the importance of the industry becomes evident as we look at them. In 1880 the number of acres planted to vines was only 35,000. In 1881 the planting of vines began in good earnest, and has been kept up ever since. From 1881 to 1887 most of the vines planted were for wine-making purposes. From that time to the present year but few wine grapes have been planted. In 1888 there was a sudden rise in the value of raisins, and from that year to this one there have been large plantings of Muscat grapes. The low prices of raisins this year has given a check to the boom, and the area of raisin grapes will not increase much for some years to come. At the present time the area in vines in this State is estimated to be 175,000 acres, of which 90,000 acres are in wine grapes and the balance in raisin and table grapes. It will be seen that we have in 12 years increased the acreage from 35,000 to 175,000, or 500 per cent. The value of the 35,000 acres in 1880 was estimated at $300 per acre, or $10,500,000. Taking the same estimate of $300 as the value of an acre of vines, the total value at the present time of all the vineyards of the State is $52,500,000, or, in other words, the taxable property of the State has been increased $40,000,000. This amount does not include the money invested in wineries, distilleries, warehouses, cooper shops, etc., that are not connected directly with vineyards—$20,000,000 more could easily be added for such improvements, and which would not exist were there no vines in the State. The benefit derived from this industry is well demonstrated in the Livermore Valley. In 1880 there were but five acres of vines planted; now there are over 4000 acres. The value of the property in the valley has been increased over $1,000,000. It costs the owners of the vineyards at least $20 an acre per year to cultivate them and pick the grapes. Eighty thousand dollars yearly is therefore paid to the workingmen and tradesmen of the valley. Upon the success of the vineyards depends the success of the town of Livermore. It is so of many other places in the State.

As I said before, there was a rapid increase in acreage of vines from 1881 to 1887, and when those vines came into bearing the amount of wine produced increased rapidly. In 1881 the amount of wine made was 8,000,000 gallons. Of this amount 3,000,000 gallons were exported to foreign countries or shipped to Eastern States, 4,000,000 gallons were consumed on this coast, and 1,000,000 gallons used for brandy and other purposes. At that time there was a market for all the wine made and prices for wine and grapes were high. This condition of affairs kept up until 1886, and there was great prosperity in the viticultural industry. In 1886 the effect of the heavy plantings showed itself in the amount of wine made that year, which jumped from 11,000,000 gallons in 1885 to 18,000,000 gallons. This was too large an increase for the trade to handle, and prices of grapes and wine fell rapidly. From that time to 1891 there was more wine made than we had a market for and prices fell to ridiculously low figures and there was no profit left to the producers. From 1887 to the present time the acreage in wine grapes has decreased from various causes. The vine disease in Southern California has destroyed 20,000 acres of vines, and the phylloxera in Napa and Sonoma counties from 10,000 to 15,000 acres more. The consumption of wine has increased from 9,000,000 in 1881 to 18,000,000 gallons in 1891. Our production now is not over 18,000,000 gallons (in 1891 it was not over 15,000,000 gallons), so that the industry is in a good condition as regards supply and demand. As soon as some of the surplus stocks are cleaned up, the prices for grapes and wine must advance, and there will be great prosperity again in the industry. The vine growers should not remain discouraged, even though prices still remain low. The time is close at hand when a change will occur for the better. We are making better wines now than we did in 1881, and as the conditions will soon be similar to what they were then (that is, supply and demand equal), prices for grapes and wine will go higher than they did then.

I have made these remarks to show you the value of statistics. The producer who does not know what the production or consumption is cannot tell what the condition of the market is going to be.

The Home Circle.

The Singing in God's-Acre.

Out yonder in the moonlight, wherein God's-Acre lies,
Go angels walking to and fro, singing their lullabies;
Their radiant wings are folded and their eyes are bended low,
As they sing among the beds whereon the flowers delight to grow:

"Sleep, oh, sleep!
The Shepherd guardeth his sheep!
Fast speedeth the night away,
Soon cometh the glorious day,
Sleep weary ones while ye may—
Sleep, oh, sleep!"

The flowers within God's-Acre see that fair and wondrous sight,
And hear the angels singing to the sleepers through the night;
And, lo! throughout the hours of day those gentle flowers prolong
The music of the angels in that tender slumber song.

"Sleep, oh, sleep!
The Shepherd loveth his sheep!
He that guardeth his flock the best
Hath folded them to his loving breast—
So, sleep ye now and take your rest—
Sleep, oh, sleep!"

From angel and from flower the years have learned that soothing song,
And with its heavenly music speed the days and nights along;
So, through all time, whose flight the Shepherd's vigils glorify,
God's-Acre slumbereth in the grace of that sweet lullaby:

"Sleep, oh, sleep!
The Shepherd loveth his sheep!
Fast speedeth the night away,
Soon cometh the glorious day;
Sleep weary ones, while ye may—
Sleep, oh, sleep!"—*Eugene Field.*

Mattie's Soupbone Week.

In Two Parts--Part I.

Written for the Rural Press by Augusta E. Towner.

"I can't help it, Mattie. One fifty'll have to do. I just can't spare any more with all I've planned. It isn't my fault, and you know you promised."

"Yes; but, Tom, one fifty can't possibly do. Why, you alone ——"

"But you must make it do."

Mattie flushed angrily. "Oh, as to that, Tom, if you say must, I can say shan't;" and she turned and went into her pantry.

Tom, standing near the outside kitchen door, turned to go about his business, also. Then he hesitated a second as though a sudden thought had come to him. Then, with two or three vigorous steps, he was in the pantry, where his little wife appeared to be all absorbed in tidying up the shelves. What a clouded brow and a hard-set little mouth! Tom's mustache didn't hide a queer little smile at the corners of his mouth. Before she knew it, Mattie was caught up in a pair of strong arms, almost smothered with kisses, a "Good-by, dear," whispered in her ear, and Tom was off like a shot.

Ah! Tom's mother was a wise woman. She had said to him: "Kiss your wife, my boy, and kiss her often. Never forget the tender things to say or do."

Mattie stood where Tom had set her down, looking out of the pantry window. A wistful, perplexed look had replaced that of anger on her face.

"Let me see," she murmured, "I might possibly get along to-night with what there is on hand; but to-morrow! How shall I manage? Tom's so fastidious and has such an appetite. It'll be like the Israelite making bricks without straw. I just love, though to please him at his meals." Here she looked sharply around her tiny pantry. Then, with a decisive nod of the head, "I'll do up my work and go and see Miss Hetty. She'll tell me, if anybody can, what to order, and how to get along and not starve."

By nine everything was neat about the house, and Mattie, putting her pretty silver-gray dust-cloak over her morning gown, and donning her jaunty gray walking-hat, started on her short walk to Miss Hetty's. In the work-bag hanging on her arm was the necktie she was crocheting for Tom. No such thing as Mattie wasting her time.

Mattie found Miss Hetty in her sitting-room, placidly knitting by an open window which overlooked her adored rose garden. The first thing she said when Mattie came tripping in was:

"Did you notice my 'Gold of Ophir' rose? And did you see how double that 'Isabella Sprunt' is I budded on the Archduke Charles?"

"Now, Miss Hetty, I cannot talk roses this morning. They are all just lovely, and I'm coming over for a regular rose chat one of these days. I've business on hand this morning; I wish your financial acumen brought to bear on my commissariat department.

"Mercy on us, child! What are you driving at?"

"Do you see that?" And Mattie held up three silver half dollars. "That's my week's allowance. Liberal, isn't it."

Miss Hetty looked at Mattie sharply. "I don't know but it is. What does it include?"

"Why, it's to go for meat, milk, bread, Chinee vegetables, anything to eat I don't get at the grocery."

"Yes?"

"You see, Tom and I resolved to regulate our expenses so as to pay for our place within a certain length of time, and have a little ready cash on hand, too, for emergencies. I've done real well so far, for my part, but somehow I've missed it this month. I guess," and Mattie flushed a little, "I've been a little foolish about some expenditures. I got ahead the fore part of the month, and as there were some bargain sales in town, I invested. And Tom's that obstinate he will not—indeed, he says he cannot—give me any more money. It's the last week of the month. He will not run up any bills but at the grocery, and I only get certain things there. He abhors canned things, and will hardly eat bacon, unless it's with 'pigs in a blanket,' or some such way, and I cannot do that. But he has an appetite as big as he is, and he's mighty particular, too. And O dear, however can I set a decent table on a dollar fifty? I've most a mind to starve him a little." Here Mattie, with a thrill, thought of her hug and kiss, and, with a regretful qualm, of her bargains reposing in the bottom drawer of her dresser. Her tone changed. "O Miss Hetty, you just must say something to help me out. Wave your wand, like a fairy godmother, and evolve innumerable roasts and steaks out of what will be left to spend after the baker and milkman have had their share."

"Roasts and steaks!" remarked Miss Hetty incisively; "I thought as much. And you probably get porterhouse and tenderloin?"

"Why, of course."

"And the scraps?"

"Oh," answered Mattie triumphantly, "you don't know how economical I am. I save my remnants and put them into the soupkettle, and when I strain the soup, the scraps go to the hens. Tom is so particular about eggs. He wants to know that they are fresh, so he has just a dozen chickens in a pen. He sees to them mostly. They do like all my table scraps."

"Probably," said Miss Hetty dryly. "What sort of a soup-bone do you usually order?"

"Oh, I don't know. I get ten or fifteen cents worth of soup meat or bone nearly every day [Miss Hetty started], and then ——"

"How often does your butcher come?"

"Oh, every day, nearly. He generally comes in the afternoon for me, as Tom likes his heartiest meal at night. I get a sort of dinner-tea. Meat'll keep all right, you know, these cool nights, and I order meat for breakfast, too, so Tom needn't bring it home. Tom comes home to luncheon usually. He likes to get out of the store when he can. If there happens to be a difficult customer about noon, he sometimes stays, and gets something from that Mexican restaurant next door. They do cook a steak smothered in chilies and onions makes him hungry to smell of. *I* can't do it. But he hates to eat down town anywhere if he *can* come home. Likes to eat in his own home. He's just proud of the dainty appointments in our dining-room, if they're not so very expensive. But O dear, Miss Hetty, what shall I order of the butcher to-day?"

"How much do you want for your baker?"

"Four bits. I get seven big loaves for that. Tom doesn't eat much, nor he isn't such a great hand for potatoes, so we use a loaf a day, besides the quick biscuits I make now and then."

"How much do you need for your milkman?"

"Two bits. Gets us a pint a day. All we need. Tom doesn't take it in his coffee; isn't fond of milk."

"How much for your Chinaman?"

"Well, I don't have one come but twice a week now; got so tired of fussing with them. It's that awful big-mouthed one, you know, that's been here so long. Guess I spend twenty cents a week or more; when he has strawberries, lots more. If I don't use my vegetables, I throw them into Tom's chicken yard."

"Call it ten cents for the Chinaman. That ought to do for one week if you take care of your vegetables as you should. I'll tell you how. That leaves sixty-five cents for the butcher."

"Yes, so it does. Sixty-five cents! Why I've seen Tom eat—I'm ashamed to say how much of a sixty-cent tenderloin roast. Oh, he's ——"

"I know," said Miss Hetty; then she went on decidedly, "Now, Mattie, listen. You say you use all the remnants of your porterhouse steaks and nice cuts of roasts in your soup pot. That shows you don't know anything about cold meat cookery, and yet you want to economize; and you think Tom ought to give you some more money, when you know how much your bargains are responsible for your shortage. Now let me tell you, if a man proposes economy as to food, and such a man as Tom, don't say anything—act. He'll suffer more than you. In this case, it's your special duty to make it as easy for Tom as possible. Usually its the best way to straiten out a "near" man, to give him all he wants of economy—straight, unembellished—at his dinner-table. Men care ever so much more what they have to eat than women do. That's why women who start out as home makers—happy home makers—should know more about cooking, in all its aspects, than about music, or art, or fancy work. But, dear me, they seldom do, even now, when cooking-schools have been a fad in so many parts of the country. Why, my child," and Miss Hetty laid down the shoulder cape she was knitting and spoke very emphatically, "if half the reforms of the day would begin in our kitchens, there would not be so much to reform. Man's salvation, even, might be almost managed through his stomach. Humanity, rightly nurtured in childhood, rightly fed when wed, would be so much better morally and spiritually, as well as intellectually and physically, that—that—that the world would hardly know itself." With which climax, Miss Hetty settled back in her chair, her cheeks quite red; while Mattie laughingly cried:

"O Miss Hetty! you are such an original I really must cultivate you more—or rather, let you cultivate me. Come, I'm your docile pupil from this minute, in things culinary and economical. Tell me now just what to order from my butcher, and I'll obey, even if it's liver and shoulder steak."

For awhile Mattie and Miss Hetty sat "in secret conclave." Then Mattie went home to carry out Miss Hetty's orders. There were many such conclaves during the six days following, many of them in Mattie's own home. Once Miss Hetty took tea with Tom and Mattie; and a nice tea it was, with meat in some shape on the bill of fare, and some dainty dishes that had not before appeared. It was altogether an interesting week for Tom and Mattie. Tom felt very proud of his wife's ability before the week was over. As for Mattie, she now avers that she is just as much of a "crank" as Miss Hetty on the cooking question. She says, besides, that what she learned or began to learn, during this week, was worth dollars and dollars to her in her after life with regard to more things than cooking, in that she began to sense what were the wiser economies. But I am anticipating.

That day Mattie called on Miss Hetty, that I have told you of, she ordered a very fresh foreleg soup-bone of her butcher, for which she paid twenty-five cents. Happily she knew more than the young wife, who, when her butcher asked her if she would have a *fore*leg soup-bone, answered, no, she thought *one* would do, as her family was quite small yet.

As Miss Hetty had advised, Mattie had her butcher saw the leg in short pieces, cracking open each bone so as to expose the marrow, and cracking the big end into several pieces. How large that soupbone looked to Mattie as she unwrapped it. With a sharp knife she cut all the lean meat from the bones that she conveniently could and laid in a dish. The marrow was all scraped out and laid by itself. The lean meat, of which there was over three pounds, she separated into two parts. That from the big end of the bone and nearly free from gristle, about a third of the whole, she ran through Miss Hetty's little "No. 5 Enterprise meat chopper," borrowed for the occasion. This she seasoned with salt, cayenne and a dash of curry. It made six pats of Hamburg steak, which she put in her cool outside cupboard for breakfast. She set the marrow there also. The soup bones she covered with cold water after she had laid them in her big convex pot of agate ware. The rest of the lean meat was put into her "Berlin" stewing-pan, and also covered with cold water. These she set on the back of the stove when she built her evening fire.

There were in the pantry remnants from the morning's steak and yesterday's roast. The last, she having had company the night before, was in an unusual state of "dismantlement," as Mattie phrased it. The "possibilities" of these remnants she run through the meat chopper. There were two cups of this. To it she added one cup of stale bread crumbs, soaked soft in warm milk, and two well-beaten eggs, and seasoned the mixture well. Then she took a piece of stiff, brown paper, about eight inches long by four inches wide, sprinkled some flour on the paper, laid a heaping tablespoonful of her "croquette" mixture near one end of the floured paper, then folded the paper over and rolled the contents back and forth till it was long, round and shapely. The paper was kept well floured, and spoonful by spoonful her croquettes were all rolled and floured ready for the frying pan.

This is what she had for her dinner-tea (so different a meal from that which she usually prepared that she wondered continually, with many internal quakings, what Tom would say of it).

Well, first there was soup. She had on hand some of the "Julienne" soup (the only soup she knew how to make) of the day before. This she heated, strained, added to it half its quantity of strained tomatoes, and a tablespoonful of pearl sago. This, well-seasoned, and served with crackers heated in the oven till very crisp.

After the soup she brought on her big platter. It was "attired" thus: In the center were six slices of toast, over which had been poured the gravy from yesterday's roast, heated very hot and thinned a little. On each slice of toast was a slice of hard-boiled egg—two eggs served for the occasion. The slices of egg were seasoned with a tiny squeeze of lemon juice and a dash of *paprika*. On the sides of the platter, in an appetizing circle, lay the meat croquettes, with sprigs of water cress between, and at the corners of the platter a quarter of a lemon lay on two sardines, nestled between two sprigs of cress. Beside each plate with this course was set a pretty little China plate, on which was laid a lettuce leaf containing some potato salad, made from yesterday's cold potatoes and an egg left from breakfast, seasoned with vinegar, pepper, salt and cream. Of course, there was a bouquet on the table—a particularly choice rosebud laid by Tom's plate. Of course, too, there was a goblet of water by Tom's plate, a slice of bread in his napkin, and a cup of tea ready for him when he wanted it. There were also baked potatoes in a napkin. Tom was very fond of baked potatoes at his evening meal. For dessert there was custard cake and jelly. Mattie wondered if Tom would really get "filled up" with such a meal.

I have forgotten to say that Tom did'nt come home to luncheon, and was late to dinner this day. Miss Hetty, who had been with Mattie that afternoon and evening, but who disappeared as Tom appeared, had said to Mattie:

"You may be sure he has had a hard day's work. Probably a lot of goods came and he had to unpack them and couldn't stop to come home, or a drummer is there. Men, the best of them, are apt to be cranky and cantankerous if tired or worried, specially if hungry; I do believe a hungry man is always snappish. So be sure to be cheerful, forbearing and tactful when Tom comes home."

Mattie resolved to be "just heavenly" to Tom. She had had a reaction of tenderness since her spunky fit of the morning, and felt as though she couldn't do enough for her "hubby."

As for Tom, he had had a reaction the other way. It had been a hard day in the hardware store, where he managed things for that "rich old skinflint Bowers." A big lot of goods from Hibbard, Spencer, Bartlett & Co., had arrived. There was much heavy lifting, sorting, marking and placing. A mistake had been made in the order. "Bowers was nagging around." Tom had to hunt no end in the waste paper basket to find the copy of his order, to convince "old Bowers" that the fault in the order was not his, and so on, and so on.

And then Crissy Bowers, a niece of the old man's, came in, ostensibly to get a pinking iron, and stopped to gossip with handsome Tom. He had kept company with her once on a time, but dropped her because she was "just a little too swift" for the sort of woman he wanted to make his wife. Everybody said Crissy "wanted him bad." Now, in the course of her chat, with a most innocent air, she inquired after his wife, and spoke of having seen her, and what a hand she was to pick up good bargains, and such a lot of them, too, and "was Mattie getting ready to go visiting so soon?" etc., etc.

And Tom thought to himself, "Ho! that's the reason she's so short of money. Gets what she wants before she

wants it, and thinks I'll give in and overrun the expenses we'd agreed on. Hum! when I wear old clothes and hats and shoes, and stay at home evenings, and fairly avoid the fellows so I won't have to stand treat, but can save money to fix up the home, and pay upon it, too. I look like a dandy Jim, I do, for nicely dressed young ladies to see that come into the store. Bargain! I've heard say that of all things a bargain-hunting wife was to be dreaded." Not that Tom didn't have sweeter thoughts than these, but he really was cross, badgered as he had been by "old Bowers," and the insinuations of mischief-loving Jennie, tempted the evil side of his nature.

When he went home his feelings were in that delicate state of balance, a word from Mattie either way would have turned the scale—made him nice or disagreeable. Though, truth to tell, it would have been easier to make him very pronouncedly disagreeable.

But here was his Mattie, as neat as a pin, as sweet as a posy, meeting him so smilingly, so solicitously, offering to get him some warm water so he could cleanse his hands better than at the store sink. How hungry he was. He had skimped himself at noon—only had a ham-and-egg sandwich of the boy at the street corner. Such a restful, homely air was about his own kitchen. Mattie bustled about so cheerfully, and there was such a warm, suppery smell. Nothing disagreeable occurred to him to say, before all this comfort. And the dining room, with its bright, hanging lamp, and the flowers among the silver and china, looked so tasty. And *his* Mattie, just busying herself for him. She was a sight prettier and more ladylike than Crissy Bowers, whose loud voice always rasped his nerves, even when most fascinated by her dash and style.

Mattie needn't have worried for fear Tom couldn't "fill up" without his steak. He ate heartily, and praised everything. Afterward he lounged around in his shirt sleeves and smoked while Mattie tidied up. It was his night off. He and the other clerk under him took turns keeping open nights. After the work was all done, Mattie, who was keeping up the fire for culinary reasons, and knew how well Tom liked to spend cool evenings, when they were alone, in her cozy kitchen, brought her big "Rochester" and put it on her neat, oilcloth-covered kitchen table. By it she laid the latest papers and magazines, and her basket of work. Then she drew near the table her comfortably cushioned "settle," a quaint, old-fashioned affair that she had designed and painted and cushioned herself, and prided herself on as being the most unique and fascinating of all her household appurtenances. Then she said, coaxingly:

"You poor, tired boy, don't you want to sit down here while you are finishing your cigar?"

Tom does.

"What is it smells so nice?" he asks, presently.

"O," said Mattie, brightly, "I am stewing some beef for all sorts of things. I'm going to cook you some new dishes. And, O, Tom, when you finish your cigar, I just want to tell you something, and I'll comb your hair while I'm telling it, if you like."

"Like! Well I should say. My head aches, and it would be better than a cigar, I do believe. But you seem so busy sewing, perhaps you can't afford to stop. It'll take a good deal of your time, won't it, to make up those bargains you have been getting?"

[*To be continued.*]

Babies and Ballots.

I saw in a paper not long ago a paragraph like this:

One member of a suffrage society asked of another, "What can be the reason that Mrs. Jones has lost interest in our cause?" "Oh, I saw the furniture wagon stop at her door and deliver a cradle."

The editor thought the item a funny one. He put it, with other solemn things, in his wit and humor column. I do not doubt the truth of the incident, but to me it is full of pathos. In these perilous times, when it is so difficult to carry a soul "through all the split saltpetre of the world," there is no more touching sight than a happy young mother with her little child, both alike innocent and unconscious.

Unaware of any legal robbery which gives the entire ownership and control of her child to another, for the present it is hers. She lives in it, and for it. In the safe corner of the secluded home, what harm can come to it? It is too young to be poisoned by the moral miasma which, rising from uncleansed streets and slums, leaves no rural corner of the world untouched, and penetrates to the most cultured and exclusive homes. It is too young to learn profanity or slang, to listen to innuendoes or foolish gossip. It cannot read the papers, imbibe the irreverence of our current literature, or understand pessimistic philosophy. (Neither can anybody else, for that matter.)

The child may die, and the mother never realize her disabilities. Probably it will. The great world is too busy to give much time or thought to the wise care of mothers or babies. It is too much absorbed in what Mr. Grant Allen terms the "distinctively human." If the child lives, the mother will sometime awaken to anxieties which do not trouble her now. She knows that sorow, sin and death are in the world; but somehow we never think that evil things can happen to our own.

But the child so loved and guarded is not exempt. Some day it may fall into the snares so thickly set for young feet. Some awful day it may be a felon or an outcast, or the undertaker's wagon may stop at that mother's door with a casket, which would not have been needed if our homes were protected as they should be from evil influences.

The ballot in the mother's hand is the lever needed to bring the strong, pure love of motherhood to bear against social vices. What this country needs is mothering. Uncle Sam has kept house long enough. It is time for thorough house-cleaning and womanly care of neglected sons and daughters.—A. L. Cornwall in Woman's Journal.

—Haughty lady (who has purchased a stamp)—"Must I put it on myself?" Stamp Clerk—"Not necessarily. It will probably accomplish more if you put it on the letter."—New York Herald.

Young Folks' Column.

A California Wild Goose Chase.

A California boy can hardly understand the peculiar significance commonly attached to the phrase "a wild goose chase." To him, a goose hunt means a day's shooting on the tules, and with any luck at all, more game at night than he can carry home on his back. The numerous flocks of geese, flying and squawking in all directions, made me impatient to get at them with my Parker the first day of my stay at my friend's ranch. But when I spoke of it he suggested that I wait until the first foggy or windy day, when the birds would fly lower. "Then," said he, "we will take a team and go out on the tules and have some shooting that is shooting." The day came before long, and loading guns, ammunition, provisions and a camping outfit into the big box of a header wagon, already half-filled with barley hay for the mules and for our beds, the rancher, myself, one of the hired men and two lads in their teens, sons of my host, climbed aboard and struck out for the tules or marsh lands adjacent to the Sacramento river.

It was late in December; the rains had set in early that winter and the fields were green with growing grain. The north wind blew a gale, but the sun shone bright and the air was soft and balmy, more like May than December to me, just out from Minnesota. A ride of three hours brought us to the bank of a small creek, fringed with oak timber. All around us stretched low, level lands, dotted with patches of tall tules—bullrushes we call them in the East—and numerous shallow ponds and sloughs. Many of the streams of California, throughout their lower courses, flow between banks several feet higher than the surrounding lands. This is caused by the floating down of debris or "slickens" from the hydraulic mines in the mountains, which forms deposits sometimes many feet in depth and extending miles back from the channel. The streams all begin to rise with the first early rains in the winter, and, breaking through the banks, back water among the tall reeds and tules, forming the finest feeding grounds I ever saw for all kinds of water fowl, with which they are alive from October to April.

Tying the mules to the wagon box we cut poles, pitched our tent and fixed up our camp before firing a gun, although flocks of birds kept skimming over our heads, barely higher than the tree tops, and filling the air with their squawking. The camp in order, we donned our gum boots and, with the sun an hour high, started out for an evening shoot, my host and I going in one direction, the hired man and the boys in another. Selecting points where the flight seemed thickest, we squatted in dense bunches of tules and commenced banging away. I thought I had seen pretty good flights of water fowl among the Minnesota lakes, but I had never before enjoyed such sport as this. Our greatest trouble was not in finding something to shoot, but in retrieving the great birds that came flopping down in the water on all sides of us. Ten minutes after sunset we stopped shooting, lest the flash of our guns should spoil our next day's sport. Then came the lugging of game into camp. All kinds of water fowl had been flying, but I had shot nothing but "honkers" and "speckle breasts," and had 16 of them at my feet. My host, who had devoted his attention to spoonbills and mallards, had bagged 21 birds. We had goose fried between slices of bacon for supper, with bread, butter and coffee, and after an hour spent in smoking and spinning hunting yarns, we rolled up in our blankets and tried to sleep. But for my part, the incessant quacking of ducks and the shrill squawk of geese rang in my ears all night long and kept me awake most of the time.

We breakfasted early and were at our stands before sunrise the next morning. The wind blew as strong as ever, keeping the birds close to the ground in their flight, and we had better shooting, if possible, than the night before. The geese flew thickest about nine or ten o'clock, when hundreds of flocks came in from the grain fields for many miles around, to drink and bathe, and rest during the middle of the day upon the shallow ponds. They would not light here and there upon the first water they came to, but hovered about in large flocks until some bold gander flopped down into a pond, when every goose within sight or hearing immediately steered for the same spot. Unless disturbed, in the course of an hour there would be geese enough in that pond to cover acres of water, and as they came circling down from a great height, they looked like a cloud of great leaves carried downward instead of upward by a monstrous whirlwind. Two-thirds of them were white geese and not worth shooting, but there were enough gray geese, brant and ducks to keep us very busy cramming shells into our guns while the morning flight lasted. The hired man and the boys brought in their share of game, and when we started home that afternoon, we had over 100 birds in the wagon. The boys were not very good wing shots, but managed to hold up their end by sneaking up to a small pond surrounded by thick willows, where the geese were lighting by the hundred, and making a great pot shot; their four barrels, two on the water and two as the birds rose, killing no less than 19 geese and brant.

It may seem incredible to those who have never visited California, but wild geese are so numerous in the great grain-growing sections of the State, that, if the large ranches did not employ men to "herd" them off the fields, acres of grain would be pulled up by the roots in a single moonlight night. These goose herders carry long-range rifles and ride about on horseback, firing upon and putting to flight the flocks as they begin to light upon the fields. Just after a long spell of north wind, when they can be shot so readily, the San Francisco market is so flooded with geese that pothunters often receive barely enough for their consignments to pay express charges and commissions.—M. B. Gibson in Am. Agriculturist.

—A howling swell—An ulcerated tooth.

An Army Kitten.

One evening, says *Harper's Young People*, toward the close of the war, while Union soldiers lay in camp on a hillside near the Stanton River, Virginia, the cry of "Halt! who goes there?" from a sentry startled every lounger to his feet; and several of the more curious ran to the guard-line to find out what the trouble was. A minute later all knew that the night visitor who had been challenged was no enemy. A little girl, about ten years of age, holding a white kitten in her arms, came forward into the light of the fires, conducted by two soldiers, who had told the sentry to pass her in, and who looked as proud as if they were escorting a queen.

The whole regiment gathered—including the Colonel himself—to look at the child and hear her tell her story. A very short story it was—scarcely a paragraph; but there was matter enough in it for a full chapter. She lived near by with her father who was sick and poor; and they were Northern, she said, and "Union folks." Her mother was dead, and her brother had been killed while fighting in the Federal army. She "wanted to give something," and when the Union soldiers came she thought she would bring her pet kitten and present it to the Colonel.

The Colonel took the little girl in his arms and kissed her, and the kitten, too, and said he was not a bit ashamed of his weakness. He accepted the kitten with thanks, and its innocent donor was gallantly waited on to her humble home, loaded with generous contributions.

The white kitten was adopted by the regiment, but considered the property and special pet of the Colonel, and when the war was over he took it home with him. Like the white lamb that stayed and fed with the victors after the battle of Antietam, that little creature, during its short but stirring army life, was a daily inspiration of better feelings and thoughts in the presence of all that is worst—a living flag of truce gleaming among the thunder-clouds of human passion and strife.

Domestic Economy.

Tested Recipes.

Written for the Rural Press by Ada E. Taylor.

Waffles.—Rub two ounces of butter into a quart of flour, add a teaspoonful of salt, and a pint and a half of milk, with half a cup of yeast. Heat well for five minutes, cover, and stand in a warm place for two hours: then beat three eggs separately, add to the batter, beat, and let stand 15 minutes. Heat the waffle irons, grease well and pour half full of batter. Bake brown, take up, spread with butter and lay on a hot plate. Sift sugar over the top.

Bananas in Jelly.—Make with boiling water, a quart of strong and sweet lemonade, using only the juice of the lemons. Soak half a box of gelatine one hour in a small cup of cold water; stir it into the boiling lemonade, and set it where it will cool, but not harden. Cut three bananas in lengthwise halves and lay them in a mold wet with cold water, cover them with half the jelly, and set the mold upon the ice until the jelly sets. Then slice in three more bananas and pour in the remainder of the jelly. Serve with cream or soft custard.

Oyster Pie.—Line the sides of a deep dish with thin, rich paste, and invert a cup in the middle. Drain a quart of oysters, pepper and salt them, and arrange them around the cup. Strain the oyster liquor, add to it half a pint of milk and put it on to boil. Rub together two tablespoonfuls of flour and the same quantity of butter, and when the liquor boils stir it in, and stir until it thickens. Remove from the fire, season with pepper and salt and pour over the oysters in the pie. Roll out a thick sheet of paste, cut a hole in the center and cover the pie with it. Bake half an hour, or until the crust is nicely browned.

Bananas for Breakfast.—It is best to prepare this dish the night before it is to be eaten. Remove the skins of six bananas, slice and place them in the dish they are to be served in. Sprinkle over them three tablespoonfuls of sugar and then squeeze the juice of a large lemon, next adding about a tablespoonful of cold water. Set in a cool place until wanted. Bananas are also very nice sliced, with sugar sprinkled over them, and a little water added, then let stand a few hours, and a cupful of cream poured over them, or a rich custard, or simply the whites of eggs beaten.

Hard Boiled Eggs.—Put the eggs in boiling water and let them boil *gently* for 20 minutes. After they are removed from the hot water, take off the shells, drop the eggs into a bowl of hot salted water, and keep them in a warm place until wanted. Before sending to the table place a layer of fresh water cresses or parsley in a pretty dish, lay the hot eggs upon the sprays, and strew more greens lightly over the eggs. This is an ornamental dish, and the eggs peeping through the fresh sprays of green, invite the appetite.

Cold Veal.—Slice nicely roasted cold veal in thin, neat slices. Have ready the following dressing. Take the yolk of one hard boiled egg, and the yolk of a raw one, and rub them together. Squeeze into them the juice of a small lemon, a salt-spoon of mustard, a teaspoonful of salt and half a salt-spoonful of white pepper. Stir again and add two tablespoonfuls of butter that has been slightly softened. When this mass has been stirred to a soft paste, spread it thinly upon each slice of veal, arrange the slices in a compact pile and press them together so that they will adhere. To serve, cut slices of medium thickness *across* the previously made slices and serve with cold potatoes that have been sliced and fried brown in the least possible quantity of butter.

—How He Felt About It.—"I would like to have this afternoon off, if you please." Senior Partner—"What is the matter, Mr. Penn?" "I wish to attend my wife's funeral. I feel that it is something that I ought to attend to personally."—Epoch.

Agricultural Notes.

CALIFORNIA.

Butte.

Fruit Crop Prospects.—Chico *Record-Union:* We have talked with all the leading orchardists in relation to the outlook for the fruit crop this year, besides inspecting many of the trees. The cherry and apricot crops will be extremely short, as they, being the early fruits, suffered the greatest damage from the hail and frost. The peaches will be produced in great plenty and of extra good quality. The fruit has set very heavily upon the trees, and in most orchards it will be necessary to have the fruit thinned. Six inches apart is as close as the fruit should be left upon peach trees, and if the fruit be left thus it will be as much as the trees can mature and produce good fruit. There seems to be an idea prevalent among certain classes of people that the fruit should be as thick upon the trees as it can hang in order that there should be a full crop.

Grain Crop Prospects. — Gridley *Herald*: In conversation with a great number of farmers from all parts of the county the first of the week, we found that the crop prospects were good in all quarters. On some low, wet, cold land, of course, the grain has been badly injured by the cold, wet weather. The north wind has helped the grain on the black land, as well as elsewhere, as far as we can learn. What the result of the cold snap and recent frosts has been as regards the fruit crop, we are unable to say.

Promising Outlook.— Gridley *Herald*: A few years ago our orchard area was very limited. Now it extends clear across the country to the Feather river, and each succeeding year witnesses a big increase devoted to fruit. Rio Bonito is our nearest colony; its 2000 acres of orchard presents a healthy growth and perfect cultivation. And the end is not yet. Every year now will see the prosperity of that section of country growing as rapidly as fruit trees grow in this favored locality. The land adjoining Gridley has in fact become too valuable for cattle-grazing and grain-growing; every acre of it is good for fruit, vines, nuts and berries. Palermo and Thermalito Colonies, in the citrus belt, appear as wonders of the age when it is known that the lands they include were but a few years past exclusively reserved to herds of animals. Now they are the home of the orange, fig, vine and olive, possessing the possibility of making, if not a thriving town, at least a prosperous and important village.

Colusa.

Grain Crop Prospects. — Gridley (Butte Co.) *Herald:* Grain on Grand Island is heading out rapidly. In Sutter county the wheat and barley fields are well forward in most localities. Butte has the finest-looking grain we have seen recently in four counties, and we have traveled considerably lately through Yuba, Sutter, Colusa and Butte.

Modoc.

Large Cattle Shipments.—Reno *Gazette*: W. H. Nelson, of Likely, Cal., has shipped this year 1720 head of beef cattle over the N. C. O. Mr. Nelson owns one of the most extensive ranches in the north. He cut last year 4200 tons of hay, and can put up twice that quantity if necessary. He is at the head of the Modoc Land and Livestock Co. and owns about 5000 cattle and 600 horses. Mr. Nelson is one of the most prosperous farmers and cattle kings at the north, and has earned his wealth by close attention to business and cool calculating judgment.

Monterey.

Sugar Beet Crop at Moro Cojo.—Cor. Salinas City *Index:* Nine hundred acres of land are to be planted to sugar beets. The soil (a black loam), was in fine condition, there having been a sufficiency of moisture to make a fine crop. Planting has already begun, and they would much prefer that no more rain should fall, as the weeds would not grow and the beets would require less cultivation. The crop prospect in that section for cereals was good, not up to last year, however.

Grain Crop Prospects.—Salinas City *Democrat:* Our reporter inspected the grain fields of Santa Rita and vicinity, Natividad and vicinity and the Alisal. Without individualizing, the crops between Salinas and Santa Rita will be fair. On the Newhall tract, better than the average, owing to the land having had rest. Much of this land has been devoted to dairying interests, and to insure good crops in the future there must be a rotation of crops and absolute rest. Particularly is this the case with the Espinosa and De la Torre land grants that have been farmed almost continuously since 1870. To the observer in passing along the regular traveled roads, the prospect for crops looks generally well, but get down from your buggy and go into the fields, and this mirage, so called, at once disappears. There are many places spotted that gave the appearance of being fine but were not.

Napa.

Vines Damaged by Frosts.—St. Helena *Star*: An investigation of the vineyards of Napa valley discloses the fact that the late frosts have done far more damage than was at first expected. From Calistoga to Napa all the vineyards in the bottom of the valley have suffered more or less, and the only exception is found in vineyards lying on the hillsides or those immediately at the foot of the mountains on the west side of the valley. Conn valley and Howell mountain fared no better according to last report. At a very low estimate one-half the crop is gone in Napa county. What the conditions are in Sonoma and Santa Clara counties we have not yet heard, but it is natural to suppose they have not escaped, as the frost of Sunday morning was general throughout the bay counties. One thing is sure and certain. The next vintage, at the least, will be a short one and far under the requirements of the trade. If the present conditions do not raise the price of wine, it will be because the dealers have become independent of the producers and have become producers themselves in their five-story brick vineyards. In conversation with Mr. T. Moloney, foreman of W. B. Bourn's "Rockland" vin yard, betwe n St. Helena and Calistoga, he said he had made a trip down the valley to investigate the condition of his employer's vineyard near Rutherford, and was surprised to see the great amount of damage done by the frost of Sunday morning. He said it seemed to start in the northeast portion of Mrs. McCord's vineyard and swept through about one-half of Mr. Bourn's place, turning the leaves and buds of fully 150 acres of vines perfectly black. The Chasselas, Grauss Bleau, Grenache, Carignan, Malbec, Pedipediux and a few other varieties have been bitten so badly that there will not be a grape on the vines. The vineyards of Ex-Sheriff Harris, C. P. Adamson, J. B. Atkinson and many others are also injured. It is needless to add that the result will be a very small crop this fall, and it is doubtful whether there will be half the wine made in Napa valley this year that there was last.

San Benito.

Bad Winter on Sheep.—Hollister *Advance*: In a case on trial in the Superior Court last week, several sheepmen testified that this winter has been the hardest on sheep since 1877. One sheepman testified to losing 2000 out of 9000, by starvation. The percentage of lambs lost was over 50.

San Bernardino.

The Crop Prospects.—Alessandro *Orange Belt*: The grain is up from 12 to 14 inches to a foot and a half and is growing strong and vigorously. Hundreds of acres of as fine appearing grain as one could possibly wish to see covers the country, and everything points to one of the most profitable harvests in Southern California. The rains this year, while they have not been excessive, have come at good times, and each fall has been of the penetrating, soaking kind which does so much good. As a natural consequence, every one will have a crop, even though there be no more rain, and it is hardly time yet to look for dry weather. Those who planted alfalfa fields a month ago are beginning to see them cover the ground in a promising way. The old alfalfa fields have been growing fast for the past six or eight weeks, and on the 24th ultimo Giles Brown cut his first crop for the season. Others are now beginning to cut, and in another week alfalfa hay will be hauled to R dlands for sale.

Riverside Fruit Notes.—*Enterprise*: A visit to the various packing houses of the city shows that the orange market is not what it was this time last year. The season's crop will soon be harvested and disposed of. The prices are lagging, and orders come in slowly. We find that some weeks 40 or 50 carloads are shipped, while other weeks there are but few sent out. The several packing establishments at Arlington and Casa Blanca have been shipping a corresponding number of oranges. However, in a few weeks the season will be practically over. The packing house of Boyd & Silver employ eight or ten packers, and ships on an average five cars per week. The Fruit Growers' Packing Company employ six or eight packers. That company will, for the next six weeks, ship on an average one carload a day. The later shipments will be Mediterranean Sweets. The Griffin & Skelley Company employ nearly a dozen packers. The season with them is practically over. Cook & Langley's packing house has been closed several days, but they will begin packing some time this week and will employ five or six inside hands. The packing of Mediterranean Sweets will finish the season with the Earl Fruit Company. We understand this company intends to ship from its house in this city not less than 240 carloads for the season. They have already shipped about 230. W. R. Strong & Company are employing eight or ten packers, and are shipping six or seven carloads a week. Frank Devine's house ships some weeks 15 cars, and other weeks but few. He employs six or eight packers. The Twogood Fruit Company packs but few oranges, laying off its hands once or twice a week. It has shipped the bulk of its pack, of course, and is just closing. The orange season this year did not require more than one-half the hands of last year. The coming peach, pear, apricot and raisin crops all promise to be exceptionally good.

Sugar Beet Crop.—Chino *Champion:* Chino beet fields now present the busiest appearance of any place in this county. About 300 men are at work on the beets, of whom some 110 are thinning. The crop is looking fine and growing as vigorously as any one could wish for. The second planting on some fields is well up, and in nearly all cases is a splendid stand. If nothing unforseen occurs later, we have reason to expect a splendid crop this year in general. One thing is sure—never did farmers do better work in their fields than is being done here this spring. From one side of the Chino ranch to the other is a perfect garden, level, smooth, clean, well-cultivated and covered with long straight rows of bright green foliage of beets, healthy, vigorous, and promising to the farmer ample reward for his labors. Probably about 300 acres will be planted yet, most of which will be done this month.

San Diego.

First Receipt of Wool.—S. D. *Sun:* The first wool of the new crop has been received at the warehouse of W. W. Stewart & Co., and is of the usual fine quality of San Diego county's production. This shipment consists of 66 bales and weighs about 40,000 pounds. This is two days later than the first receipts last year. It is estimated that the crop this year will be about 250,000 pounds.

Hay-Cutting on the Mesa.—Otay *Press:* Hay-cutting for the season has commenced on the San Miguel mesa. Geo. Johnson and J. Rooney commenced cutting their 260 acres on Monday; Chas. Sciss is cutting 25 acres; Mr. Jacobson is cutting his 175 acres, and others will soon commence the cutting of the 8000 or 9000 acres that are estimated to have been sown on this mesa.

Crop Prospects in Chollas Valley.—Cor. National City *Record:* Some of the late sown wheat and barley, even on the dry mesas, are doing wonderfully well considering the long dry spell, and much hay will be cut in the aggregate. Barley looks better generally than wheat, and the red oat crop is the most backward of all. The price of good old wheat hay keeps up to $17 by the ton in San Diego, which looks steep at this season.

San Luis Obispo.

Creamery at Huasna in Operation.—Santa Maria *Times:* Tom Steele's dairy is now in full operation with the new cream separator and other improvements. This is one of the few dairies that has been kept running all winter and always obtained the top price for butter. He is now busy fencing the west line of the Huasna grant, which will completely enclose the entire ranch.

Santa Clara.

Fruit Crop Prospects Around Campbell. Cor. San Jose *Mercury:* The canker worm is putting in good time in its last year's haunts, but has not found its way into this immediate vicinity. The orchards on Meridian road and Leigh avenue seem to suffer most. Thinning of apricots has begun in earnest. It is noticeable that the Moorparks do not need thinning this year. Peaches have taken the freak of doubling badly this year. What effect this will have on the crop as a whole is yet uncertain. Prunes are well set, and will be a large crop.

Santa Cruz.

Sugar Beet Crop Prospects.—Watsonville *Pajaronian:* The contracted acreage for sugar beets in Pajaro valley this season aggregates nearly 2000 acres. Over half of this acreage has been planted, and the beets are up on over 400 acres and show a remarkably good stand. Thinning was commenced in four fields this week. The season has been extremely favorable for this business, and but a limited acreage has had to be reseeded. The work of the crop is nearly a month ahead of last year. All indications point to a big year for the factory, and the beet crop will most probably be the largest ever harvested in California.

Santa Cruz.

Successful Berry Culture.—S. C. *Sentinel:* Mrs. McCann is making a success in raising berries on four acres of land for market. For the past three weeks shipments of strawberries have been made daily to San Francisco. On an average, 100 boxes a day are sent away to satisfy the palates of San Francisco epicures. Three men are engaged at present in picking the berries. Each man picks, on an average, 120 boxes a day. Soon, 20 boys and girls will be employed. Some of them have been picking the berries for five years, so that they are now experts. This year, Mrs. McCann has planted 50 new varieties of berries, which she received from the East. Next week, the raspberries will be ready for market. Mrs. McCann acts as general manager, secretary and treasurer, and apparently has a personal acquaintance with every plant on the place. She can tell their history, productive qualities, and the flavor of the berries. She also has an orchard of 16 acres in Glen canyon, in which she has planted 5000 trees and 10,000 berry plants.

Solano.

Apricot and Prune Crops at Vacaville.—Cor. Dixon *Tribune:* Although the apricot crop is somewhat spotted, orchardists think that the coming crop will be equal to that of last year. Some of the growers complain that the prune crop will be unusually light.

Sonoma.

Swiss Agriculture.—Petaluma *Courier:* The Italian-Swiss Agricultural Colony, which has an estate of 1500 acres above Healdsburg, held its 11th annual meeting on the 15th inst. The report of the secretary showed that the assets of the corporation amount to $393,000; the liabilities are $72,000. They have 700 acres in grapes, 100 in orchard and 200 acres in grain and vegetables.

Stanislaus.

Grain Crops.—Westport Cor. Modesto *Herald:* Grain is doing well, considering all drawbacks, and with anything like favorable weather from this time on, the yield will be good, but not near the amount expected by some. Barley shows up to a better advantage than wheat.

Tulare.

Dewberry Plants.—Grangeville Cor. Visalia *Delta:* Monroe Burrell has several dewberry plants. They produce more than a blackberry bush, yet in appearance and taste they are about the same, but the dewberry is about three weeks earlier. It grows on the ground, but can be trained to climb.

Profit in Pigs.—Tulare *Register:* D. O. Hamman sent a load of young shoats into town and sold them, not as material for pork, but as stock hogs, and he says that they pay him as well as he asks to have things pay. Mr. Hamman says that pigs of good breed will, at 11 or 12 months, weigh 200 pounds each, with nothing but alfalfa to live on, and will be worth eight to ten dollars each, owing to the condition of the market, and that they pay. He expresses the opinion that good Poland-China hogs pay better and do better than the common California hog, and cause less trouble. When fattening time comes a little corn or waste fruit, watermelons or pumpkins, will harden the flesh and make good eating.

Ventura.

Bean-Planting.—Cor. Hollister *Free Press:* If putting the ground in good condition will insure a crop of beans and corn, the farmers ought to be rewarded with good crops this year, as they seem to have the ground about as clear of weeds and as mellow as it is possible to get it. A few have commenced planting, but generally they are waiting for warmer weather. The two or three frosty mornings this week looked as though the time for planting had not come yet. We hear all kinds of predictions in regard to the moisture in the ground of late. Some think more rain is needed, while others seem to think more rain would be injurious.

NEVADA.

Purchasing Beef Steers.—Pioche *Record:* Mr. Joseph Coumerilh, as agent for B. F. Saunders of Salt Lake, is around contracting with cattlemen for beef steers, to be delivered at the Springs, eight miles from Desert station, in the months of May and June. During the past ten days, Mr. Coumerilh has securred some 1200 head in this vicinity, and will materially increase the number before the time for delivery arrives. He came up from Pahrangat valley on Monday, where he purchased 200 head from A. W. Geer, some of which are said to be the finest beef ever offered. Current prices are: Yearlings, $9.50; two-year-olds, $14; three-year-olds, $18; and four-year-olds, $20, which prices are deviated from, however, in cases of prime quality.

ARIZONA.

Stock Notes.—*Stockman:* Grass is growing beautifully on our ranges since the late rains and following warm weather. Mortality among stock, in most localities, has about ceased, and the outlook is encouraging enough. Large numbers of cattle have been shipped during the past several weeks, and in another month many thousands will go north, east and west to the feeding grounds, relieving our ranges to no small degree, and in a year from to-day cattlemen will almost have forgotten we had a drouthy season at all. It is believed large numbers of female stock will be spayed—an action necessary for a year or two—which, when put on the market, will give cattlemen surplus cash, and, at the same time, allow the range to recuperate to a considerable extent. Those who look at it rationally believe that the drouth was actually beneficial.

OREGON.

No Hop Lice at Dallas.—Salem *Statesman:* Hopmen of Dallas say that what are taken for lice are not the lice that devour the hops, but simply root lice, which appear on all kinds of green vegetables at this season of the year, and come from around the roots, where they have lain dormant during the winter. Their opinion is based on the statements made by eminent scientists, and must be believed. They also say that the weather has been too cold for the young and tender hoplouse to make its appearance, but believe that it will come later on.

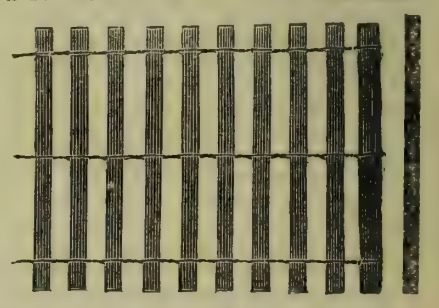
RABBIT-PROOF

STOCK FENCE!

Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to

JUDSON MFG. CO.,
14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

FOR SALE.

THRASHING ENGINE.

A 15 horse power Payne. Has been used but little and is in first-class condition. Cost $900. Will sell for $500 on account of having no use for it. For particulars address

T. LILIENCRANTZ,
Aptos, Santa Cruz County, Cal.

WANTED, HORTICULTURAL POSITION, as foreman or manager, by a young man (married) with skill and experience in fruit growing and nursery. Very best references furnished. Address, HARVEY C. STILES, 54 Manvel, San Diego, Cal.



The most reliable machines the world has ever had are made for 1892 by

WALTER A. WOOD MOWING & REAPING MACHINE CO.

WOOD Binders	WOOD Twine	WOOD Mowers	WOOD Reapers	WOOD Rakes

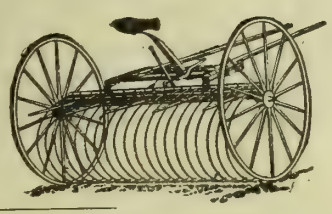
EXAMINE THEIR FAULTLESS QUALITY.

THE PERFECT RAKE—3 SIZES.

NEVER OUT OF ORDER.

Any One Can Use It. Shafts can be Changed into a Pole for Two Horses.

SIMPLE, STRONG, SUPERB. Self-dump.



ADDRESS

FRANK BROTHERS, 33 & 35 MAIN STREET, SAN FRANCISCO,

OR, **WALTER A. WOOD M. & R. M. CO., 68 & 70 FRONT ST., PORTLAND, OR.**

Factories at Hoosic Falls, N. Y., and Minneapolis. Agencies Everywhere.

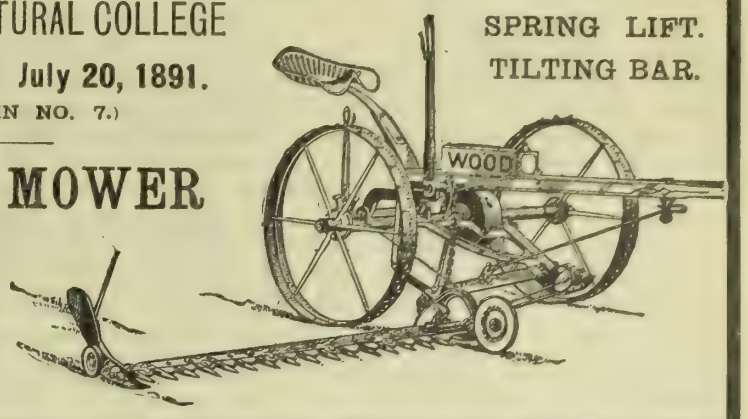
Government Experiment Station,

UTAH AGRICULTURAL COLLEGE

LOGAN, UTAH, July 20, 1891.

(BULLETIN NO. 7.)

SPRING LIFT.
TILTING BAR.

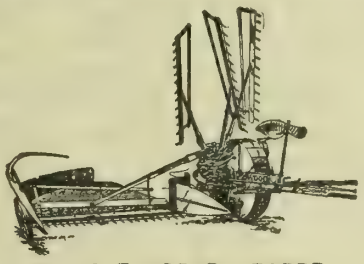


WOOD MOWER

Shows Draft Only

215 Lbs.

IN CLOVER.



EN LO ED GEAR REAPER.

THE BEST EVER USED.

WINTERS, CAL.

FRANK BROTHERS, S. F.:

GENTLEMEN—**The two 5-foot Walter A. Wood Mowers** I purchased of your agent, R. Morrison, **are the best I have ever used. They are light draft, strong and durable, cut clean and are simply constructed.** I am much **pleased** with them, and **cheerfully recommend** them to anyone needing **a first-class Mower.**

C. GOSLING.

STEEL HARVESTER & BINDER,

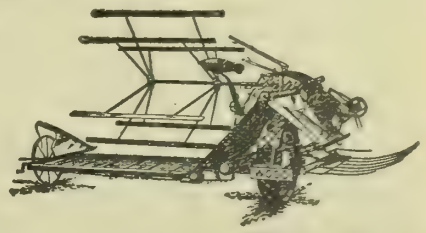
WITH STEEL BUNDLE CARRIER,

One Draper Only is used, securing Great Lightness of Draft, Ability to Handle any grain and Economy in all ways.

The Binder is Absolutely Sure. It Takes Care of Itself.

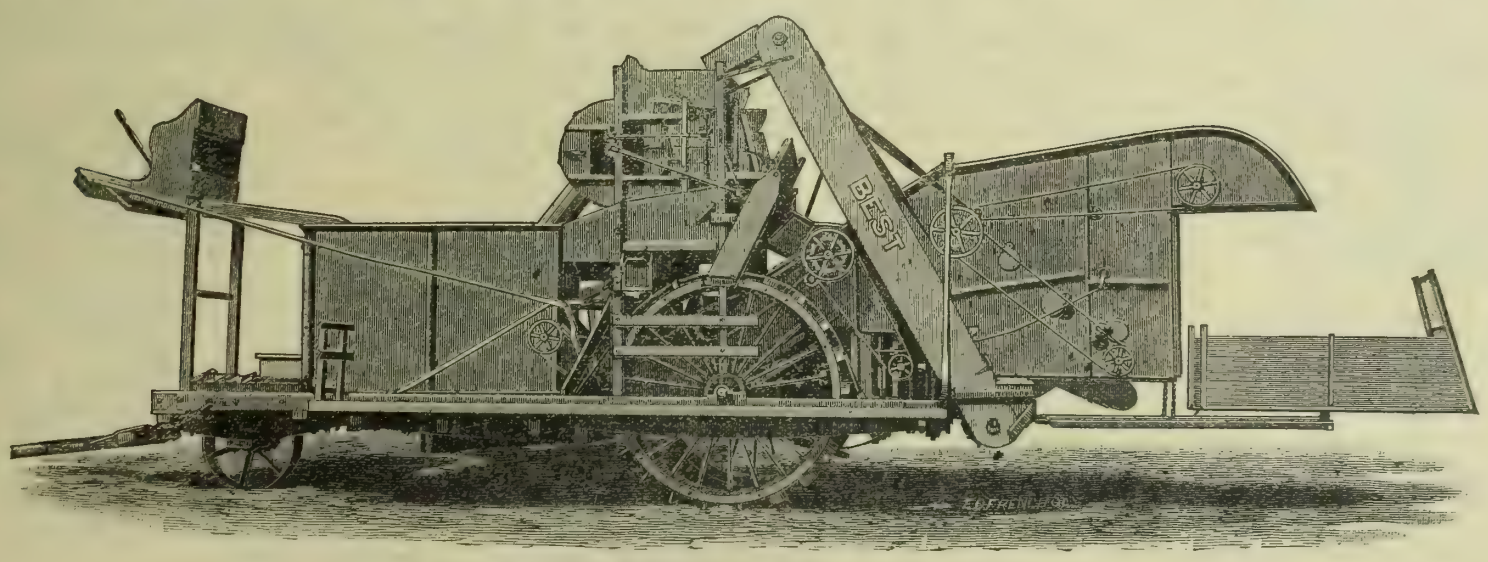
The IDEAL HARVEST MACHINE.

You Drive, the Machine does the rest.



AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

Evolution of Inventions.

A new departure will be made by the patent office at the World's Fair at Chicago. Hitherto it has never attempted to go beyond an exhibition of photographs and drawings. In this instance it will offer an elaborate and comprehensive display of models. The show will be designed to illustrate as completely and vividly as possible the age of mechanical civilization. It will give in concrete form a picture of the the progress of invention.

The Commissioner of Patents says that the great exhibit of the patent office will not be displayed. All that will be attempted in the show proper of his bureau will be to illustrate the processes through which those achievements have been perfected. For this purpose, groups of models will be prepared. For example, one group will represent the progress of the steam engine, beginning with the first one, which was built 150 years before Christ, by a Greek named Hero. It had a boiler, and was able to do work by means of a shaft and belt attachment. From this primitive contrivance to the modern Corliss engine, in miniature, an interesting series will extend.

Other groups will be similarly arranged. One will represent the printing press, all the way from Guttenburg's original invention to the rotary Hoe machine, which turns out newspapers at the rate of many thousands per hour and folds them ready for delivery. In electricity, wonders of all sorts will be illustrated by progressive series. There will be telephones running all the way from the primitive conception to the perfected instrument now in use. The telegraph will be introduced with the actual instrument made by Morse, by which the first experimental messages were sent over the wire from Washington to Baltimore, this line of discovery culminating with the latest devices for printing messages at any distance with type and transmitting one's own handwriting across thousands of miles of space in a fraction of a second. The growth of the locomotive will be shown in like manner; also that of the sewing machine; of the marvelous modern agricultural implements from primitive types; of clocks, from the water clock of ancient Babylon and the later hour-glass, etc.

Many of the models required for these groups are already in the possession of the Patent Office, but a large number will have to be constructed especially for the purpose. Manufacturers all over the country will be asked to supply specimens of their products for representing the latest developments of inventive art. The locomotive works will be requested to lend miniature models of their newest engines. Makers of agricultural tools and sewing machines will contribute the most improved specimens of their handiwork. Likewise with printing presses and everything else. Few, if any, of the mechanical models will be set working, however.—Washington Star.

Patrons of Husbandry.

The State Canvass.

The Northern trip of Past Master Overhiser and of Lecturer Huffman has not turned out to be a great success. Mr. Huffman writes from Orland to the State Secretary as follows: "We left home for a swing around the circle April 17th. We arrived in Vacaville on the evening of the 17th, aud met Vacaville Grange on Monday, the 18th, conferred the third and fourth degrees in the forenoon, but in the afternoon nothing was accomplished. The farmers were all too prosperous and busy to spend any time to learn anything of interest or that would be beneficial to them, and with all the thunder that we possessed we could not awaken any interest in them. That other fellow (the earthquake) stepped in and demonstrated the fact to the satisfaction of all that there was a supernatural power that could waken them from their reticence. On Tuesday morning, after the temblor, all the farmers had time to come to town. They were not half so busy as they were on Monday. It seems to me sometimes that we will have something similar, if not quite as heavy, to waken farmers from their lethargy, or we will all have passed into oblivion and under corporate control for all time, equal to Rome, when ballots will not save the producers. But suffice it to say we got out of there, and have pursued our way northward. At Grimes the Patrons and others got waked up, and, on the 27th of April, Brothers Flint and Frisbie will reorganize them and place that Grange as another star in the galaxy. The encouragement at that point exceeded our expectations. We left there at the time of the shake. At Maxwell we were met by that true and tried Patron, Bro. A. D. Logan, and a member of Antelope Grange, who has accompanied us on our way thus far. At Maxwell an open meeting was held in the forenoon, but as to results, I think there will have to be some more electricity applied than we possess to get the farmers waked up. In the afternoon a closed meeting was held, and we hope it will result in good. But time will tell better. We left Maxwell for Orleans, and succeeded in giving an open meeting in the afternoon, but as to results it is doubtful. In my humble opinion it may take a house-to-house canvass to build up the Grange, but the outlook is somewhat more favorable. We should have had two, three or four days at a place, just as circumstances required. From here to Antelope, Millville, etc., at some of the places we are to go, I fear our visit will be of no value. We had no one to correspond with, and so our trip is more or less of a prospecting tour. At Chico they have a picnic on the 6th of May, which will knock out everything there prior to that time. They have posters out all over the country."

The Reorganization at Grimes.

Concerning the meeting at Grimes, upon which Mr. Huffman touches in his correspondence, we have a fuller account from the Secretary, Mr. A. A. Thayer. He writes: "In accordance with arrangements heretofore announced, Bros. Huffman, Overhiser and Frisbie paid Grimes a fraternal visit on April 20th, and as the announcement had been pretty well circulated throughout the vicinity, there was a large and respectful crowd at the hall to meet them. Bro. Overhiser explained what the Grange had done and what it was trying to do. After his address, which lasted about an hour, there was an adjournment for lunch, and upon reconvening, Bro. Huffman spoke, and, among other things, explained the working of the new ballot law, which was listened to with close attention. After remarks by Bro. Frisbie and others, the proposition was made to reorganize Grimes Grange, and it met with unanimous approval. It was found that 20 old members were present, and five more expressed their wish to become members. After dismissing the open meeting, the hour was found to be so late that it was decided to postpone organizing until April 27th, at which time Bros. Frisbie and Flint of Sacramento will be present. So you see the prospects are good that Grimes Grange will soon be in a flourishing condition again."

Past Master Flint's Trip.

Past Master Flint, in reporting to the State Secretary concerning his recent trip to Tracy, Lodi, Stockton, Clements and other points in the San Joaquin valley, says: "Bros. Walton, McConnell, Caples, Huffman, Berry and Senator Langford gave me the best kind of support, and I consider that our efforts were fully appreciated, and will be the means of adding more to our ranks. I spoke from two to four times a day, and instructed three classes in the Second Degree, one class in the First and Second Degrees, and two classes in the Third and Fourth. We have been received and entertained in the kindest manner, and transported to our several appointments free of charge. I was constantly among agreeable and entertaining companions, and the trip proved a round of pleasure."

The Worthy Master.

No report has been received at the office of the State Secretary in San Francisco of the doings of Worthy Master Davis during the past week. He spent Saturday in the city, in attendance upon official duties, and during the week has not been idle, though we have no specific account of his work. The Dixon *Tribune* of the 22d inst. speaks of his presence with Dixon Grange on the preceding Saturday, characterizing the meeting as one of the most interesting ever held by that body. After a business meeting in the morning, the general public was invited to join in a sumptuous feast, after which, addresses were made by Past Master Coulter and Mr. Davis. Speaking of Mr. Davis' remarks, the *Tribune* says: "This was Mr. Davis' third visit within the current year, but he was not at a loss for fresh topics. Although Mr. Davis terms himself a 'plain farmer,' he is a highly educated and cultured gentleman, and one of the most fluent speakers ever heard in Dixon. California never had a more able exponent of the Grange doctrine, and no one, whether a member of the Order or not, could fail to be benefited by his talk. He is deservedly very popular with the members of Dixon Grange, and they look forward to his visits with anticipation."

The Yuba Picnic.

The Yuba City *Farmer* of April 22d has the following concerning the Grange reunion and picnic to be held on May 6th: "The Grange Reunion and Picnic Committee held a meeting last Monday afternoon and discussed plans, etc. It was decided that the Order take charge and conduct the dinner tables and also the temperance bar. The subcommittees made reports. The work so far shows that there will be a complete program of races, games, etc., with liberal prizes for the same and also for exhibits of cut flowers, grain, etc. The Marysville Independent brass band has been engaged, and also the Yuba City orchestra. A merry-go-round will be in attendance to amuse the little folks. The ball in the evening will be one of the main features, and a good platform is now being contracted for. Posters and newspaper ads will keep the public informed on all new developments.

Farmers' Alliance.

The Rural went to press last week before the meeting of the State Alliance Executive committee in this city had concluded, and, it will be remembered, just after the resolution had been passed supporting Pres. Marion Cannon in his attitude concerning the Nicaragua Canal. It is very evident, from expressions of members of the Committee, that Mr. Cannon's attitude was entirely satisfactory, and that there would be no wavering, so far as the Committee themselves were concerned, in giving him full and cordial support. It was the feeling among the members and the direct expression of the Committee that they were in favor of the construction of the canal, though, as the Rural looks at it, their position is, in a practical view, directly antagonistic to the canal project.

The question next in importance to the canal discussion related to the establishment of an official Alliance organ in this city. The sentiment of the members of the Committee was unanimous in support of the project, but they did not succeed in accomplishing anything. The question is still an open one, however, and it is announced that within 30 days, or at the farthest by the 4th of July, a strong daily newspaper will be established in San Francisco devoted to the interests of the Alliance. We suspect that those who are most hopeful concerning this matter have very little idea of how much it costs to print and establish a daily newspaper.

At a meeting of the Contra Costa County Alliance held April 15th, the following resolutions were passed:

Resolved, That it is the sentiment of this County Alliance that the rate of license for keeping a saloon in which malt and spirituous liquors are sold in Contra Costa Co. should not be less than $200 per annum.

Resolved, That applications for license to keep a saloon in this county should be signed by at least twelve (12) qualified electors residing in the school district in which the saloon is situated, twelve (12) of them being freeholders.

Resolved, That we, as members of the Alliance, do hereby pledge ourselves not to support any candidate for Supervisor in our respective townships unless he is pledged to the foregoing resolutions.

At the same meeting Mr. Geo. P. Elliott, a farmer of Hollister, made a stirring speech, winning a great deal of sympathy from his audience. He advocated an increase in the circulating medium, Government ownership of railroad and telegraph lines, the abolition of national banks, a seventh day of rest for all classes, and the emancipation of politics from the saloon interest. As one step along this line, he advocated the enlistment of a million men, if necessary, to build a railroad across the continent, said road to be owned by the Government and operated in the interest of the people, the expense of building to be paid by an issue of treasury notes good for all debts, public or private.

H. C. Wetmore, the Secretary of the meeting, to whose courtesy we are indebted for these notes, remarks by way of comment: "The hearty applause which greeted Mr. Elliott's allusions to temperance and a Sabbath law shows that there exists in the community a desire for a higher state of morals in politics than is evidenced by the old political parties."

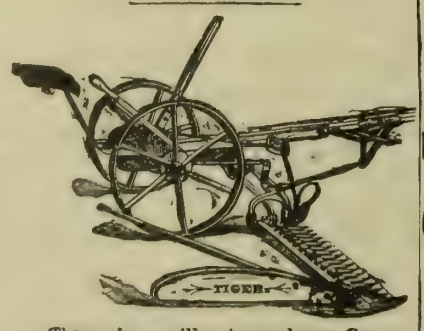
San Diego Resolves.—The San Diego County Alliance at its last meeting reindorsed the resolution passed at the Murrieta meeting, recommending the passage of a law for the purpose of more accurately collecting the tax on mortgages—that each assessor be furnished a stamp to be used on mortgages when assessed and any mortgage not bearing the stamp of the assessor could not be collected by law. Also President Cannon's message advocating the Government owning the Nicaragua canal. Also recommending that women be given the ballot.

Unitarian Literature

Sent free by the Channing Auxiliary of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. B. F. Giddings as above.

UNEXCELLED—"OUR THREE LEADERS"—*UNEQUALLED.*

TIGER.



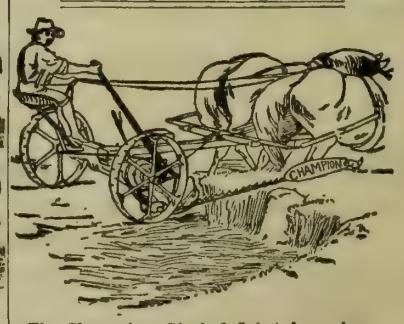
Three sizes—will cut anywhere. Guaranteed—equal to any—superior to most. We have handled this Mower for years and know of its merits well. Write us and we will tell you about it, and give you prices.

ADRIANCE BUCKEYE.



This is the Buckeye which has been sold for years on this Coast. Everybody is familar with the name. Look out for inferior imitations. The Adriance is the genuine. Write us for prices, etc.

CHAMPION GIMBAL JOINT.



The Champion Gimbal Joint has absolutely no lost motion. It ranks as the equal of any machine made. It has no superiors. The Gear can not wear out. Cutter bar can be folded up or down. You should get our prices and circulars before purchasing elsewhere.

BAKER & HAMILTON, San Francisco and Sacramento, Cal.

ONE HUNDRED THOUSAND!!!

Of what? Of sturdy, thrifty settlers wanted, to occupy the

KERN RIVER VALLEY, CALIFORNIA.

The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

ALL UNDER IRRIGATION, ALL FOR SALE.

SOIL A RICH SEDIMENT DEPOSIT FROM TWENTY TO ONE HUNDRED FEET DEEP.

Produces all fruits possible to both the temperate and semitropic zones.
The home of the peach, apricot, nectarine, pear and raisin grape.
Fine farming and stock raising country.
Land ready for cultivation when you buy.
On main line of the Southern Pacific railroad.
Land under the largest irrigation system in America.
Owned by the largest land company in California.

The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

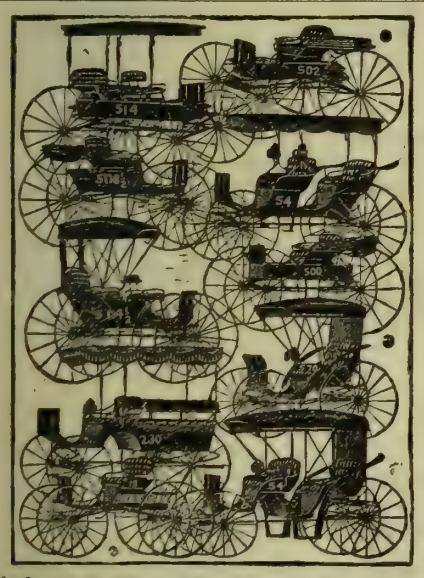
No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

This Company is incorporated and has a capital of ten million ($10,000,000) dollars. Can give better prices and terms than any other land company in California or elsewhere.

—— FOR FURTHER INFORMATION, ADDRESS ——

KERN COUNTY LAND CO.,

S. W. FERGUSSON, Agent. **BAKERSFIELD, CALIFORNIA.**



We have the Finest and Largest Carriage Repository on the Pacific Coast.

For prices and full particulars, address

TRUMAN, HOOKER & CO.,
San Francisco and Fresno.

BE HAPPY WHILE YOU LIVE, FOR YOU WILL BE A LONG TIME DEAD

To be Happy buy a

DANDY STEEL MILL

AND A DANDY STEEL TOWER.



We Make the Challenge, Tilty and O.K. Wooden Mills, and a Full Line of Pump Heads, Cylinders, Tanks, Grinders, Shellers, Etc.

With graphite boxes the **Dandy Wind Mill** requires no oil for years, therefore no more climbing towers, no more tilting towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and **Will Be Sent to Good Parties on 20 Days Test Trial.** If not satisfactory freight will be paid both ways. The **Dandy Steel Tower** is a **Four Corner Tower**, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

Challenge Wind Mill & Feed Mill Co.,
Batavia, Kane Co., Ill.

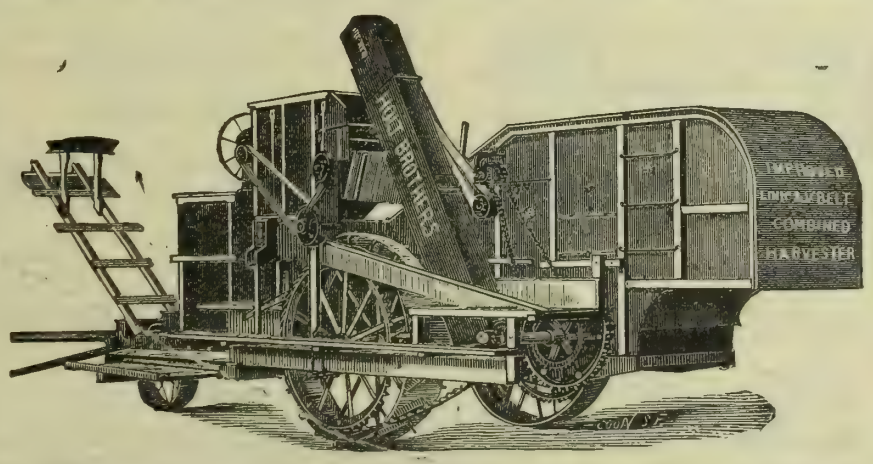
J. F. HOUGHTON, President, J. L. N. SHEPARD, Vice-Pres.
CHAS. R. STORY, Sec'y, R. H. MAGILL, Gen. Ag't.

Home Mutual Insurance Company,

N. E. Cor. California and Sansome Sts.,
INCORPORATED A. D. 1864. **San Francisco.**

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 19

HOLT BROTHERS' Improved Combined Harvester.



For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. **or,** **HOLT BROTHERS CO.,** 30 & 32 Main St., San Francisco.

DEDERICK HAY PRESSES.

BEST ON THE MARKET.

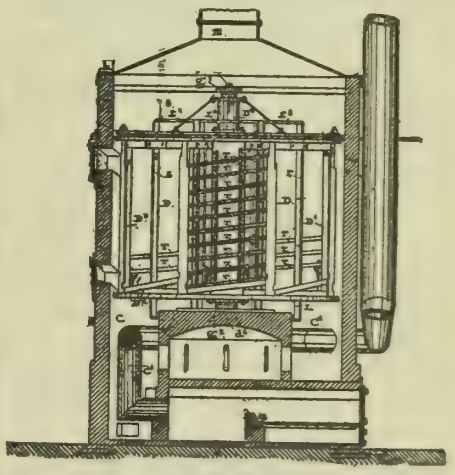
PATENT FULL CIRCLE LEVER HORSE PRESSES,

All Steel, with Automatic Feeder and Condensing Hopper. Also

PATENT CONTINUOUS REVERSIBLE LEVER PRESSES.

Write for Illustrated Catalogue and Prices.

Hawley, King & Co., Los Angeles, Cal.



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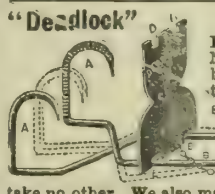
BECK FRUIT EVAPORATOR

This unequaled apparatus is constructed on a new and novel principle, by which its capacity for rapid and uniform evaporation of fruit is attained to a degree that is wonderful. It creates a rapid and continuous current of hot air and distributes it equally and uniformly over every portion of the fruit surface, carries off every particle of moisture as fast as extracted and leaves the fruit bright and clear and of excellent flavor.

Send for circulars. Address

T. & W. A. BECK,
Watsonville.

"Deadlock"



GOPHER TRAPS.

Improved for 1892. Never fail. Fish-hook jaws. Double triggers. No loose joints to be repaired. Any child can set them. 25 cts. ea. or $3 a doz. deliver'd

Ask or write for them & take no other. We also make the **SUICIDE DOUBLE-END TRAP.** Price 30 cts. each. The only trap which catches coming from either end. Send for both traps.

IRA F. WHITE & SON, Pomona, California.

UNION IRON WORKS,

SACRAMENTO, CAL.

ROOT, NEILSON & CO.,

MANUFACTURERS OF

Steam Engines, Boilers,

AND ALL KINDS OF

MACHINERY FOR MINING PURPOSES.

Flouring Mills, Saw Mills and Quartz Mills Machinery constructed, fitted up and repaired.

Front St., bet. N & O Sts., Sacramento, Cal.

ENTOMOLOGICAL.

Questions Concerning the Smyrna Fig.

SAN FRANCISCO, April 4, 1891.

TO THE EDITOR:—As I have been asked different questions in regard to the Smyrna fig and its relation to the gallwasp, I think it convenient to answer them in your esteemed paper instead of answering separately in different letters.

1. Do you think the fertilization, and in consequence the officiating insect, necessary for the production of the Smyrna fig?

I am convinced it is necessary from the time I learned the views of Prof. Count Solms Laubach, but I confess that, like many others, for a considerable time I have been a skeptic in this matter, and considered caprification a superstition, although I should have known that there exists no superstition that is without some foundation. Superstition always rests on misunderstood or wrongly interpreted facts, and in this case caprification, if a mere superstition, could not have lasted 3000 years if its believers had not seen real benefits resulting from its practice.

2. Are you certain that the blastophaga introduced in spring or summer perishes without offspring?

As to the fact—yes.

As to my explanation, I am not quite certain. There are several explanations possible, but the fact has been noticed and decribed 3000 years ago by Theophrastus, is confirmed by modern investigation, and here in California also by several failures in the permanent introduction of this insect.

3. Are you certain that the blastophaga can be found in the wild fig during winter?

Yes, because all real gallwasps hybernate in their winged form, with the sole exception of the genus *Teras*, of which I know a European species *Teras Terminate*, which passes the greater part of the winter in the larva state. This exception probably extends to our California *Teras* and may have its cause in the fact that the species of *Teras* inhabit galls of organs that remain in connection with the tree, viz., branches, while all the other gallwasps, as far as I know, produce their galls on deciduous organs, viz., leaves or flowers. The genus *Andricus*, for instance, the cause of galls in the catkins of oaks, falls down with the withering catkin, and consequently has an exceedingly short existence in its larva state.

4. Are you certain that the Smyrna insect will be found in Northern Mexico or elsewhere at a distance nearer California than Smyrna?

Not the Smyrna insect, but another insect doing the same service. In the year 1865, Major Preiss, living near Guaymas, sent me, among other things, some figs of a native tree, which he described as being highly ornamental. These figs must have swarmed with the little parasite, because the cotton and paper were full of dead ones. At that time the observation was without practical value, but later, when the fig question was frequently discussed, I recollected the fact. Since that time I have spoken to several people about the matter, have sent at different times gentlemen to the district, but never obtained anything else except the pierced seeds of the fig, which fact proves that the insect had been there, but had escaped. Such seeds I have received from Lower California, Mazatlan and Hermosillo. H. H. BEHR.

Army and Navy Supplies.

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New York Tribune.

Large purchases of baking powder have recently been made by the United States Government. In one lot 80,000 pounds were bought of the Royal Baking Powder Company.

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Electrical Fog Annihilator.

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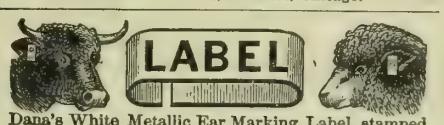
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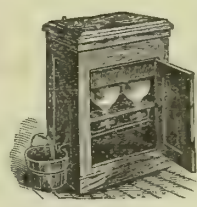
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HORTICULTURE.

Success and Failure of Different Fruits in Livermore Valley, and Why.

An essay by W. P. BARTLETT read before the Alameda County Farmers' Institute at Livermore.

The dry climate of Livermore valley, so unlike that of the portion of our country skirting San Francisco bay, has, until late years, repelled the horticulturist.

A few family orchards were planted, from time to time, and conscientiously neglected all the time; and it is within the past ten years that an orchard of more than an acre or two in extent could be found in Murray township. We have to-day upward of 1500 acres of commercial orchard, all young, cared for properly, and protected from disease and the assaults of insects.

These plantings have mostly been made with a clear discernment of the needs of the various fruits, in the matter of soil and climate, and it is therefore probable that the proportion of failures will be less than is usual in inaugurating an industry in a new country. I once heard a prominent orange grower at Riverside, who began when land could be bought for little or nothing, say, that he had better have paid a thousand dollars an acre and had it with the experience he had gained in planting wrong varieties.

But fortunately there was, for the keen men who were our first orchard planters for profit, an infallible guide to success. This day it may seem strange to so state in view of the poor, broken-down, forlorn-looking, neglected orchards of the wheat farmer, pointed at by every one as proof that fruit-growing was a failure in this valley. Remnants of these orchards still exist in favored localities; where fairly well cultivated, entire plantings exist and bear fruit. But generally only a few trees remain. And these are what? The pear, the almond and the apricot. The rest are either dead or merely dragging out a miserable existence. Apple, peach, plum, prune, cherry, all have succumbed to neglect and bad management, only these, then, being left to tell the tale. The almond and pear produce considerable fruit. The apricot misses pruning and is sulky, but makes a large tree nevertheless. There is a small orchard near the Martin ranch, seven miles north of Livermore, where the trees are but 19 feet apart, have been neither pruned nor cultivated for 12 years, and are open to the incursions of stock. Yet the pear trees bear heavily every year. I have seen barrels of fruit on a single tree.

With good cultivation, on rich soil, the pear flourishes here, delighting in our dry air, which represses the slug and prevents mildew, that enemy of the sets in moist climes. The fruit, too, is large and firm, and will stand shipment as that grown in fogs will not.

The almond has been largely planted here and is essentially a dry-air tree. It is later in coming into bearing here than in some other localities, but is a heavy producer when it does begin bearing. Mr. Hatch's El Primo orchard, planted in 1886, bears its first fine crop this season, though the trees are of large size. No insect enemies have appeared.

The apricot bears young, makes a fine, large tree, stands erect against the wind, and unless its tendency to overbear is strongly checked by either spartan pruning or heroic thinning, the fruit is apt to be small. Its only insect enemy so far is the junebug.

The peach does well here in protected spots, on naturally subirrigated land.

The olive thrives, and after the third year makes a vigorous growth, bearing in the sixth. Its productiveness is something marvelous. All the Roche importations, and several others, have fruited here. All bear regularly and nearly all are extremely prolific. The tree has no enemy here but the twig borer, which does little harm.

The White Adriatic fig makes a good growth here, but the first crop is small, and the second is mostly cut off by the frost. Experiments in cultivation and treatment may cure the defect. It has no enemy but the gopher.

The prune is not a success, excepting, perhaps, on the moist loam lands about Pleasanton. In our best orchard, the fruit runs 100 to 110 to the pound—entirely too small. This tree requires fogs. In the Santa Cruz mountains it branches out like an apricot; here it runs up like a cherry. This close habit allows the sun to scald the bark and the tree is gone.

The cherry, except in a few dry spots, is practically a failure for the same reasons.

The apple tree planted here often brought the woolly aphis from the nursery; and as if that were not enough, our dry air and soil do not agree with the tree.

Insect enemies are not numerous and do not give such trouble to the fruit growers as about San Francisco bay.

The San Jose scale has often been introduced here but has made no headway, being, I believe, killed by our dry north winds. I have witnessed three instances of the destruction of the scale in this way, and believe that whenever it is exposed to the direct effects of this wind it is destroyed. What this means to the orchardist can only be appreciated by those who have fought this pest.

The apricot and pear do best on our heavier and richer loams, and light alluvial and loose gravelly loams. The olive thrives best on deep, well drained, rich vegetable loams, and not on shallow soils and rocks, as is often stated.

In fruit, as in all else, we attain quality rather than size, though culture, close pruning and thinning will give us this quality as well.

The same exquisite climatic conditions that have made Livermore valley famous for its wines and its hay also combine to give a rare flavor and a delicate aroma to its fruits.

Rancho Chico Fruit Crops.

CHICO, Butte Co., April 23, 1892.

TO THE EDITOR:—Statements have recently appeared in various papers that the fruit crop on Rancho Chico this year is an entire failure.

This is something of an exaggeration, and in the line of correct information, in which all fruit growers at least are interested, I will give an approximate estimate of the growing crop.

Of cherries, we expected when the trees were in bloom to have about 150 tons. My present estimate is 15 to 20 tons.

Of apricots, a fair crop would have given us 150 tons. We shall have practically none. Nectarines are also almost an entire failure.

Compared with last year, we shall have one-third of a crop of plums, one-third crop of French prunes, one-third to one-half crop of pears and one-third crop of peaches.

The crop of peaches last year was too heavy. In portions of the orchards the peach trees this year are fairly full, while in other portions the crop will be small.

The crop of almonds is better than last year, many of the trees being very heavily loaded.

The damage to fruit was occasioned by the hailstorm, which occurred three weeks ago, and which was followed that night by a severe freeze. The hail was local, and I am informed that in many of the smaller orchards of this vicinity fruit, except apricots and cherries, sustained little damage from either hail or frost.

C. C. ROYCE,
Manager Rancho Chico.

A Fruit Growers' Convention in San Jose.

CAMPBELL, Santa Clara Co., April 26th.

TO THE EDITOR:—There will be a mass meeting of fruit growers at San Jose, May 7th. The purposes of that mass meeting I can only state in part, and that, too, from memory, hence cannot give them fully nor accurately; but enough can be given to show the great importance of that meeting to the fruit growers. Among its purposes are the following:

1st. To establish a Fruit Exchange in San Jose.

2d. To prevent the present ruinous competition of our products.

3d. To establish and maintain a brand of fruit, if possible, of unequaled excellence.

4th. To secure uniformity in grades of fruit.

5th. To provide storage room, issue warehouse receipts on stored fruits, and make advances on same.

6th. To obtain for our products what the law of supply and demand entitles us to.

7th. To have a voice in establishing and maintaining the price of our products.

8th. To obtain reliable reports of the state of the market, both domestic and foreign.

9th. To exhibit our own products at the World's Columbian Exposition.

10th. To buy for members of this Exchange in large quantities, and consequently at wholesale prices, such indispensable articles as sulphur, sacks, trays, boxes, etc.; and a number of other important purposes that I cannot now call to mind.

The severe frost of April 25th did great damage in Santa Clara Valley. How great has been the damage cannot yet be accurately determined. Probably at the convention of May 7th a correct estimate can be made.

F. M. RIGHTER.

ANOTHER ANNOUNCEMENT OF THE CONVENTION.

SAN JOSE, April 25.—A call has been issued for a County Convention of Fruit Growers to be held in San Jose on May 7th for the purpose of organizing a Dried Fruit Exchange so that growers can dispense with the middlemen in disposing of their products. The plan is explained by Col. Philo Hersey, a director of the successful West Side Fruit Growers' Association. Last year, the first of its existence, the West Side Association shipped 43 carloads of dried fruit, netting $45,000. The fruit was purchased from the stockholders, it being paid for according to the grade, and they being advanced 50 and 75 per cent on it and frequently 85 per cent. The last lot of apricots on hand, about 6¼ tons, sold only a few days ago, and there is now remaining a small amount of fruit. The Association dries its members' fruit or it buys their dried fruit.

The Association commenced with a capital of $50,000, which it expended in purchasing a tract of land and erecting buildings. Its gross profit was $19,000 and its net profit was $14,000. The stockholders are satisfied with the working of the Association, and it has been decided this year to purchase more land and extend its operations. The only drawback that has been encountered is the employment of a commission house to do the selling, but it is hoped that this necessity will soon be obviated. The commission merchants kept the Association constantly informed as to the state of the market, both by telegram and letter.

It is desired that such Associations be organized in every part of the country, with one or more directors from each, to form a central Association, that the purposes of a Fruit Exchange may be realized without destroying the individuality of the district Associations. The central Association would receive all orders for fruit, and place them and regulate the prices.

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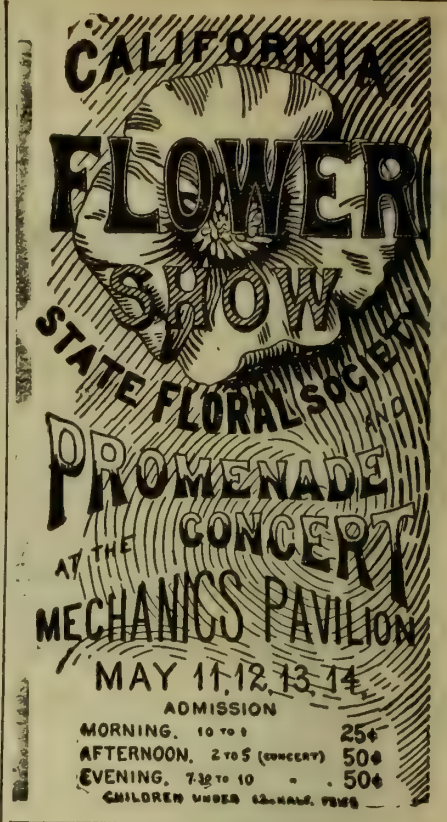
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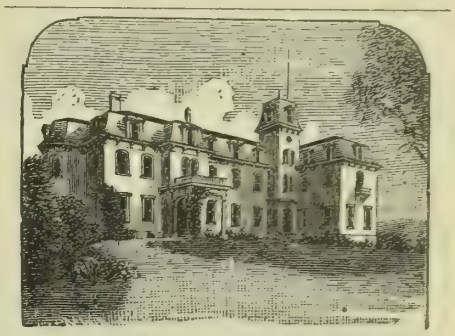
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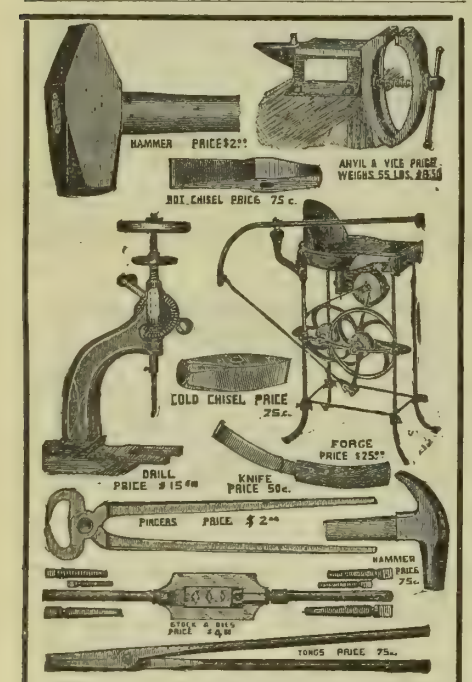
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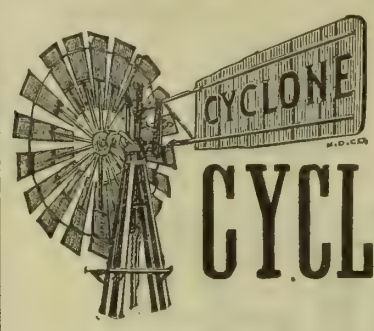
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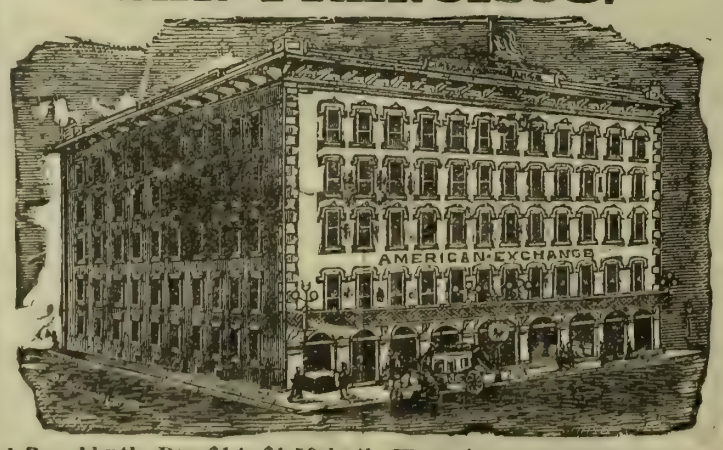
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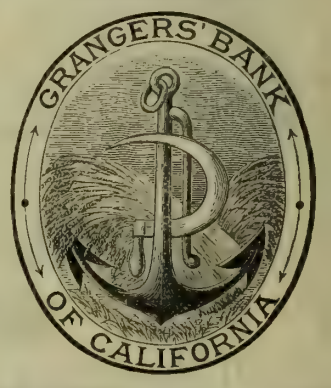
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S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

SAN FRANCISCO, April 27, 1892.

The weather is the absorbing topic of conversation, and, as usual, the croakers (but this time they appear to be justified) are getting in their work to good advantage. With two fairly dry winters the ground is deficient in moisture, and therefore plant vegetation is ill prepared to withstand the dry weather we are now experiencing. Unless rain falls soon, the cry of short grain crops will become more pronounced. The local money market continues to rule easy. Taxes have been paid up closer than for years past.

Foreign Grain Review.

LONDON, April 18.—*Mark Lane Express* says: English wheats are dull; prices have declined 1½d during the past fortnight. Foreign wheats are steady; the stocks now held at 15 grain ports amount to 2,951,000 quarters. The outlook for the holders of these stocks is serious. English flour is dull at 29s; Minnesota flour is active at 25s. Corn is firmer. Barley, oats and beans are cheaper. At to-day's market only California wheat advanced, the rise being 6d.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	April.	May.	June	July.	Aug.
Thursday	7s03½d	7s01 d	7s00 d	6s11½d	7s00½d
Friday	7s03½d	7s00½d	6s11½d	6s11½d	7s01½d
Saturday	7s03½d	7s01 d	7s00 d	7s00 d	7s00½d
Monday	7s03½d	7s00½d	7s00 d	7s00 d	7s00½d
Tuesday	7s03½d	7s01 d	7s00½d	7s00½d	7s00½d

No. 2 Red Winter are quoted and not No. 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	36s6d	36s0d	36s0d	Steady.
Friday	36s6d	36s0d	36s0d	Steady.
Saturday	36s6d	36s0d	36s0d	Firmer.
Monday	36s6d	36s d	36s d	Steady. Weather wet.
Tuesday	36s6d	36s3d	36s3d	Firmer. Held higher.

To-day's cablegram is as follows:

LIVERPOOL, April 27.—Wheat firm but active. California spot lots, 7s 5d; off coast, 3?s 6d; just shipped, 36s; nearly due, 36s 3d; cargoes off coast and on passage, firmer but not active; Mark Lane wheat, slow; French country markets, weak; weather in Eng and, cold.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Apr.	May	June	July	Aug.
Thursday	155⅝	154⅝	149⅝	149⅝	149⅝
Friday	156	151	149⅝	151	149½
Saturday	156½	151½	149⅝	150	149⅜
Monday	157½	152½	150⅝	150⅝	150
Tuesday	154⅝	152½	151	151½	150⅝

The following are to-days' telegram:

NEW YORK, April 27.—Wheat, 95⅝c for April, 91½c for May, 90¾c for June, 91c for July and 90⅝c for August.

CHICAGO, April 27.—Wheat, 81¼c for May and 81½c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	153½	152⅝	....	....	141½	139
Friday	153½	153⅜	....	....	....	....
Saturday	153½	153½	....	....	....	....
Monday	153⅜	153⅜	....	....	141⅛	141
Tuesday	153½	153½	....	....	142⅜	141⅜

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal Session: Buyer season, 200 tons, $1.53⅜; seller 1892, 100 tons, $1.43½; 900, $1.43½ per ctl. Regular session: Seller 1892, 100 tons, $1.43½; 200, $1.43⅜; 400, $1.43¾. September, 200 tons, $1.47½ per ctl. Afternoon session—Buyer season, 300 tons, $1.53½; 100, $1.53. Seller 1892, 300 tons, $1.44; 1000, $1.44½ per ctl. Buyer August, 500 tons, $1.47½. Buyer September, 200 tons, $1.48 per ctl.

BARLEY.

	Buyer Season. H.	L.	May H.	L.	June. H.	L.
Thursday	101½	100½	....	....	95⅛	94½
Friday	101⅝	101½	....	....	....	....
Saturday	102½	101½	....	....	....	....
Monday	104	103½	....	....	....	....
Tuesday	103½	103½	101	101	....	....

The following are to-day's recorded sales on Call:

Barley—Regular session—Buyer season, 200 tons, $1.03½; 200, $1.03¾. Seller 1892, new, 100 tons, 99½c; 200, $1.00½; 300, $1; 200, $1.00½ per ctl. Afternoon Session—Buyer season, 100 tons, $1.03½; 100, $1.03½; 100, $1.93¾ Seller 1892, new, 200 tons, $1;01½; 100, $1.02; 100, $1.01½; 200, $1.01½; 300, $1.01⅝ per ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, April 22.—*Bradstreet's* says: There continues to be a good demand for wool. Prices, while low, are unchanged. The fact that London sales have reopened at an advance has strengthened the feeling here, not only in Australian wools, but domestic fleeces. Stocks are not heavy, and there seems to be little choice wool from which to choose. Manufacturers, while refusing to pay more for wool, are more inclined to take wool at current quotations. New wools are beginning to come forward, but in only small lots. Some new spring California wool has already arrived, but as yet has not been sold. Fleeces are selling better at former prices. Texas wools are quiet and the supply light. The demand for Territories is weak, although a few sales are reported. There is a good, steady demand for medium grades of pulled wools. An increased demand for carpet wools continues. Prices are, however, unchanged, but firm. Stocks are said to be small.

NEW YORK, April 25.—A liberal closing out of old continues, and late prices are accepted. Many broken parcels are regarded as well rid of, though sold cheap. Fleeces—Australian are active. A recent estimate of the receipts of prime foreign are much modified. Parcels ostensibly taken for this market were resold at the tempting advance in London. All of our mills are busy. Fabrics of all kinds are moving well. Sales at New York were 472,500 domestic; 738,000, mainly Montevideo, to arrive; and 18,000 monair. Boston sold 2,674,000 domestic and 634 000 foreign. A few lots of new California are shown, but not yet quoted. Philadelphia is hopeful of a better deal for the new clip, based on the strong European situation.

Eastern Hop Markets.

NEW YORK, April 25.—There was considerable marketing of unexpected lots for consumption, and prices have been under them. There is no export buying of moment, and brewers will hold off from liberal purchases while the market is weakening. State and Pacific choice 91 dropped to 29c; others range down to 21c; '90's, 14@20c. Options bid and asked May. 24¾@26½c; June, 25@28c; July, 25½@28c; August, 25c bid.

Eastern Raisin Markets.

NEW YORK, April 25.—Fine quality are scarce on the market; slow. We have never carried many bags into hot weather, and buyers are therefore cautious. A speculative lot is reported to have been placed at 3¾@3¾c; trade lots above 4¾c for three crown. Some selected bag crowns are being packed in boxes here to fill certain wants.

CHICAGO, April 26.—California Dried Fruits—The market for raisins remains quiet and easy, but in all other lines there is a feeling of firmness, with prices in numerous instances showing improvement.

Eastern Orange Markets.

Choice California oranges, clean-skinned, in fair demand and ruling steady, but common or smutty slow and offerings becoming smaller. California oranges; Seedlings, light, ₱ box $1.40@1.60; heavy smutty, $2@2.50; heavy bright, $2.75@3; Navels, light, $1.50@1.75; heavy smutty, $2.50; heavy bright, $3.75@4.50. California nuts, very quiet: Walnuts, hard shell, lb. 6@6½ cts.; soft shell, 7½ cts.

Eastern Fresh Fruit Markets.

The Earl Fruit Company received to-day the first consignment of California cherries of the season. This shipment sold at $1 ₱ lb. and constitutes the opening of the California green fruit season in Chicago for this year.

Eastern Dried Fruit Market.

NEW YORK, April 25.—Apricots are strong again. Prime bags are quoted at 7½c; extra at 7¾c. Bags at the moment take precedence over boxes. Peaches are steady at 6@7½c; two hundred old sold at 4½c. Prunes—Several reserved lines have shown up, but the market is not heavily supplied. The West took four cars of bags with seventies and eighties quoted at 7@7½c. For trade wants, specified sizes, if choice, bring the last quotations.

Miscellaneous.

NEW YORK, April 25.—Mustard seed—Steady in a wholesale way. Brown, 4@4½c; yellow, 4¾c. Lima beans—Firm and fairly active at $1.65@1.75 spot bushel.

General Remarks and Statistics.

Cereals.

The *Wisconsin Crop Bulletin* says that the winter wheat and rye passed through the cold weather in much better shape than expected. The condition is now fair.

Through Southern Dakota, Southwestern Minnesota and most of Iowa, the late storms of snow and rain were very severe, putting back seeding a week or so. In eastern parts of Minnesota seeding has progressed well. Probably a third of the seeding has been done in the southern half of Minnesota and South Dakota, with only occasional lots put in in the north.

Advices from St. Petersburg are that late returns from various parts of the empire indicate quite a satisfactory change in the appearance of the growing crops. Spring seeding is said to have begun under very auspicious circumstances.

Early in the season it was estimated that France would require imports of 96,000,000 bushels of wheat to supplement her crop of 224,000,000 bushels. From August 1, 1891, to March 1, 1892, there have been delivered from French custom houses 63,424 000 bushels of foreign wheat, and at that date 17,200,000 bushels were in store and 4,120,000 bushels afloat, making a total of 84,744,000 bushels. It will take only small imports the balance of the season to bring the total up to the first estimates.

The crop bulletins of Iowa, Michigan Illinois and Missouri say that the cold weather and frosts the past week injured early vegetation and fruit to some extent, and likewise delayed the spring seeding of oats, but were generally beneficial to the growing wheat crop.

Dornbusch's report of the condition of crops in Western Europe the second week in April says that in England a distinct improvement was observable. In France, the wheat and rye began to present a fine appearance. Later reports from Belgium and Holland showed improvement, while in Germany the favorable outlook for the crop was affecting the market. The Hungarian official report was not so encouraging as commercial reports. The Italian reports were quite favorable. Russian reports showed improvement.

Mark Lane Express April 11th reports as follows: "The surface soil is becoming rather arid, and as March rainfall was half an inch below the average, April showers are now awaited with some anxiety by farmers. The wheat plant still looks a trifle starved, though the color is better than it was a fortnight ago. Despite the low prices, a good area seems to have been sown to oats and barley. Foreign wheat has been helped a little by an improved inquiry for Germany, and also by a slight rise in prices at New York, Antwerp and Amsterdam. Value, however, cannot be said to have recovered anything from a week ago; there have simply been larger sales at the low prices then accepted. The supplies which the United Kingdom will require during May, June, July and August are already in sight either in granary here and in America, or on passage, and this imparts an ease to trade which is unusual. Unfortunately, the losses which have been incurred on the midwinter purchases of cargoes are very heavy and there is a feeling of disorganization almost amounting to panic. We have already commented upon the low price at which the new Indian crop is being sold forward, while the price is so low as to absolutely preclude any such losses as have been recently experienced. This safety has not been purchased without considerable sacrifice. The whole future of the summer trade is much weakened and the chances of advancing values are reduced.

London cables, April 26th, report as follows: Wheat and flour on passage to United Kingdom, 2,807,000 qrs.; Continent, 1,232,000. Imports of wheat into the United Kingdom during the past week, 203,000 qrs.; flour, 238,000 bbls.

The local wheat market has held to strong but fairly steady prices throughout the week. It now looks as if the bears will not be able to send values below $1 50, if even to that figure, for No. 1 White shipping. The strength of the market is due largely to local causes, viz., a certainty of a small carryover, a liberal supply of tonnage and present prospects not warranting our expecting a larger aggregate outturn than in 1891, notwithstanding a larger acreage was seeded. Many fields which were intended for grain-harvesting will either not have enough to justify cutting, or else will be cut for hay. Continued dry weather has been against growing crops in many sections of the State. Our advices from the interior report about all the warehouses cleaned out of both wheat and barley. From up north, crop advices continue uniformly favorable.

Cold weather the past few days has been favorable for growing crops, and with a liberal rainfall within a few days, crops, as a rule, will revive, but the chances now appear to be against a rainfall.

Barley shows considerable strength, with a growing impression that although the acreage seeded to the grain is larger than it was in 1891, yet the aggregate outturn will probably be considerably short of that in last year. From the southern part of the State our advices are confirmatory that large areas will be cut for hay; as far as that is concerned, haying is well under way in two or more of the counties. The carryover this year will not be large, while the demand steadily grows.

Oats show more strength, owing to a steadily increasing demand from trainers of speed horses. Oregon and Washington are sending to us heavy supplies, but as the surplus in those two States has fallen quite low, it looks as if still higher prices must rule soon.

The receipts of corn are heavy, but owing to unfavorable crop weather and light available supplies, the market holds strong.

Rye is weak and dull.

The action of the San Francisco Produce Exchange Call Board in sustaining the directors of that institution in confirming trading in futures to seller option and monthly sales, ought to create more interest in trading on call. If we are to have gambling or dealing in futures it is much better for it to be conducted as it is elsewhere, by monthly options. An exporter there can buy cargoes ahead for delivery within a certain month, against sales for shipments made in the demand markets of Europe, while farmers can sell their crop for delivery within a specified month. It looks as if the new rule will work for the best interest of all concerned.

Feedstuff.

Ground feed shows considerable strength with an advance established in bran, middlings and feed meal. Ground or rolled barley is very firm with a free demand ruling. Owing to dry weather it is claimed that the consumption of ground feed this year will be larger than it would have been had the usual spring rains fallen.

The market for new hay which began to show signs of opening low, is now exhibiting more strength, owing to a growing impression that dry weather will shorten natural pasture. With a short pasture season and renewed attention given to dairying, combined with increased requirements by orchardists, the consumption will be so large as to require all that will be cut. The carryover of old will be large.

Dairy Produce.

The market for butter shows a strong tone, which is accepted by dealers as giving evidence of having touched bottom. Receipts are larger, which admits of extensive packing. It is said that one firm in this city is receiving orders for packed butter for future delivery at the rate of 18 to 19 cents per pound, according to size of package and grade of butter. The firm sells on 30, 60 and 90 days' time. The older established houses, so far as we can learn, are not pursuing this line of policy, believing that it destroys the market.

Cheese is weak and in buyer's favor. Receipts are enlarging, causing buyers to hold off for concessions.

Eggs are weak at quotations. Heavy receipts of Eastern are against Californian; fairly cool weather admits of their keeping better. The more experienced dealers think that the market for Californian is about bottom for the season. This opinon is grounded on past experience that it will soon be difficult to make shipments of Eastern to this market with the expectation of their arriving in good condition, consequently fresh-laid Californian will command the market.

Fruit.

Advices to hand report heavy damage by frost to grape vines in the lowlands, chiefly in Napa and Sonoma counties, but tree fruits have so far escaped with only a light loss. It now looks as if the vintage this year will not be more than one-half of what it would have been had there been a favorable season. This loss will probably be made good by better prices.

Some green apples came in the past week. Last year's apples are in light supply. They sell at from $2 to $3.50 a box.

Cherries are coming in more freely, but as yet the quality is poor. Sales are made at from $1 to $1.50 a box. The crop promises to be large. F. S. Jones of Suisun is said to have made the first shipment of cherries to Chicago. The consignment consisted of 11 boxes.

Gooseberries are in slightly better supply.

Strawberries are coming in quite freely. The quality is better than last year's. The demand for local requirements and shipping is sufficiently large to keep prices well up for the better keepers.

Dried fruits are slow, but strong. Apricots are about cleaned up. We doubt if a carload could be picked up in this city.

Raisins are about as heretofore reported.

Mail advices coming to hand from the East report that the peach crop will not only be short in Delaware and New Jersey, but that frost killed the early fruited in the Central States, particularly in Illinois and Indiana.

Vegetables.

Frosts the past week nipped the more tender vegetable plants and vines cultivated on the lowlands, which will necessitate replanting.

Asparagus is weak and heavy, owing to a poor demand. Rhubarb is stronger. String beans are coming in more freely, with Winters a large contributor. The market for green peas is demoralized. Receipts to-day were very large, and with only a few buyers in the market, sales had to be made at low figures. Sweet peas sold at one cent a pound. It is said that canners will not buy heavy this year owing to the market being well supplied with last year's pack.

New onions are coming in. The quality is good for the season of the year. Onions are coming to hand from Nevada and Oregon.

Old potatoes are demoralized. New potatoes are stronger, with 85 and 90 cents obtained for something fancy for shipment to the East. The low prices now current are inducing heavy shipments to distributive points east of the Rocky Mountains.

Live Stock.

Bullocks and mutton sheep are lower, with a weak tone reported at the close. Hogs are fairly steady. Milch cows are about as heretofore reported. Dairy cows sell at from $20 to $35, and family milkers from $35 to $75. The horse market does not show any material change.

Wool.

The market is exhibiting more life, with buyers and sellers meeting in their views. So far, scourers are the largest operators. This is easily accounted for, for manufacturers in buying, preferred scoured to wool in grease, for they know what they are buying; besides, shipping scoured wools, they do not pay freight on grease and dirt. Large wool growers are beginning to learn the advantage of having their wool scoured. A firm in this city reports as follows: "As a rule, shippers have done but little, chiefly because real nice, free, bright, light stock for shipping is hard to find. The San Joaquin wools are, as a rule, poor, so far as received, and the wools now coming from what are termed "foothill" districts have more defects and less staple and character than usual. These drawbacks, as well as the continued dull and low-priced market in the East, prevent shippers from buying liberally, and it is feared they will also prevent much, if any, improvement in present prices. Sales are reported for the past ten days of 300,000 pounds."

Miscellaneous.

Poultry is fairly firm at quotations.

Lima beans are strong and higher. Other kinds are firmer. The demand comes from the East.

Grain bags are weaker, with a slight concession reported in asking prices.

Hops are about as reported in our last week's issue.

The statistics of produce exports from this port from July 1st to April 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,0 8,524	10,676.149
Flour, bbls	873,072	931,020
Barley, ctls	786,338	208,535

Live Stock.

BEEF.		MUTTON.	
Stall fed	6 @ —	Wethers	7½@—
Grass fed, extra	6 @ —	Ewes	7 @—
First quality	5½@ —	Do Spring	9½@—
Second quality	5 @ —		
Third quality	4½@ —	HOGS.	
Bulls and thin Cows	2 @ —	Light, ₱ lb, cents	5½@ —
VEAL.		Heavy	4½@ —
Range, heavy	5 @ —	Feeders	3½@ 4
Do light	6½@ —	Stock Hogs	3½@ —
Dairy	7 @ —		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 27, 1892

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 40	@	2 80
Pea	2 20	@	2 80
Red	1 90	@	2 15
Pink	1 75	@	2 00
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 15	@	2 35
Bld Peas, blkeye	1 30	@	1 50
Do green	1 30	@	1 50
Do Nlles	1 25	@	1 40
Split	3 85	@	4 15
BUTTER.			
Cal. Poor to fair, lb	12½	@	—
Do good to choice	15	@	—
Do Giltedged	—	@	18½
Do Creamery rolls	—	@	18½
Do do Giltedge	—	@	19
Eastern	—	@	—
CHEESE.			
Cal, choice mild	10	@	10½
Do fair to good	9	@	10
Do glit edged	—	@	11½
Young America	—	@	11½
EGGS.			
Cal. ranch, doz	19½	@	—
Do do selected	—	@	21
Do store	15	@	18
Eastern	16	@	18
FEED.			
Bran, ton	17 50	@	18 50
Feedmeal	26 50	@	28 50
Gr'd Barley	22 00	@	23 50
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₱ cwt.	7 50		
HAY.			
Wheat, per ton	12 00	@	—
Do choice	—	@	14 50
Wheat and Oat	10 00	@	13 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	1 00	@	1 03½
Do Choice	1 05	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	1 70	@	—
Corn, White	1 35	@	1 40
Yellow, large	1 36½	@	—
Do small	1 38½	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 25	@	—
Gray	1 25	@	—
Rye	1 42½	@	—
Wheat, milling. Gilt edged	1 57½	@	—
Do Choice	1 55	@	—
Do fair to good	1 51½	@	—
Shipping, cho'ce	1 51½	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 45	@	—
Sonora	1 45	@	1 57½
HOPS.			
1891 Choice to Ex.	26	@	30
Fair to Good	22	@	—

FLOUR.			
Extra, CityMills	4 80	@	5 00
DoCountryMills	4 65	@	5 00
superhne	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	2 00	@	3 00
Fair to Good	1 20	@	—
Cut	75	@	—
New	1 50	@	2 00
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	50	@	70
Do do Oregon	90	@	1 15
Do Humboldt	40	@	75
River Reds	15	@	35
New	50	@	80
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@	8 00
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	5 50
Do large	6 00	@	—
Fryers	7 00	@	—
Ducks	6 00	@	9 00
Geese, pair	1 75	@	2 25
Goslings	2 50	@	3 00
Turkeys, Gobbler	17	@	19
Turkeys, Hens	19	@	21
Manhattan Egg Food ₱ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1¾	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	15
Cala'v & F'th'l.	14	@	17
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def	10	@	12
Nevada (State)	15	@	—
HONEY.			
WhiteComb, 2-lb	10	@	13
do do 1-lb frame	12	@	14
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	22	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, April 27, 1892.

Limes, Mex	2 50	@	3 50	Cherries, box	1 00	@ 1 25
Do Cal	—	@	—	Beets, sk	—	@ 1 00
Lemons, box	1 00	@	3 00	Carrots, sk	35	@ —
Do Sicily	5 00	@	—	Okra, dry, lb	15	@ —
Oranges, Seedlings				Parsnips, ctl	—	@ 1 25
Redlands	1 75	@	2 25	Peppers, dry, lb	10	@ —
Riverside	1 50	@	1 75	Do green	—	@ —
Los Angeles	1 25	@	1 50	Turnips, ctl	50	@ —
Do Navels—				Cabbage, 100 lbs	40	@ —
Redlands	3 00	@	4 00	Garlic, lb	2	@ 4
Los Angeles	2 50	@	2 75	Squash, Mrft, tn	12 00	@15 00
Riverside	2 50	@	3 00	Do Summer, lb	10	@ 15
Duarte	2 50	@	3 00	Tomatoes, box	2 50	@ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.				Asparagus, box	1 00	@ —
				Do choice to ex	2 00	@ —
				Peas, green, sk	75	@ —
				Do sweet	—	@ 2½
				Rhubarb, box	25	@ 1 00
Strawberries, per chest—				String Beans	8	@ 12½
Longworth	7 00	@	12 00	Cucumbers, doz	75	@ 1 25
Sharpness	5 00	@	8 00	Mushrooms	10	@ 30
Gooseberries, lb	12	@	15			

Grain and Wool Bags.

Calcutta, spot	7⅞	@	7¼
Do, June-July	7¼	@	7⅜
Wool Bags	36	@	38

BUCKEYE RAKES,

8, 10 and 12 Foot.

KNOWLTON MOWERS,

4 ft. 3 in., 4 ft. 6 in, 5, 6 and 7 ft. cut.

PLANO RUSTLER MOWERS

4 ft. 3 in. and 5 ft. cut.

IRON TURBINE and COLUMBIA Steel Windmills, 8, 10 & 12 Ft.

PACIFIC COAST AGENTS:

P. P. MAST & CO.,

31 Market St., San Francisco.

Additional Grange News.

Grange Notes.

E. W. Davis, W. M., called at headquarters on the 23d inst. He expressed regrets at not being able to visit Temescal and Eden Granges; is looking well and will continue the State canvass with his usual energy.

EDEN GRANGE. — The State Grange special meeting was well attended at Haywards. The Harvest Feast spread in N. S. G. W. Hall was extra fine. We learn that the arrangements for the day throughout were well planned and carried out. Some nine visiting Patrons from San Jose were in attendance, besides a number from Danville, Temescal and other Granges. Bros. Coulter, Adams and Blackwood were the leading speakers. Master Dennis and other officers of Eden Grange were credited with doing good work.

A GRANGE AND ALLIANCE PICNIC is announced at Creston, San Luis Obispo Co., for April 30th. Past State Lecturer Geo. Steele is expected to attend. About the middle of May it is proposed to hold another joint Grange and Alliance picnic at Arroyo Grande.

O. N. CALDWELL writes from Carpenteria, Santa Barbara Co, April 17th, saying: "Our Grange is alive, but not making much progress. Past Master Overhiser's visit to the Grange meeting on the forenoon of April 9th was profitable to us all. He gave us information of the Trade Card system and other things of importance to Grangers. After lunch, which was greatly enjoyed, a number of outsiders met with us. Bro. Steele read the Declaration of Principles, and gave a talk on Grange subjects. He spoke of the early work of the Grange and the sterling advantages which the Grangers' Bank and Business Association had proved for the welfare of farmers. I believe we have more strength, as well as knowledge, from his visit."

IMPORTANT CIRCULAR.—The Chairman of the State Grange Committee on Woman's Work, Mrs. Hattie S. Jones, has sent the W. M. of each subordinate Grange, for the Committee on Woman's Work in the Grange, an urgent appeal. Mrs. Jones requests notice to be sent her if any Grange fails to receive the circular.

MUSIC FOR

CANTATAS,

OPERAS AND OPPERETTAS,

OLD FOLKS' CONCERTS, ETC.

Cantatas for Singing Schools and Societies.

ESTHER, THE BEAUTIFUL QUEEN, by Wm. B. Bradbury. This Cantata is too well known to need description; it has had an enormous sale. Time of presentation, two hours; full instructions in the book. (Orchestral parts may be rented, $5.00 per month,) Price 50 cents. BELSHAZZAR'S FEAST, OR THE FALL OF BABYLON, by G. F. Root. A dramatic Cantata in ten scenes, with fine solos, part songs, and choruses. Eight characters; Jewish costumes. Price 50 cents. PILGRIM FATHERS, by G. F. Root. A historical Cantata of Colonial Times; not dramatic. Price 50 cents; libretto 12 cents. Other good Cantatas are DANIEL (50 cents), RUTH AND BOAZ (paper, 65 cents).

For Female Voices Only.

In this class are TWIN SISTERS (easy and pleasant), Price 40 cents. PICNIC (no action, no dialogue, one hour of solos, trios, choruses, etc.). Price 75 cents. MAUD IRVING (with dialogue and action). Price 50 cents. NEW FLOWER QUEEN; a bright Cantata for festive occasions, not difficult. Time, two hours; 13 characters. Price 60 cents.

For Children.

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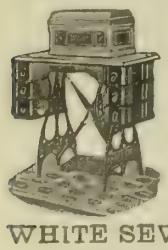
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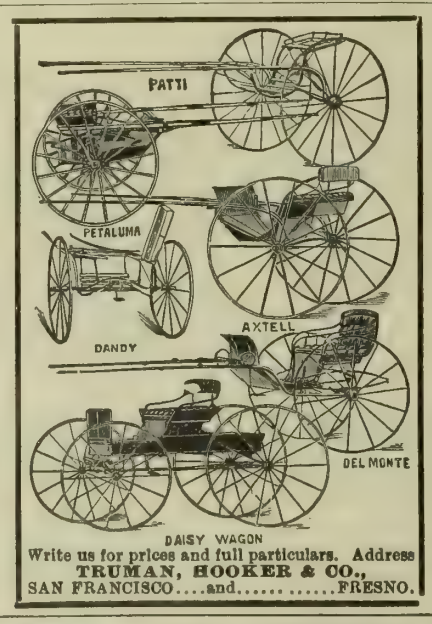
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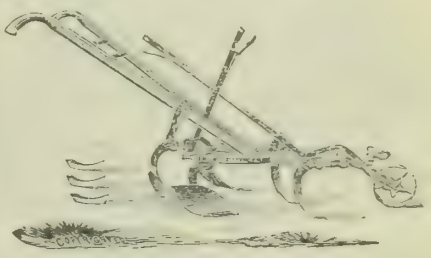
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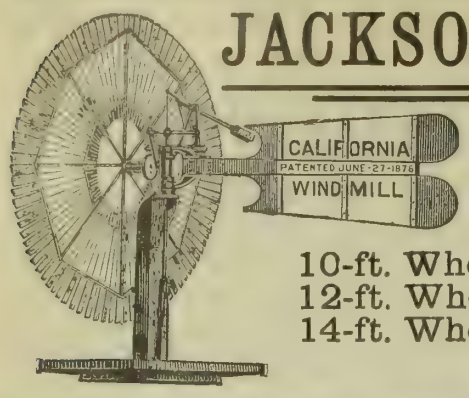
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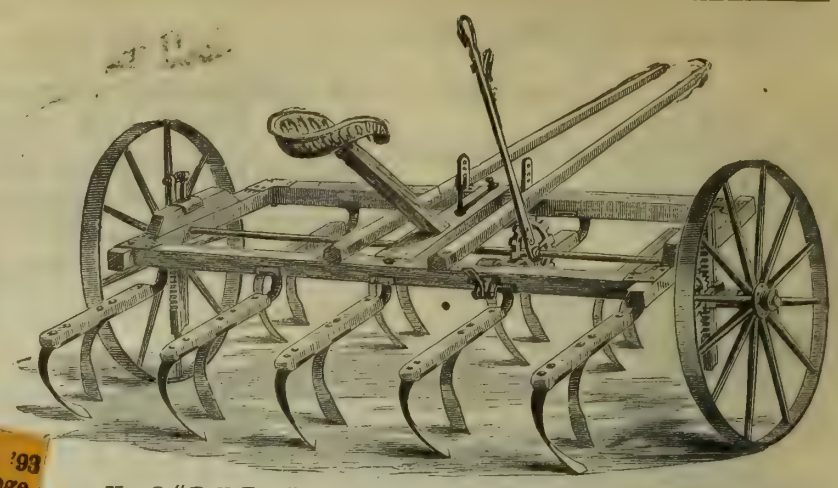


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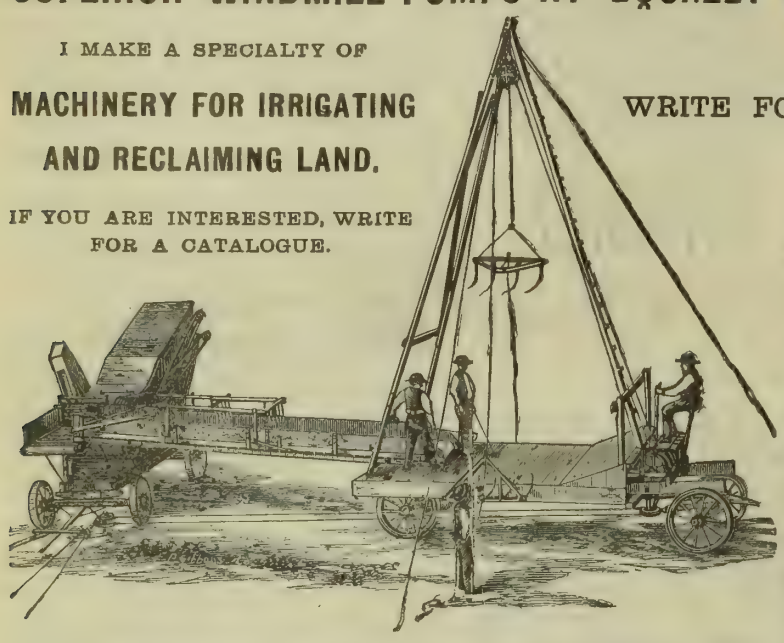
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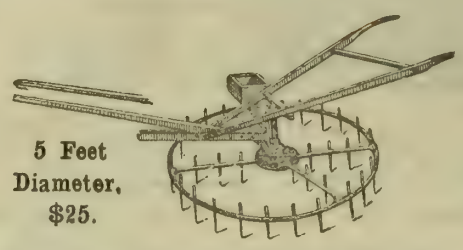
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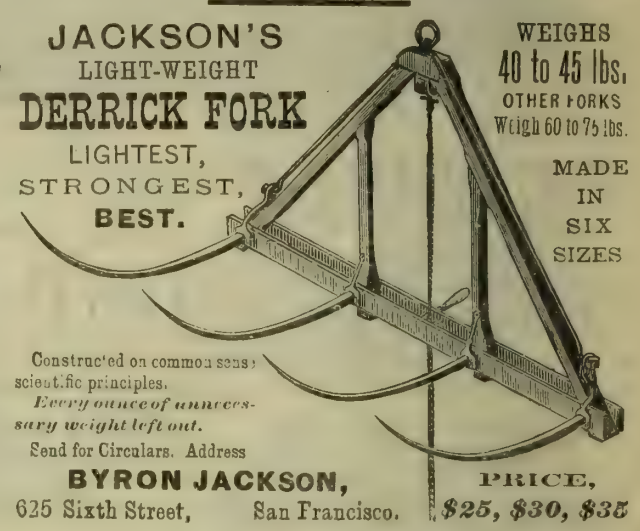
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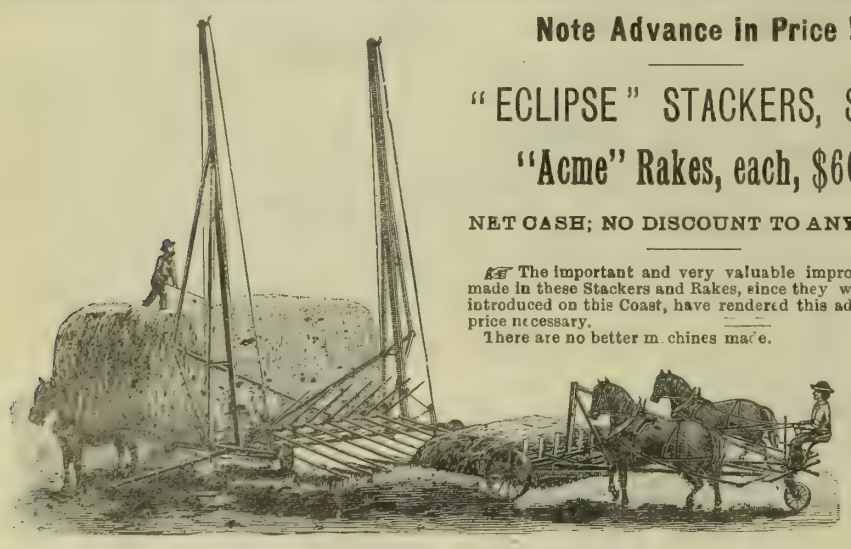
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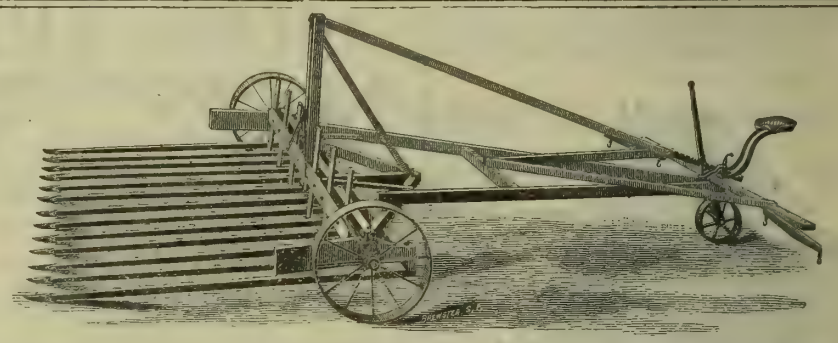
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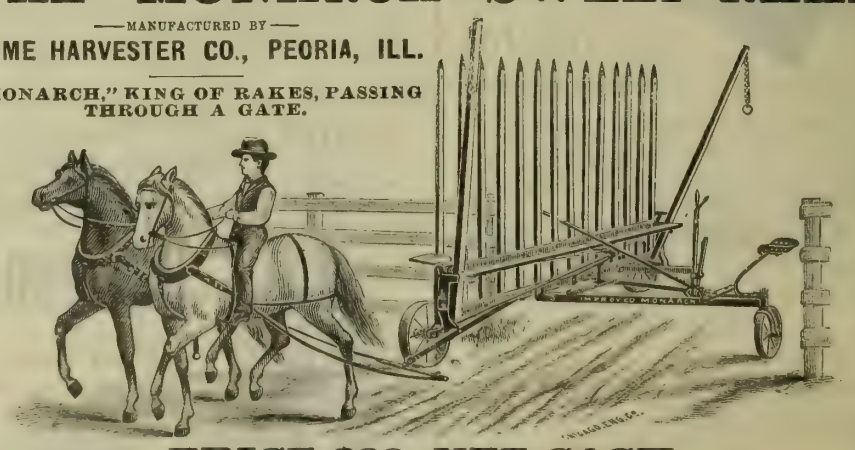
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A Schoolhouse in Contra Costa.

California has an enviable reputation for her public schools, and, if we are not mistaken, the State has a good claim also for excellence in schoolhouses. Certainly there are to be found in all the more progressive and prosperous parts of the State at least, structures for schoolhouses which have required large expenditure of money, which has been most willingly furnished by the tax-payers. So far as we know the California people, we believe that they would rather furnish money for schools than for any other public purpose, and therein they are wise as well as liberal.

Not alone the large towns, surrounded by high priced lands, devote money for fine educational structures, but the smaller and newer places, in the midst of moderate surroundings, build schoolhouses which in some cases may require a greater proportion of the public moneys. This is a good investment in the higher sense, and it is also a good common business proposition, for localities are judged largely by their appreciation of education and the liberal arts, and enterprising home and investment seekers desire to place themselves and their money amid such environment. When we see a good schoolhouse well equipped, we enjoy the reflection that the people have done a good thing.



PUBLIC SCHOOL BUILDING, BRENTWOOD, CONTRA COSTA COUNTY.

The dwellers in Brentwood, Contra Costa county, and its vicinity did well when they erected the handsome schoolhouse which we show in the engraving on this page as an illustration of an excellent moderate-sized school building. One searching for indications of progress in this generation would find it in a comparison of recently built schoolhouses with those of years ago. Cast over against the tasteful building on this page the "old red schoolhouse" of our childhood, or even the "Union school" of the Eastern village of 50 years ago, and no doubt will remain of substantial progress. This the interior of the building will show as well in its neat, comfortable seats and full instructional equipment.

Especially would we note in the Brentwood schoolhouse the excellent adaptation of the structure to a hot interior situation. The broad surrounding veranda affords most grateful relief from the glare of the summer sun, and the high ventilated space between the roof and the ceilings of the school rooms gives good protection from the heat of the sun rays falling upon the roof. Besides these considerations, the building is pretty and the grounds, so far as the photograph shows, declares that the people appreciate the desirability of making the school grounds handsome by plantations of shrubs and trees. The picture may be suggestive to many of our rural readers.

A Loophole in the Oleomargarine Law.—The United States Supreme Court has decided that there was no penalty imposed by the oleomargarine act upon dealers who refused or neglected to keep books and make monthly returns of the receipts for and sales of oleomargarine as required by the regulations issued under the provisions of the act by the Commissioner of Internal Revenue. The Court says a matter cannot be made a legal offense by the regulation of a department. If Congress intended to make liable to a penalty dealers who failed to keep the required books it should have done so by direct enactment.

Viticulture at the World's Fair.—The Viticultural Commission thinks the viticultural interest should have $12,000 of the World's Fair appropriation instead of $6000. The secretary of the viticulturists is now sending out notices to the various County World's Fair Associations, to get their ideas on the subject, and also to have them assist in getting the appropriation increased. The counties are also asked to say how much of their exhibit will be devoted to viticulture. A state convention of wine growers, wine merchants and wine makers has been called for May 16th by Clarence J. Wetmore of the Viticultural Commission, under instructions from the Executive Committee. The viticultural display to be made at the Columbian World's Fair will be the subject for discussion by this convention.

The State Flower Show.—Readers should not forget the show of the State Floral Society, which will open in the Mechanics' Pavilion, in this city, May 11th, and continue during the week. It is believed that it will be the greatest display of flowers and ornamental plants ever held in the State. The exhibits will be named and classified so as to make it as instructive and valuable as possible, as well as beautiful and entertaining. Flower growers and flower lovers should come long distances to see a display of this kind.

Peach Yellows.—The State Board of Horticulture has arranged that the disease affecting the peach trees known as "peach yellows" and "peach rosette" be fully investigated and the results published for the information of the Legislature in framing laws to protect fruit interests.

Plants for the State University.—Hon. S. Merrill Jr., United States Vice-Consul-General at Calcutta, has returned from India on a visit of a few months to California. He brought with him a number of new varieties of fruit and ornamental trees, which he has presented to the State University. Among the fruit trees are the Bombay and Lengra mangoes, the custard and rose apples, the sapota and litchi. The ornamental shrubs are the Amherstia, Mohwa, Bangainvillea, Brownea, camphor tree, purple wreath and flame leaf. The plants were packed in a large Wardian case, and were somewhat too closely confined, for some of them had died and some others were in low condition. The donation will be handled with the greatest care by the agricultural department of the University. Mr. Merrill's thoughtful action in bringing home for public benefit plants of value in far distant lands should prove suggestive to others who go abroad.

California Cereals.—The telegraph brings an outline of a census bulletin on cereals, of which we shall have fuller notice later. It is of interest, however, to note now that the figures of California, for the year ending June, 1, 1890, are given as follows: Wheat, 2,840,807 acres, 40,869,337 bushels; corn, 70,303 acres, 2,381,270 bushels; barley, 813,995 acres, 17,548,386 bushels; rye, 27,413 acres, 243,871 bushels; oats, 57,569 acres, 1,463,068 bushels; buckwheat, 664 acres, 10,388 bushels. The total area developed to cereals was 3,812,751 acres, as compared with 2,561,800 acres at the tenth census. There was an increase in acreage in wheat of 1,008,378 acres, and in the yield of 11,851,630 bushels; an increase in barley of 229,645 acres; in oats of 7622 acres, and in rye of 7132 acres. There was a decrease in corn of 1478 acres and buckwheat of 348 acres.

Irrigation in San Joaquin.—The large Woodbridge canal in San Joaquin has been filled for irrigation and water applied to a large area. It is now announced that much more will be done in the same line so as to bring a large portion of the county under ditch. One plan is to take the water from the Mokelumne River near Campo Seco, and irrigate the whole north end of the county. The company has secured many miles of right of way, and promises to commence work at an early day, and rush it to completion. It isbelieved the several plans will be carried out to irrigate from both the Stanislaus and Mokelumne rivers, thus covering the county.

The November Convention in San Jose.—The State Board of Horticulture has decided to hold the sixteenth State Fruit-growers' Convention in San Jose from November 22d to 25th. A. Block of Santa Clara was appointed director of the convention with J. A. Clayton, Professor C. H. Allen and A. K. Whitton of San Jose as assistant directors.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

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ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 7, 1892.

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[NEW THIS ISSUE.]

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Agricultural Implements—Allison, Neff & Co.
Agricultural Implements—Wm. Deering & Co.
Agricultural Implements—Frank Brothers.
Wagons—Baker & Hamilton.
Insurance—Brown, Craig & Co.
Thrashers and Self-Feeders—Robert Brand, Oakland.
Buggies, Harness, Etc.—California Wagon and Carriage Co.
Coal, Coke and Pig Iron—J. C. Wilson & Co.
Baking Powder—Royal Baking Powder Co.
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Oxford Down Sheep—W. A. Shafor, Middletown, Ohio.
Agricultural Machinery—G. G. Wickson & Co.
Baling Wire—Washburn & Moen Manufacturing Co.
Holstein Friesian Bull—T. Liliencrantz, Aptos.

☞ *See Advertising Columns.*

The Week.

Copious rains have followed the frosts, and rejoicing over improved grain and pasture prospects has replaced the grieving over reduced fruit crops. Happy is the man who has the rejoicing in one hand and the grieving in the other, for he can average up the emotions and herein the old argument against eggs-in-one-basket farming. If the man has his fruit on the hillside and his grain in the valley, he would have escaped the frost and been benefited by the rain. Again, if one man owned the fruit on the hills, and another the grain in the valley, both would now rejoice. And if this is the case, what becomes of our argument? It looks very much as though the deduction would be that we ought to plant our fruit out of the frost and our grain in the wet. And we are not sure but that is the true doctrine after all. Read the full weather and crop report which we print on a following page, by courtesy of the officials named, and see what you think of it.

Fruit Outlook.

The forecast of the fruit crop given in last week's RURAL seems to cover the case, so far as developed up to this time. There has been, in some parts, injury to tree plants where frost effects are not usually felt. The general outlook is that fruit supplies of nearly all kinds will be moderate, and no surplus likely which can depress values; in fact, the outlook for prices, counting an ordinary demand, must be considered good.

At the meeting of the State Horticultural Society last Friday, a few members gave informally their impression of fruit crops in the regions where they reside, as follows:

Alameda county—Haywards region: Cherries almost a failure; plums light; French prunes less than one-quarter crop; pears uneven; apricots good. Niles region: Egg plums injured by frost; peaches light; apricots good.

Solano county—Putah creek region: Apricots uneven, best on young trees, poor on old; cherries very light; peaches good; pears light. Vaca Valley region: Apricots not over one-quarter of a crop; pears light; cherries scarce; French prunes and all plums light.

Sutter county—Yuba City region: Peaches full crop; apricots half a crop; prunes nearly a failure, and pears light.

Contra Costa county—Martinez region: Apricots and pears light; cherries very uneven; in some parts of the county, almonds hurt by frost.

Santa Clara county—San Jose region: On low lands, apricots, peaches and prunes badly hurt by frost. On higher lands, prunes uneven. Mountain View region: Pears fine; prunes good; also apricots, except Moorpark; cherries half a crop.

San Joaquin county—Stockton region: Grapes lost one-quarter of crop by frost.

Prize Letters for 1892.

The signal success of our effort to draw out valuable and practical information by the offer of prizes for letters upon hay-making, leads us to push on with a similar method to draw out full and satisfactory experimental knowledge upon other important branches of California agriculture. The technical, or as they may be called the practical, departments of the RURAL have always been its chief value. Its pages have been filled to a greater degree than most other journals of its class, with articles written by men and women who have actually done the things of which they write. We conceive that in its accounts of successful practice the RURAL must be a *journal by the people and for the people.* Of course, upon this framework of solid practice, our scientific investigators throw the light of their researches, and around it other writers weave a decorative environment of sentiment and fancy,that a medium of instruction shall be elevating and entertaining, as well as industrially valuable. Such has been the RURAL during the 21 years of its life, and we propose that its future shall be a reflection of its past, but more abundant. If our readers will cooperate with us in the prize-letter plan, the RURAL for the balance of this year shall not only have a higher practical value than a single year's issues have ever had, but possibly the year 1892 will be worth more to technical readers than all earlier years combined.

We propose a Prize-Letter Contest for each month of the present year. There will be three prizes for each subject, viz.: First prize, $10; second prize, $5; third prize, one year's subscription to RURAL PRESS. The outline of subjects (which may be more fully defined in each case hereafter) will be as follows:

JUNE.—SMALL FRUIT-GROWING: Counting as "small fruits" everything which is commonly understood by the terms "berries" and "currants;" which are the best varieties, how to plant, cultivate, irrigate, and harvest them to secure the best results.

JULY.—FRUIT PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

AUGUST.—FRUIT DRYING AND RAISIN CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine evaporating each and every kind of fruit; packing and marketing of products.

SEPTEMBER.—DAIRYING: The best practice in every productive step from the pasture and the cow, through the feed barn and silo into the dairy house or creamery and on to the market. A full discussion of results with improved practices and implements.

OCTOBER.—GRAIN-GROWING: The treatment of grain lands, the best varieties in different localities, and the best time for sowing; the most satisfactory arrangements for harvesting cheaply. All about steam in California agriculture, from the steam plow to the steam wagon which hauls the crop to the landing.

NOVEMBER.—ORCHARD AND VINEYARD: Preparation of land for laying off and planting; what varieties yield best results; pruning of trees and vines; winter treatment of insect pests.

DECEMBER.—POULTRY FARMING: The best breeds for practical purposes and how best to feed and house them; the prevention and cure of parasites and diseases; a broadside of useful experience with small-feathered stock, which yields millions, but is yet imperfectly understood.

Letters in competition for the prizes in each of the above subjects must be mailed to us on or before the *first day of the month to which the subject is apportioned.* The writer may make his letter as long as he or she pleases; the competition is open to all. The reader of a good letter does not care whether the writer is a regular subscriber or not, nor do we. We want the facts and the successful experience from all trustworthy sources. We will therefore thank any subscriber who may call the attention of anyone ,qualified to write a valuable letter, to our prize offer.

This is the outline of our plan for drawing out the facts which will make the RURAL more valuable than ever to the practical farmers of the Pacific Coast. We are willing to sink or swim on the issue of making a journal of direct technical and industrial importance to every producer in the agricultural lines. In this age of progress in a new country whose resources are being rapidly developed, the producer must have the best and fullest knowledge of what all other producers are doing to command success. This is just what will occupy our columns in the future, and this is the information which men who wish to succeed cannot afford to neglect.

Now let all who know how to grow small fruits of any kind, by any method practicable on this coast, go to work on the letters, which must be mailed to us not later than Wednesday, June 1.

The Dairy Industry.

The dairy industry in this State is making such rapid progress as to encourage the belief that before another half decade passes, it will not only supply the consumptive demand, but will give a large surplus for shipping out of the State. In 1888 the receipts of butter at this port aggregated 8,376,700 lbs of Californian and 3,597,500 lbs of Eastern. Last year the receipts aggregated 10,484,900 lbs of California and 1,580,900 lbs of Eastern. This shows a most remarkable increase in the receipt of California butter within the short space of three years. Not only do the receipts of butter show a large increase, but the receipts of cheese have kept fully abreast. In 1888, receipts of California cheese at this port aggregated 3,321,700 lbs and last year the aggregate was 4,427,800 lbs. When it is considered that San Francisco in point of population is only about one-fifth of that of the entire State, then the rapid strides made by the dairy industry is readily seen.

Aside from these comparisons of the receipts of butter and cheese in this city, there is another and probably more correct means of estimating the growth of dairying: by the increase in the number of milch cows in the State. According to county assessor's returns there were in California on March 1, 1889, 258,915 milch cows, and in 1891, 290,521; an increase in two years of 31,606. It is claimed by those in position to know that the number now in the State is well over the 300,000 mark. This increase has been made in the face of strong competition with Eastern creamery butter, high local transportation charges, higher wages paid to help and higher cost of land and feed when artificial feed is used.

With a more general introduction of creameries, cooperative and private, in the Central and more Eastern States, there grew up stronger competition; and as the product increased, new outlets were sought, when this coast, particularly this State, became a dumping-ground for a large part of the surplus. The butter being of superior quality and uniform grade, our dairymen were placed at a disadvantage, but this was soon overcome by their supplanting the old methods of making butter with the new, and to-day creameries in this State are largely in the ascendancy, with the number being steadily increased. So far as the writer can learn, every dairy having over 40 milch cows, and in many cases a much less number, has a creamery plant. Many dairymen individually own and milk several hundred cows. Within the past year there have been several creameries built, the owners of which buy the milk or cream from adjoining farmers. According to G. G. Wickson, there are in Humboldt county five of such creameries, one each in the counties of Sonoma, Monterey and Inyo, one in Marin county with another being built, while in Los Angeles there are several. It is claimed that several more will be built before the end of the year in other parts of the State.

In the States of Nevada and Oregon the number of creameries is increasing at a rapid rate, and with the best financial results to the owners of those which are properly managed. The surplus of the output of the creameries in Nevada will seek this State for a market.

The butter market in this State holds out the promise of ruling fairly strong throughout the year. So far in this year, prices have not sunk to much lower figures than were touched at one time in June of 1891, and it now looks as if they will not go any lower than the prices now current, but, on the contrary, advance, and this, too, in the face of a much larger production in the State. In the first five months of last year the receipts of creamery butter from the Central States were very large, but, notwithstanding, the market price for California butter kept well up until the month of June, and even in that month giltedged brought 21½ cents per pound. The last half of 1891 the receipts of Eastern creamery butter were light, not even higher prices here offering inducements to shippers, owing to relatively better prices ruling at the Atlantic seaports. The high prices at the East were due to a lessened manufacture of butterine, owing to the high cost of the material used in its production. The same conditions obtain at the East still, and consequently it is only reasonable to conclude that our markets will have to rely on California butter to meet their requirements, which ought to cause a strong and higher price to rule when country supplies begin to lessen. Packing, as has heretofore been reported in the commercial department of this paper, is well under way, not only on the large dairies, but also in this city. Putting butter in rolls in brine continues the favored mode of packing, for it gives the best results to packers and more satisfaction to consumers.

The State Press.

Petaluma *Courier*: "It has come to be a proverb that whom the Southern Pacific protects the law cannot punish."

Escondido *Advocate*: "No man should be chosen to represent us in the next session of the legislature, who is not known to be a stanch friend of the Wright Irrigation Act. The irrigation question is, and should be made, paramount to all others in the selection of an Assemblyman."

Stockton *Golden State*: "We would warn our readers to keep a close watch upon all enterprises of a private nature that require backing up with public money. Experience should teach every citizen that private enterprise corporations never let loose when they once get a comfortable hold on their victims."

Santa Maria *Graphic*: "While we are sending ship loads of bread to the suffering Russians, thousands of our own people are actually in need in all the large centers of population. America is prone to helping starving foreigners and she is repaid for her kindness and liberality by thousands of European paupers flooding her country."

Healdsburg *Enterprise*: "A book that holds up as a hero a man of bad heart or desperado and which throws a halo of romance around low life or rude character is dangerous to most boys and girls. It tends to give them false ideals, depraved tastes, and a disinclination for good literature. On the other hand, a novel which pictures a noble character or gives a sketch of sweet, pure life, has an elevating influence of the most positive character."

The *Pajaronian*: "The people are settling this Chinese question in their own way—just as they have settled all serious questions since the commencement of time. Gradually, Chinese labor has become the most expensive in the market, and with the growing demand for laborers it is not the easiest to obtain. White labor is supplanting the Chinaman right along, and it will not be long, exclusion act or no exclusion act, when the Mongolian will not be 'in it' in California."

Oroville *Register*: "Money earned by selling liquor to a child ought to sear and burn the hand that receives it like the heated iron that in olden times was used to brand the word thief on the criminal who deserved the name. We would that it might prove to him such a curse that like the terrible disease cancer it might, inch by inch, day by day, eat and sap the life blood from his veins, cause his flesh to rot and his bones to decay. Better scatter poison among children that would cause speedy and violent death than to furnish boys 10 or 12 years of age liquor that sooner or later will send them to a drunkard's grave."

San Diego *Union*: "The railroad, the steamship, the canal—these have multiplied and improved phenomenally, but the wagon road that is just as necessarily the feeder of the railroad and steamship line as the springs and creeks are of the rivers, remains as it was a hundred years ago. Ex-Senator Ingalls, Clem Studebaker, and others equally distinguished, have recently contributed to the public discussion on this subject. There is a growing opinion that the Government should take the matter up and either act itself or advise the several States. Ex-Senator Ingalls urges that convicts in the several States' prisons be employed in making roads and in preparing material for them. Clem Studebaker, the famous wagon manufacturer, advises the employment by the General Government of large numbers of common laborers—to enlist them for a term of years, furnishing clothing, rations and pay, as is now done for the soldiers. 'There is a numerous class in this country whose enlistment as road makers, under an arrangement that would insure them a frugal living, clothing, shelter and care when sick, would be a boon indeed.' He would have the government control our wagon road systen for two reasons: To give to the country, roads scientifically and durably built, which would be of incalculable value to the whole country in improving and cheapening communication between the farm and the market; and to furnish a safety valve to the labor market, giving ready employment to the men most in need of help the moment they are thrown out of work—the unskilled classes."

Letter from Mr. Pool.

FRESNO CITY, CAL., April 27, 1892.

TO THE EDITOR:—You say in your criticisms that I ought to understand that the canal company is a private organization. I do understand that, and have always understood that way; and another thing, I understand that Lake Nicaragua, which will be part of the canal when finished, is also leased to a private company to navigate exclusively for 99 years. Now, sir, who dares to navigate Lake Nicaragua without paying for the right to do so, and at the price set by this private corporation?

You say the canal should be built as cheaply as possible, and, when built, it shall be subject to control by Americans, in American interest. We don't deny but what it should be controlled in American interest, but we do deny that any private corporation ever ran anything in the interest of the people.

Why did that convention held in San Francisco, after getting up the memorial to Congress, strike out the words "build and forever control," if there was not a negro in the corner? I tell you, Mr. Editor, the people have had enough of all such work as this scheme. In building the Pacific railroad, they furnished the money to build the roads, they granted millions of acres of our domain, that should be owned by the poor of our land for homes, and now these same roads, instead of being run in the interest of the people, are run in the interest of the railroad magnates, and are nothing but grinding monopolies to the people; and this Nicaragua canal scheme, controlled by a private company aided by the Government, would only grind out a few more millionaires, as has already been said by the State President of the F. A. & I. U.

You say we are demanding something that cannot be done at this time; that the Government cannot take up the project at this time and make it its own, because there is at present no sentiment in the country that would support such a violent change in our national policy. My friend, read the Ocala demands of the F. A. & I. U., read the platform of the St. Louis Conference, read the resolutions passed by all the Sub Alliances of the country. Listen to the voices of the producing millions, and you will find out that the sentiment is strongly in favor of the Government owning and controlling all the means of transportation and communication, which they should do the same as they do our postal system, and all of these things should be run at actual cost, and not be used in the interest of a favored class. That is the sentiment of the people to-day.

If we can modify that bill as Bro. Cannon suggested, by the Government building and forever controlling the canal, I and my friends are in favor of it, but, when they strike out those two words, we oppose the Nicaragua canal. I am surprised to see a paper like the old RURAL PRESS, which has been a weekly visitor to my house for ten years, take the stand it does in favor of that company. WM. POOL.

If Mr. Pool really believes that the RURAL PRESS "stands in favor of the canal company" he has sadly misjudged its motives. We realize how great a benefit the Nicaragua canal would be and we feel that no chance to get it should be lost. We do not believe that it is possible at this time for the Government actually to own it; and we would rather have it under private ownership than not at all. We believe that the only way to get the canal and to keep it under American authority is to assist the company to build it *under conditions that will secure Governmental control;* and that to attempt more than this at the present time is to attempt the impracticable, and so, to throw away a chance upon which the future fortunes of California depend. On this subject of universal interest the people of California should, as Mr. Doyle said in his letter last week, stand as a unit. And they should stand not for impracticabilities, but for what they can reasonably hope to secure. Whoever advises the farmers of California to take a position that will defeat the Nicaragua canal project or throw its ownership and control into foreign hands does them and the State a very grievous injury. We do not question Mr. Pool's motives. We know them to be of the best, but we believe that he is very seriously mistaken.

Parcel Postage.

MURPHYS, CAL., April 30, 1892.

TO THE EDITOR.—In a recent number of the RURAL, I advocated the reduction of postage on merchandise and claimed that if granted, the measure would prove of greater value to the people as a whole, and the Agricultural classes in particular, than the free rural delivery now before the people. In reply, our worthy Post Master General has forwarded to me a copy of his annual report, which, on examination, proves very interesting reading, not so much for what it shows has been accomplished, but on account of the numerous suggestions of desired improvement in the postal system which it is seemingly impossible to secure on account of the apathy of those who should champion the cause, or of being effectually curbed by the monopoly interests that would suffer if the dear people were given their rights. That the Pacific Coast is not forgotten, is shown by Mr. Wanamaker's suggestion that a Dead Letter Office be established at San Francisco. That California deserves recognition is shown by the fact that she leads all the Pacific States in the extent of her postal receipts by almost one milllion dollars, and shows the gratifying increase of $141,803.31 in the past year, and further shows the only decrease in postal expenses of any section of the United States. The free rural delivery has proven a profitable venture by confining it to the densely populated sections, except in California, here Roseville was selected; a town sitting at the edge of the valley and below the fruit belt, and having no rural population of any extent in the immediate neighborhood. Had New Castle or Auburn been selected, with the close settlement of fruit growers surrounding them, or Fresno with its colonies of a family on every 20 acres, the result in this State would have been very different. I am not opposed to rural delivery, but from a personal knowledge of the plains and mountains, I know that it will not be possible, if desirable to extend the system to remote sections, that it will be a boon to the sections favored, goes without saying. The P. M. Gen'l has shown his nerve in the vigorous manner in which he has suppressed the lottery frauds, at a loss of over $1,000,000 to the Department, and a gain to the people of many times that amount. That the letter postage can and will be reduced to one cent is now shown, as the figures at hand prove that it can be done at a profit. The Postal Bank and Telegraph Systems meet with the opposition of the Telegraph and Banking Association, and the P. M. Gen'l must be upheld by the people if they are ever to be placed at the service of the people.

Now I come to my hobby, the reduction of postage on merchandise to 8 cents a pound. The report shows that the present rate of 16 cents a pound does not pay because the express companies take all the short hauls at a lower rate, and leave the Government the long hauls. Mr. Wanamaker very aptly hits it when he states "There are but four strong objections to the parcel post, and they are the four great express companies." The whole question settles down to this: Who is the greater, the people or the express companies? That the system will be self-supporting when properly enforced is shown, and if it should not be, cannot our Government afford to serve the people at a slight loss? No other branch of the Government service reaches out to every citizen and is so generally useful or so fully appreciated. To ask that in every instance every new departure must first be shown to be self-supporting is not creditable to our country. We might far more consistently ask that our Navy be made self-supporting by carrying merchandise, and our regular army be cured of the vice of idleness and made self-supporting by producing agricultural products.

E. H. SCHAEFFLE.

The Nicaragua Canal.

CARMEL VALLEY, April 30th 1892.

TO THE EDITOR:—I've handled cattle some for 27 years, and I believe in taking the bull by the horns. I don't care if the bull is John Bull, or even a Papal Bull, the same rule applies.

The U. S. Government, politicians tell us, *cannot* confer a benefit like the Nicaragua Canal on their own citizens and humanity at large—because why? Because a certain Clayton-Bulwer treaty, made 42 years ago, forbids us from exercising any sovereign rights in Central America. Because, also, a private company now has a charter to make said canal.

Now, Mr. Ed., what would a business man do under these circumstances? If I were that business man I should make John Bull a call. "Look here, John, you have some little common sense and sometimes make use of it. To make things mutually pleasant 42 years ago you and I agreed to follow a certain line of conduct. It is now for the benefit of all parties concerned that a different course should be followed. I would like, for the sake of mutual good fellowship, that you should consent to revise that Clayton-Bulwer arrangement which suited us both in 1850, and no longer suits us in 1892."

What do you think John Bull would say? He might toss his head and paw the ground, and grumble and bellow a bit just for fuss. It's a way most bulls have; but just show him how the canal opens a door for fat pasturage, for John Bull among others, and my word for it, he'll act like a very sensible Bull. Give him a fair deal and he'll be as ready to come to amicable terms as his sturdy offspring, Jonathan.

Nor need the second "because" be an obstacle. The company holding the franchise, hold it for one reason and one only—to make money out of it.

Uncle Sam has money enough to make it worth their while to sell. He is proposing to fool away ten times the cost of the canal in ironclads, etc., unproductive and destructive unnecessaries, surely he can furnish funds for something so necessary and so reproductive as the interoceanic canal. The canal would even diminish the assumed need for these ships of war, as our North Atlantic and North Pacific Coasts would not then be divided by the whole distance of circumnavigating South America.

I never saw the Clayton-Bulwer treaty, and don't know for how long its stipulations were made binding, but all such agreements are surely open to revision; and it is to meet just such cases as this that the International Arbitration and Peace Federation urges the establishment of an International Supreme Court to decide differences on a basis of equity and righteousness—righteousness which exalteth a nation as war bestializes it. Surely a better plan than the old-fashioned blunder-headed nonsense of going to war to settle every trifling dispute.

Perhaps my ideas smack too strongly of the farm; but would to God there were a little more fresh air perpetually blowing over the stinking pool of politics. It's getting to be a question of whether the saloon or the farm is to run this Government, and if there is a short cut to hell, the saloon door is the portal. EDW. BERWICK.

Asphaltum for that Leaky Cistern.

BAKERSFIELD, April 23, 1892.

TO THE EDITOR: If Mr. S. H. Herring of Los Gatos, who writes on March 22d for a remedy for his "leaky cistern," will apply a coat of pure asphalt, as manufactured by the Standard Asphalt Co. of Bakersfield, Cal., to the wall of his cistern it will make it waterproof by filling the pores of cement and cracks, if any. It should be heated to about 300°—very liquid, as it chills and hardens quickly when applied to cold surfaces. The walls should be dry. Build a fire in the cistern if necessary to dry them. Numerous reservoirs in Southern California are lined with asphalt instead of cement, and are a success. Apply the asphalt to the cistern wall or floor with a whitewash brush or small broom. The asphalt leaves the water perfectly sweet. LOUIS BLANKENHORN.

SALE OF HAGGIN'S HORSES.—The following concerning the Haggin sale of May 10th and 11th will be read with interest: The draft horses raised upon the Haggin Ranchos have acquired such a reputation as hardy, true pullers, that the various corporations, fire department and large teaming firms rely principally upon this annual sale to replenish their plant. The harness horses are yearly becoming more popular, their uniformity is increasing and a poor animal is an exception. Their desirability for general utility and road work is more apparent each year. To this is added the probability of getting an animal of exceptional speed. During the year several trotters and pacers sold at late sales have made records, and a number more are eligible. The present offerings are mostly sired by standard animals and the dams generally of trotting descent. The sale will be as usual by Killip & Co., the great live stock auctioneers.

MORE RESERVOIRS IN SAN BERNARDINO.—It is announced that the Arrowhead Reservoir Company will build three immense dams north of San Bernardino in the mountains, thus forming a great reservoir system to place water on thousands of acres of barren land. They will invest $1,000,000 in the enterprise and have a large force of men employed on the work.

PACIFIC RURAL PRESS.—This San Francisco weekly has just celebrated its twenty-first year. It has cause to be proud, for in our estimation it is one of the best "all-round" weeklies in the world. Every California industry is fostered in its pages,—and agriculture, horticulture and popular botany especially so.—Meehan's Monthly.

From such a source this is indeed high praise.

Weather and Crop Bulletin for Week Ending April 30th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Franklin, Observer at Los Angeles:

Lassen County.—Susanville—The week has been very windy, with cold and frost three times, killing about half of the cherry crop. Grain and alfalfa are looking well.

Humboldt County.—Blocksburg—Cold rains are delaying all farm work. What is now needed is sunshine and warmth and less rain. Farmers are feeling uneasy about getting potatoes in the ground. *Eureka*—The week has been cold and stormy, with frost and ice nearly every night. The fruit crop has been damaged to some extent.

Tehama County.—Red Bluff—The weather is unusually cool for this time of the year. The mean temperature has been from 2 to 13 degrees below the normal for the past 14 days, with light frosts on the 17th and 26th, the latter severe enough to kill all young tomato vines just set out. Fruit and grapes have not been injured. The rainfall has not been heavy, and we are still about three inches short of the usual amount.

Shasta County.—Anderson—The weather has been cold and frosty, but has not apparently injured the fruit prospects. Grapes have suffered to some extent.

Butte County.—Chico—Grain crop continues to do well. Warmer weather is needed to force the growth.

Glenn County.—Willows—Wheat slightly injured by frost. All crops looking well.

Colusa County.—Colusa—Frost on Monday night, 25th, injured the grape crop considerably, also vegetables. Wheat and barley doing well. The outlook is all that could be desired.

Sutter County.—West Butte—The frost of the 26th killed potatoes, tomatoes, beans and melons on low land. *Yuba City*—Variable weather with frosts. Grain is growing well. Some has lodged on account of recent rains. Fruit is developing fast and is uninjured, with the exception of grapes, which were nipped by the frost.

Yuba County.—Wheatland—Grain is making an excellent growth, and looks promising. Apricots, peaches and cherries will not be over half a crop.

Yolo County.—Rumsey—Light frost, damaging to vines and vegetables in some places in this (Capay) valley. Crops are looking well. *Davisville*—Gentle showers will do the crops considerable good. *Winters*—The recent heavy frosts are said to have injured both trees and vines. *Blacks*—The light showers will result in much good. *Madison*—The light showers will help all crops. *Knights Landing*—The farmers say that a good rainfall is needed to insure good crops. The cold weather has been detrimental to the grain. *Woodland*—The light showers will do fruit and grain much good.

Nevada County.—Nevada City—There have been several frosts during the week, but no material damage done. The rains have been very beneficial to all growing crops, and large hay yield insured. More sunshine and warmer weather is needed.

Placer County.—Newcastle—Weather rather cool. Hay and fruit crop looking well.

Sacramento County.—Mayhew—Frosts on 25th and 27th. Damage to vines from 10 to 20 per cent on some varieties only; mostly Muscats and Mission. *Sacramento*—Hop report by C. Wagner: Hops are retarded by reason of the cold weather, and prospects for early harvest are not so favorable as a fortnight ago, considering the cold weather as retarding the growth; prospects are, however, as favorable for a large yield as usual.

Solano County.—Vacaville—The peach crop continues looking well, and there is every prospect of a fine yield. Other fruit crops will average light. The frosts on Sunday and Monday nights were damaging to grapes in the low valley, but did not affect the higher ground. Warm weather needed.

Napa County.—Calistoga—The hillside vineyards generally escaped the frosts. Most of the lowland vineyards badly damaged. *Napa City*—Mr. Evans, secretary Napa Fruit Growers' Association, says there will be a light crop of cherries this year, both in this and Vaca valleys. A. L. Bryan's orchard is the only one in this vicinity which promises a full yield. Browns valley reports extra large crops both of grain and fruit.

El Dorado County.—Coloma—Cold rains have not been very beneficial to the f uit crop. No damages noticed in this vicinity, with the exception of garden truck, such as beans and tomatoes. The fruit outlook is very good.

Sonoma County.—Sonoma—Light frosts, but nothing damaged by it as far as heard from. Warm weather required. Rainfall .60 of an inch, and 20.79 inches for the season. *Santa Rosa*—Changeable weather, with light frosts, which damaged peaches and pears slightly. Total rainfall for the season, 24.91 inches.

Forestville—With several exceptions, the cherry crop will equal the average; French prunes are light; peaches will require thinning; berries look promising. Warm weather is needed to warm up the corn land. *Petaluma*—High winds and light frost slightly damaged the grain hay and grain crop. *Healdsburg*—Cool weather has had a retarding effect on all crops; the light frosts have done no damage, apparently. The grape vines look thrifty with abundant fruit.

San Joaquin County—Lodi—Highest and lowest temperature, 74 and 35; frost on the 26th injured grapes to some extent, some places being affected more than others; beans and tomatoes nipped; fruit not hurt. Wheat is doing fairly well, but the crop will not be an average one; warmer weather is needed. *Stockton*—The weather has been cool; more wind than usual; the light frosts have done considerable damage to early grapes, but late varieties will not suffer at all.

Contra Costa County.—Cornwall—The continued cool weather favors the grain; feed is drying up.

Alameda County.—Livermore—Average temperature exceptionally low; frost every night except one; grapes and other fruit on heavy soil are much damaged; grain doing fairly well; berries are ripening. *Niles*—All barley sown immediately after plowing in the spring is very foul with weeds; high winds injurious to all grain crops, which need more rain very soon. Black cherries dropping badly.

Santa Clara County.—Gilroy—All crops looking well; light frosts slightly injured fruit and grapes. *Santa Clara*—The cold weather has not tended toward the development of the fruit crop, the frost having done considerable damage to some varieties.

Monterey County.—Salinas—Frost unusually severe; fears of the barley crop being injured. All crops here are in splendid condition in other respects. *Jolon*—Cool and strong westerly winds and frost the past week. Some fields of wheat are past help. Much of the wheat in this valley would make a fair crop with a good rain; without rain the crop will be a light one. *San Ardo*—High winds and frosts injurious to the crop prospects. All in the southern part of the county are sadly in need of rain, principally in Salinas valley; north end of county crops are fairly good. The fruit outlook is for an average yield.

San Luis Obispo County.—San Luis Obispo—High trade winds are very drying on land prepared for beans, corn, etc. Nights quite cold. We need warm days with dewy nights.

Stanislaus County.—Turlock—The cool nights with dew have helped the crops, but the drying winds have about offset the dews, and all kinds of grain need rain badly. On the west side of the San Joaquin crops are about gone. *Modesto*—A few light showers of rain would be of great benefit to grain; with the continued cool weather to retain the moisture our prospects would be great. The prospects for fruits are good and our vineyards promise a large yield.

Fresno County.—Selma—North winds have prevailed, drying the ground where not irrigated. Rain is needed for grain, although in this vicinity it generally looks well.

Tulare County.—Visalia—The north wind still continues, all grain on the plains injured. Some will be cut for hay only. Near this place all crops are good.

Amador County.—Oleta—Drying northerly and westerly winds have dried winter sown grain somewhat but the rains of the 24th evened up matters. Grapes much injured by the frost, peach trees injured by the curl leaf and some of the fruit is falling; pear trees and fruit doing well. *Bridgeport*—Another cold wave has passed over this section, finishing the apple crop entirely so far as heard from. *Shenandoah Valley*—Light frosts but doing no damage.

add Humboldt Co.

Upper Mattole—Weather still cool and is good for all kinds of crops grown here, especially fruit, of which the prospects are good. *Hyderville*—Frost on 23d but no damage done. Crops of all kind never looked better; warm weather is the most needed. *Phillipsville*—Showery weather nearly all the week but generally warm; two light frosts at elevation above 800 feet; fogs protect the lower land from frosts.

J. A. BARWICK.

SOUTHERN CALIFORNIA.

Santa Barbara]County—Santa Maria—The weather has still kept up its perpetual blow since three weeks, drying out the feed and the crops generally. No rain since April 1st. Grain on summer fallow is holding out well, but on other lands it is poor; late sown will not mature without rain. Bean and corn lands are ready for planting. Ground less moist than average of years at this time. Too early to predict about fruit outcome but trees are well set. Highest and lowest temperatures 72 and 40 degrees.

SOUTHERN CALIFORNIA FOR WEEK ENDING APRIL 29, 1892.

Ventura County.—Hueneme—Haying has commenced. Bean-planting is progressing rapidly. More moisture is needed for late crops. The barley crop, from present indications, will be about three-fourths of last year's yield. *Bardsdale*—The weather is quite warm, and, with some wind, is very drying. Barley sown late will be short. Corn is coming up nicely. Alfalfa needs rain.

Los Angeles County.—Lancaster—The warm weather of the first part of the week was injurious to grain. The present indications are, that there will be two-thirds of a full crop. Where land was not planted too heavy, crops look well, and, in many cases, will make a crop even if it does not rain. *Rodeo de los Aguas Ranch*—Early and late grain is looking well and will make an average crop. Corn is coming up finely, sugar beets are growing nicely and the orange crop is promising. *Duarte*—The past week has been warm and pleasant, but rain is needed for the late grain. The fruit crop still promises well. Highest temperature during the week, 83 degrees; lowest, 47 degrees. *Pomona*—The temperature was about the average for the the season; no rain fell. Light fog occurred two mornings. Carloads of oranges, uninjured by frost, are now being shipped; and shippers say there are more sound oranges than was supposed some weeks ago.

San Bernardino County.—Ontario—The continued warm weather is favorable to trees. Grain harvesting has begun; the crop will be light, except in hay. *Chino*—The prevailing warm weather is forcing vegetation very rapidly; but the warm, dry winds are drying the soil rapidly. The beet crop is assured.

Orange County.—Anaheim—Hay-cutting has commenced; the crop will be very light, but of the best quality. The cooperative beet sugar factory is now an assured fact. *Tustin*—The finest of weather has prevailed since last report, except the continued drouth, which has injured the grain and hay prospects, the crops of which will be light. Apricots promise a very full crop.

San Diego County.—National City—The hay crop is proving rather better than was expected. Early sown grain is looking fairly good. Highest temperature 71 degrees, lowest 44 degrees. *San Diego City*—Harvesting has begun, but the crops are very poor, and some are reported too much so to cut, especially on the mesa lands. The fruit crop promises well, and but little has fallen from the cold nights; apricots and peaches are the size of walnuts. Grapes promise well, and have not been touched by frost. Low temperatures were reported from the back country, with light frost at Campo, which did no injury. The orange crop is about all gone, except some scrub stock.

GEORGE E. FRANKLIN,
U. S. Weather Bureau,
In Charge.

HORTICULTURE.

Thinning Fruit.

An essay prepared for the April meeting of the State Horticultural Society by R. C. KELLS of Yuba City.

Not many years past the questions of thinning fruit and how to thin it were not looked upon as being of much importance. The manner in which it was formerly done, and the results of the labor did not prove successful, hence the necessity of discussing the question of thinning. First—Why shall we thin?; second—when shall we thin?; third—how shall we thin?

To the first I would answer that *nature* says we *must* thin for many reasons, and I may mention a few of them. We neglect the pruning of most varieties of trees to such an extent that nature provides an overabundance of fruit, and when this is the case small fruit is the result. The human eye is not pleased with small fruit, and many times the placing of such a product on the market results in touching our pockets, and when you touch the fruit growers pocket you at once become a member of the first class. Why does it touch my pocket? Because nature's eye does not like a small pear or peach.

Why shall we thin, and when shall we thin? In answer to this question I would say that we must be governed something by the season; but in all cases with stone fruits they should be thinned before the time for the stone to harden. With us in the Sacramento Valley, the apricot should be thinned by April 15th to the 20th; peaches from May 1st to 20th. I think we find conditions different in different sections. These dates I mention are as late as we can thin before pits harden, but we can begin three to four weeks earlier, and be sure to thin early enough to get the required results, for it may call for the second thinning to get the fruit properly thinned.

How shall we thin? I might state that the pioneer growers of California did not have to thin their fruit, as nature's eye was not so observing in early days—the small as well as the large fruit found a market; and when the pioneer's attention was first called to thinning, what did he do? Why sir, directed his men to cut long poles for the purpose of thrashing off a portion of the crop. Nature said he must thin, and human nature said he must thin cheaply, but as fruit growers in this progressive age, we find the pole system a poor one, and at this date we are compelled to pick the fruit by hand, one at a time, and I might say with some system and rule, while with the pole we had plenty of rule but no system.

I imagine my hearers expect me to have a laid down rule for thinning stone fruits, but as yet I do not think we have reached that point, while I know we are making great progress in the view of thinning as well as in other lines of fruit growing. I might quote Mr. L. W. Buck who spoke at our Horticultural Society at Yuba City, April 20th on "how to thin and what rule to follow" etc., in which he spoke of the peach principally (and I think the same rule can be applied to other varieties of fruit, viz., apricots, pears, etc,) which is in thinning the peach so as not to leave the fruit closer than four to six inches, on good healthy branches; or in other words, not to leave the fruit closer than the width of the hand. As to how much to thin, it is well for example, to take a peach tree, follow the above rule, and after having thinned, count the fruit on one branch which may be about one-tenth of the tree, and estimate balance of the tree by the fruit left on this limb. You will find that on a seven or eight year old tree you will have from seven to ten boxes of peaches, 20 lbs. per box, counting about 60 peaches to the box. Estimating seven boxes to the tree, 90 trees to the acre, gives us 12,600 pounds of fruit at 1 1-2 cents brings us $189.00 per acre.

When the fruit sets so that we find it necessary to thin, we find it very light thinning if we do not take off more fruit than we leave on the tree. Thus we reduce the number of fruit and increase the size of that which is left, and do it with a less expense than to pick the whole crop, when ripe and when labor is higher, and compelled to take one-half the price for the small fruit which gives the same result per acre, $189.00, and we are unable to sell the same as readily as the large, all things being equal. The man with the large fruit is called upon first, meets with first sales, is able to pay his debts first—in fact he is first, last, and all the time.

Thus we find thinning fruit is of great importance, and is now classed with the many questions of fruit growing. But my plan of how to thin will be by more thorough pruning in the future. The cost of pruning is less than picking the fruit, and we will not overtax or have broken down trees, while on the other hand we will have a more vigorous tree and prolong the age of our orchards.

Suckering Young Trees and Vines.

Read at the April meeting of the State Horticultural Society by ED. M. EHRHORN of Mountain View.

The term suckering, as generally used by fruit growers and vineyardists, means the removal of such sprouts which are not wanted on the tree or vine, and which, if allowed to remain, sometimes prove to be a serious detriment to them. There are trunk and crown suckers. Young trees which are pruned back very much, have a larger root system than the crown requires, and the food furnished by the root has to be placed somewhere, thus it forces every bud out on the trunk and limbs. The lower buds throw out the strongest suckers, and if these are not removed they will make more growth than any limb on the tree. A crown of four branches will be finer and stronger than the one with eight. I have seen newly planted orchards in which trees, as above stated, were not suckered, and the crown was stunted so badly that a sucker, which was a very thrifty one, had to be turned into a tree, thus losing a whole year's growth. We often hear men talk of watersprouts. These are nothing more than matured suckers on the inside of trees. They have been shaded and have a glossy appearance, terminating in a sharp point, and, if furnished with laterals, these generally look like thorns.

The best time to sucker trees or vines is when the sprouts are yet tender, say from two to three inches long. If removed at this time, no knife is needed and the sprout can be removed very easily by hand. When two sprouts start from one bud, one should be removed.

An orchard ought to be well plowed before suckering, as the horses and singletrees are sure to assist you in doing it, and if you have removed all the unnecessary sprouts you will find that, of the few remaining ones, the plow will have picked out the very ones that ought to remain. In very hot localities some practice has been made of leaving the trunk suckers on newly planted trees and pinching them back as soon as they are four or five inches long, and repinching them later on. This is done to protect the trunk from sunburn. These sprouts can be removed as soon as the crown of the young tree can furnish shade enough to protect the trunk. About the month of July would be the time to do this. Judicious suckering saves a great deal of pruning in the fall, and careless pruning causes a great many suckers to grow in spring. The symmetry of a tree can be greatly improved by removing the unnecessary sprouts, and the strength and vigor of the tree will be greatly benefited by it. Shade caused by suckers has a tendency to weaken the crown of the tree and cause the wood to be soft and the fruit spurs to be sickly.

Although suckers are generally detrimental, they can be sometimes made use of. If trees grow lopsided, as very often occurs to the annoyance of fruit growers, a sucker, or, we may say, a branch, can be forced to grow out on the side where wanted by making an angle cut above the dormant bud on the trunk. This will prevent the sap from flowing past the bud, and in nearly every instance the bud will sprout.

Every fruit grower must use his own judgment, as no rules can be given. Suckering is half the cultivation of a young tree, and if not done it will soon grow into a scrubby bush. I consider suckering just as essential as thinning fruit, and from personal experience can see the difference it makes. What has been said about trees will answer also for vines. A great annoyance to vineyardists are the root suckers, but these are generally caused through neglect. If the young vines are well suckered the first year they will not require much more attention. What I mean by well suckering, is to dig down to where the sprout starts and cut clean, so that no blind buds remain. I am sorry to say that this is practiced very little. It is caused either by unreliable help or to save expenses.

THE FIELD.

Hay Notes from a Kansas Reader.

PFEIFFER, KANSAS.

TO THE EDITOR:—In your number of March 26th you offer prizes for the best letters on hay-making on the Pacific Coast. I am not so fortunate as to live there, having spent the best years of my life in drouthy Kansas, but have grown and gathered many a load of hay in my lifetime here and in the old country, and believe that the principal part of it will be mostly the same, only varying a little according to soil and climate.

In planting a crop that is destined for hay and not for seed, sow thick; at least, double the quantity, because we do not want hard stems and long stalks with big seed heads, but lots of leaves and fine stems. Next of great importance is to cut in the right time. This is when the majority of your grasses, clover, barley, wheat, rye or whatever else it may be, is in blossom. At that time you will be able to get the best quality without losing in quantity.

Now, in handling the hay, and not exposing it to the bleaching influence of sun and dew or rain, I have not found a method yet that beats the raking up of the green fodder immediately after cutting and putting it in such shocks as will not heat, but cure without being further handled. The hay will not lose any of its aromatic properties, will bleach only a little on the outside of the shocks and withstand even a good solid shower of rain without being penetrated by it. In the old country, I learned this way of haying when I was a boy and found it to be the best even in our changeable climate of Northern Germany. Here in Kansas I have followed it for 20 years with success, and I believe it would be good for California, where they say it does not rain in haying time.

If the green grass or fodder gets a little warm (not hot) in the shocks so as to sweat some, it will not hurt, but rather improve on the flavor of the hay. In one or two weeks, according to the dryness of the atmosphere, the shocks may be stacked, hauled to the barn or baled, just as desirable, or according to the custom of the country.

In handling clover and alfalfa, this raking up green will prevent the loss of a good many leaves and flower heads, which constitute the most valuable part of the hay, and are often partially sacrificed by exposing on the swath to the hot sun after mowing.

One of the cheapest and best of hay for Western Kansas is green rye. It can be raised by simply drilling a bushel and a half of rye to the acre in wheat stubble without plowing the land. It never fails to grow, and can be cut by the middle of May. The land can then, by summer fallowing, be prepared for wheat again if so desired. Hoping you will find my letter worth reading, I sign

CONRAD THRISGER.

[Our correspondent's note is interesting. He will see by the letters published last week that it is better to cut the grains we grow for hay later than the blossoming. Hay then cut has not substance enough, but his rule is a good one for some grasses, which, however, we do not grow. He will also see that curing in the shock is the accepted practice here. We are using green rye for dairy feed in some parts of the State.—EDS. PRESS.]

An Irish Agricultural Graduate on Hay-Growing.

SANTA BARBARA.

TO THE EDITOR:—In treating the subject of growing and harvesting hay, which properly comes under two heads, as grain and grass or clover—grain being either wheat, barley or oats, and grass or clover being, as in this State, timothy, or perennial rye, or Italian rye, also alfalfa, or even buckwheat.

The preparation of the soil, taking for granted it is rich and suitable for such purpose, should include thorough cultivation, deep plowing and pulverization, rolling, etc. In European countries, or Ireland, and in the East, grass seed is sown with a grain crop, as barley, successfully—the sowing being early in the fall. After removal of the grain, the grass comes up well and it saves the land, being often foul with weeds. This method succeeds here with grasses and alfalfa.

The curing or harvesting of the hay crop is a nice point, the great desideratum being to turn often and not allow any one part or portion to get too much sun. This is essential with alfalfa, or otherwise the leaves all are lost and nothing but stalks left. On the other hand, if not sufficiently cured, the hay is apt to heat, sweat too much and mold. Chimneys or air holes in stacks are a good preventive of heating and molding. Also a little salt (coarse) shaken over it, say half a pailful to every load, is particularly good for wheat and barley hay, when being stacked.

As to the length it should remain in cocks, depends on the weather and state of the crop. Generally, three days or less ought to be about long enough in swaths before being cocked, and a week in cocks of about 100 to 300 lbs. to each cock, which too might, just before being moved for stacking, be turned over to admit more air. A good plan to remove it is a long, strong scantling, with some spikes, rake-like, put on this, and it then drawn over the cock, which saves forking it into the wagon. The derrick easily hoists to the stack; otherwise those hay nets for this purpose are good.

I may add, in conclusion, that I recommend the steeping of all seed grain or even grass seed, but not alfalfa or clover. In steeping grass, which floats on water and is hard to thoroughly soak, 24 hours ought to be enough; after, mix with about one-fourth its bulk with nice, fine, dry sand, after having drained off all the water from the seed. Grass seed or grain so steeped has greater weight in sowing and is easier scattered, but a machine for broadcast sowing is much more satisfactory.

I would strongly recommend all who have even a few acres, to have a small patch of alfalfa, which is excellent for horses. I have seen on the Nevada Bank big ranch, Merced county, horses work and thrive on alfalfa alone. For feeding cows, hogs, even chickens, it is invaluable, and once well put in, with plenty of farm manure plowed in, it will stand drouth and return good crops, even on average rainfall, without irrigation. Once well put in, it is in to stay permanently, and yield, as I have seen in San Bernardino county, from three to ten tons average yearly. Even more is not impossible, especially if irrigated or top-dressed with manure.

Grass hay, as Timothy, is far inferior to grain hay, as they, when allowed to mature, are liable to shed their seed. The waste is so much consumed, unmasticated, which grows after being out on the land. Again, grain hay or straw, if on rich land, is so apt to lodge or be coarse, and that part nearest the ground (except the grain itself) is the best of it. This is lost because not cut close enough to the ground.

M. J. BYRNE.

Growing and Curing Hay.

BUTTE CITY, COLUSA CO.

TO THE EDITOR:—California farmers can pride themselves on having a soil and climate capable of producing most varieties of hay in the greatest profusion.

Where water for irrigating purposes is easily obtained, it is no trick to raise very large crops of hay per acre, as, owing to our superior climate, several crops can be secured from the same soil in one season. But, as your humble servant lives in the Sacramento valley, where irrigation is yet in its embryo state, we must content ourselves with fewer varieties and only one crop per season. However, I think in this we are not unfortunate, as nowhere in the State is a better class of hay made and fed than in the banner county of Colusa. We can have a wild-oat hay, a wheat hay or a barley hay. I prefer an even mixture of the three.

In the fall of the year I burn off a piece of wheat stubble. This, if left alone, will produce a fair crop of wheat and oats; but I sow broadcast on it 40 pounds of Chevalier barley per acre and harrow the ground twice, thereby making a smooth surface for the mower and rake. I cut as soon as the oats and barley are in the dough, letting it lie 24 hours in the swath to wilt. I then rake into windrows and cock it up till fully cured, when it is then hauled to the haymow or baled, as may be required.

I generally get from two to three tons per acre of this hay, than which no better fodder could be placed before stock, reference being had to its nutritious qualities and fine aroma. Stock will eat very little grain with this class of provender before them, as I witness daily.

Farmers who use harvesters, and generally cut considerable hay around the headlands of each field, can have the same result by sowing the headlands with a mixed seed, and much heavier than their usual seeding, so as not to have the hay too coarse.

N. J. CLARK.

Producing Hay.

NAPA. April 12.

TO THE EDITOR:—In preparing land for raising hay, it is not necessary to plow as deep as for grain; four or five inches are sufficient.

The amount of seed per acre depends on the quality of the soil and time of seeding; early in the winter less is required than later, for the reason that early sown grain stools more than late. On rich land, between 100 and 110 pounds of seed per acre is considered the correct amount for early sowing. After sowing, the land should be thoroughly harrowed no less than twice, once each way.

The best variety for feeding horses is black oats and wheat mixed; for cattle, grass hay is preferable.

Land that is used for hay only, needs to be plowed only every other year, alternating with a cultivator.

In cutting hay, care should be taken not to have it too green. All grain and timothy hay should be cut when it will weigh the most; that is, when the kernel is in the dough.

Raking and stacking should be done as soon as possible after being cut; at the same time, be careful that it is dry enough so as not to mold or heat. When practicable, hay should not be left in the swath overnight, as it will lose its brightness more or less through the effects of the dew, but put into the windrow. The state of the weather must be considered; if dry and cool, two days will be time enough to dry so that it can be piled. In 1887 the weather was so hot and dry that we cut, raked and shocked hay in the same day, and then it was so dried as to be only second class.

The sooner hay is put in the barn or stack the better quality of hay you will have.

The cost of producing hay depends on the locality and quality of the soil. Land that will grow two and a half tons per acre will cost, on an average, $8.37 per acre in the bale, ready for shipping; 110 pounds of seed for one acre, at one cent and a half, $1 65; plowing, sowing and harrowing same, $2; stacking, $1.50; baling, including rope and board of balers, $3.22.

W. J. S.

ENTOMOLOGICAL.

Summer Wash for San Jose Scale, Red Spider, Fungus, Etc.

The Sutter County Board of Horticultural Commissioners recommend the whale oil soap and sulphide of potash wash for the summer-spraying of deciduous trees, infested with the San Jose scale, red spider, yellow mite, etc. The following is Prof. Hilgard's formula, and is used throughout the State, being not only cheap but easily mixed and quite effectual for summer-spraying. To accomplish the best results this wash should be applied after the scale are hatched and while they are crawling on the trees. It is impossible to state the date when this occurs, as it varies according to the season and weather, but it is usually about the first of May in this part of the State. All infected trees should be often examined and when, with the aid of a magnifying glass, the young scale can be seen crawling on the tree, no time should be lost in applying the remedy.

WHALE OIL SOAP AND SULPHIDE OF POTASH REMEDY.

Whale oil soap (80 per cent strength)	20 pounds
Sulphur	3 pounds
Caustic soda (98 per cent strength)	1 pound
Commercial potash	1 pound
Water to make 100 gallons.	

Place the sulphur, caustic soda and potash together in about two gallons of water and boil for at least an hour, or until thoroughly dissolved. Dissolve the soap in the water by boiling; mix the two and boil them for a short time; use at 130 deg. F. in vessel.

Prof. Hilgard recommends, in bad cases of scale and in fighting red spider, an addition of kerosene, in the form of an emulsion, to the above wash.

Kerosene	1 gallon
Whale oil soap	¼ pound
Water	½ gallon

Dissolve the soap in the water and when boiling hot add the kerosene. Churn the mixture for five or ten minutes with a hand spray pump until it forms an emulsion. If the emulsion is perfect it will be of a creamy nature, no oil appearing on the surface. Add this to the 100 gallons of spraying material.

The sulphide of potash and the kerosene emulsion are often made up in large quantities and the proper amount added to the whale oil soap, as required. Keep this wash well stirred when using.

It is very important that the whale oil soap used should be at least of 80 per cent strength. To test the soap, spread five or ten ounces of it on a tin plate counterpoised on a pair of upright scales reading to ounces, and then dry the whole by setting it on top of a pot of boiling water. The loss in drying will indicate the amount of water in the soap. Thus, if five ounces were taken and one ounce was lost in drying, the soap would be of 80 per cent strength.

FORESTRY.

Eucalyptus, Rostrata and Viminalis.

MONTECITO, Santa Barbara Co.

TO THE EDITOR:—The note of Mr. Abbott Kinney in the current number of your paper, in which he refers to the frequent sale of *Eucalyptus viminalis* under the name of *E. rostrata* calls attention to a matter of some importance to all those interested in planting gum trees.

The manner in which Mr. Kinney seeks to point out the differences between these two trees, however, leads me to surmise that he has perhaps, himself been deceived by taking for *E. rostrata* another gum which is often, though not so frequently as *E. viminalis*, sent out as the true red gum. After describing the *viminalis* he says, "the lanceolate leaves of the red gum are less long and narrow than those of *Viminalis*." In this he is incorrect. The leaves of the genuine *E. rostrata* are if anything longer and narrower than those of *E. viminalis*. Such a method of distinction, however, is at best inexact and unsatisfactory.

Had Mr. Kinney possessed a more intimate practical acquaintance with these trees he might have been able to give in a few words a test by which the most inexperienced or careless observer could have easily distinguished between them at the first glance; namely by saying that the leaves of young trees of *E. viminalis* are opposite and sessile, while those of *E. rostrata* are alternate and petiolate.

As this is a subject of some interest to a considerable number of tree planters in this State it may not be out of place to publish a full description of these two trees as given by Naudin, the highest European authority on the genus, in his memoir entitled *Description et Emploi des Eucalyptus Introduits en Europe*, which was reviewed in the RURAL PRESS of March 14th, 1891, p. 245.

Of the *viminalis* he says: "The tree is eminently biform (that is, it changes greatly from its youthful to its mature form). When young the leaves are sessile, opposite-decussate, lanceolate, more or less pointed and usually green or slightly glaucous. When the trees reach maturity the leaves, like those of the greater part of the Eucalypts, become alternate, petiolate, slenderly lanceolate, straight or very little curved and pendant. Their general color is light green, even verging toward yellow. The flowers are in triple axillary cymes, and the bud at the time of opening is of the size of a small pea, as is also the fruit, the mature seed-pod of which scarcely reaches beyond the edge of the tube of the calyx. The tree generally grows straight, assuming a more or less pyramidal shape, and the trunk after throwing off its old bark which detaches itself in large strips, appears smooth and almost as white as that of a birch. The *E. viminalis* is a handsome ornamental or avenue tree, which attains a height of 100 feet without growing quite so rapidly as *E. globulus*. Nor has it the same density or durability, which however does not prevent it from finding numerous uses for interior work. It is considerably hardier than *E. globulus;* trees which have reached some size, enduring without any injury, a passing temperature as low as 140 Fah."

Regarding *E. rostrata*, Naudin says it is one of the most widely distributed species throughout the Mediterranean region, and especially in Algeria, where it seems to be tending to supplant in favor the *E. globulus*, although its growth is less rapid than that of the latter. It owes this preference, justified or not, to the excellence of its wood, more easily worked than that of *globulus*, with straighter fibres, less subject to checking, of great durability even in sea water, where it appears not to be attacked by the teredo, though in this quality it is perhaps surpassed by the wood of *E. marginata*. It has long been used in Australia, especially for piles, railroad ties and telegraph poles, etc.

E. rostrata, which many planters still continue, says M.

Naudin, to call by the meaningless name of "red gum," grows into a tree 125 feet or more in height, and from three to four feet in diameter. He classes it among the *uniform* gums as its characteristics in its young state do not differ perceptibly from those of its maturity. Its bark at first smooth, gray and somewhat marbled, detaches itself in patches something like that of the sycamores, thickening greatly with age and cracking open with long and deep fissures. The leaves of a grayish green or glaucous, more or less pendant, a trifle sickle shaped or quite straight, and lanceolate are from 10 to 15 centimeters long by one to one and one half wide.

I will add that this description corresponds with specimens I have growing in Montecito received from the State Board of Forestry since Mr. Kinney's retirement, and with others raised from seed sent me by Prof. Maiden of the Technological Museum, Sydney, N. S. W.

The characteristics which most accurately distinguished this eucalypt, are furnished by the inflorescence and the fruit. The inflorescence is composed of axillary umbels containing as many, perhaps, as 25 flowers all neatly pediceled, whose operculum prolonged into a sharp beak, is longer than the receptacle of the calyx. The seed-pod, about the size of a pepper seed, is always exserted, protruding beyond the calyx nearly half its length.

E. rostrata is a little more hardy than the *globulus*, and appears to accomodate to all soils, preferring however, those which are rather moist and more or less sandy.

FRANK M. GALLAHER.

FRUIT MARKETING.

The State Society Discusses Fruit Exchanges.

At a regular meeting of the State Horticultural Society, held in the rooms of the State Board of Horticulture, on April 29th, the following Report of the Committee on Fruit Exchange was presented:

To the President and Members of the Horticultural Society:—Your Committee met. Present, C. F. Wyer, B. M. Lelong, C. H. Allen, E. W. Maslin—Mr. Wyer, Pres.; E. W. Maslin, Sec.

Mr. A. L. Bancroft submitted a plan which was discussed. Mr. P. W. Butler addressed a letter to Mr. Chas. H. Allen endorsing Mr. Bancroft's plan. Both the plan recommended by Mr. Bancroft and Mr. Butler's letter accompany this Report, which are referred to the Society for its action.

The Committee found the subject too complex for acceptable adjustment, and hence have refrained from reporting a definite plan, believing that the people who are to be affected should be called into consultation.

The Committee believes that the interests of the dried-fruit producers would be best subserved by separate organizations formed in each county, or at least in contiguous groups of counties, and to prevent these companies or associations from conflicting with each other and thus aid in depressing the market for dried fruit; that there should be formed out of these separate organizations a main association having jurisdiction over the branches. By this means, the marketing of the fruit at inauspicious dates could be prevented and machinery organized for obtaining for the use of all the branches, information of the condition of the fruit market in the East.

Your Committee recommends that this Society call a convention of the fruit growers of the State to meet at a place and time designated by the Society to take into consideration the feasibility of organizing a general and special or separate association, as above described, for the joint and profitable marketing of the dried fruits of the State.

CHAS. F. WYER,
CHAS. H. ALLEN,
E. W. MASLIN,
Committee.

The report was accepted, and after discussion, it was decided, upon motion of Mr. Bancroft, that the Committee be continued and be empowered to call a meeting of those interested in dried fruit whenever it sees fit. The Committee is C. F. Wyer of Winters, Leonard Coates of Napa, B. M. Lelong, A. L. Bancroft and E. W. Maslin of San Francisco, and C. H. Allen of San Jose.

The following are the documents referred to in the above report:

MR. BANCROFT'S SUGGESTION OF A DRIED FRUIT EXCHANGE.

The object is to furnish a medium through which to market California's product of dried fruit, figs, raisins, almonds, nuts, etc.; to have a Board of five Directors, monthly meetings; compensation to each Director, $20, for each meeting attended, provided they are strictly on time; to have an Executive Committee of three from the members of the Board of Directors; weekly meetings from June 15th for six months and bi-weekly meetings for the remaining six months, or say 40 meetings in the course of the year; compensation, $20 to each member for each meeting attended, if on time; a record to be kept of their transactions by the Secretary. Where the members are not unanimous upon any point, it may be dropped or referred to the Board of Directors for action.

A manager, to devote his entire business time to the interests of the Exchange; to be Secretary and ex-officio member of both Board of Directors and Executive Committee, but to have no vote in either body; compensation, $200 per month; two assistants—one at $50 per month and one at $25.

The members of the Exchange to be of two classes—selling members and buying members; the selling members to pay a fee for the season of $5; the buying members to pay a fee for the season of $10; the Exchange to locate in rooms as near to the State Board of Horticulture as practicable; rent probably about $75 per month.

The Exchange to receive samples of dried fruits, etc. and to sell by sample, charging to the seller and buyer *each* a commission of 1½ per cent, making 3 per cent in all to the Exchange. The commissions, or a part of them, to perhaps be deposited with the Exchange in advance, or the seller to be responsible for all—he to collect from the buyer at the time of sale.

The Exchange to effect sales by correspondence as well as in their rooms, charging the same commissions; the seller to furnish samples and the purchaser to pay transportation on them.

No samples to be accepted by the Exchange except from parties who contract to sell their entire product for the entire season through the Exchange. No one to be admitted as a seller for any season if he shall have made any sales previous to applying for membership. No *dealer* in dried fruits to be admitted as a *selling* member.

The Exchange to assume no responsibility as to goods agreeing with samples; that must be arranged for between buyer and seller. No goods to be consigned by the Exchange. The selling prices to be determined from time to time by the Executive Committee.

The Exchange to issue bulletins *to the seller* weekly from July 1st to January 1st, and biweekly from July 1st to January 1st; giving statistics of sales made, goods unsold, etc., and market rates of dried fruits, etc. all over the world. The bulletins to be mailed in sealed envelopes. Accompanying each bulletin shall be a blank form of ballot—perhaps to be numbered—for the seller to fill out, showing the quantity of dried fruit he may have on hand and the prices at which he is in favor of offering it, but the prices at which it is to be held are to be finally determined by the Executive Committee.

Lots of goods offered shall be listed at the Exchange in the order accepted and shall be offered to the buying members in the same order. If goods remain with the Exchange for a period of six months unsold, the selling member is to be allowed to apply for and receive permission to offer them at private sale at any price he may desire, and if so sold the Exchange shall be notified, but the Exchange shall not be entitled to any commission upon them.

The Exchange to make the most favorable arrangements possible for the storage of goods while awaiting a purchaser and also for the obtaining of loans upon them.

The Exchange should organize at once and commence preparations. Applications for selling memberships to be solicited at once conditioned upon business amounting to an estimated amount of not less than $250,000 for the season before obtained before they shall be considered binding. Requests should be made in each notice published, that producers send their names and address to the Exchange in order that circular matter may be sent to them. Advertisements to the same end should be inserted in the trade papers.

Estimates Of Receipts and Expenditures.

RECEIPTS.

Com. on $250,000—sales at 3 per cent	$7500 00
Fees from 500 selling members at $5	2500 00
Fees from 25 buying members at $10	250 00
Total	$10,250 00

EXPENDITURES.

Board of Directors—12 meetings at $100	$1200 00
Executive Com.—40 meetings at $60	2400 00
Manager and Secretary	2400 00
Assistants	900 00
Rent	900 00
Stationery, printing, postage, fuel, lights, etc	2000 00
Sundries, extras or surplus	450 00
Total	$10,250 00

The $250,000 worth of goods to be sold by the Exchange would be about one-eighth or one-tenth of the apricots, peaches and prunes alone, to say nothing whatever of figs, raisins, grapes, almonds, nuts etc. How much business it would be reasonable to expect might be done by the Exchange the first year, it would be difficult to say. If the sales were materially in excess of the amount named, the commission to the selling members should be reduced or be cut off entirely, or they should have a draw-back at the end of the year which would materially reduce or wipe them out. The commission to the buying members should *not* be reduced.

Subscriptions should be started at once to a fund to guarantee the expenses of attempting an organization. If the attempt is successful, the expenses would be met in the ordinary way; if not successful they would be divided *pro rata* among the subscribers.

The Board of Directors should be elected by ballot by the selling members—each $100—of sales made during the preceeding season to be entitled to one vote. The election should be held April 1st of each year.

The Board of Directors should elect the officers: President, Vice-President, Executive Committee, Manager and Assistants. The management of the Exchange should fall upon the Executive Committee; it being all the time subordinate to the Board of Directors.

If an enterprise of this kind bids fair to succeed, there will be danger that the middlemen will try to find some way to strangle it in order to protect their own interests. The possibilities of such an attempt resulting successfully should be very carefully guarded.

MR. BUTLER'S LETTER.

LOS GATOS, March 12, 1892.

CHAS. H. ALLEN, San Jose:—The plan for the operating of a Dried Fruit Exchange, by A. L. Bancroft, I have carefully examined, and I find the plans suggested to be intelligent and seemingly practical. They are clear and business like in form, and can be readily understood by all interested parties. Twenty dollars to be paid to each director for his attendance at each meeting, might be considered as too high, but it is doubtful if competent men can be secured at less compensation. It might not be necessary to have weekly meetings of the directors begin as early as June, or so long before any dried fruit was ready for the market, but this matter could be determined by experience. A portion of all samples should be held by the Exchange until the goods are delivered and accepted or rejected, as difficulties are liable to occur by buyers claiming goods to be inferior to samples.

I fully concur in what is said about the danger from middlemen, and it is to avoid these men, and bring the producer and consumer nearer to each other, that the proposed organization is to be formed.

P. W. BUTLER.

What the West Side Association Has Done.

As stated in last week's RURAL, the joint committee of the Doyle and Campbell Fruit Growers' Association has called a convention of fruit growers to be held in San Jose May 7th, at 10 o'clock A. M., for the purpose of organizing a Dried Fruit Exchange. The committee has issued a circular setting forth the objects of the meeting, and it is hoped that fruit growers from every section of the county will attend this proposed convention.

Colonel Philo Hersey, one of the Directors of the West Side Fruit Growers' Association, at the meeting of the Campbell Association Saturday evening, gave the history of the West Side corporation. He stated that a little over a year ago the growers in the vicinity of Doyle met, organized and incorporated. The West Side Fruit Growers, Association purchased 20 acres of land on the Stevens Creek road, put up a large drier with all the other necessary buildings, trays, trucks, tracks, sulphur-houses, boxes, etc., and when the season opened they were ready to handle the fruit of the members of the association who were not prepared to dry their fruit at home, and to find a market for those who did dry their own fruit. These latter hauled their dried fruit to the drier loose in boxes, and the association graded, packed and marketed it. During the season the association handled about one million pounds of fruit, and so far as he could learn all who were interested in the association were satisfied with the management of it, and received more for their fruit than did other growers who acted independently of the association. The business was conducted on a working capital of about $4000. The association was in shape so as to be able to advance growers from 50 to 75 per cent on the fruit delivered. The association was daily in receipt of advices from all the leading markets, showing the condition of each, and these reports were posted up in the office so that all members had access to them, and could inform themselves; not only were the reports open to members, but to all others who wished to see them, and by this method many growers no doubt were prevented from consigning their fruit when the market was depressed. This move proved a benefit to the association as well as to the individual grower who prepared his own fruit for market. So successful was the venture, that at the close of the season the stockholders were paid eight per cent on the money they had paid in. Some money was borrowed by the Directors at the beginning of the season, but they paid only $60 interest for what they had borrowed, as prompt returns were made for the fruit. For one carload of apricots the association received ten cents per pound. The par value of the shares of the association is $25.

Continuing, Colonel Hersey said he thought it would be a good thing for the growers if several associations were organized in the county; then a central association might be formed and controlled by a Board of Directors selected from the several organizations. This would give the central organization a large quantity of fruit to dispose of, and it would be an object for buyers to consult the central organization and secure their supplies. Each local organization could have its own brand, which in the course of two or three years would become known in the markets, and sales could more readily be effected. Of course fruit of all kinds must be properly graded and classified, so that the brand would be a guarantee of the quality.

THE STOCK YARD.

A Chicago Cattle King on the California Outlook.

Nelson Morris, who has been spending the winter in California, gives an interview to one of the daily papers, from which we select the following paragraphs. Mr. Morris is senior member of the house of Nelson Morris & Co., whose establishments in Chicago and St. Louis are among the leaders in America in the manufacture of animal food products. Mr. Morris has been spending the winter on this coast for the benefit of his health, and at the same time to give more or less attention to the extensive stock yards, slaughtering and packing-house industries now in course of erection in South San Francisco, San Mateo county. G. F. Swift and P. D. Armour are also joined with him as chief promoters of this great enterprise.

"California," said Mr. Morris, "in my opinion, has a great future, having, as it has, unlimited resources which are susceptible, by being properly developed, of making this the wealthiest State in the Union. By observaton, when here three years ago, I learned that the grain-raising farmers of California were in the habit of pursuing the ruinous policy of exhausting the soil by drawing successive crops from it without giving it adequate rest or restoring anything to it in the way of fertilizer or nutriment, which obtained with Eastern farmers when they began to deplete the virgin prairies of Illinois and Iowa. Recent observation has confirmed this opinion.

"The experience in the East, coupled with intelligent appreciation of the progress of events in California, induced me to join in the purchase of a large tract of land near San Francisco, to be used in part for slaughtering, packing and canning beef, pork and mutton, and in part to be subdivided and transformed into homes for the numerous persons who will be employed in those industries.

"It is easy to see, from the rapidity with which the soil is deteriorating, that the farmers of California will sooner or later realize the necessity of following the example of the the farmers of Illinois and Iowa, in seeding part of their lands to pasture, upon which they can profitably graze and raise cattle, hogs and sheep.

"Part of it may advantageously be seeded with Egyptian corn, which can be raised, as a rule, for not over $4 an acre, and fed to stock in the entire plant. The stalk, as well as the grain, is one of the best foods known.

"The success and profitableness of this crop in this State has already been duly demonstrated by Messrs. Miller & Lux and others. Still other parts of the land may be used,

as now, to raise small grain, until they show the need of rest and recuperation. By this time the parts already rested and recuperated by use as pasture land will be in condition to be planted with small grain, if this should be found more profitable, and the freshly exhausted soil may, in its turn, be restored in a similar manner. The straw and stalks of all grains should be utilized as feed, instead of being burned and thrown away, as is now the practice of the average farmer of this State. These parts of the plant contain some nutriment, and, fed to the cattle and sheep, make a fair substitute for the hay used in the East. The droppings of the stock are one of Nature's means of nourishing the earth. All this can be done in California to greater advantage than in any other State in the Union, by reason of the mildness and equableness of her climate. Moreover, it takes about twice as much grain feed to fatten animals in the winter, East, as it does on the Pacific Slope during the same season of the year, for in cold climates much food of a fattening tendency is consumed in the maintenance of bodily heat, and hence does not contribute to increase the weight of the animal. During the mild winter weather of this State a properly fed animal will usually gain in flesh and fat two pounds per day, while if exposed to the rigors of an Eastern winter it will not gain an average of one pound pound per day, even with twice the quantity of the same kind of food.

"As to hogs, in the winter season, East, they crowd together and often upon one another in great heaps, for greater warmth, and not uncommonly with the effect of smothering numbers of the undermost. The intimate contact which comes from crowding is most favorable to the spread of infectious diseases, and hence the prevalence of what is known in the East as 'hog cholera,' and its rarity or entire absence under more favorable conditions of climate and soil in California. Here animals have warm and dry places to rest upon at all seasons of the year, consequently they grow faster and on less feed than they do in less favored regions, while the early grass is of almost priceless benefit to the female and her young.

"Sheep raising has been one of the main industries on this coast as a livestock enterprise, but it has not been made what it is possible to make it under the influence of a permanent and steady market. Yet to-day mutton is higher in California than almost any other State in the Union. This is not only unnatural, but directly the opposite of the natural condition of things existing in the State. The most desirable results in this, as in all other important live stock industries, can only be attained under strict commercial laws, such as are only created and maintained by and through a central market exchange, as now exists in Chicago and St. Louis, the influence of which has not only made the great Mississippi valley the great grain-producing center of the world, but has made the once-supposed deserts of the plains west of the Mississippi the most favorable grazing territory of any part of the globe.

"The South San Francisco Land and Improvement company is now engaged in the inauguration of industries, the erection of abattoirs, stockyards, packing-houses and canneries on its premises in South San Francisco, where, for all time henceforth, will be found a permanent and steady market, not for sheep alone, but for all classes of live stock, horses, mules, cattle, sheep and hogs.

"This plant will be able to consume all the cattle and sheep sent to it. All the beef and mutton not needed for home consumption can readily be canned and shipped to France and other parts of Europe for use in the armies of those countries, where there is great demand for them. Furthermore, lambs raised in this State for the Christmas market, and also for sale during the months of January and February, will always find a good and ready sale at the South San Francisco Stockyards, as that company will have its own patent refrigerator cars in which to ship this class of meat to the markets of the East, where, during the winter months, it has a great demand—the Eastern farmers not being able to supply the demand during those months.

"The demand for hog products on the Pacific Coast has become so great that over 35,000,000 pounds of lard, hams, salted and smoked meat were shipped from the packing-houses of the East during the past year to San Francisco, and proportionate amounts shipped to other prominent points on the coast.

"In addition to the hog product, large quantities of canned beef, potted meats and beef tongues were shipped from the East to San Francisco, Los Angeles and other points during the same time, say to the extent of several million pounds.

"In view of the fact that enough cattle, sheep and hogs can be profitably raised in California alone to supply the stockyards and packing industries of South San Francisco, to say nothing of the cattle and sheep raising capacity of Arizona, Nevada, Oregon and other neighboring territory, it ought not to surprise these people that we, G. F. Swift, P. D. Armour and myself, who were the promoters and are, as individual companies, the owners of the chief part of the packing-house industries of Chicago, St. Louis, Omaha and Kansas City, should join hands for the purpose of fostering and developing the animal food products of this coast by the use of methods in vogue in our Eastern plant, and which are most modern, cleanly and economical in character, thus bringing to a speedy ending the very filthy and crude manner of preparing animal foods for the supply of the home market now in force not only in the enterprising city of San Francisco, but at every other important coast point.

"If our South San Francisco plants are appreciated by the farmers of this and adjoining States to the extent of being furnished with a full supply of cattle, hogs and sheep properly fattened for market, its brands of canned meats will soon be as well and favorably known in all foreign markets as are the brands of the Chicago and St. Louis plants.

The conditions at South San Francisco for preparing and handling animal food, economically, being, as they are, as favorable if not, in a general sense, more modern than at either Omaha or Kansas City, and for the more important fact that the markets to be supplied with the products of South San Francisco being as favorable, if not more so, as to prices to be obtained than the markets that Omaha can supply, we can assure the farmers and stock raisers of California, Oregon and Nevada that they will at all times find the market at South San Francisco as steady and as good as to prices daily the year round for live stock, sold live weight, as obtain in Omaha.

"The fresh meats furnished by the packing-houses of South San Francisco will be treated in exactly the same manner as is done in the great Eastern establishments by the same owners. It will be stored in extensive cooling rooms, constructed for the especial purpose, chilled to the marrow, and put into condition for shipment in especially designed patented refrigerator cars, then shipped, regardless of the conditions of the weather, to any part of the country that desires to be supplied with superior fresh meats just as it is now shipped from Chicago to London, Eng., and distributed over the continent of Europe; and it will be in equally as favorable condition when introduced into the kitchens of San Francisco."

"It is generally understood that the extensive slaughtering and packing houses now in course of erection in South San Francisco, when completed, will have a daily capacity for handling and preparing for market 800 head of cattle, 1000 head of hogs and 1500 head of sheep. Have you any doubt as to the ability of this and adjoining States to furnish a daily market with so great a number of animals?"

"In reply," said Morris, "I will say that the subject of the supply of live stock was duly considered by myself and associates before the land on which the works are located was purchased. Had there been any doubt in our minds as to an abundant supply ultimately of cattle, hogs and sheep, you can rest assured that the purchase of the 3400 acres would not have been made.

"A careful investigation of this question of supply during my present sojourn in this State prompts me to say that cattle-raising in California is in its infancy, hog-raising in its decline and sheep-raising is nearly at an end. But our observation during the past 35 years in the East as to the influence on stock-raising of permanent steady markets, such as now exist in Omaha and Chicago, convinces me beyond doubt that the inauguration of the stockyards in South San Francisco will not only give fresh impetus to the stock-raising industry throughout a great extent of country, but in other ways of material importance it will contribute to the prosperity of the farmers of this coast by enabling them to maintain the fertility of their lands.

"California barley and also Egyptian corn are exceedingly nutritious, and, containing but little moisture, make excellent feed for both cattle and hogs. Egyptian corn is not only more easily eaten than Indian corn by cattle, but it makes firmer meat."

Discouraged Breeders.

It is truly lamentable, says a writer to the *Iowa Homestead*, to see not only the apathy, but almost disgust of our farmers for pedigreed cattle—not one class alone seem to suffer or be indifferently considered, but all. True, the cattle industry is depressed, fearfully depressed, away below paying prices. Farmers cannot raise beef from calfhood up to three years of age for the price they can sell it for to-day, or for the last three years, and this has made them heart sick. They have hoped there would be a change for the better, each succeeding year, but clouds still darken their industry, and despair is upon them. Is this wise? Is it sensible or becoming in a class of men who are the salt of the earth—the basis, the foundation of all other kinds of business, of whatever nature? Yea, more, they are the progenitors of the law makers of our country, as a rule, as well. Seldom do you find a man of this country more than three generations removed from the farm ere his progeny returned to it again. Hence, of all classes of men, the farmer should be sensible. Their misfortunes or mistakes effect every other line of business, and the prosperity of every country is in their hands; hence, whatever our farmers do in their line, the act is of interest to everybody in the country. If a farmer only destroys his buildings, and kills his stock (a right he has) he not only lessens his own property, but that of the county, State and nation as well; there is less property for taxation and the support of man. We know all cattle are not alike, or of equal value for practical purposes. Some mature much earlier than others, and will make much more flesh from the same amount of food, or assimilate food to flesh in greater proportions, and in a more perfect manner. We claim, and everybody who has given the subject due consideration will agree with us, that a well-bred Shorthorn is better than a scrub. They mature earlier, assimilate food more perfectly, and are more reliable as good breeders. The most despondent breeder will agree with me as a rule, though he may say, and truly, that he has seen some of such breeding, scrubs. Now let us come to the point. Heretofore our country has been filled with good herds of thoroughbreds. The common beef breeder was particular about the bull he used, and would have none but the best. Now how is it? Ah, we see a marvelous change. Many farmers who had good herds a few years ago have sold them to the butcher, and installed in their place a common and varied lot of scrubs, for cattle of some kind they must have to consume the roughness of their farms. This varied lot fatten irregularly, if at all, and at much greater expense than the thoroughbreds, and when fat they are inferior, common beef, consequently bring an inferior price in market. Has not this man not only lessened the production of his farm, the value of his stock, the same as if a part had been killed, as well as the value of the property of the country? He has less money to lay by or spend and has reduced the production of the country and its business in the same ratio of his loss. Many of the heretofore good breeders are now quite indifferent as to the bull they use, and a grade or scrub suits just as well, giving as an excuse that cattle are so cheap it will not pay to be particular. How unreasonable is this idea, for if good cattle will not pay if they net a loss, and I will admit they do in some cases—how is it that poor cattle costing more in feed, and selling for less in the markets, can possibly be considered profitable? Is not this absurd as well as unreasonable? When an article is cheap, the best costing little, can man afford to buy, or keep an inferior thing? Is not this the time to build up and improve herds instead of letting them run down? Does it profit anything to become discouraged in a line of business you must follow, in some form, and dispense with the good and put in its place inferiority? All kinds of business have their periods of depression—have their ebb and flow, and is it reasonable to expect cattle breeding to be an exception? I myself have been looking for better days in this business for more than a year, yet it comes not, up to date, but it will come sooner or later, and those who have held fast to it and improved their stock instead of lowering the standard will reap a rich reward.

Sheep and Wool.

The Progress of Wool Manufactures.

Our wool-growing readers will be interested in an account of the wool manufacturing industry of the country, as disclosed by the census of 1890. We have just received a copy of Census Bulletin, No. 169, which deals with this subject and presents introductory remarks by Superintendent Porter, and a most carefully prepared statistical report by S. N. Dexter North, the well-known secretary of the National Association of Wool Manufacturers. We have known Mr. North personally for the last 27 years and can commend his accuracy and intelligence in statistical inquiries in which he enjoys well-earned eminence. We can present the elaborate tabulations of the bulletin, but we shall set forth deductions therefrom which will give a general idea of the progress in this important line of industry:

Total Capital in Wool Manufacturing in U. S.	$320,417,304
Total amount paid in wages	76,768 871
Cost of materials used	203,768,642
Value of products	338,231,109

The number of establishments reported for 1890 as engaged in the manufacture of "woolen goods" proper, when compared with the number reported for 1880, shows a decrease of 678. The number reported for 1880 for this branch of the industry showed a decrease of 901 establishments from the number reported in 1870. It is explained that this continued decrease in the number of establishments is principally due to the disappearance of the custom or neighborhood carding mills, which formerly carded wool to be spun in families. The number of fully equipped woolen and worsted mills in the United States has considerably increased since 1880, as well as their aggregate machinery capacity.

It is stated that a great reduction has taken place in the market value of the products of the wool industry. The true measure of the progress of the industry is therefore the quantity rather than the value of the product.

The following are the amounts of materials used in the years named:

	1890.	1880.
Domestic wool, lbs	258,757,101	222,991 531
Foreign wool	114.116,612	73,200,693
Shoddy	61 626,261	52.163,926
Camels hair and noils	7,689,801	1,523,119
Mohair	2.136,244	159 678
Other animal hair	16,865,764	6,335,169
Cotton	75,638,865	48,000,857

Concerning the materials included in the above summary and their relation to the total product of the country, Mr. North remarks as follows:

While the bulk of the wool reported was in grease, much of it was washed, and some of it scoured. In making his return of the wool manufacture for the census of 1880, Mr. Geo. Wm. Bond of Boston, the special agent in charge, said: "It is estimated that from 10,000,000 to 15,000,000 pounds should be added to the domestic wool reported, and from 2,000,000 to 3,000,000 pounds to the foreign to reach the true consumption." The habit of buying scoured wool has become more general during the last 10 years, and the present special agent estimates the allowance now necessary in both domestic and foreign at 25,000,000 pounds in order to reach the true consumption of wool as it originally came to market.

Camel's hair, mohair and alpaca are regarded in the trade as the equivalents, the first of Class III, or carpet wools, and the others of superior grades of Class II, or combing wools. The quantity of camel's hair and noils consumed has increased from 1,583,119 pounds in 1880 to 7,689,804 pounds in 1890 and of mohair and noils from 159,678 pounds in 1880 to 2.136,244 pounds in 1890. The alpaca has been lost in the "hair of other animals," which is in the main an adulterant, and the consumption of which has increased from 6,335,169 pounds to 16,865,764 pounds.

The table as presented takes no cognizance of wool contained in the imported yarns consumed by American manufacturers, the value of which is included in the amounts reported under the head "All other materials." The quantity of woolen and worsted yarn entered for consumption in fiscal year ending June 30, 1890 (contemporaneous with the census year) was 3,229,777.83 pounds, valued at $1,844-849.15, an average of 57.1 cents a pound, and may be accounted the equivalent of 9,000,000 pounds of greasy wool.

Adding all these items to the 373,000,000 pounds of foreign and domestic wool above shown, we have an approximate consumption of 434,000,000 pounds of wool in the grease. Similar additions must be made to the consumption reported in 1880 to institute an exact comparison and per cent of increase.

The Department of Agriculture estimated the wool clip of the year preceding the census year at 265,000,000 pounds. The foreign wools entered for consumption in the fiscal year ending June 30, 1890, were 109,902,105 pounds and in the prior year 126,181,272 pounds. The commercial estimate of the domestic clip of the year preceding the census year was 295,779 479 pounds. The census figures of consumption tend to show that the actual clip is above the estimate of the Department of Agriculture and below the commercial estimate.

THE HOME CIRCLE.

Shared.

I said it in the meadow path,
I say it on the mountain stairs—
The best things any mortal hath
Are those which every mortal shares.

The air we breathe, the sky, the breeze,
The light without us and within—
Life, with its unlocked treasuries,
God's riches—are for us to win.

The grass is softer to my tread
For rest it yields unnumbered feet;
Sweeter to me the wild rose red,
Because she makes the whole world sweet.

Into your heavenly loneliness
Ye welcomed me, O solemn peaks!
And me in every guest you bless
Who reverently your mystery seeks.

And up the radiant peopled way
That opens into worlds unknown,
It will be life's delight to say:
"Heaven is not heaven for me alone."

Rich through my brethren's poverty—
Such wealth were hideous! I am blest
Only in what they share with me,
In what I share with all the rest.

—Lucy Larcom.

Mattie's Soupbone Week.

In Two Parts--Part II.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

Mattie was transfixed. She had put away her sewing and had taken brush and comb from a certain corner of the kitchen arranged specially to accommodate Tom when he wished to make a hasty toilet. Who had been telling him anything? From his teasing tone he evidently would as lief as not hurt her feelings. For a moment Mattie's mind was filled with words that would show her vexation—resentment—show her ready even to meet him half way in a quarrel. Then one of Miss Hetty's stories about the Arabian woman and the charmed water came to her mind, and Miss Hetty's closing words, "Men will be cantankerous at times, my dear, so women must try and take them at their best; when they try to quarrel, not encourage them, but just think 'That's the *he* of it,' and never mind."

So, instead of answering back, instead of saying anything for a time, Mattie came and took the lounging, teasing fellow's head in her lap, and began to brush his hair, smiling down at him as he looked up quizzically at her.

Presently Tom, "What's that you're going to tell me?"

Then, with prettiest persuasiveness, Mattie told Tom all about how she had interviewed Miss Hetty, and all her new plans at culinary economics. And frankly, with wittiest detail, she also told him about her investments of the past week at Baston's closing out sale, ending thus:

"Now, Tom, you may scold me if you want, but everything I got is really a bargain—nothing useless—something will help in our clothes, bedding and the table. I know it pinches in this week, but if you can get along I shan't care, for it's roused me to study cooking more than I have. Though I shall feel awfully sorry, Tom, if you miss your steaks and roasts too much. But really, Tom, mamma put me through a great training about bargains; showed up all the foolishness of the typical bargain-hunter the newspapers crack their jokes about. She had one for a neighbor once. And so, Tom, I really *do* think you can trust me pretty well. I'll do just the best I can; and, Tom, you *may* scold me if you want to, and oh!—you big baby, just turn on the other side; there's a spot I can't get at as you are. There! it shall have its poor head brushed. Ha! ha! ha! I haven't told you the funniest part of it all. When I was in the store, Susie Bowers was in there too. You know her mamma is one of those bargain fiends—they both are; get bargains on trust, too, and then sometimes bring them back. Makes the merchants so mad. Well, Susie was in such a rush, specially after a certain bargain in flowered pongee she'd seen some one have who'd been there the day before. And there she was, pestering Mr. Baston himself, and talking so every one in the store could hear her. Baston told her that the pongee was all sold out, but that there was some of the batistes and muslin and other things left. Oh, he was as smooth as oil, and called Sharp to wait on her. I was so disappointed to hear that pongee was gone, but, while Susie was shouting at Sharp, Mr. Baston called me aside quietly, and took me back behind a pile of ginghams, and showed me the loveliest remnant of madras, and all that was left of that very figured pongee I wanted, and a certain shade of batiste—all just what I wanted to finish off that upstairs bedroom—and he offered it all to me as cheap, *as cheap!* My! Said he was away when I was married, and he wanted to do something for me—you know he's been in town ever since I was a little girl—and he *gave* me a red damask tablecloth and set of napkins to match, and *half a box of gloves*, assorted colors, just my size! And I got some toweling and some half-bleached damask at *such* a bargain. But, oh! I must laugh. Susie pounced upon us, just as Mr. Baston was doing up my things. And she fairly screamed, 'There's that stuff—just what I wanted. What did you say it was all gone for?' And Mr. Baston very quietly said, 'Excuse me; most of this order was engaged by Mrs. Bailey yesterday.' And Susie just *glared* at me. Ha! ha! ha! Tom, she'll *never* forgive me for getting you."

All this time Mattie was chatting, she, with deftest, softest touch, brushed and combed Tom's hair. It was his weakness, his greatest delight, from a child, at any time, but specially when tired or headachy, to have some one brush his hair, if they would, by the hour. Mattie found this out when he was courting her, and, like a wise little woman, resolved to pet him about it—*advantageously*.

And Tom, well, he turned and turned about, in one comfortable position after another, on the big, easy, high-backed bench, cuddling his head in his wife's lap as she brushed and brushed, feeling rested, soothed, conciliated, abashed, charmed, repentant—in short, *tamed* to Mattie's sweet will.

When he did speak, he said: "Go ahead, little woman, and try your experiments. I'll try and be good and not grumble. And don't mind me if I do. I'll be ashamed enough of it afterward. And as for steaks, well, I have a weakness for meats, I know; perhaps I'm too fond of it—eat too much. Anyhow, Dr. Allen was in yesterday—had me order two new surgical instruments for him—and he said, looking me over, up and down, sharp (you know the way he has), 'Young man, keep yourself in good fighting trim, and beware of the fleshpots,' and, I declare, it's just come to me what he meant. My! your supper was dainty and filling enough to-night. Go it, Mattie. Ah! yes, you're the girl for me, every time."

* * * * *

It was part of Mattie's soupbone that Tom smelt cooking the evening described above—the *bone* part, with a bouquet of sweet herbs, two cloves, three peppercorns, three little onions, and a carrot and turnip. Of course, as an eminent French professor has said, one must have only a certain proportion of bone to meat in soup, "the less bone the better;" but Mattie has found that where one "needs must," a very good stock for a variety of soups can be made from "a very bony shin of beef."

For breakfast the next morning Mattie had the Hamburg steak made of the best of the lean meat cut from the soupbone, an omelette Miss Hettie had shown her how to make, mashed potatoes, quick muffins and coffee. Tom couldn't bear mushes of any kind, and oatmeal was his special abhorrence. Muffins and pancakes he approved of. As to the omelette, Miss Hetty had told her when she wanted one egg to seem like two, or two like four, and so on, to make an omelette this way: Take two eggs, heat the yolks well, add two tablespoons of rich milk to them, pepper and salt to taste, then the whites, beaten stiff and lightly stirred in. Have an agateware frying-pan, not too hot on the stove; put in a tiny bit of sweet butter, just enough to grease the pan; pour the omelette into the frying-pan, let it spread all over the bottom, and brown delicately; then fold over on itself, till 'tis shaped like a half moon, and put in the oven for a little to "set." Or the omelette may be divided, a little at a time put in the slightly greased pan, and folded, or rolled over and over, as it cooks.

Well, this was Mattie's first breakfast under the new regime. Tom praised everything, eat heartily, and went striding to his work, whistling jollily.

This same forenoon, Mattie put the rest of the lean meat from her soup bone into her "Berlin," and set it to stew gently, seasoned with salt, pepper, a dash of curry, and a heaping tablespoonful of Chili sauce. The meat thus cooked was deliciously flavored, tender as chicken, the long, slow cooking, never allowing it to boil violently, leaving the "gristle" so it would melt in your mouth like jelly. About a third of this meat, made into a meat pie, with a light biscuit crust and plenty of gravy, was the *piece de resistance* of her evening meal. It was preceded by soup "a la Julienne," and accompanied by potatoes and a salad of chopped celery and onion (left over from the vegetables used for the soup). For dessert, when she made the crust for her meat pie, she made more than enough. This extra dough she patted out into a pie tin and baked for a shortcake, the fruit for which was furnished by one of her bottles of canned peaches.

Shall I weary the reader with details? Let me try and be brief in telling of the new points of view opened up to Mattie this week in her role as economical cook. Miss Hetty (dear, modest, reserved Miss Hetty, who was always surprising every one who long knew her by her really encyclopedic knowledge of all matters pertaining to that which makes this life more worth the living), was as a "bright and shining light" guiding Mattie's footsteps in these new paths of housewifely lore.

All Mattie had known how to cook was good, so far as it went. She could broil a steak, fry ham and eggs pretty well, make light baking-powder biscuit, and her silver-layer cake, with "caramel" filling, was always called for at the "teas" and "socials" given by her church. Tom, who had "roughed it" in the foothills after deer, and hence had often made himself a cup of tea or coffee, had taught her to make these two beverages in a way to suit him. Let me tell you, *sub rosa*, that the first time Mattie made a cup of tea for herself and Tom, she put in half a cup of tea into the pot for two, and carefully boiled it for half an hour. As the sensational novelist would say, I draw the curtain over Tom with that cup of tea.

But Tom was very much in love with Mattie, and Mattie was very much in love with Tom, and she was a bright, determined little creature, too; so the vicissitudes of this week acted as a stimulus and left her victorious.

To her soup-bone order of Monday was added on Thursday ten cents of steak (for Tom), and on Saturday, a thirty-cent rump roast (well hung). That used up the sixty-five cents for meat. The liquor from her first soup bone lasted her nearly all the week, and she never made the same kind of soup twice. She had a cool cupboard on the north porch of her house, made mostly of wire-netting, in which her cold meats, broth, etc., kept nicely, though of course she watched them so as to reheat when necessary.

Her method of procedure was this: Each morning she went to Miss Hetty and told her what she had in the house, and how much of it. Then she and Miss Hetty planned the meals, Mattie making notes and writing the necessary recipes and instructions. Usually before Tom came home in the evening, Miss Hetty stepped over to see how Mattie's "dinner-tea" was progressing. Luncheon was made an easy affair. Tom had so little time for it that he readily agreed to be perfectly satisfied with such simple dishes as a cup of coffee, bread and butter, or toast, with fruit. Sometimes there were warmed potatoes, and cake and cheese, or a piece of pie.

Miss Hetty was forever talking to Mattie of the "leftovers" and of "cold-meat cookery." And Mattie would pout and say, "There won't be any 'leftovers' with the little I have, nor any cold meat; it'll be a 'and-between-them-both-they-licked-the-platter clean,' and a 'kiss-the-cook' business with me all the week through. Tom's already at his jokes; says he's weighed himself and is going to tell me at the end of the week how much he's lost, and wants to know if I can 'take in' his Sunday suit if it hangs like a shirt on a beanpole at the end of the week."

But Mattie found there were "leftovers" that she could utilize most advantageously. I am most tempted to give her bill of fare for the week, but the different dishes would require so much explanation, the most indulgent of editors would "shut right down" on me, as taking too much space for so humble a subject. But I will tell some of the things Mattie learned, and began to learn.

The making of scolloped dishes was a revelation, not only as to attractiveness and variety, but as to use in completely disguising the "leftovers." Raw or cold boiled potatoes, sliced thin, laid in layers in a buttered dish, each layer seasoned well, and a little flour dredged on, with plenty of bits of butter, or slices of bacon on the top layer, and the dish filled with milk or broth, then baked slowly in the oven from half an hour to an hour and over, according to whether the potatoes were raw or not, was the plainest of these dishes she was initiated in. Then there were scollops of minced meats of any kind, "layered" with bread or cracker crumbs, or broken biscuits, or remnants of meat pie, sometimes seasoned, besides the usual salt and pepper, with grated or chopped onion, and wet with milk, water or broth, or thinned gravies, or white sauce, according to occasion. Sometimes the layers of crumbs or crackers alternated with bits of cheese, and strained tomatoes were poured over the whole, then baked; or, a custard of eggs and milk was poured over, making a sort of "ramakin," with which name she quite electrified Tom. But generally she made Tom laugh by calling all her dishes "Olla-Podrida" and "Pot-pourrie."

Then she had "O-*everything*-don't-ask-me-Tom" salads. These last caused Tom to get up a conundrum: "When does the *Omniferous* and the *Omnivorous* meet? When a fellow eats one of Mattie's soupbone meals."

She also found Tom very fond of the many dishes she learned to make with toast as a basis—hash on toast, or spicy stews of meat and vegetables, or various omelettes—cheese omelettes, or omelettes "stretched," as Mattie phrased it, with milk and flour and bread crumbs, or seasoned with minced meat, or onion, or parsley, etc., etc.

She also learned a dumpling rule for pot-pie, which "never went back on her," and which "hit" Tom in a particular "right spot." I will give the rule: One teacupful of flour, one teaspoonful of baking powder, and sweet milk (or water) enough to make a soft dough. Roll out thin and cut in squares, or drop from a spoon. Lay carefully on your boiling meat, cover close, and cook 10 or 15 minutes.

Then she learned how to use the quick biscuits, she already knew how to make, in such a variety of ways, notably, crust for meat pies and for fruit puddings. "Duffs," Tom called the last, and he highly approved of them, and liked them cold for his luncheons with sugar and cream, or some pudding sauce.

Then there was a "pilau" of rice—of all dishes cheap, appetizing, and easy of digestion, which fitted into her culinary economics most aptly, just rice boiled in liquor that meat of some sort had been boiled in (it may be thinned, but *must* be very highly seasoned), boiled hard till the grains swell and the whole mass is light, then the liquor drained off, if any extra, and rice steamed in the oven in the colander for a little. The extra liquor can be used in soups, and the rice left over from one meal be made at some future meal into dainty "rice fritters" by the addition of eggs (one egg, whites and yolks beaten separately, to one cupful of rice), a little flour added if rice is too thin, and a little milk if too stiff, season highly and drop from a spoon.

Then Mattie learned that eggs could be cooked in different ways—so many of them—a different way every day in the week, and almost every day in the year.

Then she learned two new cake rules—plain, cheap, quickly-made cakes, that served her ever after, in various capacities, more satisfactorily, more creditably, than richer varieties. The first she called "Sudden Company Cake." Proportions: Four eggs, one and one-half or two cups of sugar, one-half cup water, two cups flour, pinch of salt, flavoring to taste. Beat sugar and yolks together, first. If hard, coarse, granulated sugar is used, have the water hot and pour slowly, stirring continually on the beaten sugar and yolks. Then add the flour, with the baking powder sifted through it; lastly, the whites of the eggs, beaten stiff. Bake in a rather quick oven. May be baked in a loaf, or in layers, with jelly or custard between, or cut in pie-shaped pieces and passed warm, with jam or preserves, at the tea-table, or used as a cottage pudding, with a sauce, at a dinner dessert.

The other cake she called "Guess Again Cake," because her lady friends never could guess exactly what class of cake it went with, always taking it to be much richer than it was. Proportions: One cup sugar, two eggs, three tablespoons melted butter, one-half cup sweet milk, one cup flour (rounded), two teaspoons baking powder. Sift the baking powder into the flour; pour melted butter on the sugar and cream them together; then add the yolks, well beaten; then the milk, and beat all well together; lastly, add flour and whites, alternately, quickly; flavor to taste, and bake in a loaf or layers in a rather moderate oven.

But, more than all, Mattie learned, during these days of wide-awake effort, how much it is, the little things that count; how much women's wit and ingenuity, practically applied, can help her "other half" in the home-making which husband and wife both owe each other to make the first duty of life.

[*Concluded next week.*]

A WISE and good man says: "Don't make your minds sponges, saturated with the putrid waters of the goose-pond of gossip. Hear as little as you possibly can to the prejudice of others; believe nothing of the kind, unless you are forced to believe it; never circulate or approve of those who circulate loose reports; moderate, as far as you can, the censure of others; always believe that, if the other side were heard, a very different account would be given of the matter."—Interior.

"From Jest to Earnest."

There was a timid knock on the door of my law office the other day, and in response to my loud summons to come in, there entered the most forlorn-looking man I ever laid my eyes on. He had a scared, hunted look on his face, and kept glancing back over his shoulders, as if he expected to see a detective appear to arrest him at any moment. He dropped into a chair with a sigh of relief and said:

"You're a lawyer, aren't you?" I assented. "Well, I just want to tell you my story, to sort of relieve my mind, and perhaps you may be able to give me some advice.

"You see, last summer I was staying at the seashore at one of those newspaper-joke hotels, where there is only one man to every 26 girls. The best of it was that the girls at this place were of the most entertaining sort, so on the whole I had a very agreeable time. They read to me, fanned me, made me pillows, sewed on my buttons, and did their best to make my time pass pleasantly. But, as you will see, I paid dearly for it in the end.

"One day I took six of the prettiest girls out for a little sail on the bay. Everything went smoothly for a time. The girls were just adorably frisky, the lunch was good, and the chaperone went to sleep.

"We didn't notice how fast the hours went, and by the time we got back to the hotel the tide was so low that we stuck fast in the mud about a hundred yards from the beach. We had no small boat with us, and all our shouting brought no one to our aid. The water was too deep for the girls to wade ashore, so there seemed no way out of the difficulty except that I should carry the whole party to the beach, one by one, in my arms. I suggested this plan to the girls, and, in fun, said that in order to make such a proceeding perfectly proper, I would formerly propose to each girl and become engaged to her. They laughingly agreed, so I plumped down on my knees before each one in succession, chaperone included, and proposed and was accepted in due form. Then I carried them ashore.

"I left them on the piazza and went to my room, congratulating myself on my originality and large head. That night I dreamed of carrying perishing maidens around in my arms; sometimes they had blue eyes and golden hair, and sometimes their eyes and hair were dark, but they always clung closely to me and put one soft arm lovingly about my neck.

"Rather late the next morning, as I strolled downstairs into the hall, Brown, one of the three men staying at the hotel, came up to me and said:

"'Well, old man, I congratulate you; I know you can't be very sorry.'

"'Why, what's up?' said I in astonishment.

"'Read that and you'll see," Brown replied, handing me a Philadelphia paper of the evening before. I took it from his hands and read:

"'Mr. J. T. Chubb, one of the oldest and wealthiest business men of the city, died suddenly from apoplexy while at his breakfast Tuesday morning. . . . The deceased has no near relatives, and his property, as there is no will, will go to his nephew, Mr. Thomas Cheever.'

"Good gracious! That was my rich, old Uncle Jim; he was worth $500,000 at least. There had never been much love lost between us, and really I couldn't cry. Just think of it! I was a rich man; I wouldn't stay at that infernal hotel another day; I would take the train straight for B——, and tell dear little Dora that we needn't wait any longer, that I was now a rich—

"'Good morning, dear. Did you sleep well after yesterday's excitement?'

"I jumped out of my chair as if shot. There was Miss B——, one of my sailing party, standing before me.

"'It was sad about your poor, dear uncle, wasn't it? But then,' she said, blushing sweetly, 'I will try my best to console you.' I bolted for the stairway, but ran plump against little Miss L——, another of the sailing party.

"'Why, Tom,' she said, 'I suppose I ought to call you Tom, now,' looking bashfully down at her toes, 'where are you going so fast? I was just about to hunt you up and tell you how sorry I was to hear of the death'—I tore away from her and fled to my room. This was horrible! Those girls had read the notice in that paper and they meant business; they were going to make me keep to my engagements. Just think of it, seven breach-of-promise suits on hand, including the chaperone's, and there was dear little Dora patiently waiting for me at B——.

"I thought of suicide, but was afraid to try it. I locked my door and tried to sit down and make some plan of escape. It was useless—I couldn't think. The girls kept knocking at my door and sweetly asking after my health, suggested gruel, rice water and hot bottles. I became desperate; after nightfall I took what money I had, dropped out the window, and walked to the railroad station. Since then, I have lived in constant terror. I have changed my name and grown whiskers, but still I know if I ever meet one of those girls again, she will fling her arms around my neck and claim me as her own."—Percival Hall, in the Harvard Advocate.

YOUNG FOLKS' COLUMN.

Pranks.

Written for the RURAL PRESS by DUANE MORLEY.

"Speaking about boys and their many pranks reminds me," said a friend of mine, "of a family of my acquaintance in Los Angeles in the earlier or less recent days of that city. Winans was the name, and the boys were Jackson, Tiffany, Jared and William—or 'Little Will,' as the latter was often called. Of course Jackson was called 'Jack;' Tiffany, 'Tiff;' and Jared, 'Jed.'"

The family place was on San Pedro street, not far out, where they had considerable acreage, a good, substantial brick dwelling, and a large unused barn—save as 'twas improvised into a sort of a theater by the boys. Stately palm trees fronted the place along the street side, and a pair of them, called "The Twins," of great height, loomed up near the back door of the house.

"Father, what makes this wall sound so hollow?"

"Keep quiet, Tiff, and wait your turn to talk."

"Yes, but I must know," insisted the boy.

"Built that way, doubtless, to save the rooms from dampness," was the farther's answer.

"Yes, but it sounds hollow right here, and nowhere else.'

It was evening. Tiff's chair was tilted against the wall and he was in it, half the time listening to his father's stories to a curious neighbor about old Mexican times, and the other half sounding the wall with his strong-handled pocket knife. Many a time had the father answered the boy's anxious questions, but never to the boy's perfect satisfaction.

One day the parents were gone on an all day visit, and Jack and Jed on their horses to look after stock in the Calmenga pass, while Tiff and little Will were left to keep the home-place during their absence.

"I expect that Tiff will tear the house down while we are away," said Winans to his wife, after they had got some distance out upon the road.

"Not so bad as that, I hope," said Mrs. W., "though Tiffy is strangely curious about that hollow wall."

"I'll tear it down myself, wife, pretty quick now, just to get rid of the boy's everlasting questions," was Winan's remark.

At home, Tiff and Will played about a bit; plucked some old ripe oranges, leaf-hidden in the treetops; rendered a mock tragedy on the boards of the barn theatre; and finally, Tiff began to sound the walls of the old brick house with the face of his father's hammer—not only all around the back and ends of the building, but the front also, where it abutted closely against the street.

"Only here does it sound hollow," said Tiff, as he completed the inspection, "just here, Will, at the back, and I'm going to break it in."

"Don't, Tiff," pleaded Will in alarm; for, young as he was, he feared his father's anger in the event of the breaking in of the wall.

The wall was almost irresistible; but Tiff got an iron maul and a huge wedge his father had, and, with these, finally made a small opening some feet from the ground in the outer wall—for it was really hollow—and he enlarged it by prying loose the under courses of bricks down to the ground.

"It doesn't look larger 'n mother's china closet," said Tiff, as he first looked into the cavity, and when fully exposed, it really was not. On a pile of rocks at the base lay a roll or bundle of skins, as shown when dusted.

"Now we've found something," exclaimed Tiff gleefully. Sure enough, they had; for when unrolled, the bundle proved to contain a pair of rusty, old-fashioned pistols, several dirks, and a leather sack full of something heavy and closely enwrapped in strips of rawhide. Dragging it into the kitchen and severing the strips, out rolled a large quantity of Mexican dollars, a double handful of Spanish doubloons, and several other foreign coins. While the gold coins were strange to Tiff, the Mexican dollars were familiar; for he already had similar ones in his cabinet.

The boys stacked the coins up in regular bank fashion on the kitchen table, laid the old rusty dirks crosswise on the piles; and then on guard, playfully swaggered about with the pistols in their hands. This exercise they varied with lunching, and an anxious peering up street for the return of their parents, or down street for the coming of their brothers. Finally the parents appeared in sight, several blocks away, and Will started to meet them.

"Don't say a word about the money," enjoined Tiff, as Will hurried away. Nor did Will mean to broach a word, but his constrained silence was noticeable, and he was so closely questioned about how things were that he blurted out:

"Tiff's broke in the wall," and immediately after, "He's got lots of money."

When the parents arrived, the find proved to be several hundred dollars worth, actual value; so, of course, the prank—if I may call it that—was easily forgiven. And Tiff's share of the spoils bought him a driving horse and a light, strong, buckboard wagon.

"Your sugar, Mrs. W., has little force; I've supplied my cup twice already, and yet I get no taste of it. Is it the beet variety, Mrs. W?"

I was taking tea with the family that evening, and the boys were ranged on the opposite side of the table, eying me closely. When Mrs. W. said in reply that it was not beet sugar, the boys burst out laughing and fled from the room, shouting:

"Sold, sold. We've sold Mr. Lord this time."

They excused themselves, as far as I was concerned, by saying that the sell was projected, not against me, but the dressmaker, who had, unknown to the plotters, been called away. The substitute was marble dust, placed when the cook's back was turned.

Eventually, in cutting the place into lots, several rows of orange trees were removed, and the trunks saved to be sawed into plaques or slabs. The work was mine and from the sawing—done while the boys were at school—a fine lot of sawdust, much in appearance like yellow meal, was had. As I, too, was boyish, I saw a way to return the compliment of the marble dust prank, and so formed a conspiracy with Mrs. W. and the cook. One evening, knowing looks were exchanged by the seniors at the table, as they lingered long over the course of plain food. Soon the boys called out:

"Mother, can't Mary serve us the dessert?" The permit was given, and a plate of brown cakes was set before the boys. Even culinary art had given them a certain tasty odor. Jed and Tiff took a cake apiece, sampling them ravenously, but immediately spitting out the mouthfuls, regardless of the lack of manners.

"They're not hot, are they?" asked Jack. With that he took one and tasted it, but instantly ejected the mouthful, suspecting the hoax. Then he left the table, followed tumultously by the other boys, all of them chagrined over the way they had been fooled, but confessing that it was a fair return for the marble-dust sell.

Mrs. W. was soon afterward left a widow, and the boys, grown more mature, cared for the stock, besides looking out for all home interests. In the midst of one of the dry seasons—as the summers are called—the boys planned a trip overland to the Gila River country in Arizona. As the boys were nearly men grown, and as Tiff was very importunate, Mrs. W. finally gave her consent, but with many words of caution about carefulness. At first, readily finding water along their route, they finally grew careless, and while crossing the desert their supply gave out, and they suffered. Changing their course somewhat, they came alongside the railway, which pushes its way eastward to Yuma and beyond.

"Now," said Tiff, "we'll have water."

"How?" the boys chorused.

"I'll show you," said Tiff. Unhitching the horse, the boy overturned the buckboard across the rails of the railway, and then, mounting it, he waved their crimson dust cloth at an advancing train.

"What does all this mean?" asked the train hands as the locomotive slowed up, its nose against the obstruction.

"We're out of water and must beg some of you," was Tiff's answer. Water was given them, their proper route designated, and, the obstruction removed, the train sped on. Finally the boys reached the Gila river country—the river just before them.

"Now for a bath," they cried in chorus, and, soiled and dust covered, no wonder they proposed a bath. And careless Tiff bestrode his horse as grandly as a Spanish cavalier, and urged him through the waters to a bank in the center of the stream.

At that point the boy stood erect upon the horse and made a pompous speech, closing it with something about "more worlds to conquer." Then he shouted:

"Now for the other side."

The current was deep and strong, and poor Tiff was swept from the horse's back. As the horse climed the opposite bank riderless, Jed looked up and exclaimed:

"Why! where's Tiff?"

"Sure enough!" said Jack. Then, hurriedly turning his gaze down stream, Jack saw the boy swept onward and downward like a feather, one bare white arm held up imploringly. Strong Jack only secured Tiff's lifeless body after severe battling with the torrent of waters. It was Tiff's last prank. A telegram to Mrs. Winans from the nearest station, preceded their own speedy but sorrowful trip by rail.

DOMESTIC ECONOMY.

To Make Tea.

The delicate leaf of tea should never touch metal. It should be kept in paper, wood, glass or porcelain. To make it, put a small quantity in a porcelain cup, fill the latter with boiling water, cover it with a porcelain saucer and let it stand three minutes.

Then, if you desire to be an epicure, drink only the upper layer of the golden liquid, throw the rest away, rinse the cup, and begin drawing *de novo*. Never use sugar any more than you would sweeten Chambertin or pour molasses into Mumm's extra dry. Do not use milk. It ruins the flavor of the tea and the combination injures the stomach.

Above all things do not boil tea. The heat drives off the perfume, spoils the flavor and extracts the tannin, the astringent principle. If the boiling be done in a tin or iron pot, the tannin attacks the metal and makes the liquid black.

Never let the tea stand except in a tightly closed porcelain pot. Standing changes it from a delicious, wholesome beverage into an ill-tasting and bitter liquor. Better make it in small quantities, and make it often. In summer sip the tea boiling hot, with a slice of previously peeled lemon, or, nicer still, of orange without the rind, floating in it.

Beware of green tea! It is the unripe leaf, and bears the same relation to the real article that the green does to the ripe peach. The green tea of commerce derives its color from being cured, or rather killed, on dirty copper pans, from being mixed with weeds and shrubs, from being stained with indigo and chrome yellow, from being colored with verdigris, grass juice or chlorophyll.—From Consul Bedloe's Report to the State Department.

TO COOK A YOUNG CHICKEN.—Scalding water is too hot for young chickens. Put in a pint of cold water to half a gallon of hot. When scalded, pick the chicken clean, taking off all the pin feathers. Put it in a pan of cold water and wash off what feathers remain; then hold it over the flames and scorch off the hairs. When ready to fry, put in the pan two spoonfuls of lard and one spoonful of butter. When hot, have the chicken cut up and well drained; salt and pepper, and roll the pieces in flour, and brown them well on both sides, being careful not to burn them. Cover tightly, and place on the back of the stove, with a very little water, to steam a few minutes. Have ready one pint of cream or milk, in which one spoonful of flour has been smoothly mixed. Take out the chicken, and put the pan over the fire. Stir in the milk and flour, and this makes good gravy.



PATRONS OF HUSBANDRY.

NO reports have reached Grange headquarters in this city relating to the Grange canvass during the past week. The Worthy Master has not been in the city since last report, and the Worthy Secretary left on Monday for the central part of the State, to be absent a week. All the news from the field that has been received is embodied in the notes given below.

LECTURE APPOINTMENTS.—Past Masters D. Flint, Wm. Johnston and Hon. Thos. McConnell were to speak at Elk Grove last Saturday; B. F. Walton at Pennington, May 2d, and at Gridley, May 3d.

NATIONAL GRANGE MEETING.—It was left with the Executive Committee to decide by May 1st at what place the National Grange session shall be held, and Patrons all over the Union are interested to know whether Concord or Manchester, N. H., Rochester, N. Y., or Washington, D. C., will get it.

WE have been informed that we incorrectly stated in last week's RURAL that Past Master Steele was in attendance at the meeting of Carpenteria Grange on the forenoon of April 9th. Past Master Overhiser was the only representative present.

CORVALLIS GRANGE, Or., May 7th, will discuss "Corn in Domestic Economy." Mrs. Mary Stewart and Miss M. Small will lead in the discussion. Mrs. S. L. Shedd will read an essay. May 21st, "How to Waken Public Interest in Schools" will be treated by J. B. Horner and Fred Yates; reading by Mrs. J. B. Horner will follow the discussion.

NATIONAL GRANGE LECTURER.—Mortimer Whitehead, who has served so long and popularly as Lecturer of the National Grange, resigned some time since to take a place as an Inspector, with special reference to its work for the farmers of the United States, in the National Weather Bureau Service. We are sorry, indeed, to have Bro. Whitehead even lessen his labors for the Grange. It would seem as if his place could never be really filled. We believe he did faithful and excellent service in the Census Bureau. That he may be as successful in his new position as in his former services for the welfare of the farmer, is the wish of numerous and true friends.

COL. J. B. ARMSTRONG, who made the magnificent donation of the 100-acre Redwood Park near Guerneville, Sonoma Co., is an old Patron of Husbandry. We would suggest that he deliver an address on forestry at the coming session of the State Grange at San Jose.

CHAIRMAN HATTIE S. JONES, of the State Grange Committee on "Woman's Work," requests that the Subgrange Committee's reports shall be forwarded to her not later than September 1st, in order that she may give the status of the work of the current year in her annual report to the State Grange.

A. T. DEWEY, Sec'y, started for a week's visit to Tulare county and vicinity on Monday last after penning the foregoing notes.

Children's Day.

The following communication from the undersigned is just received by the State Secretary:

DELTA, O., April 25, 1892.

To the Patrons of Husbandry of America:—In accordance with a resolution adopted at the 22d annual session of the National Grange, I hereby announce Saturday, the 4th day of June, as "Children's Day," and I hope every member of our Order will earnestly cooperate to make it an occasion of pleasure and profit, not only to the children, but to every member of our Order. Committees should be appointed at once to arrange program and make necessary preparations for the occasion.

It has been suggested that "Flora's Day" be held in connection with "Children's Day," and I see no objections thereto.

State Masters are requested to supplement this proclamation and lend all their influence to interest all in the exercises of the day. For good and sufficient reasons, State Masters may select some other date within their jurisdiction. Fraternally,

J. H. BRIGHAM,
Master of National Grange, P. of H.

The Graham's Grove Picnic.

The Grange picnic at Graham's Grove, near Sacramento, is said to have been one of the most successful ever given in the State. The weather was not perfect, but the threatening skies seemed to have no terrors for the people, who came out in immense crowds. Fully 2000 people assembled, and the day was in every way a complete success. There was a series of prizes for athletic sports, and speeches by Worthy Master E. W. Davis, Assemblyman Gillis[illegible] and State Lecturer J. D. Huffman.

Popular Election of Senators.

OFFICE OF MASTER,
NATIONAL GRANGE, P. of H.
DELTA, OHIO, March 21, 1892.

To the Members of the Order of Patrons of Husbandry:—The National, State, Pomona and subordinate Granges of our country have repeatedly endorsed the policy of electing U. S. Senators by a direct vote of the people. The amendment, providing for it, will be submitted to the various State Legislatures in the near future, and be ratified by those bodies, if the *people* do their duty.

But why wait for this change in the Constitution? We need this reform *now!* The people should have more live men in the Senate, who are in close touch with them. There are several members of that body who should be retired to enjoy the wealth which was the means of their elevation to an important position, for which they had no especial fitness.

These men never would have been chosen by popular vote. We should do the next best thing to a direct vote under an amended Constitution, which is to insist upon the nomination of candidates for U. S. Senator, in States which will elect this year, by the various political parties with which our members are connected.

If we will agitate this matter sufficiently at once, political parties will hardly disregard the wishes of the people. If we will move, others will join us, and the movement will become irresistible. The farmer fills a larger space in the eye of the shrewd politician than ever before; and now is the time for action. A few weeks more and it will be too late for this year.

We should also take a lively interest in the nomination and election of Representatives. It is of no use to petition to men who turn a deaf ear to our cries. Nominate friendly men in your party conventions. *Elect friendly men at the polls*, and then all your reasonable demands will be granted. Retire every "People-be-damned" man, in convention if you can, at the polls if you fail in convention. Ballots are even more effective than bullets. If the people fail to make proper use of the former, the time may come when the latter must be used to "Keep the Jewel of Liberty in the Family of Freedom."

No more important campaign was ever entered upon by a patriotic people, than the one just before us. The people must learn to distinguish between sound argument and sophistry. They must not mistake the railing of the demagogue for the inspired eloquence of the true patriot and honest citizen. No order or organization has done more to qualify farmers to make wise use of their political power, than that of the Patrons of Husbandry. We are proud of our past, intensely earnest at the present, very hopeful of the future. Fraternally yours,

J. H. BRIGHAM.

Pomona Grange.

We find the following account of the meeting of Pomona Grange in the Sebastopol *Times:*

At the meeting of Pomona Grange in Two Rock Hall the 20th inst., the various towns of the county were well represented. Messrs. G. N. Sanborn and Martin Litchfield represented Sebastopol Grange. Reports from the Grangers showed prospects good for grass, grain, fruit and hops throughout the county. After the usual order of business a harvest feast was partaken of, which was elegant and bountiful. It was decided to have a grand three-day's picnic at Dillons beach, near Tomales, commencing Thursday, July 7th. The exercises will be held Friday, July 8th, and great preparations will be made for the affair, which will be known as Children's Day.

WRITING to the State Secretary from Edna, San Luis Obispo county, Mr. G. W. Steele says: "About the middle of May we are to hold a joint picnic of the Grange and Alliance at Arroyo Grande. I have just returned from a trip across the mountain into the eastern portion of this county. Am sorry to say crops look poor in that section. Much of the wheat in the Cholame Valley will make nothing. About Creston crops look better; wheat will make about half a crop."

A MAN or woman who is fondest of picking flaws in other people, is so because he or she has a larger than usual proportion of them, and is kept busy in this way in trying to apologize for them.—W. C. Gray.

A PURE heart at the end of life and a lowly mission well accomplished are better than to have filled a great place on the earth and have a stained soul and a wrecked destiny. J. R. Miller.

THE question is not, "Art thou in the nobility," but, "Is there nobility in thee?" Anon.

FARMERS' ALLIANCE.

Senator Peffer on the Currency.

The Chicago *Inter-Ocean* of April 26th has the following letter from Senator Peffer addressed to the editor:

Replying to your request under date of the 5th inst. in relation to the supplying the place of National Bank circulation, I have to say that in my own judgment the best substitute is what the people of Kansas favored 14 years ago, namely, United States notes, commonly called greenbacks; for, as you know, National bank notes are redeemable in United States notes. I think it would be well to abolish the whole system of bank note issues. No banking institution should be permitted to issue anything which is to be used as legal tender money unless the issue is supported by the power and the credit of the Government, and the material used, whatever it may be, should not be redeemable in anything. It ought to go out to the people as money, full-fledged, ready for duty, without any weight or impediment or conditions of any sort whatever. What we use as money should be absolutely free from all conditions, so that there could be no "runs" on banks in time of stringency, and no panics because debtors are unable to obtain legal tender money. I believe that the time has come to nationalize our money. We took one long step in that direction when we adopted our national banking system. We taxed State bank notes out of existence, substituted a national currency for a purely local currency, and it was only a short time after embarking in this new enterprise until we discovered that the bankers of the country were masters of the financial situation. We find that instead of serving the people, they served themselves. In 1872 there were $358,000,000 of bank note circulation. Since that time about $240,000,000 of it has been retired, not because the people did not need the money, but because the banks realized a great profit from the sale of their bonds at a premium, the bonds that they had deposited as security for circulation. Our experience and that of other nations has been that banking corporations are private schemes for profit to individual persons, and our observation has taught us that there is only one safe way to avoid the dangers to which that sort of financial management subjects us—that is, for the nation itself to prepare its own money, every dollar of it. Issue it to the people directly through Government agencies, wholly without the use and intervention of banking corporations or other private agencies.

You understand, from the foregoing, that I would not only substitute United States notes, or Treasury notes, if you choose, for national bank notes as they are being retired, but I would substitute that sort of money for all bank issues; and I would even do more than that. I would not make money out of a promise to pay—that is to say, I would not write out a promise to pay money and call that *promise* money; but I would use a piece of paper just as we are now using a piece of gold or a piece of silver, and make that money, providing in the law what its functions shall be. That puts the influence, the credit and the power of all the people behind the money. Then we will have gold and silver and paper at par one with the other, and that, if we will reduce rates of interest down to the level of profit on labor, so that men can make as much money farming or blacksmithing or carpentering as they can by lending money, will give us a safe currency, a sound financial system, and no more money panics.

Yours truly, W. A. PEFFER.

The Alliance and Prohibition.

At its last meeting Valley Center Alliance adopted the following preamble and resolutions:

WHEREAS, The call from the State People's Party Executive Committee to the County People's Party Convention held at Escondido on April 12th demanded election of delegates upon State platform; and

WHEREAS, Said platform is not in accord with the National, as endorsed at St. Louis, by its adoption of the woman's rights and temperance planks; and

WHEREAS, We believe that our Alliance brotherhood will be thus burdened in its infancy by too much of minor details, to the injury of our cause in matters of so much more weight and importance, and that the State and National platforms should conform to each other. And, further, that we recognize that California is not a prohibition State, and the adoption of a temperance plank at this crisis would be suicidal to our success, and wholly inexpedient; and further, that though these delegates were elected according to the State call, they are but the representatives of the county brotherhood and should bring about erasions or amendments in accordance with the petitions of a majority of their constituents; therefore be it

Resolved, That we, the Valley Center Citizens' Alliance, do earnestly and respectfully petition our delegates to do their utmost to have our State platform conform to that of the National, by discarding the above two planks, particularly the latter.

Letter From Mr. Dore.

FRESNO, May 1st, 1892.

TO THE EDITOR:—I notice in the RURAL PRESS of April 23d. that the statement is made that I am to be the People's Party candidate for member of Congress from this the 7th Congressional District.

Please allow me to say through your paper, that I am not and *positively will not be* a candidate for that or any other office at the coming election. Very Truly Yours,

JOHN S. DORE.

An Object Lesson in Stock Jobbing.

In an address at an Alliance meeting at Walnut Creek on April 23, Prof. Fowler of Clifton said:

That the invasion of English capitalists has cost us more money, hard times and misery than our civil war did. That Great Britain, Austria, France, Germany, Belgium and other nations, have a governmental system of telegraphy, while we are compelled to pay to the Western Union Telegraph Co. an annual dividend of from 350 to 420 per cent on its capital for the use of its lines for both public and private purposes. In 1858 this company started with a capital stock of $317,000. In 1866 its dividends were over $17,000,000. In 1870 its dividends were $41,000,000. In 1891 its capital stock had been watered up to $100,000,000. Under a governmental system of telegraphy, a message of ten words could be sent to any point in the United States for five cents.

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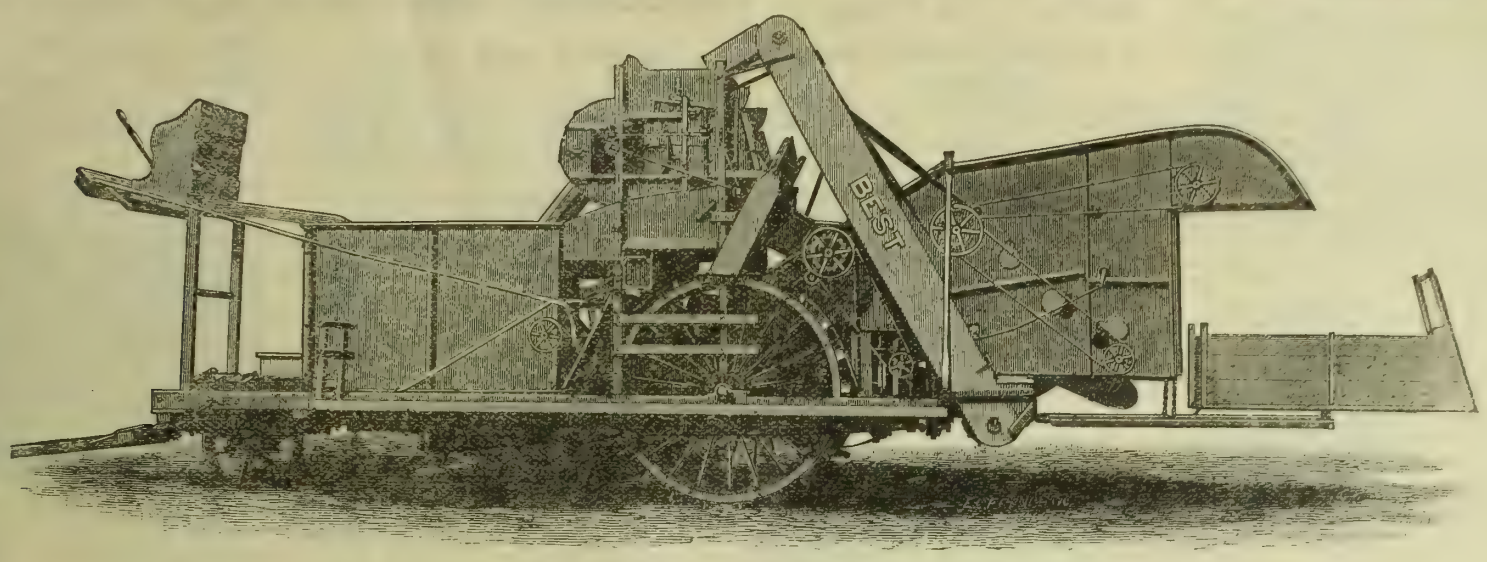


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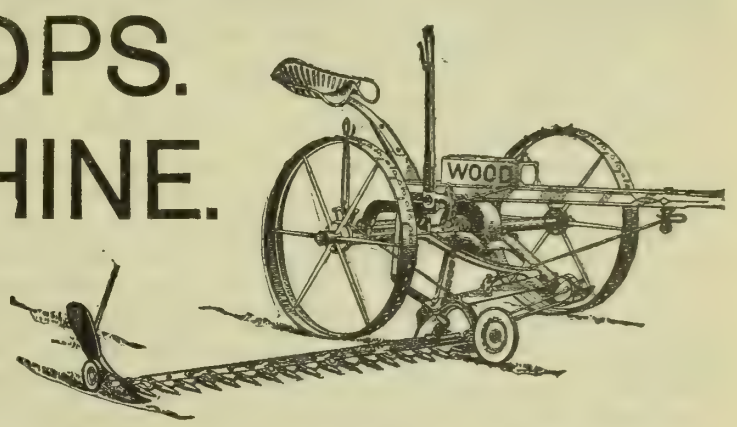
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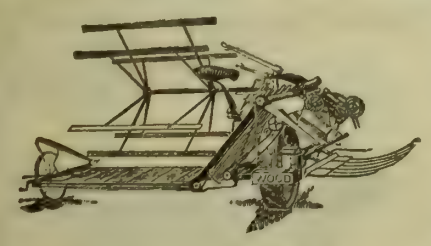


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THE ONLY PERFECT BINDER.

ROHNERVILLE, CAL., Jan. 28, 1892.

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Yours truly, C. H. BREWER.

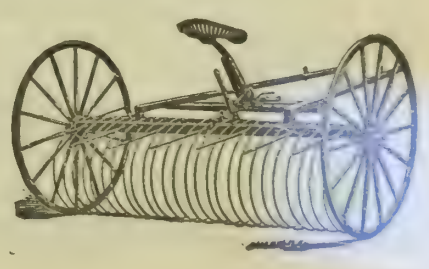
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Spring Lifts, Tilting Bars, Right Gearing, Right Draft, Correct Construction.

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For '92, the strongest and best steel Rake Wheel yet designed. Shafts may be changed to a pole. The Wood Rake is built to work and work right and any one can work it. It is built to last and does last. It is built to excel and there is nothing better.



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World's Fair Queries.

Answers to Questions Propounded at the Recent Convention.

Answers in brief to the questions submitted to the California World's Fair Commission by delegates to the convention which was held in this city on April 20th and 21st, have been made as follows: The State commission will pay railroad transportation from all terminal points in California on exhibits for the California building that are accepted by the commission. All shipments will be made at the risk of exhibitors. Exhibits will be returned to exhibitors free.——All works of art, if accepted, will be by classification only, and will be exhibited in the California building.——The proposed plan for the California building has practically, but not officially, been accepted by the authorities at Chicago.——In the General Classification Department the California commission will furnish tables, platforms, etc., for the use of exhibitors. Application blanks for space in the California building will be prepared at an early date. Facilities will be given in this building for preserving, preparing and repacking exhibits. In the matter of cold storage for perishable fruits, no decision has yet been reached.——As to how much land at Chicago has been allotted to California for an outdoor display of horticultural, viticulture, and other exhibits, J. M. Samuels, chief of the Department of Horticulture, under date of April 12 h, advises the State commission that the proposition is still open to California to use five acres for ornamental trees, shrubs, semi-tropical trees, etc., provided the State commission will indicate to him in detail what is wished to be exhibited thereon. It will be impossible for him to secure five acres in one body. Mr. Samuels writes that the grounds must be arranged with regard to harmonious effect as a whole.——After due consideration the State commission has decided to recommend what is known as the museum glass jar for preserving fruits. Intending exhibitors may correspond with the secretary of the State commission for sizes, styles and cost. Exhibitors must furnish their own jars. The California World's Fair Magazine for April contains an article from Prof. Hilgard on preparations necessary for the preserving of fruits in their natural state. Preserved and dried fruits can be sold at the World's Fair only on orders. No delivery will be permitted from the State building. The mining exhibit, while at Chicago, will be in cases provided by the State commission. Valuable specimens will be enclosed in a safe. Watchmen to guard exhibits will be employed both day and night. All displays will be insured, but the State will be liable only for the amount of such insurance. Special arrangements will be made with exhibitors of minerals in cabinets or specimens of great value. Counties are expected to aid in making collections of minerals.——Each county is expected to make an exhibit of its products at the proposed World's Fair exhibit of California in the Mechanic's Pavilion at San Francisco this fall. The State commission will select exhibits from this preliminary display, store them, and, at the proper time, transport them free to Chicago. It is not compulsory on the counties to submit displays for this preliminary World's Fair exhibit, but the State commission earnestly requests that such display be made.——The State commission hopes to secure concessions from the authorities at Chicago for the sale of California curios, woods, etc.——No literature, giving special features of any county, can be sold in the California building. The State commission will issue gratuitous literature. Free distribution of pamphlets will be permitted when of proper character, but copy should be submitted to the commission for approval. All literature should be attractive. It is possible that sales of California products may be permitted in the cafe, but no concession has yet been granted.——It is desirable for each county to prepare an exhibit of floriculture. ——The Women's exhibit in the California building will be catalogued.——The State will arrange and care for exhibits in the California building during the exposition.——Although an appropriation for a general exhibit of the natural flora of the State has been made, it is desirable for each county to assist in making this exhibit a complete one. ——There will not be a competitive department in the California building.——Powder or other explosive articles for display are prohibited by general rules. Acids and chemicals, not of an explosive nature, may be exhibited.——County associations may take charge of exhibits placed in department buildings for competition, subject to the rules of the national commission. No premiums will be offered for displays in the California building.——Counties will be allowed to carry out their accepted design in the arrangement of exhibits, but at their own expense and risk; this, however, to be subject to the rules of the State board.

One Pure Article of Food

The Royal Baking Powder Officially Commended.

It is particularly gratifying to consumers to know that the baking powder which they have so long been accustomed to using, the Royal, has invariably gone through the official analysis not only without a reflection against it of impurity or unwholesomeness, but each time more emphatically endorsed as the superior of all the baking powders of the market.

The health authorities of a number of States have recently made exhaustive examinations of this character, and with the uniform result of finding the Royal superior to all others. The United States Government Chemist, after an examination for the Indian Department, made the emphatic statement that "The Royal Baking Powder is the purest in quality and highest in strength of any baking powder of which I have knowledge." The authorities of Canada have been making an elaborate study of the baking powders sold there. The official analyst of Ontario says as the result of his investigation that he "finds the Royal Baking powder far superior to the others," and goes so far as to recommend its use in preference to any other. Likewise a series of over five hundred tests for strength made by public analysts and other chemists of prominence throughout the country show it to produce an average of twenty-five per cent more leavening gas than any of its competitors.

A company that maintains this high standard for its product against the temptations of the enormously greater profit that would accrue from the use of the cheaper materials employed by others (for the alum baking powders are produced at a cost of three cents per pound) is entitled to this public commendation and endorsement.

What One Man Can Accomplish.

Los Angeles and surroundings, it is well understood, are in possession of nearly everything worth having from the standpoint of an enthusiastic horticulturist. It was natural, therefore, that in such a country there should spring up up a demand for equally superior breeds of domestic animals. Excellency in the orchards was soon seen to be incomplete without corresponding superiority among the denizens of the barnyards.

Among the leaders of this line of effort in Southern California is William Niles Esq., of Los Angeles. The interests represented by the business he has developed are now consolidated under one general firm, William Niles & Co., incorporated 1891, capital $50,000, with headquarters on East Washington and Maple avenue, only two miles from Los Angeles business center, reached easily by either horse or electric street-car system. The Home Place comprises 15 acres, subdivided into meadows, walnut and orange groves. Passing through the latter, one reaches an assembly of the barnyard aristocracy. They are ideal representatives, as it were, of the "Four Hundred" in the poultry world. Golden polish and their fashionable relations gaze at the visitor with an air of being strictly "at home" and here to stay.

Poultry raising is, however only one branch of the business. Mr. Niles has made the rearing of thoroughbred live stock a special, scientific study for years. That he has succeeded, numerous orders from abroad testify. Mr. Niles' "Home Ranch" is supplemented with two additional ranches in the surburban district of Los Angeles. These breeding farms are the homes of first-class families of Holstein-Friesian and Jersey cattle, Improved Berkshire, Poland-China pigs, etc. The widely known Ashantee, Coomassie, Alphea and other well-tested strains are represented in the Jersey herd, while among the Holsteins are choice representatives of the Netherland, Aaggie, Artis, Clifden and Neptune families. No expense or pains is spared in the obtainment of superior blood.

The established reputation of the company of which Mr. Niles is president is matched by the personal traits of the head of the firm which makes it a pleasure to have any dealings with the establishment.

NEVER suspecting what a noble creature he was meant to be, he never saw what a poor creature he was.—McDonald.

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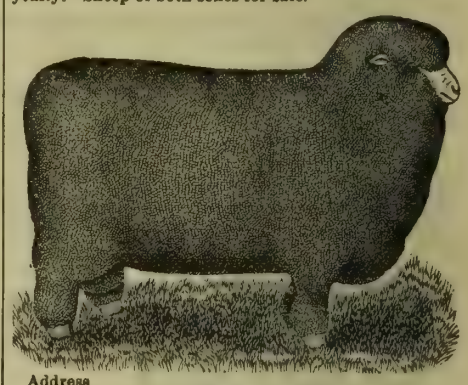
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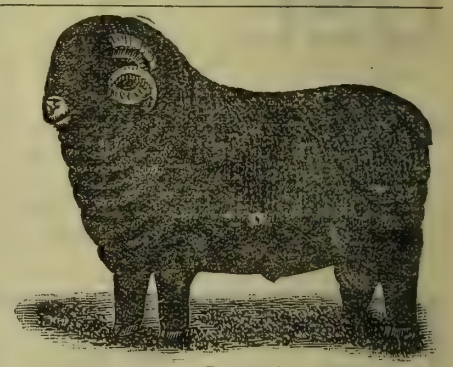


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Schools of Science.

The State University at Berkeley announces its intention of repeating the courses of instruction in chemistry offered to the general public during the summer of last year under the denomination of "summer school," and also of offering for the first time a summer school of biology. The school of last year, though very little advertised, was well attended and successful. The authorities wish to make it known to more people this year that all those interested in the science may avail themselves of the opportunity to study it. The chemical laboratories have just been completed and equipped in such a way as to offer as good facilities for chemical work as can be found.

The characteristic features of the course will be the opportunity for practical work in the laboratory. Each person taking part in the course will have a desk and the necessary reagents and apparatus at his disposal and will receive such personal assistance and guidance as may be necessary. The course is intended primarily for the teachers of the State, especially for those who wish to prepare themselves as teachers of chemistry. Special attention will be given to points connected with the successful conducting of experiments before classes and to the precautions to be observed. In a word, it is intended to make this a training-school for teachers. Applicants are requested to state their preparation, whether elementary or advanced. Advanced students, who do not require such direct and personal supervision, will be allowed to carry on such lines of advanced work as may be agreed upon. Certificates of proficiency will be given to those members of the class who distinguish themselves by their daily work and who pass a satisfactory examination at the close of the term. This examination is not required, save from those who wish certificates.

No tuition will be charged, as all the University courses are free, but a deposit of $10 will be required, $5 of which will be retained for the chemicals used. The cost of the apparatus that may be broken will be deducted from the remainder and the surplus will be refunded to the student. The session will begin on Wednesday, June 22d, and will be under the personal supervision of Professor E. C. O'Neill, one of the most popular instructors at Berkeley.

The summer school of biology will be of a slightly different character. Professor Ritter, who is now in charge of the department of biology, wishes to accomplish some permanent results in contributions to science. To that end he intends to devote the work of his summer school to marine biology. The ocean along the California coast contains many varieties of marine life that are to be found in no other region accessible to scientists, and it is very important to the science of evolution that these varieties should be thoroughly worked up. No one has ever undertaken the work and Professor Ritter wishes to gather a number of earnest students to assist him in beginning it this summer. Adolph Sutro has offered the use of his new and splendid aquaria at the ocean beach in San Francisco to Mr. Ritter, which will make it possible to preserve and study the organisms as they live and move in their own element. Elaborate collections will be made from Monterey and, possibly, Santa Barbara bay, and transferred to Mr. Sutro's aquaria. The work will begin some time in July. Further announcements will be made next month. Meamtime inquiries should be directed to Professor W. E. Ritter, Berkeley.

Artificial Diamonds.—Mr. Streeter, in his book on "Precious Stones and Gems," says that a good deal was heard at one time of the experiments of Mr. J. B. Hannay, of Glasgow, in making artificial diamonds. The philosopher's stone, it was said, was at length discovered. Then the subject was allowed to drop. Here is the sequel. The so-called diamonds were found to crumble to pieces when placed on the wheel for cutting. Worthless as these gems proved to be, they were not obtained without much labor, expense, and above all, risk to human life. A peculiar mixture of paraffin and certain metals and minerals was put in a strong wrought-iron tube, and subjected to the heat of a reverberatory furnace. In most of the experiments the tubes exploded, and, in some cases, the assistants were injured in consequence.

Flour Paste.—To make a paste that will "stick like grim death," heat some water to boiling, then stir in flour, keeping it free from lumps. The best way is for one man to stir the water while another drops in the flour through a sieve. The stirring is continued until the paste is as thick as desired, then continue a little longer to make sure that there are no lumps of flour left in the mixture. Care should be taken that too much flour is not sifted in, or the paste will become too thick, as it takes a little time for the last flour put in to affect the rest of the paste. The paste may be strengthened by adding to the flour one-sixth its weight of powdered resin. To make the paste keep for months without souring, add a few drops of oil of cloves. A little carbolic acid will do as well, but it does not suit the nose as well, by a good deal.—*Blacksmith and Wheelright.*

Electricity in Agriculture.

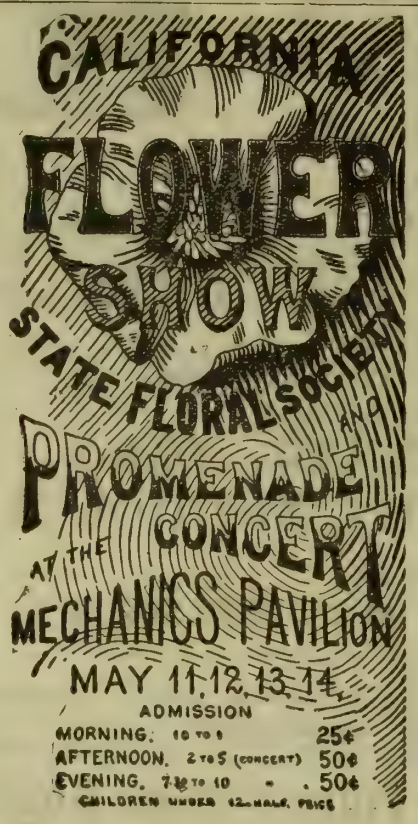
The recently awakened interest of the more advanced section of the farming community in the subject of the utilization of electricity in agriculture, lately alluded to in the *Western Electrician*, was exemplified by the action of the United States Senate when, on motion of Senator Peffer, a resolution was adopted requesting the Secretary of State to obtain from our consuls abroad information as to the application of electricity to the propulsion of farm machinery and to the propagation and growth of plants. The Kansas senator explained that it was understood that electricity had been applied in Italy to the compression of hay and also that electrical influences had been successfully used in the vicinity of Paris in the propagation of cabbages, and there was a desire on the part of the farmers to obtain definite information on these subjects. Much valuable information can doubtless be collected in this manner, as many scientists, and practical agriculturists both at home and abroad, are now studying this problem. The publication of the consuls' replies will be awaited with interest.

That there is a growing demand for information of this sort is shown by the fact that in many sections of the country experiments are being conducted on this line. A press dispatch from Auburn, Ala., announces that on April 16th, cotton was ginned by electricity for the first time in the history of the world at the Agricultural and Mechanical College of Alabama. The class in electrical engineering, under the direction of A. F. McKissick, connected the generator at the dynamo room of the college with the motor at the Statum farm about 3,000 feet away, and the motor at the farm did the work of a ten horse power engine formerly used, grinding corn for cow feed and ginning cotton.

Of course as far as the electrical engineer is concerned the application of a motor to a cotton gin or any other piece of farm machinery is no startling departure. Such experiments and new adaptations as the one just referred to, however, do an immense amount of good indirectly in that they serve to bring electric power to the notice of the agriculturist. We must reiterate our conviction that an experimental station such as Senator Peffer of Kansas proposes would do an immense amount of good by educating farmers in the many advantages of electric power.

Theory of Thunderstorms.

Solids and liquids cannot be charged throughout their substance with static electricity; if charged at all, the electricity is upon their surface. But gases and vapors being composed of myriads of separate particles, can receive a bodily charge. The air in a room in which an electric machine is worked is found afterwards to be charged. The clouds are usually charged more or less with electricity, derived probably from evaporation going on at the earth's surface. The minute particles of water floating in the air being better conductors than the air itself become more highly charged. As they fall by gravitation and unite, the strength of their charges increases. Suppose eight small drops to join into one. That one will have eight times the quantity of electricity distributed over the surface of a single sphere of twice the radius of the original drops; and its electrical potential will therefore be four times as great. Now a mass of cloud may consist of such charged spheroids, and its potential may gradually rise, therefore, by the coalescence of the drops, and the electrification at the lower surface of the cloud will become greater and greater, the surface of the earth beneath acting as a condensing plate and becoming inductively charged with the opposite kind of electrification. Presently the difference of potential becomes so great that the intervening strata of air give way under the strain, and a disruptive discharge takes place at the point where the air offers least resistance. This lightning spark, which may be more than a mile in length, discharges only the electricity that has been accumulated at the surface of the cloud, and the other parts of the cloud will now react upon the discharged portion, producing internal attractions and internal discharges. The internal actions thus set up will account for the usual appearance of a thunder cloud, that it is a well-defined, flat-bottomed mass or cloud which appears at the top to be boiling or heaving up with continual movements. Electrical Age.



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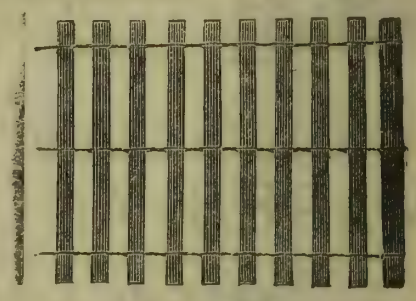
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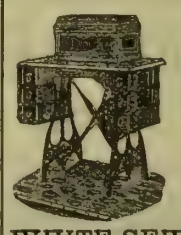
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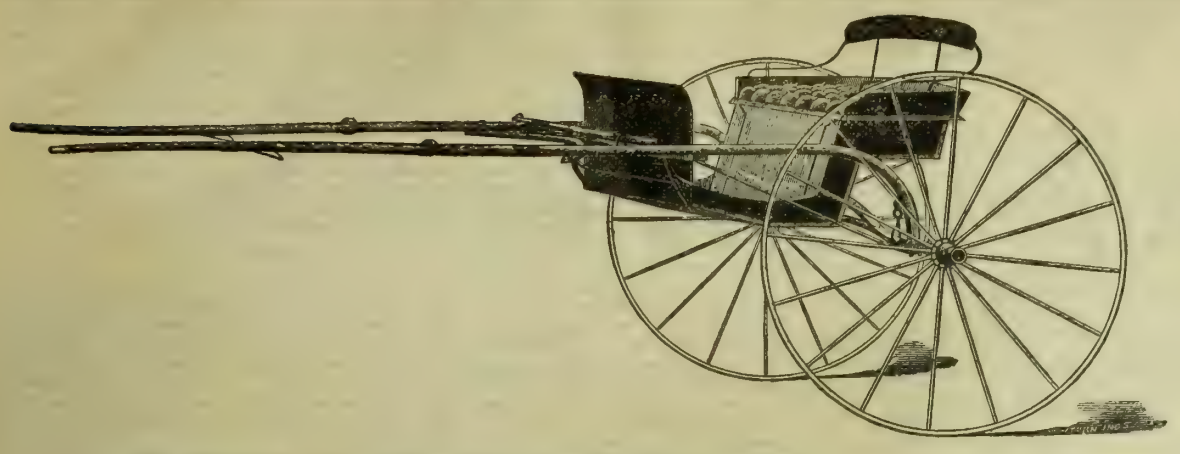
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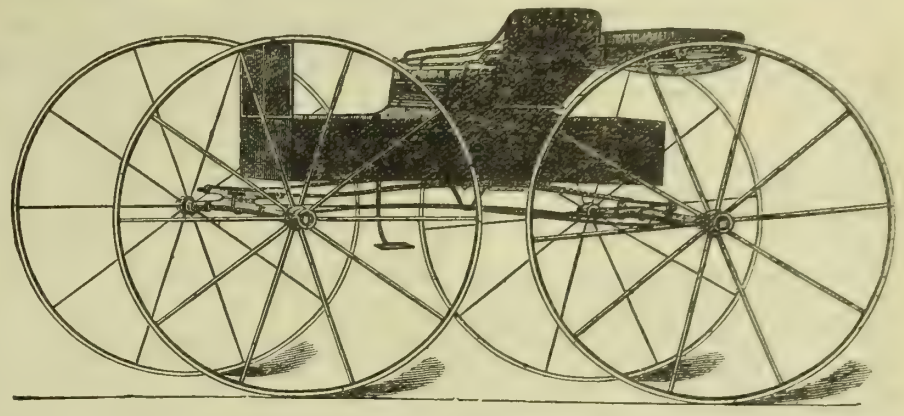
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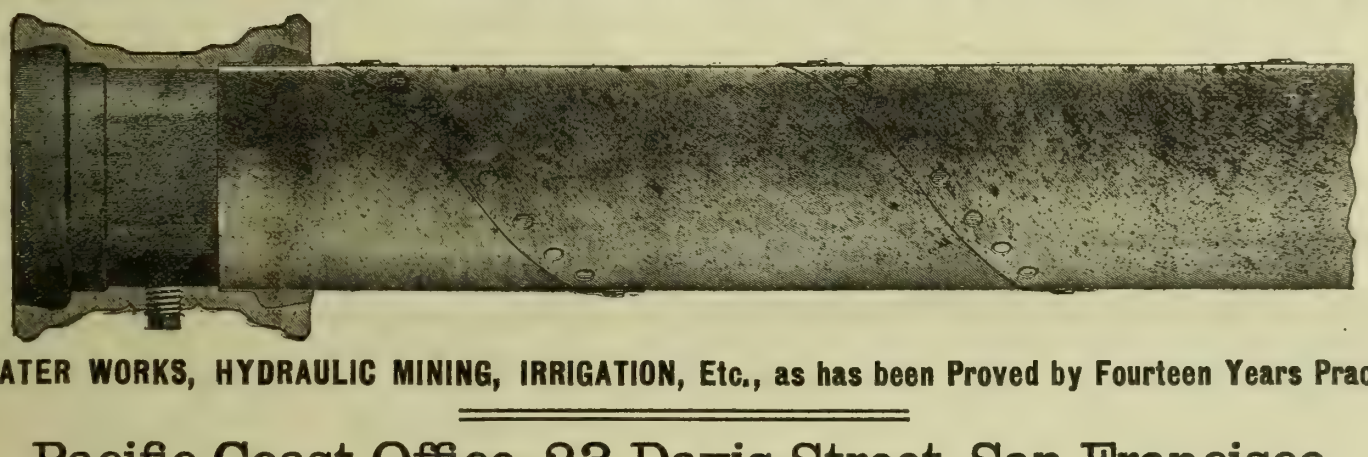
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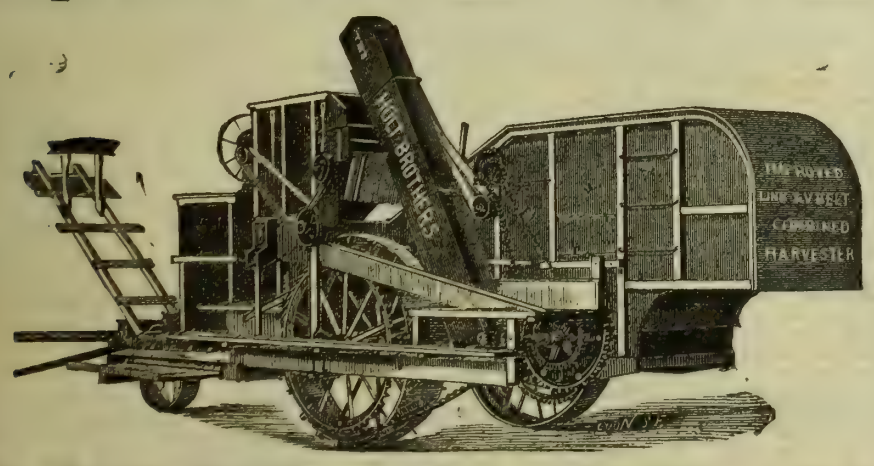
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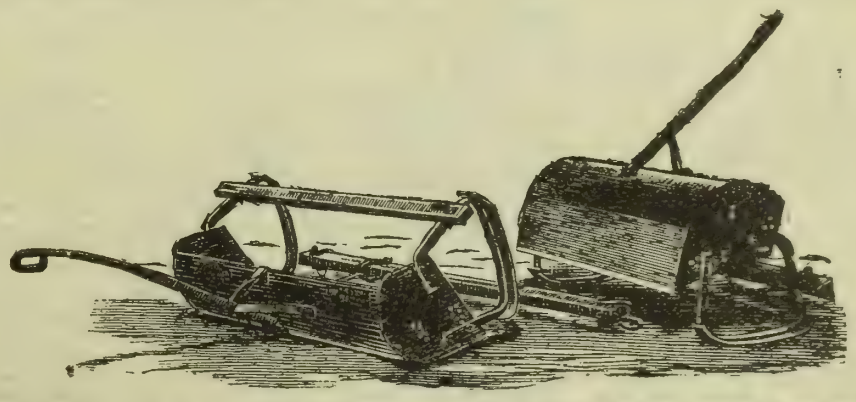
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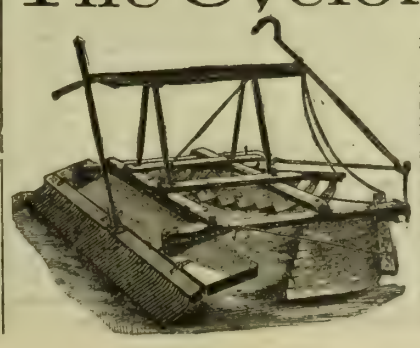
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

EFFECTS OF RAIN ON GRAIN.—Oroville *Register*: Thos. Chivell of Nelson was in Oroville this week, and speaking of the late rains, said they had not benefited the adobe land but had rather injured it. On inquiring the manner in which the rain had been a damage, he said it appeared to have killed the suckers or shoots where the grain was stooling out. This left a less number of stalks to bear heads of wheat. In favorable seasons he had seen many of these from a single shoot, and in one instance he, with two other gentlemen, had pulled up a root and counted growing from it 40 stalks, each bearing a head of grain. This year he thinks the wheat crop on the adobe will lack 25 per cent of being as great as usual.

Fresno.

CROPS IN SQUAW VALLEY.—Reedley *Exponent:* The weather is fine, crops are very promising, and with one good rain there will be more than an average crop. The late frost of the 17th inst. did some damage to the fruit crop, potatoes, etc.

Kern.

SPOTTED RAINFALL.—Weldon Cor. *Echo:* The weather keeps cold and crops are backward, but stock is fattening fast in most places. The rains, however, this season have not been general, and in some districts there is little or no grass.

CROPS AROUND DELANO.—*Courier:* The cool winds which have prevailed during the past week have been somewhat drying, but owing to the absence of very much sunshine the crops have not suffered very much. With a few more showers, which we are almost certain to have, a considerable amount of grain will be harvested and there will be an abundance of hay. The grain is just now hardening, and with the cool weather will be plump and well filled out.

Los Angeles.

THE GRAIN CROPS.—L. A. *Farmer*, April 30: The rather scant amount of rainfall for this season will have its effects on the grain crops of this section. The rainy season is past and the total precipitation is only from eight to twelve inches according to locality. So small an amount of rain would result in an utter failure of all crops anywhere outside of this peculiar State. Here it will mature excellent crops of all kinds, excepting grass and grain on the drier mesa land, and even here the crops will be good where the land was well tilled and the land put in early in the season; so that the whole proposition resolves itself down to this: The man who loses his crops has only himself to blame. If one were to go over the section, he would find a great many fields of excellent barley and wheat. Wherever the grain was sown in January it is excellent, and wherever it is sown in an old corn or potato field which was well tilled last year it is good, even though sown at a later date. There is an important lesson to our farmers in this season. *The farmer who plowed deep and put his crop in early will get an excellent crop of grain.* As it is, there is a vast acreage of land under seed, on which the straw will be short and not very heavy; still we expect to see a good deal of grain of superior quality threshed next fall. The crops of hay will be peculiarly sweet and clean, and will make good feed. A ton of short straw with pretty well filled heads is better than two tons of long, coarse straw with very little grain in it. Then there are the damp and irrigated lands which will have their "innings" this season, where large crops of alfalfa hay and of corn will be grown.

GREAT OLIVE SECTION.—E. S. Penny of Sacramento in Pomona *Progress*: You may say with all truthfulness that Pomona is the greatest place in the production of young olive trees. I have been interested in olive growing for years and have traveled in Europe with the view to inform myself as to the olive oil industry there, and I do not know of any locality in America or Europe that sends out half as many olive trees, suitable for orchard planting, as Pomona.

TREE PLANTING.—*Progress*: The acreage of citrus fruits planted in and about Pomona since January 1st, has been about 500 acres, and the area of deciduous fruit orchards here has been increased by about 275 acres. Prunes and olives have been the popular deciduous fruits for new orchards.

FRUIT AND IRRIGATION NOTES ON HOLT AVENUE.—Pomona *Times*: E. P. Cooley, who owns the Lockwood place, has put in 1000 feet of redwood fluming for irrigation purposes, 10x12 and 7x10 inches, with capacity for 100 and 70 inches respectively. Farther along, the Crawford Brothers have just put in 110 acres to citrus fruits. These gentlemen, too, have put in a lot of redwood fluming, 120 rods along the avenue and about 40 rods running at right angles to it. Water is to be received from the P. L. & W. Co.'s artesian system. Messrs. Brady, Hewitt and Morehead have 120 acres adjoining Ontario set out mostly to oranges—a few lemons. This gives evidence of being one of he best improved tracts on the avenue. The land all lies between Holt avenue and the railroad. There is a domestic and irrigation water pipe conducted along the tract in separate pipes. One and one-half inches of water goes with each ten acres. The water is received in pipes far enough up Mountain avenue to give a 56-foot pressure. The irrigation water is delivered in a four-inch pipe, and there are two hydrants to each row of trees—one on each side of the row. The water for domestic purposes is delivered in a two-inch pipe, and both pipes run the length of the tract on Holt avenue. The domestic system has four turnouts in each ten acres. A cypress hedge, to act as a windbreak, is planted around the entire tract, and each ten acres is separated by a hedge of cypress. There are 50 lemon trees, 40 deciduous trees of different varieties and 990 orange trees to each ten acres. One-half the oranges are Hart's Tardiff and Mediterranean Sweets and the other half Navels.

Napa.

JACK FROST'S WORK.—St. Helena *Star*: Never in the history of viticulture in Napa county has the frost played such havoc as it has the past month, and should cold snaps continue for another month, there could not be a great deal more destruction wrought, as the vines are nearly all gone and there will be very few grapes this year. The first frost to do much damage was the morning of the 31st of March. Since that time cold waves have swept over the valley every few days. Sunday morning a heavy frost visited many portions of the valley, leaving only stumps of vines stripped of their verdure. Tuesday morning there was an exceptionally cold snap, and it seemed to visit every vineyard not already destroyed, and when the sun had cleared away the frost, the scene was one of desolation, not only all over Napa valley, but in Conn and Chiles valleys, and even many vineyards on the side-hills and on Howell mountain. We have interviewed many of our grape-growers and there has not been one but who has said that fully three-fourths of the prospective crop of 1892 has been wiped away. Captain Amesbury said before the last frost that he had visited many sections of the valley and had found at least one-half of the crop destroyed and now fully three-quarters must be gone. In conversation with S. P. Conner, that gentleman informed us that he had seen a number of vineyards which the owners thought had escaped, but on close inspection the leaves and buds were seen to be badly frosted, although they had not turned black. J. M. McPike says he is confident that the crop of 1892 will be fully three-fourths short. His own vineyard, which escaped the heavy frost of March 31st, is now fully one-third destroyed. R. H. Delafield, of La Feld Rancho, above Calistoga, was in St. Helena Wednesday, and said, when speaking of the damage done by the late frosts, that the vines at Healdsburg, Santa Rosa and Glen Ellen are mostly gone. It can be readily seen from the reports, which have all been gleaned from reliable sources, that the valley vineyards are nearly three-fourths destroyed, while on the mountains and hillsides fully one-third of the prospective crop has been destroyed.

FRUIT CROP PROSPECTS.—Napa *Register:* W. H. Evans, Secretary of the Napa Fruit Growers' Association, says there will be a light crop of cherries this year, both in this and Vaca valleys. A. L. Bryan's orchard is the only one in this vicinity which promises a full yield. Not more than half the ordinary crop will this year be gathered from the trees in Chapman's orchard, and the yield will be still lighter in the orchards of Messrs. Evans, Tool and Butler. This shrinkage is attributed to excessive dampness in the blooming season. The apricot crop here will be light; the peach crop heavy. Prune orchards will pretty generally fall behind last year's yield. The vineyardists of the valley report the continued presence and spread of phylloxera and frosts, that will cut the crop of grapes down to one-half what it would be under ordinary circumstances. Supervisor Deweese says that Brown's valley would produce extra large crops this year, both of fruits and cereals. From recent investigations made, he thinks that there will be an immensely heavy yield of Bartlett pears, as they have set very thick. Some varieties of peaches will probably not give as big a crop as last year, while apples are too thick in the trees; cherries are bearing rather light.

San Bernardino.

NINE MILES OF PIPE.—Cor. Los Angeles *Express:* The South Riverside Land and Water Company has completed its second line of pipe, some nine miles long, water being secured from artesian wells in Temescal valley, on the company's own land. Water was turned on Wednesday, and as soon as satisfactory tests are completed, a grand celebration with excursions, will be given. The company owns some 15,000 acres of fine lands.

San Joaquin.

WOODBRIDGE CANAL OPEN FOR IRRIGATION.—Stockton *Mail:* The Woodbridge canal has been filled with water for the purpose of irrigation. The head-gates are open, and hundreds of acres of parched land are being saturated with water. It being the first practical irrigation in San Joaquin county, great enthusiasm among the people of Lodi and Woodbridge and the surrounding country is manifested. Hundreds and hundreds of acres will be made green with alfalfa, and many orchards will be made vigorous through irrigation this summer, when heretofore the country has been parched with heat and made unbearable by dust. The people feel as if they had cause for rejoicing.

GRAIN AND FRUIT NOTES.—Stockton *Mail:* Farmers say that there are more weeds growing in the fields now than there have been before for 20 years. The cause of so many weeds this spring is to be found in the fact that the season opened very early and then frosts followed the warm weather. The frosts didn't hurt the weeds, but it retarded the growth of the grain, and in that way gave the weeds the start of it. If it had not been for the cold weather, the wheat would have got the best of the weeds and kept them down. W. L. Ashe, who is in town now, and who has been traveling extensively through this region during the last few weeks, says that thousand-acre fields of poppies may be seen. But it is not alone the weeds that are doing damage; the soil needs moisture and the wheat is thirsting for rain. Singularly enough, cold has a drying effect on the ground. One would naturally suppose that the earth would retain moisture better in cold weather than in warm, but the opposite is the case. Crops on sandy soils are in worse condition than those on adobe tracts, because sand, containing as it does a great deal of rock, is comparatively a good conductor of heat. It warms up much more quickly than adobe in hot weather, and cools much more quickly than adobe in cool weather. In consequence of the long "spell" of cold weather, the sandy lands have been so cold that the growth of grain has been stopped. Should warm weather come soon, with copious showers of rain, the sand would heat up and the wheat would grow wonderfully fast and produce some sort of a crop, but probably not so much as 12 bushels to the acre. From Stockton southward to Fresno the wheat looks very bad. From here to New Hope it is in better condition. On the black land it is also in better condition. Around New Hope, on the low-lying land, a fair crop will be raised, in Mr. Ashe's opinion. Near Clements the prospects are for a crop, but the yield will not be, by any means, what it should be. It is reported that frosts have done great damage to the grapes. Moses Marks, who has a vineyard of 27 acres in the Lodi region, says that the vines, which were looking all right three days ago, have turned black. It is feared that the young watermelon vines in the Lodi region have been injured by the frosts. The heavy hail which fell some weeks ago did more damage than was appreciated at the time. Pear trees, which were then in bloom, were stripped of their flowers, and as a consequence, the yield of pears this season will be small. Joseph Hale informed J. D. Peters, the other day, that the pear trees in the Hale orchard on Roberts Island will not yield more than 2000 or 3000 boxes this year. Had it not been for the hail, the yield would have been 8000 boxes.

San Luis Obispo.

GRAIN CROP PROSPECTS.—Paso Robles *Moon:* The dry north winds which have been blowing for the last week, up to April 29th, have not provided the sort of weather that was necessary for developing a grain crop that was already suffering for moisture. Prospects were bad enough before, but it is now a foregone conclusion that the wheat crop will be shorter than for a number of years. Probably not one-half as much wheat will be turned off as last season.

Solano.

THE FRUIT OUTLOOK.—Vacaville *Enterprise:* Generally, apricots will not make more than half a crop in this neighborhood. Cherries are very light, running from a tenth of a crop to a half. As with apricots, however, some ranches will have a good deal of fruit. Plums and prunes are very light, also. The pear crop will be better than originally thought, though by no means good. Peaches will average better than anything else. Grapes have been injured on some ranches, but generally will do well.

THE GRAIN PROSPECT.—Suisun *Republican:* In certain localities the Hessian fly is doing considerable damage to growing grain. In the hills this side of Vallejo the ravages of the fly are great, entire fields are completely destroyed. Contra Costa county, in certain sections, is also badly affected. The grain fields in this section, Montezuma hills and about Dixon and Elmira are not affected by the pest and are all in prime condition, and unless something unforeseen and unexpected happens, a most bounteous harvest can reasonably be expected.

Sonoma.

FRUIT NOTES.—Santa Rosa *Republican:* The first strawberries to show up in the Santa Rosa market this year were grown by Robert Mather of Bennett valley. Mr. Mather has two acres of Longworth's Prolifics and they keep him very busy. Strawberries came in about two weeks earlier this year than they did last. They are said to be of better quality than the crop of 1891. The cherry crop will be rather light, according to some reports. It is also reported that in some parts of the country the peach and apricot crops will be below the average. Mr. Philpot of Windsor will have 13 acres of raspberries next season. He has made arrangements to put out a few orange trees for next year. The Santa Rosa *Democrat* says: M. Fallon of Forestville reports that, in his opinion, the peach crop in that section is generally light. The prune trees which bore heavily last year have now a very light set, and the light-bearing trees of last season have only a medium crop. Taken as a whole, the fruit crop will be below an average. The cherries will yield well and the promise of the apple crop is very fair. Willis Gauldin reports his prune crop as very light, he thinks not more than one-third as heavy as last year. He attributes the shortage to the heavy showers which fell just as the fruit was coming out of the bloom and before the fall of the flower. At this critical period he says there is a light flower dust on the newly formed fruit which seems to nourish it until it is able to draw its sustenance from its parent stem. A heavy shower at this time washes off this dust and much of the fruit will fail to mature. He attributes the light set to this cause, and infers from it that the crop will not be nearly so heavy as last year. D. D. Philips reports the prune crop of Mendocino township as very light, he thinks not more than half a crop, for which there are two causes; one, the unusual yield of last year, and the other, the heavy rains during the bloom season. There is no indication of any injury to the grape crop in Dry Creek valley, by frost or otherwise.

Siskiyou.

FERTILE MOUNTAIN VALLEYS.—Yreka *Journal:* Travelers on railroads through the mountain sections do not get a view of the country as in the valley sections, from the fact that in order to obtain grades for easy hauling the uninhabited canyons of streams are utilized for the most economical railroad building. Back from the C. & O. R. R., on either side, are large, fertile and productive valleys, not seen by those traveling through the county on the main line, hence many through travelers no doubt think our entire county is composed of nothing but rocky mountains and dry plains, when there is really no region more productive of varied resources to make Siskiyou county one of the richest in the State, which fact is demonstrated more fully by its going ahead of Shasta and other counties south in the rapidly increasing population, without any exertion in the way of a boom to attract new comers. Our county contains many beautiful valleys locked in by mountains to render them delightful retreats for residence and productive in the way of crops and fruit. The mountains are covered with dense forests of timber of great value.

Santa Cruz.

THE STRAWBERRY CROP.—Watsonville *Pajaronian:* The strawberry shipments have gone upward with a boom and growers are feeling good over the prospects of the season. The crop is going to be large, and prices have held up very well thus far. The quality of the Pajaro strawberries was never better than it is this year. They are large in size, beautiful in color, and firm meated.

INCREASED CAPACITY OF THE BEET FACTORY.—*Pajaronian:* The work of doubling the capacity of the beet factory has been commenced. But a small addition will be made to the factory buildings, as the present structure will hold most of the new machinery. Sixty carloads of the machinery are now in San Francisco.

Sutter.

AN EXTENSIVE NURSERY.—Yuba City *Farmer:* On James T. Bogue's home place, which comprises over 100 acres, the nursery stock has given way largely to orchard, which is as thrifty as any in the state. About 30 acres are yet in general nursery stock from the seed to two-year-old trees. Below Starr Bend, Mr. Bogue has rented 320 acres, and now has planted 55 acres in nursery of general varieties planted from the seed-bed since the first of the year. In neat rows one-half a mile long the young trees, a few inches apart and from 6 to 12 inches high, presented a very pretty sight, and when one considers the number of acres that will be planted from this nursery of over a million of trees, the magnitude of the business strikes very forcibly. The budding season will be a busy one there, as it will require over 40 men a month or more to go over the same.

THE LADY BUGS.—Yuba City *Independent*: The Australian lady bugs which were placed in the orange trees on the premises of W. H. Lee in Yuba City, are increasing rapidly. They are now in the larva state. The cool weather has retarded them to some extent, but as soon as it grows a little warmer it is expected they will wipe out the scale. If any one in the county has cottony cushion scale on trees of any kind, he can procure a supply of the lady bugs on application to the County Horticultural Commissioners.

Tehama.

ORCHARDS AND VINEYARDS.—Corning *Observer*: The orchard of R. Hurlburt is receiving a thorough cultivation and presents a very handsome appearance. The trees have made a splendid growth and should produce an abundant crop of fruit this year. W. H. Stewart's vineyard, in his ten-acre lot of the Fair View Colony, is now showing up pretty well. The vines are growing lovely, but he keeps constantly working the earth around them and not a weed to be seen in the whole patch. The newly planted orchard of Mr. Rolling, just a short distance west of town, also presents a beautiful appearance. The trees have all made a good growth so far, and not a weed nor brush is to be seen in the carefully tilled field. The vineyard and orchard of A. B. Aitken is doing splendidly. Mr. Aitken has 40 acres of choice land just south of the town limits, and has some 20 acres of the tract planted to grapes of the choicest shipping varieties, the whole of which will come into good bearing this year. Mr. Aitken also has a few acres planted to olives, almonds, figs and deciduous fruits, and the trees are all thrifty and strong, and in a few years this place should yield a handsome revenue.

Ventura.

GRAIN AND FRUIT CROP PROSPECTS.—Ventura *Democrat:* The season is so far advanced that little or no rain may be expected, and the crops will have to struggle with the moisture at present in the soil. Whether there is enough to produce beans and corn is a question on which there is difference of opinion. Doubtless in some localities, fair bean and corn crops may be raised, particularly the former; but a general yield is out of the question. Barley, in a large degree, will also be a comparative failure, though on land planted last year to corn and beans, the barley crop never looked finer in any previous year, hence a great deal of that cereal will be produced in any event. Much of the lighter grain will also make very fair hay, and in view of the probable shortness of dry feed, next fall, very little of it, likely, will be permitted to go to waste. The apricot yield, from present appearances in the county, will be twice as large as that of last season, and a good crop of all other classes of fruit seems, from all accounts, to be assured. It is a little too early to form an accurate opinion of the walnut crop, but the present signs are very good for a full average yield.

OREGON.

HOP CROP NOTES.—Eugene *Guard*: Hop men report that up to within a couple of weeks ago hops made a rapid and hardy growth, but the past two weeks they have grown very slowly owing to the damp, cold weather. They expect them to come out all right, however, and the prospects at present are that hops will command a good price next fall. They are now quoted as being worth 35 cents. Most hop raisers believe that the hop lice are going to be numerous this summer and many of them are already preparing to do a large amount of spraying.

ONE HUNDRED THOUSAND!!!

Of what? Of sturdy, thrifty settlers wanted, to occupy the

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The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

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Land ready for cultivation when you buy.
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The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

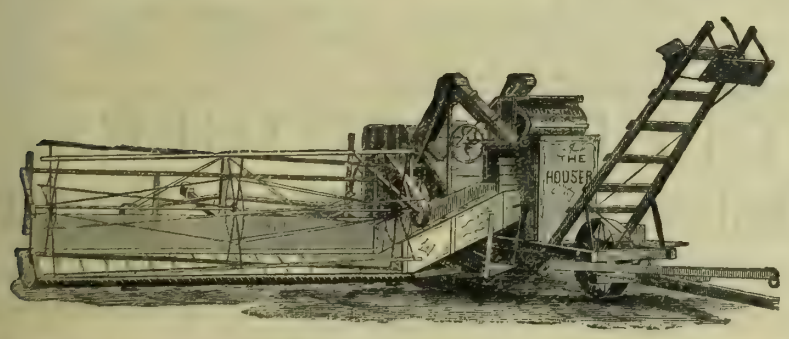
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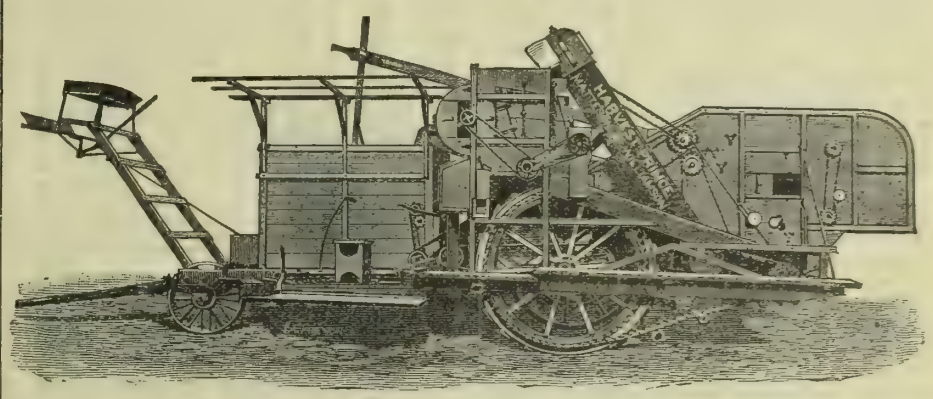
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It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by 4-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

MATTESON & WILLIAMSON MF'G CO.

STOCKTON, CAL.

GOOD HEALTH.

CHRONIC ARSENICAL POISONING.—A good example of chronic arsenical poisoning on a large scale occurred in County Asylum, Berrywood, and a short account of it may be both interesting and instructive. In the endeavor to make the wards of an asylum bright and cheerful, and to do this at as little expense as possible, it is not improbable that the nature of the coloring materials used may be overlooked, and that some of the gastric and intestinal disorders which disturb the peace of mind of medical superintendents may be cases of arsenical poisoning. For a long period the nurses here were in poor health. First one and then another was laid down until, within a few months, nearly every nurse on the staff had been, or was, under medical treatment. Headache, neuralgias, gastric derangements, loss of appetite, constipation or diarrhœa, irritation of eyelids, anæmia—these were the chief symptoms complained of. Drugs did not appear of much avail, but a holiday had a marked effect for good. At last one nurse had the eye symptoms in a more pronounced form, and suspicion was aroused. In each nurse's room was a green baize curtain, used as a covering for dresses, etc. A portion was taken and examined. It was found to be impregnated with arsenic to an astonishing extent. These curtains were removed; the rooms freely ventilated; medical treatment was stopped; the symptoms disappeared, and, though some months have elapsed, have not returned. The baize was similar to that used for covering doors, etc., and was obtained from two manufacturers.—W. Harding, M. B., in the Lancet.

SOPORIFIC PROPERTIES OF LETTUCE.—Although preparations of lettuce have from very early times had a reputation in medicine for their soporific properties, the narcotic constituent of the plant has never been ascertained with any certainty. Various neutral, fatty, and waxy bodies separated from the milky sap of different species of Lactuca have been from time to time described as compounds of medicinal value, but on the other hand it has been denied that the dried milk-sap, lactucarium, in spite of its narcotic odor, possesses any sedative action, and in fact, this preparation is no longer officinal in England or the United States. It is, therefore, interesting to learn in a communication from the Research Laboratory of the Phaamaceutical Society, read recently before the Clinical Society, that Mr. T. S. Dymond has established beyond doubt the presence of hyoscyamine, the principal alkaloid of belladonna and henbane, not only in the cabbage and Cos varieties of the common lettuce, *L. sativa*, but also in the wild lettuce, *L. virosa*. The amount in the young plants is certainly very minute, but in the official green extract, which, according to the directions of the "British Pharmacopœia," is to be prepared from the flowering herb of *L. virosa*, the mydriatic alkaloid occurs to the extent of 0.02 per cent.

THE BEST MOSQUITO REMEDY.—Mr. C. H. Russel, of Bridgeport, Conn., has recently communicated to us the following interesting fact: A very high tide recently broke away the dike and flooded the salt meadows of Stratford, Conn. The receding tide left two lakes, nearly side by side, of the same aize. In one lake the tide left a dozen or more small fishes, while the other one was fishless. A recent examination showed that while the fishless lake contained tens of thousands of mosquito larvæ, that containing the fishes had in it no larvæ. An English gentleman living on the Riviera, according to a correspondent of *Nature*, having been troubled by mosquitoes, discovered that they bred in the large tanks kept for the purpose of storing fresh water, which is rather a rare commodity at this Mediterranean resort. He put a pair of carp in each tank and succeeded in this way in extirpating the insect pest. The utilization of fish in this way is an old suggestion, and a very practical one under some circumstances. Many people suffer from the mosquito plague when the insect breeds in a circumscribed and easily accessible place, and where it could be destroyed by some such method as that used by the level-headed Englishman.—Insect Life.

"NO form of vice, not wordliness, not greed of gold, not drunkenness itself, does more to unchristianize society than evil temper. For embittering life, for breaking up communities, for withering up men and women, for taking the bloom off childhood, in short, for sheer gratuitous misery-producing power, this influence stands alone." Henry Drummond.

To Sail for England.

Mr. W. A. Shafor of Middletown, Ohio, the importer of Oxford Down Sheep, sails for England on May 13th and will return in July. Mr. Shafor has already booked sufficient orders to warrant him in increasing his importation by one-third, his usual number being 200 each year, while this year he will import 300 of the best English product. This breed of sheep is said to be peculiarly adapted to California and Oregon climate and conditions. A good plan for those interested would be for neighbors to combine and purchase a carload, and make a saving on freight. Orders should be in early, as a large portion of this year's importation is already sold.

NATURAL GAS AT STOCKTON. — The female department of the State Asylum was lighted last week for the first time with natural gas from one of the State's wells. One hundred burners were lighted and gave a beautiful illumination of the large buildings. After the lights were burned one hour there was no lowering of the gas reservoir over the well. Heretofore the gas lights were extinguished in the asylum at 10 o'clock, but the supply of natural gas is so large that attendants will not be restricted in its use. In addition to lighting the buildings, natural gas from this well will be used to run the engines for pumping water and sewage, and also for operating the big laundry at the asylum. Work is progressing on a larger well, and when that reaches a depth of 1700 feet, which is the depth of the well at the female department, the saving to the State will be above $250 a month in light and fuel expense.

45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
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3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.
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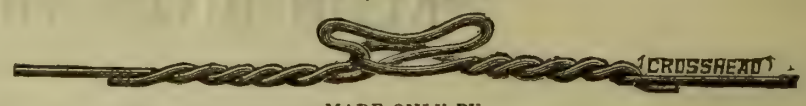


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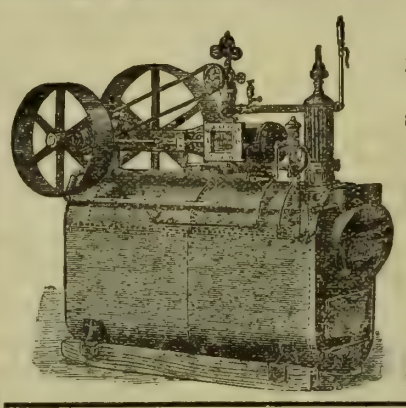
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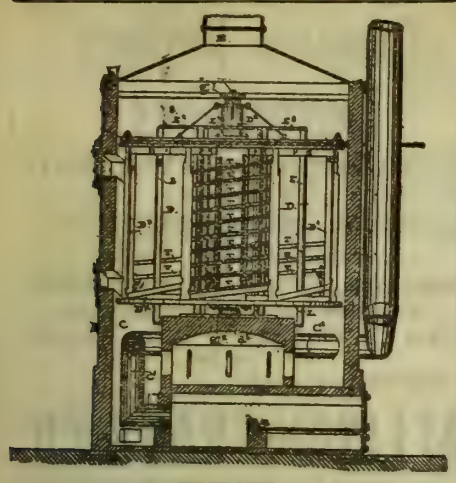
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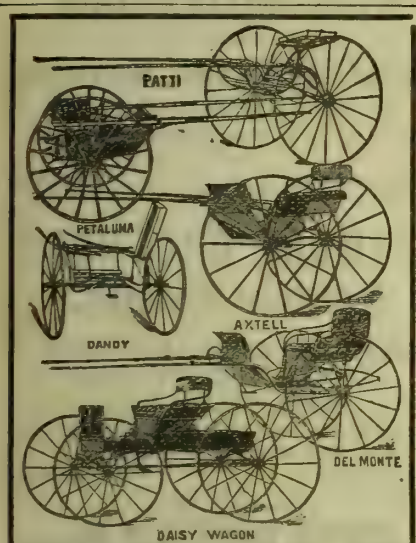
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YOU WILL BE A LONG TIME DEAD
To be Happy buy a
DANDY STEEL MILL
AND A DANDY STEEL TOWER.



We Make the Challenge, Dandy and O.K. Wooden Mills, and a Full Line of Pump Heads, Cylinders, Tanks, Etc.

With graphite boxes the Dandy Wind Mill requires no oil for years, therefore no more climbing towers, no more tilting towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and Will Be Sent to Good Parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

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By using CARBOLINEUM AVENARIUS
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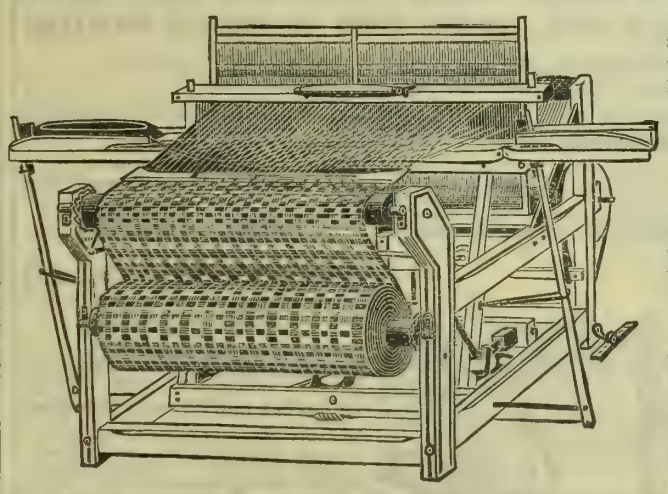
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IT IS EXCELLENT. IT IS CHEAP. It prolongs the life of wood at least 100%.
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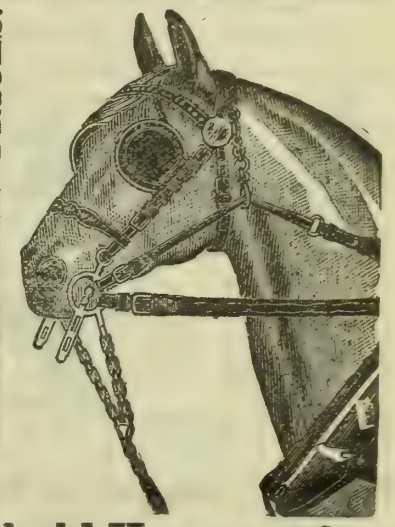
Send for sample, which we mail free, and taking two separate quarts of new milk; into one put ½ of a teaspoonful of Preservaline; put nothing into the other, and set them side by side so that the temperature of the milk may be the same. See which keeps sweet the longer and which raises the more cream.

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Send for circular giving full directions, also prices.

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Is a marvel. Saves Time—Labor—Hay.
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Gathers the Hay clean. Loads loose Grain.
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SAN FRANCISCO-SACRAMENTO

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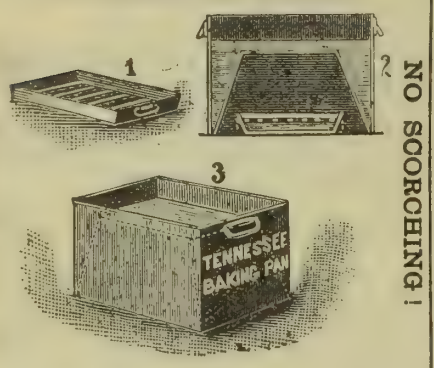
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NO BURNING! NO SCORCHING!



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Positively Unequaled for Baking Meats Fowls, Fish, Puddings, Etc.

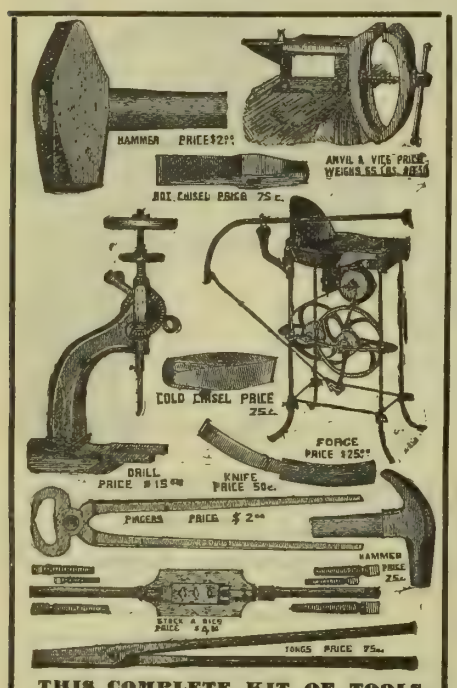
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THIS COMPLETE KIT OF TOOLS Only $25.

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HERCULES Gas and Gasoline ENGINES

Have fewer parts, and are therefore less likely to get out of order than any other gas or gasoline engines now built. Just light the burner, turn the wheel, and it runs all day.

MAKES NO SMELL OR DIRT.

No double or false explosions, so frequent with the unreliable spark,

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Home Mutual Insurance Company,

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INCORPORATED A. D. 1864. San Francisco.

Premiums Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	867,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

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No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

The wheel and vane of the Cyclone (which are the most durable parts of any solid wheel mill) are made strong and of well seasoned wood finished with the best lead and oil which neither blister in the sun nor is consumed by rust

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Manufacturers and Jobbers of Windmills, Pumps, Tanks, TUBULAR WELL TOOLS, Pipe, Fittings, Etc., Etc.

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Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

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To Scale Bug and all Insect Pests.

Now is the time to effectually guard your Fruit Trees against the visitation of all INSECT PESTS by spraying them with the

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The only effectual remedy in the market. Indorsed by the University of California. When Grafting or Budding use our Liquid Grafting Compound.

Send for circular with testimonials to

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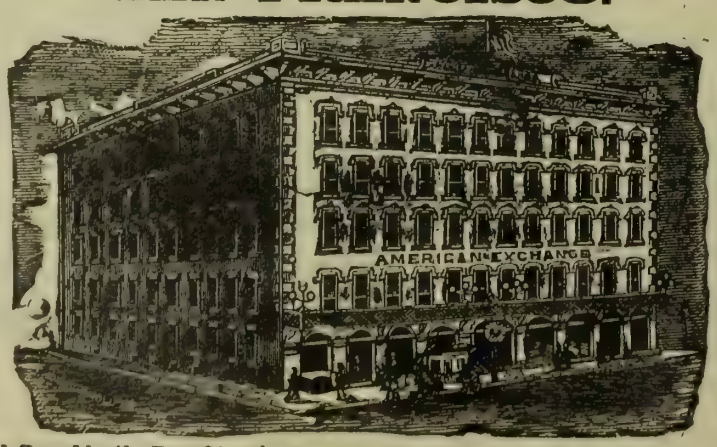
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Rooms and Board by the Day, $1 to $1.50; by the Week, $6 to $10; by the Month, $25 to $40.

Good Rooms and Elegant Table. Meals, 25c. Single Rooms, 50c. Free 'Bus.

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Green and Dried Fruits,
Grain, Wool, Hides, Beans and Potatoes.
Advances made on Consignments.
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☞ Consignments Solicited.

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Members of the San Francisco Produce Exchange.
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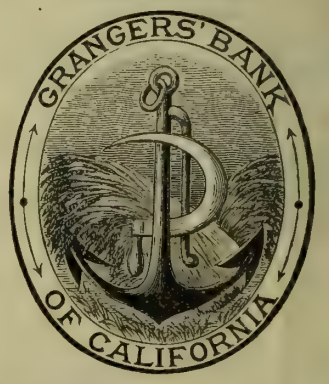
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COMMISSION MERCHANTS,
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☞ SHIPPING ORDERS A SPECIALTY.

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And Dealers in Fruit, Produce, Poultry, Game, Eggs Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223 225 and 227 Washington St., San Francisco.

GRANGERS' BANK

OF CALIFORNIA,
SAN FRANCISCO, CAL.
Incorporated April, 1874.



Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	720,000

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ELM STREET, DALLAS, TEXAS. }

S. F. Market Report

Market Review.

DOMESTIC PRODUCE, ETC.

San Francisco, May 4, 1892.

Trading in farm products continues light. The change in the weather has been of great benefit to growing crops, and gives reasonable assurance of an average yield of cereals to the acre. Cold, rainy weather keeps back the fruit crop, and may possibly do considerable damage to the more mature fruits. The local money market continues easy, with no particular inquiry for accommodations from any source.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June	July.	Aug.
Thursday	7s9½d	7s00½d	7s00½d	7s01½d
Friday	7s00¾d	7s00d	7s00¼d	7s00¾d
Saturday	7s00¾d	7s00d	7s00d	7s00¼d
Monday	7s00¼d	6s11½d	7s00¼d	7s00¾d
Tuesday	7s00¾d	7s00d	7s00¼d	7s00¼d

No. 2 Red Winter are quoted and not No. 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	36s6d	36s3d	36s3d	Held higher. Cold, wet.
Friday	36s6d	36s3d	36s3d	Cold.
Saturday	36s6d	36s2d	36s3d	Quiet but steady.
Monday	36s6d	36s3d	36s3d	Firmer. Wet and cold.
Tuesday	36s3d	36s d	36s d	Quiet but firm.

To-day's cablegram is as follows:

Liverpool, May 4.—Wheat—Firm, but not active. California spot lots, 7s 5d; off coast, 36s 6d; just shipped, 36s; nearly due, 36s 3d; cargoes off coast, firmer; Mark Lane wheat, steady; French country markets, very quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug.
Thursday	150¾	150⅝	150⅝	149⅞
Friday	151	150⅛	150⅜	150
Saturday	150⅜	150¼	150⅜	149⅝
Monday	150¼	149½	149⅜	149⅛
Tuesday	150	150¼	150⅛	150

The following are to-days' telegram:

New York, May 4.—Wheat—90½c for May, 90¾c for June, 90¾c for July, 90½c for August, and 9.½c for September.

Chicago, May 4.—Wheat—81⅛c for May, and 81½c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H	L.	Seller 1892. H.	L.
Thursday	152	151½	143½	142⅝	143½	142⅝
Friday	151⅝	151	....	....	143½	142⅝
Saturday	151⅛	151⅞	....	....	143½	143½
Monday	151½	151⅝	145	145	142½	142½
Tuesday	150⅛	147⅝	....	....	1[illegible]	140

The following are to-days' recorded sales on Call.

Wheat—Morning—Informal Session: Buyer season—500 tons, $1.48; 100, $1.48½. Seller 1892—100 tons, $1.40⅝; 400, $1.40¾ per ctl. Regular Session: Buyer season—200 tons, $1.48½; 300, $1.48⅝; 100, $1.49; 600, $1.48¾. Seller 1892—2300 tons, $1.41½; 900, $1.41⅝; 200, $1.41½; 200, $1.41⅝ per ctl. Afternoon: Seller 1892—900 tons, $1.41½. Buyer season—100 tons, $1.48½; 100, $1.48⅜ per ctl.

BARLEY.

	Buyer Season. H.	L.	June. H.	L.	December. H.	L.
Thursday	102⅜	102⅜	....	....	....	....
Friday	102¼	102	104	104	105	105
Saturday	103¼	102⅜	....	....	....	....
Monday	102½	102	....	....	....	....
Tuesday	99¼	99¼	103½	100¼	....	....

The following are to-day's recorded sales on Call:

Barley—Informal: Seller 1892, new—600 tons, 99½c per ctl. Regular Session: Buyer season—300 tons, 99½c; 100, 99¼c, 600, $1. Seller 1892, new—200 tons $1.00½; 200, $1.00⅝; 400, $1.00¾ per ctl. Afternoon: Seller 1892, new—100 tons, $1.00½; 500, $1; 300, $1.00½. Buyer season—100 tons, 99½c. Seller June, new—100 tons, $1.02½; 100, $1.02 per ctl.

Markets by Telegraph.

Eastern Wool Markets.

New York, May 2:—The tone is something more buoyant, but is not affecting general quotations; in fact, the slow response to London quotations amazed many large Eastern operators. Part of this is attributable to the low condition of remaining stocks, but the strongest feature is the cautious speculative feeling after the bad pan out of many of last year's ventures. Few buyers have gone to primal points as yet. Sales footing up of domestic 991,000, including over half a million of unwashed pulled, and 588,000 foreign on private terms. Sales at Boston: 1,515,000 domestic, including 195,000 spring California; 770,000 foreign unwashed wool is down to a light quantity. Philadelphia had several active days, helped by the presence of New England buyers.

Eastern Hop Markets.

New York, May 2.—Quiet attends the late strong prices. Brewers have placed some of their reserve on sale, evidently as a "bluff" to break prices, but with well-founded confidence in the statistical position. Holders of choice lots maintain full views, 24@30c for '91's. Closing option prices: May (bid and asked), 25@27c; June, 25@27½c; July, 26@28c.

Eastern Fresh Fruit Markets.

Chicago, May 3.—Sales by auction to-day were as follows: Purple cherries, 5-lb boxes, $3.50; Rockports, 10-lb boxes, $4.50; Earliness, 5-lb boxes, small, $2.10.

Miscellaneous.

New York, May 2.—Lima Beans—Buyers are now well supplied; nominal are $1.65@1.75, the latter selected. Mustard Seed—Steady.

Wool.

The market is more active, but at no better prices, unless we except special clips bought for special purposes. F. P. McLennan & Co. and other large scourers appear to be running to full capacity. Manufacturers and their buying agents appear to give preference to scoured wools. Receipts of wools are very heavy.

Live Stock.

Bullocks are barely steady. Those received are generally in excellent condition. When of proper size, so as to cut up with little wastage, slaughterers pay a slight advance. Mutton sheep and lambs are weak. Hogs are irregular. The lower prices ruling for mutton sheep are against block hogs.

General Remarks and Statistics.

Cereals.

London cables, May 3d, report as follows: Wheat and flour on passage to United Kingdom, 2,943,000 qrs.; Continent, 1,320,000. Imports of wheat into the United Kingdom during the past week, 201,000 qrs.; flour, 163,000 bbls. Indian shipments of wheat during the past week: United Kingdom, 90,000 qrs.; Continent, 95,000.

Within the past few days, crop prospects in this State have been greatly improved, owing to cool and showery weather. By referring to the Agricultural Note Department in this paper, it will be seen that as early as last Friday the improvement had set in in nearly all parts of the State. The rains and cool weather have been just the things wanted to bring the berry out plump and insure a larger yield to the acre. What is now wanted is fair and moderately warm weather.

The local wheat market hangs around former quotations. Trading in the sample market is very quiet. The low price of silver has enabled English importers to contract for the delivery of Indian wheat at English sea ports at very low figures, which is against farmers in the United States. The stock of wheat in this State is said to be less than ever before known in this month, but the near approach of new crop season encourages the bears. Trading in futures on Call is as yet light. It looks as if monthly options will be largely dealt in, which may prove beneficial to the trade.

The large disengaged tonnage in port and large list of vessels on the way are calculated to keep wheat charters within reasonable figures.

The barley market exhibited considerable strength up to Monday, when a weaker tone set in which resulted in lower prices yesterday. The unfavorable turn to holders is due to better crop weather and encouraging advices from growing crops. The feed demand for ground and rolled barley continues free, notwithstanding natural feed was never better at this time of the year in the central and northern counties of the State. Receipts from up north are light.

Oats are firm. Receipts are lighter, while the demand holds good. Crop advices are uniformly favorable in this State and up north. The stock here is only fair.

Corn, after making a slight advance under a free export demand, shaded off toward the close, owing to a falling off in the demand.

Rye is weak and nominal.

Geo. A. Abel, official grain inspector of the San Francisco Produce Exchange Call Board Association, has prepared the usual monthly statement for May 1st, showing the stocks of grain in all Call Board warehouses, as follows:

	Feb. 1.	Mch. 1.	Apl. 1.	May 1.
Wheat, tons	2,648	1,068	2,182	2,475
Barley	16,768	13,837	12,718	10,978
Oats	4,384	3,709	2,566	2,097
Corn	2,434	2 564	1,893	2,091

The stock of wheat in Port Costa warehouses is 19,069 tons, and in Stockton warehouses 31,039 tons, making the total in all Call Board warehouses 52,583 tons, as against 82, 013 on May 1, 1891. The receipts at this port during April and the preceding months are shown in comparison as follows:

	Jan.	Feb.	March.	April.
Barley, tons	5,650	4,436	10,837	8,691
Oats	1,232	2,069	1,340	1,797
Corn	986	1,229	460	1,087

Feedstuff.

Ground feed continues in good demand. Bran and middlings are steady, but ground barley shows signs of easing off. Feed meal is barely steady.

Hay is firmer. Rains the past week will cause many fields which would have been cut for hay to be harvested for grain. There is a diversisy of opinion regarding the crop. Many hold to the opinion that the ousturn will be considerably larger in this year than it was in 1891, while others think it will be about the same. For new crop hay contracts it is hard to get correct quotations.

Dairy Produce.

The butter market shows continued strength owing to heavy packing. There is still more or less complaint of butter coming from sections where weeds have grown rank of its having an unpleasant flavor. Packers should exercise caution in putting such butter down. Natural pasturage is reported to be of the very best in all parts of the State, which gives assurance of a continued liberal output of butter.

Heavy receipts of cheese and an offish demand have caused the market to decline, closing the week weak. The grade this year is said to average better than usual.

Eggs are weak, with concessions obtainable. Receipts of both Californian and Eastern are very large. The cool weather is in favor of holders, several of whom are disposed not to sell except at full asking prices, but others are selling as fast as consignments are received.

Fruit.

The berry market has held steady throughout the week. Cold and unseasonable weather has retarded the growth, but it is claimed that in the end it will result favorably. There is a good home and shipping demand.

Cherries are making a better show, but as yet the fruit is generally small-sized and poorly flavored. The crop, taking the State as a whole, will be a full average. In several localities the yield is very light, but in other sections it is large, with more trees in bearing.

We are not advised of any contracts for tree fruits. It is said that buyers' views are below those of sellers. It is claimed that the market is cleaning up on canned fruits, the bulk of which are not A 1.

In dried fruits and raisins there is nothing new to report. The market is said to be working into good shape for handling the 1892 crop.

In citrus fruits, limes and lemons are in oversupply, causing low prices to rule. The supply of frosted oranges is heavy. Sales are hard to make. Choice oranges from Redlands and Highlands in San Bernardino county are wanted.

Vegetables.

In garden truck there is very little to note. Asparagus is weaker, but rhubarb is firmer. Peas are stronger under moderate receipts. Canners are not in the market, and probably will not be until lower prices rule. String beans are in freer receipt, as are summer squash.

Old potatoes are barely steady, but well-matured new are in request at an advance. The demand is chiefly for shipping eastward. The home demand is good. It is claimed that heavy frosts in last month killed many acres of vines in the lowlands, which will necessitate redropping.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 2, '92, were as follows:

Flour, qr. sks	42,047	Bran, sks	6,076
Wheat, ctls	8,957	Buckwheat "	....
Barley, "	17,158	Middlings "	2,019
Rye, "	1,137	Chicory, bbls	25
Oats, "	626	Hops, "	9
Corn, "	3,176	Wool, "	5,526
Butter, "	1,533	Hay, ton	1,121
do bxs	1,178	Straw, "	128
do bbls	....	Wine, gals	194,580
do kegs	39	Brandy, "	3,440
do tubs	11	Raisins, bxs	763
do ½ bxs	267	Honey, cs	....
*Cheese, ctls	952	Peanuts, sks	....
do bxs	195	Walnuts "	12
Eggs, doz	50,330	Almonds "	36
do " Eastern	61,050	Mustard "	25
Beans, sks	2,565	Flax "	....
Potatoes, sks	7,493	Popcorn "	....
Onions, "	1,354	Broom corn, bbls	....

*Overl'd, 221 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to May 2, '91.	July 1, '91 to April 30, '92.
Flour, ½ sks	335,505	410,701
Wheat, ctls	1,349,376	1,249,549
Barley, "	268,612	51,533
Oats, "	318,927	397,708
Wool, bales	6,041	6,172
Hops, "	443	431
Rye, sks	910	3,352
Potatoes sks	98,007	128,964

(*Continued on next page.*)

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Over 75,000 Have Been Sold on This Coast.

WHAT IS SAID ABOUT THEM:

Merced, March 4, 1892.

Messrs. BAKER & HAMILTON.

Gentlemen:

I bought a Bain wagon of your agent at Merced, eighteen years ago and it is a good wagon yet.

F. HANFORD.

Gertrude, March 4, 1892.

Messrs. BAKER & HAMILTON.

Gentlemen:

The Bain wagon I got of you six or seven years ago was a good one. The tires have never been reset, and everything is solid.

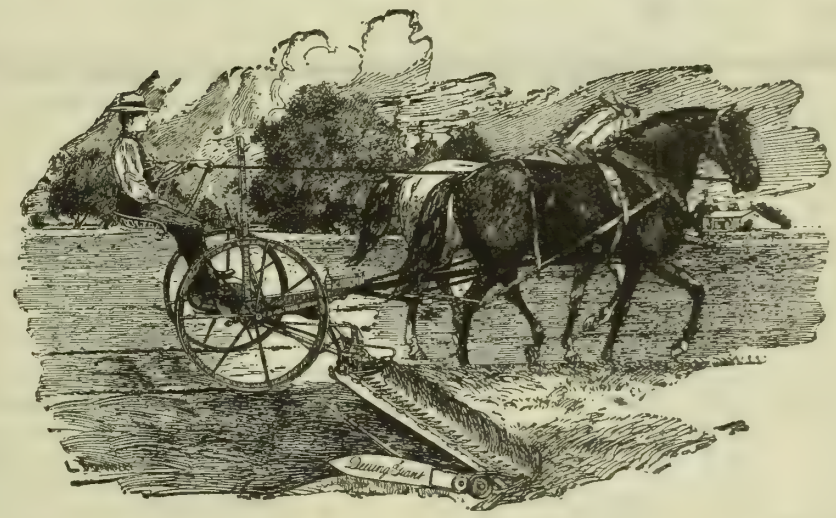
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5 and 6-Year-Old Bearing Shrubs.

ALOHA NURSERIES, Penryn, Placer Co., California.

FRED C. MILES, Manager.

Market Reports.

[*Continued from preceding page.*]

Miscellaneous.

From reliable advices up to April 20, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	205,775	276,390	*†144,023	71,796
San Diego	15,247	15,607	4,967	.....
San Pedro	1,571	6,807	....	13,305
Oregon	24,455	22,870	15,045	
Puget Sound	14,119	31,402	.....	
Totals	261,167	353,076	164,035	85,101

*Engaged for wheat, 1892, 15,542; 1891, 63,914 †For new crop loading, 6,803

The statistics of produce exports from this port from July 1st to April 27th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,388,172	11,964 902
Flour, bbls	917,453	1,053,500
Barley, ctls	994,616	273,196

Poultry is generally strong. The demand is fair, while receipts are moderate.

Beans are stronger, with an advance obtainable for several kinds.

Old hops are scarce and held above buyers' views. For new crop, bids are made at around 17½ cts.

Honey is in light supply. It is said that the crop this year will show a decided increase over that in last year.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 4, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 20	@	2 80
Red	2 15	@	2 40
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 20	@	2 40
Fld Peas, blkeye	1 30	@	1 50
Do green	1 50	@	2 00
Do Nlles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	14	@	—
Do good to choice	16	@	—
Do Giltedged	—	@	19
Do Creamery rolls	—	@	19
Do do Giltedge	—	@	19½
Eastern	—	@	—
CHEESE.			
Cal, choice mild	—	@	9
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Young America	—	@	11
EGGS.			
Cal. ranch, doz	18	@	—
Do do selected	—	@	20
Do store	16	@	—
Eastern	16	@	18
FEED.			
Bran, ton	17 50	@	18 50
Feedmeal	26 50	@	28 50
Gr'd Barley	22 00	@	23 50
Middlings	28 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7 50		
HAY.			
Wheat, per ton	12 00	@	—
Do choice	—	@	15 00
Wheat and Oat	10 00	@	13 50
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	96½	@	—
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 35	@	1 40
Yellow, large	1 33½	@	—
Do small	1 35	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 25	@	—
Gray	1 25	@	—
Rye	1 42½	@	—
Wheat, milling.			
Gilt edged	1 57½	@	—
Do Choice	1 55	@	—
Do fair to good	1 51½	@	—
Shipping, cho'ce	1 51½	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 45	@	—
Sonora	1 45	@	1 57½
HOPS.			
1891 Choice to Ex.	26	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, City Mills	4 65	@	4 75
Do Country Mills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	1 50	@	1 75
Fair to Good	75	@	1 25
Cut	50	@	—
New Reds	65	@	1 05
POTATOES.			
Early Rose, ctl.	25	@	40
Burbank Seedling,	50	@	70
Do do Oregon	60	@	1 05
Do Humboldt	40	@	75
River Reds	30	@	45
New	80	@	1 05
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@	8 00
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	5 50
Do large	6 00	@	—
Fryers	7 00	@	—
Ducks	6 00	@	9 00
Geese, pair	1 75	@	2 00
Goslings	2 25	@	3 00
Turkeys, Gobl'r.	17	@	19
Turkeys, Hens	19	@	21
Manhattan Egg Food ₩ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	—	@	—
Sac'to valley	16	@	—
S Joaquin valley	11	@	15
Cala'v & F'th'll.	14	@	17
Oregon Eastern.	10	@	17
do valley	—	@	—
So'n Coast, def.	10	@	12
Nevada (State).	15	@	17
HONEY.			
WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	25	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, May 4, 1892.

Limes, Mex	2 00	@	3 00
Do Cal	—	@	—
Lemons, box	50	@	2 50
Do Sicily	5 00	@	—
Oranges, Seedlings			
Redlands	1 75	@	2 25
Riverside	1 50	@	1 75
Los Angeles	1 25	@	1 50
Do Navels—			
Redlands	3 00	@	4 00
Los Angeles	2 50	@	2 75
Riverside	2 50	@	3 00
Duarte	2 50	@	3 00
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—			
Longworth	8 00	@	13 00
Sharpness	6 00	@	7 00
Gooseberries, ₩ drawer	40	@	50
Raspberries, bkt	35	@	45
Cherries, box.			
Black	1 50	@	2 25
White	1 00	@	1 25
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do green	—	@	—
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	—
Garlic, lb	2	@	4
Squash, Mrft, tn	12 00	@	15 00
Do Summer, box	2 00	@	2 50
Tomatoes, box	2 50	@	—
Asparagus, box	50	@	—
Do choice to ex.	1 50	@	—
Peas, green, sk.	75	@	—
Do sweet	1 00	@	1 25
Rhubarb, box	35	@	1 25
String Beans	4	@	10
Cucumbers, doz	75	@	1 25
Mushrooms	10	@	30
Egg Plant, lb	20	@	30

Live Stock.

BEEF.			
Stall fed	6	@	—
Grass fed, extra	6	@	—
First quality	5½	@	—
Second quality	5	@	—
Third quality	4½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Large, heavy	5	@	—
Do light	6½	@	—
Dairy	7	@	—
MUTTON.			
Wethers	7½	@	—
Ewes	7	@	—
Do Spring	8½	@	—
HOGS.			
Light, ₩ lb, cents	5½	@	—
Heavy	4½	@	—
Feeders	3½	@	4
Stock Hogs	3½	@	—

Grain and Wool Bags.

Calcutta, spot	7½	@	—
Do, June-July	7¼	@	—
Wool Bags	36	@	36

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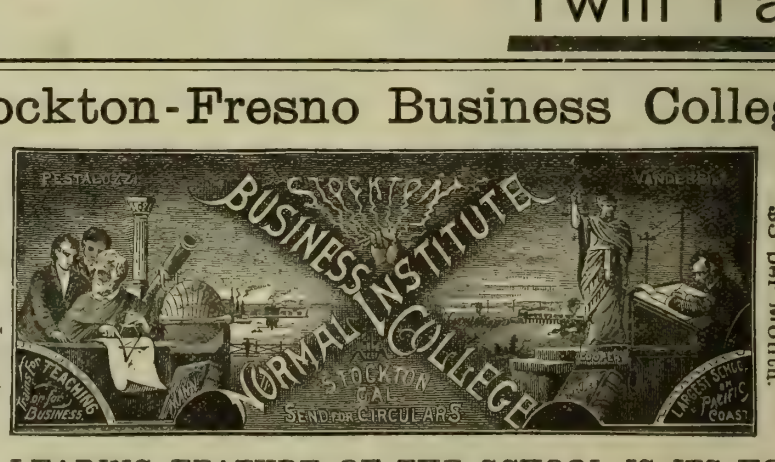
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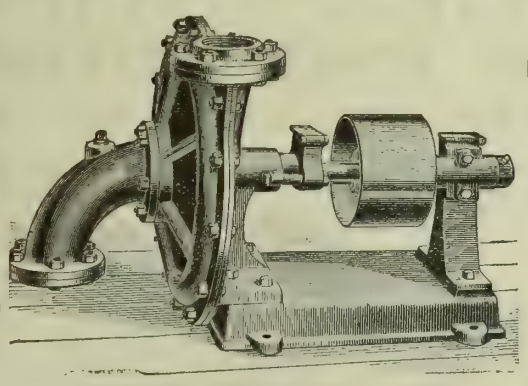
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DON'T FORGET
—THAT THE—
PECOS VALLEY
THE FRUIT BELT OF NEW MEXICO,
Offers better advantages for persons desiring to engage in fruit culture than any other place on the continent.
Note the following table showing growths made by various fruit trees, shade trees, grape vines, etc., during the past summer:

Name of Grower.	*P. O. Address.*	*Tree or Vine*	*Growth in feet.*	*inch.*
Witt Bros.,	Eddy N. M.,			
		Raisin Grape,	16	9
"	"	Apple,	4	9
"	"	Pear,	4	8
"	"	Plum,	5	9½
"	"	Cherry,	1	9
"	"	Crab Apple,	1	8½
"	"	Mulberry,	1	8
F. G. Campbell,	Eddy, N. M.,			
		Black Locust,	8	7
G. W. Blankenship,	Eddy, N. M.,			
		Apple,	3	11
"	"	Apricot,	5	8
"	"	Peach,	3	9
"	"	Box Elder,	6	1
"	"	Mulberry	7	8
"	"	Lombardy Poplar,	6	2
"	"	Castor Bean,	8	4
Jas. Hogg,	Seven Rivers, N. M.,			
		Peach,	7	2
"	"	Cottonwood,	16	3
R. M. Gilbert,	Seven Rivers, N. M.,			
		Osage Orange,	14	7
"	"	Native Willow,	16	5
"	"	Pecan,	6	2
"	"	Black Walnut,	4	11
"	"	Plum,	8	1
"	"	Mulberry,	6	4

Witt Bros. have several cottonwoods, 9 years old, that are 62 to 64 inches in circumference and over 60 feet high. Mr. Hogg has a peach tree 3 years old from the seed that is 3½ inches in diameter and 17 feet 5 inches high. He has a cottonwood 4 years old that is 28 inches in circumference. Mr. Gilbert has a pecan tree 6 years old that is 24 inches in circumference and 22 feet high. He has a black walnut tree 3 years old from the seed that is 12 inches in circumference, 11 feet 10 inches high, and that bore several walnuts this year. Maynard Sharpe, of Eddy, has two peach tree, 2 years old from the seed, that bore and matured 7 peaches this year. He has 1 apple tree 2 years from the seed, that bore 3 apples the past season.

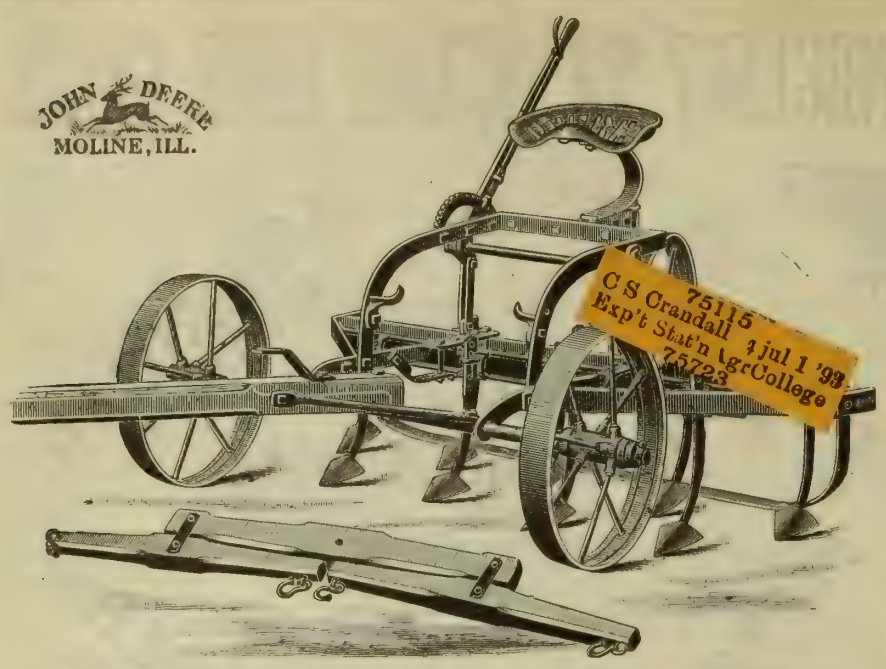
Apples, Peaches, Pears, Apricots, Nectarines, Figs, Prunes, Almonds, Muscat, Tokay, Muscatelle and other varieties of Grapes now in successful bearing in this Valley. Over 1000 acres of Muscat Grapes being planted this year.
Send for maps, illustrated book, etc.

PECOS IRRIGATION AND IMPROVEMENT CO,
EDDY, NEW MEXICO.



TRUMAN, HOOKER & CO.,
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JOHN DEERE MOLINE, ILL.



NEW "ZIG-ZAG" CULTIVATOR,

(STEEL FRAME.)

FOR ORCHARD AND VINEYARD.

TWO SIZES, FIVE & SIX FOOT.

The "Zig-Zag" Cultivator, with Wood Frame, as manufactured last year, met with such great success, that it has encouraged us to build a much larger number for the trade of 1892. We are using on our new Cultivator a Frame constructed of Channel Steel, which is the strongest light material to be found.

The axle has been lengthened 16 inches, which makes it run level and steady.

The Standards for "Duck Foot" Shovels will be sharp on the front edges. This cuts the soil and materially lightens the Draft. The new Standard Clamps will have nuts on each end and will be made from heavier stock.

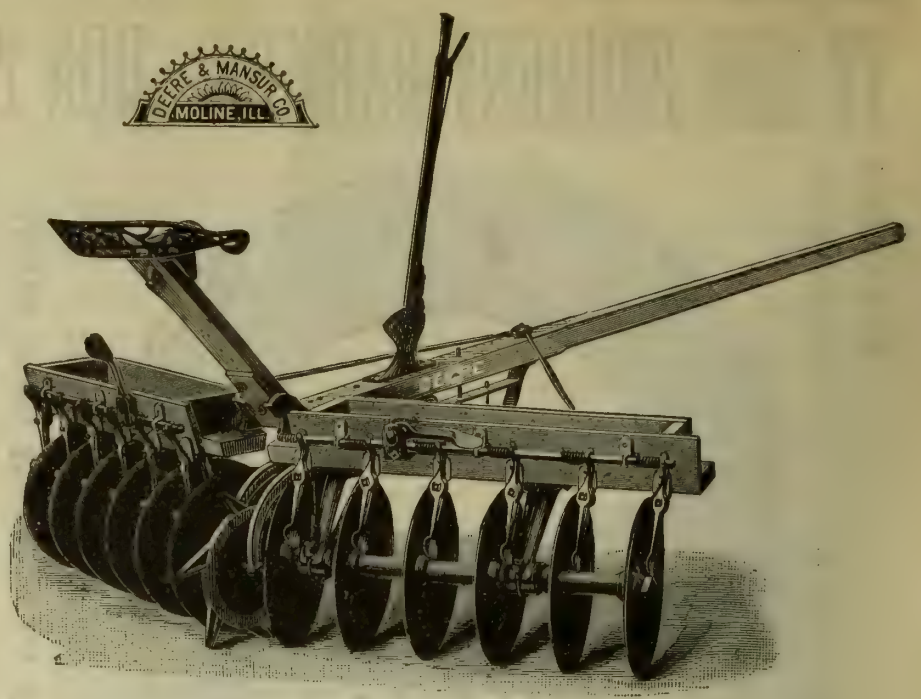
While we consider the "Duck Foot" Shovel superior to any for fruit cultivation, we are prepared to supply the "Oval Reversible," Dismond Point," or "Mole" Self-Sharpening Shovels.

The "Mole" is 3½ in. wide and similar to the "Duck Foot," but is chilled in such a way that the natural wear has a tendency to keep the point sharp. Sub-Soil cultivation is fast superseding the old top cultivation, which throws the moist earth to the surface to be dried by the wind and sun.

The "Zig-Zag" has the lowest Frame of any Cultivator yet on the market, and for that reason is the best for young orchards or vineyards.

The Cultivators may be ordered with or without Weed Knives.

DEERE & MANSUR CO. MOLINE, ILL.



THE "DEERE" DISC HARROW, WITH MIDDLE BREAKER.

4, 5 and 6 Foot, FOR ORCHARDS.

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The 4 and 5 Foot Disc Harrows are Especially Adapted to Vineyard Work.

Except in number and size of discs, all are similar in construction. They have two independent gangs of discs operated by a hand lever, a high Spring Seat, Flexible Scrapers that can be operated lightly, or with a strong spring pressure, by pedals within easy reach of the driver's foot, and a Middle Breaker, by which the ridge left by other harrows between the track of the gangs is cut out.

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No. 1.—4 ft. 16-inch Discs, 330 Lbs.	$38 00	No. 10.—4 ft. 20-inch Discs, 382 Lbs.	$45 00
" 2.—5 " 16 " " 365 "	40 00	" 11.—5 " 20 " " 436 "	47 50
" 3.—6 " 16 " " 394 "	45 00	" 12.—6 " 20 " " 479 "	55 00

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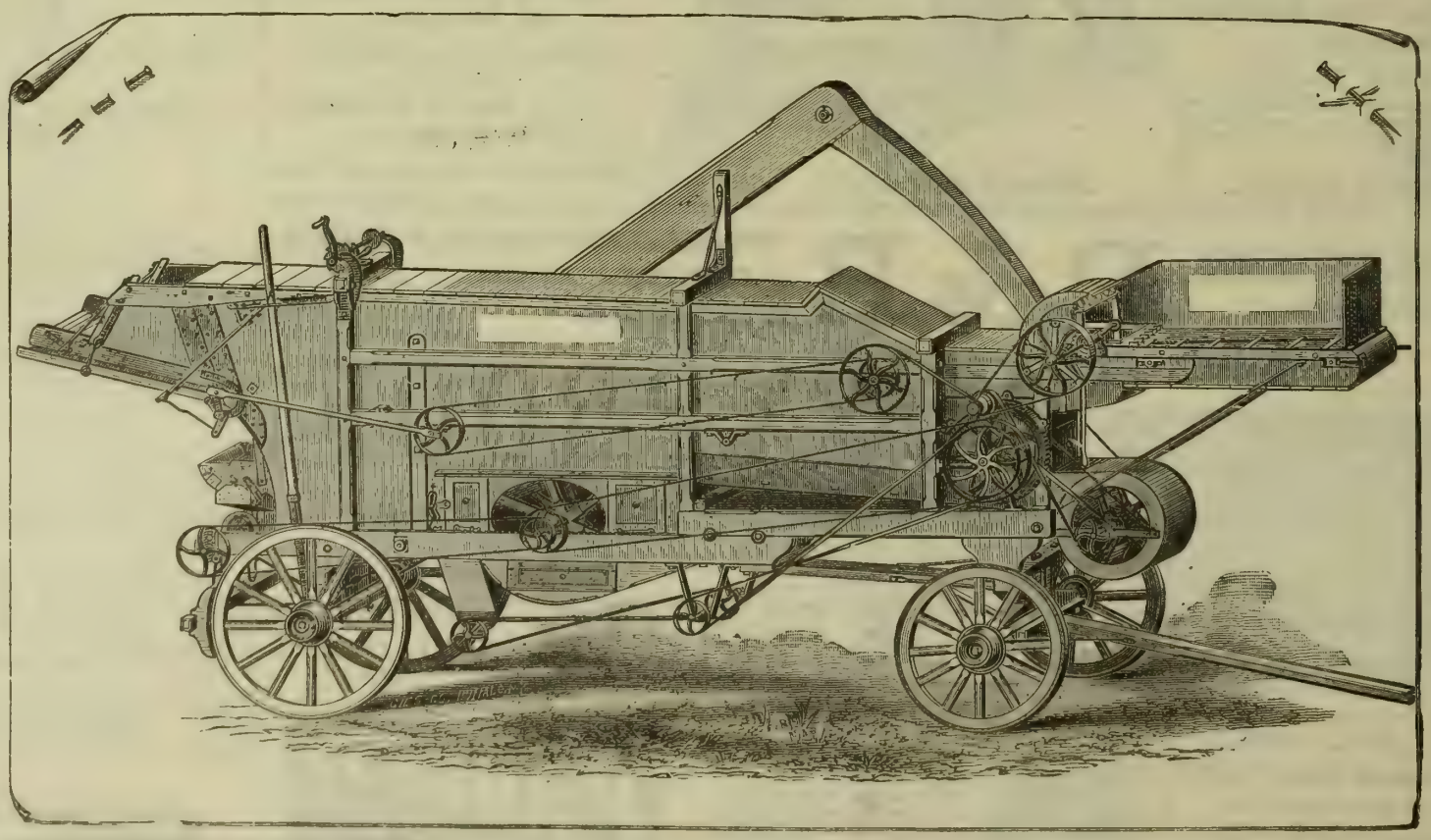
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PACIFIC RURAL PRESS

Vol. XLIII. No. 20. SAN FRANCISCO, SATURDAY, MAY 14, 1892.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

The Contra Costa County Courthouse.

For illustration this week we have selected the courthouse of Contra Costa county, one of the oldest in the State, and a building famous in the annals of the law. It was built in 1853, and at that time represented a very ambitious spirit on the part of a new community. When new, it was deemed an architectural wonder, and to this day it remains an ornament to the pretty town of Martinez.

The courthouse, as it appears in the picture, is perhaps not more interesting than the glimpse of its surrounding grounds and of the rolling landscape in the background. Both are characteristic of California and of Contra Costa county, which, though very near to San Francisco, has been, comparatively, a neglected district. There are signs, however, that this interesting country will soon come into more general notice. A public highway will soon be opened via Chabot reservoir in Oakland township, over a favorable pass through the Contra Costa hills to Moraga valley, connecting with roads to Lafayette, Walnut Creek, Danville, and farther eastward. This will give a drive from Oakland into a section of country whose bland air and beautiful scenery afford especial attraction to visitors. A great part of Contra Costa county consists of beautifully rolling country; it is rich in all the potential elements of soil and productive without irrigation. Nearly all the fruits, nuts, vegetables and cereals commonly grown in California are successfully cultivated.



THE CONTRA COSTA COUNTY COURTHOUSE.

Contra Costa county is peculiarly available for country residence by those who do business in San Francisco or Oakland. When it shall be covered, as it must be before a great while, with a system of electric railroads, a very large part of its area will be brought within thirty minutes of Oakland and the State University. There is no better community in California than that of Contra Costa county. Having no large city, it follows naturally that its people have few vices. They are in the main well-to-do, honest folk, and have, from their special advantage of situation, all the good that comes from country life, and all the benefit that comes from proximity to the metropolis.

The care and skill displayed in the order of the courthouse grounds shown in the picture, and even more pleasantly manifest in the picture of the Brentwood schoolhouse, printed last week, bear evidence of public taste and refinement.

An Opening for Jack Rabbits.—The rabbit drive is to have an ally. It is recorded in one of the city dailies that one hundred pairs of rabbits of the jack species were sent north on the steamer Bertha, which sailed for the Pribyloff seal islands last Saturday. They will be placed on St. George's island, where it is anticipated they will breed fast enough to furnish food in winter for the white, blue and gray foxes on the island. For several years the foxes have been getting scarcer, owing more than anything else to the lack of food. There was at one time a great number of rabbits on St. Georges's island, but the foxes have nearly exterminated them, so the experiment is being tried of introducing a new lot of rabbits in the hope of remedying the want of a food supply. Fox skins are becoming more and more valuable each year. If the rabbits sent up prove a success others will follow.

Hop Roots Must be Separately Assessed.—On another page of this issue is given a report of a meeting of hop growers at Sacramento, at which it seems to us a strong case was made out against the assessment of hop roots in addition to the assessment of the real estate in which they grow. It seems, however, that the showing has availed little thus far, for on Tuesday of this week the committee sent by the hop growers appeared before the State Board of Equalization and asked that body to rescind its alleged action in directing County Assessors to add $15 an acre to the assessments on hop and alfalfa lands. The Board of Equalization informed the committee that it had simply called the attention of the County Assessors to the law which requires them to assess such things separately and specially. The board declined to alter its action.

Dandelions.—Italian women on the outskirts of New York gather enormous quantities of dandelions at this season. They go forth wearing great aprons and armed with small, strong kitchen knives, and return home laden with as much as half a bushel each.

The Flower Show.—The spring show of the State Floral Society is opening as we go to press, on Wednesday. It is the greatest display of flowers and ornamental foliage plants ever gathered on this coast. The show will close Saturday evening, May 16th.

Hounds for Wolves.—The stockmen of South Dakota have recently imported from Tennessee a number of Russian wolf hounds to help in the extermination of wolves, which have of late been killing numbers of calves and colts.

The Canal Discussion.

Deeming the Nicaragua Canal question the most important subject now before the people of California, and that it is especially related to the interests of producers, the Rural Press has invited letters in representation of every shade of opinion, with the hope of bringing out all the arguments on all sides of the question.

We have printed communications from Mr. Pool and Mr. Berwick on one side and from Mr. Doyle and Capt. Merry on the other. We hope others will follow, giving such arguments as they may consider important. We have written to President Marion Cannon of the Farmers' Alliance, who represents the extreme opposition to the bill now pending before Congress, inviting him to fully state his position, and hope to have his answer in time for next week's issue. When this answer comes, we shall present it to ex-Senator Warner Miller, the President of the Canal Company, who is about to visit San Francisco, and we hope to have direct from him a statement of the plans and purposes of the Canal Company. The purpose of all this is to give to the readers of the Rural Press a full and fair statement of all sides of this great question, entirely free from the bias of partisan interest and political motive which seems to influence all discussions in the daily political press. A question of this sort ought to be considered apart from politics, from an economic standpoint and wholly upon its merits. There is no other way to approach subjects in which the interests of the State are bound up.

More Trees Under Condemnation. — The State Board of Horticulture is proceeding vigorously against the importation of pestiferous trees. It is announced from Los Angeles that another suit has been filed against the Fairmount Land and Water Company. The suit prays to condemn 12,000 peach, apricot and plum trees alleged to be infected with black aphis and the peach borer, and asks that they may be destroyed. These trees are of the same lot as was shipped into the Antelope valley from Delaware, and which was a short time ago in litigation, but not the identical trees. These trees were planted upon land owned by the Fairmount Land and Water Company before the authorities got hold of the other trees. The suit differs from the other in that it is not alone for an injunction pending litigation, but a straight proceeding to condemn the trees and destroy them.

Ponce de Leon in the Dark.—A Georgia man has in his possession a palm-oil lamp made in Madrid, Spain, in 1604. It was dug up in the woods some time ago, and is supposed to have been lost by Ponce de Leon.

Kansas City grain merchants are at war with the Burlington road and charge gross discrimination.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 14, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Byron Jackson.
Agricultural Implements—Baker & Hamilton.
Agricultural Implements—P. P. Mast & Co.
Agricultural Implements—Allison, Neff & Co.
Agricultural Implements—Frank Brothers.
Agricultural Implements—Wm. Deering & Co.
Agricultural Machinery—G. G. Wickson & Co.
Fruit Driers—California Fruit Evaporating and Mfg. Co., Los Angeles.
Buhach—Buhach Producing and Mfg. Co., Stockton.
Carriages, Buggies, Etc.—Briggs Carriage Co.
Fruit Trees—A. B. Everett. Sutter City.
Farm for Sale—J. DeWitt Butts, Ashland, Or.

See Advertising Columns.

The Week.

California is now awaiting two great visitations, and to extend an old-fashioned California greeting to the visitors. Next week several trainloads of Eastern editors will enter the State at the south and traverse the greater part of our territory before returning. Formal receptions without number will be accorded in all parts of the State. It will avail us much to please these molders of public opinion, and we trust that no effort of generous and wisely directed hospitality will be withheld.

Another visitation will be by the American Association of Mining Engineers. Their interest is a little outside of our immediate field. We presume they will regale themselves largely upon rocks and holes in the ground and ponderous machinery. It is to the general interest, of course, to show this department of our resources and industries to those who can best appreciate them.

The season seems to be still somewhat out of joint. Heavy rains and light frosts so late in the season are not usual in California. Probably the trouble is that the Weather Service changes bosses so frequently out here that the elements get sorter rattled—so to speak.

Building Up the State Fair.

It seems to us an exceedingly happy result has been attained in the postponement of the "dress rehearsal" of the State's World's Fair exhibits until January next, at the Mechanics' Pavilion in this city. This is a better time for holding, for then the material will be massed at nearly the proper time for shipment eastward, or at least with just time enough before shipment to allow discriminating selection. We are glad also that relief is had from a possible renewal and intensifying of the issues between the Mechanics' Institute and the State Board of Agriculture. There should be no conflict between these bodies; both should work together toward praiseworthy ends without rivalry, except such as continued effort toward excellence makes honorable and desirable.

But the half issue which recently arose has proved beneficial in another way, and that is in stirring up people to take greater interest in the State Board of Agriculture as a part of the State Government, and in its exhibitions of industrial achievement and progress. We have urged this time and time again. The officers and members of the board have invited it, and certainly they can do better work with a fuller popularization of their efforts, and possibly an improvement such as might naturally result from a fuller enlistment of producers in their behalf.

The present occasion has a local flavor, and was perhaps engendered in part by interior interests as compared with those of the metropolis and the coast regions. This does not matter, providing it results in broadening of the popular interest and support. However, this is the reported manner of the present movement as telegraphed from Sacramento on Tuesday of this week:

Some 50 leading citizens met here to-day and formed a permanent organization, the purpose of which will be to devise special and novel features that will add interest to the State Fairs this and succeeding years.

A program embracing upward of 20 different features, including an historical State exhibit, same of the Pacific Coast, exhibits of floriculture, exhibits of mining and industrial implements, an ethnical exhibit of primitive native races and of the Mexicans, dress rehearsal, a sham battle, contests in bricklaying, carpentering, etc., a military competitive drill, and various other things to please and instruct visitors was adopted. The following officers were elected: Pres., A. A. Vanvorlies; Vice-Pres., Thomas B. Hall; Sec'y, James E. Mills; Ass't Sec'y, Charles M. Campbell.

We say success to the new association. Let us see this year how much they can accomplish in the improvement of the State Fair. Possibly they will do so much that the whole State will apply for membership. This would be a consummation eminently to be desired.

Fruit Notes.

We desire to call the attention of our readers again to the work we propose in the fruit line during the next three months. We have offered prizes for letters on set subjects during all the remaining months of 1892. These prizes are: First, cash $10; second, cash $5; third, RURAL PRESS one year. The list of subjects will appear from time to time in our columns. We desire now, especially, to emphasize the awards for the next three months, the letters on the subjects named to be mailed to us on the first day of the month named.

JUNE.—SMALL FRUIT GROWING: Counting as "small fruits" everything which is commonly understood by the terms "berries" and "currants;" which are the best varieties, how to plant, cultivate, irrigate and harvest them to secure the best results.

JULY.—FRUIT-PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

AUGUST.—FRUIT-DRYING AND RAISIN-CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine-evaporating each and every kind of fruit; packing and marketing of products.

We have chosen the subjects for July and August with the special design of making the RURAL useful to those who desire to know the latest and best methods of handling fruit. The times are set so that the letters will be published just before the heavy work of the season begins, so that all the suggestions may be immediately useful to our readers. So, RURAL readers, please prepare your letters on these subjects with a special view of making known the ways by which you have succeeded best in doing any one of the hundred things which minister to satisfactory work. Never mind if your information seems small and unimportant, it will help some one to know it, if it saves labor and wins money.

We cannot find room in this issue for as full reference to the San Jose Convention of last Saturday as we would wish. The reports, however, indicate movement, and are promising. It is perhaps becoming more and more apparent that our first great achievements in the line of cooperative fruit-handling will be upon the neighborhood and district plans. The neighborhoods may act first as they did in Santa Clara, and the district, including neighborhoods, follows naturally. Possibly the districts will ultimately converge in the State, or at least may act in harmony without formal association. Then there will be a degree of centralization in the fruit interest which will protect and promote. That is what is needed. We are glad that the Santa Clara people have started in this line and we wish them all success. We hope to give the plan of their organization that it may be suggestive and valuable to other districts. Including the signal results gained in Southern California during the last few years, it can be confidently claimed that cooperative fruit-handling has already accomplished much in California.

And while upon this subject, it is interesting to note the latest movement among the Florida orange growers, decided upon at a meeting held in Jacksonville two weeks ago, as summarized by the *Agriculturist*:

The orange growers agreed to pledge to the Fruit Exchange 1,000,000 or more boxes of fruit for transportation the coming season. The Exchange is to submit these pledges to the transportation companies and request bids for the transportation of the fruit. If the Exchange cannot obtain a rate of 25 or 30 cents per box from Jacksonville to New York, it will charter steamers and carry the fruit itself.

Fifteen thousand dollars is to be raised by selling stock of the Fruit Exchange, which will be used to make good any loss entailed by the Fruit Exchange in chartering these steamers; also for the purpose of putting canvassers in the field to solicit business and increase the shipments through the Exchange. It was the most representative convention of fruit growers ever held in the State.

This is a businesslike proceeding. What would California producers think of being able to give the railways a chance to bid on their service, and if the bids were not favorable throw them all out and go by water on their own bottoms. Perhaps the isthmus canal will do something like that for us, in some lines of goods at least.

Wheat Crop and Tonnage Supply Estimates.

The area in California seeded to wheat this year is estimated at 3,350,000 acres, against 3,190,716 acres seeded in last year. Persons who give close attention to crop prospects, and whose estimates of the probable outturn are accepted as fairly correct, place the yield this year at from 1,300,000 to 1,400,000 tons. But there are others who estimate the outturn at fully 1,500,000 tons, but they do so without duly considering the many sections where the crop is either a total or an almost total failure. From farmers who live in different parts of the Sacramento valley, we learn that there are more grains to the mesh this year than there were in 1891, which is accepted as proof positive that the yield to the acre will be larger this year than it was in 1891 in the grain-growing counties in the central and northern part of the State. In Kern, Tulare, Fresno, Monterey and other southern counties, the yield will probably be about the same as it was in last year, although the rains and cool weather for the past fortnight have been of inestimable benefit to the crop. This applies also to the crop in other parts of the State. The grain this year will be plump and weigh heavy.

With a crop of 1,350,000 tons, we will have a surplus for export of about 975,000 tons, without taking into consideration the probable carryover from the present season, for this will be offset by the carryover from the season of 1892–93. With an almost certainty that the surplus this year will be 975,000 tons, if not more, the tonnage situation becomes an interesting subject and should be closely watched. The present situation, without considering the engaged tonnage in port for present season loading, is quite encouraging to farmers, and with the average number of vessels which come to this port, but which are not now in the list, during a crop season there will be an ample supply of tonnage.

There are in port for new-crop loading, 9566 tons register; in port and disengaged, suitable for wheat-loading, 113,157 tons register; on passage and due to arrive (not including undesirable and also coasting vessels) between now and the middle of next October, 206,500 tons register. These give a total of 329,223 tons register, having a wheat-carrying capacity of 546,218 tons, within about 425,000 tons of the estimated total surplus from this year's crop. Of the 425,000 tons, fully 125,000 tons will be shipped in flour to countries bordering on the Pacific. This will leave 300,000 tons to be provided with tonnage between July 1, 1892, and July 1, 1893. The statistical record of this port shows that the average tonnage arrival has been over 100,000 tons register in excess of that known to be on the way at the beginning of the season, and it is only reasonable to conclude that this year will not be an exception.

While the present and prospective supply of tonnage appears ample to move the surplus wheat of this State, the supply for both Oregon and Washington promises to be considerably less than the two States will require. All advices regarding the crop prospect in Oregon and Washington point to a total yield of from 15 to 20 per cent greater in this year than there was harvested in 1891. If this be realized, then a large part of the surplus up north will either have to be shipped to this city for a market or else vessels chartered here and sent to the Columbia river to be loaded outward with wheat. The tonnage, at this writing, on the way to the Columbia river and Puget Sound ports, is fully 20,000 tons register less than it was at the like date in 1891, and with a large increase in the wheat crop the tonnage supply will fall very considerably below what will be wanted. Possibly this, to a certain extent, may be offset by heavy shipments eastward from points east of the Cascade mountains. So far this season very little has been shipped eastward, but in the crop season of 1890–91 heavy shipments were made.

In giving the tonnage on the way to this coast, there was not included that on the way at this writing, and also that which will be added during the crop season to San Pedro and San Diego in this State. The ships, not including coal coasters, on the way to the two ports have a registered tonnage of 15,832 tons, having a wheat-carrying capacity of 25,122 tons. About 8,000 tons will be required at San Diego for wheat loading, and the rest will be available for chartering for wheat loading either at this point or up north.

THE walls of the National Library building, in process of erection in Washington, are about half up. It will cost over $6,000,000.

The State Press.

Los Angeles *Herald:* "Men and brethren, would it not be a positively delightful thing if we had a State of South California? It would be the making of this section, no matter where it should be located. We presume that, geographically, the center of this ideal commonwealth would be Los Angeles, which is, and probably always will remain, the metropolis of Southern California."

San Bernardino *Enterprise:* "The tendency in this State to put up cheap buildings is a strong one. This probably is the result of our mild climate and very general freedom from cyclones, or earthquakes, but the experience of Napa valley and the loss sustained by its people by the late shake, ought to lead our people to provide against just such accidents by building substantial buildings first, last and all the time, for who can say where the next temblor will be felt?"

Sonoma *Democrat:* "Of all the forced tributes which the McKinley bill lays upon the back of the farmer, the tax on wheat bags is the most unjust, unreasonable and indefensible. This tax by itself is sufficient to revolutionize the sentiment of the farmers on the tariff question, if they would give it a moment's serious consideration. Before the wheat farmers of this State can commence their harvest, yes, before their crop is ripe in the field, they are forced to advance this tariff tax upon their crop, amounting to $1,500,000, which they do not owe and which it is simply an outrage to exact of them. This is the first toll taken out of the wheat-rancher's earnings."

Tulare *Citizen:* "In 1890 the farmers produced wealth to the amount of $2,513,402,564; manufacturers, $4,232,325,442; miners, $3,319,575,443. Of all this wealth, those who produced it received $3,380,000,000, while the exploiters absorbed the following proportions: Railroad profits, $318,125,339; Telegraph Company profits, $8,000,000; Telephone Company profits, $18,838,814; national bank profits, $142,695,019; bondholders' interest, $36,099,284; manufacturers' profits, $1,024,801,847. These are the profits admitted by these corporations in their official reports to the Government, but the farmer, who does not realize a dollar a day out of the unequal division of profits, is called a fanatic by these demagogues and the subsidized press."

The Canal Question.

A Second Letter from Mr. John T. Doyle.

MENLO PARK, May 9, 1892.

TO THE EDITOR:—I have shown in the RURAL PRESS of April 30th how a canal across Nicaragua, "built and owned by our own Government," became impossible of attainment at the present time, and will be so for about twenty years [illegible] Mr. Pool, Mr. Berwick, and others, who still insist on asking, [illegible] of the fact that Nicaragua and Costa Rica are sovereign States, with domestic laws and foreign alliances of their own, over which our Government possesses no jurisdiction or control. These countries have sold to this Maritime Canal Company the exclusive right to build the canal, and given 20 years to do it in. An Act of Congress can no more affect the rights so purchased and acquired than one of the British Parliament, or of the German Reichstadt. We cannot even buy out the company's rights, as suggested by Mr. Berwick, for the terms of their grant distinctly forbid the sale of it to any foreign government. All these phases of the matter have been well considered by men in Washington, much more familiar with the whole situation than we are and quite as competent to deal with it. They realize, and we may well do so, that the facts above stated cannot be changed. The canal, therefore, if we are to have it built within the next 20 years—and assuredly we are to—is to be built by this present company and under the present charter. I repeat emphatically that we might as well wish for the moon as for anything else. Shall we then, like children, sit down and sulk because we cannot have exactly what we would have liked, or act a manly part and strive boldly and promptly for the good tha is still attainable?

I trust Mr. Cannon, Mr. Pool, and the gentlemen of the Farmers' Alliance, will all be of one mind on this question, for to us producers of California, having food and luxuries of the highest order, sufficient for millions abroad, and only needing cheap transportation to secure for them the ma kets of the world, it is a necessity. No railroad facilities possible can compete with it, for the reason that water-borne freight does not cost a tenth of that carried by rail and is always reducible to a minimum by unlimited competition. Here, then, is the situation. This Maritime Canal Company has secured from the Government of Central America the right to build the canal, and they have a charter of incorporation from Congress. They have spent somewhere between five and six million dollars on the work and are prosecuting it steadily. They have 20 years to complete it in. *So far, they have borrowed no money* and are subject to no consequent entanglements abroad or at home; but it will not be always, nor will it even be so long. Already we hear rumors of their negotiating a loan in Europe, and if it is not true this year it will be next year, or the year after, for the work will be constructed mainly with borrowed money, as such things always are, and the lenders demand always the best terms they can get. All this is common knowledge. It is certain, too, that the cost of construction will practically regulate the rate of tolls, for they must be made high enough to produce a sum equal to the cost of management, maintenance and repair, together with interest on the cost, which last is of course the largest item of all. I do not myself see how management, maintenance and repair can cost as much as a million a year, but it is quite clear that if the construction costs a hundred million dollars, borrowed at six per cent, it will call for six millions per annum in tolls to cover interest, and, if, in order to raise that hundred millions in cash, bonds for a hundred and thirty-three millions have to be issued, eight millions per annum must be raised for the same purpose. Hence it is our interest that the company shall borrow the capital it needs, at the lowest possible rates, for the interest has to be paid out of the tolls, and *we pay the tolls.* That is a fact never to be lost sight of. We, the farmers, fruit growers, vineyardists, of California, have, in the form of tolls for transit, to pay the interest on the cost of the canal. A saving of a dollar, or a dollar and a half per ton on the canal tolls is equal to that much added to the price we receive for every ton of wheat, barley, wool, fish, fruit, wine, or other merchandise exported, a sum which in many instances will cover the line that divides profit from loss to the producer. If we could by any device secure for the company the hundred millions or so it needs, at three or two and three-quarters per cent, think of the difference it would make to us. Less than four millions per annum of tolls needed to defray the whole expense of maintaining the canal. The difference between that figure and the eight or nine millions to be raised if the higher rate of interest is to be paid, is what we have to pay for dear money; nor is it a sum to be paid once and done with it, but is a recurring burden year after year for the next quarter of a century.

To save this money and avoid this burthen on commerce is the purpose and scope of the bill pending in Congress. It is not a measure, devised, promoted or sought for by the canal company, nor in their interest. It was drawn by the Committee on Foreign Relations of the Senate, and substantially on the plan suggested by the President in his last annual message. It is the work chiefly, I believe, of Senators Edmunds of Vermont and Sherman of Ohio, though earnestly supported by such men as Morgan of Alabama, Dolph of Oregon, Eustis of Louisiana, Evarts of New York, etc. Its provisions are briefly as follows: The United States to endorse its guarantee on the company's three-per-cent bonds, to the extent of one hundred million dollars. These bonds are all to be deposited in the U. S. Treasury and doled out to the company in installments, to pay for the actual construction as it progresses, the amount of progress payments to be determined and certified by a corps of Government engineers, appointed by the President. The company is to transfer to the United States seventy per cent of all its stock as security for the fulfillment of its contract, and this stock the Government is to have the privilege of purchasing at par so long as the bonds remain unredeemed. In the meantime it can be voted on by the Secretary of the Treasury. As Nicaragua has six per cent, and Costa Rica one and one-half per cent of the stock, here are 77½ per cent of the whole stock of the company held by the three Governments, leaving only 22½ per cent undisposed of, including that already issued. Even the unsold portion of the stock is required to be held back and only parted with at a price satisfactory to the President of the United States. It is even proposed that the five or six millions already issued be replaced by bonds and retired, so that the whole stock of the corporation may ultimately be held by the three Governments mentioned, or by themselves and such others as the President of the U. S. decides to admit to coownership with them. Our own country will have a clear majority of the whole stock, with the control and direction that such majority ownership confers, and this without any infraction of our treaty obligations to Great Britain, which only forbid us to obtain or maintain any *exclusive* control. A control which the United States shares with Nicaragua and Costa Rica, and possibly with some other American State, however effectual and complete it may be, can never be termed exclusive. Meantime, with the credit of the General Government at its back, the company can get all the money wanted on its three-per-cent bonds at par, and can push the work at all available points with the greatest vigor. There is no reason why the excavation on the westerly shore of the lake, the jetties at Brito, and the dams at La Flor and Ochoa, should not all go on simultaneously, and the canal be completed within even five years from the passage of the act.

Now I respectfully ask Mr. Cannon, Mr. Poole and gentlemen who have their opinions to tell us distinctly what objection to this proposal we Californians can seriously urge? Are they really afraid that with 70 per cent of the stock in the hands of the United States Government, and voted by the Secretary of the Treasury, the individuals who hold five or six per cent of it will be able to use it as an instrument of oppression? It certainly cannot be done without the distinct consent of our own Government, whose control is none the less perfect because exercised as a majority stockholder than it would be if exercised [illegible] owner? If Mr. Cannon or Mr. Pool were the owner of six millions of stock in a corporation, and one of their neighbors owned seventy millions of it, would they seriously contemplate grasping the management against the wish of the majority owner, or if attempted could they hope to succeed? These enquiries scarce need an answer. The vote of a majority of the stock settles the control of the company, and that control this bill expressly secures to the Government.

The words stricken out of the memorial at the late convention are not quoted quite correctly by Mr. Pool in his letter of April 27th. They originally were: "*It should be built and owned and forever managed and controlled by the United States Government.* The words *built, owned and managed* were stricken out. The word controlled was not, for control belongs to a majority of the stock, and that we want the U. S. Government to have. The reasons for this change of phrase I believe I have made clear. Mr. Pool refers to our bitter experience of subsidized overland railroads, as a sort of "awful warning," and intimates an opinion that to aid in building the canal will probably lead to the creation of a similar monopoly in the present case. There are two distinct and satisfactory answers to this suggestion, to which I trust he and his friends will give serious and fair consideration, for to my mind each of them is conclusive. They are:

1. Canals for transportation are merely artificial rivers; they are not new in the world's history. In modern Europe they date back 350 years, and there are plenty of them both in Great Britain and on the continent. *No instance can be cited in which one of them has become a monopoly or an instrument of oppression in the hands of private parties.* It is of their very essence to invite unlimited competition, because their revenues depend on the total volume of the traffic, not upon who does the carrying. The most conspicuous illustration of this truth to-day is the Suez canal, which is owned by a private French corporation. If any canal in the world could be used to monopolize transportation, it would surely be that of Suez, for it is the only one by which the voyage round the Cape can be saved, yet no such tendency has ever appeared or been apprehended. The tolls for passing it are two dollars and a half a ton, and are uniform, the canal being open impartially to the commerce of the world. Our people have been so terribly oppressed by railroad monopoly that they are nervously apprehensive of monopoly in every new proposal; but they should consider that it was not the ownership of the road which gives to railroad companies a monopoly of transportation, but the ownership and management of the motive power, and the cars on which alone the transportation by rail can be effected. If railroad companies were forbidden to own or run cars, and the roads made free to all who chose to use them on payment of tolls regulated by distance, weight and speed, their monopoly would cease. I have known them so managed in my lifetime, and men now living will, in my opinion, live to see them so managed again, for that is the true remedy for railroad abuses. But does any one imagine that the company owning an interoceanic canal could think of buying up all the water crafts in the world to secure a monopoly of transportation? Yet unless they do so they would have no monopoly, and when they had done it their monopoly would only last until more ships could be built. A monopoly, therefore, in canal transportation is out of the question.

2. Assuming, however, for argument, that canal transportation can become the subject of abuses of some kind or other, needing the intervention of Government to effect a remedy, have we not ample control of the whole enterprise by a vote of a majority of the stock. If, when aid was granted to the overland road, we had known as much about such things as we now do, we could, by a similar provision, have easily provided security against abuses. If, instead of reserving the right to name a small minority of the directors of the Union Pacific road, and none at all in the Central or Southern, Congress had taken from the companies aided 70 per cent of their stock as security on the redemption of the bonds, with the option to purchase it and the right to vote on it reserved to the Secretary of the Treasury, can any one suppose that the infamous scandals of the Credit Mobilier and the Contract and Finance Companies would have occurred or that we would be now taxed to death to pay interest on eighty thousand dollars per mile of stock and bonds where the roads cost only from twenty to twenty-five thousand a mile to build? If Messrs. Cannon and Pool will seriously reflect on these questions, they will see that the disposition of the stock provided in the impending bill affords an absolute security against abuses such as they apprehend.

JOHN T. DOYLE.

Letter from Captain Wm. L. Merry.

SAN FRANCISCO, May 10, 1892.

TO THE EDITOR:—I notice in the communication of Mr. Wm. Pool of Fresno an error in regard to the Nicaragua Canal so misleading that it appears a duty to correct it.

He writes: "I understand that Lake Nicaragua, which will be a part of the canal when finished, is also leased to a private company to navigate exclusively for 90 years. Now, sir, who dares to navigate Lake Nicaragua without paying for the right to do so and at the price set by this private corporation?"

My reply to this formidable indictment is that *it has no truth in it.* Mr. Pool is in error. The navigation of Lake Nicaragua is covered by no concession or lease after March 17, 1895, when the present concession to A. J. Pellas expires by limitation. The canal cannot be completed by 1895, and consequently the navigation thereof cannot be affected by the Pellas concession, and there is no other. Moreover, the said concession *would not affect the canal even did it not expire in* 1895. The concession alluded to was given Pellas in 1875 for 20 years. It gives the exclusive right to navigate Lake Nicaragua and the River San Juan to the Atlantic ocean *by steam only, and is strictly limited to the 20 years, without extension.*

However, does any thoughtful man suppose that the Canal Company would accept a franchise for an interoceanic canal subject to the right of the navigation of the lake in other hands? Of course not. The Pellas contract only applies to internal navigation, anyway, but the canal concession for 198 years specially provides for the expropriation of the Pellas concession by the Canal Company, and said company could have obtained compulsory possession under the law if necessary. But the Canal Company, recognizing the value of the lake and river steamers owned by the Pellas Company for its own transportation, besides which the line was earning money in local freight and passenger business, made a purchase of the entire plant; and to keep the business separate, operating it on its merits, organized the Nicaragua Mail and Transportation Company, and this company now operates the line. *Its rights expire, as before stated, on March* 17, 1895, and the Government of Nicaragua has announced its decision to grant no more exclusive concessions for navigating the internal waters of the Republic. But the steamers will continue to run as an aid in canal construction, paying their way by local earnings.

I have thus disposed of Mr. Pool's error. If himself or any friend for him in this city will call upon me, I shall be pleased to furnish documentary evidence to prove the assertions I have made above.

It is an *inconsistency inexcusable* that Mr. Pool and, happily, a few only like himself should advocate the control of the land grant railroads by the United States Government on behalf of the people, and object to the strict application of the same principle as regards the canal! These gentlemen want the Government to own the canal! Well, let the Government buy it by buying the stock! It has the option of 70 per cent of it under the Sherman Canal bill now before Congress, and if this is not enough, let it buy as much more of the stock as it pleases! Mr. Doyle has so plainly explained in your columns why it can own it only in this way that I will not occupy your valuable space in repetition. If our Government fails to do this, the canal will go under European control by the sale of the company's stock, so far as this stock is taken in Europe, and there is no doubt that it can be disposed of there.

The Canal Company is forbidden to sell its charter to any Government. How, then, can the United States Government acquire the canal in any other way than by purchase of the stock?

An obstructionist should show a reason for his action. If that reason is proven nonexistent, obstruction should cease if it is honest. *Success only attends practicability. We want the canal! Let us then discuss only facts in connection therewith.*

WILLIAM L. MERRY.

Dishonesty in Hay-Marketing.

SACRAMENTO, May 8, 1892.

TO THE EDITOR:—I intended to squander a little ink on your hay prizes, but my engagements would not permit me to get my paper ready by the 15th of April.

There is one consolation left me, it saves being criticised, and gives me an opportunity to examine into the methods of others. Before this important subject is lost sight of, I want to call attention to the fraud that is practiced in baling hay. According to my observation, few persons ever question the weights marked on the tags. It seems but a small matter, where a person is only using a limited amount of hay, to quibble over the difference of five or ten pounds on a bale of hay, but to the person that is using, dealing or pressing hundreds of tons, it makes a handsome profit. The buyer of a load of hay should insist that it be weighed on the public scales or platform scales. If the weight holds out, the buyer can well afford to pay 25 cents to see that he gets what he pays for. If short in weight, let the seller pay for weighing, and he will learn to look to the balers to see that his hay is not overmarked. A hay dealer, a few years ago, stored his warehouses full of hay, and, during the winter, it advanced over 50 per cent. Not contented with his handsome profits, he was charged with erasing the figures with a knife and marking each bale up from 10 to 20 pounds.

I bought a car of hay last fall, and, as I was about to put it into my hayloft, I saw that one of the bales was marked 350 pounds. I got a pair of platform scales and weighed every bale. The 350-pound bale did not bring up the beam at 300 pounds. They fell short from 20 to 40 pounds. I settled for it with a shortage of 30 pounds on each bale.

There is one thing very certain about such a transaction, the hay baler must have known about this overmarking, if the owner did not. I have seen owners that seemed pleased to have their hay overmarked, saying that it was no matter of theirs. The way to get even with such dealers is to buy your hay of those that give honest weight.

During last winter, I discovered another fraud in putting up hay, in the way of dust, dirt, clods and chaff. The hay had evidently been cut in two, two or three times, by the mower, for it looked as though it had been run through a hay cutter. Stock will not eat such hay until they are almost starved. I think, from the frequency with which I cleaned out the mangers, that over 15 per cent of this hay was refuse, trash, dirt, etc.

It hardly seems credible that hay should become so foul as this without a purpose on the part of some one. It is a good way for a person to sell his farm, where he has another underneath better than the one on the surface.

I am a little below the grade in the city, and I have several sloughs on my farm, but I fear my posterity will not look with favor on me for filling them up with such expensive material.

DANIEL [illegible]

Weather and Crop Bulletin for Week Ending May 7th.

Lassen County.—Susanville—There were three frosts during the week, doing some damage. About all the early fruit in this section is killed. Janesville and Milford report no damage.

Siskiyou County.—Yreka—The weather has been cold; grass grows slowly; wheat getting a good stand. Warm weather will insure large crop.

Humboldt County.—Eureka—Unusually damp and cloudy weather prevailing and the temperature below the normal, which condition, if not injurious, has greatly retarded all growing crops. Clear weather and warm sunshine are the conditions most needed to insure average crop. *Hyderville*—The temperature has been slightly injurious to strawberries. *Upper Mattole*—The aphis has made its appearance in some grain fields and may do considerable damage. No corn-planting yet, and will not be until the weather is more favorable. *Phillipsville*—Some snow has fallen on the higher ground. The cold weather is bad on young lambs. *Blocksburg*—Unusually cold and rainy weather prevails; all crops late; highest and lowest temperature 62° and 38.° *Arcata*—Farm work delayed by too much rain; fruit prospects good.

Shasta County.—Redding—Weather cold and backward, but otherwise favorable to grain and bad for fruit and vegetables. Heavy crop of hay and fruit outlook good. *Anderson*—Fruit crop looking well and is now out of danger from frost.

Tehama County.—Red Bluff—Temperature abnormally low; hay crop good; barley doing well; apricots not abundant and strawberries not a success.

Butte County.—Chico—Crops looking fine; dry north winds would now do good by drying out the overwet soil. *Palermo*—The rain is beneficial to the grain and hay crop; it retards plowing in the orchards.

Colusa County.—Colusa—.87 of an inch of rain and 11.02 inches for the season. With the exception of delaying the cutting of hay and lodging some grain the conditions continue favorable.

Glenn County.—Willows—The wheat and barley crops will be immense; the damage by frost highly overestimated.

Sutter County.—West Butte—Weather unfavorable for beans, melons and sweet potatoes. *Yuba City*—The rains are liable to cause rust in the heavy grain; fruit trees and vegetables greatly benefited.

Yuba County.—Wheatland—The cool, wet weather, while not injurious, has retarded growth of grain and has caused it to lodge where the growth is heavy; peaches promise an average yield; other fruits will be much below the average.

Nevada County.—Nevada City—The past week has been the stormiest of the season, 5.09 inches having fallen. Snow fell for a short time on May 1st 2d 3d and 4th—Heavy frost on the 3d; grain on the foothill ranches is hopelessly lodged; more rain will be certainly injurious.

El Dorado County.—Coloma—It has rained steadily all the week and weather quite cold. It is not yet perceptible whether the cold rains have done any damage or not to the fruit in this vicinity. Fruit crop looks well, except cherries, which will be light.

Sacramento County.—Mayhew's—The outlook for an average fruit crop is good; grapes but slightly injured by the late frosts.

Amador County.—Oleta—Rains were beneficial, because the northerly winds had dried out the ground. Apple crop fair; warm weather needed. *Sutter Creek*—Late grain greatly benefited by the rains, and if no frosts follow, crops will be good. *Drytown*—Most of the early sown grain is badly lodged by the late rains. *Willow Springs*—Farmers getting ready for haying.

Solano County—Denverton—Grain crop doing well; rainfall for the season 14.53 inches. *Vacaville*—On low lands peaches are turning black at the pit from the effects of the frost. Cherry crop light and being injured by the continued cold rain; milder weather needed.

Yolo County.—Rumsey—Crops two weeks later than usual; rains beneficial to late grain. *Woodland*—Crops of all kind looking well throughout this county.

Napa County.—Napa City—Rainfall above the normal for the past week, with cold weather, which retards the ripening of all crops. *Veteran's Home*—Thunder and lightning on the 5th. Crops looking well.

Sonoma County.—Sonoma—Warm weather needed for rapid ripening of fruit. *Petaluma*—Crops doing well. *Santa Rosa*—Rainfall for season 26.75 inches. Fruit men say that sunshine is needed more than anything else. *Forestville*—Caterpillars making their appearance on fruit trees.

Healdsburg.—The heavy rains have necessitated the reworking of the already prepared corn ground. Barley and wild oats are heading rapidly, and alfalfa in bloom; fruit crop looking well.

Contra Costa County.—Cornwall—The past week has been just what farmers wanted. Cool and cloudy at times, with light showers, have benefited grain and feed.

Alameda County.—Niles—The rainfall has benefited the crops.

Santa Clara County.—Gilroy—Crops will be above the average in this vicinity. *Santa Clara*—Outlook good for abundant crops.

Monterey County.—Salinas—The rainfall has benefited the entire valley, and crops are doing finely. *San Ardo*—The generous rains have benefited grain immensely; fruit has set well. Hay that was cut slightly damaged by the rains. *Jolon*—The rain will insure a fair grain crop. Snow visible on the mountains.

San Luis Obispo County—Edna—Excessive rains slightly injured early sown grain. *San Luis Obispo*—Late grain and pastures greatly benefited by the rain. Hay that was cut is somewhat damaged.

San Joaquin County.—Lodi—Rainfall 1.16 inches during the week, which was good for grain and grass, but not for watermelons and corn. Season backward; hay crop will be short. *Stockton*—All crops benefited by the late rains.

Stanislaus County.—Modesto—Rain of great benefit to all kinds of cereals; at the same time it gives new life to the weeds which have taken complete possession of several grain fields; otherwise the outlook is promising. *Turlock*—Unless the rains of the past week make remarkable changes in the condition of the crops, they will not be as near so large as last year. Rye is looking well.

Fresno County.—Selma—The cold and drying north winds have been bad for the grape crop. A good deal of mildew is reported, and will injure the fruit crop.

Tulare County.—Visalia—The north winds and frost have done considerable damage. Grapes damaged 40 per cent of first crop; think the second crop will be fair. Prunes will be a heavy crop and first class; all other fruit good. The late rains will help the grain crop; 11 42 inches of rain for the season to date.

SOUTHERN CALIFORNIA.

Santa Barbara County.—Santa Maria—The rains have greatly benefited the bean and corn land. *Santa Barbara*—The rainfall has been very beneficial to late-sown barley and most other crops.

J. A. BARWICK.

SOUTHERN CALIFORNIA FOR THE WEEK ENDING MAY 6, 1892.

Santa Barbara County.—Lompoc—The rain of the 3rd was a God-send and saved the crops generally. Some of the barley has been burnt by the winds of the week previous to the rain. Bean land is in fine condition.

Ventura County.—S. L. Mack—The rainfall of the 3rd and 4th, amounting to .92 inch, did a little damage to the early grain, but was of very great benefit to late grain and summer crops. Haying still continues. *Bardsdale*—J. R. McKee—The weather is cloudy and cool. More than one and one-half inches of rain fell on the 3rd. Being badly needed, it will prove of great general benefit, especially to late barley, pasturage and young trees, but it slightly damaged mown hay. The prospect for all later crops is unusually good.

Los Angeles County.—Lancaster—The rainfall, amounting from one to two and a quarter inches, according to locality, has been of very great value to grain, and in most instances insures a full crop; 2000 or 3000 acres which were planted late or too heavily and were given up as a total loss previous to the rain, will now make a light hay crop. *Rodeo de los Aguas Ranch*—H. H. Denker—One and ninety hundredths inches of rain fell during the storm and greatly benefited all crops. Some early grain was lodged, but most of it will come up. A little extra exertion will be necessary to dry mown hay, which was wetted by the rain, but not injured. *Palms*—W. D. Curtis—Hay and grain were slightly damaged by the rain; other crops were greatly benefited. *Verdugo*—J. C. Sherer—The rainfall of the past week, amounting to 3.15 inches, slightly injured mown hay and caused some of the heaviest grain to lodge. The general effect was beneficial, especially to corn and root crops. *Duarte*—W. W. Bliss—The rainfall of the past week was 4.51 inches, and was beneficial to all crops. Total for season 16.29 inches.

San Bernardino County.—Ontario—The rain of the past week was generally beneficial. Very little hay had been cut, so no material damage was done. *Chino*—Hay was slightly injured by the rain. The beet crop was greatly benefited and is now assured. *Alessandro*—The weather has been generally favorable to crops, though some barley hay was slightly injured by the rain.

Orange County.—Anaheim—The copious rains of the past week helped the corn, but slightly injured mown hay. *Santa Ana*—The rain of the past week injured the hay crop and lodged much of the grain. Fruit and vegetables were greatly benefited which will much more than offset the damage caused by the rain. *Tustin*—Late sown grain and corn derived much benefit from the rains. A large acreage of hay was caught out and was more or less damaged. The general effect of the rain was good.

San Diego County.—Winchester—Late grain, trees, vines and crops of all kinds were benefited by the rain of the past week, and the crops of grain and hay will be greatly augmented. *National City*—The rain, as a whole, has been beneficial and will help late grain considerably. Cut hay was slightly damaged.

G. E. FRANKLIN.

Prison Grain Bags.

In a former number of the RURAL PRESS we have printed the arguments presented to the State Board of Prison Directors by the President of the Grange Committee appointed to investigate into the price of State prison grain bags. We find an additional argument written by Senator D. A. Ostrom of Wheatland, published in a local paper of Yolo county. We quote:

We claim they should be sold direct to the farmer, and at cost to the State or thereabout. But we are not willing to lump the entire expense bill of San Quentin Prison, with its thirteen hundred prisoners, more or less, and charge it all up to the jute works, for the reason that less than one-third of that number are engaged in or about the works; why they are not all so engaged, your honorable Board is doubtless well aware, is not the fault of the farmers, for they have for several years striven for legislation which would have doubled the present output of bags.

At the twenty-eighth session of the Legislature, testimony was adduced to the effect that the cost of bags manufactured at the prison, exclusive of prison labor (for the day shift) was $4 per hundred, so that at this time, with a very heavy duty removed on raw jute, it would seem that the output at San Quentin ought to be placed within the reach of consumers at a very much reduced price from that at which your honorable Board fixed it at your last meeting for that purpose. In this connection, it is not amiss to call your attention to the very proper action of your Board of one year ago. By that action you fixed the sale of bags at 6½ cents per bag and limiting the number to any one individual to 5000. The farmers of this State believe your action at that time commendable and in the right direction, and largely prevented the formation of rings and combinations to rob the producer and consumer.

It is not for a moment to be supposed that the honorable Board of Prison Directors would play into the hands of the bag rings, yet the recent action of the Board had that effect, for at that time the price was fixed on prison bags at 7⅞ cents. Calcutta bags were quoted for less money, June delivery. But mark the effect—immediately thereafter prices advanced, with a probability of going still higher, particularly if prison bags are to be still further advanced in price, as foreshadowed by a distinguished member of your Board.

As to distribution, we maintain that the number of 3000 bags should be the maximum, and none should have more. And we recommend that the Board require an affidavit to accompany each order, that the bags so ordered are for the individual use of the person so ordering. As to the number, we believe the medium or small farmer should have an equal chance with the large, more particularly as in the case where the State, through your Board, can prevent the extortions which are practiced by rings and combinations formed for that purpose.

The Brentwood Schoolhouse.

BRENTWOOD, CAL., May 10, 1892.

TO THE EDITOR:—The people of Brentwood appreciate the compliment paid in your last issue to our public school-building. It is a structure in which we feel a laudable pride, and its illustration in the RURAL PRESS has given satisfaction to us. The design of the structure was after a thoughtful consideration of our surroundings and the comfort and convenience of pupils and teachers. The wide, covered porches afford alike protection from the heat of the summer's sun and the rains of winter, and the breadth and arrangement of the grounds afford many advantages. The extension of the roof over the porches gives a low appearance to the building, but this could not well be avoided without putting the house upon stilts, which the trustees declined to do. On entering the building, however, the height and airiness of its rooms, its large windows, ample light, and spacious halls and porches, have a pleasant effect and the squatty appearance of the outside is forgotten. We had often noticed the little ones crouching in the shadow of the porchless and shadowless "box houses," and had our sympathy excited by the comfortless and unpleasant arrangements for them. To better the plan and aid in making them comfortable; to afford a pleasant place to leave happy recollection, and perhaps to stimulate their pride, were the objects to be attained, and we are satisfied with the effort, for all take delight in the Brentwood schoolhouse and grounds. The cost of the structure was about $5500.

R. G. DEAN.

—Wee Sammy—I wush, Maister Busyman, ye wid learn me hoo tae staun' on ma hauns and touch ma heid wi' my feet. Master Busyman—Dear me, Sammy, I canna dae that. Whit make's ye ask me? Wee Sammy—'Cause faither tell't mither ye wis gye thin i' the soles to' noo, and wis gittin quite bauld heided trying tae mak' baith ends meet.

—Irate Father—"I don't believe, sir, you could earn your salt to-morrow." Son—"Now what the dayvil is the use of talking like that, governor? They don't charge for salt in any of the first-clawss restaurants."—New York Herald.

THE STOCK YARD.

How to Build the Silo and Grow the Crop For It.

John Gould, Ohio, gives the *American Agriculturist* the following comprehensive review of Eastern experience:

The general verdict now is that the silo built of wood, and made durable, with seams and pores closed by some kind of waterproof paint, is not only more economical than the stone structure, but actually is a better agent in the preservation of the silage. Stone being not only porous, but a good conductor of heat, is not to be relied upon under all circumstances for this purpose. Air penetrates the walls, frost goes through the stone and precipitates moisture on the inside surface of the silo, and this moistened silage freezes into blocks of ice. On the other hand, the wooden silo is impenetrable to ordinary degrees of frost, wood being a poor conductor of heat. Waterproof paint makes the walls not only free from moisture, but excludes the air perfectly. Wood is cheaply transported and obtainnble everywhere, and the silo can be built at a reasonable cost. It may be located in the corner of a barn, a shed, built on as a lean-to, or, if furnished with a roof, may be set up as a separate building.

Just how thick the silo walls should be built is yet undecided. The fact is, both parties are awaiting the evidence as between the merits of the double-boarded silo, made of cheap, unmatched, sound lumber with a lining of tarred paper between, or the single-ceiled silo lined up with four-inch flooring, put on with the horizontal grooves upward, and filled with paint as the building proceeds. The cost is not greatly different in either case, as it is a case of a larger amount of cheap lumber against a single thickness of the more expensive matched flooring. The lathed and plastered silo promised well at the start, as a compromise between wood and stone, but the corrosive action of acid causes the plaster to lose its strength in two or three years, if not sooner. The choice is, therefore, practically between the two forms of the wholly wooden silo, made durable by a coat of paint composed of gas tar thinned by an equal amount of gasoline. The round tank silo has many friends in the West, and, built of good material, has much to recommend it, as it needs no bracing or extra strength. The foundation of the wooden silo has also undergone modification. It is claimed that a sill 12 inches square, of timber, well coated with gas tar, set in a trench and firmed in with a backing of hydraulic cement, is superior as a foundation, in most localities, to stone. Then the floor of the silo made of clay well pounded down, somewhat lower in the center, coming up a few inches on the sides of the walls, is quite as good as the cement and gravel floor, and keeps the silage just as well.

As to the crop, corn is the best adapted to the use of the silo of any plant yet used. What varieties to plant, and how, are largely to be determined by locality. Where the season will admit of a full growth, some of the large varieties are best, notably the white horse-tooth corn of Virginia. This variety makes heavy growth, and, when planted thinly and not root-pruned, gives a great yield of ears and fodder, and for keeping qualities in the silo has no superior. To grow for silage profitably, the biggest crop that will ear and mature is best, as it is not found in practice that a big stalk is superabundant in moisture, or below smaller kinds in nutritive qualities, provided it is not planted too thickly and the roots are left undisturbed, by employing only shallow culture. This corn is also noted for its saccharine quality, a great help in attaining the result of sweet silage. In latitudes where the corn-growing period is very brief, the smaller varieties are best. Pride of the North is held in great favor in most northern latitudes.

Ensilage corn is best when planted and cared for as it would be if designed for a field crop. It is best drilled in rows, three and one-half feet apart, one kernel every eight inches. If the ground is made very fine and free from rubbish, the greater part of the cultivation can be done with slanting-toothed harrows, and these followed by a good weeder, finishing up the job with one or two light workings with a Planet Jr. cultivator. Corn for silage should be cultivated frequently, but not more than an inch in depth. Corn roots run in rich soil quite close to the surface, and continual cutting them off when cultivating, checks the growth of the corn, delays the earing and so prevents storing up its full quota of nutrition. It is now, in some quarters, recommended to sow six quarts of clover after the last working of the corn, and thus seed the field to clover and gain almost a full year in rotation. The Pennsylvania Station, in a single experiment, seemed to show that silage corn, even of the large varieties, might be planted somewhat thicker, and result in a total larger per cent of food material upon an acre. Prof. Ormsby says: "On comparison I find that by the use of 20 quarts of seed per acre it gave 41 per cent more dry matter than did six and one-half quarts of the same variety on another acre. The large variety gave me 43 per cent more dry matter than the smaller variety of corn, and the large corn was three and one-half per cent more digestible than the small kinds, and that on well cared for large varieties so planted as to develop full ears, the idea that the gain in weight is 'simply wood and water,' is largely a matter of opinion and the results favor the growing of large varieties, and somewhat thicker seeding."

TRANSFERS OF BERKSHIRES.—John G. Springer, Secretary American Berkshire Association, Springfield, Ill., sends the following transfers of recorded Berkshires: Moses Z. 27,245, Esther H. 27,246 and Ruth 27,247, Andrew Smith, Redwood City, Cal., to W. M. Zeller, Hueneme, Cal.; Cora Hill 27,204, H. C. Dunn, Corvallis, Or., to T. J. Farra, Erskinville, Or.; Dick Small 27,205, H. C. Dunn to Ned Smith, Corvallis, Or.; Prince of Alameda 27,371, William Niles, Los Angeles, Cal., to G. D. Almond, Pleasanton, Cal.

The Field.

Assessing Hops and Alfalfa.

There was recently held in Sacramento a called meeting of the California Hop Growers' Association, which is reported by the *Record-Union* as follows:

It was called to order by Chairman Daniel Flint, who stated that the object of the meeting was to consider the recent order of the State Board of Equalization increasing the assessment on hop lands 15 per cent, and other matters pertaining to the interests of hop growers.

County Assessor R. D. Irvine being present, he was requested to state to the meeting the facts concerning the increase in the assessments on hop and alfalfa crops.

Mr. Irvine read those sections of the law relating to "growing crops," and said the State Board of Equalization had directed him to except alfalfa and hop vines from those exempt from taxation. President Morehouse of the State Board held that lands on which hops and alfalfa are growing are far more valuable than similar lands adjoining, on which these crops are not growing. For his own part, Mr. Irvine said, he did not think it just to assess hop vines, because to his own knowledge vines had often to be renewed, and could not be considered in the category of permanent improvements. He was simply carrying out the orders of the State Board.

A number of gentlemen asked questions of Mr. Irvine, touching the latter's views as to his duty in the matter of making assessments. In the course of his remarks, Mr. Irvine stated that last year he did not specially assess hops and alfalfa lands.

Dr. Durst of Wheatland, Yuba county, remarked that he had been specially assessed on his hop lands. The value of his hop roots, however, deteriorated in value from year to year, and had to be renewed. Then, again. for the first year or two, alfalfa does not yield much revenue, and is an expensive crop to plant and bring to maturity. In the opinion of Dr. Durst, the 15 per cent increase placed on hop and alfalfa lands should be made upon all the property of the county, the revenues of which are increased by the valuable crops raised.

L. F. Long of Mendocino claimed that on the 1st of March, when the tax assessments are made, no man can tell whether his hop roots are worth a dime or not. They are beneath the soil, and no one can tell whether they will grow the ensuing season and raise a crop or whether the roots had been killed. The only way to determine the matter would be to open the hills and examine all the roots. Again, very often it costs the grower more money to raise hops than he can get for them. The farmer's burden is heavy enough at best, but it is manifestly a wrong to impose such a tax as that proposed on hops and alfalfa. In some counties the assessors [illegible] be understood, intend to assess hop lands, as they did not regard the action of the State Board of Equalization as imperative in the matter. Still, if hops were to be assessed in Sacramento county, they should be in all counties. He hoped the proposed action would be reconsidered.

John Rooney of Brighton said it was a shame to tax alfalfa crops, as after the fourth year the roots did not yield well and soon had to be renewed. Last year the grasshoppers ate every spear of alfalfa along the Cosumnes, and poor people who depended on their little fields for a living would not have been able to stand an assessment on their crops.

Patrick Carroll of Sutter county, E. J. Croly of Sacramento and others spoke in a similar strain. Mr. Croly held that under the law, which exempted growing crops, the State Board of Equalization had no authority to direct the levy of a special assessment on hops and alfalfa. He was informed by Assessor Irvine that the State Board regarded rooted hops as permanent property. This is absurd, as he could not tell on the 1st of March that he had any property of value beneath the soil.

Mr. Wittenbrock said that out of 18,000 hop roots planted not long ago, he had been obliged to replant 13,000, the roots having rotted out. This shows there is nothing in the claim that hop roots are permanent property.

Mr. Irvine again explained the position he took before the State Board of Equalization, and the arguments with which his objections to the order were met by the Board.

Mr. Rooney held that the assessor had the law to govern him, and should pay no heed to the special orders of the Board of Equalization.

Mr. Irvine replied that the State Board interpreted the law, and he, as assessor, was governed by their interpretations thereof.

Mr. Rooney said that if the members of the State Board of Equalization held that alfalfa and hops were not growing crops, they certainly are not farmers.

"Well," remarked Chairman Flint, "you wouldn't expect to find any farmers on the State Board of Equalization."

Mr. Long of Mendocino said the whole question was as to whether or not the State Board of Equalization had correctly interpreted the law. In his opinion, and that of the meeting, the Board had made a mistake. He therefore moved that a committee of five be appointed to wait upon the State Board of Equalization, present the matter to them, and give reasons why no special assessments should be levied on hops and alfalfa. Perhaps the Board might reconsider its action, but if it did not, he for one was in favor of resisting the order and making a test case in the courts.

The motion was carried, and the committee named was Messrs. Long of Mendocino, Durst of Yuba, Carroll of Sutter and Croly and Flint of Sacramento, with County Assessor Irvine added.

Mr. Flint suggested that if hops and alfalfa roots are to be taxed, those of asparagus should be also.

The committee was instructed to call upon the State Board of Equalization at the next monthly meeting of that body.

Some time was devoted to a discussion of the "tare" question, but there was a wide diversity of opinion on the subject. [The legal tare is now two per cent, or about four pounds per bale.]

Finally, J. E. Camp moved that the former rate of tare fixed by the association be reduced to that named in the State law—namely, two per cent. The motion prevailed.

The association then discussed the matter of securing Indians for service in the hop fields during the picking season in preference to Chinamen.

The California Blue Jay.

Our State seems to have a hobby of producing animals and plants which, though of the same species as those in the eastern part of the United States, differ very greatly from them in point of color and size. The California blue jay, while holding the same name as his eastern cousin, is very different from him in many ways. He has not the brilliant topknot and headgear of his eastern relative, but his plumage, as a whole, is much darker. His wings and tail are of a darker blue; his head is very dark, to correspond with his long, black bill. His breast is of a light blue drab, with reddish stripes running down across it from the neck.

The jay is the sassiest, boldest, liveliest, smartest, and about the prettiest little bird in our country. He is not a songster, uttering no other cry but sharp screams. But he is a very lively bird and cannot keep still a moment. When he flies he takes one long dip down and then one upward, all the time uttering his peculiar note. He is noted for his bravery, and if he is not able to drive away the intruder from his domain, he can marshal a whole army of his tribe in a short time. He is a leader among birds.

The blue jay feeds upon insects, worms, fruit, birds and their young, and, in fact, almost everything. In the fall and winter he frequents the live oak trees and feeds upon acorns.

This sly and greedy bird has received the condemnation of many a farmer and fruit raiser for his thieving habits. From the time that the earliest peach is first tinted with purple until the last apple is gathered in the fall, the blue jay is a constant visitor to the orchard. During the long summer days he rises before the farmer and flies to the orchard and commences his breakfast long before the dishes are rattling in the farmhouse kitchen. When the farmer at last emerges from the door into the pure air of the morning, the jay greets him with many a pert, contemptible bow and sassy good morning. If approached too closely he darts away, uttering many an angry cry for being disturbed, when he had just found the juiciest spot in the large, mellow peach. As soon as the farmer leaves the orchard, the jay is back to his repast in a moment. He is a model of perseverance, and will sit for hours in the top of some live oak tree and wait until the farmer has left the orchard. He steals into the chicken yard often times and breaks many eggs. But despite his bad habits, he does much good to the farmer by catching hundreds of worms and insects. Some destroy his nests and in every way try to kill the jay himself, but it is a question whether they are right. It is hard to draw the line, and would seem just to let the jay have the benefit of the doubt and let him live.

The nest of the blue jay is built about the first of April. It is constructed of coarse sticks and roots and hair. It is generally placed about ten feet from the ground in a small live oak shrub. The eggs are four and five in number, of a light pale green, spotted with greenish brown and gray. The average dimensions of six eggs in my collection are 1.08 inch in length by .82 of an inch in breadth.—W. M. J., in Arroyo Grande Herald.

The Pepper Tree.

One of the most prominent features of the thickly settled portions of Southern California,and one of the most attractive to strangers, is the beautiful growth of an exotic tree introduced from South America; the so-called "Pepper Tree," with which so many homes are beautified.

The tree has not heretofore been considered from a utilitarian point, but therein may possibly be found the material for one or more substances of great economic value.

It may not be known to many that the tree is abundantly supplied with a gum which resembles gum mastic; in fact, the leaves are so filled with this resinous or gummy matter that it is sometimes thrown off in showers, leaving spots on clothing or other substances upon which it may fall; on carriage tops the gum and our summer dust form spots which are difficult to remove.

The leaves, when immersed in water, throw off the resinous matter with such energy that the recoil gives them the appearance of being possessed with spontaneous motion. The gum from these trees makes a good dentifrice. A lotion is also made from the bark, which is said to be a good remedy for reducing inflammation and the treatment of ulcers.

It should be remembered that the tree is deleterious to the growth of other plants under its spreading branches. It is also subject to the destructive ravages of the scale insects, and every owner of these fine trees should see that they are kept free of scale and other insect pests, as it must inevitably result in their being destroyed to save other valuable plants and trees from infection.

We cannot expect to have anything beautiful or valuable in our surroundings without the exercise of a reasonable amount of care. No tree that I know of will bear the indiscriminate use of the pruning shears so patiently, but it is a mistake to denude them of their beautiful feathery foliage, just at the time of year when we expect the tide of tourists to come here to enjoy the trees and flowers which present to them such an interesting and tropical appearance. The "kodac sportsman" will hardly care to exhibit a specimen of the bare limbs of a tree to his Eastern friends.

Another favor which I would like to ask on behalf of these beautiful trees is that they be abundantly planted along our public highways, where, in a few years, they will cast a cooling, grateful shade and form lovely, arching driveways to shield man and beast from the heat and glare of the summer sun.

It takes a great deal of the unrighteousness out of poorly kept highways if trees grace the roadside, and the finest macadamized roads lack more than half their beauty and comfort if not supplemented by suitable trees.

Perhaps there is no tree which, subjected to the neglect common to roadside trees, would serve the purpose any better than the lovely evergreen tree *Schinus Molle*, with its abundant clusters of shining, bright-red berries, which form the subject of many an artist's sketch.—*Lorenzo G. Yates in the Ojai.*

Humboldt Notes.

LARIBEE, HUMBOLDT CO.

TO THE EDITOR:—Since my last, a postoffice has been reestablished at the above place, and, as it is surrounded by a rich agricultural district, with a new flourmill well under way, this section is fast coming to the front. The idea of discontinuing large stock ranges is being agitated, and where there is so much smoke there must be some fire.

So far, fruit, and more particularly prunes, have been advocated. With all due respect to those who advocate fruit ranches, and who so ably urge the adaptability of the country to fruit, and admitting that the small orchards on the different ranches have proved a success, I question if the change from a sheep ranch to a full-bearing orchard is not too great, and the necessary outlay too large, for many individuals to succeed. So far, the fruit ranches have been started by joint stock companies. This was of inestimable benefit while this section's adaptability to fruit was a debatable question, but the time has now come when the foothills of Humboldt can stand on their record in the fruit line. The time has come when the future is assured, and should be considered as well as the present.

What class of citizens does this county want—corporations, or families that control their own homes. For my part, I would say the latter. With the former, they can take a 200 or 500 acre tract and plant it in fruit, and can wait till it is bearing fruit until they need anything in return for their outlay. But let a single individual, who has funds sufficient to buy a ranch, invest the profits over and above the "living" in fruit trees. It is all that can be expected. Where are these profits and a living coming from? That is the question. Some prefer not to plant trees until the land has previously been under cultivation.

Mixed farming should pay well here. Let one raise enough hay to feed his stock well, and do more or less threshing, and he can make a living. The market for hogs, too, here is generally fair.

There is one industry that could be made profitable in the foothills, and that is dairying.

There is a large portion of the land that can be irrigated, and water assures alfalfa; and if one-half is true that is claimed for silos, the milking could easily be prolonged throughout the entire season. There are two silos now in operation in this county.

The era of the small farmer is near at hand, and I hold that the hill land of this county will double in value within the next five to seven years.

Engineers are making a preliminary survey of a route between Eureka and Red Bluff, and the report is current that the S. P. has a finger in the pie, and with the nearly compulsory sale of the Donohue system, and the probability of the purchasers extending it to Humboldt, and with the growing sentiment in favor of communication with the outside world, the chances of an outlet by rail were never brighter.

This coming season promises to be a prosperous season for this section. The increase of stock is flattering, and the outlook for a large harvest is good.

The lease of the McClellan range, with 6500 sheep, expires this June, and will be rented again. The Robertson's ranch will be subdivided and rented in separate tracts.

The outlook for fruit is good. The Fortuna cannery is assured.

Two new papers will be started in the county, one at Eureka, the other at Ferndale. The latter will be edited by Mr. Rod M. Saul, one of the most entertaining writers in the State, and I trust both papers will prove a success.

The oil well at Garberville is down about 350 feet, and Supt. Gilfillan is confident of success. An expert pronounced the find of coal near Blue lake of excellent quality.

The bonding question is bobbing up again, and if "jobs" can be kept out and the needed roads voted on, the proposition will undoubtedly be carried at the coming election.

CREAMERIES.

I remember that, in the summer of '89, when traveling for one of the county papers, I met a Mr. Stewart, who came to this section to introduce creameries. He was then in Ferndale, and was inducing numerous dairymen of means to take stock in the new venture. His efforts were crowned with success.

The first creamery was built on Salt river, in probably the best dairy region in the State, and was named in honor of the county Humboldt Creamery. That was the beginning of the creameries here, but where the ending will be I do not know. I kept track of the different creameries until there were eight in the county, but there have been several erected since, while two are under way at present.

At present the dairying is confined to the valleys near the ocean, but with the advent of the silo the dairy field must necessarily broaden. There are two silos in the county, one opposite Blue Lake, on Mad river, the other near Eureka. Both are giving good satisfaction. If I understand the principle of a silo, they are of the more benefit where the country is comparatively dry in the summer months. If silos are profitable where feed remains green the year round, they should be a bonanza in the foothills where the feed dries up in August, and where ensilage would pro-

long the milking season until the grass starts again in the fall.

The people generally think they have been given a new lease of life since the bill was introduced into Congress placing Humboldt Bar under the War Department. Many think the passage of this bill means a first-class harbor for Eureka, and, further, that a railroad is assured. Work is in active progress in making a survey of one route, and rumor has it that work is soon to be commenced on the survey of the second line.

Some interest is taken here in the Union packing establishment, which is nearing completion near the metropolis. It ought to furnish a market for a vast amount of live stock, and some predict that hogs will be the largest shipment from this county. The increase of stock in this section is far above former years.

COYOTES AND SHEEP DOGS.

In a former issue the PRESS solicited news from Mr. Coyote. There are two species of the tribe in this county, the lean kind generally belongs to some cliff or canyon; and prowls around periodically—that is, he makes his circuit every two or four weeks. The other kind, which is of corpulent form, is a domesticated cur, and is never so happy as when after a band of sheep. His home is often with the human tribe whose worldly possessions are from 10 to 17 offspring—very patriotic people, one old horse and the above sheep-killing dogs. But they say charity begins at home, so that when a sheepman finds his own cur after sheep, count his scalp No. 1. The genuine coyote is quite destructive here, and the removal of the bounty would mean a large loss to sheepmen. ED. ROBERTSON.

Summer-Fallowing in Dry Regions.

At a meeting of the Farmers' Institute held recently at Wasco, Or., John Medler read an interesting paper on "Summer Fallowing." Mr. Medler said:

When we notice the conditions that prevail in Eastern Oregon and Washington, we find that we have a rich, deep alluvial soil, capable of absorbing and holding all the moisture that may fall, but there is a very deficient precipitation, which probably amounts to 14 to 15 inches in Sherman county, which, of course, is not sufficient, with the excessive evaporation that we have, to insure good, profitable crops annually, for it must be remembered that the late spring and summer months are destitute of rain, or nearly so, and what little falls is evaporated with great rapidity.

The ground should be summer-fallowed not for the purpose of resting it, according to an old antiquated idea, for the farmer might as well talk about resting his plow by by putting it in the stable as to talk about resting his land, for it will produce good crops—and, where climatic conditions are favorable, two or three crops annually—provided you have a sufficient amount of moisture and keep up the fertility of your soil by supplying it with the necessary plant food.

But the idea of summer-fallowing is to store up the moisture of the preceding winter and spring, and thus have the moisture of almost two seasons to draw from. The way to accomplish this is to plow your land as early in the spring as possible, a good reasonable depth and harrow immediately after the plow, and cultivate during the season as much as may be necessary to prevent the growth of weeds. The effort is to retain the moisture already in the ground by preventing its evaporation, the fine, well pulverized surface acting as a mulch, and so it becomes possible in this semiarid region to raise fine crops of the cereals because they have almost two years' rainfall to draw from. Of course it is very evident that the earlier in the spring this work is done the more moisture will be retained, for the air becomes drier as the season advances and evaporation is much more rapid.

I claim that the above idea is the keynote to all successful farming in regions like ours where the soil is very deep, and the soil is composed of a large percentage of volcanic ash, and where the rainfall is deficient; for, where it is abundant, summer-fallowing, except for some special purpose such as the destruction of weeds, would be a sad waste of time. With it, however, if properly carried out, the yield in this region may be doubled and in some cases trebled, and the harvesting expenses, which constitute nearly a third of the whole, are but a little more than for an annual crop.

Now, while the most of the farmers in Eastern Oregon and Washington do summer-fallow their land, it is somewhat strange that they do not seem to grasp the whole idea with all its consequences, and carry it out to a logical conclusion. They summer-fallow for wheat, which, of course, is their main crop and is generally planted in the fall. Barley and oats are sown, and all kinds of vegetables planted on lands plowed in the spring, and often with poor results; and it often happens that the yield of wheat is very fine, while all else is a comparative failure. Now, why is this so? If the rainfall is not sufficient to grow an annual crop of wheat, and you have to resort to summer-fallowing in order to carry over the larger part of one year's rainfall into the next, to secure moisture enough to assure a good crop of wheat, why will the same treatment not hold good for everything else, whether sown in the fall or spring?

The whole idea is that of having enough moisture for all plants, not one kind alone, that by summer-fallowing ground any one can raise double as large a crop of oats, barley or anything else.

Then why not extend the system to your gardens, potato patches and truck patches in general? By taking a garden and summer-fallowing one-half one year and the other half the next there is only half the area to hand-cultivate that there would be if it was all in. Then, if the yield be twice as great, as it surely will be if the moisture in the ground is doubled, or nearly so, which is the effect of a good summer-fallow, adopt this system for everything; in fact, if you only have one acre of ground, you ought to divide it and summer-fallow one-half one year and the other half the next. In carrying it out it must be remembered that, in addition to sowing in summer-fallowed ground, to get the best results the seed should be put in the earth as early in the spring as practicable, before evaporation begins to rob the ground of its moisture, for a few days' delay in planting will make a marked difference in the germination as well as the growth of the seeds.

No doubt this system has added, and will add, thousands of acres to the cultivated area in the dry belt of this so-called inland empire, and by it it becomes possible for civilized man to exist in comfort, and add largely to the development and prosperity of the country.

HORTICULTURE.

Lemon Culture for Profit.

Read by L. M. HOLT before the Pomological Society of California, at its meeting in Redlands, May 5 and 6, 1892.

Eighteen years ago lemon culture in Southern California was in its infancy. At that time there were a few small lemon orchards in Los Angeles county, but they were composed of seedling lemon trees, the fruit of which was naturally very inferior, and the manner in which the fruit was handled made it still worse.

The seedling lemon tree was soon discovered to be short lived, and it did not take long for our fruit growers to decide that a hardier root must be obtained on which to bud the lemon. The orange root was tried with success. The China lemon root was tried for both orange and lemon trees, but was soon discarded. The lime root was successful, but, on account of being so easily affected by frost, its use was not considered advisable or practical. The universal verdict to-day is that the lemon tree should be grown on the orange root, but some are contending that the sour orange root is preferable to the sweet.

Prior to 1875, the Lisbon lemon, the lemon of Genoa, and some other varieties which have since practically disappeared, were introduced into Southern California. The Lisbon lemon has become a standard, and is recognized to-day as being a first-class lemon, a lemon that one can plant without fear of making any mistake. The lemon of Genoa is thought well of in some localities, but it is not a popular favorite.

About 1877 the Eureka lemon was discovered as a choice seedling in Los Angeles, and was brought to public attention by Thos. A. Garey, who propagated a large nursery of lemon trees of this variety. A cold winter swept away most of his trees, and some 90 small orchard trees secured by myself were scattered broadcast in Southern California, and it was from these trees mostly that this variety was propagated. The Eureka stands to-day second only to the Lisbon, and, in fact, in the opinion of many, it is at the head of the list, the principal claim in its favor being that the Eureka tree is very free from thorns, while the Lisbon is very thorny, and the Eureka fruit has but few seeds, while the Lisbon has many. The habits of the Lisbon tree of making a compact head and a thick foliage are considered very much to its credit by many, placing it, as they believe, ahead of all other varieties thus far introduced into Southern California.

About the time that the Eureka was discovered, Mr. H. H. Higgins, of National City, brought to public notice what he termed the Bonnie Brae lemon, which for a time attracted widespread attention. This lemon seems to be a cross between the lemon and the lime, with the shape of a citron. It was very juicy, nearly seedless, a little oversize, and had a thin rind. It was propagated only to a limited extent, and the public soon discarded its many claimed virtues.

Recently the Villa Franca has been introduced from Florida. There, it is considered the best lemon in the State. Here, those who know it best think the most of it. No one can find any fault with it, but nearly all agree that it is passing through the experimental stage of its existence with a fair prospect that in time, as soon as it has been thoroughly tested, it may become one of the standard varieties of the State. And yet few, at present, care to experiment with it on a large scale.

The seedling lemon, years ago, was known as the California lemon, and afterward as the Sicily lemon. It has required more study and skill and time to develop lemon culture in this State than it has to popularize and make remunerative any other fruit that has been made a success. The cause of this has been that the lemon ripens mostly in November, December and January, but the market for the lemon does not ripen till the following June, July and August. One great problem to be solved has been how to pick and cure the lemon so that it will keep till the market is ready for it. As soon as good varieties had been found, the curing problem was taken in hand by G. W. Garcelon of Riverside, N. W. Blanchard of Santa Paula and others, and to-day the lemon can be safely cured and kept for six months or more without heavy loss.

Years ago, it was customary to let the lemon hang on the tree till it was thoroughly ripe. It then became a great overgrown fruit, with very thick rind and but little juice. One hundred lemons would fill a box and disgust the market. They would sell for $1 a box, or perhaps a little more, and all classes of people became thoroughly convinced that California could not produce a good lemon, or, if it could, it was impracticable to put the fruit on the market in good shape.

The progress made in lemon culture in the last 18 years has been slow—very slow—but, on the whole, it has been very satisfactory.

Our fruit growers have demonstrated the fact that the better varieties of lemons grown on orange stock will produce as fine a fruit as can be raised in the lemon countries along the Mediterranean, so far as size, texture, juice, acidity and keeping qualities are concerned.

They have also discovered how to pick and cure the lemon and it can be placed on the market when it is needed and when it will bring the highest market prices.

They have demonstrated that California was not to blame for not producing a good lemon sooner, and that the soil and the climate of this country would do their parts as soon as man was ready with the requisite skill to do his.

Having discovered the necessary varieties and skill, what other elements are necessary?

To this question I would answer, climate, water and soil.

By climate for the lemon, I refer to absence from frost, or from a degree of frost that will injure either the tree or the fruit. Usually the frostless belt is to be found on the slopes of the valley next to the foothills or mountains. The bottoms of valleys and level tracts of land are usually cold and frosty. This is especially true in the interior valleys, but other conditions are found in the ocean valleys, where the large body of water has a perceptible effect on the temperature of the adjacent country.

There are other influences at work on low temperatures in the interior valleys. For instance, it is a well known fact that a long and extensive canyon, opening out upon the larger valleys, sends down currents of air during the cold, still nights, when frosts and freezes do the greatest damage. These currents of air prevent frosts in the canyons and wherever their influence is felt. This theory has been forcibly illustrated in San Bernardino county, during the past season, in several places.

It is a well known fact that the San Timoteo canyon has an effect on the temperature of Old San Bernardino, preventing heavy frosts at times when they are common elsewhere. The Temescal canyon or valley has had the same influence on South Riverside, and Lytle creek and Cajon canyons have appeared to have a similar effect on Rialto.

The greatest danger from frost occurs when the trees of the orchards are young and small. After the orchard begins to bear, the trees will stand more frost than the fruit will. So far as the orange is concerned, a locality will raise orange trees that will not safely mature the fruit.

The lemon tree is more tender than the orange, and hence the acreage suitable to lemon culture is more limited than that which is adapted to the orange. So far as the crop is concerned, however, the lemon has an advantage over the orange, because it is largely picked in November and December, before the heavy frosts are liable to come, while the orange hangs on the tree all winter, and is, therefore, subject to all the cold weather that we are liable to have.

A location with a suitable climate having been found, the question of water becomes important—very important. The Dutchman's statement, relative to his lager beer, is applicable in this connection. He said: "Too much lager beer is shust right," and the man who gets too much water for his orange and lemon orchard will some day discover that it is just right. If you have too much water, you don't have to use it, but if you don't have enough, the situation is a serious one.

Of course, the amount of water must be determined by circumstances. Some localities and some soils need more than others. A sandy loam soil needs less water than a clay loam, and an orchard located in one of the interior valleys needs more water than one located near the coast.

How about the soil? Well, if the climate and water are all right, you need not worry much about the soil. A moist, alkali soil will not do; but you will not find such a soil except in the bottom of the valley, where the climate is not suitable; such soils are found only in too cold localities. Any location on the slope of a valley is liable to be good, unless situated in a wash or bed of bowlders. A sandy loam or a clay loam are both good, and good orchardists are divided in opinion as to which is the best.

A Florida orange grower visiting the Chicago Citrus Fair, in the spring of 1886, stated that his orchard was planted in sand so pure that he could utilize it for plastering, and yet he got good returns by using fertilizers to the extent of $50 worth per acre each year.

California soil is, as a rule, natuarlly rich, and hence does not need as much fertilizing as does the clear, sandy soils of Florida, and yet the man who attempts to raise either oranges or lemons without the free use of the best fertilizers makes a costly mistake. As well might a man attempt to eternally check against a bank account without making any deposits. A man who attempts to draw either upon the soil or the bank, without making deposits equal to his drafts, will soon find that his drafts in either case will be dishonored.

Get a good place to put both trees and fertilizers, and do not forget the latter if you expect the former to prove a good investment.

The approved method of gathering lemons is to pick them when they are just beginning to ripen. Mr. Garcelon says that 100 pounds of lemons as they are picked from the tree will shrink so they will pack a 65-pound box six months later, if the fruit is properly handled and cared for. This is not a serious loss. The fruit as it is picked from the tree is supposed to be worth $1 per box. Six months later, the market prices range from $3 to $8 or even $10 per box. If the loss or shrinkage was twice or three times as great, the curing process would pay, as it would return the orchardist more money than the fruit if sold when picked. It is true that the railroads might be robbed of a portion of the money that they would otherwise get for hauling poor fruit to market, and the box makers and packers would make less money, but the growers would get more, and the customers would be better satisfied.

While cured California lemons, marketed in warm weather, are bringing better prices than formerly, we still have our reputation in that line to make, for our lemons do not bring more than half or two-thirds as much as imported lemons do, even when they are equally as good, but the time is not far distant when Mediterranean lemon growers will come to Southern California to learn how to handle the lemon crop, just as the French have had to learn the California methods of curing the French prune in order to save their prune industry from ruin.

We have not reached perfection yet in the lemon business, although we have practically solved the problem. Ten years from now we will know more about the lemon business than we do to-day, or at least, if we do not, we had better abandon this country and make room for a more intelligent race.

The careful observer who travels over Southern Califor-

nia, carefully noting the progress being made in citrus fruit culture, cannot help but be struck with the fact that fortunes are made by planting the very best of trees and giving them the very best of care, while the country is strewn with failures and partial failures, caused by planting so-called cheap trees and giving them cheap attention and care. This criticism applies to lemon orchards, but not to that degree that it does to the orange orchards. In either case, however, the best trees and the best care are essential to the best results, and the man who casts pearls before swine is a philosopher beside him who does his orchard work in a shabby manner.

The United States are sending out to Europe annually millions of dollars for lemons. It is doubtful if there is enough good lemon land in Southern California on which to raise enough lemons to supply the present and ever-increasing demand for that popular fruit. It is safe to predict, however, that within the next quarter of a century this southwestern corner of Uncle Sam's dominion will receive many of the millions of money that are now being sent to Europe for lemons.

Pruning the Moorpark and Grafting.

E. A. Bonine gives the Pasadena *Star* paragraphs on pruning the Moorpark to induce bearing on grafting which will be read with interest:

There are a great many Moorpark apricots around Pasadena and very few of them are worth the room they take up, and I think I have found a way by which they may be made to bear. Two years ago I began cutting off the tops of mine and grafting them, leaving about one-fourth of the tree—all lower branches. To my delight these lower branches were densely loaded with fruit last season, more fruit than the trees ever had on them since they have been growing, and they are densely filled with blooms and young apricots for this season, with one exception, and the exception is a late wild plum which I grafted on the Moorpark tree and which has made a large growth. This plum, taking the major part of the sap, has not left enough sap for the lower branches, and as a result no apricots. I have another Moorpark which has been doing as poorly as the rest, near which a drain and cesspool have been placed and this tree is loaded with blooms and fruit this year, and I am inclined to think that the Moorpark needs irrigation and manure. If these are not at hand butcher your trees. Try half a dozen this year and see what the result will be next. Cut away *one half at least*. I have 25 or 30 that I budded last year and the lower branches are a mass of bloom and fruit now (April 24th), and I will be pleased to show the result of what I write about to any who call at the ranch.

Sometimes we have to set our theories aside. We reason that if you prune a tree hard, or butcher it, it will drive the tree to making wood instead of fruit, but the Moorpark does not do this. [illegible] the trees I cut last spring I budded into the young shoots in the summer [illegible] as the buds were set I cut the Moorpark growth off so I was virtually pruning the trees all summer. Sometimes we get results we cannot reason out, and this reminds me of a joke on the rancher. One year the linnets came out of the valley in great numbers; they ate up all my apricot buds and promised to stay all summer and finish my nectarines and peaches, so I planted Egyptian corn among my fruit trees thinking they would prefer the grain, but the result was they brought all their friends and ate up both corn and fruit.

HINTS ON GRAFTING.

Buy a small chip basket, 10x18 inches in size, tear one lid off, take a piece of your old duck overalls and cover the bottom and sides to keep the dirt from getting in, also to keep your basket from wearing. I cover my fruit-picking baskets the same way, and they last several years. Sew on the side of your basket the corner of a pasteboard box, and into this slip a box of matches, and on the other side of your box sew a larger piece. Into this box put a California curved-pattern pruning saw. They are shaped like the segment of a circle, are the best pruning saws I ever used, and, as I think, the only good ones. It cuts by pulling to you. Then you need a chisel to spread your cut while you insert your scion; a small oak mallet; knife for cutting your scions; and one for splitting large limbs; half of a tomato can containing water; and a cotton towel wet and wrapped around your scions. Carry these on your basket on the lid end, with some paper and a lead pencil, and as soon as your scions are put in, state position of tree in the orchard, variety or varieties of graft. If two varieties, mark one in the bark with a letter or hieroglyphic and make a note of it in your book; also note condition of scions and tree, also date of grafting. I use a tin saucepan to melt my grafting wax in. First I take a five-gallon coal-oil can and cut out the side and a V-shaped piece out of the top. Then I put a small incubator (tin) coal-oil lamp in the bottom, using a tin chimney. Fasten (with wire) a little shelf near the top of the can, cutting out a large hole, and set your grafting wax on this shelf. Then take the top of a coal-oil can and hinge it to your can in front of your lamp, and this makes your door to keep the wind from blowing out your lamp. Use a brush to apply wax. Heat it, but not too hot. I cut my scions by holding the limb in one hand and cutting from me. When grafting a large tree, I cut my scions first and put them in my tomato can, then saw off my limbs, pare them smooth, split and insert my scion, and then wax. If the wax is not smooth enough to suit, moisten with your finger (to keep the wax from sticking), and smooth it to suit.

Apples, pears and prunes are easily grafted; peach and apricot scions are harder to get to unite. I have had the best success in late grafting, after the tree is in full bloom, or even past that time, and will say I have seen more failures here from early grafting, the scion drying out before the flowing of the sap than from any other cause. Some varieties do not unite well. Almonds will not do well on apricots. They grow a year or two and blow off.

Apricot is the worst root I know of for prunes, yet if you have large apricot trees, you can graft them to prunes. They unite well, and will bear all right.

THE VINEYARD.

Resistant Stocks and Desirable Wine Varieties.

At a meeting of the Winegrowers Union in St. Helena recently, a report on resistant vines, grafting etc., was made by Mr. E. P. Palmer, who in company with E. Zange and F. Kraft, made a tour of inspection through the vineyards of Napa and Sonoma counties in July 1890, to investigate the condition of resistant stock planted, was called upon and made a report, covering all points of interest to winegrowers at this time, as follows:

The Riparia and Lenoir are the only varieties which are being extensively planted. Riparia is the favorite on account of its adaptibility to all kinds of soil, doing equally well on hillsides as bottom land; on sandy or clayish, gravelly or loamy soils. This has been practically demonstrated in Sonoma valley by an experience of eleven years, particularly in the reinstated vineyard of Messrs. Dresel & Co., (comprising some 140 acres or more) who are the pioneers in resistant stock, importing the Lenoir and Riparia in 1878, together with several other varieties. They use only the Riparia for reasons enumerated.

The Lenoir is adapted for free soil, having good depth whether on hillsides or bottom land, and in many localities is a more rapid grower than Riparia, although the experience of Messrs. Dresel & Co. has proven that at this time the varieties grafted to Riparia and Lenoir several years ago appear more vigorous on Riparia roots than Lenoir.

Both varieties have proven resistant under ordinary favorable circumstances. I have heard at times that neither were resistant and again at different periods that Lenoir was destroyed by phylloxera. I have been unable, after a thorough canvass of Napa and Sonoma counties, to find an instance where either variety has been killed, except when grafted too low in the ground and roots from the graft were allowed to grow, starving the resistant stock and absorbing all its nourishment. Phylloxera would then attack the roots and kill the vine.

Resistant vines should not be grafted below the surface of the ground but from one half to an inch above, and mound the earth up to the top of the scion, leaving not more than one bud exposed.

What to graft is a very important consideration with all vineyardists. To improve in quality and yet secure a profitable yield without sacrificing quality to quantity, at the same time growing short pruned varieties, thereby saving stakes and tying.

There are a number of light bearers, both red and white grapes, which make a high type of wine, but the average wine maker can not afford to grow them.

After consultation and correspondence with many of our best informed winemakers in different localities, I am led to believe that for hill land and locations where grapes ripen early, that the Mondeuse is a poor man's as well as a rich man's grape. It is a very heavy, regular bearer; makes a good wine; has good color and is short pruned.

Beclan is highly recommended as a beauty for quantity and quality every year. It is not subject to sunburn or coulure; ripens well, attains high sugar, makes a soft, mellow and beautifully colored wine; is a good regular bearer, not as heavy as Mondeuse but makes better wine. It is not adapted for heavy soil as it loses color. A short pruner.

Serene, called by C. C. McIver, Esq., of the Linda Vista vineyard, Mission, San Jose, the "Unknown," was imported by him from Europe eight years ago for the Petite Sirrah, but it proved to be a different variety. It is a very heavy bearer, excelling his other varieties (of which he has a large number) a short pruner; makes a very fine wine, intensely dark and beautiful and retains its color for years.

Carignan finds favor with many. It is a good bearer, makes a good wine, although subject to mildew, otherwise hardy, withstanding heat and rot; a short pruner; too well known in this vicinity to require minute description.

Alicante Bouschet and St. Macaire are the standard coloring varieties; good bearers; yielding an intensely dark colored wine. As a wine by itself, Alicante Bouschet is preferred by the majority and St. Macaire to blend, although both are much used. Every vineyard should have a small proportion at least of one or the other. They are short pruned like the Carignan and do well in almost any soil.

Sauvignon Verte, which is now in most of our vineyards, considering quantity and quality, is as good as any variety; produces a fine wine of the Sauterne type, a good bearer, withstands frost moderately well, requires high stakes and is too well known to require further description.

Semillon, also of the Sauterne type, is a good bearer, not as heavy as the Sauvignon, but makes what is considered by many a finer wine, and one more sought for by the dealers.

Green Hungarian is but little known. It is recommended by Professor Husmann (an experienced, practical viticulturist and wine maker, who has been identified with grape growing and wine making interests of Napa and Sonoma counties for many years) as a strong grower, heavy bearer and making a fine wine much resembling the Riesling; short pruned, hardy and not affected by the sun.

All the foregoing varieties can be seen fruiting at my vineyard this Fall. The Serene and Beclan, grafted into old vines this spring, the others mostly last season.

I have grafted these various kinds, as well as many others (that I did not have already in my vineyard) into old vines to determine their adaptation to my locality and soil, productiveness and color, hardiness and exemption from heat, rot, coulure, etc.

Mr. Krug was asked his opinion and stated that there was no question but that the Riparia stock is the best, although the Lenoir has never been ruined by phylloxera. He said he had Lenoir stock 11 years old perfectly healthy. Mr. Krug also recommended all to graft one-half to white varieties and the others to red.

POULTRY YARD.

Relative Merits of Different Breeds.

LODI, SAN JOAQUIN CO., May 2, 1892.

TO THE EDITOR:—It has been so often repeated that for all "around purposes" the Plymouth Rock has no superior, that it may be deemed rank heresy in any one to advance anything differing from this, but my experience and my observation have not led me to any such conclusion, and at the risk of being thought an unorthodox poultryman, I must venture to differ from this apparently almost general belief.

We are too apt, as a general thing, to accept and adopt the opinions of others without proper proof of their real merits; some because they have no real interest in the matter and had as soon believe that as anything else, and many because they are willing to accept the decision of those whom they believe to have knowledge and experience.

I am willing to admit that the question of locality and "manners and customs" of the person enter largely into the consideration of the matter, because certain climates and certain style or manner of keeping, while suitable for one breed would be altogether unsuitable for another of dissimilar habits and requirements. Leghorns or any of the game breeds, kept and treated as Plymouth Rocks or any of the large Asiatic breeds should be to obtain profitable and satisfactory results, would go far to convince their keeper that they were not a desirable breed to keep and he could not be made to know wherein their superiority consisted, while under proper treatment and proper surroundings, their superior merits would be abundantly manifest.

Before we concede the palm of superiority to any one breed we should know that they have manifested it under all conditions that obtain in the general care and keep of fowls, and the Plymouth Rocks have not done this, at least so far as my observation goes. It cannot be denied that for a table fowl, all things considered, they are the most desirable, and a coop of Plymouth Rocks in prime condition, of uniform size with bright plumage, clean looking yellow legs and bright red combs, is a sight to tempt a buyer, or when nicely dressed and exposed for sale, the rich yellow, juicy-looking carcass is very tempting. But in this matter, if one could get over prejudice in favor of a yellow-skinned fowl, he would find that under the white skin of a Langshan as tender, appetizing flesh of a rich and racy flavor would be found as under the yellow skin of any Plymouth Rock—if, of course, they had been equally well kept and got into market in equally good condition.

The Plymouth Rocks are so far of the nature of game fowls that it is a difficult matter to keep them within certain given bounds, even though they should be of a large, heavy strain, as they will fly equal to Spanish or Leghorns and are as great rangers and foragers, but are hardier and easier to raise than Leghorns. As egg producers they do not compare at all favorably with the Leghorns or Langshans, laying smaller eggs than the Leghorn and not so many of them during the season, being also of a slightly dark cast verying from pale pink to light brown. It is not claimed for them generally that they will equal the Leghorns as layers, although they have their advocates also in this direction, but for a table fowl they are, it cannot be denied, altogether superior, and did one find their principal profit in raising fowls for market they certainly have much to recommend them. There is, however, comparatively little profit in that branch of "chicken ranching," and eggs, large, fine, white-shelled eggs, and plenty of them, is therefore the thing to be principally desired, and the Langshan, while fully as good a table fowl as the Plymouth Rock, is a much better layer. The eggs are, however, darker than the eggs of the Plymouth Rock and in that respect hardly suit our market as well, perhaps, as the whiter colored ones, although really a much richer and more nutritious egg. This fact is so well known to housekeepers as to have given rise to the saying: "If you want an egg for an omelette or to fry or boil take always a dark colored one, but if for cake or a light froth then a light colored one." Should you test the matter fairly you will find much of truth in it, and that for richness and substance the dark one is far ahead of the lighter colored one.

My Langshans have done for me better in eggs than my Leghorns, inasmuch as they have laid fully as well during the spring and summer and altogether better in the autumn and winter, which cannot be said of the Plymouth Rocks which are on the whole shy layers, while the Langshans are fully as large and take on as good a condition and were it not for the prejudice against white skin and black legs would be found equally desirable.

While saying what I have, it is proper to state that one will find almost as many strains or breeds of fowls of any one variety as there are poultry yards, each yard apparently having some pet fad of its own and desiring to introduce some valuable quality or striking peculiarity, and so they will be found to vary much in form and size and in laying qualities. I have been shown fowls no larger than Black Spanish or Black Leghorns whose owner and breeder claimed for them a clear pedigree as pure Langshans and as such had exhibited them at one of our county fairs, and he, perhaps, was right, only in the place of having bred for size as the desideratum he had looked to the development of some other quality while, perhaps, keeping the blood pure.

I have bought Plymouth Rocks from three yards East and from two yards in California, each differing from the other markedly in size and form but undoubtedly all pure blood Plymouth Rocks, and so it may be seen that although, perhaps, equally pure, some yards may furnish a better strain for eggs than some others, either in Langshans or Plymouth Rocks, but taking things as they are, the Langshans, to my perceptions, have established their superiority as an "all purpose" fowl. The chicks are hardy and easily reared and, as well as the grown fowl, stand extremes of heat or cold much better than the Plymouth Rock.

T. B. GEFFROY.

THE HOME CIRCLE.

Alone With Conscience.

I sat alone with my conscience,
In a place where time had ceased,
And we talked of my former living,
In the land where the years increased;
And I felt I should have to answer
The questions put to me,
And to face the answers and questions
Throughout an eternity.

The ghost of forgotten actions
Came floating before my sight,
And things that I dreamed were dead things
Were alive with a terrible might!
And the vision of all my past life
Was an awful thing to face,
Alone with my conscience, sitting
In that solemn, silent place.

And I thought of a far away warning
Of sorrow that was to be mine,
In a land that, then, was the future,
But now was the present time;
And I thought of my former thinking
Of a judgment day to be;
But sitting alone with my conscience
Was judgment enough for me.

And I wondered if there was a future
To this land beyond the grave?
But no one gave me an answer,
And no one came to save.
Then I felt that the future was present,
And the present would never go by,
For 'twas the thought of my past life
Grown into eternity.

Then I woke from my timely dreaming,
And the vision passed away;
And I knew that the far away warning
Was a warning of yesterday.
And I pray I may not forget it,
In this land *before* the grave,
That I may not cry in the future
And no one come to save.

And so I have learned a lesson
Which I should have learned before,
And which, though I learned in dreaming,
I hope to forget no more.
So I sit alone with my conscience
In a place where the years increase,
And I try to remember the future
In the land where time will cease.
And I know of the future judgment
How dreadful so e'er it be,
That to sit alone with my conscience
Will be judgment enough for me.

—London Spectator.

A Resurrection.

It was a typical Easter morning, whitely brilliant with sunshine, and filled with the soft air that sometimes comes in early spring.

John Amory felt its influence as he walked through a narrow street in the older part of Boston, swinging his cane like a boy, and whistling in reckless disregard of the Sunday quiet of the place. He was a very handsome man, with a dark, brilliant, Southern face, and black eyes with a latent fierceness of expression in them which made people a little afraid of him. But he was not tall enough to be noticeable, although he was very well built, with a finely developed chest, and an alert, firm way of holding himself.

He was coming to see a former friend of his, David Warner, an artist, whose studio looked over the river at the back of one of the sober old houses Amory was passing He was coming to ask his friend's forgiveness for a wrong he had done him, and which had broken a friendship whose perfectness and nobility it is rare to find, even among men.

The thing which had parted these two had been petty in itself—such a little, little thing it seemed, looking back at it all, but in their blind anger they had magnified it until it became enormous, and each said things the other declared it impossible to forgive.

And so the time dragged on, until one day David came up to Amory, holding out his hand and saying, "It was all my fault, old fellow; will you forgive me?"

But Amory had repulsed him bitterly, with harsh, scorching words, and they had not spoken since. He never forgot the hurt look that crept into David's face, and the contempt which blazed into his usually gentle eyes as he turned away. For the fault was mainly Amory's, and when the latter calmed down, his recognition of this fact and his remorse goaded him into positive fury whenever he saw the man who had been his friend. He was a man whose violent passions left him no middle course of feeling toward any one in whom he was interested; but he must either vehemently love or vehemently hate.

Several months passed by in this manner, until, the night before this Easter morning, he resolved to put an end to the battle raging in him between his false pride, his insane anger and his better nature, and he spent hours writing incoherent letters to his friend, and tearing them up in disgust. It was useless—he could not write what he wanted to say—and so he had hurried here, eager and determined to humble himself.

And yet he could not bring himself to enter the house. A cross street ran by it to the river, where it ended in a tall iron grating, against which he went and leaned in an agony of irresolution, looking up at the windows of David's studio. He saw him come into the light, and stand with his back to it, holding out before him a canvas which he examined intently, with his head on one side, and which Amory fancied was the completed portrait of himself from a sketch David was making at the time of their quarrel.

A lump rose in his throat, and he turned, and looked down at the river.

After a few minutes he said, half aloud: "Confound it!" I can't do it!" and began punching holes viciously in the gravel with his stick.

Just then he heard the street-door bang, and he looked up and saw his friend coming down the steps. He drew back, and waited till he had gotten some distance down the street, and then followed.

David Warner was a very tall, slight man, with stooping shoulders, and wearing a beard a little darker than his fair hair. His small, clear features were of an almost feminine delicacy, but his face, nevertheless, was strong and manly, and the dreaminess of his wild, gray eyes was balanced by his firm mouth.

Intrinsically, his character was weaker than Amory's, but his control of will power and the high principles by which he ordered his life brought out the points in him which were obscured in Amory's character by his waywardness and impetuosity. But David's quiet, practical goodness had had a tremendous influence on Amory, and was now drawing him, in spite of himself, to the point where the barrier he had raised between them was to be broken down.

And so he followed David, half defiantly, on and on through the Public Garden with its fresh, earthy odor of spring, and up the avenue, bright with sunshine and the faces which could not help looking happy on such a morning, and so until they came to Trinity Church.

Amory forgot to scoff at himself for going into a church, as he went unnanounced among the throng of people after David, and up the stairs into the gallery, where he watched him seat himself in the front row and kneel for a few minutes, with his head bowed over his clasped hands. The light streaming in through the stained glass window lay in broad bands of purple and red and gold upon his figure and made a glory of his fair hair. And Amory felt, suddenly and bitterly, how far away and how high above him he was. He made a movement to go out.

But he sat down in the shadow, so that he could get a good view of David's face, and waited.

The service had not yet begun, and below there was a constant stream of people pouring in, the women looking their prettiest in their dainty spring gowns and their flowers, and the men in their immaculate clothes and patent leathers and their shiny top hats. They were such a rich, prosperous, self-satisfied looking crowd that Amory shrugged his shoulders impatiently.

But gradually his restless soul grew calm and uplifted with the vague influence of the organ rolling its grand, solemn chords through the vast church, and the waves of fragrance stealing upward from the Easter lilies standing in the dim, rich chancel.

And now, as he watched his friend's reverent face while the service went on, all the bitterness and anger flowed out of his heart, and he burned with shame for the miserable pettiness of it as he had never done before.

Absorbed in his thoughts, he had not noticed that the minister was almost through his sermon, until he, too, was roused into attention by the marvellous eloquence of the man who is able to hold people breathless before the infinite divinity, and the sweet humaneness as well, of the message he is called upon to deliver. And these were the words he heard:

"Oh, my dear friends, you who are letting miserable misunderstandings run on from year to year, meaning to clear them up some day; you who are keeping wretched quarrels alive because you cannot quite make up your mind that now is the day to sacrifice your pride and kill them; you who are passing men sullenly upon the street, not speaking to them out of some silly spite, and yet knowing that it would fill you with shame and remorse if you heard that one of those men were dead to-morrow morning; you who are letting your neighbor starve, till you hear that he is dying of starvation; or letting your friend's heart ache for a word of appreciation or sympathy, which you mean to give him some day, if you could only know and see and feel, all of a sudden, that 'the time is short,' how it would break the spell. How you would go instantly and do the thing which you might never have another chance to do. . . . Oh, you who are waiting until each day you live makes it harder, go now, and let this beautiful Easter morning be a resurrection of your better selves!"

The great preacher stopped, and there was a short silence, followed by the subdued rustling and stirring and coughing which is inseparable from the end of a sermon.

Amory leaned forward and looked at David, with his hands stretched out on his knees, his lips slightly parted, and his eyes filled with the mightiness of a man's yearning for his friend.

And David looked up and saw him and knew that the thing which had parted them was gone forever.

Then Amory got up and went over to his friend, and laid his hand very gently on his shoulder.

"Come," he whispered.

And they went out together, unconscious of the curious glances of the people about them, feeling only that they had forgiven each other, knowing only that their friendship had come back to them stronger and more perfect than before.

But only one among those people understood. That was a young girl, a slender, childlike little thing, with a sweet, serious face and shy brown eyes.

And her name was Esther Warner, for one of these men was her brother and the other was her lover, and she had waited, saying no word, trusting implicitly that her lover's better nature would triumph in the end.

So she whispered over and over again to herself, with happy tears in her eyes, "I am so glad, oh, I am so glad for them!" as she knelt during the benediction.—Mary Winifred White, in American Cultivator.

Mattie's Soupbone Week.

Part III.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

In the little California town where Mattie lived, the cooking "fad" had not attracted much attention; much less had there been any lectures or lessons on the subject. Music, painting, "Spanish," and all sorts of fancy work, was "the thing," femininely speaking. Interest, rivalry in cooking was confined to the cakes, ice creams, pickles and salads served—exhibited—at the "teas" and "socials." Mattie was like the rest; rivalry in dress, fancy work, all the elegant accomplishments, with as little thought about cooking, now she was married even, as possible. Hence she had always got the most expensive cuts of steak—they could be cooked quickly; the highest priced roasts—they were tender, good, more or less juicy, no matter how she neglected the "basting." And she thought she must have a seven or eight pound roast to get "rare done" for Tom; so, afterward, it was cold roast *ad nauseum*, or else a lot went to waste.

If Mattie had not loved Tom so unselfishly, she counted nothing hard that made home attractive for him, she could not have learned so much. Yes, she was an apt pupil of an excellent teacher.

"O, Miss Hetty," she cried, "How could I have got along without you? You tell me things in a way I can't help learning—my brain just gets to buzzing with ideas. Why, it's as funny, as interesting, as studying chemistry, and as fascinating as fancy work for our fair, when we contrive all sorts of things out of all sorts of scraps."

"I have just opened your eyes," Miss Hetty would answer, "that is all. Your bright head and deft hands have done the rest. There was a philosopher who said a man can only see that which he brings with him, the power of seeing or something like that. You, I have observed, never sensed—noticed—the household hints in anything you read or heard, only about dresses and fancy work—things to fuss up parlors and bedrooms, and make them look like curiosity shops. But don't *ever* stop studying cookery as an art—a science. Realize how much your husband's being, his moral nature even, has to do with what he eats—is influenced by it. You'll know what I mean better when you are older, more experienced. But now let some things showy get crowded out, that you may not only learn skill and economy in this, and so better please your husband, but so that whenever you are able to keep a girl you'll know just what's what, and can't be run over and imposed upon. Girls with mistresses who know little about cooking, specially about its economies, are very tyrannical and terribly expensive. Their wages and board are not the sum of all their cost."

"O, I know it," cried Mattie, enthusiastically. "I begin to see that what I am learning is going to be worth dollars and dollars to me in the future. I had before sensed, practically, what a writer on dressing called 'the smartness of simplicity.' Now I begin to see that *good* cooking doesn't necessarily mean *rich* cooking, expensive cookery, not when there's brains and taste back of it. And as for Tom"——

"And what's the matter with Tom?" asked that gentleman, unexpectedly entering the dining room where Miss Hetty and Mattie were sitting.

"Why, Tom, I didn't know you had come. How did you happen to be home so early Saturday night? Dinner isn't quite ready."

"Most, I hope; I'm hungry. Must hurry back. Got an agent there this evening, and had to come now while he was at another store."

"Well, said Mattie, cheerfully, jumping up, "I think things will be ready soon."

"But what's the matter with Tom?" asked that gentleman again, following Mattie into the kitchen.

Mattie laughed. "O, I was just going to tell Miss Hetty what you said this morning."

"Don't go," said Tom to Miss Hetty, who was folding up her knitting work, "and I'll make my little speech over again for your benefit. I was figuring over with Mattie about these experiments and experiences of hers, this morning, and I told her that while I couldn't honestly say but that I liked a porterhouse steak and a rare-done tenderloin roast as well as ever, I wasn't ashamed to acknowledge that I had been inclined to over eat on them—was altogether too much of a carnivora in fact; and I said that I found, on these tasty, lighter dishes of hers, I had felt clearer-headed, not so dull and stuffy, as after a succession of hearty, hot meat meals. So, I found there was such a thing as having too much of a good thing. And I told Mattie she'd done splendidly; I was proud of her. And what she was learning made me think of what my mother once said, that, as a rule, getting along well, financially, in married life, depended more upon the woman than on the man; there are so many ways for a housekeeper to let things go to waste. Of course, that doesn't count drunks and misers for [illegible] spendthrifts," interposed Miss Hetty, dryly, "nor speculators, nor men who spend all their spare cash on billiards, or cards, or"——

"Hold on, please," cried Tom, laughing. "Circumstances being equal, you know. And so I told Mattie that if we did get along well, paid on our place right along, and made improvements every year, I should credit it to her, and what she learned during our *week of soup bone*."

"Milkmaids."

Ik Marvel, in his "Wet Days at Edgewood,' spends the humid hours in his library. He pores over the vellum of antiquity, and finds that the Greeks and Romans knew quite as much about farming as authorities ranked competent in these days, and he cites passage after passage which reflects admirably their common sense in the management of everything pertaining to farm life. He follows this bucolic vein down through the older French and English poets, till, among the charming metamorphoses which his reading effects, he tells us, "through the prism of their verse, Patrick, the cattle-tender, changes to a lithe milkmaid, against whose ankles the buttercups nod rejoicingly, and wakes all Arden with a rich burst of laughter."

This is the milkmaid of tradition, says Mrs. Frank Crosby, picturesque, songful and laughter-loving, whose praise, coming down the centuries, has reached us through the notes, "oaten stop or pastoral song."

She it is whose meridian glory was, doubtless, in the seventeenth century, the day of castes, processions and pageants, whose customs and costumes we ape now on the stage, in tableaux, the carnival or fancy ball. She it is whom Milton, of that period, mentioned in his "L'Allegro" in this connection:

"The swain responsive as the milkmaid sung."

She is one the birds at their matins missed after the cruel "Sack of Baltimore."

"Midsummer morn, in woodland nigh, the birds
begin to sing,
They see not now the milking maids, deserted in
the spring."

Lines like the following portray her image:

"I see the pool, more clear by half
Than pools where other waters laugh
Up at the breasts of coot and rail.
There as she passed it on her way,
I saw reflected yesterday
A maiden with a milk pail.

"There, neither slowly nor in haste—
One hand upon her slender waist,
The other lifted to her pail—
She, rosy in the morning light,
Among the water daisies white,
Like some fair sloop appeared to sail.

"Against her ankles as she trod
The lucky buttercups did nod."

Or these:

"I met a maiden with shining locks,
Where milky kine were lowing."

"She wore a kerchief on her neck,
Her bare arm showed its dimple,
Her apron spread without a speck,
Her air was frank and simple."

"She milked into a wooden pail
And sang a country ditty."

* * * * * * *

And all the while she milked and milked
The grave cow heavy laden.
I've seen grand ladies plumed and silked,
But not a sweeter maiden."

"But not a sweeter, fresher maid
Than this in homely cotton,
That pleasant face and silky braid
I have not yet forgotten."

What are the songs she sings? Here are bits from one by Sidney Dobell, which represents the course of her thought while the streams of milk beat time till the pail is brimming:

"Fill, fill,
Fill pail, fill,
For there by the stile stands Harry!
The world may go round,
The world may stand still,
But I can milk and marry,
Fill, pail,
I can milk and marry.

"Give down, give down,
My crumpled brown!
And send me to my Harry.
The folks o' towns
May have silken gowns,
But I can milk and marry,
Fill, pail,
I can milk and marry."

Rarely is anything crystallized in verse sweeter than this, which the old mother recalled as the last song of her "sonne's faire wife, Elizabeth," which she heard echoed back from the shores of Lindis, as she sat spinning within her door:

"Cusha! Cusha! Cusha!" calling,
"For the dews will soon be falling.
Leave your meadow grasses mellow,
Mellow, mellow.
Quit your cowslips, cowslips yellow!
Come uppe Whitefoot! Come uppe Lightfoot
Quit the stalks of parley hollow,
Hollow, hollow.
Come up Jetty, rise and follow;
From the clovers lift your head!
Come uppe Whitefoot! Come uppe Lightfoot!
Come up, Jetty! rise and fol'ow
Zetty, to the milking shed."

In adjusting ourselves to changed conditions, much is modified, and much is lost which has not a pecuniary value. Since the steam era began, the romance of dairy-farming as well as of travel, has been taken away. In old England, fast outgrowing her old-time sports and customs, the milk-maid has been one of the last to yield her place. A few years ago, in London, the only trace of the old custom of going a Maying were the garlands of the milkmaids and the Jack-in-the-green of the sweeps. The garland (so called) was made of silver plate, borrowed for the day, and fastened upon a sort of pyramid. Accompanying this droll garland were the maids themselves, in gay dress, with ribbons and flowers; and attended by musicians, who played for them to dance in the streets. Sometimes a cow was dressed in festive array, with bouquets and ribbons on her horns, neck and tail, and over her back a net stuck full of flowers. Thus highly ornamented, the meek creature was led through the streets.

A sad coming down, indeed, from the time when the milkmaid assisted at the festivities around the May-pole in her native village, when lords and ladies, as well as king and queen, laid aside their state to rear its leafy crown! From what has been cited, we may see that we can predicate of the representative milkmaid very enviable qualities. She was frank, simple, comely, rosy-hued with health, graceful, tidy, contented, sweet-tempered and lively, industrious, honest, persevering, devoted to business, proud of her calling, tenacious of purpose, duly ambitious, all of which she could hardly have been had she been avaricious. She has never been naturalized on American soil any more than have the skylark and the nightingale, nor is she the exact prototype of the dairywomen—the farmer's wife and daughters and the "hired help" (barring the foreign element)—that till more recent times, sustained the credit of the dairy interest in this country. Our dairy woman added a large intelligence to the good traits enumerated, and was more likely to be heard singing religious or patriotic songs daily, for her training led her to believe she owed an abiding loyalty to God and her country.—Western Rural.

YOUNG FOLKS' COLUMN.

In Charity.

Written for the RURAL PRESS by ADAH FAIRBANKS BATTELLE.

DEAR DEB—Don't work so hard that those poor eyes of yours will ache. School goes well though we had a fearful history exim. O! Deb. I heard that Mrs. Nichols cuts everyone who calls on her new daughter-in-law. The upper ten aren't all angels, are they? I'll be at the door to walk up with you this evening. In haste—LOTTIE.

With a little sigh Deborah read the characteristic note from her impulsive sister. Why did Lottie persist in repeating such unkind remarks as the one regarding Mrs. Nichols? They gave the mild Deborah a feeling of aggravation. Each word of slander was to her like a porcupine quill.

She put the note in her pocket as the lady for whom she was sewing entered the room. Mrs. Eaton was imposing in appearance and she carried herself with the dignity of an arch duchess.

"You have sewed for Mrs. Nichols, have you not?" she asked as she tried on the basque which the young dressmaker had basted together.

"Yes, I sewed there for some time last fall," replied Debby.

"And are they pleasant people? Did you like them?" patronizingly.

"I was very kindly treated," said Debby with quiet dignity.

"A dressmaker has such good opportunities for seeing how the domestic machinery runs. I have heard that Mr. and Mrs. Nichols are not turtle doves and it's well known that she turned her son out of doors after he married Madge Smith, such a pretty girl and so stylish."

Mr. Eaton paused and glanced at the little dressmaker, but not by the movement of an eyelash did that person assent or deny.

"It sems so horrible not to receive one's daughter-in-law, not to give her a reception or—or anything. But no one blamed Mrs. Nichols very much for Madge's mother is *such* a queer woman. I suppose she is good enough, but such a queer old creature."

"Yes, she is very kind hearted," returned Deborah demurely. "No one minds her odd ways when once her kindness shows itself."

"Yes indeed" quickly replied Mrs. Eaton, "I had rather go to her for a favor, queer as she is, than to that Miss. Roddan who puts on so much dignity. She knows how to snub people because they are not rich, and her parents are just as plain as anybody."

"I sewed there this month" said Debby "and she was very pleasant. You are not really acquainted with her, are you? She is very bright, a real artists beside being a good pianist. And she talks well on any subject. Over at Oakville where she taught German, they say they never had a teacher with so good an accent." Deborah's enthusiastic way was so convincing that Mrs. Eaton added to the list of good qualities, "What a pretty figure she has."

"There's Miss. Weston," said Debby as a tall girl passed, walking rapidly.

"I wonder if that girl knows how people talk about her?" mused Mrs. Eaton. "Why Mrs. Justin told me only the other day—"

"Mrs. Eaton, people don't understand Winnie Weston. I went to school with her and I know she is an excellent girl. She likes to go and have a good time and she hasn't a brother to go with her. People ought not to talk against her, Mrs. Eaton; she has no mother to go to, you know."

"Can you cut the bell skirt?" asked the lady abruptly.

"Yes ma'am. What do you want made in that way?"

"The brown suit, I think, and I want the basque surplice in front; the kind that is fastened at the front. What kind of suits do you prefer to make?"

"I make all kinds, but I prefer whole dresses, those with skirt and waist together. It is a satisfaction when they are done, to know that the weight hangs on the shoulders where it belongs. Don't you like dresses made on a princess lining?"

"I don't know but I do. They are graceful. Don't you find that most people prefer skirt and basque separate?"

"Many do. When I make those I sew the skirt to a waist made of the lining. Then they hang from the shoulders."

Mrs. Eaton laughed. "You ought to be one of those health dressmakers—what do they call them—the ones who make dresses in the Greek style and don't fit them over corsets. But people will always wear tight clothes."

"Perhaps not always," remarked Deborah, and worked on silently and swiftly.

"How fast you work," as the pieces were advancing toward completion. "Don't you get tired?"

"I make my work a rest by changing. First I cut, then baste, use the machine, make button holes, then go back to cutting for variety. Resting is doing different sorts of work."

Mrs. Eaton laid her hands idly in her lap. "I can't rest your way," she said smilingly.

"Didn't I see Mrs. Kitty Marcy wear one of those Greek suits?" asked Mrs. Easton when the brown suit was being fitted.

"Yes, a black one. She is so tall and slender that she looks fine."

"Nothing she could wear would make her look pretty to me. Since there was so much said about that divorce suit I don't even want to hear about her. I can't see how a woman can bear to make herself so conspicuous."

"Why, you don't blame her for leaving her husband? Think of her children. She would have put up with his drunkenness and neglect, but she could not see her children suffer. And he whipped them so cruelly. She is devoting her life to her children."

Mrs. Eaton turned round to say, with a sharp tone in her voice, "I believe you would find excuse for anybody."

"When I am acquainted with a person and know her good qualities I can't bear to hear people misjudge her. You have no idea," in a sudden burst of confidence, "how my work helps me to appreciate people. There are people that you think you would not like, but when you go into their homes and they are so considerate and pleasant, you like them."

Deborah's last three words had all the force of a pledge of friendship from a less candid person. Although Mrs. Eaton was not in the habit of crediting others with good qualities which she herself did not possess, it came to her that something beside Deborah's work brought her so many friends. Being a dressmaker did not make one feel kindly toward neighbors. It must be something in the girl herself. The appreciative way was a sort of sunshine which Mrs. Eaton missed. Deborah put away her work and went home for the night.

It was a happy family that gathered round the student lamp in the Hill sittingroom. After the children were helped to prepare their school lessons for the next day, there came an hour of reading aloud. Mr. Hill chose some interesting author and many were the works read together in the family reading circle.

For the time, Deborah could forget her trials. If she had been older and wiser, she might have been deaf to gossip. This she had not learned to be, and her conscientious nature was daily hurt by cruel reports about people who were nothing to her. To them she was a dressmaker.

For some time to come, Deborah was to be at the large house near the bridge. So much work at one place was not easy to find, and as Mrs. Eaton paid promptly, Deborah was glad of the place. To be sure, there were drawbacks. Debby must constantly hear town gossip, as distasteful to hear as it would have been to the victims of the unkind discussion.

Unlike her sister, Lottie had a faculty for picking up bits that she called "news." She remembered them usually because they were funny, for Lottie had a keen sense of the ridiculous. From some perversity in her nature Lottie often went to Deborah with these nettling rumors. She did not confide them as information but let fall the anecdote in its most ridiculous light where Debby could but hear it. In vain Deborah remonstrated. Lottie protested that thereafter she should consider all mankind angelic. If anyone told her of the Prince of Wales gambling she should say that it must be a mistake, probably he only played casino occasionally for pastime. But Lottie's extravagant promises only meant that she would go on hearing and repeating to her sister.

It was late one night when Lottie pranced into the bedroom anxious for a romp. After gesturing wildly toward an imaginary Desdemona, Lottie came toward the bureau with uncertain steps, and wildly grasped for the nearest support. "That is the way Mrs. Eaton's son walks."

"Mrs. Eaton's son!" from Deborah, who had just rescued the lamp.

"Yes, he has just come home. He drove past the school-house in fine style to-day. But they say he is—Well I won't hurt your sensitive feelings by repeating it," and Lottie brushed her hair vigorously. "How does it happen you didn't meet him," she asked, as the thought struck her, "were you not at Mrs. Eaton's to-day?"

"No. Mrs. Nichols wanted me for one day and I went there this morning. I am going back to Mrs. Eaton's to-morrow," and Deborah fell asleep thinking that this must be the son who had been away so long.

The next morning early Deborah opened the door to be met by a pale-faced, tearful woman who held out her hand. Deborah grasped the offered hand wondering what could be coming. Mrs. Eaton's lip moved before she spoke. "Can you, will you—will you come and stay with me for a few days? I am in trouble." Deborah laid aside her hat with a resolute motion, then followed Mrs. Eaton to the sitting-room. All the coldness had vanished and Mrs. Eaton put one arm round Deborah while she told her in a broken voice of this son who had come home to break her heart. "He is very sick dear, and I cannot bear to have people know all about it. Oh, the disgrace! Need I have any one know it? If you can stay and take care of the house I can take all the care of my son. Will you stay?" Deborah did not hesitate as she answered, "I will stay while you need me."

"Thank you, dear. You know the house. Don't do too much; if you could cook some little delicate dish to tempt his appetite. He does not eat anything.

When Mrs. Eaton came downstairs Debby was ensconced at the cooking table, stirring. The kitchen had been freshly set in order. "Where did you learn so many things?" asked Mrs. Eaton.

"Oh, housework is a pleasant change from sewing. I like it for exercise, especially if I can roll up my sleeves and go right in."

Deborah did roll up her sleeves and go right in. She kept the house in order and in every way possible relieved Mrs. Eaton of unnecessary strain outside the sick room.

Mr. Eaton cared for his son at night and Deborah knew something of the horror of these vigils from the sounds that came even through the thick walls.

"If we had such a daughter," said Mr. Eaton regretfully to his wife. "She is a wonderful girl and the most charitable person I ever knew," was the response.

"Tell your father and mother," said Mrs. Eaton, "that we will adopt you whenever they can spare you."

Many bright spots came into Deborah's plain life as Mrs. Eaton strove to show her gratitude.

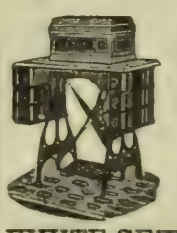
"I feel perfectly safe to tell Deborah Hill all my troubles," Mrs. Eaton said, "for she never tells tales, and she feels kindly toward everybody, especially toward people who are in trouble."

LET the perfect ideal of indissoluble marriage be once definitely rejected by the world, and human society will inevitably fall back to that wallowing in the mire from which the church rescued it. And in whatever degree you tamper with this ideal and derogate from its strictness, in that degree do you demoralize woman. Yes, and man too; for assuredly he speedily sinks to her level. W. S. Lilly.

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PATRONS OF HUSBANDRY.

The Secretary's Column.

Worthy Master Davis writes May 6th: "I am just home from a week of picnicing in the rain. Had a good time, and hope have done some good work for the Order."

By telegraph from E. C. Shoemaker, Master of Tulare Grange, received May 9th, we learned of the death of Mrs. Albert J. Woods of Tulare Grange, formerly of Lodi. Mrs. Woods has been a highly esteemed honorary member of the State Grange for many years.

Temescal Grange, May 7th, gladly accepted the invitation of Master Renwick and wife to attend a fraternal picnic at the Renwick Farm, at Fitchburg, near Mills Seminary, on the line of the electric railway to Haywards.

Hon. C. P. Berry writes from Wheatland, May 9th, that on account of unexpected business requisitions and sickness which has fallen upon his family, it will be impossible for him to fill his appointments in Sonoma county. He appreciatingly remarks that "Past Master I. C. Steele is a host in himself, and if he can meet the people at those places, they will be highly edified and will lose nothing by my absence." Master Davis promised to attend to the vacancy thus occurring in the appointments of Mr. Berry.

The Secretary of the State Grange has just published the late changes in the Constitution and By-laws of the National and State Grange in suitable form for inserting in the printed pamphlet. These amendments will be sent free, on application, to any Grange or member applying.

Sec'y Clara Vignaut of Placerville Grange writes that it is not feasible for Placerville Grange to hold a State Canvass meeting on May 27th. It is hoped that arrangements will be made later for a grand rally of the members of that old Grange and neighboring farmers.

Last year, J. H. Brigham, Master of the National Grange, proclaimed Saturday, June 6th, 1891, as "Children's Day." We presume therefore that the first Saturday in June will henceforth be considered as Children's Day in the Grange. In his proclamation the National Master said: "I sincerely hope that our entire Order will strive to make it one of pleasure and profit to the boys and girls who are growing to manhood and womanhood upon the farms of our country. State Masters are requested to supplement this proclamation and to do all in their power to interest all in the exercises of the day. For good reasons, State Masters may select some other day for their jurisdiction, but it is desirable that all unite upon the day named."

TULARE AND KERN COUNTIES.—We returned Monday from a week's trip to these counties. Found Bro. J. W. Mackie, president of the Tulare irrigation district, very busy. The trustees have a large force of men and teams still at work finishing up their many miles of main canals and distributing ditches. Best of all, water is already flowing through the system, with prospects of an abundance for all purposes soon. Improvements in Kern county are progressing rapidly. Orchards and vineyards are being planted in a thorough manner. The recent work done in and about Bakersfield is quite suggestive of early days of successful Riverside. The asphalt and petroleum fields tributary to Bakersfield are quite likely to soon equal, if not rival, all others in the State. Our acknowledgements are due to Bro. John Twohy and family, and other Patrons and friends for their kindly attentions.

GRANGE MEETINGS.

Appointments in the special State Grange canvass for this week are for I. C. Steele, P. M., and Hon. C. P. Berry in Sonoma county viz: at Glen Ellen, Monday, May 9th; Bennett Valley, Tuesday; Petaluma, Wednesday; Two Rock, Thursday; Sebastopol, Friday; Santa Rosa, Saturday. Grange meeting to be held at 10 A. M., and public meeting in the afternoon.

Next week the appointments are for J. V. Webster, I. C. Steele, and B. F. Walton, at American River, Monday, May 16th; Enterprise, Tuesday; Florin, Wednesday; Elk Grove, Thursday; Sacramento, Friday; Grass Valley, Saturday. Let all farmers turn out and enjoy and profit by the opportunity offered in their behalf. A. T. D.

From the State Lecturer.

LODI, May 8, 1892.

TO THE EDITOR:—After so long a time, I have found time to make a brief report of Bro. Overhiser's and my trip in the north part of the State. After leaving Orland (a brief account of which had been made up to that time in the RURAL), we arrived in Anderson under escort of the friend who had been looking after us for some time that we did not fall into bad company, "Bro. A. D. Logan." At Anderson the trio were met by that valiant Patron, Bro. C. P. Dunham, shown to a hotel for supper, after which we started for Millville, said to be 16 miles, though the writer thought that the surveyor's chain was double the length of the standard; but our pilot brought us safely to port. After a good night's rest, April 25th found us all much refreshed and in a pure atmosphere near the base of a mountain covered with snow. After a brief stroll about town, we were informed that it was time to go to the Grange Hall, the closed meeting being at 10 A. M. A quorum being present, the W. M., Bro. J. L. Nichols, called to order, when the third and fourth degrees were conferred on a class of 13 by Bro. O. and self, concluding with a feast, etc. In the afternoon there was an open meeting, when the hall was filled full. There being scarcely standing room, at least 50 gentlemen had to stand for the short space of 1½ hours, during which Bro. O. and self tried to entertain them, and with all *that* cruelty they asked us to come again, perhaps from courtesy. I am not quite sure but they know best, but nevertheless I think that the Millville meeting was one of the most successful meetings that I have had the pleasure of attending this campaign. The evening was set apart for the young people and members of the Order, and that was well patronized, as Bro. O. can testify. Before leaving Millville Patrons, I desire to say: If there is a Grange in California that is inculcating the principles and teachings of our Order for the edification, cooperation and social features for old and young, Millville Grange is one in the Galaxy.

Tuesday, the 26th, we were taken under the kind care and protection of Bro. Dunham and went to Anderson; tried hard, all of us, to get up a good attendance for an open meeting there, but at the open meeting held in Anderson not over a dozen farmers were present. Perhaps they are all doing well and making money, and under no duress whatever, want no light or information whatever, and in that state of lethargy of which only an earthquake will awaken them. Nothing was done there that was encouraging to us. Bro. Dunham has the faith that there will be a new Grange organized near there before the meeting of the State Grange.

We left Anderson on the evening of April 27th for Red Bluff. Stopped all night at that point and till noon next day, but no meeting and no results, and left there the 28th for Dixon to see what could be done there. On the way from Red Bluff to Dixon we lost Bro. Logan somewhere. He stepped off the train and the train went off and left him. If any Patron finds him anywhere on the line he should be reported. I fear he is indisposed.

Upon arriving at Dixon, could not find a bed in the town, only in a brick building, and we had had some experience in brick buildings recently and were not inclined to accept that kind of quarters, but Bro. Overhiser found an old Patron there, Bro. Dudley, and we accepted his kind offer of hospitality and stopped at Dixon with him. At Dixon Bro. O. and I parted company, and I went to Sacramento and stopped with Bro. and Sister Flint, and the next day returned home. Thus was completed my swing around the circle, and from experience now gained I would suggest that a different system be adopted in the future, that there may be more effective work at less expense, which will be reported to the State Grange.

On Saturday, May 7th, I visited Lockeford Grange and conferred the third and fourth degrees on a class of four brothers and three sisters, concluding with an ice cream and strawberry festival. The membership of this Grange is now over 50 and four more applications were called for at the Secretary's table, which augurs well for Lockeford Grange.

On Wednesday, the 11th, if it does not rain, we will organize a new Grange in San Joaquin county. Grangers' picnic at Clements Friday, May the 13th, and at Linden Tuesday, May the 17th, so I am told, and everybody goes. Fraternally,

J. D. HUFFMAN.

Land-Clearing Contracts Wanted.

If this should come under the notice of any person having land-clearing to do in considerable quantity in California, either brush, stumps, or standing timber, I would be pleased to hear from them, with a view to contracting for the same. Address, Geo. Harvey, California Stump Puller Works, 82-84 Zoe St., San Francisco.

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THIS IS THE ORIGINAL
THIS IS THE ONLY MOWER
WORTHY OF THE NAME

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And you will get the Best Mower on the Market and Which has been sold on this coast under that name for years.

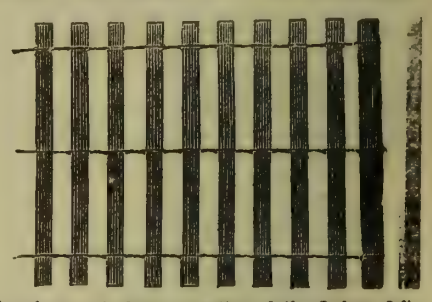
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STOCK FENCE!
Cheap, Durable and Effective.

Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to

JUDSON MFG. CO.,
14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.



Rice's Patent
CALF WEANER
—AND—
SUCKING COW MUZZLE.

Prevents calf or cow from sucking themselves or each other. Thoroughly tested and endorsed by all. No hindrance in eating and drinking. No pain. Complete success. No. 1, for Calves, 50 cts. each; No. 2, for Yearlings, 75 cts. each; No. 3, for full grown animals, $1. All postpaid by mail.



FUNK'S PATENT CALF FEEDER.

...calves better than the cow, on prepared feed and all the calf can eat.

No air swallowed; no fingers chewed; no ears sucked. Less trouble; greater success; easy to clean.

Sample Feeder mailed postpaid, $1.00; per dozen, $9.00.

J. G. WICKSON & CO., 3 & 5 Front St., San Francisco.

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Lining Paper of every description for Dried Fruit Boxes.

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BE HAPPY WHILE YOU LIVE, FOR YOU WILL BE A LONG TIME DEAD

To be Happy buy a DANDY STEEL MILL AND A DANDY STEEL TOWER.



We Make the Challenge, Dairy and O.K. Wooden Mills, and a Full Line of Pump Stands, Cylinders, Tanks, Grinders, Shellers, Etc.

With graphite boxes the Dandy Wind Mill requires no oil for years, therefore no more climbing towers, no more oiling towers to break down and injure you or your cattle. Needs no attention and is warranted to last longer than other mills that are oiled, and Will Be Sent to Good Parties on 30 Days Test Trial. If not satisfactory freight will be paid both ways. The Dandy Steel Tower is a Four Corner Tower, the corners being made out of heavy angle steel. The girts and braces are very strong and substantial, and of the very best steel made. It is the most graceful, strong and durable tower on the market, and can be erected in one-half the time of a wooden tower. We will not allow ourselves to be undersold.

Challenge Wind Mill & Feed Mill Co.,
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LOWEST PRICES.
EASIEST TERMS.
LARGEST STOCK.
Oldest Music House.

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DECKER BROS. KOHLER & CHASE,
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ONE HUNDRED THOUSAND!!!

Of what? Of sturdy, thrifty settlers wanted, to occupy the

KERN RIVER VALLEY, CALIFORNIA.

The proposition is this: Here are 400,000 acres of tillable land, 20 acres of which (it all being irrigated) is enough for a farm; 20 times 20,000 is 400,000, and 20,000 farmers with families of five amount to ONE HUNDRED THOUSAND persons. Now, if you will be good enough to read carefully what follows, keeping in mind that it is ABSOLUTELY CORRECT, it may be of value to you or your neighbors.

Four Hundred Thousand (400,000) Acres of Rich Alluvial Valley Land.

ALL UNDER IRRIGATION, ALL FOR SALE.

SOIL A RICH SEDIMENT DEPOSIT FROM TWENTY TO ONE HUNDRED FEET DEEP.

Produces all fruits possible to both the temperate and semitropic zones.
The home of the peach, apricot, nectarine, pear and raisin grape.
Fine farming and stock raising country.
Land ready for cultivation when you buy.
On main line of the Southern Pacific railroad.
Land under the largest irrigation system in America.
Owned by the largest land company in California.

The Kern County Land Co. is the only land company in California that owns thousands of acres of choice fruit land, which can be bought from the owners, by the farmer DIRECT.

No middlemen. No real estate agents. We sell to the farmer and colonist direct. He thus gets the land at a minimum cost.

This Company is incorporated and has a capital of ten million ($10,000,000) dollars. Can give better prices and terms than any other land company in California or elsewhere.

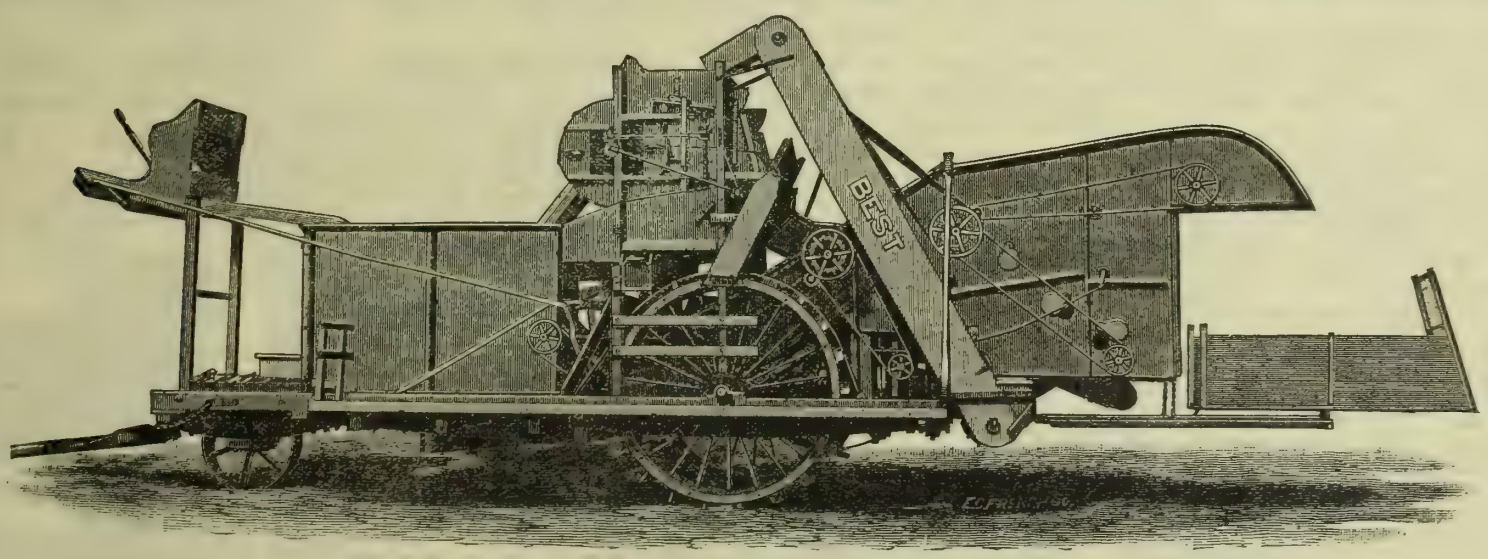
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KERN COUNTY LAND CO.,

S. W. FERGUSSON, Agent. BAKERSFIELD, CALIFORNIA.

AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

FRUIT MARKETING.

A Raisin Man's Plan of Cooperation

C. E. Barnett of Fowler, Fresno county, writes to the *Expositor* as follows:

The raisin men of Fresno county are in a very critical condition as to the proper mode of disposing of their crop the coming season. There are two distinct ways of handling the business.

The first proposition is that offered by the packers of Fresno and other parts of the State, to take the people's raisins and pack and sell them, and not advance the grower any money until they make the sales.

Now, I cannot agree to such a method, because men and corporations nowadays are too tricky to do business on such loose principles. It is all right for the packer, as he is sure of his cash paid out for the preparation of the goods for the market, which cannot be estimated exactly; so he will necessarily have to hold a small percentage, say 10 per cent, until the close of the season, and see how much more expense will be incurred before the work is completed.

Then the packer must have his five per cent commission off before he can make any reckoning to the grower. By the time all these little necessary expenses come off, then the middlemen that handle the goods in the Eastern market must make a good thing out of the business—say one-half—and what the packers and middlemen get, leaves the grower about one-fourth as much for his crop as the wholesale man has to pay for the same.

Let me show you a little point in that kind of business. For example: I deliver 20 tons of raisins on the 25th of September, and they are packed and sold the following day. It will be at least ten days before I get my money. Now, all this time the firm or corporation has the use of the money I should have, and they can use the same for the paying of expense; and my neighbor delivers 20 tons two or three days later than I did. They pack and sell his and give me a check on the bank for my money at the end of 10, 20 or 30 days, just as the case may be.

Now, it is the grower that needs his money just as soon as possible; but the above is the style of commission agents.

My honest opinion is that you had better look well before you take hold of any commission concerns as represented through the press of Fresno.

Another question: What guarantee have you when you deliver your goods to the packing-house that you will ever get anything? None.

Now, if I see right, the grower has all the uncertainties against him, and will have to bear all the burden, heavy or light, while the packer is sure of all the money he has spent, together with 50 per cent commission on the whole crop. This is not the proper way for the growers to do. Let commission concerns alone, first, last and all the time.

Don't you know that commission concerns, or firms, never work for the interest of their employer? As a general thing, all they think about is to sell, regardless of price, so that they will be sure of the 50 per cent allowed.

Now, this should not be. Men who have articles equal in quality and quantity should receive the same remuneration for them; but this is not the case. Men and firms are so constituted, they think, "Well, that fellow is in California, and we are here. Dig him all you can, for you may never get another chance." And that is the way the business goes—"Dig him all you can."

The second and most effectual way should be for the ranchers to pack their own crop on the ranches, or form an association among a few individuals and pack their goods in first-class shape, and then go to the people that use raisins in the East and sell them direct to the retail merchant, or to the people. Don't take any raisins to Chicago, New York, Boston or Philadelphia.

These towns are overstocked with raisin brokers. Go where the people use them, and let them see that the first crop of California raisins is what they should be.

Now, some may say that we cannot do this way. If you can't, suppose you have 20 tons of raisins; if the merchants of a place do not want to buy your raisins, sell them to the people. Mind, I do not favor the forcing of any one to do anything; but you can rent a suitable place and sell your stuff and make far more than enough to pay your wages and expense. Now I know this to be a fact. If 10 or 15 growers would combine and pack their own crops, they can select some one from among them and send him to the market to sell the product. Did you ever see a wholesale grocery house make a success unless they had a drummer on the road for them, and sometimes two or three?

The cooperative companies would be all right if they were not so badly wrapped up in the commission agents that you cannot make them see the necessity of placing some of our own men in the market that know the grades and quality of the different kinds of goods. What do one-half the brokers in the East know about raisins? I do not think they would know what a first-class raisin is if they see it.

Handle your own business! You know what you want, and no one else does.

THEY say that every day is a man's education, and we believe it to be true. The advertisement of Brown, Craig & Co., for the Phenix Insurance Company in this issue, suggests a novel and yet practical solution of the problem of farm insurance. On inquiry it was learned that this company has been conducting this business on the coast for the past ten years, while it has been generally supposed to be an innovation, the result of that firm's progressive tendencies.

It is evident to all farmers that insurance is as necessary to them as the plow, yet the average farmer finds it difficult to afford himself this protection unless the payment of the premium can be made at harvest when his income is assured.

The system of the Phenix is to insure for a term of years, accepting a nonnegotiable note for the premium and payable at a time of the year most suited to the farmer.

An examination of a Phenix policy evidences a remarkable freedom from the usual retrictions by policy conditions, and they provide that in addition to their liability from fire, the company also protects against lightning. It would seem that the Phenix Insurance Company offers a full value for the premium charged, in fact it would appear that they undertake too much; but their experience is the proper basis to judge the profit arising from the quantity and quality of protection offered.

To insure horses against fire and lightning while in barn or field anywhere in the State, is an evidence of that Company's liberality, the only restriction being that they shall not be insured while in a city, town or village, and which at a glance is a very proper limitation of the Company's liability.

Every farmer should hold a "Phenix" policy and thereby enjoy the confidence of such sure protection as is guaranteed by its six millions of dollars of assets.

VALUE OF THE WEATHER SERVICE.—The practical application of the work of the Weather Bureau of the Department of Agriculture by farmers themselves is becoming more and more apparent. Just after one of the cold waves which passed over the South not long ago, the following telegraphic dispatch appeared in a Memphis, Tenn., paper, telling of the frost in Mississippi: "No damage resulted to tomato plants, as growers were warned by cannon firing on receipt of Weather Bureau report. Prospects are still good for over 2000 acres in at this point." Being warned a full day ahead of the coming freeze the "truckers" had time to protect their crops.

AMERICAN SOUTHDOWN ASSOCIATION.—The annual meeting of the American Southdown Association will be held in Springfield, Ill., May 25, 1892, at 10 o'clock A. M. Matters relating to the exhibit of Southdowns at the World's Columbian Exposition and the importation of this breed, together with the usual business receiving attention at the annual meetings, will make this session one of particular interest, and a full attendance is desirable. Communications sent the Secretary by members who cannot be present, will be laid before the Association.—S. E. PRATHER, Secretary.

A Legislative Endorsement.

A law was passed last winter in Minnesota affecting the sale of alum baking powders. The interest excited by the bill when proposed led to a long and thorough investigation by a legislative committee of the qualities of all the baking powders sold in that State, with the result that the Royal was shown by very positive evidence from the State Chemist, Dr. Drew, and others, to be the purest, strongest, and in all respects the best baking powder in the market.

ALAMEDA SANITARIUM.—Dr. W. P. Burke, so long connected with the Rural Health Resort at St. Helena, has, in connection with his brother, opened on Railroad Avenue, between Fifth and Sixth Sts., Alameda, an excellent medical and surgical sanitarium. Dr. Burke has many friends here who will welcome his advent to Alameda.

Breeders' Directory.

Six lines or less in this Directory at 50c per line per month.

HORSES AND CATTLE.

JERSEYS—The best A. J. C. C. Registered Herd is owned by Henry Pierce, S F. Animals for sale.

P. PETERSEN, Sites, Colusa Co., Importer & Breeder of registered Shorthorn Cattle. Young bulls for sale.

JOHN LYNCH, Petaluma, breeder of thoroughbred Shorthorns. Young stock for sale.

WILD FLOWER STOCK FARM, Fresno Co. A. Heilbron & Bro., Props., Sac. Breeders of thoroughbred strains and Cruikshank Shorthorns; also Registered Herefords; a fine lot of young bulls in each herd for sale.

CHARLES E. HUMBERT, Cloverdale, Cal., Importer and Breeder of Recorded Holstein-Friesian Cattle. Catalogues on application.

M. D. HOPKINS, Petaluma, Breeder of Shorthorns. Dealer in fresh Cows, Beef Cattle and Sheep.

PERCHERON HORSES.—Pure bred horses and mares, all ages, and guaranteed breeders, for sale at my ranch near Lakeport, Lake Co., Cal. New catalogue now ready. Wm. B. Collier.

PURE-BRED HOLSTEIN FRIESIAN Cattle for Sale. Bonnie Brae Cattle Co., Hollister, Cal.

F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

J H. WHITE, Lakeville, Sonoma Co., Cal., breeder of Registered Holstein Cattle.

BREEDER OF REGISTERED JERSEY Cattle. H. A. Mayhew, Niles, Cal.

P. H. MURPHY, Perkins, Sac. Co., Cal., Importer and Breeder of Shorthorn Cattle and Poland China Hogs.

PETER SAXE & SON, Lick House, San Francisco, Cal. Importers and Breeders, for past 21 years, of every variety of Cattle, Horses, Sheep and Hogs.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Registered Holstein and Jersey Cattle. None better.

POULTRY.

MADISON H. CRITCHER, Santa Cruz, Cal. Light Brahmas, Black Langshans, Buff Cochins, Barred Plymouth Rocks, Black Minorcas, White Leghorns. Settings, $1.50.

DEER MOUNT POULTRY YARDS, St. Helena, Cal. S. C. White Leghorns, W. Holland Turkeys, Toulouse Geese and Pekin Ducks and Guinea Pigs.

CALIFORNIA POULTRY FARM, Stockton, Cal., send for illustrated and descriptive catalogue, free.

C. BLOM, St. Helena, Brown Leghorns a specialty.

JAMES QUICK, Patterson, Cal., Breeder of Pure Bred Poultry of Choicest Varieties and Best Blood.

JOHN McFARLING, Calistoga, Cal., Importer and Breeder of Choice Poultry. Send for Circular. Thoroughbred Berkshire Pigs.

R. G. HEAD, Napa, Importer and Breeder of Land and Water Fowls. Send for New Catalogue.

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R. H. CRANE, Petaluma, Cal., breeder and importer. South Down Sheep; also Fox Hounds from Missouri.

J. B. HOYT, Bird's Landing, Cal., Importer and Breeder of Shropshire Sheep; also breeds Crossbred Merino and Shropshire Sheep. Rams for sale.

SWINE.

WILLIAM NILES, Los Angeles, Cal. Thoroughbred Poland-China and Berkshire Pigs. Circulars free.

TYLER BEACH, San Jose, Cal., breeder of thoroughbred Berkshire and Essex Hogs.

ANDREW SMITH, Redwood City, Cal.; see adv't.

BEES.

GOLDEN ITALIAN QUEENS—California Headquarters, Wm. Styan, San Mateo, Cal.

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THE SOUTHER FARM,

One and a half miles northeast of San Leandro, Alameda County,

— HAS —

Every Facility for Breaking Colts Properly.

Rates Very Reasonable.

HORSES BOARDED AT ALL TIMES.

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—OF—

STANDARD AND HIGHLY BRED

Brood Mares, Harness Horses, Colts & Fillies,

TO BE SOLD AT AUCTION

AT

SALESYARD, Corner MARKET ST., and VAN NESS AVENUE,

AT

10 a. m., Tuesday, May 17, 1892.

At this COMBINATION SALE will be sold the consignment of A. L. WHITNEY, Esq., comprising twenty head of first-class

TROTTING MARES, COLTS & FILLIES,

By DAWN, SIDNEY, SWIGERT

And Other Noted Sires.

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OXFORD DOWN SHEEP

FOR THE PACIFIC COAST.

W. A. SHAFOR, - - Middletown, Ohio.

LARGEST AMERICAN IMPORTER OF O. D. SHEEP.

Twelve Years Experience. Imports will arrive from England in July. Order Early. Get your neighbors to join. Order car lots by freight. Save Express charges.



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Breeders and Importers of Thoroughbred French Merino Sheep,

NEWMAN, STANISLAUS CO., CAL.

Address correspondence to J. M. Lathrop, Agent, Newman, Cal.

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Prize Herd of Southern California.

FIVE FIRST PREMIUMS IN 1891.

PIGS OF ALL AGES FOR SALE.

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BADEN FARM HERD.

Short Horn Cattle and Draft Horses.

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Baden Station, - San Mateo Co., Cal.

WHEN YOU BUY,

— BUY —

THE BEST!

— THE —

H. H. H.

Horse Liniment

Is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours,

FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

MANUFACTURED BY

H. H. MOORE & SONS,

THE DRUGGISTS,

248 MAIN STREET, STOCKTON, CAL.

STOCK SCALES



4 TON $45.

U. S. STANDARD. FULLY WARRANTED.

Delivered at your R. R. Station and ample time for building and testing allowed before acceptance.

OSGOOD & THOMPSON Binghamton N. Y.

PORTABLE PLATFORM SCALES, TRUCKS, ETC.

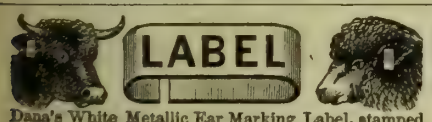
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BREEDERS SHOULD SEND a stamp for our n w illustrated catalogue of Wool Growers' Supplies and a free copy of the only illustrated Sheep and Wool Journal published. We sell Shepherds' Crooks, Shears, Dockers, Sacks, Twine, Wool Boxes, Bells, Marks and a hundred other articles needed by every sheep owner. Send to-day. C. S. BURCH & CO., 178 Michigan Street, Chicago.



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A comb that combines the strength of metal with the elasticity of a brush. Efficient, humane, convenient and durable. Descriptive circulars on application. Send 50c for sample by mail, if not sold by your dealer.

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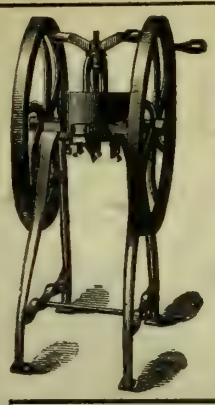
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Mann's Green Bone Cutter

FOR POULTRY FOOD.

Patented June 15, 1886; August 20, 1889. Canada Patent, June 12, 1890.

WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock. COST OF FEEDING MATERIALLY LESSENED.

These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing vaulable information in relation to feeding green cut bones.

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LITTLE'S CHEMICAL FLUID NON-POISONOUS

SHEEP DIP.

BEWARE OF CHEAP IMITATIONS.



One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Each drum contains 5 English or 6¼ American gallons. Also

Little's Patent Powder Dip.

(POISONOUS). Mixes instantly with water. Prevents the fly from striking. In a two-pound package there is sufficient to dip 20 sheep, and in a seven-pound package there is sufficient to dip 100 sheep.

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One Case Makes 1000 Galls Dip. PRICE $16 PER CASE.

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SHIRE AND COACH HORSES A SPECIALTY.

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Genuine only with RED BALL brand.

Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc.

It keeps Horses and Cattle healthy. For milch cows; it increases and enriches their milk.

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— WITH —

Fly-Wheel Walking Beam for Pumping Large Quantities of Wate

Send for Catalogue and Price List.



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Endorsed and used by the best Farmers throughout the country.

"The Weeder has come to stay; no doubt about that." T. B. TERRY.

"I can not see how any progressive farmer can do without one." J. S. WOODWARD.

"A second year's trial convinces me more than ever of its value." JOHN GOULD.

"It fully supersedes the hoe, doing better work and ten times as fast." W. I. CHAMBERLAIN.

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Can be made in raising Chickens than in any other business for the capital invested. A beautifully Illustrated Catalogue of Incubators, Brooders and all kinds of Chicken Fixings Free. Agents for Mann's Bone Cutter, Necessity Clover Cutter, and everything required by poultry-raisers.

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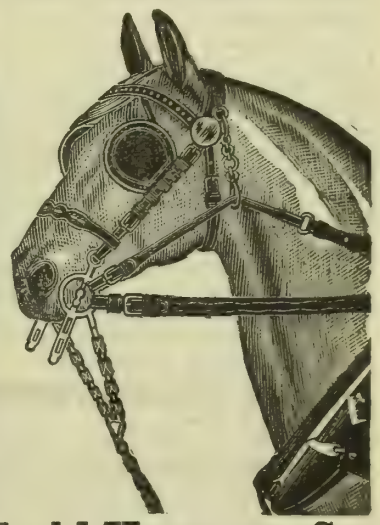
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BUY YOUR HARNESS AT WHOLESALE PRICES.

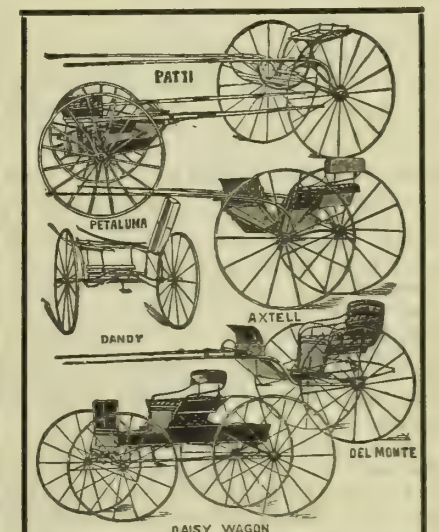


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Elegant Hand-Made Buggy Harness. All Styles of Harness on Hand.

Send for Descriptive Price Lists.



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—PATENT—

SQUIRREL EXTERMINATOR.

This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to

F. E. BROWNE,

314 & 316 So. Spring St., Los Angeles, Cal.

Now that good grain crops are pretty well assured, the thoughtful farmer looks forward in the near future to the realization of the results of his year's work, in some instances two year's work (crops on summer fallow land). About the only contingency to fear is the destruction of his grain (when ripe) by fire. He has been compelled to take the chances of failure of crops by drought, hot winds, rust and sometimes overflow, because there is no insurance against these misfortunes. He can protect himself to some degree, against loss by fire, by insuring his grain in good companies. We are informed by the underwriters that the cost is very slight as compared to the value. It is from five cents to 25 cents per acre, varying according to the amount insured and the time the policy is in force. Where the cost is so slight no farmer should go uninsured. If he is fortunate enough to get through his harvest and get his crop to market without loss by fire, he will not miss the small outlay paid for insurance. If on the other hand, he does not insure, and his crop is destroyed by fire, he is apt to be financially embarrassed in consequence, as he has depended upon his crop to pay his debts and to give him the means for putting in another crop.

We wish to call the attention of our readers to the advertisement of Messrs. Brown, Craig & Co., found in this issue. This firm is among the leading underwriters on the Pacific Coast, and have been in buisness a great many years and have paid out to their patrons several millions of dollars in losses. They represent four splendid old companies, namely the Phenix of Brooklyn, the American Fire of Philadelphia, the Pennsylvania of Philadelphia and the Insurance Company of the State of Pennsylvania of Philadelphia. The combined assets of these companies amount to over thirteen millions and they issue a joint policy covering grain in the field. The policy covers the grain while standing in the stack and in the sack; in fact, uutil it is moved from the grain fields. It is one of the strongest combinations writing grain on the coast.

A New Fruit-Drier.

In another portion of this issue we publish the announcement of the California Standard Fruit Drier, which is worthy a word of explanation. It is one of the most complete inventions of the kind now on the market and has given universal satisfaction wherever used. By it fruit can be dried ready for market within 24 hours, and retain all its natural characteristics of color and flavor, thereby saving from 8 to 15 days of time and labor. It puts a net gain of from 20 to 30 per cent in weight over sun-drying or hot air. The evaporation or drying is accomplished by steam, the evaporator maintains a uniform heat of 210 degrees, and over and around all the fruit on the trays passes a warm current of air which is taken pure and cold from outside the evaporator and heated, creating a strong draft by expansion, thereby removing every particle of moisture from the fruit on the trays as fast as it is forced to the surface by the steam heat. There is no possibility of burning, as the temperature cannot be carried above steam heat, 212 degrees. The fruit does not touch the metal plates, being simply suspended on trays between hollow steam shelves, with a warm current of air constantly passing over it. No insects dust or dirt can come in contact with the fruit while being evaporated. Raisins and figs are especially beautiful and perfect when taken off the evaporator ready for market.

Fruit-growers who have tried this Evaporator are highly pleased with it. Send to the company for descriptive circular and testimonials. For address and illustration see page 463

CITRUS TREES AT THE WORLD'S FAIR. Chief Samuels of the Horticultural Bureau in Chicago has written to the California World's Fair Commission that the five-acre tract which it was understood would be granted to this State for the purpose of showing citrus trees in a growing condition cannot be utilized for that purpose. Instead, the local governing Board has set aside five acres in the western end of the midway plaisance, and entirely outside Jackson Park, for growing trees. This plat is to be divided among 50 States and Territories and all the foreign countries, but Mr. Samuels offers to allot one acre of the space to California. This restricted space will probably be utilized in accordance with the intention respecting the original plat, and divided equally between the World's Fair associations of Northern and Southern California.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Mrs. E. F. Giddings as above.

TREES BUDDED TO ORDER.

I have a Fine Lot of Peach Seedling now ready to be Budded; also a few hundred Peach-Almond Stock.

On such orders as are received by June 1st, very low rates will be given.

Trees will be ready for shipment by Jan. 1st, 1893.

All Trees FREE FROM SCALE.

No irrigation is used, as all the stock is grown on lo land near the Sacramento River.

For Further Particulars address

H. B. EVERETT,

Sutter City, Cal.

May 10, 1892.

The Best Article is the Cheapest.

BUHACH

IS THE

Best, Purest and Most Effective Insect Powder on the Market.



BY ITS INTELLIGENT USE hotels, restaurants, saloons, stores and offices may be kept free from all troublesome insects. It is now regarded as a necessity in most of the principal hotels in the United States, and wherever it has been introduced it has given complete satisfaction. Owing to an increased production of Pyrethrum flowers, from which this valuable article is made, and their improved facilities for reducing them to powder, the manufacturers have this season made a material reduction in their prices.

Send your orders to the

Buhach Producing and Manufacturing Co.,

STOCKTON, CAL.

Columbia STEEL WIND Mill

New in Principle. Beautiful in Appearance.
POWERFUL IN OPERATION.



Contains Covered Internal Gear.

UNEQUALLED In the line of **Pumping Windmills.**

We solicit the closest investigation. Also **Iron Turbine Wind Engines, Buckeye Force and Lift Pumps, Tank and Spray Pumps, BUCKEYE Lawn Mowers, Iron Fencing, Creating, &c.**

Write for Circulars.

P. P. MAST & CO.,

31 MARKET ST., San Francisco.

FOR SALE.

A FARM OF 188 ACRES IN ASHLAND, OREGON, 40 acres in Alfalfa and well watered. A modern house on place. Address

J. DeWITT BUTTS,

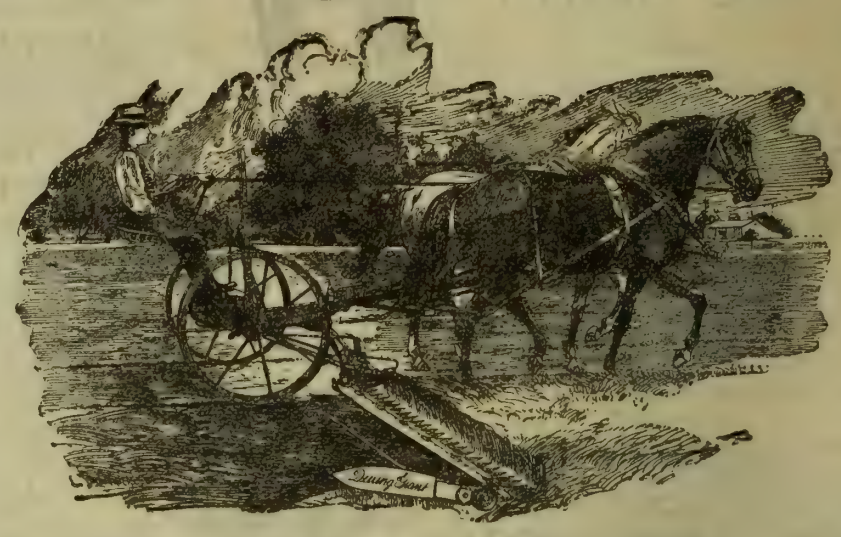
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JOHN CAINE, 369 El Dorado St., Stockton.

1892—Wholesale and Retail—1892.

General Agent Winans' Pat. Carriage Co., Mich; also Stratton Carriage Co., Buffalo and Osborne Mowers, Rakes and Reapers. Every one guaranteed. Gang and Single Plows, Farm Implements, Hardware.

Deering Mowers.



STRONGEST CONSTRUCTION, LARGEST WHEELS, WIDEST TREAD, SUPERIOR CUTTING APPARATUS.

LIGHTEST DRAFT. LARGEST VARIETY OF SIZES.

BETTER THAN ANY OTHER. BETTER THAN EVER BEFORE.

Call on Deering Agents for Deering Mowers and Genuine Deering Repairs.

WM. DEERING & CO.,

11 BLUXOME STREET, SAN FRANCISCO.

Look out for new address next week.
Write for copy of "Grass, Grain and Gain."

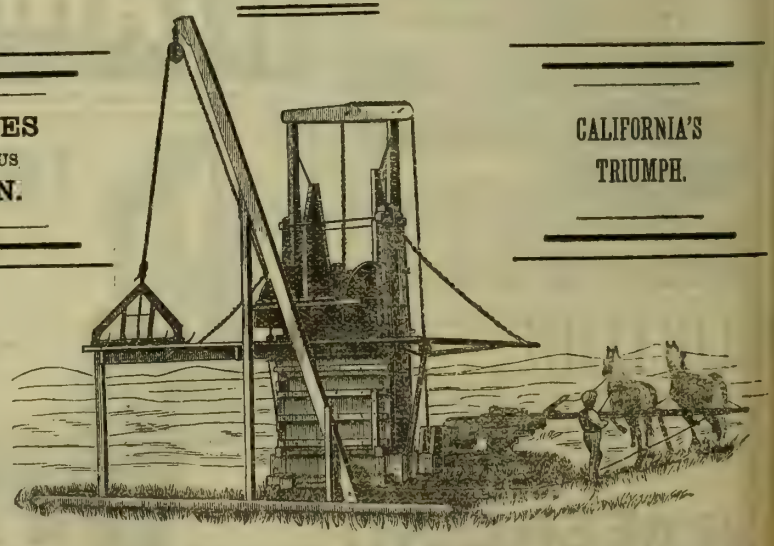
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Capacity, 41 Tons per Day.

AWARDED FIRST PREMIUM BY THE CALIFORNIA STATE AGRICULTURAL SOCIETY FOR 1890 AND 1891.

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CALIFORNIA'S TRIUMPH.



No tramping. No forking from the Stack. No cutting of Stacks Necessary. Yo can sit at a hundred-foot stack and bale it without a move. It makes the best bale i the market. You can put 10 tons in a car. The forking from the stack is all done by th horses. The baler can turn out more hay in less time and in better style than any othe press.

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SEND FOR CIRCULARS.

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TRICYCLE FOLDING BAR MOWER.

The Hickory Hoop-Pole Cutter.



THE ONLY MACHINE with SOLID wrought STEEL GUARDS and SOLID wrought STEEL KNIFE CONNECTIONS.

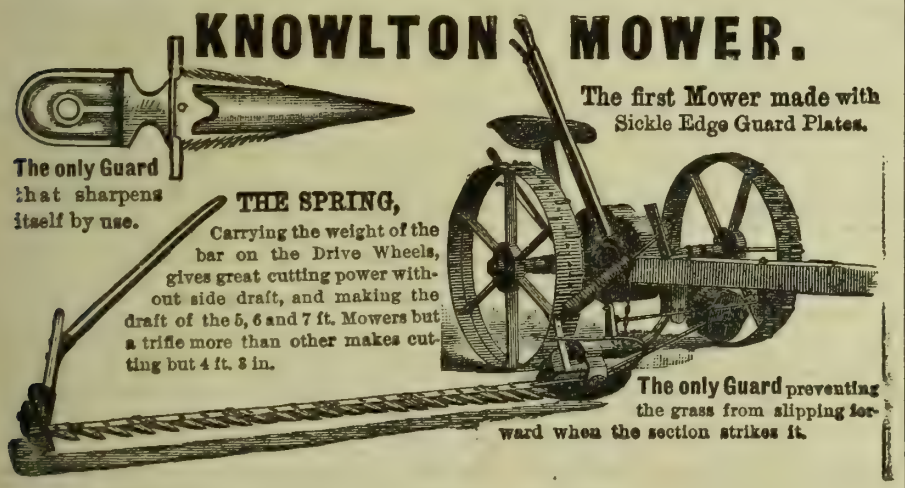
It will cut Pick Handles, Wagon Spokes, Ax Handles, etc., demonstrating Superiority over Cast Guards and Cast Knife Connections.

Buy a Whiteley and nobody will have a mortgage on you in way of repairs.

ALLISON, NEFF & CO.,

S. E. Corner Market and Main Sts., San Francisco.

KNOWLTON MOWER.



The only Guard that sharpens itself by use.

THE SPRING, Carrying the weight of the bar on the Drive Wheels, gives great cutting power without side draft, and making the draft of the 5, 6 and 7 ft. Mowers but a trifle more than other makes cutting but 4 ft. 8 in.

The first Mower made with Sickle Edge Guard Plates.

The only Guard preventing the grass from slipping forward when the section strikes it.

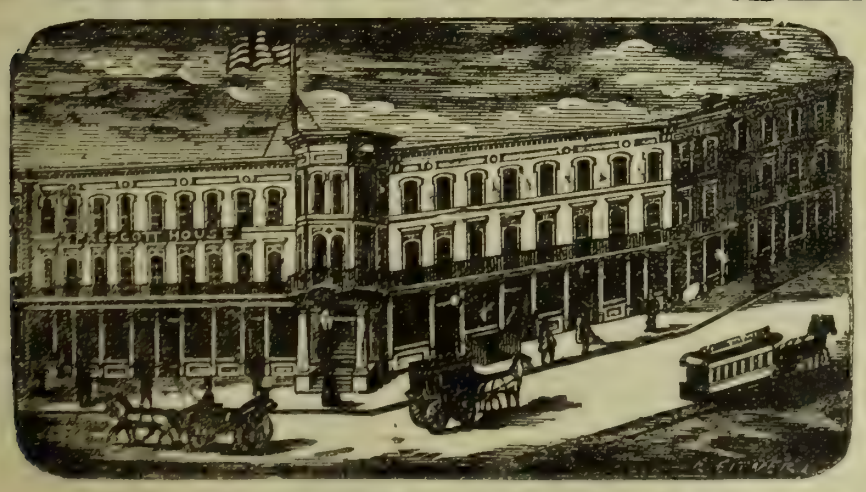
BUCKEYE HAY RAKES, 8, 10 and 12 Feet.

No better haying outfit than a **KNOWLTON MOWER** and **BUCKEYE RAKE.**

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PRESCOTT HOUSE.



S. W. Corner Kearny and Montgomery Avenue, San Francisco.

Free Coach to and From the House. **J. W. BECKER, Proprietor.**

DON'T DON'T pay 50 cents per gallon for syrup when you can get the same quality at 17c in barrels, 28 cents in kegs, or 35 cents in single gallon tins.

DON'T DON'T Pay 10 or 12½ cents for the same brown muslins we are ready and anxious to sell you at 7 and 8 cents, some 40 inches wide, 12 yards for $1, that would surprise you.

DON'T DON'T pay 12½ and 15 cents for colored shirtings. We have good medium quality at 7 cents, better at 8½ and 10 cents, and Excelsior Amoskeags not kept elsewhere at 12½ cents.

DON'T DON'T pay 25 cents and 35 cents for Scotch cheviots—we'll give you the same, in 20 different patterns, 31 inches wide, at $12½ cents.

DON'T DON'T pay $2 50 to $5.00 for ladies' fine shoes when we are offering such good value at $1 25, $1.35, $1.50, $1.75, $2.00, and elegant cloth tops, square toe, patent tip, 2½ to 6, at $2 75.

DON'T DON'T pay 10 to 25 per cent extra on staples and 50 to 100 per cent extra on other goods for the sake of a little credit or time—you have to pay sooner or later.

DON'T DON'T run in debt and keep yourself poor all your life when a little extra care and extra rustling would enable you to buy for cash and supply every want, besides having money left to educate the children.

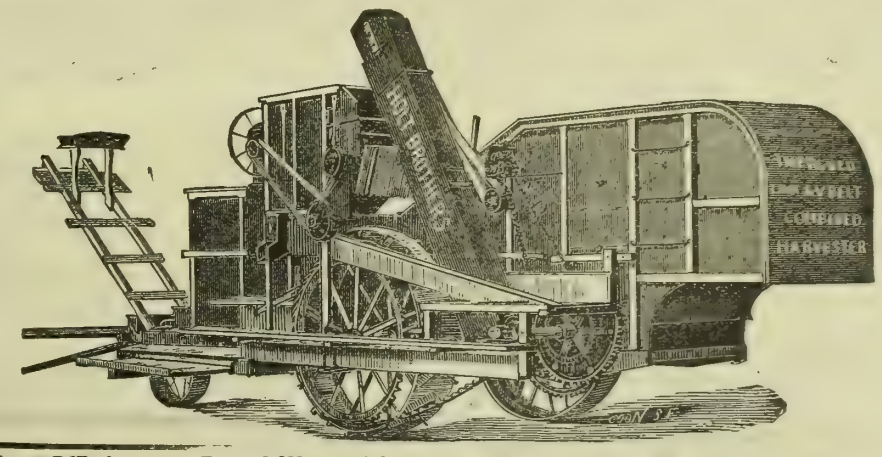
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416 and 418 FRONT STREET, - SAN FRANCISCO, CAL.

SEND FOR THEIR FULL PRICE LIST.

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Improved Combined Harvester.



For Efficiency, Durability, Light Draft and Fine Work it is far Superior to any other Harvester of the Present Day.

We would call special attention to our new SIDE HILL COMBINED HARVESTER, that will run as well on Side Hills as on level ground, and do the finest work. Send for Circular describing the Side Hill Harvester.

Those contemplating buying are invited to visit our manufactory at Stockton and see for themselves. Circulars sent on application to

HOLT MAN'F'G CO., Stockton, Cal. or, **HOLT BROTHERS CO., 30 & 32 Main St., San Francisco.**

By Reducing the Interest of the Debt
The Nation Makes a Saving.

By using CARBOLINEUM AVENARIUS
1000's of Dollars will be Saved.

FARMERS, Orchardists, Wine-Growers, Hop-Growers, Chicken-Ranchers, let us tell you:

Save money and work by painting your Fences, Barns, Stables, Troughs, Stakes, Poles and all wood exposed to moisture or climatic influences with the celebrated Carbolineum.
IT IS EXCELLENT. IT IS CHEAP. It prolongs the life of wood at least 100%.
It is at loggerheads with Insects, Chicken Lice and Vermin. They don't like Carbolineum; they keep away.
It is an enemy to Rats and mice; they lose their appetite for wood treated with Carbolineum.
It disinfects Barns and Stables and destroys Microbes.
It prevents Shingles coated with Carbolineum from rotting, warping or cracking.
It makes Rope nice and pliable, it beats tar coating.
It contains no acids or injurious or poisonous ingredients.
It is THE BEST WOOD PRESERVER IN THE WORLD. We state facts and have testimonials genuine and indisputable.

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MUECKE & CO., Pacific Coast Agents, 319 California Street, San Francisco, Cal.

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BUILDING PAPER.
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PAINTS.

WATER ALKALI ACID PROOF!

P & B Fruit Drying Paper.

SAMPLES AND CIRCULARS FREE.

PARAFFINE PAINT CO.

116 BATTERY ST. SAN FRANCISCO.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FRUIT NOTES.—Oroville *Register:* John R. Preston recently took a contract to plant 1500 orange trees on land now covered with oaks. He agrees to remove the oaks, plow, level and prepare the land, and, in 15 days from date of contract, to have the orange trees planted where now the oak trees stand. The handbook recently issued by the State Board of Trade gives some interesting figures concerning the famous ranch of General John Bidwell at Chico. The number of bearing almond trees is 2678, the nonbearing ones, 7666; apples, bearing, 1570, nonbearing, 1224; apricots, bearing, 2944, nonbearing, 4197; quinces, bearing, 37, nonbearing, 75; cherries, bearing, 981, nonbearing, 1289; chestnuts, bearing, 150; figs, bearing, 217; grapes, bearing, 150 acres; nectarines, bearing, 368; nonbearing, 124; olives, bearing, 50, nonbearing, 2427; oranges, nonbearing, 300; peaches, bearing, 9959, nonbearing, 13,451; pears, bearing, 361, nonbearing, 5324; pecans, bearing, 5, nonbearing, 100; plums, bearing, 3043, nonbearing, 285; prunes bearing, 2816, nonbearing, 3454; English walnuts, bearing, 100, nonbearing, 50; Eastern black walnuts, bearing, 50; California black walnuts, bearing, 75; berries in bearing, eight acres. Total trees in bearing, 25,390; nonbearing, 39,886.

ORCHARD AND OTHER CROPS.—Gridley *Herald:* In Butte county there are miles and miles of orange and olive groves in bearing and coming into fruiting this year. There are lemon and lime trees within the county boundaries that have borne fruit for long years. Near Gridley are the largest continuous orchards in the world. The finest citrus colonies on earth for location and natural adaptability of soils are are Palermo and Thermalito, a few miles from this city. Coffee, tea, tobacco, cotton and hemp plants thrive in this county. The banana, pineapple and tropical fruits can be raised in Butte with proper care. The natural home of the olive is here, and thousands upon thousands of these trees are yearly planted. The vine and deciduous fruit trees grow to perfection all over the county.

CROP PROSPECTS. — Chico *Chronicle-Record:* The present season has been one of the most peculiar that we have experienced in many years. In the early portion of the season, the sun shone and the rain descended alternately, and in a ratio that gave the greatest promise of an abundant harvest. Later in the spring, Northern California experienced a heavy and in some localities a disastrous storm of hail Following immediately upon the heels of the hail and frost came soft, warm and gentle rains, which neutralized the ill effects of the former conditions, and restored the previous promise of abundant crops with the exception of a few varieties of the earlier and more delicate fruits. The orchardists in this vicinity—and the same conditions appear to prevail in other localities—will, and are even now called upon to have the weaker and poorly set fruit picked from their trees, in order that the hardier and better fruit may mature in good size and flavor. The directors of the Chico cannery are even now doubtful of their ability to handle the bulk of the canning fruit in even this immediate vicinity. The story that there will not be one-tenth of a crop of fruit is the veriest rot. There will also be a good average crop of grain and cereals this year. There is no doubt that in some few localities—especially in the timber regions—there is a good proportion of the heavier summer-fallowed grain more or less lodged from the effect of the hail storm and the late heavy rains. But much of this will rise as soon as dry weather comes for a few weeks. The farmer has no cause to feel blue this year, as he will have a good, fair yield of grain. Should it remain slightly cloudy for a few days after the present storm, there will be nothing to fear from rust, and, that being the case, the grain yield will be far above the average. Taken as a whole, the crop outlook for 1892 is extremely bright, and the promise is of abundant fruitage in field, orchard, vineyard and garden.

Colusa.

EXPERIENCE AGAINST FROST.—Colusa *Sun:* John Cheney has had an experience this spring that may be of value. He plowed his vineyard early, and rains came on and packed the ground down, and gave the surface a crust. The land being free from clods and perfectly smooth, it was a uniform glazed surface. A few days before the late frost that killed De Jarnatt's, Gray's and other vines, already noted, Mr. Cheney plowed about half his vineyard, and now the frost came along, and exactly to the row, killed all the newly plowed land, doing no damage whatever on that part with the smooth surface. This is an important *fact* on which to base operations. Theories may be built on facts, but facts are worth more than theories.

Fresno.

STRUCK A LARGE FLOW OF WATER ON THE WEST SIDE.—Fresno *Expositor:* A company, while boring for oil in Pleasant valley, near Coalinga, struck a strong flow of artesian water at a depth of 800 feet. The water rises 16 inches above the top of the well. This is an important discovery. Artesian water in this side of the valley would not amount to so much, because it is not so much needed, for there is abundance of water for all irrigation without boring wells to the depth of 800 feet to get it. But on the western side of the valley such is not the case. Pleasant valley, where this well was sunk, lies near the base of the Coast Range; and while it is not regarded as impossible to lead water there by means of irrigation canals, yet it always has been admitted that a bountiful supply of water brought there by canals must be a very expensive affair. It lies far away from the supply of water which the rivers send down from the Sierra Nevadas; and the Coast Range has no large supply of running water of its own. For this reason, the discovery of the stratum of artesian water there will be hailed with delight by all persons who are desirous of seeing Fresno county prosper, and especially by the people who live in that part of the West Side, and who have all along been contending against adverse circumstances in the matter of obtaining water for irrigation purposes. The land is as good as any in the county. In fact, the people in that vicinity are confident that their land is a little better than that of any other portion of the county. It is a pardonable pride, and there is no one who will not be glad to see the people obtain an abundant and cheap supply of water for irrigating their lands. By that means they will be able to produce not only grain and hay, but also fruits and vines.

PRECAUTIONS AGAINST FROST.—Fresno *Expositor*, May 4: This morning the Coast Range was white with snow. From this, the inference is drawn that the rains extended entirely across the San Joaquin valley, and fell as snow on the western mountains. If the frost comes, it will do much harm, in spite of all that can be done to prevent it. The large orchards and vineyards will have to take their chances. But in many places it is possible to take steps to protect fruit and vines. It is done in other portions of the State with success. It is done by building fires, so that the smoke will hover over the fields and drive the frost away. These smudge fires are usually built upon the windward side of the orchard, so that the wind will carry the smoke across, and thus a few fires will serve as a protection to a considerable acreage of trees. Persons who can, should have their smudge ready, so that, if needed, it can be used when frost is threatened. The expense will be small and the saving may be great. The material most suited for such fires consists of wet hay, straw or tules. Any material that will smoulder and make a great smoke is suitable.

Kern.

LARGE PEACH YIELD.—Bakersfield *Californian:* At Mountain View Colony, J. W. White has some two-year-old peach trees of the late George Cling variety, and in culling the fruit this season, which had to be done in order to preserve the trees, he kept count of the fruit picked from one tree and found that he had pulled off 1800 green peaches, and then had not taken one-half from the tree. These peaches, when ripe, will average a pound apiece. He expects to gather at least 1200 pounds from each tree, providing he can so prop up the branches that they will not break down. From a two-year-old Briggs' May, which will have ripe fruit the last of this month, he picked off 2400 peaches, each about the size of an English walnut, and in this case again he did not remove one-half of the fruit. These peaches, when ripe, will average ten ounces each, so if the tree will stand it, there will be a yield of 1500 pounds per tree. These trees are only two years old—that is, three years from the pit, and of course, therefore, they have not yet begun to reach their full bearing capacity.

Los Angeles.

BENEFICIAL RAINS.—L. A. *Express*, May 3: Los Angeles county is a great county for corn. A great many farmers have not planted corn this season on account of the continued dry weather of last month. Now they will probably put in a larger acreage than usual, as the rain has soaked the ground thoroughly. Farmers in this vicinity plant corn from the middle of April to the first of June. The barley that has been cut for hay is damaged to some extent, but the late sown grain will be greatly benefited. The hay that was not too far advanced will also be helped materially. The vineyards will be refreshed by the rain. They depend upon irrigation in some districts, but in a majority of cases they probably have only the winter rains to depend upon, and the late rain will prove of great assistance. The deciduous fruit crops will be much benefited. Alfalfa hay will be specially profited where there is no water available for irrigation. Farmers who have recently been interviewed, said that if there was a good rain within a week, it would insure a crop of grain on thousands of acres. This timely rain has, therefore, settled the question between hay and grain. Vegetables will be also much benefited, especially potatoes. Another great advantage will be the increase of the reservoir supply.

CROP NOTES.—Santa Monica *Outlook:* Haying commenced last week. The click of the mower was heard on every hand. Our "salt water farmer" has beat the natives this summer. The acreage sown is larger than ever, and crops on the Home Farm are vastly superior to any in the vicinity.

SILKWORM EXHIBIT—L. A. *Express:* The Ladies' Annex of the Chamber of Commerce have on exhibition on the second floor of the old county courthouse building about 200,000 silk worms which are being bred from the eggs to the cocoon. There are in all about 200 trays, and the development of the worm can be seen at all ages and stages.

Monterey.

CROP PROSPECTS.—Superintendent Wood is now on his regular official round among the public schools of the county, which affords him a good opportunity to note the condition of the crops in the various localities by him. He says: The lower end of the Salinas valley, from Chualar to Moss Landing, and Pajaro, will, with cool weather, have an average crop. Beginning at Chualar and going south, the grain crop gradually falls off, showing the worst at Chalone and King City. Some of the smaller canyons running into the valley near King City will have hay, with possibly a little grain. On the southern slope along the valley the grain fields are already dried up and can make nothing. On the northern slopes the grain is yet green, but not sufficiently advanced in most cases to insure crops. The grain on the Trescony grant across from San Lucas promises some crop with favorable weather. Long valley and Pine valley will have but little hay or grain. The irrigated land on the San Ardo Rancho promises an excellent crop of alfalfa, with a mixture of barley. Where not irrigated, the San Ardo will produce very little, if any crop. Bradley and San Miguel are much the same. The grain has not headed, and, in most cases, will not. Hames, Indian, Priest, Cholame, Pleyto and Jolon valleys will have some crop, the last named four the best. In some places the wild feed is good; in others, poor. Cattle are yet in good condition. Farmers are selling off all the stock they can spare to avoid feeding them next winter. The present outlook is anything but encouraging. In some localities the frosts of the past two weeks have injured the fruit to some extent, but orchards generally are looking well. This week's rainfall has made the outlook decidedly more encouraging all over the county.

Napa.

RECLAIMING THE MOUNTAIN SIDE.—Napa *Register:* Mr. Melone, proprietor of Oak Knoll farm, some time ago arranged with a company of woodchoppers that they should clear the hillsides of the farm of brush and timber, sparing only the redwood, laurel and sound oak trees, the company to pay him 50 cents a cord for all wood it sold. On this basis work has progressed to the eminent satisfaction of both parties to the contract, and it promises to continue for years. Where, under the old order of things, the ground was given over to an underbrush so thick that not a blade of grass would grow under it and only wild game could run through it, just enough trees to afford shade and comeliness to the locality now stand, and there is abundance of green pasturage for the sleek-sided livestock that feed on the place.

Sacramento.

CROPS ON COSUMNES RIVER. — Interview in *Bee* with William Dixon: "It is very good, considering the extremely backward spring which opened out in February so auspiciously. I do not think, however, the cold rains and an occasional frost has done any damage. In my orchard I find a fine prospect for peaches, apricots, plums and pears. I should say there will be a full crop." "How about corn?" was asked. "It is too early to say, but we have no fears about corn. The Cosumnes valley is famous for corn and annually produces a crop which for quantity and quality cannot be excelled on the Pacific coast. A corn crop is as sure, with a few contingencies, as taxes, which you know never [illegible]. The only thing that can spoil our crop is the grasshopper plague, and they have never yet made an entire success of it. Once we get our corn up we are all right and are almost sure of from a ton and a half to three tons to the acre I planted my corn, 150 acres, two weeks ago, but it has not come up yet. I may have to replant, but I think with warm weather in a few days it will be all right." "Has alfalfa-haying commenced?" "Not yet, although the first crop has been ready to cut for a fortnight. We dare not go into the field until the weather settles. Hay will be up to the average this year, I think, and good fields will turn off from six to ten tons per acre during the season. Usually we cut three crops, but frequently four are harvested. Grain of all kinds is growing very rank, and there is danger of it falling before harvest, especially if we should have heavy late showers."

San Diego.

MOUNTAIN APPLE ORCHARDS.—S. D. *Union:* It was learned from Supt. Wagner, who has recently returned from the northern part of the county, that 5000 apple trees have been planted on Smith mountain this season at an elevation of 5400 feet. Large quantities of other fruit trees have been set out there this year. The Julian apple belt, which is 4500 feet above the sea, has produced the finest apples on this coast, and now it looks as though that section will soon have a rival.

WELCOME RAINS.—Winchester *Recorder:* This week, the parched and thirsty earth was refreshed by a series of copious and welcome showers, which have gladdened the hearts and brightened the financial prospects of every farmer in the valley. The grain fields and orchards sucked up the needed moisture as fast as it fell, and by Tuesday noon the ground was soaked to a depth of several inches, varying in different localities from three to ten inches. This very fortunate occurrence will greatly increase the yield of the grain and hay crop, and insures better times for farmers than was thought possible earlier in the season. Many ranchers state that the recent rains will double their crops, and others say that many thousand acres they did not expect to cut at all will now yield profitable returns for harvesting.

Shasta.

FRUIT NOTES.—Anderson *Enterprise:* The fruitmen in this section are complaining of the the continuous rain, claiming it is ruining the prospects for a heavy crop of prunes, as the fruit is falling from the trees, more particularly noticed with young trees that come into bearing first this year. What fruit does hang will be exceedingly large and of a better grade than on trees heavily loaded. A number of Happy Valley fruitmen, who will have a considerable quantity of fruit to handle this season, were in town Tuesday to attend the association meeting. They report that frost and rain have done no material damage to their crops, the frosts being light out there.

Solano.

GRAIN CROPS.—Dixon *Tribune:* In the lower part of Solano county the ravages of the Hessian fly have made a failure of what promised to be a good crop. In Northern Solano, however, the present indications are for one of the largest crops ever harvested. The late showers lodged the heavy summer-fallowed grain, but no serious injury will follow and the wintersown grain will be greatly benefited.

Santa Cruz.

DAIRY NOTES.—Watsonville *Pajaronian:* J. L. Koster, president of the Watsonville Creamery and Cattle Co., spent several days here last week. The creamery is now buying considerable milk from dairymen, and is making a large quantity of butter. Most of the product is being packed, as the prices for butter are rather low at present. Some of the leading dairymen of this section are also packing, because the prices will not justify sales now. Packed butter brings a good price in the winter months, when dairy products are at the highest figures.

Sonoma.

INCUBATOR FOR EXHIBITION AT CHICAGO.—Petaluma *Courier:* The incubator company of this city has almost completed a superb incubator destined for exhibition at the World's Fair at Chicago. It is intended for hatching ostrich eggs, of which it will accommodate 28. In the construction of the machine California redwood is the only timber used, and it is of the most beautiful pieces. The machine will be exquisitely finished and will make a very handsome exhibit.

Sutter.

FRUIT AND GRAIN IN SOUTHWEST SUTTER.—Cor. Yuba City *Independent:* After an inspection of the orchards here, I would sum up the fruit prospect about as follows: Peaches will yield a large crop, and the thinning process will have to be applied. Pears will be about one-third crop, as will also be prunes, plums, apricots, etc. The farmers probably have the largest acreage of grain they have had for several years, and they are all smiles in anticipation of big crops.

Tulare.

REMARKABLE GROWTH. — *Delta:* Judge Nye brought in from his ranch in Antelope valley some samples of beardless barley six feet and two inches tall. Fifty stalks grew from a single grain. He also brought down some bearded barley stalks six feet and ten inches long. The judge had with him a lemon sprout of one year's growth over eight feet long.

A BIG YIELD.—Tulare City *Citizen:* There is on exhibition at the *Citizen* office a bunch of barley containing 368 heads, grown from one kernel of barley. The heads are all large and well developed, an average one of which has 90 grains, making a total yield of 33,120 grains. This wonderful bunch of barley was grown upon the ranch of [illegible] Deer creek,

Ventura.

RAINS AND CROPS.—Ventura *Unit:* The rainfall ensures a good crop of beans but some of the limas will have to be replanted. The fruit crop will be largely increased and trees just planted saved from drought. Hay that is cut will be injured slightly. The rain came too late to help the growing barley materially. The greatest benefit of the fine shower is, perhaps, the damper put on the croakers who persist in predicting a dry year.

Yolo.

FRUIT NOTES. — Guinda *Independent:* Ed. Haswell of Rumsey paid Elmira a visit the beginning of the week. Mr. Haswell estimates Rumsey will ship 2½ cars of fruit, including grapes, this season. Wm. B. Stitt of the Stitt-Buck orchard here, has had "hands" picking off peaches from the three-year-old trees the past week. From one tree 1100 were taken, leaving about as many more to ripen. This is a sample of the entire orchard. All the other trees, notably the apricots, are bearing well in this part of the Capay valley. A gentleman who is an authority in horticultural circles in this State on raising almonds, was written to by the Guinda almond novice for advice as to how he should manage his trees. The Guinda gentleman stated that his almond trees had grown, within one year, in many cases to eight feet. The almond authority replied that such a growth is "phenomenal," and that a growth of four feet is the average in his experience.

OREGON.

TOO MUCH RAIN IN JOSEPHINE COUNTY.—Grant's Pass *Courier:* April was not a very kind month to growing crops. The cold rain and occasional frosts kept vegetation back to a considerable extent. Corn and potatoes planted early were the worst sufferers. The corn rotted in the ground and the potato vines wilted to some extent. Posted farmers claim that the 10th of May is plenty early for corn-planting.

ARIZONA.

FRUIT NOTES.—Phœnix *Gazette:* The fruit crop this season will be immense, as will also the barley and wheat output; all in all, 1892 will be the most prosperous year Central Arizona ever experienced, and will not only give our valley a great lift in its race for supremacy, but will be a prosperous era for the tillers of the soil. Maricopa county alone has 2,000,000 acres of land that will grow all the fruits known to the most favored climes in the world. Think of this wonderful area of citrus fruit land; think of the hundreds of thousands of happy, prosperous men and women that will people this peerless domain; think of all this that will come to this great country when Arizona becomes wedded to the union of States; think of this and tax your energies to consummate this future condition. Yavapai, Cochise, Pinal, Mohave and Gila will supply the mineral output, while Maricopa Yuma and Graham will ship to the marts of the country the choicest of fruits.

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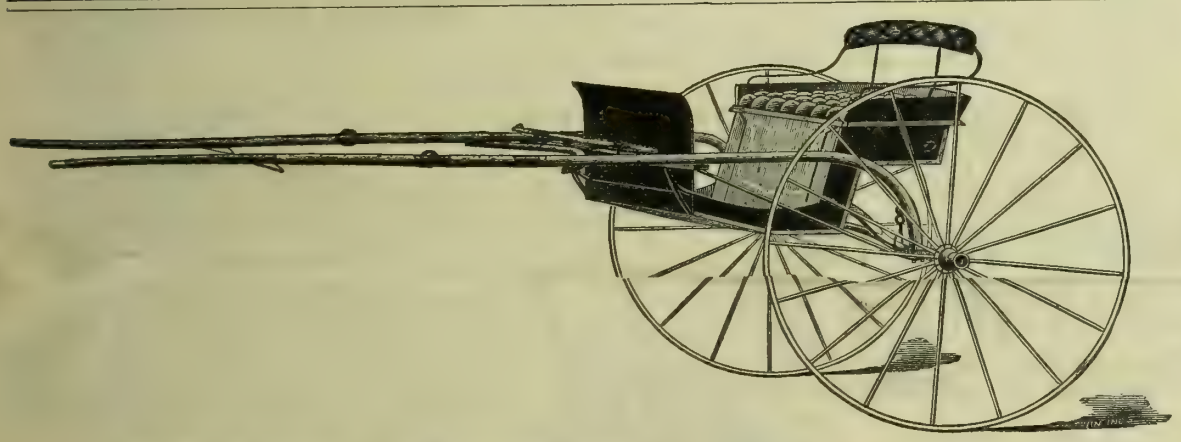
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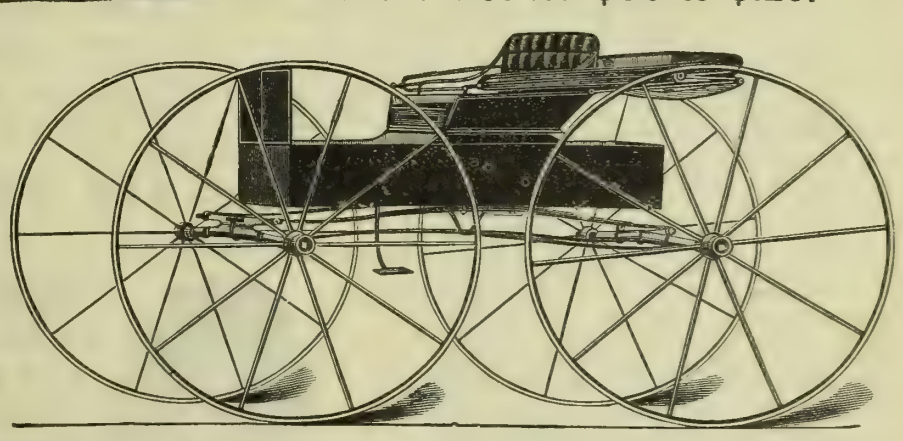
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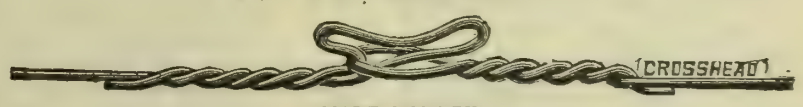
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The Dairy.

A New Creamery at Arcata.

The *Western Watchman* of Eureka, Humboldt Co., gives a description of a new creamery at Arcata which was opened May 5th, with a picnic and literary exercises, and a demonstration of creamery practice in all its branches. The following description is given of the establishment:

Size of foundation, 34x66 feet, 2 stories; boiler room, a lean-to on the east side, 12x26; capacity of boiler, 18-horse power, steel tubular boiler, made by Langford Bros.; engine, 12-horse power. The creamery is located on the Doe place. The wagons drive up on the south side, and deliver the milk to the weighing tower, where it is emptied from the large cans into the weighing tank, a testing sample is taken out, the milk weighed and set down opposite the number of the patron; it is then discharged through a large faucet into the receiving vat, having a capacity of 600 gallons. The hoisting windlass and crane is geared and attached to the steam power of the creamery and works to a charm, hoisting the milk to the second story. From the receiving vat the milk is led into the extractor-separators, each having a capacity of putting through one ton of milk an hour. These machines can be used as butter extractors, or as simple separators, by a slight change in the internal arrangement. The separator process is being used solely thus far. From the separators the cream is conveyed by tin troughs to the cream room, and discharged in the cream vats, three in number, 600 gallons capacity each, passing over the Kausen patent cooler, which leaves the cream at an even cool temperature. Adjoining this is the churn room, fitted with two large box churns, each having a capacity of 300 gallons. When the cream is churned to butter it is taken out and placed on little carrier tables, which are rolled into the working room and placed on the rotary butter worker, 100 pounds at a time, where the buttermilk is worked out and the salt worked in, whence it is dumped on the broad butter tables, where the last operation of moulding into rolls or squares is performed. Then it is packed away in the storage room. The skimmed milk descends immediately from the separator to a small receiving tank, from which a pipe extends to the outside of the building, from which customers draw fresh, warm skim milk for their calves. This receiving tank is fitted with an overflow pipe, which leads the surplus milk into a large vat capable of holding 1500 gallons, into which also the buttermilk is run. From there it is forced by a rotary pump through 2900 feet of pipe to the hog pen, away down on the marsh.

The outside walls around the cream room butter room and storage room are 12 inches thick, with double air space; the outside space is the circulating air chamber, and the inner space is the dead air chamber. Every room is provided with ventilators.

The creamery is supplied from a driven well; the tank holds 5000 gallons at an elevation of 36 feet, and the water is raised by a double acting force pump.

The creamery is now handling three tons of milk daily, and is equippen to handle 20 tons daily. They are now averaging a pound of butter to 23 pounds of milk.

This creamery receives its milk upon the test plan, using the Babcock test, so that each customer receives returns in exact rations with the richness of the milk he produces. Thus, each customer's record stands squarely on the merit of his product, and one does not gain an undue profit at the expense of another.

In closing this description it is but just to say that the Arcata creamery was planned and constructed by R. A. Simpson of Ferndale, and that he has thought out a most complete creamery plan is proven by the fact that after the work was accepted by the stockholders and the price cheerfully paid, the Association complimented him with a unanimous vote of thanks for the completely satisfactory manner in which he has carried out his engagement.

The operating of the creamery is in the hands of C. T. Spencer, well known as an experienced butter maker, and his assistant, Mads Madsen, and these handle the milk of 24 patrons who are now putting in their milk. During the heighth of the season, the receipts will probably reach eight to ten tons daily.

The essence of true nobility is neglect of self. Let the thought of self pass in, and the beauty of great action is gone, like the bloom from a soiled flower.—Froude.

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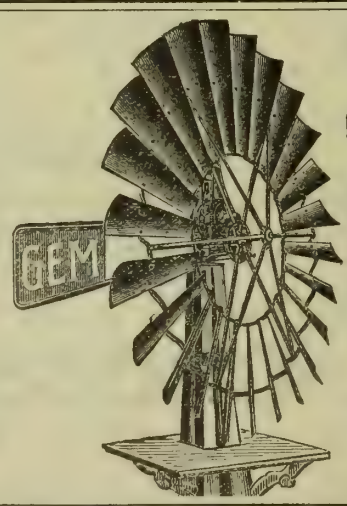
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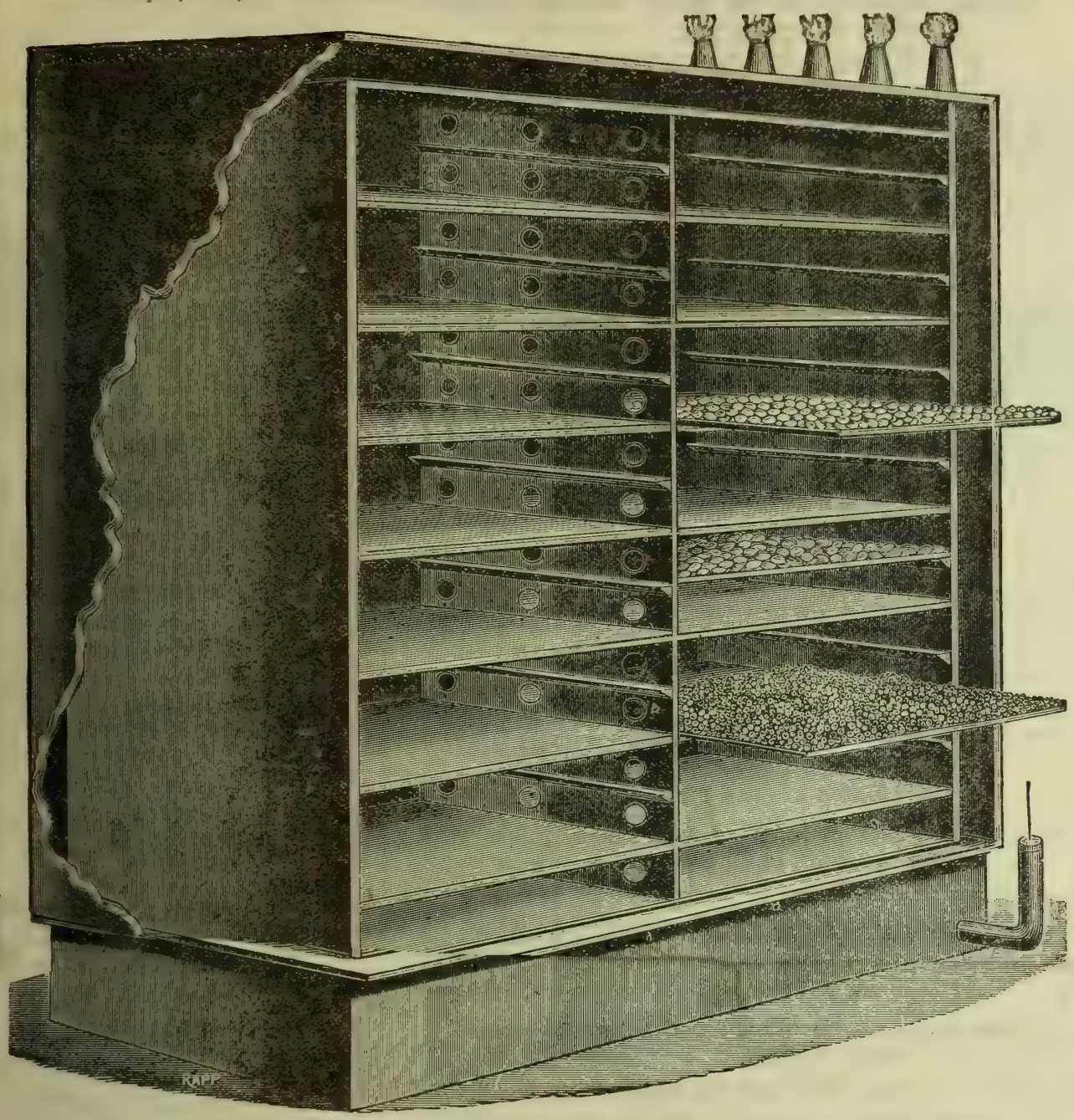
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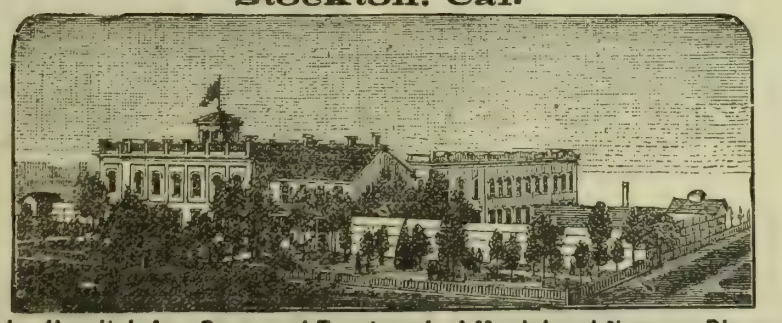
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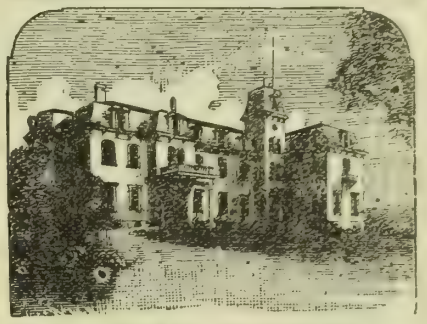
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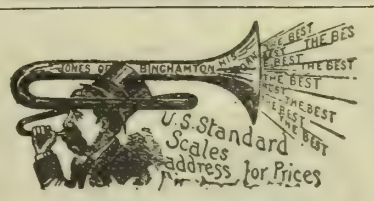
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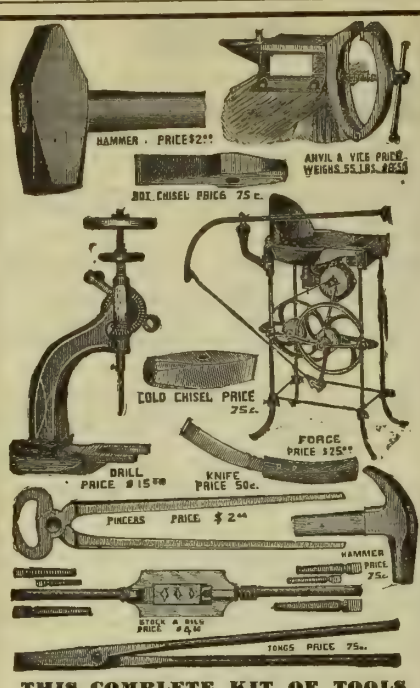
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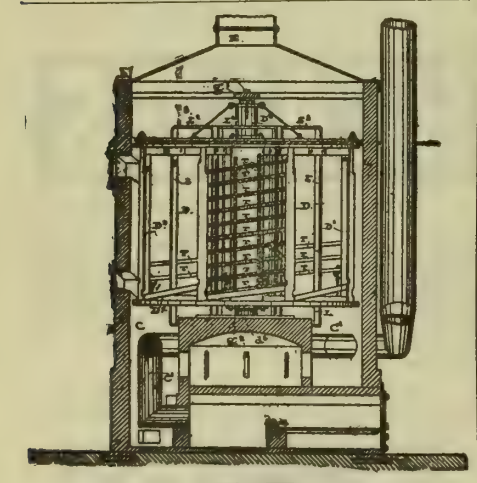
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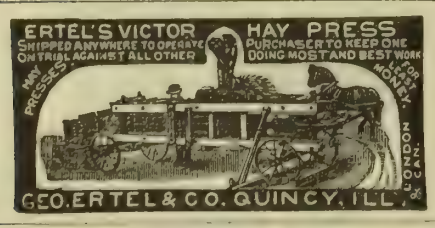
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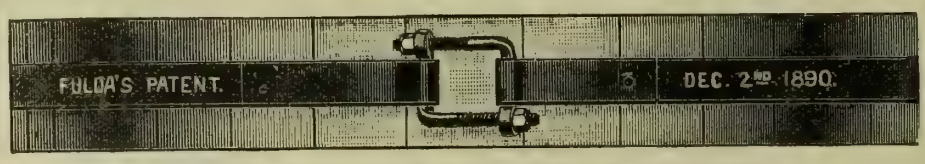
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, May, 1892.—Cool weather with alternating fair weather and showers have been of inestimable benefit to growing crops in all parts of the State. The outturn of cereals, it is now claimed, bids fair to be fully 20 per cent more than was looked for six months ago; the grade will also be much better. Tree and vine fruits have been greatly benefited; of course there are isolated cases of damage by the unseasonable weather, but they are few and far between. Operators in grain are watching with deep interest growing crops here at the East and abroad for now is the turning point for good or bad. The local money market continues lifeless with the rate of interest on gilt-edged security favoring borrowers. Although money is reported to be easy, yet paper offered for discount is scrutinized closely, which shows that there is a feverish uncertainty regarding the future.

Foreign Grain Review.

LONDON, May 8:—*Mark Lane Express*: English wheats are in better demand, and foreign wheats firmer in London. Holders ask 6d more. At Liverpool there is fair business, but prices unchanged. Corn is firm, 22s 9d@23s, and good round. 27s@28s. Oats quiet. At to-day's market English and foreign wheat was 6d dearer. Flour firm.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June.	July.	Aug.	Sept.
Thursday	7s00½d	7s00 d	7s0¼d	7s00½d	7s00 d
Friday	7s00½d	7s001d	7s01½d	7s01½d	7s00 d
Saturday	7s 0½d	7s00½d	7s0¼d	7s00½d	7s01½d
Monday	7s00½d	7s00 d	7s03 d	7s00½d	7s01 d
Tuesday	7s0¼d	7s00½d	7s00½d	7s00½d	7s01 d

No. 2 Red Winter are quoted and not No. 1 Californian.

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	36s 6d	36s 6d	36s6d	Firm. Cold.
Friday	36s6d	36s3d	36s6d	Held higher.
Saturday	36s6d	36s3d	36s3d	Quiet but steady.
Monday	36s6d	36s3d	36s3d	Steady. Warmer.
Tuesday	37s d	36s3d	36s6d	Steady.

To-day's cablegram is as follows:

LIVERPOOL, May 11:—Wheat—Buyers hold off, hoping to obtain concessions. California spot lots, 7s 5½d; off coast, 37s; just shipped 36s 3d; nearly due, 36s 6d; cargoes off coast firm but less active; on passage, quiet; weather in England very fine.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug.
Thursday	153½	154½	153½	154½
Friday	151½	151½	152	152½
Saturday	152½	152½	152½	151½
Monday	151½	15 ½	153½	152½
Tuesday	150	151½	153	151½

The following are to-days' telegram:

NEW YORK, May 11:—Closing morning session.—Wheat 90½ cts. for May; 90½ cts. for September; [illegible] for July, 90 cts. for August; [illegible] for May and 82 cts. for July.

CHICAGO May 11:—Wheat—82½ cts. for May and 82 cts. for July.

San Francisco.

WHEAT.

	Buyer Season.		Buyer Aug.		Seller 1892.	
	H.	L.	H.	L.	H.	L.
Thursday	150	148½	....	....	142½	142
Friday	149½	148½	....	....	141½	141
Saturday	152½	150	....	....	142	141½
Monday	152½	151¼	145½	145½	142¼	142
Tuesday	151¼	151¼	....	....	141½	141½

The following are to-day's recorded sales on Call:

Wheat—Morning Informal session: Buyer September—100 tons, $1.42½; 100, $1.43½; 100, $1 44 ₰ ctl. Regular session: Buyer season—100 tons, $1.50. Seller 1891-46 tons, $1.4 ½. Buyer September—100 tons, $1.44; 100, $1 43½ ₰ ctl. After noon: Seller 1892—100 tons, $1.41½

BARLEY.

	Buyer Season.		June.		December.	
	H.	L.	H.	L.	H.	L.
Thursday	100	99	....	....	....	....
Friday	99½	99½	101½	100	....	....
Saturday	100	100	....	....	....	....
Monday	100½	100½	....	....	107	106½
Tuesday	100½	100½	102	102	....	....

The following are to-days' recorded sales on Call.

Barley—Regular session: Buyer season—100 tons, $1.01½. Seller 1892, new—$1.00½; 300, $1.00½; 300, $1.00½; 500, $1 ₰ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, May 6.—*Bradstreet's* says: Some of the markets report a good demand for wool, while others are meeting with quiet trade. Manufacturers are buying where they can find wools suitable to their wants, and as some markets have a larger supply of choice wools than others, they are going there for stocks. Prices remain about steady. The strength developed at the London sales did not effect the markets here. There is too much wool here and too much in sight. In Ohio and Michigan wools there is very little doing. Quarter-blood wools are in light supply and firm. Texas wools are quiet. The demand for California wool is light. New wools from this State continue to arrive, and large lots are said to be on the way East. Territory wools are inactive. The total sales of pulled wools for the week were large. The stocks of A and B supers are small. Prices are very firm on all choice lots. The season for long wools is over and short wools will soon begin to come forward. Australian wools are less active. London sales closed on Tuesday with 10,000 bales taken for this country. The prices at the close were firm and competition strong. The next sales will open June 14th. There continues to be a fairly active movement in carpet wools. Prices are steady and firm. Manufacturers are now engaged in making samples for the fall trade.

NEW YORK, May 9.— Seaboard sale records imply an active market but an unusual amount of foreign swells the account. There seems to be no stimulating feature for any grade. Most holders continue to be free sellers, and buyers, of course, will not reward them with hardened prices. Driblets of news from primal points indicate irregular prices and no prompt negotiations of the moment. Sales at New York amount to 541 000 lbs domestic and 284,000 foreign. Boston trade has been large, the sales amounting to 1,684,000 lbs domestic and 1,500,000 lbs foreign, chiefly carpet. Quotations are reported quite as low as at any time during the past year. The outlook for the new clip is weak. Philadelphia has a good attendance, but trade was restricted on account of the few attractive lines offering.

Eastern Dried Fruit Markets.

NEW YORK, May 9.—California dried fruit is cleaning up fast, and the market is in better shape for next season's goods than was expected for this date. Prunes are well worked off, and only the intermediate sizes remain in first hands, say sixties to eighties, which are quoted at 5½@6¼ cts. Raisins—The market is low and holders are anxious to close out; 2½@4 cts. has been accepted for four cars of Three Crown for Chicago, and seven carloads to a New York firm, at 3 cts. Many of the latter are damp and sticky, but the good ones make the price a safe one, even at a summer risk. The stock of Valencias here on April 30th was 300 boxes. Apricots are steady at 9@10½ cts.

California Fruit East.

CHICAGO, May 10.—California Dried Fruits—Are ruling very steady. Arrivals are small. Of raisins there is still a fair to good supply on the market, but otherwise the offerings are very moderate. Demand is very fair for all lines.

CHICAGO, May 10.—California Cherries—Sell moderately; boxes, 8@10 lbs, $4; 8@10 lbs, black, $4@4 50.

NEW YORK, May 8.—Sales at auction to-day Rockport cherries at $2 per box. No demand for white Cherries. Black Tartarians brought $7 per box.

Eastern Hop Markets.

NEW YORK, May 8: Hops have been neglected all the week. Brewers took a few lots when their views were met, and in this way State ranged one cent lower. The offering, however, is not general, as late English and Continental advances are strong allies for holders of straight choice lines. Pacific rates thus are unchanged. Options are dead. June Coast is bad, and asked 24@26½ cts.

Miscellaneous.

NEW YORK, May, 9: Lima beans are quiet, at $1.65 @1.70 spot per bushel. Mustard seed is steady.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 9, '92, were as follows:

Flour, qr. sks	93,381	Bran, sks	14,000
Wheat, ctls	80,282	Buckwheat "	....
Barley, "	11,860	Middlings "	4,420
Rye, "	173	Chicory, bbls	160
Oats, "	100	Hops, "	....
Corn, "	5,420	Wool, "	2,569
Butter, "	1,900	Hay, ton	1,210
do bxs	833	Straw, "	95
do bbls	2	Wine, gals	165,550
do kegs	5	Brandy, "	15,650
do tubs	24	Raisins, bxs	1,050
do ½ bxs	452	Honey, cs	27
*Cheese, ctls	1,261	Peanuts, sks	....
do bxs	158	Walnuts "	32
Eggs, doz	55,400	Almonds "	36
do " Eastern	95,100	Flax "	....
Beans, sks	14,201	Popcorn "	....
Potatoes, sks	14,603	Broom corn, bbls	....
Onions, "	1,303		

*Over'd, 221 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to May 9, '91.	July 1, '91 to May 7, '92.
Flour, ½ sks	343,123	419,025
Wheat, ctls	1,349,676	1,267,470
Barley, "	268,512	51,533
Oats, "	324,562	403,500
Wool, bales	6,063	6,588
Hops, "	443	431
Rye, sks	210	3,498
Potatoes sks	98,555	132,635

Cereals.

Dealing in futures on Call Board has been more active. So far the fluctuations do not afford much of an opportunity to make quick turns; this is accepted as evidence that dealers are watching more closely.

The local wheat market has a strong undertone, notwithstanding the studied efforts of a bear contingent to depress prices. It now begins to look as if the world's wheat crop and the statistical position of wheat are favorable to farmers, yet fuller advices are required to warrant farmers and dealers to operate on it. Receipts of wheat are light. It is claimed that the supply in the country is light. Several charters were made the past week and at rates which show a slight advance. Crop advices in this State, Oregon and Washington are uniformly favorable.

The receipts of barley are light, with the bulk coming to hand being dark grade. Brewing grades are in light supply. It now looks as if better prices can be reasonably looked for in the more choice grades. New crop barley is expected to come in quite freely in next month. Rains in the southern part of the State greatly improved the crop prospects in that section.

Oats are steady; for bright choice grades an advance is obtainable. The supply in this State and also up north is light. Crop prospects in Oregon and Washington are said to be very favorable.

Corn does not exhibit much strength. The export demand has fallen off while the home demand is light. Rains have improved the crop prospects.

Rye continues dull and heavy.

The imports into Germany for the first two months of the present year ending February 29 were 9,328,000 bushels of wheat, against 3,100,000 bushels for the same time last year. The imports of rye were 3.584.000 bushels, against 2,448,000 bushels for the corresponding time last year. The imports of barley were 4.722,000 bushels, against 5,392,000 bushels last year, and corn 4,720,000 bushels, against 2,288,000 bushels.

Mark Lane Express, April 18: The exportations from the Atlantic ports are not excessive, and both France and Germany are buying with unwonted vigor. Antwerp, too, is 2s. dearer from the 1st of the month, and as the British markets show a net decline of 1s. 6d. for the same period, the difference in the situation is not less than 3s. 6d. per qr. The effect of this change will probably be that whereas at the end of March the United Kingdom had the pick of American and Indian offers, the preference at the end of April will rest with the Continent. Californian wheat on passage to the United Kingdom is still a large quantity, but 1,426 000 qrs. is a total which shows an important modification since March 17th, when 1,801,000 qrs. were afloat. Californian wheat is now cheap. 38s. per qr. at Mark Lane and 7s. 5d. per cental at Liverpool, but the center of depression is to be found in Indian sorts, which a fall of silver to 39½d. per ounce has caused to be forced on sale at 32s. for a good medium quality such as No. 2 Calcutta. The South American Republics are shipping wheat a good deal more freely than had been expected. Chile is poor, owing to the recent civil war, and English gold is in great request. Thus we have 200,000 qrs. of Chilian wheat already on passage to the United Kingdom, and 100,000 qrs. in course of shipping. The trade, while recognizing this fact by only quoting 36s., against 39s. paid for Chilean wheat in March, will do well to recognize that no lasting expansion of Chilean wheat production is likely. On the contrary, we hear that the southern province has gone very largely out of cultivation.

Oregon Crops.

Oregon Crop-Weather Bulletin for the month of April reports as follows: Throughout Oregon the rains during April have been in excess of the normal amount, The rains have penetrated the soil, and it is now more thoroughly moistened than it has been for years. Water stands on the lowlands of Willamette valley. Temperature has been from two to four degrees below the normal for the month. This deficiency is apparent in every section of the State from the retarded condition of vegetation. The season is fully four weeks late. Frosts occurred with unusual frequency, and they did slight damage to the fruit interests. A severe wind and rain storm, one of the most severe on record, occurred on the 24th. There has been a marked deficiency in sunshine and an excess in the number of cloudy and rainy days. The weather has delayed spring seeding and farming operations in general. It has been unfavorable to shearing and lambing. The latter has been very successful, however, fully 85 per cent of the lambs being saved. The wool clip is unusually good, the staple being long and remarkably clean. The acreage of grain is as large as ever before, and considerable is yet to be sown. That which is sown is in first-class condition, except in a few places on the lowlands of the Willamette valley. The wheat has a good stand and has stooled well. Though the season is late, yet vegetation is healthy and offers bright prospects.

Feedstuff.

Improved natural feed has restricted the demand, and as the receipts of both bran and middlings have been free, prices shaded off. Ground barley is strong in sympathy with the grain. Feed meal is weak.

Rains the past fortnight are reported to have done considerable damage to hay cut and not cared for, but growing crops are benefited. At this writing advices regarding the crop are conflicting, but the general tenor is favorable. It is claimed that many fields of grain which would have been cut for hay will be harvested, but on the other hand, many fields reserved for hay will yield heavier crops. There is a good demand for choice old hay.

Dairy Produce.

The receipts of butter, cheese and Eggs at San Francisco in April were as follows:

Sources—	Butter. Lbs.	Cheese. Lbs.	Eggs. Doz.
California	1,785,950	639,000	231,988
Oregon	2,400	1,900	90
Eastern	4,700	162,000	357,990
Totals	1,793 050	802 900	590.068
January	502.200	476,900	420,345
February	622,850	313,500	250,765
March	1,188,700	574,200	358,755
Four months	4,106,500	2,167,500	1,619,934

During the first four months of 1891 the receipts were 3,903,600 lbs butter, 2,152,300 lbs cheese, and 1,385,047 doz. eggs.

Notwithstanding continued heavy receipts of butter, the market is strong at an advance. So far as the writer can learn, there is more butter being packed than ever before. The packing is done in any style wanted by buyers. It is claimed that considerable butter has been put into pickle, which tastes more or less of weed. This will tell against any brand of butter, tasting of weed and packed for future use. Creameries and dairies up North, and also those in Nevada, are in full operation. They supply the markets in their States.

Cheese is weak. Receipts are large and demand more or less offish. Concessions are necessary to induce free buying.

Eggs, after selling lower, are, at this writing, firmer with a slight advance obtainable for the more choice frest laid. Cool weather has been in favor of holders.

Vegetables.

Garden truck shows more or less firmness, with prices fluctuating according to receipts and demand. Warm and clear weather is now wanted for the plants to make a rapid growth. Unseasonable weather put the plants back, but, as the ground is well soaked by rains, the benefit will be large. Peas continue weak. String beans and summer squash are slow in coming in.

Onions, if old and choice good keepers, fetch good prices, but poor keepers, and also new, favor buyers. The crop promises to be large.

New potatoes are strong at a slight advance. Choice and more matured are in good request for shipment [illegible]. Old potatoes are fairly steady, many dealers taking them in preference to new, owing to the lower prices.

Fruit.

Rains did considerable damage to strawberries in some localities, but the general effect will be beneficial. Strawberries have a wide range. The tone was weaker to-day. Raspberries and gooseberries are coming in slowly. The crop promises to be a full average.

Cold and generally unseasonable weather has put the fruit season back. It will not be much if any earlier than it was in last year. The general quality and size of fruits this year will be a decided improvement over that in last year.

Cherries are coming in slowly. The quality shows a slight improvement, but warmth and sunshine are required to bring them out more perfectly. The rains have not done any material damage; there are a few cracked cherries, but the fruit is compact. Had warm, growing weather ruled instead of cold, the damage would have been large. Damage to apricots and prunes has been exaggerated. The fruit will be large and of excellent quality. Extra sizes will make up a very large part of that lost by there being a lessened number of fruit to the tree. Mr. Nash, of Eveleth & Nash, writes from Santa Clara county that the fruit crop will be a good average and of good quality.

Reports are current that contracts have been made for several orchards, but particulars are withheld. The present outlook is greatly improved over the prospects of about four weeks ago.

Choice to fancy oranges are scarce and wanted. Poor oranges continue in good supply, although the stock now here is smaller than at anytime in this year.

Lemons and limes are dull and weak.

Dried fruits are in light supply. Odds and ends are being picked up for shipment.

Raisins are slow. The stock is light.

Wool.

More life is reported to the market, but at prices not showing any material change over those ruling at the commencement of the season. It is only desirable clips for special use that fetch an advance. It is reported that considerable buying has been done in the interior. F. P. McLenan & Co. and other scourers continue to report running to full capacity.

Live Stock.

The market is weak at lower figures for bullocks and mutton sheep. The lower prices are due to free offerings and a lessened consumption, owing to more vegetables. With stock in good condition owners are always anxious sellers, particularly with the season so far advanced as it is now.

Miscellaneous.

From reliable advices up to May 11, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	221,951	273,466	*†140,214	65,190
San Diego	14,261	18,271	4,084	.....
San Pedro	11,389	7,630	.....	18,181
Oregon	24,207	33,293	19,418	
Puget Sound	17,163	18,961	.....	
Totals	288,971	351,621	163,716	83 371

*Engaged for wheat, 1892, 19,272; 1891, 51,612 †For new crop loading, 9,5:6

The statistics of produce exports from this port from July 1st to May 4th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,390,301	12,276 952
Flour, bbls	932,144	1,072 724
Barley, ctls	1,001,632	280,953

Poultry strengthened slightly during the week but at the close the market is a shade weaker, owing to Eastern shipments being near at hand.

In hops there is absolutely nothing new to report. Crop advices are generally favorable in this State.

Nuts are sluggish. The receiptsof beans are heavy, but it is claimed that the bulk was purchased previous to shipment.

Honeyis scarce but no higher.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, May 11, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 20	@	2 80
Red	2 15	@	2 40
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	2 20	@	2 40
Wld Peas, blkeye	1 30	@	1 50
Do green	1 50	@	2 00
Do Nlies	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, ₰	15	@	—
Do good to choice	18	@	—
Do Giltedged	—	@	25
Do Creamery rolls	—	@	20½
Do do Giltedge	—	@	21½
Eastern	—	@	—
CHEESE.			
Cal. choice mild	—	@	9
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Young America	—	@	11
EGGS.			
Cal. ranch, doz	18	@	—
Do do selected	—	@	20
Do store	16	@	—
Eastern	16	@	18
FEED.			
Bran, ton	17 00	@	18 00
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	23 50
Middlings	19 50	@	21 00
Oil Cake Meal	—	@	25 00
Manhattan Food ₰ cwt.	7	@	50
HAY.			
Wheat, per ton	12 00	@	—
Do choice	—	@	15 00
Wheat and Oats	10 00	@	13 50
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC			
Barley, feed, ctl	96	@	—
Do Choice	1 02½	@	—
Do Brewing	1 05	@	—
Do do Choice	1 15	@	—
Do do Giltedge	1 18½	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 32½	@	—
Yellow, large	1 30	@	—
Do small	1 32½	@	—
Oats, milling	1 46½	@	—
Feed, Choice	1 43½	@	—
Do good	1 35	@	—
Do fair	1 30	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 30	@	—
Gray	1 27½	@	—
Rye	1 37½	@	—
Wheat, milling. Gilt edged	1 57½	@	—
Do Choice	1 55	@	—
Do fair to good	1 51½	@	—
Shipping, cho'ce	1 50	@	—
Do good	1 50	@	—
Do fair	1 47½	@	—
Common	1 45	@	—
Sonora	1 45	@ 1	57½
HOPS.			
1891 Choice to Ex.	26	@	—
Fair to Good	22	@	—

FLOUR.			
Extra, City Mills	4 65	@ 4	75
Do Country Mills	4 50	@ 4	75
Superfine	2 75	@ 3	10
NUTS—JOBBING.			
Walnuts, Cal. ₰	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, stt shl	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silver Skin, Choice per ctl	1 75	@ 2	00
Fair to Good	1 00	@ 1	50
Cut	50	@	—
New Reds	50	@	90
POTATOES.			
Early Rose, ctl	25	@	40
Burbank Seedling	50	@	70
Do do Oregon	60	@ 1	15
Do Humboldt	40	@	75
River Reds	30	@	45
New	80	@ 1	15
Sweets	—	@	—
POULTRY.			
Hens, doz	6 00	@ 8	00
Roosters, old	6 50	@ 8	00
Do young	8 00	@ 12	00
Broilers, small	3 00	@ 4	50
Do large	5 00	@	—
Fryers	7 00	@	—
Ducks	6 00	@ 9	00
Geese, pair	1 75	@ 2	00
Goslings	2 25	@ 3	00
Turkeys, Gobl'r	17	@	20
Turkeys, Hens	19	@	21
Manhattan Egg Food ₰ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, ₰	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	16	@	20
Sac'to valley	16	@	—
S Joaquin valley	11	@	15
Cala'v & F'th'll	15	@	17½
Oregon Eastern	10	@	17
do valley	—	@	—
So'n Coast, def	10	@	12
Nevada (State)	15	@	17
HONEY.			
White Comb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6½
Beeswax, lb	25	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, May 11, 1892.

Limes, Mex	2 00	@	3 00	Cherries, box.			
Do Cal	—	@	—	Black	1 00	@	2 25
Lemons, box	50	@	2 50	White	50	@	1 00
Do Sicily	5 00	@	—	Beets, sk	—	@	1 00
Oranges, Seedlings				Carrots, sk	50	@	—
Redlands	1 75	@	2 25	Okra, dry, ₰	15	@	—
Riverside	1 50	@	1 75	Parsnips, ctl	—	@	1 25
Los Angeles	1 25	@	1 50	Peppers, dry, lb	10	@	—
Do Navels—				Do green	—	@	—
Redlands	3 00	@	4 50	Turnips, ctl	50	@	—
Los Angeles	2 50	@	2 75	Cabbage, 100 lbs	40	@	—
Riverside	2 50	@	3 50	Garlic, lb	8	@	12½
Duarte	2 50	@	3 00	Squash, Mrft, tn	12 00	@	15 00
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.				Do Summer, box	1 00	@	2 00
				Tomatoes, box	—	@	—
				Asparagus, box	1 00	@	—
				Do choice to ex	2 00	@	—
				Peas, green, sk	50	@	—
Strawberries, per chest—				Do sweet	50	@	1 00
Longworth	6 00	@	11 00	Rhubarb, box	35	@	25
Sharpness	4 00	@	6 00	String Beans	6	@	10
Gooseberries, ₰ pound	4	@	7	Cucumbers, doz	50	@	1 50
Raspberries, bkt	25	@	40	Mushrooms	10	@	30
				Egg Plant, lb	20	@	30

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	5	@	—
Second quality	4½	@	—
Third quality	4	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	5	@	—
Do light	6	@	—
Dairy	6	@	—
MUTTON.			
Wethers	7	@	—
Ewes	6½	@	—
Do Spring	8½	@	—
HOGS.			
Light, ₰ lb, cents	5½	@	—
Heavy	4½	@	—
Feeders	3½	@	4
Stock Hogs	3½	@	—

Grain and Wool Bags.

Calcutta, spot	7½	@	—
Do, June-July	7½	@	—
Wool Bags	36	@	38

An Efficient Machine.

Messrs. Truman, Hooker & Co. handed us the following letter from one of their agents in Oregon unsolicited:

"UMPQUA, OR., May 7, 1892.

Messrs. Truman, Hooker & Co., San Francisco, Cal.—GENTLEMEN: Last February I purchased a Pacific Spader Harrow from you, and after giving it a thorough trial cultivating my orchard, am pleased to say that it is by far the best cultivator that I have ever used. It pulverizes the soil and kills young weeds in a way that no other machine I have ever seen can compare with.

Owing to the open winter, weeds did not stop growing, and when we commenced plowing, they were three feet high. We turned them under and put the spader on the ground and it did its work right from the start, never dragging up the weeds as any other cultivator would.

I would not take $100 for it and do without.

No man with five acres can afford to do without the Pacific Spader. Respectfully,

S. D. EVANS."

Action of Frost on Cotton.

At the last meeting of the Manchester Section of the Society of Chemical Industry, a short communication by Mr. C. F. S. Rothwell, on "The Action of Frost on Cotton," was read. The literature published on this subject, said the author, gave the idea that cotton was "tendered" by frost. To quote Hummel's "Dyeing of Textile Fabrics," "the evidence on this point was conflicting, and it was quite conceivable that the crystallization might act injuriously in a mechanical way, and that the atmospheric ozone might also exercise some slight destructive influence." This uncertainty might be attributed to the fact that, until recently, no reliable machine for testing the strength of the cloth was available. To decide the question, two pieces of "madder bleached" cloth, one of good and the other of very poor quality, were placed in water for ten minutes, withdrawn, and without squeezing were exposed to a temperature of 4° C. (28° F.) The cloth was quite stiff in three minutes, and, when the ice had evaporated, its strength was tested in Goodbrand's machine against some of the original cloth, when the breaking weights were found to be identical. The trials were repeated, the cloth being frozen for 16 hours. In this case also the strengths were found to be identical. It was thus evident that cotton was not "tendered" by the freezing of water within it, at any rate not when in the ordinary width. If the fiber were compressed to a greater or less extent, as would happen at the bottom of a wagon load, the cloth might probably be weakened mechanically by the crystallization of the water, but he had no proof of this. The prevailing oppinion that cloth was weakened by frost had, no doubt, arisen from the fact that when the fibers were frozen stiff they were easily snapped, but any stiffening body, such as gum, would have the same effect, and this had obviously nothing to do with the actual strength of the fiber.—*Textile Mercury.*

The Coyote.

SOLEDAD, Monterey Co., May 5.

TO THE EDITOR:—Living in a neighborhood where coyotes are very destructive, I wish to contribute my mite in favor of the scalp bounty. When small and defenseless stock is destroyed the producers of such stock suffer loss, so also the consumer, because the production is lessened and the consumer pays a higher price; herein is the universal benefit of the coyote bounty, which is a very small tax compared with the great benefits resulting. We (myself and family) have lost about $200 per annum for the last 20 years by the depredations of coyotes.

We have often tried to poison them, and sometimes succeed; occasionally we shoot one. Since the coyote bounty law they have decreased, and as they continue to become less we can afford to increase the reward for their destruction to any reasonable sum.

T. C. HERBERT.

QUICKSAND.—The reason a person sinks in quicksand is because the latter is composed chiefly of small particles of mica mixed largely with water. The mica is so smooth that the fragments slip upon each other with the greatest facility, so that any heavy body which displaces them will sink, and continue to sink until a solid bottom is reached. When particles of sand are ragged and angular, any weight pressing on them will crowd them together until they are compacted into a solid mass. A sand composed of mica or soapstone, when mixed with sufficient water, seems incapable of such consolidation.

[ADVERTISEMENT.]

Mass Meeting.

The People's Party of Alameda Co. will hold a mass convention at Haywards on Saturday, May 21, 1892, at 10 A. M. Every person living in this county interested in this movement is cordially invited to attend. General business pertaining to this county will be transacted, county ticket put up, and delegates (one to each Supervisor District) will be elected to attend the State Convention at Stockton, June 1. 1892, where State ticket will be put up and delegates will be elected to attend the National Convention at Omaha, Neb., July 4, 1892, for nominating United States presidential candidates.

H. B. VALPEY,
Chairman Co. Central Committee.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos., $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

How Society is Indebted to Invention.

In the "Relation of Invention to the Conditions of Life," in the *Cosmopolitan Magazine*, Mr. G. H. Knight says:

With each step in industrial progress not only is the greater the number who can be warmed, fed and clothed, and the better are their life conditions, but in default of such progress a vast majority would not have lived at all. It is to industry, guided by scientific methods, and to science that concerns itself with practical applications of its discoveries, that we are indebted for such magical arts as that which makes light itself depict for posterity the very features and expressions of the life it once illuminated; for the kindred art whereby scenes in the most remote regions are made to pass in realistic panorama before the pleasantly cheated vision; for the instrument which, having analyzed the sunbeam and revealed the chemical constituents of distant constellations, becomes, in the hands of the metallurgist, the means of determining the precise instant at which to arrest the process of "conversion" in the Bessemer steel manufacture. It is to invention that society is indebted, not alone for the refinements, but for every necessary of modern life; for food, clothing, and shelter; for the arts of spoken, written and printed speech; for the means of flashing the very voice to a listener in a distant city, or catching the fugitive, tremulous tones and storing them for the delectation of generations yet unborn; for music, poetry, and the plastic arts; for locomotion by land, by sea, and even through the circumambient air; for the gift of soothing with healing wings the bed of anguish; for the ability from this tiny speck of earthly life to sound the abysses of time, thought and space.

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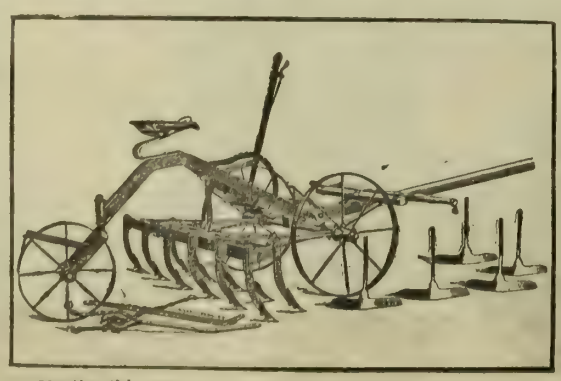
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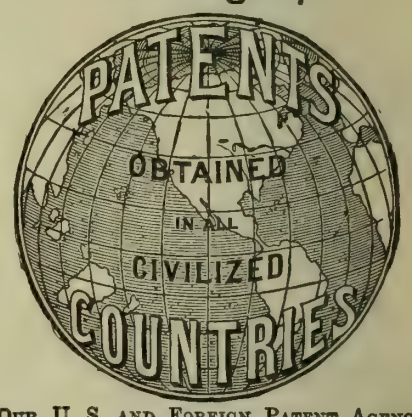
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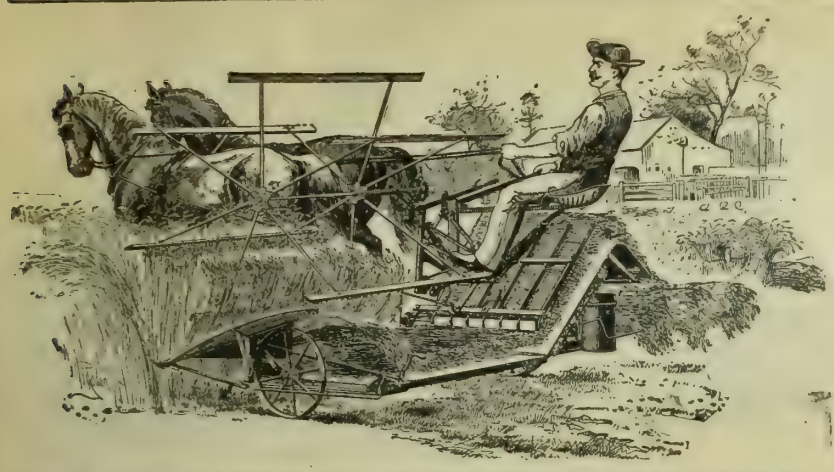
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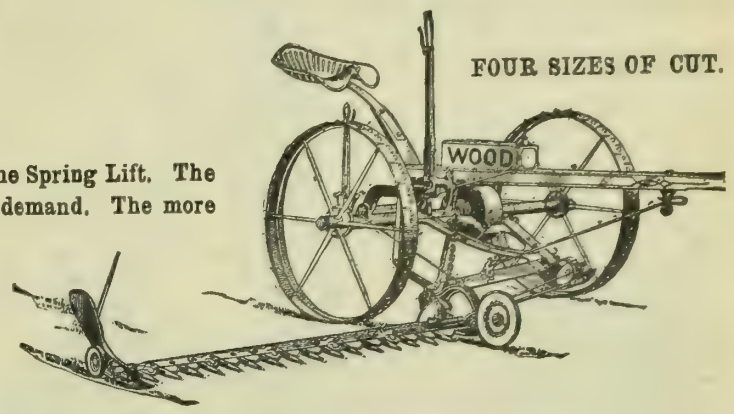
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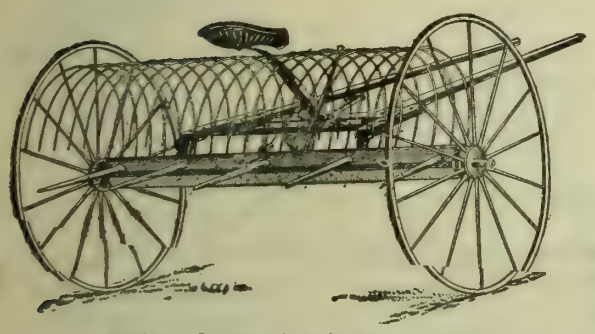
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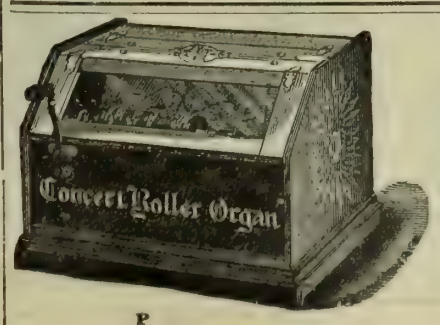
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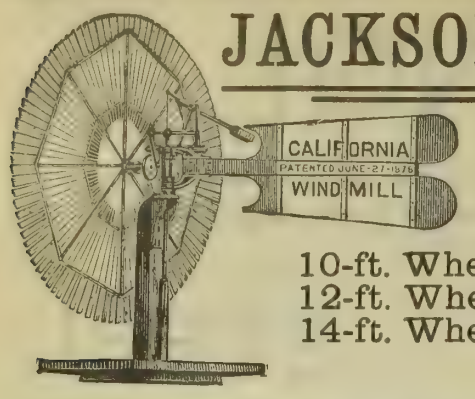
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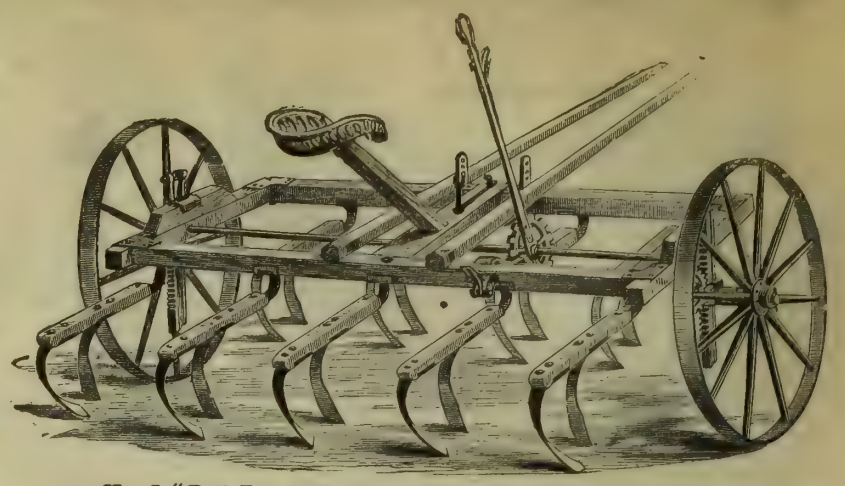
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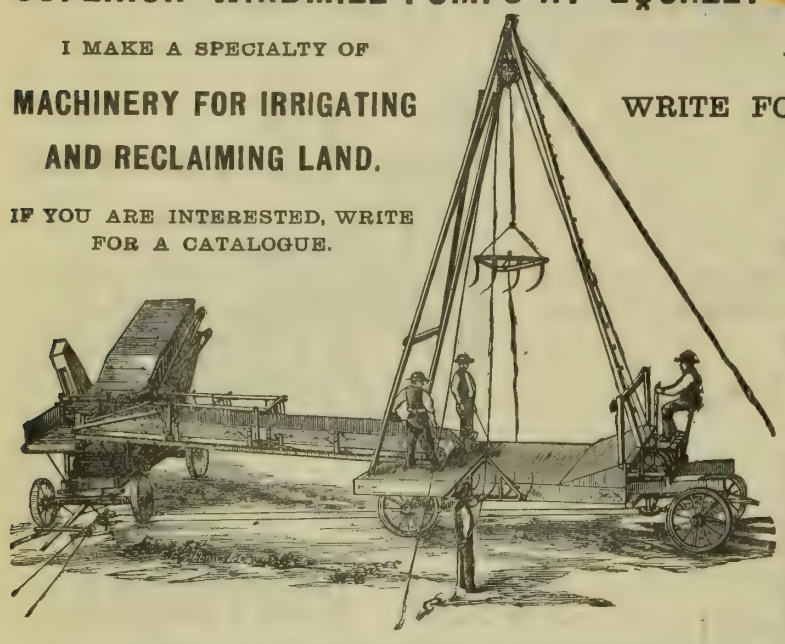
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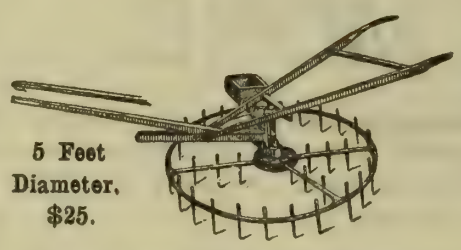
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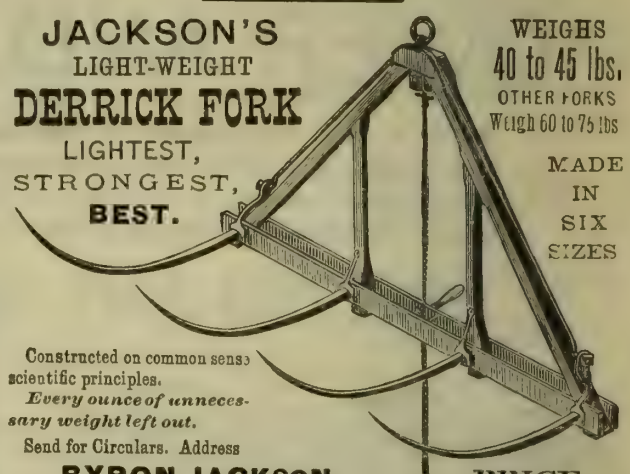
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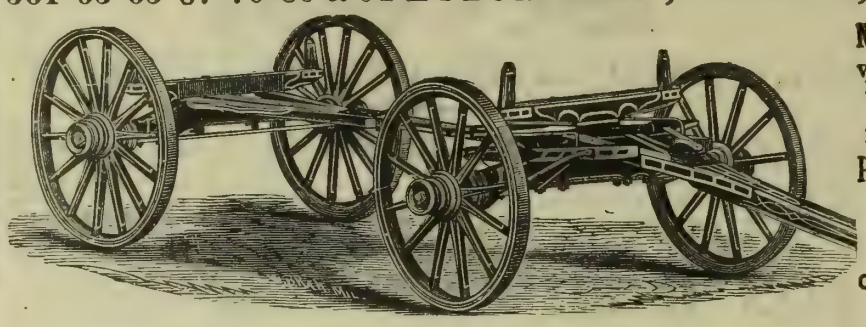
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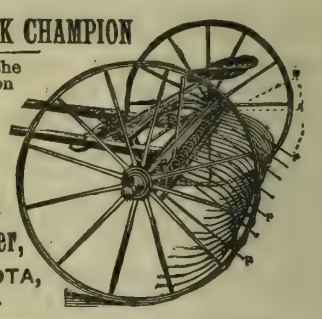




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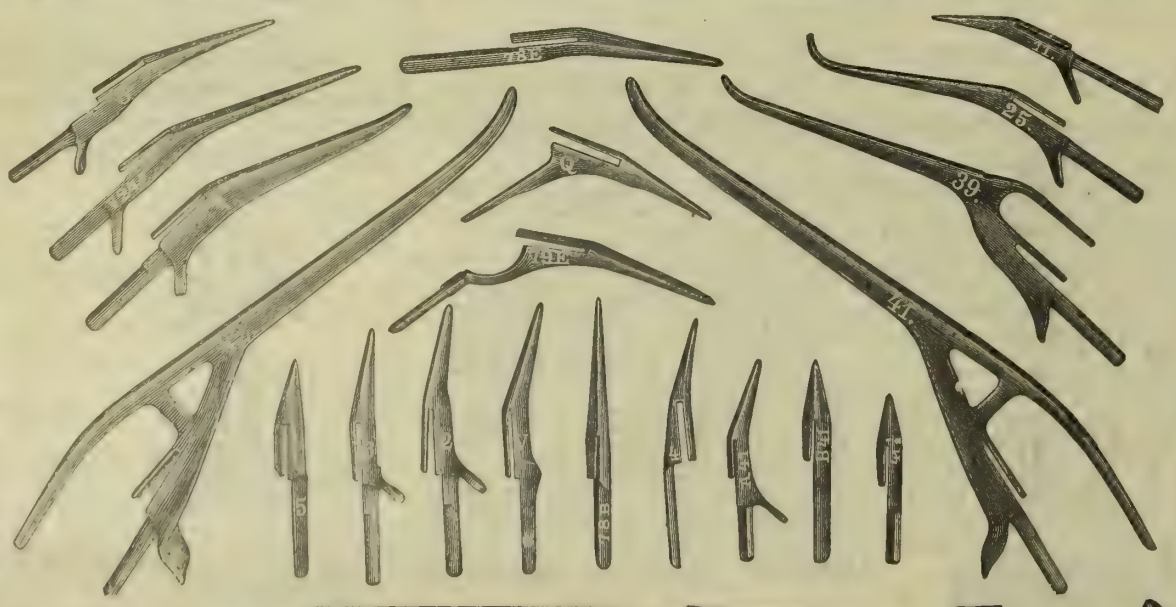
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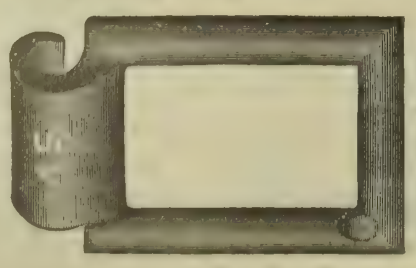
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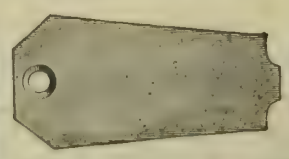






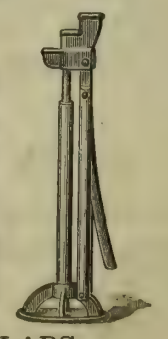
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PACIFIC RURAL PRESS

Vol. XLIII. No. 21. SAN FRANCISCO, SATURDAY, MAY 21, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Stony Creek Valley, Colusa County.

When we speak of the "great valley of California," or when we divide it by specific mention of the Sacramento and San Joaquin valleys, the distant reader probably conceives the notion of a wide stretch of land definitely bounded on the sides by the foothills of the Coast Range and the Sierra Nevada, something as the sides encompass the bottom of a basin. This view does not include the hosts of small valleys which lie among the outer fringes of the foothills, and are themselves arms of the great valley. From north to south for hundreds of miles, the east and west sides of the great valley intrude themselves among the hills, by means of these smaller valleys which open into the great valley. These small valleys are usually higher than the great valley, and their soils, formed by wash from adjacent hillsides, are often deeper and richer than the great valley soils. With elevation and the immediate shelter of adjacent hills, these valleys are often warmer and freer from frost than the broad expanses below, and they usually have greater rainfall. It is natural, then, that the earliest fruit should come from these small valleys; also that, because of deep soil and more abundant moisture, they should be favorite sites for orchards and vineyards. Sometimes these small valleys are very narrow, and are inclosed within the boundaries of a single ranch; sometimes they widen so that they inclose thousands of acres and form an important farming district. The engraving on this page presents a view of one of the larger valleys, and is characteristic of these valleys, which have not yet received attention from the fruit planters. These valleys are usually well wooded, or at least freely dotted with trees, though not covered as in a forest. As improvements progress, these old oaks disappear before the serried lines of fruit trees and vines, but when the territory remains in grain or pasturage, the trees are left to beautify the landscape and furnish grateful shade for stock. Such is the condition in Stony Creek valley, which is the largest of the small valleys in Colusa county. It is 40 miles in length, and could hardly be called a small valley at all, except in a State where there are so many larger ones. It is very picturesquely situated among the sloping foothills of the Coast range, and is a region of excellent repute for salubrity of climate and fertility of soils. The settlement of the valley began as early as 1854. The farm shown in the center of the picture is that of J. W. Brownell, who settled at this point in 1858.



VIEW OF STONY CREEK VALLEY, COLUSA COUNTY.

THE STATE FLORAL SHOW.—The spring show of the State Floral Society, which occupied the last four days of last week in this city, was a notable success. The main floor of the Mechanics' Pavilion was largely filled with the exhibits of foliage and flowering plants and cut flowers, and the grouping and arrangment were very effective and beautiful. It was, undoubtedly, the greatest exhibition of the kind ever held on the Pacific slope, and its character reflected much credit upon the State Floral Society, under whose auspices it was planned, and carried out by a very able and devoted exhibition committee. Though the expenditures and payment of premiums called for a large amount of money, it was nearly supplied by the public patronage, and the Society can congratulate itself upon signal success for this its greatest effort. The premium list for the fall show is already published, and it is none too early to begin making collections and growing plants for the exhibition which will be held in the Mechanics' Institute pavilion, about the first of November.

FARMERS' INSTITUTE AT POMONA.—The next meeting of the Los Angeles County Farmers' Institute will be held at Pomona on Friday and Saturday, May 27 and 28. A program full of practical subjects will be presented and there will also be entertaining musical and literary features. We hope our many readers in the region about Pomona will take full interest in these meetings and will prepare to attend. It will be a season of free inquiry into all branches of farming suitable to the region and such conference will be profitable to all who participate. Prof. Wickson, of the State University, will conduct the meetings.

A MAMMOTH POPPY.—One of the curiosities of the Flower Show last week was an "Iceland poppy" ten inches in diameter, deep red marked with black, which was grown by Mrs. A. Dowd of Menlo Park from seed procured from some Eastern seedsman.

Progress in the Wool Interest.

An encouraging note in the wool line is refreshing. There are from time to time quite clear indications that we should not allow our wool interests to work down too low. It is true that we shall have to produce wool upon another basis than the old free range plan, and that to make sheep pay upon enclosed fields upón alfalfa or other grown feed, we must have better sheep and produce higher-priced wool. This is quite possible providing our growers apply themselves to an understanding of the question and will make the investment necessary to get good blood and handle it properly. J. R. Dodge, the Statistician of the U. S. Department of Agriculture, gives assurance that a very comprehensive presentation of the statistics of sheep and wool gives the estimated number of sheep and product of wool for each of 22 years past, the average wool supply by decades since 1840, the annual importation of wool since 1870 and the average annual importation of woolens by decades since 1830. It shows that the value of our flocks is greater by $42,000,000 than in 1870, and the value per head greater than since 1875.

From these facts it appears that the domestic supply of wool is six times as great as in 1840, and that both domestic and foreign supplies were only three pounds to each inhabitant while they are now 6½ pounds. Then, including imports of woolens, scarcely four pounds per head were used, whereas we now require over eight pounds.

It appears that three-fifths of all the wool used for all purposes is of domestic production, while four-fifths of the requirement is manufactured in this country, leaving only one-fifth to come in the shape of imported goods. It is gratifying to know, also, that for three decades the value per head of imports of woolens has been regularly declining, and is now only about three-fourths of a dollar per annum for each individual, when in 1850–1860 it was considerably more than a dollar.

THE TOBACCO PRODUCT.—Those who are experimenting with the tobacco product in this State may be interested to note that the high prices resulting from the shutting out of Sumatra tobacco by present customs law has stimulated tobacco-growing in the seed-leaf districts, and the acreage will be materially increased in the Connecticut valley, Pennsylvania and Wisconsin. A strong tendency to increase the acreage in Kentucky, in case the season should be favorable for putting out, is also noted.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 21, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Truman, Hooker & Co
Storage Warehouse—Grangers' Business Association.
Cocoanut—L. G. Sresovich & Co.
Fruit Grader—Mosher, Chandler & Co.
Agricultural Implements—San Jose Agricultural Works.
Berkshire Swine—Alfred Seale, Mountain View, Cal.
Agricultural Implements—Baker & Hamilton.
Bicycles—A. W. Gump, Dayton, Ohio
Agricultural Implements—Deere Implement Co.
Land for Sale—Kern County Land Co.

See Advertising Columns.

The Week.

A hot wave comes just in time to convince our distinguished editorial visitors of the accuracy of their preconceived notion that California, in order to be semitropical, must be next door to Tophet. This is a common impression among new comers, and we hope that the weather will moderate so that they can have a good sample of the "balmy and delightful" before they depart.

The incoming host of writers and publishers was cordially welcomed to the borders of Southern California, and has been entertained with lavish hospitality in Southern towns. At Los Angeles the visitors were met by a distinguished company of representatives of the various State organizations, including the State Boards of Trade and Horticulture, the State Grange, etc., who will serve as their escort to the several points to be visited in Central and Northern California. All this week will be occupied in a round of such delightful local receptions, and early next week they will reach the metropolis.

We are glad this greeting to Eastern newspaper folk is so cordial and wide-reaching. Certainly California owes much of her growth and prosperity to the information so freely circulated in the journals which our guests represent, and we rejoice that they come to see the country which they have helped to develop. It is fitting and proper that they should enjoy the best we can extend in the way of generous hospitality.

The People and the Politicians.

The direct and dominant force of public opinion upon Governmental policies, and upon political affairs generally, is one of the curious and happy facts of American politics. It is curious because without parallel or analogy in any other country; and it is happy because it is the circumstance, above all others, which affords assurance of the integrity of our institutions. No matter how wire-pullers may plot, or rings may juggle, all are at last brought up to the snubbing post of public opinion and made to step in time with whatever tune it may choose to play.

For the ten thousandth time this principle is now being notably illustrated and, curiously enough, by contests between the rank and file and the leadership of both the great political parties. The organized machinery of the Democratic party is more completely "handled" by Mr. Hill of New York than it ever has been by any man since organization became the rule in our politics. Mr. Hill wants the nomination for the presidency. His schemes are supported openly by Gorman, Bryce, and others, and covertly by Watterson, Carlisle and their associates. These leaders know that with Hill in the presidential chair there would be abundant "spoils" for distribution. But, on the other hand, the rank and file, the great unorganized mass of Democratic voters, to whom policies are more than "spoils," and to whom principles are more than expedients, will have none of Mr. Hill and his machine-made boom. They steadily demand the nomination of Mr. Cleveland, and so strong has become their demand, that nothing in the natural order of things can prevent his nomination. The politicians have been driven to the wall by the force of a public opinion, which, though silent, is irresistible.

On the Republican side the situation is almost exactly reproduced. It is very plainly to be seen that the leading party politicians of whom Boss Platt of New York, Boss Quay, of Pennsylvania, chief bugle-man Clarkson of Iowa and local ringsters everywhere the whole crew of spoilsmen and self-seekers are not friendly to the renomination of Mr. Harrison. After the habit of their kind they refrain from outspoken methods of opposition; but their private wishes may easily be read. Their platform, if they dared to announce it, would be "anybody to beat Harrison." But in opposition to these "leaders," these managers of the "machine," there stands the overwhelming mass of opinion within the party ranks in supporting Mr. Harrison, and his nomination is as sure as anything in the future can be.

The selection of these two men by the popular choice of the two great parties illustrates the continuing integrity of the popular jugdment; with either of them in the presidency the power of that great office will be honestly and diligently employed. We might wish, perhaps, for certain higher qualities in each of them, but either will take good care of the interests of the country.

Another Great Livestock Deal.

It is reported that another great cattle king has been crowned in Chicago, and the greatest deal of recent times places him on the bench alongside of Armour, Swift and Morris. Six small concerns which have hitherto had issues with the old kings, have pooled their issues and put their new king on a par with their old rulers. It is said that these six concerns have a capacity for slaughtering and curing 10,000 hogs a day in the summer and 15,000 in the winter, with all the requisite improved refrigerating plants and accessories. Last year the combined plants slaughtered 1,250,000 hogs, 120,000 cattle and 20,000 sheep and calves. The six concerns cover more than 20 acres of ground at the Chicago yards and have branches in other cities.

A noteworthy feature of the deal is that Henry Botsford of the Chicago Packing and Provision Company concern, which made a net profit in two years of $1,200,000 for its stockholders, is to be president of the new amalgamated company. That will take him out of the category of "small packers" and will put him at the head of establishments slaughtering one-third of all the hogs packed at Chicago.

Some gossip about the amount of money involved in a livestock transaction in Chicago may be interesting to some reader who may be wondering how much he can get for a surplus steer or a farrow cow. The figures are startling:

"The new company will have a capital of $6,500,000. There will be $2,500,000 six per cent gold bonds, redeemable in thirty years at 110. There will be £400,000 of 8 per cent preference cumulative stock and about £450,000 of ordinary stock, equivalent in all to about $6,500,000. Of this, $1,750,000 will be represented by cash capital. The firms which are amalgamated have, during the last three and one-half years, averaged $875,000 net per annum, during the last two years they have averaged $975,000 per annum, and in 1891 they made over $1,100,000 net, being more than $850,000 for the first year, $950,000 for the second, and $1,100,000 for the third year. Of the $6,500,000 securities of the new International Packing and Provision Company, limited, about one-half have been taken by the venders. The bonds have been taken by a syndicate of local banks."

The plans of this one concern may give some inkling of the vastness of the livestock interests when the whole country is considered. We believe California should and will have a greater share in this line of wealth-making.

Who Wants a Colony?

TO THE EDITOR:—Can you or any of the readers of your paper (who, from its excellence, ought to be numerous) give me authentic information as to the best location in your State for a colony of practical old country farmers who intend going in for grain and high-class stock-raising. Any information will be gratefully received by IAN, care Editor.

This inquiry comes from a RURAL subscriber in Chicago who expects to take his place among the farmers of the Pacific Coast. The information he desires may be useful also to other home seekers. We will print descriptions of lands suitable for the purpose specified, providing such descriptions do not exceed 200 words in length, and are written by residents in the localities described. Descriptions should mention distances from railways and prices at which tracts can be purchased, as well as general notes of the natural adaptations of the lands.

Statistical Review of Barley.

The cultivation of barley in California has at all times been an important industry, but at no time has it assumed such proportions as within the past three years. This is largely due to increased attention given to fruit culture and also to many large tracts of land which had been given over to pasture, being cut up and sold to small holders. It is roughly estimated by seemingly well informed horticulturists that for every acre of land devoted to fruit, one work animal is required. If this estimate is well grounded, then we can readily see how barley is such an important industry when it is stated that it constitutes about the only kind of grain which is fed to horses. Besides this, with improved milling machinery, barley is rolled and fed largely to dairy cows, work oxen and to stock fattened for market.

The State Board of Equalization reports the number of horses in this State in 1890 as follows: Thoroughbred, 1433; graded, 60,618; American, 152,691; common, 84,149; colts, 91,249; total, 390,140. In 1891 the Board reported the number as follows: Thoroughbred, 1417; graded, 48,141; American, 141,641; common, 113,216; colts, 89,075; total, 393,493. The returns for 1892 are not at hand, but it is claimed that they show a substantial gain. An average of fully two-thirds of the horses are fed barley the year round. Of the other third, part are fed other grain, while the rest are pasture-fed. With two-thirds of the horses fed barley, any farmer or horseman can readily figure out the quantity consumed annually.

Besides the barley required for feeding to stock, large quantities are taken yearly by malsters, the amount of which we are not prepared to say. We also supply an important export trade. That sent out of the State is common to gilt-edged. The latter is sent almost entirely to the Eastern States and to Europe.

The number of acres seeded to barley in this State in 1889 was 1,167,627; in 1890, 852,902; in 1891, 1,118,867; and in this year it is estimated at 1,250,000. The increased acreage seeded in this year is largely in the counties of San Diego, San Bernardino, Tulare and San Joaquin. The acreage devoted to barley in the above counties is fully up to that seeded in 1889, while in the other counties more or less of an increase is reported over that seeded in either 1889 or 1891. In estimating the crop outturn, one important factor must be considered—the acreage that is neither cut for hay nor harvested. This varies according to the season. This year fully 20 per cent will either be cut for hay or else left in the field, owing to its generally being of too poor quality. At one time, about the middle of April, it looked very much as if one-third of the crop would be more or less of a failure, but with showery and cool weather toward the latter part of that month, and extending to about the middle of the current month, crop prospects improved rapidly; and, with continuance of favorable weather, the yield to the acre will be a full average, as well as the grade.

Eastern Oregon and Eastern Washington are free contributors to this market, notwithstanding much of the barley raised in those two States has a high market value east of the Rocky mountains for malting. In this State it is also held in high favor, ranking fully up to the best Californian. The receipts of barley from up North, from July 1, 1891, to May 14, 1892, aggregate 51,533 sacks, against, in the like time of 1890–91, receipts of 269,912 sacks. It is quite generally claimed that the barley crop in the Central States in this year will be light, which, if it will prove to be correct, will create a good demand for Oregon, Washington and California barley. So far this season, the shipments from this State to the East have been light, but from up North they have been quite free.

The exports by sea from San Francisco, from July 1, 1891, to May 14, 1892, aggregate as follows: 1,005,734 centals, against 291,854 within the corresponding time in 1890–91. The receipts of California barley at this port within the above dates were respectively 2,476,295 centals and 1,626,145 centals. Adding the receipts form up North, and the grand total received at this port was 2,527,828 centals within the above dates in 1891–92, and 1,917,999 centals within the corresponding time in 1890–91. Deducting the quantity exported, and there was taken in this city, for home feeding, 1,549,570 in 1890–91, and 1,470,561 centals in 1891–92.

While it is too early to estimate the probable foreign demand during the season of 1892–93, yet crop advices received from Europe do not indicate a full average yield to the acre, while with only fairly favorable crop weather, it will fall below an average. Last year the outturn was not only below an average, but the grade was as a rule poor. This created a free demand for malting barley from this coast, Canada, and other supply sources.

The State Press.

Modesto *Herald*: "Kern, Tulare and Fresno counties furnish illustrations of the great benefits of irrigation. A desert waste has there been rendered wondrously productive, and opened up to settlement, civilization and wealth. Land there that a few years ago was considered utterly worthless, or only useful for a few months in the year as a sheep range, now is worth from $100 to $1000 per acre; and unnumbered vines, and miles of orchards, and broad fields of waving grain, and villages and growing cities, mark the trackless wastes of former times."

Woodland *Democrat*: "The people of California have not, at any time, received direct benefit from any official act of the Railway Commissioners, and the proceedings of the last session, if correctly reported, should be sufficient proof that they never will."

Speaking of recent Chinese legislation, the Grass Valley *Tidings* says: "If the judges are disposed to favor the people of the Pacific coast rather than the unwelcome aliens, the danger from this source will not be very serious. Judges Morrow and McKenna can be trusted in this connection, we think."

The Canal Question.

LAMANDA PARK, May 15, 1892.

TO THE EDITOR:—The Nicaragua canal completed will be a great thing for the commerce of the world. It will be especially beneficial for Australasia, the large equatorial islands eastward of Sumatra, the east coast of Asia and for the western coast of North and South America.

The construction of this canal meets with the approval of a vast majority of our citizens. There is, however, some disagrement as to the means by which the canal is to be constructed.

This disagreement is exceedingly useful in causing an examination of the present scheme of a private company to construct and manage it. The scheme, as I understand it, is that the necessary funds are to be derived from bonds for one hundred million dollars, guaranteed by the United States—that is to say, by a Government loan. The security seems to be a first lien on the canal, with certain privileges of employing its own engineers to pass on work and of holding 70 per cent of the stock of the company in escrow, with an option on the stock at a price I have not seen named. During the period of the escrow and option, the Secretary of the Treasury votes this block of stock. This escrow and option seem to expire at the completion of the canal. I have not seen the bill, and consequently derive my impressions from its friends' statements in the papers.

Assuming this statement to be substantially correct, we next wish to know the option price and who is to get the money should the Government choose to buy. Here is a point that I am either misinformed about or that needs some light. Then what voice has the Government after the expiration of the option should it not buy?

It is not to be presumed that the gentlemen who are said to have risked some six millions on the enterprise are expecting to go without any profit. It is reasonable that they should have a good round reward for their work and risks, but we should have a clear idea of what this amount is to be and where it is to come from.

The American people have always been too impatient in examining bounty and subsidy and guarantee schemes that were asked for on the grounds of a general public benefit. The resulting laches have ended in the most oppressive and the most corrupting monopolies we have. The subsidized Pacific Mail Steamship Line is operated on the cleanest dead-cinch plan that is anywhere extant. Nothing like it exists. The subsidized Pacific R. R. combine is another gigantic oppresser and political corrupter born and reared on Government guarantees and subsidies. The subsidy-bounty guarantee scheme has so far worked for the enrichment of a few while the people of government have been defrauded. We are certainly justified in a close examination of this new guarantee scheme, to see that our past experience is not repeated.

Assuming, again, that the bill now before Congress does give sufficient security for the proper expenditure of the Government loan and for the management of the canal in the public interest without the payment of some vast sum for stock, we still have the danger of further congressional modification, which would destroy both of these. Take for instance the change procured by the Central Pacific R. R. in its Government debt. The Government held a first mortgage on this property, but by Act of Congress this was released and the Government mortgage was changed to a second lien and the security absolutely destroyed. With the powerful lobby now constantly maintained in Washington by the protected and bountied interests, a lobby all powerful in legislation, we must admit the danger of a similar hocus pocus under similar inducements.

Mr. Pool recently called attention to the extraordinary concession for the exclusive navigation of Lake Nicaragua by a certain company. Capt. Merry replies that this concession expires in 1895, and that any way the canal company holds an assignment of it. All these things, and many others, are subjects for careful examination. There should be a sort of abstract of the whole record presented together with the present Senate bill. By the way, the senators named as advocating this bill are supposed to be very close to one or another of the largest corporations in this country. Sherman is a general all-round monopoly man. Dolph is quite friendly to the Northern Pacific. Edmunds, when a senator, frequently appeared in the Supreme Court as counsel for the Pacific roads; thus, with Evarts acting as their special hired advocate before one department of the Government while themselves legislative judges of these railroads in another department.

Capt. Merry goes on to say that the Nicaragua Government has expressed its intention of granting no mo e exclusive rights of navigation over its internal waters. If the navigation of Lake Nicaragua—the key to the canal—rests on the mere expressed intention of the local Government to let it alone and not grant it away, we have at once a need for further guarantees. A Central American Republic's expressed intention, I should say, was inadequate.

The arguments offered by the friends of the private corporation are largely open to question. Mr. Jno. T. Doyle says that the rate of the canal tolls will be proportioned to its cost. If the canal is operated by a private concern on business principles, the cost will play no part in the toll charges. In such c. se, the charges will be fixed at a rate that will insure the largest possible returns to the company. It will consider the capacity of the canal, the development of commerce by its advantages to the full use of this capacity, and fix the charges accordingly.

Whether the canal costs one hundred billions or one hundred millions, affects in no way the gross revenue the canal will bring in, and would certainly affect in no way a business man controlling it in fixing his charges.

The claim that a musty and forgotten treaty with England prevents the United States from building this canal directly, while allowing it to do so indirectly, seems to me very weak. The further claim that the concessions of the Central American Governments for 20 years to this company will keep others out, is more tenable. But these gentlemen of the company are either on the make or they are patriots—perhaps a little in both lines. In either case, they can be arranged with on liberal terms to relinquish their rights and have them renewed to the United States. The Canadian canals and the Sault St. Marie and Erie in this country, show that Provinces, States and the United States can build and manage canals without the intervention of private companies.

I agree with Cannon that the Government should be all or none in this canal. Less complication, less temptation, less danger of abuse and fraud, and less danger to the public users to have it either all one way or all the other. By all means, let us see the contracts and the bill, then we can obtain a clearer idea. I believe in the canal and I believe, too, that the cheapest and best way to build and manage it is to pay the present six-million-dollar-investment men their profit and have it over with, and get rid of all the entanglements the mixture of public and private interest must bring.

ABBOT KINNEY.

Some Extraordinary Questions.

FRESNO, Cal., May 16, 1892.

TO THE EDITOR:—Suppose the Senate bill to give government aid to the Nicaragua Canal should become law; that the Government, by its assistance in construction, or by additional payments in construction, should become owner of $70,000,000 of the one hundred millions of stock; that the Secretary of the Treasury hold that stock in trust and six men as directors, in a total of 15 directors, represented the Government's or people's interest in the canal, and voted the Government stock, what would there be to prevent one or more of the Government Directors from misrepresenting the Government or people's interests and selling out?

The representative system, wherever applied—whether in Government or business, as it now exists—has one serious defect—it leaves the men chosen, in place of a numerous body of others, free to be representatives or misrepresentatives; as free to be misrepresentatives as anything else. The Senate bill does not say how the Government's Directors should vote. It does not say, there is no bill whatever, before Congress, saying what the Government or people's interests are, nor how the Government Directors should vote in case they come into being. It does not fix a maximum rate of toll. What surety have we, then, that the Government Directors, or some of them—enough to give a majority of stock on the side of the private corporation directors—would not yield to the blandishments of private capital or the pressure of political intrigue when in office, and misrepresent the people? How can a man be a representative unless he is (1) instructed plainly as to what he is to do and (2) obeys his instructions. The man who wields power derived from the people by their vote or appointment, by those elected by them, is a delegate, and not a representative; and it is that kind of Government Directors which the Senate bill provides for the creation of.

I am for the building of the canal, and by the Government purchase of stock, if the difficulty I have indicated, if the danger of misrepresentation by Government Directors can be destroyed, but if Government Directors are to be left free to misrepresent the people's interests, then I agree with Pres. Cannon that a Government partnership with private capital is dangerous to the interests of the people. And the reason is plain, for it would be manifestly to the interest of the private capitalists to put on as much tariff as the traffic would bear, and to the interest of the Government (if it represented the people) to make the tariff as little as expense of operation would permit. The consequence would be a continual conflict of interests, and we know that "a house divided against itself cannot long endure." The Canal Company would soon become all Government or all private, and necessarily so. F. P. COOK.

If in the nature of things it were possible to instruct the directors "how to vote," then it would be unnecessary to appoint directors at all, since the ends sought might be reached by statute. It must be presumed, just as it is in the case of members of Congress, that the directors representing the people's interest would by their votes support that interest. If our correspondent really believes that six true men cannot be found for the service he must be far gone indeed in pessimism. As to the further question, namely "How can a man be a representative unless he is instructed as to what he is to do; and obeys such instruction?"—this is really too silly for serious consideration. Any man may be a representative who is chosen to represent, and he may be instructed or not. In nearly all representative systems the representative is not instructed, since in the nature of things, instruction would be an impossibility. How, pray, could representatives elected to Congress be instructed how to vote concerning matters as yet not before the public? The question is a pure and simple absurdity.

It is not true in the sense it is assumed by our correspondent, that a "house divided against itself cannot stand." In every chamber of government administration—in every board of administration concerning large affairs—there is constant division. Congress is not unanimous and yet it contrives to "stand" pretty well; there is never unanimity in any political party but they manage to "stand" nevertheless. Whoever heard of a railroad directory in which there was not constant clash of judgment—still they work pretty steadily toward profitable ends.

In going into this canal project the people will have to take the chances of getting faithful and true representatives just as they do in the greater business of general government. Sometimes the wrong men are chosen for governors and presidents and so, sometimes, wrong men might be chosen for directors of the canal. But the fear that opposes the canal project because bad men might get into the directory, should, to be consistent, decline to support the system of representative government because the administration may get into bad hands. There is no department in the affairs of civilized life in which dependence upon the integrity of others does not play a part; and the experience of society is that there are more honest men than rogues.

For the Canal in any Honest Shape.

CARMEL VALLEY, May 17, 1892.

TO THE EDITOR:—I don't think my last letter justifies Mr. Doyle in classing me with those opposed to Government's joint ownership of the Nicaragua canal. I merely wished to point out that there were no insuperable obstacles to an *entire* ownership by the U. S. Government, or at least none that C. P. Huntington or Jay Gould, if they ran the Government, would allow to remain insuperable; nor do I yet see, after all Mr. Doyle has urged, that a Government ownership, *if desirable*, might not be arranged by negotiation with all parties concerned. In fact, Mr. Doyle seems himself to desire a a real, if not nominal, Government ownership. "The company," says Mr. Doyle, "is to transfer to the United States seventy per cent of all its stock and security," etc., and this "can be voted on by the Secretary of the Treasury." So long as the Secretary of the Treasury is true to his employers, the people, there should be no fear of oppressive tolls. Unfortunately, too many of the people's servants are like Ginral C., that "that dreffle smart man," in the Biglow Papers, who had

> "Bin on all sides that give places or pelf,
> But consistency still wuz a part of his plan,
> He wuz true to one party, and that wuz himself."

But if we cannot trust our Government honorably to husband the people's resources and uphold the people's rights when thus controlling a majority of the stock, I don't see how we could look for anything better if the entire membership were vested in the Government.

Further, I am much opposed to enlarging our already too cumbrous political machine. Unless civil service reform were so faithfully carried out as to insure tenure of office during good behavior and efficiency capacity, the canal would become for the party in power an instrument for the debauchery of voters. There are already far too many "spoils" for the "victors."

I think the ideal plan would be a joint international ownership, and a joint international treaty of neutralization, as in the case of the Suez canal. Failing that, I am prepared to vote for the canal in any shape we can get it, built and owned by the U. S. Government or by private company with governmental aid. Uncle Sam ought to have his eye teeth cut by this time, and should be able to protect his family from being outwitted by a few adventurers. It should be easy to insist on a strict economy in building and to insist on only a fair profit being exacted in tolls.

So I want to be on record as hurrahing for the canal in any honest shape! May it be built without a days's needless delay.

EDWARD BERWICK.

Santa Barbara County Notes.

CARPINTERIA, May 16.

TO THE EDITOR:—While the rain of two weeks ago will benefit fall crops, it has not been of any particular benefit to hay and grain as they were already so far advanced that they could not be much renewed.

Prospects are very good for beans and corn. Not nearly so many Lima beans are being planted as usual; the low prices for them causing farmers to plant corn and small beans. Many blackeye beans have been put in on contract, the price for them being two and one-half cents per pound.

Fruit and nuts are promising well and growing finely, except some varieties of pears and plums.

A great many lemons are being set out in Montecito and Carpinteria valleys. The lemon thrives wonderfully well in this section and is never bitten by frost. Santa Barbara lemons are always salable at higher prices than any other in the State. Harleigh Johnson, of Montecito, has done much to bring this about as he has made a study of the curing and packing of lemons as well as oranges, and now cures and packs the bulk of all citrus fruits sent from the county. Santa Barbara oranges are also enjoying a boom this year as they are entirely free from frost bites.

Heavy shipments of Lima beans are now being made as prices came up to two cents per pound and many concluded best to unload their crops, although that is still a low figure.

The asphaltum business promises to be heavy, and extensive works are being put in at Carpinteria and preparations made to ship heavily.

Santa Barbara is busy laying her outfall sewer and building the "Esplanade Del Mar." H. R. Richardson has applied for a franchise to construct an electric motor road from the city to Montecito.

The County Horticultural Society has begun to hold monthly open air meetings in the country, as is usual all the summer months. Last Wednesday the society met at Jno. Spence's and will meet again on the first of June at J. A. Blood's place in Carpinteria. L. B. CADWELL.

Fewer Raisins But Better Ones.

HANFORD, CAL., May 18, 1892.

TO THE EDITOR:—You can, if you wish, say over my signature that the frost of April 10th here damaged the first crop of raisin grapes in the entire Lucerne valley fully one-half, possibly two-thirds of what it otherwise would have been. This frost, together with the subsequent unusually cool weather, has also so delayed the second crop as to cause a serious probability of its not ripening sufficiently early to be cured into raisins. Such serious destruction of fruits by frosts has never before occurred in this part of the State, and the real damage suffered by raisin growers here in consequence is just being realized by them. The result is really disastrous, and it can safely be said that the quantity of raisins produced in the Lucerne valley the present year will fall far below that of 1891, notwithstanding the large increase in acreage just coming into bearing, but the quality will be better than in any previous year if the fruit is well cured.

Speculators in land and dried fruits here and in Fresno have, and still do, as a rule, strenuously deny that any serious damage has been done to the incoming raisin crop by frosts in the upper San Joaquin, but growers, who are best qualified to know, and who have investigated the matter thoroughly, say otherwise, and as I believe that it is not only right but best that the truth be known, particularly in matters of this kind, I have said what is herein written. A. F. JEWETT.

Weather and Crop Bulletin for Week Ending May 13th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Francklin, Observer at Los Angeles:

Humboldt County.—Eureka—The weather has been warm, with a fair amount of sunshine, which greatly improved the fruit crop. The number of rainy days and the amount of rain, however, have been detrimental to the potato and cereal crops. *Upper Mattole*—The cold storms still continue, but no frost; everything backward. The prospects for grain crops are fair, and no very serious damage to fruit from the continued cold rains. *Mad River*—The weather has been favorable, and much warmer, and good growing weather; on most places, too moist for cultivation. Apples and prunes have set better than any other fruit. *Blocksburg*—The continued rain delays getting the ground ready for corn, potatoes and other vegetables. Warmer weather and sunshine is most needed. The highest temperature was 60, and the lowest 34 degrees. *Hydesville*—Oats are the principal crops in this vicinity, and are looking fine. It is thought the cherry crop will be light, the cause not known. Strawberries are ripening very slowly. *Phillipsville*—Cold and hard rains early in the week; but later, less rain and warmer. Grass has been growing nicely, and stock looks well. No frost. The fruit crop looks promising. Grain never looked better. Everybody has had rain enough, and now we all want a little sunshine.

Lake County.—Upper Lake—The unusually heavy rains of the past week have helped grain-hay, also grain; but slightly damaged alfalfa, and have done no good to fruit and grapes. There is now great need of warm, sunny weather, as everything is backward.

Shasta County.—Anderson—More sunshine would be beneficial to gardens. The fruit crop looks well. Peaches will have to be thinned out; the trees are heavily laden and large for the season. Prunes will be a large crop. Bartlett pears are good; other varieties not so good. Highest and lowest temperatures, 68 and 36 degrees.

Tehama County.—Red Bluff—The weather has been favorable to grain and hay. Haying will begin in about ten days. The present fear is too much heat after the recent cool weather. The frost on the 11th did no damage in this vicinity but was rather detrimental to fruit in the foothills. Strawberries in the market, but not so good as last year's.

Butte County.—Chico—Weather has been very favorable for the grain crop. *Palermo*—The temperature slightly higher, the amount of rain less, and the sunshine a little more, than last week, thus enabling the orchardist to plow and cultivate, which all are doing. Grain and fruits promising.

Glenn County.—Williams—Prospects continue favorable. *Willows*—Haying is well under way; crop will be a full one. Some wheat lodged, but not seriously. Peach crop a full one. Apricots very light. Prunes nearly all killed by the frosts of April.

Sutter County—West Butte—Grain is making an excellent growth; weather unusually cool for the time of year; rainfall .94 of an inch, and for season, 14.54 inches. Some alfalfa-hay spoiled by continued rains and damp weather. *Yuba City*—The weather for the week has been favorable to a large extent. Light frosts nipped some vegetables. The rains have aided late sown grain. The warm weather and drying winds have put a check on rust in the grain.

Yuba County.—Wheatland—Summer-fallowed grain is looking yellow in places, from too much rain and cold weather. Winter sown grain is doing finely. Both need spring weather. Other crops are backward.

Nevada County.—Nevada City—The past week has not been favorable for crops of any kind. The temperature has been much lower than for this season of the year, but no material damage has been noticed or reported.

Placer County.—Newcastle—Farmers are thinning peaches; prospects favorable for a good crop. Pears and cherries will be light.

Sacramento County.—Mayhew's—Slight frost on the 10th; temperature was 35; white frost on the roofs of the buildings; no perceptible damage noticed or reported. *Franklin*—The weather has been of great benefit to all growing crops. Haying will commence in a few days. All the barley and most of the wheat is headed out, and what the farmers now need is good, warm, bright, sunshiny weather, so the heads can fill.

Yolo County.—Rumsey—All crops favorably affected by the rainfall, temperature and sunshine of the past week. *Briggs' Vineyard*—The rainfall, temperature and sunshine beneficial to fruits and grain. *Woodland Democrat*—S. T. Mowder returned from a trip (Friday, 13th) to Dunnigan, Arbuckle and vicinity, and reports that he had never seen better crop prospects. Summer-fallow is especially promising. The grain is as strong, green and healthy on the foothills west of Dunnigan and Arbuckle as it is on the level lands.

Napa County.—Calistoga—Fruit of all kinds will be a light crop. Recent reports show French prunes will be one-third to one-half crop; grapes on low lands, very small crop. Owing to frosts on higher lands, crops are reported not setting well, and much shortage will result therefrom.

Solano County.—Denverton—The rains have been gentle in character, but plentiful, with the weather quite cool, retarding the growth of vines and fruits. Winter sown grain doing nicely; summer-fallow fine.

Solano County.—Denverton—Cool weather still continues, and is very favorable for late-sown grain; rainfall .43 of an inch for the week. *Vacaville*—The weather continues cold and damp, which is more or less injurious to all kinds of fruit. We sadly need warm, mild, sunny weather.

Sonoma County.—Forestville—Grain is somewhat retarded in growth. Grapes at this date have received no injury, as was at first reported. The ground is yet too cold to plant corn

Hyde Ranch, near Cornwall, Contra Costa Co.—The cool weather and showers have been a great benefit to this portion of the county.

Santa Clara County.—Santa Clara—The warmer mornings and evenings have been beneficial. What is now wanted is good weather for the hay crop. *Gilroy* crops are looking well, especially late-sown grain.

Alameda County.—Alvarado—The weather has been cool except two days, with over an inch of rain. Prospects for grain, hay, fruit and vegetables are generally good; no frosts the past week. Sugar beets coming up very well. Prospects are very flattering for all kinds of crops. *Niles*—The outlook for grain in this vicinity is good. Peaches light; cherries light; apricots average; almonds fair; and prunes a fair crop. The cool weather, while not forcing fruit, will be beneficial to all kinds here.

Stanislaus County.—Turlock—Crops of all kinds have made a wonderful improvement since my last report. It has been too cool and cloudy for ripening strawberries and mulberries. *Modesto*—If any danger since my last report, it is in the weeds taking possession of many grain fields.

San Joaquin County.—Lodi—Highest and lowest temperatures, 76 and 38, with southwesterly winds prevailing. Haying just begun in a small way, two weeks later than usual; crop light; acreage rather more than usual. Some fields that were sown to wheat are full of oats and will be cut for hay; recent rains have improved the wheat, which is now heading out; the straw will be short. *Stockton*—High winds have prevailed on the 10th, 11th and 12th; but owing to the low temperature, have caused no damage to the grain crop.

Calaveras County.—Milton—Cool weather with rain has kept hay back and favored the growth of all late-sown grain, which is very [illegible]

Fresno County.—Selma—The weather continues unusually cool and favorable for the grain crop, which now promises well. Fruit is looking well, and an enormous crop developing, making extensive thinning necessary.

Tulare County.—Visalia—The past week has been favorable to nearly all crops. Everything the last rain helped at all is doing very well.

Amador County.—Quartz Mountain—The late rains have resulted disastrously for some of the crops around this vicinity, and have been a decided benefit to the late crops and feed on the ranges. *Baville*: Four inches of snow fell here during the last storm. Earthquakes have been quite numerous up at French Camp. They have been so severe as to run people out of their houses. *Shenandoah Valley*—The weather has been very stormy for some time, there not being a clear day during the week.

Monterey County.—Jolon—The wheat crop has improved greatly since the last rain, but fears are entertained that the continued cold northerly winds prevailing will damage crops to some extent. *San Ardo*—The past week has been favorable to the grain and fruit crops. Grain is recovering well after the severe trial it had. With favorable weather, there will be an average crop.

San Luis Obispo County.—Edna—The last rain and cool days have helped out the late-sown grain, so that there will be an average crop; fruit trees looking well, and bid fair for a good yield. *San Luis Obispo*—All crops doing finely; the land is in splendid condition for beans and other green crops. Grain is looking well; the dairymen are well pleased. The rains have given a fresh growth to feed and grasses; only a few acres of cut hay has been damaged. Paso Robles *Leader*: The rain of the past week has been worth thousands of dollars to the farmers of San Luis Obispo county. What was an almost total failure two weeks since will now make a fair yield.

SOUTHERN CALIFORNIA.

Santa Barbara County.—Santa Maria—The rains have been favorable for all vegetation. Grain crops will, however, not come up to the average. Beans and corn are being planted rapidly; some well up and the ground in a good and clean condition. Fruit is holding its own. In some localities frost has affected it, while in other sections it remains untouched. J. A. BARWICK

WEATHER CROP BULLETIN OF SOUTHERN CALIFORNIA.

Santa Barbara County.—Lompoc—Threatening weather prevailed during the past week, accompanied by heavy winds which dried the land prepared for beans, but did not injure growing grain. Hay-cutting has commenced; no rain fell.

Ventura County.—Hueneme—The rains of last week will require some beans to be replanted. The weather has been favorable to growing crops during the past week. Haying still continues. *Bardsdale*—The hay harvest is under way, and the crop is very good. The bean crop was injured by last week's rain and much of it will have to be replanted. The general prospects are most excellent. Considerable cool, cloudy weather occurred during the week.

Los Angeles County.—Lancaster—Rain fell on the 6th; since then cool winds have prevailed, which are very beneficial to grain, and the prospects for a good harvest are improving. *Rodeo de los Aguas Ranch*—Grain is filling out finely. This promises to be the best season for all crops that we have had for several years. Corn, beans and sugar beets are growing finely. Farmers are busy cultivating and haying. *Monrovia*—Cool, cloudy weather prevailed, which was injurious to the berry and fruit crops, but was beneficial to freshly planted fruit trees. *Duarte*—The weather has been cool and cloudy most of the week. The growing fruit looks well; peaches are overloaded and must be thinned. *Pomona*—The rainfall for the season beginning August 16, 1891, is 14.19 inches. The late rains did immense good and little harm; clouds every day for over a week, detrimental only to hay-making. Oranges are still being shipped by carloads, and are giving good satisfaction to buyers.

San Bernardino County.—Ontario—Hay-cutting is well under way, and the present weather is very favorable for curing. Fruit is developing finely.

Orange County.—Anaheim—The weather has been partly cloudy, with a few sprinkles of rain. Vegetable and orange shipments are still going on, and the reapers are busy cutting hay which was not damaged by the late rains. *Tustin*—The weather for the past week has been cool and cloudy, but crops are growing well. The rain of the week before damaged hay on the ground somewhat, but it was of much benefit to pasture, late grain, corn and other crops. Oranges are still being shipped, and with a better market. Cabbages and potatoes are going forward to Eastern points. G. E. FRANCKLIN.

FRUIT MARKETING.

The San Jose Convention of Fruit Producers.

Steps Toward an Organization and a Fruit Exchange.

We alluded last week to the significance of the convention held in San Jose, May 7th, and promised details, which may be found below:

There were about 400 in attendance, some coming from considerable distances. The meeting was called to order by F. M. Righter, president of the Campbell Horticultural Association. Colonel R. P. McGlincey of Campbell was chosen chairman of the convention, D. W. Miller and S. G. Rodeck were chosen secretaries, and, on the suggestion of Colonel McGlincey, D. C. Vestal and Captain E. A. Wheeler were unanimously elected vice-presidents.

Chairman McGlincey read the call issued by the Campbell and Doyle fruit growers for the convention. This call sets forth that the objects of the exchange will be to establish a fruit exchange, for selling our products for cash at home, or at the terminal shipping point of this valley; second, to adopt a uniform method of preparing our fruits for market; third, to devise some means of consuming our products; fourth, to devise some means of obtaining reliable information of the supply and demand, both domestic and foreign; fifth, to adopt some measure tending to preclude the competition, now so injurious among the growers; sixth, to obtain for our products what the law of supply and demand entitles us to; seventh, to have a voice in establishing and maintaining the price of our products; eighth, to provide storage room, issue warehouse receipts for stored fruits, and make advances on same; ninth, to establish and maintain a brand of fruit, if possible, of unequaled excellence; tenth, to buy for members of this Fruit Exchange in large quantities, and, consequently, at wholesale prices, such indispensable articles as sulphur, sacks, trays, boxes, etc.; eleventh, to secure more favorable freight rates; twelfth, to discuss the propriety of an exhibit at the World's Fair at Chicago in the interests of the fruit growers themselves; thirteenth, to obtain reliable statistics of this year's crops and a comparison with last; fourteenth, to discuss such additional measures as will subserve our further mutual interests.

On motion of Mr. Adams of Wrights, two committees, one on organization and order of business, and the other on the Dried Fruit Exchange, were appointed, as follows:

Organization—Colonel E. G. Hall of Doyle, E. H. Hazelton of Evergreen, J. J. Shaner of Saratoga, W. H. Wright of San Jose, and George Blaine of the Willows.

Dried Fruit Organization—C. C. Agee of Solano, A. L. Bancroft of San Francisco, Col. Philo Hersey of Doyle, F. M. Righter of Campbell, and I. A. Wilcox of Santa Clara.

The committees were about to retire when Colonel Hersey was called upon to speak. He responded by making a clear statement of the workings of the West Side Fruit Association. He stated that about one year ago the fruit growers in Cupertino district were troubled about handling fruit profitably. There were numerous talks and several meetings, with the result that the association was organized. It is a joint stock association, and last year handled between $40,000 and $50,000 worth of fruit in a manner to the satisfaction of all interested. He advocated the formation of an exchange immediately, for the reason, as he said, that inside of, or at the end of five years, Santa Clara valley would ship more dried prunes in one season than have been consumed in the United States in any one year. The advantage, he said, was to do away with individual competition.

The convention adjourned till 2 o'clock to allow the committees time to prepare their reports.

Upon reassembling at 2 o'clock, the committee on permanent organization made its report, as follows:

"We, your committee on permanent organization, beg leave to report, as follows: We recommend that an exchange be formed, consisting of the fruit growers and driers of Santa Clara county and those to whom San Jose is the natural terminal point.

"That its name shall be the Fruit-Growers' Exchange of Santa Clara county.

"That the exchange incorporate and that the capital stock be $200,000, divided into $20,000 shares of $10 each.

"That the object of the exchange be the grading, handling and marketing of dried fruits owned or controlled by its members, and that any person owning one or more shares of the capital stock of the exchange shall be entitled to all the benefits of said corporation.

"We further recommend that the corporation be managed by a board of directors, consisting of not more than nine members, and that the chair appoint a committee of five to draft a constitution and by-laws for the exchange.

"We also recommend that a list be circulated at once for subscriptions to the capital stock of the proposed corporation. All of which is respectfully submitted.

G. BLAINE,
E. H. HALL,
J. J. SHANER,
E. H. HAZELTON,
W. H. WRIGHT."

The report was adopted, and as a committee to draft a set of by-laws, the chairman appointed the following: Col. Philo Hersey, F. M. Righter, Adonis Ball, G. W. Tarleton. Colonel McGlincey was added to the committee.

The report of the committee on the organization of a Fruit Exchange was then read and adopted, as follows:

"Your committee on the establishment of a fruit organization or exchange beg leave to make the following report:

"First—For the purposes for which this meeting was called, considering the extent of territory to which the call applies, your committee recommend the organization of districts throughout Santa Clara county, with a central organization for the sale of the products. The plan of the organization of the West Side Fruit-Growers' Association is approved, as far as we understand it, and we believe the interests of the fruit growers will be benefited by such corporations.

"Second—Your committee further believe that the fruit-growers' interests will be further subserved by a State organization, combining all the localities of the State where fruit is grown and prepared for the market. Said organization being for the product and making and enlarging the market, as well as having authority to establish market prices. And we approve of the call recommended by the committee of the State Horticultural Society, as published in the PACIFIC RURAL PRESS of May 7th.

PHILO HERSEY, Chairman,
A. L. BANCROFT,
F. M. RIGHTER,
C. C. AGEE,
I. A. WILCOX."

C. H. Allen then brought up the matter of the State Fruit-Growers' Convention, which is to be held here November 22d, and upon his suggestion a committee of ten was appointed to make arrangements for the convention. It is expected that there will be about 800 people present from different parts of the State at the convention. Following is the committee appointed: S. P. Saunders, F. Dunne, D. C. Vestal, G. Duncan, C. W. Proctor, W. L. Worthen, J. Shaw, J. S. Selby, H. W. Edwards and Mr. Crandall.

The convention then adjourned to meet in two weeks. After the adjournment of the convention the committee appointed to make arrangements for the State Fruit-Growers' Convention, which will be held in this city, met and elected Colonel R. P. McGlincey, chairman, and C. H. Allen, secretary. The committee then agreed to meet again immediately after the adjournment of the convention, which will be held May 21st.

THROUGH SHIPMENTS TO LIVERPOOL.—Arrangements have been made by the California Fruit Transportation Co. of Chicago with the White Star Line by which weekly shipments of the fresh summer fruits of California will go out to England. The four steamers Teutonic, Majestic, Britanic and Germanic are being fitted up with special refrigerator room, capable of holding up to five carloads, and each week through the summer this quantity will probably go out to Liverpool, commencing just as soon as the fruit is ready, some time next month, probably. This arrangement, we are informed by the C. F. T. people, has been made by them for the benefit of all, and no one shipper is to have an advantage over others. A through rate per car will probably be made from California to Liverpool, and it is not expected that the time will take more than 16 days from the Pacific coast to the English market.

POULTRY YARD.

Ostrich Farming in California.

NORWALK, LOS ANGELES CO.

TO THE EDITOR:—It is now ten years since the first ostriches were imported into California and located at Anaheim, in Los Angeles county. Owing to the interest taken in these birds by tourists, ostrich "farming," in its literal sense, has been somewhat neglected, the owners of birds securing locations near large cities and pleasure resorts, where the admission fees of visitors form the principal item of profit. At my farm here, at Norwalk, these form quite a secondary consideration, the production of feathers and chicks being my chief aim.

A short account of my ranch and the treatment of the birds will be of interest to your readers. I brought my ostriches from Africa in 1887, so have had considerable experience in the business, and have proved that they can be raised successfully in California and will hold their own as a source of profit with any other kind of stock.

I have now 49 birds and, as this is the laying season, expect to hatch several more in the next few weeks. Eight pairs or trios are coralled off as "breeders," each pen being about 100x150 feet; the balance run together in a paddock of about one acre, with the exception of those under six months, which are again kept separately. The fences are made with two 1x4-inch boards, the highest about four feet from the ground.

I have twenty acres of land; eight are planted to young fruit trees—between these I grow sugar beets and corn—and the balance in alfalfa. On this small farm I can raise enough alfalfa and beets to feed 100 ostriches. Beets being now out of season, I am feeding alfalfa hay, cut up and thoroughly moistened—four pounds of hay to each bird is the daily ration. The laying birds have, in addition, one pound of corn each. When feeding beets I allow ten pounds to each ostrich.

Now, as to the returns. The figures I give are the prices obtained at wholesale rates, as I sell direct to manufacturers who make plumes, boas and tips for sale to milliners, who retail to the public at a large advance. The chicks are plucked at six months old, and at intervals of seven months thereafter; the first plucking realizes an average of $4 per bird, the second $12, and the third and afterwards $20, the annual produce of a full grown ostrich, from feathers alone, being $35.

It is difficult to calculate the increase. Some birds lay almost every egg fertile, while in other cases 75 per cent will not hatch. A fair estimate would be eight chicks from a pair in a year. I once raised 30 from a trio and 23 from a pair. When hatched and allowed to run on a patch of alfalfa, they almost invariably live and thrive with very little attention.

I use incubators made by the Petaluma Incubator Co., and they answer their purpose admirably, a fertile egg always producing a chick. The birds will set on their own eggs, but by artificial incubation double the number of eggs can be obtained. The unfertile eggs have a ready sale at $15 per dozen.

The labor question is a small one. I do all the work here myself, except at plucking time, when extra help is advisable, although not necessary, as I took the plumes from 40 birds last November without assistance. I drive the birds into a chute, having a plucking pen—about 3x6 feet—at the top, with a door at each end. As soon as a bird gets into this pen I slip a hood over its head, and, thus blindfolded, it gives little trouble.

At the present time there are in Cape Colony 150,000 domesticated ostriches, and that country has almost the monopoly of the industry. Auction sales are held in London every two months. In March 42,000 pounds of feathers were sold for £92,200 ($461,000), all being imported from South Africa. A duty of 25 per cent levied on raw feathers imported into the United States gives farmers here an additional profit. This industry has been thought so valuable to Cape Colony that the Government has levied a duty of $500 on every ostrich exported.

One of the reasons why ostrich farming has not become more popular in California is the high prices birds have been held at, and the exaggerated accounts that have been published of the profits to be made. I have, however, sold between 60 and 70 birds, and have supplied the stock to start the farms at Santa Barbara, Arizona and the Sandwich Islands. In each of these instances many chicks have been raised.

From the above short account of this interesting industry any one can estimate the profits, and, although not fabulous, they will compare favorably with those to be realized from any other kind of stock. EDWIN CAWSTON.

THE DAIRY.

Good Cows in Plumas County.

BECKWITH PASS.

TO THE EDITOR:—I was much interested in the amount of milk and butter given by different cows at several State Fairs, as told by Mr. Ashburner in his article "Red, White and Roan," in the RURAL PRESS of April 23d. I was somewhat surprised at the amounts of milk being no larger than they were, as I had no idea to what cows would be expected to attain which would win premiums at State Fairs. I am glad to know what may be expected of a first-class dairy cow. It would certainly be "a consumation devoutly to be wished," if more people knew exactly what their cows would do.

My husband has always been a believer in good stock. Our cows are graded Shorthorns. We occasionally have cows give over fifty pounds of milk a day some little time after coming in. Happening to be at the ranch of one of our nearest neighbors one evening at milking time, our neighbor, a Swiss gentleman, was weighing the milk from two of his cows, and they had given 52 and 53 pounds of milk in 24 hours. At one time, I remember we had a large full-blood Shorthorn heifer which was three years old some time after having her first calf. We weighed her milk 33 times during the first six months after she came in. We have no way to test milk except in the glass testing-tubes. Of course we do not keep cows whose milk does not give a good amount of cream. Counting 20 pounds of milk make a pound of butter, we made 216 pounds of butter from this heifer in six months. Her milk was not kept separate, but from weighing it the 33 times in six months, and counting 20 pounds of milk a pound of butter, we made our calculations. She averaged 33 pounds of milk a day for the first three months, and 24 4-5 pounds a day for the next three months, from April 1st to Oct. 1st. The largest amount given at any one milking was 28 pounds. Of course she gave milk some time longer. By weighing frequently, we considered we made 260 lbs of butter from the heifer with her first calf.

Another heifer, a three-quarters Durham, according to the same method of figuring, made 223 pounds of butter with her first calf.

We have weighed some of our cows' milk at regular intervals through the season, and have had results of from 200 to 270 pounds in a season, though we have had some better milkers whose milk we have not weighed regularly, not always having time to attend to the weighing of milk at regular intervals. Recently I weighed a cow's milk repeatedly after she had been giving milk ten months. She gave from 20 to 22 pounds a day. These results were when cows had only sagebrush pasture. We often wonder why more people do not tell what they are doing with their dairies. MARY P. ARMS.

ENTOMOLOGICAL.

The Cankerworm in the Orchard.

Fruit Notes from Santa Clara Valley.

The cankerworm is with us in greater numbers than last season, and promises to increase and multiply still more in the years to come. That we must fight them is self evident, if we would save our trees, and how to do it most effectually is not easy to determine. We are not favorably impressed with the idea of spraying our trees with Paris green or other poisonous preparations, even if by doing so a general killing of the cankerworm would result. It seems that trees that have supported the worms for a time, until the leaves are more or less perforated, are much more liable to injury from spraying than when the leaves are entire. Whether spraying with material strong enough to kill the the worms will also kill the lady bugs or not is a question, but we who have been so greatly benefited by them are in no hurry to see them go. We would prefer to fight the cankerworm some other way, and not give the scale a shadow of an excuse to return to our orchards. While our chickens have been some help both last fall and now, it seems that they cannot keep them in check without help, so we are helping them in the way generally adopted in this valley. First the trees are banded with a strip of paraffine paper about five inches wide. The band is put about the trunk just below the branches, and held in place by two tacks driven through the ends where they overlap. Second, fine earth is thrown into the tree with a shovel, and most of the worms fall to the ground or are left hanging by the web. Those left hanging are cut off, after a vigorous shaking of the tree, and then the band is painted with printer's ink. The printer's ink that we use is a very cheap grade, costing 12⅔ cents per pound in 20-pound lots. We thin it with whale oil until it flows nicely from the brush. It is an effectual barrier, and if every worm could be shaken from the trees, the extermination of this pest would be only a question of expense. But many worms remain in the trees even after two or three shakings, and, although not enough to do any serious damage to foliage or fruit, there are enough to produce altogether too many worms next year. Banding the trees in the winter has been tried by a number of fruit growers in this section with generally good results. After the first rains in the fall, the female, which has no wings, ascends the tree to deposit her eggs, and she is not stingy with them, either, for, if the conditions are favorable for a good hatch, the work of one specimen will loom up in the spring as 300 or more healthy worms with hearty and increasing appetites.

If the banks could be kept moist and sticky during the winter, that would be the best time to fight them, and I am inclined to think that it is, anyway; but after a rain, if the bands are not immediately painted with fresh ink, the little pests will go up the tree without any trouble.

The cankerworm in our orchards seems to prefer the apricot and the apple, English walnut, cherry and prune in their order. They do not trouble the peach at all. Up to this date the English walnut has had no enemies, and on the strength of that fact, no doubt, many trees have been planted. It therefore behooves every one who has a walnut grove to be on the lookout for the cankerworm, and not allow it to spread.

Thinning Apricots.—In addition to fighting the cankerworm, the usual orchard work is going on, cultivating, hoeing around the trees and fences, etc. Next week we will begin to thin apricots, which with us are a very uneven crop this year. Probably half of our trees are well loaded, a quarter with half a crop, and the remainder very scattering. Thinning apricots requires judgment and experience to do the work well and rapidly. A general rule is to leave only one 'cot in a place and separated two to eight inches, according to location on the tree. The short, vigorous spurs on the larger branches will sustain more fruit according to space occupied than farther out on the smaller and longer branches. It pays well to thin apricots properly. The fruit is of better size and color; about the same weight of fruit will grow on a tree, and with less effort, as there are not so many seeds to produce. Well-thinned fruit is better for drying, canning, or shipping green, and, above all, trees that are not allowed to become overloaded will grow larger and better each year, thus increasing the value of the orchard.—H. G. Keesling in California Cultivator.

THE FIELD.

The Squirrel Bounty.

The squirrel bounty is stimulating increased activity among rodent hunters at this season of the year. Last month over 36,000 squirrel vouchers were received by the county clerk, one party from Bradley sending 21,755 tails. The exact amount paid out on squirrel tails received for April was $1085.37. This is a good time of the year to destroy the pests, as every one destroyed now is as good as a dozen destroyed in the fall. Although the bounty makes something of a vacuum in the county treasury, the increase of assessable property from the destruction of these crop destroyers will eventually more than fill the hole. Those who vigorously made war on the squirrels last year find a satisfactory decrease of the squirrel population on their places this year. As squirrels are colonizing brutes, the killing of them in sparsely settled regions is a benefit to the more thickly settled sections. It is barely possible that the county is paying for imported squirrel tails. When this county was paying bounty on scalps and San Benito on tails, it was charged that the tails from this county all went to Hollister and the scalps from San Benito county all came to Salinas, and that the squirrel hunters, as the gambler would say, were double-shotting the turn. Consequently, this county took a tail hold on the squirrel question. For a variety of reasons, the best evidence of a dead squirrel would be his pelt. It is stated that an important industry in the sewers of Paris is the destruction of rats to get the wherewithal for fine French kid gloves, and it is further stated that the pelt of a squirrel is infinitely superior to that of a rat in strength and fineness of texture. It would no doubt be a judicious departure if our county fathers would offer their bounty for the pelts, so that some enterprising individual might engage in the manufacture of French kid gloves in California, and protection to home industry and American labor be thereby effectually secured. The county would then be getting rid of its squirrels, and the enterprising American workman would be getting $1.50 a pair for his squirrel skin French kids, and there would be an exemplification of the old adage of killing two birds with one rock—getting rid of the squirrels and making the squirrels pay for the ammunition to compass their own destruction. The showing on the face of the returns is suggestive of the necessity of general legislation upon the subject of squirrel extermination. The agriculturists of all the counties in the State appreciate the necessity of action for the eradication of these pests, but not all of the counties offer bounties. The philosophy of the situation amounts to bounty-paying counties putting up for the dead squirrels of the nonbounty paying counties. San Benito county pays a five-cent bounty, and it is stated that there are citizens of this county base enough to export the home product to our sister county for the extra two cents of bounty. To be sure, the venue of the killing has to be laid, and men have to swear that it was done within the municipal jurisdiction where the bounty is claimed, but the yawning doors of the penitentiary seem to have no terrors to seekers for public plunder. A squirrel bounty law that is not adopted by all counties, and is not uniform in the counties adopting it, seems to work like the coyote scalp law of the State, which brings in scalps from Arizona, Nevada, New Mexico and Colorado. These scalps are coming in countless throngs to the authorities of every county of the State. The offer of a bounty on coyotes, the exterminators of squirrels and rabbits without fee or reward, and the payment of a bounty on squirrel scalps is like sowing money with both hands. It is a contradiction of economic terms. Its futility is comprehensively expressed by ex-Supervisor Pinkerton, who says he will give $5 for every able-bodied live coyote brought to his place.—Salinas Index.

The Assessment of Hop Roots.

Just as we went to press last week there came a dispatch from Sacramento stating that the State Board of Equalization would hold to its decision to tax hop roots apart from the land. The following fuller statement of the subject is found in the Sacramento *Bee* of May 10:

In January last, the State Board of Equalization issued a circular directing county assessors, in assessing "improvements," to place a separate valuation on "trees and vines." Hop growers, it appears, inferred from this that the assessments on their vines were to be increased, and on yesterday a committee, consisting of Dr. Durst of Wheatland, L. F. Long of Mendocino, Daniel Flint and E. J. Croly of Sacramento, waited on the State Board in reference to the matter. County Assessor Irvine was in attendance by invitation.

The members of the Board explained to the committee that the object of the portion of the circular referred to was that county assessors must segregate "improvements"—that is, that they should not aggregate under that head fences, houses, vines, etc. For the information of the committee, the law defining "improvements" was read, and included are "all fruit, nut-bearing or ornamental trees and vines not of natural growth. The decision of the Supreme Court in the case of Cottle *vs.* Spitzer (65 Cal., page 456) was also read.

During the discussion, Chairman Moorhouse said that he had been informed that Mr. Long, a member of the committee, had threatened that he would not obey the law; that he would not pay a tax on his hop roots, and that he would appeal the matter to the supreme court.

Mr. Long acknowledged that he had so stated, but said he had modified his views after hearing the law and decision read.

County Assessor Ireine also took advantage of the occa-

sion to deny that he had ever said that the State Board had ever fixed a rate for the assessment of hop roots and alfalfa.

The committee departed satisfied that their visit had been occasioned by a misunderstanding. It is certain, however, that they are not satisfied with the situation. A prominent hop grower said to a *Bee* reporter this morning that he cannot see the justice in assessing a hopman's crop before it is produced, and then assessing it again after it is produced and in the bale. In the first place, he declared, they assess something that is not tangible, as they simply put on so much per acre, and without knowledge as to whether there will be a good crop or none at all. Then, after the crop is harvested, the baled hops are assessed again. County Assessor Irvine assessed over $21,000 worth of baled hops last year, and in San Francisco over $27,000 worth were assessed. It is quite likely that an effort will be made to have hop roots included in the list of growing crops.

THE APIARY.

Another Glucose Story.

NORTH TEMESCAL, May 13, 1892.

TO THE EDITOR:—An Eastern correspondent of *Gleanings in Bee Culture* makes a very serious charge against the honesty of California canned goods, especially of jellies and honey. The indictment is too serious to pass unnoticed. If not run down and proved false, it will do the industry much injury throughout the country, as it will be no doubt copied into other publications. If the charge is as stated, our horticultural societies should see that the practice is at once stopped.

The correspondent referred to, says in *Gleanings* that his brother, who has worked in canning factories in California, writes that "all their jellies and all their extracted honey" put up where he worked were three-fourths glucose. This Californian brother further informs his Eastern kinsman that he "was never so surprised, for he thought where such a supply of pure product was obtainable, such things as adulterants were never used."

Well, it is no wonder that he was, provided that what he states about glucose is true. I doubt very much if it is so, and the writer of *Gleanings* has done the fruit and honey industries of this State a great injury by publishing such a statement without any evidence to maintain it. As there is a Beekeepers' Union which prosecutes all who injure beekeepers, and, also, defend them against unjust lawsuits, this matter might have been quietly turned over to this union for investigation.

I shall not assign any wrong motives to *Gleanings* for using the above statements; in truth, that journal seems to have done it in the interests of beekeepers, for it tacks on an editorial footnote stating that it is not satisfied to let the matter rest here; that it would like to have affidavits and legal advice from California. Yet, in my mind, this is a case where we might exclaim, "Save us from our friends."

A story almost like the above was started in the East about 13 years ago, and at that time I called the attention of the RURAL PRESS to the matter. The editor noticed my communication editorially, and, if I remember rightly, held that as the pure articles were cheaper here than the adulterants, it was not likely that fraud would be practiced by placing spurious articles on the market. Again, in 1883, I noticed in these columns an attack in *Chamber's* (London and Edinburgh) *Journal* on American canned fruits, and, more especially, honey, which the writer in the *Journal* asserted was adulterated before it was shipped to England.

For the fair name of our State let canners be very careful in putting up their goods; use nothing in the way of adulterants, or anything that will depreciate the value or merit of our California products. Let eternal vigilance be the watchword of every canning establishment. See that everything that goes into a can or glass jar is genuine—the natural product, as far as possible, of the great God-blessed fruitful land. W. A. PRYAL.

Fruit and Bees.

MT. BLOOM APIARY, MURPHYS, May 10, 1892.

TO THE EDITOR.—Throughout the blooming of the fruit, there has been a steady fall of rain; in consequence the fruit notes of the RURAL show from a partial crop to an entire failure throughout the State. In some sections this is due to the frosts, but in most sections is charged, as in past years, to the rains.

In the report of the fruit prospects of Sonoma Co., a fruit grower states that, "Just as the fruit was coming out of the bloom, and before the fall of the flower, there was a light dust which nourishes the fruit until it is able to draw its substance from the parent stem, a heavy fall of rain at this period washed off this dust and the fruit failed to mature." That is but one of the many ways in which the failure of the fruit to "set" is charged to the washing away of the pollen by the rains.

That fruit will be fertilized to some extent by the winds spreading the pollen, is a fact, and that this wind fertilization cannot be carried out when the pollen is wet, will be admitted, but the loss is mainly from another source, which is entirely unnoticed, and which, when generally known and acted upon, must make uniform fruit crops the rule, instead of the exception.

In my trips throughout the State, in the interests of the PACIFIC RURAL PRESS, I have found a degree of ignorance among the fruit growers as a class, in regard to the offices of the bee. Prominent fruit growers, men of far more than average intelligence on every other subject, have assured me that, "the fruit growers should be protected as well as the sheepmen and every hive of bees be banished from the State."

Now I claim that the loss of fruit, other than that resulting from the frosts, was due directly to the fact that owing to the storm, the bees did not fly; did not reach the orchards and fertilize the blooms save in brief intervals between storms, which did not permit of a general fertilization of all the blooms.

In proof of the fact that the bees remained in their hives is the fact that I was compelled to feed the swarms all through the blooming season, or they would have starved to death, as did the bees of my neighbor, who did not feed. That bees fertilize the bloom is an established fact. That orchards bore more uniformly before the woods were cleared away and the wild bees driven to the mountains, is well known. That orchards in which bees are kept, produce uniform crops is due to the fact that, be the weather what it may, if the trees are convenient, the bees will reach them in the intervals of the storm while those more remote will scarcely be visited. The nurserymen and florists have long since utilized the bee to fertilize the blooms in their conservatories and nurseries.

Noticing some bee stands in the Barren Hill nursery, I asked its intelligent owner, "What is your yield of honey per stand?" and he replied "I don't keep them for their honey but to fertilize the blooms—."

In some portions of the world it was found impossible to raise seed from clover until the American bumble bee was imported. It is not necessary to go out of our own State for proof. Frank Benton in *Sunset Life* states; "In Vaca Valley, Solano Co., the cherry crop became poor, though in former years, when the wild bees were plentiful, the crop was good. The failure was attributed to north winds, chilling rains, etc. Messrs. Bassford of Cherry Glen, reasoned that the absence of the wild bees accounted for the failure of their cherry crop and to test the matter in 1890, placed stands of bees in their cherry orchard, with a striking result, for while their orchard bore heavily, other orchards but five miles distant, where no bees were kept, reported a partial or entire failure of crop. In 1891, Messrs. Bassford placed 60 hives of bees in their orchards and wrote the *Entomologist*, as the result, "Our crop was good this season and we attribute it to the bees," and added, "Since we have kept bees in our orchard our crop of cherries has been much larger, while other orchards where bees are not kept, have produced but light crops." Other orchardists are procuring bees to effect the fertilization of the blossoms, having concluded that to succeed in cherry culture a beehive and cherry tree must be planted side by side.

This is true of the cherry crop at Vacaville, where it is profitable because of the candiness of the cherries in that section. It is also true of the entire fruit crop throughout the State.

Darwin very logically explained the matter in his statement that, "Without cats you cannot have clover. The cats kill the field mice which, if not destroyed, eat the comb of the bumble bee, and by destroying the bees, prevent the fertilization of the clover."

In the same way the bee keeper produces the fruit in his section by furnishing the bees to fertilize the blooms in the neighboring orchards. E. H. SCHAEFFLE.

SHEEP AND WOOL.

Future Wool Values.

Will the recent advance in prices of wool be sustained at the June sales? The future value of wool is a question of serious concern, and while, of course, the future cannot be predicted with any positiveness, it may not be amiss to look into the present situation and analyze the factors which are likely to exert an influence upon future values. When we permitted ourselves in the early weeks of last autumn to indulge in predictions concerning prices to prevail at the January sale, we based our predictions upon an excess in supply, arising partly out of a large increase in the world's clip and partly out of a large decrease in consumptive demand, owing to the diminished earning capacity of Europe. There was no doubt as to the correctness of these premises—the only possible doubt being the condition of supplies in hands of manufacturers. The January sales confirmed our predictions.

The recent advance was probably a matter of surprise to many, but a presentation of the true inwardness of this advance will show that it was a logical result of the situation. The sale has made evident one fact—that Europeans have been running the past few months on scant supplies, and tempted by the low prices prevailing, with a reasonable assurance that prices were close to rock bottom, they were easily encouraged to go in and purchase in anticipation of future needs. The combination or agreement of German manufacturers to restrict production, and in this way to make higher prices for mannfactured goods, was undoubtedly a potent factor in advancing prices. Then, again, the increased demand from this country—a larger representation of American buyers than ever before being present—and the slightly improved tone of general trade consequent upon the promises of spring (the death of winter and the birth of spring always quickens hope) must not be left out of consideration.

Under the influence of a more active demand, the course of the market was logical; but now that the excitement of the first few weeks of the sale has passed, and calm judgment has resumed its proper sphere, the thought arises: Does the situation warrant a continuance of present prices? In answering this question, one is confronted by an array of facts very similar to those which presented themselves during the autumn months of last year. The question of supplies still remains the same—the quantity of wool available, minus the amount gone into consumption since the first of the year, is essentially unchanged. Ths solution of the question lies with the probable demand—has the latter increased, and, if so, is the increase permanent? That there is an improvement in business all through Europe is evident—it is manifest in many directions, but to what extent it will be developed or how widespread it is to be, is to be determined only by the future.

It should be borne in mind that the depression in trade throughout Europe has been exceptionally severe, and that a recovery from it must necessarily be slow, and not the work of a day or month. With earning powers greatly crippled, having for the last year, or nearly so, drawn from surpluses accumulated in previous years, the people are not yet in position to return again to normal consumptive requirements. This much for their home demand. As pertains to the demand from this side for manufactured goods, any advance in price must necessarily curtail exportations proportionately to the increase—a factor having practically no bearing, as it merely shifts the manufacturing from that side to this. In view of these facts, it would seem as though prices had much to contend against before advancing permanently.—American Wool Reporter.

HORTICULTURE.

Preparation of Fruit Specimens for the Columbian Exposition.

UNIVERSITY EXPERIMENT STATION,
Berkeley, Cal., May 13, 1892.

[The summary information given below is issued in transient form in response to an urgent demand on the part of intending exhibitors.]

The conservation of fruit samples for the Columbian Exposition, that are therefore to remain in good condition for over a year, necessarily involves more care and precautions than need be employed for exhibits that are to serve simply for one Fair season. Nor is it possible to give one sweeping formula that will serve equally well for all fruits, without any brainwork on the part of the operator. This should be distinctly understood from the outset; and the consideration that the Columbian Exposition is an extraordinary occasion, of unusual importance, should justify the exertion of an exceptional degree of care in putting up samples. This involves, not merely the following out of a set rule, but the exercise of some discretion and skill on the part of those desiring to be, and to remain, well represented at the great Fair by their products.

In the first place, the fruit should be properly selected; neither too unripe to show its distinctive features, nor so ripe as to be readily bruised in transportation. The rule should be to take the fruit *as unripe as is consistent with a proper exhibition of the size, surface texture and color.* The greatest care should be taken that in gathering and handling (the latter restricted as much as possible) not the least bruise is inflicted. It is best not to touch the fruit with the hand at all, but to handle it in a piece of tissue paper, such as is used for wrapping fruit. This can be done by holding the paper close under the chosen specimen and cutting the stem with a pair of shears, avoiding any jar or pressure. Immediately before placing it in the preservative fluid it should be thoroughly rinsed in a jet of clean water, so as to remove all dust and fungous germs as much as possible.

The *preservative fluid* must not only preserve the fruit from decay, but also from shrinkage or bursting. The latter two conditions can, for the purpose now in view, only be fulfilled by ascertaining the density of the juice by means of a "must spindle," such as is familiar to all wine-makers and can be found in any winery. The operator must then give the preservative fluid the same density as that of the juice. I have heretofore attempted to give a rule by which this density can be approximately estimated; but for such long conservation as is desired for the Columbian Fair, no approximation short of that which can be attained by the use of an ordinary spindle will serve the purpose, except, perhaps, in the case of citrus fruits, whose thick rind prevents, to a considerable extent, the shrinkage or bursting that is almost certain to befall all other fruits, unless the condition of "equal density" of the juice inside and the preservative fluid outside is fulfilled. The condemnation by the users of some of the best preservative agents has resulted from a failure to attend to this point.

The juice of fruit as unripe as that which should be used in this case will rarely have a greater density than *six degrees of the must spindle.* Those who are absolutely unable to obtain the use of such a spindle may, at a guess, be successful by making *that* the density of their fluid, according to the rule given below. It will then at least not burst the fruit, although it may shrink it a little. If the juice cannot readily be pressed for the test, it can be got out by stewing the fruit, as in jelly-making, in a jar covered so as to completely prevent evaporation.

The best substance for the purpose of *increasing the density* of the fluid to the proper point is glycerine, which can now be obtained in commerce cheaply enough for all those who make up their minds to exhibit at Chicago. Pure refined sugar, made into clear syrup, may be substituted, but is much more apt to darken the color of the fluid and fruit.

As to the *proportions* to be used: Since a gallon of water weighs 128 ounces, *one* per cent of that (or each degree of the must spindle) will be, in round numbers, one and a quarter ounces, to be added to a gallon of preservative fluid for each degree shown by the spindle in the fruit juice. For example, if the spindle shows four degrees, six ounces of sugar or good commercial glycerine must be added for each gallon of preservative fluid wanted. The glycerine can be apportioned by *measure*, instead of weight, by taking *in place of each ounce by weight* that would be required, *four-fifths* of an ounce in druggists' "*fluid ounces.*"

As to the preservative agent to be used, it is true that the most powerful antiseptic ordinarily available is "corrosive sublimate," now much employed in sanitary disinfection; but it is also such a powerful poison that it seems unsafe to place it in the hands of those who ordinarily will put up the fruit samples. Moreover, unless extraordinary precautions are used, it gives the fruit a dingy, ghastly aspect, arising from a whitish film that gathers on the surface. At the same time, it is the most certain of all means known to preserve fully the *form* of the fruit. If used, it requires only four parts in a thousand, or about half an ounce per gallon, to effect complete preservation. Distilled water must be used for the solution, and only a competent druggist should

make it up, and carefully label it "poison," as should also be done with all fruit thus preserved. This fluid is especially well adapted to the preservation of figs.

Common salt necessarily shrinks all fruits preserved in it and darkens their colors. *Alum*, frequently recommended, is not a good preservative because, besides shrinking the fruit, it dissolves the colors very effectively, and also changes them.

The most available preservatives, because accessible to all and not dangerous, while very effective, are *salicylic* and *sulphurous acids*—the former now readily obtained from all druggists; the latter generated from burning sulphur, as is done in bleaching fruit—the latter fact emphasizes the difficulty encountered in using sulphurous acid as a preservative for fruit samples. It inevitably bleaches the colors in the course of time, if employed of such strength as to be an effectual preservative. Nevertheless, the ease with which it can be used, and the certainty with which it acts, have made it a favorite for citrus fruits, apples and other fruits not having very delicate colors. But cherries, plums and berries of all kinds assume a bright yellowish or almost white tint when so preserved for a length of time.

The solution is most readily prepared in the following manner: Fill a clean keg or barrel half full of clean, clear water, bunghole up, and introduce a cellarmen's "sulphur strip" (cotton stuff passed through melted sulphur), leaving it to burn as long as it will, while closing the hole with the hand or mop. When the strip goes out, withdraw it, close the bunghole, and give the cask rolling shakes until, within a minute, the gas is all absorbed. Then blow in fresh air with a bellows, and repeat the burning of sulphur strip ten or twelve times; this takes about an hour's time. Then keep the barrel well bunged up until the fruit is to be put up, when the proper amount of glycerine can be added to each jar of different fruit, or to the whole if no difference is to be made.

Or, according to the method used at the rooms of the State Board of Trade, an iron pan is floated on the water in a (40-gallon) barrel open at one end and three-quarters full. Then sulphur is burnt in the pan, two or three tablespoonfuls at a time and the water well stirred each time, until about two pounds of sulphur has been consumed. The barrel-head is of course laid on while the sulphur burns. The fluid thus obtained is of about the same strength (.1%) as that obtained by twelve burnings of sulphur-strip in a barrel half full.

Instead of the gas, the solid "bi-sulphite of soda," which can be had of most druggists, may be used. The acid of the fruit soon liberates the sulphurous acid to a sufficient extent for preservative purposes, as has been shown by the use of the same substance under the name of "California fruit salt." Half an ounce of this compound per gallon of fluid is probably ample for the preservation of fruit not too ripe for the purposes of exhibition, and the bleaching effects are not nearly as great as when the gas is used.

Salicylic acid exerts no bleaching action and is a very energetic preservative, even at the moderate rate of one-fifth of an ounce to the gallon of water, or one ounce to five gallons; the dissolution of the acid is best effected in boiling water. But for the purpose of long conservation, it is best to increase its solubility by using one and one-half ounces to every five gallons, dissolving the extra half ounce by the cautious addition to the (boiling) water of enough salsoda to make it clear, and to make it remain so after cooling. It is of the greatest importance that not a particle more salsoda be used than is just sufficient to dissolve the last flake of the acid; the least excess of soda will tend to soften the fruit and spoil its color.

The solution so prepared may be preserved indefinitely, and the glycerine (or white sugar if glycerine cannot be had) can be added to the extent that may be indicated by the spindle in the fruit juice.

While salicylic acid does not affect the color of fruit as to *tint*, the solution nevertheless gradually extracts the color of cherries and berries, coloring the fluid. Thus at least a measure of the original color remains; while nothing is left in the fruit preserved with sulphurous acid, after a few months. Salicylated fruit also preserves in a measure its taste, while the other does not.

It is absolutely essential that the jars containing the fruit be hermetically sealed. Glass-stoppered jars can be made tight with "canning wax" or paraffine. A very good way to prevent mold on the surface of the fluid in case a little air should get in, is to put a few drops of best coal oil on the surface before sealing. E. W. HILGARD.

Orchard Cultivation.

Nothing will give us better returns for our labor than the cultivation of our orchards, we cannot plant a garden or a field of corn and expect to reap any very large returns unless we cultivate the soil; neither should we expect to have fine orchards unless we give our orchards the very best of cultivation.

Now, one of the main points in orchard cultivation is to keep the ground level. We aim never to plow the soil to or from the trees twice in succession, but at each plowing to plow a different way, if we have thrown the soil to the trees this year, next year we will throw it away. Before we begin to plow, we have our men to dig all of the weeds and trash away from around the trees for a space of two feet, by so doing we can work very close to the trees with the plow, in fact this is all of the hand cultivation that we need to do, all of the balance of the work can be done with the plow.

We will now begin by using a one-horse plow and throw the soil to the trees, after we have plowed two furrows to the trees we will then use a two-horse plow and plow two more furrows, now we are about four feet from our trees, and we will use a three-horse plow and plow as deep as we can; the depth of each plow will be as follows: 4 inches for the one-horse plow, 6 inches for the two-horse plow, and for the balance of the strip between the trees we will plow 10 inches deep and when the strip is done we will throw two furrows back in the furrow so as to leave no dead furrow. The next year we will just reverse the order of plowing, commencing in the middle with the large plow and throw the soil toward the center and plow a little shallower as we work toward the trees, and when we get our strip down to about five feet we will use our one-horse plow; but before we begin to plow we will take away all of the weeds and trash from around the trees; when we are done plowing we will throw two furrows back against the tree so as to have no dead furrow next to the trees. At each year's pruning we will leave the soil as rough as possible until after all of the heavy rains are over, or until the weeds have begun to grow, then we will run a sharp tooth harrow over the soil and if we have many clods to contend with, we will use a board clod masher or pulverizer. The main object is to get the soil well pulverized, after this has been accomplished we will not have any trouble to cultivate. Among the fine implements for orchard cultivation we would mention the Acme harrow, the San Jose cultivator and the Cassaday harrow; with any of these implements the opeator can ride and if very careful can work as close to the trees as it is safe to go. We will cultivate at least three times and go in a different direction at each cultivation. The most important object in view is to keep the ground perfectly level. The third year we will plow at right angle to the two previous plowings, and throw the soil to the trees and the fourth year will plow the same direction and throw the soil away from the trees.

By plowing deep in the center and shallow near the trees, we cut away all surface feeders and cause all roots to strike deep in the ground, consequently our trees will be longer lived, and will not be affected by drouths. By proper pruning and proper cultivation, all insects can be kept under control. Our fruit will be finer and much easier to gather, and last but not least, we will get the highest price for our production in the market.—J. Luther Bowers in Ukiah Press.

THE STOCK YARD.

Variations in Yield.

Since the invention of the Babcock test a great many people are are skeptical of its merits, because it records such variations in the yield of fat in the same cows from day to day on the same feed and care. If the test is handled with skill and care there is no cause for being surprised at this. If any person will take the milk of a single cow and cream and churn it day after day he will find surprising variations in the yield of butter. So it is to a certain extent with the milk of herds, though the variation is less than with individuals.

The same perplexing variation is seen in the weight of the fattening steers. The Pennsylvania Experiment Station publishes the following record. The weight of the two lots varied the first week as here recorded:

	Lot 1.	Lot 2.
Dec. 17	3,145	3,165
Dec. 18	3,195	3,165
Dec. 19	3,213	3,180
Dec. 20	3,178	3,215
Dec. 21	3 205	3,505
Dec. 22	3,220	3,210
Dec. 23	3,255	3,250

For instance lot 1 fluctuated from 3145 pounds. Dec. 17th to 3213 pounds Dec. 19th, and then dropped back to 3178 pounds the next day. An increase in 48 hours of 68 pounds and a decrease of 35 pounds in 24 hours.

When exact methods of weighing cattle every day or the more exact work of chemieally testing the milk every day is practiced certain facts about the variation of each are brought qut. Then it is that farmers who have never taken an exact record of anything in their lives, who have always been guessing at everything, come forward and dispute the reasonableness of the tests.—*Hoard's Dairyman.*

"The eye of the master fatteneth the ox" is an old but true saying, but should "the master" not have that "eye" for discriminating between profitable and unprofitable feeders, whether for beef or milk, there is no reason why, in these days of improved mechanical appliances to every branch of agriculture, that he should both feed and judge of the results by guesswork.

For a really practical man it is not necessary to weigh everything of both food and products all the time, but when he has doubts about a beast being a profitable consumer of the food of the farm there is an easy method of settling the matter by the use of the scales.

Some beasts are so noticeably profitable to any man of ordinary judgment that to go to the trouble of weighing in order to find out the fact of this being so is wholly unnecessary, but as an object lesson in finding out what some animals can be made to do, it is sometimes expedient, and there is at least a pleasure in owning a number of animals of that kind, whose almost daily growth is observable to the experienced eye, if beef animals, but if used for the dairy the results and variations are easily obtainable by the frequent, if not daily, use of the scales.

That these are valuable agents in weeding out unprofitable animals there can be no doubt, for in weighing *both* food consumed and the daily produce of milk, and increase in weight of an animal, can true loss or gain be accounted for. We sometimes hear of very large yields of milk and butter from such and such cows, but how very seldom do we hear anything of the cost of those productions, without which they are meaningless to a really practical dairyman, who, in order to make a profit, must count both ways.

The Battle of the Breeds and the Battle in the Breeds.

The "battle of the breeds" is best fought by a battle in the breeds—a battle against all inferior or worthless animals. Especially is this true of the milch breeds of cattle. There is always an upward and downward tendency in all breeds. Skillful care and breeding are constantly improving them and unskilful care and breeding as constantly working the opposite. The extremes of superiority and inferiority are constantly widening and the process goes on much more rapidly than is generally supposed. Francis Morris, many years ago, put this fact in a concrete and graphic form. We quote from him:

"Take," said he, "two Durham calves from cows of equal purity, and sired by the same bull. Send one into green fields and pasture new; stable it in cold weather, and give it all it can need for its health and comfort. Turn the other out to pick its living on a bleak and rocky barren, to shiver with cold and to search wearily for the few blades of sickly grass that grow in granite clefts. Then at the end of the year compare them. The first will be a fat, sturdy, handsome fellow, sleek, bright, erect of head, straight of limb, courageous, intelligent; the other a miserable, melancholy runt, without pluck or beauty, lean, small and showing scarcely a trace of blood. Take two more calves of the same parentage and turn the fat one's brother out upon the hills and the lean one's brother into the rich pasture and warm stables; feed them precisely as their relatives were fed before, and it will be found that the brothers look nothing alike, while those of different parentage look like brothers. Now try to fatten them all alike. The two that were well treated will thrive, but the others, though they may improve, will never attain their proper size, or be anything but runts; *nor will they be fit for breeding purposes comparatively.*"

We have taken the liberty of italicizing the closing words. They cover a great secret. Changing circumstances of life are constantly changing the characteristics of the different breeds, through the secret law of transmission from parent to ofispring, of what is gained or what is lost by their training, handling, feeding, etc ; in other words, by their environment. The Jersey breed in America is, in many respects, a different breed from what it was when it first came from the island of Jersey; and the Holstein-Friesian breed, though handled in this country comparatively but a few years, is already undergoing changes quite as great. These changes in the dairy breeds are wrought along different lines and by different means than the changes in the beef breeds. In the former, training is the most potent—training for milk and for butter production. If we were to lay down three rules for improving the dairy breeds, the first would be training, the second feeding and the third care, and we would put the three together under the general head—training. This training, however, may go on with marked success, even though feeding and care is moderate. Hence the dairy breeds afford a better field for the exercise of skill by breeders of moderate means, and this class of breeders often produce dairy animals of the highest value. Many of this class assist in milking their own cows and come into closer relations with their cattle than do breeders of larger means. Many of them are also close observers, and they learn lessons that are unknown to those who may be of higher scientific attainments. While we have no thought of disparaging the work of the latter, we believe the work of the former should be recognized and encouraged. They should be brought in line and made to feel a common interest in this "battle of the breeds."

By the "battle of the breeds," we do not mean an ungenerous and vicious fight such as is often manifest, but a kind and generous competition conducted in the fairest possible ways, in which all are credited for their diverse and full values. It is not necessarily the breed that gives the largest quantity of milk that is the best breed, nor the breed that gives the richest milk. To determine the comparative value of the breeds, we should know the quality of milk and the quantity of milk generally produced by each, and the food and care required for such production. Further, we should also know the general characteristics of each, whether hardy or not, the comparative liabilities to diseases dangerous alike to cattle and to the consumers of their products, and we should also know its other values to dairymen beyond its milking qualities. Every merit and every demerit should be known and fairly weighed. A fairly drawn battle can only be along the whole line of merits and demerits. There is altogether too much maneuvering for undue advantages. We see this in the proposed rules for the Columbian Exhibition to be held next year in Chicago. Such maneuvering shows a lack of confidence in favorite breeds, on the part of those who labor for such advantages. In saying this, we do not oppose the exhibition. We hope all of the breeds will be fully represented in it. Yet no such exhibition can settle the "battle of the breeds." The necessary limits of such exhibitions preclude investigations into all the various merits and demerits of dairy cattle. Nevertheless, this battle is to be fought out in this country. From time to time, there will be partial victories and partial defeats for each and every breed, but eventually each will be given its rightful rank and position. The methods by which this battle will be fought and won we leave for a future article.—S. Hoxie in Holstein-Friesian Register.

Various Topics.

ALESSANDRO, May 8, 1892.

TO THE EDITOR :—In looking over the hay letters I do not see any mention made of beardless barley for hay. This grain makes first-class hay and does away with the objectionable beards. Some people get beardless and bald barley confused. Bald barley has a hard grain which is confined in a husk, or chaff, like wheat, but the beardless is like the ordinary grain, minus the beards, and can be used for any purpose for which it is used. The seed is always scarce and high here, and there is but little of it raised.

I see considerable mention of Egyptian corn in the RURAL lately. Will some one who has had experience with it, tell us through its columns how to cure it so as to get the most good out of it? We are trying some of it this season, and as there are so many contradictory stories as to its virtues, we have concluded that the secret must be in the time of harvesting and manner of curing it.

We have had a good rain during the past week and it will help the late grain and summer crops wonderfully.

The frost did no damage along the foothills. Bean vines are loaded with string beans and new potatoes are getting large enough to eat. Trees and vines are starting out finely, as though to bid defiance to rabbits and hoppers. The weather is somewhat cloudy, but quite warm. Haying will begin in earnest in a few days. L. S. LYMAN.

THE HOME CIRCLE.

At the Stone House.

Marsh Grant, Contra Costa County.—In May.

Written for the RURAL PRESS by L. H. S.

A narrow valley opens to the plain
With low hills circling round. A quiet stream
Glides ever on beneath its bowers of green,
And spreading oaks adorn the fields of grain.
An old stone house of early English style
Looks from this vale in beauty's silent power;
A "house of seven gables," curious windowed tower,
And long, wide porch, ground-paved in Spanish tile.
Round this deep porch, with many pillars quaint,
The long grain billows in the changeful breeze;
The lark pours out his silvery joy to please;
The late spring showers flee with shadows faint,
And all day long there trembles through the trees
The sad, sweet music of the dove's complaint.

That Ugly Man.

Written for the RURAL PRESS by CLARA SPALDING BROWN.

"How came such a beautiful woman to marry that ugly man," exclaimed a stranger in the city, as the wedding party came from the church.

"Because she knows what real beauty is," said a gentle faced old lady as she passed.

I knew the story. I knew Salome Marden when she married at 18 a man who had more than his share of personal graces, and I knew what a life she led for the next fifteen years—not necessarily because she had married a handsome man, but because in his case beauty was only "skin deep." She had an inkling of the fact once when, for a trifling fault, he lashed the horse that he was driving unmercifully. It jarred upon her seriously, but could she break an engagement for a little thing like that? She had yet to learn that a cruel, unreasonable temper can destroy the happiness of a home. She also discovered that her handsome husband was too much engrossed with himself to take any interest in her pursuits. On her experiences I will not dwell. The martyrdom of a neglected, ill-treated wife is far more common than the world realizes.

After Salome became a widow, she had no lack of admirers. A few had some attraction for her at first, then a chance act or word would dispel her illusion. Warned by the past, she took heed when Mr. Prince sneered at a ragged old woman, and Mr. Means kicked an injured dog which had crawled to his feet, and Mr. Sterne could not see the sense of fussing over flowers or reading poetry, and Mr. Pomposity thought women were getting so that they knew too much, and Mr. Gayfair occasionally took too much wine.

One Sunday morning, as she took her seat in church, she caught sight of the ugliest little man, positively the very ugliest, she thought, that she had ever set eyes on. He was short, and red faced, and bald-headed, and had a turned-up nose, and a big mouth and scraggly red whiskers. He sat in the seat directly behind her, and her first feeling was one of thankfulness that he did not sit in front of her. By and bye she noticed that he joined in the hymns with a hearty bass voice, and he actually said the Lord's prayer right out loud at the proper time in the service. Salome had not been accustomed to hearing a man pray. She respected the ugly creature from that time forth.

Sunday after Sunday passed; she was a constant churchgoer and so was he. Then he was introduced to her at a "social," and real acquaintance began. She found that he was even more of a reader than herself, that his sympathies were quick, his perceptions delicate. She liked the manly ring in his voice and the strong grasp of his hand. His almost diffident courtesy was a change from the self-assured attentions of the other gentlemen. She was sure that he knew how ugly he was and that his unattractive appearance deprived him of much of life's pleasure. He must be forty, yet had never been married.

"Young girls are so foolish," she thought, recalling how she, as well as others, had reserved all her smiles for the best-looking young men, and more than once had snubbed some gawky, freckled face youth without regard for his good qualities.

It was rather a lively winter among the church people, and Salome often met Mr Hartwell. He seemed to take great pleasure in her society, but always maintained a certain reserve. Salome discerned that the nature of this plain little man was not one to be fathomed readily.

One evening he escorted her home from a meeting of the literary club. Almost at her doorstep she slipped on a banana peel, turned her ankle, and for an instant lost consciousness with the pain. What woman could faint long within a pair of embracing arms, with a warm kiss clinging to her lips? Not Salome Marden at any rate. Her astonishment brought her to her senses, and in another moment she was standing very straight and Mr. Hartwell was stammering an apology.

"You were falling—I caught you—and—and I lost my head. Can you forgive me?" Without waiting for an answer, he went on as if the floodgates were opened. He told her how hopelessly he had loved her, how well he knew that no woman could ever marry him; that he never meant to show his affection, but was grateful for her friendship.

Something shone in his face that was better than beauty of features. Salome wondered how she could ever have looked with pity upon this man.

"Will you come in a minute?" she asked.

Uncertain of her mood, he followed her up the steps.

She turned as they passed through the parlor door.

"You said that no woman could ever marry you, Mr. Hartwell. You must take that back, for—I can. I want to be happy," and she laid ber arms about his neck.

That kiss had made things clear. Somehow it was not quite like any other kiss she had ever received, and Salome felt that it was what she had been wanting all her life. She forgot all about her aching ankle. Mr. Hartwell's emotions need not be described, but I will say this: If there is a blissful wedded couple in the universe, "that ugly man" and his beautiful Salome are the identical pair.

The Story of Mary Lee.

On the great plains of Kansas, seventy miles due north of Sheridan, there is a lonely grave on the crest of a sterile mound. It may be that no one could find the spot today, for the storms of summer and winter wash great ravines in the earth, and level even the hilltops after a time. But I saw the grave twenty years ago, and at its head stood a board on which was painted:

HERE LIES
MARY EMMA LEE,
WHO WAS
KILLED BY INDIANS
ON THIS SPOT AFTER A
HEROIC DEFENSE,
IN JULY, 1867.

As two hundred cavalrymen grouped around the lonely grave, every man uncovered his head in reverence for the dead, and the story of that young woman's death has never been told around a campfire in the West without making men's hearts ache.

This is the story: There were five or six families of emigrants journeying across the lonely plains when they were beset by hostile Indians. Mary Lee was a girl only eighteen years old, and had been brought up on the Iowa line. The family consisted of father, mother, two sisters and a brother. The attack was made very suddenly, and Mary, who was riding her own horse, was cut off from the band. When she realized this, she turned and rode away and was pursued by seven Indians. This was about nine o'clock in the morning. Her horse carried her thirty six miles before he became exhausted, and when he fell she made her way to the crest of the mound, and there scooped out a shallow rifle pit, piled stones up around it and prepared to die fighting.

The Indians were three miles behind her when her horse gave out. She had a light Winchester rifle, which was fully loaded, but no extra cartridges. Her first shot killed an Indian and her second crippled another for life. The other five dared not charge her position. On the second day she killed another Indian, and the other four posted themselves in position and waited for hunger and thirst to conquer her. On the third day, they were joined by twenty of their band, but the girl was not attacked. On this day an Indian, who was creeping up to spy upon her, was shot through the right lung, and the others contented themselves by a drooping fire at long ranges to harass her.

On the fourth day not a shot was fired. The weather was terribly hot and the sun glared down on that mound until the grass withered and shriveled and seemed about to flame up. On the fifth day, an hour after noon, the girl shot herself through the head and was dead before any one reached her. I afterwards talked with one of the warriors who was there, and he told me that she had been almost roasted alive by the fierce sun. She had neither food nor drink and was little better than a skeleton. The Indians simply stood about and looked down upon her. She had a wealth of golden hair, but they did not scalp her. She had rings on her fingers, but they left them there. They did not even take her rifle nor the saddle from her dead horse.

"White squaw—heap brave—fight hard—no scalp!"

That was her eulogy. Two or three years later her scattered bones were collected and buried by a surveying party, and to-day her dust mingles with the sterile soil fifty miles from the nearest dwelling of one of her race. Bronzed and bearded Indian fighters, reckless and desperate cowboys, stern-faced and taciturn pioneers have whispered the name of Mary Lee around the campfire a thousand times since her death, but ever and always with gentle tongue and swelling heart. She was not only a woman, but she died game.—N. Y. World.

Her Desk.

It had to be written! Of course the letter had to be written. I had told myself this many times, besides stating it in very plain terms to my sister but a half-hour before. Yet there I sat staring stupidly at my pen just as though I expected that fragile pearl implement to dictate the thing for me.

It is all very well, thought I, for Byron to speak of the gray goose quill as being

Slave to my thoughts, obedient to my will!

But when it comes to the modern jewelled bauble of silver and gold, the tables are strangely reversed, and the last line of the stanza receives a new and significant meaning:

That mighty instrument of little men!

"Go right upstairs," my good sister had said to me, "and make yourself perfectly comfortable at my desk; no one will interrupt you; the room is quiet."

Quiet, why I might have heard my ideas had I had any! I laid my half-smoked cigar on the edge of the pretty light-wood desk, and almost imagined I heard the tiny plume of smoke which curled away from it. Then I drew forth the cutlass inkstand, placed the dainty blotter at a convenient distance, and, glancing at the silver-framed calendar, began:

PHILADELPHIA, May 15.

My Dear Blanch—

But my borrowed pen sputtered on the heavy cream paper and a great blot fell almost on the name. I shuddered at the significance, and turned for a fresh sheet. Folding the paper and creasing it with a curious agate paper cutter, I began again:

Dear Blanch—

But somehow I could get no further. The bit of moss agate retained my attention, and I mused, as I examined its delicate, petrified plumes, on the beauty of the everlasting.

Changeless — endless constancy! My eyes involuntarily wandered to the pretty gold timekeeper on the top of the desk, which my sister had long ago dubbed the Wee Wag. Back and forth, back and forth, the miniature pendulum waved, marking the moments which were as nothing to the duration of time those bits of moss had laid imbedded in that smooth, transparent quartz.

Dear Blanch—

Near the Wee Wag, as though it doled out the measure of their existence, stood a bunch of purple violets. Their color was still bright, but some of the little heads drooped languidly against the glass vase which supported them, and their fugitive perfume was fleeting.

O Blanch—

I turned, half entreatingly, to the next ornament on the desk, which happened to be a bisque Amour—I say happened to be, because his dainty gilt wings were so delicately poised as to give the impression that, should I close my eyes for a moment, on looking again he would not be there. He had clustering yellow curls, and his small dimpled fingers were just touching the strings of a light blue guitar. With head thrown back, his rosy lips were parted in such a way as to make me certain, had not the silence been so profound, I might have heard him sing:

Dear Blanch—

"What great difference between the sad-blossomed violet and the feathery green moss?" I demanded of the smiling Cupid "that the one, so transitory, should last but a day, and the other be preserved for ages?"

But the cruel cupid only smiled. A faint, sweet odor arose from the violets, and the Wee Wag wagged on, and on, and—on.

I was aroused by the rustle of a woman's gown and a hand laid lightly on my shoulder.

"What, not finished yet!" was my sister's surprised exclamation. She bent forward, and I knew she was reading the address—"Dear Blanch"—but no more, for it was impossible that she could peruse the unwritten thoughts which had so perversely followed that beginning. "Little one," I said, drawing her to me, "the letter remains unwritten because I have been listening to the "Song of Time," as chanted by your Wee Wag here. I have pondered long on the cause of change—and unchange, and have propounded a question to yon porcelain god which he declines to answer.

The little sister looked very grave and sympathetic at this; with the agate paper cutter she reverently stroked the sheet of paper before me, and answered, gently: "Perhaps you have been too dilatory, too deliberate. The gods, and—women—hate indecision."

I took the hint. Snatching up the pen once more, I dashed off these lines and handed them to her to read.

PHILADELPHIA, May 15.

"*Dear Blanchard*—Please send me by the first express as many violets as you have on hand, not meaning, by the way, such wilted ones as you supplied us with the last time, most of which were so dilapidated, on arrival, that they had to be thrown away. Telegraph if you have none. Sincerely yours, ——."

My sister dropped the letter; she gave me a glance, a most expressive glance! Then she drew a long breath and said, very slowly: "So it has taken you just one hour to order violets for mother's reception!"

With this she whirled on her heel and left the room.

Well, it did take me a long time, but then I never could write at a woman's desk. —New York Home Journal.

San Francisco Fashions.

SAN FRANCISCO, May, 1892.

DEAR DAISY:—As usual, Easter gave us a good idea of what the summer fashions would be like; and Easter is long enough passed now to have shown what styles in the Easter toilettes were to be lasting.

Costume dresses are more in vogue than ever—shirt and outdoor jacket being made of the same material, and worn with a silk waist, which is exhibited by the jacket being left partially or wholly unbuttoned. Ladies with a taste for masculine dress prefer a starched white or colored shirt, with a man's tie and pin, to the silk waist.

Light woolen goods are now so cheap and pretty that one can buy the material for a stylish summer costume dress for very little. The cloth for a charming one I saw the other day only cost seven dollars. It was a narrow stripe of light and dark fawn, the bell skirt, which was long and plain, was edged by a number of rows of machine stitching—a dozen at least. The waist was finished off by a deep pointed belt of the cloth, into which was gathered a dark, fawn colored silk blouse. The outdoor jacket, of the same material as the skirt, was long and fitted closely at the back; it was worn open at the front to show the vest, which had a turned down collar and a necktie of the light fawn shade, tied in a bow and ends under the chin. The hat worn with this very stylish-looking costume was of ecru gauze and crushed roses, and had one long ribbon streamer drawn loosely under the chin on the right side, and fastened on the left shoulder with a bow.

In the best stores here, nearly all the summer walking costumes differ only in the trimming of the skirt, and, naturally, also in color and material, from the model just described. You cannot fail to be with the multitude if you have just such a dress; but supposing that you are in search of something new, you will prefer the Russian blouse which European and Eastern dressmakers have been describing for some months, but which to San Francisco is still almost a novelty. For one woman that you meet in a Russian blouse, you will encounter at least fifty wearing open jackets and silk vests.

"The Russian blouse is a new style of jacket or bodice, or both combined, quite long, plain, fastening over to the left side from the shoulder, and worn with a belt," is the description a fashion writer gave of it, some little time ago. But the term "Russian blouse" is now applied to all the jackets with skirts from a quarter to half a yard in depth, that are worn with belts. The skirt may be full or almost plain, but it generally opens at the side, not the front, and for the most part, buttons diagonally from one shoulder. The Russian blouse may be of the same material as the skirt, or not, but it is an absolute necessity for it to fit well.

Some of the prettiest things displayed this season are the new underskirts, necessitated by the habit of holding up the long bell skirts. These underskirts are made in the prettiest shades of silk, and are adorned with several pinked or embroidered frills; indeed, in many cases, the underskirt is more handsome than the dress itself.

If you have some old-fashioned silk, you can easily make either an entire silk skirt, or

a sateen skirt, with one or two silk frills, which will look better if you pink them. If, however, you do not possess any available silk, India silk can be bought for fifty cents a yard, and, if lined, looks very well, or the natural colored India silk at forty cents a yard is very pretty and washes excellently.

Dress skirts are still cut bell shaped, and are trimmed in an endless variety of ways—with one narrow frill of ribbon; one or two pinked silk frills; a puff of the goods cut on the bias; rows of machine stitching; lace and ribbon; a heavy fold, like a plait of hair, made of three biased folds of the material—in fact, there is no end to the variety of these trimmings, which, in most cases, are carried round the entire skirt, instead of merely across the front breadth, as formerly.

Seamless bodices are very fashionable; they are made in a variety of ways, and are trimmed extensively with ribbon and lace. China and India silk goods are now so cheap and so fashionable, that most people prefer them to cottons, which fact, however, has not prevented there being a large display of cotton dress fabrics. Some of the challies shown this season are extremely artistic, and the cheviots and light woolen goods are pretty and inexpensive.

Hats and bonnets are worn with rather stiff trimming, even the flowers being made to stand up in a formal manner. Lace stretched tightly over a wire frame to give the appearance of butterfly's wings, is a very popular trimming, often combined with flowers and streamers.

Hats are made of lace, jet, straw, or gauze, drawn over a wire frame. Of the straw hats one of the shapes most in vogue has a rounded, flat brim and a small, pointed crown. A stiff wired bow, one or two streamers and a wreath of flowers are generally used to trim this shape.

No street costume is complete without well-fitting gloves, and the rule this summer is to wear gloves of white, or the palest shades of cream, or pearl color. The fashion is expensive, as these delicate shades soil directly, but when new and fresh, light gloves heighten a costume immensely.

MARIE EVELYN.

He Made the Sale.

Exasperated Woman of the House—I have told you a dozen times I don't want the machine! Sick him, Tige!

Peddler (while the dog is gnawing his leg)—Don't wan't the machine, ma'am? Pardon me, you haven't yet seen half its good points. It washes the clothes cleaner than any other, and in less than half the time. It never tears off a button. It—

"Good heavens! Don't you see what the dog is doing?"

"Yes. Quite a playful animal. This machine, ma'am, uses less soap, takes up less room—"

"He'll tear you to pieces if you don't go! Run, for mercy's sake! He's tasted blood and I'm afraid I can't make him stop now!"

"I have to put up with such things, madam, and it's in a good cause. This machine is the best one that ever was invented. If I can succeed in introducing one into a family I feel I have done a benevolent act. You can use any kind of water, hard or soft, hot or—"

"O! O! O! He'll kill you! What is the machine worth?"

"It's worth a million dollars in any family, but I'm selling it for only $5, and—"

"Here's your money. I'll take it. Tige! Tige! Let go!"

"Let him chew, ma'am—let him chew. It's a wooden leg. I've got another one at home all ready for use when this one is worn out. Looks as if we were going to have rain."—Chicago Daily Tribune.

—He bought a guitar and practiced for six long weary months. But at the end of that time a smile of joy lit up his warm and weary face, and his brow grew radiant with joy as he inspected the corns on the thumb of his right hand. The hour was 10 P. M., and as he wandered through the stilly night to the boarding-house where she lived, and directly under the window which had been so often sanctified by her presence, he commenced to toot: (Twang, twang, bim). "I wandered b-i-i the brookside (cling, clang, boo), I wandered b-i-i the mill"—and the sash was gently raised with a crash, and a deep bass voice yelled out: "I vish as you fall into your brook off your brookside and trown yourself in dose mill, odor I plow my vissil and call a polizeidiener." It was cruel of her to have changed her room without letting him know.

—Dolly—"Oh, yes. I quite believe there is a fool in every family. Don't you?" The Captain—"Well—er—my opinion is rather biased. You see, I'm the only member of our family."

YOUNG FOLKS' COLUMN.

The Fishhawk, or Osprey.

Written for RURAL PRESS by CAROLINE E SANDERS.

Harry Sanford had always lived in a large city and scarcely remembered ever having been out of it until he was about 12 years of age, when his father took him to pass his summer vacation near the Atlantic coast. They first stopped to spend a few weeks with his uncle who lived on a farm upon the bank of a stream in which was considered excellent fishing. If there was ever a happy boy in the world he was Harry when told he could wade around in the water, or fish as much as he pleased. As soon as it was light in the morning he was off with his dip-net or fishing pole.

One day at the breakfast table his aunt said, "you are quite a good fisherman, Harry, but I think those rosy cheeks are the nicest things you have caught."

"Wait till he goes to the Jersey shore," said his uncle, "and he will see fishermen that can beat him."

He alluded to the fishhawks.

A few days later when they reached the shore Harry's first interest was in watching for these birds, and he had not long to wait, for the little village where they stopped was right upon the bank of a broad shallow river, really an arm of the sea, and here they could be constantly seen either standing solemn and grave on the limb of a pine tree making up their minds to the work, or ascending into the air, sometimes until one becomes a mere speck in the sky, then he may circle around and around in descending as if uncertain where to strike his prey, though just as often from his loftiest flights descends with lightning speed and plunges head foremost into the water. When he rises with the fish in his talons he shakes the water from his feathers and is off in a hurry for his nest. They have been known to carry away fish weighing six or seven pounds.

"I should think they would get hold of one sometimes that was a little too strong for them and would pull them under," said Harry one day to an old fisherman to whom he was talking.

"Yes, my lad, they do say it happens so, and I know it must be for the tide has carried them up together, the hawk's claws still buried deep in the fish—and that I have seen."

"And do they stay here and fish all winter?" asked Harry.

The old man chuckled to himself at the city boy's ignorance as he replied, "Well, well, that's a curus' question, a body might know the poor lad wa'nt used to the sea. No, after the 21st of September not a fishhawk could you find on this coast, but on the 21st of March here they'll come flocking back; where they go is mor'n I can tell you, but if you want to know more 'bout them come along with me and I'll show you something curus'.

And curious indeed it was to Harry. It was a nest that had been blown down the night before. It appeared a great heap of sticks, corn-stalks, mullein, sea weed, etc., of which it was composed. This seemed to be about as serious a matter to the birds as having one of our dwellings swept off by a cyclone might be to us, for it is said they occupy the same nests year after year, each recognizing their own, though without door-plates.

They appeared a very distressed family this morning, perhaps in their generation never having had to build before, they hardly knew how to go to work, so they flew around uttering their shrill, wild, peculiar note, but, like people who soon learn to help themselves when compelled to, did not waste much time in useless complaint probably, for a few days later Harry reported the old homestead in good repair again.

Their nests were to be seen all around there in the forks of the trees, sometimes away up fifty feet from the ground, while others were not more than ten feet, always in strong trees, for they have the forethought to make them very heavy to resist the strong winds; they are not hollow inside, as you might suppose, but nearly flat. Their great weight seems to have a bad effect upon the trees for they soon become perfectly bare. The birds do not appear to mind their exposed position, but to understand that the fishermen who live near would protect rather than harm them. They say these birds always foretell a storm and they consider it an omen of good luck when one builds near their dwelling.

"You have not told us what they look like," said his brother, as Harry was telling them about the fishhawks after his return home.

"Oh, the young ones are beauties without paint or polish," he replied laughingly, "like other young birds, they are funny, awkward looking things, but improve as they grow older. In color they are a grayish brown, their beaks sharp and hooked, and claws long, feet and legs covered with hard scales. The old fisherman told me they would measure four or five feet and that he had seen one that was six feet across the wings. He said that he was a great deal better bird than the eagle, because he does not harm any of the other birds, and will even allow a small one called the crow blackbird to build into the sides of his nest. The eagle is their only enemy, for the reason that he is a lazy glutton who never appears to get enough to eat and will not work if he can steal. They have great battles sometimes when he waits until the fishhawk is on his way to his nest with a fine large fish, then pounces upon him and almost invariably gets it."

"I'll tell you what it is, Fred," added Harry, with a very wise look, "I don't think our forefathers and mothers did any great thing in taking the eagle as the American emblem, the fishhawk is a good deal nicer bird."

Her Practical Talent.

Written for the RURAL PRESS by DUANE MORLEY.

"How about Kensington art, Lottie?"

"Kensington is old; one day popular, the next day not, and everybody dabbles in it just enough to make it common; I cannot give it thought or time." "There's regular art, Lottie; oil, water-color or crayon; I was hoping you would take up one of them."

"Most young ladies paint, I know, but it is a fad, decidedly, as followed by the mob; the same as music is." "The same as music! Why, Lottie, you surprise me. How about your own lessons?" "My course I'll finish—even glad to, but that will be all. Since my talent is but ordinary it is useless to continue. Out of school it is a little music, a little painting, a little fancy work, and then—matrimony. I am posing for no one of them." The above conversation was between mother and daughter, and that night Mrs. Dean said to her husband: "Lottie is peculiar—not interested in Kensington, painting, or music." "She's not gone on novels, is she, wife?" "Not at all, though she devours the newspapers, even the market reports; asking me questions I cannot answer."

"Don't disturb her, wife; Lottie'll come out all right." Day's afterward a pensive look—even serious—was often see on Lottie's face, and one night when her father was home from the day's business and be-slippered by the grate, said she: "Father, where am I to get the necessary seventy five dollars with which to take a business course? I'll return it when through." "If that's what you're after Lottie, you can have it of me, certainly," was her father's ready answer. Lottie took her course; but before it was finished she had found for herself employment—for a few hours each day—as cashier at a near-by grocery. Soon afterward, when her course was completed, she was retained in the same capacity by the great house of S. B. & Co., and still later on, the weekly bills were given her to make up; all of which delighted her. In the best of houses mistakes occur, and when the blotters had gone wrong or the tally lists were crooked, they were brought to her to search. So expert did she finally become at it, that they named her "The Mistake Searcher," and business pleased her so much that often she would interrupt her father's reading hour to "talk shop" or make "trade" inquiries. One night, alone with her husband, Mrs. Dean confessed that her daughter was strongly practical. After a time, a change came in the firm of S. B. & Co., old partners drawing out and new ones coming in. One Friday—seemingly a Black Friday to Lottie—she was deposed to accomodate a son of one of the incomers, and the week which followed was distasteful to her, though she rusticated among the mountains and took a trip to Santa Monica.

One night a caller—a business caller—invaded their home circle. It was a Mr. Barman, an aged expert accountant, in quest of "The Mistake Searcher." A few days thereafter the sign of a new business firm swung out before the public: "Barman & Dean, Expert Accountants." Barman was a fine old school gentleman; as fatherly toward his feminine partner as he was faithful to the business. And so, level-headed Lottie found a calling that suited her practical talent.

—She—"My father's a bank cashier." He—"Huh! So is mine." She—"Well, my father owns a span of horses and two blocks on our street." He—"That's nothing; my father's only been a cashier six months."—Jester.

DOMESTIC ECONOMY.

Marmalade and Crystallized Fruit.

STOCKTON, April 17, 1892.

TO THE EDITOR:—A few weeks since I gave my method of preserving fruits, jellies, etc., to the ladies of Stockton Grange, and mentioned that if anyone wished for tested receipts of orange and fig marmalade and for crystallizing fruit, I would furnish them. Since its publication in the RURAL PRESS, I have received so many letters of inquiry that I have deemed it best to publish them.

MRS. JOS. HALE.

Fig Marmalade.—Peel figs and weigh and to every 20 pounds slice six Sicily lemons, boil the lemons in a little water, as you do in other preserves. Slice the figs and add to the lemons, boiling slowly for four hours, then add three-quarters of a pound of sugar to each pound of fruit, and boil one hour. Seal in glasses or jars.

Orange Marmalade.—One dozen large, thin-skinned oranges, five pints of water, seven pints of sugar and two Sicily lemons. Slice thin over night, throwing away most of the peel. Put the water over the fruit at night, in the morning cook two or three hours till tender, then add the sugar and cook onehalf an hour. Put in glasses or jars.

Crystallized Fruit.—Quinces, cut around in slices, removing seeds; oranges, select the thinnest skinned ones, lemons, cook the last in syrup to prevent other fruit absorbing bitterness; small white figs, whole and peeled; peaches and apricots, remove pits; pears, quarter. Make a rich syrup and work clear. Quinces, lemons and oranges should be cooked in water and water changed in the two last before cooking in the syrup. While the syrup is boiling drop the fruit in carefully, as much as the syrup will cover, and boil till it becomes transparent; drain carefully from the syrup, spread sugar in the bottom of a pan, roll each piece separately in the sugar and spread to dry in the sun on plates or earthen dishes, covering it with mosquito netting to protect it from the flies. At night take it in the house, next morning drain the syrup from it which has extracted during the day and roll again in sugar and spread to dry. Give it a final cover of sugar and put away in boxes—five or six days are required for the drying.

HAVANA SOUP.—Grate one cocoanut and simmer it in one quart of veal stock for half an hour. (Veal stock is made by simmering two pounds of veal bones in two quarts of cold water until reduced one-half, then strained.) Strain the stock to remove the cocoanut, and add to the liquor one pint of cream. Heat again, and when boiling add one heaping tablespoon corn starch mixed smoothly with one tablespoon of hot butter. Season with salt and white pepper. Beat the yolks of two eggs, add one cup of the broth, pour into the tureen, turn in the boiling broth, and mix well. Served with boiled rice.

FRICASSEED TRIPE—Cut a pound of tripe in narrow strips, put a small cup of water or milk to it, add a bit of butter the size of an egg, dredge in a large teaspoonful of flour or work it with the butter; season with pepper and salt, let it simmer gently for half an hour, serve hot. A bunch of parsley cut small and put with it is an improvement.

ROYAL


BAKING
POWDER
Absolutely Pure.

PATRONS OF HUSBANDRY.

Grange Notes.

What has become of the farmers of Winters? A Grange was to have been organized there some time ago. The RURAL hopes the "shake" will not keep them from organizing a Grange.

Woodland, too, is in the Grange belt. Mr. Adams, formerly of Woodland Grange, has promised to help Past Master Overhiser reorganize the Woodland Grange.

Past Master Overhiser, assisted by J. H. Bauman, is going to make an effort to get Suisun into line. The effort promises success.

The Oregon State Grange convenes in annual session this month. How many Patrons from California will attend.

Politics will not annoy the Grangers. They have fully determined not to support carpetbaggers for legislative and congressional offices. That much is settled,

J. V. Webster, Past Master of the California State Grange, and chairman of the special committee to propound conundrums to candidates for office, has called a meeting of the committee for May 21, 1892, at the office of the State Secretary, 220 Market St., S. F. There will no doubt be a full attendance of the members of the committee.

The May rains had a cooling effect on picnickers, yet the Grangers turned out in goodly numbers to hear the speakers sent by the Executive Committee.

Glen Ellen Grange had a successful "outing" May 9, 1892.

Bennett Valley Grange holds its annual reunion and picnic at its hall, on the 27th of May. They promise a good time to all who attend.

The former members of Petaluma Grange, No. 23, P. of H., and the farmers of Petaluma and vicinity, will meet at Fireman's hall, Washington street, Petaluma, on Wednesday, May 25, 1892, at 1 o'clock P.M. sharp, for the purpose of the reorganization of that Grange. Already a sufficient list of members has been secured to insure the success of the movement. Let others who desire to join Petaluma Grange send their names *at once* to A. P. Martin at Petaluma, Cal.

Healdsburg Grange will probably soon be reorganized. Prominent members of that now dormant Grange say they have been out in the cold long enough.

The Grange canvass has been a success. More members have joined the Grange during the past quarter than in any quarter for years past. And the half is not yet told.

San Diego county is calling for Grange speakers. The call will be heeded in due time, no doubt.

Past Master Coulter and Don Mills will visit the Granges of Mendocino county the last of May. They expect to do some field work while on the trip. Good speeches in the interest of farmers may be expected of these stalwart Grangers.

The Clements Picnic.

State Lecturer J. D. Huffman writes as follows from Lodi to the State Secretary:

I presume some one who is much better qualified than I will give an account of the Grange picnic at Clements May 13th. I had expected that the editor of the RURAL would have been present, but he failed to materialize. I will briefly say that there was a large attendance of Patrons and citizens, and it being a lovely day, the children and Patrons marched from the town hall to the grounds, a distance of 40 rods. The forenoon was devoted to exercises for the children, May Day festival and crowning of the May Queen, after which a barbacue dinner. After dinner, an address by Hon. J. V. Webster, who, in an able manner, portrayed the evils which, at no distant day, if not speedily checked, would soon enslave the tillers of the soil, and the Government completely placed in the hands of a few autocrats; and by way of a query, how long will this state of affairs last, or how long will the people endure it? Who can foretell?

Notice.

The regular meeting of San Joaquin Co. Pomona Grange in Lodi, May 26th, commencing at 10 A. M., and an evening session.

J. D. H., Sec'y.

Card from State Lecturer Huffman.

To the Lecturers of all Subordinate Granges in the Jurisdiction:—I find that Section IV, Paragraph 57, Page 64 of the Digest was amended at the last session of the National Grange as follows:

To wit: "It shall be the duty of the Lecturer of subordinate Granges to report to the Lecturer of the State Grange at the end of the March and September quarters, giving a report of the literary work within their Grange; the State Lecturer to summarize the same and make semiannual report to the Lecturer of the National Grange."

The plan suggested by the Lecturer of the National Grange is: The best of the original essays and papers read in subordinate or Pomona Granges by the Lecturers or others be forwarded to the Lecturer of the State Grange, who in turn forwards the best to the Lecturer of the National Grange, and he in time distribute to all parts of the United States.

Also the following questions to answer and be forwarded to the Lecturer of his or her State Grange:

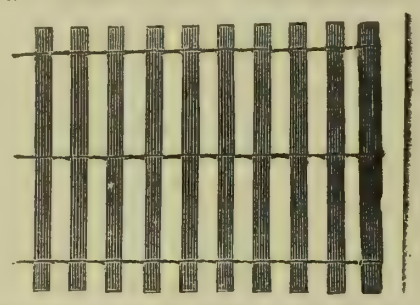
1st. Do you have lecture hour in your Grange?
2d. How often? At every meeting or only occasionally?
3d. Do you have a regular program prepared ahead of each meeting for your lecture work?
4th. Does your Grange have a printed program of its literary work for six months or a year ahead?

Fraternally, J. D. HUFFMAN, Lect.

THE degree of B. A. has been bestowed by the State University upon Worthy Master E. W. Davis. This is a compliment which he richly deserves. Some years ago he was a student at Berkeley, but was compelled to return to his duties at home before completing the course. The compliment just paid him is a handsome recognition of talents and accomplishments usefully employed in the public service.

WHEATLAND GRANGE was reorganized May 8th by Deputy B F. Frisbie, with 26 members on the list. Others will soon be initiated.

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Pickets colored red by boiling in a chemical paint to preserve the wood. We make it 2 ft., 2½ ft., 4 ft. and 4½ ft. high. Send for circulars and price list to
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CEILING, SIDING, SHEATHING AND CARPETING. Easy to apply—just the thing for Houses, Barns, Ice Houses and Outbuildings—Durable and Cheap.
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AND A DANDY STEEL TOWER.



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Challenge Wind Mill & Feed Mill Co.,
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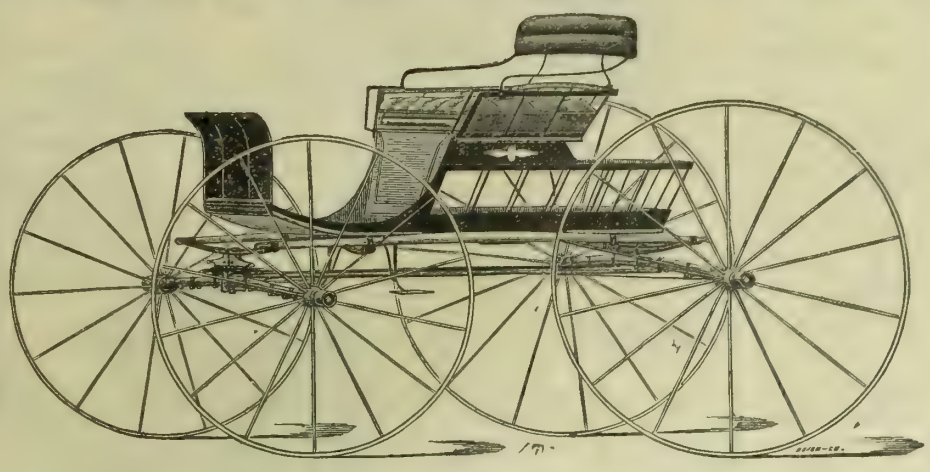
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FREE, August 1st., No. 130P Wagon.

FREE



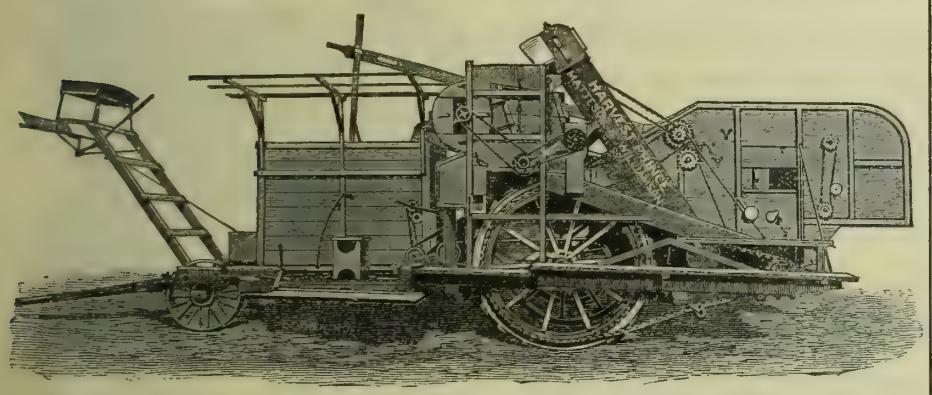
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NO. 130p ROAD WAGON, PRICE, $47.50.

We will give this wagon to the person who will send us the best and largest number of names and P. O. address of people who intend to buy vehicles and harness, so that we can send them our catalogue. The conditions of this agreement being that the number and amount of sales we make with people named in the list sent us shall decide who is entitled to the wagon.

CALIFORNIA WAGON & CARRIAGE CO., 36 Fremont St., S. F.

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Farmers, Take Notice.

You who contemplate buying Harvesters this year, please examine the

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It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by ½-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day. FRANK CORCORAN.

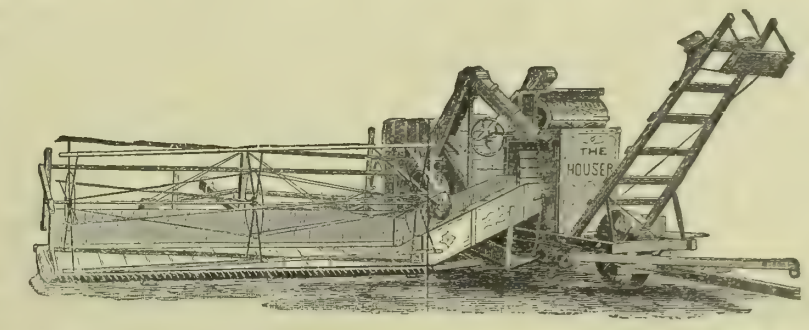
TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

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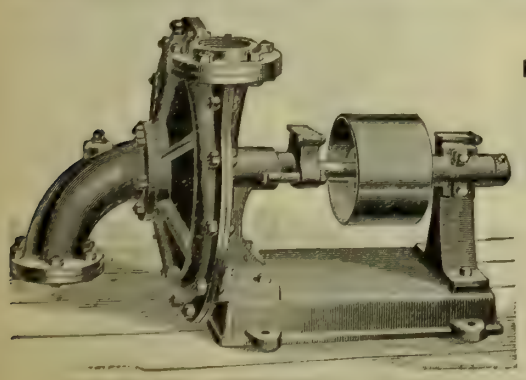
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Country Correspondence Solicited.

A Growing Section.

Colonists from England Settling in Kern County—Railroad and Other Progress.

BAKERSFIELD, April 15, 1892.

The colonization work so systematically inaugurated by the Kern County Land Company continues to produce good results, as witnessed by the arrival during the past month of a large party direct from England. A number of these new settlers had already purchased land, which is being improved for them, while the others were quickly suited and have already earnestly commenced to make homes for themselves.

A large force of men is at work in the Union Avenue Colony grading streets and doing other work. Over 1000 trees of choice varieties have already been set out along the avenue. Another model farm has been started, the first one of 20 acres having been sold to an English banker. The new farm will be 40 acres in extent, one-half of which is already set out in vines and trees, and the remainder will remain in alfalfa this season. From the grand improvements under way and already carried out and the taste displayed, it is evident that the Union Avenue Colony will be one of the beauty spots of all California, and withal one of the most fertile, for its soil cannot anywhere be excelled.

The Southern Pacific Company has begun grading a line of standard gauge railroad from this point to the asphaltum and oil deposits in the Coast Range foot-hills; also to Armona, in Tulare county, the present southern terminus of the west side branch. These two roads are one for the first 20 or 25 miles from here, this portion of the road lying through the heart of the Kern river delta.

From one point nearly due west of Bakersfield a branch runs on west to the oil field, the main line continuing northward through the famous artesian belt to Armona. Altogether there will be about 75 miles of these two roads in this county.

A gentleman who keeps himself well posted says he has reliable information to the effect that before the graders leave this county they will construct a branch of the Southern Pacific across the Coast Range to San Miguel or Templeton in San Luis Obispo county. Such a line was surveyed some years ago and the company knows exactly what work will be required to construct such a road.

The first station west of Bakersfield in this new line has already been laid out, and named Gosford, in honor of the Earl of Gosford, who is a large property owner here. The Kern County Land Company, it is understood, deeded to the railroad sufficient land for a depot, switches and town site and the outer bounds of this property have already been staked out by one of the Land company's surveying corps. It is said that the railroad company will soon lay out the site in town lots.

Never before has there been so much work in sight in this county as at the present time, says the *Echo*, and this is strictly correct. And no other county in the State has so much public work on hand as Kern has this year. An unprecedented harvest of work seems to have ripened here this spring and the summer of 1892 will long be remembered. Large forces of graders are now at work on two different railroads in Kern county and there are good grounds for the opinion that the most important work in this direction has not yet begun.

The reservoir road leading from Buena Vista reservoir to the foot-hills, a distance of 12 or 15 miles, is being constructed by Col. Geo. Stone. Long strings of ten-horse teams are going out every day loaded with ties and iron for this road.

Never in the history of the country was there so large a grain acreage as this year and never was there a more flattering outlook for an immense yield. In the mountain valleys, on the irrigated lands and out on the plains the grain is strong and the ground in fine condition,

There will also be an unusual hay-harvest. The scarcity of feed during the fall and early winter, both in this county and in Arizona, made heavy demands on the hay reserve, Arizona alone sending several hundred carloads of cattle to this "Egypt of the West" to fatten for market. These demands and those made by the canal and railroad builders have exhausted the hay supply and as a result thousands of tons must be cut and stacked this year. This means a brisk demand for labor and plenty of money in circulation.

IN South Africa Nature furnishes ready to hand a substitute for the fly paper Americans have so patiently to prepare, in the shape of a plant botanically *Roridula dentata*. It grows several feet high and is hung in rooms of the colonists to catch flies, just as the artificial article is here. It is closely allied to the Droseras, the Sun-dews of our swamps, made so memorable by Mr. Darwin's works, in which he shows that these plants catch insects for the direct purpose of eating them, that they are really carnivorous plants.

The Late Mrs. E. T. Y. Parkhurst.

Written for the RURAL PRESS by MAUDE PEASLEE.

Many readers of the RURAL will mourn the untimely demise of Mrs. Emelie T. Y. Parkhurst, who departed this life April 21, 1892.

Possessed of a brilliant intellect and with strong executive and judicial powers, she was the originator, prime adviser and indefatigable corresponding secretary of the Women's Press Association.

The faithful adviser of many literary aspirants, she was an unceasing worker herself in the literary field.

Still quite young, she had produced much valuable work, and was honored with recognition and membership of all the important literary leagues in the land.

She had the welfare of her State very deeply at heart, and constantly urged upon her coworkers in the association the deep importance of using pen and voice steadfastly for the ultimate good of California.

Much of the good that she has done will never be known, as her good influence has sunk deep in many a heart and changed the current of many idle lives.

She was the daughter of John Swett, and leaves a husband and infant daughter.

The Goods are Pure.

St. Lovis Journal of Agriculture.

The business of the Royal Baking Powder Company comes to us in the regular way, and is not, therefore entitled to any special mention on that account. But the fact that other baking powder companies have been making war on this company and using all manner of unfair means to injure its business is itself an appeal to the love of fair play which is a part of the character of every good American citizen.

The fact that the Royal Baking Powder Company has succeeded far beyond any of its competitors is no doubt reason enough for some of them to say anything against the Royal Baking Powder that they can get newspapers to publish. We do not know whether that sort of thing has injured the Royal's business or not. We don't suppose it has, but of one thing we are sure; when the goods of any company have been on the market, as Royal Baking Powder has, for a whole generation, and been consumed by almost the entire population to a greater or less extent, with perfect satisfaction to all, and without having injured the health of a single person, then it will take more than spite or jealousy to injure its business. The baking powders made by this Company have been tested a thousand times by the most eminent chemists, and always pronounced pure and wholesome. This, added to the experience of the millions who have used them, will stamp as absurd the attacks of other manufacturers who are prompted by jealousy of their great success to publish false statements about the Royal Company's goods.

RIVER WATER.—Analyses of river water to determine their values for fertilizing and irrigating purposes have been made recently by Mr. A. N. Pearson of Melbourne, Victoria, Chemist for Lands, Agriculture and Victorian Water Supply. The results of the 48 analyses made during the year ending June 30, 1891, are presented in the last report of the Minister of the Victorian Water Supply. The samples were from the Murray, Goulbourn, Werribee and Lerderburg rivers. Mr. Pearson states that the richness of the waters was highest during summer and lowest as winter approached; also that the waters of the Murray and Goulburn rivers, as a rule, increased in richness with sudden rises in their height. The principal fertilizing value of the waters has been found through these and previous analyses to be in the matter in solution rather than in the sediment. In most cases the sediments were so small that all the fertilizing ingredients could not be determined, but so far as could be stated, the value of the sediment was from 1-20 to 1-5 that of the solution. The tables accompanying the report show for each ingredient its weight in pounds and value in pence; the total value of the matter in sediment and solution, and the combined value of these two when either 1 or 20 inches of water is applied to an acre of land.

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GOLDEN ITALIAN QUEENS—California Headquarters, Wm. Styan, San Mateo, Cal.

COLTS BROKEN.

THE SOUTHER FARM,

One and a half miles northeast of San Leandro, Alameda County,

— HAS —

Every Facility for Breaking Colts Properly.

Rates Very Reasonable.

HORSES BOARDED AT ALL TIMES.

THE SOUTHER FARM,

GILBERT TOMPKINS, Proprietor,

P O Box 149.....San Leandro, Cal.



Having purchased the choicest selection from the famous herd of THOROUGHBRED BERKSHIRE SWINE belonging to the estate of the late Andrew Smith, of Redwood City, Cal., the undersigned will carry on the business of importer, breeder and shipper of this line of pedigreed stock.

Correspondence and inspection solicited.

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MECHAM & FRITCH,

Importers and Breeders of

Red Polled Cattle.

We have about 150 Head of Imported and Graded Stock, all Deep Red Color.

Full Blood and Graded, of both sexes, for sale. Address all communications on cattle to

W. S. FRITCH, Petaluma.



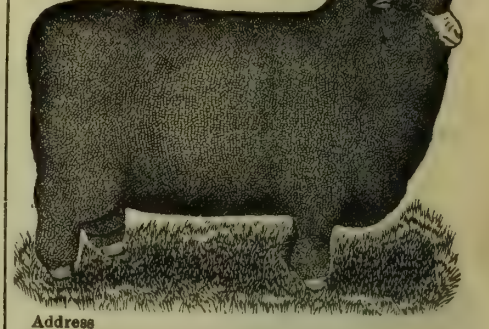
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Importer and Breeder of Shropshire Sheep

They were all imported from England, or bred direct from imported Stock.



I have also bred American Merinos—Hornless Sheep—for 22 years. They are a large sheep, without wrinkles. Rams will produce 20 to 25 pounds of long white wool yearly. Sheep of both sexes for sale.



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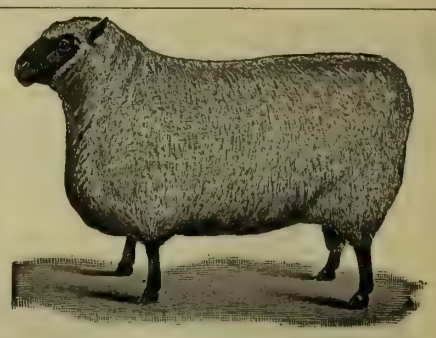
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LARGEST AMERICAN IMPORTER OF O. D. SHEEP.

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Holstein Friesian Bull,

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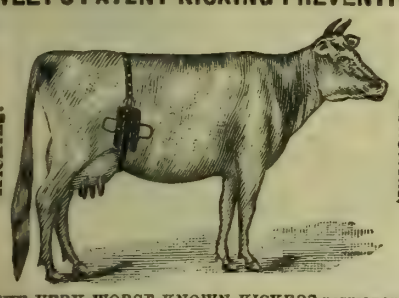
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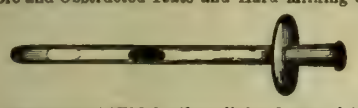


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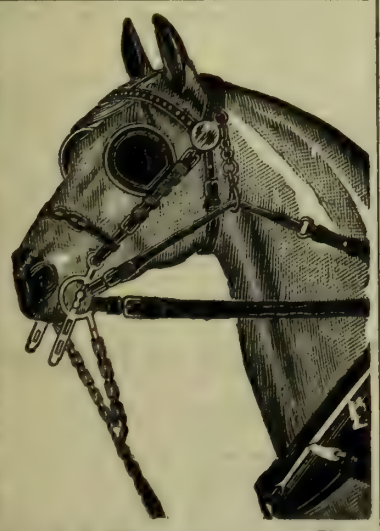
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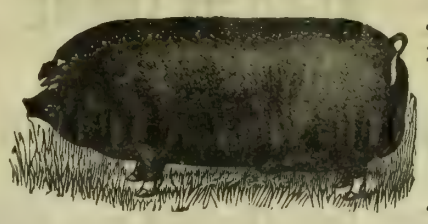
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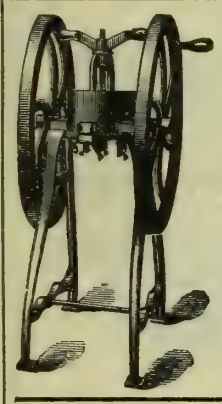
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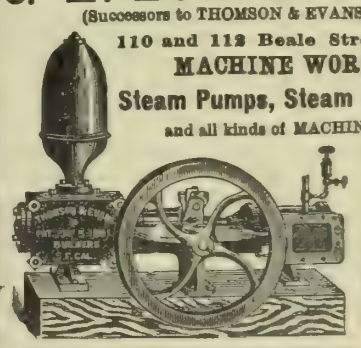
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RAINFALL RECORDS.—In the annual report for 1892 of the Berlin branch of the German Meteorological Society, Professor G. Hellmann gives an account of his continued experiments, which are summarized in *Nature*, on the effects of exposure on rainfall records, and on the determination of the distance apart that rain gauges should be erected in order to obtain an accurate account of the rainfall of any district. Simple as the question appears, the experiments, which have been carried on for seven years, have not sufficed to give a definite answer. Very considerable differences are found in the amounts recorded at stations comparatively close to each other. This result is partly owing to the effect of wind, especially in the case of snow. The following are the most important conclusions derived from the experiments: (1) The more a rain gauge is exposed to the wind, under otherwise similar circumstances, the less rainfall it records, and the higher a gauge is placed above the ground, the less rain it catches, as the disturbing influence of the wind is greater than on the surface of the ground. But if protected from the wind, a gauge will give useful results in an elevated position. The usual instructions to erect the gauge as openly as possible are therefore incorrect. (2) Even in a flat country, differences of five per cent occur in different months, at stations a quarter of a mile apart; in stormy weather, especially during thunderstorms, the difference may amount to 100 per cent. The amounts recorded at neighboring stations agree better together in spring and autumn, and also in relative wet years. Further experiments are needed, if possible by means of anemometers erected at the same level as the rain gauges, to determine more accurately the effect of wind on both rainfall and snow.

LOCOMOTIVE MILEAGE — That English locomotives sometimes make very large mileage, both per year and in total, is shown by the record of the "Charles Dickens," on the London & Northwestern Ry., which has made the round trip daily between Manchester and London (with occasional exceptions for repairs) since 1882, and on Sept. 10, 1891, completed its millionth mile. This is perhaps, says *Engineering News*, truthfully declared to be "a feat without parallel in the annals of railway traveling," as few engines complete their millionth mile, and fewer still do it in nine years, or at the rate of 111,000 miles per year. On the Pennsylvania Railroad, in 1885, the highest mileage which any passenger locomotive then had to its credit was 780,182 miles. Several had about 500,000 miles to their credit for ten years' service, and one had 41,510 miles for three months' work, or at the rate of 166,040 miles per year. The average of all passenger engines that year, however, was 45,936 miles (highest, 79,258), which is quite beyond any English precedent, and as several of the Western roads are far exceeding Eastern precedents in respect to locomotive mileage, it may be that some Western road has a locomotive in its service which has made a million miles in ten years. The New York Central has not, and it is likely to remain a very exceptional performance either in England or America until operating conditions have radically changed.

IMITATION FUR.—A recent invention of English origin is that of a looped fabric finished in such a manner as to imitate very closely the skins of bears, buffaloes, sables, foxes and other animals. In the process of making the material, the loops which constitute the pile are formed in different lengths. After the weaving of the fabric, the loops are drawn out by a revolving wire brush or card, and this process finishes the ends of the threads so as to make them finer at the points than at the roots. The pile is then formed at different lengths, consequently the resulting fur is thicker at the bottom than at the outside, thus most nearly resembling the real fur to be imitated. The fabrics made in this way are intended to be used as carriage rugs, door mats and for other purposes, the effect being, it is said, so good that the imitation cannot be detected except on close inspection.

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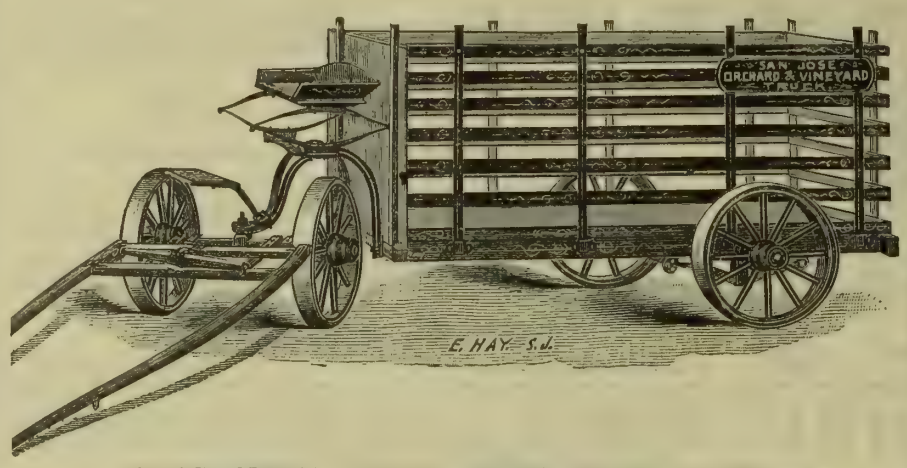
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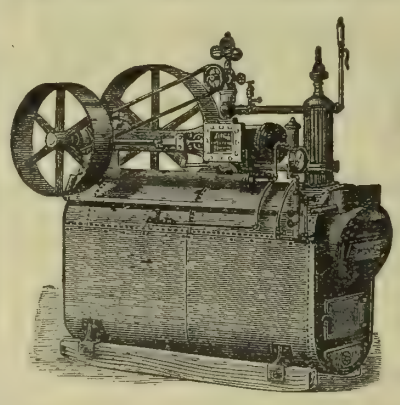
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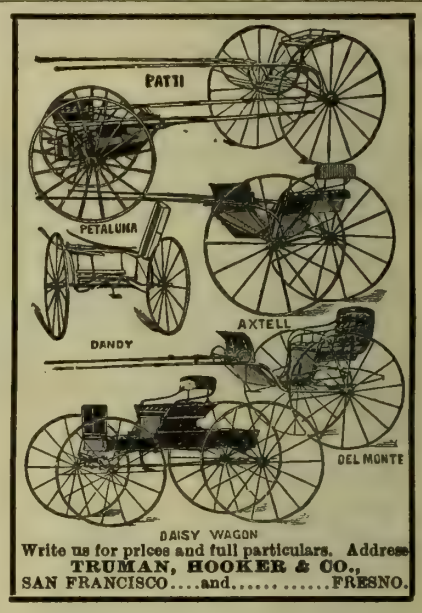
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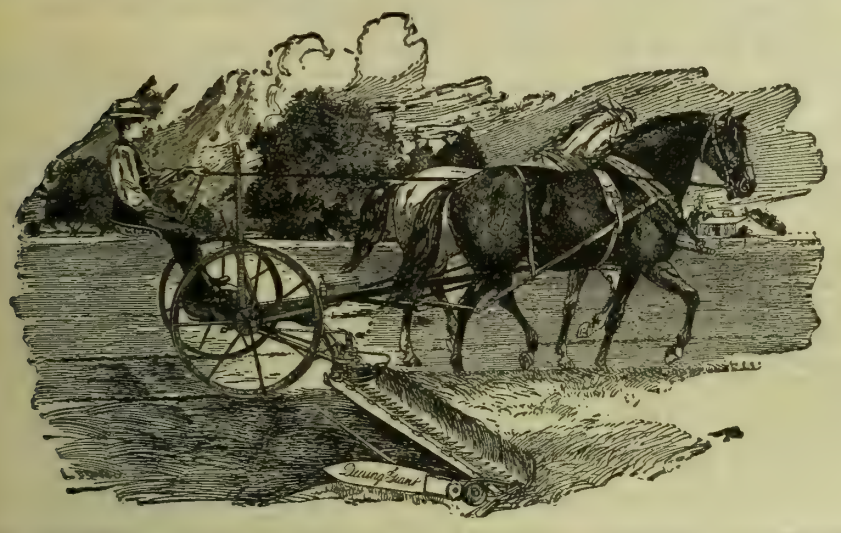
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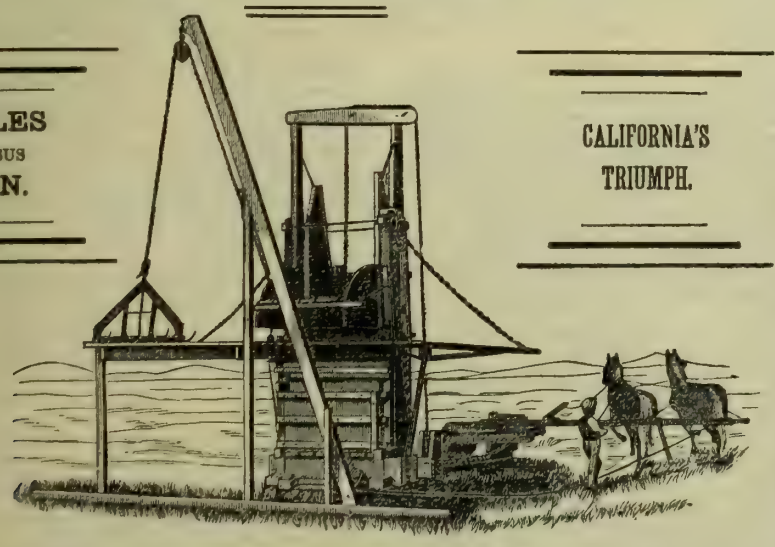
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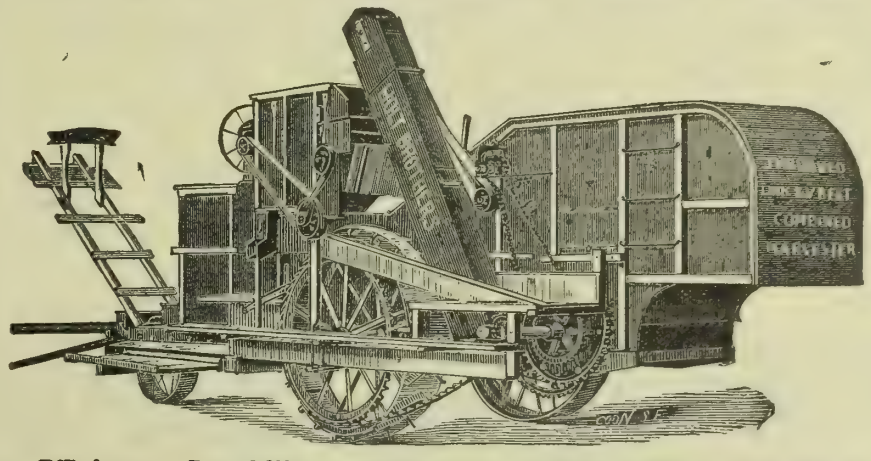
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CALIFORNIA.

Butte.

HOP NOTES.—Wheatland *Four Corners:* The cold weather of the past few weeks has put the crop back about ten days. The hopmen will begin to tie up in the Bear River yards about next Monday, May 16th. The vine is looking hardy, but is uneven. A few weeks of growing weather would bring them out in fine order. Work will commence on the Durst and Roddan new kilns about the middle of June. George Dalbey is putting the fine work on the Bear River hop press, which he is building for John Roddan.

WHEAT NOTES. — Biggs *Argus:* Thirty-six carloads, 635 tons, of wheat have been shipped from the brick warehouse since the first of the month, and about 1000 tons still remain in the warehouse. Of this 1000 tons, 150 tons are in the hands of the farmers, the balance being owned by millers and shippers.

Fresno.

WILD GOOSEBERRIES.—Reedley *Exponent:* The wild gooseberries of this locality, which are plentiful, are now ripe and in good condition to be gathered. The best way to gather them is to place a large pan, or several of them, on the ground under the branches and then beat the bush with a stick. This will shake the berries off and will prove a satisfactory method in every respect, as it takes but little time and save one's fingers from the thorns.

Humboldt.

CROP AND SHEEP ITEMS ON BANNER SHEEP RANGE.—Cor. Eureka *Standard:* Everything is prospering in this part of the county. Grass and grain are doing well; stock of all kinds is fat; in fact, we had good mutton all winter and our loss is a mere nothing. I don't remember as fine a winter for stock in the last 30 years. This spring has been very wet and showery, but notwithstanding that, the showing for lambs is not so bad, after all. I saved 80 per cent of mine (or the ewes did it for me) with the aid of the fine orchard grass pasture I saved for them. Hooker has done about as well as I have. My two sons at Gans have saved fully 95 per cent of the lambs from their flock of 1500 head. They are now rounding up an extra lot of beef cattle which they have sold to Siskiyou county butchers.

Kern.

TEHACHAPI CROP NOTES. — Cor. Bakersfield *Echo:* Providence seems to take especial care of this particular garden spot, for in every instance the rain has come just in the nick of time. Previous to last Saturday the outlook was not flattering. In many places the grain which was only about six inches high, had begun to joint and would have been a failure, but Saturday night a gentle rain began to fall, and showers have been frequent throughout the week, and now the crop is assured, but will undoubtedly be late, owing to the cool weather which still prevails.

FATTENING CATTLE FOR MARKET.—Bakersfield *Californian:* Mr. Ayres, an extensive cattle dealer of San Jose is shipping a lot of cattle from Arizona to be fattened for market upon the rich pasture fields of Kern Island. He is bringing in cattle by the trainload, and the amount of this kind of business that is now being done leads one to believe that one of the most solid and profitable industries in the whole world—that of making beef cattle—is a possession of Kern county's that will never feel dull times, nor suffer from the competition of glutted markets.

Napa.

ORANGES IN NAPA.—Leonard Coates in *Register:* There is no reason why Napa should not in time be as celebrated for her oranges as for her cherries, prunes and peaches. Lunching the other day at the Magnolia hotel, Calistoga, brought this forcibly to my mind, via my palate. On the table were some excellent oranges, grown in the neighborhood. Later on, while driving home, I was accosted by a peddler selling oranges. Finding that they were home grown I at once bought some, at 20 cents a dozen only. These oranges were infinitely superior in flavor to any I have bought this year from Southern California at 40 cents to 60 cents per dozen. While the rind was rather thick, the orange was of good size, very juicy, and notably free from fiber. Occasionally we have a season when orange trees will be injured by frost, but never, I think, more so than in Los Angeles. This year most of the oranges shipped to San Francisco are insipid and dry, and many of the trees killed. But this may not happen again for many years. I have eight varieties of oranges on my place, some in bearing, and they have not needed any protection from frost yet, after the first year or two. The trees should always be allowed to grow out bushy from near the ground, so that the branches and trunk are protected by the dense foliage.

Orange.

GRAPES TO THE FRONT.—Anaheim *Gazette:* Unless all signs fail, there will be a vast area set to grapes in this neighborhood next season. On all sides there is a reawakening of interest in this industry, based upon the universal impression that the vine disease has run its course. Mr. Wehmeyer's two-year-old vineyard on West street looks splendidly; the vines are filled with grapes, and there is in them evidence conclusive that the disease is at an end. Vines in different parts of the valley that have survived the mysterious malady are putting forth new growth and giving abundant evidence of returning health and vigor. They are covered with the rich glossy foliage of our vineyards of the days before the blight, and are quite sufficient to prove that the last lingering trace of the disease has vanished quite as mysteriously as it came. The vigorous growth of leaf and stem, and the putting forth of the delicate tendrils peculiar to the healthy vine, together with the branches laden with miniature clusters of grapes, is a sight calculated to make glad the heart of the old-time wine maker. It is a sight that we have not seen here in five years, and warrants the conclusion that we are at last out of the clutches of the malady. On every hand prevails the opinion that we have come out of the dread scourge, and that grape-growing will soon take on again the magnificent proportions of the past. Indeed, some of the old vineyardists are even now looking over the country for choice cuttings to plant next year.

Sacramento.

HOP CROPS BACKWARD.—SACRAMENTO, May 13: Many hopyards which last season at this date were twined, tied up and the vines growing rapidly, are now just sending out the first shoots. For the last ten days the hopmen have noted this slow growth, but attributed it to unusual cool weather. Latterly a closer examination reveals not only the fact that the vines are not growing vigorously, but that in numerous instances the top roots of the hill are decayed and only the small crown shoots are making a feeble effort to show life. It is hoped that the fine weather, which now appears to have come to stay, will bring out the backward hops, but it is certain that there is no remedy where the roots have been injured, and that this will tell on the coming crop. The reported condition of the yards is confirmed by Daniel Flint, F. V. Flint and Co., Henry Whittenbrock, J. E. Camp, Thomas Flint, T. Lovedal, Russ Flint and others. The cause of the trouble is undoubtedly due to the cold and backward season, but just how and what particular climatic condition has done the mischief is a matter of surmise. Many of the growers believe that the warm weather in February and March did the damage by awakening the dormant root stalks prematurely. Others attribute it to the drouth of last fall and the early winter. At the time hops usually begin to grow, the river was quite low and farmers feared a dry season, many of them erecting irrigating plants. The moisture in the ground was not sufficient to give the hop the nourishment which it received by subirrigation from the flood tide of the river. This season, as a result, the plants made a slow growth. Now the river is carrying a big volume of water and forcing a heavy seepage when it is least needed. The high water usually marks the gauges a month earlier than this season, and it is thought by many that derangement of the usual water supply has caused the trouble. The unfavorable weather has greatly delayed tying up, and some growers are undecided whether to tie the crown shoots or to wait for the lateral ones. One man to-day said that he proposed to be sure of vines, and proposed to tie up crowns where nothing better was growing, and if later in the season the lateral vines put out, he would prune the first ones and tie up a second time, though the work would incur a great additional expense.

San Benito.

HOLLISTER, May 10, 1892.

TO THE EDITOR:—An unusually large acreage of grain has been sown in San Benito county this season (mostly wheat). There has been an abundance of rain during the winter and spring months until within the past few weeks, when farmers begin to fear that the cold weather and scarcity of rain for a couple of weeks might injure the grain; however, on the last of April, nice warm rain began to descend upon the thirsty grain, and now farmers who have wild cat hay to cut are as anxious to see it stop as they were for it to commence. However, the rain came too late to help the growth of the wild hay, as it was too nearly matured. It is feared that he late frost this spring has injured the fruit crop here as in other sections of the State. Several slight shocks of earthquake recently around here. Alfalfa hay has been cut here over a month ago, and yields well. The orchards have not been hurt as much by cold weather as was at first supposed. Young trees are thriving nicely and grape vines are leafing out well. Haying will commence soon.—OCCASIONAL.

San Bernardino.

MODEL POULTRY FARM.—Robbie Condee in *Courier:* Geo. H. Lea's ranch is situated about two miles northeast of the city of Redlands. The poultry plant, which occupies but a small portion of Mr. Lee's large fruit ranch, covers about five acres, consisting of a brooder and a house 8x24 feet, which is heated by gasoline, and has a capacity of over 500 chicks. A large incubator is kept in operation, constantly hatching out chicks. From the incubator the chicks are removed to the brooder, where they are kept until about three weeks old. They are then moved to a larger pen. Here they remain until old enough to go on the roost, and then are given a long range, with a roosting-house 18x50 feet, which has a roosting capacity of over 500 fowls. The breeding-stock, which consists of Black Langshans, Houdans, Brown Leghorns, Light Brahmas, Buff Cochins, Barred Plymouth Rocks and Silver Wyandottes, are kept in separate yards 20x50 feet; each yard is planted to apricot trees, which afford an abundance of shade. The houses are 8x10 feet, with movable floors, so that they can be easily cleaned, The nests, which are in these houses, can be opened from the outside, making it much easier to gather the eggs. The yards, ten in all, are arranged with an alley running ning through the center, there being five yards on either side. The ends of each yard can be removed, and the yards are cultivated each year, keeping them always in good condition. Mr. Lea states that there is no better market for poultry and eggs anywhere, and there is no danger in overstocking the market.

San Diego.

IMPROVED CROPS.—Escondido *Times:* In the past ten days there has been a marked improvement in the cereal crop prospects of this valley and surrounding country. The great benefit of the splendid rains of May 2d and 3d are now more apparent. The grain which before that was considered hardly worth cutting has grown into a fair average crop, and the late grain will be fully up to the usual average. Corn has taken a new start, and with warm weather, which may now be looked for, will make a good yield. The vineyards never presented a better showing than at this time; the bloom is well set, and with the excellent cultivation and attention which has been bestowed, a large crop is assured. The same can be said of the orchards, citrus groves and small fruits. In fact, from the manner in which the ranchers now brag about the prospects, and are preparing to care for the coming crop, we are led to expect much for the season.

PLANTS FROM CUTTINGS.—Escondido *Times*: A. B. Eells writes: "Noticing directions going the rounds of the papers for growing plants from cuttings that are difficult to start, I thought it might not be amiss to give a plan that has been very successful here. A trench is dug, having sloping sides and say a foot or more in depth, in sandy soil. The cuttings, either green or dormant, are of any length from two inches to one foot, are laid thickly along the sides of the ditch and buried all but the last inch of the top end. The bottoms of the cuttings should be as near on a level as possible. Lay light boxes over the cuttings for shade and let water in the trench to an inch above the base of the cuttings twice a week, or often enough to keep them moist."

San Mateo.

CROP PROSPECTS.— Half Moon *Advocate*: A trip down the coast as far as Pescadero revealed splendid crop prospects. The valleys of Pilarcitos, Purissima, Lobitos, San Gregorio, Pomponia and Pescadero are all abloom with abundant and healthy crops. Grain is doing unusually well, and the season is equally auspicious for beans, of which a good acreage is being planted. Pasturage is excellent and stock look sleek and fat. The coast farmer is happy, and the only thing he has to pray for is the early completion of the S. F. W. S. electric road.

Santa Clara.

FRUIT CROP AT LOS GATOS.—Cor. *Mercury*: Owing to the fact that the surface moisture has not united with that of the subsoil in our deep gravelly soils around Los Gatos, there was some apprehension that the usual warm, dry weather would be rough on the fruit and make it small and destitute of flavor. The orchardists now have the utmost confidence in the prospects. Cold weather of April has caused, in some instances, the falling off of the embryo fruit, but enough is left to make a splendid crop.

ENGLISH PHEASANT EGGS.—San Jose *Mercury*: M. C. Jordan, of Santa Clara, has received from London 100 English pheasant eggs, which were forwarded by Peter J. Donohoe, the owner of the beautiful farm, who is now in London. Mr. Jordan set the eggs under hens.

Sonoma.

POULTRY PAYS.—Petaluma *Courier:* A little more than two years ago R. M. Hyatt started in the chicken business. With his land paid for with funds on hand for that purpose at the time of the purchase, he made the business pay all of its investment in the way of improvements. This included fencing the property, cultivating the land, erecting a large number of excellent chicken houses, brooders, hatching-houses, storehouses and the like, a very good barn, etc. Besides all this, the revenue from his sale of chickens and eggs has paid all the living expenses of his family and produced enough besides to build a fine residence. It may be that the poultry business does not pay in this part of the world, but there is an immense amount of evidence in support of the opposite theory. He understands how to manage every detail of the business. He has at times from 1200 to 1500 chickens on his place, the number at the present time being something over 1000.

Stanislaus.

CROPS ON THE WEST SIDE.—Newman Cor. Modesto *Herald:* The weather for the past few days has been as changeable as the mind of a blonde maiden, being windy, rainy and sunshiny all in a few hours. However, farmers have no fault to find, as this kind of weather has been most favorable to grain, and a fair crop of cereals will be harvested on this side of the San Joaquin this year. Much of the late sown grain is beyond redemption further than to make hay.

Tehama.

A LARGE GRAIN FARMER. — Napa *Register*: Eighteen years ago Mr. John Finnell went to Tehama county to engage in farming upon a larger scale than the limited area of grain land in Napa county allowed. He leased and subleased a tract of thousands of acres, made big money on the venture and then purchased the property. He now owns 22,000 acres west of the town of Tehama (having lately purchased, for $50,000, 2000 adjoining acres), rents the Walsh ranch of 20,000 acres near Chico at $35,000 per year, owns 11,000 acres 30 miles west of that, and ten miles farther away owns 10,000 acres more. This last is mountain land used principally as a range for sheep. Here is a total of 63,000 acres of land controlled by one man! Mr. Geo. Goodman, Sr., who has just returned from a week's visit from Mr. Finnell, says that not since 1880 has the prospect been so good for a large crop of grain as this year in Tehama county. Mr. Finnell expects to harvest on his own and rented lands 200,000 (130-lb.) sacks—enough to supply San Francisco with breadstuffs for one whole year. In the management of his farms he has the assistance of four sons—John, James, Bush and Simpson. A fifth son, Fountain, owns a place of between 4000 and 5000 acres just south of the Senior Finnell's Tehama Ranch. In running his machinery during the plowing and reaping seasons, mule power is used in preference to traction engine. The soil is not cropped to death, the land sown one season being summer-fallowed the next. Mr. Finnell's places carry a great many heads of live stock—500 mules, 150 brood mares, 1500 head of cattle, 14,000 sheep and lambs, and an uncounted number of hogs.

HOW TO PREVENT FROST.—T. Kindlespire in *Peoples' Cause*: I see an extract from the Colusa *Sun* headed "To Plow or Not to Plow." The writer gives a remedy to guard against frost on orchard and vineyard lands. He says that where the land was freshly cultivated it was injured, while the part uncultivated was uninjured, and gives as his reason for the uncultivated part not being affected by the frost that it was of a smooth surface and had a crust on it. I don't think the smooth surface had anything to do with it. It was simply a dry surface and the cultivated part had a damp surface That is the whole secret of the matter. Rough or smooth, if dry on the surface, frost will not damage fruit as much as when the land is freshly cultivated, as the cultivation creates a moisture that freezes. Much damage might be prevented if in frosty weather we would leave the ground uncultivated and keep the surface dry, for in the absence of moisture there will be no frost. But this we can't always do, as it will rain in the evening and clear off during the night and turn cold. The ground is then wet, the trees and vines and vegetables are wet, and that is the time our greatest injury is done. Unless land needs cultivation badly, it is better to let it alone in frosty times. The frost has injured our fruits but little, except prunes. They were in full bloom and no leaves on the trees during the first part of April, when we had the heaviest frost. The prune crop will be light. The cold and backward spring so far has made melons a failure.

CROP NOTES.—Corning *Observer*: Haying has commenced, but only on alfalfa. Mr. A. B. Aiken was about the first to have the mower out, to cut the alfalfa field adjoining the town. The hay crop will be fine generally through the country. The summer-fallowed wheat looks handsome, as it is headed out; the late rains will make the winter-sown a fine crop. Next week farmers will be a busy lot at hay-cutting.

Tulare.

LARGE NAVEL ORCHARD.—Porterville *Enterprise:* J. Curtis of Palermo, Butte Co., has been in town the last two weeks superintending the putting out of 50 acres of orange lands to Washington Navels for J. J. Cairns, whose place is ten miles west of Porterville, at Lindsay, and the trees for which, his firm supplied. He had 12 men employed four days and put out nearly 4000 trees. Mr. Curtis says he has never yet planted an orchard where he has found the ground in such fine condition and the future prospects looking so well. Mr. Cairns expresses himself exceedingly well pleased with the trees, as well as the manner in which they have been planted.

SHEEP ON THE GOVERNMENT RESERVE.—Visalia *Delta*: Stephen Barton of Kernville writes the *Delta* as follows: "Between 100,000 and 200,000 sheep have entered the land reserved for a national park by my place up to the present time (May 2d), and still they come."

ARIZONA.

A BIG HARVEST.—The Salt River valley never presented a more enchanting view than it does at the present time. In every direction is to be seen fields of waving grain which responds to the breeze like the rolling billows of Old Ocean. The many acres of grain are now rapidly nearing the time when the harvester will be set to work and the golden kernels threshed out, ready for market. The acreage this year is large, and the yield promises to be abundant, and the farmers are correspondingly happy and hopeful. The copious rains in the early part of the season, with the more recent ones, were especially conducive to an abundant crop. Many thousands of dollars are being expended in harvesting machinery, from the self-binder to the steam thresher, and soon their busy hum will be heard throughout the length and breadth of the valley. The steam hay balers are already at work taking care of the hay crop, and they will be followed by other machines now in short order. There should be an abundance of grain this year, not only for the home demand, but for shipment as well. The acreage is increasing rapidly each year, and it will not be long before this section of Arizona is known as a wheat-producing country, as well as being noted for fruit, honey, minerals, etc. The fact that the Salt River valley can produce 60 bushels of wheat per acre is a fact that can be pointed to with pride, and the people of less productive sections of the U. S. can hardly comprehend this.

STRAWBERRY CULTURE. — Phœnix *Herald:* Strawberries! The valley is teeming with them. Col. Stewart's 15 acres keep four teams busy on the road, and he is furnishing 300 boxes per day to the fruit-canning company, which is at work on the crop. Every fruit store and ice cream parlor in town is overflowing with strawberries of the finest flavor. Mr. Charles Williams is furnishing the market with an especially fine berry—the Crescent, a seedling that would make an Eastern grower turn pale with envy. From three-fourths of an acre Mr. Williams is now regularly gathering 114 boxes per day. Mr. Williams has five acres in these berries, and will double the acreage next year. Then there is the Trook Ranch with six or eight acres, and Farrington with as many more, and various others who are making a business of strawberries, when five years ago any old timer would say, "You can't raise sich truck here." In five years from this date this valley will be canning enough strawberries to supply the entire United States if some mishap does not throttle the business.

Farmers, Fruit Growers, Home Seekers

FARMERS:

Do you want to locate in a region where crops never fail?

Do you want a place where you may plow and plant in the assured certainty that you will in due time reap an abundant harvest?

Do you want a farm where you can raise every variety of cereal to perfection?

Do you want a farm where you can raise cotton, sugar-cane, tobacco, flax or ramie?

Do you want a farm where you can cut three to six crops of hay every season?

Do you want a farm where you can raise potatoes, beets and vegetables the year round?

Do you want a farm where your harvest may commence in January and continue each month until the following December.

Do you want a farm where you can raise two and even three crops on the same land in one season?

FRUIT GROWERS:

Do you want a place where the peach, apricot, plum, pear, apple and every other deciduous fruit flourishes?

Do you want a place where you can raise oranges, lemons, figs, olives, pomegranates and other sub-tropical fruits?

Do you want a place where you can raise almonds, chestnuts, pecans, walnuts and all similar products?

Do you want a place where you can raise finer raisins than Spain, can show better prunes than France produces?

Do you want a place where strawberries and other small fruits are at home?

Do you want a place where the peach tree and the raisin grape bear at eighteen months from planting?

Do you want a place where every fruit produced in America grows luxuriantly and produces abundantly?

HOME SEEKERS:

Do you want a home in a land where there is neither snow, thunder storm or tornado?

Do you want a home in a land where the sun shines more than 300 days out of the 365?

Do you want a home where twenty acres well tilled will yield a competence and eighty will return wealth.

Do you want a home where discomfort of every kind is minimized and everything conspires to make existence a pleasure?

All this, and more, too, you may find in the great Kern River Valley of California. In this valley and in the mountains that tower above it, you may find every variety of climate, from perpetual summer to eternal winter, every variety of scenery from level plain to rugged mountains.

In the choicest part of all this rich territory the Kern County Land Company owns over four hundred thousand acres of choice fruit land, which it offers to the classes above mentioned in tracts of any size, from town lots to thousands of acres. Prices and terms more favorable than may be obtained anywhere else in the world.

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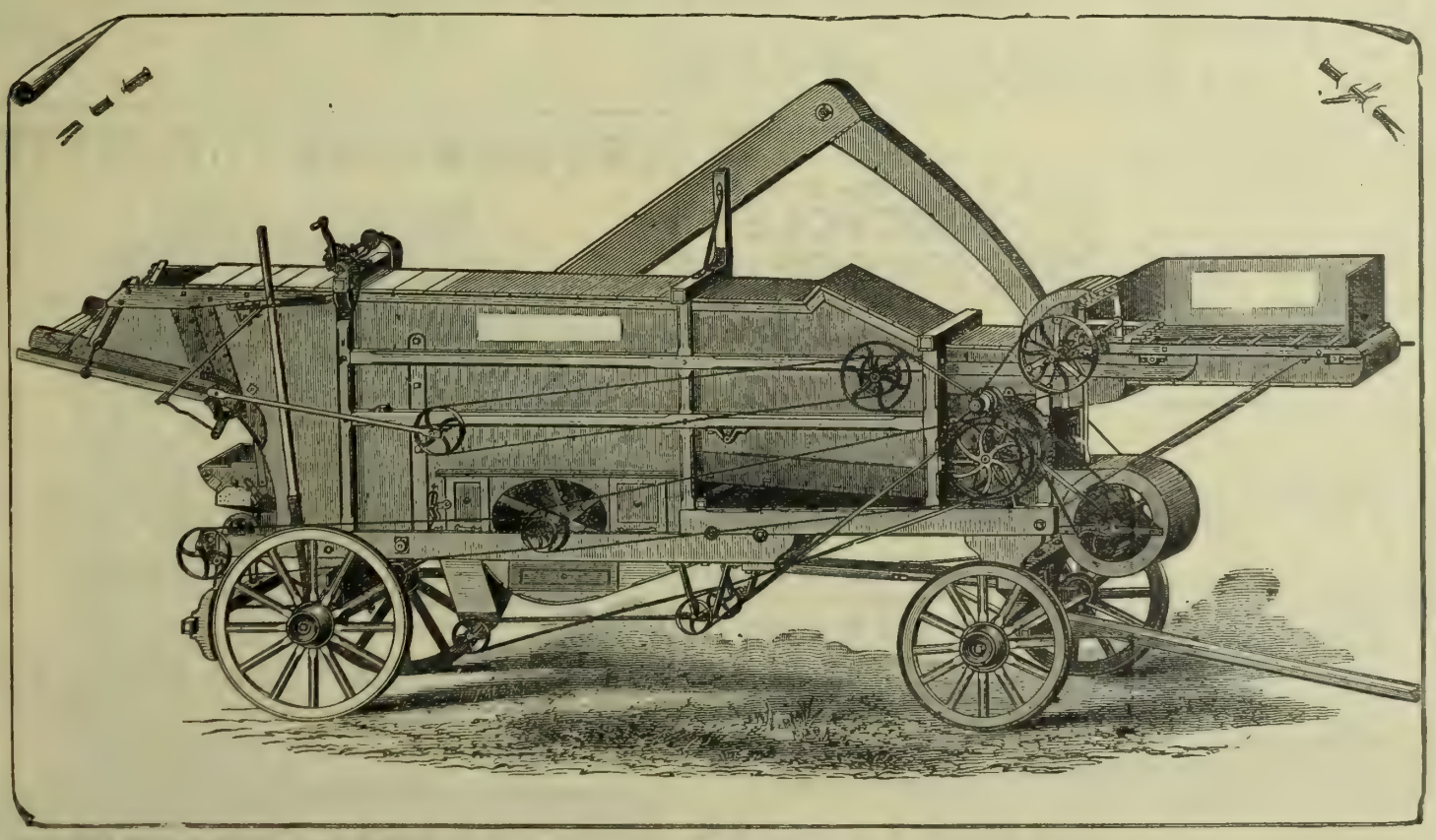
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GOOD HEALTH.

Organisms in Surface Water.

Thos. N. Drowne, in a report to the Board of Health of Newport, has the following to say on this subject: "The excessive development of vegetable organisms in surface water, with all its attendant evils, may be briefly explained by the statement that there is abundant food to support these organisms. In all surface waters these vegetable growths are found to a greater or less degree, and the reason why some bodies of water have few and some have many is that the former contain but little food for their support and the latter contain much. The analogy between poor crops on a barren, rocky soil and an abundant harvest on good soil, richly manured, is one that may serve our purpose by way of illustration.

A good deal of information on this subject has been acquired by the recent investigations conducted by the State Board of Health of Massachusetts. Some of the conclusions that have been arrived at in the course of these investigations are as follows:

1. Polluted waters of ponds and reservoirs, that is to say, water that receives readily decomposable organic matter, such us sewage or the drainage from houses, stables, manured fields and the like, is more liable to give trouble from vegetable growths than that which is free from such pollution.

2. Artificial storage reservoirs, which have not been cleaned before flooding, by the removal of all trees, shrubs, and rich surface soil, supply, by the decomposition of this vegetable matter, the conditions for an abundant development of organisms.

3. Shallow ponds and reservoirs, and those with much shallow flowage, are more liable to give trouble than deep ponds and reservoirs.

4. The larger amount of decomposable organic matter present in the water, the greater the probability of the development of blue-green algæ, which are highly nitrogenous, and give on decomposition the characteristic pig-pen odor.

SHADE TREES ON CITY STREETS.—Shade trees on city streets have been condemned by sanitarians as inducing dampness and shutting off air and sunlight. While this is perfectly right under the conditions frequently affronting us, says G. N. Bell in the *Sanitarian*, other conditions may be promoted that render tree-planting on our residence streets both advantageous and pleasing. Assume an average city street 60 feet in width and running due north and south. On each side of the roadway there will be a footway of 12 feet. Let us pave but seven feet of this. The depth of the lot, we will say, is 125 feet. Allowing 65 feet for the depth of the house, there will be 60 feet depth of yard room. Thirty-five feet in the rear ought to afford ample drying room, and we can then set our house 25 feet back from the street. From the front of the house, then, to the curbstone there will be 37 feet. Midway between the edge of the paved sidewalk and the curbstone affords a line for the location of trees over 35 feet from the front of the house. Trees at this distance from the house obstruct no air nor sunshine detrimental to residents, and the cost of the trees is comparatively small in consideration of the increased value of the adjoining properties. On streets running east and west, trees are advantageous on the north side only.

CHARACTER AND EYES.—A far-searching individual, who has apparently made a very deep study of the pigmented cells of the iris, tells us that a person's character can often be best told by the color and depth of his eyes. People do not usually apply more than four or five colors to eyes, so that any that are not blue, or black, or brown, or hazel, are called gray. Yet there are a hundred different kind of gray eyes. You seldom see a stupid person with gray eyes, but the genuine gray is always found among highly intellectual people. Steel-gray eyes with large pupils denote intense feeling; blue-gray eyes are generally possessed by people with kindly hearts. You never find a mean spirit behind a pair of blue-gray eyes. Blue eyes denote quickness of thought, and generally fine physical development when they are large and bright. About nine-tenths of our engineers, lighthouse-keepers, policemen aad army and navy officers, and many others selected for physical perfection, have blue eyes. Hazel eyes denote musical ability and grace of person; they are very pretty eyes, too. Our omniscient informant does not make it clear: Which is cause and which effect? Does individual character affect the color of the eye, or does the color of the eye affect the individual character?

45 sold in '88
2,288 sold in '89
6,268 sold in '90
20,049 sold in '91
60,000 will be sold in '92



A Steel Windmill and Steel Tower every 3 minutes.

☞ These figures tell the story of the ever-growing, ever-going, everlasting Steel Aermoter. Where one goes others follow, and we "Take the Country."

Though sold, we were unable to make all of the 20,049 Aermotors in '91. Orders often waited 8 weeks to be filled, but now we have vastly increased our plant and are prepared promptly to plant our increase in every habitable portion of the globe.

Are you curious to know how the Aermotor Co. in the 4th year of its existence, came to make many times as many windmills as all other makers combined? How we came to originate the Steel Wheel, the Steel Fixed Tower, the Steel Tilting Tower?

1st. We commenced in a field in which there had been no *improvement for 25 years*, and in which there seemed no talent or ambition, and none has yet been shown except in *feeble* imitation of our inventions.

2d. Before commencing the manufacture, exhaustive scientific investigation and experiments were made by a skilled mechanical engineer, in which over 5,000 dynamometric tests were made on 61 different forms of wheels, propelled by artificial and therefore uniform wind, which settled definitely many questions relating to the proper speed of wheel, the best form, angle, curvature and amount of sail surface, the resistance of air to rotation, obstructions in the wheel, such as heavy wooden arms, obstructions before the wheel, as in the vaneless mill, and many other more abstruse, though not less important questions. These investigations proved that the power of the best wind wheels could be doubled, and the AERMOTOR daily demonstrates it has been done.

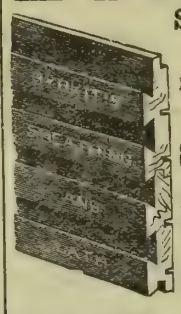
3d. To the liberal policy of the Aermotor Co., that guarantees its goods satisfactory or pays freight both ways, and to the enormous output of its factory which enables it to furnish the best article at less than the poorest is sold for. For '92 we furnish the most perfect bearings ever put in a windmill, and have made an exhaustive revision of the Aermotor and Towers.

If you want a strong, stiff, Steel Fixed Tower—or if you want the tower you don't have to climb (the Steel Tilting Tower) and the Wheel that runs when all others stand still, that costs you less than wood and lasts ten times as long (The Steel Aermotor) or if you want a Geared Aermotor to churn, grind, cut feed, pump water, turn grindstone and saw wood, that does the work of 4 horses at the cost of one ($100), write for copiously illustrated printed matter, showing every conceivable phase of windmill construction and work, to the AERMOTOR CO., 12th and Rockwell Sts., Chicago, or 27 and 29 Beale St., San Francisco.

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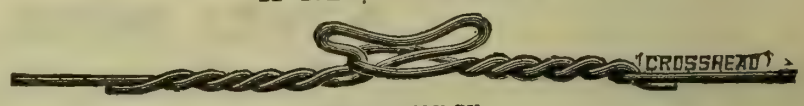
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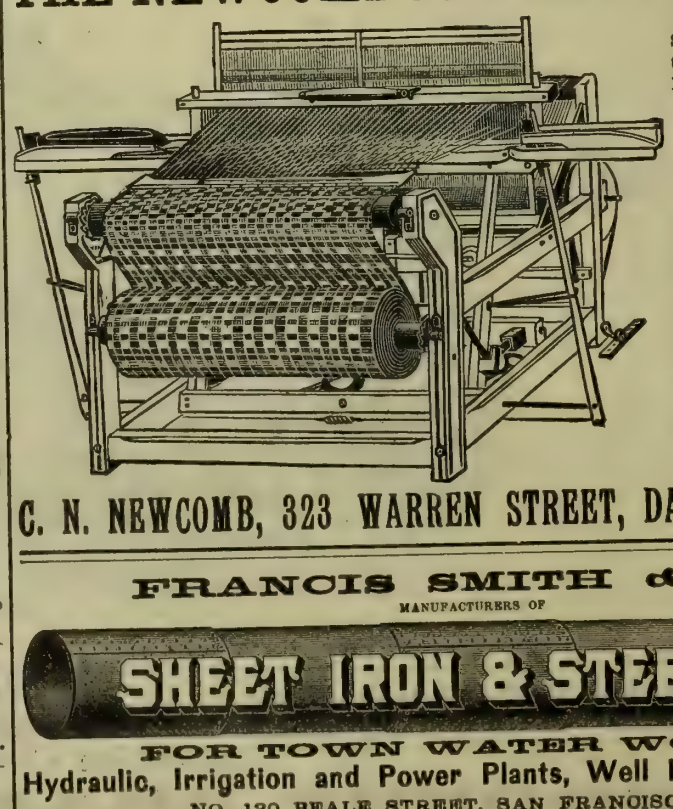
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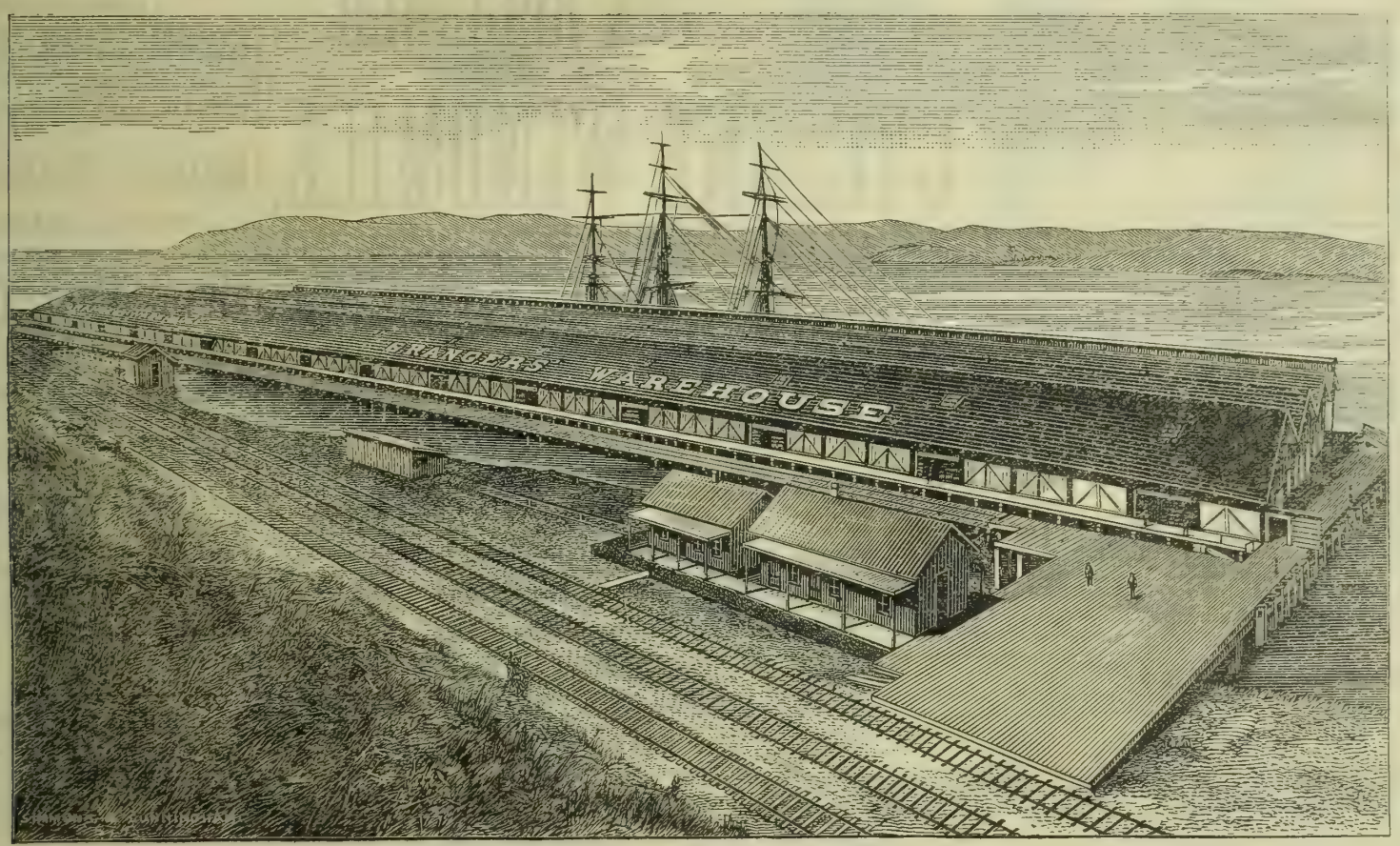
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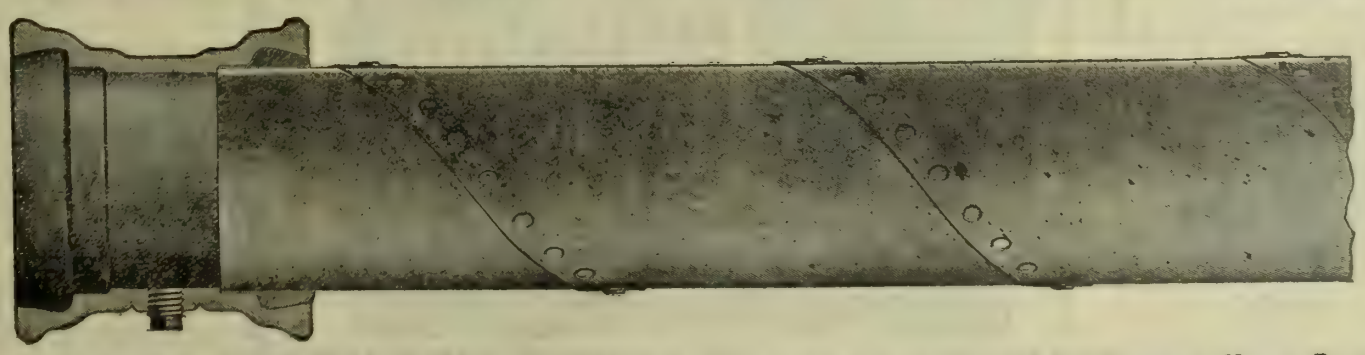
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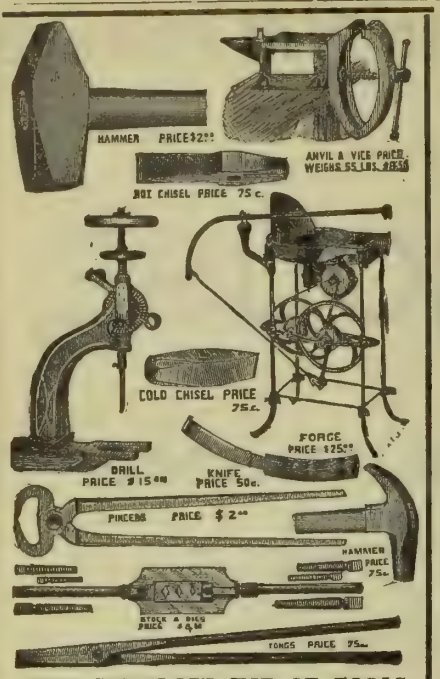
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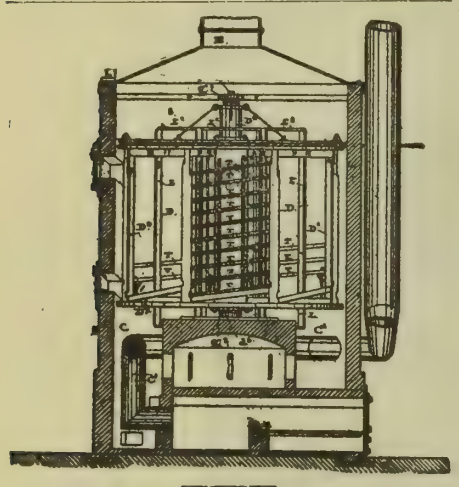
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IN 1-LB. AND 5-LB. CANS.



THE RELIABLE CYCLONE WINDMILL.

No story need be told of the Cyclone or of the number that have been sold. They can be seen working in every inhabited part of the Pacific Slope whilst hundreds are exported every year.

The Cyclone mill is not an experiment, but acknowledged by all who have used it to be the most powerful and durable mill on the market.

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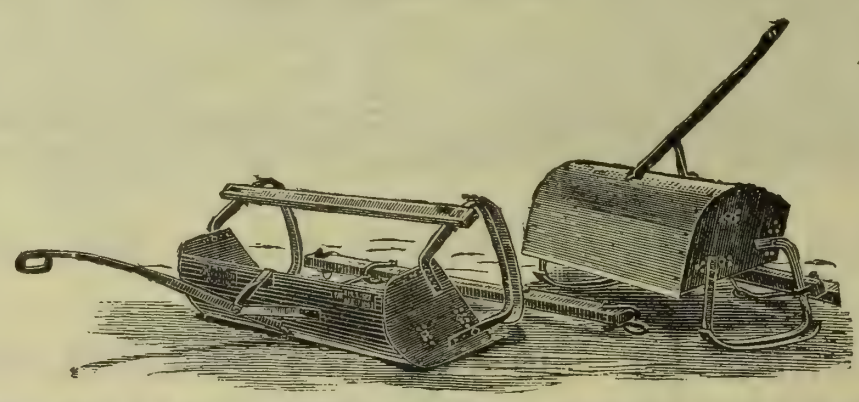
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Personal attention given to sales and liberal advances made on consignments at low rates of interest.

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OF CALIFORNIA,
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Incorporated April, 1874.



Authorized Capital	**$1,000,000**
Capital paid up and Reserve Fund	**800,000**
Dividends paid to Stockholders	**720,000**

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The American Well Works, Aurora, Ill.
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S. F. Market Report

Market Review.

SAN FRANCISCO, May 18, 1892.

Clear skies and warmer weather, if not followed by devastating hot north winds, are doing no little in restoring general confidence by giving assurance of good crops. The local money markets continue easy and in favor of borrowers on giltedged security. There is a growing impression that there will soon set in a growing demand for funds for moving crops and speculative and other purposes.

Foreign Trade Review.

LONDON, May 16.—The Mark Lane *Express* says: There are large supplies of English wheat; prices of fine samples are maintained, but lower qualities show a decline of 6d. Foreign wheats show an average decline of 6d. Corn is in good demand at an advance of 6d. Oats are dull and barley is unchanged. At to-day's market wheat declined 6d. Flour was sluggish, values being barely maintained. Corn and oats were 3d dearer.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June	July.	Aug.	Sept.
Thursday	6s11½d	6s11 d	6s11 d	6s11½d	7s00 d
Friday	6s11½d	6s11 d	6s11½d	7s00 d	7s00⅜d
Saturday	6s11½d	6s11½d	6s11½d	7s00 d	7s00 d
Monday	6s11½d	6s10⅜d	6s11 d	6s11½d	7s00½d
Tuesday	6s 8½d	6s08½d	6s09½d	6s10 d	6s10 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	37s0d	36s d	36s d	Quiet.	Fine.
Friday	37s0d	36s d	36s d	Slow	Warmer.
Saturday	37s d	36s d	36s d	Quiet.	Showery.
Monday	36s9d	36s d	36s d	Steady.	
Tuesday	37s d	36s d	36s d	Steady.	

To-day's cablegram is as follows:

LIVERPOOL, May 18.—Wheat, red very dull and white firmly held. California spot, 7s 5½d; off coast, 36s 6d; just shipped, 36s; nearly due, 36s; cargoes off coast and on passage, weaker; Mark Lane wheat, quiet.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug
Thursday	149½	150½	151½	150⅝
Friday	150⅝	151½	152½	151⅝
Saturday	150	150⅝	15 ⅛	151⅛
Monday	148½	149	149½	149⅜
Tuesday	148⅛	148½	149½	149

The following are to-days' telegram:

NEW YORK, May 18.—Wheat, 83⅞c for May, 89½c for June, 89c for July, 82½c for August, 89½c for September, and 91½ for December.

CHICAGO, May 18.—Wheat, 81c for May and 80½c for July.

San Francisco.

WHEAT.

	Buyer Season. H	Buyer L.	Buyer Aug. H	Buyer Aug. L.	Seller 1892. H.	Seller 1892. L.
Thursday	149⅞	149½	144	144	140½	140
Friday	150	149½	....	....	140⅝	140½
Saturday	....	....	....	....	140⅝	14 ⅛
Monday	149	148⅝	145½	145½	141 ⅛	139⅝
Tuesday	149½	149½	....	....	140⅜	139⅝

The following are to-day's recorded sales on Call:

Wheat—Morning—Regular Session—Buyer season — 100 tons, $1.42½. Seller 1892—500 tons, $1.40½ per ctl.

BARLEY.

	Buyer Season. H.	Buyer L.	Seller Season. H.	Seller L.	December. H.	December. L.
Thursday	9 ⅜	98⅜	99½	99½	105	105
Friday	100½	99½	....	....	102⅜	103½
Saturday	99	99	99	....	....	....
Monday	97½	96	....	....	....	....
Tuesday	98	98	97½	97½	101½	100½

The following are to-days' recorded sales on Call.

Barley—Morning—Regular Session—Buyer season—300 tons, 95½c. Seller 1892, new—100 tons, 94½c; 200, 94c; 200, 93⅞c per ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, May 13.—The feature of the wool markets this week is an active demand for pulled wools. The scarcity of other wools has forced manufacturers to turn their attention to this grade, and the result is that only a small amount of wool has been disposed of, but dealers have obtained prices which they could not have secured a month ago. Fine combings, which have been heretofore very dull, were freely bought at 37 cts. Supplies of B supers is about exhausted while A supers are active and firm. Fleeces are quiet, but this is, in a measure, owing to a lack of suitable stock and not demand. In Texas territories and California wools there is little doing. Australian wools are not as active as they were a week ago. Carpet wools are receiving more attention. Some large sales of Cordova wools are reported. China wools are active and firm. Dealers and manufacturers are giving considerable attention to reports from the wool sections. Advices received state that buyers are paying as high prices as they did a year ago and in some instances even more. Many leading dealers believe that there will soon be a general advance in wool values. Considering the advanced production of the mills and the large amount of wool used, such a movement seems possible, if not probable.

NEW YORK, May 16.—Wool has a shadowy sort of better condition, not that prices for present supplies are in any way improved, but because lines and remnants are going out of the way of new to such an encouraging extent. The strong tone of London is also a basis of confidence for dealers. Manufacturers however, say they must fight against a material advance in the face of goods gone out and yet to go to meet the easy-priced plane that distributors and consumers have become used to. Still it is generally conceded that wool is at bottom prices and holders who have weathered the tiresome protraction of unpaying returns have a right to feel hopeful. There has been considerable trade at primal points, but caution prevails again, and it is quite apparent the new clip will not stand hurried heavy marketing.

BOSTON, May 16.—Sales amounted to 1,486 000 domestic and 1,240,000 foreign. The sales include half a million Australian at 32@40 cts.; 25,000 California spring at 17@20 cts. and 30,000 fall at private terms.

PHILADELPHIA, May, 16.—Trading has been light, the remaining fine lots being held for more money, which restricts business.

Wheat Statistics and European Markets.

NEW YORK, May 13.—Bradstreet's statistics of available wheat stocks indicate that with a continuance of the rate of exports, reported for three weeks past, the United States will carry over about as much available and probably more invisible wheat in July than on that date in 1891. Exports of wheat for both coasts this week (and flour as wheat) equal 3,621,000 bushels, contrasted with a weekly average of 3,100,000 bushels during the previous three weeks, and with 1,941,000 bushels in the second week of May, 1892. A concensus of European expert opinion as to the prospective price of wheat is cabled as follows: It depends on the weather and crop reports, meanwhile the general opinion among European authorities is that the lowest price has been touched this season, although sufficient supplies are practically assured. European crop prospects generally are below the average, though probably not much.

Eastern Markets for Fresh Fruit.

CHICAGO, May 17.—California cherries in larger supply and easier; boxes, 8@10 lbs. white, $2@4.25; 8@10 lbs. black, $2.@2 30.

Eastern Dried Fruit Markets.

NEW YORK, May 16;—Peaches—Unpeeled are scarce and strong at 8½@9½ cts. Prunes are in few hands and firm. Raisins are working out well, considerable cheap stock going west. Bags range from 3½@4½ cts.; for three-crown layers there is a wide range at 90c@$1.30. Apricots are firm at 9½@10 cts. boxes. Extras are tending upward. Small consignments of cherries have been sold at $6@6.68 per box.

CHICAGO, May 16—California dried fruits remain very steady. Raisins are quoted a little quiet and slow, but peaches, prunes and apricots of good quality all sell well. Of the latter kind the supply is small.

Eastern Hop Markets.

NEW YORK, May 16—Hops are quiet; trading is chiefly in prime at 26@27 cts.; choice State and coast are held at 28 cts. but are not offered freely; 500 bales of State were sold to liquidate an old contract. The London market is firmer, helping faith in top grades; options are quiet; June, California, bid and asked, 25@27 cts.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 16, '92, were as follows:

Flour, qr. sks	153,536	Bran, sks	12,955
Wheat, ctls	70,977	Buckwheat "	....
Barley, "	11,499	Middlings "	3,539
Rye, "	996	Chicory, bbls	130
Oats, "	624	Hop's, "	....
Corn, "	3,476	Wool, "	1,795
*Butter, "	1,463	Hay, ton	2,722
do bxs	857	Straw, "	94
do bbls	....	Wine, gals	284,676
do k gs	21	Brandy, "	10,630
do tubs	10	Raisins, bxs	7,375
do ½ bxs	4 3	Honey, cs	32
†Cheese, ctls	1,026	Peanuts, sks	....
do bxs	78	Walnuts "	....
Eggs, doz	34,690	Almonds "	....
do "Eastern	58,800	Mustard "	....
Beans, sks	25,406	Flax "	....
Potatoes, sks	16,506	Popcorn "	....
Onions, "	3 369	Broom corn, bbls	....

*Overl'd, 88 ctls. †Overland, 688 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to May 19, '91.	July 1, '91 to May 14, '92.
Flour, ½ sks	355,537	432,781
Wheat, ctls	1,361,056	1,272,513
Barley, "	269,912	51,533
Oats, "	337,647	414,528
Wool, bales	6,100	6,933
Hops, "	443	431
Rye, sks	210	3,498
Potatoes sks,	99,818	136,124

Cereals.

Yesterday's cables from London report as follows: Imports into the United Kingdom for the week ending May 17th: Flour, bbls., 176,000; wheat, qrs., 202,000, Stock on hand May 1st: Wheat, 260,000@270,000 qrs; flour, 270,000@280,000 bbls. Amount of wheat and flour on passage May 17th: To United Kingdom, 2,831,000 qrs; to Continent, 1,473,000 qrs. Farmers' delivery of wheat for week ending May 14th, 84,587 qrs; average price, 31s 7d.

New York mail advices to May 11 report as follows: "Cold and stormy weather in the East, West, Southwest and Northwest has reduced the volume of general trade in all but the Southern cities and set the croakers to work talking of short crops. But a good authority says, concerning the issues of the season, that it is well to refer to the crop and weather conditions of a year ago, when the greatest crop of spring wheat ever known was raised in the West. On May 8th the Signal Service reported cold weather of unusual severity prevailing over the country, and later frosts than ever previously recorded. On May 10th the Government report stated that spring plowing had been delayed first by wet weather and steadily by dry weather. The proportion of spring wheat planted was only 68.8 per cent, against 77 per cent as the average of a number of years. On May 13th the North and South Dakota crop bulletin said, in the North State seeding had been interrupted by rain and cold, and only a little more than half had been done. On May 18th a Chicago paper stated that the spring wheat seeding through Minnesota and the Dakotas had been practically completed, and the largest proportion of it was above ground. So the season is by no means too late for abundant crops."

While the above may be very well for bears to put out, yet the fact remains that there was a large falling off in the acreage seeded to wheat this season, and therefore it will not be possible to have so large a crop outturn in this year as there was in last year.

The movement of wheat at the East this year offers some food for reflection, as well as for the inner man. The arrivals at points in the Central States up to May 7 were as follows since July 1:

	1891-92.	1890-91.
Winter	66,306,000	27,248,000
Spring	158,894,000	78,885,009
Total	225,200,000	105,633,000

This movement of spring wheat of 159,000,000 bushels is from a crop of 219,000,000 bushels, while the movement of 66 000.000 bushels of winter wheat is from a crop of 391,000,000 bushels, showing that with the greatest crop on record the consumption in the thickly settled parts of the country is increasing rapidly, while the spring wheat country, which is poor and sparsely settled, has a larger margin to sell.

The official figures of the Austro-Hungarian exports for the seven months of the present cereal campaign amount to 142,030 qrs. of wheat, 120,000 qrs. of rye. against 622,000 qrs. of wheat and 5000 qrs. of rye last year.

Advices from St. Petersburg, April 25, state that prices of grain in the famine provinces are falling rapidly.

Advices from Belgium are that the growing wheat crop is in unfavorable shape and that one-fourth of the area has been replaced with oats.

The local wheat market is easy and lower under strong bear influence and a now general disposition shown by speculative holders to sell. Improved crop prospects have contributed to the weaker tone, in the face of only fairly favorable crop advices from Europe and also from the Eastern States. Several vessels were chartered during the past week for spot loading and an equally large number for new crop loading. Ships in port are held with considerable firmness. There is less disposition manifested to take up vessels to arrive, exporters contenting themselves to follow the market. This course is probably induced by reason of the large disengaged tonnage in port and the steadily increasing available supply on the way to Pacific Coast ports.

The receipts of barley have been light. The feed demand in the interior is taking unusually large quantities. The market shows a fair degree of steadiness. Crop advices are favorable. The yield will, without some unfavorable event, be much larger than had been estimated, while the grade will be fair to choice with large quantities of bright color.

Oats are in light supply with a good demand ruling. While the market shows considerable strength, no improvement in prices is expected to rule this side of new crop season.

Corn is in good supply, with a heavy tone reported. Both the export and home demand are of a sluggish character. Cropladvices are more favorable.

Rye is weak and heavy.

Feedstuff.

Bran and middlings are barely steady. Rolled barley and feed meal are weaker with concessions obtainable. Notwithstanding good matured pasture the demand for ground feed continues fairly active.

Notwithstanding that there is more or less selling pressure of old and of new damaged by rains, the market holds strong under a free feeding demand. The quantity that is being fed out is said to be larger than before known. With continued clear and warm weather haying will become quite general within the next ten days. The crop outturn is as yet a disputed point; many contend that more fields will be harvested for grain than were expected, while others claim that admitting this to be correct yet the late favorable weather has made it possible to cut a larger number of fields for hay.

Dairy Produce.

Hot weather the past three days has caused a stronger selling pressure in dairy produce. The trades, as usual under such circumstances, are offish and not disposed to buy beyond immediate wants.

Butter is coming in very freely. Considerable quantities of that received show the bad effects of cows feeding more or less in weedy pastures. The warm weather causes receipts to come in soft and undesirable for the better class of trade.

Cheese continues to sink under free receipts and only a fair call. The quality averages better and more uniform than the run of former seasons.

Cool weather has admitted of Eastern eggs being brought in in most excellent condition, with the quality comparing favorably with best ranch. Now that we are having hot weather it is questionable if the quality will keep up. Strictly choice fresh laid eggs sell at a slight advance on our outside quotations for selected.

Vegetables.

Warm growing weather is forcing vegetables and consequently the markets are being liberally supplied with much better varieties. Choice canning peas are too high for free buying by canners, but commons are in ample supply and cheap. Canners will soon be able to run to full capacity. String beans are slowly sinking in price, as are summer squashes and other spring vegetables

Onions are in liberal supply and as new improve in quality, market prices set in favor of buyers.

New potatoes are fairly firm, with a free overland demand ruling. Oregon Burbanks from last year's crop sell well, provided they are in good condition.

Fruit.

A change in the weather from cool to warm is forcing early fruits to maturity, and therefore it is claimed that our market will soon be well supplied. It is very generally claimed that all varieties will show a much better quality than they did in last year. They will have a choice fruity flavor and be much better keepers owing to their being firmer.

The receipts of cherries are increasing. Prices are slowly shading off.

Berries are coming in only fairly free, barely sufficient to meet trade wants. Strawberries sold well up, but at the close they are weaker. Gooseberries and raspberries are lower. Currents are beginning to come in; the crop promises to be large.

In dried fruits and raisins there is nothing new to report.

Reports from the vineyards are more encouraging. The cool, showery weather during the past three weeks was greatly in their favor.

Lemons and limes are meeting with a better demand. Choice oranges are hard to get. The Ontario *Record* gives the following tabulated statement of the oranges and lemons shipped from that place so far in this season:

	Oranges, boxes.	Lemons, boxes.
December	400	80
January	438	268
February	305	80
March	4.780	133
April	1,957	176
Total	7,880	737

The season's total will exceed 35 carloads, more than the estimates.

Wool.

Naturally, cold, rainy weather causes the receipts of wool to fall off, but with warmer weather receipts are expected to increase. Considerable free and light wools are being picked up in the country for shipment to the East. In our market, a good market and free buying is reported. Scourers are running to full capacity. Some grades of wool are slightly firmer.

Live Stock.

The market for bullocks, mutton sheep and hogs is weak, with concessions obtainable on present quotations. Warm weather keeps retail butcher's orders confined to daily requirements, except where they are provided with cold storage facilities. Work horses for farm and railroad are meeting with a fair inquiry.

Miscellaneous.

From reliable advices up to May 11, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	242,136	260,223	*†141,625	65,309
San Diego	18,869	17,591	4,061	.....
San Pedro	11,389	7,575	.....	.....
Oregon	25,743	36,572	18,266	16,346
Puget Sound	18,140	34,448	.....	.....
Totals	316,277	356,409	163,952	81,655

*Engaged for wheat, 1892, 18,075; 1891, 46,894 †For new crop loading, 14,789.

The statistics of produce exports from this port from July 1st to May 11th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,506,204	12,470 809
Flour, bbls	954,932	1,082,720
Barley, ctls	1,005,734	291,854

Poultry holds strong under moderate receipts and a good demand.

Beans continue firm, with red varieties only showing weakness. Crop advices are more favorable.

In hops there is nothing new to report. For new crop, buyers and growers are apart in their views.

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	5½@—	Wethers	7 @—
Grass fed, extra	5½@—	Ewes	6½@—
First quality	5 @—	Do Spring	8 @—
Second quality	4½@—	**HOGS.**	
Third quality	4 @—	Light, ℔ lb, cents	5½@—
Bulls and thin Cows	2 @—	Heavy	4½@—
VEAL.		Feeders	3½@4
Range, heavy	5 @—	Stock Hogs	3½@—
Do light	6 @—		
Dairy	6 @—		

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, May 18, 1892

BEANS AND PEAS		**FLOUR.**	
Bayo, ctl	2 00 @ 2 20	Extra, CityMills	4 65 @ 4 75
Butter	2 50 @ 3 05	Do Country Mills	4 50 @ 4 75
Pea	2 20 @ 2 75	superfine	2 75 @ 3 10
Red	2 15 @ 2 40	**NUTS—JOBBING.**	
Pink	1 90 @ 2 05	Walnuts, Cal. lb	4 @ —
Small White	2 20 @ 2 55	Do Choice	6 @ —
Large White	2 20 @ 2 45	Do paper shell	7 @ —
Lima	2 20 @ 2 40	Almonds, sft shl.	10 @ —
Std Peas, blkeye	1 30 @ 1 50	Paper shell	12 @ —
Do green	1 50 @ 2 00	Hard Shell	6 @ 7½
Do NUes	1 30 @ 1 40	Brazil	6½@ 8
split	4 50 @ 5 50	Pecans small	11 @ 13
BUTTER.		Do large	14 @ 16
Cal. Poor to fair, lb	15 @ —	Peanuts	1½@ 3
Do good to choice	18 @ —	Filberts	10½@ 12½
Do Giltedged	— @ 20	Hickory	7 @ 8
Do Creamery rolls	— @ 20	Chestnuts	11½@ 16
Do do Giltedge	— @ 20½	**ONIONS.**	
Eastern	— @ —	Silver Skin, Choice per ctl	1 75 @ 2 00
CHEESE.		Fair to Good	1 00 @ 1 50
Cal. choice mild	— @ 8½	Cut	50 @ —
Do fair to good	7 @ —	New Reds	50 @ 90
Do glt edged	— @ 9½	**POTATOES.**	
Young America	— @ 10	Early Rose, ctl	25 @ 40
EGGS.		Burbank Seedling	50 @ 70
Cal. ranch, doz	18 @ —	Do do Oregon	1 00 @ 1 25
Do do selected	— @ 20	Do Humboldt	40 @ 75
Do store	16 @ —	River Reds	45 @ 60
Eastern	16 @ 18	New Peerless	80 @ 1 10
FEED		Early Rose	85 @ 1 15
Bran, ton	17 00 @18 00	**POULTRY**	
Feedmeal	26 00 @28 00	Hens, doz	6 00 @ 8 50
Gr'd Barley	22 00 @23 50	Roosters, old	6 50 @ 8 00
Middlings	19 50 @21 00	Do young	8 00 @12 00
Oil Cake Meal	— @25 00	Broilers, small	2 00 @ 3 75
Manhattan Food ℔ cwt.	7 50	Do large	4 50 @ 6 00
HAY.		Fryers	6 00 @ 8 00
Wheat, per ton	12 00 @ —	Ducks	6 00 @ 9 00
Do choice	— @15 00	Geese, pair	1 25 @ 1 50
Wheat and Oats	10 00 @13 50	Goslings	1 25 @ 2 00
Wild Oats	10 00 @—	Turkeys, Gob'r	16 @ 18
Cultivated do	10 00 @—	Turkeys, Hens	16 @ 18
Barley	10 00 @12 00	Manhattan Egg Food ℔ cwt	11 50 @ —
Alfalfa	8 00 @10 00	**PROVISIONS**	
Clover	— @ —	Cal. Bacon, he'vy, lb	9½@ —
Straw bale	45 @ 60	Medium	10½@ —
GRAIN, ETC.		Light	12 @ —
Barley, feed, ctl	96½@ —	Lard	9 @ 11
Do Choice	1 02½@ —	Cal. Sm'k'd Beef	11½@ —
Do Brewing	1 05 @ —	Hams, Cal salt'd	10 @ —
Do do Choice	1 15 @ —	do Eastern	12½@ —
Do do Giltedge	1 18½@ —	**SEEDS.**	
Do Chevalier	1 05 @ 1 40	Alfalfa	12 @ 12½
Do do Giltedge	1 45 @ 1 50	Clover, Red	14 @ 15
Buckwheat	— @ —	White	20 @ —
Corn, White	1 32½@—	Flaxseed	1½@ 2
Yellow, large	1 30 @—	Hemp	3½@ 4
Do small	1 32½@—	Mustard, yellow	3½@ 4
Oats, milling	1 46½@ —	do Brown	3 @ 3½
Feed, Choice	1 43½@ —	**WOOL.**	
Do good	1 35 @ —	**SPRING, 1892.**	
Do fair	1 30 @ —	Humb't & Men'cino	16 @ 20
Surprise	1 50 @ —	Sac'to valley	16 @ —
Black Cal	1 15 @ —	S Joaquin valley	11 @ 16
Do Oregon	1 30 @ —	Cala'v & F'th'll	15 @ 18
Gray	1 27½@ —	Oregon Eastern	10 @ 18
Rye	1 37½@ —	do valley	— @ —
Wheat, milling. Gilt edged	1 52½@ —	So'n Coast, def	10 @ 12
Do Choice	1 50 @ —	Nevada (S'tate)	15 @ 17
Do fair to good	1 48½@ —	**HONEY.**	
shipping, cho'ce	1 48½@ —	WhiteComb, 2-lb	8 @ 11
Do good	1 47½@ —	do do 1-lb frame	10 @ 13
Do fair	1 45 @ —	White extract'd	6½@ 7
Common	1 42½@ —	Amber do	5½@ 6
Sonora	1 42½@ 1 50	Beeswax, lb	25 @ —
HOPS.			
1891 Choice to Ex.	25 @ —		
Fair to Good	22 @ —		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, May 18, 1892.

Limes, Mex	2 00 @ 3 00	Cherries, box	
Do Cal	— @ —	Black	1 00 @ 2 25
Lemons, box	50 @ 3 50	Red	75 @ 1 50
Do Sicily	5 00 @ —	White	60 @ 1 20
Oranges, Seedlings		Beets, sk	— @ 1 00
Redlands	2 00 @ 2 50	Carrots, sk	50 @ —
Riverside	1 50 @ 2 00	Okra, dry, lb	15 @ —
Los Angeles	1 25 @ 1 75	Parsnips, ctl	— @ 1 25
Do Navels—		Peppers, dry, lb	10 @ —
Redlands	4 00 @ 5 00	Do green	— @ —
Los Angeles	2 50 @ 2 75	Turnips, ctl	50 @ —
Riverside	3 00 @ 4 50	Cabbage, 100 lbs	40 @ —
Duarte	3 @ 4 50	Garlic, lb	8 @ 12½
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Squash, Mrft, tn	12 00 @15 00
		Do Summer, box	1 00 @ 2 00
		Tomatoes, box	2 @ 3 50
Strawberries, per chest—		Asparagus, box	1 00 @ —
Longworth	7 00 @13 00	Do choice to ex	2 00 @ —
Sharpness	6 00 @ 8 00	Peas, green, sk	50 @ —
Gooseberries, ℔ pound	4 @ 6	Do sweet	50 @ 1 00
Raspberries, bkt	20 @ 35	Rhubarb, box	30 @ 75
Currants pr dr	1 00 @ 1 25	String Beans	5 @ 8
		Do do wax	6 @ 8
		Cucumbers, doz	50 @ 1 25
		Mushrooms	10 @ 30
		Egg Plant, lb	— @ —

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.		Do do fancy	8 @—
Sun-dried, ¼'s, com'on	2½@ 3½	Sun-dr, pi'd, prime, bl	11 @—
Do do prime	3½@ 4	Do do choice	12 @—
Do do choice	4 @ 4½	Do do fancy	13 @—
Do sliced, common	3½@ 4	Evap, peeled, in boxes, choice	15 @—
Do do prime	4 @ 4½	Do do fancy	16 @—
Do do choice	4½@ 5½	**PEARS.**	
Evap. bleached, ring. 50-lb boxes	7 @ 8	Sun-dried, quarters	3 @ 4½
APRICOTS.		Do sliced	4 @ 5
Sun-dried, unbl. com.	2½@ 4	Evap, sliced, in boxes	6 @ 8
Do do prime	5 @ 5½	Do ring do	10½@—
Do do choice	6 @ 6½	**PLUMS.**	
Do bleached, prime	7 @—	Pitted, sun-dried	4½@—
Do do choice	7½@—	Do evap. boxes, choice	— @—
Do do fancy	8½@ 9½	Do do do fancy	— @—
Evap. choice, in boxes	9½@10	Unpitted	2 @ 2½
Do fancy, do	10 @10½	**PRUNES.**	
FIGS.		Cal. French, ungraded	5½@—
Sun-dried, black	3 @ 3½	Do graded, 60 to 100	6 @—
Do white	3½@ —	Do do 40 to 60	8 @—
Do do washed	— @ —	Fancy sell for more money.	
Do do fancy	— @—	**RAISINS.**	
Do do pressed	— @—	London Layers, choice ℔ bx	$1 50@ —
Smyrna boxes	— @—	Do fancy, do	1 75@ —
Do sacks	— @—	Layers, ℔ bx	1 25@ —
GRAPES.		Loose Muscatels, common, ℔ bx	1 00@ —
Sun-dried, stemless	2 @ 4	Do choice, do	1 20@1 30
Do unstemmed	1 @ 2½	Do fancy, do	1 50@ —
NECTARINES.		Unstem'd Muscatels, in sacks, ℔ lb	4@ 5
Red, sun-dried	3½@ 5	Stemmed do do	5@ 5½
Do Evap., in boxes	5 @ 6	Seedless do do	6@ —
White, sun-dried	4 @ 6	Do do ℔ 20-lb bx	1 15@ —
Do evaporated	6 @ 7	Sultanas, unbl, bxs	1 15@1 40
PEACHES.		Do bleached, in bxs	1 30@1 60
Sun-dried, unpeeled, common, bleached	3½@—	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes	
Do do prime, do	5 @—		
Do do choice, do	6 @—		
Do do fancy	7 @—		
Evap, unpe'l'd, choice	7 @—		

Grain and Wool Bags.

Calcutta, spot	7½@ 7¾
Do, June-July	7½@ 7¾
Wool Bags	30 @ 35

A Sweet Story.

Once there was a widower, left with three children, who concluded, instead of rewiving to take a bachelor brother to superintend his house, and be, so far as he could, a house-parent to the little ones.

"If you come to me," says widower John, "I will do as well by you as I did by Mary. You will reign supreme in my home, and I will lay my fortune at your feet."

"Fortune, where is it?" says innocent bachelor William. "Will you make it over to me in writing?"

"I mean," says John, explaining, "that I will provide the table liberally, dress you handsomely, get you meerchaums and canes, and generally do my best to make you happy."

"But that wouldn't do," says bachelor William. "I have never been considered extravagant in my habits, but I can imagine desires to arise which neither meerschaums, canes, nor unlimited credit at my tailor's would wholly cover."

"Oh, don't be afraid," says the widower kindly. "If you learn how to coax as well as Mary did, you will get no end of odd change to spend in your little vanities. You are my youngest brother, and I have always been fond of you. Just 'lay your sweet hands in mine and trust to me.'"

"It wouldn't do," says William; "it would kill my self-respect. I would rather have $50 a month at my own disposal than $500 dribbled out to me for the asking."

"I am disappointed in you, brother," said the kind widower. "I had thought there was such a beautiful fraternal relation between us that you would be above caring which of us held the money. Mary didn't mind."

"Are you so sure of that?" said the bachelor brother, thoughtfully.—Working Woman's Journal.

HASHED POTATOES.—Cut the potatoes as for a pie; put them in a pan, with a little chopped onion, pepper and salt; add a little butter, allowing about half an ounce to each pound of potatoes, and quarter of a pint of water; cover the pan, and let them stew moderately about 30 or 35 minutes.

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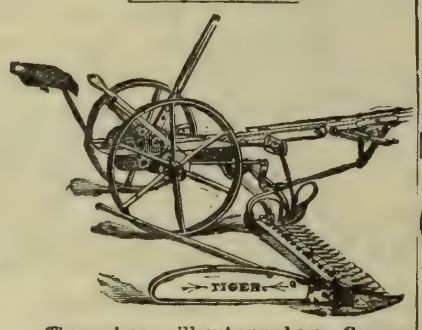
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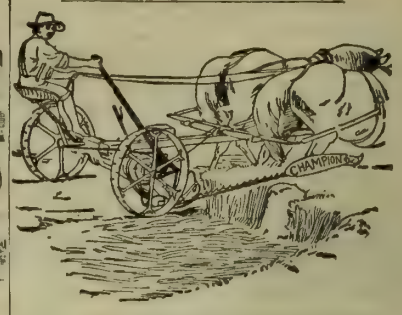
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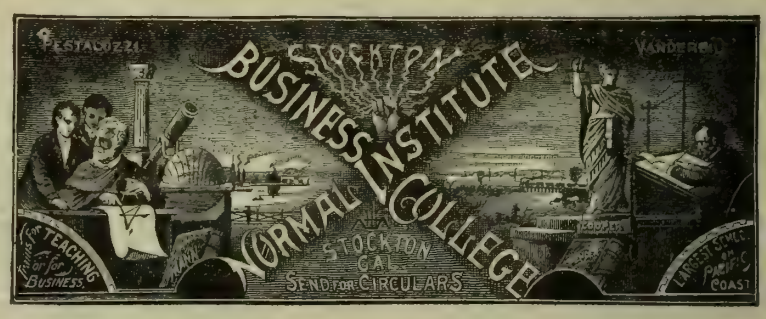
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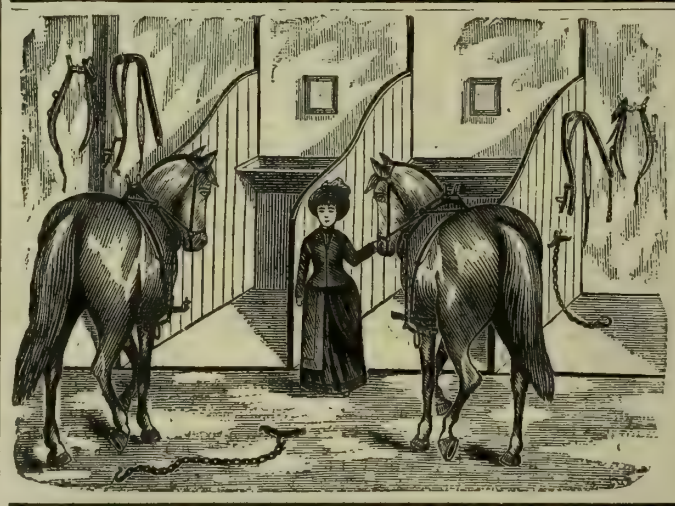


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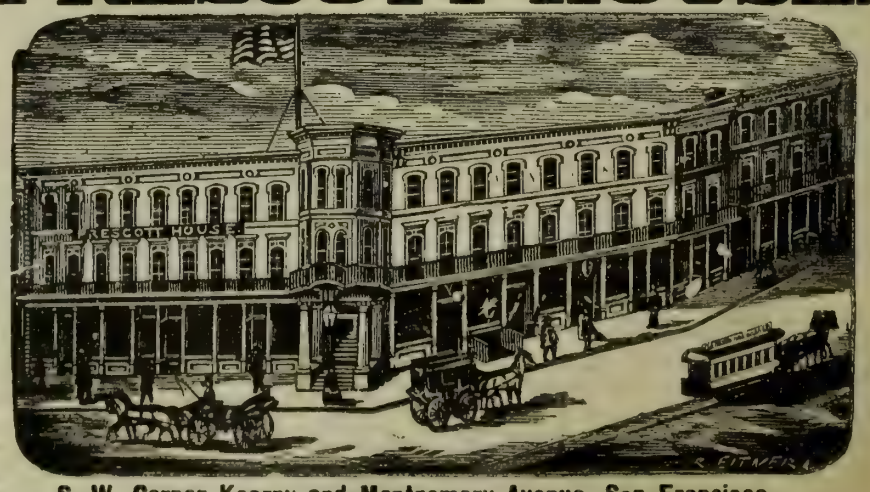
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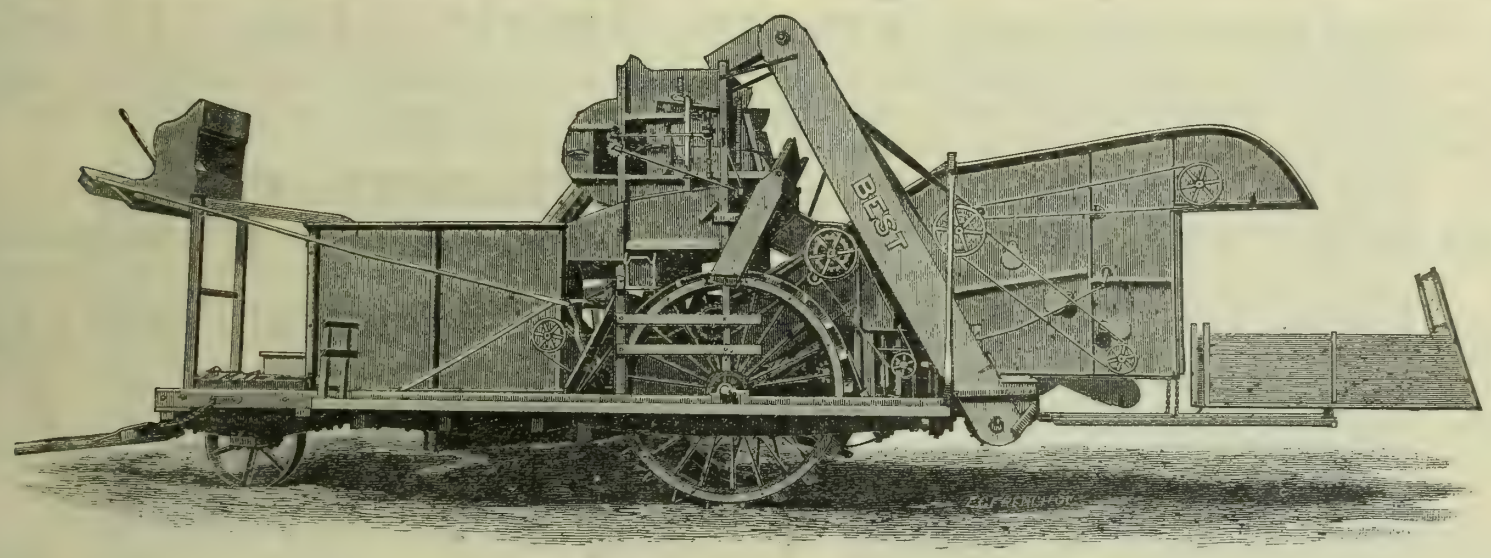
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And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

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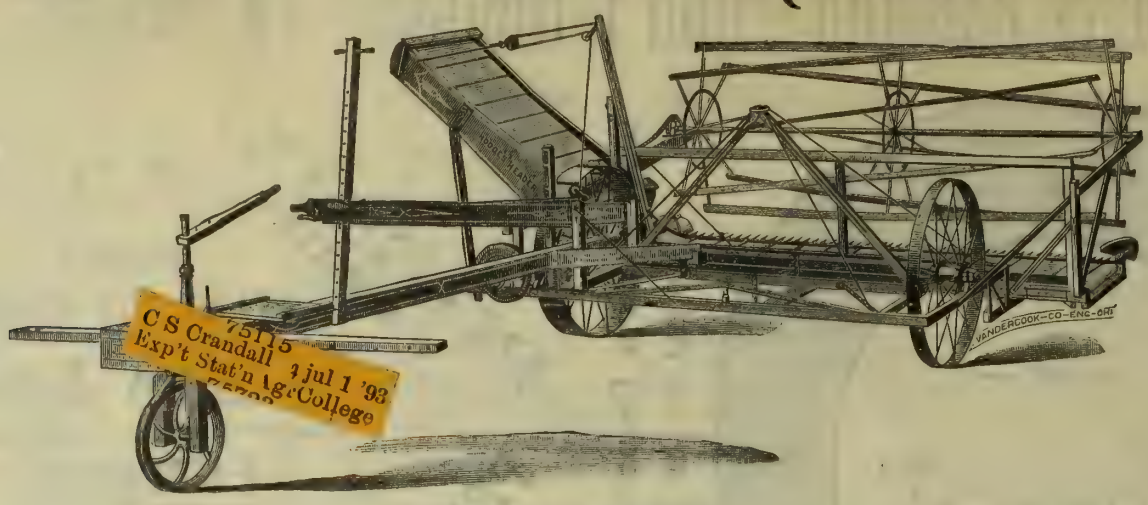
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85 Fine Engravings showing the positions and actions of sick horses. Gives the cause, symptoms and best treatment of diseases. Has a table giving the doses, effects and antidotes of all the principal medicines used for the horse, and a few pages on the action and uses of medicines. Rules for telling the age of a horse, with a fine engraving showing the appearance of the teeth at each year. It is printed on fine paper and has nearly 100 pages, 7½x5 inches. Price, only 25 cents, or five for $1, on receipt of which we will send by mail to any address. DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

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PRICE LIST:

10-foot cut, 40-inch Draper, Weight 2450 lbs	$300 00
12 " " " " 2550 "	325 00
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10-foot cut, 36-inch Draper, Weight 2450 lbs	$315 00
12 " " " " 2550 "	340 00
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HOLLISTER, CAL., Sept. 7, 1891.

DEERE IMPLEMENT CO., San Francisco, Cal.

GENTLEMEN:—I have run all kinds of Headers, but the Hodges Steel Frame beats them all. I ran it this season in the San Juan Valley, in big mustard and down grain, and it worked so well that I believe every farmer who saw it running would purchase no other kind.

Yours truly,
JAMES MILES.

DEERE IMPLEMENT CO, San Francisco, Cal. CRESTON, CAL, Dec. 7, 1891.

DEAR SIRS:—I purchased of your agents, Messrs. W. S. Lewis & Co., of Paso Robles, a 12-foot, Steel Frame Hodges Header, and cut about 700 acres of heavy grain without any expense for Extras, and will not want any Extras to start in on another crop. I have farmed for 20 years, and have used nearly all other makes of Headers, and will say you have the lightest draft, strongest and most complete Header I ever saw, and highly recommend them to all farmers. The elevation is perfect.

Yours, free, gratis, for nothing, J. E. MOSHER.

The Hodges' Steel Frame Single Gear Headers.

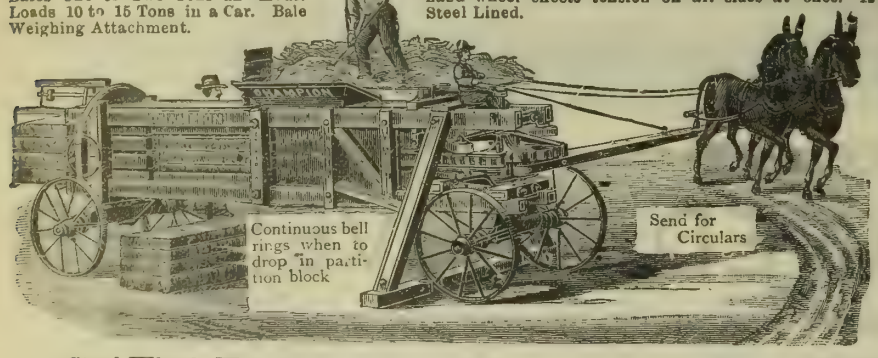
At the urgent request of many dealers and ranchers we shall have for this year's trade, a Single Gear Header, with "CENTER DRIVE SICKLE" and with "STOP DRAPER," which will allow the operator to drive around standing trees or other obstructions without the usual scattering of grain. This will be of great advantage in some localities in this State.

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Challenge Portable Lever Baling Press.

Challenge Continuous
Bales One to Two Tons an Hour. Loads 10 to 15 Tons in a Car. Bale Weighing Attachment.

Double Working Baling Presses.
Uses no door. Easy on Man and Beast. Turning either hand wheel effects tension on all sides at once. Is Steel Lined.



ASK FOR THE ORIGINAL BUCKEYE MOWER AND TAKE NO OTHER. IT IS THE BEST MOWER IN THE WORLD. EVERY ONE GUARANTEED.

Steel Wheels With 5-inch Tires on Truck. Size 18x22 inches. Steel Lined. Weight 3600 lbs.

Most Powerful, Rapid and Durable Press in America.

WIT DOUBLE-ACTING REBOUND PLUNGER POWER and QUICK RELIEF CONTINUOUS BALE CHAMBER,
—WITH—
Bell Attachment which rings when to drop in Partition Block for Hay, Straw, Moss, Etc.

Challenge Double-Acting Continuous Baling Press BALE WEIGHING ATTACHMENT.

By the use of same, each bale can be weighed accurately as it passes out of the press, which is very desirable when wanting the correct weight of each bale. Being attached to the press, is always ready and no trouble to move it about, as is the case when using a platform scale, yet it is just as correct. (warranted.)

SEE IT! TRY IT! AND YOU WILL BE SURE TO BUY IT!

Everything Ready for Work—Even a Fork Wherewith to Feed It.

CONTINUOUS, Making Bales Without Intermission.

NO STOPPING TO TIE. NO DOORS USED, TO BE HANDLED 1,200 TO 2,000 TIMES A DAY.

The Best is the Cheapest. **Complete With the Best Bale Weighing Attachment.**

Agents for the Challenge Detached Power Press, Challenge Full Circle Press, Challenge Belt Power Press, Petaluma and Monarch Presses.

WHEN BALING YOUR HAY USE
TRUMAN, HOOKER & CO'S PATENT STEEL WIRE BALE TIES.
BETTER THAN WIRE AND CHEAPER THAN ROPE.

THE OLIVER DERRICK.



Description.

The base occupies a ground space of 8x14 feet, mast 27 feet high, boom 22 feet long. Boom is suspended by flexible steel wire rope. Its operation is positive and will not get out of order. The boom is extended (as shown by dotted lines in cut) by simply checking a chord; when load is dropped, boom automatically returns to its normal position.

We claim for this machine:

First—It is the only Derrick having an extension boom, whereby load can be deposited at any point on a very large rick.

Second—It is the only Derrick that can be easily and quickly folded for transportation. Horse used for hoisting hay can elevate mast and man can lower the same.

Third—It is the only THOROUGHLY PRACTICAL Derrick on the market. It is well made of good material, and we will send it anywhere, guaranteeing satisfaction.

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Celebrated Randolph Steel Header, Best in the World. Buggies and Vehicles in great variety. Agricultural Implements of Every Description.

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PACIFIC RURAL PRESS

Vol. XLIII. No. 22. SAN FRANCISCO, SATURDAY, MAY 28, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Rural Improvement.

There are many indications that California is advancing in affairs which appeal to taste and culture, as well as in industrial development. Any one who visits interior towns or passes along country roads is convinced that the people are giving greater heed to the improvement of homes and home environment than ever before. Not only is there indication of regard for better architecture and good carpentry such as the older habitations seldom showed, but there is also a recourse to gardening and ornamental tree-planting, the absence of which in our earlier years was conspicuous.

Probably there are two agencies which can be credited with this gratifying tendency. First is the change in lines of agriculture, which is leading us farther and farther away from the ranch idea of the native Californians and of the early settlers.

One gets his mind to running upon orchard or vineyard planting and pursues neatness in planting and cleanliness in cultivation at first, because it is necessary to success. Afterward, a taste for neatness and cleanliness in natural surroundings is engendered, and the house grounds become offensive in their untidiness and neglect as contrasted with the well-kept fruit area. The result is that ornamentals for the dooryard find their way from the nurseries along with the new fruits for the orchard, and the work is begun not only on a single farm, but throughout a neighborhood or a district.

Another agency toward the improvement of California rural affairs has unquestionably been the very desirable elements of population which have been brought in during the last decade. It is well that to the traditional generosity and almost careless content with surroundings, whatever they might be, which were prevalent among the older Californians, has been added the more exacting and calculating taste requirements of the newer Californians. They have brought money and expended it in finer buildings than satisfied us for rural dwellings, and around their country dwellings, whether mansions or cottages, they displayed their delight in ornamental gardening. Their achievements and their example have had much to do with the improved aspect which the country wears.

The same tastes which are bringing us handsomer homes are also influential in advancing our educational interests. It is clear to all engaged in the work of instruction that the interest in higher education was never so acute or widespreading as at present. Fortunately, too, we were never in a position to satisfy such an impulse as we are at present. The improvement and extension of university facilities, the multiplication of high schools, and the activity in all lines of intellectual effort, coupled with the indications of growing taste for home improvement, are all sureties that California prosperity is not alone in material interests.

Social and Industrial.—It is becoming quite the thing to celebrate the opening of important industrial concerns, in which communities are interested, with pleasant social festivities. We gave recently the opening of a creamery in Humboldt Co. which was made a picnic and literary entertainment. We now acknowledge receipt of an invitation to a grand benefit ball for the Santa Maria Cannery, Cannery Building, Santa Maria, Friday evening, June 3, 1892. This cannery is the property of the Santa Maria Packing Co., which includes the leading fruit growers of the progressive country around Santa Maria. The directors issued a circular April 18th, announcing that work was progressing satisfactorily, aiming to have the plant ready for operation by the opening of the season. A most desirable location was secured and paid for in stock. A thoroughly competent man was engaged to take charge of construction and also the operating of the cannery for this season. The directors are guarding against all needless expenses and have decided to pay as they go. Material and labor must be paid for in cash every week.



SCENE AT THE STATE FLORAL SOCIETY'S SHOW IN THE MECHANICS' PAVILION, SAN FRANCISCO.

At the State Flower Show.

The engraving on this page, made from a photograph by the California View Co., will give distant readers some idea of the extent and beauty of the State Floral Society's flower show which was held in the Mechanics' Pavilion in this city during the second week of the present month. The view is from the front gallery of the pavilion looking down the length of the main floor. It does not include nearly all of the space filled by the exhibits, but it is the greatest extent to be commanded from a single point of view.

In the foreground, and extending through the middle ground of the picture, are the masses of foliage plants. Though the display seems almost continuous and similar, it was not so. The plants comprised several distinct exhibits, and were in great variety in character. Between these exhibits were spacious walks, and the fullest opportunity was given to view the masses from all sides.

All along the sides were the exhibits of potted plants and cut flowers well diversified. Of these the picture gives intimation, but not presentation. On the right was a large transept, which was filled with the wonderfully large collections of pressed wild flowers, in which there was sharp competition for the awards.

In the background of the picture—that is, at the most distant parts of the pavilion, were the largest collections of cut roses; and on the left were the decorative displays of table and room adornment.

The display, as a whole, was, as we have previously said, the greatest systematic exhibition of plants and flowers ever held in the State. The effort on the part of the State Floral Society was a commendable one, and it was successful from all points of view except perhaps the financial one, for we understand that the receipts did not quite equal the expenditures. That is not surprising for a first effort of so great extent, and that the public did not quite understand the undertaking and patronize it more generously is not wonderful. The Society has demonstrated its ability to produce a first-class flower show worthy of the State, and it should take courage from such a success. It will not be long before such exhibitions are appreciated here as they are in older communities, and as the Floral Society is doing an educational work, it should press forward upon the success of its last undertaking in full confidence that the public will appreciate and bear the cost of the work.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, MAY 28, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Pacific Grove—Rev. T. H. Sinex, Monterey.
Berkshire Swine—Sessions & Co., Los Angeles.
Shorthorn Bulls—R. Ashburner, San Mateo.
Fruit Drier—Cal. Fruit Evaporating and M'f'g Co., Los Angeles.
Holstein Cattle—F. H. Burke.
Poultry—C. Blow, St. Helena.

See Advertising Columns.

The Week.

The heated term has given a sudden impulse to flight from the close rooms and heated pavements of the city. The calendar date for such a rush is just at hand, so that the yearning for the shady haunts and breezy beaches of mountain and coast line is not ill-timed. The schools are closing and the owners of summer resorts and camping grounds are throwing their doors open. Few who can afford a change of scene and surroundings can resist the present impulse.

Though the heat of last week has been replaced along the coast by acceptable fogs and cool winds, the interior still endures high marks on the thermometer. The "June drop" in the fruit orchard has been advanced into May by the sudden temperature changes and our reports indicate a decrease of the burden upon many kinds of fruit. Peaches seem especially to have suffered, From all points of view it is becoming clear that we are not likely to have too much fruit this year and anything like a fair demand should bring good prices. It is well to be somewhat deaf to the reports of excessive fruit crops which are peddled about by buyers at this time of the year. We do not know of any such excessive yield of any kind of fruit.

The excursion of Eastern newspaper people reached this city safely on Monday, and the "trying San Francisco climate" was very acceptable after the baking and broiling which had been undergone. Before this reaches the reader the visitors will have started on their homeward journey, convinced as never before, we hope, of the vastness and variety of Uncle Sam's domain.

FOR THE STATE FAIR.—The movement for the improvement of the State Fair in industrial lines, to which we alluded last week, is progressing. A meeting was held in Sacramento on Monday evening of this week, the Directors of the State Society meeting with the new promoting organization. Various new projects were agreed upon. A committee was provided for, to consist of three members of the Board of Agriculture and three from the Industrial Association, and the Secretary was directed to respectfully request the naming of a similar committee for the World's Fair Commission and the Mechanics' Institute, all to meet at an early day for the purpose of consulting with reference to exhibits, to the end that additional encouragement may be given the producers of California and to urge their speedy action in gathering exhibits for the fair.

Another Trial of Silk Culture.

We have just received from Washington, a copy of a report made May 11th by the Agricultural Committee of the House of Representatives which favors an appropriation for renewed experiments in silk culture. The report says that the Government has already expended considerable money in a desultory and unmethodical way in experiments at reeling silk and disseminating information as to the rearing of mulberry trees and the production of silk, but the time seems now to have come when experimentation should give place to actual results, and the committee have thought proper to give this work into the hands of the Secretary of Agriculture, who is authorized to clothe five agricultural colleges with power and resources to develop the industry, distribute mulberry seeds and trees, silkworm eggs, and by practical demonstration prove to the public that raw silk can be profitably produced in the United States. An appropriation of $30,000 for this purpose.

The Committee also makes a part of its report some testimony presented by Joseph Neumann of California, as to the probability and desirability of silk-forming.

Certainly, if people could and would do it, there is opportunity to replace a vast value of importations by home-grown silk. It has not yet appeared that they were disposed to do this to any great extent, but of course it is possible that they may be shown the way. The report cites the facts that for eight months ending February 28, 1891, there was imported, free of duty, 2,980,635 pounds of raw silk. During the same period, to February 29, 1892, there was imported to the United States through the regular channels, free of duty, 5,186,390 pounds of raw or reeled silk.

For eight months ending February 29, 1892, there was imported under a duty averaging 50 per centum ad valorem, $21,697,485 worth of manufactured silks, and to that date for a period of 12 months there was imported $33,159,404 worth of manufactured silks. On this the United States paid a total duty of $16,579,702.

During the period of 12 months ending December 31, 1891, there was of cocoons, raw and waste silks, imported free of duty, $24,183,372 worth, making a total of $40,763,074 paid for raw silks and as duty on such goods imported, annually going out of this country.

The people of the United States annually send abroad for about $200,000,000 worth of silk goods of all kinds, while those who would be producers are deprived of a corresponding amount, less the cost of production.

Mr. Cannon's Letter.

To carry out the plan of a full and free discussion of the canal question, we recently invited Mr. Cannon, of the Farmers' Alliance, to contribute his views, and this week we have his answer in the form of a plain and straightforward letter. With much that he says we are quite ready to agree, but in our judgment his mistake is in attempting to carry reform of the pending measure to impracticable lengths. The end to be desired is Government control of the canal, and this cannot be secured unless the Government has for its majority ownership also a majority vote in the directory. For the Government to provide the major part of the money and then to hold only a minor vote in the Board of Directors would be contrary to all business policy, and, as Mr. Cannon says, it would not secure Government control. From the beginning the RURAL has contended that the bill should be modified to assure this control, and this we believe to be a practical contention. But Mr. Cannon goes further (although there are some signs of relenting in the latter part of his letter), and insists that the Government must absolutely own the canal. This, we believe, under all the circumstances, is out of the question, and we hold that those who insist upon it are trying to get what is impossible. Since, with Mr. Berwick, we are for the canal in any honest shape, we do not insist upon impossible conditions, and we think Mr. Cannon and those who are with him in this discussion are wrong in holding out for what cannot possibly be secured.

Those Small-Fruit Letters.

Letters on small-fruit growing in competition for the June prizes which the RURAL offers, are arriving. Readers will remember that there are still some days left and that any letter bearing a postmark of June 1 will be included in the awards. We choose this testimony of the postmark so that distant writers shall have as much time as those near by. We trust that we shall receive a host of letters in competition for these awards. Those who may have begun and then laid the paper aside should now take it up and finish. We want these contests to draw out the fullest possible local experience to the end that RURAL subscribers shall get a fuller knowledge of successful western practice in the growth of special crops than has been possible hitherto. These practical letters will be of the greatest value to those who desire to try new crops and have not the detailed, explicit instructions which will help them to do it. The writers who enter these contests are not merely trying for a prize; they are rendering public industrial service of the most direct value. Therefore, let all contribute the results of their experience and light the way to success, to the end that general prosperity may be promoted.

A Glance Over the Markets.

In the produce market, wheat continues lifeless, notwithstanding the large disengaged tonnage in port and also the large and steadily increasing tonnage on the way to this and neighboring ports. While a decided improvement in crop prospects in this State, Oregon and Washington contributes to the weak and inactive market, yet the prime factors in producing the present condition are heavy purchases of Indian wheat for forward delivery, based on a low silver value, a prospective fair crop in Russia, a total absence of speculation at home and abroad, and the uncertainty which hangs over European crops. It is said that holders in this State have become tired and are throwing their old wheat on the market, which is being picked up at low figures. For new crop delivery we are not advised of any contracts having been drawn, but it is said that buyers are willing to contract at the rate of a little over $1.45 per cental, Port Costa delivery, for No. 1 white shipping.

The bears on 'Change continue to hammer barley futures, which creates an easier market for spot and also for near by delivery. The present promising outlook for a larger crop outturn than was harvested in last year, is used as a lever for securing lower prices. It is claimed by many dealers that, although the yield will probably be larger than it was in 1891, there is a decided increase in the quantity consumed, and that this will fully offset any increase in the crop. It now looks as if we shall, in the coming season, enjoy a fair export trade.

In oats and corn trading is only fair. The crop prospects for the former are of a fairly encouraging character, while that for the latter has greatly improved. Unless better crop weather is experienced in the Central States between now and the middle of June (even with favorable weather only a certain variety of corn can be planted which will assure any degree of certainty for a fair yield) the outturn east of the Rocky mountains will aggregate very considerably less than it was in 1891. With a smaller crop in the Central States, the market on this coast should hold to profitable figures for farmers.

Heavy shipments of potatoes are being made to distributive points in several of the Central and Southern States. These shipments cause fairly remunerative prices to be maintained. It is quite generally claimed that the crop this year will fall very considerably below the total of 1891. Oregon, it is said, will not have much, if any, over an average crop. If these estimates shall prove to be correct, then we can reasonably look for prices not to average so low in the season of 1892–93 as they did in the season of 1891–92.

Tomatoes and pea crops will probably not be so large as they were last year, yet prices will rule lower owing to the certainty of a falling off in the demand from canners. This falling off is said to be due to heavy stocks of 1891 pack in the hands of both wholesale and retail merchants. It is claimed that this supply is fully equal to a nine months, or even longer, consumption

Wool is coming in fairly free. The larger proportion of receipts at this city are scoured before being shipped to the East. Better results, it is claimed, are secured by having the wools graded, scoured and properly packed. Considerable buying is reported in the country, with sales made as high as 19 cents a pound for desirable clips. So far as we are able to learn, there is less disposition on the part of growers to hold their wool for better prices. Interest, storage, and in some cases shrinkage in weight, fully offsets an advance unless the market should move up two or more cents a pound.

It has been many years since strawberries have sold at such high prices as are now current. It is conceded that prices for all kinds of berries will average higher than they did last year. The crop in this State will probably fall below that in last year. At the East the weather so far in this year has been decidedly against even a fair yield. Plums will be scarce, and consequently command good prices. Regarding other fruit crops opinions differ, but the majority of persons who are in position to secure the best of crop information claim that other tree fruit crops will probably be from a fair to a full average outturn. In some localities there promises to be an almost total failure of one or more kinds and fair to large of the other kinds, while in other localities the crops will show a contrary yield. Reports are current of sales of orchared, but par-

ticulars, so far as to form a basis for quotations, are withheld.

The grape crop will undoubtedly be short. This applies more particularly to wine than to raisin and table grapes, although the two latter varieties are said to have suffered slightly. Better market prices are predicted with considerable degree of confidence by growers and buyers.

Butter is selling at lower ranges in prices. This is largely due to a continued large manufacture and a falling off in the distributive orders. If it were not for heavy packing in this city and at the dairies, prices would be very low. The grode of butter averages better and more uniform than ever before. The market for cheese continues weak under free offering and free receipts.

In hops there is nothing new to report. The stock of old is not large, neither is the demand, owing to cold weather. Crops are being closely watched at home and abroad.

New hay has put in an appearance, but the quality is poor, and in consequence sales are hard to make except at low prices. So far as we are able to learn, there have been very few large crop sales for future delivery. It is said that feeders will not contract at the prices asked by farmers.

The State Press.

Santa Cruz *Sentinel*: "In showing how the Pacific Mail Steamship Company has violated the contract under which it receives a subsidy for carrying the mails, Representative Bowers has brought prominently before the country the nature and effects of the iniquitous arrangement between it and the transcontinental railroads, whereby the latter is enabled to monopolize the carrying trade between the oceans and deprive the people of this coast of the benefits of water transportation. * * * During the 14 years prior to March 1st last, the Pacific Mail Company received $14,655,000 as a subsidy from the transcontinental railroad companies, and is now receiving $75,000 per month from these companies."

Amador County *Record*: "The American people are willing and anxious to furnish the means to build the Nicaragua canal, for they fully realize the great benefit it will be to them, providing they, the people, can control and operate it for the general weal; but it will be a cold day for any Congress pretending to represent them that is led away from its duty by this huge advertising dodge of what are unjustly called the leading newspapers of the country. Our space is too limited to do justice to the subject, but as a closing remark would it not be pertinent to inquire who is furnishing the funds to pay these papers for the lies they tell in favor of this, the most stupendous swindle—for enriching a few at the expense of many—ever concocted during the long years of the nineteenth century?"

The Kern County *Echo* is strong for the toll railroad proposition. It remarks: "A road on this plan must be open to all companies or individuals who want to run cars over it. If the grain farmers can put on cars and haul their own crops to tide water cheaper than regular transportation companies offer to do it, they would have the opportunity. And this brings us to a word as to how such a road might be operated. The station agents would be in the employ of the road-bed company, their duties being similar to those of an agent now, namely, to receive and forward all freight offered. There would be perhaps two schedules—one for regular trains and one for specials. Both would be under the control and guidance of a division superintendent, the same as at present. Trains could not, of course, be run haphazard, as wagons are driven over county roads; they must and could easily be operated under the guiding hand of some one in authority."

President Cannon's Position.

He Reviews the Letters of Messrs. Doyle and Merry on the Canal Question.

VENTURA, May 21, 1892.

TO THE EDITOR:—In compliance with your request, I will endeavor to give you my position on the Nicaragua Canal Company's effort to get the indorsement of the Government for $100,000,000 to build that canal for them, and in doing this I will review the letter of Mr. Doyle and Mr. Merry.

My position is fairly stated in the resolutions I submitted to the Canal Convention in San Francisco last March, and which were treated with so much contempt by Mr. Doyle, Merry and Estee. I stood upon the floor of that convention, a representative of more than 100,000 wealth-producers in this State, and over 10,000,000 in the United States, and I was denied five minutes' time to advocate their cause by this same John T. Doyle. Who did he represent? Simply the Canal Company. Who did all the attorneys and politicians represent in that convention? These kid-glove and plug-hat gentry were all there in the interest of the canal. Not a dozen of them ever produced enough to support an inmate of the Almshouse, yet when the President of the Farmers' Alliance of this great State stood upon that floor to advocate the rights of the wealth producers, he was choked off, and next morning the papers in large headlines proclaimed "The President of the Farmers' Alliance was sat down on." Yes, he was "sat down on," but I have had the satisfaction of sitting down on the Canal Company ever since. I fully understand the odds against me in this contest. The best talent of the United States is at their beck and call for coin. The shrewdest politicians of the nation are at their command, while a plain old farmer is pitted against them—a man "half educated," "stubborn," and whose principal characteristic is "mulishness." I thank Mr. Pool and Mr. Berwick for their assistance, and I trust that, before this $100,000,000 is filched from the people many more patriotic citizens will raise their voices against hatching out a new brood of Canal millionaires.

Now to Mr. Doyle's letters. He says, "as to the canal across Nicaragua, built and owned by the United States, I, too, was in favor of that plan, so long as it was a possible thing," and then goes on and states how President Arthur negotiated the treaty with Nicaragua, and how the Senate of the United States had not acted upon it when Cleveland was inaugurated, and how Cleveland, before he had warmed his seat, snatched it out of the Senate "*and pigeon-holed it forever.*" Well, I want the people to understand that no one man is big enough in the United States to *pigeonhole* anything forever, and I desire this canal company to understand that this Government is strong enough to take things out of pigeonholes when they deem proper.

Not long ago a level-headed Congressman offered a resolution to take the charter away from this canal company, and it only lacked a few votes of being carried. So you see that one man by pigeon-holing that treaty did not forever settle the question. He says, further, "the day when a canal built and owned by our Government was possible, passed forever when Cleveland withdrew the Nicaragua treaty from the Senate, never to return it again." This seems to be a *wail of sorrow*. Well, I hope for the good of the country that Cleveland will never have an opportunity to "return it again." But hear him, "we might, at this time, just as well wish for the moon as ask for a canal so built." "If we seriously desire to see the canal built at all, we must help the present company build it." We do not desire the moon at this time, but we could seize it by the horns and control its course in the heavens as certain as we could control this canal company, under the bill now before Congress. This canal company stands before the country like a big bully, demanding tribute. When the language of its advocates is stripped of all its fine plumage, it leaves it like a highwayman demanding Wells-Fargo's treasure box, on the condition that he will not go through the passengers in detail. They, in effect, say, "we have the drop on you, and, if you will club together and make up $100,000,000, we will agree not to rob the people in detail in our charge for passing through the canal." If you don't do this, look out. John Sherman, their bugleman in the Senate, and the man that drafted the bill now before Congress, says: "If the Government don't come to the relief of the canal company, it will cost not less than $250,000,000, and might extend to $400,000,000." The revised estimate of the chief engineer for the construction of the canal amounts to $73,176,308. This estimate does not include the stealings or profits of the construction company. But suppose the canal can be built for the estimate of the chief engineer, and John Sherman's estimate is $400,000,000, if built by this canal company, where does the balance go to, amounting to $326,823,692. Some of it no doubt will go to parties writing fine articles for the press to boost the scheme. An army of politicians and lawyers must get their fees, and then there's the expense of holding conventions to act as a lobby upon Congress. And when the Farmers' Alliance grapples with this monster, a set of cowards rush to the front and yell "Surrender, Surrender," "it is the best we can do." "If we don't surrender Uncle Sam's cash box, they will go through all of us." Well, the Farmers' Alliance will not surrender until it has a black eye; we don't capitulate until the battle is lost.

But Mr. Doyle says: "These countries have sold to this Maritime Canal Co. the exclusive right to build the canal, and given 20 years to do it in." Now, he might as well have told the truth, because it is bound to come out before we get through with this contest. He cannot deceive any one by stating that the franchise runs 198 years, and that they have 20 years in which to build the canal. He and Merry both know this is far from the truth; that the facts are as follows: The Government of Nicaragua granted them a franchise for 99 years, with two provisos or upon two conditions: First—The company should spend $2,000,000 within a certain time, and, second—The canal must be completed within ten years, so that vessels could pass from ocean to ocean. In case the two conditions were not fulfilled, the franchise was forfeited. This franchise was granted on the 25th of April, 1887, according to John Sherman. Consequently, it has less than five years to run, unless the canal is completed. The canal cannot be completed in five years. This is one of the reasons why they want the Government to become interested in the scheme; they think they would have a better chance to get an extension of the time when the five years expire.

But Nicaragua stipulates in the bond that, in consideration of the large amount of money that may be expended, she *may* extend the time ten years. She holds it in her power to close out the canal, and if she renews the franchise, she will demand her pound of flesh. I would advise Mr. John T. Doyle and Merry to tell the truth when they go into print.

Mr. Doyle and Merry lay a great deal of stress upon the fact that the Government has deposited with it $70,000,000 in shares of stocks, and, consequently, it could control the election of the Board of Directors. I will prick this bubble for them and show up their deception.

Doyle says: "If Mr. Cannon or Mr. Pool were the owners of six millions of stock in a corporation, and one of their neighbors owned seventy millions of it, would they seriously contemplate grasping the management against the wish of the majority owner?" Under an *honest* deal, no; but if the law said there should be fifteen (15) directors, and that a party holding as security seventy millions was entitled to but six of them, and even they are not elected by the stockholders, but appointed by the President of the United States, we would most assuredly hold the fort. To still further expose the deception practiced by this Canal Co., I desire to quote from the act before Congress: SEC. 9. "The Secretary of the Treasury, on behalf of the United States, *may at his discretion vote said stock*," Again, Sec. 10. "That to secure the proper application of the aid to be furnished by the United States by this act, Sec. 4 of of the act approved Feb. 20, 1889, entitled an act to incorporate the Maritime Canal Co. of Nicaragua is so amended that six of the fifteen directors of said company shall be appointed by the President of the United States," and the Government pledges itself not to foreclose the lien for five years after the completion of the canal, provided the Maritime Canal Co. remains under the control of said company.

I will quote that part of Sec. 5: "But until the expiration of five years after the said canal shall be put in operation, and so long as during said five years the canal shall be in operation, *and remain under the control of the Maritime Canal Co. of Nicaragua*, this subrogated lien and right of the United States, as aforesaid, shall not be enforced by foreclosure or otherwise of the said mortgage against the property covered by said mortgage." Now I don't think it is worth my time to follow this matter any further. No man of any sense, after reading the bill before Congress, will for a moment claim that the United States can ever control, nor was it ever intended that it should control the canal. The claim these men are making that the Government can control the canal under the Sherman bill they know to be absurd.

Now let me give them a little horse sense. Suppose they insert in the bill that the President of the United States shall appoint fourteen (14) directors instead of six (6), and that upon all occasions the Secretary of the Treasury *shall* vote the stock in the interests of the United States! But will these men agree to this? I think they will. The canal is now on its last legs, and it is "Oh Lord, anything!" with them.

Last year they spent less than half a million dollars, and on Sherman's estimate it would take them eight hundred years to complete it at that rate.

Now, gentlemen, if you are so anxious that the Government should control the canal, amend the Sherman bill by inserting in Sec. 10, "fourteen" for "six" directors. If you refuse to do this, don't write any more long-winded letters in favor of Government control.

MARION CANNON,
State President.

A Cold Swindle.

An old reader of the RURAL, who now lives in Florida, asks our opinion about an advertisement which he says is circulating in Eastern papers to this effect:

A Chance to Make Money. California Cold Process for Keeping Fruit Perfectly Fresh, Without Heating or Sealing. Can Put Up a Bushel in Ten Minutes. Cost About One Cent a Quart. Can Get Directions.

The only cold process about the above is the way the swindler will probably draw much money from credulous Eastern people. No such thing is done in California, although some years ago there was a rascal out here trying to sell some such thing which he then called a "preservative powder from Canada." It was an out and out swindle—a bare-faced fraud. Such, too, is the "cold process" mentioned above. We are not surprised to know that it hails from a point in Ohio. There is a nest of petty swindlers in Ohio which the Government should put in the penitentiary for thieving through the mails. Every few months they use a new bait, but it is the same old trap. They are very artful in sending their notices to the papers, and some of our contemporaries help in their games unwittingly. We can tell their ear marks from a long distance. The use of the name California in their contemptible business is a new departure. Let no one be deceived thereby.

Further Work by the San Jose Fruit Convention.

The adjourned meeting of the Convention of May 7th, of which a report was given in the last RURAL, has pushed the organization along another step. The *Mercury* of May 22d says there was a large attendance at the meeting of the previous day, Col. R. P. McGlincy presiding and D. W. Miller, of the Doyle district, Secretary.

Col. Philo Hersey, as Chairman of the Committee on Constitution and By-Laws, read the Committee's report, and it was taken up by sections, and the entire morning and most of the afternoon sessions consumed in discussion.

The capital stock was fixed at $200,000, divided in 20,000 shares at $10 each, 10 per cent payable at the time of subscription. It was also decided that no person should be allowed to subscribe for more than 100 shares of stock.

The following committee was appointed to select nine names such as would be suitable to hold the place of directors: O. Helridier, M. Wingate, J. R. Johns, E. F. Adams, H. C. Morrell, F. H. Babb, J. J. Shaner, F. W. Crandall, D. C. Vestal, F. Dunne, G. Blaine, E. H. Hogelton, J. Shaw, W. H. Wright and Col. P. Hersey.

As one gentleman thought the Committee had been appointed a little too soon to select directors intelligently, and several of those who constituted the Committee stated they did not feel competent to select directors, the Committee was resolved into one for the purpose of circulating subscription lists during the coming week, and having all sign who intended to take any stock in the Association.

The Convention then adjourned to meet Saturday morning, May 28th, at 10 o'clock, when officers and directors will be elected and a corporation will be formed.

One Use for the Boys.

DIAMANTE, CAL.

TO THE EDITOR:—Some weeks ago a gentleman lamented in RURAL PRESS over our poor boys of 10 to 18 years. I will help him along with mention of an old system which prevailed in my old home. At the age of 14 (which is the time he leaves school) the boy is sent to a master to learn a trade. From three to four years are the terms. The father furnishes clothing, the mother washing. The master furnishes board and lodging but no wages. For four long years the youth is taught. It is his hardest time in life, but he learns a trade by which he can make his living. Take this for a suggestion: Send the boys to learn a trade in the above way.

There are thousands who will teach but can't pay a cook. A good cook is an artist. It takes years to get ideas of good cooking. We have thousands of cooks in the State but how many are cooks? Ask them where did you learn, and 99 of 100 will answer: "I picked it up." For your own sake supply the trade with willing boys to learn the important and well-paid trade of a cook, and not be obliged to eat the refuse of the so-called cook.

A. LEVY.

Holstein-Friesian Cattle.

Mr. F. H. Burke, proprietor of the La Siesta stock farm at Menlo Park, San Mateo county, has just issued a very very complete and exhaustive catalogue of this justly celebrated breed of cattle, of which Mr. Burke is one of the largest importers and breeders in the United States. All farmers and dairymen who are striving to improve their herds should secure a catalogue at once, which can be done by writing to F. H. Burke, No. 626 Market St., San Francisco.

ANOTHER RICH HORSEMAN.—Charles Fair, son of ex-Senator Fair, has become a horse fancier and has recently spent $60,000 for good young stock, paying one-half of that sum for Yo El Rey and six other Hooker yearlings to Theodore Winters, now of Nevada. Mr. Fair has not yet fully determined where his stud shall be permanently located. Richard Havey, who rode Norfolk and who has an excellent reputation, will train the youngsters near Petaluma, where the string will be quartered for the present.

Weather and Crop Bulletin for Week Ending May 20th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Francklin, Observer at Los Angeles:

Lassen County.—Susanville—Good weather. Everything doing finely. Danger from frost now past.

Humboldt County.—Phillipsville—Heavy rains caused much fruit to drop. Farmers much behind with their work. *Hydesville*—Rainfall .90 of an inch; highest and lowest temperature, 68 degrees and 40 degrees; warm, sunshiny weather needed. *Vance's Orchard, Mad River*—Weather changeable; crops growing fast; farm work delayed; sunshine needed. *Eureka*—1.30 inches of rain; good weather latter part week; corn being planted rapidly; cherries and peaches poor crop; apples and prunes an average crop. *Upper Mattole*—Only moderate crops of fruit and grain expected. *Blocksburg*—Past week stormy; 1.63 inches of rain measured; highest and lowest temperature, 86 degrees and 38 degrees; warmer weather needed for all crops.

Mendocino County.—Mendocino—Crops doing well; those on high land better than those on low lands; rainfall 1.25 inches and cold; apples, pears and plums about half a crop.

Lake County.—Upper Lake—Rainfall 1.73 inches. Alfalfa-hay needs cutting, but the rains have retarded the work; the yield will be large of both hay and grain; fruit and grapes doing well.

Shasta County.—Redding—Weather warm; highest temperature 92 degrees, lowest temperature 45 degrees, and rainfall 1.40 inches; vegetation advancing rapidly: crops of all kinds promise well. *Anderson*—Rainfall 1.50 inches; highest and lowest temperatures, 96 degrees and 50 degrees; rainfall for season, 30.10; all crops looking fine.

Tehama County.—Red Bluff—Fruits and grains greatly benefited by the week's weather; apricots peaches and prunes about half a crop.

Butte County.—Chico—All crops favorably affected by the weather. *Palermo*—1.43 inches of rain, which has improved the outlook.

Glenn County.—Willows—Hot weather just what is needed. Hay damaged; peach crop abundant. *Williams*—1.23 inches of rain and 12 25 inches for the season, and conditions continue favorable.

Colusa County.—Colusa—Rainfall 2.32 inches, and prospects continue favorable.

Sutter County.—West Butte—1.50 inches of rain; hay damaged; melons late, owing to backwardness of the season. *Yuba City*—Rainfall 1.65 inches; highest temperature, 87 degrees; all crops doing well.

Yuba County.—Wheatland—Rainfall 1.4 inches, which lodged some grain, but warm, dry weather will soon start it up; weather now all that could be wished for.

Solano County.—Vacaville—Weather warm; just what is needed for all crops in this vicinity.

Nevada County.—Nevada City—Warm weather very beneficial to all crops; fruit crop short; peaches, pears and early varieties of apples are nearly all destroyed.

Placer County.—Newcastle—Warm weather beneficial to all crops; rainfall 1.89 inches, and has apparently done no damage to the hay and fruit crop.

Sonoma County.—Sonoma—Rainfall 1.25 inches. Rain, as a whole, has been beneficial. Hot wave reached here; Wednesday 93 degrees, Thursday 90 degrees, and early this morning the mercury is higher than yesterday, probably another hot day. Haying commenced; corn planted; fruit ripening finely: grapes will be a light crop. *Santa Rosa*—Highest temperature 90 degrees. If the present hot, dry weather continues, much damage will result to all grain and grass. *Forestville*—Weather getting warmer. Hop growers complain of backwardness. Rainfall 2.02 inches. *Healdsburg*—Rainfall 3.15 inches. It did not do damage to grainfields as was supposed was done. The barley fields are looking well and about two weeks ahead of oats. Pulverized fields and hills have run together; need reworking.

Sacramento County.—Franklin—The rain of the fore part of the week slightly damaged the hay that was cut. The grain is very rank, and in some places, is falling down.

Amador County.—Oleta—This week has been unusually favorable for all crops, and they are coming forward with a rush.

Yolo County.—Briggs' Vineyard—The weather has been cool, except two days. With over an inch of rain, prospects for grain, hay and fruit are good. *Winters*—Crops are ripening rapidly.

El Dorado County.—Coloma—Highest and lowest temperature 98 and 65 degrees, the weather has been very beneficial to all kinds of fruits and vegetables. The best warm and bright sunshine will be needed here for several weeks to come to make any great showing in advancement.

Napa County.—Napa City—Highest and lowest temperature 90 and 48 and 1.09 inches of rain; all crops doing well.

Alameda County.—Alvarado—Rainfall 1.15 inches, accompanied by high winds that blew the grain down badly and injured hay that was cut. Temperature (highest) 86. The warm weather favorable to all crops. *Livermore*—Haying in full blast, crops generally good; rainfall, .80 of an inch and no damage done. *Niles*—Rainfall .72 of an inch. The high temperatures have been beneficial to growing corn. Apricots all thinned, peaches being thinned. The rain assures a big crop.

Calaveras County.—Milton—Rainfall .90 of an inch, which damaged hay and lodged some grain, but the north wind was beneficial and reduced the damage very much.

Santa Clara County.—Gilroy—Rainfall 1.08 inches and damaged cut hay and matured grain. The hot spell has done much good to grain and fruit. *Blacks*—The present warm spell has been favorable to all crops, and everything the last rain helped is doing well. *Madison*—The grain is filling out finely and this promises to be the best season for all crops we have had for several years.

Contra Costa County.—Cromwell Station—The rain of Sunday was beneficial to wheat and barley. There has not been any hay damaged. The heat of past three days dries up everything.

San Luis Obispo County.—San Luis Obispo—Rainfall, 75 hundredths of an inch and was beneficial to all crops, but has damaged some hay that was just cut. The warm weather for the last two days will almost recuperate the hay. The rain will be a great benefit to late crops, also to the beans and other crops just now about half planted.

Fresno County.—Selma—Rainfall, 21 hundredths of an inch. In the midst of the hot wave we are suffering less than other sections, but grain is ripening rapidly.

Monterey County.—Salinas—Crops good and will be an average yield. Rainfall .41 of an inch and no damage done. *Jolon*—The wheat and barley crop have greatly improved since the rains and promise a fair field. *San Ardo*—Rainfall .90 of an inch and the ground is looking well. There was some fear of the hot spell injuring early sown grain; fruit prospects good; highest temperature 97.

San Joaquin County.—Lodi—Highest and lowest temperatures 91 and 46; rainfall .92 of an inch, and followed by warm days, is rapidly bringing forward all vegetation and wheat improving. Barley filling out well, no damage by the rains. Watermelons poor stand and very backward; fruit doing well, but late. *Stockton*—Grain lodged by the rains; the high temperature of the 18th, 19th and 20th was very trying on grain where the heads are now forming.

Tulare County.—Visalia—Rainfall .22 of an inch; highest temperature 95 and all crops are looking extremely well since last rain.

Yolo County.—Rumsey—Rainfall 1.20 inches. The rain and hot weather has been very beneficial to crops of all kinds.

Sacramento County.—Sacramento—Rainfall 1.16 inches; highest temperature 94.5 on the 20th. The warm wave has done no harm, but good, to all crops. River 26 feet and 3 inches and is very near the danger line, with much danger of levees being broken.

SOUTHERN CALIFORNIA.

Santa Barbara County.—Santa Maria—Weather exceptionally hot, 95 at noon of the 17th, and not favorable for crops, except fruit which have been benefited by the sun and heat.

San Bernardino County.—Arlington Heights—(Riverside Fruit Company) near Riverside. We are now having a hot wave, 17th, 98, 18th, 100, 19th, 96 at 1 P. M.; yesterday the 18th, the thermometer registered at the Orange Co's. Camp, near the Temescal foothills, three miles west of us, 102; in the city of Riverside 103, and at Colton 107; up to this hot spell we have had an unusually cold spring; very little growth; buds have been generally dormant, growths now commencing in good earnest. The hay crop in our immediate vicinity is exceedingly light, some being harvested will run about one-fifth of a ton to the acre, and one-half the crop area will not be cut; too light. South Riverside has a fair crop and big acreage. San Bernardino has a good hay crop. Berries are a poor crop. Elsinore valley is reported to have had 3 inches of rain during the last storm, and in the mountains adjacent 6 inches; at our place 1.16 inches.

J. A. BARWICK

WEATHER CROP BULLETIN OF SOUTHERN CALIFORNIA.

Ventura County.—Hueneme—The warm wave of the last few days has a tendency to cause a little shrinkage in the late-sown grain and ripen barley fast. Heading is in progress. *Bardsdale*—An east wind prevailed the latter part of the week, ripening the grain and drying vegetation perceptibly. The weather is now warm, clear and favorable.

Los Angeles County.—Lancaster—The warm weather has been injurious to grain, but the extent of the injury is not yet known. The first crop of alfalfa is being cut, and is yielding 3¼ tons to the acre, and is bringing $12.50 per ton. *The Palms*—All varieties of trees are growing finely. Corn is looking well, and the prospect is for a good crop. *Verdugo*—The hot weather of the past three days will dry up natural grass rapidly and hasten the ripening of late grain. Barley is being generally cut for hay. The deciduous fruit crop promises to be good. *Duarte*—Harvesting is well under way; fruits are growing rapidly; peaches are overloaded, and will have to be thinned. Highest temperature 100 degrees; lowest 47 degrees. *Covina*—The May rains greatly improved the late grain, and put trees in fine condition. Oranges are holding on finely, with a prospect for a fine crop. First crop of strawberries about gone, and the next will be ripe in about three weeks.

San Bernardino County.—Ontario—The past week has been very warm, the temperature ranging from 90 to 95 degrees. The heat was favorable to curing grain and beneficial to young orange orchards. *Chino*—The unusually hot weather this week has damaged the quality of hay now being cut. Beets are growing vigorously, and a heavy crop is well assured. *Riverside*—The temperature for the past three days has been very high; 100.5 degrees was recorded on the 17th; 105 degrees on the 18th; and 101.5 degrees on the 19th, with a hot north wind on the 17th and 18th. Hay is all cut, but the crop is very light. Oranges promise a fair crop. *Alessandro*. Hot, dry winds have prevailed. The temperature varied from 100 to 105 degrees; the lowest was 50 degrees. Drought has slightly injured hay and grain.

Orange County.—Anaheim—The extreme heat of the last three days, the temperature ranging up to 100 degrees, has not damaged any growing crops, and will tend to ripen early fruits. *Santa Ana*—Three days this week were quite warm; the temperature ranged from 94 to 98 degrees. With an abundance of water, everything has grown rapidly. The outlook is good. *Tustin*—Hot spell on the 17th, 18th and 19th, the temperature reaching 96 degrees. The warm weather is beneficial. Apricots are heavily loaded and need thinning; peaches promise well; prunes a light crop.

San Diego County.—Vineyard—Warm weather has prevailed, with some dry east wind, and slightly damaged the grain crop, which is now in the dough. Haying has commenced; the yield will be good. The season has been good for young orchards. G. E. FRANCKLIN.

OREGON WEATHER-CROP BULLETIN FOR WEEK ENDING SATURDAY, MAY 21, 1892.

Western Oregon.—The week opened cool and rainy and closed with continuous sunshine and unusually warm weather. On Friday, the 20th, the maximum temperature ranged from 85 to 95 degrees, except, of course, along the immediate coast.

The total rainfall on Sunday, Monday and Tuesday ranged from .30 to .60 of an inch.

The winds for last three days have been northerly and very dry. Crops—The hot weather on the 20th scalded wheat on wet lands and baked the soil on low ground; other than this, the weather was just what was needed. Farmers have been unable to finish spring work, which was delayed fully one month; vegetation is growing rapidly and promising well. The beneficial effect of the desirable change in the weather is shown in all vegetation, except that on low lands.

The effects of the April frosts are now being shown by the young fruit falling from the trees. In some localities there has been practically no damage to the fruit, while in others there has been general loss and there will be a short crop, especially peaches; the latter conditions are principally on the low lands.

Acreage of spring sown grain is below the average. Strawberries are ripening in all sections.

Eastern Oregon.—From the first of the month up to the 15th, rains fell in the Columbia River valley while rain and snow squalls occurred south of the Blue mountains. Since the 15th, there has been warmer weather and more sunshine.

About normal weather conditions now exist. In the latter part of the week there was a decided rise in the temperature. On the 20th, the maximum temperature ranged from 80 to 90 degrees, with dry east to north winds. From .14 to .36 of an inch of rain fell during the week. Crops—There has been a marked improvement in the growth and development of all vegetation. Wheat, especially, is doing finely; in sections the heads are three feet high. Spring grain is about sown, and corn-planting is being finished. Some early planted corn rotted in the ground. In Sherman county the corn is from six to ten inches high. Every county reports very wet soil and unusually good prospects. The present weather conditions are welcomed by all. Sheep-shearing has been greatly delayed, but is now in full progress. The weather retarded shearing and some contracts for mutton could not be filled.

B. S. PAGUE,
Observer U. S. Weather Bureau.

POULTRY YARD.

Advice to Beginners.

LODI, May 23, 1892.

TO THE EDITOR:—I am now and then in receipt of letters inquiring, among other things, how a poultry ranch should be started and conducted in order to make it a paying and an agreeable business. Without being one, it can hardly be the other, as, if it don't pay, it will fail to be agreeable; and if not agreeable business for one who engages in it, it will be almost sure not to pay.

If one desires to make a success of it, one's heart, so to say, must be in it. There must be sufficient liking for the business to cause the owner to attend faithfully and thoroughly to all details of the business, however unnecessary they may appear to be, for this business perhaps more than any other requires strict attention to minor details. A little neglect throws a fowl out of condition very promptly, and it then fails to be productive; while on the contrary, care for all the little needs of fowls, as well as their more important ones, is always repaid in the well-being and productiveness of the flock, pleasing to the eye and satisfying to the pocket.

In other words, care and untiring watchfulness in studying their needs and in supplying them promptly, as far as practicable, is strictly necessary if one would be successful as a poultry raiser. A few fowls, say a dozen or so, may be kept with comparatively very little care, and yet be productive. A handful or so of grain, a few scraps from the table, access to the water trough and a convenient tree to roost in, seems to satisfy all their requirements, and one need not go far to find the reason for this—a few kept together do not crowd each other unhealthfully. Having abundant range, they find all they want, where several hundred kept in one place would soon exhaust the fitness of the range for them. Wherever fowls are kept in large numbers they may, for a limited time, be trusted to forage for their gravel, animal food and green stuff in season; but it soon becomes necessary to supply them otherwise and to provide liberally and fully for them all that they would find for themselves were they where they could. So it becomes necessary to watch their condition carefully and to supply them with what they need, and to know what they need, requires constant study of fowl nature.

In a general way, the requirements of fowls in confinement or in limited range are, first, a liberal supply of healthy food such as, during the cold months, a morning meal of a stiff mush of middlings as warm as they will eat it, and with meat scraps liberally mixed with it, and three or four times a week have it liberally seasoned with cayenne or red peppers and onions. This may be varied by substituting for a mush of middlings one composed of part middlings, or bran if you prefer, and small potatoes boiled and mashed and mixed with it and well seasoned. Vegetables of almost any kind prove very acceptable to them, and a meal of cabbage, turnips, beets or carrots boiled with meat scraps they relish very much. Still, I do not think it necessary to boil it for them, although no doubt they find it more appetizing, particularly during the cold months.

The meat scraps may be fed to them separately, chopped fine, so as to be easily eaten by them, or, which is better, mixed in their mush, and their vegetables, whether beets, carrots, turnips, cabbage, onions or whatever it may be, may be fed to them through the day, as they will readily pick them to pieces and get all they want as food, to say nothing of needed exercise which they get by this manner of feeding it to them.

I have seen advocated the plan of hanging the vegetable just far enough above the reach of the fowl to cause them to jump up from the ground in order to reach it, but I think that rather a refinement of the idea; and if it is fed to them in such condition as to make it necessary for them to peck it off, they will neither eat it too fast nor too much of it at a time, and at the same time get all the exercise of that kind that they need.

Perhaps if food is cooked it will go farther, but that I think is offset by the time and fuel consumed in the preparation of it; and where fowls have not been "spoiled" by having it cooked or chopped for them, they will eat it with great relish if thrown to them without either.

So much for their morning meal, and during the cold months I think it better to feed them two hot meals a day, and a good corn or wheat feed at night. For their mush, I consider middlings better than bran, or if, as in the case of country mills generally, the middlings and bran are rich, then a mixture of two parts bran and one part middlings would be preferable.

During the warmer months, my practice is to feed grain in the morning, mush at noon and grain again at night.

Along with their food they should have an abundant supply of good, fresh, clean water, fresh from the well in the morning, with no ice in it, or, better yet, a little warm water in it to take the chill off, or, if milk is abundant, give them all they will consume of warm milk. In summer it is of course unnecessary to warm it, and all liquid supplied them should be kept in the shade, and kept fresh and in clean vessels, and frequently renewed, say twice a day, cleaning the vessels once a day thoroughly, that no slime or green stuff gather on them.

They should also have an abundant supply of coarse, sharp sand, and of shells, either ground oyster shells or the fine seashells ordinarily furnished for that purpose. Charcoal also, broken so they can readily eat it, is greatly relished by them and I think very necessary to them. They should also have an abundant supply of green stuff, which may be either carrot or other vegetable tops, cabbage, or young corn, or grass or unripe grain, chopped and fed to them.

Then, in addition to all this, and no whit less necessary, is the keeping of their quarters and roosting-places scrupulously clean, well ventilated and fresh. No henhouse should smell strongly of their droppings, when first opened in the morning. If it does, then it has not been cleaned thoroughly or sufficiently often, or it is not properly ventilated, and that state of things will result surely in disease very promptly. Prevention is always better than cure, and cure is not always possible, or at least without more or less loss and annoyance.

In all this, I have said nothing of the selection of fowls to start with, and that is a matter to be left somewhat to the taste of the one starting. It may be either Langshan, White or Brown Leghorn, Black Spanish, Black or Blue Minorcas, Polish, or any one of the "good laying" breeds, as generally eggs are the main source of income. Good young roosters, from April to nearly July, command an excellent price, but, to have them, one must set eggs when they are worth from 40 to 50 cents per dozen, and many at this time of year are not fertile, which, added to the cost of brooding, as fire is necessary, or artificial heat, and the larger percentage of loss, makes one's gains at those prices ($8 to $15) considerably less than would appear at first glance.

But the continuation of this subject will call for more time and space than you will like to give in this issue of your valuable journal.

T. B. GEFFROY.

HORTICULTURE.

Can Injury from Frost be Prevented by Irrigation or Otherwise?

The following paper was read before the Southern California Pomological Society at Redlands, on May 6, 1892, by JAMES BOYD of Riverside.

The question of preventing injury from frost is one of considerable importance to the fruit growers of California, and, indeed, to almost the whole of the civilized world, as there is hardly any part of it settled by the Caucasian race in which injury from frost is not to be feared.

The conditions in Southern California are rather peculiar, in that our leading crop, the crop of citrus fruits, is ripening during the coldest part of the season. In most other parts of the world it is generally spring frosts that are to be feared, but with one exception we have never in Southern California suffered any damage from frost in the spring. It is generally understood when vegetation is young and tender, that a much less degree of cold is injurious than is the case when fruit is nearly mature. For instance, in early winter frosts, grapes that are ripe are not injured by frost, while those that are green are very easily affected; and so in the case of oranges. If oranges are fully ripe, they are not easily injured and will stand eight degrees of cold without any injury.

Practically, the question before us will resolve itself into protection to citrus fruits against injury, and we will in this case, as in their cultivation, have to feel our way as we go along, as we cannot refer to any previous experiences on the subject.

The past winter having been exceptionally cold and the consequences very disastrous, has caused more attention to be turned to the subject than otherwise would. The idea that running water would prevent injury from frost is not entirely new, as it has been held by different parties in Riverside for several years that it would considerably mitigate its effects, partly by giving off heat in freezing, and partly by the fact that running water rarely gets chilled enough to freeze during the short time that the thermometer remains at or below the freezing point, coming, as it does, either from underground pipes or from a larger body of water in a main canal. Something, however, depends on the condition of the atmosphere, as our most destructive frosts come in a calm, just after a cold north wind. In our climate, however, we never have had extreme cold during a norther, presumably because the motion of the air produces heat, but in such cases, ice will sometimes form in an open vessel of water, exposed to the wind, when the thermometer will hardly reach the freezing point.

Judging from the testimony of competent witnesses, we can hardly doubt but that irrigation, during a freeze, will, to a great extent, prevent injury from frost, for the reasons above named, but there is a limit to the degree of cold it will counteract, and, at most, it can only make a difference of two or three degrees, but in critical cases, this is all that is required. It is, however, safe to say that if the thermometer gets much below 24 degrees, which is generally conceded to be a dangerous point, irrigation would be entirely useless. Allowing that irrigation is a preventive, the next question is, would it be practical? In answer, I unhesitatingly say no, except in exceptional and limited cases. Take, for instance, a district such as Redlands or Riverside; in case of threatened frost, it would be an utter impossibility for every one to get water at the same time, so that, were it possible, for other reasons it would not be practical. Again, take the season of 1890-91, in which it was frosty for a week or over, the thermometer ranging from 32 degrees down to 24 degrees, it is not always possible to tell what night the cold wave would be dangerous or destructive, and it is doubtful whether running for a week or ten days would not be as injurious as the frost. In most of the cases where benefit has been experienced from running water, it has been more from accident than design that the parties have been irrigating. Again, our cold snaps frequently come on without much previous warning, and as we never know just how great the degree of cold may be, we might have a great deal of trouble and labor for nothing. If we could have signal service dispatches a day or two beforehand, telling us just the degree of cold we might expect, the orange grower would rest easy at night; but as we have not got our weather service down to so close figures, we must needs work with considerable uncertainty. It sometimes happens that some of our most threatening nights come off warmer before morning, and the reverse may also happen, so that we are kept occasionally in uncertainty for a period of at least two months. On a notice of only a few hours beforehand, it will readily be seen that an orchard could not be furrowed out and water gotten through the rows in time to prevent damage.

Clearly, irrigation as a preventive is out of the question, except in a very limited degree, and we will have to look to some other method to prevent injury from frost. Where a locality is subject to frost, and a possibility of losing a crop once in two or three years, it will seriously interfere with an orchardist's profits; but as in most cases it has not been possible to tell beforehand these unfavorable conditions, the orchardist will have to make the most of it. The frost itself is so uncertain, visiting one locality one time and some other place in the immediate neighborhood the next time, that nothing sure can be predicted from past experience; but where it touches isolated spots, it is generally in very still, calm weather, and then resort can be had to a smudge or smoke from burning tar, damp weeds, brush or rubbish of some kind. If the smoke can be kept over the orchard, there can be no question, but it will have the effect of raising the temperature two or three degrees by preventing radiation of heat. Where a slight current of wind is moving and carrying off the smoke as fast as formed, it is more difficult to prevent injury. Indeed, opinions are somewhat divided as to the benefits of smoke. It is also held that in case of late spring frosts, smoke, if kept over a vineyard or orchard (while frost is likely to do damage) until after the sun is up to warm up the atmosphere, will prevent damage. Some orchardists have a system of electric alarms which will give timely notice whenever the temperature is likely to reach a dangerous point, and, where everything is in readiness, and it is perfectly calm and near sunrise, it is undoubtedly a safeguard.

Another method of preventing injury is by making large fires, and thus drawing off a stratum of cold air and replacing it with warmer air from some warmer place. This method is most effectual in low ground, where frost is liable to settle. It may, however, be understood that all of the above measures are but remedial, and when the cold is excessive for only an hour or two, or where not very extreme, as there is a degree of cold not far below 24 degrees in which no means heretofore tried will be of any avail.

If our rain makers can, as they profess, form clouds over any given section of the country, it would probably be the cheapest and best preventive, as the slightest film of cloud will immediately raise the temperature above the freezing point. As we are nearly on the northern limit of successful citrus fruit culture, we have necessarily many vicissitudes, and only under favorable conditions can they be grown at all, and if we could on'y find some successful method of warding off the effects of extreme cold, it would have the effect of bringing so much more land under citrus fruits, that it would be likely to interfere with their profitable cultivation.

Every kind of fruit has its limitations, and the best can only be grown under the most favorable conditions; the fact that the conditions for citrus fruits are so varied even in Southern California, gives to those who are as favorably situated as we are, advantages that will always make San Bernardino county a desirable place for investment.

Fruit Prospects Around Saratoga.

HILLSDALE, May 18, 1892.

TO THE EDITOR:—During a visit to Santa Clara County, I have noted something in relation to the outlook for fruit around Saratoga, Los Gatos and the vicinity of Almaden. The apple crop promises well, Pearmains, Smith's Cider and Newtown Pippins good. The Jonathans in some orchards are poor in consequence of lack of judicious pruning.

The recent frosts damaged the late varieties of prunes; the early varieties on high grounds escaped; the same cause has seriously affected the grapes in many localities, otherwise doing well. Pears are doing well, especially the Bartlett and Winter Nelis. The peach crop is fair, but the curl leaf is very prevalent. Almonds are well advanced in growth, but in low lands damaged by frost. Cherries are doing well. Apricots are light, in some places very seriously affected by frost. The olive industry is increasing in economic importance. Fruit trees planted out this season have done remarkably well, although in some localities many of them have been injured or destroyed by a bug or worm, the character of which I have been unable to learn. The unusual prevalence of dry north winds have caused the grounds to dry very rapidly, rendering the proper cultivation of orchards and vineyards extremely difficult.

The numerous showers have caused a continuous and thrifty growth of weeds and grasses, insured the crops of hay and grain, and covered the landscape with a lovely coating of green, illuminated by the innumerable wild flowers and the varied tints and shades of color in the mild and cultivated trees and shrubs of the mountains and valleys.

LORENZO G. YATES.

FLORIST AND GARDENER.

High-Class Garden Farming.

DOS CABEZAS, ARIZONA, May 11, 1892.

TO THE EDITOR:—At Orient, Long Island, New York, George W. Hallock owns 58 acres of land, which he and his son manage as a market garden for supplying vegetables to New York and Boston. The gross annual product of this land averages $20,000 in value, being within a fraction of $345 per acre. The net profits, though not made public, are known to be handsome. The following list gives the market crop of a single season: Strawberries, 15,880 quarts; early cabbage, 4800 barrels; early potatoes, 3300 bushels; onions, from sets, 3300 bushels; late potatoes, 1600 bushels; carrots, 9200 bushels; sweet corn, 14,000 ears; white beans, 50 bushels; onions, from seed, 4750 bushels; ears of corn, 1800 bushels; brussels sprouts, 400 bushels; Hungarian hay, 3 tons; Hubbard squash, 100 barrels; carrot seed, 25 pounds; onion seed, 100 pounds; onion sets, ten bushels, and cabbage plants 250,000.

If the weights of these crops were given, the yield per acre would seem very large. During the season two steamers are in continuous use in taking the crop to market.

I get the above figures from the New York *Christian at Work*, whose editor and proprietor is Mr. Hallock's brother, and it in turn copied them from *The Voice*.

While farmers cannot all have large cities near to buy their produce, it is possible in the most remote localities to make more out of land by treating it generously, both as to culture and manuring, than by exhausting it under a one-crop mode of mismanagement. By using dairy or fattening stock to consume the main crops, by careful saving of manures for return to the soil, fertility will beget fertility; wisely outlaid money will beget satisfying incoming money, and under good supervision, the end, which is profit, will be begotten also. With a Californian climate, plenty of water and sound farming practices on the high-tension style of the new agriculture, it is hard to estimate the possible yield of deep bottom land. Wheat yearly, wheat ever as the farmer's mainstay, is not really farming, but only soil-robbing. When time has brought the product, even of deep alluvial soils, down to a profitless basis, the folly of relying on a single-crop system will be widely admitted by the impoverished owners of worn-out lands.

JOHN DARE EMERSLEY.

Two Methods of Laying Out Grounds.

E. R. Roberts, of Tacoma, Wash., writes an essay for the *Northwest Horticulturist*, from which we quote as follows:

There are two very distinct modes of laying out grounds, known as the geometrical and natural. Various terms have been used from time to time by descriptive writers on these subjects to designate styles, but they are all easily referred to one or the other of these modes, and in the geometrical may be placed the formal Roman, architectural and ancient, the Italian, French and Dutch varieties of this style. Under the natural we may, in a similar manner, place the gardenesque, modern, irregular, English, uniform and graceful.

GEOMETRICAL STYLE.

In the early ages of the world, the possessor of wealth exhibited his riches by surrounding his residence with such improvements as were most distinctive from the common scenery of the country. Hence gardens were ornamented with ballustrated terraces of massive masonry, magnificent flights of steps, decorated arcades, costly fountains, architectural grottoes and lofty clipped hedges arranged with nitches and recesses for the display of statuary, when the less wealthy contented himself with a sloped grass bank for the stone terrace, shaped his small lake in a square or circular form, clipped his trees and shrubs into fantastic shapes.

Such a style is well fitted for immediately producing grand effects; in countries abounding in irregular and natural forms of uncultivated scenery, distinction is at once imparted by introducing perfectly level, or everything regularly sloping, surface of grounds. Trees and shrubs, planted at uniform distances apart along the driveways, walks and clumps, lakes bounded by geometrical lines, so as to leave no chance of mistaking any portion of the scene as having been the result of unassisted natural arrangement, but to convey the impression of a display of natural wealth and refinement; to indicate ownership by distinguishing the country residence from the natural, uninclosed, rude scenery of the neighborhood.

In the strictly geometrical style, everything is architecturally accurate in its lines, perfect symmetry pervades the whole, and all parts are equally balanced. Statuary of all kinds, fountains, steps, ballusters and pediments, broad and straight walks, broad and straight avenues, formal-shaped flower beds, clipped plants, shrubs and trees, all belong to this species of garden and landscape decoration.

Such style as this would have a beautiful combination, and would produce and immediately have a magnificent effect in our parks, private grounds and gardens in Western Washington, owing to our magnificent natural scenery.

THE NATURAL STYLE.

In the geometrical style the hand of the artist is in every detail, but in the natural style artificial enterprise is not so conspicuous in the disposition of the material used for the development of landscape views and scenic effects. There is nothing, so far as general impressions are concerned, to indicate where the hand of the improver has been operating, or anything appearing beyond a natural production, or what may be indigenous to the country or the locality; all natural beauties are carefully preserved, so far as consistent with objects of use or convenience, and the element of utility enters more largely, perhaps, into our ideas of the beautiful in this than in the geometrical style, and, while there is no desire to avoid the appearance of art in operative details, it is not rendered obtrusive, and the effects produced need not suggest the idea of painful and laborious operation. The perception of the beautiful ought to be the first impression, and not that of the art by which it has been produced. The beauties of nature are imitated in the disposition of trees, shrubs and plants, and, so far as general scenic effect is concerned, the arrangement might be taken for a natural group, yet a closer examination of details will lead to the discovery that the plants employed are not indigenous to the locality, and art design will be recognized. A natural footpath seen on the hillside, curving gracefully around, or on the banks of streams, embracing a thicket of trees and undergrowth, and lost in the tangled vines, then emerging and tracing its course across the land below, alternately widening and narrowing, and at times lost in the massive foliage of grasses and other natural growths, is what might truly be termed a natural footpath.

Let it be trimmed and widened, is surface be neatly graded and covered with gravel, its curves well defined, its sides made parallel, and it will have lost much of its beauty as a natural footpath; although the natural scenery has not been disturbed, nor anything impaired, it is now invested with the beauty of utility, yet for comfort and convenience we prefer its improved condition.

In arranging and preparing a natural ground for a pleasure garden, nature should be preserved in every instance possible, and never destroy the beautiful and great things of nature.

ARBORICULTURE.

A Promising Eucalyptus Sport.

NAPA, May 10, 1892.

TO THE EDITOR:—I have read with much interest the discus sion about eucalypti in your valuable paper, and appreciate fully the importance of this genus of trees for the purpose of wind-breaks and timber in this State, where they seem to be entirely at home.

Judge Stanly, on his beautiful ranch near Napa, has all

his vineyards and orchards divided into lots and surrounded with *Eucalyptus globulus*. They seem to enroach but little upon the vines and trees, and he assures me that he has found them a great protection against frost and wind. That they are also great purifiers of the atmosphere and could be planted with beneficial results as an antidote against malaria, is although well authenticated, perhaps not fully appreciated in those sections of our State where malaria prevails. But the object of the present communication is not so much to draw attention to this, as to an accidental and very beautiful sport of the well known *E. globulus*, of which I can give the full history, and of which I have secured all the seed for this season. In the winter of 1881-82, about a hundred of *E. globulus*, one year old, were planted on a ranch near Napa. All others were typical *E. globulus* trees, of which many are 80 feet high; but one of them assumed a more dense, upright form from the start, which has more and more developed, until now it is a beautiful and very striking tree about 50 feet high, about 18 inches diameter of trunk at the base, and a conical, gradually tapering crown, the branches growing upright and very dense; starting about four feet from the ground and making a beautiful pyramid, perhaps 15 feet wide, tapering gradually to the top. I can compare its shape to nothing better than a well grown specimen of *Theya aurea* the well known "Golden Arbor Vitae." Your readers can easily see what a handsome object such a tree must be, and how invaluable a row of them would prove as windbreaks. I shall sow the seed, and am very anxious to see whether the seedlings will partake of the character of the parent, or sport back to the original form.

Can any of your readers inform me whether eucalypti will grow from cuttings, and if so, at what time they should be taken? I have no doubt that this desirable variety could be propagated by budding or grafting. At any rate, I am determined to propagate it some way.

Another peculiarity is that so far only one branch has produced blossoms and seeds, all others being barren.

GEORGE HUSMANN.

The English Walnut in Ventura County.

The following well written letter to the State Board of Agriculture by N. B. Smith, the well-known horticulturist of Ventura county, and printed in the annual report, is interesting as coming from a practical grower:

I am located on Ventura avenue, three miles from the coast, in cultivating various varieties of fruit. My original idea was to have walnuts. My first purchase of land had 185 (what is known as the hard-shell) walnut trees. They began bearing at seven years old, and gave 12 pounds; at eight years, 226 pounds; at nine years, 2600 pounds; at ten years, 7200; at eleven years, 9000 pounds; at twelve years, 13,000 pounds, and at present they contine to produce about the latter figure, and are a very remunerative crop, with less labor attending cultivation and harvest than any other kinds of fruit.

The walnut seems to be confined to certain localities in California, and Ventura county soil is well adapted to its production, and particularly so in this valley. The thrifty trees and their bounteous harvest show for themselves. A few years ago a new nut, called the soft-shell, seems to have taken precedence with many, myself as well. They produce much younger. At five years old they yield a good many nuts. As my trees are young, I can hardly make a comparison with my hard-shell, so called. They were very productive last year, a fine-looking shell, and attractive, with meat white and plump, weigh several pounds more to the sack than the other variety, and command several cents more per pound. Hence, it would seem, it "was *the* nut." My soft-shells have not a fair show as yet. I have prunes and apricots between, which return immense crops, but of course they retard the growth of the nut, and, producing as they do, I am reluctant to remove them. Between the 185 old trees above mentioned were apples, but I removed them finally, and such a marvelous growth as the walnuts made the next year demonstrates the fact that they need room. Mine are 40 feet apart, but 50 feet is better, as many touch now. They need but little pruning, only to get them up. When at a proper height, I prune from the under part of the limb, for if allowed to grow to any size, it pulls the more upright ones down. We harvest the nuts in October and November. I agitate the limb with a long pole with a hook in the end. Those that are ready to drop come down easily. I then pick and dry them a few days in the sun, when they are sacked and ready for market. I make three such pickings as described. The trade seems to demand bleaching.

It is quite interesting to watch the nature of the walnut. It has its staminate and pistillate blooms separate; both occur on the same tree; the staminate develops into catkins, the pistillate into embryo nuts. Successful fruiting depends on these two forms of bloom appearing at the same time. Now, with me they have never failed to connect, but I can cite localities where they do. They are fine, healthy appearing trees, but fail to develop the embryo nuts; they form, but drop. The staminate for the coming year begins to form as the nut is developing, say the early part of July, and by the last of August they reach the state that nature has required. Thus they remain until the following spring, when they develop as I have before stated. So one can generally estimate his crop for the ensuing year, barring climatic changes. The first year my soft-shells began bearing, no catkins appeared. It was peculiar, as now they have plenty. I have thirty, four-year-old, trees that gave me last year 22 pounds of nuts. These trees were grown from seed of my hard-shells, and produce identically the same nut. Why I allude to this is, it has always been the impression they did not bear until nine years old; neither did my old ones. It is quite a freak of n

Walnut growing is a pleasant and agreeable occupation, and can be made very profitable, providing one gives it proper attention; but they cannot be grown in all localities by any means, although thousands have been planted where they will be worth more for wood—too exposed, cold, not moisture sufficient. My soil is a rich, sandy loam, well drained, 24 feet to water. I have trees that have given five sacks of 60 pounds, and prices range from 7 to 10½ cents. Twenty-seven trees to the acre, one can readily calculate their value. As yet we have but little competition—on this coast the Chile nut, in the East the foreign ones. Withal, I believe, when our California nut, soft or hard, is properly grown and put on the market with as much care and judgment as other fruits are given, that it will rank first on the list. I have seen many foreign nuts, but I have yet to see the walnut that compares in size, color, clearness and sweetness to the meat of the soft-shell, although I have both, and the two kinds are prolific.

The English Walnut in Oregon.

Extracts from a paper read by HENRY E. DOSCH before the Oregon State Horticultural Society.

When, some years ago, I retired from business and bought the out-of-town place on which we now live, my first thought turned to the cultivation of English walnuts, though the place had been cultivated for over 40 years, and had all the other varieties of fruit growing. Knowing little or nothing of the habits and growth of the English walnut, except, when we were boys we thought our neighbor's walnuts better than our own—I began to read up, and to inquire of those whom I saw had large walnut trees growing, but was informed that Oregon was not a nut-growing country, as some of these trees were 30 years old and had never borne any fruit. I concluded that there must be some reason for this, as I could not convince myself that a country which grew every kind of fruit to such perfection as Oregon, having all the advantages in soil and climate that France and Germany have, where the English walnut flourishes abundantly, could not grow that royal fruit, and soon learned that the variety planted here was the Los Angeles, the most delicate walnut grown, which thrives on this coast only in a few counties of Southern California, brought there by the Friars of the early Spanish settlements.

Feeling that there must be other varieties, I wrote to a large grower in California for trees which he thought best suited to our climate and of such large size as he could recommend to transplant and do well. He sent me 5-year-old trees of the second generation, Proeparturiens and Serotina varieties, which were duly planted with utmost care and every attention given afterward, but did not seem to do well. Over half of them died after struggling along a year or two, and for four long years after planting, the remainder stood still, all of which was caused by the cutting of a large tap root. What few lateral roots they had, were barely sufficient to keep them alive, but last year they made some headway and bore a few nuts, which shows that the trees have finally established themselves. It was a great mistake. Had I planted yearlings I would have had better results, which I only learned, however, by actual experience. I have some three-year-old trees transplanted at yearlings, which have as large heads and are nearly as far advanced as my nine-year-old trees are, which were transplanted at the age of five.

As to varieties suitable to our climate I would name Second Generation Proeparturiens. Serotinas, Mayette, Franquette, Chaberte, and perhaps Parisienne, Vaury and Cluster, and possibly the improved soft shell walnut. The latter is claimed to prove true to seed and is growing nicely with me, but not yet in bearing, and may not be adapted to our climate, being considered rather delicate and tender.

Having made your selection of trees, put the place in which you wish to plant them in perfect order, dig the holes three feet wide by at least two feet in depth and 40 feet apart, then fill them up again, bottom soil on top, all of which can be done in the fall and winter and be ready in spring for planting, which is a very particular piece of work. Tap roots straight down, spread out each lateral root carefully as you proceed to fill the previously re-opened hole, sifting in fine dirt as you go, the tree to stand a little higher than in nursery rows, thus allowing for settling down, and when completed you may rest assured your trees will grow, and beyond cultivation, require no further attention; no spraying and no pruning.

If you wish to experiment as I have done, by planting the nuts, procure them in the fall as soon as they drop, fill some boxes with light soil and sand, half full, then put in the nuts, pointed end up, about one inch apart, cover three inches deep, and place out of reach of rats, squirrels and gophers, keeping the soil moist; on examination in the early part of April you will find that they have sprouted; that is, they throw up two sprouts from the pointed end of the nut, one of these turns down over the nut and forms the tap root and the other continues upward and forms the tree. Now remove them very carefully as these sprouts are very brittle and easily broken, which would make the plant worthless. Plant them either where you wish the tree to grow (by far the best way) or in nursery rows about five inches deep, and transplant to permanent place the following spring. There is no fruit tree that is so indifferent to location exposure or soil, as the English walnut, and gives good results even on land not fit for any other use; but it is grateful for better soil, by going into bearing sooner and yielding larger crops.

Walnuts usually go into bearing in five or six years and at 12 years are in full bearing. In Ventura Co., Cal., trees of the latter age are said on undoubted authority to have yielded from $15 to $20 worth of nuts. It is not a slow grower as I have been led to believe, four to six feet being not an uncommon growth in one season; besides it s a healthy tree, having, comparatively speaking, few pests ito molest it; and once established, lives to a good old age and proves profitable to generation after generation, with but little care. The walnut is very difficult to graft, which, according to Prof. Budd, is owing to the rapid evaporation from the scion while the slow process of uniting with the stock is going on; which also accounts for the very high price of grafted trees.

This year I planted about 300 yearlings of my own growing, and have now sprouting about 500 more of English walnuts besides butternuts, hickorynuts and pecans.

THE IRRIGATIONIST.

Hillside Irrigation in California.

T. S. Van Dyke of San Diego furnishes the following to the *Irrigation Age:*

The irrigation of heavy slopes was for many years considered impossible, even by the enterprising settlers of California, who had more money and more time to work out problems of irrigation than any other people on earth. And it is only within the last ten years, and really within the last six, that the solution of this problem may be said to have been completed.

It was, of course, known that hillsides or rolling ground of any kind could be irrigated by terracing, or by forming basins heaped up on the lower side. This was done long ago, and many fine places made in that way. But, as explained before, these methods, especially basins, are very inefficient as well as annoying and expensive in the matter of labor. The hillsides were therefore generally avoided by those who wanted irrigation both cheap and effective.

OBJECTIONABLE METHODS.

But when it was found that the hillsides generally produced the best fruit and were the freest from frost, people who were familiar with the great results produced by the small furrow system as used at Riverside, turned their attention to the heavy slopes. Most of these, such as that which is now the finest part of Redlands, were long considered worthless because of the difficulty of irriga ing them. It was supposed that this was so near an impossibility that it would not pay to carry aqueducts high enough up the slope to reach such land. Flooding was manifestly out of the question, and basins on the greater part of the slopes would have to be built to an enormous height on the lower sides. Terracing so as to wet a sufficiently large area was very expensive, and, above all, came the objection that in wet weather the soil would cut all to pieces, even if the ditches left any of it.

Running a small ditch, which was made permanent, and planting along that, as had long been done by the Mexicans and Indians on a few slopes, also failed to produce good fruit and enough of it on old trees, because it did not wet enough of the ground and because there was no cultivation, the ditch never being broken up. In short, there seemed for a long time no method of wetting the whole ground evenly. And yet the problem was one of the simplest, and the marvel is, not the fine places that are now blooming on such ground and the high price it brings, but only that it should have taken so long to discover so simple a trick.

THE CURVED FURROW.

With a little practice it is as easy to plow a curved furrow as a straight one, especially when you have a line of trees to guide you. There is also no reason why trees should be planted in straight lines if it is not perfectly convenient to have them so. The symmetry of the orchard is of no consequence compared with good and cheap irrigation and tillage. The trees are therefore planted where the water will run best. That is all there is about it, and the rest of the operation differs in no respect from the system of fine streams with a long run that I have before described in these columns. The whole ground is thus evenly wet and the moisture retained by the same continuous cultivation before explained as essential to good results. The system can therefore be used on any hillside on which machinery can be used at all without terracing.

The objection that the soil is liable to cut in wet weather amounts to little if the cultivator and plow are run in the right direction and no furrows allowed up and down the hill. But in addition to this, it is almost entirely obviated by letting the grass and weeds grow in the winter. A very little growth binds the soil so as to stand the wash of the very heavy rains, which rarely come before the grass has a fair growth. It is easily cultivated out of the way, as all danger of heavy rains is over before it gets too big.

The water is delivered from a flume laid down the hillside, and fitted with cleats at each hole so as to throw off enough water at the sides, or sometimes the flume is laid in steps connected with a bit of covered flume from step to step. The latter is best for very steep hills, though, with care, the other may be used on a greater slope than one would imagine. Another flume should be laid at the end of the furrows to carry off the waste water. At Redlands small hydrants are used in many places to feed the furrows, and cement or stone ditches are used for the waste. But common redwood flumes are good enough and often cheaper.

Swales or "draws" make little or no difference when the ground is first thoroughly prepared. Whatever the shape of the hill, money will always be saved by preparing the ground in the best way. The run of the water may be determined by letting the water follow a hoe. But it is better to lay out the ground with a level at the start and then test your work with a stream of water. Then plant your trees on that contour and they will be a sufficient guide for your plow in the future.

METHOD OF CONSTRUCTION.

The contours may be laid out by any one with a carpenter's common level. Fifty-five feet to the mile is nearly right for a very fine stream on most soils. And this is about one foot in ninety-six, or two inches in sixteen feet. Therefore take a sixteen-foot plank and bevel it to a slope of two inches in its whole length. Then when the upper edge of this is level the lower edge will represent the required grade for your ditch. In this way the work can be done very rapidly.

The same thing is equally good for laying common little

flumes, cement ditches, etc. But in earth, one should determine by trial the amount of slope the soil will stand without cutting or filling up with sediment or refusing to run fast enough in case the soil is very porous. A mistake of a few inches in a hundred feet will generally not be serious, but the more nearly exact you can get it the better. Every approach to perfection in your first arrangements diminishes your future work and annoyance.

All manner of stuff is now raised in this way in California on hillsides that a few years ago, when covered with brush, seemed too steep and rough even to plow. Of course no one would attempt to raise large tracts of alfalfa for heavy profit on such ground, but many small patches for home use are grown in this way as well as upon any ground. When once made, the furrows, of course, are left in place, but the water finds its way to the center between them quite as well as on more level ground.

The proper handling of water in this way will solve the problem of irrigation in a great part of the Eastern States. People naturally think ground must be comparatively level for irrigation, and the greater portion of the irrigated ground seen in the West and on this Coast is so. As such ground in tracts of any size is quite rare on the Atlantic Coast, many naturally think irrigation there out of the question. But there are thousands of slopes on which it can be done as well as here. And any slope on which corn can be cultivated, without the soil cutting in heavy rains, may be used for anything else with safety. The irrigation water will not cut, or the rain either, if the furrows are made right and the plowing done in the right direction.

THE FIELD.

Agriculture at the World's Fair.

CHICAGO, May 10, 1892.

TO THE EDITOR:—The agricultural exhibit at the World's Fair, it is believed, will be studied with greater interest and by more people than will almost any other division of the great Exposition. Millions are engaged in raising or dealing in agricultural products, and every one is a consumer of them. Recognizing this, the Exposition management has provided accommodations and facilities for this exhibit which dwarf such provision made at any previous World's Fair.

The Agricultural Building, an imposing and beautiful structure, situated across the main lagoon, southward from the great Manufactures Building, is rapidly approaching completion, and will be finished even to all details of ornamentation, before October 1st. It measures 500 by 800 feet, and has an annex 300 by 550 feet, and a connected assembly hall, which has a seating capacity of 1500. Close by on the south is the Dairy Building, measuring 100 by 200 feet.

The northern portion of the main floor of the building will be occupied by the agricultural and other food exhibits of foreign nations, which, it is already assured, will be extensive. Great Britain, Germany, France, Mexico, Austria, Denmark, Sweden, Japan, Paraguay, Canada and a number of other countries have already been assigned space, ranging from 1000 to 15,000 square feet each. It is expected that the agricultural exhibits by these countries will be as comprehensive as those of our own country, and will show some features which will be exceedingly instructive to Americans.

Occupying nearly all of the remainder of the main floor will be the exhibit of cereals and other farm products from the States of the Union. Every State and Territory, it is expected, will be represented by its products. Thus, upon this one vast floor, covering nearly ten acres, will be displayed, in all their variety and perfection, the pick of the farm products of the world. It is believed that the exhibit made by this country, naturally exceeding that of any other in extent, will attract great attention, also, by reason of its exceptional merit and the comprehensive information that will accompany it.

This great exhibit, or rather array of exhibits, will be made and arranged in such a systematic manner that the visitor, almost at a glance, can tell not only the appearance of each object, but what it is, where it came from, and "all about it;" for under the regulations adopted for the Department, Chief Buchanan requires that each exhibit shall be accompanied with the following data: Name of object, name of producer, where grown, character of soil, date of planting, quantity of seed planted per acre, method of cultivation, date of harvesting, yield per acre, weight, price of product at nearest market, average temperature and rain or snowfall by months between planting and harvesting, and whether or not irrigation was employed.

On the six acres of flooring in the annex, which is virtually an extension of that of the main building, will be shown every description of agricultural machinery, including not only the best and most improved now in use, but also such as will illustrate the progress of the industry, from primitive times to the present.

In the great galleries of the building, which are most novel in construction and perfect in point of availability, will be located, on the north front, the wool exhibit; on the west end the apiary display, which will include working colonies of bees; on the south front the dairy implements, and on the great central sections the exhibit of the brewing and tobacco industries and the wealth of magnificent exhibits of flours, meals, bread, pastry, sugars, confectionery, canned foods, oils, soaps, chocolates, etc.

One of the most novel, instructive and elaborate exhibits, and one that will undoubtedly attract the attention of every scientific person and scholar interested in any phase of agricultural life, will be that made by the Association of American Agricultural Colleges and Experiment Stations. This exhibit will occupy nearly 8000 square feet of space, and will be located in the southwest corner of the building, on the first floor. It will represent the entire work of a model Agricultural Station, covering entirely the field of experiment and research in crops, botany, horticulture, entomology, feeding stuffs, animal nutrition, dairy solids, milk testings and veterinary science, and will include an elaborate and complete, botanical, biological and chemical laboratory.

In addition to this, the agricultural colleges of the United States will have, in this space, a combined exhibit graphically illustrating the work and special field covered by each college. This entire exhibit is not only unique, but is something that has never been accomplished or attempted at any previous exposition. The exhibit will be put up and conducted by the directors of the different experiment stations and representatives of the different agricultural colleges of the United States, each contributing some part of the exhibit, the whole to be installed in a magnificent manner, at the expense of the United States Government. This will give to every visitor an opportunity to witness the methods by which the great advances in all phases of agricultural life and research are carried on in the colleges and experiment stations of the United States.

Outside the building will be shown several magnificent exhibits, put up at a great cost, of the irrigation systems of the great West. On the lagoon just south of the annex to the Agricultural Building will be installed traction and portable engines and a wonderfully interesting exhibit of windmill machinery.

Connected with the Agricultural Annex by a short walk will be the Dairy Building, in which will be shown dairy products, and in which will be conducted, during the entire period of the Exposition, the Dairy School, which has been extensively described, and has received cordial endorsement from all sources. Here will be conducted practical dairy tests for determining the relative value of different breeds of cattle as milk and butter producers and of methods of feeding. The records and results of this school, unquestionably, will be of lasting benefit to the dairy interests of the United States and of the world. In speaking of this, Mr. Buchanan says that too much credit cannot be given to the dairy cattle associations of the United States, which, by their generosity and public spirit, have made this excellent feature of the Exposition a certainty.

Connecting the Agricultural Building with the Machinery Hall is an artistic structure known as the Assembly Hall. This will be devoted to discussions by various agricultural societies, national organizations of farmers and live stock associations, of questions of interest to agriculturists throughout this country.

All visitors will be interested in the agricultural exhibit, but its chief value will rest upon a much broader and more significant fact. The exhibit will afford a vast amount of information to many thousands to whom it will prove of incalculable benefit. The crops best adapted to different localities and the reason therefor, the most improved methods of cultivation that are being pursued, the best results that have been secured and the manner of their securing, and the perfection of products in every line—all these will be shown and will constitute the more important lessons which the agricultural exhibit will teach. Through the thousands who learn these lessons, and are sure to make practical utilization of them, the agricultural industries will receive such an economic readjustment and impetus as will result in increased productiveness and merit, and general benefit to the entire country. OCCASIONAL.

Proposed Survey of California Valleys.

At a recent meeting of the Technical Society of the Pacific Coast, held in San Francisco, Willard D. Johnson of the United States Geological Survey, in charge of the topographical work now in progress in the gold belt of California, presented a plan for a systematic topograpic survey of the valley areas of California—a plan involving cooperation by the State Government with the Geological Survey Bureau of the Federal Government, the cost of the work to be equally shared.

It is proposed to have made a systematic and uniform contour map survey of all the valley and foothill areas of the State, to be engraved in atlas sheets of a quarter degree square each, on a scale of one inch to one mile. Each of these sheets—a quadrilateral of the earth's surface, 15 minutes extent in latitude and longitude—would include an area, varying slightly with the latitude, averaging 238 square miles, an equivalent of about 6½ townships. The paper dimensions of each sheet, with margins, would be 16 inches by 20 inches. To join these quarter degree units into a single sheet would be to give to the great central valley alone a length of 50 feet. It is estimated that for the valley and foothill areas the number of atlas sheets would be 140.

This map would be designed for general purposes. It would not be a cadastral map—that is, it would not show private property boundaries. It would be a topographic map, portraying the topography, or the relief of the surface, by the modern contour method, and exhibiting in addition the drainage system, the water bodies, the public property or political boundaries, the land survey lines (indicating the errors of position of their corners), the settlements, the railways and the public roads, and the canals and waterways not of individual ownership. In short, the map would depict on the one hand the natural features, and on the other hand the public "cultural" features.

The valley areas of California foot up about 33,000 square miles—four times the total area of Massachusetts. The cost of their survey would possibly be $200,000. The time required to do the work with thoroughness might reach six years. The expense annually would not exceed $35,000, and finished atlas sheets would be forthcoming at the rate of 20 or more a year.

To summarize the case for this State, we recognize at the first thought of comparison that California is topographically unlike the Eastern State referred to. It has a mountainous area of Alpine massiveness and roughness twice the size of all New England, and it has in addition a spread of agricultural lands four times the area of rock-encumbered Massachusetts, and not in scattered patches among hills, but in great valleys, one of them matchless in extent and promise. In the survey of the mountainous area the General Government is at present actively engaged. The work is of the highest modern type. The scale is well adapted to the country, and no expense will attach to the State. Eventually, when Congress shall authorize publication, the atlas sheets, nearly 100 in number, may be had, presumably at the cost of paper and printing—about 5 cents each. For the survey of the agricultural and habitable area, on the other hand, there is no present plan at Washington, and if there were, the resulting map, uniform with that for the mountains, would not meet the economic needs of the State, though meeting the needs of a Geological Survey. It is thus seen that, unlike the Eastern States mentioned, it is not necessary to map the entire State on the inch-to-a-mile scale; that the smaller scale is sufficient for about 125 000 square miles, and that this work is now in progress and well advanced. For the more valuable one-fifth remaining, however, a much more detailed map is needed. The precedents offered by the Eastern seaboard States presumably might be followed here, and this more detailed map secured at half cost—the additional cost of the increased scale.

Further Information Wanted on Hay Subjects.

Another Chance for a Prize Letter.

ENSENADA, LOWER CAL., May 8.

TO THE EDITOR:—I have read with much interest your "hay" articles and beg to ask that you will kindly include in your next series on that subject, answers to the following questions, incompletely answered in the present series:

1. The machine stackers most commonly used of the "Eclipse" type and which is the best in use.
2. The saving made by use of stackers over the old hay rack and fork method.
3. And, most important of all, in using sweep-rakes and stackers, can the hay be taken from the horse rake bunches and stacked at once; without waiting the usual week or ten days to permit sweating in the cock, in order to avoid molding in the stack?

If so, how long must hay lie in the windrow in the coast counties in ordinary weather, before it can be stacked, and how is the color preserved during this exposure to the sun. The advantage of stacking from the horse rake bunches, instead of from the cock, is that all the expense of hand cocks (necessary on account of our haying showers, if the hay is to be in the field even three days after cutting) is done away with. Experience here seems to prove, however, that without a week at least, in the cock, the stacked hay will mold.

Also kindly inform me as to *Chevalier* barley.

1. Why is it better than ordinary barley for hay?
2. Why is it better than bald barley for hay?
3. Why is it supplanting wheat-hay?
4. Has it the same range in climate and soil as ordinary barley?
5. Does it make the same yield as ordinary barley per acre?
6. Does it entirely do away with "sore mouth" in stock or horses fed on it?
7. Is it as good as ordinary barley in strength and yield if used for grain, instead of hay. READER.

These are good questions and should renew the hay discussion. Our offer of $5 for the best letter commenting upon the hay essays already printed, is still open. We will award it to the writer of the best letter answering the above questions.—EDS. PRESS.

Ramie Manufacture.

SAN FRANCISCO, 810 Castro St., May 16, 1892.

TO THE EDITOR:—The Department of Ramie Culture has been named by the State to have the ramie plant successfully introduced in California if possible. By correspondence, Mr. Walter T. Fowler of Atlanta, Ga., was invited to visit our State. He came, and has invested over one thousand dollars in machinery, to fully demonstrate that he can clean ramie fiber that has been decorticated and furnished him in ribbons.

Several trials of his "Patent Digester" were made in the city of San Francisco at Cor. Eighteenth and Shotwell streets. Samples of the fiber so degummed were sent to the San Jose Woolen Mills by the undersigned to test the practical working. White blankets containing half ramie and half wool were manufactured. They looked fine and soft, and no doubt will be strong and durable. Also cloth was made for gentlemen's suitings, which was good looking for spring goods, being of equal parts of ramie and wool. Much credit must be given to the enterprising manufacturers of the San Jose Woolen Mills for demonstrating the use of ramie in this manner. They say the fiber is good and works well on the machinery and blends finely with the wool, no trouble being noticeable. W. H. MURRAY,
Superintendent of Ramie Culture for California.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

THE HOME CIRCLE.

The Bivouac of the Dead.

The muffled drum's sad roll has beat
The soldier's last tatoo;
No more on life's parade shall meet
That brave and fallen few.
On Fame's eternal camping-ground
Their silent tents are spread;
But Glory guards, with solemn round,
The bivouac of the dead.

No rumor of the foe's advance,
Now swells upon the wind;
No troubled thought at midnight haunts
Of loved ones left behind;
No vision of the morrow's strife
The warrior's dream alarms;
No braying horn nor screaming fife
At dawn shall call to arms.

Their shivered swords are red with rust,
Their plumed heads are bowed;
Their haughty banner, trailed in dust,
Is now their martial shroud.
And plenteous funeral tears have washed
The red stains from each brow,
And the proud forms, by battle gashed,
Are free from anguish now.

The neighing troop, the flashing blade,
The bugle's stirring blast;
The charge, the dreadful cannonade,
The din and shout are past;
Nor war's wild note, nor glory's peal,
Shall thrill with fierce delight
Those breasts that never more may feel
The rapture of the fight.

Like the fierce northern hurricane
That sweeps his great plateau,
Flushed with the triumph yet to gain,
Came down the serried foe.
Who heard the thunder of the fray
Break o'er the field beneath,
Knew well the watchword of that day
Was "Victory or death."

Long has the doubtful conflict raged
O'er all that stricken plain,
For never fiercer fight had waged
The vengeful blood of Spain;
And still the storm of battle blew,
Still swelled the gory tide;
Not long our stout old chieftain knew,
Such odds his strength could bide.

'Twas in that hour his stern command
Called to a martyr's grave
The flower of his beloved land,
The nation's flag to save.
By rivers of their father's gore,
His first-born laurels grew,
And well he deemed the sons would pour
Their lives for glory, too.

Full many a norther's breath has swept
O'er Angostura's plain,
And long the pitying sky has wept
Above the moldering slain.
The raven's scream or eagle's flight,
Or shepherd's pensive lay,
Alone awakes each sullen hight
That frowned o'er that dread fray.

Sons of the Dark and Bloody Ground,
Ye must not slumber there,
Where stranger steps and tongues resound
Along the heedless air.
Your own proud land's heroic soil
Shall be your fitter grave;
She claims from War his richest spoil—
The ashes of her brave.

Thus, 'neath their parent turf they rest,
Far from the gory field;
Borne to a Spartan mother's breast
On many a bloody shield.
The sunshine of their native sky
Smiles sadly on them here,
And kindred eyes and hearts watch by
The heroes' sepulcher.

Rest on, embalmed and sainted dead,
Dear as the blood ye gave;
No impious footstep here shall tread
The herbage of your grave.
Nor shall your glory be forgot
While Fame her record keeps,
Or Honor points the hallowed spot
Where Valor proudly sleeps.

Yon marble minstrel's voiceless stone,
In deathless song shall tell,
When many a vanquished age hath flown,
The story how ye fell;
Nor wreck, nor change, nor winter's blight,
Nor Time's remorseless doom,
Shall dim one ray of glory's light
That gilds your deathless tomb.

Embers.

It was snowing, and Dick Snivers's old felt hat and meagre overcoat were all white and soft looking; you couldn't see the holes in the crown of the one nor the threadbare edges of the other. He shuffled slowly along the snowy path past the University, his chin buried under his coat collar, his shoulders up about his ears, his hands shoved deep into the breast pockets of his overcoat. Already there were a few lights in the windows of Matthew's, opposite, and a solitary black figure with a cape flapping about its shoulders could be seen across the yard, marching head down against the storm.

Snivers stopped in front of Weld. In one of the rooms in the north wing there was a red glow, telling of a good fire. Snivers couldn't help thinking, then, of his own poor little room in College House, with its white walls and deal table supporting a pile of battered books and a brass lamp, and its empty stove. It had been three days since he had had a fire. He couldn't afford to buy any more coal at present—he had figured on that half ton lasting longer. It wasn't so bad in the evening, because then he could sit up close to the lamp and keep pretty warm, but in the afternoon, before it was dark enough to light the lamp, it was very dreary; Snivers had rather shiver out of doors then than in his room, so here he was whitening all over like a miserable Santa Claus.

That room in Weld with the red glow in it, looked very cosy. There were curtains across the lower part of the window, so that only a bit of terra-cotta wall paper surrounding a small etching, and a yellow circle cast by a jet half turned down, were visible. The owner must have but just gone out, probably to dinner, for it was hardly dark yet, hardly six.

Snivers turned up the short path to the front of Weld, clumped through the dark, brick vestibule, and, with a creak and a thud of the door, entered the hall. It was really very cold outside, he would get warm here. It must be so comfortable to live in a place where the halls are warm, thought he, shivering underneath the gas jet, as he gazed at the sign prohibiting the building to "peddlers, beggars and book agents." He wondered if he would be taken for a beggar. Well, he was one, but a student, too—the "Beggar Student," he said aloud, with melancholy cheerfulness.

At the end of the hall there was an open door, through which, past the little vestibule, he could see the room with the terra-cotta wall paper. Over the floor flickered an orange light, flinging queer, trembling shadows about the room. "A wood fire must be burning there; I wonder if the feller'd mind if I went in," said Snivers to himself. "I guess he won't if he doesn't find me there. And such a fire as that—a wood fire—oughtn't to be wasted. To think of the feller wasting a wood fire!" With which economical reflection Snivers timidly entered the room.

There was an odor of cigarettes in the air that made the room seem all the more cosy. In one dark corner glowed the polished black front of a piano, the keys gleaming like white teeth on the grin; pictures, signs and shingles were scattered here and there on the walls, and beside a large desk in the middle of the room, littered with books, papers, tobacco and cigarette boxes and a couple of thin glasses, was a small, open steamer trunk. Before the fire there was a low arm-chair covered with a rug. With a final glance about the room, Snivers sat down upon the edge of the chair, holding his hands to the fire with a sigh of satisfaction, while the snow from his hat and coat trickled down in little streams, spoiling the rug of his unknown host.

"I'd better not turn the gas up," he soliloquized, "some of the feller's friends, or the feller himself, might see the light and come in. I'll sit in the dark—it's pleasanter anyhow with such a fire—"

Suddenly he caught sight of a little piece of paper, folded once across the middle, lying on the hearth. Mechanically he reached for it and examined it. "Why it's a check!" he exclaimed, as with trembling hands he held it in the firelight. "Pay to the order of Charles P. Graff $100," he read. It must be fine, thought he, to have $100 and to spend it on anything you wanted, as Charles P. Graff would do. Graff must be one of those fellows you see sometimes on Sunday afternoon, in long, loose overcoats and silk hats, boarding the electric cars to go into Boston. One of those fellows who think nothing of going to the theater when they want to, that can spend a whole hundred dollars on fun. Fellows that leave $100-checks lying on the hearth with the door open can't think much of $100. He, poor Snivers, had not even enough to buy a little coal. If he only had $100! and Snivers fell a-planning what he would do with so much money, staring into the fire. He wouldn't spend it all on himself, as Charles P. Graff would probably do. He would buy Tom a good fiddle, Tom who had such a genius for music—you can buy very good fiddles for $25 now. That would leave $75. He'd send his father $50—Snivers would so like to help the dear old grisly fellow, with his wrinkled, tired eyes and cheerful mouth, who had denied himself so much to send his son to college. Twenty-five dollars would buy him coal and clothes and a new hat. He really needed a new hat, his present one was really too disreputable; and perhaps he might—Snivers hung his head guiltily at the thought—he might go once to the theater, or maybe—twice—and a delightful but shamefaced smile flitted over Snivers's face. Ah, yes, there were so many things he could do with the money. But what was the use of dreaming? The check wasn't endorsed. If only the check were endorsed, then he could—Snivers suddenly straightened up in his chair. Well, what would he do? What good would that do him—was he—was he at heart a thief? What a mean man is a poor man! thought Snivers, blushing guiltily at the fire. It seemed to hiss back at him, forming many bright, grinning faces; it was no longer a comforting fire.

Snivers rose to go. "Hullo, Gus! is that you?" said a voice behind him. He turned hastily to the door. Before him stood a rather tall fellow, wrapped in a light mackintosh, with a felt hat pulled over his eyes, his trousers tucked into a pair of high arctics.

With a start the newcomer bent forward and peered into Snivers face. "Well, what are you doing here? he asked, quietly, as he stepped under the chandelier and turned up the gas.

"I—I just came in and sat down to get warm," stammered Snivers confusedly, and blinking in the light.

The man in the mackintosh stood looking curiously at Snivers, slowly drawing off his gloves. "That was cool in you," he said at length, with the faintest twinkle in his eye, "but where did you get that?" catching sight of the check trembling between Snivers's fingers.

"Why, I—I saw it on the floor—I was just looking at it—it's not endorsed," he added hurriedly; "it wouldn't have done me any good if I had—er taken it."

"Won't you sit down, Mr. ——."

"Snivers," said Snivers.

"Mr. Snivers? My name is Graff," said the man in the mackintosh, doffing it and snapping the lock on the door.

Snivers sat down, watching his host uneasily as he pulled the heavy curtains across the windows, kicked off his arctics, and drew a chair up to the fire. He was a big fellow, with a rather pale but pleasant face, his hair parted squarely down the middle, and with a self-possessed glance in his eyes.

Snivers laid the check on the desk. His host reached over and took it. Snivers noticed that his hand trembled as he read it. Snivers dropped his eyes to his host's yellow shoes. He felt himself being scrutinized, and he felt that he was blushing. Surely his host would think him a thief if he noticed this sign of gulit. Snivers wished his host would say something, instead of sitting over there and digging his keen eyes cheerfully into his (Sniver's) soul. Only the mirthful cracking of the fire broke the stillness and Snivers could not but feel that it was laughing at him and pointing him out to its master as a thief.

The silence must be broken. So, still avoiding the sharp scrutiny of the eyes he felt fixed on him, and fingering his ragged hat, Snivers began hesitatingly. "I ought to—say to yer, Mr. Graff—that I—I didn't come in here to—to steal. I just came in to sit down and get warm. Your fire looked so warm—so cheerful, I mean, that I could't resist coming in. I happened to see that check," he glanced up half haughtily, half guiltily, and was surprised to see that his host was not looking at him. His face was hidden by his hand and he seemed to be gazing into the fire. The check still trembled in his hand.

After another silence, with an effort, Graff began hesitatingly, "Mr. Snivers, I suppose you're pretty poor. Whether you're honest or not has nothing to do with the case now. Now the Faculty—the Faculty—well, they think I'm a handball and they've used me accordingly. I haven't made a success of my college life—I don't believe my being here has done me or any one else the slightest good—so if you—er—you could accept—that check—well, I'd be awfully grateful. I'd like to be able to say I have helped somebody here, if not with my own brains, with the old gentleman's money, so—so—won't you please accept it?

Snivers thought of his own father and Tom. Why not accept—what was pride compared to making three people happy? Tom should have his fiddle, and Daddy—he would send him the whole $75.

"Mr. Graff," said Snivers, blushing, "I will accept it, thank you sincerely."

Graff endorsed the check and showe Snivers to the door. "I wish I were going to be here a little longer," he said, smilingly, "so that I could see you again. A warm fire is good, but a warm friend and a warm fire—well, I won't paint the good times you've missed through the efforts of the Faculty," shaking Snivers merrily by the hand.

"What a light-hearted fellow," said Snivers as he plowed his way back to his room; "he doesn't seem to care a bit about being expelled."

When Snivers held the face of the check under his little brass lamp that night, he was surprised to see how blurred it was; "I don't believe I understood that fellow," said Snivers thoughtfully shaking his head. H. B. Eddy in Harvard Advocate.

At Pacific Grove.

[Written for the RURAL PRESS by K. P. S. BOYD.]

To see once in a life-time a crestfallen expression on the face of a "boss carpenter" is worth living for.

"What does this mean?" said our lately arrived, next-door neighbor, a Philadelphia widow, indeed, whose slumbers had been rudely broken by dumping of lumber and tearing up of her kitchen door-steps.

"Why, madam," said politely the 'boss carpenter' "we are going to make you a fine porch here and a woodshed up to this hedge."

"You are not going to do any such thing; I have heard nothing about it. I hired this cottage for a month from the 2d of May, and the agent said nothing at all of any shed."

"That's a pity, madam; of course you should have been told. Well, you know it now. It will be a great convenience to you, as you see. My orders are to attend to it at once. The agent has been after me about it for a long time."

"There shall be no pounding on this house while my sister and myself are in it. We hired it for rest and quiet, and not to hear hammers and nails."

"But, madam (persuasively), you see the letting season begins here in June, when rents jump right up, and this furnished cottage with five outside doors will rent easy for fifty dollars a month; and then I've other work to attend to, and must do this now. Sorry to trouble you, of course, but we will hurry it up."

"You will not do anything of the kind. I will not have any pounding; you will both of you leave, and take that lumber away. I never heard of such proceedings in all my life. *Good morning*," and she majestically closed her kitchen door.

Not a word was said by the two men for several minutes; then the "boss" looked at the young man, who began to grin, and kept on grinning till he had to sit down on the upturned step and hold on to his knees with one hand and cover his mouth with the other. The elder man examined the roses and the tall, pale foxgloves beside the house, while he rubbed his chin and then said: "She is right; you go and work for —— when you have fixed up that step."

Oh, the puzzled, downcast and discomfitted expression on that head carpenter's face! It was simply impossible for us to then abstain from stepping out of our cottage door (in the same garden) and going near enough to him to see his face, while we also examined that rose vine. We had been as much surprised to hear the carpentering begun as the widow was, and could not help hearing the conversation and rejoicing that Philadelphia brotherly love won the morning. But we, not being widows indeed, are so used to giving man the dominion, that we should certainly have let those carpenters give us splitting headaches with their "pounding," or run away from home to the beaches, and let them make all the woodsheds they chose and been thankful, inasmuch as we have to keep our 12 inch sticks of wood under the dining-table and sit sideways at our meals. We never should think of eating in our woodshed, but it is quite another matter to keep wood in our dining-room. One would not eat in the kitchen, but one might, on occasion, cook in the dining-room, especially if, as to-day, one had a fresh abalone (Haliotis—"ear of the sea") to chop and boil until perfectly tender, with a little pork and potato, for our delicious soup, tasting very like, but much nicer, than clam stew. Sole and all fish are very nice and cheap here. Of course, a dinner is not a dinner without fish.

The lumber was carted away that same day, leaving the big bench and box of tools; and next time I fancy the agent will consult his tenants before making additions to houses.

There is nothing to mar the music of the hosts of little linnets that sing, from quarter before five in the morning till dark, in the gently murmurous pines over our heads. One linnet is now carrying off the ragged edge of our ancient door-mat, and looks through the open window at us from our piazza rail, where her red-breasted, red-headed mate sits and sings and pecks at the nasturtium seeds. Of course, there are no English sparrows here, or we should not have these charming songsters.

On the beach, we watched a duck floating to and fro on the waves, as the tide was coming in, till she was washed to the sand, when she stepped ashore and waddled about, in great contrast to her grace upon the water.

Finding nothing to suit her bill, she embarked herself again on the rolling sea and floated along by the sharp rocks to the next short stretch of beach, which she in turn visited for living mollusks, torn by the waves from the rocks.

The view of the blue water through these gray, gnarled old cedars is most charming, as all Californians know. Though the coast is not very high, the waves dash with tremendous fury, sending their spray over the pine trees at Pacific Grove that grow on the very edge of the cliffs, wisely left in their beauty by the railroad company. On other days the water is as calm as a pond and reflects the trees and rocks and sail-boats "as in a looking-glass." We gather many little *haliotis* from the size of a grain of barley to that of an inch long, and pick up large ones thrown away by those who take them from the rocks under the seaweed in boats, and cut out the large thick muscle or "foot" for food. It resembles a pat of butter set upon a larger oblong slab six inches long, delicately fringed and scolloped around with gray trimmings—solid, an inch or two thick. The top of the "pat" is fastened into the inside of the shell where the highest coloring is, as that round, hard part of the oyster is fastened to its shell. We have heard it spoken of as being "as tough as sole-leather;" but those we have chopped and slowly boiled have been tender, so we could eat them all and enjoy it. The under part, the paunch, the long gills under the holes where the sand and water, not desired, are spouted out, and the mantle are very interesting, but not generally eaten. The black abalone, *Haliotis Cracherodii*, the "black turban snail," *Omphalins fasescens*, "blue wire snail," *Calliostoma costatum*, the "top snail," and the limpets that have the "owl" inside, and are polished and made into the fashionable Monterey spoon, *Acmæa spectrum*, are found living on the rocks here, and many other little beauties, especially the dark-brown, variegated, rice-shaped shells and tiny red-spotted pheasant-shells abound on the sand where that duck took her promenade.

The air is delicious and invigorating; the sweet wild flowers and the rarest of cultivated ones are all about this heaven of a prohibition town, where life is indeed worth living.

Odds and Ends.

Written for the RURAL PRESS by MRS. J. HILTON.

There is one form of cruelty to animals that I wish to protest against, and that is turning an animal out to die. I have seen horses staggering along, too weak to go and get a drink, yet living days and days, and I have seen them lie down and have no strength to more than raise their heads, yet not die for two or three days. Oh I think it is so cruel. If the owners cannot kill the horse themselves, which I do not blame them for not doing, yet they could get almost any one not used to the animal to do it for a small sum. Friends, if your horses are too old to work, do have them put out of misery. Merely turning them into a pasture is not kindness, for weakness and loss of teeth often debars them from getting nourishment and they slowly starve.

As we live on a main road we are often visited by tramps, and we rarely deny them anything, and sometimes when there is an extra lot of pancakes or Johnycake left from breakfast the remark is made that they would be nice for some poor fellow who needed a breakfast. The other evening our little four-year-old was watching her papa eating his supper, and as he had been working pretty hard was eating heartily. Missy spoke up, "Don't eat that all up, papa, leave some for the tramps." So we have that saying for a caution now when one eats too much.

I want to tell the young folks handy with hammer and saw to make a reading friend, an inclined book or magazine rest. A very convenient size for a center table is a board 12 inches long and 8 wide, then nail a piece 12 inches long and 5 wide to one edge so that the large board is inclined, and on the other edge add a piece 12 inches long and 2 inches wide to prevent the book from slipping off. It can then be covered all over with some cloth that matches in color the rest of the colors in the room and you will have an article that will make a reader think grateful thoughts of you when reading. A large one, arranged so that mother's bible an be permanently open in her room, gives pleasure to many.

Another article made the same way, only a little wider and not inclined quite so much and without the lower piece, put on a table in a corner, and a collection of pencils and pens with a small inkstand by the side and paper and envelopes underneath, will induce the youngsters and often the older ones to write letters, when without the conveniences many a letter is unanswered. When I know that a family keeps the ink on the mantel, the pen anywhere, and the writing paper in the bottom of the bureau drawer, and the envelopes in the trunk, I do not expect an answer to my letter for one year at least. Parents, if you do not care to write letters yourselves, have the things arranged handy for the young folks and let them write, or try to, whenever they want to, as writing, like every other accomplishment, must be often done to make one proficient.

YOUNG FOLKS' COLUMN.

"Maria's Song."

A Story of Italy.

Written for the RURAL PRESS by MARIE EVELYN.

"Four o'clock! and Francesco does not come," cried Maria, looking at the clock for the fiftieth time that afternoon.

"My lesson begins at four, and I shall be late, and never know the song after all."

Maria spoke aloud, because she was excited, and as all the children had gone home, she was alone in the large schoolroom, with no one to criticise her remarks.

She was a little Italian girl of ten years, with a pale face, large, eager, dark eyes, and long, brown hair wound round the top of her head, like a Japanese lady's.

Maria's mother had died before the child could remember. It seemed to her that she had always lived with her father, Madelina, their old housekeeper, and Francesco, their cook, in the old house in the Via degli Alberi (The Street of the Trees), in Milan. Il babbo (papa) was very good and kind, but strict, so was Madelina, and Maria seemed to be always studying or practicing.

"Five minutes past four." She spoke English now, but very slowly, pronouncing each word separately with difficulty. "And school was over at half past three. I shall have no singing lesson," and the tears came into her eves.

Most little girls would exclaim, "Why did she not go to her lesson?"

Well, in Italy it would not have been the custom. Little girls are never allowed out alone in the city, nor big ones either, for the matter of that.

Every day Francesco took Maria to school and came for her. "Why," she asked herself, "should he be late to-day, when so much depends on having a good lesson?"

Maria learned English from Miss Clarke, an American lady who was studying singing in Milan. The child was beginning to speak a little, and her "babbo" had promised that if, on Christmas Eve, she could recite "Mary had a little lamb" in English, and could sing an Italian song, he would give her anything reasonable that she asked for.

The song was "Santa Lucia," and she had learned the accompaniment without much difficulty, but as for the singing, her piano teacher had given it up in despair. "I can never teach Maria to sing," the poor teacher had exclaimed.

But Maria would not give up the attempt. She had seen a doll, a beautiful large doll, with a trunk of clothes for every occasion, with shoes and hats to match each dress, besides a real sealskin cloak for cold weather.

"I *must* earn that doll," Maria had confided to her English teacher, and Miss Clarke had replied, "I will teach you the song"

"To-day is the last lesson, and I cannot sing Santa Lucia yet. Miss Clarke will think I am not coming, and go out," cried poor Maria in despair, as the schoolroom clock struck a quarter past four. "I will go and see if Francesco is coming," she added, and, snatching up her books and music, Maria ran into the courtyard.

It was beginning to grow dusk, and the doorkeeper perhaps thought all the children had gone home, for he was not sitting as usual at the entrance, so that Maria reached the street without being stopped. It was a quaint, narrow street, with a canal running at one side of it. Beyond the canal were old palaces with gardens, where the snow lay quite thick.

No Francesco was in sight. There was a man coming along the road, lighting the street lamps, and just as he lighted the one opposite the school, the clock of San Carlos church tolled half past four.

"My lesson is half over. Oh, how angry il babbo and Madelina will be! But I *must* go alone," cried poor Maria; "perhaps I shall meet Francesco."

If she had only stopped to think, she would never have dared to walk all the distance by herself. She had never been out alone before in her life, but then the circumstances were so desperate, to-morrow being Christmas Eve, that Maria forgot everything but her desire to reach her teacher.

"I will run fast," thought the child.

The roads were slippery, but she made good speed till she reached a rather lonely spot, with the canal on one side and the public gardens on the other. Maria hesitated. The great trees looked so dark and somber, and the white snow only made the shadows blacker.

"I wish I had crossed the canal by the last bridge," she thought; "but it would take too long to go back now."

At this instant a voice, a few yards away, began to sing her song—Santa Lucia.

Maria forgot everything as she listened to the sweet notes ringing out on the frosty air. "Ah! if I could only sing like that, 'babbo' would give me *two* dolls," she thought with involuntary envy.

Suddenly the song stopped, broke off in a sob, and Maria ran forward to see what was the matter.

Crouching against the granite railing of the canal was a little girl about her own age. A thin, brown child, in a washed-out cotton dress. Her face was partly hidden in the frayed black lace shawl she wore instead of a hat, and one of her worn wooden shoes had rolled off and was half buried in the snow.

"You poor thing!" cried Maria with Italian impetuosity. "Don't cry, *cara*. I would not cry if I could sing so beautifully."

The little singer uncovered her face. and stared with great, black eyes at the well-dressed healthy child kneeling in the snow at her side.

"Why do you cry? Are you cold?" asked Maria again.

The little girl sobbed convulsively for a moment, and her lips twitched as she answered:

"Why should I not cry? It is not because I am cold and hungry; I am used to that. My father has been in the hospital for three weeks, and to-day—to-day"—and here she sobbed again.

"Is he no better?" asked Maria, chafing the child's cold hand.

"He will never be better; he—O babbo! babbo!" she sobbed.

"Is he *dead?*" asked Maria in an awe-struck tone.

The child nodded her head, and Maria for a few moments went on chafing her hand in sympathetic silence. At length she asked:

"Why do you not go home?"

"I have no home," said the child sadly. "Babbo was ill for so long that we sold everything. My stepmother is not like babbo. She said I was a useless burden, and must make a little by singing while babbo was in the hospital. She has not money to find bread for her own children. Now that babbo will never come back, she will not give me a home.'

Maria was silent. It never occurred to her that she could desert her new-found friend, but she was sorely puzzled to know what to do with her. At length she said:

"Tell me your name."

"Gina," replied the child, placing her other hand over Maria's, as though to keep her from leaving her.

"I will take you too," said Maria, smiling, picking up Gina's shoe for her.

Miss Clarke was taking her five o'clock tea in her cosy little parlor, and wondering what could have become of her favorite pupil, when the maid announced Maria, and added confidentially, "Sono in duo" (there are two of them).

"Two!" said Miss Clarke, surprised, as Maria entered, leading a shivering, poorly dressed little girl.

"Miss Clarke," cried Maria, rushing up to her teacher, "this is Gina; she is the loveliest singer you ever beard."

Maria had touched Miss Clark in a tender spot. She was willing to welcome the most disreputable looking person who could sing well.

"And who is Gina?" she asked smiling.

"Hear her sing first," said Maria. "Gina, sing Santa Lucia."

Poor Gina did not feel in a very singing humor, and, seeing that the child looked embarrassed and unhappy, Miss Clarke observed:

"Play for her, Maria."

Maria jumped on to the piano-stool and sounded a few chords, saying eagerly, "Begin, Gina."

Gina began in a rather trembling and husky voice. It was a new experience to her to have an accompaniment, and she liked it, and soon forgot everything else in the music.

When she had finished, Maria asked eagerly, "Well?"

Miss Clarke had tears, actually tears in her eyes. "She has a lovely voice, Maria, lovely," she replied.

Like many other Italians, Gina sang correctly by nature. The language has a great deal to do with this, by opening the mouth and sending the sounds well forward. In addition to this, nature had given Gina a really beautiful voice and a correct ear.

Miss Clarke made the children eat some cake, and heard all poor Gina's story. Then Maria took her lesson. The child had no false modesty about singing badly before Gina.

"I have no voice," she said laughing; so Gina sang with her and helped her so much that Maria actually seemed to catch something of Gina's way of singing.

Just at the end of the lesson, old Francesco arrived, pale and excited. He had had a great deal of shopping to do, and the crowds in the stores had made him late.

"I will take Maria home," said Miss Clarke.

As for Gina, Miss Clarke and Maria took her address, after the former had given her a few francs, to soften her stepmother, and on the way home they talked about nothing but the little singer, and how they could have her educated to become a great singer.

Luckily Madelina was in a good temper, and promised Miss Clarke to forgive Maria's dreadful disobedience, on condition that the child promised never, never, to go out alone again.

"On Christmas Eve Maria recited "Mary had a little lamb" faultlessly, and then, going to the piano, she began Santa Lucia.

She knew the chords by heart, and, shutting her eyes, she tried to imagine herself out again in the road, listening to Gina's singing, trying to recall every tone, every inflection, that the little street singer had made.

Usually she spoiled her singing through nervousness and trying too hard to do well. To-day she forgot herself, and was only aroused by hearing her father exclaim.

"Brava, Maria! You will make a singer yet."

Nothing pleased Maria so much as her father's praise, and it was very rarely given. She jumped up and threw her arms around his neck.

"You are pleased, babbo?"

"Yes, I am pleased. Madelina has told me about yesterday, but you are to be forgiven this once. You must tell me if it is the doll you want."

Maria closed her eyes to shut out the vision of the doll, which she did want very much, as she answered:

"No, I want something that may cost even more than the doll. *Can* you afford it, babbo dear? I want you to buy Gina nice clothes, and get her into one of those schools where they educate orphan children."

"And your doll, Maria?" said her father.

"Oh, Gina shall be my doll," she answered. "Will you do it, babbo?"

Maria had her wish. Mr. Galli spent money and interested his friends in getting Gina into a good school. She is well cared for now, and is having a musical education. They say that she will probably become a great singer.

As for Maria, no doll could ever have given her half the delight obtained by the happy pride she takes in Gina, whom she always calls "my singing doll."



AGRICULTURAL NOTES.

CALIFORNIA.

Amador.

EXPERIMENTAL AGRICULTURAL STATION.—Sutter Creek *Record*: The station at Jackson was located in this part of the foothills through the efforts of Congressman A. Caminetti. Its location could not be better. The long chain of foothills along the Sierras has about its centre in our neighborhood, and the soil to be found in its wide area is represented in the ground of the station—the red and granite formation. The place itself lies in about as rough a country as could be picked out. There was no cultivation on the ground previous to the establishment three years ago. Clearing had to be done at great expense, much of which was paid for out of the very liberal contributions from the inhabitants of the county. The fencing and the building, as well as the team and spring wagon, were also paid for by the citizens. The collections were taken because the law says that only the carrying on of experiments shall be paid for by the funds at disposal, whereas the county which wants the improvements located in its midst has to provide for the establishing of the place. The area, 34 acres, was donated partly by Senator Boggs (22 acres), partly from the adjoining neighbors, McKay and Oneto. Three hills are enclosed by the fence, giving exposure in every direction, the ground being no better and no worse than any other place around this part of the country. Plantations are made of fruit trees and vines, and plots are laid out for forage plants. Whatever has been put out on the red soil is duplicated on the granite formation. There are about 140 different kinds of grapes under cultivation; half of their number on red, the rest on granite soil, making a total of about 4000 vines, of which all those put out in the first season will be in bearing this year. About 1000 different fruit trees take up the rest of the cultivated land, every variety of all kinds grown in California orchards being represented. The olives line an avenue from one side of the station to the other; the figs (56 varieties) will give shade to a road encircling the reservoir hill. The hill on which the residence is built is reserved for a natural park, in which all those trees and shrubs which formed the original growth will be retained. A turbine and pump located at the Amador canal which crosses the grounds, supply the place with water. A system of about 3500 feet of pipe and the necessary reservoirs and tanks take the water wherever it might be wanted. The difference of the lowest and highest point of the ground is 200 feet, the elevation above the sea, 2000 feet. Though the trees and vines could be irrigated, they have never received any water from that source since they were put on. The object is to try and grow the plants without irrigation, to show that keeping the ground open will do better for them than irrigating.

Butte.

SMALL VS. LARGE ORCHARDS.—Oroville *Register*: A leading fruit grower says: "Urge your people in the line of small orchards. Large ones are a detriment to the country and sooner or later the owners will go to the wall. It is true the large fruit orchard develops the land, but it is bad for the owner himself. He must employ a large number of men. He cannot superintend these men and keep them constantly employed at a profit to himself. There is more waste, greater loss and less profit in a large than a in small orchard, acre for acre. Some men will not earn what you pay them, and this is especially true when a large number are employed together. They are not all working in one place, like miners or laborers in many other occupations. They must exercise some skill and judgment to prevent a loss in handling your fruit. With a small orchard these losses can be avoided. Ten acres are plenty; twenty ought to be the limit in fruit-growing."

KEEPING ORANGES.—*Register*: Many let their oranges hang upon the trees till late in the spring or early summer, but Mrs. S. Titus of this town showed us some that had been picked the first of February and laid in a cool, dry place. The rind was thin, the flavor fine and the orange exceedingly juicy. The fruit was certainly superior to that left hanging upon the trees.

Contra Costa.

FRUIT CROPS AROUND CLAYTON.—Cor. Martinez *Gazette*: The prospects for fruit in this valley are not the best. Peaches and plums will be scarce and apricots not much over half a crop. Grapes will be a fair average, except where frosts have injured. The hail storm in March, when the trees were in blossom, was an injury. Almonds that were set were beaten off to some extent.

Fresno.

HOW TO HANDLE THE RAISIN CROP. —William Applegarph in *Expositor*: Let us launch out by combining in one solid organization, and dictate our own terms, for in union there is strength. I propose that we form ourselves into as many companies as may be necessary; the larger the plant the cheaper the work can be done. Then let each company elect a director, said directors to form a board which shall inspect all the packs, grade and fix prices, and sell all of the output each season. If this plan should be adopted universally, we can get from five to five and one-half cents this season, whereas, if done on the go-as-you-please plan, we will have to take starvation prices. We must cooperate or dig up our vines, there is no middle course. We can borrow money from the banks to pay, say, 2½ cents for fruit when received at the packing house, and enough to put up the pack in good shape. Suppose we don't sell all of our crop, is it not better to get an average of five cents for 85 per cent of it than to take 2½ cents for the whole? As to selling, the board handling the whole raisin crop of the State would be independent of middlemen and the other parasites who fatten on our labor. Every man, woman and child in the raisin-producing countries is interested in this question.

ORANGES ON THE FOOTHILLS.—*Expositor*: A large acreage of orange trees has been set out this year in Fresno county, along the foothills and also lower down in the valley. The question of successfully growing oranges in this county is no longer a matter of speculation. It has been successfully tried, and many fine trees laden with the golden fruit are yielding large profit to the fortunate owners. The thermal belt of the foothills will no doubt produce as choice an orange as can be grown anywhere in California.

Mendocino.

CROPS AT SUNOL.—Ukiah City *Press*: Some of the heavy grain was blown down and tangled up by the recent wind and rain storm, but it is generally concluded that the benefits outweigh the damage. Some hay was cut and will be damaged, but the amount is not large.

Monterey.

NO DAMAGE BY WARM WEATHER.—Salinas City *Democrat*: Inquiry among the farmers in town Thursday elicits the information that no material damage has been done to growing grain or fruit by the warm weather of the past three days.

CROP PROSPECTS.—Salinas City *Index*: Crop prospects are reported never to have been better from Salinas to and through San Miguel canyon along the Santa Rita road. Barley is the principal cereal, and a large acreage has been put in. H. C. Tuttle has a splendid barley and oat crop. The wheat on the Graves place, near Santa Rita, is magnificent.

Napa.

THE MUST CONDENSER TO BE ENLARGED.—Healdsburg *Enterprise*: We visited the must condenser at Geyserville the other day, and met Baron Von Schroeder, one of the principal owners of the establishment. The last shipment of must was made this week, being 50 tons, which was shipped to London. The Baron informed us that he intends to increase the capacity so that double the amount of grapes can be used, and he thinks that in time a heavy trade for must can be built up in America.

San Diego.

LARGE DEMAND FOR CITRUS TREES. — *San Diegan*: The season for the sale of deciduous fruit trees has about gone by, but the demand for citrus trees continues, and is, if anything, increasing. It has been well demonstrated that citrus trees can be safely and profitably transplanted at any time the trees are dormant for any reason, and when the earth is warm. Trees transplanted late last year have this year made the best growth. The planting of oranges and lemons will, therefore, continue until along toward the end of June. Geo. N. Nolan said that before the season closed the market would be cleared of all lemon trees and nearly all orange trees. "I have just been compelled," he said, "to order a new supply of our stock trees from the nurseries. The fact is, the demand has been far beyond what was expected, in view of the short rainy season. The original supply of trees was large."

THE SILK INDUSTRY.—*San Diegan*: At the Southern California Silk Culture Association regular monthly meeting, the principal business was devising ways and means for extending the silk industry all over Southern California, and also in calling the world's attention to the fact that this portion of the State is most favorably adapted to silk culture on account of the soil and climate. In proof of this, the reports of different members showed remarkable results in regard to the number of eggs hatched, the health of the worms, the size of the cocoons and the quality of the silk. A good average of eggs hatched is 80 per cent. Reports of different members claimed 100 per cent; loss of worms from disease, none; inferior and useless cocoons, none. It must be remembered that the ladies who testified to such unusual luck in these regards have been careful and painstaking in their methods. They have complied with conditions and not trusted to chance to escape disaster from violated rules.

DISTRICT FAIR.— Julian *Sentinel*: The Directors of the Twenty-second Agricultural Fair Association met at San Diego last week and fixed the date of holding the next fair from September 21st to 23d inclusive, and the place Escondido. It was decided to have no races this year, as they have heretofore been a losing card. The early date will doubtless prove satisfactory to all parties, but it completely bars out the apple show of this section. However, we have glory enough and will be pleased to see other localities that are earlier try their hand at an apple show. It is also early for our late potatoes, corn and winter vegetables. Notwithstanding all this, it will not be safe to hang out any tempting prizes, or we will gather a few acorns, Indian pine apples and nuggets, and go you one round for luck. Here's success to the fair. This locality will be on hand with something, if it is not larger than an Indian.

ORANGES AT CHOLLAS VALLEY.—Cor. National City *Record*: Some of the old citrus farms in Spring Valley are making a record. The old McRae farm, now belonging to W. B. Prentice and folks, and on which Mr. Prentice has introduced the flume water by flumes and pipes connecting with the great flume, has produced for sale this last season 1400 boxes of oranges and 600 ditto of lemons. The oranges were sold on the trees at $1 a box, but I don't know how the lemons were sold, as they are now being cured by the Prentice people.

Santa Barbara.

PETERSON'S FARM.—Santa Maria *Times*: Peterson's cheese has such a good reputation in our local market that his entire output is consumed right here at home, and there is call for more of the same quality. Mr. Peterson is milking 40 cows now, and is making about 80 pounds of cream cheese per day. Grazing is a little short on adobe land this year, and he is economizing in this line by herding his cows on the river. There was but little water running in the river the past winter, and a great deal of the river bottom is covered with a fine growth of alfilaria, clover and other grasses. His dairy fixtures are of the latest improved, and are kept clean and in perfect order. He has an unlimited supply of pure spring water, and makes cheese only through the heaviest milking season, when the milk is plentiful and very rich. He devotes his entire dairy to cheese-making until the green feed supply begins to give out, when he turns his attention to butter-making for the rest of the season. Mr. Peterson has a ranch of over 400 acres, all highly improved. He has a family orchard in bearing and an 80-acre orchard one and two years old. He has 200 acres of fine fruit land, all of which he expects eventually to plant to trees.

CARPINTERIA CROP NOTES—Cor. *Independent*: The rainfall of several days ago amounted to about three-quarters of an inch, and will result in much good, although causing some loss and much inconvenience at this time. A few farmers whose beans were planted just previous to the storm will have considerable replanting to do. Very little hay was large enough to lodge much. Some was cut, and consequently was damaged somewhat. Late hay and fall crops will be greatly benefited by the additional moisture. Fruit and nuts promise well (with the exception of certain kinds of pears and plums), and are coming forward promptly. It is likely that all the driers in the valley will be busy this season, as low prices for dried fruit will be against factory's buying green fruits to put up. The hay crop will be light for the area of acreage, the early sown being all that will make a good crop. Some wheat and barley will be threshed.

Santa Clara.

FRUIT AROUND MOUNTAIN VIEW.—Cor. *Mercury*: The fruit crop around Mountain View this year will be large with the exception of prunes, and they will produce about two-thirds of the usual yield. Cherries, apricots and peaches will be heavy, the late frost not injuring them in this section at all.

Sonoma.

FRUIT CROP PROSPECTS.—Santa Rosa *Democrat*: Charles Perry of the Sebastopol cannery says that the fruit outlook in the Gold Ridge district is more promising than the reports made public so far would seem to indicate. There will be a large crop of peaches, he says; cherries bid fair; Bartlett pears promise an average yield; apricots nothing to speak of; blackberries good; prunes less than last year; apples a heavy crop. The growers have done effective work in spraying their pear and apple trees.

Stanislaus.

GRAIN AND FRUIT NOTES.—Oakdale Cor. Modesto *Herald*: The late rains, while they have damaged more or less that portion of the hay crop which had been cut and remained in the field, will prove of incalculable benefit to late grain. Of the latter there is a large area in this locality, the yield of which, should the remainder of the season prove favorable, will be almost doubled by the late rainfall. In anticipation of the heavy crop from his almond and fig orchard, F. A. Sawyer is erecting a two-story drying-house in the rear of his residence. Mr. Sawyer's almond crop is exceptionally good.

Tulare.

A ONE-YEAR-OLD ORCHARD.—Visalia *Delta*: One year ago the J. D. Thorne ranch of 240 acres was almost a wide waste of land. Since that time a wonderful change has been wrought; dense weeds and underbrush have been cleared away for fruit trees. The ranch is conveniently situated, lying along a road on the south and one on the west. When the whole tract is planted to trees, it will present a charming picture to one who drives along either road. During the past season, 90 acres of this tract have been set out to fruit trees, divided into the following varieties: 2000 climbing plum, 2000 Robe de Sergent prunes, 700 Tragedy prunes, 300 prunis Simonii, 600 peach on plum roots, 50 orange trees and five lemons around the house. Besides the above, 120,000 Myrobolan plum seedlings, 100,000 peaches, 45,000 pears and 5000 apples have been set out for nursery stock. This nursery stock presents an even and healthy growth, and represents $30,000. The nursery stock is situated on the far northern side of the ranch, where the soil is naturally damp, being next the river. This land does not require irrigation, only cultivation at intervals. The upturned soil is moist, and remains so for weeks. The young trees are growing well. The 90 acres already planted to trees are doing remarkably well, and while the trees are not high, having been summer pruned and cut back, they present a vigorous growth, with plenty of stock and leaf, and well filled with buds. Geo. F. Beals, the superintendent of the ranch, said that up to the present time he has not lost a tree from improper setting out. He has been troubled a good deal by rabbits, but he has since protected the young trees with shakes, and the trees are growing well, having leafed out splendidly, although they were badly damaged. Sixty-one acres of the tract lie along the road on the west, and a good deal of alkali and salt grass were in it. The salt grass and alkali were thoroughly cultivated before the trees were set out, and the soil has been well tilled since. The trees are growing as well on the salt grass and alkali piece as on the best land on the ranch. This all goes to prove that careful and frequent cultivation will work out good results.

ORCHARDS AND VINEYARDS.—Tulare *Register*: The acreage now set to fruit and vines is very much greater than one might imagine unless he familiarizes himself with the facts. All kinds of fruit trees that are in bearing are well laden with their growing burden of fruit. Upon many trees so much fruit has set that the owners deem it necessary to knock off fully 50 per cent of the fruitage, in order to give the balance a chance to properly mature. This, however, is a common practice in this wonderfully productive locality, and is regularly attended to by the successful fruit raiser. The vines, of which there is a greatly increased acreage, have made rapid growth, and although somewhat injured by the late frost, there will this season be a large pack. In all the vineyards and orchards we visited, the care and painstaking method of cultivation was particularly remarked, there being no noticeable instances of neglect. The introduction of larger and larger areas of fruit and vines is bringing into prominence a more systematic and thorough manner of taking care of the crops. Nothing short of the best methods will please our fruit raisers, as nothing but success will succeed. With one of the most perfect systems of irrigation almost completed, with a soil that cannot be excelled and an enterprising people here located, we of Tulare are on the sure road to commercial greatness.

FRUIT SALES.—Hanford *Sentinel*: W. S. Porter, we hear, has sold his apricot crop on the trees for $75 per acre. B. V. Sharp was offered $65 per acre for the crop on his three-year-old trees and would not take it. B. A. Bateman sold his orchard by the lump for $450. The Railroad orchard at Armona sold for $3700 last Tuesday. Harding has had several offers for his but has not sold. A. M. Stone has been solicited for a sale several times, but we have not heard whether he has sold yet or not. Seventy-five dollars per acre for the fruit on the trees, without any handling to the owner of the trees, looks like a very fair price this time of the year. It is ten per cent on $750 per acre land.

Ventura.

CROP NOTES.—Sespe, May 16—TO THE EDITOR: Two weeks ago many of us felt pretty blue—late barley gave every indication of being almost a total failure; earlier sown was fast ripening and nearly ready to cut; corn and beans were a very uncertain article; gardens and potato fields were fast drying. But our two inches of rain have done wonders; and subsequent weather has been moist and most propitious. Late barley looks fresher and more unfit to cut than it did two weeks ago, and will be good, although light. Early barley is being cut, some being baled; it is good, some of it heavy. Beans and corn now being planted; whether there is sufficient moisture to mature them is a problem. Corn that is up looks well. On the whole we shall have a fairly prosperous year.—S. P. SNOW.

HONEY CROP.—Ventura *Democrat*: L. S Snuffin, a bee raiser near Newhall, says he will have to go without honey this year. The rains were a little behind hand to make honey.

Yolo.

FARM NOTES. — Winters *Express*: Scott & Lowe have gathered in their flocks of sheep for shearing and are marking their lambs. They have had 12 men shearing for three weeks and the increase of their lambs is about 2000 this season. There is plenty of grass now fit to cut, but the farmers are waiting for the weather to settle before commencing to hay. F. N. Cutt, of Sacramento, bought Scott & Lowe's wool, paying 18 cents per pound for it. The grain crops never looked more promising than at present. W. J. Cannedy has four eight-horse gangs and three single plows running. He has erected a large water tank near his residence; both horse and wind power are connected. Carpenter Shaw, of Winters, did the work.

Yuba.

WEATHER AND CROPS.—Wheatland *Four Corners*: The weather has been unusually warm the last few days, the mercury playing around the 80 notch. A mild north wind accompanied the warm wave, much to the satisfaction of the farmers. From late reports, the last heavy rain did no damage of any note to hay or grain. In some few fields a trace of rust is found and heavy grain is slightly out of perpendicular. On the bottom lands the heat has rushed all crops forward. In the hop yards the growth of the bine can almost be seen with the naked eye. The growers are busy training. Although the yards are about ten days behind, good growing weather from now will make considerable difference.

ARIZONA.

CATTLE NOTES.—F. B. Logan in Tucson *Citizen*: One of the most promising towns along the S. P. railroad in Arizona is Willcox, situated in the Sulphur Spring valley. It is estimated that upward of 15,000 head of cattle will be shipped from here to Montana, Wyoming and Kansas during the next few months. Already shipments are being made, and buyers have arrived to secure large lots. Among them, J. M. Holt of Montana will alone relieve the range of 5000. J. B. Insley and A. R. Reader have purchased 2000 of two-year-olds of Mr. Hooker at $11.50, which is somewhat above the regular price paid, his stock being of superior quality.

WASHINGTON.

CROPS IN EASTERN WASHINGTON.—Ellensburg *Capital*: Never in the history of this valley has the outlook for a good crop been so fine as it is to-day. The unusual rainfall of March, April and May has got the ground in perfect condition for working, while the fall-sown grain has been nourished and stimulated to a wonderful degree and now presents a magnificent appearance, many fields of it being from eight inches to a foot high. The acreage is gratifyingly large and consequently the yield will be fine. A good many are predicting an average yield of from 35 to 45 bushels per acre, and judging by present appearances the predictions are not unreasonable.

The Red Cedar Shingle Business.

It is now acknowledged in the East that red cedar shingles from this coast have obtained such a foothold in some markets that no other kind can be sold to any great extent. Carpenters like them because they are light to carry aloft, because they are wide and because they can lay them rapidly. The house owner likes them because they will stand the test of time. Numbers of new shingle mills are being erected on the northwest coast, especially in the State of Washington—so many, in fact, that the question arises, "Will the business be overdone?" The *West Coast Lumberman*, in speaking of the subject, says:

The above question is often asked but seldom answered twice alike, but usually with many ifs and provisos. The question presents problems that are new and perhaps not susceptible of a positive solution, but from the general "layout" we think a reasonably safe answer can be made in the negative. It is true that shingle mills are going in rapidly. At no time in the history of this coast has the increase been as marked as it has since the close of last season's business. Mills are still going in, and it is safe to say that at the close of this year the cutting capacity of our shingle mills will have increased from 75 to 100 per cent over the past year's capacity. Not that the number of mills have increased to that extent, but a large number of the old mills have added new machinery. The statement from actual figures is that one large machinery house in Seattle has sold machinery in the past few months which has a daily cutting capacity of 2,500,000 shingles, or more than 6000 cars a year. This is more than was shipped last year from this section. So much from the affirmative side of the question. Now what have we to offset this? Let us see: In 1889, Manistee, Michigan, manufactured in round numbers 525,000,000 shingles; in 1891 the output had dropped to 200,000,000, or but 25,000,000 over one-third of the former cut. Again, at Muskegon, Mich., was formerly located what was known as the Irish mill, with a daily cutting capacity of 750,000 shingles. That mill was burned last year and will not be rebuilt. We note these two cases on account of their magnitude. Men who are posted say that throughout the districts which were formerly devoted to making white pine shingles the number of mills has greatly decreased. A case at hand is that of the Stinson Mill Co. of Seattle, which has abandoned their large shingle plant in the East, but now manufacture red cedar shingles at Ballard. Again, it is evident that the demand is growing at an unexpected rate, and the fact that our millmen are behind with their orders at this early date in the season is proof of the growth. Wholesale lumbermen in the East are trying—often without success—to contract for large quantities of our shingles. No better argument could be made for our side than that. It should not be expected from shingle makers that the demand will continue in advance of the capacity and a lull will follow, but nevertheless, by a fair construction of the rule of supply and demand, we believe that the former will not exceed the latter.

PRACTICAL USES OF GEOLOGY.—Though the practical value of geology has been, and still is, well demonstrated, there is a certain class of well-meaning persons who, from want of due consideration or lack of information, fail to see any direct benefits from the study of stones. Appended, are a few hints regarding the worth and results of geology. As a statement, geology is the sum of all the sciences, the foundation, the support, the very anchor that holds the rest, for it treats of our own earth, of its birth, rise, progress and the present state. Properly studied, it embodies the complete story of life, the great history of creation, the narrative of our very existence, the record of our own planet, our present home. To be a competent geologist, one must study everything useful and economical to explain causes and effects, reasons and results. As he journeys he involuntarily studies thoroughly the country he passes through—the botany, entomology, chemistry, zoology, mineralogy, and compares them with the silent wonders he saw sculptured in the rock that lived, flourished and died thousands of years ago. Astronomy is consulted as to the formation of this earth and its companions and visitors. From the little diatom, resplendent under microscope, to the huge reptiles 75 feet long, in stony silence petrified, the boundless, natural realm of mysteries opens wide its gates. All have a wonderful tale to tell—a story often beyond the grasp of man's puny intellect. But proofs are constantly carried around with you of the uses of mineralogy and geology. The metal buttons on your clothes, the knife in your pocket, your keys, not to mention the countless array of hardware everywhere, owe their cheapness to work of the persevering follower of science. This assertion is true. It cannot be denied. There are belts and lodes of mineral in the earth that have certain limits, sure and certain manner of occurrence and regular deposition. Here the mineralogist and geologist steps in and defines them, toiling away until the rocks tell their own story of hidden treasure. By deductions, the geologist locates mineral belts, natural gas, oil, marble and minerals. It is not to be forgotten that his theories have to be tried in the crucible of experience.

LIFE SAVING BY ELECTRICITY.—A most interesting apparatus was exhibited at the last meeting of the Frankfort Electrical Society. This was a poison cupboard invented by Mr. E. G. Kubler, of Akron, Ohio, and provided with an electric safety contrivance rendering impossible on the part of the chemist any error in the sale of poisons. The cupboard, which is well executed from an artistic point of view, shows a number of compartments closed by shutters and each containing a bottle. The current is supplied by two Leclanche elements, the conductors being so arranged that they run past each compartment, terminating finally in the armature of a relay. This armature in a state of rest closes the line, going from the positive pole to a plug cord. The negative pole is connected with a spring having a hole at its end, so that, when the plug is inserted in the hole, the current is closed. The current further passes through a number of electromagnets, one being contained in each compartment, and provided with a hook, which holds up the shutter closing the compartment. On the current being closed, the shutter is released and drops. The poison bottles in the compartments stand on hubs and are provided at the bottom with matrices. Beneath the hub is a second wire, which is held down by the weight of the flask, and which on the weight being taken off interrupts the current and causes a bell to ring. It will be clear from this description that, both when a shutter is opened and when a bottle is taken out, the current is interrupted and no other shutter can be opened until the preceding one has been closed and the bottle restored to its place. By this contrivance an error is excluded with absolute certainty.—Electricity.

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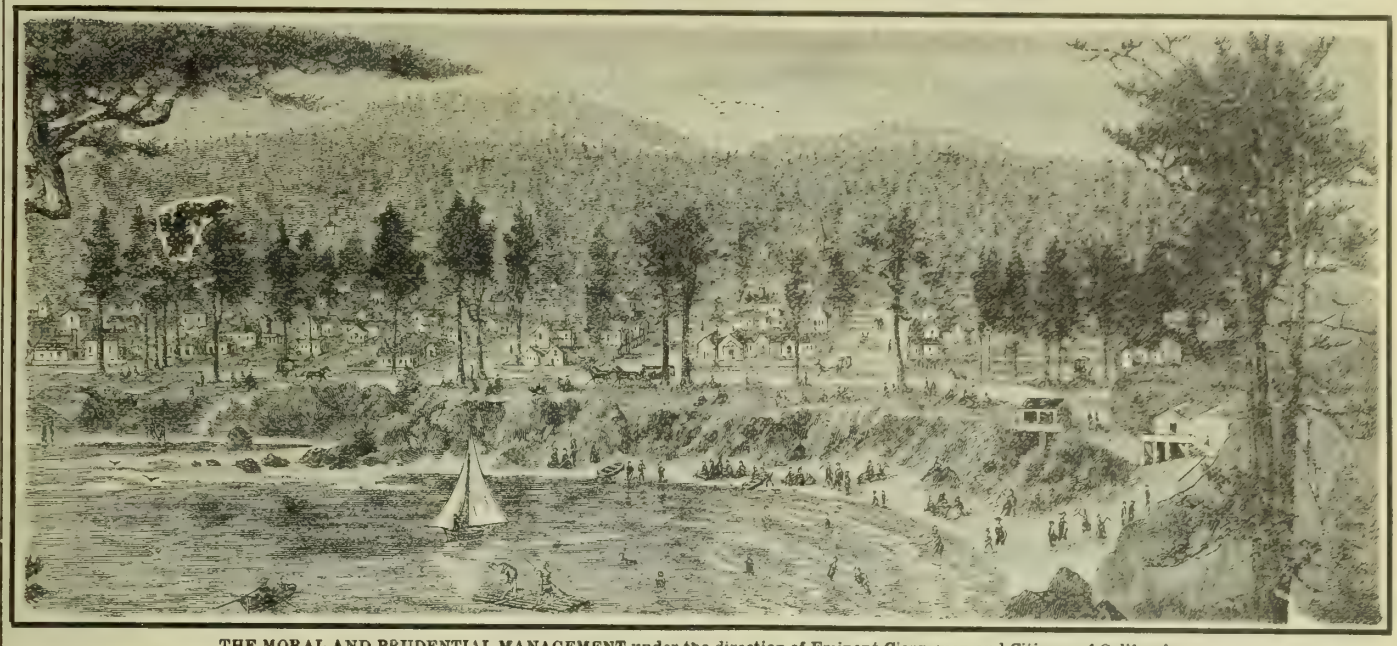
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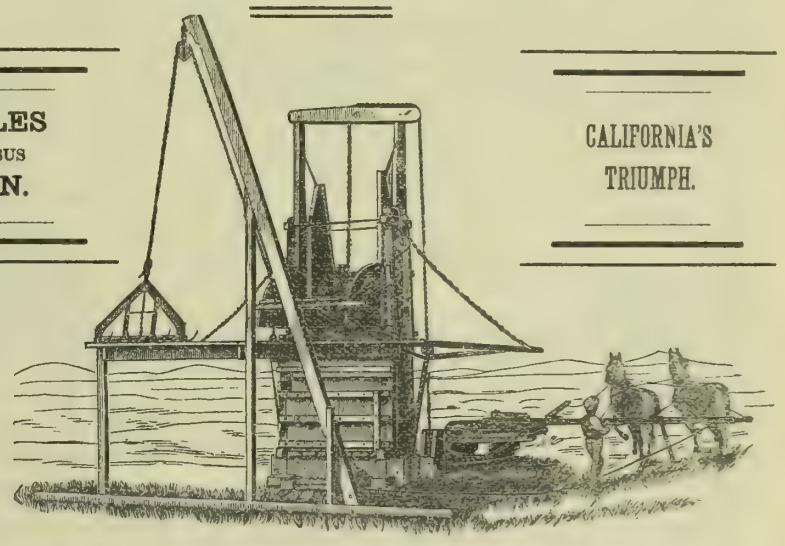
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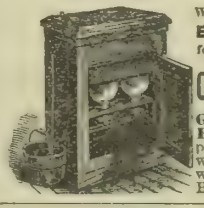
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THE VINEYARD.

Grape Interests at the World's Fair.

There was a convention of those in the grape interest on Wednesday and Thursday of last week. I. DeTurk of Sonoma county, presided. The chief subject for consideration was the exhibit of California grape products at the World's Fair.

After a general discussion, in which many participated, a committee was appointed to propose a plan for securing a creditable display in the lines proposed, as follows: Alameda, A. G. Chauche; Contra Costa, John Swett; Los Angeles, S. C. Bichowsky; Sacramento, H. M. Larue; Santa Clara, William Wehner; San Francisco, Charles Bundschu; Napa, S. P. Connor; Sonoma, D. D. Davidson.

At a subsequent session this committee reported as follows: First—That a general, harmonious and artistic exhibit of the grape and grapevine and its products, consisting of wine, brandy, raisins, etc., should be made in the California State building at the Columbian World's Fair. That a concentrated, classified exhibit should be prepared for the national building, for the purpose of competition and awards.

Second—County groups and individual producers should have therein as much distinctive recognition as practicable.

Third—Said exhibit should include all apparatus and paraphernalia pertaining to the production, preservation, racking and storing of wines, cellar utensils, cooperies and distilleries.

Fourth—The organization and collection of the exhibit should be managed by the State Board of Viticultural Commissioners, its chief officer and Supt. McNeil of the State exhibit. However, as the duties and labors connected with a faithful and judicious performance of this task are very exacting and complicated, we recommend the appointment of a committee which, in conjunction with the Board of State Viticultural Commissioners, the chief viticultural officer and the superintendent of the State viticultural exhibit, shall constitute the viticultural central committee in all matters pertaining to wine, grapes and viticultural products.

Fifth—The said committee shall be organized on the following basis: Wines (sweet and dry) 7 members, brandies 3, raisin grapes 2, table grapes 2, grapes and grapevines 3, cooperage 2, machinery, utensils and distilleries 2, literature and statistics 2; total 24.

Sixth—This committee should be appointed by the chair, with due consideration of a fair division of the viticultural districts, but principally with a view of concentrating its members within easy reach of San Francisco, so an executive committee may be enabled to establish a permanent communication with Supt. McNeil and the officers of the viticultural commission.

Seventh—When the amount of available space and appropriation of funds will be definitely settled the committee should work out its plans in detail, submit the same to the California State Commissioners, or to the chief of the Viticulture Department in Chicago, for approbation, and thereafter devise ways and means to successfully carry them through. Respectfully submitted, S. P. Connor, A. G. Chauche, H. M. Larue, D. D. Davidson, E. C. Bichowsky, Charles Bundschu.

The report was taken up and each clause acted on seriatim, the result being its adoption with a few minor amendments.

THE EXHIBIT IN THE STATE BUILDING.

The secretary read a copy of a letter addressed to the California World's Fair Commissioners, stating that the proposed appropriation of $6000 to the viticultural department was greatly inadequate to its needs and asking that it be increased to $12,000. The letter was mailed on the 3d of the present month and no reply had been received.

Mr. Haraszthy moved that a committee of three be appointed to ask for a reapportionment of funds.

Much discussion ensued and the chairman announced that the committee would be appointed later.

The following resolutions were offered and adopted:

Resolved, That the application of Hon. H. M. Larue of Sacramento for the position of chief of viticulture at the Columbian Exposition, under J. M. Samuels, is heartily indorsed, and that we, the viticulturists of the State in convention assembled, respectfully urge Director-General George R. Davis to appoint Mr. Larue at the earliest possible date.

Resolved, That the appropriation of $6000 for viticultural purposes set aside by the State World's Fair Commissioners is entirely too small to make a creditable display of viticultural products.

Resolved, That in view of the importance of viticulture in California, of the numbers of people engaged and the amount of capital invested in the industry, and of the important part that viticultural exhibitors will be called upon to take in preparing a creditable display in the California building, the State World's Fair Commissioners are respectfully but urgently requested to increase the amount set aside to at least $12,000.

It was then moved that a committee of three be appointed to again bring the matter properly before the State World's Fair Commissioners. The chair appointed Messrs. Larue, McIntyre and Stanly.

SHEEP AND WOOL.

Wool in the Census of 1890.

It is now only one month less than two years since work was begun on the eleventh census, of which one of the objects was the collection and publication of facts in connection with sheep husbandry in the year 1890. If it was the intention of the census authorities that their report should considerably antedate what the historian may have to say, there must have been some miscarriage of effort in that direction, for one-fifth of the decade is about closing over a practically exhausted treasury with flock statistics mouldering in office pigeon holes, while ex-employes are waiting for recall at such time as funds are forthcoming for meeting the expenses of compilation and distribution.

Such in general terms is the situation so far as sheep husbandry is to figure in the national census in 1890, unless exception be made in case of the short "preliminary report on the wool manufacture of the United States" sent out during the month just now closing. This little bulletin may have some interest for the wool grower as showing for the year 1890:

Number of establishments	2,503
Hands employed	221,087
Capital invested	$296,983,164
Wages paid	76,768,871
Cost of materials used	203,095,642
Miscellaneous expenses	19,547,200
Value of goods at factory	338,231,109

A considerable increase over the showing by the previous census, ranging from 23 per cent to 86 per cent, with the single exception of the number of establishments. This diminution is accounted for by the absorption of smaller mills by corporations and the general disappearance of custom carding-mills formerly so common.

But for wool producers, the chief interest in this report centers upon the item of raw "materials consumed." These were made up of 215,001,813 pounds of wool scoured ready for the cards and 88,318,073 pounds of shoddy, hairs, etc., with a supplement of 75,638,865 pounds of cotton. The most prominent fact in connection with the enumeration of these materials is the rapid increase in the quantity of hairs employed as substitutes for wools of the several grades. For instance, the item of camels-hair increased from 1,583,119 pounds in 1880 to 7,689,804 pounds in 1890; mohair from 159,678 pounds to 2,136,244 pounds, and other animal hairs from 6,335,169 pounds to 16,865,764 pounds. Ninety-three mills, employing 2266 hands, were engaged in manufacturing shoddy in 1890—an increase of 20 mills since 1880.—Breeders' Gazette.

A WOOL GROWERS' MEETING.—In response to numerous petitions, Governor Prince of New Mexico has issued a proclamation calling an Interstate Wool Convention to meet at Albuquerque July 5th to 7th. The object is to discuss sheep and wool interests in the States and Territories west of the Mississippi river. Delegates are invited to be sent as follows: From each State and Territory to be appointed by the Governor, ten delegates; from each county to be appointed by the Commissioners or Supervisors, five; from each city of over 25,000 inhabitants, to be appointed by the Mayor or municipal authorities, five; from each city or town with a population not exceeding 25,000, to be appointed as above.

IN California for nine years, beginning with 1867, the industry of wool-raising forged ahead rapidly. In 1876 the clip reached over 56,000,000 pounds, but two years after it fell off nearly 16,000,000 pounds. From 1878 to 1884 it ranged from 40,500,000 pounds to nearly 47,000,000. In 1887 the clip was the smallest on record. Since that year it has fluctuated from about 32,000,000 to over 34,000,000.

A WATER supply from tunnels driven into the hills near Oakland, Cal., is being developed by the Piedmont Spring Water and Power Co. The supply is being piped to Oakland and distributed there in competition with the Contra Costa Water Co. In all, ten tunnels have been driven, and, it is reported, 2,000,000 gallons of water per day developed. One of the tunnels is 1400 feet and another 1200 feet above tide water. Mr. W. W. Dingee is at the head of the enterprise.

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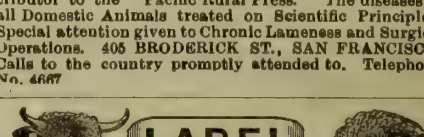
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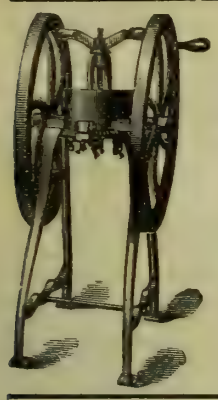
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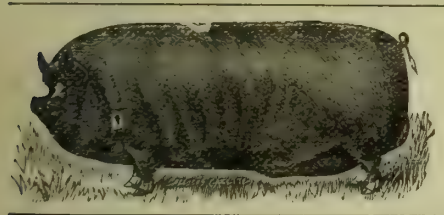
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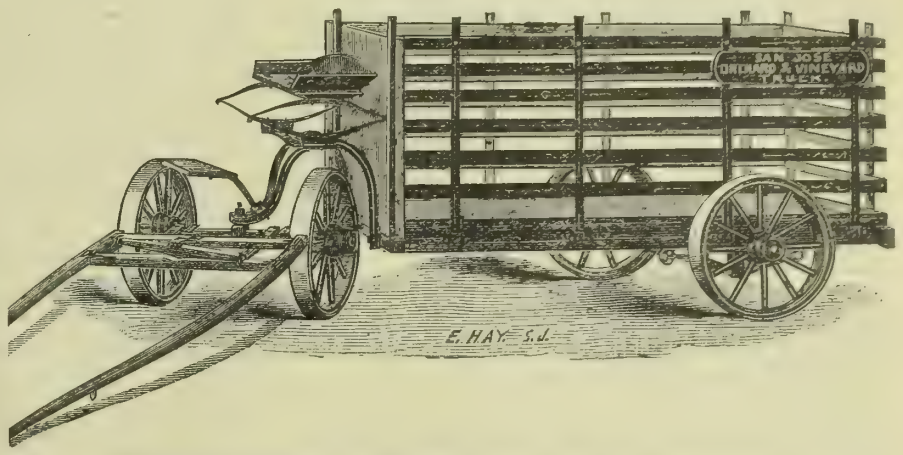
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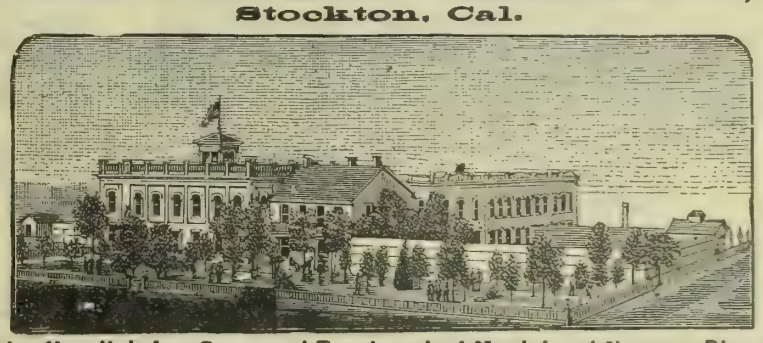
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The Nicaragua Imbroglio.

TO THE EDITOR:—The contention of the farmers anent the Nicaragua canal matter has thus far had reference only to the burdens which might be imposed upon commerce by the devices common to railway corporations. There is, however, an objection which goes to the legality of the charter and which is interwoven with the history of the Federal Government, as it was the incorporation of a bank by Congress, which first divided the people of the United States into parties.

That the power to grant charters of incorporation was not only not delegated to Congress, but was denied in such form as to leave no room for equivocation, is evidenced by the journal of the convention, which framed the constitution and the notes of debates by Mr. Madison.

On the 18th of August, 1787, Mr. Madison submitted, in order to be referred to the committee of detail with other powers, the following as proper to be added to those of the general legislature: "To grant charters of corporation in cases where the public good may require them, and the authority of a single State may be incompetent," and on the same day Mr. Pinckney submitted a list for that purpose, one of which was a power "To grant charters of incorporation." The propositions were so referred.

August 22d, Mr. Rutledge, from the committee to whom were referred the propositions of Mr. Madison and Mr. Pinckney, reported favorable to some of the propositions, but not to the power to grant charters of corporation.

September 14th Dr. Franklin moved to add after the words "post roads," Article 1, Sect. 8, a power "to provide for cutting canals where deemed necessary." Mr. Wilson seconded the motion. Mr. Madison suggested an enlargement of the motion into a power "to grant charters of incorporation where the interest of the United States might require, and the legislative provisions of individual States may be incompetent." Mr. Randolph seconded the proposition. Mr. King: The States will be prejudiced and divided into parties by it. In Philadelphia and New York it will be referred to the establishment of a bank, which has been a subject of contention in those cities. In other places it will be referred to mercantile monopolies. Col. Mason was for limiting the power to the single case of canals. He was afraid of monopolies of every sort. The motion being so modified as to admit a direct question, specifying and limited to the case of canals—Pennsylvania, Virginia, Georgia, aye, 3; New Hampshire, Massachusetts, Connecticut, New Jersey, Delaware, Maryland, North Carolina, South Carolina, no, 8. Madison Papers, p. 543, 544.

Here, then, the convention, by a vote of eight States to three, not only refused to delegate to Congress the power to grant charters of incorporation generally, but denied such power even when limited to a single specified case, and that the cutting of a canal.

From the day that President Jackson vetoed the U. S. Bank bill until the signing of the act of incorporation of the Nicaragua Maritime Canal Company by President Cleveland, it was not considered possible that any President owing his election to the confidence of the Democratic party could be so forgetful of its origin, so ignorant of the history of the Constitution or so blinded by ambition for reelection as to commit such a blunder.

What is more remarkable than Mr. Cleveland's blunder is the want of protest of an act which in principle effaced all distinction between the two parties and reduced them to contending factions struggling for the emoluments of office.

For the first time since the acquisition of California it fell to his lot as a Democratic President to do an inestimable service to his party and his country by securing to the people of the United States a quick and economic passage between the Atlantic and Pacific oceans through the Central American States. He was, however, found as destitute of statesmanship as he was lacking in trustworthiness.

It was a notable illustration of a small man in a great place; of a Democratic President who made a National bank president Secretary of the Treasury; who permitted the coin of the United States to be removed from the treasury and deposited in the banks for corporate profit; who argued with the fervor of a Wall Street broker for the single gold standard; who failed to understand that the restoration of constitutional gold and silver money, supplemented with representative coin certificates as currency was the burning issue of the period; who thrust forward in the closing hours of his administration an issue which, however meritorious in itself, found those for whom it was intended unprepared, and which not only defeated his party and himself but gave to the country the Billion-Dollar Congress, saddled upon the people a pension system heretofore unknown to the history of nations, and but for the patriotism of a few Republican Senators would have been instrumental in lighting the fires of an inter-race, if not another civil war.

That the cutting of the Nicaragua Canal is a matter of vital importance to the inhabitants of the Pacific Slope, of undoubted advantage to the commerce of all nations, and almost indispensable to the western coast of the United States, is well known. Indeed, the necessity for an Isthmic passage was so important that it received the earnest consideration of President Grant, the cutting of the canal was recommended by President Hayes, and during the administration of President Arthur a treaty with Nicaragua was negotiated by which the United States was to construct and own the canal and have a strip of territory three miles wide on each side of it. This treaty was sent to the Senate for its advice and consent, whereupon the British Government represented that it was in contravention of the Clayton-Bulwer treaty and further consideration was postponed until after the 4th of March, 1885.

Immediately after his inauguration, President Cleveland withdrew it, consigned it to the limbo of dead treaties and took no further interest in the Nicaragua Canal matter until the eve of his election, when he was induced to sign the bill incorporating the Canal company. O! what significance is the "Monroe Doctrine" if it be permissible to a foreign government to invade a neighboring republic by the trick of conferring the title of King upon an Indian chief and giving him a Consul for Prime Minister, assuming protectorship and refusing to abandon the invaded territory except on such terms as were assented to by the United States in the Clayton-Bulwer treaty—a negotiation in which Great Britain was represented by an accomplished diplomat and the United States by the timid and dwarfish politicians of a moribund party?

Is it possible that the United States are reduced by this improvident treaty to the alternative of forever beholding the citizens of the Pacific States with an ocean at their doors, and an isthmic right of way offered gratis, condemned to depend for an indefinite period, upon railway transportation alone, for the commerce of a greater part of their products, and the cities of the coast quite defenseless while the naval vessels destined for their protection are circling almost half the world or participate with a corporation in accomplishing the work by loaning the credit of the Government thereto?

Congress has power to borrow money on the credit of the United States, but it has not power to loan that credit or to guarantee the payment of a bond made by any individual or corporation. The commission of one unconstitutional act leads to that of another.

The guarantee, or purchase proposed, would be an evasion of the Clayton-Bulwer treaty, which would be objected to by Great Britain. Were the bonds placed upon a foreign market, the United States would object, and that very promptly, as it would leave them subject to acquisition by a foreign government, as witness the Suez Canal bonds which were acquired by Great Britain. In no event will the United States permit any foreign power to obtain control of the Nicaragua Canal either directly or by indirection, as it would subject their commerce to regulation by a foreign nation and leave them dependent on it for leave to pass their troops and ships of war, and would make Nicaragua and Costa Rica subject to domination by such nation or to the overthrow of their Governments. The truth is, if the bonds were placed on a foreign market, Great Britain would at the opportune moment give notice to abrogate the Clayton-Bulwer treaty, and would soon thereafter be found in control of the canal. This would provoke a war in which we might be successful, or necessitate more diplomacy in which we might again be outwitted. Any attempted negotiation, however, of the bonds should be followed by instant revocation of the charter by the United States and of the concession by Nicaragua and Costa Rica.

Nothing is more certain than that the farmers and workingmen have determined that there shall be a complete severance of action between the Federal Government and corporations, and that the powers delegated to Congress by the Constitution shall be administered hereafter without participation by such organizations; and hence there will be no legislation by the United States touching the guarantee or purchase of the bonds of the company.

Are we then to be indefinitely restricted to the route by Cape Horn? No! Let us give notice to terminate the treaty. Let the United States pay to the company, upon surrender to Nicaragua and Costa Rica of its concession, such an amount as may be agreed on, and such as will fully compensate that company. This, President Miller has just declared, the company is ready and willing to accept. We should hasten to purchase exemption from the folly and blunders committed in this signally important matter, even if we have to pay somewhat roundly for it, and then vitalize the Nicaragua treaty by returning it to the Senate for confirmation. M. N. M.

Is It Dangerous to Spray Fruit Trees with Poison?

The following report of experiment, made to determine the amount of copper and arsenic adhering to fruit that had been sprayed with Bordeaux mixture and other compounds, is taken from Bulletin 17 of the Hatch Experiment Station of the Massachusetts Agricultural College at Amherst:

GRAPES.

During the early autumn the Board of Health of New York City condemned several carloads of grapes as dangerous to the public health and ordered them destroyed, because they were slightly disfigured with the Bordeaux mixture which had been used by the growers to prevent mildew and rot. This caused a "scare" among the dealers and consumers, and a serious fall in prices, which affected the market more or less for the rest of the season. To determine positively the amount of copper adhering to the grapes grown in the college vineyard, two lots of fruit—of ten pounds each—were selected, one from vines sprayed with the Bordeaux mixture throughout the season, and which were very badly disfigured, and the other from vines that were treated with the Bordeaux mixture up to the middle of June, then with two applications of the ammoniacal carbonate of copper, and which were not in the least disfigured.

An analysis of these two samples was made at the State Experiment Station. In the first, sample No. 1, there was found only 2-1000 of one per cent of oxide of copper—an amount so small that one would need to eat from one-half to one ton of these grapes, stems, skins and all, to obtain the least injurious effect, and that notwithstanding the fact that the bunches were selected from those having the largest amount of the copper mixture adhering to them.

In sample No. 2 not a trace of copper could be found. It would seem from the above that even under the most careless use of the copper solutions, no injurious effects need be feared, and that when properly applied there will not be a trace of copper left upon the fruit at harvesting.

APPLES.

Early in December the *Pall Mall Gazette* of London, England, published an article headed "American Apples; Alarming Allegations—Are They Doctored with Arsenic?" Then the statement is made "that American orchardists use arsenic in such large quantities to protect their fruit from insects as to completely saturate it, and that the bloom or white powder found on the surface of American apples is arsenic, brought to the surface by evaporation, and if the fruit is eaten, this should be wiped off to avoid injurious effects; that the delicate, unnatural (?) bloom of the American apples is due to arsenic—a drug that is largely used by people, especially the fair sex in America, to make the complexion fair," and other statements equally absurd and without a shadow of foundation. These statements were undoubtedly made in the interest of speculators for the purpose of injuring the sale of American apples in the English market.

To determine the amount of copper and arsenic adhering to the surface of apples (for it could not have been absorbed into the substance of the fruit) which had been sprayed three times with the Bordeaux mixture and Paris green, 20 apples, measuring one peck, were taken to the State Experiment Station for analysis. The amount of copper oxide found on these apples was .022 of one grain. This equals about .0005 of one ounce to the barrel, or requiring 2000 barrels to yield one ounce of copper oxide. The specimens selected for this analysis were those with the roughest surface, to which would adhere more of the copper solution of Paris green than to the average apples.

Not a trace of arsenic could be detected in this analysis, as Paris green (average samples of Paris green contain about 33 parts of oxide of copper and 61 parts of arsenious oxide) was not used after July 1st, but it was probably all washed off during the three months following, before the apples were gathered, which was October 1st.

When we consider the fact that probably not one fruit grower in one hundred throughout the country used Paris green at all, and that not one barrel in thousands came from sprayed trees, the absurdity of the "scare" becomes still more apparent.

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BEING STRONGER, THEY ARE CHEAPER THAN OTHERS, and impart a most powerful natural color.
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Do you want a place where the peach, apricot, plum, pear, apple and every other deciduous fruit flourishes?

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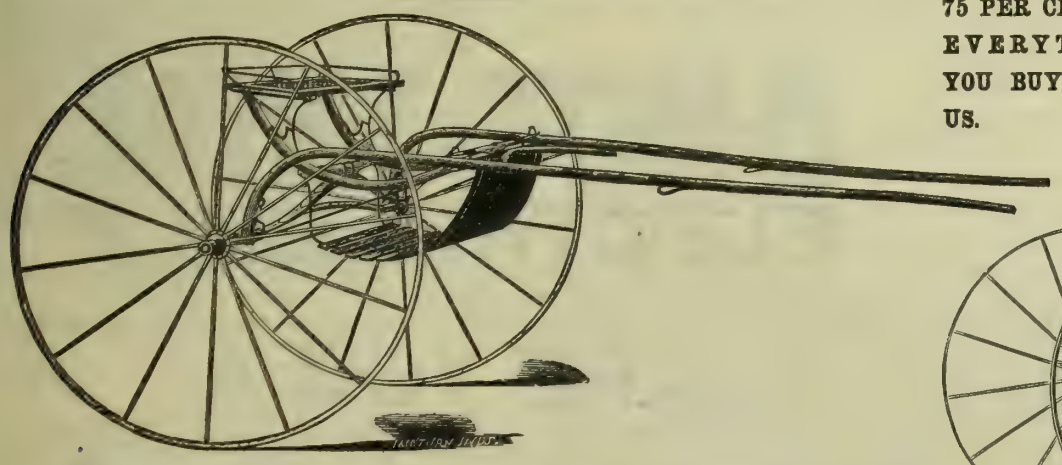
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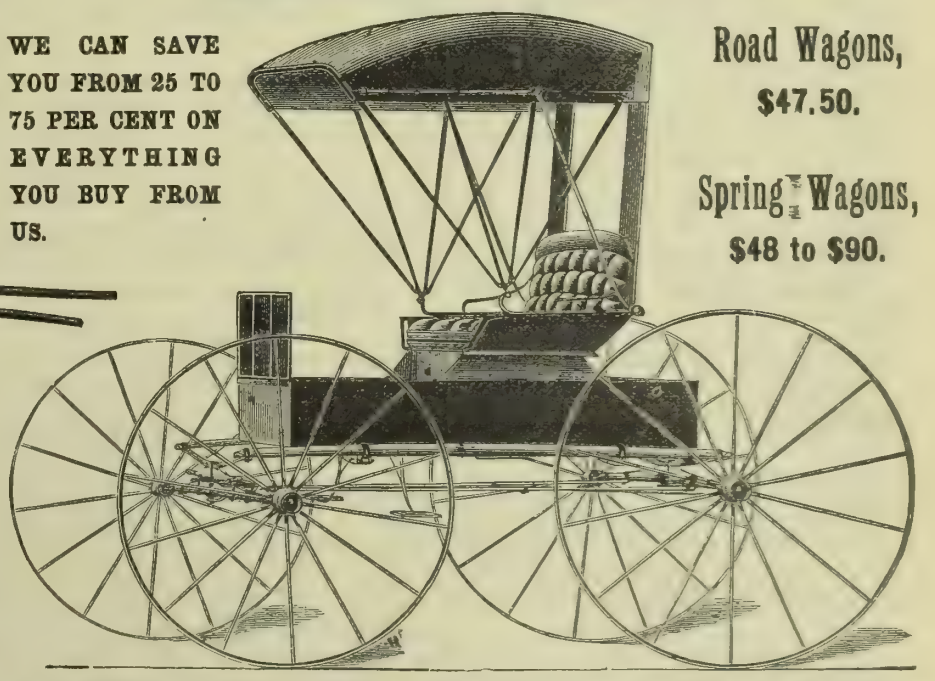
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(Mention this paper.)

DOMESTIC ECONOMY.

Tested Recipes.

Prepared for the RURAL PRESS by Ada E. Taylor.

Jelly Pudding.—Four eggs beaten separately, two cupfuls of sugar, one of butter, one of sweet cream, one of acid fruit jelly, two tablespoonfuls of vanilla. Beat the yolks thoroughly; cream the butter; mix the butter, sugar and yolks together, then add jelly, and lastly the well-frothed whites and the seasoning. Bake with an under crust. This quantity will make two very large puddings, or three medium-sized ones, and, where rich desserts are liked, will be found delicious. Such desserts should be perfectly cold before eaten.

Jam Pie.—One teacup of creamed butter, one of sugar, one of raspberry, strawberry, or grape jam, three eggs beaten separately, cinnamon, nutmeg and cloves to taste. Bake in perforated tin plates lined with rich pastry. This quantity will make two large pies.

Potato Pie.—Three eggs beaten together, a cupful and a half of sugar, half a cup of butter, and two large potatoes. Mash the potatoes and put the butter in while hot; add eggs and sugar. Beat all together thoroughly; season with orange or vanilla. After mixing well, bake in tins with under crust only. This makes two pies.

Cranberry Puffs.—One pint of cranberries, one pint of flour, two teaspoonfuls of baking powder, one teaspoon of salt, two eggs; add enough sweet milk to make a batter a little thicker than for cake. Grease six or seven teacups thoroughly with butter. Fill half full; set in a steamer closely covered, and steam an hour. They will come out perfect puff balls. They are spongy and absorb a great deal of sauce.

Pudding Sauce.—One cup of sugar, one egg, butter twice the size of an egg; stir to a cream. Heat one-third of a cup of milk and pour into the sauce, stirring it rapidly until it foams. Flavor with lemon or vanilla.

Devilled Ham.—Put a tablespoonful of mustard into a dish, mix with a teaspoonful of lemon juice; add half a teaspoonful of curry powder and a pinch of cayenne pepper; mix and spread over slices of cold, boiled ham. Broil and lay on a dish with sliced lemon.

Cream Biscuit.—Sift a quart of flour; add half a teaspoonful of salt; dissolve a teaspoonful of soda in a little boiling water, and stir in half a pint of thick, sour cream; mix the flour with the cream, roll out the dough, cut into biscuits and bake in a quick oven.

Grape Tarts.—Line small patty-pans with rich puff paste, and bake 15 minutes in a quick oven. When done, take out and fill with the following: Stew some grapes until tender; when cool, remove the seeds and add one cup of sugar to two of grapes; put on the stove and boil till thick. Cover each tart with meringue, and set back in the oven to brown.

White Cake.—Beat three-quarters of a pound of butter to a cream; gradually add a pound of powdered sugar, beat well, sift ten ounces of flour, beat the whites of 15 eggs to a stiff froth, and stir alternately with the sugar, into the flour; beat the whole very hard, turn into a greased pan, and bake in a moderate oven When cold, ice.

Salmon Salad.—Take one can of salmon, pour the juice off, and remove the bones. Then mash fine with a wire potato masher, or fork. Add salt, pepper, mustard and vinegar to taste. Chop fine two hard-boiled eggs, and mix thoroughly. Put on lettuce leaves and pour mayonaise dressing over it.

Cheese Straws.—Roll rich pie crust very thin; grate cheese thickly over it; fold several times and roll again; cut in fine strips, and bake to a rich brown.

PROF MUYBRIDGE, of the University of Pennsylvania, is strongly of the opinion that men will some day learn to fly. "Edison has told me," he says, "that he firmly believes a perfect flying machine some day will be invented, and that he believes the wing of a fly is the model upon which that machine will be constructed. Lubbock and Helmholtz, and Langley, Ray Lankester and Sir Wm. Thompson—a group of names that are probably the most renowned in the scientific circles of to-day—share Mr. Edison's opinion, and unite with him in urging me to make a study of the locomotion of insects upon the same system I adopted in my 'Animal Locomotion.'"

THE Souvenir Badge for the members of the National Editor's Association has been manufactured by Col. A. Andrews from gold silver and tin, products of the mines of California. The medal proper, which is of tin from the Temescal mines, is just the size of a silver half-dollar piece, but somewhat thicker. It is suspended from a silver bar pin by two short chains of silver beads. The silver bar, which is of satin finish, bears the letters "N. E. A." On the obverse of the medal the emblem of California appears in the shape of a small bear made of solid gold, and riveted to the medal with concealed rivets. Above the bear is the word "California," and beneath it the figures "1892." The reverse of the medal bears the legend in raised letters, "Gold, silver & tin products of California."

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"From actual analysis made by me, I pronounce the Royal Baking Powder to be the strongest and purest baking powder before the public. W. T. WENZELL."

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"It is clearly demonstrated and proven that the Royal Baking Powder is pure and wholesome and that it stands, as far as strength and purity are concerned, at the head of the baking powders of the United States. GRANVILE MCGOWAN, M. D."

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"GEO. A. BETHUNE."

State Chemist and Assayer, Washington.

"I find the Royal Baking Powder superior to all the others in every respect. It is entirely free from all adulteration and unwholesome impurity, and in baking it gives off a greater volume of leavening gas than any other powder.

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"The strength of Royal is shown to be 23 per cent greater than any other.

"As a result of my investigations, I find the Royal Baking Powder far superior to the others. It is pure and contains none but wholesome ingredients.

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"Finding in analysis that it is made of the highest grade of cream of tartar and bicarbonate of soda, and is entirely free from any adulteration, we heartily recommend the Royal Baking Powder for its great strength, purity and wholesomeness."
Signed by Members of BOARD OF HEALTH, Seattle, Wash.

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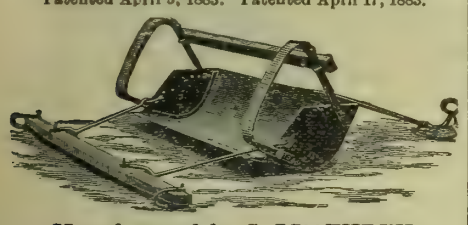


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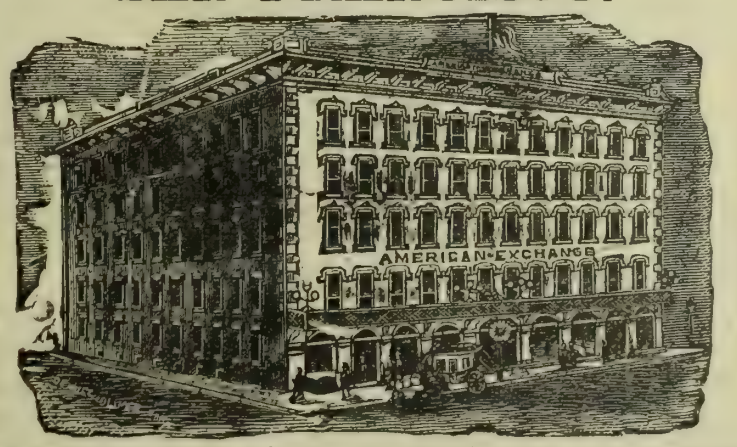
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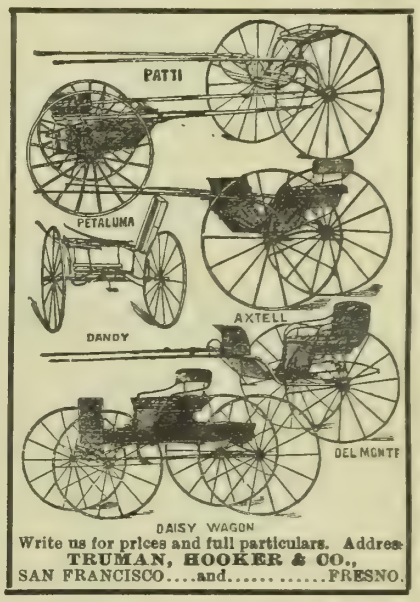
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THE STOCK YARD.

Selecting a Bull.

Before many weeks the question of selecting a bull will be occupying the minds of many farmers and stockmen, and I am prompted to speak of a few things that are not often considered in this connection. As a general thing, the search for the bull ends when one of good form in fair condition is found, providing, of course, that he is in reach of the seeker's pocket book. Few, indeed, look at more than the mere outward conformation. That is all right as far as it goes. To improve the form is, or ought to be, a prime object of improvement. But the bull should have something more than merely a good form to recommend him. He should have feeding quality, the ability to profitably convert the greater portion of the food he eats into flesh, and he should have what is most important of all in the bull—prepotency, the ability to transmit his own good qualities to his offspring. Form, feeding quality and prepotency must be combined in the most profitable bull, and one of the greatest causes of dissatisfaction and failure in breeding beef cattle is the lack of judgment displayed in being content with bulls that hardly possess more than one of these three most essential qualifications. Good form is generally demanded by every bull buyer. That is the *sine qua non*. Fortunately, although perfect form is not often met with, animals of good form are not hard to find in these days. Unfortunately, such forms are too frequently covered with little more than loose skin, and while such bulls may transmit their forms to their calves, they cannot transmit what is of more real economic importance to the western farmer, viz., feeding quality, for the reason that they do not possess it themselves. Hence the work of selecting a bull, if thoroughly satisfactory results are to be obtained, is not done even when an animal of unusual individual excellence is found. It is not always easy to judge correctly to just what extent a bull possesses feeding quality. To start with, he should most certainly be in good flesh. No excuses, such as "he has had no grain," "I've just aimed to keep him growing," and other like expressions, should be accepted. They may be true and valid. The bull may be all right and a good feeder, but it is doubtful. That is not the way good feeders are raised, and it is always best to be on the safe side, and let such a bull and such a breed alone. The only way to breed feeding quality is to feed, and the man who is forever making excuses about the condition of his stock may usually be set down as a poor feeder. The fact that the bull is in good flesh, taken with such outward indications as the head, size of bone, touch of skin, etc., is quite helpful in judging him, and in fact I consider it a safe rule to discard all thin bulls and use only those in good flesh. Now I know that some will object to such doctrine and talk about "breeding conditions," and the unreliability of fat bulls, the evils of pampering, etc. Such talk is getting most decidedly monotonous. It is a great pity about ten thousand times as many bulls are not pampered. The cattle breeding interest would be much better off if they were, and there would be considerable less growling among cattlemen. The bull kept in thin flesh may be a good feeder and get good feeding steers, but he will be an exception if he does, and exceptions are good things to beware of. They are not to be trusted. In addition to the points above mentioned, about the only other way to judge of the feeding quality is to examine his immediate ancestors. If the sire and dam, and grandsire and granddam, were good feeders, the animal in question is reasonably sure to possess feeding quality, but it is always well to look with suspicion on a bull whose immediate ancestors show themselves to be hard feeders and unthrifty doers.

In selecting a steer, if we can get one of good form and a good feeder, the work is done. But in a bull there is something even more important, if such a thing be possible, than either of these. We want him to impart that excellence and feeding quality to his calves. There is only one way to tell certainly whether he will do this or not, and that is to look at the calves. They will tell the story. Of course, if one confines himself to this way of judging of a bull's prepotency, he can buy only aged bulls. This is the plan followed by the greater number of our best breeders. They cannot afford to take many risks with young and untried bulls, and such are always used sparingly until their value as breeders is ascertained. It is a great wonder that more farmers and cattlemen do not adopt this plan. There seems to be a prejudice among such against bulls over three years of age, and, as a consequence, many first-class steer-getters are sent to market in their prime, simply because of an utterly foolish notion. The greater number of farmers must depend upon young bulls.

The degree to which a young bull possesses the power to transmit his own characteristics can only be guessed at, to say the most. There is no invariable rule for determining it. A study of his pedigree, or rather of the animals that compose his pedigree, will enable a good judge to make a pretty fair guess as to the young bull's prepotency. We hear a great deal of talk about pedigree. It began a century ago, and will probably never end. There is probably nothing new to be said about it. All animals have pedigrees. Some are called "good" pedigrees and some not so good. Just what constitutes a good pedigree varies greatly, according to the breeder who defines it.

For the man who wants a bull to sire good calves in every sense of the word, a good pedigree must be composed of the names of animals that for not less than five generations back were each and all individuals of pronounced excellence not only as regards form, but good feeders and useful, prolific breeders. With all the talk about pedigree there is far too little attention paid to it, and of all those who neglect it the farmers and stockmen who raise steers can the least afford to do so. Pedigree is the only guarantee the buyer has that his bull is better than a well-fed grade for breeding purposes, but in nine cases out of ten it is filed away in a pedigree hole and no practical use is made of it either before or after buying. The pedigree itself is worth nothing. The aid it gives in judging whether the animal is likely to transmit his own characteristics is invaluable.

First, then, get individual merit, for "like breeds like." Second, get feeding quality, for upon the flesh-producing capacity of the steer depends the feeder's profit. That, in connection with the other two, get a good pedigree, for only animals possessing such have the power of transmitting their own good qualities to their offspring.—Henry C. Wallace in Live Stock Report.

Cattle Sales.

We have been looking forward with some degree of interest as to what would be the outcome of several important sales of cattle that have recently been held at Chicago. Now that we have full reports, we are more than ever convinced that there is always a paying market for the best of everything.

This is no mere theoretical conviction, as the "proof of the pudding is in the eating." So have we proof of good cattle selling for good prices in every public sale of such that is held in every part of the country, be the breed what it may. Utility seems to rule the demand.

In the closing out sale of Messrs. C. M. Sanger & Sons, whose herd contained several show animals and prize winners, besides "cattle of all ages, from aged cows down to young things that could not be expected to command high prices," the average price for 53 head was $111.65. In this sale, the highest priced cow was the three-year-old Victoria of Glenwood 8th, red, white stockings all fours (not a taking color) that sold for $735. The second highest price was for $720 for the light roan yearling elsewhere referred to.

On the day following, April 20th, the consignment of 43 head, belonging to Col. W. A. Harris of Linwood, were sold for an average of $252, the highest of the series of sales.

The *Breeders' Gazette* says that at this sale was the largest gathering of Shorthorn breeders seen about an auction sale ring for many years. The cattle were nicely brought out. All females of breeding age were either safe in calf or had but recently calved, and the uniformly useful type of the cattle was the theme of much favorable comment.

On the following day were sold selections from the Bates-bred herds of Bronson C. Rumsey of Buffalo, N. Y., and Wm. Wright, Detroit, Mich., when 36 head sold for an average of $168.35. In this sale was the highest-priced cow of the season, so far, viz., the roan 4th Duchess of Hilldale. On the 22d of April the sale of C. H. Andrews' Bates-bred herd took place, when an average of $153.60 was realized on 39 animals. The *Gazette* says: "This sale was not so largely attended as the rest, its position at the end of a four days' series operating to limit the company largely to those who meant business."

At the four sales there were sold a total of 171 animals, for an average price of $168.50.

The average on 46 bulls sold was $186, and that on 125 females, $162.17.

The *Gazette* in its editorial remarks on the series has the following, which will be found worthy of more than a superficial perusal by those interested in breeding Shorthorns, or any other good cattle:

"There is certainly much encouragement for the Shorthorn cattle-breeding interest to be derived from a perusal of our detailed reports of the sale series held at Dexter Park, this city, last week. The one outstanding fact that must be observed with genuine pleasure by all intelligent breeders is the recognition accorded real merit wherever it was found to exist, regardless of bloodlines or color.

"Selling well up to that splendid Bates Duchess cow, 4th Duchess of Hilldale, will be noted a "plain" American-bred Crocus. She carries the blood of grand show cattle, however, and if properly handled will prove a stumbling block to all yearlings at this year's competitions. Be it noted further that both of these highest-priced females are roans—one of them a very *light* roan. The highest-priced female of the Sanger herd—the Sittyton Victoria that swept the show yards last fall—was bought by Henry F. Brown of Minnesota, one of our best-known advocates of the use of Bates-bred sires. At the Rumsey-Wright sale, the proprietor of the Linwood herd and various buyers of Scotch cattle at his sale were conspicuous bidders upon several Bates-bred heifers. It thus appears that the entering wedge which shall finally crack the shell of hide-bound partisanship has been given another well-directed blow, and the *Gazette* trusts that the lapse of time will serve to still further beat down the barriers of prejudice. Whoever attempts to perpetuate factional strife is a traitor to the true interests of the Shorthorn breed."

A Wonderful Machine.

Twenty-two years ago, in the city of Rochester, N. Y., James W. Paige began the work of constructing what at that time seemed an impossible machine. Assiduous labor, persistency of purpose, and an indomitable will finally crowned his efforts with success, and Dec. 24, 1890, in the city of Hartford, the inventor saw his work completed—a work which all who have been granted the privilege of seeing have pronounced the greatest mechanical invention of the age.

True, the machine does not talk, says the Chicago *Tribune*, but it reasons; reasons with its operator. It is a type-setting machine, and is called "The Paige Compositor," and it does the entire work of composition, setting ordinary movable type with far greater speed, accuracy and artistic effect than has ever before been accomplished by any method. The machine automatically distributes, and at the same time sets the type indicated by the operator, automatically spaces and justifies the matter without mental effort on the part of the operator, places it in a galley ready for book or newspaper, as desired, records the number of lines set, and "leads" the matter as and when required. All of this is accomplished by means of positive mechanism.

This machine is not to be confounded with any other machine, nor should it be called a mere type-setting machine. To see it in operation, to note with wonder its marvelous performance, one who understands, and even one who does not understand, the method of type-setting by the human printer, would call the machine a compositor in the truest sense of the word, as it performs simultaneously all the work of a human compositor. In an apprenticeship of less than 40 days, an operator has set 86,121 "ems" of solid, standard nonpareil in eight hours, an average of 8515 "ems" an hour. These figures are wonderful when one takes into consideration the fact that the average printer of to-day sets about 700 or 800 "ems" an hour with his time of distribution also considered. The machine, as has already been said, distributes its type while it is also setting. The work is all done simultaneously.

The machine is run by one-twelfth horse power and is now in private practical operation at Fifteenth street and Western avenue. It is probable that the directory of the World's Fair will offer one supreme prize for the best mechanical invention of the age; also one for that of electricity. For the former "The Paige Compositor" will be a competitor. That it will be the successful one is instantly and unstintedly accorded by all who have been to see it.

"I can print," says Mr. Paige, "a 200-page book, at a cost of $5, in twenty minutes. The operator has only to watch the keyboard and copy, and the machine will do the rest. An operator can average three or four characters at each touch of the keys, and this machine is the only one in the world for which there is no excuse for an error in proof."—Chicago Journal of Commerce.

GOOD HEALTH.

Night Air and Malaria.

"Ever since I can remember, I've heard changes rung on the necessity for sitting in doors at night, especially in malarial districts. To walk about much in the evening was deadly. To sit on the porch or door step was to take one's life in one's hands, while riding or driving were only permitted as matters of necessity, and the team generally went home against time, in order to get us in out of the night air.

Now, the physician comes in here and attends a patient suffering from a malarial disease, and after divers and sundry other directions, tells us, that, whatever we do, we must not shut fresh air out of the sick-room, even at night, but must have the windows so arranged that the ventilation will be as nearly perfect as possible.

Now, this is a malarial locality, at all events it is considered so, and the patient contracted whatever disease there may be, just here. If you will tell me what difference there is between breathing night air indoors, and night air out of doors, it will relieve my mind of great anxiety. We would no more think of spending the night, or any portion of it, in the hammock on the porch than we would of seeking suicide in any other direction, and yet here is this medical authority insisting that we bring indoors the very elements that we are supposed to stay in the house in order to avoid.

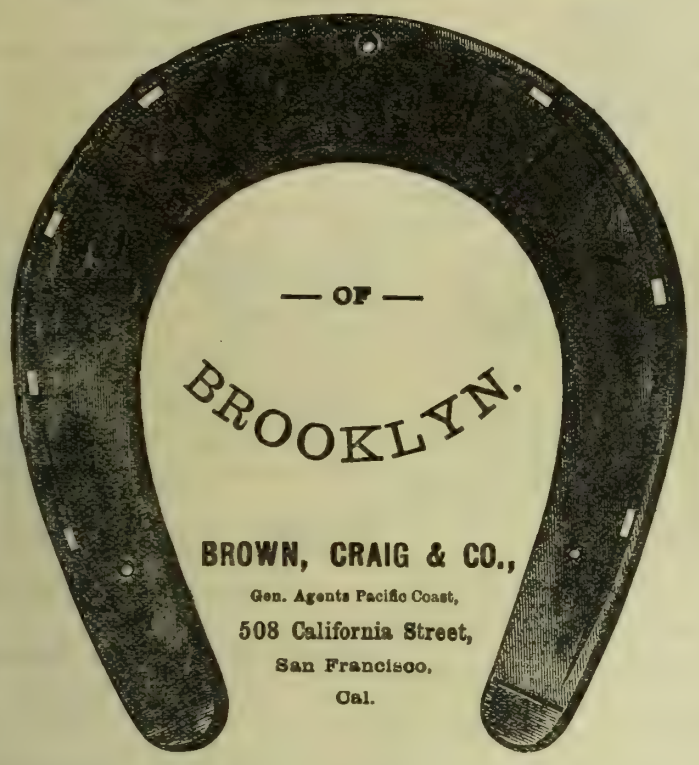
Now, dont understand that I am quarreling with anybody's notion on the importance of fresh air, for I am not, but I am trying to make up my mind why so much is said against spending a little time out of doors in the evening, and so much in favor of bringing the same atmosphere into the house. For my part, I think that a great deal of the danger from night air comes from the fact that people go out without sufficient wrappigs. I think that I could spend half of my evenings on the piazza, and not receive the slightest injury, if I protected myself in a proper way, but I should wear a cloak as thick as the one I use in mid-winter, and should keep a hood or light shawl over my head all of the time. I once spent a season in one of the worst malarial districts I ever knew. It was confidently predicted by every one who knew me, that I would have malaria-fever, because I insisted on sitting out on the porch of evenings, but I always put on a jacket, and then wrapped myself in a mackintosh with a hood pulled over so as to cover all but my face. I didn't catch cold, nor did I have an ache or a pain either that season or the next. Almost every one around there had ague and chills and fever and aches of all sorts, but I assure you that the sick ones were those who went out without wrappings, and always declared: "Oh, it won't hurt me to go out a little while; I never take cold;" but they took the consequences of their imprudence, and some of them paid for their folly with their lives. This and similar experiences have fully satisfied me that it is less what you do than the way you do it, which preserves the health; therefore, I am going to obey the doctor's orders and open the windows, but they will not be the windows of the sick-room. I shall let in the air to the other rooms first, and ventilate entirely in what you might call a secondary fashion. I shall also take the precaution to put an extra blanket over the sufferer, or, what is often better, a very thick linen sheet, which is a more complete protection under such circumstances than the heaviest blanket."—New York Ledger.

A PURER CHLOROFORM than has yet been available, by virtue of its purity, is claimed to be produced by the Swiss scientist, Pictet, by a process of artificial refrigeration that precipitates a quantity of deleterious impurities. It is moreover claimed that the physiological effects of the impurities removed by Pictet's process when isolated have been such as to show their deleterious quality beyond doubt. If this be all as stated, the use of chloroform in surgery, the benefits of which are simply incalculable, may become free from some dangers hitherto attending its administration. The use of intense cold for purifying and separating chemical substances is still in its infancy, though for the extraction of menthol and similar substances from essential oils it has been for some years employed.

THE number of persons who approve of cremation seems to be steadily increasing. From the report of the Cremation Society of Englahd for 1891, we learn that in 1885, the first year a crematorium was used, only three bodies were sent there; in 1886 the number was 10; in 1887, 13; in 1888, 28; in 1889, 46; in 1890, 54; and during last year, 99.

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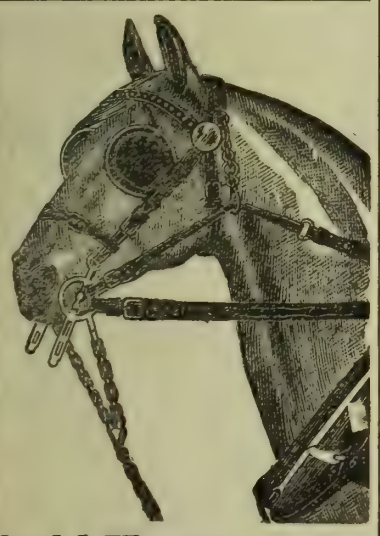
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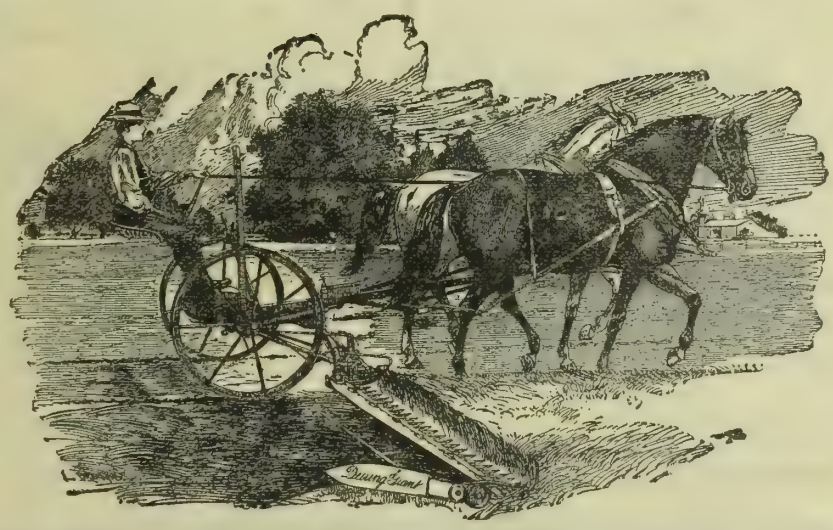
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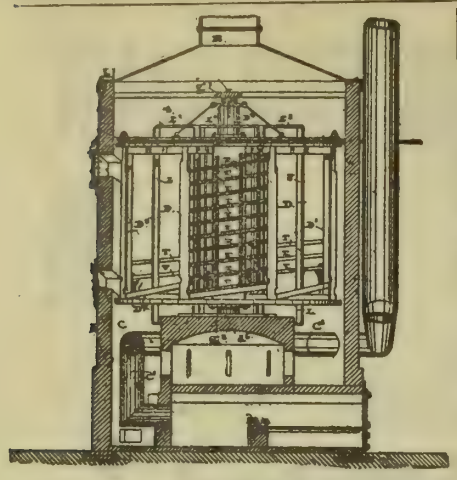
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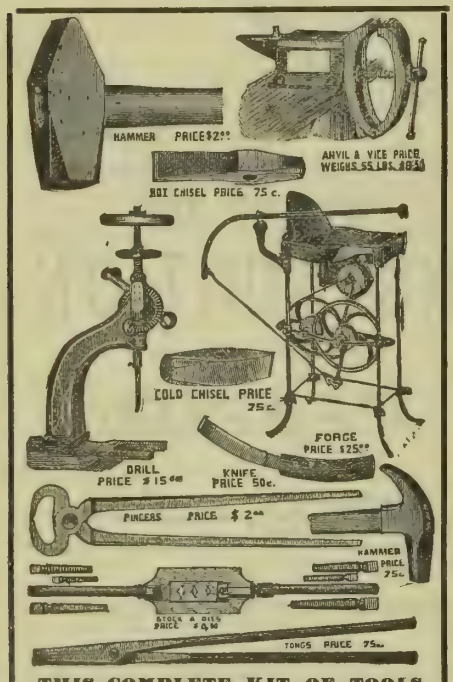
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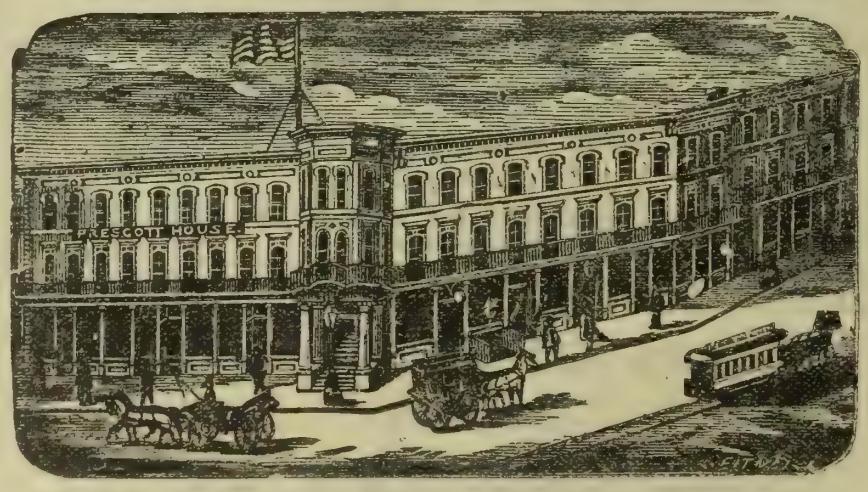
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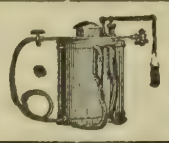
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, May 25, 1892.

Fickle weather has contributed no little in demoralizing general trade, and until crops are assured it now looks as if no great improvement can be expected. In farm products, trading is light. Wool and fruits are moving fairly free. In the local market money is easy, but complaints are at hand from interior points, of a growing scarcity of available funds. It is claimed that crop requirements will be quite large.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June	July.	Aug.	Sept.
Thursday	6s08¾d	6s08¾d	6s09¾d	6s10½d	6s10½d
Friday	6s09¾d	6s10 d	6s11 d	7s00 d	7s00¾d
Saturday	6s10¾d	6s10¾d	6s11¾d	7s00¼d	7s00¼d
Monday	6s10¼d	6s09½d	6s10¾d	6s11 d	6s11¾d
Tuesday	6s 8¾d	6s09 d	6s10 d	6s11 d	6s11¾d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	36s0d	36s d	36s d	Inactive.	Fine.
Friday	36s6d	36s d	36s d	Slow.	Warmer.
Saturday	36s6d	36s d	36s3d	Higher.	Showery.
Monday	36s6d	36s d	36s d	Quiet.	Fine.
Tuesday	36s d	35s9d	36s d	Easier.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, May 25.—Wheat—Not much demand. California spot lots, 7s 4d; off coast, 36s; just shipped, 36s 9d; nearly due, 35s 9d; ca goes off coase, steadily held; on passage, market seems firmer; Mark Lane Wheat, steady; French country markets, very firm.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug
Thursday	15[illegible]	150½	151⅝	150⅝
Friday	153⅛	154½	155⅛	1[illegible]
Saturday	152½	152½	153⅜	152⅝
Monday	150½	150⅝	151⅞	150⅝
Tuesday	151⅝	15[illegible]	153⅛	152

The following are to-days' telegram:

NEW YORK, May 25.—Wheat—91⅜ for May, 91⅝ for June, 92c for July, 91⅞ for August, 91c for September and 93⅜c for December.

CHICAGO, May 25.—Wheat—83½c for July.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	148½	147½	....	....	....	....
Friday	147½	147	....	....	140⅝	140½
Saturday	....	....	....	....	....	....
Monday	147	144⅝	....	....	140⅜	140⅛
Tuesday	143⅝	141½	142	142	139⅝	139½

The following are to-day's recorded sales on Call:

Wheat—Morning Informal Session—Buyer season, 400 tons, $1.42½; 300, $1.43; 100, $1.43½. Seller 1892—200 tons, $1.39⅜ ₰ ctl. Afternoon Session—Seller 1892, 200 tons, $1.39½; 100, $1.39½ ₰ ctl.

BARLEY.

	Buyer Season. H.	L.	Seller Season. H.	L.	December. H.	L.
Thursday	*96½	95½	....	....	100½	100
Friday	*96⅝	95½	....	....	101	100½
Saturday	....	....	....	....	....	....
Monday	*95½	95½	....	....	100½	100½
Tuesday	*94½	93⅝	....	....	100	99½

*New Crop.

The following are to-days' recorded sales on Call.

Barley—Morning Informal Session—Seller 1892, new, 100 tons, 94½c; 100, 94¾c ₰ ctl. Regular Session—Buyer season, 400 tons, 94c; 100, 94¼c; 200, 94⅜c; 700, 95c. Seller 1892, new, 100 tons, 95¾c; 200, 95¼c. October, 200 tons, 97¼c; 900, 97½c; 300, 87½c ₰ ctl. Afternoon Session—Seller 1892, new, 100 tons, 95¼c ₰ ctl.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, May 23.—There was an earnest attendance of buyers and a larger volume of sales would have resulted at the seaboard if supplies had permitted. Receipts of western are detained by the floods, and wet, cold weather in Virginia, Pennsylvania, Ohio and New York has delayed shearing. The most prominent feature of the quotations in this between clip period is the readier sale of wool at the old figures than for some time past. The tone for old or new is not above 55 cents cleaned. This, with the rates obtained for Texas here, and California in Boston, does not as yet indicate much buoyancy in the new clip. Australian has a steady sale. It would be well if home growers were to copy the careful marketable preparation of this product. Freedom from spiritings and tags makes a great difference in buyer's views. Woolen goods are in good shape, there being a few cancellations in orders for men's fabrics. Sales at New York, 548,000 domestic and 330,000 foreign. Boston sold 1,772,000 domestic, of which 206,000 were new spring California at 17@19c. and 150,000 ditto to arrive to a manufacturer at private terms; also 538,000 foreign, 331,000 of which were Australian. Philadelphia reports good inquiry, but a very limited supply on hand.

Eastern Dried Fruit Markets.

NEW YORK, May 23.—Peaches and prunes are hardly in wholesale offerings; prices are as strong as before. Raisins—Dealings are not in a large way, but are quoted better with more confidence. A few lines of layers at $1.35@$1.50, and if boxed loose, $1.10@$1.30. For outside rates the quality must be faultless. Selected bags, 4¼c; fairly decent, 3½c. Holders obtain some assurance from the fact that Californias have kept steadier than Valencias all through last summer, though the latter were 1@1½c cheaper. Apricots are stiffer. A line of 800 packages brought 10c; boxes, 10@12c for prime to extra; bags, 8½@10.

NEW YORK, May 24.—Black California prunes are reported scarce here. The Grayish stock of 50s, sell at 9¼c in bags and 9¾c in boxes from second hands; good 60s, 9c; 70s, 8½c; 80s, 7¾c, in boxes.

Eastern Deciduous Fruit Markets.

NEW YORK, May 23.—Cherries brought $5@5.50 a box. A sample of fresh Arizona-grown apricots, small but handsome, were shown by Sgobel & Day.

Eastern Hop Markets.

NEW YORK, May 23.—Most of the week there was merely enough brewers' demand to verify prices. At the close a better feeling was apparent, as deliveries on contracts are expected to be less interruptive. Best State '91's, 28@29c; Pacific, 28; other grades, 23@27. Options are dull; July, 26c bid. The English market is strong.

English Hop Markets.

Mark Lane *Express*, May 9:—Considerable activity is visible in the English plantations, poleing being in progress everywhere, and even stringing in a few instances. The shoots have come away quite strong and healthy, and if we escape late frosts there will be a fair prospect for bine. Planters seem to be entering upon another season in a very hopeful spirit, inasmuch as, even should there be a large crop grown, prices are pretty sure to rule good on account of the close way in which stocks of all kinds have been used up, leaving no surplus to carry over for another year.

Miscellaneous.

NEW YORK, May 23.—Lima Beans—The supply is less pressing; choice are firmer at $1.75 per bushel for spot. Mustard seed holds its improved condition.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 23, '92, were as follows:

Flour, qr. sks	100,210	Bran, sks	5,197
Wheat, ctls	21,475	Buckwheat "	....
Barley, "	7,451	Middlings "	2,105
Rye, "	....	Chicory, bbls	110
Oats, "	28	Hops, "	....
Corn, "	770	Wool, "	1,846
*Butter, "	1,563	Hay, ton	1,568
do bxs	66	Straw, "	104
do bbls	....	Wine, gals	236,650
do kegs	23	Brandy, "	2,020
do tubs	4	Raisins, bxs	200
do ½ bxs	280	Honey, cs	....
†Cheese, ctls	1,027	Peanuts, sks	....
do bxs	117	Walnuts "	89
Eggs, doz	46,910	Almonds "	....
do "Eastern"	71,610	Mustard "	51
Beans, sks	31,433	Flax "	....
Potatoes, sks	19,313	Popcorn "	....
Onions, "	36,121	Broom corn, bbls	....

*Overl'd, 260 ctls. † Overland, 136 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to May 23 '91.	July 1, '91 to May 21, '92.
Flour, ½ sks	361,999	444,457
Wheat, ctls	1,371,926	1,280,415
Barley, "	269,912	55,602
Oats, "	347,552	419,183
Wool, bales	6,409	7,383
Hops, "	456	431
Rye, sks	210	3,498
Potatoes sks	100,687	137,742

Arrival of New Wheat.

The first carload of new wheat, crop of 1892, arrived at Port Costa on May 23d. The wheat was raised on the farm of J. M. and O. B. Kimberlin, Kimberlina, Kern county. This makes the third year in which the Kimberlins have outstripped their competitors in the race to get new wheat into market first. In the present instance their consignment was of inferior quality, the berry being very small and very badly pinched. The carload was sold on 'Change by auction and purchased by the Del Monte Milling Company at the fancy price of $1.52½ per cental. In each year there is more or less competition to secure the first lot of new wheat, and the prices paid have no bearing whatever on the local market. Last year the first lot was also purchased by the above-mentioned company.

The following shows the first arrivals of new wheat and prices paid for the same:

Year.	Month.	Price.
1859	July 14	$1 90@2 00
1860	July 3	1 50@1 55
1861	July 24	1 50@1 62
1862	July 11	1 62@1 65
1863	June 25	1 50@1 60
1864	July 9	2 80@2 95
1865	June 12	2 20@2 25
1866	June 25	1 50@1 60
1867	June 17	1 65@1 70
1868	June 18	1 90@2 00
1869	June 15	1 40@1 45
1870	June 9	1 70@1 80
1871	June 23	2 30@2 37
1872	June 10	1 80@1 85
1873	June 7 (Vallejo)	1 75@1 80
1874	June 11	1 65@1 67
1875	June 2 (Vallejo)	1 65@1 67
1876	June 9 (Oakland)	1 75@....
1877	June 2 (Vallejo)	2 40@....
1878	June 13	1 70@....
1879	June 20	1 65@....
1880	June 24	*1 00@....
1881	June 7	1 25@1 40
1882	July 6	1 67@....
1883	June 19	1 65@1 70
1884	June 20 (Port Costa)	1 42@....
1885	June 2	1 42@....
1886	June 5	1 30@....
1887	June 10 (Port Costa)	1 75@....
1888	June 15 (Wheatport)	1 31½ ....
1889	May 24	1 37½ ....
1890	May 20	1 30 ....
1891	May 25 (Port Costa)	†2 02½ ....
1892	May 23 (Port Costa)	1 52½ ....

*Very inferior quality.

†Sold by auction at a fancy price, actually worth, by sample, about $1 65. It was Sonora, rather pinched and somewhat mixed with barley. It came from the Kimberlena farm, Kern Co. In 1890 the first consignment also came from Kern Co.

Cereals.

The second general memorandum on the wheat crop of 1891-92, issued by the Government of India, says: In the Punjab at the end of January the area under wheat was reported to be 6,948,400 acres, or a falling off of 1 8 per cent from the area reported at the end of 1890-91, and 2 9 per cent from that shown in the first forecast for 1891-92. In the north-western provinces and Oudh the area as reported at the end of December last was 4 per cent more than last year's area. In Bombay the area in British districts, including Sind, is about 12 per cent below last year's area and the average, while the Native States figures show a decrease of 10 to 21 per cent respectively. In the Central provinces the area under crop is below the normal area, while in Berar the crop area is estimated at 884,104 acres. In Bengal the area sown with wheat has fallen short of the normal by about 25 per cent, and of last year's area by about 15 per cent. Condition: In the Punjab the crops have in many places suffered from drought, and at the date of report it was feared that if rain continued to hold off the crop would be a very poor one. In the north-western provinces and Oudh there has practically been no frost, and damage from rust is but slight. The crop is said to be probably the best that has been seen for some years. In Bombay the condition of the crop is fair to average, except in the South Deccan and Karnatic, where almost the whole of the unirrigated crop has been lost or greatly injured by drought. In the north of the central provinces condition is good, in the Narbudda Valley districts about average, in the southern districts and Chattisgarh, however, it falls short of the average by a third. In Berar the condition is not, on the whole, satisfactory, while in Bengal half an average crop is the most that can be expected."

London cables, May 25, report as follows: Wheat and flour on passage to United Kingdom, 2,784,000 qrs; Continent, 1,275,000. Imports of wheat into the United Kingdom during the past week, 233,000 qrs; flour, 213,000 bbls.

In the local wheat market futures have been hammered on Call to lower ranges. The general appearance of the market indicates that a strong bear contingent is at work to force prices down, for so far our advices from abroad and also from the East do not warrant low prices; the only thing favorable for lower ranges is the low price of silver which admits of importations into England of Indian wheat at a considerably less range in values than imports of wheat from gold-using countries can be made at.

In the sample market wheat is reported lower. This decline is largely due to heavy offerings of old, by disgusted holders. With more sellers in the market, buyers were not slow in bidding down; being able to purchase here at lower prices, they offered cargoes for prompt shipment on the Liverpool market at slightly lower figures, which has a temporary bad effect on wheat cargoes. The engaged tonnage in port for old and new crop loading continues to increase. The disengaged tonnage in port is kept up to over the 100,000 tons register mark.

Crop advices from the country are uniformly favorable. The hot weather in the past week did not do any damage, owing to its short continuance and cool weather since. It is quite generally claimed that the present cool weather will cause the grain to be plumper and heavier. Farmers, as a rule, report very spotted crops, more so than ever before known which makes it difficult to form a fair estimate of the probable outturn.

The barley market shaded off, but toward the close it exhibits a firmer tone. Cooler weather, it is claimed, will put back harvest work, and as the supply of old in the State is light, dealers are slightly more anxious to buy for immediate wants. Cool weather is against brewing barley, although holders are firm in their views under the belief that the available supply of that grade in this State is light; barely enough to meet the requirements before new will be available for use. Feed barley for delivery in next month is more or less in buyers' favor.

Oats hold to strong prices under light receipts, lessening stocks and a good demand. It is quite generally claimed that the outturn in this year will be less than it was in 1891. This will be particularly the case up north where rains interfere with outdoor work.

Corn shows more strength with a general advance along the line. The available supply in this State is said to have largely entered into strong hands.

Rye is very dull.

Feedstuff.

Considering the excellent natural feed, the demand for ground feed continues active. With moderate receipts and a fair demand, both bran and middlings have been advanced. Feed meal commands a higher range of values.

New hay put in an appearance the past week. The quality was poor and, with forced sales, low prices had to be accepted. Haying in the southern part of the State is general, but in the central and coast counties it has only fairly commenced, owing to more or less cloudy and foggy weather in many districts. There is, or at least as far as the writer knows, no desire among large feeders to contract for large quantities for future delivery, unless offered inducements. Farmers, as a rule, prefer to take chances in getting better prices than to sell at buyers' present views.

Live Stock.

The market for bullocks appears to be slightly firmer. A warm wave in the past week caused butchers to "go slow" in buying, fearing that another warm wave might set in at any time. The Reno (Nevada) *Gazette* reports heavy shipments from that place to Oregon; in one day 21 cars were loaded with bullocks for Portland alone. Mutton sheep steady, as are block hogs.

Dairy Produce.

Hot weather for four days in the past week not only softened butter, but also softened the market, for under strong selling, prices shaded off fully one cent a pound. The manufacture of butter in this State and in Nevada is exceptionally large, with the grade more uniform and better. Feed has been most excellent, while there has been a large increase in the number of cows milked. During the hot spell of weather there was little packing, but with cooler weather it is again being largely carried on, both in the city and country.

Cheese drags at lower prices. It now looks as if the bottom for the better grades has been reached. It is said that some quiet buying is going on. The buyers will hold for better prices, and to keep the cheese sound and sweet will shellac them.

Eggs are strong for strictly choice fresh laid. The hot spell of weather is succeeded with cooler weather, which causes Eastern eggs to come to hand in better condition. Eastern eggs have this season sold alongside of Californian.

Vegetables.

The quotations for old potatoes are withdrawn—only new crop potatoes will from now on be quoted.

The receipts of potatoes are only fair for the season of the year. Shipments to distribution points at the East are free. The backward season east of the Rocky Mountains will give us a market later in the season than we would otherwise enjoy.

Onions are slow for both old and new.

In garden stuff, the market is well supplied with beans and peas. Tomatoes, summer squash and other spring vegetables continue to decline, as receipts of all kinds are increasing.

Fruit.

On Friday the first apricots of the season came to hand. J. R. Collins and E. Fisher, Vacaville, were the shippers. The first figs of the season were received on Saturday; they were sent in by J. H. Taggart, Yuma, Arizona. M. L. Madden, Tulare county, sent the first peaches of the season to market.

Strawberries advanced the past week. Longworths sold as high as $15 a chest, but to-day the outside figure was $12. Free receipts of other fruits, with declining prices, are against them. Currants are coming in freely, with a strong probability that prices will have sunk to a sufficiently low level by the middle of next month to admit of canners entering the market. Cherries made another bad break, To-day $1 was the top for choice black. Receipts are very large, and, with its continuance, canners will be able to soon enter the market as buyers. Cherry plums are coming in sparingly, yet prices are shading. Gooseberries are coming in fairly freely. The quality is good. Raspberries are scarce. There is a growing conviction that when the weather grows warmer, fruits will mature rapidly, which will cause some difficulty to handle the riper kinds at fair prices. Apricots are small and generally poor.

Limes and lemons are firm, with the former selling at a decided advance. Oranges sold at one time at an advance on outside quotations, but toward the close they shaded off under free receipts.

The dried fruit market is well cleaned up; only odd ends and trashy stuff are to be had. Peaches and apricots are in good request at a slight advance.

The market is being cleaned up of raisins; all poor and inferior stuff is being worked off; choice to extra choice are scarce. Stemless grapes are wanted at 3 to 3½ cents ₰ lb.

Wool.

The market at the East does notshow any material change. Our market is quoted at a slight advance for the more desirable clips. The advance here is accepted as an evidence that the grades of the better conditioned clip is more acceptable than they were in last year. Sales have been made at Red Bluff of 1300 bales at a flat price of 19 cents ₰ lb. This indicates a range of from 17 to 20 cts. ₰ lb. This purchase was for shipment to the East.

In hops trading is light owing to the light available supply of old. We are not advised of any contracts drawn for new crop delivery. Both buyers and sellers are paying particular attention to crop prospects on this coast and also abroad.

Green almonds are hard to sell even at low prices.

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@ —	Wethers	7 @—
Grass fed, extra	5½@ —	Ewes	6½@—
First quality	5 @ —	Do Spring	8 @—
Second quality	4½@ —		
Third quality	4 @ —	HOGS.	
Bulls and thin Cows	2 @ —	Light, ₰ lb, cents	5½@ —
VEAL.		Heavy	4½@ —
Range, heavy	5 @ —	Feeders	3½@ 4
Do light	6 @ —	Stock Hogs	3½@ —
Dairy	6 @ —		

Miscellaneous.

From reliable advices up to May 25, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	219,657	319,220	*†145,761	50,177
San Diego	18,859	16,477	2,708	.....
San Pedro	11,389	10,237	....	
Oregon	25,941	34,383	17,262	13,185
Puget Sound	17,800	39,408	.....	
Totals	294,636	419,785	165,731	81,635

*Engaged for wheat, 1892, 19,503; 1891, 33,165 †For new crop loading, 16,849

The statistics of produce exports from this port from July 1st to May 18th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,481,556	12,726,251
Flour, bbls	954,932	1,082,795
Barley, ctls	1,008,763	340,650

Poultry is gradually settling to lower prices under free receipts and more liberal supplies of fruit and vegetables.

Beans are lower, with Limas breaking the most. Our advices indicate that the crop of Limas will be short, owing to a lessened planting. More attention was given by farmers this year to planting white beans, particularly the smaller varieties.

Honey is in light supply. Advices from the southern part of the State indicate a light crop.

Foreign Grain Review.

LONDON, May 16.—The Mark Lane *Express*.—It is the opinion of experts that there will be a short yield of wheat. The farmers are clearing away their reserves, and owing to heavy supplies unprecedented sales were made at low figures. Foreign wheat was also largely offered. White dropped 1s 6d. Oats and maize are dearer and barley is cheaper. To-day foreign wheat advanced 6d on American sales.

Prices Current.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, May 25, 1892.

BEANS AND PEAS.			FLOUR.		
Bayo, ctl	2 00	@ 2 20	Extra, City Mills	4 65	@ 4 75
Butter	2 50	@ 3 05	Do Country Mills	4 50	@ 4 75
Pea	2 20	@ 2 70	Superfine	2 75	@ 3 10
Red	2 00	@ 2 20	NUTS—JOBBING.		
Pink	1 90	@ 2 05	Walnuts, Cal. lb	4	@ —
Small White	2 20	@ 2 55	Do Choice	6	@ —
Large White	2 20	@ 2 45	Do paper shell	7	@ —
Lima	1 70	@ 2 05	Almonds, sft shl.	10	@ —
Fld Peas, blkeye	3 00	@ 3 30	Paper shell	12	@ —
Do green	1 50	@ 2 75	Hard Shell	6	@ 7½
Do Niles	1 30	@ 1 40	Brazil	6½	@ 8
Split	4 50	@ 5 50	Pecans small	11	@ 13
BUTTER.			Do large	14½	@ 16
Cal. Poor to fair, lb	15	@ —	Peanuts	1½	@ 3
Do good to choice	17	@ —	Filberts	10½	@ 12½
Do Giltedged	—	@ 19	Hickory	7	@ 8
Do Creamery rolls	—	@ 19	Chestnuts	11½	@ 16
Do do Giltedge	—	@ 20	ONIONS.		
Eastern	—	@ —	Silver Skin, Choice per ctl	1 75	@ 2 00
CHEESE.			Fair to Good	1 00	@ 1 50
Cal. choice mild	—	@ 8	Cut	50	@ —
Do fair to good	7	@ —	New Reds	45	@ 70
Do glit edged	—	@ 9	POTATOES.		
Young America	—	@ 10	Early Rose, ctl	60	@ 85
EGGS.			Do do in boxes	80	@ 1 25
Cal. ranch, doz	18	@ —	Burbank Seedling	—	@ —
Do do selected	—	@ 21	Do do Oregon	1 00	@ 1 25
Do store	17	@ —	River Reds	40	@ 60
Eastern	17	@ 18	Garnet Chilies	80	@ 90
FEED.			POULTRY.		
Bran, ton	17 50	@18 50	Hens, doz	6 00	@ 8 00
Feedmeal	26 50	@29 00	Roosters, old	6 50	@ 8 50
Gr'd Barley	22 50	@24 00	Do young	8 00	@12 00
Middlings	20 00	@21 50	Broilers, small	2 00	@ 6 50
Oil Cake Meal	—	@25 00	Do large	4 00	@ 6 00
Manhattan Food ₰ cwt.	7 50		Fryers	6 00	@ 8 00
HAY.			Ducks	5 00	@ 7 00
Wheat, per ton	11 00	@ —	Geese, pair	1 25	@ 1 75
Do choice	—	@ 14 00	Goslings	1 25	@ 1 75
Wheat and Oat	10 00	@12 00	Turkeys, Gobbler	17	@ 19
Wild Oats	10 00	@ —	Turkeys, Hens	14	@ 16
Cultivated do	10 00	@ —	Manhattan Egg Food ₰ cwt	11 50	@ —
Barley	10 00	@12 00	PROVISIONS.		
Alfalfa	8 00	@10 00	Cal. Bacon, he'vy, lb	9½	@ —
Clover	—	@ —	Medium	10½	@ —
Straw bale	45	@ 60	Light	12	@ —
GRAIN, ETC.			Lard	9	@ 11
Barley, feed, ctl	95	@ —	Cal. Sm'k'd Beef	11½	@ —
Do Choice	1 00	@ —	Hams, Cal salt'd	10	@ —
Do Brewing	1 02½	@ —	do Eastern	12½	@ —
Do do Choice	1 07½	@ —	SEEDS.		
Do do Giltedge	1 10	@ —	Alfalfa	12	@ 12½
Do Chevalier	1 05	@ 1 40	Clover, Red	14	@ 15
Do do Giltedge	1 45	@ 1 50	White	20	@ —
Buckwheat	—	@ —	Flaxseed	1½	@ 2
Corn, White	1 37½	@ —	Hemp	3½	@ 4
Yellow, large	1 35	@ —	Mustard, yellow	3½	@ 4
Do small	1 36½	@ —	do Brown	3	@ 3½
Oats, milling	1 46½	@ —	WOOL.		
Feed, Choice	1 43½	@ —	SPRING, 1892		
Do good	1 35	@ —	Humb't & Men'cino	16	@ 20
Do fair	1 30	@ —	Sac'to valley	16	@ —
Surprise	1 50	@ —	S Joaquin valley	11	@ 16
Black Cal	1 15	@ —	Cala'v & F'th'll	15	@ 19
Do Oregon	1 30	@ —	Oregon Eastern	12½	@ 19
Gray	1 27½	@ —	do valley	—	@ —
Rye	1 37½	@ —	So'n Coast, def	10	@ 12
Wheat, milling, Gilt edged	1 50	@ —	Nevada (State)	15	@ 18
Do Choice	1 47½	@ —	HONEY.		
Do fair to good	1 45	@ —	WhiteComb, 2-lb	8	@ 11
Shipping, cho'ce	1 45	@ —	do do 1-lb frame	10	@ 13
Do good	1 42½	@ —	White extract'd	6½	@ 7
Do fair	1 40	@ —	Amber do	5½	@ 6
Common	1 36½	@ —	Beeswax, lb	25	@ —
Sonora	1 36½	@ 1 45			
HOPS.					
1891 Choice to Ex.	25	@ —			
Fair to Good	22	@ —			

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, May 25, 1892.

Limes, Mex	8 00	@10 00	Figs, Arizona, lb	70	@ —
Do Cal	—	@ —	Apricots, Prindle, box	75	@ —
Lemons, box	50	@ 3 50	Cherries, box		
Do Sicily	5 00	@ —	Black	75	@ 1 00
Oranges, Seedlings			Red	40	@ 75
Redlands	2 50	@ 3 00	White	40	@ 75
Riverside	1 50	@ 2 50	Beets, sk	—	@ 1 00
Los Angeles	1 50	@ 2 00	Carrots, sk	50	@ —
Do Navels—			Okra, dry, lb	15	@ —
Redlands	4 00	@ 5 00	Parsnips, ctl	—	@ 1 25
Los Angeles	2 50	@ 3 00	Peppers, dry, lb	10	@ —
Riverside	3 00	@ 4 00	Do green	—	@ —
Duarte	3	@ 4 00	Turnips, ctl	50	@ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			Cabbage, 100 lbs	40	@ —
			Garlic, lb	8	@ 12½
			Squash, Sum, bx	70	@ 1 00
Strawberries, per chest—			Tomatoes, box	1 25	@ 2 25
Longworth	7 00	@12 00	Asparagus, box	75	@ —
Sharpness	5 00	@ 8 00	Do choice to ex	1 50	@ —
Gooseberries, ₰ pound	2	@ 3½	Peas, green, sk	40	@ —
Large do	4	@ 6	Do sweet	75	@ 1 25
Raspberries, bkt	20	@ 35	Rhubarb, box	65	@ 1 25
Currants pr dr	65	@ 85	String Beans	3	@ 3½
Peaches, box	2 00	@ 2 50	Do do wax	2	@ 4
Cherry Plum, dr	1 15	@ —	Cucumbers, doz	50	@ 1 00
			Mushrooms	10	@ 25
			Egg Plant, lb	17½	@ —

Grain and Wool Bags.

Calcutta, spot	7½@ 7¾
Do, June-July	7¾@ —
Wool Bags	38@ —

THE CHAMPION COMBINED REAPER & MOWER, NO. 4.

IF YOU HAVE FIFTY ACRES YOU SHOULD HAVE ONE.

It has everywhere met with the most brilliant success achieved by an agricultural machine. It is simple, strong, light draft, easily understood and handled, ready and capable at all times, complete and perfect in every detail.

This machine is first built as a Mower, and so arranged, before it leaves the factory, that either a self-raking attachment or dropping attachment can be added at any time. These attachments are fastened to the machine by a few bolts and can be easily and quickly attached or taken off by the farmer. The machine is made in one size—wide cut, five feet. It is the most powerful cutter ever constructed, enabling it to do good and clean work without choking or breaking in especially difficult crops, such as heavy, lodged grain, flax, sowed corn, etc.

The Champion No. 4 Combined Reaper and Mower

Is in every respect a combined machine, capable of cutting grass or grain as well as any Single Reaper or Single Mower. To change it from one to the other does not require that a number of intermediate gear wheels, etc., etc., should be changed so as to increase or reduce speed.

The Main Driving Wheels

Are of cast iron; and the Main Frame, made of steel bars firmly riveted together, is supported on two driving wheels, which turn upon a stationary axle.

The Main Frame

Made of the best rolled steel and firmly riveted together, is exceedingly strong and durable. The boxes or journal bearings, made of malleable iron flanged to fit the bars of the main frame, are bolted to this frame, insuring perfectly true bearings, and they will always maintain their relative positions.

The Main Shafts and Drag Bar

Are made of cold rolled iron, possessing great strength and stiffness, and, at the same time, the highly polished surfaces furnish perfect wearing journals

The Knife Pitman

Is very long, and works almost on a straight line. It is connected with the fly-wheel by means of a universal socket and ball joint, while the opposite end, or pitman hook, is is of conical shape, fitting into the eye of the knife, and firmly held in its position by the pitman bolt and ratchet nut.

The Rakes and Reels

Are absolutely under the control of the driver, and can be arranged to work automatically or at will; when set to work automatically the driver can, by the use of a convenient device, carry the gavels around a corner out of the way of the team in cutting the succeeding round, or for any distance where the grain is light or uneven.

The Levers

Are conveniently arranged so that the cutter-bar can be instantly thrown down to the ground to pick up badly lodged or tangled grain. When the cutter-bar is tilted, the rakes almost touch the ground, and, as it were, lift the tangled grain upon the table. Without the reaping attachment this machine is almost identical with the Champion Light Mower, and does the work equally well. For the farmer who raises small crops of grass and grain and does not feel able to buy separate machines, this is decidedly the most economical implement that he can purchase, as the Champion No 4 is the only machine that is a perfect Reaper any Mower in one.

FOR FURTHER INFORMATION ADDRESS

SAN FRANCISCO. **BAKER & HAMILTON,** SACRAMENTO.

PATRONS OF HUSBANDRY.

Grange Mention.

AMERICAN RIVER GRANGE.—Past Master Daniel Flint reports recently the pleasure of meeting this Grange, with Past Masters Steele and Webster, Executive Committeemen Walton and McConnell and Doctor Caples, saying that they "were out in good voice, and they made the hall ring with good Grange ideas. It is a rare thing to get so many State officers together at one time. A class of ten was instructed in the fourth degree by your humble servant. The officers did exceedingly well, the choir giving us soul-inspiring music. The Matrons furnished a real feast, and every one contributed some pleasure of the day, by either voice, smiles, good looks or appreciation."

EDEN GRANGE.—On account of a public sale, this Grange will not meet again until Saturday, June 4th. The question box has furnished considerable interest lately, and at the next meeting a MS. paper will be issued for further entertainment and instruction of members.

MERCED PICNIC.—May 21st Merced and California Granges joined with two Sunday-schools in a picnic, which, considering the high temperature of the atmosphere, was a pleasurable success. The Merced and Athlone Bands furnished music, the farmers' wives and daughters made lots of ice cream, and with plenty of games, races, etc., a lively time prevailed.

COOPERATIVE LEGISLATIVE COMMITTEE. J. V. Webster, Chairman of the Committee appointed at the last session of the State Grange to cooperate with representatives of other organizations in presenting the legislative needs of our farming and industrial classes to the candidates at the next general election, and asking their pledge or refusal to vote in favor of the same, notified the balance of the Grange Committee, and also representative members of other organizations, to meet at the State Grange Secretary's office on Monday, May 23d. There were present Past Masters Webster, Steele and Coulter and also Past Assistant Steward Norton. Legislation on the subject of the election of United States Senators by popular vote, in favor of authorizing the organization of mutual assurance associations and for the reassessment and collection of unpaid taxes, was adopted, and will in due time be printed and presented to all legislative candidates. It is to be regretted that no other representatives were present.

PAST MASTER PERRY of Merced Grange and wife were in San Francisco on Monday.

Our Editorial Visitors.

Geo. W. Childs, printer, editor and publisher "to the manner born," is one of our distinguished editorial guests in San Francisco.

Wm. H. Hearst, proprietor of the *Examiner*, gave the N. E. A. a generous compliment in placing the steamer Ukiah at their disposal and furnishing a fine lunch and other favors.

Our editorial friends from beyond the Rockies are as wide awake, appreciative, and happy a lot of excursionists as ever visited our coast. The editors of California, with everybody else, it seems, have extended them a hearty grip of friendship. Pres. G. M. Francis, of the California Association, A. B. Lemmon and Arthur R. Briggs, Chairman and Secretary of the Ex. Com., Scipio Craig, of the Southern Cal. Association, and Wm. H. Mills, Vice-President of the Board of Trade, are leading representatives of the many who have excelled in their able efforts to make our Eastern visitors heartily welcome and comfortable within the borders of the State.

Patrons and farmers generally have shown their liberal disposition by promptly doing their part in entertaining, in our towns and cities, our editorial visitors.

MRS. JENNIE C. CARR, of the Woman's Press Association of California, accompanied the editorial visitors from Los Angeles northward.

THE Free Reading Room of the Farmers' Alliance, at Santa Barbara, is a success, through the enterprise of Mrs. Eleanor E. Tousey and others.

TWO Swedish astronomers, Lemstrom and Trumholt, are reported to have produced artificial auroras by means of a network of electric currents between two mountains.

Agricultural Fairs.

State Fairs.

State.	Place and Sec'y.	Date.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	
Western Washington Industrial Exposition,	Tacoma,	

District Fairs.

No.	Place and Sec'y.	Date.
1	Oakland	Aug. 8–13
2	Stockton	
3	Chino, J. D. Sproul	
4	Petaluma, Dr. Thos. Macleay	
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	
9	Rohnerville	
10	Yreka	
11	Quincy, Fred Blinman	Oct, 3–7
12	Ukiah, R. E. Donohoe	
13	Marysville, G. R. Eckart	Aug. 30–Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield, J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	Grass Valley, I. J. Rolfe	
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	
26	Ione, C. T. La Grave	
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	
33	Hollister	Oct. 3–7
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug. ..
37	Lompoc, W. I. Nichols	Sept. 27–30
	—Glenn Co. Willows, W. V. Freeman	Aug. 9–13

AT the mouth of Nehalem river, on the coast of Oregon, is washed ashore at high tide, a substance having the appearance of a mineral and the qualities of fine beeswax. It is also found on shore in black soil where trees are growing, at considerable elevations above the water. It is sold in Astoria at the regular price of beeswax. It belongs to the hydrocarbon series, allied to amber, a fossil remain of the resinous trees of the tertiary age.

HORSESHOES of rubber set in a metal frame are said to be useful on asphalt or other smooth pavement.

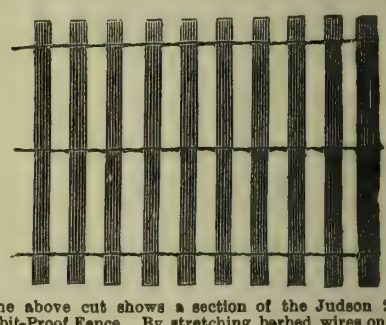
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Cheap, Durable and Effective.

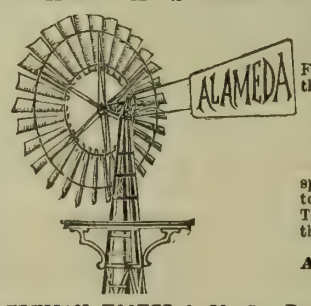
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14 & 16 Fremont St.....San Francisco.



The above cut shows a section of the Judson 2-ft. Rabbit-Proof Fence. By stretching barbed wires on the posts above it, it will turn any stock whatever.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.

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Every One Guaranteed.

No bearings, no springs, no wheels to get out of order. The simplest mill in the world.

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Save $40.00 on New $140.00 BICYCLES



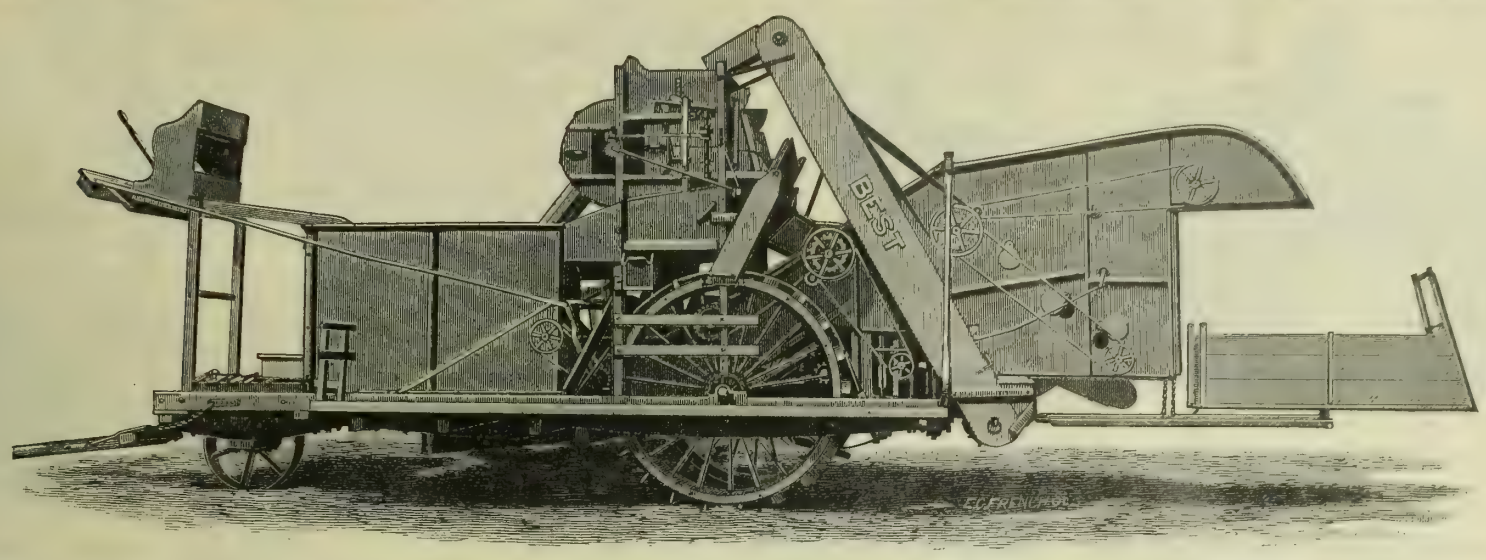
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F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

AT THE FRONT AND IN THE FIELD FOR 1892.

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THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

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LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR. TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

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ESTABLISHED 1864 Send for circular.



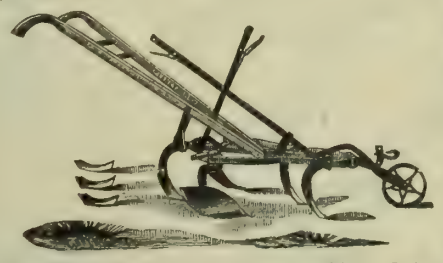
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Not if he spends an hour on a row of onions, which the "Planet Jr." Wheel Hoe would do better in six minutes.
Not if he takes half an hour to "set" his old cultivator, when he could change a "Planet Jr." without stopping his horse.
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The Best, Lightest, Cheapest Engine in the world. Can be arranged to Burn Wood, Coal, Straw or Petroleum. 5 or 8 H.P. Mounted on skids or on wheels.
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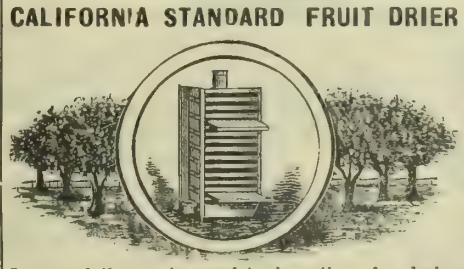
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This is an apparatus for burning straw and sulphur, and also forces the fumes down their holes, which never fails to kill. I will give $100 in case the exterminator does not kill (if properly applied) every ground squirrel that its deathly fumes comes in contact with. Thousands are in use. Price $3.00. Send for circulars to
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Is one of the most complete inventions for drying **Raisins** and **Prunes** by steam in 24 hours—other fruits less time. No sulphur or potash used. Retains all syrup, juice and flavor in original purity. Capacity, dries from 75 lbs green fruit to 20 tons. Send for circulars. CALIFORNIA FRUIT EVAPORATING & M'F'G CO., 347½ S. Spring St., Los Angeles, Cal.

ORANGE CULTURE IN CALIFORNIA.

Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.
"Orange Culture in California" was written by Those A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.
The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

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Two *new* first-class Sewing Machines for sale cheap, will be sent direct from warerooms, if desired. Address H. F. D., Box 2517, San Francisco, Cal.

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Bell Attachment which rings when to drop in Partition Block for Hay, Straw, Moss, Etc.

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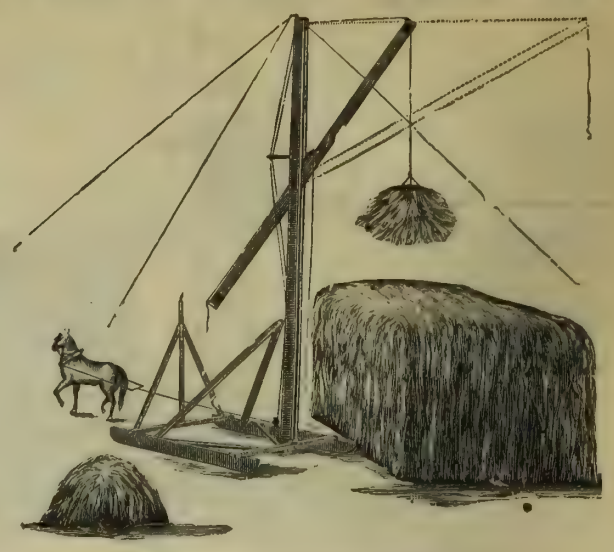
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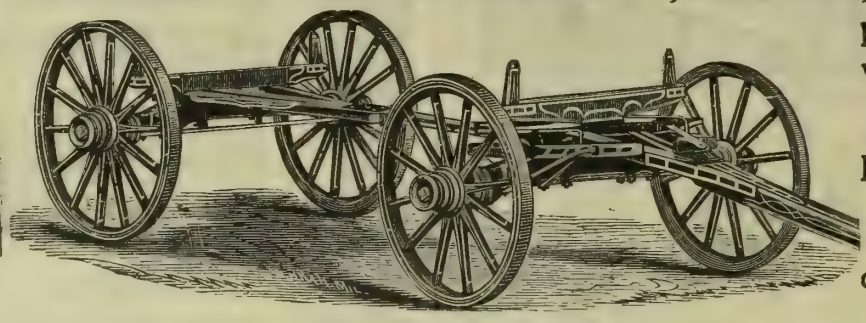
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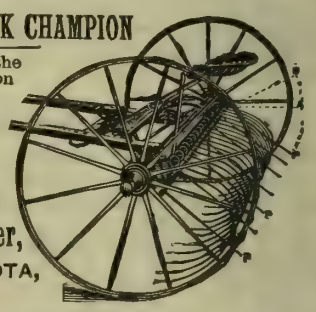
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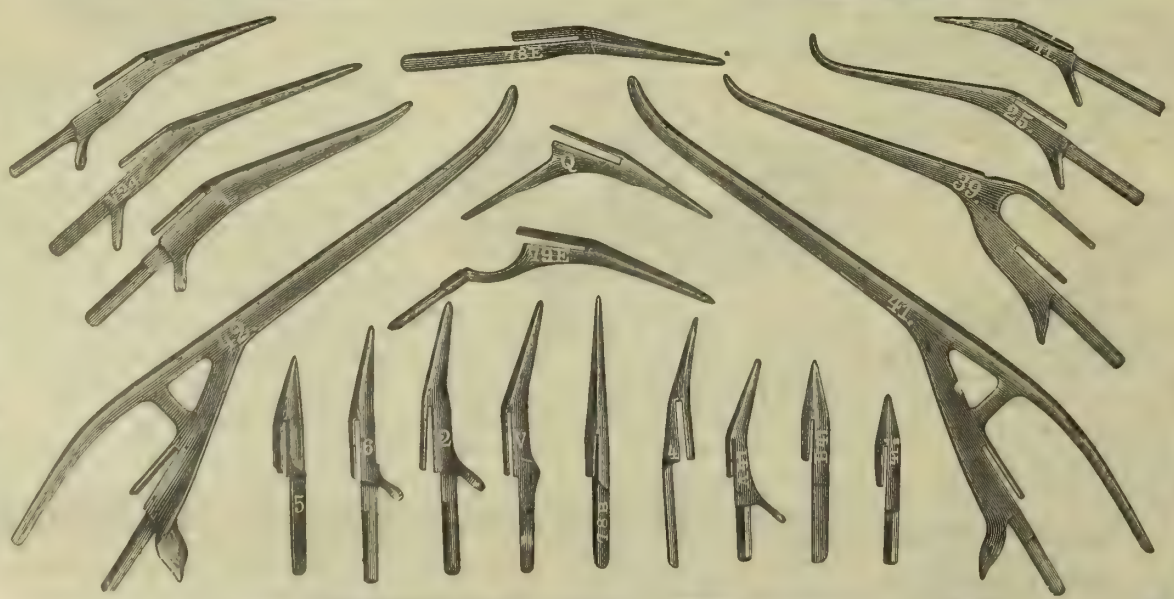
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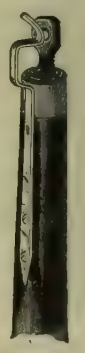


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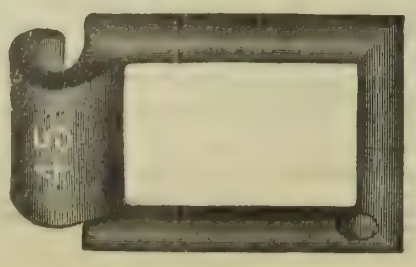


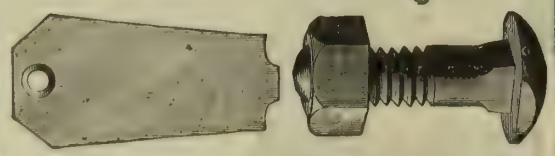






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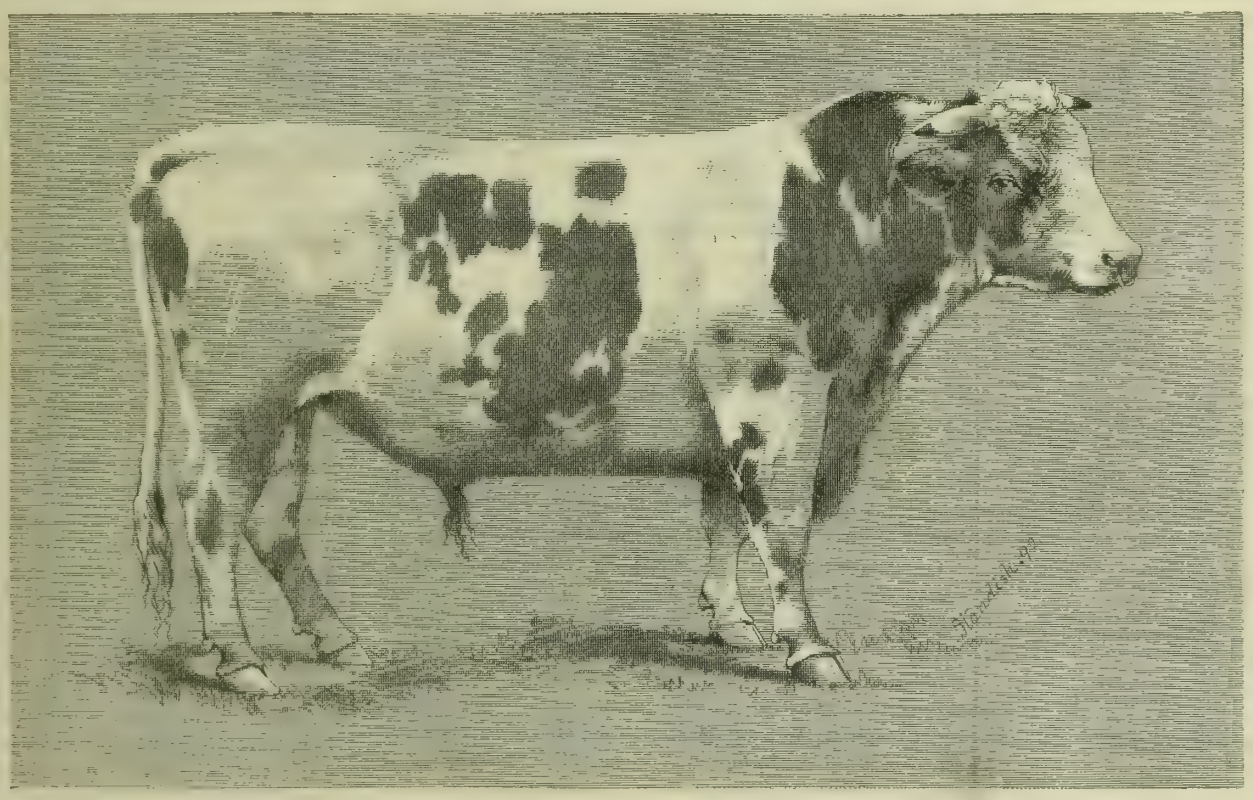
Vol. XLIII. No. 23. SAN FRANCISCO, SATURDAY, JUNE 4, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

A Possibility in Pampas Plumes.

California has suffered for some recent years because of inactivity in one of her most esthetic products. The capacity for this product at the East seemed limited, though the appetite at the outset was alarming, and at one time it looked as though the mesas in some southern counties might become vast feather beds. Just about the time, however, that the common people comprehended the incomes the acute were securing from pampas plumes, the bottom partially dropped out of the business and those who were slow to get the grass roots into their fields were very fast to get them out again. The fact was that while the plumes were new at the East, they were a genuine sensation. As soon as all the mantel vases were filled with them and the plumes had gathered dust and flies for one summer, the housewives unceremoniously ducked the dust and fly laden things into the kitchen stove and would have no more of them. Thus our great hope ended in smoke, so far as the Great Eastern States were concerned. Still, we had the world for a market and most of the recent product has been marketed in Europe where, it is said, they are used in home decorations, in street parades, etc. Germany was for a good while the largest buyer. England, Russia and Italy now purchase large quantities.

But the latest thing is the possibility of a grand demand, before which producers are now standing in keen expectancy. An enterprising Los Angeles lady, full of patriotism and business-sense, has devised an emblem which, under certain conditions, may become of sweeping popularity in the coming Presidential campaign. It and its uses are described as follows: At one end of a neatly turned stick about four and a half feet long are three small branching sockets of tin. When the stem of a plume is firmly set in each socket there are three long wavy plumes of three colors spreading in fan shape from the top of the stick. It makes the most novel and beautiful device of the kind ever conceived. While pampas plumes have been talked about in the East as a campaign emblem, their use in this device is purely a Californian conception, for which the party in this State is indebted to the patriotic woman mentioned. As the pampas plume is a California product, so soon to be honored nationally, it is fit that the California delegation should burst on the Eastern view bearing Columbian plumes in the prettiest device that has been suggested.

This emblem is supposed to be singularly appropriate to the nomination of the "plumed knight," and if he should make the race, the California pampas plume might again ride the crest of popularity, as well as ornament the top-knot of the party worker. In that case, this year's crop of plumes would sell at high figures unless some sharp Yankee should bring out bogus plumes at low figures. But suppose the "plumed knight" should not be in it; then sad to relate, the pampas plume would perhaps miss its last chance of history.



HOLSTEIN-FRIESIAN BULL TROY SEDRO 13,849 H. F. H. B.—OWNED BY F. H. BURKE, MENLO PARK.

A California-Bred Holstein-Friesian.

We give upon this page a portrait of one of the most notable Holstein-Friesians bred in California from distinguished imported ancestry. His breeder is Frank H. Burke of La Siesta Ranch, Menlo Park, whose exhibits of fine stock at California State and district fairs for some years back have won distinguished honors. Troy Sedro is a leading prize winner, and it is claimed that he has never been beaten from calfhood up to the fairs of 1891. In three years he scored 11 first prizes, thus adding to the records of his sire and dam, who were both notable beaters.

Troy Sedro is No. 13,894 H. F. H. B., which might mean Herd F. H. Burke, if it had not earlier been accepted as the initials of the Holstein-Friesian Herd Book. Troy Sedro is the son of Sedro (3168 H. H. B.) and was calved September 22, 1888. Sedro was by Imported Herder (2331 H. H. B.) whose dam was Antje Laan, with a Holland record of 56 pounds as a two year old and 64½ pounds as a three year old. Troy Sedro's dam was Edna of Troy (603 H. F. H. B.) by Violet King, out of Violet, a champion of her day both in the prize ring and at the pail.

Troy Sedro is over the average size, and, as the portrait shows, of excellent proportions. He is well backed, very handsome about the head and everywhere symmetrical.

SOUTHERN CALIFORNIA FARMERS' INSTITUTE. — The meetings at Pomona on Friday and Saturday of last week were very well attended and much interest manifested. There was an abundance of material in the form of essays and discussions, and a very free *extempore* recital of experience and observation. Many of the more practical portions of the proceedings will appear in our columns—some of them will be found in this issue. Hitherto the meetings have been held under the auspices of the State University cooperating with a County Institute organization in Los Angeles county. At last week's meetings, several adjoining counties were largely represented, and, as no local organization had been undertaken in these counties, it was decided to broaden the scope of the effort, as is implied in a change of name to Southern California Farmers' Institute. This will admit of holding meetings outside of Los Angeles county, and the opportunity was quickly made use of by appointing the August meeting at Chino, at the invitation of Richard Gird. This will give attendants a chance of a most impressive lesson in sugar beet culture, for the great beet fields and sugar factory at Chino will be in excellent condition for inspection. The meetings in August will have full programs prepared, and will doubtless attract wide attention in Southern California.

FRUIT PROSPECTS.—At the meeting of the State Horticultural Society, reports from members showed generally a fair crop of peaches in the interior, and light along the coast. The pear crop in parts of the northern belt and in the San Joaquin valley was reported heavy, but light in other sections. Apricots were reported as good, but the crops of cherries, plums and prunes light. High prices of fruit for the coming season were predicted, as crops in many parts of the country were injured by the recent storms.

DROUGHT IN RUSSIA.—The Russian Imperial Economic Society reports that the protracted drought has caused serious damage to grass, and there is damage to crops in every province. Farmers are complaining of a lack of pasturage. The society recommends the storage of grain and fodder.

THE LAW IS ALL RIGHT.—It may frighten our Railway Commission to know that the courts would sustain them if they should attempt to do anything. Perhaps such support would be as unwelcome as the finding of work by a tramp who is hunting for it. And yet that is the danger they must incur if they should wake up, for it has been done in Oregon. Action was brought in Marion county by the Board of Railway Commissioners against the railroad to compel the Southern Pacific to accept the schedule of freight rates adopted by the Board. The court has just decided the case in favor of the Board.

HAY IN YOUNG ORCHARD.—The growth of hay in young orchard has been usually condemned as bad practice because of the exceptionally exhaustive character of such a crop both of moisture and fertility. It is not alone the moisture lost by the hay which is deplored, but that which is lost by evaporation from an uncultivated surface. Another danger of hay or grain in young orchard is emphasized by a telegram from the Rotterdam colony in Merced county, where a field fire destroyed twenty acres of pear trees belonging to W. E. Muller, and twenty tons of hay, with a loss of $2,500.

THE agricultural appropriation bill was completed by the House Committee on Agriculture today, and it appropriates $507,500 more than last year; $1,000,000 is appropriated to carry out the provisions of the meat inspection law.

THE Provident Surgical Society of London distributed last year 6223 artificial arms, legs, teeth and noses. One of the noses was brought back to be exchanged.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 4, 1892.

Agents Wanted.

It is proposed during the current year of 1892 *to add* 10,000 *names to the subscription list of the "Pacific Rural Press," and to this end an agent is wanted to make a house to house canvass in every county. To such agents liberal terms will be given. Applicant should state what territory he is prepared to cover and give references as to character and capacity for the work. Any man or woman who will give earnest effort to this work can make a good thing out of it. Address the Dewey Publishing Company:* 220 *Market Street.*

To the Public.

The assertions and opinions of the "Pacific Rural Press" are always subject to review by its readers. Letters to the editor, if respectful in tone, fairly written out on one side of the paper, in fair literary form and reasonably brief, will be received and printed. The editor invites communications on all matters of popular interest, subject only to the conditions above set forth. It is designed to make the "Rural Press" a platform upon which the current thought of the State and coast can address a large, intelligent and highly respectable body of citizens.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Fruit Graders—D. D. Wass & Co.
Spray Pumps—Wm. Wainwright.
Cultivator—Malcolm Macleod. Los Angeles.
Fencing—California Fence M'f'g Co.
The California State Fair.
Holstein Bull—T. Liliencrantz, Aptos, Cal.

☞ *See Advertising Columns.*

The Week.

The hot wave has reduced notably the mountain snows, and consequently raised the rivers. Through the San Joaquin valleys the streams are running full, and the San Joaquin is flooding the lowlands in the lower valley, but this is expected, and the only effect so far is the moistening of lands for late feed and summer crops. The Sacramento has been very high, and the State Capital was saved from flooding by a break in the levee on the other side of the river, where some damage was done by overflow.

These floods are wholly due to sun water and so far have been of slight injury. The reports from the prairie States of storm floods, and tornadoes continue. There has been great loss of loss of life and property in Kansas and adjoining States.

Decoration Day was generally observed on Monday. Business was laid aside, and exercises proper to the day were held in all parts of the State.

THERE is said to be an oak in the Imperial Gardens at St. Petersburg which has grown from an acorn taken from a tree growing near the tomb of Washington at Mount Vernon. It was planted 50 years ago by George Sumner of Boston, the brother of Charles Sumner.

At the South.

We had opportunity during a flying visit to Southern California to attend the Farmers' Institute at Pomona to observe many indications of the industrial activity which is pervading many southern sections. Naturally we saw most of Pomona Valley. The development of the region in safe and varied lines of agricultural production is notable. With this growth also come many manifestations of progress. The Pomona Board of Trade is an exceedingly active and effective body and places the stamp of its work upon many important measures. Their place of meeting would do credit to a metropolis—in fact, the State Board of Trade in this city is not so well housed. Public works at Pomona are also very creditable and private enterprises show much life and thrift. A public park covering the sides and summit of a round-topped hill rising like a butte very near the main streets, and having well-made circling roads by which the summit of the hill is reached, is an acquisition which many towns might envy. The impressional visitor seeking a home could hardly resist the view of the broad valley spread beneath him in all its loveliness of varied culture, and the charming environment of hills and lofty mountains which encompass it. Residents of other towns visiting Pomona can hardly escape without forming resolutions of emulating its public and private enterprise, and thus the influence of the work done there will become State wide. If our people could only visit each other's towns more frequently there would be less local conceit and a more general impulse toward improvement.

Everywhere in Southern California we heard of new individual and corporate movements aiming at the development of water and the improvement of waste lands. It is not remarkable in view of the constant reminders of the valuable results of such efforts which are to be seen on every hand. There seems to be adequate capital for hosts of promising enterprises—not in staking of dry washes into town sites as the fashion once was, but in legitimate enterprises upon the basis of profitable production. Such undertakings are emanating constantly from the old centers of enterprise, with the names and fame of which all readers are familiar, and the aggregate growth of the south result therefrom will be something most notable and gratifying.

In Los Angeles, the great city of the south, there is at present discernible a clear spirit of advancement. Growing business and rising rents are encouraging free investment in new business blocks. The business tide is leaping far beyond its old bounds, and it is clear that boom dimensions will not accommodate the business, although the boom dimension of suburb was probably largely overdrawn. Where the old Los Angeleno lolled along in the sun, throngs are now whisked forward and backward by a network of cable and electric railways, as though time was the essence of every man's contract. Even all the time which old Los Angeles succeeded in killing during all its history could hardly suffice for a day's life of the new town.

One hears very much in Southern California of the development of some parts of Arizona. The success already attained with early fruits in the territory is attracting much capital. Irrigation investments are proceeding rapidly, and Southern California contractors, laborers and supply dealers are all enlisted in this work. It is exceedingly inspiring and energizing to sojourn even for a brief moment amid the indications of industrial activity at the south.

Danger in Grain Gambling.

The influence of grain-gambling in unsettling values, and in generally making a shuttle-cock of man's labor and necessities, is frequently remarked. This is perhaps the longest count in the indictment against it, but another evil is the destruction of personal credit and responsibility in those who conduct the trade. Gamblers too frequently operate with stolen capital, and grain gamblers who bring themselves into situations which destroy their business responsibility are hardly less culpable. However the moral may run in the case, the fact is, that very often, as at Chicago on Tuesday of this week, much grain was lost by those who had no part in the gamble, and often by producers at a distance who did not even know that a "deal" was on. There had been a corner, and a sharp rise in May corn. The bears triumphed and the bulls collapsed. A dispatch says:

> The loss to the trade was larger, it was estimated, than that suffered by the huge collapse of S. V. White in September corn. It was said that one commission house suffered a loss of $55,000 on 100,000 bushels of corn bought for a customer at 45 cents and sold to Coster & Martin to-day at $1. There were innumerable other instances of the same sort. One firm is said to have suffered a loss of $12,000 on 25,000 bushels sold the some way. The receiving houses which received car lots from country customers early in the morning and sold to the clique at 98 cents suffered more than any other class.

How is it possible to do any safe trade while the merchants are knocked about in this way? This gambling in staple products should be made impossible.

Statistical Position of Wheat.

The statistical position of wheat does not warrant the low range of prices for the cereal ruling in our market. While it is admitted that the crop outturn on the Pacific Coast will, without some unforeseen unfavorable climatic changes, be larger this year than any year since 1882, still it is but a drop in the bucket of the world's requirement. Viewing it from this standpoint, then, the depression is largely local, and a recovery in values can be looked forward to with a feeling of considerable confidence.

The United States Department of Agriculture estimates the world's wheat crop in 1891 at 2,352,537,497 bushels (Bulgaria and Caucusus were reported for the first time), allotted as follows: North America, 669,313,672; South America, 47,256,500: Europe, 1,161,581,716; Asia, 399,707,007, Africa, 40,803,996; Australasia, 33,874,606. Leaving out Bulgaria and Caucusus, the yield was 2,238,245,081 bushels, against a total crop of 2,203,889,552 bushels in 1890, an increase of 34,355,529 bushels. This increase is quite small, when it is considered that for the three years ending with 1890, the world's wheat reserve was reduced by 341,000,000 bushels, making it fully 1,000,000 bushels less than nothing. The total wiping out of the world's wheat reserve would have caused famine prices had it taken place some 15 years ago, but now it is largely neutralized by steam and electricity bringing within easy range supplies from countries having maturing crops.

The world's wheat crop for 1892 is estimated, at this writing, as follows, in bushels: North America, 560,000,000; South America, 50,000,000; Europe, 1,250,000,000; Asia, 350,000,000; Africa, 42,000,000; Australasia, 35,000,000; total, 2,287,000,000 bushels, against 2,352,537,496 bushels in 1891. In making our estimates for this year we took the more favorable crop reports, so that if in this month the weather should be unfavorable at home or abroad, the total will be subjected to a considerable reduction.

High prices in the last half of 1891 drew out liberal supplies in each civilized country, and, consequently, the old-crop wheat in farmers' hands is estimated to be next to nothing, while the stocks in public warehouses do not average more than they did at the corresponding time in 1891. Accepting this as correct, then, with a smaller crop in 1892 than was harvested in 1891, the statistical position of the cereal is in favor of farmers, and it will be only a question of time when values will appreciate.

The bears and the ship ring in our market ignore the favorable statistical position of wheat and place in the foreground the prospective large crop on this coast. While we confidently expect in California a surplus available for export of not less than 1,050,000 tons and an increase in Washington and Oregon of fully ten per cent over the 1891 crop, yet there is nothing to indicate that ships will command a higher average for outward charters in the season of 1892–93 than they did in the season now drawing to a close. The certainty of a shortage in the wheat crop of the Central States and a possibility that the grade will be correspondingly poorer, there is a very strong probability that overland shipments from east of the Cascade range of mountains will assume that degree of importance which they held in the season of 1890–91. In the latter season, it is but fair to say, there was a remarkable scarcity of rolling stock, which is not so severely felt now as it was then, to move the surplus to tidewater. This scarcity naturally worked against free shipments of wheat to coast ports in Oregon and Washington, and caused more grain to be sent eastward in cars that otherwise would have been sent back empty. While it is not at all probable there will be any marked scarcity of cars to move the crop to tidewater, yet the markets in the Central States may and probably will offer better prices. With better prices obtainable, large quantities will be shipped eastward which would relieve the Pacific coast markets by taking out just so much less which otherwise would have been exported by sea. Even without this relief we do not see, at this writing, any reason for expecting any shortage in the supply of tonnage on this coast with which to market the surplus. We have in port, engaged and disengaged, a larger supply than at the corresponding time in 1891, while the tonnage on its way, which is less than was on its way in June, 1891, is being steadily added to. Aside from the above, the carry over of old in this State, Oregon and Washington will probably not be as large as it was in 1891, when it was less than at the corresponding time for years past.

SUEZ CANAL PROSPEROUS.—The annual report of the directors of the Suez Canal Company shows that during the past year traffic through the canal increased 1,807,268 tons. A net dividend of 16f, 50 centimes is declared. The directors announce their intention to make a further reduction of 50 centimes in tolls, beginning January 1, 1893.

☞ WEDNESDAY morning the wool storage and packing establishment of George Abbot, on the southwest corner of Bluxome and Fifth streets, in this city, was totally destroyed, involving a loss in all of about $70,000.

The State Press.

Santa Maria *Graphic:* "The whole tendency of the State of California is to solid growth, and to the development of its natural resources."

Eureka *Times:* "The exclusion of objectionable foreign immigration has become a public necessity. No well-informed man will dispute this proposition. 'America for Americans' is a sentiment that evokes a hearty and approving response from ninety-nine out of every hundred people that one meets."

Scott Valley *Times:* "Those who think that the denudation of the mountain slopes of their forest growth has no influence on climate, should read in the Los Angeles *Times* the statement that on the shores of the Mediterranean there are vast tracts of formerly fertile lands where the progress of forest destruction has so utterly exhausted the soil that animal life has become almost extinct. Birds and animals have disappeared, fish have abandoned the brooks that dry up in every warm summer, chronic famine has exterminated almost the entire family of vertebrate creatures, with one exception."

Castroville *Enterprise:* "A man in San Joaquin county has seen the road to wealth that we have sought to point out. He recently told a Stockton *Mail* reporter that as soon as the supply of coyotes began to run short that he intended to start a coyote breeding farm to supply the State's demand. He thought he could get at least twelve pups a year, which would be worth for their scalps $60. On an acre of ground he ought to be able to raise $6000 worth of animals. Who will now gainsay but that is a glorious State we live in, with wonderful room for development in various industries? Raise the bounty on squirrel tails a couple of cents, and the lonely plains may become tenanted by speculators willing to raise squirreis for the bounty offered."

Mr. Doyle Again.

Review of Mr. Kinney's Letter on the Canal Question.

MENLO PARK, May 28, 1892.

TO THE EDITOR:—At a recent meeting of the Executive Committee of the Nicaragua Canal Convention, I was asked to reduce to writing the conditions essential, in my opinion, to a measure providing Government aid to the building of the canal. After reflection, I passed it to the subcommittee in charge, in the following form:

"The cardinal features of congressional legislation in aid of the construction of the canal should be as follows: 1st. It should provide sufficient funds to insure the completion of the work in the shortest time possible. 2d. It should fully secure the Government against pecuniary loss. 3d. It should insure the expenditure of the money under the strict supervision of the most competent army engineers, so that every dollar expended shall represent a dollar's worth of useful work or material employed. 4th. Control of the Board of Directors and the corporate management should be vested in the United States, as a precaution against possible abuses in administration or management."

I desire to lay these conditions before the readers of the RURAL PRESS for their intelligent criticism. I am quite as earnest as Mr. Cannon, Mr. Pool or any of the Farmer's Alliance, in desiring to prevent any fraud or swindle under the disguise of a public improvement, but I am also in earnest in wanting the canal built, and *built by American capital*, and I am quite sure that adequate precautions can be taken against abuses if we will but try. If the above four conditions fail to express all that an Act of Congress on the subject should insure, I hope that some of the gentlemen who have taken part or felt an interest in their discussion will give us in writing a clear statement of what further is needed. If, however, they are deemed adequate, I do not see why all Californians, and, for the matter of that, all the producers of the country, should not unite in asking such legislation, leaving Senators and Representatives in Congress to devise—subject to the scrutiny of the press and the public—the details of the law to be passed.

I assume the sincerity of the gentlemen who criticise the pending bill, but a little reflection will show them that to postpone all action until every one is satisfied, is, practically, to put it off forever. Objections to the principle of the bill I am ready to discuss, but I cannot attach much weight to Mr. Abbott Kinny's objection that even, assuming that the bill now before Congress does give sufficient security," etc., "we still have the danger of further Congressional modification, which would destroy it," etc. If Mr. Kinny is really afraid to have Congress pass a good law, lest it should at some future time change it to a bad one, he might better study out some ingenious constitutional amendment, which will restrict the legislative power of that body, to the passage of *good* laws. When, however, he proposes to postpone all needed legislation until such security can be had, I trust he will allow me, without offense, to consider him a little overcautious. He reminds me, I cannot tell why, of Mr. Huntington's objection based on the frequent occurrence of earthquakes in that country *for the seven hundred years preceding its discovery by white men!*

I fear Mr. Kinny is subject to some prejudice on the question, and, unintentionally miscalls things, for he speaks of the pending bill (if I rightly understand him) as "the scheme of a private company to construct and manage" the canal. He will doubtless be glad to learn, in correction of this mistake, that the pending Act is just the contrary; it is a scheme to practically take the affair out of the irresponsible hands of a private company, where it now is—subject to all the abuses of uncontrolled expenditure by them—and put into the hands of army engineers selected by the President of the United States. Mr. Kinny is probably aware that the only disbursing officers of our Government who give no security for the funds entrusted to them are the Engineer Corps of the Army, and that they are the only ones among whom a defalcation never occurs. I would rather trust them with the expenditure of money, that I have to help pay the interest on, than any corporation I ever knew.

Mr. Kinny inquires as to the option to take 70 per cent of the stock. It is to take it at *par*, and it is to last as long as any of the bonds are outstanding. Hence, *mutato nomine*, the proposition amounts to just this: You, Mr. Kinny, with some associates, are (let us suppose) engaged in a great enterprise which calls for a good deal of capital, but has the assured promise of large returns. We will suppose it a toll bridge, over which, when constructed, half the world will have to pass, and pay tolls. You have laid your foundations, got your working plant together, and are pushing the work with a view to its completion within the twenty years your charter allows for the purpose. A wealthy uncle of yours, who, in fact, encouraged you to undertake the job, now comes forward and says to you: "Nephew, I take a deal of interest in this enterprise of yours; so much so that seven years ago I was on the point of undertaking it for my own account, and had even made a preliminary contract to do so. I gave it up then because my old partner, G. B., pointed out to me that we had made an agreement many years ago (which I had partly forgotten about) to the effect that neither of us was to do it for his own sole account; and so, when reminded of this, I backed out. But there is nothing to hinder me from helping you liberally, and I'll do so. The fact is, having so much land on both sides of this bridge, I can't well afford to have it built or owned by any but assured friends of my own. Besides, blood is thicker than water, and my family will have to use the bridge so much and pay so much of the tolls over it that I think it my interest to have a voice in regulating them. So, Nephew, I'll help you build the bridge. Your credit is not good enough to enable you to do it to the best advantage. If you borrow the money yourself you will have to pay twelve, fifteen, perhaps eighteen per cent per annum for it, and you will get on slowly, even at that. I admit that, even so, there is a good deal of money in the enterprise, but I can show you a cheaper way to get the money you need, and on proper terms; will help you to get it."

"That is certainly a kind offer; but what are the terms, Uncle?"

"Well, my son, my plan and terms are these: Make your notes, to my order, for the money you need, say a million of dollars, and pass them over to me. I will write my endorsement on them, and with my credit to back you, you can borrow all you want at 3 per cent per annum. As security that the money shall not be misapplied, I will, however, keep the notes in my safe and only dole them out to you, in sixty day progress—payments as the work goes on—and I will appoint my own engineers to keep strict watch of every dollar expended, only paying, on their certificates, for work and material actually furnished. I will also require you to deposit with me seventy per cent of the whole stock of your company as security, giving me liberty to purchase it at any time within twenty-five years at par, and the right, meantime, to vote on it, so as to make sure of always having a board of directors satisfactory to myself. I shall require you, also, to lock up all the unissued stock of your company, and that it never shall be sold without my consent. On these conditions, my dear nephew, I am willing to aid you by the loan of my credit, as above stated."

Now I can understand that Mr. Kinny and his company might accept his uncle's aid on these conditions, harsh and mistrustful as they appear, for he knows that the old gentleman's credit will insure the completion of the work, and save him all the trouble of negotiating elsewhere for money; but he would certainly find it very unjust if he were charged with a scheme to induce his uncle to build the bridge for his benefit. He would, I think, be apt to resent such a suggestion with a good deal of indignation. He would say, and truly, "I made no application to my uncle on the subject; he sent for me and proposed it to me himself; *the fact is, he has so much land and cattle on both sides of this bridge that he needs me more than I need him.* Just consider the immense breadth of land he has on either side of the stream and the enormous plant of animals, workmen, agricultural implements, etc., he has to maintain on both sides of it. If he had the bridge, his force—men, animals, plows, harrows, mowers, rakes, wagons, etc.—could, after finishing their work on one side, pass over to the other and do the work there; whereas, now he has to keep two separate establishments of equal magnitude at double first cost, and double the cost of maintenance and double wages. The saving in these items that the bridge will effect for him will of itself be more than the cost of the whole structure. No doubt that is the reason why he sent for me and proposed this trade to me; and as, in fact, I depend a good deal on the old man, and owe him something, too, in the way of family love and kindness, I accepted his offer; but he, not I, is the author of and gainer by the trade."

That is just the state of things here. The proposed legislation originated, not with the canal company, but with the committee on foreign relations of the Senate. They see plainly that the weak side of our country is its enormous frontage on two oceans, with no easy communication between them. We must either maintain two navies—one on the Pacific and one on the Atlantic, or get a canal across the isthmus. They naturally prefer the latter, as less expensive and more useful; useful in peace as well as in war. They summoned the president of the company before them and demanded a detail of its plans, etc. "Where," asked the members, "do you expect to get the money for this work?" He answers, "When the amount we have ourselves put into it is sufficient to constitute a basis of credit, we expect to borrow it, in our country first, but if Americans won't lend it, we will take it from whoever will." "What interest do you expect to pay?" "We will get the money as cheaply as we can, but will pay whatever rate is necessary to obtain it." The committee inquired, "What will you accept from the United States for the interest of the present owners of the enterprise?" The answer was, "If the Government desires to buy us out, and take the work into its own hands, it should repay us all our outlay, with interest." "You would expect some profit to compensate you for your trouble and time spent?" "Yes; but that need be no obstacle; you may let the Secretary of State and the Secretary of the Treasury decide on the amount and we will accept it." "Will you put that offer in writing and deliver it to this committee?" "Certainly;" and it was done, and *that offer, in writing, remains to-day on the files of the foreign relations committee, and is still open to acceptance.* It does not suit the Government to accept it to-day, but perhaps the time for accepting it will yet come.

The Committee went into an inquiry as to the details of expense of construction and whether a Government guaranty of the company's three per cent bonds, on the basis proposed in the present bill, would be acceptable and sufficient for the work. Mr. Miller expressed his belief that it would. They then asked him to draw a bill for the purpose, but he declined. He was quite determined to preserve his independence, and under no circumstances to become or appear a solicitor for Government aid. His attitude is just what I have above imagined for Mr. Kinney and the supposed bridge. We are going to build this canal, for the benefit of the commerce of the world, and for the profit to be derived from the enterprise. Its far-reaching effects on the prosperity of the maritime nations of Europe and America we do not ignore. So far as we can influence them in favor of our own country, we will do so. We have proved this intent by asking our charter of incorporation from the American Congress, instead of going to France or England for it, as we might have done. We shall invite the cooperation of our own countrymen in preference to all others. It is the crowning work of the Nineteenth Century, and it is fit that it be done by the most progressive people of the age. If our United States Government desires to push us aside and take it up itself, *en hora buena!* Make your own terms! But in case of Government interference or aid, you gentlemen must draw up your own enactments. I have not come here to ask aid, and I object to putting myself in such false position. *Whatever action you take on the subject must be taken because you deem it wise and patriotic, and because the United States want the canal;* not because this company solicits or desires aid.

The bill was accordingly prepared by the Committee, and stands before the Congress and the people on its merits as a public measure. Do we hear of any lobby agents soliciting Congress for its passage? Has the company an agent or a "solicitor-general" in Washington urging it, or furnishing elaborate printed briefs to Congressmen and committees? Are there any rumors of votes bought, or deals made in its behalf? None of these things. There is no money to be made by anyone out of the pending measure, and hence no lobby to support it. It is demonstrated that the canal will save the Government one half the cost of the new Navy we are now commencing to build, and one-half of the money to be annually spent on the naval establishment forever after its completion, and it will cost the Government nothing, for all that is proposed is a loan of its credit against good security. These are surely reasons enough.

JOHN T. DOYLE.

Letter From Mr. Ohleyer.

YUBA CITY, May 26, 1892.

TO THE EDITOR:—I regret to say that it has been a long time since the writer has availed himself of your "standing" invitation to contribute such thoughts as I might be possessed of for your columns. The neglect was an enforced one, but was just as culpable as my silence may have been acceptable to the RURAL. Be the situation as it may, I propose a venture upon your valuable space and good natnre for the purpose of reviewing a very grave and, I might say, hackneyed question.

I feel impelled to this step by a reference to the hydraulic mining question and to myself to be found in your neighbor, the *Mining and Scientific Press*, of May 21st. The article seems to have been written by a stranger, or one that had forgotten some well-known facts. Your cotemporary reviews the prospects of the mining bill now before Congress in a glowing manner, based on information furnished by Mr. Luttrell, and then quotes the writer as editor of the Sutter County *Farmer*, as throwing doubt upon the project getting the endorsement of Congress.

It is hardly worth while to state that George Ohleyer has not been connected with the Sutter *Farmer* in any capacity for more than two years last past. He submitted to an interview on his return from Washington, wherein he expressed his conviction as to the prospects of the mining measure, which he had a right to do, a right that has been exercised quite freely by the hydraulic press, even to the extent of pronouncing the scheme hopeless in the present Congress.

I should have ventured a reply to the *Mining Press* had I not found on another page some further reference to me, after predicting a resumption of the flow of the golden stream upon Marysville in these words: "Until then, this very able and otherwise estimable gentleman must be permitted to indulge his favorite pastime in peace." Now, if I am not mistaken, this is notice that I shall not appear in the columns of your neighbor, either for censure or defense, hence my appeal to your generosity.

You will doubtless agree with me that it would be passing strange if so momentous a question as the hydraulic mining question, as now before the American people, shall not be discussed. Why, sir, it overshadows every other question that can be raised or thought of by a people who are to reside beneath its influence. It is not necessary to recite its history now. It has has had its day, and has left its ineffaceable mark. After much bitterness and tribulation, there came an unconditional surrender to law and decrees of the highest tribunals in the land. It did not at once follow the adjustment, as it should have done, which caused well-grounded distrust of the little giant, and I regret to say, the cause of the distrust is not entirely removed. But let that pass for the present. Our hydraulic friends, individuals and press, by shouting "*no more injury to land and rivers*," were enabled to construct a plea for national aid. Under no other banner could they have approached the Federal Government. A mountain of faith and hope was engendered for which there was no warrant but a very slender thread found in a certain report. A bill was framed intended to be in accord with it. Like all human creations, this bill is not perfect, and to say that, whether right or wrong, it should be taken without examination and without criticism, is demanding too much at the hands of a jealous and injured people. As an instance of the frailty of the bill, it purports to be a measure to "*regulate hydraulic mining in the State of California*," and then in its construction makes it optional for any mine to accept its provisions; and there is no penalty attached for noncompliance with the act. Would you enact a law regulating the disinfection of trees for those only who would choose to be governed by it? Surely not. Is it any wonder that the people who have suffered untold injury view the progress of such a bill with distrust? Again, the National government is called upon to restrain the coming avalanche from the public treasury, when the very opposite is suggested by the Engineering Commission, on whose report so much reliance is placed.

Now, Mr. Editor, the writer has good reasons for believing that the farmers of the Great Central States and the people of every other calling will very earnestly protest at being taxed for the benefit of private individuals and corporations, many of them nonresidents. The farmers will hold that they, too, are entitled to bask in the favors of Uncle Sam, being also a worthy class of citizens. Even the newspaper man could be of more use to himself and mankind if the Government would supply him free with paper, ink, etc., required in his office. All such contributors to the hydraulic purse will of course still have to labor a dollar's worth to get one. To me the proposition seems irrational, preposterous and unpatriotic.

Much is said concerning the enormous output of gold—past, present and future; and yet the cry for aid shows that hydraulic mining is not, nor ever has been, self-supporting. If this system can only enrich the moneyed centers (as it seems to) and impoverish the mining communities, its claim for federal aid is not well-founded.

But, dear editor, I have written more than I intended, for which I crave your indulgence. While we all wish that the golden treasures hidden in our mountains may be uncovered and utilized, the riparian proprietor must be permitted to scan the process by which it is to be accomplished. Very respectfully,

GEORGE OHLEYER.

Weather and Crop Bulletin for Week Ending May 27th.

The following synopsis of reports of crops and weather is sent us by Sergt. J. A. Barwick, Observer at Sacramento of the U. S. Weather Bureau and Director of the Weather Service of the State Agricultural Society. The synopsis of localities north of the Tehachapi range is by Sergt. Barwick; that of the regions south of the Tehachapi is by Mr. G. E. Francklin, Observer at Los Angeles:

Lassen County.—Susanville—Highest temperature 86 degrees, lowest temperature 47 degrees, no rainfall. The weather has at last settled down, and everything is growing fine, alfalfa will soon be cut. *Humboldt County.—Eureka*—No rainfall. The weather conditions for the week were very favorable to farm work and growing crops. Considerable corn planting was done the past week; all crops are doing well now, but the cherry, peach and prune yield will be considerably below the average. *Blocksburg*—No rainfall. Highest temperature 91 degrees, lowest 50 degrees. The past week was unusually hot, and although warm weather and sunshine was needed, rain will be needed within a week to insure good crops. Farmers are hurrying in corn, beans and potatoes; so far grain looks fine.

Lake County.—Upper Lake—No rainfall. The past week has been very hot, with no clouds. Everything has grown tremendously. Alfalfa cutting is well under way, crops heavy, but rather poor in quality. Grain and hay improve rapidly, also fruit and grapes.

Shasta County.—Anderson—No rainiall. The week has been all that could be desired, it has been warm. Haying has commenced, good yield; grain crop heavy. Highest temperature 102 degrees, lowest 60 degrees.

Colusa County.—Williams—No rainfall. The conditions for the past week continue all that could be desired.

Glenn County.—Willows—No rainfall. The extreme heat of the 19th, 20th and 21st did no damage. Extremes for the week, maximum 99 degrees, minimum 54.

Butte County.—Palermo—No rainfall. The first three days were very hot, the balance quite cool. Maximum 94 degrees, minimum 51. Haying is progressing rapidly, with rather more than an average yield. Grain still promises a good crop.

Yuba County.—Wheatland—No rainfall. The weather for the past week has been very favorable to all crops. Haying has commenced where land is dry enough. The present moist condition, with continued favorable weather, will insure a big yield of grain. Hops are making rapid growth.

Nevada County.—Nevada City—No rainfall. The warm weather of the past week, and the heavy dews in the mornings have been the most beneficial to crops for the season, and vegetation of all kinds is growing fast. Haying has generally commenced in the foothills, and is yielding well.

Placer County.—Newcastle—No rainfall. Maximum for the week 96 degrees on the 21st, minimum 48 on the morning of the 25th. Hay crop will yield heavily. Peaches will yield full crops in all well-cared for orchards.

Amador County.—Oleta—No rainfall. This week has been one of constant sunshine, and all crops have been greatly benefited, they are growing with a rush. Haying is rushing.

Sacramento County.—Elk Grove—No rainfall. Crops never looked better. Haying has commenced in good earnest, and is of good quality and quantity. *Franklin*—The weather was favorable to all crops. The wheat and barley is showing up in fine shape. The backwater in the sloughs is rising, and if the Freeport levee should break a large amount of grain would be damaged, otherwise there is every prospect of having a good crop.

Yolo County.—Rumsey—No rainfall. The change of weather was very sudden, but what effect it will have upon crops, especially upon young trees, it is impossible to say. So far everything looks well. *Madison.*—If the present weather continues, it will not be many weeks before wheat will be ripe enough to cut. *Capay Valley*—The weather continues favorable for both the fruit and cereal crops. *Chacheville*—The wheat crop is ripening fast. *Dunnigan*—Farmers are busy making hay. *Blacks*—The wheat crop in this vicinity is fine, prospects are good for a large crop.

Solano County.—Denverton—After the rain of the 15th we have had a week of exceedingly hot weather, the thermometer reaching over 90 degrees. Haying is well under way. *Vacaville*—The weather has been warm here during the last week, and crops generally are are doing well. Cherries are about finished, and apricots and plums are coming in freely. Warm weather needed.

Sonoma County.—Forestville—Copious fogs have prevailed during the past week. Highest temperature 92 degrees, lowest 43. Cherries are ripening, haying season commenced, corn planting under way, barley and oats are rapidly heading out, wheat is somewhat slower, owing to so much cold weaather. *Sonoma*—The hot wave of last week, followed by cool, foggy and cloudy weather, has been generally favorable to fruit. The prospects are good for all growing crops. *Healdsburg*—Hops are now about to the pole top and doing well. Hay making has begun, cherries are ripe, what few there are. Prunes, about one-third of last year's crop.

Alameda County.—Niles—Hay not injured much by last rain, early potatoes and peas all harvested, Chevalier barley doing well, peaches, apricots, cherries and almonds all good, French prunes also, 26th wind from the south all the morning, free, with indications of rain. Temperature 100 to 103 degrees, but cool since the 22d. *Livermore*—Friday and Saturday last were excessively hot, resulting in much damage to vegetables, and some to grain and fruit. In the cool weather and sunshine grain is picking up again. Haying is progressing finely.

Santa Clara County.—Santa Clara—The first four days of the week were very hot, but not injurious. Have had good hay weather. *Gilroy*—The hot days last and this week helped grain and fruit. The crops promise to be above the average.

Monterey County.—Salinas—Rainfall 0,10. Continued good prospects for all kinds of crops in this section. Haying fairly well begun and promises to be good in quality. *Jolon*—The warm weather of the past week following the rains brought wheat forward very rapidly. *San Ardo*—The recent hot wheather has very much injured the grain crop. Fruit looks well.

San Luis Obispo County.—Edna—The hot weather has ripened the grain fast, and beans are doing well. *San Luis Obispo*—Highest temperature 88. Cool nights and days foggy and heavy dews, are just what we require.

San Joaquin County.—Lodi—Highest temperature 99, lowest 51. The high temperature of the 21st caused no injury, as it was followed by cool weather, the highest on the 22nd being 83. Haying in full blast; crop light, quality good. Fruit, light crop; apricots, poor; peaches, poor to fair; almonds good. Light northwesterly winds prevailing.

Stanislaus County.—Modesto—The past week the thermometer went higher than any previous year on corresponding dates. Saturday, Sunday and Monday it registered 92, 94 and 93 respectively and caused great damage to grain and fruit.

Fresno County.—Selma—Weather cool and pleasant. Haying all under way. Harvesting beginning. Crops of all kinds promise well, and present weather conditions are favorable.

Tulare County.—Visalia—We certainly are the chosen people, and this is the garden spot. We had .49 of an inch of rain in the city limit, but very little outside, so as not to damage hay that was cut. All crops doing well. Highest temperature 102.

J. A. BARWICK

WEATHER CROP BULLETIN OF SOUTHERN CALIFORNIA.

Ventura County.—Hueneme—The foggy weather of the past week has been favorable to the grain crop. Heading is in full blast. *Bardsdale*—The cloudy weather of the past week has proved favorable to growing crops.

Los Angeles County.—Lancaster—The weather this week has been favorable to grain. The warm spell did not do as much harm as was thought, and the prospects are still good for three quarters of a full crop. *Rodeo de los Aguas Ranch.*—Sugar beets, corn, barley and potatoes are growing finely. Land for winter vegetables is being prepared for fall planting. A large amount of water is being developed in the tunnel. *The Palms*—The cloudy weather during the week was beneficial to early and late grain, as it retarded the ripening and gave a chance for the kernels to fully fill out. *Los Angeles City*—Weather cool and cloudy this week, favorable to grain crop. Highest temperature 77 degrees, lowest 57 degrees. Light sprinkling rain morning of 27th. *Duarte*—The past week has been cloudy and damp, with occasional fog. Grain is ripening slowly; fruit is looking well; oranges promise a good crop, but prunes a light one. Highest temperature 91 degrees, lowest 57 degrees. *Pomona*—Cloudy and high fogs all the week and the temperature below the average. Slight drizzles of rain Thursday. Deciduous fruits coming forward well; some ripe cherries and blackberries of local growth in the market.

San Bernardino County.—Ontario—Weather cloudy the past week, with light showers in the mountains. Hay is curing well. *Chino*—Light fogs, clouds and indications of rain characterized the past week. Hay is of an extra good quality on the Chino ranch, and is mostly stacked in good shape. Sugar beets are making a fine growth; 4000 acres are now planted. *South Riverside*—The temperature and sunshine were about normal during the week.

Orange County.—Anaheim—The foggy nights and cloudy days of the past week helped the corn crops materially. *Tustin*—Several days of cool, cloudy weather were unfavorable for curing hay. Corn is looking well. Young vineyards are making a fine thrifty growth,

San Diego County.—Vineyard—Foggy mornings have a tendency to rust grain, of which there is no indication yet. Barley is turning yellow. *National City*—The hay crop proved fairly good on cutting, much better than was expected. Grain is looking well and was much benefited by the late rains.

G. E. FRANCKLIN.

OREGON WEATHER-CROP BULLETIN FOR WEEK ENDING SATURDAY, MAY 28, 1892.

Western Oregon.—The forepart of the week was warm and cloudless, while the latter part was cool and cloudy. No rain has fallen during the week. The maximum temperature ranged from 70 to 80 degrees; the minimum temperature from 40 to 60 degrees. The weather conditions were exceedingly favorable to all vegetation and there has been a marked growth. There is already a desire for more rain to moisten the surface soil, as it has become quite dry and hard under the influence of the warm, dry days. Fall wheat and oats are heading in most counties, while rye in sections has headed out. Late sown spring wheat is not so promising owing to the warm and dry weather coming on so rapidly, and a good rain would do it much good.

Eastern Oregon.—Warm, cloudless weather prevailed up to Thursday, when it became cooler and clouds appeared. A few local showers occurred, hardly sufficient, however, to lay the dust. The maximum temperature ranged from 60 to 85 degrees; the minimum temperature ranged from 35 to 55 degrees. The weather was extremely favorable to all vegetation. The warmth and sunshine caused a marked growth, while the cooler and cloudy weather assists in the heading and filling of the grain. Some grain that is rank has not a good color. Wire worms are reported to be at work in Wasco and Gilliam counties. All reports indicate first-class prospects in every county.

Corn-planting is about done, and a large acreage has been seeded.

Fruit has been injured more or less in most counties. The green aphis has appeared near Fossil. Apples are as large as walnuts in Wasco county, where Black Republican cherries are coloring. Black and raspberries are in bloom.

B. S. PAGUE,
Observer U. S. Weather Bureau.

Field Notes in Napa Valley.

NAPA, May 26, 1892.

TO THE EDITOR:—The heated spell of last week has been followed by cool weather, comfortable for man, beneficial for crops. Backward though the season is, crops in general look very promising, grain of all kinds having rapidly forged ahead during the last week or ten days. The season has been very favorable for oats, and many fields of that grain in this vicinity are very promising. The same may be said regarding barley, with few exceptions. Wheat is coming along nicely, and if this cool weather holds, will fill out plump and heavy.

Next week haying commences, soon to be followed by harvesting. Evidently a very large acreage of hay will be cut this season, and the yield promises to be very heavy. With this prospect in view, some farmers in this valley will harvest as much of their crop for grain as possible rather than cut as much hay as they anticipated. In some fields of wheat wild oats have appeared in quantity, and wheat and oats will have to be cut with the mower instead of the header.

FRUIT AND WINE.

Our cherries are ripening fast, and the local Fruit Growers' Association will immediately make arrangements for shipping their crop East. Although the yield of some varieties of fruit will not be quite up to the average, the season from this time forward will be a very busy one for orchardists and those farmers who have no special crop. In fact, it may be safely affirmed that the outlook was never more flattering.

Then our wine men are in better spirits than for some time. It is true that frosts damaged the crop in some degree, but to what extend cannot now be ascertained. It is a question if the shortening of this season's crop by frost was not a good thing for the grape grower. It resulted in the advance of the price of the vintage of 1891 from 12 cents to 15 cents per gallon, with a prospectively better price for the wine of this season. With less grapes to handle and fewer expenses, the income of vineyardists may be greater than if there was a large yield. Within a few days a sale of 5000 gallons of last season's wine wss consummated at 15 cents, and some San Francisco parties are in the valley trying to secure 500,000 gallons. So it is evident that the somewhat prolonged period of depression in this industry is about to give way to better times.

It cannot be denied that the acreage of vines is annually decreasing in every portion of the county, principally on account of the ravages of the phylloxera. At the same time, it must be noted that comparatively few new vineyards are being planted. One would naturally infer that prices of grapes and wine must advance and remain at a higher figure than for some years past.

OUR PRIZE LETTERS.

The PRESS is to be complimented upon its enterprise in publishing prize articles upon various topics relating to farming. The amount of information elicited from practical men will be large, and the benefits resulting therefrom to many readers will be great. The plan for publishing topics mentioned is an excellent one. Would the suggestion be in place that, after the subjects enumerated have appeared in the PRESS, an article, or series of articles, upon farm buildings, especially adapted to California, be printed? This is an age of progress, and farmers who do not keep abreast of the times must suffer financially, as well as intellectually. Improvements in every branch of farming are constantly being made, and we of California are more fully alive to this fact than in years gone by. [If the topics set for this year prove popular, others will certainly be taken up later.—ED. PRESS.]

THE COMING FAIR AND THE COMING HORSE.

Arrangements for the annual fair of our Agricultural Association are nearly completed, and, as usual, the event promises to be noteworthy. The display of all farm products, the output of manufactories, the handiwork of the household will, as usual, be lavish. Not the least noteworthy improvement in farm matters developed since our Association held its first fair, six years ago, is that in stock, particularly horses. Each year sees better animals exhibited than were on the list the preceding season. But still there is chance for greater improvement in this direction. What is most desirable in any agricultural community is a class of horses that is suited to general work, that will be of not too heavy weight—strong, hardy, rapid walkers in the furrow and fair travelers on the highway. We may have some such horses, but not many. More attention has been paid to rearing race horses than any others, and it must be said success has, in good measure, been attained. But for general purposes, these horses are too small, are not heavy enough to suit the farmer. The Percheron is not as popular in this section as a few years ago. He is too slow on the farm, and is not adapted to traveling on the highway. He is an excellent dray horse. The same remarks apply to the Clydesdale.

MARKETING EGGS.

"There is one thing you would do well to mention when next you write," said a merchant to the scribe a few days ago. "Many farmers do not take pains enough in caring for, or marketing their eggs. Evidently not a few of them do not gather their eggs more than once or twice a week, and consequently some are unfit to eat. I caudle all eggs brought me and throw away dozens, in the aggregate, because should I sell them, it would injure my trade. Eggs should be picked up every day. They should be marketed in a clean, attractive condition; they should be of good size. In order to obtain large eggs, breeds noted for their production should be raised. There is too much haphazard management on the part of many, or rather no judicious management at all. Another thing those who raise poultry for eggs should bear in mind, is the marketing of all, or nearly all, cocks as soon as the hatching season is over. They are of no use until another season, and then if new birds are purchased, the character of the flock will be much improved. Eggs from hens that are in yards where there are no roosters, keep better and longer than when impregnated. Sell off all, or most all roosters; save the expense of feeding them, have quieter flocks and better keeping eggs.

R.

Cankerworms and Big Peach Figures.

NOVATO, May 23, 1892.

TO THE EDITOR:—Judging from notes in your paper, and a recent personal trip, the cankerworm still seems rampant in Santa Clara County. We up here have been through the mill, but banding the trees has saved our orchards this year, and proved itself a most effectual cure Our method is to band the trees with tarred papers—the bands about seven inches wide. the upper edge fitted snugly to the tree, so the moth can't crawl underneath. Commencing about December 1st, and renewing about every five days, we spread on the bands a mixture of printer's ink, procured ready made in San Francisco, for about 9 or 10 cts. a pound. This renewing must be kept up, till the last of the female moths have left the ground, generally the middle of January, when, if this method has been thoroughly followed, your trees will be found free from eggs, and the cankerworm a thing of the past. Have also tried spraying with Paris Green, but without the least result. From young trees, the bands should be removed as early as possible in the spring, as the oil in the mixture may soak through the paper, and injure the bark of very young trees.

Have noticed an extract from the "Bakersfield Californian" in the PRESS lately, which states that a Kern county orchardist has a tree of George's Cling Peach, a two year old, from which he expects to gather 1200 pounds of fruit this year, also a Briggs May, same age, good for 150 pounds. Now, I have lived in Kern county for a couple of years myself, and am prepared to believe anything reasonable, but a yield of 1200 pounds of peaches, from a two year old tree, I must confess, rather stuns me. 1200 peaches, each peach to weigh a pound. It seems to me there is a cipher or so too many in these figures.

MAX A. THEILIG.

The State Fair.

An attractive advertisement on another page shows that the State Board of Agriculture proposes to make its fair this year more fully characteristic and representative of California than ever before. It plans to work directly toward the great display of State products, manufactures and resources at the World's Fair by making its fair in September a "dress rehearsal" for that event. Large premiums will be awarded, and we hope they will set everybody at work collecting and preparing for the exhibition. Get up your committee and work for the county displays, or proceed alone and compete for the individual awards. Write to Edwin F. Smith, Secretary at Sacramento for fuller information.

FRUIT MARKETING.

The Santa Clara Fruit Exchange Organized.

The organization of the Santa Clara valley producers into an exchange was completed at a meeting in San Jose Jose last Saturday. More than 100 subscribing members have already enrolled themselves, and 90 per cent of them are fruit producers.

As to the aims of the organization, Col. Hersey spoke as follows:

The purpose of this organization is to sell the fruit before it is placed upon the cars, and when we ship the fruit no one can remove it from the cars until the money is paid. This is a proper business principle, and is the only one on which we should act. Some have expressed their fear about the canners eating us up. Well, I can say I have no such fear, as we are in the majority. He stated that, as the articles of incorporation set forth, the purposes of the corporation are to receive, prepare, pack and sell the fruit products of the county, owning or leasing land, buildings or machinery necessary for the conducting of its business, and of dividing, after actual and necessary expenses, all the net proceeds among those who deliver their freight. Transferable or warehouse receipts will be issued on delivery of each kind of fruit, to from 50 to 75 per cent of its market value at the time of delivery, and the balance paid at the close of the business season.

ELECTION OF OFFICERS.

The following were unanimously elected directors: Philo Hersey, producer, Santa Clara; W. H. Wright, drier and canner, San Jose; E. S. Dawson, canner, San Jose; G. W. Tarleton, producer, Berryessa; E. F. Adams, producer, Wrights; James E. Gordon, drier and producer, Saratoga; J. R. Johns, producer, Saratoga; F. M. Righter, drier and producer, Campbell; E. H. Hazelton, producer, San Jose.

The board of directors organized by the election of Philo Hersey, president; E. F. Adams, vice-president; W. H. Wright, secretary and temporary treasurer.

ARTICLES OF ASSOCIATION.

As this enterprise at Santa Clara is likely to be the forerunner of other local organizations, we print in full the by-laws, and advise that they be preserved for reference:

ARTICLE I. The name of this corporation shall be the Santa Clara County Fruit Exchange. There shall be a corporate seal, bearing the name of the corporation and date of incorporation.

ART. II. The office and place of business of the corporation shall be in San Jose township, county of Santa Clara, State of California.

ART. III. The capital stock shall be two hundred thousand dollars, divided into twenty thousand shares of ten dollars each. Each share of stock held by a person eligible, shall be entitled to one vote at all stockholders' meetings. Proxies must be held by eligible stockholders only.

ART. IV. The annual meeting of the stockholders shall be held at the office of the incorporation or some suitable and convenient place in San Jose, on the first Saturday of May of each year. Special meetings may be called by the president, and he shall call special meetings upon the written request of the ten stockholders of record. No business shall be transacted at a special meeting except that set forth in the call.

ART. V. All meetings of the stockholders shall be called by publication of notice, signed by the president, stating time and place thereof, in some newspaper of general circulation, published in the county of Santa Clara, for two weeks next prior to the day fixed for such meeting. The secretary shall also notify by letter or card all stockholders of record of such meeting.

ART. VI. At all meetings of the stockholders the presence of a majority of the stock shall constitute a quorum.

ART. VII. The number of directors shall be nine, to be elected at the annual meeting. They must be eligible stockholders, residents of the State of California and citizens of the United States. The interest of a majority of said directors must be greater as growers than as driers or canners.

ART. VIII. The officers of the corporation shall be a President, Vice-President, Secretary and Treasurer. The Treasurer may be a director or some bank located in San Jose designated by the Board of Directors to act as such.

ART. IX. The pay and salaries of all officers and persons employed, except directors, shall be determined from time to time by the directors. Directors, in the performance of their duties as directors for the first year, shall receive actual expenses in attending meetings, and subsequently their compensation shall be fixed by the stockholders at the annual meeting.

ART. X. The Board of Directors shall hold regular meetings semiannually at the office of the corporation, at such times as the board may establish. Special meetings will be held upon the call of the President by personal notice on each director, or by letter or postal card through the mail. Special meetings shall also be held upon notice signed by three directors having been duly served by mail or personal delivery ten days before such meeting. Five directors shall constitute a quorum for the transaction of business, and may adjourn from time to time at their discretion.

ART. XI. The President, Vice-President, Secretary and Treasurer shall be elected by the Board of Directors immediately after the annual election of directors. Such officers shall hold office for one year, and until their successors are elected and qualified. The office of manager shall be filled at the discretion of the board, and his term of office be at their pleasure.

ART. XII. Vacancies from any cause in the Board of Directors may be filled for the unexpired term by the re-remainder of the board at any meeting, unless ten stockholders shall, within one week from the time vacancy begins, file written objections, in which case a special meeting of stockholders shall be called for that purpose.

ART. XIII. The Board of Directors may from time to time appoint such officers, agents and employes as in their judgment the necessities or interest of the corporation requires, and fix their compensation.

ART. XIV. The Secretary shall be the custodian of the records of the corporation. He shall keep a full record of the proceedings of all meetings of the stockholders and the Board of Directors. He shall countersign all certificates of stock, contracts, deeds and leases signed by the President, keep an accurate account with the stockholders, collect from them all assessments and pay the same to the Treasurer, issue the proper notices of all meetings of the stockholders and of the Board of Directors, and perform such other duties as are appropriate to his office and as are required by the Board of Directors.

ART. XV. The Treasurer shall have charge of the finances of the corporation, receive from the Secretary all moneys collected by him and belonging to the corporation, and keep on deposit all moneys of the corporation at such place as the Board of directors may select, in the name of the corporation, to be drawn only on warrants signed by the President, or such other officer as the directors may name. He shall keep proper books of account, showing receipts and disbursements, and submit a full detailed report of the same at each annual meeting and at such other times as the Board of Directors may require.

ART. XVI. There shall be an Executive Committee, a Finance Committee and an Auditing Committee. The Executive Committee shall have general superintendence of the business; the Finance Committee shall examine the books of the Secretary and Treasurer and report thereon, at the regular meetings of the board, in writing. The Auditing Committee shall examine all bills against the corporation and report thereon. All of said committees shall be appointed by the President from the Board of Directors.

ART. XVII. Upon the issue of a certificate of stock to any subscriber, 25 per cent of the par value thereof must be paid to the Secretary, and the balance upon the call of the directors.

ART. XVIII. Eligibility to ownership of stock requires that the subscriber therefor shall be a grower, a drier or a canner of fruit for sale upon the market, and may be either an individual, an association or a corporation. Ineligible persons acquiring stock by inheritance, attachment or otherwise shall not be permitted to vote the same in person or by proxy. A certificate showing eligibility shall be filed with the Secretary by each subscriber to stock.

ART. XIX. Stockholders shall be paid six per cent per annum on the amount of stock capital actually paid in.

ART. XX. The business shall be conducted, as closely as ordinary prudence will permit, upon a cooperative basis, the Board of Directors establishing such rules and regulations therefor as their judgment shall dictate. No fruit shall be bought by the corporation, except to fill orders or contracts when the supply in the hands or under the control of the corporation is insufficient therefor. Transferable or warehouse receipts may be issued for fruit in store or under control.

ART. XXI. No debt beyond the sum of $5000 shall be created unless by vote of three-fourths of the stock issued, except for money to pay advances on fruit in possession or under the control of the corporation.

ART. XXII. The directors shall correspond with buyers of fruit with the view of establishing and maintaining a system of inspection mutually satisfactory.

ART. XXXIII. The directors shall by all reasonable means seek to enlarge and extend the markets for the fruit product, and shall have power to create a fund therefor, to be used in their discretion, by a special charge not exceeding one-half of one per cent on the sales made by the exchange.

ART. XXIV. The books, records and business papers of the corporation shall be open to the inspection of the stockholders at all times.

ART. XXV. These By-laws may be added to or amended in the manner provided by law.

FRUIT PRESERVATION.

A Canner's Views on Fruit for Canning.

A paper prepared by J. J. GROOM, of Pomona Cannery, for the Farmers' Institute at Pomona.

The first thing for a man to do who contemplates setting out an orchard, is to decide whether he will supply the canneries or the shipper of green fruits, or both. But right here let me say, do not set too many varieties, for unless you have a very large acreage you would not have enough of any one kind to attract the attention of either the canner or shipper. Many fruit growers realize but little from their orchards for this very reason, after years of hard labor, because of setting too many varieties. Go to good, reliable men who are in the business of canning or shipping, and advise with them and find out what variety is most sought after in their line, and act upon their advice, provided you are not competent to judge for yourself. Most people rely upon their nurseryman to advise them what varities to set. The nurseryman has his stock to sell, and of course it is quite natural for him to advise to set a variety and not many trees of a kind. Then again, he is hardly competent to judge which is the best canning or shipping varieties, as it is not directly in his line of business. If you have but ten acres, I would advise to set them all to one variety; but if you have 20 acres, it will do to divide them into three varieties, namely, apricots, peaches and Bartlett pears. These are the staple varieties to can. As to peaches, the best variety to plant for canning is the Orange Cling, and the Lemon Cling comes next. The Muir is the best freestone peach to can. It is a good, regular bearer, and when properly thinned on the trees is sufficiently large to can as extra goods. They are also the best and most profitable peach to dry, as they lose less in weight in drying than any other, as the flesh is naturally quite dry and the pit very small, and when the peach is opened with the knife the pit drops out readily. Another advantage the Muir peach has over the Salway or Crawford is, it is yellow clear through to the pit, which gives it a bright, rich color when canned or dried.

As to the best variety of apricot: In the 16 years I have been in the canning and drying business, I have found the Hemskirk to be the most desirable. It is a regular bearer, and is quite large, plenty large enough to make extra canned goods. It ripens very early and is of good color.

As to the proper size of apricots, peaches and pears necessary to make canned goods, I will say: Apricots should weigh only eight to the pound. I always give the size of apricots by weight, peaches and pears by measurement. A peach, to can for extras, should measure before it is pared two and a half inches across the narrow way after it is cut open. The Bartlett pear should also measure two and one-half inches through the center. How to obtain these sizes, is first: By pruning carefully and judiciously. Second, by proper thinning out when the apricot and peach is the size of a robin's egg. The apricots should be carefully thinned to three and four inches apart on the limb. Peaches should be not less than five to six inches apart on the tree; then with proper cultivation the fruit will be large and fine enough to make extra goods. Some growers might object to thinning down to the distance apart I have mentioned, and would say, at once, that would cut my crop of fruit down one-half or two-thirds, as the case might be. Now to illustrate: I took a drive through this valley about three weeks ago, and I found the apricot and peach trees in most cases overloaded, at least on an average one half. In some cases I counted clusters on limbs not larger than a pipe stem, 10 and 15, and as high as 21 in one case that only covers a space of 11 inches. There were 21 apricots where there should not have been but four or five at most. A majority of the peach orchards I examined were in about the same condition. I said to some of the parties, you ought to thin your apricots and peaches, you would surely get a better price for your fruit, and you would have nearly as many pounds, and it would take less labor to handle them, and your trees would be more healthy, live longer, and bear a regular crop every year, and would be more satisfactory to yourself and the buyer, and would give you a reputation for growing fine fruit; and if all the fruit growers would join in and thin out their fruit to a proper consistency, it would add largely to the value of not only your fruit, but to the trees and the surrounding country. As a rule the tendency is to allow apricots and peaches to overbear. The consequence is the trees are broken down and only bear a crop every other year, and in a few years the trees die out.

As to the condition apricots and peaches should be picked, I will say when they are fully matured and well colored, but not soft. During the ripening season the fruit should be looked after every day, and all that is in condition should be picked at once, if but only a few at a time. Most fruit-growers are inclined to leave the fruit on the tree too long, especially so in the first part of the ripening season, as they say it does not pay to go over the trees for only a few pounds. But there is just where they make a great mistake, for most of the very largest and finest fruit ripens first, and, if neglected, until a large quantity is ready to pick and then brought to the cannery, it is almost worthless, it being too ripe to can or dry successfully. So the grower should watch his fruit from day to day, and gather it as soon as it is in condition. Some have said to me when advising them how and when to pick their fruit: Why you must have a man stand under his trees and watch his fruit all the time. I reply that is just exactly what you ought to do during the ripening season to make a successful fruit-grower, and to bring your fruit into market in prime condition.

Now to illustrate the difference in value of extra fine fruit after it is canned, I will say: Extra apricots, peaches and pears sell at wholesale on an average of $2.50 per dozen cans, while the inferior fruits which have to be put up as standards sell for about only $1.40 to $1.50 per dozen. There is a difference of $1 per dozen, or say $2 per case. That is not much money on one case, but when a canner puts up ten, twenty or fifty thousand cans, it means quite a sum of money, and the difference in the cost of packing and handling extras or standards is very little. The can of extras costs $1 per M. more than the standard, and there is a little more sugar; but that difference is offset by the difference in expense of cutting, packing and handling, for the large fruit can be handled with much less expense than the small fruit. Then, again, should the large fruit be put upon the market in a green state or shipped East, the difference in price would be the same. So I say to all, thin out your fruit. It will pay largely to do so. I have known instances where heavy losses were sustained by the canner where small and inferior fruit was forced on him by neglecting to have it understood at the time of purchasing the crop on the trees that it must be thinned out to a certain distance apart. In one instance there was a loss to the canner of $24,000 in 12,000 cases. The circumstances were these: A new cannery was started, and the first season there was care taken to have the fruit properly thinned on the trees, and the result was the company turned out an extra quality of canned goods and they were shipped to Liverpool and London and were sold there for $3 25 per dozen. The next season the cannery changed its buyer and contractor for the green fruit and still purchased the fruit in the same orchards, but neglected the all-important thing of thinning out the fruit on the trees. The consequence was when the fruit came into the cannery it was small and it was impossible to make extra goods out of it. But the canner had contracted for it and was compelled to receive it. He had also contracted with the same Liverpool and London parties to deliver 12,000 cases of extra goods guaranteed to be equal to the first year's pack, and were sold to arrive in Liverpool at $3.25 per dozen. But when the goods arrived they were condemned and thrown back on the shipper's hands. So the goods had to be sold at a sacrifice of $1 per dozen, making a loss as stated above of $24,000 on the pack.

THE FIELD.

The Value and Importance of Good Roads and Shade Trees.

Read by Miss KATE SESSIONS of San Diego, before the Pomological Society of Southern California, at its meeting in Redlands, May 5th and 6th, 1892.

A short editorial in one of Boston's leading papers brings me at once to the bare facts in regard to our roadways. It says there are now colleges enough in the country. Education has been made so cheap that poor but deserving young men and women can get anything in the line of high learning by making just the amount of exertion that is good for them. We have enough libraries to go around, and bibles are so cheap that even a tramp can save his two cent pieces and buy one in a few weeks. But there is one thing we have not enough of in the United States, and never did have. That is good roads. If any millionaire wishes to immortalize himself and really benefit posterity, let him select the county roads in a region of farms and fix up those highways so that spring mud and summer rains (and I might add California dust) shall never wipe out or budge them from their beds. With those smooth, hard highways he will build his own road to everlasting fame. He will earn the gratitude of every farmer, milkman and peddler for a hundred years. The system of roads should be named for him. His name, whatever it might be, would be remembered when that of the founders of our great universities had gone glimmering down into the night of oblivion.

We have awakened to the fact that our roads are poor, and already a spirit of improvement can be noted. "Legislation for good roads," "The advisability of road commissioners for State and County", "The road question is one of the most important for the American farmer today", "A poor road is the most expensive thing in the agricultural outfit, it is as much behind the times as the flail and the sickle", "The bad road has no rightful place in the domain of an intelligent people." These are a few straws one catches from conversation and periodicals, and they show plainly which way the wind blows.

The several European governments that build rock bed roads and care for them, see prosperity follow such footsteps. None have ever returned to the *primitive* dirt road —the road maintained by each farmer or land owner paying his road tax by work done upon them. This is the road of our country to-day.

While the roads of the United States are passable for horse and wagon, the owner (one small part of the voting or ruling power) has been satisfied to use such roads and keep, as he thought, his money in his pocket. But when the *young* man mounted his own wheel and stepped into the harness himself, within the past ten years, the first consideration was the road. Not a better road, but a perfect road was needed. So with the more general use of the bicycle comes the more universal demand for good roads. The Wheelmen's League will, by its interest in this matter, help on an important American improvement. It would appear as though the carriage manufacturer would sell more wagons if the roads were poor and his vehicles wore out faster. But, paradoxical as it seems, the American Carriage Builder's Associations endorse every movement that tends toward State legislation in behalf of road improvement. The railroad companies encourage good roads and road development for the benefit of their freight trains, and that brings me to one of the strongest arguments in behalf of road improvements; the benefit to the producer, the farmer, the fruit grower, the stock raiser; the men that keep their shoulders to the wheel and are the mainstay of the country. Heavier loads over longer distances, in a shorter time, can be hauled on the best road with the least wear and tear on wagon, horse and man. Quick transportation is the all important question for every farmer and fruit grower everywhere. In this big State of California, with its few railroads, it is particularly important. California in general, and San Diego in particular, has been unfortunate in the location of their railroads. When the roads were built the main object was to reach San Francisco and the ocean in the shortest line over the easiest grades. The land was barren, dry and unoccupied. The bird in the hand of the railroad company was the passenger travel, mail subsidies and the freighting of goods to California, which was producing very little save mines, cattle and climate. But, like the California gold fields of '49, every acre of land is proving itself fertile, and California is fast becoming a rich agricultural State, with still more wonderful possibilities in view. As the railroads in California do not tap to-day the most productive sections, over good roads only can be brought the product of many a fertile valley apart from the line of travel. This beautiful valley before us has been favored at an early date, and to-day we see the iron horse speeding on his smooth, hard road around these productive lands, gathering eagerly his golden load. In time, more such branch railroads must be built. The Southern California producer needs good roads for all seasons of the year, our products are so varied. We have in our oranges, lemons and olives a crop to be delivered to market during the season when the rains are most abundant. In early summer the honey and hay crops begin to move, and when the heat is greatest the fruit of the deciduous tree is on the road. This must be protected from dust and sun and delivered in sound condition to bring the best prices. Over a rough road only unripe fruit can travel, while over a smooth, clean road riper and softer fruit can be moved in larger loads. Prices rise accordingly, and the producer is the principal one benefited.

If there are proofs that the people prefer good roads and are not indifferent to their benefits then by proper legislation good results ought soon to show themselves.

Would a resident of Ontario feel satisfied to allow his guest to depart without a drive on Euclid avenue, seven miles long? Would a visitor to Riverside be indifferent to a drive on her famous Magnolia avenue? The traveler in San Francisco does not half enjoy the Golden Gate park and Cliff House if he visits it by car line, but with a good team and pleasant companionship he must speed over the broad, hard roadways among trees and past green lawns and flower beds, and drive against the breezes that sweep up from the ocean's rugged shore. Inspired and invigorated, he returns to the city not over the sandhills and steep grades, over which the untiring cables pass, but by the more circuitous route to Golden Gate avenue, one of the few streets free from car tracks. Does the railroad magnate, resting a few days at Del Monte, leave without a spin over her famous drive to Cypress point? Another winter will find on Coronado beach a boulevard leading along the ocean front for over ten miles, and in time it will be ornamented with trees, and will become one of the principal features of Coronado. No one is oblivious to a good road, and wherever there is one it is well patronized and appreciated. It offers to every one a means of entertaining guest or tourist in a most agreeable way.

Southern California may overrate her *immediate* advantages in soil, products and the financial returns, but she can never overdo her climate in comparison with that of the rest of the United States, or many of the countries of the world. We must keep our visitors out of doors in the fresh, pure, mild air and bright sunshine of winter; in the warmer but dry air of summer, restore new cells to their lungs, paint roses, tan and freckles upon their cheeks, and stimulate their appetites; for that, nothing excels a good, long drive. The first recreation prescribed for every invalid is a drive. Not over the roughest and dustiest and narrowest road that can be imagined, not behind a slow and decrepit horse, but over the smoothest and most beautiful boulevard, in a comfortable carriage, drawn by horses full of spirit, strength, intelligence and gentleness. Such a drive is the quality the doctors prefer. Who is quite so dear to the family as the physician who has cured the aching head and wrecked body? Fresh air and good roads will be equally as dear, and no tax payer will ever grumble when he is cured by such a specific. The dose is too pleasant, the bill most moderate.

As a good road was the first necessity for the Yosemite Valley, so none too soon can Southern California and all of California realize that good roads for the farmer, the tourists and the invalid mean health, happiness and prosperity.

Nothing is a greater incentive to permanent improvements than well graded and paved street or road; proof is on every hand. The first improvement of such a roadway is naturally its ornamentation, and in no way can that be done better than by trees. This brings me to the second part of my subject, and I shall not undertake to say what are the best sort of trees to grow, the best way of planting and caring for them, but only attempt to give a few suggestions how to make the street the most beautiful, and how it may grow old gracefully.

My observation as well as thought has proven to me that the first necessity of tree planting along any street is to have the *same sort* of a tree planted, on both sides, for as great a distance as possible. Nature everywhere gives us examples of such symmetry. The weeds and shrubs growing on either side of the road are about the same; of course, soil and conditions are the same, but nature has made the tree, the shrub, the flower, the seed pod, the shell of the sea, symmetrical to some medial line. She has not laid out her parks, the forests, in square beds and straight lines, but she has ornamented the paths through them harmoniously. The rivers, her highways, are symmetrically ornamented on the banks. If high trees grow on one side, they do on the other, or where they are growing, man detects the greater beauty. We do not tire of an avenue with the same tree on both sides for a mile or more, or even five. We do not wish some other tree would appear, but, on the contrary, the repetition, the continuation of the same intensifies our enjoyment and appreciation, and we are proud and interested in the length and regularity of the avenue. We compare tree with tree, we observe the foliage, the branching, the bark, the flower, the seed, we calculate the age and the habit, and become a student filled with thoughts of nature, inspiring us to better deeds and thoughts.

The next great need in tree planting to the one already mentioned is that the trees be set far enough apart. In California, and particularly in these southern counties, where the growth of plants is so continuous, owing to the slight difference of the seasons, in a few years we find trees with their branches closely intermingling, forming a perfect hedge and barrier in mid-air, their graceful outline against the sky, entirely obliterated except at the top, and the individuality of each tree entirely lost, Often beautiful views of mountain and landscape are entirely hid by the wall of green, while if the trees were well apart the scene would be even more beautiful viewed between their graceful boughs. If we stop to calculate and observe a little, we are soon convinced of the short time it takes for trees to touch each other. Trees growing symmetrically extend as far on one side as the other. If set twenty feet apart they will only need to throw out branches ten feet long before they are touching. Where can you see a shade tree in California, only a *few* years old, that has branches less than ten feet long? You find more with branches twenty feet. If the trees are set fifty feet apart that space will allow each plant a perfect development for at least ten years before they appear to think of approaching each other, and yet many a tree can be found shading and spreading over more than fifty feet—observe the pepper, the rubber, the locust, the oak, the eucalyptus that have been properly trimmed. Most of our trees can be made to spread more if trimmed, but they grow out of our convenient reach so soon that we stand helplessly at their base, and well it is so. I would recommend no tree-planting on street or highway less than fifty or seventy-five feet, and even one hundred feet offers advantages. If, for the first five years or so, the row seems scant, and we think more of ourselves than posterity, set some deciduous tree, or slender and slower grower between, or plants like the dracæna. We do not need trees upon our streets in California for *shade*, but for beauty. In fact, the pedestrian during the summer finds shade too cool a resting place. The beauty of a street ornamented with trees is most inviting in its length, as we look along the vista and see the swaying boughs meeting in the distance beyond. It matters not whether the trees are twenty, fifty or a hundred feet apart to give such an effect. [In hot interior regions trees are needed for shade; along the coast beauty is the chief consideration as the writer claims. ED. PRESS]

The style or manner of growth of the tree selected becomes a most important factor in street ornamentation. One with a straight, strong stem, or trunk branching high, is the ideal tree, while a conical shaped tree like the cypress, broadest at the base and occupying all the sidewalk and roadway with its longest and heaviest branches, is the very worst sort to grow. If trimmed so that one can pass, it is so mutilated that it stands a helpless deformity.

Our native Monterey cypress is one of our most useful and handsomest trees, but it must be grown in the right way. If it is to be trimmed, it must be trimmed for a hedge, so that every semblance of individuality is entirely lost, and we see only the long, continuous wall of bright evergreen, as true and even a wall as ever a mason built. Otherwise, the cypress must be allowed to grow naturally. Then the shape is perfect and size and proportions grand. Only large grounds and parks admit of such a growth. The date palm is better adapted for the avenue that is planted for posterity. During its first ten or twenty years it is one grand, graceful fountain of green, capable of occupying the whole sidewalk and half the street, but from twenty to fifty years it throws a huge tuft of graceful plumes high above our heads, and out of reach of man or beast, and grows on and on, apparently in anticipation of a life of centuries.

The selection of dust-shedding trees is an important consideration. The pepper is the best example, the cypress the worst.

At present everyone is so anxious to maintain the general impression that is current of California by the States to the east of us, that she is one great, grand garden, full of evergreen trees, blossoming roses, shrubs and vines and fruit laden boughs, that the deciduous tree is quite condemned wherever an evergreen will thrive. I believe, in time, the deciduous tree will be in greater favor, and we will enjoy the bare limbs and sturdy trunk of the elm, maple, locust and sycamore, and appreciate better the contrast with our evergreen citrus grove and blossoming winter garden. They will be a dial to tell us when spring is here.

With united effort, it seems easily possible that a bounty might be offered for the growing of the sycamore and cork oak trees along our county roadways, on at least each quarter of every mile, a bounty payable for every tree of certain size and vigor, and increasing in liberality with the age of the tree.

California, in her more populous sections, has few woods and natural forests, and where trees are growing man destroys them for the rich land they occupy. Small places, highly cultivated, is the tenor of California's improvements to-day, and that is right, but the plan allows for very little space for shade trees. There is then all the more need that our streets and highways shall become our boulevards and parks, the pride of every citizen, every city, town and county, and maintained at public expense.

SHEEP AND WOOL.

Wool Samples for the World's Fair.

U. S. DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., May 20, 1892.

TO THE EDITOR:—The Secretary of Agriculture, recognizing the importance of the sheep industry of the United States, has expressed a desire that there be made at the Columbian Exposition an exhibit of the wools of the world.

The collection of samples will be more complete, it is believed, than ever before shown and will be of great value, giving, as it is proposed, the characteristics of wools from the highest type of sheep to the very lowest; also showing in a comprehensive way the modifications and effects of climate upon standard varieties and the adaptability of varieties to special localities. Mr. Edward A. Greene of Philadelphia, Pa., and Hon. John T. Rich of Elba, Mich., have been appointed by the Department to collect and classify these samples.

The wools of each State will be arranged so as to show completely all grades and classes of wools of that State. The Department is desirous of accompanying each sample with all information possible and has therefore decided to obtain the samples from the growers. The Department has prepared blanks to be filled up by contributors. Any special information not asked for on the blanks may be given by letter.

Samples of each quality must not be less than 14 or more than 17 ounces. Seedy, burry or sandy wool will not be exhibited.

The samples will be placed in glass jars, which will be labeled with the grower's name and address, together with a description of the sheep and quality of the wool.

All samples must be sent to Mr. Edward A. Greene, 24 S. Front Street, Philadelphia, Pa., who will, upon application, furnish small bags, in which the wool may be sent by mail free, and to whom all correspondence should be addressed. Where more samples are received than are necessary, the best representative samples will be exhibited. A circular will be sent by Mr. Greene giving details of what is wanted, also the manner of selecting, reporting and sending the samples.

EDWIN WILLITS,
Assistant Secretary and Representative.

Mr. Greene's Circulars.

From the circulars alluded to we make the following extracts:

The Agricultural Department will exhibit at the Colum-

bian Exposition between three and four thousand wool samples from all parts of the world. They will cover all classes of wool, from the highest to the lowest. Especial attention has been given to the collection of samples of wools that compete with our home-grown wools. These were procured through a special agent of the Treasury Department, sent abroad for the purpose of procuring samples for Custom House standards.

The Department is desirous of obtaining the American samples direct from the growers, so that comparison can be made with wools of the same character, grown in different parts of the country.

It is desired that the exhibit shall cover all qualities of wool raised in the United States, therefore it is not necessary that the sheep shall be a blooded animal to entitle the wool to exhibition, but that the samples shall be fair ones of the type they represent. Skirts or bellies should not be included in the samples. Desiring that the samples shall represent as many clips as possible, I suggest that not over two of any one clip shall be sent, and in no case over one of the same quality of wool. A limited number of fleeces will be exhibited, but they must be from registered sheep. Particulars can be obtained from me.

Assistant Secretary Willits is giving wool and sheep especial attention, as he is desirous of furthering the interests of this great industry. With this view he has requested Hon. John T. Rich to make a report to accompany this exhibition. Mr. Rich will, when the collection is completed, examine the samples comparatively, and being a practical sheep breeder of long experience, his report will be of great value. Each sample should be about one pound in weight and be taken from the body of the fleece.

Action by the Oregon Wool Growers.

The North Pacific Sheep Breeders' and Wool Growers' Association met in Portland last week, Hon. John Minto, Salem, presiding.

A brief address was delivered by the president, pertaining to the best interests of the association, including the subjects of protection to wool growers, Government assistance to insure the orderly grazing of the public lands, and a strong recommendation that the question of the use of shoddy, which is assuming alarming proportions in the manufacture of woolen goods, be thoroughly investigated, and some means, if possible, be adopted by our Government that will prevent this evil, which very materially injures the wool industry of this country.

The following resolutions were unanimously adopted:

WHEREAS, Certain leading members of Congress seem determined that no time shall be allowed in which to prove the adequacy of the present law levying duties on imports to give encouragement to wool-growing, but are determined to attack the law in detail, for no other apparent purpose than for partisan effect; and

Whereas, In thus beginning a merely partisan attack with a proposition to admit foreign-grown wool free of duty, they assail a branch of industry which, more than any other labor in the land, requires the protective care of the citizen so embarking his capital and of the Government he helps to sustain, the action subserves foreign against American interests; but,

Whereas, The present rate of protective duties on wool, though scarcely adequate to give needed protection against countries having climatic conditions more favorable and land and labor at cheaper rates, will permit a continuance, and perhaps a slow increase of the wool-growing interest; and

Whereas, The National Wool Growers' Association—first formed to induce farmers to give additional attention to wool-growing, and joined with them to procure legislation protective of both wool production and wool manufacturing as a means of making our country independent of the business interests of others—has already petitioned Congress to let the present tariff laws alone; to cease agitating a sufficient time to let it be manifest whether they will or will not sustain American labor life in the field and in the factory, and so enable it to maintain itself on the high plane which has made the United States the envy of the nations; therefore be it

Resolved, 1st, That we protest against the passage of the bill known as the Springer bill as low political action, calculated to deter enterprise from engaging in the production of wool, and having for its sure result, if not intent, the encouragement of foreign manufacturing interests and the development of foreign labor; and be it

Resolved, 2d, That we join the National Wool Manufacturing Association in demanding that the present law known as the McKinley law shall remain undisturbed for at least four years longer, so as to give reasonable time for proof as to whether the important and essential interests connected with the production of wool and its manufacture can maintain themselves and yet give our people cheaper and better clothing than they ever had under nonprotective laws; and be it

Resolved, 3d, That we favor the total prohibition of imports of shoddy or goods of which shoddy is part, and declare ourselves in favor of the use of cotton in admixture with wool where light goods are required.

The election of two delegates to attend the National Convention of Wool Growers, to be held at Minneapolis, June 5, 1892, was the next order of business. Dr. James Withycombe, Portland, nominated Hon. John Minto; seconded by Mr. David W. Craig, Macleay. Mr. W. W. Baker placed in nomination Hon. Charles Hilton of Gilliam county; seconded by Mr. R. C. Halley, Salem. Upon motion, both of these gentlemen were elected by acclamation.

JOHN MINTO, Pres.

JAS. WITHYCOMBE, Sec.

Selecting the Ram.

J. G. Buckhardt, of Missouri, is of the opinion that the points sought for in rams with which to improve a flock, are those which directly add to the value of the sheep, or those which are evidence of the possession of valuable qualities. Thus the abundance of yolk, or the fineness of the wool, or its curl, or the depth or form of carcass upon which depends the quality and the quantity of the fleece, are esteemed in the Merinos; in the Southdown, the small head and legs and small bones, with the black muzzle and legs, are highly regarded, as these denote quick fattening properties, and hardiness of constitution. The breadth of shoulder, the straightness and levelness of the back, the breadth of loin, and the spring of the ribs and rotundity of the frame of the Cotswold, Leicester, Shropshire and other heavy-bodied sheep, indicate capacity for feeding and digestion, and laying on of flesh, and are therefore regarded as valuable points. Large bones are an unfavorable point, as they denote an abstraction of nutriment which should otherwise go to the formation of flesh and the greater value of the carcass. The absence of horns, for the same reason, is desirable in sheep bred for mutton. A soft, mellow feeling of skin and the tissue underneath, and a softness of the fleece, are indicative of a tendency to the rapid formation of fat. A round frame and broad loin indicate the existence of abundant flesh, where it is most valuable, and a general squareness of the outline of the figure proves the existence of large muscular development, and consequently heavy quarters. In short, for sheep which are not kept solely for the production of wool, what is wanted is all the flesh possible, with no more bone than can carry it, and that the flesh should be where it will be the most valuable, viz., on those parts which bring the highest price in the butcher's stalls—the loins and quarters. Where wool is the sole object, weight and fineness of fleece alone need to be considered. Where wool and mutton are each equally sought for, the matter becomes complicated by many considerations, each of which should be studied with a view to give the preponderance to those which have the greatest special or local importance.

HORTICULTURE.

Is Fruit Sulphuring a Benefit or Injury?

An essay read by LEONARD COATES before the State Horticultural Society.

I have the misfortune to hold opinions on this subject, which at present are not popular, and therefore I wish to treat of it in a practical and business-like manner, following a line of argument which I hope will commend itself to the most thoughtful.

There are two main classes of dried fruits, known in the the market as "evaporated" and "sun dried." Some 10 or 15 years ago, when the industry of fruit-drying was in its infancy, the first named signified, very naturally, those fruits that were cured in an evaporator, in contradistinction to those dried in the sun. So far so good. One would sell at 15 cents a pound while the other was worth but five cents. Men of brains and inventive genius set to work to make machines of sufficient capacity which would cure first-grade fruit as economically as possible, but their endeavors were soon of no avail. "Sun dried" fruit fell into disrepute, and rapidly became a term of opprobrium, relegated the refuse of the orchard, and dried upon the roof of the farmer's chicken house. It has been found that by using care a very good article could be cured in the sun, but that it would not sell until labeled "Extra Evaporated." This is history. I claim that no business can prosper when founded upon a lie.

It is claimed that "the public" demands a light colored, bleached fruit, and that if that is so, it is our duty to produce it. A dealer will have displayed a variety of "Extra Evaporated" goods, neatly packed and faced in boxes, temptingly paper-lined and lithographed, and in a corner will be a dirty sack half full of "sun-dried" peaches above described. Now, what choice can the public have, as represented by the lady purchaser or housekeeper, and which will the salesman recommend? That which yields a profit of 50 per cent or that which barely pays expense of handling?

The wholesaler now issues his special circulars with detailed plans for the sulphur box, urging upon the grower to bleach his fruit to suit "the public." The grower sees the point: the more sulphur the bigger the price. Poor "public!" Because it prefers a box of beautiful looking, clean fruit to a bag of filthy rubbish, we say: "It demands bleached fruit, therefore it is our duty to supply it." This is the chief argument, and a very powerful one, in favor of sulphuring—that is, sells higher—but, as Prof. Hilgard said in a recent article, "it is precisely for this reason, and because of the consequent tendency of producers to sulphur more and more heavily and recklessly, that I think it high time to call a halt."

All this talk about the public preferring bleached fruit is mere assumption. It has not been given an opportunity to taste any other. The great annual increase in the sales of dried fruits is brought forward as a convincing argument in favor of their popularity. It is, however, no argument when we take into consideration the extent of the territory and the many millions of people who have not tasted our products.

A permanent and increasing market can only be secured when the consumer is not satisfied with one dish only of California fruits. Who of us in this room will eat bleached peaches, apricots and silver prunes? If, perchance, we taste them once, it is the last time. Then if we, our families and friends do not eat them, who is this mystic "public" that the dealers would have us believe is so ravenous for California dried fruits?

Believe me, our dried fruits are in disrepute wherever known. If you doubt it, then go through the East and talk to those who have eaten them.

A well-known grower from Santa Clara valley relates his experience with silver prunes in a recent issue of a leading horticultural paper. He, too, had learned that he must pick the fruit before it was ripe, expose it all night to the beautifying influence of the sulphur fumes, and then give the finishing touch by again subjecting it to this process after drying, in order to meet the approval of the "market." Those for his own use he dried without the sulphur. He concludes the article by saying: "It has been said that the loss of prestige of silver prunes is due to the mixing of yellow egg plums. I doubt this, but I satisfied myself of the reason by throwing a few handfuls of dark-colored silver prunes (unsulphured) mixed with an equal amount of bright-looking ones (sulphured) before my hogs; the result was, they picked out every one of the brown prunes, but rejected the bright."

A gentleman from the San Joaquin valley writes to another paper, relating his experience in drying peaches, where a consignment of unbleached fruit was ordered returned to him from San Francisco, "for it did not sell." He loaded it into his wagon and drove about the country selling it where he could. His friends afterward repeatedly inquired where they could get more, as it was the best they had ever tasted. He bought dried apricots for use in the family, which, he says, were beautiful to look at, but after a meal or two, they remained untouched by themselves and the hired men. "The trouble is," he says, "there is so little unbleached fruit in the market that we cannot find it when we want it."

These instances could be multiplied indefinitely, but, without occupying further time, I will suggest the remedy, whereby our dried fruits—peaches, apricots and light plums and prunes—shall become deservedly popular and increasingly in demand.

1st. The assistance of the press. The public needs to be educated to know the difference between unsulphured and sulphured fruits; to learn that the pale golden apricot or the snow-white apple is not necessarily any cleaner than those that are darker colored, and that they are devoid of their natural fruity taste, and frequently injurious to health by the presence of sulphuric acid, but, as Prof. Hilgard says, "the only persons not likely to object to sueh a state of things are the dentists."

2d. The more extensive use of evaporators, where most fruits are much more perfectly cured than in the sun, are free from dirt and insects, and much lighter in color than when exposed to sun and air.

3d. The formation of a company to this end, which will produce a *real* evaporated fruit, on the boxes containing which shall be set forth, from both the scientific and practical standpoints, the difference between ripe fruits cured in an evaporator and unripe fruit dried in the sun, after being bleached in the sulphur box. Whole fruits, such as grapes and prunes, may well be dried in the sun, but not the delicate, cut fruit, which lies exposed for days to the attacks of insects and to clouds of dust.

Our dried fruits are being more extensively introduced into the English markets, and the reports come back that peaches do not meet with favor. The bright golden apricot may sell at first, but if the flavor is not there, they might as well be kept at home. Three years ago I exhibited samples of our best fruits in London; and, while there, in an interview with the fruit buver and the general manager of the firm of Hanson, Sons & Barter, one of the largest fruit-importing firms in London, I was told that the peaches were no good. They did not want to look at them. I finally persuaded the two gentlemen to take samples to their respective homes and prepare them for use according to directions. Shortly afterward, I received a flattering letter from each of them in which they expressed entirely different views from those before held.

This is somewhat of a digression, but it only goes to show, as I then stated, that to introduce our fruits there through the ordinary channels, and without more careful study of that market's needs, will result in failure. The smart Yankee in London is not a success in introducing Californian specialties.

To conclude with some remarks by Prof. Hilgard: "With the present perfected appliances, fruit can be dried with so fair a color that no sensible person will object to it, particularly if it insures the possession of a fine flavor. If, unfortunately, it is true that at present most persons *do* prefer the substance to the shadow, and are willing to pay double price for the doctored article, so much the more need is there that they should be better informed; and I, for my part, will continue to do my best to induce fruit driers to be chary of, and careful with, sulphuring, and to convince consumers that their preference for bleached fruit is as irrational as is that of a certain part of humanity for painted cheeks or enameled countenances."

THE STOCK YARD.

The Importation of Live Stock.

The full text of the amended Treasury regulations governing the free importation of animals for breeding purposes has now been made public. All who take an interest in the breeding of thoroughbred stock of any kind will know that the rule adopted in circular No. 10 of Jan. 22, 1872, required that on and after April 1, 1892, no animal brought into the United States from foreign countries for breeding purposes should be admitted free of duty, unless the importer furnished a certificate which should contain a pedigree, showing that the ancestors had been recorded in a book of record established for that breed for five generations on the side of the sire, and four on the side of the of the dam.

This is the rule adopted by the Shorthorn breeders of Great Britain, in admitting new families to record in Coate's Herd Book. It is also a rule which requires that there be no less than 46 recorded ancestors; viz., 30 on the side of the sire and 16 on the side of the dam. Such a ruling would bar the free entry of some breeds of both cattle and sheep, notably South Devon cattle and Southdown sheep, for the reason that herd or flock books have been so recently established for these and some other breeds that the required number of recorded crosses, above-named, could not be given.

We have never heard of any one denying that the Southdown is a distinct and pure breed of sheep. It was so in the time of Arthur Young, who, writing in 1776, thus speaks of them: "Fine wool is certainly a very considerable object, provided it is gained on a well formed carcass, but if a fine coat is procured at the expense of a thin chine, low fore end and rising backbone, the advantage is purchased too dearly. The faults most common in the Southdown breed are these three."

"Youatt, writing some 60 years after the above date, in referring to the breed as it then was, says: "Since that

time they have materially improved, yet not by any admixture of foreign blood, for even the cross of the Leicesters was a failure, and the promised advantages to be derived from the Merinos were delusive."

The first great step in improving the breed appears to have been taken by one Mr. Elman, who lived in Arthur Young's time, and who, during his own lifetime, says: "They are now much improved both in shape and constitution. They are smaller in bone, equally hardy, with a greater disposition to fatten, and much heaver in carcass when fat. They used seldom to fatten till four years old, but it would now be a rare sight to see a pen of Southdown wethers at market more than two years old, and many are killed before they reach that age."

Arthur Young again says, in one of his later tours through England: "Mr. Elman's flock of sheep, I must observe in this place, is unquestionably the first in the country, the wool the finest and the carcass the best proportioned; both these valuable properties are united in the flock at Glynde. He has raised the merit of the breed by his unremitting attention, and it now stands unrivaled."

Since that time the breed has been kept pure, and there have been some very noted breeders of the same who have made still further improvements, so that it has long been noted as one of the choicest and purest breeds of mutton sheep in existence.

The same remarks will, in a great measure, apply to several other breeds of sheep and cattle that were for a long time kept in comparative obscurity in various parts of Great Britain, but such has the paramount importance of pedigree become, that all breeds that are known to have been kept in their original purity have now their various herd, stud or flock books to show forth their history and pedigrees.

It will thus be seen how unfair it would have been to discriminate against the importing of those well-known pure breeds that have but recently established books of record.

Among the breeds of horses, the new rule does not recognize what is called the select Clydesdale as a pure breed, though there is a book of record for them in Great Britain, and some of the very best types of draft horses have been of that way of breeding.

The breed has been, so to speak, created by the selection and breeding together of the best of the Shire and Clydesdale breeds that could be found, the idea being to produce a class of Clydesdale horses with greater weight and shorter legs, by the infusion of Shire blood, than the old unimproved breed possessed. The idea appears, from all we can gather, to have originated with Mr. Lawrence Drew of Merryton, Scotland, on whose methods and success as a breeder of draft horses we propose giving some account hereafter.

LIVE STOCK INCREASE.—In the latest issue of the United States statistical abstracts may be found some interesting figures showing the relative increase of the various domestic animals. Taking the 20 years between 1870 and 1890, we find that in round numbers the horses have increased from eight to fourteen millions; mules from one to two millions; milch cows from ten to fifteen millions; oxen and other cattle from fifteen to thirty-six millions; sheep from ninety-six to one hundred millions, and swine from twenty-six to fifty-one millions. While in numerical increase that of swine has been surpassed by that of cattle, in good quality and improvement, swine have surpassed all other varieties of domestic animals. The fact that the production of pork has doubled within the past twenty years, and the product is mainly absorbed by the home market at fairly remunerative prices indicates that the future of hog-raising will be at least as profitable as that of any other stock-raising. There is a steady increase in the foreign demand, which has been broadened by recent concessions, and new markets will be attained that ought to stimulate the industry.—*Western Swineherd.*

ENTOMOLOGICAL.

Destroying Insects by Spraying.

Read by C. B. MESSENGER of Pomoma at the last meeting of the Southern California Farmers' Institute.

There seems to be an increasing need that farmers should post themselves on insects and on methods of destroying those that are injurious to our crops. I say increasing need, for our insect enemies seem to increase with great rapidity. Agents of the Department of Agriculture are constantly endeavoring to introduce natural enemies of those insects, and in one instance, at least, that of the *Vedalia*, have succeeded in a most wonderful manner, and, today, strong hopes are entertained that a formidable enemy of the red scale has been introduced. But, while waiting and lending as much encouragement as possible to any such undertaking, we should not relax our efforts and allow the various pests to get the upper hand of us. Then, how can we best exterminate them, is a question which we must attempt to solve.

Hydrocyanic acid gas has accomplished much good and deserves credit for saving many valuable orchards from the red scale, and in case of that pest, I would say, by all means employ the gas treatment. But for nearly all other insects it is not practicable, or, if it is, it is often more heroic than necessary, especially for black, brown or white scale.

Therefore, how to spray the most effectually and the most economically, is a question we will consider from a purely practical side. To syray effectually would be a comparatively easy task, if it were not for that other side of the question—that of economy. That restricts us to materials that are within reasonable bounds as to cost.

Insecticides are divided into two classes: (1.) Those that kill by external contact and which are applied to that class of insects called haustellate, which are supplied with sucking tubes through which they get their nourishment. (2.) Those that kill by internal contact, which are applied to that class of insects called mandibulate, which are supplied with jaws and eat the leaves and fruit.

The external contact class kills either by closing the pores through which the insect breathes, as is the case with resin, whale oil soap and paste, or else by irritation of the skin, as with kerosene, lye, or sulphur wash.

FOR THE SAN JOSE SCALE.

The pernicious scale (more commonly called the San Jose scale) is probably one of the worst pests with which we have to deal, being the most destructive and, at the same time, the most difficult to exterminate. It belongs to that class of insects supplied with sucking tubes. It infests in a greater or less degree nearly all of the deciduous trees.

Perhaps the remedy most successfully and most universally used for this pest is the sulphur-lime wash. Of all the washes it is, by far, the most disagreeable and the most difficult to handle, and I hope that, soon, some remedy equally as effective that will be cheaper and more easily handled may be discovered. The preparation of this wash requires no great skill or experience, but it *does* require great care and attention to details.

The formula I have used is as follows: Lime, 20 lbs.; sulphur, 50 lbs.; boiled in 20 gallons of water from one to two hours, or until it assumes a dark red color.

Mean while in an open barrel slake 30 lbs. lime, and in some other vessel dissolve 30 lbs. salt.

When the lime in the barrel is perfectly slaked add the dissolved salt; then, if the sulphur, which has been boiling for an hour or more in the kettle, has changed from the muddy yellow color which it first had, to a dark red color, it should be added to the lime and salt—pouring through a sieve made of wire screening, such as used for windows and doors.

This collects any undissolved sulphur, which may be thrown back into the next kettle of solution. When French sulphur is used there is little if any of the sulphur remaining undissolved in the kettle after boiling an hour; but with the California sulphur, which is commonly used, there will be some residue with each kettleful, but by continually throwing back and reboiling there will be little or no waste.

But to return to the solution which has been mixed in the barrel. This is sufficient for 100 gallons of solution after it is diluted. This should be run through a fine strainer made of brass strainer cloth, when the proper amount of water should be added to make up the 100 gallons. It should be applied warm, not necessarily hot, for I think nothing is gained by that, but it must not be allowed to get perfectly cold, for in that case it at once begins to precipitate, which weakens the solution more or less according to the time of standing after it gets cold. During spraying it must be kept thoroughly stirred.

It is now ready for the pump which should be a good one. It should be in fact a better one than I have ever yet seen. I use the Bean, and presume it is the best yet offered in this market, but for the price charged it should be better made, and arranged so that it can be more easily repacked in case of worn-out valves.

For nozzles with the sulphur wash, I use only the old-fashioned San Jose nozzle with rubber disks. It cleans itself the best, and if fresh rubbers are kept in the caps it makes a very desirable spray.

One application of this wash on trees moderately affected with the pernicious scale is sufficient; especially is this the case with the peach and all rough barked trees. But where prunes, pears and other smooth bark trees are badly affected they should be sprayed twice with the sulphur, or what is preferable and cheaper. once with the resin solution, which is composed of 25 lbs. resin, 5 lbs. of caustic soda and six pints of fish-oil to each 100 gallons. Then, perhaps thirty days later, spray with sulphur. The best success I ever had in spraying was by proceeding in this manner, and, if given good weather this treatment will clean the worst of trees,—that is, the worst of trees that are worth saving at all. But any tree nearly dead with scale should at once be put on the wood pile, for it is of no use to attempt to save it when too far gone.

Care must be taken not to apply this wash after the tree begins to grow, for injury will certainly be done, especially on pear and prune. Peaches I have sprayed after the bloom was well out, and it seemingly did no harm. But it is better to apply only when tree is perfectly dormant.

FOR CODLIN MOTH.

The next spraying of the season is for codlin moth, which causes the small worm which infests the fruit of the apples and pears. It belongs to the class called mandibulate, being supplied with jaws, and after hatching, eats its way into the fruit. Consequently it is to be reached by the internal contact insecticide.

Those commonly used are London purple and Paris green, which is an arsenite of copper, containing 55 per cent of arsenic. Owing to the variable strength of the former, Paris green is now about all that is used. It is quite uniform in strength, and is cheap. Its greatest drawback is that it is not soluble in water, consequently while spraying it requires constant stirring to keep it suspended in the water. Therefore I have a boy an the wagon whose sole business it is to stir the solution constantly, using a common garden hoe, which, churned up and down, keeps the mixture thoroughly mixed. The published formula for this spray varies from one pound to each 100 gallons, to one pound to each 300 gallons. The former I think to be entirely too strong, as it is liable to injure the foliage. Last year I had excellent results with one pound to 200 gallons at the first spraying which was applied to the blossoms, then spraying two weeks later with a pound to 160 gallons. This year I have used it a little stronger and find I have burned the foliage—a few caess; consequently I conclude that a pound to 160 or 200 gallons is sufficiently strong. However, much depends on the weather, for any wash that tends to injure the foliage has stronger action during very hot weather. I understand that the addition of a little lime water lessens the danger of burning of foliage, but this I have not tried.

In using this wash it is necessary to use a nozzle which delivers from its side, as the only place to which the spray need be applied is in the blossom end of the fruit, and this should be done while the blossom end is pointing upward. For this work I have used the Cyclone nozzle, excepting on winter Nelis pears. On these the foliage becomes so dense before the fruit is ready to spray, that it is impossible with the fine fog of the Cyclone to reach in to the fruit. But with a San Jose nozzze it has force enough to push the leaves aside and reach most of the fruit.

The fear that fruit sprayed with Paris green may be unhealthful is without foundation, for no case has ever been known of injurious results.

THE BLACK SCALE.

I once heard a large fruit grower say that the black scale is the worst pest we have to contend with, because nearly everyone seems to think it amounts to nothing, consequently it is allowed to go on with its quiet work of taking the best life from the tree. This scale is easily controlled with the resin wash, and there is no excuse for the thousands of dollars annual loss. This wash I prepare as follows:

For each 100 gallons of solution I mix 25 pounds of resin, six pints of fish oil, five pounds of caustic soda 70 per cent. Add 12 or 15 gallons of water, and boil thoroughly for three or four hours, which will make a solution of the consistency of soft soap, then add water to make 100 gallons, which applied to trees infested with the black, brown, white, or even the red scale, will result in practically clearing the tree. With red scale I have with two thorough sprayings killed 98 per cent. On the olive I have used a solution of 18 pounds of resin to each 100 gallons, and had excellent results. The time for spraying orange trees for black scale is after the fruit is half or two-thirds grown, as before that there is danger of marking the fruit. Or, it may be effectually applied in the spring before the fruit is set. With this as with Paris green, avoid extremely hot weather.

There are many other insecticides, such as whale oil soap, tobacco extract and kerosene emulsion, the latter being preferred by many for the black scale on olives—but the resin wash is cheap, easily prepared, and as a general thing as effectual as any wash can be.

I thtnk the prune rust and other fungi will soon require us to be prepared to apply fungicides to some of our trees, but that is outside the limits of this paper.

Asphaltum for Young Grasshoppers.

Grasshoppers were very numerous last season and inflicted a good deal of damage. The Kern County Land Company, early this year, employed careful observers to see if it were possible to find such a thing as a grasshopper nursery, or the places where the things started. The Bakersfield *Californian* says their home was hunted up and its metes and bounds pretty accurately defined, it being found that within the limits of ten sections of mesa lands well up toward the Tulare county line, the most of the pests appeared to be hatching out. Samples of the soil were taken and in some of them grasshopper eggs were found in countless numbers.

Then came the question of how to carry out the idea of killing the pests while they are yet young. It was ascertained that for the first five or six weeks after birth the hoppers remain in the vicinity of their hatching places without anything to eat and simply grow in size and prepare an appetite against the time that they are ready to march out in squadrons and devour everything within reach.

Poisonous mixtures of many kinds were found of no avail, and the average grasshopper seemed to grow fat on food highly seasoned with different poisons.

Then a sheet of iron was fixed so that it could be heated red hot by fires kindled upon its upper surface, and then dragged over the ground in the hope that it would cook the little hoppers; but not only did it not affect the live ones, but the heat imparted to the ground hatched other eggs more rapidly.

Finally, a successful method was found, and is now being used to such effect that the home of the grasshoppers is invested, and they are being routed and slain almost to extermination. A sheet of iron, sixteen feet long and four feet deep, turned up like a sled runner at the front edge, is hitched behind two horses. Between this iron sled and the horses small chains are so fixed as to sweep the ground, thus causing every grasshopper to get out of that. There is a slight rim all around this plate of iron and upon its upper surface very liquid asphaltum is poured. Then the team is started up, dragging this plate upon the ground behind it, with the result that every single grasshopper in its course, which is large enough to jump, sooner or later falls into the asphaltum and perishes. The least particle of asphaltum ruins him, so that those who even touch it, are lost.

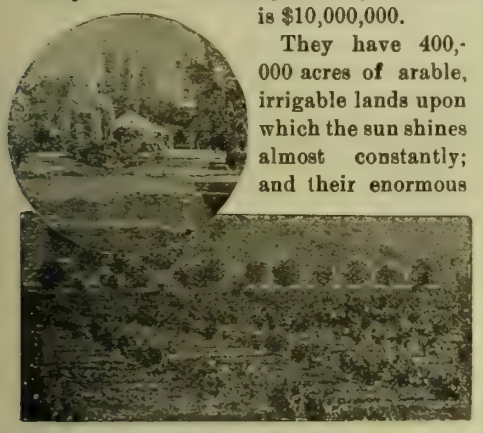
In places it has been found that in a trip of half a mile, the asphaltum became so loaded with grasshoppers, that it must be scraped off and a fresh layer added. It is estimated that each layer of asphaltum will hold 125,000 grasshoppers, a harvest of 250,000 of the creatures per mile.

Having proved the efficacy of this method the land company has gone right at the work of extermination in the most thorough way. Eleven of these plates, 16 feet by 4 are hauled abreast making a moving line of asphaltum 176 feet long and 4 feet wide, capable of catching 2,750,000 grasshoppers every mile provided that the supply holds out. And as 18 miles' travel is a day's work, that makes 49,500,000 grasshoppers in asphaltum sauce every day if the crop can equal the capacity of the machines.

This is a straightforward, determined attack upon a pest, and the whole six thousand acres will be run over again and again if need be. So far, not a grasshopper that is large enough to rise eight inches from the ground has got away, and the only need for a second trip over the same ground is for those that are yet too small to hop and for the product of eggs that are not now hatched.

FARMERS, FRUIT GROWERS, HOME SEEKERS!

THE members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.



They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

For further particulars address

KERN is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.



The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

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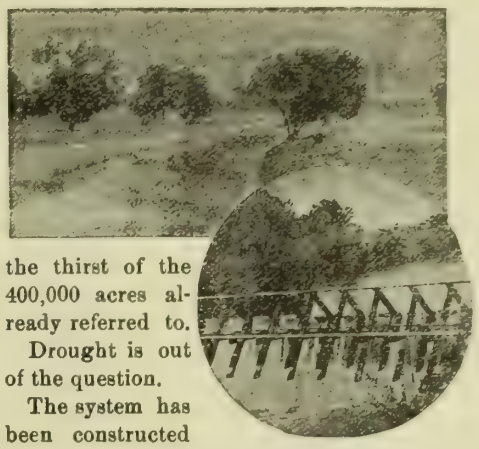
Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

THE advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.



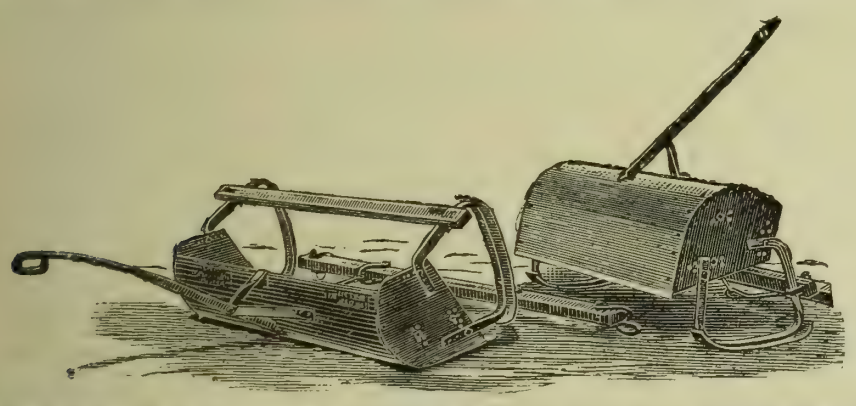
Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY,

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FIREBAUGH, CAL. (Poso Farm), November 8, 1889.

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J. W. SCHMITZ, Supt. Miller & Lux.

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It makes Rope nice and pliable, it beats tar coating.
It contains no acids or injurious or poisonous ingredients.
It is THE BEST WOOD PRESERVER IN THE WORLD. We state facts and have testimonials genuine and indisputable.

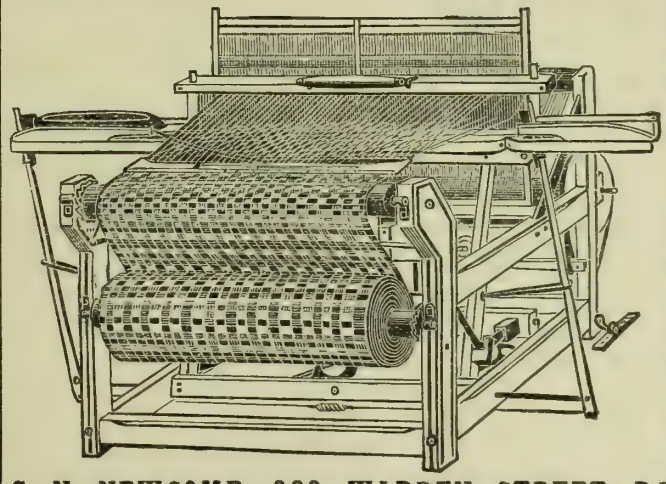
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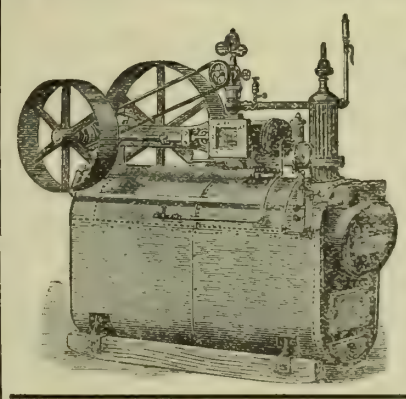
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THE HOME CIRCLE.

Your Mission.

If you cannot on the ocean
Sail among the swiftest fleet,
Rocking on the highest billows,
Laughing at the storms you meet,
You can stand among the sailors
Anchored yet within the bay,
You can lend a hand to help them
As they launch their boats away.

If you are too weak to journey
Up the mountains steep and high,
You can stand within the valley
While the multitude go by;
You can chant a happy measure
As they slowly pass along,
Though they may forget the singer
They may not forget the song.

If you cannot in the conflict
Prove yourself a soldier true,
If where smoke and fire are thickest,
There's no work for you to do;
When the battlefield is silent,
You can go with careful tread,
You can bear away the wounded,
You can cover up the dead.

If you cannot in the harvest
Garner up the richest sheaves,
Many a grain, both ripe and golden,
May the careless reaper leave;
Go and glean among the briars
Growing rank against the wall,
For it may be that their shadow
Hides the heaviest wheat of all.

Do not, then, stand idly waiting
For some greater work to do;
Fortune is a fickle goddess,
She will never come to you.
Go and toil in any vineyard—
Do not fear to do and dare;
If you want a field of labor
You can find it anywhere.

—Anonymous.

How a Reporter Filled His Assignment.

"Send Mr. Harding in."

The managing editor irritably dropped the speaking tube and exclaimed half to himself, "Why in the world couldn't those bothersome Cresson operatives have taken some other time to air their grievances?"

The managing editor did not mean to be unreasonable, but he did wish that the employes of the great Cresson cotton mills had not chosen for their strike a time when every news field was overcrowding the paper, and when an unusually active political campaign was beginning.

At this moment an alert and very young man, scarcely more than a boy, clear-eyed and frank in appearance, looked in at the door.

"Come in, Mr. Harding. I shall have to send you away on special work. Those everlasting spinners and weavers at Cresson have struck. I want you to reach the ground by the first train to-morrow morning. You know upon such a matter it won't do for the *Magnet* to be beaten, and I needn't tell you that the *Magnet* wants the whole truth about it. That's one reason why I send you."

"Thank you, sir. I shall be glad to go."

"Return to-morrow night, if you can. If you cannot, stay over; but see it through, if it takes a month."

When the *Daily Magnet* special correspondent alighted from the morning express in the city of Cresson, the looms and spindles were idle; the millyards were deserted, save by the policemen detailed to guard the property there; agents and other officials were in consultation in the offices and counting-rooms; angry and discontented operatives were gathered around the street corners.

Harding found that he could return on the evening express, and when he took the train at a quarter past seven his report of the matter was already nearly completed.

Under the dim car lights he scribbled on industriously, sure of a triumph. The other newspapers, he had found, were depending upon inefficient local correspondents for their accounts of the matter.

The train rushed through the gathering darkness, and the lights of Benton were only two or three miles distant when the whistle sounded a wild, shrill note of alarm.

Then came a shock, a crash, the splitting and shattering of timbers, the snapping of iron and steel, and, above all other sounds, the cries of human agony.

Tom Harding was stunned by a broken timber, but only for a moment. He roused himself with a half-dazed consciousness of disaster that left no room for any immediate sense of pain.

In the sudden awakening to the realities of the situation he became aware that his legs were so pinioned that he could not move and that pains were darting through his body—unaccountable pains, growing constantly more intense.

Men approached with lanterns. He called to them, and they came and relieved the pressure about his legs, waiting for him to climb out of the wreck.

"I don't know what's the matter," he said, painfully, "but I am hurt somewhere. I can't move alone."

He was raised and laid to one side upon the ground wet with dew. A flask was held to his lips, and the swallow from it revived his strength.

"Where are we?" he said. "Is there a telegraph office near?"

One of the men, who had remained for a minute beside him to see what care he might need, answered, "This is Benton near by."

"I must get a dispatch to the operator—quick. It is of the greatest importance."

"I'd make it short. He'll be busy enough to-night. Here," the man called to a boy from a neighboring farmhouse. "My boy, you can make yourself useful. Here's a man who has been hurt, and wants to send a telegram. There'll be other errands you can do in town. The men are all needed here."

The boy, his face white and his eyes big with horror at the scenes around him, came and stood by Tom, who had written the direction with difficulty, and was tearing the leaves from his notebook. Handing them to the boy he said:

"Tell the operator to send all he can of this before half-past two o'clock, sure." Then he added, "Wait," and wrote hurriedly:

"The south-bound express, leaving Cresson at 7:25, struck a freight train just north of Benton this evening at 9 o'clock, and was completely wrecked."

A physician approached and stopped to look at Harding.

"Are you badly hurt?" he asked.

"I don't seem to be hurt externally," said Harding, "but sharp pains keep shooting through my body, and I can't move."

The physician, grave and compassionate, knelt, and, with quick, skillful touch, examined the young man. He asked a few questions, and shook his head sadly.

Meanwhile, Tom had made a few rapid inquiries of the doctor about the disaster, jotting them down to fill in his dispatch. He then said, quietly:

"How is it with me, doctor?"

"Can you bear the truth?" asked the physician.

"Do you mean that I am going? Yes, I can bear it. How soon?"

"Very soon, I fear."

"Doctor, my name is Harding—Thomas Harding. I am a reporter for the *Daily Magnet*. I was on my way to the city with an account of the labor troubles at Cresson. It must be in the *Magnet* office before half-past two. Here I have scribbled a story of this accident. You've given me nearly everything but the names of the killed and wounded—I can't get those. Doctor, will you see that my paper has those names? Can I trouble you so much? I can't fail my paper now."

Dr. May knew that he had a night of anxious work before him, but he could not refuse the pleading look in the boy's white face.

"Yes," said the physician, "I will see that it is done."

"Oh, thank you, doctor!" Harding's voice had almost a ring of triumph in it."

"Your name is——"

"May."

Tom added a few lines to his dispatch.

"Can't get list of killed and wounded. Dr. May will send it. This is my last dispatch. Tell mother. Good-by. HARDING."

It was two o'clock in the morning in the office of the *Magnet*. The roll of the ponderous trucks overhead told that the first forms were being rushed down to the stereotyping room.

The managing editor came in with a worried look on his face.

"Nothing from Cresson?" he said. "What can be the matter with Harding? If he were not coming back to-night he would have wired long ago; and if he were coming he would have been here before now."

Just then came the office call on the telegraph instrument. The operator answered, and began to write. The managing editor leaned eagerly over his shoulder.

Dated at Benton? What did it mean?

Page after page came rapidly from under the operator's hand. The story was vivid, graphic and complete.

"It will be a beat!" exclaimed the managing editor.

"Probably Tom was stopped by the accident, and had to send it from Benton," suggested the city editor.

But the click of the instrument had begun again.

BENTON, July 14.—The southward-bound express, leaving Cresson at 7:25, struck a freight train just north of Benton and was completely wrecked, this evening at nine o'clock.

Then followed a brief but vivid story of the accident, read eagerly and anxiously by the strong men who stood about the operator.

The operator had grown white, and his hand twitched nervously as he laid down his pen and touched the key. The managing editor was the first to read the sheet, with its ink still wet on its brave words:

"Can't get list killed and wounded. Dr. May will send it. This is my last dispatch. Tell mother. Good-by. HARDING."

The managing editor dropped the sheet and turned away.

The *Magnet* that morning contained two special dispatches which attracted extraordinary attention. Contrary to the usual custom of the paper, both of these bore signatures, and in each case the name signed was that of Thomas Harding.

Above the telegram telling the story of the disaster, first in the death roll that was so anxiously scanned by so many eyes, stood the name of "Thomas Harding, reporter."

That was all; but the world soon learned the story.—Boston Daily Globe.

That Old Tin Can.

Written for the RURAL PRESS by ISABEL DARLING.

What shall we do with it? If it was almost anything else we needn't ask. If it was an old broom, we could cut off its head, unwind the wiry tie about its neck, and, while that is getting *bendable* in the kitchen fire, separate its bushy hair into small bunches, then wrap the wire around each bunch two or three inches from the end, and have something much better than a Chinese brush for cleaning dishes and saving our hands—just the thing for scrubbing the ears of milk pails (I never tried it on the children) and down the seams; just the thing for "ashing" (why, isn't that quite as proper as "dusting?") the stove, brushing pantry shelves and washing the sink.

The other part of the broom would make one of the three legs needed for a small stool or stand, a rod for a curtain before some corner cupboard or half-grown window, or a crutch for weak plants. Best of all, if one does not care for any of this "tinkering," the kitchen crematory may always afford apparent annihilation. A similar fate awaits many other worn articles, among them the crimpy zinc from the old washboard, which, when nailed to the wall over the sink, the upper edge with long nails so as to let it spread, makes a holder that will not show through nor get spoiled by water for the before mentioned business; but—what *shall* we do with the old tin can?

We may cut gallon syrup cans into dear little pans of various sizes for bread, biscuits, pies and puddings; we may do much less with fruit cans, much more with the oil can. We may take off one side, leaving the faucet near the bottom, and we have a tiny sink; at one end, and it is a wash-boiler or a safe for bread; take out as much as we like of one or more sides, take a slate frame, or make one, cover it with wire gauze or mosquito bar, fasten wooden slats above and below the opening with burnt nails that will clinch, slide in the door and we have a meat safe. We may cut off one end, punch holes for a big wire or old pail bail, and we have what many call a tin *bucket;* cut in two, with the handle end spread at the corners so it will slip over the other, and holes punched in the bottom of that other, it is a steamer; opened at the seam and spread flat, it is roofing for sheds; with a close-fitting tin door, it is an oven for a coal-oil stove; on a hillside, it might even be opened at both ends, one edge pinched so as to slip into another done the same, and used for a temporary sewer, especially if coated and cloaked with mineral paint.

But we get tired of this after awhile, yet keep on using oil, gasoline, fruit, oysters, sardines, spices and numerous other things, so the cans accumulate and the question comes up again. The junkmen will buy only the large ones and the very best of them, so the highways and byways, river beds and hollows of the field are disfigured by hideous heaps of rust-spotted tinware. What shall we do with it? Will not some chemist come to the rescue and manufacture a simple or compound acid powerful enough to utterly and quickly dissolve the trash, and will not the same or another earn the sincere thanks of the community by finding a use for the liquid made from *that old tin can?*

—"There ain't agoin' to be good livin' in trampin' this season," said Raggles.

"I'm afraid not," said Tatters. "These here cooking schools is teachin' gals how to use up the cold wittles."

Along the Color Line.

A Social Problem.

Written for RURAL PRESS by DUANE MORLEY.

John Proud took unto himself a wife, and in time, as the result of that union, two daughters came into the world and were reared to womanhood, both graceful and beautiful to look upon.

It matters not that this union of Proud and his chosen was in among the pine-clad mountains of California, and at a time when the population was sparse and chiefly aboriginal.

John Proud's chosen was a scion of the first family tree, a daughter of Eve—remote—and that is enough for the story we have to narrate. A woman, a wife, a mother, and, sad as it is to narrate, one to be despised.

In time, John Proud grew rich—whether from purloining timber from Government land or not does not pertain—he grew rich, built a grand mansion upon a hill, and was as proud as he was rich. Gradually, there was an influx of white population, the social status of the neighborhood changed, and fingers of scorn were pointed at Proud.

Poor Proud! Had he cared less for his neighbor's opinions than for himself and the welfare of his own—*his very own*—all would have been well. But he did not. The opinions of others were weightier to him than matters of heart and life—the wife, the mother, the aforetime domestic drudge and home-maker, was ostracised and cast out to satisfy an imported and false social sentiment. She, who had before been worthy, was now, by the terms of a social decree, unworthy. So it is that society, of whatever caste it may be, sometimes dominates the home to its destruction In the grand mansion on the hill, which towered to the skies, that woman never entered, or, if she did, 'twas under protest. In a little dell, where the pines stood thick, a hut or cabin was furnished her, and, though stored with the things calculated to keep life in the body if not joy in the soul, the divorcement was inhuman. Living in the hut, outcast from the mansion and her loved ones, and by no fault of her own, she from time to time made nocturnal pilgrimages thither to gaze in, Arden-like, upon their bliss. Not all at once did the hearts of the daughters cool, and become estranged, but the fierce sword slash of social prejudice had been made, and time and education widened the breach and completed the separation. For three brief seasons the mansion was quiet and John Proud alone—no daughters to brighten and cheer his waking hours.

Then they returned to him with strangely expressive phrases of modern English upon their tongues and eye-glasses astride their noses. They were Bostonese in speech and manners, and—as far as they had absorbed their chosen cult—*in heart*. A certain disciple of Blackstone, enamored of one of the daughters, had written her tender missives while she was away at school. Immediately upon her return the proper warrant was obtained, a preacher summoned, and the mansion on the hill made to blaze from cellar windows to attic with warmth and light. A father with no wife and two daughters with no mother at the wedding festivities—such was the spectacle. The bride of an hour, from the flambeau-lighted lawn, had retired to her balconied chamber three stories up for a glove or a handkerchief. On her way there by a rear door and the staircase, she passed an odd, dusky shape—a shape from the lips of which issued the word daughter, coupled with yet another word—one of endearment. But that word of endearment issuing from lips that had been ostracised, clashed against a heart of stone. There was no response.

Soon, all at once, from that balconied chamber, above the din of mirth and music below, sounded a fierce cry of agony and alarm. The chamber was on fire—seemingly a very hell of flame within—and its fair occupant, there for a bit of adornment, was involved in it. Proud and the bridegroom ran to the staircase to ascend, but were beaten back by the flames. Then Proud ran to the barn for a ladder, which proved all too short to reach the balconied chamber; then to the mill he flew for a yet longer one, while the bridegroom and every other onlooker was paralyzed with terror Then, for a moment, the bride was seen upon the balcony wringing her hands in the agony of despair. Then, again, she was lost in the smoke and flame-tenanted chamber. When Proud was half way up from the mill, bearing the longer ladder, just then a dusky shape, her clothing on fire and her countenance itself strangely alight, bore a blanketed bundle out upon the balcony. This she lowered, by means of a massive rope cable, to the lawn beneath. In another instant,

the mansion, gutted to its bones, tottered, a blackened skeleton, in the breeze newly sprung up, only to collapse, with all that was in it, into perfect ruin. From the bundle came the bride safe and unscorched—John Proud's daughter by an Indian mother; that mother, ostracised and scorned, freely giving up, in the act which saved her child, her own life. A few burned bones, and a heart of flesh—which would not burn—now rest beneath a massive monument in a cemetery in Northern California, while both memory and mention of the wife and the mother are exalted above reproach.

They Had Met Before.

Not long ago a well-known young Indianapolis man, who is fond of the ladies, took a business trip up the Cincinnati, Wabash & Michigan railroad to Benton Harbor, says the Indianapolis *News*. When he left Anderson the train was well filled with passengers, and the farther north he got the more the passengers crowded on the train. At Wabash there was only standing room. A very handsome young girl, dressed in the latest—the very latest—fashion, had a seat all to her own sweet self. The young Indianapolitan asked, in his own soft, North Meridan voice, if he might not occupy the seat with her. He had been perching on the coal-box and was real tired.

"Certainly," she said, in a voice as sweet as maple molasses. And as she spoke she moved over, and the young man from Indianapolis crowded into the seat beside her. She was reading a paper. The young man at her side looked out of the corner of his eye and declared—to himself of course—that he never saw one more beautiful, and the rays from the great diamond on her finger sought out the dark places in the car and made them as bright as if an electric light had flashed upon them. Of course any one knows the Indianapolis young man is aware of the fact that he is awfully diffident and lacking in what is vulgarly called "gall." So it was fully ten minutes after he had taken his seat before he had broken into conversation. She was rather talkative herself, and they soon became fast friends for such recent acquaintances. The man from Indianapolis lied like a pirate about himself and his ancestral halls and the large tract of land he owned at Fairview Park. Then she had her inning and told how she lived at Benton Harbor, but spent her summers in the east and her winters in Florida.

"It's such a poky old town, you know," she said, "that I would not stay there at all if papa did not insist. Poor papa is getting old, and we have to humor him a great deal. But next summer I am going to Europe. Brother Charlie is over there, and his wife is just the loveliest little woman on earth. She is related to the royalty of Spain, but that does not make her the least bit proud. Where did I understand you to say you were going? Oh, Plank's tavern! That's a nice place. I go over there once in a while when I am at home. It relieves the monotony, you know."

It is not necessary to tire the reader with a recital of all they said, but the young man was badly smitten with the supposed heiress, and she seemed to think "right smart of him," as they say down in Brown county. When she left the train at Benton Harbor, it was not until they had agreed to write to each other. Their parting was so protracted that he missed his train, and under the protecting wing of Conductor "Dud" Olney went to a hotel. He had happy dreams that night, and wondered when he would see his fair charmer again. He had an early breakfast. His head was lowered over the table, and his eyes were glued on the pages of a Chicago paper. A soft step at his side, a rustle of garments, and then a low, sweet voice murmured:

"Beefsteak smothered in onions, veal cutlets, ham and eggs, baked potatoes, fried potatoes, fish, vegetables, wheat bread, rye bread, rolls, corn cakes, tea, coffee and milk."

With a start he raised his head. That voice had a familiar sound. His eyes sought her eyes. 'Twas she—his companion of the evening before on the train. Around her lips was the least bit of a smile, and a blush slowly mantled her cheek. Straining every nerve, he stared at her in a cold, general-manager kind of a style, and gasped:

"Gimme some beefsteak and plenty of onions."

—Another Anglomaniac.—He—"I am rather in favor of the English mode of spelling."

She—"Yes?"

He—"Yes, indeed. Take 'parlor' for instance. Having 'u' in it makes all the difference in the world."

Little Girls' Gingham Gowns.

In small plaids, and checks forming plaids, these neat fabrics appear in blue, pink and tan shades, cross-barred with red, yellow and such bright contrasts. They are undoubtedly very pretty when made up on the bias; but when so cut they will pull askew when straightened out for ironing, writes Emma M. Hooper in her department of "Home Dressmaking," in the April *Ladies' Home Journal*. All of the skirts are gathered, two breadths answering for the tiniest tots, and three being in the skirt of a girl of five years. The low-neck waist worn over a guimpe, has a fringe of gingham or embroidery, and if made high-necked, the frill may simulate a bertha. Coat sleeves, full at the top, have an edging or turn-over cuff of embroidery, while with white sleeves attached to the guimpe the dress sleeves are tiny puffs. If a belt is worn, have it of insertion, though many of the gathered skirts are sewed to the round waist, which buttons in the back, and has only under-arm and shoulder seams. Over a guimpe of tucked nainsook the low waist is perfectly plain, or gathered, top and bottom. A little vest of embroidery is sometimes seen, also bretelle frills of gingham, or edging from the waist line in front, over the shoulders, to the waist at the back. High waists are trimmed with narrow vests, a square of tucked nainsook, jacket fronts finished with edging, and opening over a flat front of embroidery, or a plaited one of the gingham. Other waists are full from the shoulders and crossed at the waist line in surplice fashion over a V of embroidery. Girdle pieces, forming a point in front, are sewed in the side seams, and tucked fronts also appear. The collar is of narrow edging turned over. White or ecru Irish point lace trims some elaborate cotton frocks, as a yoke, cuffs and girdle.

—Weary looking man—"Doctor, can insomnia be cured?"

Doctor—"Nothing is easier. Anyone can fall into a sound sleep by simply trying to count a thousand."

Weary looking man—"Y-e-s, but baby can't count."

Young Folks' Column.

The True Blues.

Molly's father was a village blacksmith.

The shop beside the cross-road was, in the spring 1862, a grand resort for the patriotic owners of the Dobbins and Dollys that needed a shoe, as the big, brown blacksmith was enthusiastically patriotic.

One June morning the birds, not a whit annoyed at the anvil's ring, sang sweetly in the big maple shading the small, dingy, weather beaten shop.

Richard Noe, tall, broad shouldered, strong-armed and kindly-faced, carefully pared an ancient, flea-bitten, gray Dolly's hoof.

Molly Noe, tawny-haired and eyed with complexion to match, small and slender, her father's "wise little woman," stood near looking on.

"Pappy," said Molly thoughtfully, "Mr. Bigg's has taken Selim to the other shop. Selim's a fine hoss, Mrs. Swipes' Dolly isn't worth much, yet you're takin' extra pains in shoein' her. Mr. Biggs pays extra for blacksmithin'."

"See here, Molly," replied Richard Noe, standing straight and tall, "Old Dolly is Mrs. Swipes' main dependence gittin' in her crops. Since the three Swipes boys are down at the front an' their old mammy must run the farm, Dolly gets my best work free of cost. There's them that can keep Selim in trim. He's a fine animal. He'd carry a cavalryman in first-class style."

Molly understood now just why the Noe family finances decreased steadily instead of improving.

Patronage was not lacking, but there were so many Dollys and Dobbins that must be shod free gratis.

A rival smith across the way wasn't runnin' a "war widders' blacksmith shop." He was never too busy to attend to the needs of the valuable Selims.

There came a day when Richard Noe went to the front.

The little shop was deserted. The Dollys and Dobbins had lost a kind and generous friend for a season.

"I'll be back afore long, 'Mandy. Keep up heart," said the big blacksmith to the brave little woman in a shabby cotton gown, who comforted Molly and Polly with the tearfully, cheery assurance—

"Pappy'll soon be home with a pocket full of money."

Molly watched her soldier father out of sight, waving her red, white and blue apron, trying bravely to smile a good-bye.

Molly liked to wave her flag-spangled apron, a gorgeously gay affair—a "true blue" apron.

Richard Noe selected the material. A white ground thickly dotted with tiny flags, the stars and stripes, surprising "a good little girl" with the lovely present upon her eleventh birthday.

The recruiting officers came often to Lyon. The Ohio boys (and a number of the old men) were too patriotic to stay at home.

In time, the minister each Sabbath morning preached to a congregation composed mainly of really aged men, women and young people.

Mrs. Noe's eyes grew large. They told a story of suspense and hope deferred, when weeks wore on and there was no news from her own particularly beloved soldier.

One afternoon the soldiers' mothers, wives and daughters were filling a box with camp and hospital stores, having collected together in the Noe cottage jars of wine, crimson, amber and pale green tinted jelly, jam or preserves, with other good things—a contribution representing loving sacrifice and patient work.

In the highway fronting the cottage a recruiting officer drilled a number of recruits.

Molly sat upon a gate-post lustily cheering and frequently waving her true blue apron when a thought came to her.

"I'll risk it, I will," she cried, hurrying into the house to slyly secure a small pot of the favorite sweet, wrapping about it a strip of the "true blue" print torn from her apron sash.

Molly accompanied the recruits to the station where the "special" came gliding around the bend.

She decided that the young recruiting officer, Bob Benson, was the "trustiest lookin' chap," the "pick of the crowd."

"Say, Bob," confided Molly to the smooth-cheeked, laughing, brown-eyed young soldier, "I wish you'd carry this pot of jelly to pappy.

"I've been foragin' for him.

"Tell him to send us a letter. Bad news is better than no news.

"Tell him we're keeping up heart in first class style an' mothers true blue.

"We want him to come home the very minute he isn't needed at the front. The Dollys an' Dobbins hain't any kind friend now."

"I'll take this, Molly, but there isn't one chance in a hundred that I'll see"—

"You'll be likely to see him. Don't forget to tell him we are all true blue," urged the small forager waving with her flag-spangled apron a good-bye salute.

Three months more of waiting paled to a ghastly whiteness Mrs. Noe's cheeks.

Molly no longer inquired early and often of the fretful postmaster for "a letter from pappy."

One unlucky afternoon adventurous Lieutenant Bob Benson fell into unfriendly hands. He speedily saw the interior of a prison where he found a worn, anxious, familiar face—Richard Noe.

The genial, hopeful blacksmith chafed under prison restraint. He had grown morose and silent.

When the small, flag-spangled scrap was placed in the large, thin hand, the scrap torn from the true blue apron, which had been through perils and adventures carefully guarded, the father's eyes grew bright and moist.

"Molly's apron. Her true blue"—

"Yes," whispered Bob.

"Molly asked me to tell you they are all true blue"—

A guard came that way and Richard Noe was forced to wait impatiently for an opportunity to hear the remainder of Molly's message.

"The Dobbins and Dollys miss you," said Bob an hour later.

"I hope I'll muster through, but I've been turribly downhearted an'"—

"Of course you'll muster through all this bad luck. There's your true blues to help you," replied Bob cheerily.

"Yes," said Richard Noe, "I've got the truest of blue to hearten me."

"I'm glad you've come, Bob.' Not glad to meet you in a prison, but its put new life in me. You'll get out soon.

"One of the guards is raly a friendly, good-hearted fellow.

"I'm true blue myself, but I can appreciate a feelin' man an' a Christian if he does wear the gray."

In four weeks the prison doors swung open for Richard Noe and Lieut. Benson, and one happy day the true blues forming a happy procession marched to the station to meet the returned soldier, husband an father.

Molly's apron stiffly starched and beautifully ironed, the true blue apron, served as a kerchief when the happy tears so blinded her eyes that she saw dimly during the first few joyful moments the dearly-loved, honest face.

"Lieutenant Bob did find you pappy. I'm afraid you did't get the jell," said Molly, spying the scrap of flag-spangled print pinned to the blue coat lappel.

"Bob brought me new courage, an' I'm wearin' your colors, Molly," replied the father tenderly.—Ella Guernsey in Prairie Farmer.

The Girl Who Brags.

Ella Wheeler Wilcox in the April *Ladies' Home Journal*, deprecates the tendency of American girls to the habit of bragging. Only last week, she writes, I asked a young bachelor who is comfortably situated in life, why he did not marry? "Well, I will tell you," he replied. "I want a home, which, of course, means a wife, but I am discouraged about making the venture. I admired a young lady greatly, and was beginning to think seriously of paying her court. She seemed to be my ideal. She was a model daughter, progressive-minded, intelligent, industrious. She was always neatly but simply dressed, and her cheerfulness was like a sunny day. Recently I I met her on the street just as she was emerging from a milliner's establishment.

"See my new hat?" she said brightly, as I walked along by her side. "Isn't it pretty?

"I had not noticed the new hat, but now I saw a simple open-work straw on which reposed a few flowers and a bow of ribbon."

"Yes, very pretty and becoming," I replied. "I have a finer one being made" she continued. "This is only a hack affair. I paid only twenty dollars for it. It is stylish, though, for the price, I think."

"My heart sank at her light way of estimating cost. I have no sisters, and my mother possessed a knack of trimming her own bonnets, so I had never known what ladies' hats cost. If that simple bit of straw and ribbon cost twenty dollars, what would be the price of the 'finer hat being made'? Thirty dollars at least. I realized at once my inability to properly support a girl who paid fifty dollars for two hats in one fleeting season. What a fortune it would require to furnish all her wardrobe at that rate? Yet she is so simply dressed to all appearances; nothing at all showy about her. I suppose all girls in her station pay as much for their clothes, and so I think I will leave marriage for richer men. The average young man cannot stand that sort of thing, I assure you."

Now, I happened to know who this young woman was, and I happened to know that she was not an extravagant girl. If she had paid twenty dollars for a hat it was an unusual expenditure for her, and would trouble her conscience and purse for many a day, and cause her much self-denial in other directions.

But she possessed the foolish idea so prevalent in this age of great fortunes, that men admire women who use money lavishly and who pay large prices for their garments.



A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

THE CROP OUTLOOK.—Haywards *Journal:* The recent hot spell has done no damage to the grain crop so far reported, coming at a time before the grain was advanced far enough in the head to injure the kernel. The present outlook is favorable to a fair yield of barley and the hay crop will probably be more than an average. A visit to the warehouses at the depot this week showed that arrangements were being made to handle a good season's business. Additional storage room will be provided for hay the coming season, as the proprietor informed us that he was unable to accomodate all his customers last year. Considerable hay and grain will be hauled to Haywards from Dublin and San Ramon, owing to the lower freight charges from this point. Very little hay was injured by the rains, owing to the lateness of the season in this valley. Take it as a whole, the outlook is better than an average for the farmer.

Colusa.

PECAN TREES.—Colusa *Herald:* A numb r of pecan trees on the premises of John Farris are simply weighted down with blossoms, and the yield will be very heavy. Mr. Farris has between 40 and 50 pecan trees, all growing nicely, and others were planted last year by different parties. This will undoubtedly be a great source of future profit in this county, as there are numerous trees and the nut brings a good price.

Fresno.

FARM NOTES.—Fresno *Californian:* Land-leveling has occupied the attention of many farmers this spring, and several thousand acres of new land have been prepared for irrigation. All of it not yet seeded will be planted to trees, vines or alfalfa next winter. There are some lands in Fresno county too strongly impregnated with alkali to grow trees or vines, but will make excellent pasture. Such land should be thoroughly leveled and sown to alfalfa. Where the alkali proves too strong for alfalfa, Bermuda grass should be sown, and a pasture of alfalfa and Bermuda grass will give far better results than either alone. Cattle will not bloat from eating alfalfa where they can get Bermuda grass with it.

GOOD RETURNS ON APPLES.—Fresno *Republican:* L. E. Grove, an orchardist of Mariposa county, visited Fresno yesterday and related to his friends what a good thing he has made out of his little 10-acre apple orchard, 30 miles from Raymond and 4500 feet above the level of the sea. He received recently from a small consignment of apples the highest price paid in the San Francisco market in a good many years. This year his 10-acre crop amounted to 1000 boxes of 50 pounds each, being 200 boxes less than his crop of the year before last. His first shipment was 27 boxes of Newtown Pippins, Hunstman's Favorite and Winesaps, to a commission house in San Francisco. The commission merchants wrote to him that his apples were the best they ever saw and that they brought the biggest prices obtained in many years. The prices obtained ranged from $2.50 a box for the poorest grades up to $5 for the best, the lot selling at $2.50, $3, $3.50, $4.50 and $5. The $5 apples averaged 72 to the box, or a fraction less than 7 cents each. His receipts were $103, less 8 per cent commission, 81 cents for cartage and $10.93 for freight; total expense of shipping and commissions, $19.98; leaving him a net balance of $83.02, a fraction more than $3 per box net.

Kern.

LARGE HAY CROP.—*Californian:* At the Tejon ranch about 1400 acres sowed with grain have already been cut over for hay, with the prospect that the yield will be about two tons per acre. This, it must be understood, is a product from unirrigated lands and is certainly a very satisfactory showing. The hay will be stacked up upon the grant, to be used during the winter emergencies and any time when, for a little season, pasturage gets poor.

THE TEHACHAPI GRAIN FIELDS.—Bakersfield *Californian*: A few years ago everybody seemed to think that there might be 3000 or 4000 acres of land at the most in that elevated plateau, known in general as the Tehachapi valley, which, during favorable seasons, could be made to yield a fair crop of grain. But every season during the past ten years has seen a thousand or two new acres changed into productive grain fields, and during all that time there has never been a failure of crops. So things have run along, the opportunities of the land becoming each season more clearly seen and more duly appreciated until it is estimated that there are now 30,000 acres sown in grain, from which will be harvested at least 40 sacks to the acre. In plowing time the dark brown patches which mark the limit of turned-over soil, creep higher and higher up the smooth and treeless hillsides, resulting in richly waving green billows, followed by that corn-color blend which betokens harvest time, where be ore was only the dullest russet brown of dreary unproductiveness. And while the plows have been each year climbing higher and higher on the hillsides, enterprise and prosperity have come with the newly turned furrows, until now the fame of Tehachipa as a grain-growing region is known throughout the State.

Mendocino.

WOOL FOR THE WORLD'S FAIR.—Carl Purdy writes: There is one matter to which the attention of Mendocino county wool growers should be called at once. As all know, the World's Fair Association of this county will try hard to make up a thoroughly representative exhibit. Such an exhibit would be incomplete without good examples of our wool. Wool comes close to second place in our county's products. In quality it leads the Pacific Coast, as market reports will show. For each wool grower to save some fine samples would be but very little trouble and less expense. There is no standard size for samples for exhibit, but four inches square taken from the best of fleece should be ample. I would earnestly request every grower of fine wool to save two or three samples from the finest fleeces and send them to Harrison Price, Secretary of the Association, at Ukiah. We will see that they are attractively put up and sent with the county exhibit. Wool growers, will you do it and advertise your county?

Napa.

HAY AND GRAIN.—Napa *Register*: The acreage of grass to be cut this year is above the average, and the yield will, in many fields, be heavy. The haying season bids fair to be prolonged. Some fields of early sown barley in this part of the valley are rapidly turning and will be ready for the header before haying is over. The yield will be from fair to middling. Acreage not large. There has not been a season so admirably suited for oats as the present one. This grain requires considerable moisture and cool weather. There are many handsome fields in this valley which, as a general rule, are not especially adapted to raising this variety of grain. Both white and cultivated wild oats now look very promising. The acreage of black or cultivated wild oats is annually increasing in this county, this variety being deservedly popular. Wheat, both the club and Chili varieties, is heading out. The cool weather is very favorable for this grain, and if it continues, the heads will fill finely. There never was a season when hay and grain looked more promising in this vicinity than at present, and the season from this time on will be a busy one.

Orange.

HORTICULTURAL NOTES.—Santa Ana *Blade*: At the Horticultural Commissioners' meeting, Perry, of the Anaheim district, reported 22 fumigating tents in operation in his district. He said that the new Riverside tents and derricks had been tried, and it was found that the dead limbs in the trees tore the tents. In order to remedy this, a new style of derrick which will raise the tents higher has been made, and will undoubtedly prove a success. He reported a yellow bug, which stayed in the ground during the day and at night came out and ate the leaves of the prune trees. They are very numerous and are proving quite destructive. Coal oil is being poured around the trees to kill them. Hamilton reported but little work done in his district. A lot of prune trees on peach roots, from Duarte, were inspected yesterday, and held until a certificate as to the navity of the peach could be obtained. Rafferty reported two kinds of scale—the soft orange, and the frosted scale—brought to his notice. Neither are especially harmful, and are easily killed.

Sacramento.

HOP NOTES.—Sacramento, May 26: Growers now report that the number of decayed roots are much less than was reported two weeks ago. The cool weather retarded the growth of the hops so long that it was thought the dormant shoots would not put out at all, and the situation was universally reported as gloomy. It is now discovered that while the growth has been slow the shoots accumulated much nourishment, and the shoots have come out large and strong. This, with the heavy subirrigation caused by the flood tide of the river, will insure a large crop. Growers, however, should watch their vines and cut them back, if necessary, or instead of hops, vines will be the crop, and the catkins will be large, green and coarse. Too much water is said to make large, coarse and undesirable hops, if pruning is not resorted to.

CROP NOTES. — Sacramento *News*: M. Van Gelder reports flattering prospects for farmers and orchard men in the vicinity of Acampo. Haying is in active progress and laborers are in great demand. The grain crop never promised a heavier yield, and orchards, as a rule, will yield an average crop in quantity and a superior quality to that produced for several years. Cherries are light and the pear crop will be less than last season, but the increase in some of the other fruits, Mr. Van Gelder thinks, will fully make up the deficit. "The nut crop," said Mr. Van Gelder, "about Acampo and Lodi will be large, especially that of almonds. Some of the largest almond groves in the State are located near Lodi. The industry has proven quite profitable and a large acreage has been planted during the past two years. Almonds, in most localities, are shy bearers, and for that reason orchardists have hesitated about planting extensively. However, in Sacramento valley the nut is a reasonably sure crop, and, with a certain market which is insured, almond growing will undoubtedly prove a very profitable branch of the orchard business. The warm weather is having a salutary effect upon trees and vines, and it is quite wonderful to note the daily growth. Nursery stock, of which our company has over a million and a half large and small, is making very satisfactory progress. The plantlets are springing up as if touched by magic and will be trees before the growing season is over."

San Diego.

SAN PASQUAL FARM NOTES.—Cor. Escondido *Times*: Our pretty valley is still here, though not heard from for so long. Everything is growing and blooming and every one is busy. The alfalfa is being cut and stacked or sent to market. Grain hay is all attended to here, and heading begins this week. Cattle and horses are looking well. Hogs are being raised in large numbers, and are fat and impudent as hogs usually are.

San Luis Obispo.

CROPS AROUND CRESTON.—Cor. S. L. O. *Tribune:* This hot weather has injured the grain crop throughout this section hundreds of dollars, fairly cooking the soft grain in the mesh and boot and fairly burning the grain stalk. We are now having heavy fogs in the morning which is a little benefit to the crops, but it cannot place them where they were one week ago. You can set it down that for anything like a fair yield of grain for this section of country, as a whole, this season is passed. The farmers are now trying to save a portion of the crop by cutting it down and making it into hay. There is a great call for mowing machinery at this time. Some of our ranchers have been sending out for extra machines. This is going to be a hard season on the average grain farmer.

Shasta.

FRUIT GROWERS' COOPERATION.—Anderson *Enterprise:* A large number of fruit growers of this vicinity and Happy Valley met at Bedford's Hall to take final action toward the disposition of their fresh fruits. J. H. Sumner, in the absence of T. W. H. Shanahan, temporary chairman, was called to the chair. He introduced letters from various fruit firms of the East and principal home-shipping points. J. C. Kesler was elected temporary secretary. An estimate was then given in by the growers present of the amount of fruit, of the several varieties, each one expected he could furnish, aggregating 321 tons, or 32 carloads of choice fruit. Permanent organization was decided on, and J. H. Sumner was elected president, A. Dozier treasurer and H. P. Dodson, secretary and manager. It was decided by vote that the officers of the association be an Executive Committee. Motion carried that shipping contract be entered into with Barnett Bros. Following are the names of those who signed the roll of membership and estimated tons of fruit each can furnish, which was handed to us after the above was put in type: Shasta County Fruit Co., S. H. Frisbie manager, 115 tons; S. P. Hussey, 10; Alexander Farm, J. H. Sumner manager, 50; J. C. Duncan, 5; Jesse Ulry, 20; S. C. Parker, 5; H. M. Alexander, 10; David Hill, 25; G. W. Burtner, 1; A. Dozier, 1; Wm. McGuinness, 40; H. P. Dodson, 15; H. B. Frisbie, 8; C. M. Palmer, 2; S. C. Dick, 5; Clyma, 5; Ludwig Fruit Farm Co., 1; E. J. Tillman, 3; a total of 321 tons. The orchards of the men represented in this list are nearly all young, especially the larger ones, and are bearing for the first or second time. The principal fruits are peaches and pears.

Sonoma.

FRUIT NOTES.—Santa Rosa *Democrat:* In company with Viticultural Commissioner DeTurk, we took a ride up the valley a day or two ago. Our itinerary was via Fulton and Windsor and then to Russian river. We have never seen the country looking more promising for an abundant crop. The foliage upon the trees, the natural grass and wild flowers are at the height of their beauty, and on the river bottom present the appearance of a tropical soil and growth. We visited the orchards and vineyards of both Mr. Hotchkiss and his near neighbor, Mr. Miller, and it will be pleasant for vine growers in Russian River township to know that, after a careful and critical examination, the President of the State Viticultural Commission could not discover the slightest evidence of disease among the vines. On the contrary, they were pronounced to be in all respects in first-class condition. The vines are on the upland, the orchard on the river bottom, which is subject to overflow. Like the delta of the Nile, its wasted fertility is annually renewed. Two years ago the water covered the tops of the trees in a young orchard without injury. In falling to its natural level the surplus moisture drains out of the porous soil like water from a sponge, leaving over the surface a mulch of alluvium from four to six inches deep. Under such a stimulant, vines, shrubs and weeds fairly struggle with cultivated plants for supremacy. The peach crop, both on the bottom and hill land, will be large. The prunes are very light set, but of large size. Of other fruits the yield will be fair.

THE CHERRY CROP.—Petaluma *Imprint:* Will Cassiday, who is well posted on the cherry crop, says: "You will notice by the San Francisco papers that there are only 839 ten-pound boxes of cherries shipped into the San Francisco market yesterday. A year ago at this time there were from 3000 to 5000 boxes going there. The cause of this is a short crop all over the State. At this time last year the prices paid for cherries ranged from 30 cents to $1 a box. This year the range of the market is from 75 cents to $1.75. I would further say to the cherry growers that they had better hold on to their cherries, because, notwithstanding the general shortness of crops, I know for a fact that the Alameda, Haywards and San Jose cherries will all go East. I do not believe that the crop in the State this year will be one-quarter of the usual yield.

CROP NOTES.—Healdsburg *Enterprise*: In the Healdsburg district no damage has been done to crops by Jack Frost, and from present indications the grape crop will be a large one. The fruit crop will not be so large, perhaps, as last season, but with the exception of cherries, there is plenty of fruit upon the trees. The Eastern fruit crop is almost a total failure. The fruit crop of California is light. The demand will be brisk, and good prices will prevail. The canneries are prepared to handle immense quantities of fruit, the capacity of the Magnolia having been doubled, and that all four canneries will run, and largely too, is almost an assured fact. The grain crop is a fine one, and prices for cereals are firm. The hop prospects this far are favorable, although it is too early in the season to predict a crop.

Stanislaus.

FOUL FIELDS.—Lorain Cor. Modesto *Herald:* A large area of the land sown to grain in this locality will be cut for hay, owing to the heavy mixture of oats and wild vegetation. The unusual amount of oats that is mixed with the wheat crop this season cannot be accounted for by our farmers. The theory has been advanced that this incalculable damage to the wheat crop results from the use of combined harvesters; that by a continuous use of the combines the soil will eventually become so poisoned with foreign growths that wheat-growing must be abandoned from necessity. This theory is denounced by those who, after growing rich while using an old-time "horse power," now believe a wheat farm is utterly worthless without a combined harvester of the latest patent.

Sutter.

FRUIT MATURING.—Yuba City *Farmer:* In the orchards the fruit is developing rapidly, and in about ten days apricots will be ready for shipping. Considerable of this work will be done this season at this place, as an association will be formed for that purpose. The cannery will begin the apricot pack about June 20th, the same as last year. Thinning peaches will soon be finished, and some are preparing for summer spraying where the scale is seen on the trees. The fruit crop will be very good, from present indications, taking it as a whole, and the warm weather is hastening its maturing rapidly.

HAY, GRAIN AND HOP NOTES.—Nicolaus Cor. Yuba City *Independent:* Farmers are watching the clouds to see what time they can with safety start their mowers. Alfalfa, in particular, needs cutting badly, so let us hope that the time for fair weather has come. Grain crops here never looked better, and if rust doesn't set in, all will be well and a bountiful harvest will be gathered. Our hopyards are very backward, on account of the very cold weather lately and the ground being heavily soaked with water. Only let them have one week of warm weather, and the vines will be ready for tying to the poles. This is to be a year of good prices, as dealers are already in the field eager to enter into contracts at 17 cents per pound for the new crop. These are paving figures for the hop growers, and should failure set in in other parts of the world, prices would be much higher, and the California grower would be in his glory. California always feels safe on the failure part, as she never had one yet, her climatic conditions being most favorable. Indians are to be introduced into the hopyards extensively as pickers. They are known to surpass the Chinese as clean pickers, and the best of it is they do not take all their earnings away with them.

Tulare.

CROP PROSPECTS.—Tulare *Register:* The fruit crop of this season is now beyond danger, and may be counted upon to fulfill its present promise. That promise is for an abundant yield in Tulare county. Many of the new orchards and vineyards come into bearing this year, and many more which bore their first crops last season are now so full of fruit that thinning out is necessary. These orchards will increase their yield each year for the next three or four years, and it has been estimated that if there should not be planted another tree or vine, the natural increase in production of those already planted would require, to properly handle the fruit, an addition of 1000 persons each year, for the next three years, to the population depending on Tulare City for supplies and for a shipping point. Let proper attention be given to thinning on the trees, and Tulare fruit will rank with the very best in the State. It takes "nerve" to thin fruit as it ought to be thinned. At Paige and Morton's, preparations are being made for an immense amount of fruit-handling. The yield will be four times as large as ever before, 12,000,000 pounds being the estimate. Year before last the yield was 3,000,000 pounds. The thinning process is still going on, and will continue for about ten days, when apricots will be ripe. From that time on till the close of the season, the different varieties will follow and there will be no rest. The number of hands employed, men, women, boys and girls, will make quite a large community. Subirrigation was resorted to this season instead of flooding as formerly. It was found that the latter method resulted in a crust being formed over the ground, which broke up into clods. Subirrigation has done away with this. The water level has raised to four feet and six inches, and capillary attraction has been the means of wetting the ground clear to the surface, even softening the clods caused by former flooding, so that the ground is in better condition than it has ever been. No water remains in the low places as was formerly the case. Reports from various directions bring news that the fruit outlook is first class, even though in a few localities some damage was done to the first crop of grapes.

Yuba.

CROP NOTES.—Wheatland *Four Corners:* Haying is in full blast. The crop is of good quality and will be large. The first crop on the bottom lands is in the stack. The barley crop is large this season. Already many fields are putting on the yellow. The wheat crop is way up in the clouds, both in yield and quality. If the warm weather continues, harvesting will not be so late as was announced earlier in the season. Wild blackberries are ripening. Our berry reporter has not canvassed all the patches as yet, but from indications near the town the crop is larger and of better quality than it was last year. The present high water, however, will make many rich patches inaccessible. The tame berry vines are full of blossoms and green fruit. Cherry shipments continue daily from the Kirshner orchard. The crop is exceptionally small. The prune crop in this neighborhood is a failure, while varieties of plum trees are fairly loaded. The peach and apricot crop will be large and of fine quality. The Bartlett pears were never better. The weather for the past few weeks has been just to the wants of the truck gardens. Their beans, corn, melons, etc., are in fine condition. The hopyards are backward and growth uneven. It is doubtful whether the crop will be as good as last season.

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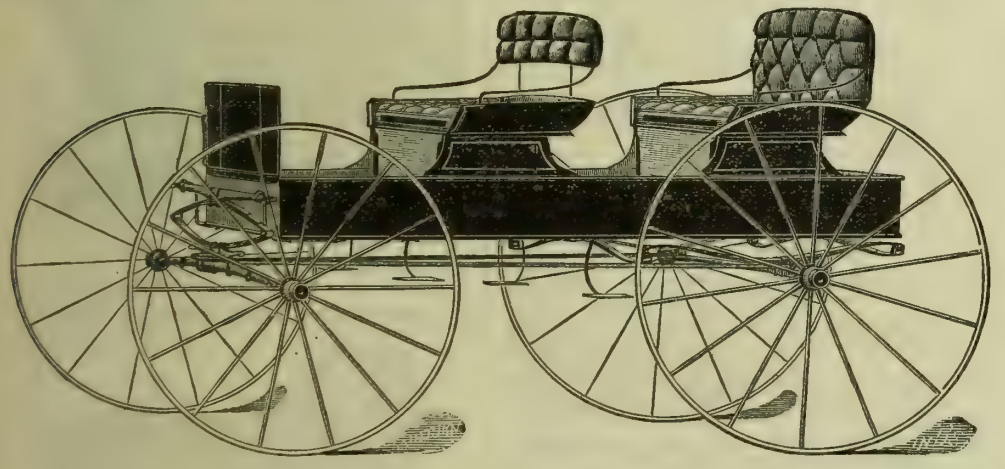
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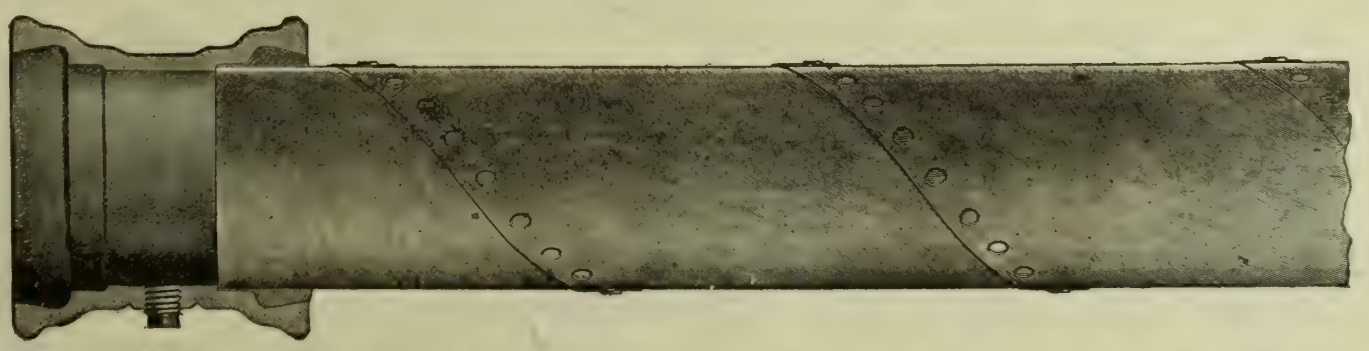
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Sweet Stock vs. Sour Stock for Oranges.

Read by PROF. C. R. PAINE, of Crafton, before the Pomological Society of Southern California, at its meeting in Redlands, May 5 and 6, 1892.

When our predecessors in orange culture first came to this coast, they did not find natural groves of orange trees, as for generations back has been the case in Florida, the moist lowlands of the latter State affording favorable conditions for growth as contrasted with our arid plains. Yet, doubtless, the original settlers of either coast brought from the same mother country of Spain the varieties in favor at home for stock and fruit. Here, by cultivation, upon the mainland and islands of the Pacific has been developed a stock of citrus trees of the sweet variety adapted to their surroundings, with characteristics of both treee and fruit peculiarly their own. Why, in view of this fact of history, should any doubt that they are suited to be grown here? Why should any say that they are inferior as a stock to Atlantic grown, either sweet or sour, considering only their common origin but different conditions of development? Even if it were said that the stock here is from the East Indian or China orange, is not the same region the original source of the Spanish and Mediterranean fruit? I think we may fairly conclude, theorizing only, that our Pacific stock, whether Tahiti, Mexican or Californian, is its own kind, and perfectly acclimatized and suited in every way to its own home.

Then, look around upon the remnants of the early California planting of 1804 to 1840, and the forests of orchards of the present day from seed of the same stock; pass from theory to fact, and who, whether old resident or newcomer, viewing either budded or seedling tree, will deny their wonderful thrift and productiveness, doubtless, in our well cared for orchards, unsurpassed in the world?

Planters ought to be satisfied to let well enough alone, as most have been.

A laudible desire on the part of dealers to supply a more abundant and cheaper stock for the large demand for planting, sent them to Florida for the sweet and sour stock of that region. For one, I cannot see the force of the reasoning that because the sour root is largely used in Europe and Florida that it is better for this coast than stock proven good here. Though there is some difference of opinion in the peninsula State as to the suitability of localities for sour and sweet stock, yet there is general agreement that their sweet stock does best on upland soils and the sour stock on low lands. This consideration ought to have limited the planting of the swamp-loving sour root on dry uplands, yet its cheapness, the pleasant quality of the budded fruit grown upon it, and the fear of extensive gum disease or footrot on our own sweet seedlings, have induced large planting of the sour stock of Florida in this State.

Since its introduction five or six years ago, sufficient time has elapsed to form a fair judgment of its adaptation to our soils and conditions. Of course, we shall not all agree in this, be the evidence ever so strong, for that is not human nature. Believe me, that in my advocacy of the superiority of home stock, I am actuated by no prejudice, nor even restrained by regard for the interests of my friends who hold and practice contrary views. I simply want to help to hunt the truth.

I ask you, then, who are interested in the same hunt for truth, to note the comparative growth and appearance and market value of orchards on sour and sweet stock, to which I could cite you by name of owner and location.

Here is one: Three year buds on sour root of an age not definite, two years in orchard form; near by another, the same age of bud and orchard, and probably a younger root on California sweet stock. I do not ask you to note *carefully* the difference, because it is striking. It is not too much to say that the bulk of foliage limbs and body is three times as great in the sweet tree as in the sour. In another orchard, five years old, on sour stock, adjacent to a four-year-old on sweet stock, the latter has plainly four times the amount of growth and a market value of $1500 per acre, as contrasted with an $800 acre value of the former. Another fine orchard on sweet stock, three years planted, has sold for $1600 per acre. There is another on sour stock of same age, near by, which could not command nearly that price. Again another, four years, set on sour stock, and two years older than an adjacent sweet stock orchard, is greatly inferior in appearance and selling, and probably intrinsic value. I refer you to another of 20 acres in the hands of the same owner, the upper 10 acres budded on sour stock and the lower 10 on sweet stock. It does not take a practical eye to note the line of demarcation between the two sorts, nor is it a surprise to learn that the lower piece has valuation of $15 000, and the other, of equal age and treated in all respects as favorably, is not counted as worth $10,000. The owner is keenly aware that this difference, and his loss, are due to his choice of sour stock for one 10-acre tract. Instances are numerous like those I have named and the difference is too uniform to be explained by difference in treatment and care. There is one orchard, the one referred to in the advocacy of sour stock, in which the bud has been trained to a height of 10 or 12 or more feet and kept in place by cords tied to long poles. This has yet no full-formed fruit-bearing head, and though planted four or five years, has, I think, yielded little profit. This orchard, peculiarly treated, forms an exception to the general low appearance of sour stock orchards, but would not, I think, be chosen as the equal of many a sweet stock orchard brought to the same age with less labor than has evidently been bestowed on these tall buds. Again, you may contrast a grower on Florida sweet stock with one on sour on our mesas, and always favorably to the sweet stock, which in reality, as well as in theory, is best adapted to our high lands.

It is true that the sour stock bud and young tree here, but more especially in Florida, grows rapidly at first, but according to excellent Florida authority on orange culture (Moore), it will finally make a smaller tree than the sweet. This writer in his treatise says: "The sour stock budded should have least distance of all in orchard setting." The truth of this observation as to sizes of trees may be seen, as I have seen it by visiting California orchards, though yet young.

Again, look at the dark colored bark and irregular contour of the stem to learn that the sour stock is ill-fitted to make a new home in the dry air and sunny clime of California, afar from its habitat in damp surroundings.

Another reason, aside from its cheapness, for the introduction of the sour stock into this State, was its freedom from gum disease or footrot, of which, rare examples were found among our sweet seedlings.

We do not claim yet to have found the causes of this condition. Certain it is, that it can be produced by too deep planting, inducing decay of bark beneath the ground, and by the stimulus of excessive fertilization of newly planted and young trees, and over irrigation, producing a rapid flow and exudation of sap, and the injury in question. Also, when trees are pruned too high, the bark may be scalded by the water or water-saturated soil too close to the trunk of the tree. When better judgment is used in these respects, there will be less injury of this kind to complain of. It is certainly too little to warrant a change on that account.

It has also been claimed that trees and fruit on the sour stock are hardier. After one of the severe freezes of Florida some years ago, I made a special inquiry by letter of a friend interested in orange culture in Marion county, near Ocala, Florida, and his answer was that there was no difference in damage by frost. I have examined the fruit of various localities in this county since the cold night of Christmas, 1891, and I find the fruit of buds on the sour, nay, even the fruit of the sour seedling itself, equally susceptible to damage by frost with the sweet.

I have one more charge, and that a serious one, to allege against the use of sour stock as a basis of California orchards. It is, that the oranges and probably the lemons grown thereon have not good keeping qualities. As many know, one gentleman of this county raised seedbed stock from seed of the sour orange, budded the best known varieties on them, and fruited them for a number of years. At the citrus fair opened in Van Dorin's hall in San Bernardino, February 13, 1889, plates of specimens of several varieties were exhibited and their qualities discussed. I, for one, found less toughness in the fibre than in the ordinary sweet stock. This fair was protracted on account of wet weather into the third week, and while we were preparing at its close to remove the fruit, my attention was called to the condition of those plates of oranges grown on sour stock. On one plate remained three specimens, and where they touched each other the three oranges were blue with the mold of decay to the core; other plates containing more specimens had rotten oranges in the interior of each and every lot. They were gathered from the trees, as I learned from the exhibitor when tasting them near the opening of the fair, a few days prior to the exhibit, as was the case probably with all others. I conceived the idea at once that the very tenderness of the fibre contributed to their early decay. A careful examination by myself and others (whom I might name) of the large number of lots grown on sweet stock, of course, displayed on the long tables up stairs and down, failed to discover a single specimen of decayed fruit among them all, except such as had been punctured by nails, etc. A similar instance occurred in a San Diego fair, of which I was not personally cognizant. In this case the fruit had taken a prize in the first days of the fair, but it was necessary to throw it away before the protracted exhibit closed.

To be sure, particular seasons and circumstances are against the soundness of any fruit when shipped a long distance, but I believe the orange of Florida is well known not to be a good keeper, probably because grown so largely on sour stock.

If my limited experience is an index of the truth in this matter, is not this the strongest of reasons for planting the Pacific Coast stock, strong-growing, acclimated, healthy, cheap enough, and producing fruit that holds up well in transit to a market over long lines of rail, and doubtless ere many years, from our ocean ports by refrigerator steamers through the Nicaragua canal to ports of another ocean.

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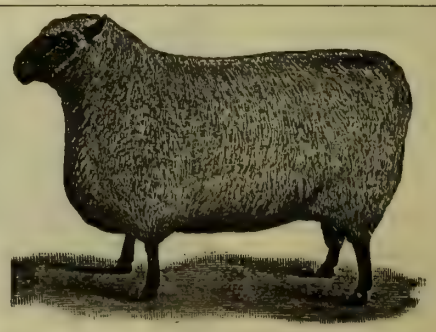
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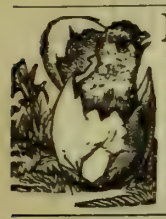
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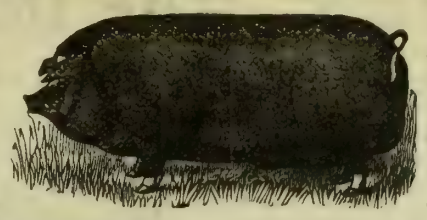


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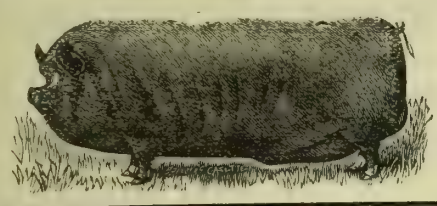
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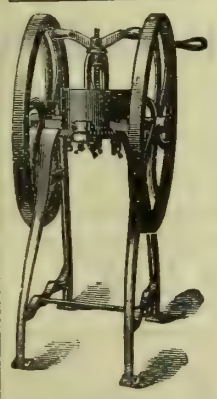
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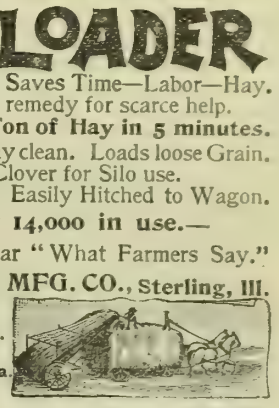
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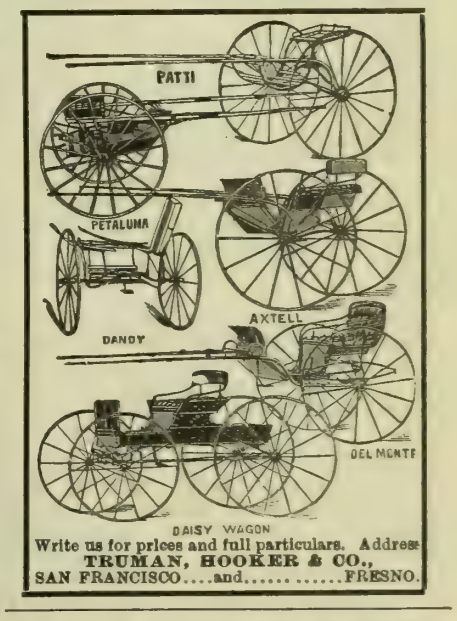
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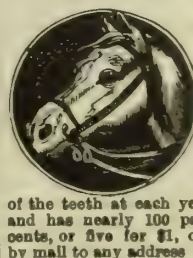
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PATRONS OF HUSBANDRY.

The Secretary's Notes.

AT Dutch Flat on last Saturday we had the pleasure of meeting Past Master Giantvalley and wife (of Eureka Grange), with other good Patrons who had come to welcome the Eastern editors. They spoke encouragingly of the future work of their Grange.

AT her Monte Vista home, near Dutch Flat, Sister C. E. Kinney briefly entertained Secretary Thomas and daughter, of Pennsylvania State Grange. They were both delighted with their visit to the mines and Monte Vista.

BROTHER AND SISTER STEVENS, of Temescal Grange, are tarrying for a short season at Monte Vista.

AT Grass Valley, Past Master Peterson, one of the faithful Patrons who have "held the fort" in that foothill and mining region, recently appreciatingly mentioned the late visit of the State deputies. He believes that Grange has now a prosperous outlook, which we hope will be realized.

HON. GEO. OHLEYER recently returned from his Washington visit on California Mining Commission duties, attended the the picnic at Chico last Friday. He is in good health and faith in the farmers' cause.

CHICO, it would seem, should have a strong and prosperous Grange. What neighboring Patrons will lead in the effort to reestablish our Order in that prosperous town?

New Hope Grange has just been organized in San Joaquin county, 12 miles from Lodi, with 30 members, by County Deputy Robert G. Williams. Just sound the name of this new Grange throughout the jurisdiction, and let it be the incentive for the formation of at least a dozen more before our next State gathering at San Jose. Arthur Thornton was elected Master, and Mrs. P. A. Kise, secretary, of New Hope Grange.

Bennett Valley Grange no doubt gave one of its pleasant picnics on Friday last, with Master Davis, Past Master Coulter and Bro. McConnell within the circle of able participants. Past Master Steele missed being present with much regret.

As the Worthy Master remarks, the Grange campaign is pretty well completed for this spring. Much good seed has been planted, and some immediate good results are manifest.

PETALUMA GRANGE was reorganized May 25th by Worthy Master Davis and A. T. Martin, with about thirty members. The installation of officers will take place June 4th. The following officers have been elected: C. D. Grover, M.; David Walls, O.; Theo. Skillman, L.; Mrs. D. M. Winans, S.; M. D. Hopkins, A. S.; Mrs. D. G. Heald, C.; A. S. Hall, T.; Mrs. D. Walls, Sec.; Miss Grace Hynes, L. A. S.; Miss Laura Walls, P.; Miss Sarah Heald, F.; Mrs. Frank Ennis, C.; and D. G. Heald, G. K. We are glad to see Petaluma Grange wheel into line again, with the belief it will prove a strong and helpful Grange. When previously reorganized, some five years ago, it had no outside helpers like Bros. Martin and others, or it would never have given up the fort. Success to our new Petaluma friends.

The Secretary of the State Grange recently received one copy of the new (National Grange) Digest, and a quantity has been ordered for sale. Within a week or two, copies can be furnished, post paid, from this office, at 35 cents each.

WHILE the RURAL PRESS has voluntarily ceased to be the *official* organ of the Grange, it will endeavor to continue to be a desirable and helpful weekly medium of communication for Grange news and such thoughts and information as will be of benefit to its readers and the cause generally.

OREGON STATE GRANGE convened at Albany last Tuesday. Its sessions usually continue three days. Capt. H. E. Hayes completed his second term of two years as Master, and Wm. L. Hilleary his first term as Secretary. Both have proved able and faithful officers, doing almost gratuitously a large amount of efficient labor. Oregon has been fortunate, as a rule, in elections and no doubt has again made a good selection of officers. For four years past we have been welcomed, in kindness to California, at the annual council gatherings of Oregon's chosen Patrons. The lessons and fraternal privileges bestowed upon us and other California visitors will never be forgotten. Bro. J. G. Heald of Santa Rosa Grange was probably the only California Patron at Oregon's present session. Our Worthy Master Davis writes regretfully of not being able to attend.

A. T. D.

Work of the National Lecturer.

WASHINGTON, D. C., May 16, 1892.

TO THE EDITOR:—In the issue of May 7th of the RURAL PRESS—which is a welcome weekly visitor to my office—I find your notice of the "National Grange Lecturer," saying that he "resigned some time since to take a place as an Inspector, with special reference to its work for the farmers of the United States, in the National Weather Bureau," to which you also add some very kind words of appreciation, all of which I value very highly. But as I have *not* resigned as Lecturer of the National Grange, and cannot think of any office that I would accept if it required me to resign, give up, or as you say, "lessen" my "labors for the Grange," I write to request a correction of your notice, that the wrong impression may not prevail among the many good sisters and brothers I count among my friends in your great State.

Doubtless you obtained this wrong idea from the fact, that having about completed the work upon which I had been engaged for over two years in the Eleventh Census, Secretary Rusk gave me an invitation to "come up higher" to my present place in the Department of Agriculture, and I therefore resigned my place in the Census and have, since the middle of February last, been doing what I can to extend the benefits of the Weather Bureau among farmers; and this is right in line with the action of the National Grange at its last session, as will be noted by a reference to page 136 of the "Proceedings," slip containing which I enclose herewith. The work remaining to be done in the agricultural part of the census was merely that of the routine of making the tabulations from the schedules. The figures of all the special investigations of live stock, viticulture, tropic and semitropic fruits and nuts, floriculture, truck farms, and other branches of horticulture never before taken in a U. S. census, and which I had in charge, were completed and published. So I accepted the "call" and am doing what I can for agriculture in this new field, but ever and *always* as Lecturer of the National Grange "performing all the duties of the office so far as I am able."

Since the last session of the National Grange, I have attended the annual meetings of five State Granges, assisted in the dedication of two Grange halls and the organization of five new Granges. Attended Pomona, subordinate and public Grange meetings in eleven different States, also a number of Farmers' Institutes, Clubs, etc., and have engagements already made for picnics, mass meetings, fair grounds, etc., as far ahead as next October. Have promised Bro. Hawkins a series of meetings in Alabama the last of July; on the invitation of Bro. J. B. Long, Master of the State Grange (and one of our good Grange members of Congress) I will go to Texas in August; have also promised to go to Missouri and Illinois in September, etc. Then as a part of my duties under direction of the Executive Committee of the National Grange, I have issued two official circulars each month on Grange work and progress, copies of which have been sent to upward of 300 agricultural and other papers and to officers of State Granges, Deputies and "Workers.'

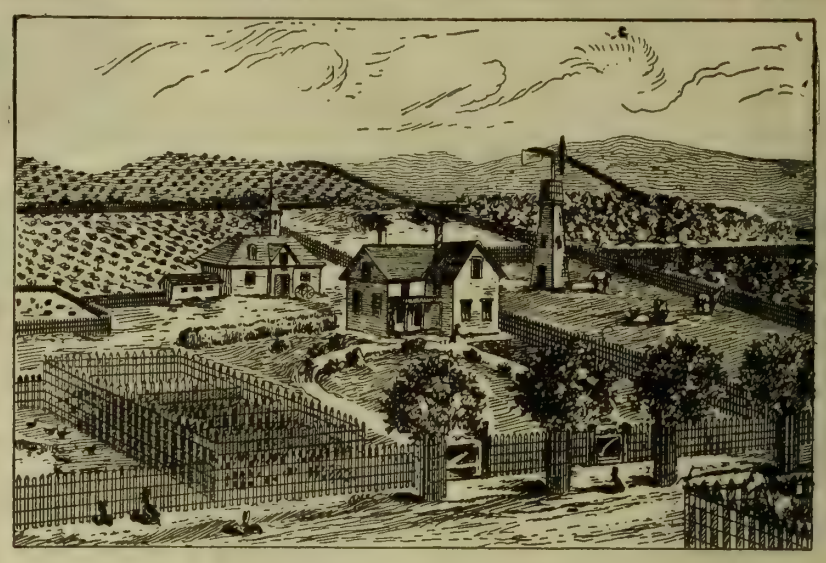
As this has been a busy session of' Congress for our Order I have been glad, in answer to the invitation of our good National Grange Committee on Legislation—Bros. Brigham, Trimble and Rhone—to cooperate with them, by going before Committees of Congress, etc., to push the measures our Order is working for at this time, especially the Pure food bill, Option bill, Rural Free-delivery of Mails, Silk culture, Free coinage of silver, etc. The official duties of my office as Inspector do not require me to give up Grange work any more than to give up running my farm; to the contrary, they take me as occasion may require to all parts of the country, and I am sure all good Patrons must rejoice at the grand progress and improvement that has been made in the Department of Agriculture of late years, in the practical benefits it is bestowing upon our greatest industry. It has been a part of my life's work in the Grange to help raise it from a simple Bureau, to a Department of the Government, with its head a practical farmer and *Patron*, ably filling his place as the representative of agriculture at the council table of the President. No, I have *not* resigned as Lecturer of the National Grange, nor as a worker doing my best to advance the objects of the Order I so thoroughly believe in and to carry them to their ultimate and highest end.

With best wishes for the good Patrons and their work in California, I remain

Yours Fraternally,
MORTIMER WHITEHEAD.

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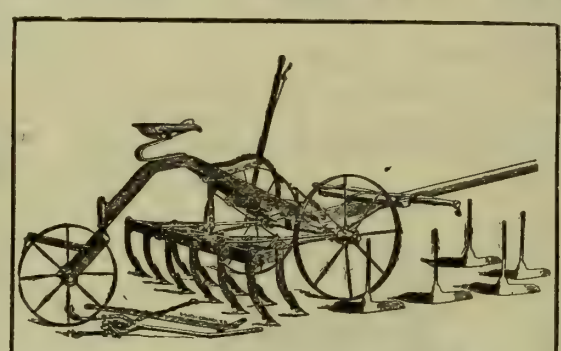
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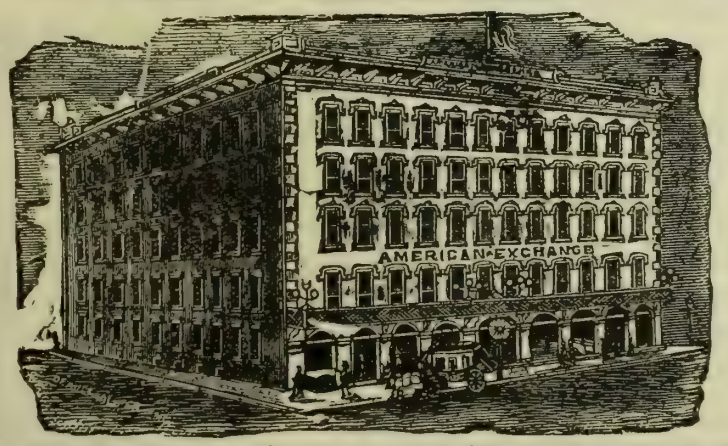
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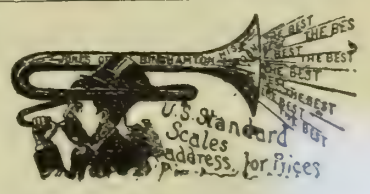
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GOOD HEALTH.

Milk Supply in Cities.

Wm. T. Sedgwick contributes to the *Technology Quarterly* an article from which we take the following:

Milk, to a great extent, man still uses much as his primitive ancestors used it; namely, in the raw or uncooked condition. And yet the milk of a modern city is altogether different from the milk consumed by primitive man. It is seldom fresh; it is often adulterated, and it is usually dirty. The stable, and travel more or less prolonged, have had their effect, so that the milk when delivered is often far along on its way toward decomposition.

Milk is an animal secretion prepared in much the same way as are the tears, the bile, the gastric juice, the urine, the sweat, and the saliva. It is secreted in the mammary gland, or udder, by certain epithelial cells which manufacture it from the blood. During the process of secretion these cells break open and contribute of their own substance to the mixture of water, salts, sugar, and fat, which constitute milk. At every milking a portion of the udder substance, the actual animal stuff, is given off; and thus it comes to pass that milk is strictly an animal food, like an infusion of muscle or of liver. It is unnecessary to say more to make it plain that it is highly unstable, highly decomposable, highly putrescible.

It is well known that milk, especially as it is found in large cities, is usually swarming with living bacteria. Most of these are probably harmless vegetables; nevertheless they constitute a host of organisms entirely foreign to the milk itself. The so-called "pure" milk ordinarily obtained in cities, even when it has not been tampered with, frequently contains in a teaspoonful millions of these microscopic vegetables, luxuriantly thriving in a soil most favorable for their development. Moreover, although themselves invisible, they do not fail to produce obvious effects. The souring and chemical decomposition of the milk, which soon appear, are due exclusively to their vital activity, and the milk which was originally sweet, and which in their absence remains forever sweet, becomes, owing to their activity, sour and chemically decomposed. In this condition it has important uses, but it is no longer "fresh" or "sweet" or "normal" milk. Under the worst conditions milk may actually be delivered to the consumer nearly or quite sour. That milk must be regarded as normal which is drawn from the teat of a healthy cow. In such normal, or udder milk, we have found no trace whatever of bacteria.

There are two principal sources of the bacteria in milk; namely, contamination during the act of milking, and the natural multiplication of the bacteria thus introduced during the interval between milking and the consumption of the milk. The result of these investigations was to show that even under the most favorable conditions, cow's milk as ordinarily drawn, becomes, almost necessarily, infested with hosts of putrefactive bacteria at the very outset. Under worse conditions, with unclean stables and dirty milkmen, to say nothing of half-cleaned pails and cans, it is easy to understand why milk swarms w th bacteria; and if we allow time also, the wonder is, not that it contains so many germs, but rather that it is still potable at all.

When we reflect upon the indescribably filthy condition of many cow stables; upon the fact that the cow's udders and flanks are not infrequently covered with flaking excrement; upon the quality of the men employed to do the milking, etc., etc., it becomes a simple matter to understand how this rich animal fluid—sterile at the start, but drawn by unclean hands into half-cleaned pails, and meantime sprinkled from above by the dust of the stable, by hairs, dandruff, dirt, and particles of excrement from the skin and udder of the cow vigorously shaken by the milker or brushed by his hat—becomes infested with organisms. That these multiply swiftly and enormously in the warm and rich fluid, well aerated by the act of milking, is also a natural consequence of favorable conditions.

Tannin in Tea.

"Some examples which have been forwarded to us," says the *British Medical Journal*, "of the results of analyses for tannin and theine in tea indicate considerable variation in the amount of tannin, according to the quality of the tea and the state of growth at which it is picked. In some blends of China teas the percentage of tannin extracted by infusion for thirty minutes was 7.44; theine, 3.11; and a similar result was given in the examination of the finest Moning; while, on the other hand, with fine Assam tea a percentage of 17.73 of tannin by weight was extracted after infusion for fifteen minutes, and two blends of Assam and Ceylon tea gave, respectively, 8.91 and 10.26 of tannin. On the whole it is probable that the Indian teas are much more heavily loaded with tannin than the China or Japan teas. Moreover, the common method of prolonged infusion in boiling water is well calculated to extract all the tannin, while it dissipates the flavor of the tea. To be drunk reasonably, tea should not be infused for more than a minute, and with water of which the temperature does not exceed 170° F. It should be taken without sugar or milk, which would drown the flavor of the delicate and aromatic infusion thus obtained. This at least is how tea is drunk both in China and Japan, whence we have borrowed the use of it. With our European method of prolonged infusion in boiling water we destroy all the best flavor of the tea, and we extract such heavy proportions of tannin as to cultivate indigestion as the result of tea drinking. Indigestion is unknown among tea drinkers in the East, and it is in all probability only the result of our defective use of the leaf."

Developing Plants by Electricity.

The employment of electricity in horticulture forms an interesting subject for experiment and investigation, and results have already been obtained that justify the hope that the idea may soon be turned to practical account on a scale of considerable magnitude. Spring vegetables have already been forced by its aid for market, and there is no doubt that roses and other flowers can be made to bloom more plentifully and more profitably with its assistance. The Department of Agriculture at Washington has been experimenting in this direction for some time past. It has been found that lettuce is particularly susceptible to the influence of the electric light, by means of which, it is said, it can be grown for market in two-thirds the usual length of time. Other vegetables respond likewise in varying degrees. But everything depends upon the proper regulation of the light, and how to do this can only be learned by careful study of the results produced under all sorts of conditions. The effect of electricity being to hasten maturity, too much of it causes lettuce to run to seed before the edible leaves are formed.

Electricity is not employed for such purposes as a substitute for sunlight. It is merely used in a supplementary fashion. The greenhouse that has the sun in the daytime is illuminated at night with arc lights, toward which the plants incline their leaves and flowers. It has been supposed hitherto that vegetables required intervals of darkness for their health and development, just as animals need sleep, but it has been shown that, supplied with electric rays, they will go on growing thriftily between sunset and daybreak.

The electric gardener usually employs opal globes to diminish the intensity of the light. When the lamp is left bare and permitted to shed its unshielded rays upon the plants the latter grow pale, run up quickly in sickly stalks and soon die. It remains to be discovered exactly how much light is beneficial, and during precisely what period of development of the vegetables it ought to be applied.

The influence of the light upon the color and productiveness of flowers has been shown to be extraordinary. Tulips exposed to it have deeper and richer tints, flowering more freely and developing longer stems and bigger leaves. Fuchsias bloom earlier under like conditions. Petunias also bloom earlier and more profusely, growing taller and more slender. It is the same way with many other flowers. In fact, there is every reason for believing that the electric light will be very profitably used in future as an adjunct to forcing establishments for both flowers and garden vegetables. Already one market gardener in New Jersey is employing it with a succes which he reports as marvelous.—Western Electrician.

AS AN evidence of the fact that the present investigations and experiments of electricians are in the right direction, the firefly furnishes direct proof that light may be produced without the accompaniment of heat.

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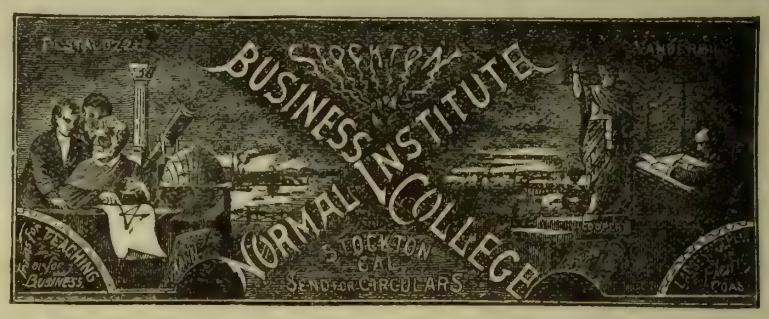
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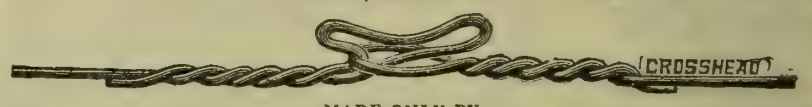
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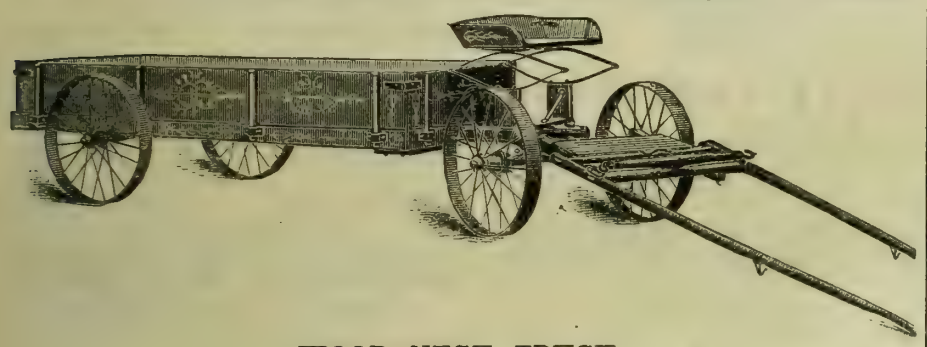
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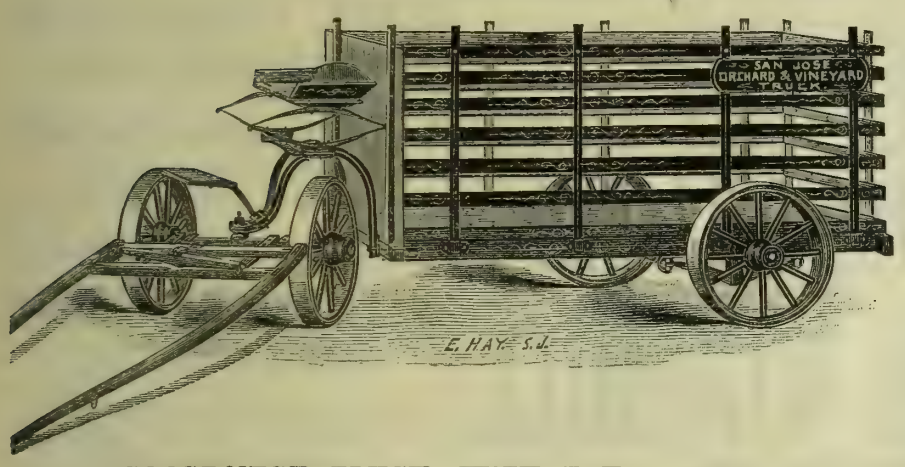
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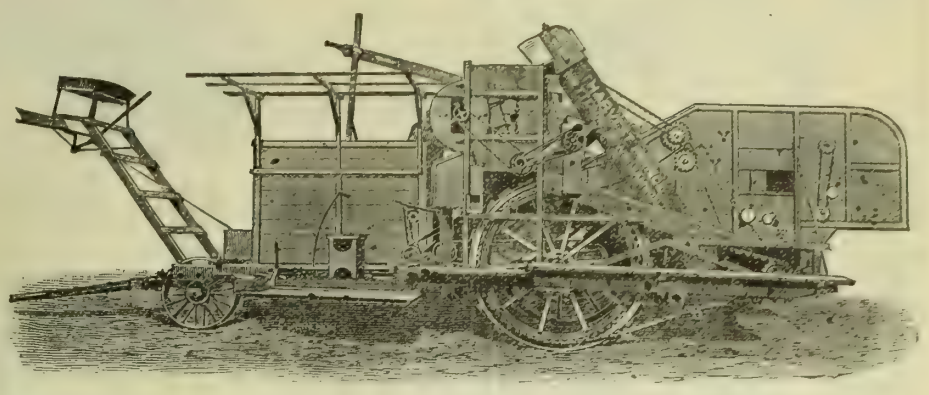
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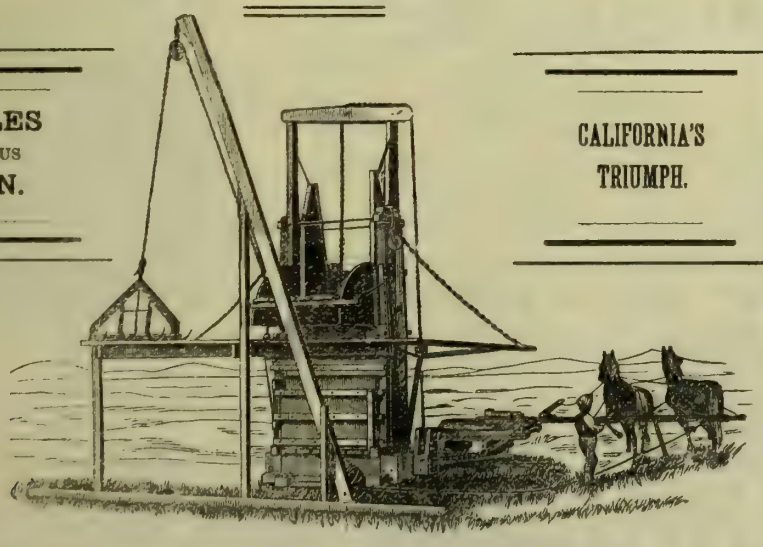
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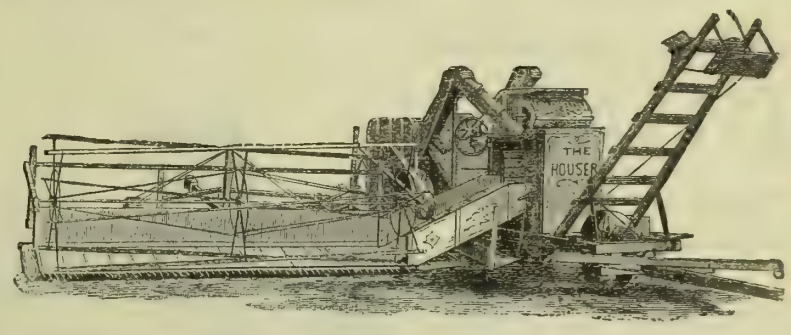
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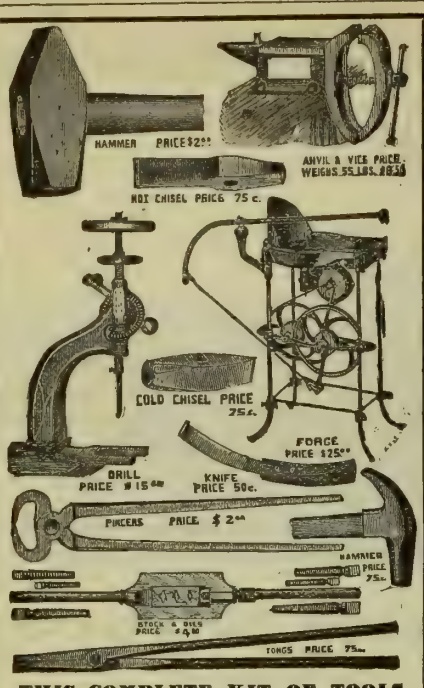
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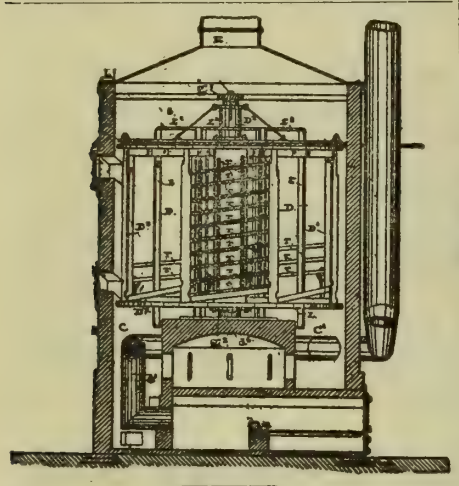
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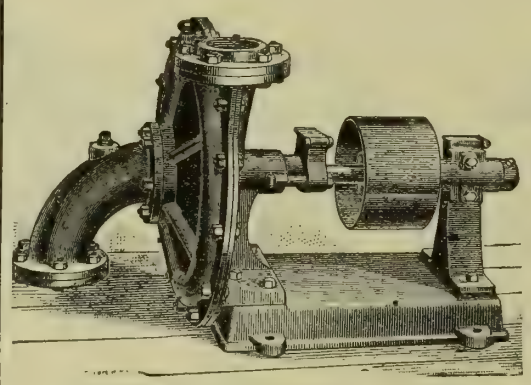
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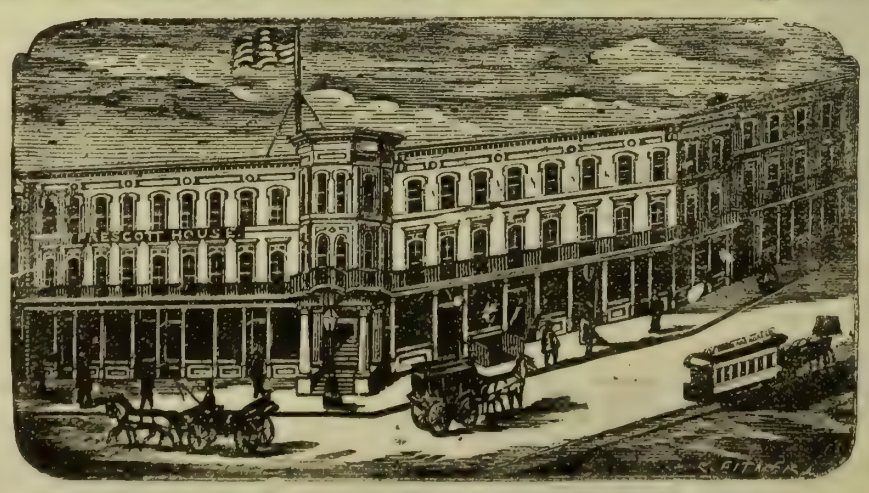
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, June 1, 1892.

The week's business was interrupted by a two day's holiday, from which, at this writing, it has not fully recovered. Clear skies and warm weather are now the characterizing features of the weather, which come at an opportune time for maturing crops. The crops of all kinds, cereal, fruit and hay, are more spotted this year than before known, which makes it difficult to form even a fair estimate of the probable aggregate outturn. The quality, as a rule, will average much better than was expected two months ago. Money continues in liberal supply. There is a steady growth of confidence not only on this coast but at the East and also abroad. With confidence fully restored, the markets should show more activity.

Foreign Grain Review.

LONDON, May 30.—*Mark Lane Express* says: English wheats are 6d lower. Sales are moderate. Stocks of wheat and flour in Great Britain aggregate 2,700,000 quarters. The American supply is estimated at 3,826,000 quarters. Last year they were respectively 1,431,000 and 2,287,000 This difference causes weakness. Foreign wheats have also dropped 6d. California is readily taken at 36s. Corn is firm. Prices at Liverpool have risen 1d. Barley and oats are 3d lower. At to-day's market English and foreign wheats were 6d lower; corn was 6d dearer.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	May.	June	July.	Aug.	Sept.
Thursday	6s 08½d	6s 08¾d	6s 09¾d	6s 10¾d	6s 11½d
Friday	6s 08½d	6s 09 d	6s 09½d	6s 10½d	6s 11 d
Saturday	6s 08 d	6s 08½d	6s 09d	6s 10½d	6s 11 d
Monday	6s 08½d	6s 08½d	6s 08½d	6s 10¼d	6s 11½d
Tuesday	6s 08½d	6s 09 d	6s 10 d	6s 11 d	6s 11½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	36s 0d	35s 9 d	35s 9d	Quieter.	Favorable
Friday	36s 0d	35s 9d	35s 9d	Quiet	Very warm.
Saturday	36s 0d	35s 9d	35s 9d	Easier.	Brilliant.
Monday	35s 9d	35s 9d	35s 9d	Quiet.	Fine.
Tuesday	35s 9 d	35s 9d	35s 9d	Flat.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, June 1.—Wheat—Quiet but steady; California spot lots, 7s 3d; off coast, 35s 3d@35s 6d; just shipped, 35s 6d; nearly due, 35s 6d; cargoes off coast, downward tendency; on passage, rather easier; Mark Lane wheat, turn easier.

New York.

The following shows the closing prices of wheat for the past week:

Day.	May	June	July	Aug.
Thursday	151¼	151¼	152½	151¼
Friday	151¼	151⅝	152⅝	151¼
Saturday	....	....	....	....
Monday	....	....	....	....
Tuesday	152½	151	152½	151⅛

The following are to-days' telegram:

NEW YORK, June 1.—Wheat—90½c for June, 91⅛ for July, 91½c for August, 90⅝c for September, and 93⅜c for December.

CHICAGO, June 1.—Wheat—83⅜ for July and 82½ for September.

San Francisco.

WHEAT.

	Buyer Season. H.	L.	Buyer Aug. H.	L.	Seller 1892. H.	L.
Thursday	142½	142½	142	142	139⅜	139½
Friday	....	....	....	....	139½	139½
Saturday	....	....	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	....	....	....	....	138⅝	138½

The following are to-day's recorded sales on Call:

Morning Informal Session.—Wheat—Seller 1892, 200 tons, $1.37½ ₩ ctl. Regular Session—Seller 1892, 500 tons, $1.38; 1000, $1.38¼. Buyer August, 100 tons, $1.41; 900, $1.40⅝. August, 100 tons, $1.40. Buyer September, 100 tons, $1.41. September, 100 tons, $1.39⅜ ₩ ctl. Afternoon Session—Seller 1892, 400 tons, $1.38; 9.0, $1.38¼. Buyer Sepiember, 100 tons, $1.40½ ₩ ctl.

BARLEY.

	Buyer Season. H.	L.	Seller 1892. H.	L.	December. H.	L.
Thursday	*97	95½	*95½	95	....	....
Friday	*96¼	96	*96⅝	95½	....	....
Saturday	....	....	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	....	....	*97½	96½	....	....

*New Crop.

The following are to-days' recorded sales on Call.

Regular Session.—Seller 1892, new, 700 tons, 95c; 300, 95½c; 100, 95¼c ₩ ctl. Afternoon Session—Seller 1892, new, 100 tons, 95½c. December, 100 tons, 99½c; 100, 99¼c ₩ ctl.

Markets by Telegraph.

Russia Grain Crop.

ST. PETERSBURG, May 31.—The Imperial Economic Society reports that the protracted drought has caused serious damage to grass, and there is damage to crops in every province. Farmers are complaining of a lack of pasturage. The society recommends the storage of grain and fodder.

Eastern Wool Markets.

NEW YORK, May 27.—*Bradstreet's* says: The light stocks of domestic wools in all markets necessitate buying on the part of manufacturers. New wools from the Western States come forward slowly. Those from Wyoming and Utah are said to be heavy and short staple. The season is backward owing to the unfavorable weather, which prevented shearing. The prices paid in these States are as high as those of a year ago. The receipts of Texas and California wools are increasing. New wools from Ohio and Michigan have not as yet come forward. The stocks in the East are about exhausted, and whatever lots remain are held at an advance. Pulled wools still meet with a fair demand, but the sales are not as large as they were two weeks ago, because there is not the wool to choose from. Prices remain about the same. Australian wools are meeting with good demand, but the supply is not large, and for choice lots dealers are asking an advance. The next London sales open on June 14th. Dealers expect that the advance made at the last sales will be maintained. Conditions are not favorable for heavy purchases for this country. Carpet wools are less active and prices are not as firm as a week ago.

NEW YORK, May 30.—The market seems fairly started. Attendance is good at all seaboard places, and there is a noticeable departure of operators for the interior. There is no speculative tendency, as it is well believed that manufacturers will not respond to any sudden demand, or even attempt to force prices in the face of their pending contracts and ventures in goods. It may be said that full late prices are paid without reluctance for an offering that has no marked attraction, and this may develop into at least fractionally better figures when qualities stimulate competition. Sales at New York, 529,000 pounds domestic. Philadelphia reports firm at old price, and lack of stock for trading. Boston sold 1,926,200 lbs. domestic.

Eastern Canned Fruit Markets.

NEW YORK, May 29.—Canned fruits have a favorable outlook, helped by the pretty generally conceded likelihood of reduced crops this summer, while the spring washouts at many points have injured chances of production. Opening coast prices for extras are met to a moderate extent. Standards show no shrinkage from the last reported list.

Eastern Dried Fruit Markets.

NEW YORK, May 30.—No peaches remain. Prunes are scarce and higher from second hands; fifties, 10½c; sixties, 9¾c; seventies, 9c; eighties, 8½c; nineties, 7¼c. Gray lots hard to sell. Raisins retain good sale. Closing prices were fine. Bags advanced. Eight hundred boxes even, good quality layers sold at $1 30; 2000, including seal brand, $1; common to fair layers were offered at $1@1.20; 1000 three-crown bags sold at 3¾@4c, good order; 2½c for damp; prime to extra now quoted at 4½@5c. Apricots are scarce. Buyers have to replenish from second hands and from lots that Philadelphia will spare. Any decent marks 9@10½c.

CHICAGO, May 31.—California Dried Fruits—Outside of the market for raisins, supplies are found to be very light, and quite a firm feeling prevails for good qualities of prunes, peaches and apricots, but of raisins there is a good supply, and under moderate demand rule steady but no better.

California Fruit East.

NEW YORK, May 30.—Express cherries sold at $3@4.50 per box, good to best; $2.25 in poor order. The first small springle apricots brought $2@2.50.

CHICAGO, May 31.—Cherries—Rule easy and the demand is tame; arrivals were small; boxes, 8@10 lbs, white, choice, $1.50@2; off stock, $1.25; black, choice, $1.75@2.25; off stock, $.50@1.50. Apricots—Are ruling quiet; half crates, $2.50@2.75

NEW YORK, May 31.—Four years ago 1,000,000 pounds of California fruit was the annual amount sold in New York. Last year 7,000,000 pounds found purchasers here, and this year, a fruit auctioneer who has just returned from a four months' stay on the Pacific Coast says, the amount of fruit sent to New York to be sold will be 20,000,000 pounds. From this time on the fruits from the Pacific Coast will be shipped to the East in less time than was dreamed of a few years ago. It is safe to say that in three years the production in prunes and raisins in California will be enough to supply America and preclude importations altogether. Last year 14 days was the average time in transit from California, and reducing the time to seven days makes the probability of landing fruit here in perfect condition unquestioned. In this event $500,000 can be saved to growers yearly over what has been realized in the past. England has been made an outlet, possible for green fruit, already, by placing refrigerating boxes on board the fast steamers, an experiment that has been recently tried with considerable success.

Eastern Hop Markets.

NEW YORK, May 30.—Feeling for choice Pacifics is unchanged. No important trading. All brewers fill moderate wants from under grades. Rather more activity in options at better bids. A closing sale of prime California, July, was at 26¾c.

Miscellaneous.

NEW YORK, May 30.—Lima beans are firm at $1.75 per bushel spot. Appreciation of this valuable coast product is commendably increasing. Mustard seed, unchanged.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending May 30, '92, were as follows:

Flour, qr. sks	31,813	Bran, sks	4,664
Wheat, ctls	92,667	Buckwheat "	
Barley, "	8,078	Middlings "	1,703
Rye, "	626	Chicory, bbls	100
Oats, "	532	Hops, "	14
Corn, "	2,194	Wool, "	2,684
*Butter, "	1,318	Hay, ton	1,518
do bxs	1,126	Straw, "	90
do bbls	2	Wine, gals	216,790
do kegs	15	Brandy, "	10,600
do tubs	191	Raisins, bxs	104
do ½ bxs	276	Honey, cs	....
†Cheese, ctls	856	Peanuts, sks	....
do bxs	122	Walnuts "	....
Eggs, doz	40,200	Almonds "	....
do "Eastern	48,060	Mustard "	....
Beans, sks	6,324	Flax "	....
Potatoes, sks	14,623	Popcorn "	....
Onions, "	4,410	Broom corn, bbls	....

*Overl'd, 239 ctls. †Overland, ... ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to May 23, '91.	July 1, '91 to May 21, '92.
Flour, ½ sks	361,999	444,457
Wheat, ctls	1,371,926	1,280,415
Barley, "	269,912	55,602
Oats, "	347,532	419,183
Wool, bales	6,409	7,383
Hops, "	455	431
Rye, sks	210	3,498
Potatoes sks	100,687	137,742

Grain in Call Board Warehouses.

G. A. Abel, Grain Inspector of the San Francisco Produce Exchange Call Board Association, reports the stock of grain in city warehouses on May 31st as follows:

	Feb. 29.	Mar. 31.	Apr. 30.	May 31.
Wheat, tons	1,068	2,182	2 475	2,925
Barley	13 837	12,718	10,978	8,776
Oats	3,709	2,556	2,097	1 688
Corn	2,564	1,893	2.091	1,860

The quantity of wheat in the warehouses at Port Costa on the 31st was 15,472 tons. and at Stockton 24 210 tons, making a total of 42,607 tons in all Call Board warehouses, a decrease of 9,976 tons during the month of May. A year ago the Call Board warehouses held 38,070 tons, of which 23,067 tons were at Port Costa and 13,195 tons at Stockton.

Washington Hop Notes.

Puyallup *Citizen*.—Roderick McDonald who came from Bucoda, Monday, reports a general increase of acreage in that locality. Marion Ogle will increase his ten-acre yard. Miss Sumner will increase her six-acre yard to ten acres, and Mrs M. A. Shead will add several acres to her eight acres. President of the State Board of Horticulture, Henry Bucey, examined many yards and reported finding lice upon the vines at the outskirts of the yards and the straggling vines which grow at a distance from the plantation. In the yards he did not find any but observed many ladybugs throughout the vines. He recommends the destruction of all straggling vines and an immediate and concerted action. He is of the opinion that buildings and fences are places peculiarly favorable to hybernating the lice. He says that if the ladybugs are as thick over the district as they are about Puyallup that they will make great inroads upon the lice. He does not think that spraying is liable to kill these lice-destroying insects, as they are carniverous and are not a parasite of the hop-vine and are moreover provided with wings that will enable them to fly away from the dangers of the spraying machines. From all over Western Washington reports come in of the appearance of lice, but though they seem to be everywhere in numbers which as yet do no material damage, presage, nevertheless, an almost certain invasion later on. The infested condition of the outside rows of hops which gave an impetus to the general rumor of a few weeks ago to the effect that the yards were reeking with the aphis—does not seem to be an indication of the condition in the interior of the yards where but few lice are to be found. The lice have made their appearance on the Skagit and reports from Lewis county say that they are there also. E. C. Merrill received a letter from the foreman of his Oregon ranch yesterday in which it was stated that there were no lice to be found about Independence as yet, though about Buena Vista the yards are pretty generally infested. The vines are going up the poles at a pretty lively rate, and a few may be found in the advanced yards which would measure from five to eight feet.

Cereals.

The last official Hungarian report stated that the crops generally deteriorated in April, owing to unfavorable weather conditions. *Beerbohm* says that the wheat crop is very backward, not only in the United Kingdom, but in France. In Germany favorable weather was desired, but there were no specific complaints. The consumption of wheat in the United Kingdom for the coming season, exclusive of seed, is estimated at 216,000,000 bushels. The consumption during the summer months is 16,800,000 bushels a month or 4,200,000 a week. Regarding the appearance of the growing crop in Russia, the St. Petersburg *Bourse Gazette* says that the daily information is that the prospects of both spring and winter have improved. The weather conditions have been favorable, and spring sowings have made good progress. The London *Millers' Gazette* says that the stock of foreign wheat now on hand in France is equal to about 20 000,000 bushels and it is believed that the imports for the entire season will foot up a total of about 104 000,000 bushels The prospects for the growing crop indicate that the total requirements for the coming year will be about half of what they have been in the past.

New York mail advices, May 25. The planting of corn has been so much delayed that it is now generally thought that the area will be reduced considerably and corn planted at this period of the year is likely to be caught by a September frost. The foreign markets were firm on corn, showing quite a disposition to follow the advance here. An announcement comes from Servia that the export duty on all kinds of cereals will be reduced from one franc per 100 kilos to 30 centimes. The total shipments of wheat from India since April 1, have been 8,340,000 bushels, against 7,280,000 bushels for the corresponding time last year. The advices from the Argentine are that total shipments of wheat for the quarter ended March 31 were 113,873 tons of wheat and 3,734 tons of corn. The Milwaukee *Sentinel* says that there was no improvement in the spring wheat situation up to the close of last week, May 21. Not more than 50 per cent of the area was seeded north of the line of the Northern Pacific, and probably very little more would be seeded. Under date of May 10 the information given out by the Russian Minister of Finance was favorable for the winter grain crop in Poland, the Baltic Provinces, the Northwest, Southwest and Central Provinces. The south and southeast were less favorable, and the vegetation in the north and east is reported very backward. Of the enormous exports of wheat from the United States for the ten months ended April 30 of 133,410 000 bushels, more than one-third, or 50,290,000 bushels, were from New York.

The official report of the Italian Minister of Agriculture says that the cold weather has arrested the growth of vegetation, but the impairment is by no means general. The condition of wheat is good, and planting of corn is in active operation. Dornbusch says that it is slowly being comprehended that no country excepting California has the promise, much less the likelihood, of a good wheat crop. The quantity on passage has absorbed rapidly for Continent account, France and Germany taking more than one-half the cargoes coming forward for orders. The Iowa crop bulletin says that crop conditions have become serious in certain portions of the State. Oats and small grain on high ground are doing nicely, but on low ground the crops are in unfavorable shape. The Michigan report states that the crops are backward, but not seriously damaged excepting on low ground. Two weeks of good weather would make a great change. The Indiana report says that farmers and merchants are becoming anxious about the delay in corn-planting, but wheat, oats and grass are promising nicely.

London cables of May 31st report as follows: Wheat and flour on passage to United Kingdom, 2,763,000 qrs.; Continent, 984,000 Imports of wheat into the United Kingdom during the past week, 357,000 qrs.; flour, 221,000 bbls.

In the local wheat market trading is of a bearish character. It looks now at if the rings are pursuing their old tactics of hammering down, on Call, the markets for futures to enable them to enter the new crop season on a low range of values. In this they have been largely assisted by speculative holders (farmers and others) throwing their old grain on the market. With more sellers than buyers, the latter had the whip handle, which they were not slow in using. Buying cheaper, they broke the demand markets abroad by offering cargoes for shipment at lower figures. There is nothing, so far as we know, to justify present low quotations, but there is much to warrant better prices, and which will certainly be realized before the summer months pass.

Crop advices are of a most favorable character in this State, Oregon and Washington. The wheat outturn in this State will probably be fully 1,500,000 tons, while up north it will be fully 10 per cent more than was harvested in 1891. The barley crop will also be larger, but the oat crop will probably be less.

Persistent hammering of barley futures on Call has caused spot barley to sell at lower figures. Receipts are light. The demand is not so free, owing to millers not taking so much. The falling off in the demand from millers is due to a lessened call for ground feed from the Hawaiian Islands and also from home feeders. Buyers of feed barley appear disposed to let the market take care of itself until new begins to put in an appearance. Brewing barley is scarce and wanted, but malsters do not appear disposed to bid up, but on the contrary, they try hard to get concessions.

Oats are steady at full figures, notwithstanding the near approach of new crop season. Feeders will for some time to come give preference to old oats, and therefore while the latter will hold to firm prices, new crop receipts will sell at a lower range.

Corn is steady. Trading is light. Receipts are only fair. The supply in this State is light. Unfavorable advices regarding crops in the Central States are in favor of holders.

Rye is dull and weak.

From the summary statement of the imports and exports of the United States for the nine months ending March 31, 1892, compared with the corresponding period of 1891, we tabulate the following quantities and values of breadstuffs exported:

Barley, bnsh	2,402,125	405,685
Bread, lbs	10,791,522	11,857,803
Corn, bush	57,575,367	24 233,683
Cornmeal, bbls	212,126	251,804
Oats, bush	7,213,015	896,635
Oatmeal, lbs	18.430 675	6,668,075
Rye, bush	10,375,772	322,912
Rye flour, bbls	3 941	3 322
Wheat, bush	128.347,897	36,688 707
Wheat flour, bbls	11,529,425	8,434,838

The above affords an interestiug study in showing the remarkable resources of this country in meeting any unexpected scarcity in breadstuffs of European countries.

Feedstuff.

There is a lessened call for ground barley, owing to a falling off in the export demand. Bran and middlings are fairly steady, as is feed meal. Feeders are not buying beyond immediate requirement, believing that with the new crop season for cereals, lower prices will obtain.

Hay, contrary to general belief, rules steady. Receipts are fair. Haying is in active operation in all parts of the State, and it is only reasonable to conclude that selling offers will soon be on an enlarged scale; but whether farmers will be willing to accept much lower figures remains to be seen. It now looks as if choice, well-cured hay will command full prices.

Dairy Produce.

Butter is weak at slightly lower prices. Receipts are free, while the warm weather is against its being kept in stock for buyers. This necessitates the hunting up of buyers. Eastern butter is coming in fairly free. The output of the dairies east of the Rocky mountains, it is expected, will be considerably larger than it was in last year

Cheese is still weak under free receipts and only a fair demand. The grade this year shows a uniform quality, which is in favor of producing an enlarged demand.

Strictly choice fresh-laid eggs are wanted, for which as high as 23 to 24 cents can be secured. Warmer weather makes a wider range in values.

Vegetables.

Warmer weather and clearer skies are causing more liberal receipts of garden stuff. Peas are very weak at lower quotations, string beans are barely steady, asparagus is hard to sell owing to free receipts, and canners being out of the market. Summer squash is slowly shading. Tomatoes continue to come from Los Angeles; the boxes are small.

Quotations for old onions are withdrawn. New onions are coming in quite freely; the better keepers command outside quotations.

Old potatoes are hard to sell. Even the best Oregon Burbanks do not fetch more than 85 cents per 100 pounds New potatoes advanced slightly, but yesterday prices gave way, and to-day the market is weak. The Southern part of the State is in the market as sellers for overland shipments, which is against the market in this city. The home trade gives boxed potatoes preference.

Fruit.

The market, outside of strawberries, is slowly sinking for early fruits. Cherries are coming in freely, and sell at lower prices. Heavy shipments overland are being made. Canners bought some to-day. Black sell at 4 cents and white at 6 cents to canners and shippers. The fruit is larger and better. Apricots are lower. The quality is slightly better. A few Royals are coming in. Gooseberries are steady. Currants are weaker. Canners' views are below sellers'. It is said that San Leandro growers have combined not to sell below $5.50 here. Cherry plums are weaker.

Snippers and canners bid as follows: Cherries, black, 4 cts. per lb.; white, 6 cts. per lb.; apricots, $25 to $35 per ton; peaches, $20 to $40 per ton. Driers are bidding $35 to $50 per ton for French prunes.

In dried fruits there is nothing new to report. Stocks are light, as is the demand. The same remarks are applicable to raisins.

Live Stock.

Warm weather is against the market for bullocks; but as the offerings are light, prices are no lower. Mutton sheep meet with a good demand at current quotations. Hogs are slightly weaker for medium to heavy, but block hogs are steady. Calves are firm.

Wool.

With a broken week, trading has been light. Receipts have increased. While buyers report a fairly active inquiry at the East, yet they claim that manufacturers are not willing to advance bids except for a desirable consignment to meet a special and urgent want. It is said that the wool coming from the northern counties shows a decided improvement over that received in last year.

Miscellaneous.

From reliable advices up to June 1, the following summary tonnage movement is compiled:

	On the way 1892.	1891.	In port 1892.	1891.
San Francisco	257,832	341,441	†143,338	55,042
San Diego	16,454	17,111	2,003	.....
San Pedro	5,470	12,205	.....	.....
Oregon	22,596	32,108	16,756	13,312
Puget Sound	16,785	31,815	.....	.....
Totals	318,987	434,681	162,697	68.355

*Engaged for wheat, 1892, 17,170; 1891, 34,809 †For new crop loading, 16,759.

The statistics of produce exports from this port from July 1st to May 25th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,580,007	12,982 290
Flour, bbls	1,014,907	1,113,724
Barley, ctls	1,103,376	305,933

Hens and roosters are steady at firm prices. Spring chickens are higher. Other fowls are steady.

Hops are firm for old. It is said that 25 to 30 cts. can be readily obtained for good to extra. For new crop, buyers bid 16 to 18 cents per lb. It is said that some damage is done to one or more hop yards in Yolo by high water.

Beans are steady. The new crop will not be as large as was that in 1891.

Grain bags are weaker under freer offers by outside holders.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, June 1, 1892.

Limes, Mex	7 00 @ 8 50	Apricots, Prin-	
Do Cal	— @ —	gles, pr box	50 @ 75
Lemons, box	50 @ 3 50	Royal, pr box	1 00 @ 1 50
Do Sicily	5 00 @ —	Cherries, box	
Oranges, Seedlings		Black	40 @ 60
Redlands	2 50 @ 3 00	Red	30 @ 50
Riverside	1 50 @ 2 50	White	40 @ 60
Los Angeles	1 50 @ 2 00	Beets, sk	— @ 1 00
Do Navels—		Carrots, sk	50 @ —
Redlands	4 00 @ 5 00	Okra, dry, lb	15 @ —
Los Angeles	2 50 @ 3 00	Parsnips, ctl	— @ 1 25
Riverside	3 00 @ 4 00	Peppers, dry, lb	10 @ —
Duarte	3 @ 4 00	Do green	— @ —
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Turnips, ctl	50 @ —
		Cabbage, 100 lbs	45 @ —
		Garlic, lb	5 @ 12½
		Squash, Sum, bx	50 @ 1 50
		Tomatoes, box	1 00 @ 1 75
Strawberries, per chest—		Asparagus, box	25 @ —
Longworth	7 00 @15 00	Do choice to ex	75 @ —
Sharpness	5 00 @ 8 00	Peas, green, sk	40 @ —
Gooseberries, ₩ pound	2 @ 3½	Do sweet	— @ 70
Large do	4 @ 5	Rhubarb, box	50 @ 1 00
Raspberries, dr	65 @ 1 00	String Beans	3 @ 3½
Currants chest	5 00 @ 6 50	Do do wax	3 @ 4
Peaches, box	65 @ 1 50	Do Refugee	4½@ 6
Cherry Plum, dr	45 @ 75	Cucumbers, doz	50 @ 1 00
Figs, Arizona, lb	70 @ —	Mushrooms	10 @ 30
		Egg Plant, lb	17½@ 20

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@ —	Wethers	7 @—
Grass fed, extra	5½@ —	Ewes	6½@—
First quality	5 @ —	Do Spring	8 @—
Second quality	4½ @ —		
Third quality	4 @ —		
Bulls and thin Cows	2 @ —	HOGS.	
VEAL.		Light, ₩ lb, cents	5 @ —
Range, heavy	5 @ —	Heavy	4½@ —
Do light	6 @ —	Feeders	3½ @ —
Dairy	6 @ —	Stock Hogs	3½ @ —

Grain and Wool Bags.

Calcutta, spot	[illegible]
Wool Bags	[illegible]

Continued on next page.

GENERAL PRODUCE.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowe quotations.

WEDNESDAY, June 1, 1892

BEANS AND PEAS			
Bayo, ctl	2 00	@	2 20
Butter	2 50	@	3 05
Pea	2 20	@	2 70
Red	2 00	@	2 20
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	1 70	@	2 05
Wld Peas, blk eye	3 00	@	3 30
Do green	1 50	@	2 75
Do Nies	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	17	@	—
Do Giltedged	—	@	19
Do Creamery rolls	—	@	19
Do do Giltedge	—	@	20
Eastern	—	@	—
CHEESE.			
Cal, choice mild	—	@	8
Do fair to good	7	@	—
Do glit edged	—	@	9
Young America	—	@	10
EGGS.			
Cal. ranch, doz	19	@	—
Do do selected	—	@	24
Do store	16	@	—
Eastern	16	@	19
FEED			
Bran, ton	17 50	@	18 50
Feedmeal	26 00	@	29 00
Gr'd Barley	22 50	@	24 00
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	26 00
Manhattan Food ₱ cwt.	7	@	7 50
HAY.			
Wheat, per ton	11 00	@	—
Do choice	—	@	14 50
Wheat and Oat	10 00	@	12 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
Straw bale	45	@	60
GRAIN, ETC.			
Barley, feed, ctl	95	@	—
Do Choice	1 00	@	—
Do Brewing	1 02½	@	—
Do do Choice	1 07½	@	—
Do do Giltedge	1 10	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 38½	@	—
Yellow, large	1 35	@	—
Do small	1 37½	@	—
Oats, milling	1 47½	@	—
Feed, Choice	1 45	@	—
Do good	1 36½	@	—
Do fair	1 34½	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 30	@	—
Gray	1 30	@	—
Rye	1 31½	@	—
Wheat, milling. Gilt edged	1 45	@	—
Do Choice	1 42½	@	—
Do fair to good	1 41½	@	—
Shipping, cho'ce	1 41½	@	—
Do good	1 38½	@	—
Do fair	1 36½	@	—
Common	1 33½	@	—
Sonora	1 33½	@	1 40
HOPS.			
1891 Choice to Ex.	25	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, City Mills	4 65	@	4 75
Do Country Mills	4 50	@	4 75
superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
New Reds	40	@	60
POTATOES.			
Early Rose, ctl	50	@	75
Do do in boxes	50	@	1 00
Burbank Seedling	—	@	—
Do do Oregon	65	@	85
River Reds	40	@	60
Garnet Chilies	75	@	80
POULTRY.			
Hens, doz	6 00	@	8 50
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	4 00
Do large	5 00	@	6 50
Fryers	7 00	@	8 50
Ducks	6 00	@	7 00
Geese, pair	1 25	@	1 50
Goslings	1 25	@	1 75
Turkeys, Gobl'r.	17	@	20
Turkeys, Hens	15	@	20
Manhattan Egg Food ₱ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10	@	—
do Eastern	12½	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	16	@	20
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll.	15	@	19
Oregon Eastern.	12½	@	19
do valley	—	@	—
So'n Coast, def.	10	@	12
Nevada (S ate)	15	@	18
HONEY.			
White Comb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	—

FLORIST AND GARDENER.

Southern California Vegetables.

Some time ago, the Chamber of Commerce, acting on the suggestion of several of its members who were engaged in the business of raising winter vegetables for the Eastern market, addressed a letter to the Southern California Railroad Company asking for information as to the time when the various lines of produce would be most in demand and how they could be most advantageously shipped. The answer received, which was a digest of much information obtained through the Eastern agents of the company from dealers in vegetables, is considered of sufficient value to offer to the newspapers of Southern California for publication, in order that the growers of winter vegetables may proceed with more intelligence and also that others may be induced to go into a line of work which may at some future time contribute largely to the prosperity of this section.

The suggestions offered by the railway company read as follows:

The trade in winter vegetables commences between December 15th and January 1st and lasts until about April 30th. This does not include potatoes, of which we shall speak later. Hitherto, it has been supplied largely from the Bermuda Islands, but latterly this supply has been supplanted by shipments from Cuba. If the Southern California producers will arrange to have their crops so planted that they may be brought to market early in the period above stated, there is no doubt that they can be disposed of profitably against the imported crop, which is longer in transportation and subjected to additional exposure, transfers and handling. By means of the through fast freight refrigerator service now provided to shippers from the Pacific Coast, these products can be placed in the markets of our large Eastern cities in almost as fresh a condition as when packed.

The following points may be judiciously considered by both growers and packers. Judgment must be used in the selection of the character of the seed, a lack of which, as has been explained in the past, is a sufficient reason why Southern California products have been unable to compete with the Southern supply.

Southern California green peas in Chicago, April 22, 1892, sold for 25 cents per crate. The crate was of the best material, similar to the crate used in packing peas from the South, but the peas were dead, tasteless and void of the squeaky sound that the Southern pea has when pinched, which in the same market could be found for comparison. The reason is stated to be that the Southern California pea was a common variety, not selected, instead of a sweet table pea which is in demand, and is the variety supplied from the South. The same point will apply to other vegetables.

Again, it is claimed that a full car-load of green vegetables, all of one variety, will spoil in from five to six days, even though they do not heat. In order to avoid this, the car should be made up of mixed shipments—beans, peas, tomatoes, cauliflower, etc. The package preferred by the commission men is one-third, one-half and bushel crates, as are now in use here.

Cauliflower and cabbage should be packed two and one-half to three dozen to the crate. It should be borne in mind that none of the larger Western cities, not even Chicago, are able to dispose of an entire carload shipment of any single vegetable to advantage, hence the recommendation for mixed carloads.

The Southern California potato crop is next in order. The demand is reported to be favorable for growers and packers in this section as regards both quality and prices, and as the business is already moving, the suggestion is presented that shippers exercise care in selecting and in shipping the various sizes and varieties separately. Good marketable potatoes only should be packed.

It is stated on good authority that last season Southern California was driven from the market by Southern competition at least three weeks earlier than would have been the case had proper attention been paid to these points. Care should also be taken that potatoes are not shipped wet.

It should not be overlooked that you are shipping to an educated market, and that strictly first-class articles will invariably command their value and result in satisfactory returns.

These features are presented simply for information and with a view to improve the reputation of Southern California productions and the prices secured to our growers by their introduction and disposition in Eastern hands to an extent that will establish them as standard, in order that they may take the lead over all other competitive producing sections.

A Cheap Fence.

There was a time when it could be said that the fences in America had cost more than all other improvements combined. That time, however, is past. As the timberless regions of the country have become settled, and the land put under cultivation, a constantly growing demand for a cheaper, more lasting and less cumbersome style of fencing has sprung up. To meet this demand ingenious men have devised almost numberless plans, and while many of them, for cheapness and saving of labor in construction, are long strides in advance of the methods of our grandfathers, there are very few that seem to fill all the requirements of a perfect fence. Among these the one that is rapidly gaining favor with farmers, orchardists and stock-growers wherever it has been used is a combination of pickets and wire known as the *Eureka Fence*. In this fence, the pickets, which may be of any reasonable length, width or thickness, are so tightly woven or twisted between double strands of heavy galvanized wire as to be absolutely immovable. Special machinery is required for its manufacture by which the wire strands are given three turns between each picket. The pickets being of the best material obtainable, the result is that a fence practically indestructible is rapidly turned out, at a price, quality and durability considered, below that of any other and within the reach of all. The machine being adjustable, any number of double-wire cables may be used, and the pickets so spaced as to be rabbit proof or simply stock proof, as the case demands. The California Fence Manufacturing Company, of which H. T. Renton is General Superintendent, is the sole manufacturer of Eureka Fence, and is composed of well known business men in good commercial standing in this city. Farmers and ranchmen generally who have new land to enclose or old fencing to renew will do well to write for particulars, etc. The company's works and offices are at 570 and 572 Brannan street, San Francisco. Address H. T. Renton, Superintendent.

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GEO. WILSON—Sacramento, Cal.
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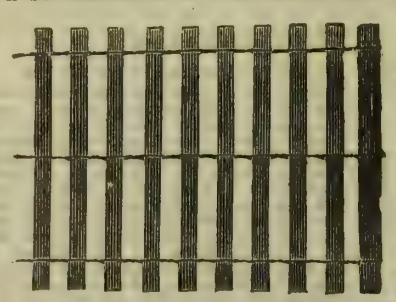
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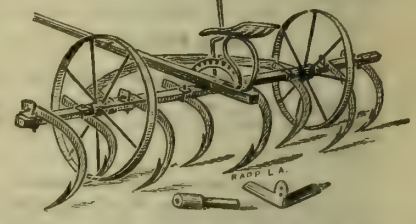
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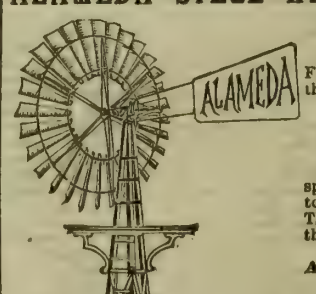
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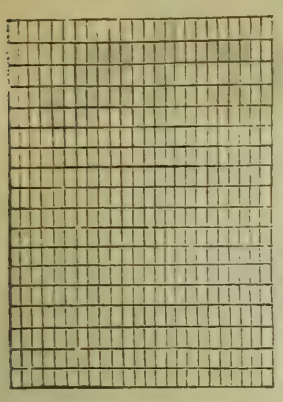
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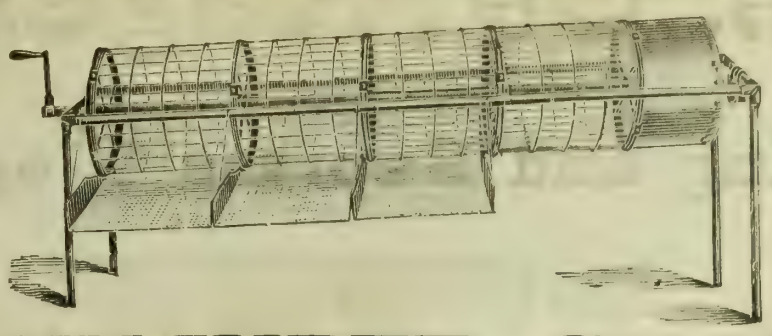
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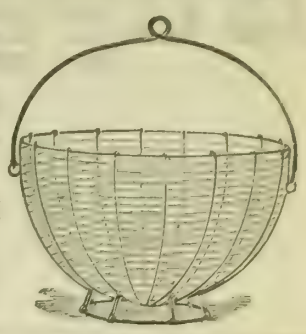


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State Fairs.

State. Place and Sec'y.	Date.
Oregon, Salem, J. T. Gregg	Sept. 12-17
California, Sacramento, Edwin F. Smith	Sept. 5-17
Washington, Spokane	Sept. 19-24
Nevada, Reno, C. H. Stoddard	
Western Washington Industrial Exposition, Tacoma,	

District Fairs.

No. Place and Sec'y.	Date.
1—Oakland	Aug. 8-13
2—Stockton	
3—Chino, J. D. Sproul	
4—Petaluma, Dr. Thos. Macleay	
6—Los Angeles	
7—Salinas City, J. J. Kelley	
8—Placerville, Thos. Fraser	Aug. 23-27
9—Rohnerville	
10—Yreka	
11—Sierraville, Fred Blinman	Oct, 3-7
12—Ukiah, R. E. Donohoe	
13—Marysville, G. R. Eckart	Aug. 28-Sept. 3
14—Santa Cruz, Oscar L. Gordon	
15—Bakersfield, J. J. Kelly	
16—San Luis Obispo, J. H. Barrett	
17—Grass Valley, I. J. Rolfe	
18—Independence, C. W. Craig	Sept. 27-30
19—Santa Barbara, H. B. Barstow	
20—Auburn, F. D. Adams	Aug. 30-Sept. 3
21—Fresno, J. M. Reuck	
22—Escondido, G. M. Dannals	Sept. 21-24
23—Concord, F. L. Loucks	
25—Napa, D. L. Hackett	
26—Ione, C. T. La Grave	Sept. 27-30
27—Redding, H. R. Hodson	
28—San Bernardino	
30—Red Bluff, H. R. Hook	
31—Hueneme, T. H. Merry	
32—Santa Ana, W. A. Beckett	
33—Hollister	Oct. 3-7
34—Susanville, C. E. Emerson	Sept. 3-7
35—Merced	
36—Vallejo	Aug.
37—Lompoc, W. I. Nichols	Sept. 27-30
—Glenn Co. Willows, W. V. Freeman	Aug. 9-13

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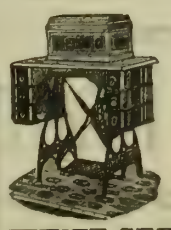
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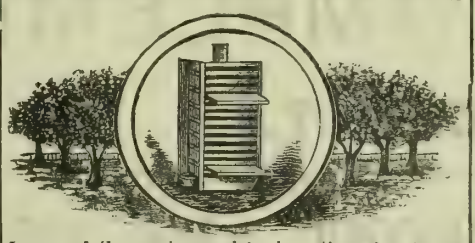
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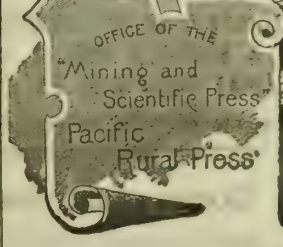
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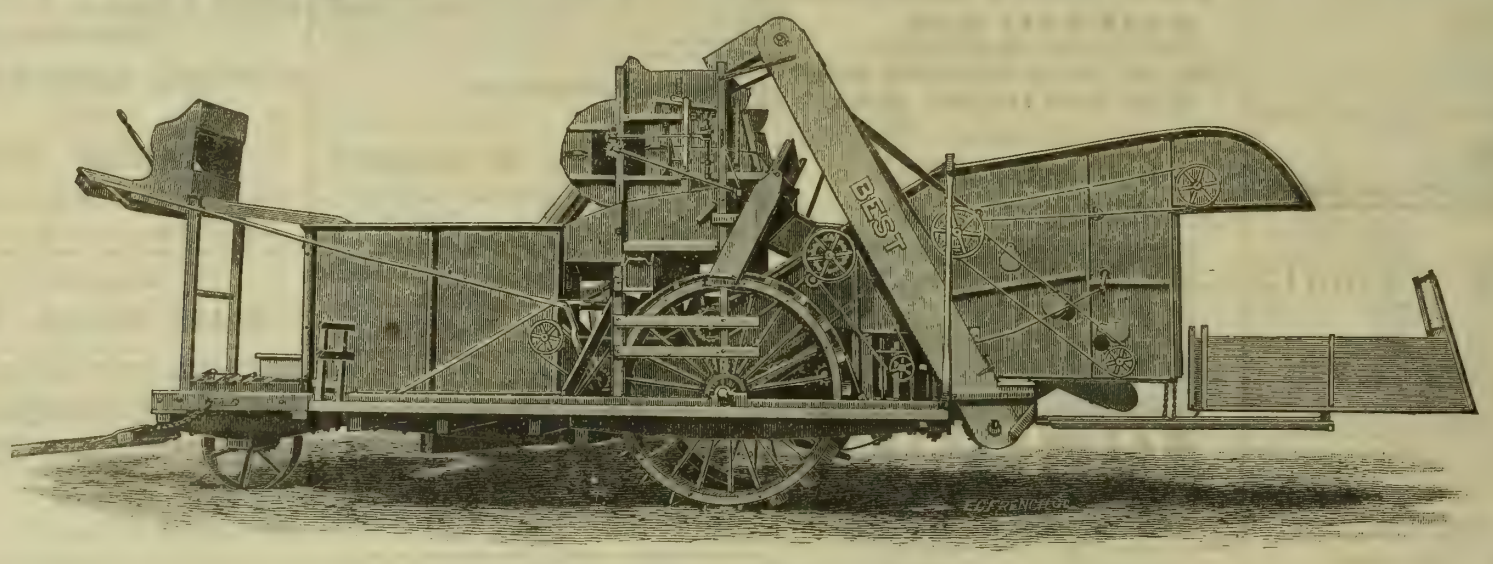
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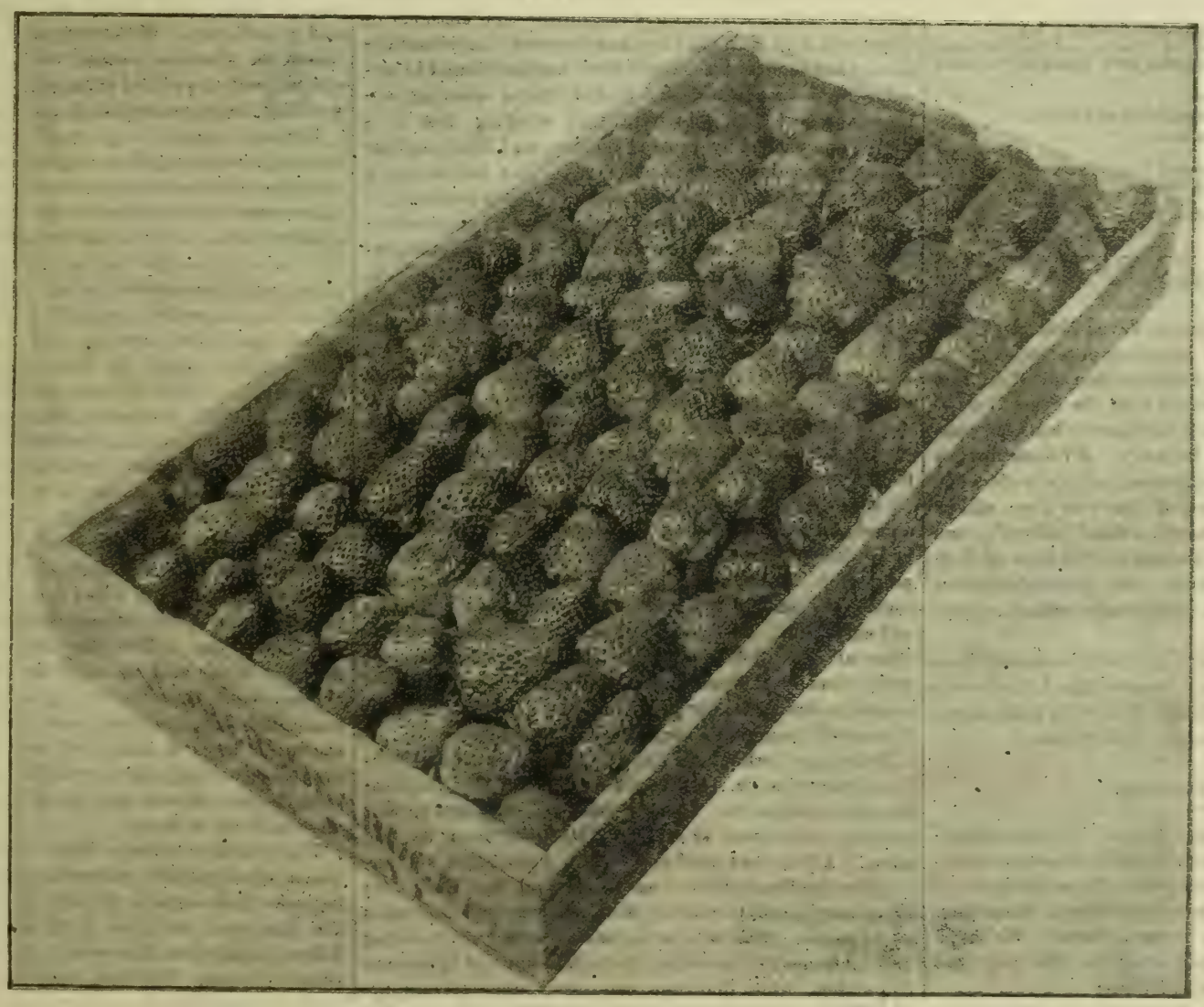
PACIFIC RURAL PRESS

Vol. XLIII. No. 24. SAN FRANCISCO, SATURDAY, JUNE 11, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St

California Strawberries.

As pertinent to an issue largely given to the growth of small fruits, we present on this page an engraving which is characteristic of California small-fruit production, even if it is not particularly artistic or esthetic. We must claim, however, that it will appeal irresistibly to the popular taste and this is an essential to art success, even if it is not the highest art attribute.

We believe the "tray" or "drawer" system of marketing berries is of California origin. If not, it is certainly local in its development. The engraving shows the fruit properly "faced" in the manner acceptable in this market. The drawer is 15½ inches long, with end pieces 8¼ by 1¾ inches. These drawers are brought to market in chests made of wide boards, with holes bored for ventilation, or in crates made of slats, with openings between them. These chests have one of the long sides made of a hinged door, which lifts and discloses the drawers resting upon cleats on which they are moved back and forth, as the name indicates. There are five drawers one above the other, and the chest is made long enough to accommodate 10, 15 or 20 of these drawers, with suitable partitions to carry the cleats upon which they rest. The original full-size chest was made to hold 100 pounds of fruit, and had 20 drawers, each holding five pounds of fruit. The shrinkage in the size of all kinds of fruit packages, butter rolls, etc., which we have never seen attributed to this dry climate, has brought down the contents of the drawer to four pounds and the chests had to be contracted accordingly. These drawers are used for strawberries, blackberries, and, by putting small baskets in each drawer, raspberries are also brought to market in them. Similar chests and drawers, the drawers in some cases twice as deep, are used for currants, and were formerly popular for cherries; now, however, cherries come mostly in single boxes.



THE PARRY STRAWBERRY AS GROWN FOR THE SAN FRANCISCO MARKET.

The berry shown in the engraving is rather a new one in our markets, though the plants were first introduced several years ago. It is the Parry, and was first illustrated and described in the RURAL of August 16, 1884. It originated with the late Wm. Parry of New Jersey, and is a seedling of the Jersey Queen. It first attracted Mr. Parry's attention by surviving an unprecedented heat and drouth which destroyed almost every other variety in Mr. Parry's experimental plots. The Parry is prolific, a strong, robust grower, with large, vigorous, clean foliage. The berries are quite uniformly large, obtuse conic, bright glossy scarlet, firm and of best quality, with little core and ripening evenly; the blossoms are perfect. The variety had an unexampled career as a prize taker at Eastern fruit shows.

The fruit shown in the engraving was grown by Charles Ingleson of Alviso, Santa Clara county—the small-fruit region which was at one time nearly the sole supply district of the San Francisco market, and is still eminent in that regard. Mr. Ingleson has about two acres of the Parry in bearing, and another acre of young plants, and proposes to increase his area of this variety. It is sometimes called the "pineapple" strawberry, but that name should be dropped, for there is another and an inferior variety known as pineapple at the East.

The San Francisco merchants whose names appear upon the tray inform us that the Parry is now in great demand in this city. It is the handsomest of all varieties, and has a gloss almost as though the fruit had been varnished. The engraving gives intimation of this glossy finish upon the fruit. We understand that the Parry has also been grown to some extent at Watsonville. We should like to hear what other growers have done with it. Mr. Ingleson's Parrys ripen with the Sharpless, but hold longer, but the plants are still yielding a fair quantity though his first crop of Sharpless is all gone.

GRAPES DROPPING.—Unusual concern is felt among Fresno vineyardists on account of the falling off of grapes, due to the cold weather which has prevailed the past week.

Our Small Fruit Letters.

We give much space in this issue to what we consider the best and most useful of the letters submitted in competition for the prize awards offered by the RURAL. These letters will commend themselves to all readers by their comprehensiveness combined with brevity and point. They are really remarkable among newspaper contributions for presenting valuable facts and practical details, without circumlocution. They seize upon and throw out clearly, the methods of work which yield best results, and are, therefore, perfectly adapted to the needs of those needing instruction in this important line of work. It is true, that they do not represent all localities, nor all the successful practices which are in vogue in this State and yet they are very broad geographically, and their influence will be to draw out other communications which will fill up the gaps in treatment which some may notice.

We cannot too highly commend the general considerations advanced in the letter of L. U. McCann, the well-known small fruit propagator of Santa Cruz. They will save us a column of editorial writing and we submit them with especial approval. Unfortunately they do not come within the requirements of our prize competition, for they do not give practical instruction in details of cultivation, but they will do much good and enhance the general esteem in which the writer is held.

We award the prizes for the June competition as follows:

First prize, $10, to E. H. Schaeffle of Murphys, Calaveras county.

Second prize, $5, to S. I. Holsinger of Sacramento.

Third prize, one year's subscription to RURAL PRESS to S. P. Snow of Santa Barbara.

We make the last award to Mr. Snow because of the clearness and fullness with which he has written on a difficult problem, viz: the growth of small fruits on high, dry land. Many will be benefited by his experience. The letters not included in the awards will be duly appreciated by our readers. Each is excellent, and the writers will be cordially thanked by thousands who will be helped by the suggestions made.

NEW LANDS FOR ENTRY.—In a few days the Register of the U. S. Land Office will have prepared a letter of instructions under which settlers may take up lands in the forfeited railroad grant in San Benito and Monterey Cos.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.*; *Elevator*, 12 *Front St.*, *San Francisco.*, *Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Half Inch (1 square	1.00	2.50	6.50	22.00
One Inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 11, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Horse Forks—Byron Jackson.
Trees, Plants, Seeds and Bulbs—Sherwood Hall Nursery Co.
Imperial Peach—I. H. Thomas & Son, Visalia.
Durham Bulls—Rolin P. Saxe.
Bowens Academy—T. S. Bowens, Berkeley.
See Advertising Columns.

The Week.

The RURAL has a decided fruity flavor this week. In addition to the broadside of information on small fruits, there are investigation into the composition of California green and dried fruits as prosecuted at the State University. There are also interesting statements about the commercial aspects of the fruit industry. All these matters are of pressing importance to thousands of our readers just at this season. In later issues of the year there will be similarly full reviews of the various animal industries and products. We propose to go through all the lines of California agriculture in the thorough and practical manner which is winning the RURAL continually wider support and appreciation.

Storm and flood are still bringing bereavement and desolation to many homes here and there on the Atlantic side of the Rockies. The Pacific is still true to its great name; tranquility and prosperity rest upon its borders.

Coming Contests.

We do not refer to the great "isshoos" of the presidential campaign which promises to be the warmest the country has ever seen, but to the contest in the contribution of useful information which is now brighter and closer than ever in the columns of the RURAL PRESS. We hope correspondents are already preparing for the July and August subjects, which will be as follows:

JULY.—FRUIT-PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

AUGUST. — FRUIT-DRYING AND RAISIN-CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine-evaporating each and every kind of fruit; packing and marketing of products.

These subjects can be most satisfactorily treated by scores of our regular readers. It is not intended that they shall be oratorical, statistical boomical, but plain descriptions of how to do things and the results of different practices and appliancs. We have plenty of the glorification of these industries, now we want the practical hints which will be helpful to all. On these subjects, perhaps more than others, it will be better to write from personal experience even though only a few points are covered by each writer. We would like to draw so fine a net that not a useful fact in the possession of any one shall escape. However, write as you see fit. The competition is open to all, and each can choose his own line of treatment.

Slandering our Fruit Product.

ATLANTA, GA., June 3:—The National Association of Nurserymen in session here to-day, passed resolutions virtually instituting a boycott against California fruits. The resolutions cite the California quarantine on Eastern nurserymen's stock, and the association resolves that in case this is not raised, to exert all its influence to get stricter inspection laws passed by the Legislature of the Middle and Eastern States.

This seems to be the action which was threatened by certain Eastern nurserymen last winter and which was freely commented upon in the RURAL at the time. We regret such action, not because fair-minded Eastern nurserymen are to be feared in their use of such action, but because the few narrow-minded and unscrupulous among them will resort to every contrivance of falsehood and slander to gratify their malice.

California has nothing to fear from inspection of her product; in fact such inspection, if honorably conducted, would probably result in benefit to the industry by punishing any evil or carelessness which may now exist and rewarding the producer who ships only a first class and carefully prepared product. The ultimate result of such a course would be the general elevation of the entire product, and this would extend our Eastern market and insure better profits.

The trouble is, however, that evil-minded men will work under the guise of the public welfare and gratify base propensities by the dissemination of falsehood. But even this can only be temporary in its effects, for we have too high a regard for Eastern nurserymen, with whom, as a class, Californians have maintained cordial relations ever since the first improved fruit tree was planted in this State, to think that they will allow base ones of their own class to malign our fruit growers. They will clearly see that the restrictions against importation of trees lie against that which is dangerous and diseased, and no honorable man cares to deal in such trees nor to approve the methods of those who do. Nor will they countenance the promulgation of lies such as are reported to be distributed in circular form throughout the United States warning consumers against California dried fruit, alleging that it is picked and packed by diseased Chinese, and that sulphur is used and makes the fruit poisonous. The fact is that a very small portion of the fruit product is now handled by Chinese at all, and each year their numbers are decreasing, and white men, women and children are the main reliance in all our packing establishments. Intelligent people who come here can see this, and we do not fear that malicious lies will long avail in this age of fact-flying.

As for the use of sulphur, the urging of that point against California fruit is simply ridiculous. There is no place in the universe where sulphur is so freely used, unless it be in Hades, as it is in the Eastern evaporating concerns. In fact, California learned the sulphur method from Eastern evaporators, and our use of it in the open air it far more innocent than the bleaching in the close chambers of their drying machines which yields their fancy dried apples and pears. Our Eastern friends who propose to mix sulphur in their malice will soon find themselves jammed in a corner by their own neighbors and customers. We need apprehend little harm from this phase of the sulphur question. If the agitation causes fruit driers everywhere to use less sulphur and teaches people generally to buy fruit in natural colors, no producers will be more pleased than Californians.

But we are perhaps arguing at a length which the subject does not justify. California fruit is its own justification and vindication. People who see it and taste it will not long be deceived by malicious slanders upon its fair name. All that we need to do is to keep right on extending the distribution of our product at the East. Do everything possible to bring it before every eye and upon every palate. This will be the best possible way to bring into contempt the men who, in the blindness of ignorance and malice, think that they can serve some private interest by maligning their relatives and friends upon this coast and, by putting forth puny efforts, harass the progress of the industry by which they secure comfort and prosperity.

California Wheat Crop in 1891.

The San Francisco Produce Exchange has issued its regular semiannual statement of grain and brans held in this State. According to this statement (given in detail in another department), the stocks held this year on June 1st show quite an increase over the stocks held on June 1, 1891. That of wheat (flour reduced to wheat) shows an increase of 23,582 tons. While the stock of wheat shows the above increase, yet the exports for the year ending May 31, 1892, show a falling off in comparison with the corresponding months ending with a like date in 1891. Taking the stocks held and the aggregate exports during the season, and the wheat crop of 1890–91 and that of 1891–92 were about the same in quantity, but the grade in the latter season averaged slightly better.

Accepting the Produce Exchange's statement of the stock of wheat in this State on June 1, 1892, as approximately correct, then the crop in 1891 was 1,184,229 tons. This estimate is formed on the following:

Exports, 12 months, tons	816,829	
Consumption	2 3,500	
Seeding 3 500,000 acres	175,000	
Stock on June 1, 1892	123,085	
		1,368,414
Deduct:		
Stock June 1, 1891	99,503	
Imports from Oregon	84,682	
		184,185
		1,184,229

The above exports do not include the shipments made direct from San Diego to Europe; neither do they include the shipments to Alaska and Arizona. It is claimed that if we include the above shipments the crop of 1891 could, with perfect safety, be placed at fully 1,200,000 tons, but in the absence of reliable data of the shipments to Arizona and Alaska and from San Diego to Europe, we do not feel justified in including them in the crop estimate.

Small Fruits Commercially Considered.

The cultivation of berries in this State has not made the progress the importance of the industry demands. Possibly this is due to the limited market for the fresh fruit and the necessity of finding distant markets for the fruit when canned. Operating against profitable market for canned berries, there are three factors: First, the high cost when canned; second, high freight, owing to the long haul; third, competition in the distant distributive markets with the canned berries grown near by, which are bought cheaper, canned cheaper, and can be marketed at a much lower rate of freight, owing to the short distance from distributive centers. Confined to this coast, the markets are soon supplied, and consequently canners' requirements are usually light, particularly for strawberries, raspberries and gooseberries. With blackberries, it appears to be different, for there is a wider field, for the canned product can be profitably placed at many distant distributive points, provided the raw materials do not cost too high.

For two years, the prices of berries, outside of blackberries, have averaged too high for canners' general use, and also for a free consumption by the public. The higher prices were brought about by unseasonable weather in the spring months, and lessened acreage devoted to the industry. Low prices for two or three years preceding 1890 caused many persons to give up the industry. Strawberries selling below $5 a chest will not return a profit to the grower, neither will currants and blackberries selling at less than $4 a chest. In June, 1889, the range of prices for berries in this market was as follows per chest: Strawberries, $2 to $9; raspberries, $6 to $9; and currants, $2 to $4. Gooseberries sold at from about one cent to five cents a pound. In June, 1891, gooseberries ranged from two to six cents a pound, strawberries from $8 to $15 a chest, or about the same as they sell at now; raspberries and currants sold at the same prices they do now. The shortage in the crop in 1891, and again in this year, can be more readily seen when it is stated that, during the busy season, the receipts of strawberries in 1889 averaged from 500 to 700 chests a day, in 1891 they averaged 400 to 500 chests a day, and in this year not much more than from 250 to 400 chests a day. Currants and gooseberries fell off fully as much, although the receipts of currants would not have shown so large a falling off were it not for the largest growers combining only to send just enough to market to meet the demand and not break prices. Any surplus is allowed to rot at home.

The favorite strawberry in our market is the Longworth, which, when properly gathered, packed and sent to market, sells at an average of nearly 50 per cent more than do the Sharpless, but then it is claimed that, at even this difference in prices, the profit to growers on each kind is about the same. The fruit lasts much longer and gives much better satisfaction when packed while dry, ripe and firm; when damp and any ways soft mold soon sets in. Currants should be picked when red and firm, for when too ripe they do not give such good results. Canners do not use currants at over three dollars per chest, and even then buy sparingly. Apple juice is used as an adulterant or substitute, and it is cheap. Oregon Improved gooseberries are growing in favor, and bid fair to meet with freer sales than common and English combined. The Lawton blackberry is about the only kind sold in this market. Dealers say it gives the best satistaction when marketed at the time the fruit is black and firm and not soft. When swelling or soft, the fruit soon molds and becomes unsalable. A large dealer in this city says that there is a blackberry cultivated near Stockton which is superior in all respects and for all purposes to the Lawton, but cuttings are hard to get, for those cultivating it do not wish to have it generally introduced.

IN a full return of the vintage of Spain last year, the total yield of wine is estimated at 540,000,000 gallons.

The State Press.

Sonoma *Republican*: "A more thorough, general road system needs to be adopted. It devolves upon the Legislature. Nevertheless, Sonoma, by seniority and standing first in say, might start the ball in motion and pave the better way."

Grass Valley *Telegraph*: "Does California want a great influx of the people who live in less favored climes? If all such people come, what is to become of the rapid increase of population here that comes of births? Is there any more of California than is needed by those who are already Californians, and who are raising more Californians?"

Cloverdale *Reveille*: "The fact that 560,000 immigrants landed on our shores during last year, and that almost one-half of this enormous number had no occupation or special skill for earning a living, is an object-lesson in the necessity of regulating and restricting immigration that should not escape notice. * * * * We are not alarmists, but we do think that the time has come when this Government should call a halt to immigration."

Sacramento *Bee*: "The experience of the past fortnight upon the Sacramento river has plainly demonstrated that the stream cannot be confined between its banks during periods of high water, and that it is folly to attempt to try and so confine it. The only salvation for the river and for the country to which it is tributary lies in a system of waterways, by which the Sacramento can be rid of its superfluous water during those seasons. There seems to be absolutely no other redemption for our river."

Sacramento *Record-Union*: "A market town approached by bad roads is practically walled in; rural communities burdened with bad roads are unduly and disastrously taxed. If we assume that in Sacramento county there are 100 miles of dirt roads that augment the cost of transportation of people and products so much as 30 per cent, compared to the speed, time and lessened output of motive power attaching to good, hard roads, we have a loss to the people of this county of not less than $100,000 a year, exclusive of the wear and tear upon vehicles and horses.

San Jose *Herald*: "Let the people in all parts of the State send complaints to the Railroad Commissioner representing their district, and demand prompt consideration and relief. Then let the Railroad Commissioners themselves see to it that there is no more jugglery, delay and evasion on any pretext. They may not be able to meet the mystifications and sophistries of the representatives of the railroad company very successfully, but each and every one of them knows enough to understand that railroad extortion and oppression is choking the life out of the industries of the State, and that they are the men who should devise and apply a remedy."

Woodland *Democrat*: "The official record furnished by the Government at Washington of immigration to the United States in 1891 puts the number of foreigners far greater than stated in the memorial. As classified, there were, of Germans, 113,554; English, 53,600; Irish, 55,706; Italians, 76,055; Swedes, 30,880; Scotch, 12,557; Norwegians, 12,568; Danes, 10,659; Swiss, 6811; French, 6766; Europe (not classified), 158,829, making a total of 543,985. Here, then, is a lesson for study, and when one considers it carefully, it is not to be wondered at that prominent American citizens like Elihu Root, Horace Porter, J. M. Drexel and Cornelius Bliss ask the Senate to take action. At this rate of immigration it will only be a few years when this country will cease to be an English-speaking nation."

Amador County *Record*: "Is it a fact that California's World's Fair Commissioners are frittering away their opportunities by quarrels among themselves to such an extent that the chief national managers are completely disgusted with the whole California outfit, and no longer take any pains to hide their utter contempt for a lot of men who are daily bringing disgrace upon their State and people by unseemly bickering and squabbles that would be a disgrace even to a lot of San Francisco Barbary Coast politicians? Was it not bad enough to lose the Horticulture Fair Commissioner by the scandalous course of certain men backed up and supported by the mad antics of a metropolitan press unworthy to represent a progressive people? Is there no way by which the people can clip the wings of these newspaper vultures that fatten on the slaughter of every public enterprise proposed for the general good?"

An Off Year for Fruit in Illinois.

CARBONDALE, ILL., May 23, 1892.

TO THE EDITOR:—I enclose three slips from our town paper, the *Republican Free Press*, to show the fruit condition here.

"The strawberry crop here is almost a failure this season. The picking will only last a few days, and that will end this years' crop.

"T. W. Thompson says his strawberry crop will average 20 per cent this season. He expects the balance of the 80 per cent next season.

"We learn the fruit crop here this season will be generally short. This is called the off year for fruit."

S. H. FRENCH.

AN ISSUE ON FREIGHTS AND FARES.—R. O. Shively, of San Jose, has filed a complaint setting forth that railroad fares and freights are higher than in other portions of the country, and expressing the opinion that freight rates ought to be reduced 25 per cent and fares 10 per cent. The Commission decided to notify the railway company to file an answer to Shively's complaint within 15 days.

Mr. Cannon Reviewed.

Mr. Doyle In Reply to His Letter Printed Last Week.

MENLO PARK, June 6, 1892.

TO THE EDITOR:—The canal question is too important to California to suffer it to be belittled by personalities. I shall therefore make short work of Mr. Cannon's attack on me in the RURAL of May 28th. It is but a repetition of the old device of a "red herring drawn across the scent to distract the hounds." Mr. Cannon was treated with great courtesy by the State Convention, and listened to with attention until he concluded. The convention, however, did not agree with him in opinion; in fact, I believe he had but two supporters. If the members, after cordially inviting him to share their counsels, could not differ from him without incurring his displeasure and being called names, it is rather a hard case. The call of the convention invited representatives from all the counties friendly to the construction of the canal. Though not coming within its terms, Mr. Cannon was promptly admitted to membership from respect for the parties he claimed to represent. It was, however, soon evident that he was there with no purpose friendly to the canal, for his first act was to propose the admission of another "delegate at large," who had no sort of credentials, but a kind of roving commission to appear at any place on behalf of one of the numerous labor organizations—real or pretended—which of late disturb nearly all public assemblies under pretense of advancing the interests of the laboring classes. As there had been scattered, on the chairs and tables, a printed statement of this person's peculiar scheme for building the canal with a special sort of irredeemable paper money, to be made legal tender and receivable for canal tolls, it was really a stretch of courtesy for the convention to admit him at all; but to gratify Mr. Cannon it was done, and he, too, spoke his piece. The effort to distract attention was too transparent to even appear plausible, and I believe no answer was made to either Mr. Cannon or his colleague.

As to the assertion that I represented then, or at any time, the Canal Company, and his classing me among the "plug hat, kid glove gentry, who produce nothing," they merely illustrate their author's recklessness of the truth or falsehood of what he says—a quality usually regarded as more characteristic of a scolding old woman than of the head of a body of men organized for serious purposes. It cost me in wages to raise my crop last year $8500, and I must have farmed to as little purpose as Mr. Cannon orated in the convention, if I failed to produce *something*. Persons interested may inquire whether Mr. Cannon spent as much wages or produced as much as I, and follow the comparison back ten years. I have no fears of the result of the examination. I represented in that convention no person or body, but the supervisors of my own county who sent me there. In 1883, after Mr. Cleveland, the President of my party, burked the canal treaty with Nicaragua, I denounced his action in a public interview, and refused to support him for reelection on that ground. What had Mr. Cannon then to say on the subject? What public evidence did he give of indignation at the proceeding? Was his desire for the construction of the canal by our Goverment, or at all, ever made public or imparted to any one before it became possible to obstruct it by pretended friendliness to the object, but preference for a better mode of accomplishing it? Did any one ever hear from him a word favoring the canal until the "red herring" device became desirable? I will not imitate Mr. Cannon's recklessness by asserting that, in opposing the pending measure, he is representing the railroad ring that molds the opinions of public men and dominates political parties in this State, for I know not what his motives may be; but I can safely say (and defy contradiction) that if he were representing that body, he could not more effectively forward their views than by his present course. His parrot-like repetition of a catalogue of their past transgressions will not screen him from suspicion. That may well be a disguise to make his aid more effective. I fear the bulk of sufferers from railroad oppression will not be so charitable as I am, and will class Mr. Cannon according to his public acts, not his professions, however loud. The fact that he is chosen president of the Farmers' Alliance affords no guarantee of his honesty. A member of the Senate or Assembly, a Congressman, a Supervisor, a Railroad Commissioner, is chosen to represent the people, but how often do they betray their trust? They are the sort of subjects whom the railroad people find worth buying, and they buy them accordingly. When such people are found on the side of the Ring, whether directly opposing a measure of relief or urging unfriendly amendments to it, the public draws an inference as to their motives. Mr. Cannon's advocacy of the railroad people's views may be sincere, but I regard it as unfortunate that he should find himself arrayed on the same side of an important public question with men whose acts he himself characterizes as so wanting in common morality. When such an unhappy coincidence of opinion occurs, a little reflection should teach him the prudence of self-restraint in attacking the motives of his opponents, lest they be tempted to retort by pointing out the rascally society in which he finds himself. Here every scurvy railroad politician in the State is on the same side with him. As to his representing 100,000 or 10,000,000 people, that fact adds no weight to his opinions, however much it may enhance his importance. Doubtless an Assemblyman is more important than a Supervisor; a Congressman than a member of Assembly, and a United States Senator than all three combined. At what point between the dignity of the President and that of a plow boy the chief of the Farmers' Alliance comes in, I don't know, nor whether it depends at all on the exact number of "wealth producers" he assumes to represent. I should suppose his rank a little lower than a United States Senator's, and that Mr. Cannon will have to yield precedence to Mr. Stanford, who represents the whole State, and by legal authority, too. As the latter's opinions on this particular question will hardly pass current as those of his constituents, so neither will Mr. Cannon's. The two gentlemen are, however, so cordially of one mind on this canal question, that it is to be hoped no difference as to the relative weight of their opinions will be suffered to mar their friendly relations.

To return to the question itself. The substance of Mr. Cannon's contention is for taking the defunct Nicaragua Convention out of the pigeonhole Mr. Cleveland consigned it to more than seven years ago, and reviving it by consent of Nicaragua; repealing the present company's act of incorporation, acquiring or confiscating their charter from the Central American States and the work they have already done, and building the canal by our Government for its own account. The farmers who compose Mr. Cannon's constituents will not, I hope, fail to see the advantages of this plan, and especially how very practicable and, indeed, how easy all this is. It will only be necessary to elect a President and two houses of Congress who are of one mind with Mr. Cannon, and who, besides passing the appropriations required, will promptly make the necessary treaty arrangements with Great Britain on the one side and and Nicaragua and Costa Rica on the other—which, if Mr. Cannon will undertake the negotiation, can doubtless be speedily effected, for Lord Salisbury represents the agricultural interest in England and will doubtless place the British fleet at his disposal, and what power can resist the British fleet and the American Cannon? Then the only thing left will be to acquire the rights of the present company, which, to a party flushed with such splendid success in politics and diplomacy as the Cannon party will then be, can present no serious difficulty. The Maritime Company's rights can probably be bought by a moderate issue of that valuable paper money invented by Mr. Cannon's late colleague in the Convention, and all will then be lovely. It is a notable scheme, and one for which I have no doubt we could secure the approval of even Mr. Huntington! There is only one objection to it, viz.: The danger that the canal might not be completed in time for Mr. Cannon and myself to sail through it. We are both somewhat advanced in years, and I fear that if he were to die before it was finished, there would be no one left who could complete *it on that plan*. It is not every one who can carry a Presidential election, secure a majority in both houses of Congress, and outwit three foreign Governments all at once.

Now, as I have so frankly acknowledged the merits of Mr. Canno..'s plan, will he not kindly look a little more leniently on the demerits of mine? With annual elections, and the right to vote 70 per cent of the stock of the company, we are not very likely to have the control permanently wrested from us. It keeps within the lines of our treaty with Great Britain, for a control that we share with two other nations is not *exclusive*. Meantime, during the long period that our option to buy the bulk of the stock lasts, we have all the chances in our favor that some opportunity will occur to secure the consent of that power to a modification of the Clayton-Bulwer treaty, allowing us to own and control the work; and when that is done, the United States can, if they see fit, buy up the remaining shares of stock and throw open the canal to the commerce of the world at merely nominal tolls, or even free. Meantime, it will have been built, and we shall have the benefit of it in our own day, and at the lowest rate of tolls, because built with money secured at the lowest rate of interest. It will be built, too, with American capital, and that means a good deal more than at first sight appears, for those who furnish the money will control the canal. They will practically determine its nationality, and give direction to its policy. If built with American money, the work will be engineered and directed by Americans. The lumber, machinery, provisions, tools and materials used will be of American production. The supplies consumed will be furnished from New York, New Orleans and San Francisco, and transported in American bottoms. The emigrants drawn into the country by the great work will be American. In a word, all the incidental benefits of the work will belong to our own country, while if built with English money, they will go to England. The difference between the expenditure of eighty or a hundred million dollars among our own people or its expenditure abroad is no slight one, and it will depend entirely on whose money builds the work. There is but one body that represents the people of the whole United States, and can ensure the building of the canal with American money, and that is our own Congress. The arguments of Mr. Cannon, Mr. Kinney, etc., assume that the Canal Co. are asking aid from Congress. That is an entire mistake. They realize fully that we—I mean the people and the Government of the United States—need them more than they need us. There will be but one canal across the Isthmus, and it will be at Nicaragua. That company holds the key of the situation in their charter for building the work. They have plenty time to do it in, and any man who doubts that within a brief period the surplus capital of Europe can spare a hundred millions, or double that sum, for such a work, must have paid but little attention to financial questions. England having more spare capital than any other country, the chances are ten to one that, if built by private subscription, it will be done with English capital. Let Mr. Cannon imagine the consequences of permitting that canal to be built with English money, and unless he is incapable of blushing, his cheeks must tingle with shame for participation in such a result. Its terminal ports will then be protected by the navy of Great Britain, and the management and police of the canal be in English hands. What would be the fate of the magnificent islands lying in the great lake which occupies the summit level of the country? Obviously, if the people who have direction of the building and management of the work are Englishmen, those who furnish the supplies, and who direct, execute and manage the work—the engineers, machinists, mechanics, stevedores, navvies, longshoremen, as well as the storekeepers, hotel-keepers and other emigrant population pouring into the country—will also be English, and the islands will be occupied by a great English dockyard, English hospitals and other public structures, differing from a great English naval station like Malta only in name. A great naval power, once in possession of the islands and lake of Nicaragua, will hold permanent control of the canal, and can never be dislodged from it. What a proud reflection to any American that he is doing his best to install a foreign Government in that position in preference to his own country! Mr. Cannon may be content with such distinction, but few will envy him. I think most plain people will agree with me that it deeply concerns the United States that our navy have secure transit through that great central channel between the oceans, and that to insure it against possible obstruction, all the surroundings of the canal should be American. The engineers who build it, the permanent staff who operate it, the population that congregates round its termini and lines its banks, must be American, so that if there is to be any naval station in the lake, it, too, may be American. Great Britain has the canal at Suez. She now owns the majority of that company's stock, and has seized and garrisoned the country. By the foolish parsimony of the French administration of the day (1882), she was enabled to shake loose from the "dual control," and has ever since administered the Egyptian Government, nominally for the Khedive, but practically as a British crown colony. On the next partition of the "sick man's" estate, her permanent occupation of that country will probably receive formal European sanction. With the advantages of the possession of Suez, she needs but the firm foothold on the American isthmus that the control of the Nicaragua canal would give her to hold the maritime commerce of the world in her absolute grasp! Is it possible that Americans can be found who, from wounded pride, offended dignity or baser motives, can look with complacency on such a prospect, or consciously contribute to its realization?

JOHN T. DOYLE.

ENCOURAGEMENT.—It is interesting to note in this small-fruit discussion, as in the hay discussion, how close is the agreement in practice among different growers. This will give the beginner who consults these letters the greater confidence in the suggestions which he receives. It is plain that small fruits can be produced in gratifying amount and quality by any one who will master the few principles upon which successful practice rests, and possess himself of the essentials in soil and wathr. Fortunately these are not difficult nor scarce, but to neglect them is to court disappointment and failure.

FRUIT MARKETING.

Cooperation at Campbell.

CAMPBELL, June 4, 1892.

TO THE EDITOR:—The fruit growers at Campbell, Santa Clara county, have formed a cooperative fruit-drying association, and expect to be able to do business the present season. The organization has chosen for its name "Campbell Fruit Union," and its object is to dry, can, preserve and otherwise cure fruit for the market. The capital stock of the association is $100,000, divided into ten shares of the par value of $25 each. On the evening of the 1st of June, the stockholders met and elected R. P. McGlincy, F. M. Righter, Gilmore T. Duncan, O. Haberdier and S. G. Rodeck, all orchardists, as directors. Subsequently the directors met and elected R. P. McGlincy, president; F. M. Righter, vice-president; S. G. Rodeck, secretary, and the First National Bank of San Jose, treasurer.

The association has had two large drying plants, located at Campbell, offered them by the owners who desire to retire from business, but the plants are rather more expensive than the association needs, and it is quite likely that ground will be purchased and such buildings as may be needed, erected. The association contemplates erecting a warehouse and packing-house along the railroad track. With a good warehouse in which to store the fruit, the association will not need expensive buildings or machinery. The stockholders who have thus far subscribed for stock, represent about 400 acres of fruit, and with an ordinary average yield, this will give the association about as much fruit as it will care to handle. The articles of incorporation have been filed with the secretary of State, and a charter is expected within a day or two. A meeting to adopt by-laws will be held on the 18th of June.

This is a step in the right direc ion, and no doubt other sections will follow with cooperative associations, as the growers feel that under the old way of doing business, they were not receiving as much for their labor as they felt they were entitled to. Then with the dried fruit exchange recently organized at San Jose, they feel that if they can hold together, they will better their condition very much. There is no reason why fruit growers should not ally themselves together, as have the dairymen of the States east of the Rocky Mountains.

There seems to be very little doubt of the success of both organizations, and Col. McGlincy has done a great deal to bring them about, having had much experience with the widely-known butter and cheese exchange of Elgin, Illinois, of which he was secretary for ten or eleven years, and having seen the benefits which accrued to the dairymen, he believed that the fruit growers could obtain the same, or greater benefits.

The PRESS, too, has done much to help the matter along and the growers appreciate the assistance it has rendered them, and hope to have its good offices in the future. Other communities desiring to organize similar institutions can get information from the officers of the Campbell association. Let the work of organizing go on.

FRUIT GROWER.

A New York Dealer's Views.

Four years ago 1,000,000 pounds of California fruit were sold in New York. Last year 7,000,000 pounds found purchasers here, and this year E. L. Goodsell, the fruit auctioneer, who has large fruit interests in California, and who has just returned from a four months' stay on the Pacific Coast, says that the amount of fruit sent to New York to be sold will be fully 20,000,000 pounds. The fruit producers of California now have the benefit of the fastest freight transportation in the world, says Mr. Goodsell, as at this time it is possible to run through solid trainloads of California fruit from Sacramento to New York in seven days. The Fruit Transportation Company succeeded in establishing this fast freight service this spring, and from this time on, fruits from the Pacific Coast will be shipped to the East in less time than was dreamed of a few years ago.

Mr. Goodsell collected much valuable information about the fruit industry during the months he was in the Golden State, and he has figures that show that the fruit production of California amounts to $35,000,000 more than the production of gold, $15 000,000 being the amount of the gold output, while the fruits amount to $50,000,000 annually. Here is what Mr. Goodsell says about California and the fruit industry:

"Land in 1849, that was used only to dig gold out of, is now growing wheat and fruit that each year sells for $100,000,000, the value of each product being equally divided. Besides this, Spain, France and Turkey formerly supplied America with the 110.000,000 pounds of raisins and prunes that are annually consumed. These fruits are now grown so extensively in the Golden State, and are so popular by reason of their superiority of flavor and quality, that the foreign products are nearly driven out of the market. This is illustrated by the fact that where California produced and shipped, in 1891, 27,000,000 pounds of prunes and 52,000,000 pounds of raisins, there were only imported 9,000,000 pounds of prunes and 18,000,000 pounds of raisins, as against the previous year's importation of 61,000,000 pounds of prunes and 44,000,000 pounds of raisins, showing a joint falling off of 78,000,000 pounds of both kinds of fruits in one year. It is safe to say in three years the production in California will be enough to supply America and preclude importations altogether.

"A comprehensive view of the greatness of the 'tree-fruit' industry can be had from the statement that there are nearly 14 000,000 trees planted in California, all of the varieties named. When these are all in bearing, fully one billion pounds of fruit will have to be marketed.

"Last year 14 days was the average time in transit, and the reducing of the time to seven days makes the probability of fruit landing here in perfect condition unquestioned. In this event $500,000 can be saved to the growers yearly from what has been realized in the past. It is significant, too, that in California any fruit produced anywhere can be grown in its perfection on the Pacific Coast, and that not one-third of the available fruit land is now under cultivation. Therefore, when we read that in 1891 there were shipped out of the State 352,000,000 pounds of fruit of various kinds, 12,000,000 gallons of wine and brandy, and 1,500,000 boxes of oranges, there is not only material for consumption, but also for reflection as to where it will go in the future. Active minds are taking up the question, and England has been made an outlet possible for green fruit already by placing refrigerating boxes on board fast steamers, an experiment that has been recently tried with considerable success. Dried fruits are already favorably known and disposed of there. The process of shipping fruit in a green state has necessarily been reduced to a science in order to get it here in marketable shape. Picked from the tree, it is packed in neat boxes, often each fruit wrapped in paper and loaded into a refrigerator-car built exclusively for the business. Trains of 15 of these cars are made up at Sacramento and hurled over the mountains and plains to Chicago and thence to Jersey City.

"The successful cultivation of the olive has attracted the attention of English capitalists to California, who have recently bought out some of the best ranches. Nearly 900,000 gallons of olive oil are used in the United States yearly. California is now only producing one-tenth of this quantity, but will in a few years be able to compete for public favor, and unquestionably will drive the imported article from the market in a short time. There are now 7,000,000 olive trees, including young and bearing orchards.—N. Y. Tribune.

THE STABLE.

The Value of Imported Blood.

"The proof of the pudding is the eating thereof," said some philosopher many years ago. It is a true saying, but pudding is not the subject we intend to discuss at present, but horse. The thoroughbred stallions brought over to America from England, France and Australia have been wonderfully successful in producing fleet and game racehorses, but, as well as we admit they have done, when imported mares have been mated with native American stallions the produce has, in almost every instance, made its mark on the turf, says the *Breeder and Sportsman*. Take our wonderful performers of the past ten years as a sample of what can be done, and when one looks into the matter he is at once astonished and delighted. A change of climate and a sharp outcross works wonders, truly. If English, French and Australian horses can accomplish so much when mated with native American mares, and imported mares perform such wonders when stinted to American horses, does it not stand to reason that the English, French and Australian racehorses could be improved by taking a number of American stallions and mares into their countries? We implicitly believe it would result satisfactorily, but the Englishman and the Australian, as a rule, believe that there is no such thing possible as improving their race of thoroughbred horses. Americans are less prejudiced than their brothers across the sea on this question, hence we are improving every day our breed of racehorses. According to a number of thoroughly posted English writers, thoroughbred horses of Great Britain are not as good to-day in point of stamina as they were 25 years ago. Ours are deteriorating in this respect, too, through inbreeding and failure in most instances to get a good outcross. By importing thoroughbred stallions and mares from foreign countries, we get the desired outcross, and the English and French people, by securing American horses and matrons, could also get a valuable cross.

Among the real good American race horses from imported mares that we might mention are Kingston, His Highness and La Tosco, the champions of last season in the two and three-year old and aged divisions; Laggard and Sluggard, from imp. Dawdle; Racine and Fairy, from imp. Fairy Rose; Flambeau, from imp. Flirt; Rinfax and Nomad, from imp. Amelia; Getaway, from imp. Cutaway; Ormonde and Mulatto, from imp. Patilla; Nero, from imp. Queen Bess; Rhono and Rosebud, from imp. Rosetta; Raindrop and Tearless, from imp. Teardrop; Catalpa, Mabel Glenn and Dungarven, from imp. Calphurnia, and numberless others. We have given the imported mares in the Palo Alto Stud because it brings the matter close to to our homes, and any one can take up a catalogue and see how the imported mares produce two winners to one native mare in a majority of cases. It is not because better blood flows in their veins or that they were better race mares, for this cannot be claimed for them, but they simply make a sharp outcross, and that is what is needed in this country. Potent as was the blood of the great Lexington, there is such a thing as getting a surfeit of it, and we should cast prejudice to the winds and endeavor to get a good outcross once in a while, whether the blood that we need comes from Kamskatka or Madagascar. If our bigoted English, Australian and French friends would only cast off the cloak of prejudice and give us a little reciprocity in the horse line, all parties would be benefited thereby and a profitable trade between the countries established as well. We are getting our eyes open to the value of an outcross, and trust our brethren over the ocean may come to a realization of its worth in the work of breeding good race horses.—Live-stock Record

TAPEWORMS IN OLEO.—Col. Robert M. Littler of Chicago, secretary of the National Butter, Cheese and Egg Association, said some time ago: "Anybody who says that butterine is healthful and wholesome either does not know what he is talking about, or else lies. Why are there so many tapeworms and so many cases of Bright's disease since butterine came into use? The embryo tapeworm exists very freely in leaf lard. This lard must be cooked if you want to destroy the animalculæ. It is not cooked; it is only warmed in the manufactories of butterine. I can show anyone by the use of the microscope, the animalculæ. When a hog has them bad it is called measly. No matter how carefully it may be prepared, butterine contains acids that are not to be found in butter. There is a very easy way of proving this. Put calomel into butterine and you have corrosive sublimate. The Lord only knows how many people have been mysteriously poisoned by taking a dose of calomel after they have eaten butterine.—Anti-Oleo News.

Weather and Crop Bulletin for Week Ending June 6, 1892.

SOUTHERN CALIFORNIA.

Ventura County.—Hueneme—The past week has been cloudy, retarding heading, but beneficial to growing crops. *Bardsdale*—Weather clear with foggy mornings; acreage of corn large; prospects unusually good.

Los Angeles County.—Lancaster—Haying has commenced; the yield is light, but prospects of high prices encourage the ranchmen. *Rodeo de los Aguas Ranch.*—The barley harvest has begun and the crop will be large in the valley. Sugar beets are growing finely. *The Palms*—Foggy weather continues and is rather injurious to haymaking. Heading has commenced and the prospect is for a fair grain crop. *Los Angeles City*—The weather was somewhat warmer this week, favorable for ripening fruit. Highest temperature, 88°; lowest, 48°; .02 inch of rain fell. *Duarte*—The past week has been cool and cloudy with some fog, which was slightly injurious to the hay crop. Fruit looks well. Highest temperature, 90°; lowest, 53°; rainfall, .12 inch.

San Bernardino County.—Ontario—The past week has been cloudy, except two days; unfavorable to grapes, but as yet no signs of damage appear. *Chino*—Hay is nearly all in the stack and was a satisfactory yield. Fruit crop is showing up well.

Orange County—Santa Ana—The barley yield will be about two-thirds of last year's crop. Hay crop abundant. The fruit yield will be large. Warm weather is forcing corn, which promises well.

San Diego County.—Winchester—The weather has been favorable for haying; the crop is light. Grain is filling well, but will be short.

World's Fair Committees.

Mr. I. De Turk, who presided at the recent Viticultural Convention, as reported in the RURAL of May 28th, has appointed the following committees to work with the Viticultural Commission in assisting Mr. W. H. McNeil in collecting and preparing a suitable viticultural display at Chicago:

Wines (dry and sweet)—Arpad Haraszthy of San Francisco; E. C. Bichowsky of San Gabriel; F. Beringer of St. Helena; C. P. Howes of Santa Clara; Geo. H. Eggers of Fresno; C. Schilling of San Francisco and A. G. Chauche of Livermore.

Brandies—George West of Stockton; H. W. McIntyre of Vina and Herman Bendel of Natoma.

Raisins—T. C. White of Fresno; A. B. Butler of Fresno and S. W. Ferguson of Bakersfield.

Table Grapes—John Muir of Martinez and R. G. Stephens of Sacramento.

Grapes and Grape Vines—Leonard Coates of Napa; H. W. Crabb of Oakville and A. Brigden of Lamanda Park.

Machinery, Utensils and Distilleries—J. L. Heald of Crockett and H. Sanders of San Francisco.

Cooperage—David Woerner and F. Korbel of San Francisco.

Literature and Statistics—C. J. Wetmore and Winfield Scott of San Francisco.

A meeting of this committee has been called for Tuesday the 14th inst., at 11 A. M.

OLEOMARGARINE LAW VALID.—The Supreme Court of Massachusetts has handed down a decision in several cases involving the validity of the oleomargarine law of 1891. The decision of the court is in favor of the constitutionality of the law. The cases were The Commonwealth *vs.* Huntley *et al.* and Commonwealth *vs.* Plumley. In the first case, the defendants were convicted of making a sale of oleomargarine at retail not in the original unbroken packages in which it was brought into the State. In the second case, the sale was of oleomargarine in the original package. The court in its opinion reviews the case of Leisy *vs* Hardin, the original package case decided by the Supreme Court of the United States. Accepting that decision without discussion as settling the law for whatever it covers, the court said that the question had to be considered whether it extended so far as to cut off the power of the Legislature to forbid the manufacture and sale of oleomargarine which is made in imitation of yellow butter, where such oleomargarine has been imported from another State. The only question, therefore, was that arising under the provision giving to Congress power to regulate commerce among the several States. The court held that there was a palpable distinction between the cases before it and that of Leisy *vs.* Hardin, and that it was at liberty to decide upon the validity of the statute involved in those cases according to its own opinion. In its judgment, the enactment of the statute was a valid exercise of the police power which remains in the several States, and was not in violation of the constitutional provision giving to Congress the power to regulate commerce among the Several States.

Sierra Madre Forest Reservation.

At the Farmers' Institute at Pomona, on motion of Abbott Kinney of Lamanda Park, the following resolution was adopted:

Resolved, That the Farmers' Institute of Los Angeles county heartily endorses the action of the federal government in establishing the Sierra Madre forest reservation.

Resolved, That this preliminary action for the preservation of our irrigation and domestic water supply is of the greatest importance to the agricultural interests of Los Angeles, Ventura and parts of San Bernardino counties, and should be followed by action similar to that found effective in preserving from fire and other injuries the Yellowstone and Yosemite reservations.

SMALL FRUIT GROWING.

Our Prize Letter Contest for the Month of June.

PRACTICAL INFORMATION ABOUT ALL KINDS OF BERRIES.

WHICH ARE THE BEST AND HOW BEST TO GROW THEM.

An Exceedingly Valuable Review, Embodying the Experience of Practical People Who Have Done and Are Doing the Things They Write About—All Processes From Selection of Soil to Marketing Fully Dealt With.

MURPHYS, Calaveras Co., May 28.

TO THE EDTOR:—It is a difficult thing to condense the subject of small fruits to the space that can be allowed the matter in the usual edition of the RURAL, as an entire issue would be required to give all the information concerning a single berry, but as the RURAL aims to be practical rather than exhaustive it will be possible to give a brief practical description of the different varieties of berries and their culture to which I shall endeavor to restrict my article.

STRAWBERRIES.

SOIL AND SITUATION.—I have found strawberries of equal size on adobe, red clay and black loam soils. The berries grown on the adobe and clay soils required less water for irrigation as the clay and adobe hold moisture longer. The water on the loose loamy soils drained away from the surface faster and the loamy beds could be picked on the same day that the berries were irrigated, while the clay and adobe, if thoroughly soaked, would mire you down at any time within 24 hours after irrigating.

The plants on the clay and adobe have but very little foliage, throwing their entire energies into the production of the berries. The loamy soil grows a plant with luxuriant foliage, and while the berries are not as great in quantity per acre, they are seldom if ever sunburnt. It is possible to set the plants much closer on clay and adobe than on loam, because the clay and adobe soil produces a plant with so few leaves, and the stems are so short that the plants can be set very closely. As a rule, the rich loamy soil is in the cold, frosty, but wet bottoms, while the clay is generally found on the higher elevations, and is, therefore, earlier on acconnt of the soil being warmer and the location comparatively free from frosts.

The grower will plant on the land that he owns, but if he can choose his site, I would prefer a sloping hillside facing the southeast, with a clay soil for all varieties of small fruit. Next to the clay hillsides, I would take the rich, loamy bottoms, but would expect to have a late, and in consequence, low-priced crop.

PREPARATION OF SOIL.—The soils of California will grow any of the small fruits profitably, without a fertilizer; in fact many berry growers contend that the fertilizer is an injury in that it forces the plants to grow a large amount of foliage at the expense of the berry crop. In this there is a basis of fact, but where the quantity of water for irrigation is limited, a heavy manuring will prove very profitable. If the plants can be kept wet from the time of blossoming until the last berry is picked, the greatest results will be obtained, and very litlte, if any fertilizer will be required on the average soil.

With a limited quantity of water, I find it the most profitable to cover the ground six inches deep with stable manure. This is spaded under, and some early crop, like peas, planted; when this crop has matured and the ground made clean, the soil is spaded or plowed, and harrowed until perfectly mellow—then, in July or August, the plants are set out and faithfully cultivated *every ten days*.

Thus cultivated, the plants will have attained their full growth and be covered with crowns, distancing by far, the plants set out in the early spring and irregularly cultivated, and produce a few small berries.

Spring planting has the advantage that any Chinaman can make the plants grow then. Midsummer planting gives you the use of the ground for an early crop, the first season, and admits of a second or late crop after the berries are are done fruiting, which is a big advantage on heavily fertilized soil, in high-pressure gardening on limited and high-priced lands.

VARIETIES.—I have grown a long list of strawberries, but have found nothing that will excel, in profit, the "Monarch of the West," though some growers prefer the Longworth. Mr. S. L. Watkins of Grizzly Flats, El Dorado county, claims to have discovered a California strawberry, which he calls the Honey strawberry, that will grow in any situation, yield enormously and excel any other berry in its sweetness and flavor; but I have not ested it.

Having selected your variety, strike out the furrows six inches deep and two feet apart. If in the spring, the whole field can be furrowed at once and the plants set all day long. Place the plants eighteen inches apart in the rows, spread out the roots, draw the plant up and gather the soil around the roots *under* the leaves. The top of the plant should be an inch above the soil. When the row is set, start back over it, stepping squarely and solidly on each plant, to thoroughly firm the soil.

If the plants are to be set out in July or August, the ground should first be thoroughly irrigated, then plowed and made mellow, and but one furrow run at a time to check evaporation. If possible, the planting should be done in the evening, and if the patch is small it will pay to shade the plants. The soil should not be allowed to get dry at any time during the summer, but a situation that remains wet throughout the winter should be avoided.

In the neighborhood of Florin, Sacramento county, strawberry culture is the leading industry. Here a windmill irrigates each five acres. The plants are set in rows, between every two rows is the path for the picker, while on each side is a ditch with dams to hold the ditches level full, and these ditches are full of water from the time the berries blossom until the last berry is picked. The main requirement in successful strawberry culture, is an abundance of water, "first, last and (excepting winter) all the time."

Throughout the first season see that all runners are pinched off, that all the strength of the plant may be thrown into the forming of crowns.

MARKETING.—As a rule, strawberries are picked direct into the baskets or trays they are sold with, and the bottoms of which are said to come nearer the top each season. The picker carries a long shallow box with a handle and in this six or eight of the boxes rest. Some growers prefer to repack all of their berries so as to face the box with the choicest berries, which are packed over the face of the box sold. This method may do for immediate sale, but where the berry has to be shipped East it will be found that they will carry better, keep nicer, and command better prices, if the berry calyx and short pieces of the stem are allowed to remain, and the berries thrown loosely into the box, as picked; care being exercised that the pickers gather no unripe, overripe or defective berries.

BLACKBERRIES.

The same soil and situation required for strawberries will be found best for the blackberry—with a clay soil preferred. The plants should be set out in the fall, and if the ground can be heavily manured, the plants can be set not less than four feet apart each way. Many prefer to plant in rows when on poor soil, but as the blackberry throws out its roots for eight to twelve feet, it is best to enrich the soil (you can hardly make it too rich) and set the plants four to six feet apart. If the patch is to be cultivated with the horse, measure the width of your cultivator and allow 18 inches more each way for the plants, and arrange to cultivate each way, by leaving room at the fence for the horse to turn.

Many growers get along without stakes, by low-heading, but where cedar stakes can be had, I prefer a stake that rises six feet above the soil, one to each plant. Cultivate thoroughly, and when your plants are five feet tall, pinch off the top. This will send out laterals from each bud. As soon as these are eight inches long pinch off the tips, and they will throw out sublaterals, thus forming a compact bush, with short arms and well shaded. Such a plant will not break down, and its berries, being shaded, do not sunburn, and it also grows its berries within easy reach. The usual plan of allowing the bush to grow like a bean pole, and then cut off all of the top and the greater part of the long arms, and thus leaving only the main stem and butts of branches, with all of the fruit buds cut away is akin to the fruit grower who yearly cuts away all the limbs bearing fruit spurs and leaves the trunk and barren branches. The second season the old wood should be cut away, as soon as it is done bearing, and the new growth tied up to the stakes.

VARIETIES.—A berry that is a proved success in one section may prove a dismal failure in another. This is specially true of the Crandall or Texas Hybrid, which bears enormously in one section and will grow nothing but bushes in another. The Crandall is very generally preferred on account of its earliness, which makes all the difference between profit and loss. The berries ripen a full week before the majority of the varieties, and continues to bear until Christmas. The bush being an evergreen, its only fault is its excess of wicked thorns. Where the Crandall fails, the Erie or Wilson Jr. will be found to bear early and produce big crops. The old Lawton is a fine berry, and for a large yield of fine berries nothing can excell the Kittatinny, though not very early.

Nothing need be said of picking, save that a ripe berry "that shines like a nigger's heel," is ripe and delicious; while one with a red tinge or dull lustre, will set your teeth on edge for a day, and in consequence only ripe berries should be picked, as the best blackberries are not fit to eat if picked before they are ripe.

DEWBERRIES.

This is the coming blackberry of the State. In its home it selects a white sand soil, and hence stands our extreme summer heat and is not sensitive to cold.

VARIETIES.—At present "The Lucretia" is preferred. The berry is as large as the blackberry, very fine in its flavor, and can scarcely be told from its brother, the bush blackberry. The dewberry is trailing in its habit and will cover an area of 20 feet. To cultivate the berry it is necessary to train it on a trellis. To get the best results, set your plants in the fall, place them two feet apart and give the ground a heavy mulch of manure. Set your rows from N. W. to S. E., that the sun may get in between the trellises during the day. Drive a post at each end of the row with intermediate stakes for supports. Have the stakes fully six feet high and stretch a wire about every 18 inches. Train the vines, as they grow, over the wires, and the next season your trellis will be a mass of bloom long before your blackberries have shown any buds, and you will have an immense yield of delicious berries *three weeks before the blackberries are ripe*, which means "big money" to those that get their bushes in bearing next year.

CURRANTS.

The currant delights in a rich soil and repays a liberal dressing of manure and an abundance of water. In the hot plains it will be found necessary to grow the bushes where they can have the partial shade of the orchard trees. The bushes should be set six feet apart, or three feet, and every other bush dug out when they fill the ground.

VARIETIES.—"The Cherry" is the leading currant. If heavily manured, the ground kept moist and mellow by cultivation, it will not belie its name, but will produce great clusters of berries as large as the average cherry. The White Grape currant is a heavy bearer. The berries are not as large as the Cherry, but the berry is much sweeter. Fay's Prolific is a favorite in some sections. The berries are large, sweeter than the Cherry, red in color and very prolific. The Black Naples is the old black currant that grew in the corner of your father's garden lot and emitted a perfume as peculiar as that of Wm. Goat. This currant's only value was that it was black. It is slow to bear and a very shy bearer, though a strong grower. The Crandall currant is a black currant that in color and flavor resembles the Black Naples, but, unlike it, is a very heavy bearer and makes delightful jams. The bush grows very strong and the variety is called a "Tree Currant;" in consequence, the bloom is unique and very pretty, while the plant is not affected by scale or other insect pest. Currants are picked "stem and all," and in cool situations will produce enormously.

PESTS.—The currant has special enemies. There is a borer which eats his way into the pith, and then travels up and down the stem. The only way to exterminate it is to cut off and burn all branches as soon as you notice their wilting. There is another root borer that girdles the bush below the ground as nicely as the gopher girdles the English walnut tree. This root borer is very difficult to reach. By removing the ground all around the butt of the bush, rounding up the ground so as to form a basin, and then filling this basin with scalding hot water, you can get the most of them. Removing the dirt and covering the butt with fresh wood ashes seems to work very well and adds to the fertility of the soil. The San Jose scale is particularly fond of the Cherry, White Grape and Black Naples currants. The usual washes will keep it in subjection, but they should be applied after the leaves have fallen, and again before the buds swell, as any of the sulphur and lime washes will kill the berry blossoms as certainly as these washes will kill a cherry tree after its buds have swelled.

GOOSEBERRIES.

The gooseberry, like the currant, does best in a partial shade; if too dense a shade, the bush bears lightly and the berries mildew badly; if in too hot a situation the berries cook in the sun. They should be planted with plenty of room to grow or every other plant cut out after the second year. On rich soil six feet apart will prove none too far. To prevent mildew and procure large berries, thin out the bush each fall.

VARIETIES.—"The Industry" gooseberry is, without doubt, the best berry to grow. Its freedom from mildew, vigorous growth, and immense yield of very large berries make it superior to the English varieties with their determination to mildew. Next to the Industry in size is the "Houghton Seedling," a nonmildewing variety, of good size and a good bearer. The old "Mountain Seedling" does well anywhere, but the berries are very small. A better variety is "The Oregon," which, while not a large berry, is a heavy yielder and free from mildew. The wild California gooseberries excel crab apples for jelly and are fast coming to the front for that purpose. The common wild gooseberry is as full of sharp points as a porcupine and not very large, but there is a variety growing in the high altitudes that is larger than the English gooseberries and free from thorns.

RASPBERRIES.

I have sandwiched all the small fruits between the two best; viz.: the strawberry and raspberry. The raspberry gives me the best results on a soil that is heavily manured in the fall and plowed in the spring. With your soil thoroughly pulverized, strike out the ground with furrows eight to ten inches deep, having them cross at every four feet. If you are not crowded for land make it six and you will realize on it in larger berries and more of them. Raspberries can be grown, if headed very low, without stakes, but I prefer a five-foot stake to tie the bush to. Cultivate and irrigate so as to keep the ground free from weeds and mellow. When the plant is two feet high pinch off the tip. As soon as the laterals are a foot long pinch them in turn. The following season cut out the old wood, as soon as the berries are done bearing; tie up the new wood, and leave all the wood on, save the extreme tip. It is a common and suicidal policy to let the bush grow at its own sweet will throughout the season, thus forming all its fruit buds on the long spindling branches, and then cut all these fruit bud branches off at trimming time, and leave the bare and almost barren stalk.

VARIETIES.—Of the red varieties, the Barter raspberry is more largely grown in the State than any other variety, and is very satisfactory, being red in color, large in size, fine in flavor, a big bearer and firm for shipping. The Cuthbert and other varieties have their admirers, and are all good berries. The black raspberries do not adapt themselves to our climate. While they grow and bear, there is no money in them. The Gregg, Souhegan, New Rochelle and Tyler are usually grown. I have also the old "Thimble berry," that we stole out of the farmers' fence corners and strung on timothy grass when we were barefooted boys, and it does as well (in the shade) here as there. The "Yellow Canada." that does so well in the East, is a delusion and a snare here. There, they are very large, juicy and delicious; here, they are about the size of and as palatable as a shirt button. It may be that in Oregon, or in our higher altitudes, it would do as well as East. The Caroline and Brinkle's Orange do better, but I find the new "Golden Queen" to excel them all. The bush is a very strong grower; so far not affected by pests. Every

bud sends out a branch that hangs full of berries, so that when grown sufficiently far enough apart, the bush is a mass of golden yellow berries from the ground to the ends of the tips. The berries, however, while very enticing in their mellow tint of yellow, are not as deliciously fragrant and luscious as the red varieties.

MARKETING.—The raspberry is very delicate, and every picker should first be thoroughly taught how to *roll* the berry off of its stem and to never squeeze and pull it. Once off, the berries are laid, not thrown, into small, flat baskets, holding one pint each. The berries should be picked by sun-up, and shipped or sold as speedily as possible.

Where there is a vineyard in connection with the berry patch, the large surplus leaves of the Isabella grape will be found an excellent lining for all berry boxes. If the berries have to go over a rough road, make a cushion one-half inch deep of rye or wheat straw, cut the length of the box, cover with paper, and set the small berry boxes on this.

PESTS.—The raspberry and blackberry have a common enemy in the rose scale or white scale (*Diaspis rosæ*), which is very difficult to kill on the raspberry. The washes used for the San Jose scale will hold it in check, and should be applied after the leaves fall and again before the buds start. If all of the old stumps are cleared away, so that the wash can get in and down around the base of the plants, good results will follow. Unfortunately, the foliage is too dense to spray in midsummer, and you always burn your berry brushes.

SUCCESS.

To be successful, there must be close attention to all the details. While the foregoing remarks may seem to cover the field, there remains *one* condition without which berry culture will not pay. We all irrigate while the bushes bear. Once they have ceased to bear, we show our ingratitude by turning the water on to some fall crop and let the berries scorch. Now, the fruit buds of the strawberry (its crowns), raspberry, blackberry, gooseberry and currant are formed in autumn, and not only on "small," but "big" fruits as well. If you would have every bud bear berries, continue irrigating all of the small fruits until the winter's rains moisten the ground. In that is the great secret of successful berry culture.

Small fruit growers have been the sport of the paragrapher for all time, and have to some extent merited it; but with the large yield and big profits possible in small fruit culture, there is no need of boxing berries, as a Quaker acquaintance did sweet potatoes. Noticing my quizzical look, he explained: "Thee sees I put a half bushel of good potatoes in the bottom, then a half bushel of poor ones in the middle, and top off with another half bushel of good ones, so that no matter how smart thee is, nor which end thee opens, they are bound to be good."

E. H. SCHAEFFLE.

SMALL FRUITS IN THE SACRAMENTO REGION.

SACRAMENTO, May 30, 1892.

TO THE EDITOR:—One of the most profitable branches of horticulture in California is berry-gardening. Each year the industry assumes greater importance as improved varieties are propagated or imported, and growers become more skilled in cultivating, picking and marketing.

A few years ago, shipping berries was an experiment, but now hundreds of carloads, especially of strawberries, find a ready and remunerative market North and East. It is well-known that it takes experience to successfully conduct a fruit ranch, and the same is true of berry-growing. If possible, more care and a knowledge of every phase of the business, from the act of placing the plantlet in the earth to harvesting the fruit, is required than in any other horticultural pursuit. To make a decided financial success, the gardener must be familiar with every detail of the business, though an amateur, who is willing to learn and will not be discouraged by reverses, should not hesitate to embark in such an enterprise, as there is a living in it for the experimenter, provided he has good land and proper facilities to irrigate and market his berries.

As to the profits, I can only speak from experience and observation in the Sacramento valley. Here a good strawberry garden will yield from $800 to $2000 per acre. Erskin Greer, chairman of the Board of Supervisors, has one field of seven-eighths of an acre from which he sold last year $1340 worth of berries. The Davis Brothers near Florin have frequently sold from $1000 to $2000 worth of berries from a single acre.

STRAWBERRIES.

VARIETIES.—The variety to be adopted depends very much on the locality. Two varieties have been successfully grown in this valley, the *Triumph de Grand* and the Jessie. Many other varieties have been experimented with, but the two mentioned are now looked upon as standards. The former is an excellent shipper and has carried well as far East as New York and Chicago. The berry was placed in the Eastern markets this year at the rate of a carload per day, and in not a single instance was it reported as arriving in bad order. For an all-around berry, I think it has no equal.

The Jessie is a much larger fruit, more attractive, but fit only for the local market.

SOILS AND CULTIVATION.—High, red clay, clay with enough sand and well-rotted manure to thoroughly subdue the earth and make it loose and yielding to cultivation, is the best for strawberries. It produces a berry having firmness, rich flavor, fair size and excellent color.

Too much care cannot be exercised in preparing the ground for planting. The plowing should be deep and the earth thoroughly enriched. Careful preparation should be made for irrigation. I prefer beds four or five feet wide and the irrigating ditch between them should be flat and shallow. The strawberry does not throw its roots deep, hence the water must be kept near the surface. By exercising care in this matter much water is saved, as deep irrigation is entirely unnecessary.

PLANTING AND TREATMENT.—I prefer to plant early in the winter after the first rains have thoroughly saturated the soil. I set my line of plants eight or ten inches from the edge of the bed and 12 inches apart. If plants are no object and I am in a hurry for a crop, I plant two rows on either side, leaving a path two feet in width in the center. In the spring, sift over the vines well-decomposed straw or stable manure to the depth of half an inch. Cultivate thoroughly and a fair crop will be the result.

After the fruit is harvested, runners may be allowed to fasten in the limit desired for each row, and the succeeding year-old vines showing a lack of vitality may be removed. This may be kept up until the vines form a sod, and, having lost their vitality, must be entirely removed.

Care should always be exercised in preventing too thick a growth, and this can only be prevented by constant pruning. Each winter a thick coat of manure well pulverized should be thrown on the berries, after which a light harrow may be run over them with advantage. The picking path should be thoroughly cultivated at least two or three times a year. The soil should be kept loose.

MARKETING.—I make it a rule never to market an inferior berry. It is best to order the pickers to carefully pluck green and ripe fruit which is or promises to be unmarketable, and throw it in the ditch. This rule rigidly, adhered to, will pay in the end by establishing a reputation. Better not pick berries if poor. A few boxes of small half ripe or overripe berries placed on the market will do the grower more damage than he can estimate.

If only choice fruit is grown, the farmer will soon solve the question of markets. First-class berries will make their own market. Consumers east and west are looking for the best, and, if growers would pay more attention to quality than quantity, they would make more money, and would never be annoyed by haggling over the price with the dealer or shipper.

BLACKBERRIES.

The blackberry is even more profitable than the strawberry, and will grow on a wider range of soil. It, too, must be well supplied with water, and too much cannot be said about enriching and cultivating the ground. The rows should be from eight to twelve feet apart; I prefer ten feet. Between the rows, vegetables may be grown without injury to the vines, but, where constant gardening is kept up, more manure should be used about the roots of the vines, and a mulching with rotted straw should be added two or three times a year.

The vines should be pruned low, in order to get fine, large, luscious berries, and for convenience in picking. Never allow a vine to grow so tall that a picker must reach for the fruit. The only variety which I would recommend in this valley is the Lawton. The rules already given for picking and marketing strawberries apply also to the blackberry, and I may properly add that only fresh, new boxes of a style acceptable to the trade should be used. I never allow a stem or leaf to go to the market.

The berries should be well-graded as to ripeness. If for immediate consumption in the local market, they should be ripe, having no red berries to mar the appearance of the basket. If for shipping, picking should be carried on so as to secure medium ripe berries.

RASPBERRIES.

Raspberries are also grown successfully here, but my experience has been limited. However, they are easily pruned and cultivated, and, while somewhat of a shy bearer, are a reasonably sure crop. They will not take so much water as the blackberry and strawberry, but require a like treatment in other respects. They appear to thrive well on thin soil having a hardpan near the surface. The red Barter raspberry is the only one successfully grown here.

CURRANTS.

Currants, where they can be grown, prove a valuable adjunct to the berry garden and always find a ready sale. The fruit does not thrive in the valley, but near the coast and in the mountains it reaches perfection. Owing to the prescribed districts in which it grows, it has for years commanded a good price. As a jelly fruit it has no equal. For this purpose the common red current is the best, it having more body and making a superior jelly to its more attractive sister, the cherry currant. These two varieties are the only ones that can be recommended.

Planting, pruning and other details I must leave for those having more experience than myself.

Small fruit culture is attendant with endless labor, but, withal, if well conducted, is both pleasant and profitable, and each year the field for the industry is widening.

S. I. HOLSINGER.

SMALL FRUITS—GENERAL CONSIDERATIONS.

SANTA CRUZ, May 30, 1892.

TO THE EDITOR:—There are certain grave and potent reasons why small fruit-growing must always commend itself to all those who are fortunate enough to possess *suitable locations for such culture.*

1st. Because no other fruits that can be grown yield *so quickly* a generous return for all the time, labor and cash expended upon them, or contribute so largely in so short a time to the every-day comfort, health and pleasure of the grower's family, as do the whole berry list: strawberries, raspberries, blackberries, currants, gooseberries and all, each, in its turn, adding a new zest to the daily fare throughout the whole summer season, and filling the bill (no pun intended) of human needs at this time as nothing else could do.

2d. Very few in all the long list of horticultural products return *so large* an interest, acre per acre, upon the amount invested, if all conditions are favorable.

3d. The cost of a plantation of small fruits is so little compared with the amount required to start one in almost every other branch of horticulture, that this, in itself, is often a matter of grave consideration to a man whose ready cash is pretty well used up after having bought his land, built house and barns and gotten team and tools to run things with, to say nothing of cost of clearing and getting the land ready for future crops, nor the price of trees to put upon it, which must be planted and cultivated for four or five years at least before one can hope for any returns for all the labor bestowed upon them.

4th. In proper locations (that is, near centers of thickly settled districts), and with proper management, no other crops can be harvested so cheaply, since, from the very nature of the crop to be gathered, there is but little *heavy* work required. Deftness and delicacy of touch being more important requirements than strength in a berry picker, it follows naturally that women and children make the best pickers, and they can be hired in this capacity for the season at far less than the wages of an ordinary working man. Indeed, where a man has a large family of his own, every child can help in this work without any overtaxing of its strength, and thereby lend its aid in lightening the burden of its parents.

5th. The heaviest part of the berry-harvest comes in the midsummer during the school vacation, when there is an abundant supply of boys and girls who are only too glad to be able to earn something for themselves by picking in the berry fields.

6th. The returns in small fruit growing are *so immediate.* With proper cultivation and an intelligent selection of those varieties best adapted to one's soil, the plants set out with the first rain in the fall, will yield a fair crop the next spring, and with very little extra expense of any sort, outside of ordinary care and cultivation, will continually increase in their yield for years, as the plantations are extended from yearly increase of plants by "runners," "suckers," etc.

7th. The outlay for boxes, chests or other shipping crates is a gradual one—not demanded all at once, but little by little as the patch is extended and the crop increases.

8th. Under a liberal system of intelligent manuring, which shall prevent any exhaustion of the soil, the berries can be grown both profitably and successfully between the trees in young orchards, where one is limited for space, and by their profits pay all the expenses of the orchard cultivation until the trees themselves come into bearing and require the whole strength of the ground.

So one might go on stating the many advantages which the culture of small fruits offers to those who have the ability to fill the conditions first stated—that is, *to those possessing locations suitable for the successful growing of small fruits.*

In other branches of horticulture there are recorded successes of all sorts of fruits in all sorts of climates, soils and conditions upon hilltops and in valleys, with irrigation and without irrigation, with pruning and without pruning, with spraying and without it, showing the infinite diversity under which profitable crops may be grown when the unfavorable conditions imposed by nature are supplemented by the keen wit of the intelligent horticulturist.

In small fruit growing it is different. The conditions of success are *few*, but they are imperative. As some writer upon this subject has tersely stated it, "The first requirement is water. The second is WATER! The third is WATER!!

This is especially true of California. Without water and enough of it for continued irrigation throughout our long dry season, one had better devote his energies from the very first to some other crop. *Small fruits are not the things for him to grow.*

Granted plenty of water, then the next condition is *nearness* to a steady market for his crop—one that is within three or four hours' travel by rail. Berry-growing is "touch and go" work! Each mile of the road or hours delay between producer and consumer tells heavily upon the quality of the fruit and the price it wlil bring in the market. Akin to this in importance is a home location in a populous district, from which a good supply of pickers can always be obtained at short notice when the rush of the crop comer on in midsummer. But *first* and last, and most important of all, is the planting of proper *varieties* of berries, such as shall meet every demand of both shipper and consumer—strawberries, for instance, that are red as blood to the very heart, firm and good travelers, not pithy, or with big white cores, but melting subacid, sweet and aromatic. Not *too* large, but perfect and regular in form and size, attractive to the eye and delicious to the taste (such berries as "Jessie," "Cloud," "Hoffman," etc.). In all other varieties, selecting upon the same principle the very best sorts of raspberries, blackberries, etc., that can be found, giving them the highest cultivation that they will take, and that preparation for the market that shall enhance the value of the fruit to the highest notch. Make easy work for one's salesman, a fat pocket for oneself, and give satisfaction to all concerned.

It would make a book to enter into all the minutia of cultivation, special pruning, etc., required for each plant of this class—varieties which one's experience had pronounced best for one's own locality, and so on, etc., but I fear I have already overreached the limit of space allowed, and hope these hints may be helpful to some of your readers.

L. U. MCCANN.

STRAWBERRY CULTURE.

SACRAMENTO, May 31, 1891.

TO THE EDITOR:—At least one year before the strawberry plants are to be set out, the preparation for their culture should begin by spreading upon the ground a good coat of well-rotted stable manure, or by the use of commercial fertilizers. The ground should then be planted to some other crop in order to work out the weeds and, if stable manure is used, to rid it of the white grubs which might otherwise injure the strawberry plants. In irrigating districts the ground must be well-leveled before setting out the

plants, and in all sections the ground should be plowed deeply and the soil finely pulverized.

If the ditches are six and the rows three feet apart, the cultivating can be done with a horse, thus saving time and expense. The ditches may be made either before or after setting out the plants. If they are made before setting out, I think the results more satisfactory, as the ditches serve to drain the beds if the weather is very wet and are ready for use when needed.

PLANTING. — When the ground is ready, a wire is stretched from end to end of the row as each row is set out, as a guide in making the row straight. Marks are made in the wire, or strings tied on, 12 or 15 inches apart to show the distance between the plants.

The plants should be runners from young plants, not those from an old worn-out patch. The plants should have their old leaves stripped off that they may not draw upon the vitality of the root, and in very warm weather the plants should be carried around in a pail of water. If the roots are very long, they should be cut off to a length of from four to six inches. A hole is made with a dibble and the plant, with its roots straight and spread out in a fan shape, is inserted, and the earth pushed firmly around it, taking care to leave the crown just even with the surface, neither above nor below.

CULTIVATION.—After the plants have had time to become settled in their new position, two weeks or more after planting, they should be well hoed, and from that time until they are plowed up and the ground put to other use the soil must always be kept loose, either by hoeing, cultivating or moisture; the weeds must be kept out and the runners picked off.

MARKETING.—The stage at which the berries are ready for picking depends upon the market, a shipping house requiring green berries while the local market needs them nearly ripe, but in either case, when the berries are ready for picking, the pickers must be instructed to pick with the hulls on, to throw away all bad ones, to give good full measure and to have the top layer no better than the bottom one.

I have heard of strawberries having too much water, but have never seen one that was injured that way if the berry itself did not touch the water. Water, and plenty of it, seems to be one of the most important helps in strawberry culture.

E. E. EASTON.

SMALL FRUIT GROWING IN SAN DIEGO COUNTY.

ESCONDIDO, May 30th.

TO THE EDITOR:—As to strawberries, experience and observation indicate that the "Wilson" is the best-adapted to any and all localities, but the beginner can experiment with one or more other varieties, and perhaps find a good one for his locality. Select a smooth, nearly level or gradually sloping piece of land, of any kind of soil that is available, except adobe, sandy loam preferable; manure heavily, plow deep, irrigate thoroughly, unless the soil is well wet by rain. Set mostly "Wilson" plants, about 12 inches apart in the row, rows three feet apart; keep well cultivated and irrigated (if necessary use a hoe in the rows) till fruit begins to form, then mulch thoroughly with old straw or any available material. Keep the soil damp, irrigate if necessary, but keep it damp. Pick the berries early in the morning while they are cool, and directly into the boxes in which they are to be sold. After a crop has been gathered, the soil may be allowed to get partially dry, and all that can of the mulch cultivated in; then thoroughly wet down. Plow up the patch after the third or fourth crop, and reset with home-grown, selected plants, that you know are first-class in every respect, and thus increase the productiveness of your patch.

RASPBERRIES AND BLACKBERRIES.

Varieties of raspberries that do well at high elevations sometimes do not succeed in the warm valleys, so the best rule is to notice what kinds do best in the vicinity or in similar localities, and select two or more varieties of Reds, and also Black-caps, and, after trying them, keep those that do best. Of blackberries, the Kittatinny and Crandall are best; but other varieties can be tried on a small scale, and perhaps something valuable for the locality may be found. The above two varieties seem to be good everywhere. Land may be more sloping than for strawberries, but must be well fertilized, plowed deep, and so arranged that water can be run between the rows at a moderate grade; good natural or artificial drainage is necessary. Set the plants in rows six to eight feet apart, and three feet apart in the row, and allow suckers to fill in the spaces so as to have a continuous row. Cultivate shallow, or so as to avoid injuring the roots; irrigate plentifully till fruit begins to form, then, if the ground can be well mulched, cultivation may be dispensed with; but keep on irrigating and the berries will be larger and more juicy. Pick into the boxes for market, and do not leave berries that are intended for market on the bushes till they get too soft; those for home use are best thoroughly ripened. Old vines may be cut out after the berry season is over, and the new vines shortened into three or three and a half feet in height. After getting started in the business, grow your own plants from the best vines in your patch.

CURRANTS AND GOOSEBERRIES.

These fruits do not seem to do well in the warm valleys, but on the mountains, or where there is some cold weather, they are a success. They will stand more neglect than other small fruits, but pay only when well taken care of; they succeed best where irrigation is not necessary, but will not do well on a dry, shallow soil. Set them in good, deep soil, but not too rich in vegetable matter, or they will run to bushes, with little fruit. Set them in rows each way, six to eight feet apart, as circumstances admit. They do extra well in nooks and corners around buildings, where they are partially shaded; prune out all wood too old to bear, keep the bush in an upright form, allow no weeds, and keep the surface cultivated and mellow. Fruit for home use is best thoroughly ripened; for market, it must be picked while the bunches hold together, and before the berries mash easily.

The requisites in growing most small fruits are, a good soil, thorough cultivation, and plenty of water, naturally or artificially. With these, a beginner can soon master the business, and when a plantation is once established, an income is assured.

H. W. WARD.

HILLSIDE BLACKBERRIES WITHOUT IRRIGATION.

SANTA BARBARA, May 20.

TO THE EDITOR:—I will give you some of my experience in raising blackberries during the past 12 or 15 years, although my success, or want of success should, perhaps, operate rather to deter, than to stimulate. Had I not several elements in my favor, as the most suitable ground, it being rich side hill facing sharply to the north, retaining moisture late in the season; several boys to whom I could give profitable employment, nearness to market, being only a mile from State street, Santa Barbara, and moreover, a kind friend who gave me the plants, free of charge (he was plowing them up, as being unprofitable to him), I should have made—not a failure perhaps, but no money.

I had, perhaps, one and a half acres, but in part of it I had apple trees and a few cherry, pear, peach trees, Blackcap and Brinkle's orange, raspberries, gooseberries and currants. The blackberries enroached upon everything but the gooseberries.

The varieties I grew were Lawton and Kittatinny. The Lawton is a large, roundish berry, very tart; too tart to eat out of hand, unless dead ripe. The Kittatinny is a largish, long, very sweet berry, not quite so showy as the Lawton. I could perceive no difference in average productiveness.

The rows are about eight feet apart, canes one to two to a foot; too steep to cultivate both ways. Depending upon the rains, I sometimes plowed as early as December; after one plowing, the cultivator and hoe did the rest, going over them three or four times during the season. When the canes were five or six feet high, I cut them back to four or five feet, keeping well trimmed between the rows, to facilitate the pickers. For this purpose, I use a piece of a broken scythe fastened to a handle, and can work rapidly. The hoeing also is quickly done; pulling the dirt down the steep hill among the canes, thus covering most of the weeds. When done bearing in the fall, I cut off the old canes at the roots with a long-handled trimming shears, pitch them out with a pitchfork, carry them to the lower side of the patch and burn them.

Picking commences about the 10th of June and continues till October or November. I get the town boys and girls to assist us in this, paying them one to two cents a box of nearly a pound. They usually do very well at this, picking sometimes as many as 100 boxes apiece, a day, with little or no supervision. Occasionally one or two of them will get a little frisky or a trifle lazy and put leaves, or stones or apples in the bottom of the box, and cover carefully with nice large berries and collect pay as if all right; but, considering they were town boys, I seldom had any cause of complaint. Sometimes whole families would come with teams and picnic dinners and stay all day, and have a jolly good time of it. Such usually pick for themselves, paying me about four cents a box. I gave all free permission to eat not only all the berries they wanted, but peaches, nectarines, apricots, apples, plums, cherry-plums, etc., and this may doubtless be the reason that they gave us so little trouble and did so little damage, and required no overseeing. True, they would not stick to their rows very well, or pick very clean, and I doubtless lost somewhat in this way; but the added comfort and increased pleasure much more than counterbalanced this little loss.

MARKETING.—Great care is necessary in handling this fruit. It should be picked in the boxes in which it is to be sold, sticks and leaves carefully excluded, handled carefully to not bruise and marketed in 12, or at most, 24 hours after picking, or the berries will begin to mold. When taken but a mile in a spring wagon, they sometimes settle so as to require refilling.

In picking, we use light-handled trays, just big enough to slip in nine or twelve boxes. Great care is required to keep out dust in marketing. We sell some to dealers, some we peddle over town, in which case people tell us that our berries are not so large and fine looking as those that are irrigated, but are sweeter, and they prefer ours. We often buy boxes that have been used, when thus engaged, paying 30 to 50 cents a hundred. If not weather-beaten, they answer about as well as new ones, which cost over a dollar a hundred. While peddling, we often trust small sums and scarcely ever fail to collect without trouble.

We have boxes just the right width and length to suit the berry boxes, two, three or four stories high, with loose boards to slip in between the different stories, as we pack in the berries carefully covered to exclude all dust, and hasten to get them sold quick as may be. Every hour of delay detracts from their fresh appearance.

COST AND PROFIT.—I will extract somewhat from my daybook. It is not very accurate; thus in the item of expense, we sometimes sold berries for boxes; these cases were not put down in the column of expense. What our own family picked also was not put down. The berries used in the family and for canning, are not mentioned. In 1881 we sold 5474 boxes for $354.02. In 1882 we sold 4189 boxes for $300.60. In 1883 we sold 2685 boxes for $200.15. In 1884 we sold 8091 boxes for $504.25. In 1885 we sold 3276 boxes for $201.10; cost $12 75. In 1886 we sold 3466 boxes for $265; cost $26.05. In 1887 we sold 3432 boxes for $220.50; cost $9.80. In 1888 we sold 3338 boxes for $234 48; cost $30.28. In 1889 we sold 6548 boxes for $338.69; cost $125.98. In 1890 we sold 5702 boxes for $275.89. "Cost," means money paid pickers outside from my family, and for boxes. Some years we bought nearly all our boxes for berries; this is not taken into account at all, nor is it when people picked and took pay in berries; nor is it when berries were given away—sometimes in considerable quantities. The time spent by my family, self, wife, and one to three or four boys, it is impossible to estimate, even approximately; it might amount to an average of one person six months each year, possibly considerably more than that.

The berries must be very ripe, and if left a little too long, they decay, mold or drop off. We lost considerable in this way, especially when, as sometimes happened, there was a glut in the market or a scarcity of pickers just at the nick of time.

OTHER SMALL FRUITS.

Blackcap raspberries are fine, but being among the blackberries they were run out in three or four years. So also, to some extent, the Brinkle's orange. According to my experience, the latter is too soft to market profitably. They soon look wilted and settle in the box. I have a kind of wild blackberry, or perhaps it is dewberry, that ripens early, has a sort of gamy flavor, so to speak, that sold readily, but it is not sufficiently productive to be profitable. My apple, peach and pear trees amid the blackberries, bore well, but many of the apple trees died. due perhaps, more to the scale than to the enroachments of the blackberries. My cherries grow thriftily, but bear little, but such is the case with all cherry trees near Santa Barbara. Currents bear but little, and half of them are dead.

My gooseberries hold their own among the blackberries and bear moderately well every season. They are very rampant, and want a deal of trimming and thinning out. Variety unknown.

My blackberries, as will be seen, bear much more some seasons than others, and this does not seem to be owing entirely to wet or dry seasons, either. I think the roots lie by, partially, some years, to put forth renewed vigor in succeeding years. Last year I was in this—Ventura Co.—and my blackberries did poorly, and probably not altogether from neglect, either. This year my sons are tending them, and they write that some of them are dead, but those that are alive are doing well, and will produce a good crop.

I have not raised strawberries much, in this State, on account of hens. What little I have raised, fencing out the hens with laths stuck in the ground, have well paid for the trouble, in family comfort, for of course I have not raised them for market. Having no means of irrigation, the vines have died every summer, so I have to reset when the fall rains come. But they are so delicious when fresh picked, and are so easily raised, that this little trouble is easily forgotten. I raised a few on my place at Sespe last year, but the roots all died last fall for want of water.

S. P. SNOW.

SMALL FRUIT GROWING IN WISCONSIN.

ARKANSAW, WISCONSIN, May 31, 1892.

TO THE EDITOR:—Beginning with strawberries as the first of small fruit, I would say, first, get the very best kind adapted to the locality you wish them for. As the best all-round varieties, I think I may safely say Wilson's Albany comes first. It is the most popular strawberry in cultivation and too well known to need description. Next comes Crescent Seedling. This is a pistillate or imperfect flowered variety, and must have perfect-flowered plants set among them or they will produce imperfect fruit. Such a plant every 15 or 20 feet will do. The Sharpless is a splendid berry, of large size, very vigorous and productive, of the finest quality. With these three varieties, one has early, medium and late berries, thus making the season last much longer than when one variety is used.

Prepare the land by heavy manuring, deep plowing and making it mellow and fine so that the roots can run freely, thereby insuring your plants from heat and frost. Set the plants as early in the spring as the ground can be prepared. When planting, do not let the roots become dry. Carry them about in a pan with just enough water to cover the roots. If the foliage becomes wet, it often causes the crowns to rot. Be careful to have the crowns even with or a little above the surface of the ground. For field culture, plant in rows four feet apart and the plants one foot apart in the row, making your work lighter by using horse and cultivator. For the garden they may be planted closer if the hoeing and weeding is done by hand. Keep clean, and pick off all blossoms the first season. In dry seasons, I have found it very beneficial to irrigate.

Add one pound of crude ammonia to a barrel of water. I use a kerosene barrel. When dissolved, stir well and apply to plants every evening while in bloom if dry weather continues. Here, we hire them picked for two cents a box, using the paper boxes holding a pound each. We pick through the day and market them in the morning, as this is the most satisfactory to all concerned. I find that it is better to renew the bed every second year, and then I am sure of a crop from one or both.

RASPBERRIES

For field culture should be planted in rows five feet apart, with plants three or four feet apart in the row. The Cuthbert is one of the best late red varieties, large, firm and of superior quality. It is also very productive. Of the yellow raspberries, the Golden Queen is a great beauty, of large size, productiveness and high quality. It is very hardy, and a favorite for home use or near market. It is light amber in color. The Gregg is also a favorite. It is very large, and it is really wonderful how many berries may be picked from a single stem. This is a very hardy variety also.

Horse and cultivator are used in the field, and every spring each bunch is cut back until not more than six canes are left. The berries are larger and the vines more thrifty. I leave this until spring, as some might die out through the winter, and if there are not about six good strong canes the crop of berries will be light.

Continued on page 550.

THE HOME CIRCLE.

The Voice of the People.

By JAMES E. CLARK.

Swing inward, O gates of the future,
Swing outward ye doors of the past,
For the soul of the people is moving
And rising from slumber at last;
The black forms of night are retreating,
The white peaks have signaled the day,
And Freedom her long roll is beating,
And calling her sons to the fray.

And woe to the rule that has plundered
And trod down the wounded and slain,
While the wars of the old time have thundered
And men poured their life-tide in vain;
The day of its triumph is ending,
The evening draws near with its doom;
And the star of its strength is descending
To sleep in dishonor and gloom.

Though the tall trees are crowned on the highlands
With the first gold of rainbow and sun,
While far in the distance below them
The rivers in dark shadows run,
They must fall, and the workman shall burn them
Where the lands and the low waters meet,
And the steeds of the New Time shall spurn them
With the soles of their swift-flying feet.

Swing inward, O gates till the morning
Shall paint the brown mountains in gold;
Till the life and the love of the New Time
Shall conquer the hate of the Old.
Let the face and the hand of the Master
No longer be hidden from view,
Nor the lands He prepared for the many
Be trampled and robbed by the few.

The soil tells the same fruitful story,
The seasons their bounties display,
And the flowers lift their faces in glory
To catch the warm kisses of day,
While our fellows are treated as cattle
That are muzzled when treading the corn,
And millions sink down in life's battle
With a curse for the day they were born.

Must the sea plead in vain that the river
May return to its mother for rest?
And the Earth beg the rain clouds to give her
Of dews that are drawn from her breast?
Lo! The answer comes back in a mutter
From domes where the quick lightnings glow,
And from heights where the mad waters utter
Their warning to dwellers below.

And woe to the robbers who gather
In fields where they never have sown,
Who have stolen the jewels from labor
And builded to Mammon a throne;
For the snow-king asleep at the fountains
Shall wake in the Summer's hot breath
And descend in his rage from the mountains,
Bearing terror, destruction and death.

And the throne of their god shall be crumbled,
And the scepter be swept from his hand,
And the heart of the haughty be humbled,
And a servant be chief in the land;
And the truth and the power united
Shall rise from the graves of the true
And the wrongs of the Old Time be righted
In the might and the light of the New.

For the Lord of the harvest hath said it—
Whose lips never uttered a lie—
And his prophets and poets have read it
In symbols of earth and of sky,
That to him who hath reveled in plunder
Till the angel of conscience is dumb,
The shock of the earthquake and thunder
And tempest and torrent shall come.

Swing inward, O gates of the future!
Swing outward ye doors of the past!
A giant is waking from slumber
And rending his fetters at last;
From the dust where his proud tyrants found him
Unhonored and scorned and betrayed,
He shall rise with the sunlight around him
And rule in the realm he has made.

What's in the Frying-Pan?

OR

Mattie, a Camper's Cook.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

"Going camping, you say?" and Miss Hetty, with a thoughtful air, turned the sprinkler of her hose from a bed of mignonette to the row of "Blanche Ferry" and "Eckford" sweet peas which reached clear across her garden.

Mattie watched the drops as they fell. From the "Princess of Wales" near, so dainty in mauve and white, to the "Indigo King" beyond, royal in purple and blue; from the two "Princes," superb in bronze, orange and pink, to the "Queen of England," large and stately in pure white; and the lesser dignitaries, with the glorified painted ladies scattered in between, all seemed to face her, lifting their brilliant standards and spreading their delicate wings to catch the sparkling shower. The grateful fragrance of their breath was all about her.

"Yes," she said, a trifle wearily. "We are going camping, and right away, too. Doctor Allen advised it, and a very good chance has come."

"What are you so solemn about? It will be very good for Tom. Really, Mattie, I confess I felt a little anxious when I first saw him after I came back; he looked so hollow-eyed."

"He just would go back to the store too soon after that attack of the grip. And you know what a cold winter we have had, and then the late rains, and the store is so draughty, and Mr. Bowers—O, I shall always just hate him! He pooh-poohed the idea of a fire in the store." Mattie was very near tears.

"There, there," said Miss Hetty, soothingly, "Tom has a splendid constitution, and he will be all right with rest and care."

"But that's just it," cried Mattie. "I am so anxious about him and so fearful I can't care for him as I ought. He has to be watched, he's that careless about wrapping up. He's always 'banked,' as he says, on his good constitution, and it's made him reckless. But that's not the hardest; it's the *cooking* for him, he's that finicky and fussy since he was sick. I never knew him to have a poor appetite before; but doctor says I must feed him well. Now think of that! There's a tiny, pocket edition of a two-burner gasoline stove down there, I hear. What can I do on that? I'm not used to gasoline stove cooking, anyhow. And Tom's already beginning to worry about the expense, and losing more time after what he's lost already, and he says I must be careful, O, so careful about expenditures. I just feel between two fires."

While Mattie was speaking, Miss Hetty had turned the faucet and coiled up her hose. She now came and put her arms around Mattie.

"My dear," she said "these are the times when one realizes what it is to be born a woman. The everlasting balancing and conquering of circumstances on a scale so small and yet so imperative wears patience, temper, nerves; but like air and sunshine, the results are taken for granted."

"Never conspicuous except for their absence," flashed Mattie, "and then it is never this or that done right, or always thus and so, wrong."

Miss Hetty looked at Mattie with a comical air. "Well, you have struck 'the he of it' this time. I perceive Tom has really been sick. I'm so sorry I was away."

"So am I. Why couldn't I have gone camping when you did?"

"Then who would take care of our places? I'm going to take good care of yours, mind you. You've been just too good about mine, and Tom not well, too."

"O, I was glad to do it, and it was a distraction evenings, when Tom was better, to come and help me spray."

"Come in and sit down; can't you leave Tom a little longer?"

"Yes, Jack West is there cheering him up. It's his tent and lot he's asked Tom to 'hold down' for him. I told Tom I was going to advise with you. He was pleased and said: 'Suck her dry, Mattie. Doctor says I'm going to get the appetite of an ostrich down there, but not the stomach of one yet awhile. So you must take good care of me.' So easy, isn't it, to be economical and careful of a convalescent stomach, and on a miserable little gasoline stove? Suppose I might run a Delmonico restaurant, off hand, I'm so smart."

Miss Hetty laughed. "Well, come in" she said cheerily. "There, lie right down on the lounge. Now, then, are there any fixtures with your stove?"

"Fixtures! O yes-a little oven, I believe, separate. That's down there. I'll have to take a frying-pan, I suppose, some bacon, and make lots of cake and pies and cookies before I start—O, dear."

Miss Hetty suddenly bounced into her kitchen, then out again, dangling before Mattie's astonished eyes three triangular-shaped tins, with handles. The handles were on the hypothenuse, which was convex; opposite the handle the tin came to a right-angled point. Then each had a cover, and held about two quarts, and could be placed so as to form a circle—handles on the outside. Miss Hetty placed them so.

Mattie stared. Then, excitedly, "Why, they are to put over a burner—three git over one"—

"That's it; three things cooking at once. I've cooked meals for from six to a dozen people, many a time, on one of these same little camping stoves. Several courses, too. You can keep things warm in your oven when you are not baking in it, and on top when you are. And it makes a good heater cool nights—such as you will have at the coast—heats up a tent quick.

"Fishing is reported good down there. Tell me about cooking fish. Tom can't live on boiled things, and I'm afraid I'll kill him if I cook in a frying-pan—frying is called so unhealthy."

"There's frying and frying," said Miss Hetty. It all depends on the cook and the know how. I like frying-pans, and plenty of them. But I'll tell you what not to do. It's the way I saw fish cooked down to the coast, though. The fish is dressed, and mangled in the dressing; then flung into water to stand till convenient to take it out. When the gasoline stove is lighted, before it is hot, the spider is put on, and cold grease into the cold spider, the dripping fish flung on top, and then it is covered up and left to sozzle at its leisure till it gets ready to scorch and burn, warning the nose of the negligent cook that *that* fish is ready to turn. Then it is flopped over, carelessly, tumbling to pieces, most likely, seasoned—if remembered—then left to scorch or sozzle some more. When done, it's ready to fling back into the ocean to feed and *poison* the little fishes."

It was Mattie's turn to laugh now. "I know the kind of people you mean," she cried, "those one never likes to camp near; they are so untidy, and who even don't like to camp after themselves."

"Yes. But there are more people than that who do not know the first thing how to use a frying-pan. Frying with such means *sozzling* in grease, and grease all out of proportion to what's in the frying-pan. Every day sort of people, who have to count their pennies, can't always afford that royal sort of frying—immersing the fish, or whatever it is, in the hot fat. Besides, at the coast it takes many dishes—utensils. Give me frying-pans, plenty of them, at the coast. I can cook anything in them."

"Ah!" gasped Mattie.

"The French have a term—*saute*—for the kind of frying that *should* be done in a frying-pan. When they *sautez* a thing, the fat is right hot, and, for some things, very little of it. Frying doesn't need to be unhealthy—*isn't*, rightly done. Besides, using frying-pans doesn't necessarily mean to fry in them."

"Oh!" gasped Mattie.

"I *broil* in one of mine. Did'nt you ever?"

"No. How?"

"Oh, it answers nicely—specially convenient on a gasoline stove. Wipe your pan dry, put over the blaze and let it get *real* hot. Lay your steak in the hot, dry pan and cover instantly. When the raw flesh touches the heated pan of course it seethes and adheres to it, but in a few seconds becomes loose and juicy. Turn every half minute, keep as much as possible under cover, and pan as hot as at first. Will be done in two or three minutes, a nice brown on the outside and juicy inside. If steak is tough, mangle it. Treat in seasoning just as you do broiled steak, only you can season with the pepper, salt and bit of butter right in the pan, cover and let stand to season through, where it is kept warm. A teaspoonful or so of strong coffee added helps make a nice gravy, very palatable to some. I've cooked steak this way time and again for invalids when I couldn't get a chance at a broiling fire, and they couldn't tell the difference."

"That lets me out," said Mattie, delightedly, "for I was just racked with worry how to give Tom a bit of broiled steak now and then."

"The steak has all the healthful, beefy flavor so desirable, that one loses in stewed meats. You can do the same way with mutton chops, only cook longer to prevent their being too rare. To make a dainty, nourishing gravy, add a little milk thickened with a pinch of flour, into which, when off the fire and partly cool, stir the yolk of an egg, well beaten. By the way, have you frying-pans enough?"

"I've three. A long-handled sheet-iron one, one of granite ware, shaped like it, and a short-handled, deep, cast-iron one."

"Good," said Miss Hetty. "You can cook anything in these, from broiling a steak to concocting and cooking the most elaborate of chowders.

[*To be continued*]

TO MAKE A HOME OUT OF A HOUSEHOLD.—The Delsarte principle of outward expression influencing, if not determining, the inward feeling is often illustrated in personal experience. For instance: If there come a dreary day at home, when one feels out of touch and of tune with the world; when rooms have perhaps relapsed into a state of disorder, or even chaos, and no one knows where to begin to restore them; when one's own toilette is without freshness, and both one's self and one's environment are verging on shabbiness, or have even passed the line; when the children, too, are, or may be, out of sorts—their spirits undoubtedly affected by the general atmosphere of gloom or disorder—then try the Delsarte principle.

Clear away the debris and disorder; make the rooms clean, pretty, attractive. Then go, O fair mistress of the *menage*, and don your prettiest gown (not necessarily your best or costliest one—not your ball gown, if you have one, nor yet your dinner costume or street gown; but some pretty, dainty, inexpensive affair of lace and ribbons, that will brighten your spirits unconsciously). Open the piano, and, as the Germans would say, sing a *kleines lied* (little song), or read a charming story or poem aloud to the little ones—and, all in all, the spirit of peace and harmony and sweetness and radiant happiness shall return.

The recipe is infallible. Try it.

Chosen.

"When I want you, I will let you know," she had said three years ago, when he told her all, and went away. He went because he knew it was his only hope in the years of waiting which were before him.

He had come to love her as boys love; and he had come to believe in his passion, because it never left him, and because there seemed such endless suffering in it. He often wondered whether the pain, the agony of suspense and jealousy, the brief moments of bliss, were not more than half the dearness of his passion. Every memory of childhood, boyhood and early manhood was full of her, and when he went over his past life Ethel was there from first to last, in a relationship which was almost taken for granted. After he finished college, he spent a year at home. Now, as he remembered that year, he thought it held more agony than any other of his whole life. The endless comings and goings, the dissatisfaction, the misery. It was Ethel's first year "out," and he thought, ironically, how entirely it had thrown him "out." He remembered so well the night he first made up his mind to go back to his books, and try to console himself and wait for the time he knew must come, else why was he born—the time when Ethel should give him her hand and say—but it made him dizzy to think of that time.

The night he decided, Ethel had run in for a moment on her way to the theatre, to show the old people her pretty new gown. She was brilliant, dazzling, her face all rosy with excitement, her eyes dancing. He followed her into the hall on her way to the carriage. "Ethel, how long will this last?" he said to her. "How long am I to wait?"

She looked up in his face with a pretty little frown. "Wait, wait, wait! You're always talking about waiting. I wish you wouldn't wait," she cried.

"I will go away then," he replied. "I can't stay here and waste my life on nothing. I have something to do and I must learn to do it."

"I'm glad to hear it," she replied. "I'll send for you, Errick, dear, when I want you, and soon, too!" and she stepped into the carriage and waved to him as it drove away into the darkness. Her face always smiled at him out of the darkness, and seemed symbolic of the light in darkness she had always been to him. Could it be only three years ago. It seemed like three centuries. She had never written to him, because, "she didn't like writing letters." Some one once said in his presence that a woman always liked writing letters to the man she loved; and he felt how little that man knew.

In his mind, Ethel's superiority to other women was an acknowledged fact, which her difference from them in this respect only proved.

Meanwhile there was growing in his life another interest, whose depth and significance he could scarcely realize. When he left his home, it was only the first dawn o purpose, which comes into a man's life side by side with his first great emotion, which had actuated him. Now the intoxicating cup of success had been held up to his lips but long enough for the first pungent aroma to reach him. At these times there would come such delight and happiness in his work that it seemed as if he must write to Ethel—to Ethel, who was to glorify the work and be his inspiration. His name would be a name worth having, one he would be proud to offer her. But he never wrote, thinking he would bide his time and tell her all in that one moment of reunion to which he looked forward with such passionate anticipation.

At length one night he had a dream, which in his prosaic moments he would have said was as wild as any of the Arabian Nights. Two women came to him, one with Ethel's face, the other a glorious creature with shadowy, lossened hair, tall, commanding, with deep, true eyes all alihgt with a strange, serious meaning. The face he did not know, but the personality seemed to bring back a memory of something intangible which he had known for a long time. As he looked at them, they faded from his view and he cried out to them to stay, but only

Ethel stayed, for it was her name he called. The other form passed away, and he awoke, saying, "Only Ethel," to himself with dull dissatisfaction. For many days the fancy hung over him as a foreshadowing of the truth. He could remember nothing but the beautiful stranger with the serious, meaningful eyes, which seemed to reflect his own destiny. On the other hand, Ethel represented every ideal of tenderness and peace, inspiration and passion, and he could comprehend no love apart from her. The earnestness of his life was in his own inner knowledge of the destiny before him, which Ethel was to crown. His dream seemed a mirror held before him, in which he recognized his own moral condition. He could not but perceive that his dependence on the merest shadow was driving out of his reach the certainty of his future success.

Perhaps Ethel had become the Vittoria Colonna, the inspiring creature he dreamed of. The doubt made him decide to see this maiden of his dreams, this Vittoria, this Beatrice, and show her the whole of the new life, the beautiful dawning future which she was to glorify.

* * * * * * *

And now in a moment he knows he will stand face to face with his beautiful dream, will clasp her hand, will feel the touch which he has longed for with such passionate yearning. He feels that he knew long ago how it would be. She would grow and grow, and as her capacity for sympathy developed, her nature would advance and expand. He could picture just how she would enter the room. How he would hear her sweet, composed voice, and the serious, expressive eyes would meet his, and he would realize all his anticipation in that one moment of—

"Why, how do you do, Errick!" the lively voice came through the doorway before Ethel herself, and very soon she was holding out her hand with smiling welcome in her face. He looked at her for a moment silently. Was this Ethel, his ideal, his dream? Had she not grown smaller? Was she not less smiling than this pretty little woman standing before him? He had forgotten that the Ethel of his dream was small, too, and only the beautiful ideal creature was in his memory. Did he expect to see the other tall, commanding being with the strange, serious eyes? Perhaps!

"How much older you look, Errick, in these three years! What have you been doing with yourself?" she said.

"Doing? Nothing! Thinking of you!" he replied, absently.

"Nonsense; but you don't ask me what I have been doing. Don't I look older?"

"I hardly know. You seem changed in a way!"

"Yes, changed," she replied, "I hope I am not so silly as I once was. I have settled down. I suppose all girls must sooner or later."

"What do you call settling down?" he asked.

"Oh, not going out so much, and keeping house and taking an interest in poor people. In fact, trying to do a little good," she replied, sweetly.

"How domestic and how sweet," he thought as he walked down the street. "A dear little wife for a dear little man!"—Harvard Advocate.

Miss Nelson's Victory.

At the Inter-State Oratorical Contest held at Minneapolis, Minn., on May 5, Miss E. Jean Nelson, of De Pauw University, Greencastle, Ind., won first honors, with the theme, "Industrial Freedom." Miss Nelson, a tall, slender young woman of 19, is a member of the junior class at De Pauw, and a resident of Greencastle. She is the first of her sex to win honors in an Inter-State contest, and has achieved this distinction by first winning against the best oratorical talent in her own University, then against five young men from as many colleges at the State contest, and lastly against nine young men from as many States.

The news reached Greencastle at 2:20 A. M, Friday, May 6. The college boys were watching for returns, and soon aroused the sleeping town with their bonfire, blowing horns, ringing bells and booming cannon. In the morning a mass meeting was held, with speeches by the faculty and students. A message came from President John, who is at the General Conference at Omaha, which said: "Tell the boys to make a noise. Congratulations." The boys obeyed with a vim. They marched through the streets, headed by the college band, singing and yelling. Preparations were made for a great parade on the following Monday. Washington street was agleam with yellow bunting, the college color, and the decorations were greater than in any presidential campaign. Miss Nelson's picture was everywhere. The parade had to be given up on account of rain, but another mass meeting was held in the afternoon. When Miss Nelson appeared she was greeted with all the enthusiasm and applause of which a thousand Western students are capable. The young men were as proud of her as if she were one of themselves, instead of their sister student. At night she was given a reception at Ladies' hall.

The honor paid Miss Nelson by her fellow students illustrates the generous spirit of comradeship which characterizes the system of coeducation in its best estate. It may be expressed epigrammatically as: "Not less chivalry, but more justice." De Pauw University is one of the leading institutions in the midwest. It maintains high standards, and numbers many able men and women among its alumni. It is coeducational in all its courses, both undergraduate and postgraduate, and for some years it has had one or more women on its faculty. This is the fourth Inter-State oratorical victory for De Pauw.—Woman's Column.

Young Folks' Column.

Capturing a Desperado.

Twenty-five years ago, certain parts of western Wisconsin were infested with horse thieves. Their operations were so systematic and covered so large a region that detection was extremely difficult.

For a few years, indeed, they had things much their own way; but at last the farmers, goaded to action by the failure of the authorities to cope with the thieves, organized themselves into vigilance committees.

These committees were not lawless bodies of lynchers, but were societies incorporated under the laws of the State, to protect their members against larceny and to recover stolen property.

The active work of these vigilance committees was done by "the riders," usually five in number, one of whom was captain. When more help was needed, the riders might call to their assistance as many members as the case seemed to demand.

Among the scores of hardened men who at that time alternately worked and loafed along the Mississippi River was one named Jim Corsen. Though nothing criminal had been proved against him, his practices and associations gave color to the suspicion that he would not hesitate to steal whatever property he could safely make off with. In his habits he was reckless, dissolute and defiant.

In one particular he differed from most of his lawless associates. Instead of constantly loafing about the river, whether there was work to be had or not, he would occasionally go back a few miles into the country, hire out to some farmer, and work for a week or two.

One of the men for whom he had worked several times was William Dexter, a good-natured, easy-going old farmer who lived ten miles from the river. Corsen had worked so well for Dexter that the old farmer had begun to feel confidence in him.

"Corsen ain't so big a rascal as some folks would like to make out," he said to one of his neighbors, who had suggested that it was not wise to have such a fellow about.

Like most of his neighbors at that time, Dexter allowed his cattle to roam at will during the day, and at night shut them in a yard near the house.

On going out to milk his cows one morning, he found the bars down and all the cattle gone.

"What! what!" he exclaimed, rubbing his eyes, "I must'a' left them bars down last night!"

He went to look for his cattle, and found the herd at midday, but a yoke of fat oxen which he had been intending to drive to market in a few days, was missing.

Corsen was not at the time at work for Dexter, and no suspicion fell upon him.

Dexter was a member of the vigilance committee. He notified at once the proper officers of the society, and Blackman, their captain, was sent for. He was a keen, courageous young farmer, tall and smooth-faced.

At dark the riders reported to him for duty. Dexter joined them.

"The thief," said Blackman, "has either taken the oxen to the city and sold them, or he has hidden them on the island. It is more likely that he went to town with them; nowadays they want the money as soon as they can get it."

A night ride of twenty-five miles brought them to the city. There were in the place at that time a dozen or more cattle dealers, including butchers. Each of them was visited and closely questioned, but without any practical result. Not one of them reported having seen the stolen oxen.

"We will look 'em up," said Blackman.

He knew that nearly every butcher had a pasture of some sort, as near to the city as possible, where he kept the beef cattle he had on hand. He knew that some of the dealers were dishonest, and occasionally received stolen property.

As quietly as possible the riders began the search, going from one pasture to another. Just at nightfall, in a pasture which belonged to a German butcher, they found the missing oxen. Dexter identified them, took his property and started them into the city.

So much was accomplished; but it was now necessary to find the thief.

When the German butcher was confronted with the oxen, he rolled his eyes in evident distress. However, he was not disposed to give up the cattle.

"I haf bought dose oxen ten days pefore," he declared, doggedly.

"See here, my friend," said Blackmau, "it will do you no good to lie about this business. They are fully identified. You bought them yesterday morning. Now, sir, you answer our questions, tell us the truth, remember! or we'll have you in jail in less than half an hour."

"Py Shorge!" whined the man. "Ven I haf known dot dose oxen vas stoled, I puys dem not."

"We understand that. But tell us what sort of man it was you bought them of."

Thoroughly terrified and convinced that Blackman could find out whatever he desired, the butcher told the whole story.

"I dells you true," he said. "Dot man vas a young fellar, short und t'ick, mit black hair und eyes, und a grooked nose."

"Corsen!" the men exclaimed.

Further questioning served to strengthen the impression that the thief was Corsen. To find and arrest him was the next thing to be done.

It was found that he generally stayed with a young man of his acquaintance at a cabin thirty miles down the river from the city. An old woman, an aunt of Corsen's crony, kept house for them.

The cabin stood at the foot of one of the the high, rock-crested Mississippi bluffs, and within a stone's throw of the river-bank.

Anticipating trouble in making the arrest, Blackman called out a few more men on his way down the river. There was another all-night ride, wearying alike to men and horses. At the end of it, Blackman's party, increased to a dozen men, dismounted and tied their horses a short distance from the cabin.

It was morning, but the sun had not yet risen. A gray mist hung over the valley, shutting out distant objects. The cabin itself was seen indistinctly, and showed no signs of any stir within.

The men surrounded it, and Blackman advanced to the door and knocked. There was no response, but sounds of moving about were heard within.

"Open the door," Blackman demanded.

Still there was no reply. Just as Blackman called for an axe that stood near, thinking to break in the door, it was opened by the old woman.

Blackman asked first for Corsen's crony.

"He's gone down the river. He went away a week ago," said the old woman.

"Where is Jim Corsen?"

"He's gone, too."

Blackman entered the cabin. The woman, frightened, went out. Blackman noticed this movement.

It seemed absurd to think that any man would try to hide in so small a room. Two beds occupied nearly all of the space.

Blackman stepped into the center of the room, motioning to his followers to keep outside. In the ceiling of boards above his head, so low as to be within easy reach, was a square hole. But this aperture was closed, and the cover, when Blackman tried to push it aside, resisted his best efforts.

Again he called for the axe, and again he found its use unnecessary, for the board was shoved swiftly to one side, and Blackman suddenly found himself looking into the muzle of a cocked revolver held within two feet of his face.

It was Corsen who held the revolver. He glared down at Blackman.

"Move a hand, and you're a dead man," he cried.

"Very well, sir; I'm here," said Blackman.

He gazed unflinchingly at the revolver and into the eyes of the desperate man behind it.

"What are you here *for?*" said Corsen.

"To arrest you."

"For what?"

"For stealing Dexter's cattle."

Corsen uttered an oath. "I aint a thief, and I won't be arrested?" he said.

"You are one against a dozen," said Blackman.

"What of that? I'll shoot the first man that makes a move."

"All right. Shoot me, and you'll still be taken in the end."

"Never! There ain't men enough in this county to take me alive."

"You might as well understand," said Blackman, speaking slowly, "that you will be taken; if not alive, then dead. You need not expect my men to come in here, one at a time, for you to shoot down at your leisure. Instead of that, they will set fire to the house and you will be roasted out only to be shot down like a dog."

"But what about you?" cried Corsen, with a triumphant gleam in his eyes. "I'll shoot you dead if they undertake that!"

"You will do as you please about that," replied Blackman.

To see him, one would have thought it was a matter of small consequence.

"But the men will capture you just the same, and in that case they might not treat you well. I can't say what they would do."

Corson could easily guess what would be done. In imagination he saw himself dangling from a limb of the nearest tree. The vision caused him to waver.

"What will you do with me if I surrender?" he asked.

Deliver you up to the officers of the law."

"Will you swear it?"

"No. My word is good enough. I assure you that there will be neither hanging nor shooting done if you surrender."

"But you've got to swear it!"

"I shall not swear it!"

"I'll shoot you if you don't."

"Fire away!"

Corson hesitated. Blackman, looking him steadily in the eye, saw that the time had come to take advantage of his hesitation.

"Turn that revolver the other end to, and give it to me!" he said. At the same time he held out his hand to receive it.

For two minutes the men glared at each other, and neither spoke a word. Then Corson slowly turned the revolver and gave it up.

"Now come down!" said Blackman, instantly covering him with the weapon.

The fellow obeyed with alacrity. Thirty seconds later he was wearing a pair of handcuffs, and after that gave his captors no more trouble.

He was immediately taken to the county seat and lodged in jail. At his trial he was clearly identified by the German butcher. He was convicted and sentenced to 12 years imprisonment at hard labor at Waupun.—Youth's Companion.

—Scene—Lawyer's office. Enter little girl, sobbing bitterly.

Lawyer—"Why, little one, what's wrong?"

Little girl—"Are you Mr. Blank, the lawyer?"

Lawyer—"Yes. What is it you want?"

Little girl—"I want—(sob)—I want—a divorce from my pa and ma.

—Life as it is.—"What is Mamie doing?" "She is a saleslady." "Does she earn much?" "Hardly enough to keep soul and body together, but her sister helps her a little." "What does her sister do?" She's a servant girl."

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

Small Fruit Growing in Wisconsin.

Continued from page 547.

BLACKBERRIES

Are a delightful fruit and should be more generally grown; moreover there is not a cleaner, nicer fruit to handle than the blackberry. The Wilson Junior is a descendant of the Wilson's Early and promises to outdo its parent in yield, quality and size of fruit. The Erie is another good new blackberry and very hardy and productive. The culture is the same as for raspberries, and both are much easier picked than the strawberry. We find good pickers here for a penny a box or 75 cents a day.

CURRANTS

Are very easily propagated by cuttings, but fruit is obtained sooner if a larger root is set out. I set them four feet apart and three feet apart in the row. Trim out all the old or scrubby stems or branches every spring. A good mulch of fine chip manure applied in the fall is an excellent thing for currants, but I like straw better for other small fruits and find it beneficial in keeping down weeds; it also helps to retain moisture. There are so many good kinds that it is difficult to choose. Fay's New Prolific, White Grape, and Cherry are all of the best, and there is the Black Champion for those who like the black variety.

GOOSEBERRIES.

In setting out your fruit do not forget the gooseberries. They are very hardy and productive if set where they can have a partial shade. I find that they do well among the plum trees, which serve a double purpose, *i. e.*, as shade for bushes and shade for the pickers. They make delicious preserves or jam and are unrivaled for jelly, having a delightful flavor peculiar to themselves. The culture is the same as for currants. If these directions are carried out, the careful housewife will have an abundance of fruit for her table and an array in her pantry that will turn her less fortunate neighbor green with envy.

I have never been troubled with insects of any kind on strawberries; for the others use the Bordeaux mixture, or any other good mixture, if troubled with mildew or rot. Spray early; as soon as fruit begins to set I have found an emulsion of soap and kerosene very good. Spray often as necessary and use a good machine. Eternal vigilance is the rule and not the exception for the fruit grower, and as nothing can be attained without labor, do not make up your mind to have a soft snap of it, but give your attention to this, the same as in any other branch of farming.

M. H. A.

SOME FRUIT NOTES.

LAMANDA PARK, LOS ANGELES CO., June 2, 1892.

TO THE EDITOR:—Our season has been somewhat exceptional, and I desire to make a few notes in reference to same, with the hope that others may do likewise, for, as we are differently located and surrounded, one may discover a fact or operation of nature that another may not.

April was almost without rain, and during that month our peaches and nectarines, with some pears and French prunes, were in bloom. We never have had such a dry time for the trees to bloom in the ten years I have been here. The peaches and nectarine trees never were half so full of fruit, or requiring such heroic thinning, as this year. It seems as though every bloom made a peach, and some, not content, made three or four all grown together. I have closed my two (not very large) hands over an excessively prolific bunch the size of hickorynuts, and then counted 12 to 14 peaches.

One orchard of Bartlett pears bloomed early (first part of April), and set fruit well; another orchard, a few hundred yards away (also Bartletts), was in full bloom on the 1st of May, and on the 3d of May we had a three-inch rain, and all the Bartlett pears and French prunes then in bloom blighted to such an extent that there is not a dozen pears or prunes to the tree. Some of these trees bloomed on the north side early in April and set plenty of fruit, and these same trees were in full bloom on the south side when the rain came and blighted them; possibly washed out the pollen so it could not mix.

I have a neighbor who has 125 cherry trees. He is the only man here who has cherries planted in quantity. The trees are about nine years old, and about half of them are holding a full crop; *these* bloomed during April, while it was dry. The balance were in full bloom when the rain came, and they blighted.

Our Muir peaches hung the thickest, almost like beans in a bag; Foster's next. The latter doubled worse than any we have on the ranch (all freestones), and bunch along a limb like onions on a string. Some say thin them to six inches distance. I say "you read that out of a book," and further say there is no rule to go by but *good judgment.* I told my men who helped me thin, "when you come to two grown together, take them both off or leave them both on." We consider the location of the limb on the tree, size of limb, health of tree and size of tree as to how many it ought to carry, and cull out all the small ones and separate them as much as possible. Peaches seem to be larger now than we have ever seen them this time of year.

There are several methods of thinning. I had a neighbor who used to wear white shirts, who thinned his peaches by throwing stones up into the trees, and he always kept saying, "There's no money in fruit." He sold, and is in the real estate business. I can't say how much truth he deals out to his customers. I know another man who put a small boy at thinning peaches. The trees were breaking down, and when he went to see how he was getting along, he had taken all the fruit off. Another, who passes for a nurseryman, thrashed his off the trees this year with poles.

I use men and pick by hand. Last year and this, are the only years we have known when the Late Crawfords overbore.

In this locality, I find trees do best after they get some age. My trees, from the time they were six or seven years of age, have had a tendency to overbear. I prune a tree hard for three or four years after setting it out.

E. A. BONINE.

THE DAIRY.

The Milk Capacity.

The rapid increase in creameries and cheese factories in Western States is already perceptibly modifying the ideals of the beef breeders. Until the creamery came in, the main effort of the breeders of beef cattle was to develop the beef form and capacity, paying little heed to the milking qualities. Where the calves ran with the cows and the cows were dried off as soon as the calves were weaned, it was inevitable that the beef form and habits should be developed at the expense of the capacity to give large quantities of milk. Hence there has been a marked deterioration in the dairy qualities of the registered Shorthorns since their introduction in America, and they are in these respects, as a rule, inferior not only to the early Shorthorns, but to families of British Shorthorns that have been kept for dairy purposes. The loss of dairy qualities is still more marked in the Galloways which, we are told by British authorities, were originally good dairy cattle. The Aberdeen-Angus were bred in the same direction, but there are even yet families of these that show a marked tendency to milk production. Already in America, in so new a breed as the Red Polls, we have the tendency to a beef type as well as a milk type, and it would require but a few generations to develop the same difference in any of the breeds.

Whatever may be the advantages of a distinctly beef breed in the West and of distinctly dairy or special purpose breeds in the East, the farmers of the corn and grass States demand a cow that will be a first-class dairy cow and the dam of first-class beef steers. Our special purpose friends claim most vehemently that this is an impossibility, and, on thin soils, it undoubtedly is. It does not follow, however, that it is an impossibility in an environment that will produce first-class beef cattle, and, at the same time, in the hands of first-class dairymen.

As an instance, we call attention to the report of Mr. John Gould of Ohio, a noted authority on dairy matters, that he found, even in New Hampshire, a herd of registered Shorthorns that averaged the last year, 312 pounds of butter per cow, in addition to the family supply of butter and cream. Few special purpose herds ever do better than that, and we will wager, without any knowledge of the facts, that the steers from these cows gave a good account of themselves in the feed lots.

How then are we to develop the milking capacity in the breeds where it has been neglected? We answer, how was it ever developed in any breed? By milking and feeding, of course. This is the first step. So long as nothing more is demanded of a cow than milk to supply the wants of a calf for a few months, she will give no more, nor for a longer time than is necessary to supply them. When more is demanded she will gradually give more, and this demand will in time modify the form and type. The next step is the breeder's act of selecting the best milkers and coupling them wisely with sires that come from good milkers. In this way families and breeds are built up. The same practice that will form breeds will modify breeds in which the milking capacity has been allowed to become dormant or has been undeveloped to the point of profit in the dairy.

The time has now come when this must be done if cattle are to be kept on the ordinary quarter section farm at a profit. There are very few cows east of the Missouri that are good enough to pay for their keep with the chance of a calf. Farmers soon cease to keep that which will not give them a profit. The cow to pay for herself must give a good supply of milk as well a good calf. The trouble is that four-fifths of the cows that have been kept for calf-growing, when put into the dairy, will not pay for the extra labor of milking. What is needed now, is the development of the cow that will give not less than 200 pounds of butter per annum, as well as a calf and a good one at that. Butter will be a very low price and feed very high when this kind of a cow will not bring a good profit on the farm.

How can this kind of cow be produced? We answer: How have such cows ever been produced but by milking, feeding and breeding?

The first thing to do is to find out what the cows on the farm produce now in the way of butter-fat. This is the first step, and it cannot be taken intelligently except by testing the milk often enough to know its quality—its richness in butter-fat. Quantity is easily ascertained. The next step is to dispose of all cows that do not give a paying quantity of butter-fat. What that quantity is depends on the cost of the keep, and price of butter and the value of the calf. It will vary, of course, but whatever it may be, whether 100 pounds or 200, all that do not give that amount should be fattened and sold to the butcher. Then secure sires whose dams were heavy milkers, and grow the future cow of the heard from the heaviest milkers. If the keep of a cow for one year costs $20, and the calf is worth $10 in the fall, then the farmer, in addition to the cost of his keep, gets $10 for his profit and labor, provided the cow gives 100 pounds of butter-fat worth 20 cents per pound. If, however, she gives 150 pounds, he has double the profit; if 200 pounds, he has three times the profit. With ten 200-pound cows he has the same profit that he has with thirty 100-pounders and has the keep and labor of 20 cows to give to steers. The 200-pound cow is in time within the reach of any farmer who will breed and milk with that object in view, not by any means neglecting the feeding. The fact that cows of the so-called beef breeds have reached this amount shows that the combined beef and milk breeds is a possibility. This is what we must come to if we are to have profit on western farms through handling cattle. It will help on the good work at an amazing rate if the breeders of the beef breeds will invest in a milk tester and will milk their cows. There will be no trouble in selling bulls, if out of 100-pound cows. Nearly every farmer who writes us where he can get a bull wants one of a milking family. Bulls of the beef breeds, out of cows that give 200 pounds of butter per year, will go off like hot cakes on a cold morning.—The Homestead.

THE STOCK YARD.

The Trade in Fine Cattle.

A few years ago, while the prices for fine imported and thoroughbred cattle were up to the highest range that has ever been reached in this country, the writer had a lengthy conversation with the late J. M. Robinson on the subject, in which Mr. Robinson said it was only a question of time when the great bulk of the men then engaged in importing and dealing in fine cattle would break up in the business, and now it may be recorded in support of Mr. Robinson's prediction that the trade in and production of fine cattle has suffered one of the worst revulsions that has ever struck any branch of trade in our country. While we do not report any cases of bankruptcy in connection with the business, we are well satisfied that there are a good many men connected with the business that have suffered some embarrassment as a result of their determined perseverance in attempting to stem the tide. As a result of the efforts of these men to introduce to the fullest extent all the best breeds of cattle the world has ever known into the United States, we now have distributed all over the country in large numbers, imported or thoroughbred Shorthorns, Hereford, Polled-Angus, Galloway and Red-Polled cattle, representing the best beef breeds that have ever been known, while all the breeds of dairy cattle have received the same attention. We undoubtedly have enough of these cattle in the country to enable us to maintain and increase thoroughbreds in each of the breeds referred to, and we shall finally be able, with the pure stock distributed throughout the country, to grade up and run out the old scrub breeds that have so long stood in the way of successful cattle production in our country, and the men, through whose labors this condition has been brought about, richly deserve the lasting gratitude of the country.

Even now, after the long depression that has handicapped the fine cattle trade, it was fully demonstrated at the sale of Shorthorn cattle sold at Dexter Park by Col. Harris of Kansas, during the past month, that home thoroughbred cattle, well bred, young and in good order, can be produced at a very fair profit; but it has been demonstrated just as plainly at different public sales of fine cattle within the past two or three years, that it is no use to offer for sale what are now called plain bred cattle, in thin, poor condition, with a common dunghill look, with any expectation that they will bring anything more than about the prevailing prices current for common beef cattle.

We are just now led into this train of reflection by the advertisement of C. M. Culbertson, in which he announces his purpose to hold a dispersion sale of his entire herd of Hereford cattle, one of the best herds of the kind that has ever been worked up in this country; also by the statement of T. L. Miller in our office within a few days that he has lately sold 160 head out of his herd of Hereford cattle, and that he is determined to close out and disperse his whole herd. These two men have been among the foremost in the country in importing and breeding the best strains of Hereford stock that have ever existed anywhere.

C. M. Culbertson several years ago imported the noted Hereford bull Anxiety, which we think was the finest bovine animal we have ever seen of any herd. Within the past two or three years a decided change has come over the feeling of our fine cattle producers with regard to imported cattle, and, relatively speaking, buyers at a public sale will bid no more for them than for our own home thoroughbreds, and, as a matter of fact, there is now no reason why we cannot produce as good cattle in the United States as can be produced in Great Britain, as we have breeding animals of all the best breeds in the world in abundance.

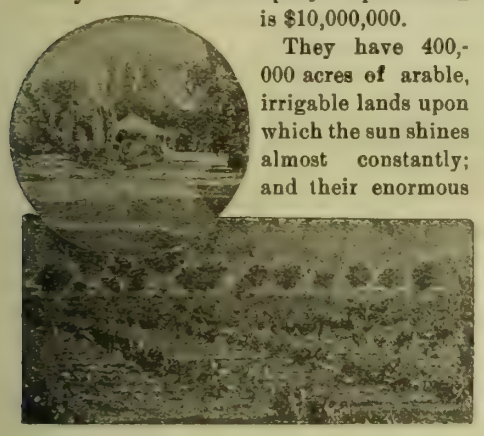
In support of the point we have here made, we may refer to the purchases of the Hon. John Dryden, Minister of Agriculture for the Province of Ontario, the purchase for export of a young bull and a heifer calf for account of Manuel Garcia Sedano of Mexico, and the purchase by Robert Bruce of Darlington, Eng., for ultimate export to Great Britain via Canada, of the eleven months heifer, Rowena by Craven Knight, from a Duke of Richmond dam.

These were from the Linwood herd of Shorthorn cattle sold at Dexter Park in April. The effect of the grading up of our old scrub breeds by the introduction of the fine cattle we have been receiving is daily seen in the cattle market at the stockyards. Grades of either the Shorthorn, Hereford, Polled-Angus or Galloway are now all the time on the top quality list in the market, and it is the grades of one or another of these cattle breeds that bring the top prices here. In one of the cattle markets a good-sized lot of Hereford yearling grades averaging 1000 pounds recently sold at $5 per 100 pounds, $50 per head, certainly no loss to the producer. This transaction shows plainly enough just what can be done in the production of cattle by using the right kind of stock and treating it right from first to last, and this is the only true course for any stock raiser to pursue with any kind of farm stock. The prices for all the best breeds of cattle are now so low that any common farmer can enter upon the work of grading up or out the old scrub stock.

We are satisfied that the work in this direction is going steadily forward in all portions of the country, and we are glad to note the fact that horses, hogs and sheep are getting a full share of attention and effort in the same way. A pretty large part of all the stock that now reaches the Chicago market shows plainly that it has had an effusion of good blood, and about all the stock of all kinds that sells at the highest prices is well graded up toward the best breeds that the world knows.—The Drovers' Journal.

FARMERS, FRUIT GROWERS, HOME SEEKERS!

THE members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.



They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

KERN is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.



The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

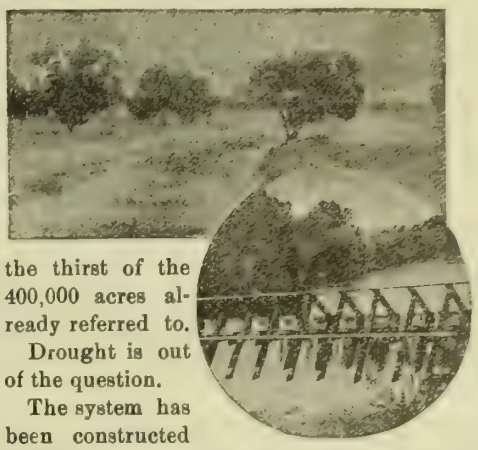
Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

THE advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.



Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

For further particulars address

KERN COUNTY LAND COMPANY,

S. W. FERGUSSON, Agent,

BAKERSFIELD, · CALIFORNIA.

"THE DRESS REHEARSAL"

FOR THE

WORLD'S FAIR OF 1893

WILL BE HELD AT THE

CALIFORNIA STATE FAIR

OF 1892.

From September 5th to 17th.

California's Capabilities are Beyond Comparison. Let Not Apathy Prevent Their Being Exhibited.

The State has Appropriated Over $5000 for Premiums for Soil Productions.

REMEMBER THAT THE GREAT COLUMBIAN WORLD'S FAIR opens in May of next year. Hence, all agricultural exhibits must be collected this year.

The State Board of Agriculture stands ready to assist the producer, and by gathering your exhibits and showing them at home at the State Fair, you can take advantage of the cash awards to assist you in the good work. All exhibits shown at the State Fair will be kept free of storage until their removal. BEGIN WITH HARVEST.

MERCHANTS AND PROPERTY-OWNERS in each county are interested as much as the farmer, and should lead in the ORGANIZATION OF COUNTY-EXHIBIT COMMITTEES.

Do not overlook the chance of getting money to remunerate you, right here at home; it is to be given away at the State Fair of 1892. Come and get some of it.

Send for Premium Lists.

FREDERICK COX, President.
EDWIN F. SMITH, Secretary.

AGRICULTURAL SCIENCE.

Investigation of California Prunes, Apricots and Peaches.

University Experiment Station Bulletin No. 97.

The subjects discussed in this paper are summarily set forth in the following quotation from Bulletin 93 of this department:

"The purpose of this work is to show comprehensively the proximate and ash composition of the leading varieties of fruits as grown in the principal fruit regions; and inferentially, the influence exercised upon them by the prominent conditions of soil, climate, fertilizers, etc. The physical data (proportion of pits to flesh, etc.) are of interest from a commercial standpoint, as showing what is being purchased as to available and waste material, etc.

"The consumer, though usually considering fruit as a luxury, would derive much valuable knowledge from studying the fruits in their relative values as foods. The nourishing portions, shown especially by the nitrogenous and saccharine contents, vary greatly with the variety and conditions of growth. It is not, then, a matter of indifference to the consumer what fruit he uses, but an important question of domestic economy.

"The ash ingredients, together with the nitrogen contents of the standard varieties, are of high interest in connection with the vital question of soil exhaustion and fertilization. The soil ingredients extracted by an ordinary crop are a serious drain upon the supporting soil, and the lines of heaviest draft can only become known by the actual determination of the constituents withdrawn."

It will be observed that the majority of the fruits here reported are from the Santa Clara valley, from which they were most readily obtained. It of course intended to extend this work, hereafter, to *all* the fruits grown in California; notably, during the coming season, to all obtainable varieties of figs from the different regions; also, a more numerous representation of apricots, prunes and other plums. It is well known that these fruits differ materially in their qualities *e. g.* as between north and south California, and between the valley and the foothills. These investigations will not only aid in determining the best uses to which these several fruits may be put, but also in what direction and to what extent the soil ingredients taken from the soil by them require replacement. Raisins and table grapes, as well as cherries, pears, etc., will come in their turn in succeeding years. Meanwhile, producers interested in these questions are invited to communicate with the Station in regard to the examination of their fruits.

In the work here presented, as in that previously done on citrus fruits (Bulletin 93), Assistant Colby has been very efficiently assisted by Mr. Hubert P. Dyer, a graduate student in this department.

E. W. HILGARD.

Berkeley, May 31, 1892.

Description of Prunes, Apricots and Peaches Received.

PRUNES.

No. 1, Prune d'Agen, Mountain View—S. F. Leib grower; sample received Sept. 28, '91. Usual size, but more rounded than the other samples of the same variety, quite ripe; soft and very sweet.

No. 2, Prune d'Agen, Niles—Wm. Mortimer, grower; sample received Aug. 26, '91. Condition, good, fully ripe and very sweet.

Nos. 3 to 12, San Jose—John Rock grower. All of these samples, except No. 12 were received, on September 8, '91; No. 12, St. Catherine, came Oct. 3, '91, and represents a fully ripe sample; No. 11, St. Catherine, was rather green. Condition, excellent for all these samples; No. 3, French, No. 7, Hungarian, and No. 10, Datte d'Hongrie, being soft, rather juicy and sweet; No. 7, tasted quite tart; No. 4, Wangenheim; No. 5, Robe de Sergent; No. 6, Fellenberg; No. 8, Bulgarian, and No. 9, German, were firm-fleshed and much less sweet than the other members of the series.

APRICOTS.

Nos. 13 to 18, Niles—James Shinn, grower; samples received during August, 1891. No. 13, Hemskirk, Aug. 3, '91, was hard and unripe. The other varieties, No. 14, Hemskirk, No. 15, Blenheim, No. 16, Royal, No 17 Peach, and No. 18, Moorpark were in good condition, fully ripe and quite sweet. No. 19, Pringle? Tulare, grown by B. F. Moore, was received June 30, '91, and has already been reported (Agr. Expt. Stat. Rept., 1890, page 115).

PEACHES.

No. 20, Orange Cling, and No. 21, Lemon Cling, samples received Sept. 25, '91, from L. C. McAfee, San Francisco. Condition only fair, as the fruit had been picked for some time. No. 20 was grown by H. M. Alexander, Anderson, Shasta Co.; No. 21 by General Bidwell, Chico.

The table (p. 4–5) shows the results of the analytical work for the season 1891; the first subdivision, A, gives the physical and general proximate analyses; the second, B, the results of the analysis of the ash. Lack of time prevented us from making as extended a work as was desirable upon the ash—that which has been accomplished indicates at least the general character of the ash composition.

The chief points shown by the table will be better understood by a brief discussion as to similarity or difference.

Proportion of Pits to Flesh.

Prunes.—The range in the percentages of pits is from 3.7, in Hungarian, No. 7, to 7.5 in Robe de Sergent, No. 5; 5.5 per cent representing the general average, thus leaving about 17 times as much flesh as pits. Thus the consumer finds that, on the whole, the prunes possess but little advantage over each other in regard to the proportion of pits to flesh.

Apricots.—Leaving out of consideration the Pringle, No. 19, on account of its small size and relatively slight importance, the variation of pit percentages is from 4.14 (Hemskirk, No. 13) to 6.7 (peach variety No. 17), a somewhat smaller difference than was found in the prunes, viz., 3.8 to 2.5 per cent. The average pit contents is 5.8 per cent, leaving about 16 times more flesh than pits. Here again, there is but a trifling advantage in choice so far as the proportion between flesh and pits is concerned.

For equal weights of prunes and apricots, whole fresh fruit, the consumer receives nearly the same amount of flesh or available matter; but the apricots being some three times larger than the prunes; we have, on the average, 7 apricots as against 21 prunes to the pound avoirdupois.

Peaches.—The limited results obtained prevent us from making any comparisons with the figures presented for apricots and prunes. The difference between the pits in the varieties examined is too small to be considered. Lemon Cling, No. 21, has some 33 times more flesh than pits; Orange Cling, No. 20, shows 25 times more flesh.

European analyses of these fruits report figures which do not differ materially from those furnished in the above table; the average pit percentages for prunes is 5.4, for apricots 5.3, and for peaches 6.1, the weights for whole fruits not being given in the analyses at hand.

Proportion of Juice to Flesh.

Prunes.—A glance at the figures in the table shows that the French prune, No. 3, has the largest proportion of free juice, namely, 87 per cent, nearly *seven-eights* of the flesh. No. 5, Robe de Sergent, falls but slightly below with 84 per cent, or *five-sixths* of the flesh. The driest flesh is that of No. 11, St. Catherine (unripe sample), about *one-half* of it being fiber; No. 12, a later and fully ripe sample of the same name, approaches closely the general average of 73 per cent, or nearly *three-fourths* the flesh. It is important to note that Hungarian, No. 7, while the largest fruit, has nearly ten per cent less juice than the average French prune, *i. e.*, 70 against 80 per cent.

Apricots.—The relation between juice and fiber in the flesh is quite constant, as none of the figures obtained differ more than five per cent from the general average (87.3 per cent), the juice amounting to about *seven-eights* of the flesh, Nos. 16, 17 and 18, respectively Royal, Peach and Moorpark varieties showing the highest proportion of juice (90 per cent), and Hemskirk, No. 13 (not fully ripe), the lowest (82.3 per cent).

The average flesh of the apricots, from this showing, is apparently more juicy than that of the prunes, in the ratio of 7 to 6.

Sugar Contents of the Juice, Flesh and Fruit.

The work undertaken this season (1891) did not comprehend the determination of the different sugars (dextrose, levulose, cane sugar, etc.), contained in prunes and apricots; the length of time necessary to complete such an investigation for each sample required us to limit the work to the determination of the most important point—the total sugars.

Prunes.—By far the highest sugar percentages are found in the ripe, soft and juicy French prunes of the various localities; the somewhat harder varieties, Wangenheim, Robe de Sergent, Fellenberg, Bulgarian, German and Datte de Hongrie yielding, on the average, six per cent less sugar. Although there is a difference of one month in the picking (Sept. 28th to Aug. 26th) of the French prunes from Mountain View and San Jose, yet, for the flesh and fruit, the sugar content is nearly identical, 18.6 per cent for flesh and 17.6 per cent for the entire fruit, fresh. St. Catherine, No. 12, with 22 per cent of sugar in its juice, compares well with the sugar percentage (average 22.6 per cent) in the juice of French prunes; referring these figures to the flesh and fruit, those for the St. Catherine are some 2.5 per cent less on the average. In connection with the St. Catherine, it is interesting to note the wide difference, fully 6.5 per cent, in the sugar found in No. 11 (not fully ripe) and No. 12 (fully ripe) picked over three weeks apart.

Among the other (or) firm-fleshed prunes, the widest difference in sugar percentages is 3.8; Datte de Hongrie, No. 10, showing 12.44 per cent and Wangenheim, No. 4, 8.80 per cent for the whole fruit. A sample of dried French prunes (No. 24) ready for consumption, from same crop as No. 1, Mountain View, and referred to that, yields 47.25 per cent of sugar. This latter figure is a little over four times larger than the general average of sugar in whole fruit of the fresh prunes.

Apricots.—Both the early (picked in June) and later varieties (picked in August), with the exception of the (not fully ripe) Hemskirk, No. 13, show a remarkably close resemblance to each other in regard to sugar contents; the Royal, No. 16, with 15.06 per cent, and Peach, No. 17, with 15.72, the highest in sugar, showing but about 2 per cent more than the general average, 13.34 per cent, for the juice. Taking the general averages of sugar in the juice of prunes and apricots (columns 22 and 23), we find that the prunes stand a trifle over 3 per cent the higher; for the flesh, and for the whole fruit, the difference is considerably less, viz., about one per cent. Apricots, then, according to these determinations, range much lower in sugar (six per cent) than the Prune d'Agen, the difference being nearly the same as already noted above for the harder prunes.

European reports of these fruits show that the *juice* of prunes, on the average, contains 6.15 per cent sugar, apricots 4.69 per cent (one case is reported of a small variety of apricots with 16.5 per cent sugar), and for peaches 4.48 per cent, these figures being from 2.5 to 3 times less than those herein presented for these fruits as grown in central California. There seems thus to be good cause for the preference they have so quickly attained in the market.

By reference to the small table following the relations to each other of the average *sugar* and *acid* contents of some California fruits will readily be seen. For convenience of comparison the acid is expressed in terms of sulphuric acid (SO_3).

	JUICE.		FLESH.	WHOLE FRUIT.
	Acid, per cent.	Sugar, Per Cent.		
Apricots from Niles	.63	13 34	11.56	10 76
Prunes from Niles, San Jose and Mt. View	.43	16 70	12.30	11.65
French prunes, do. do.	.25	22 60	18.33	16 91
Grapes from various localities	.50	24.00	23.00	20.70
Oranges from various localities	1.34	9 65	6.20	4.70
Peaches from Anderson, Shasta Co., and Chico	.24	17.00	13.40	12.50

Acid in the Juice.

Prunes.—The maximum, nearly one per cent, is at once seen in the Hungarian, No. 10; the minimum, .23 per cent, in the Prune d'Agen, No. 1; the average, .43 per cent, being almost twice the minimum.

Apricots.—While the acids differ from .50 per cent to .80 per cent, they do not show as great a diversity as the prunes in this respect. In both fruits it appears that low acids are combined with high sugars. European analyses, which report the acid in terms of Malic, when corrected for Sulphuric, give for prunes .51 per cent, apricots .70 per cent and peaches .55 per cent, which do not differ much, except for peaches, from those we report.

Nutritive Values—Nitrogen Contents.

The flesh-forming ingredients of any article of food being of great importance as regards its proper uses (see Bulletin 93 of the department, relating to oranges and lemons) it is of special interest to compare in this respect the prune and apricot to other fruits, and the different varieties of prunes and apricots amongst themselves. As heretofore set forth in Bulletin 93, the California orange with 1.20 per cent albuminoids, while lower in these ingredients than the Sicilian (albuminoids 1.73 per cent) was rated the *first* in this respect amongst our fruits. In so far as our later work bears in this direction we must accord to the apricot (edible portion alone) an equa place, albuminoids being 1.19 per cent; thel prune (.76 albuminoids) takes the *second* place, leaving the other fruits, grapes, bananas, apples and pears (from European data) to stand in the order now mentioned till we find opportunity to study them. The apricot *as a whole* (pits included) shows 1.43 per cent albuminoids, or .23 per cent more than the orange.

Among the *prunes* the highest percentages of albuminoids (.94) is found in the flesh of German, No. 9, and the ripe St. Catherine, No. 12, closely followed by that of the prune d'Agen with .86 per cent; the lowest of the series being the Robe de Sergent, No. 5 with only .52 per cent—about .2 per cent less than the average for the flesh of all the prunes, which is .76 per cent.

The flesh of the *apricots* shows even a greater difference in albuminoids than the flesh of the prunes, being quite one-half of one per cent; the maximum, 1.37 per cent albuminoids is seen in the Royal, No. 16 and the Moorpark, No. 18; the minimum, .84 per cent, in the peach variety, No. 17, ranges nearly with the highest albuminoid content in the prunes (.94 per cent).

Apricots grown in Europe average .49 per cent albuminoids, just about one-third as much as the Californian (1.37). European prunes (with .78 per cent albuminoids), however, are more nearly like the Californian (.76 per cent) in this respect.

With this portion of our work we give below a summary of the *food constituents* of some of our *dried* (cured) commercial French prunes, dried apricots and grapes:

	French Prunes.	Apricots.	Grapes.	Apples.
	Dried. Edible portion.		Black Malvasia, "Grape Food."*	(European.)
Water, per cent	25 20	32 44	34.83	33.00
Ash, per cent	1.50	1.38	1.16	1.40
Albuminoids (Crude Protein), per cent	2.70	3 27	2.94	1.70
Crude Fiber, per cent	.....	.....	3.70	8.30
Nitrogen — free Extract, per cent	29.67	31.81	2.17	21.60
Fat, per cent	.....	.....	.56	.....
Sugar, per cent	40.53	29.59	52.50	32.00
Free Acid, Calculated as Sulphuric (SO_3), per cent	.40	1.51	.85	2.00
Tannin, per cent	.....	.....	1.29	.....
Total	100.00	100.00	100.00	100.00

*Dried and ground by R. E. Wood, Rutherford, Napa Co., Cal.

The above results, while inadequate as a basis for general conclusions as to the relative food values of these fruits, nevertheless indicate plainly that the nutrients, notably the sugar and crude protein (albuminoids) differ very widely, *e. g.* the sugar in the grape food is 20 per cent more than that of either the apricot or apple, and 12 per cent more than that in the French prune. Again, the crude protein of the dried apricot is double that of the dried apple, and but one-half a per cent higher than that in the prune and grape. As to ash, we note but little difference.

Ash Composition and Nitrogen Contents.

Contrary to statements in our previous publications (Bulletins 88 and 93 of this department), in which, according to European data, the orange stands second (grapes being first), among fruits in the quantity of mineral matter withdrawn from the soil, we find that, weight for weight, the apricot has the *second* place; and that the prune and the orange have about an equal right to the *third* place, thus again bringing plainly before us the fact that we cannot safely use European results, as heretofore, as a basis of comparison for our fruits.

Upon the basis of the preceding table of this publication and those given in Bulletin 93, we have prepared the following tabular view of the amounts, in pounds, of soil ingredients extracted by the different fruit crops, that will have to be replaced by fertilization:

FRUITS.	Total Ash lbs.	Potash lbs.	Phos. acid lbs.	Nitrogen lbs.
GRAPES.				
European.				
In each 1000 lbs	8.8	5.00	1.52	1.70
APRICOTS.				
European.				
In each 1000 lbs	4 90	.. ..	.....	.86
Crop of 30,000 lbs	147.00	.....	.....	25.80
California.				
In each 1000 lbs	5.16	2.16	.71	2.29
Crop of 30,000 lbs	154 80	84.98	21.38	68 70
PRUNES.				
European.				
In each 1000 lbs	6.3	3.73	.95	1 22
Crop of 30,000 lbs	189.00	111 90	28.53	36 60
California.				
In each 1000 lbs	4.03	2 653	.53	1.48
Crop of 30,000 lbs	120.90	79.70	15.95	44 40
ORANGES.				
European.				
In each 1000 lbs	6.07	2.78	.67	2.69
Crop of 20,000 lbs	121.40	55.60	13.40	53.80
California.				
In each 1000 lbs	4.32	2.11	.53	1.83
Crop of 20,000 lbs	86.40	42.20	10.60	36,60

ANALYSES OF CALIFORNIA PRUNES, APRICOTS AND PEACHES, CROP OF 1891.

A. — PROXIMATE ANALYSES.

	PRUNES.												APRICOTS.							PEACHES		AVERAGES.		DRIED PRUNES.
																						Prunes.	Apricots.	
Name of variety	Prune d'Agen.	Prune d'Agen.	French.	Wangenheim.	Robe de Sergent.	Fellenberg.	Hungarian.	Bulgarian.	German	Datte d'Hongrie.	St. Catharine.	St.-Catharine.	Hemskirk.	Hemskirk.	Blenheim.	Royal.	Peach.	Moorpark.	Pringle?	Orange Cling	Lemon Cling			Prune d'Agen.
Number	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.
Place of production	Mountain View.	Niles.	San Jose.	San Jose.	San Jose.	San Jose.	San Jose.	San Jose.	San Jose	San Jose.	San Jose.	San Jose.	Niles.	Niles.	Niles	Niles.	Niles.	Niles.	Tulare.	Anderson.	Chico			Mountain View.
Sender or grower	S. F. Leib.	Wm. Mortimer.	John Rock.	John Rock.	John Rock.	John Rock.	John Rock.	John Rock,	John Rock.	John Rock.	John Rock.	John Rock.	James Shinn.	James Shinn.	James Shinn.	James Shinn.	James Shinn.	James Shinn.	B. F. Moore.	H. M. Alexander.	Gen'l Bidwell.			S. F. Leib
Date of receipt and analysis	Sept. 28, 1891.	Aug. 26, 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Sept. 8 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Sept. 8, 1891.	Oct 3, 1891.	Sept. 8, 1891.	Oct. 3, 1891.	Aug 3, 1891.	Aug 14, 1891.	Aug. 3, 1891.	Aug. 7, 1891.	Aug.14, 1891.	Aug.19, 1891.	June 6, 1891.	Sept. 25, '91	Sept. 25, '91			1891.
PHYSICAL ANALYSIS.																								
Average weight, in grams.†	23.5	22.9	20 8	19.5	20.0	26.0	80.5	25.6	25.5	21.6	20.2	18.5	89 3	63.0	81.0	46.8	57.5	59.2	24.8	153.5	215.5	27.1	66.1	10 0
Number per pound	20.4	20.8	23.0	24.6	24.0	18 5	6 0	18.8	18.9	22 2	23.7	26.0	5.1	7.1	5.6	9.6	7.8	7.6	18.0	3.1	2.2	20.5	7.3	48.0
Flesh, per cent	94.5	94.9	94.24	95.0	92.5	94.1	96.3	93.8	95.3	94.0	95.1	94.8	95.86	93 98	94.75	93.40	93.30	94.0	90.90	93.9	93.7	94.55	94.2	90.0
Pits, per cent	5 5	5.10	5.76	5.0	7.5	5.90	3.7	6.2	4.7	6.0	4.9	5.2	4.14	6.02	5.25	6.60	6.70	6.0	9.10	6.1	6.3	5.45	5.8	10.0
FLESH.																								
Juice, pressed, per cent	72 6	81.2	86.8	69.0	83.8	76.4	70.0	64.0	71.5	81.7	53.0	63.4	82.3	85.8	85 3	90.3	90.0	90.0	.....	79.1	76.2	73.3	87.3	.....
Pulp, pressed, per cent	27.4	18.8	13.2	31.0	16.2	23.6	30.0	36.0	28.5	18.3	47.0	30 6	17.7	14.2	14.7	9.7	10.0	10.0	.....	20.9	23.8	26.7	12.7	.....
JUICE.																								
Total sugar by copper (inversion), per cent	25.6	20.50	21.73	13.45	14.00	12.05	14.04	13.81	12.60	16.50	14.32	22.00	9.01	13.43	13.43	15.06	15.72	13.58	13 50	20.0	14.00	16 70	13.34	.....
Acid, in terms of sulphuric (SO_3), per cent	.23	.24	.28	.52	.48	.59	.95	.50	.53	.38	.34	.28	.....	.84	.....	.46	.58	.64	.....	.17	.32	.43	.63	.62
SUGAR.																								47.25
In fresh flesh, per cent	18 52	16.60	18.87	9.26	11.78	9.20	11.20	8.37	9.05	13.36	8.63	15.21	7.0	11.54	11.61	13.56	13.84	12.10	.....	16.00	10.80	12.30	11.56	.....
In fresh fruit, per cent	17.59	15.60	17.64	8.80	9.89	8.67	10.72	7.92	8.43	12.44	8.10	14.34	6.8	10 70	11.03	12.30	12.50	11.30	.....	15.00	10.00	11.65	10.76	.....
NITROGEN.																								
In whole fresh fruit, per cent	.178	.145	.168	.140	.134	.139	.122	.121	.168	.133	.144	.185	.....	.199	.242	.258	.186	.259	.....	.....	.....	.148	.229	.....
In fresh flesh, per cent	.148	.142	.124	.109	.083	.117	.114	.118	.150	.104	.116	.150	.....	.168	.210	.217	.133	.224	.....	.....	.....	.124	.190	.....
In fresh pits, per cent	.785	.641	.766	.588	.753	.499	.326	.514	.512	.560	.751	.866	.....	.784	.880	.840	1.050	.805	.....	.....	.....	.648	.871	.....
Albuminoids in whole fresh fruit (equivalent to nitrogen), per cent	1.112	.906	1.050	.870	.837	.879	.762	.756	1.050	.842	.900	1.156	.....	1 243	1.513	1.610	1.150	1.619	.....	.....	.....	.926	1.427	3.00
ASH (Pure).																								1.65
In whole fresh fruit, per cent	.613	.395	.442	.376	.361	350	.392	.410	.370	.330	.362	.440	.....	.530	.555	.550	.454	.494	.....	.62	.44	.403	.516	.....
In fresh flesh, per cent	.600	.387	.434	.365	.347	.344	.385	.40	.36	.320	.349	.431	.....	.512	.540	.542	.440	.484	.....	.....	.....	.395	.504	.....
In fresh pits, per cent	.668	.519	.582	.629	.527	.434	.416	.491	.434	.405	.595	.526	.....	.893	.850	.681	.533	.612	.....	.....	.....	.526	.703	.....
GENERAL PROXIMATE ANALYSIS.																								
Water, per cent	75.96	79.650	77.00	79.74	82.50	85.69	85.50	82.72	83.00	81.40	83.30	78.78	.....	84.77	84.600	85.11	85.50	85.90	.....	78.50	86.50	81.29	85.57	28.00
Organic matter, per cent	23.43	19.955	22.56	19.88	17.14	13.96	14.11	16.87	16.63	18.27	16.34	20.78	.....	14.70	14.845	14.34	14.05	13.61	.....	20.88	13.06	18 31	13.91	70.35
Ash, per cent	.61	.395	.44	.38	.36	.35	.39	.41	.37	.33	.36	.44	....	.530	.555	.55	.45	.49	.....	.62	.44	.40	.52	1.65
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	.....	100.00	100.00	100.00	100.00	100.00	.....	100.00	100.00	100.00	100.00	100.00

† 30 grams are equivalent to 1 ounce.

B. — ANALYSIS OF THE ASH.

FRUIT.	Place of Production.	Percentage of Pure Ash.	Composition of the Pure Ash.											
			Potash.	Soda.	Lime.	Magnesia.	Peroxide of Iron.	Br Oxide of Manganese.	Phosphoric Acid.	Sulphuric Acid.	Silica.	Chlorine.	Total.	Less excess of Oxygen, due to Chlorine.	Total.
FRENCH PRUNES.	San Jose.														
Whole fruit		.442	65.92	3.18	3.24	6.16	.85	.31	13.19	2.37	4.56	.19	99.97	.05	99.92
Flesh		.434	69.50	3.07	3.01	5.33	.83	.17	11.56	2 13	4.30	.20	100.10	.05	100.05
Pits		.582	24.01	4.53	6.04	16.26	1.14	1.90	32.98	5.40	7.88	.22	100.16	.05	100.11
ROYAL APRICOTS.	Niles.														
Whole fruit		.550	54.88	10.57	3 52	3.85	1.71	.21	13.86	2.95	7.85	60	100.00	.15	99.85
Flesh		.542	58.59	11.20	3.24	3.31	.77	.09	11.20	2.75	8.31	.58	100.04	.14	99.90
Pits		.681	10.95	3.45	6.75	11.58	12.39	1.65	43.76	5.38	2.58	1.65	100.14	.40	99.74

California *prunes* thus appear to draw much less upon all the mineral ingredients which have to be replaced by fertilization than the European; the latter, however, draw much more lightly than the former upon nitrogen. *Apricots* both of California and European growth stand, in total amount, about equal as to mineral ingredients withdrawn; as to nitrogen, the California fruit draws 2.5 as much, showing the very material difference in the relative proportions of the vital soil ingredients among themselves.

Potash.—In the ashes of prunes and apricots, as in the orange, potash is seen to be the leading ingredient (at least one-half the ash), ranging somewhat higher in the former two fruits. In its distribution as between pits and flesh, the greatest difference is shown by the European prune; for apricots we have no foreign data. Although potash constitutes so large a portion of the ash of these fruits, its replenishment to the soil will be delayed long beyond the addition of other fertilizing ingredients, because most California soils are naturally so well stocked with it that available potash for the current demand will, in many cases be adequately supplied for many years.

Phosphoric Acid is not so heavily drawn upon, nor do our fruits in any case, so far, quite reach the same demand upon the soil in this respect as the European. Its distribution between pits and flesh, also, is not quite so variable as that of potash. Since our soils usually contain a limited supply of phosphoric acid, the prune and apricot as well as the orange orchards will require *phosphatic* fertilizers first, when any are used.

Nitrogen.—The apricot here leads in its demand upon the soil in this substance, closely following the European orange. Averaging the nitrogen withdrawn by the prune and apricot, we obtain a figure but slightly greater than that for the orange; emphasizing for those fruits the same necessity of early replacement of nitrogen, and partly for the same reason; viz., that California soils are usually not rich in their natural supply of this substance.

Of the other ash ingredients, it will be seen that *lime* is quite constant, although much less in amount (for prunes) than European standards show. Especially is this difference seen in the comparison of the ash analyses of the flesh and pits. In the orange ash the lime content far exceeds that of either the prune or apricot; accordingly, as our soils generally contain plenty of lime, even for oranges, we would rarely expect to fertilize with a view to its replacement. *Soda* is seen to be much higher here than in European analyses of the ash of the prune; this is probably explained by the fact that California soils, like those of other arid regions, contain much more soda than the European.

GEO. E. COLBY.

ANNOUNCEMENT.

The Board of Regents of the University has granted Director Hilgard a leave of absence for one year from June 15, 1892, and has appointed E. J. Wickson Acting-Director during the same period.

In this connection, attention is again called to our former request that all letters relating to experimental work, or questions of any kind, should be addressed "*Director of the Station*" as such, and not to individuals, as has been very generally done heretofore.

TO THE PRUDENT FARMER—DON'T NEGLECT TO INSURE YOUR GRAIN.

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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

CROPS AROUND PARADISE.—Cor. Gridley *Herald:* A drive in the vicinity of Paradise, Saturday, shows steady improvement. The grain and hay crops never looked better. The way the young orchards are growing is wonderful; olives and English walnuts are a decided success; oranges and lemons do fairly well. It requires but a small amount of imagination to forsee one of the finest fruit countries in the world located right here in Paradise.

CROP OUTLOOK.—Oroville *Register:* We lately had a chance to note the condition of hay, wheat and barley in the best agricultural sections of the county, and saw that the crops would be better than most people have heretofore estimated. About Moore station the grain and hay will both be heavy this season. Near Gridley there is an immense area of land that has been summerfallowed, but the land that is seeded will produce good crops. Both east and west of Biggs, the crop outlook could hardly be better than it is to-day. Near Nelson the crops are fine; at Durham and vicinity it would be hard to find better crops anywhere in the State, while about Chico they are equally as good. There are thousands of tons of hay that have been cut, and barley is nearly ripe for the sickle, if we may use that biblical phrase. The crop of wheat will be one of the greatest ever harvested in Butte. So far as we have been able to observe, there will not be over half or possibly two-thirds of the usual yield of fruit.

Calaveras.

SCIENTIFIC AND PRACTICAL FARMING.—F. S. Chapin in Sacramento *Record-Union:* Mr. Tift of Campo Seco purchased, one year ago, one of the most neglected places in California, and proceeded to renovate the place with the energy and enthusiasm of Hercules. Fifty orange trees were sold with the place, but they had been standing for a long time in grass, and were in sad plight. Cultivation and fertilization failed to restore them to a healthy color, when a friend, who was a practical chemist, visited him, examined the soil and advised an application of alkali. This he applied in a spray of soda ash and crude potash, with the effect of turning the leaves a dark healthy green and promoting a vigorous growth of young wood. The trees are 15 to 20 feet high, and he used from three to six gallons of the wash per tree. It was applied a little too strong. He would recommend the following formula: 1½ pounds soda ash, worth 2½ cents; ¼ pound crude potash, worth 8½ cents; 6 gallons water. It will be seen that materials for this wash cost about one cent per gallon. The soil is quite red, and is underlaid by slate at no great depth. One tree that stands in what was once an old cellar is nearly twice as large as the others. Some of the trees bore large crops of oranges last year, and many others are promising to come into profitable bearing very soon. Mr. Tift has some homemade incubators that cost him only $2 each, besides his own time and some old lumber that he used. He has made some brooders on the same principle, and is very successful where most amateurs have their main trouble—in raising the chicks. He hatches no more at one time than he can easily care for, and promotes them from one grade to another, like boys in a school. While another party visited was said to have lost chickens enough to fence his ranch, none of the dead were scattered about Mr. Tift's place. He says that success in the poultry business depends upon very careful attention to feed and cleanliness, and in keeping never to exceed 50 in one place.

Humboldt.

WADDINGTON CREAMERY.—Cor. Eureka *Standard:* Our creamery is ready for business. We are receiving a little more than 13,000 pounds of milk per day, all from stockholders of the creamery, and will have more soon, as many cows have not come in yet. We are making close to 600 pounds of butter per day. The machinery, though new, is doing splendid work and runs very smoothly. We have some material advantages, that of drainage being the principal one, and that is a very necessary consideration. We have adopted several improvements, among which is the cleaning of all waste spouts by steam, so that there is never any smell from them, which is so annoying in many institutions of the kind. Another great innovation is the placing of all belts below the floor, doing away with all dust and waste oil which is continually flying in the air and settling on and in everything. The late rains have put us back with our crops, but at the present the weather is fair, and every available team is engaged in putting in corn, beets, peas, barley, carrots and grass seed for cow feed. Grass is looking fine, although up to the last few days it has grown very slowly. The outlook for this section is good, and all seem of good courage. We ship this morning 20 boxes of fine butter from three days' churning.

Kern.

"DESERT" LAND CROPS.—Visalia (Tulare Co.) *Times:* J. D. Waugh returned from a visit to Kern county and brought samples of wheat and barley grown on "desert" land in Kern county without irrigation. Mr. Waugh said: "The barley was raised by Knight & Cowles on section 8, township 31 south, range 30 east, about 15 miles southeast of Bakersfield, on desert land claimed by Lucky Baldwin. This is the third crop raised on the same land. Two years ago the land averaged from three to three and a half tons of hay to the acre, some of it going as high as six tons. This year the crop will be cut for grain by Mr. Moshmayer. The grain was put in without plowing, nothing being used but a spring-tooth harrow. Mr. Moshmayer has in 800 acres of wheat and barley on sections 9 and 12, township 31 south, range 30 east. The wheat will yield from 10 to 12 sacks to the acre, the barley fully 15 sacks. This was sowed and plowed, but not harrowed. On section 20, township 31 south, range 30 east, Baldwin put in some wheat for hay which was cut the early part of last week, and now it is green again on the same stock. This is all done without irrigation on desert land."

IMPORTED STRAWBERRY PLANTS.—Bakersfield *Californian:* There is no question but that the region in the vicinity of E. Chauvin's artesian well, near Delano, is a favored spot. He has had two crops of alfalfa harvested already this year, and the third will be ready for cutting in about ten days. New potatoes have been eatable there for the past three months, or since the first of March. But the strawberry plants that he has are indeed worthy of mention. They were imported from France by Mr. Tesser of San Francisco, and are what is there called the "wood strawberry," and came originally from wild stocks, but under careful cultivation have been greatly improved. They are not large, averaging not over the size of a thumb's end, but they have a flavor equal to that of a garland of flowers, and when picked their bouquet fills the room with an exquisite odor, and to the palate their flavor is delicious. They seem to be the original of Bishop Berkeley's tribute, when he said: "God might doubtless have made a better berry than the strawberry, but, doubtless, he never did." And to think that these luscious berries grow and ripen at Mr. Chauvin's place every month in the year and nearly every day in the week.

Sacramento.

WILD BLACKBERRIES. — Sacramento *News:* Wild blackberries are very plentiful. The weather has been such that the crop will come all in a bulk, as ripening is remarkably uniform this season. The quality is better than for years, the berries all being plump and juicy Both Indians and Chinamen claim the season will be short, and that they will not pick for less than 12½ cents, being higher than usual. Gathering the berries is attendant with much hardship, on account of the high water and the myriads of mosquitos which infest the swamps and lowlands. Chinamen were supposed to be invulnerable, but the tough-skinned Mongol declares, "misketee heap too much bitee," and the Indian is free to admit that "sketo heap bite."

San Bernardino.

FRUIT NOTES FROM AZUSA VALLEY.—Ontario *Record:* A large acreage is being set to oranges this year; the improvements in this direction compare favorably with those in San Bernardino county. The soil in general is a rich chocolate loam, much like that of Hermosa, with a trace of adobe in it on the lower lands. At Glendora there is more gravel, and the best tracts are similar to Ontario foothill land. The damage from wind last winter was general and severe, but everybody seems to be going ahead caurageously, and more new orchards are being set than last year. The most of the valley is watered from the San Gabriel river; Glendora's supply comes from Dalton canyon, and most of the mesa ranches are watered from small springs. While preeminently an orange section, the Azusa valley has a great reputation on small fruits. In April, May and June of last year, about 20 carloads of strawberries were shipped from Azusa and Glendora. The shipments for the same period this year are not so heavy, but will reach about 15 carloads. We believe this entitles the section to the palm on the berry business. Glendora will ship blackberries this year by the carload. Glendora is one of the favored nooks on frost, and large winter shipments of peas, tomatoes and cabbages have been made from that point. There is a large acreage of deciduous fruits in the valley, and fruit driers will be run at Azusa and Glendora this summer.

TARDIFF ORANGE.—Riverside *Press and Horticulturist:* J. E. Cutter has brought us, for examination, some specimens of the Tardiff orange which seem to confirm his theory that in this orange we have a variety which we can profitably propagate in place of the Mediterranean Sweet. It appears that this variety, when planted in the immediate vicinity of the Navel, the Malta Blood and the Mediterranean Sweet, has withstood the frosts which have affected the others more or less severely. The quality of the orange even in May is sufficiently good to allow of its use at the season when the Ruby and the St. Michaels are made use of, while it can hang upon the tree as late as is desirable without serious deterioration. Its habit of growth, like the Ruby, is vigorous, and Mr. Cutter is of the opinion that in the Navel, the Ruby, the St. Michaels and the Tardiff, we have a "big four" in the orange line which will, with the Seedling, cover the complete round of the shipping seasons satisfactorily. It seems to us that the Tardiff, while not superior in quality to the best Mediterranean Sweets, is more uniform in quality and superior as a keeper, and, since it will go unharmed through a cold spell which would ruin a crop of the latter, that its superiority as a late orange must be fully admitted.

San Joaquin.

THE WATERMELON CROP.—Lodi *Sentinel:* The watermelon crop will be about ten days later this year than last, on account of the late spring rains. The prospects for a large crop are good, although a number of the growers complain of the ravages made by a small worm. This worm, or "grease bug" as the melon men term it, may be found on the under side of the leaf, which, after being attacked, shrivels up and appears withered. The vine, as well as the ground under it, looks greasy; hence the name "grease bug." About five years ago the same bug did considerable damage to vines, and no remedy was found to check its ravages. Several growers have tried spraying with different solutions, but as yet without success. From a prominent grower, a *Sentinel* reporter obtained the following names of farmers who have planted melons in this vicinity this year and with the acreage each has in: S. S. Gillespie, 50; H. L. Clark, 30; L. O. Gillespie, 60; H. Tecklenberg, 40; H. Binger, 80; Wm. Pope, 60; T. A. Pope and E. Eisler, 80; H. Pope and Thomas Troy, 80; C. W. Norton and E. Angier, 80; H. B. Coleman, 40; A. Harmen, 40; J. Lang, 80; John Acker, 50; F. N. Smart and Ed. Allison, 80; W. W. Huron, 160; James Perrott, 30; Wm. Hart, 40; Geo. Hogan, 40; J. Harshner, 40; Frank Miller, 40; Milloglay & Co, 30; James Thompson, 40; small patches, 200. Total, 1470. If the melonmen will adopt some plan of cooperation, they will be able to control the melon market, instead of the market controlling them as has heretofore been the case. It is a well-known fact that the Lodi melon is by far the best raised in the State, and there is no reason why Lodi growers should not make a handsome profit if they will only come together, make some equitable agreement and live up to such agreement. As long, however, as they insist upon placing small and inferior melons on the market when there is hardly sale for good melons, they will make a failure. Come, gentlemen, do not complain that the farmer is the victim of corporations, rings, etc., when you do not take the means to protect yourselves when you can.

Santa Barbara.

ANOTHER CREAMERY.—Santa Maria *Graphic:* Joseph Muscio is one of the most progressive dairymen in this section. While other dairymen have been talking about building creameries on the joint stock plan, he has put in a plant of his own for the use of his dairy, and he is well pleased with the result. The cream is passed from the strainer right into the separator, which is run by means of a vapor engine. Here the cream is at once separated from the milk. It is then placed in the cellar for 24 hours, being kept constantly cool by means of cold water around the vessel and by exposure to the cool night air. It is then churned. This treatment insures a uniform quality of butter, and Mr. M. assures us that the difference in the quality over the butter he used to produce by the old pan method is well marked by the increased price which the creamery butter commands. While Mr. Muscio could undoubtedly handle the cream for other dairies than his own, he prefers the creamery for his own use, and is very well satisfied with his outlay. If more of our dairymen, who are able to do so, would follow his example, they would feel well repaid for the expense of doing so.

Santa Clara.

TOBACCO-GROWING. — Gilroy *Gazette:* Mr. Culp of San Felipe, not disheartened by many reverses, although cramped by lack of capital and rebuffed by those who never believed the home production could equal the foreign importation, has persistently grown crops of tobacco since 1859. During these 33 years, he has never failed in getting a crop. People will be astonished when told his actual production has exceeded 4,460,000 pounds. But such is a fact.

Sonoma.

FRUIT OUTLOOK.—Santa Rosa *Democrat:* Reports from various parts of the county show that apples are a full crop; pears, one-half crop; prunes and plums, a little under half a crop; and cherries, one-fourth crop. Peaches in the Sebastopol country, Russian River Valley, and a few other sections, are a full crop, while in many localities they will not be more than half a yield. Apricots are a failure. On the 20th inst., Inspector Rogers stated that State Quarantine Officer Alex Craw sent to Dr. White of Santa Rosa a colony of steel blue lady birds (*orchus chalybeus*), a parasite for San Jose and red scale from Australia, which were placed in E. R. Hughes' orchard.

Tehama.

LARGE HAY CROPS—FARM HANDS ARE SCARCE. Corning *Observer:* Hands have been scarce here for the haying time; also scarce at Kirkwood, and a telegram came from Woodland to send down all idle men. The hay crop is very large and never better. The north high wind the past week has hurried on the ripening of the hay as well as the grain crops, and the harvesting of grain will be right after the heels of the hay mowers. Indeed, on Sunday, in coming from Kirkwood, we noticed a large stretch of barley belonging to the O'Niell Bros., already ripe for the sickle (the harvester, now-a-days). Crops of all kind are very fine, and the long north wind stopped the rank growing of the crops, and now the heads will fill out and rapidly ripen.

Tulare.

VISALIA PRUNE CROP.—C. J. Berry in Visalia *Times:* Last year our prune crop was not so large as it had been in previous years, but it was good enough to pay a profit of $300 or $400 per acre, even at the low price of fruit. This year the crop is simply immense. In the older orchards, trees seven years old will average 700 pounds of fruit to the tree. It will be safe to make the statement that some of the trees will yield 1000 and up to 1200 pounds. At the present price of prunes, there are 900 trees on the Briggs' orchard, situated near the city, that will yield the owner at least $9000. The orchard is under the supervision of M. J. Rouse, who was the manager in 1890, when one prune tree yielded 1102 pounds. I wish to say right here that Mr. Rouse's ideas of pruning a tree and mine coincide. Orchardists cannot pay too much attention to their pruning, as on it depends to a great extent its crop. The entire crop of fruit of this orchard is simply immense. One would scarcely be believed if he were to tell the bare truth. To an amateur fruit grower any large statement is accepted, but to a practical fruit grower the production of the fruit trees of our Visalia district is phenomenal. I'll venture the statement there is one Moorpark apricot tree on the Briggs' orchard that will yield one ton of fruit. For a number of years fruit growers have been trying to find out some way to prune the Moorpark apricot so it will bear every year. These trees that yield so heavy—one of them one ton of fruit—have never been pruned at all, so I reckon that must be the right way to treat the Moorpark apricot. As a fruit-producing country, the Visalia district beats the world.

Ventura.

THE APRICOT GROWERS.—Ventura *Observer:* The apricot growers, to the number of 25, met in the court room on Saturday. After a good deal of discussion, the "Ventura Apricot Association" was organized, with the following officers: A. Everett, President; J. M. Sharp, Vice-President; T. G. Morrison, Secretary; Chas. Barnes, Treasurer. An estimate of the apricot crop showed that about 4000 tons will be raised in the county this year.

A HEALTHY BEAN CROP.—Ventura *Democrat:* W. L. and D. Richardson have been farming the James Leonard place, over the river, or a portion of it, the past couple of years, and as evidence of the fertility of the soil in that section of the valley, we quote the following estimate of last year's crop of Lima beans: Of the 450 acres planted, 140 acres averaged 2650 pounds to the acre, and the average of the whole was 2200 per acre. The Richardson Bros. are cultivating the same ground to Lima beans this season, and have a promise of as large a crop, if not larger, than that of last year.

Yolo.

FRUIT ORCHARDS AROUND GUINDA.—Guinda *Independent:* In the fall of 1886 W. B. Stitt of Kentucky, together with several prominent fruit growers of Vaca Valley, formed a company and purchased of the Capay Valley Land Company a tract of land, which they immediately set out with the finest varieties of early fruit. Since that time there has been a gradual increase each year in the number of purchases of land around Guinda. Although the above mentioned orchard is only three years old, between 8000 and 10,000 boxes of the earliest fruit in the market will be shipped from it this season. Mr. Stitt shipped a few boxes of Alexander peaches to Boston last season (1891), and received a letter from a commission house stating that the fruit arrived in excellent condition, and was among the finest fruit received by them. Immediately south, adjoining this ranch, are the three years' old orchards of J. H. Sharp and Wm. Sproule, two business men of San Francisco. These gentlemen have about 80 acres of orchard, containing many varieties of the choicest fruit. The trees show a good growth, and will this year turn off several hundred boxes of first-class fruit. Among the other fruit growers in this locality are: J. G. Woodbury, Thos. Steele, W. T. Barnes, J. W. Cook, B. F. and John Davisson, J. C. Frank, A. L. Rhodes, M. F. Tarpey, O. Leach, C. Y. Hamilton, H. Galvin, J. B. Everett, Mrs. —. Cummings, C. J. Snyder and E. J. Campbell, most having from 20 to 40 acres in trees and vines.

CROPS AROUND GRAFTON. — Cor. Woodland *Democrat:* The grain crop is very promising. A heavy yield is expected on J. G. Fair's "Reed Ranch." On the smaller farms, the crops will probably exceed the anticipations of the owners. The orchards never looked better, and peach trees especially are bearing so abundantly that it is necessary to relieve them of some of their green fruit.

ARIZONA.

NUT CULTIVATION. — Phœnix *Herald:* Nut culture will soon be on a sound footing in this section. The nut that bids fair to soon make a beginning in Arizona is the pecan. So far, the attention seems to have been given almost entirely to fruits, but another season will probably see several acres set out to different kinds of nuts. A gentleman who has given some study to nut culture, in speaking of the successful growing of the pecan in Arizona, said that in another year he expected to put out ten acres of pecans as an experiment, at least. He felt so sure of being able to make a success of nut culture that he was going to set out, in addition to the pecans, ten acres of walnuts and ten acres of almonds, making thirty acres in nuts. There is little doubt about the success of the undertaking, as the different varieties of nuts can be produced on our rich bottom lands in profusion.

NEVADA.

A LARGE CATTLE PURCHASE.—Reno *Gazette:* Mason & Bradley and Russell & Bradley have purchased between 3000 and 4000 head of two, three and four year old steers recently, and will ship them from Deming, N. M., to their range in this State about the middle of the month. The cattle at this time are very thin in flesh, but strong enough to ship.

OREGON.

THE MOHAIR CLIP.—Eugene *Register:* Considerable mohair is marketed in this county every year, and the industry is growing all over the State. A couple of carloads have already been shipped from Portland this summer. A dealer in this article says the clip this year will amount to about 60,000 pounds, and that the production of mohair is to become one of the great industries of the State. Oregon mohair ranks better than any other produced in the United States. A very fine article of mohair plush is now produced in the United States from American mohair for upholstering furniture, railroad cars, etc.

WOOL CLIP IN EASTERN OREGON.—Baker City *Democrat:* The harvest is now in full blast, and shearers are in demand. The wool crop in this section this season will be the greatest known for years. Mr. Heilner has excellent facilities for handling wool, his warerooms being large and commodious. The roads are improving fast, and wool will soon commence to arrive in large quantities.

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

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F. H. BURKE, 626 Market St., S. F.; Registered Holsteins; winners of more first prizes, sweepstakes and special premiums than any herd on the Coast Pure registered Berkshire Pigs. All strains.

JERSEYS—The best A. J. C. C. Registered Herd is owned by Henry Pierce, S. F. Animals for sale.

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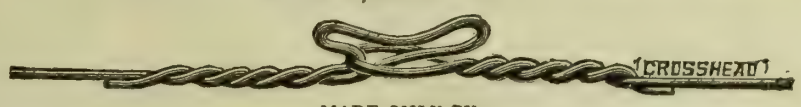
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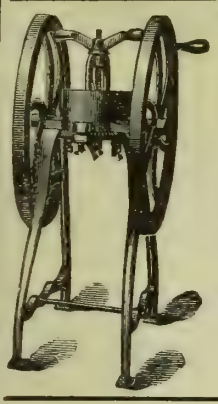


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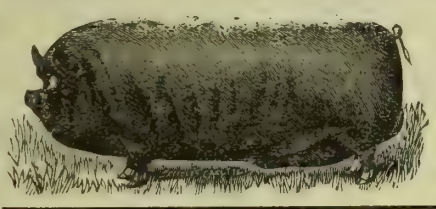
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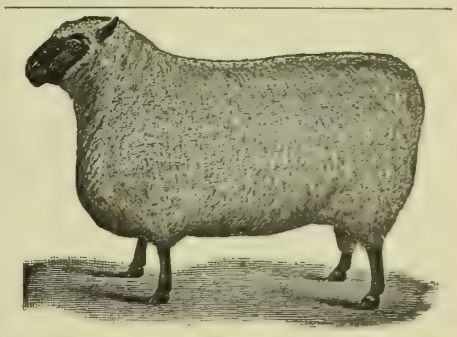
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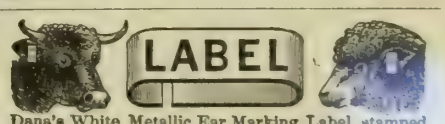
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DOMESTIC ECONOMY.

Chicken Milk for Invalids.

Although every one is now talking of the merits of the new "Chicken milk," it is a very old friend, and does not even pretend to a new face. The recipes here given are in the possession of a member of the "Ancient Noblesse" of Canada and came from France in the early days of "The Old Regime." They are now being used in all the hospitals. No. 1 is the more delicate of the two, and can be used in cases where the patient cannot retain even a soft-boiled egg. No. 2 is prepared in a different manner, and is more for cases where the patient is stronger or more nourishment is necessary.

CHICKEN MILK, NO. 1.—Cut a chicken into small pieces and see that it has been cleaned in the most careful manner, removing the skin. Put it into a china-lined sauce-pan, with the bones and neck, the white part of a head of celery, and the stalks (not leaves) of a fresh bunch of parsley, a few pepper-corns and a little salt. Cover the meat with cold water, and let it simmer till it is in rags and falls from the bones. Strain into a flat basin or large bowl. When cold it should be in a stiff, clear jelly. Carefully, with a skimmer, take off the grease, and then take a soft, clean pantry towel, dipped in hot water, and gently wipe over the top of the jelly with it so that no particle of greasy matter can possibly remain. Take equal quantities of this jelly and fresh milk, put them into a small china-lined sauce-pan and let them boil together. Boil up the mixture three times and strain into a cup. A teacupful is generally considered sufficient at a time.

CHICKEN MILK, NO. 2.—Prepare the chicken in the same manner as above, but instead of using water, cover it with a quart of fresh milk and use a bain-marie, or improvise one by putting the chicken and milk into a very large jam-pot, and setting that in a sauce-pan nearly filled with cold water; when the milk in the jam-pot boils, the "chicken milk" is ready for use.

OTHER DISHES FOR INVALIDS.

RICE JELLY.—Mix one tablespoonful of rice flour in cold water, put it in a pint of boiling water and sweeten; break in while boiling, one stick of cinnamon. Pour in molds and set on ice.

BLANC MANGE. — Dissolve one tablespoonful of moss farine in a quart of new milk. Sweeten and flavor; stir in a beaten egg.

OATMEAL PORRIDGE.—Put a quart of water in a sucepan, let boil, stir in meal to thicken, with a pinch of salt, let boil slowly half an hour, add a little more boiling water, and let simmer one hour. Serve with sugar and cream.

PANADA.—Lay six or eight crackers in a bowl, sprinkle with powdered sugar, add a pinch of salt and a teaspoonful of fresh but ter. Pour over a teacupful of boiling water, let stand near the fire an hour; add a teaspoonful of wine or brandy, grate nutmeg over the top.

ARROWROOT CUSTARD.—Take one tablespoonful of arrowroot, mix smooth in a little cold milk, and stir into a pint of boiling milk with half a teacupful of sugar and two beaten eggs. Let boil, and flavor with cinnamon. Set in a cool place until very cold.

TAPIOCA JELLY.—Soak half a pint of tapioca several hours, put on to boil in a quart of water; sweeten and flavor with lemon juice, boil one hour, put in molds and set on ice. Eat with sugar and cream.

BUTTERMILK STEW.—Boil one pint of buttermilk, sweeten, and stir in a tablespoonful of buttter; flavor with extract of ginger.

MULLED BUTTERMILK.—Put a pint of buttermilk on to boil; add a well-beaten egg; let boil up once.

KUMISS.—Fill a quart bottle with fresh milk up to the neck, add two tablespoonfuls of sugar dissolved in warm water; when lukewarm, three tablespoonfuls of yeast; set in a warm place, shake often until it begins to sparkle. Then cork tightly and set on ice for six hours. The virtue of kumiss as a diet for the sick is that it refreshes and stimulates with no after-reaction from its effects.

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Tables 30, 31 and 32 give the velocity and discharge of a large range of open channels, and tables 68 and 69 give the velocity and discharge of circular and egg-shaped pipes, sewers and conduits.

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The "Flow of Water" will be useful, not only to the irrigation engineer, but also to the engineer engaged on water supply, sewerage, drainage of land and improvement of rivers, etc.

The tables of contents of volumes 1 and 2, and the index of volume 1, are very full, and will enable the reader to find any subject referred to in the book, without loss of time.

Mr. Flynn is acknowledged to be one of the most accomplished mathematicians on this coast, and has had great practical experience in this country and abroad on irrigation and other engineering works. He is therefore perfectly competent to write authoritatively on this subject, and has evidently devoted great labor to his work. The typographical appearance of the book is exceptionally fine. Good ink has been used on heavy paper, and the table work skillfully done. The two volumes are bound in one book; price $8, post free. The work contains 711 pages and 211 illustrations. This branch of engineering science, of such great importance to California and the Pacific coast, has been neglected by our writers until now. While Mr. Flynn has given much of what has heretofore been known, he has also added much that is original and of great value. Professional men will appreciate the labor bestowed on this book, especially on the table work.

Visiting Cards.

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A daughter, in the first year of her social life, has no card, but engraves her name on her mother's card. After this probationary year the eldest or the only daughter in a family writes only Miss before her family name; the younger daughters write the full name. It has been decided that on a widow's card the dear name so long borne, so hard to relinquish, may be retained with propriety for social use, though in all practical matters the widow writes her own Christian name instead of that of her husband.—New York Sun.

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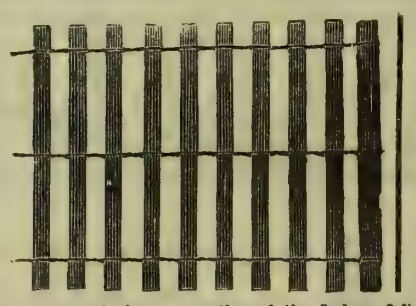
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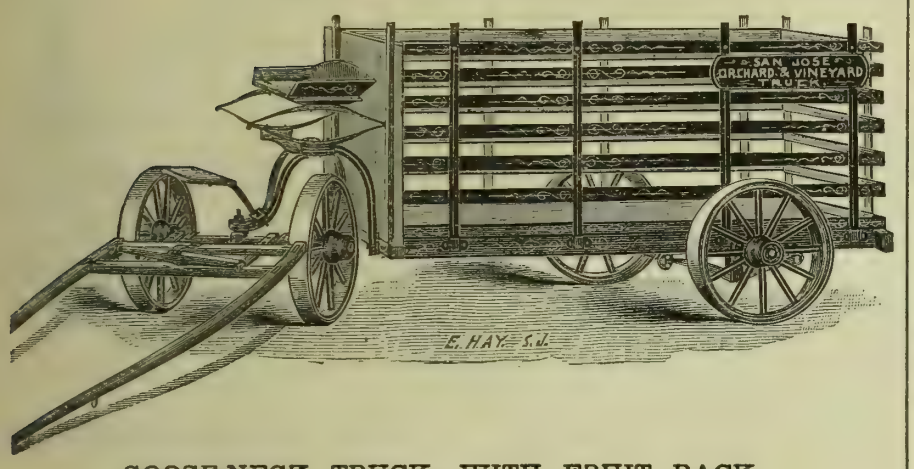
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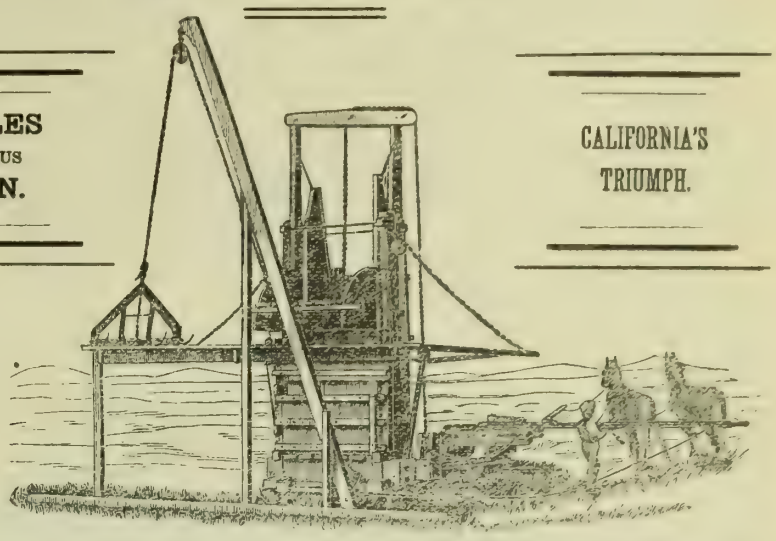
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Patrons of Husbandry.

The Secretary's Column.

State Grange Finances.

[By A. T. Dewey, Secretary State Grange of California.]

Owing to the special canvass of State Grange Lecturers, incurring considerable traveling expense, it is natural that interest should be felt as to the State of our Grange finances. We are happy to show there is a healthy balance in the treasury. There was on hand on Jan. 1st, in the general fund, $560.87, in the lecture fund $2059.78, making a total of $2620.65. On the 1st of June there was on hand in the general fund $597.89, in the lecture fund $1810.08, making a total of $2407.97. This shows a decrease of $212.68, only created by the extensive canvass which has been made during the past five months. It should be remembered that only five (instead of ten) cents per capita per quarter is at present received in the lecture fund.

Now that good seed has been sown throughout our Grange field we hope local workers will be found to make a farm to farm canvass and organize at least a dozen new Granges before our annual gathering at San Jose. Very liberal compensation is offered by the State Grange for those who succeed in organizing new or reviving dormant Granges. Full information and proper blanks will be furnished on application to the Secretary.

Let Us Hear from All. — The following Granges have failed to send in a quarterly report to March 31st: Nos. 15, 100, 147, 172, 203, 242, 245 and 289. It is to the advantage of the Order at large as well as for every Grange that each shall make its quarterly report prompt and in full. We hope that all Patrons will use their best efforts to thus forward the work.

Children's Day.—How many Granges gave heed to the proclamation of the Master of the National Grange for holding children's meeting on Saturday, June 4th. We should like to hear from all that celebrated, giving brief hints of the best features for making the day pleasant to old and young and for advancement of the Order. To those Granges which did not celebrate we would say by all means set apart a day for the special enjoyment of the children.

Fourth of July Picnics.—Many Granges have had no picnic this season. Why not hold a gathering of Patrons and neighbors interested in having a good, time July 4th, inspiring patriotism and the true progressive American spirit. Some of the best celebrations have been thus held under the auspices of the Grange. Let each Grange take this subject up.

Hold Meetings.—It has been the custom of some Granges to discontinue all meetings during the hot and busy season of the year. Let us consider if this custom has not become too sweeping in its application. Cannot every Grange hold at least a short session once a month to advantage? It is only four months before the State Grange meets. See if there is not some good Grange work that can be sandwiched in with home and field work in the meantime. Make the effort and you may find it an easier matter to hold more meetings than heretofore, during the busy season, and reap good results from the same.

National Grange.—The "Granite State" has secured the next annual session of the National Grange, and the chiefs will gather in council next November at Concord, N. H.

Try for Them.—There is talk of organizing new Granges at Fresno, Livermore, San Diego, and at least half a dozen other places in the State. Would it not be well for local Granges to appoint committees to organize and revive Granges in contiguous territory; also to furnish, by subscription or from the treasury of the Grange, sufficient funds to pay expenses while efforts are being made by Patrons to secure the charter list of new Granges; in case of success the money to be refunded from premiums ultimately paid by the State and National Granges?

Sacramento Grange.—The "Special Canvass Meeting" of this Grange took place May 21st. An open session with good attendance and much earnestness and enthusiasm prevailed. Hon. Thomas McConnell led the speaking, followed by Past Masters I. C. Steele and J. V. Webster, Judge J. H. McKune, Hon. H. M. Larue, Bros. W. A. Jenkins and others. Good music helped out the excellent program.

National Grange Digest.—A new edition has been received and will be mailed for 35 cents. to any person desiring it, by the S. G. Secretary. It is the only revision made since 1890.

Resolutions on the death of Mrs. Albert Woods, a long esteemed and honored member of the State Grange, were recently passed by Tulare Grange.

California Patrons extend hearty congratulations to Washington State Grange upon fourth annual session opened at Vancouver, June 7th.

Master E. W. Davis, assisted by P. M's. Martin and Purvine of Two Rock, installed the officers of Petaluma Grange last Saturday, the meeting being a full and interesting one.

Temescal Grange.—Saturday last Bro. Stevens gave an interesting sketch of his recent visit to the home of Mrs. C. E. Kinney, Dutch Flat. He and Mrs. Stevens enjoyed the recent visit of the National Editorial Association to the mines of that section. Among other amusing happenings, Bro. Stevens mentioned that he ventured to say to one of the old miners panning out, that there was no gold in his pan. "Just you keep still," replied the miner, "and these here editors will never know the difference." Master Roxie Dennis reports Eden Grange moving along O. K., with the hope that some early efforts will revive Livermore Grange.

Correspondence, announcements of meetings, and information of Grange transactions and news in brief is solicited for publication in this department.

Worthy Master Davis has his hands full of Grange and other business, all of which he is transacting with good zeal and promptness.

Yuba City Grange. — George Obleyer, Sr., called in on Tuesday and reports that a class of ten received the third and fourth degrees on Saturday last. From six to eight applicants are also on the way to the Master's desk. This Grange has lately obtained from this office 145 badges, the handsomest, we believe, ever produced in California. Certainly Yuba City is prospering nobly.

THE LECTURER'S CIRCULAR.

At the last session of the National Grange the following regulation was adopted and made a part of section IV, paragraph 57, page 64, of the Digest:

It shall be the duty of the Lecturer of subordinate Granges to report to the Lecturer of the State Grange at the end of the March and September quarters, giving a report of the literary work within their Grange, the State Lecturer to summarize the same and make semi-annual report to the Lecturer of the National Grange.

We met State Lecturer Huffman at Stockton last week. Among other efforts put forth lately, he mentioned the sending of circulars to each subordinate Grange, a copy of which we have not received. We understand, however, with other good suggestions, it urged the carrying out of National Lecturer Whitehead's proposition, viz.:

THE PLAN.

I have arranged the following plan for uniform and systematic distribution and circulation of the best essays and papers read in our Order to be used by Lecturers in their "Lecturer's Hour," which ought *never* to be omitted from the exercises of *any* Grange, and which *every* Lecturer will provide for if the obligation and instructions given at installation are lived up to.

We will suppose there are 100 subordinate Granges in a State. In compliance with the rule of the National Grange each Lecturer twice a year reports to the Lecturer of the State Grange and forwards an average of five of the best essays or papers read in the Grange. This places in the hands of the Lecturer of the State Grange 500 essays or papers. He selects one out of ten (50 in all) and forwards them to the Lecturer of the National Grange. With 30 States complying, this gives the Lecturer of the National Grange 1500 of the best.

The Lecturer of the National Grange then has printed slips with names of all the States and the names of the Lecturer of each State Grange, with postoffice address printed with his State. One of these slips is attached to each package of 50 essays, and one of them (package) is sent on its way to the Lecturer of each State Grange. This slip is also checked, so that this State Lecturer will know to which State Lecturer *he* is to send them, after their use in *his* own State, and so they will be passed along the line. For instance, a package of 50 goes to Alabama's State Lecturer; after using he sends to California's State Lecturer (by mail); California to Colorado; Colorado to Connecticut, and so on, alphabetically, to the end of our grand national chain of States.

When the State Grange Lecturer receives this package and "National Slip" in his office, he attaches to each essay a "State Slip," containing the names of the Lecturers of each subordinate Grange in his State (or, if thought best, only of Pomona Granges), (or, if a large State, he can have four or five divisions, with package going the rounds in each), and the State Lecturer also uses such number of the original papers he started with (500) *in addition* to the National Grange package, and sends all on their journey around his State.

Each Lecturer, of course, understanding that after an essay has been used in his Grange, that it must be at once mailed to the next address on the slip attached, his own being checked off, and, finally back to the Lecturer of the State Grange, who will, when those forming his *National* package have all returned, as before said, start them on their way to the Lecturer of the next State Grange found on the "National Slip."

Now, just as soon as I have received from the Lecturers of *five* State Granges enough essays or papers to make "a trial trip." I will start them on their way *in those five States*, and as fast as other States cooperate in the work, they will be included also. We can if we will. *The way to cooperate is to cooperate.*

As in other pursuits and professions, many of the best writers of our country to-day had their early training upon the farm, and received their first inspiration direct from nature. Our Order, with its beautiful ritualism of field and forest, its lessons of the springing grass and running brooks, "bud and bloom, sweet perfume," is leading thousands to higher aims and broader and better views of life. A noted divine once said:

"Every book which interprets the secret lore of fields and gardens; every essay that brings man nearer to the understanding of the mysteries which every tree whispers, every brook murmurs, every weed even hints, is a contribution to the wealth and happiness of our kind."

Let us improve the opportunities the Grange offers in this direction.

The above is followed by a series of questions to be answered by Subordinate Grange Lecturers, which we believe have already been submitted by our State Lecturer to each Grange.

OREGON STATE GRANGE.

I am glad to receive, from its faithful Secretary, the following favorable news from the annual session of Oregon S. G., held at Albany last week. Master Boise and Lecturer Hayes are both experienced and effective men in the positions they have been again called on to fill:

Turner, Or., June 4th.

Bro. D.—You will pardon me for not responding sooner to your kind fraternal telegram of greeting to Oregon State Grange. The session was a very busy one. We had the largest attendance, most enthusiasm, most harmonious, pleasant and profitable session that I have had the pleasure of attending. Bro. and Sister Heald and Bro. and Sister Newton, all of Santa Rosa Grange, were present from the Golden State, and they appeared like our own folks, since Sister Heald is a sister of our lamented Bro. and Past Master Wm. Cyrus. The Grange of Oregon has held its own remarkably well both numerically and financially during the past year, notwithstanding the rush to organize other farmers' organizations within our borders. You have learned ere this that Bro. R. P. Boise is again at the head and Bro. Hayes in the Lecturers' chair; Secretary and Treasurer reelected almost unanimously. It is pleasing to us to realize that our humble efforts to serve the Order are appreciated by the Patrons of Oregon. We increase the pay of Deputies, and now with what they get from N. G., they will receive $10 for each new Grange instituted and $5 for reorganizing old ones. Five hundred dollars is appropriated to keep the Lecturer in the field as much as possible. We are now mapping out our work for a vigorous campaign. We were very much disappointed not to have Bro. Davis, M. of Cal., with us.

CROP PROSPECTS.

The prospects for fruit are not flattering, the frost thinning many varieties. Spring crops of grain promise well, while fall wheat will be less than average, on account of cold, wet weather in April and May.

Fraternally,
W. M. Hilleary.

Protect Your Trees from Sunburn, Borers, Rabbits, Etc., by Using

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AT A COST OF FROM 1 CT. TO 2 CTS. PER TREE.
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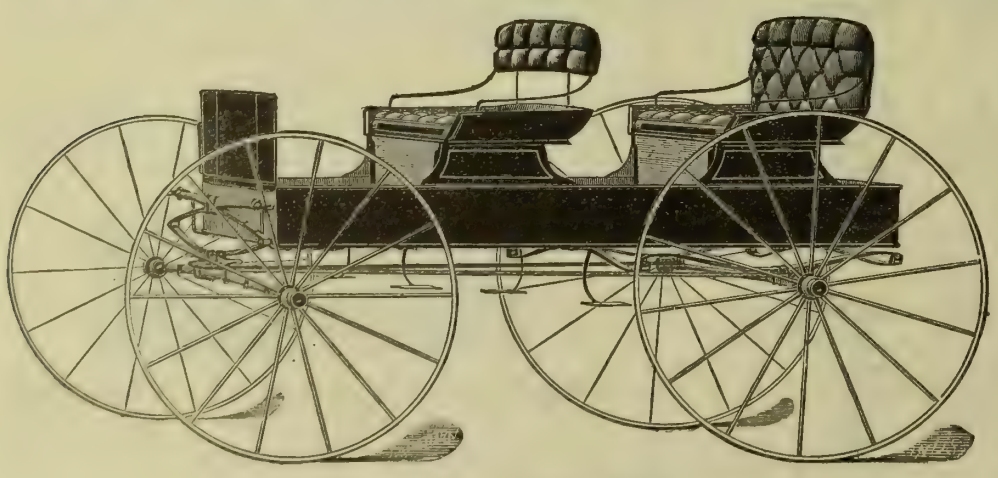


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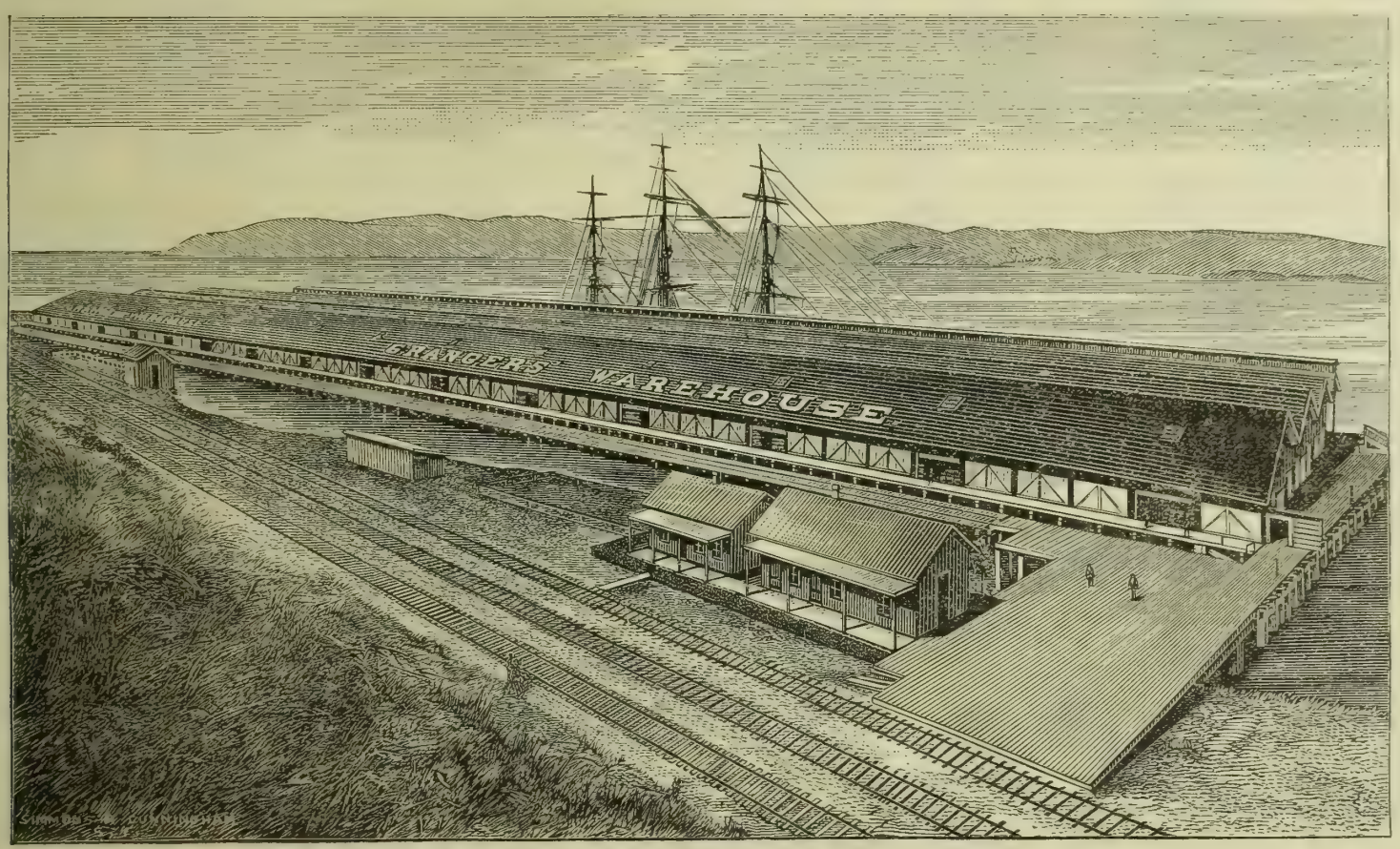
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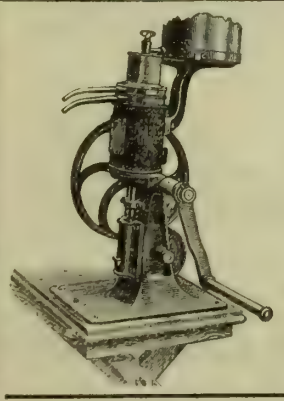
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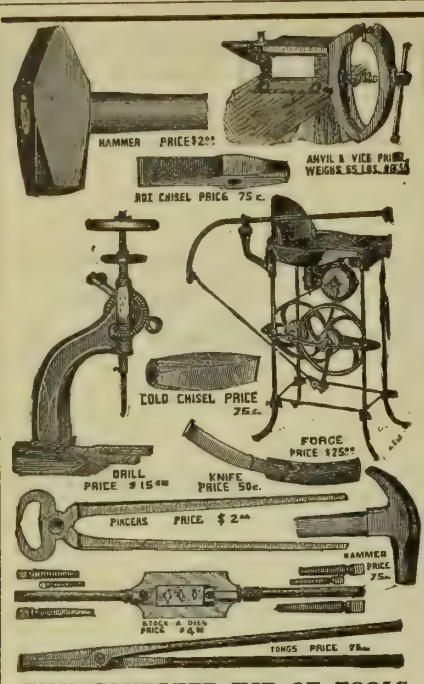
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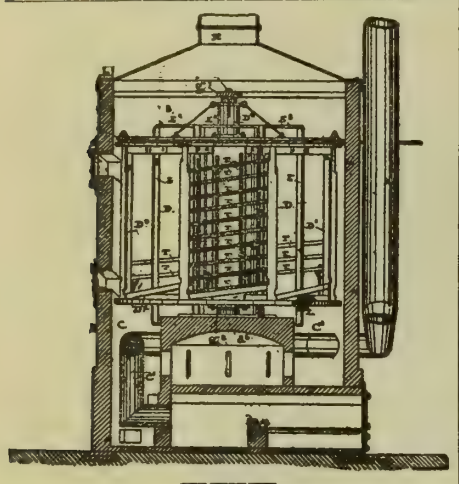


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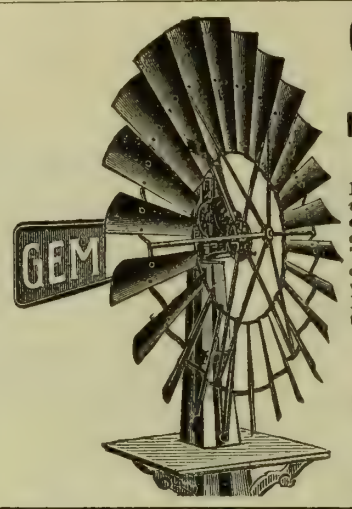
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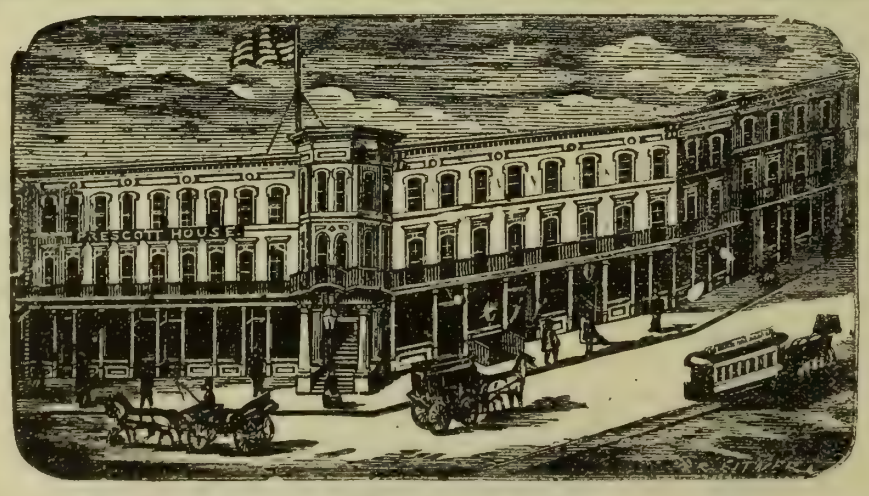
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GRANGERS' BANK
OF CALIFORNIA,
SAN FRANCISCO, CAL.
Incorporated April, 1874.



Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders	720,000

OFFICERS.
A. D. LOGAN.....President
I. C. STEELE.....Vice-President
ALBERT MONTPELLIER.....Cashier and Manager
FRANK McMULLEN.....Secretary
General Banking. Deposits received, Gold and Silver. Bills of Exchange bought and sold. Loans on wheat and country produce a specialty.
January 1 1892 A. MONTPELLIER, Manager.

JAMES M. HAVEN. THOMAS E. HAVEN, Notary Public.
HAVEN & HAVEN,
ATTORNEYS AND COUNSELORS AT LAW,
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S. F. Market Report

Market Review.

SAN FRANCISCO, June 8, 1892.

General trade the past week was more active, with a marked increase in the volume of goods sent out on orders. Favorable weather for maturing crops, and cool weather on the mountain ranges, causing snow to melt more slowly, are the prime factors in producing a stronger feeling of confidence with the trade in general. With returning confidence there is more of a disposition shown by capitalists to place idle funds, and, therefore, securities offered are not so closely scrutinized. Silver shows an advancing tendency, which is accepted as a harbinger of better times for all lines of produce.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.
Thursday	6s09½d	6s10 d	tall d	7s09 d	7s00½d
Friday	6s09½d	6s10½d	6s11½d	7s0[illegible]d	7s00½d
Saturday	6s09¾d	6s10½d	6s11 d	7s00¼d	7s00½d
Monday					
Tuesday	6s10 d	6s10 d	6s11 d	6s11½d	7s00 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	35s3d	35s6	35s6d	Slow.	Showery.
Friday	35s3d	35s6d	35s6d	Steady.	Fine.
Saturday	35s6d	35s6d	35s6d	Firmer.	
Monday					
Tuesday	35s6	35s6d	35s d	Quiet.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, June 8 WHEAT—Upward tendency. California spot lots, 7s 4d; off coast, 35s 6d; just shipped, 35s 6d; nearly due, 35s 6d; cargoes off coast, American advices offset market favorably; on passage, higher prices asked but no advance established; English country markets, steady; French firmer.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug.	Sept.
Thursday	150½	152½	152⅝	152½
Friday	151½	154¼	154⅛	153¾
Saturday	152½	154¼	154⅝	155⅝
Monday	151½	153¾	154	154½
Tuesday	154¼	156	157½	157½

The following are to-days' telegram:

NEW YORK, June 8.—WHEAT—91½c for June, 93½c for July, 94c for August, 94½c for September and 95½c for December.

CHICAGO, June 8.—WHEAT—86¾c for July and 86½c for September.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	....	141	....	....	....
" lowest	....	141	....	....	....
Friday, highest	139½	....	....	142½	....
" lowest	139½	....	....	142½	....
Saturday, highest	140½	....	....	142½	141½
" lowest	139½	....	....	142½	141½
Monday, highest	139½	....	....	....	....
" lowest	138½	....	....	....	....
Tuesday, highest	141	....	....	....	141½
" lowest	139½	....	....	....	141½

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	96½	....	....	....	....
" lowest	95½	....	....	....	....
Friday, highest	96½	....	....	....	....
" lowest	96½	....	....	....	....
Saturday, highest	96½	....	....	....	....
" lowest	95½	....	....	....	....
Monday, highest	95½	....	....	....	....
" lowest	95½	....	....	....	....
Tuesday, highest	94½	....	....	....	....
" lowest	94½	....	....	....	....

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal: Seller 1892—300 tons, $1.40½ ₱ ctl. Buyer December—100 tons, $1.44½ ₱ ctl. Regular session: Seller 1892—300 tons, $1.40½; 1000, $1.40⅝; 600, $1 40½; 3300, $1.40½ per ctl. Afternoon: Seller 1892—500 tons, $1.40½ per ctl.

Barley—Morning—Informal: Seller 1892, new—300 tons, 94½c. Regular session: Seller 1892—600 tons, 94½c. December 100 tons, 98½c. October—100 tons, 96½c per ctl. Seller 1892, new—100 tons, 95½c; 200, 95½c per ctl.

Bran—Seller 1892—205 tons, $16.50 per ton.

Markets by Telegraph.

Foreign Grain Review.

LONDON, June 6.—The Mark Lane *Express* says: The hay and oat crops threaten to be very short. Seven weeks may bring wheat and barley nearly to mean; expectations of full crops are abandoned. Deliveries of English wheat the past month were unexpectedly heavy. Foreign wheats were depressed at Hull and 1s. lower at Liverpool. California wheat was firmer; the downward limit of American produce seems to have been reached. America practically controls the trade. Flour is extremely low. The spring grain trade is unsettled. Corn is 3d higher; Indian shipments were 50,000 quarters for the week below a year ago; prices are 32s per quarter against 40s then.

Delaware Peach Crop.

NEW YORK, June 6.—The Commercial Bulletin's Delaware advices report that the prospect indicates a short crop of peaches suitable for canning. Yellow peaches are very scarce.

California Fruit East.

CHICAGO, June 3.—Two carloads: Black Tartarian cherries at $1.05@2.05; White Bigarreau, $1.15; Pontiacs, $1.30; Rockports $1.25@1.45; Black Bigarreau, $1.55; Pringle Apricots, $1 25@1.40; Seedlings, $1.50@2.50; Cherry plums, $2.10@2.25; Hale's early peaches, small boxes, $1.

CHICAGO, June 4.—Two carloads: Royal Apricots at $2.50; Seedlings, $2 15; Pringle, $1.05@1.20; Tartarian cherries $1 50@1 80; Bigarreau $2.05; Royal Anne, $2.06@2.65. Some in very bad order sold for less.

CHICAGO, June 4.—One carload: Pringle apricots brought $2.50; cherries $1.10@2.40. Fruit is in good condition. The weather is bad and it is raining hard.

CHICAGO, June 6.—One carload: Royal apricots brought $2@2.20; Seedlings, overripe, $1.25@1.75; peaches, $2.70@3

CHICAGO, June 6.—One carload: Tartarian cherries $1.20@1.70; Royal Anne, $1.70; Republican, $1.50; Seedling apricots $1.70; Pringle, $1.05@1.10.

Eastern Dried Fruit Markets.

NEW YORK, June 6.—Eastern crop reports, especially of peaches, stiffen recent prices for present and prospective California packings. Evaporated peaches are out of the list. The quality of prunes is poor, but the demand is active, as our berry season is late. Sellers try to make the stock presentable by steaming it into a marketable condition. Grocers pay 7½@8 cts for small to best sizes. A line of small ungraded sold at 7 cts.

Raisins—Sellers are closing out as fast as they can; common to fair, loose and in layers, are 90c@$1 05; good, $1 10@1 15; prime, $1 25@1 80; bags are out of first hands; last fall, 4½@5 cts. Valencia layers at 5¼@6¼ cts. divert a large portion of buying for summer wants.

There are no apricots in commercial lots. Cherries have had warm weather against them and range wide; the first sales of the week were 65c@$1 95; a few boxes sold at $2 75; Porter Bros. sold a car of black Tartarans at $2 50@4, also one on Saturday ranging from $1 10 to $2 40. Apricots, $1 70@2 30, with selections, $5 15.

CHICAGO, June 7.—California Dried Fruits—There is a good demand and firm market for all lines named below except raisins, but in this description there is not much doing. Prunes, apricots, nectarines and peaches all rule firm. On account of apricots being scarce nectarines are doing better.

NEW YORK, June 7.—Offers of $1.40 for a line of Horseshoe brand A, loose muscatel raisins, were refused.

Eastern Wool Markets.

NEW YORK, June 9.—Business is fairly active. Assortments are not in convenient bulk for large buyers who desire to match lots on hand. Prices are steady at late rates, and no prompt response is promised to the new clip figures which reach the seaboard. Australian is a menace to many home lines that have been talked higher. There is much complaint over the heavy condition of some of the Western arrivals. The Texas clip is estimated to be one-third smaller than last year's, and is reported well sold out of grower's hands. It is also reported here that most of California's clip has been placed at the principal points. Sales in New York, 183,000 domestic and 310,000 foreign. Boston sold 1,700,000 domestic and 448,000 foreign, mainly Australian. Philadelphia had fair sales of high grades of wool at full prices. There is no indication of advance in any sort.

English Potato Markets.

CHICAGO, June 7.—Potatoes, new—The market is slow and unsatisfactory. The daily arrivals from California and the South exceed the demand. Consumers are not buying and holders are anxious to sell and offer to accept reduced prices, but failed to call out inquiry. California, northern, per sack, $1.50; southern, $1@1.25; bad order, 60@75c.

Miscellaneous.

NEW YORK, June 6.—Lima beans are easier for spot at $1.70@1.75. Most of the best grades are absorbed. To arrive in two months, $1.60@1.65. Hops—Prolonged quiet has given more stress to brewer's wants and with increased inquiry at last prices, with more strength, and a better disposition is shown by holders of choice to part with their stock. In options there is no excitement. Closing bid and asked: June 24, asked, 26¾; July 25, bid, 25¾; asked, 27; August, 26 bid.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 7, '92, were as follows:

Flour, qr. sks	73,872	Bran, sks	7,659
Wheat, ctls	154,531	Buckwheat "	....
Barley, "	20,595	Middlings "	1,860
Rye, "	396	Chicory, bbls	100
Oats, "	345	Hops, "	....
Corn, "	855	Wool, "	3,255
*Butter, "	1,625	Hay, ton	2,609
do bxs	916	Straw, "	90
do bbls	14	Wine, gals	216,100
do kegs	51	Brandy, "	18,485
do tubs	2	Raisins, bxs	2,500
do ½ bxs	29	Honey, cs	14
†Cheese, ctls	1,125	Peanuts, sks	....
do bxs	150	Walnuts "	....
Eggs, doz	41,200	Almonds "	....
do " Eastern	82,239	Mustard "	....
Beans, sks	38,309	Flax "	593
Potatoes, sks	19,675	Popcorn "	....
Onions, "	5,741	Broom corn, bbls	....

*Over'd, 239 ctls. †Overland, ... ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows:

	July 1, '90 to May 30, '91.	July 1, '91 to May 28, '92.
Flour, ½ sks	386,138	462,493
Wheat, ctls	1,393,084	1,288,845
Barley, "	269,912	56,791
Oats, "	359,998	426,676
Wool, bales	7,420	8,238
Hops, "	506	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,048

Report of Flour and Grain Remaining in the State of California on June 1, 1892.

LOCATION.	Flour, bbls.	Wheat, ctls.	Barley, ctls.	Oats, ctls.	Beans, sks.	Corn, ctls.	Rye, ctls.
San Francisco and Oakland wharf, including grain afloat in harbor and in transit	30,167	156,739	180,224	41,966	59,807	93,052	3,831
Sonoma, Humboldt, Napa, Solano, Yolo, Colusa and Glenn Cos.	8,175	32,585	1,210	....	....	3,070	....
Sacramento, Yuba, Sutter, Butte and Tehama Counties	24,000	264,960	....	....	1,200	6,703	....
Contra Costa and Alameda Counties	1,000	226,070	44,700	....	....	....	....
San Joaquin, Stanislaus, Merced, Fresno, Tulare and Kern Cos	30,765	3,324,555	110,410	....	....	1,600	....
San Mateo, Santa Clara, San Benito, Santa Cruz, Monterey and San Luis Obispo Counties	18,735	738,215	65,010	....	....	....	2,000
Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino and San Diego Counties	7,675	81,920	283,190	320,150	4,830	23,115	1,500	42,225	5,831
Totals	120,517	2,100,149	913,049	158,960	45,010	42,225	5,831
December 1, 1891	140,043	9,964,575	2,843,602	183,401	276,126	263,256	39,545
June 1, 1891	191,166	1,628,562	852,882	45,074	46,632	76,738	14,198
December 1, 1890	118,123	12,168,993	1,615,655	61,085	174,291	302,921	27,150
June 1, 1890	81,090	4,811,063	1,004,457	81,235	33,503	91,111	16,892
December 1, 1889	116,225	15,300,368	3,321,860	120,356	107,419	184,915	66,540
June 1, 1889	100,566	2,092,430	2,052,630	110,246	60,415	84,916	10,218
December 1, 1888	95,906	10,819,630	4,087,060	120,175	235,320	266,247	7,040
July 1, 1888	69,979	9,730,060	4,522,990	65,380	109,925	191,800	4,250
January 1, 1888	50,275	8,790,400	798,500	42,400	74,405	72,330	1,350
July 1, 1887	80,608	7,812,850	2,590,250	47,400	243,550	186,650	44,850

First Receipts of New Crop Barley.

The following shows the dates on which new barley has arrived at San Francisco and the prices paid for the same:

Year.	Month.	Price.	Year.	Month.	Price.
1870	June 19	$1 20	1892	June 12	1 65
1871	June 12	1 57½	1883	June 25	95
1872	June 6	1 40	1884	June 28	90
1873	June 5	1 10	1885	June 16	1 25
1874	June 9	1 45	1886	May 26	1 25
1875	June 20	1 35	1887	June 3	1 15
1876	May 30	90	1888	June 5	92½
1877	June 30	1 55	1889	June 1	75
1878	June 11	80	1890	May 31	1 00
1879	June 30	75	1891	June 6	*1 42½
1880	June 24	64¾	1892	June 6	1 05
1881	June 21	$ 90			

*Sold by auction worth about $1.20. † Sold by auction worth about $ 95

The first lot in 1891 was received on the same date, and came from the William Sharon estate, Fresno county. The first received this year was shipped by P. Fabian & Co. of Tracy, San Joaquin county. The grain was bright and fairly heavy, coming up to the No. 1 standard.

Cereals.

Mark Lane *Express*, May 23:—English wheat has been on large offer for the time of year. Farmers have lost heart, and are clearing their reserves at a very low figure. The sales of English wheat last week at 196 statute markets were larger than we ever remember them for the same week in 1890 they were decidedly heavy, but without coming quite up to last week's standard. Value is as much as 8s. 4d. below that of a year ago, but this time last year was a period of excitement and advance, and Whitsuntide, which fell at this period of May 1891, was marked by frost and sleet, which did widespread damage and caused farmers to hold grain for a relatively high price. Value has in reality reverted to the moderate level associated with the easy trade conditions of 1890. It is estimated that 5,533,440 qrs. of the last harvest have now been sold, and that 2,466,560 qrs. remain for sale. A year ago it was estimated that 2,269,307 qrs. were still in farmers' hands. Foreign wheat has lately been pressed on sale, and this pressure at the ports being coincident with heavy offerings on the agricultural exchanges value has proved impossible to maintain. The decline, however, does not exceed a shilling in white wheat, which is by far the most abundant quality just now, or sixpence on red. There must be a decided substratum of firmness in the market for the recent strain to have been borne with no greater loss on previous values than a shilling per quarter. It is, however, very remarkable that South Russian wheat which this time last year was making 42s., with free shipment, is to-day worth only 35s., despite the prohibition of exports since November. The costs of holding being added, it is probable that a loss of as much as 10s. per quarter has in some instances been sustained. The imports of wheat since harvest have been 10,838,348 qrs., and of flour have equalled 4,791,648 qrs. The mean weekly rate of total imports has been 422,000 qrs, against 362,000 qrs. last year. The British visible supply of wheat is put at 5,405,000 qrs. against 4,223,000 qrs. in the two preceding years. The American visible supply is 4,400,000 qrs., as compared with 2,400,000 qrs. in 1891 and 2,850,000 qrs in 1890

Reducing flour to wheat, and adding the product to wheat exports, the equivalents in wheat exported from this city for the first eleven months of the cereal year compare as follows:

	Centals.	Value.
1887-88	10,724,400	$15,724,600
1888-89	15,175 200	22,560,300
1889-90	16 359,100	21 457,100
1890-91	16,514 200	23,501,800
1891-92	15,980,000	26,781,400

The wheat exports for the past eleven months show the following monthly value averages:

	1890-91.	1891-92.
July	$1 37	$1 19
August	1 38	1 65
September	1 38	1 68
October	1 36	1 68
November	1 36	1 78
December	1 37	1 77
January	1 36	1 75
February	1 37	1 64
March	1 48	1 62
April	1 55	1 54
May	1 71	1 67

The monthly average values of the flour exports compare as follows:

	1890-91.	1891-92.
July	$4 10	$5 06
August	4 00	4 73
September	4 20	4 76
October	4 11	4 95
November	4 27	4 92
December	4 03	5 00
January	4 00	5 00
February	4 08	5 00
March	4 10	4 70
April	4 70	4 50
May	5 00	4 87

Oats have ruled firm throughout the week. Receipts have been light, while the demand has been steady.

In corn there has been and continues to be a strong bear pressure, but unfavorable crop prospects in the Central States and the prospects in this State favorable for a fair crop only, cause holders to be firmer in their views. The stock in this State shows an increase this year over that held at the corresponding date in 1891. The supply in this State is said to be well concentrated.

Rye is very dull and heavy.

London cables report as follows: Imports into the United Kingdom for the week ending June 7th: Flour, bbls., 159,000; Wheat, qrs. 363,000. Stocks on hand June 1st: Wheat, 300,000@320,000 qrs.; flour, 270,000@280,000 bbls. Amount of wheat and flour on passage June 7th: To United Kingdom, 2,814,000 qrs.; to Continent, 1,064,000 qrs.

Strong north winds in the Sacramento and San Joaquin valleys did not do any perceptible damage to the growing crop of grain, but it is claimed the wind did good, owing to its being succeeded so soon by cooler but very favorable weather. Harvesting will soon become quite general, and unless an unfavorable change in the weather takes place, the ingathering of grain will be done in better shape than for some years past.

The strong bear position heretofore reported in the local wheat market is still in full force. It looks very much as if the majority of the members of the Produce Exchange are pulling in the one direction, to keep prices down so that the 1892-93 season will be entered on a low range of values. Whether farmers, in the commencement of the season, will be able to resist the strong bear pressure is an open question, for, at all times, there are far too many impecunious farmers, and it is those that country merchants compel to sell, let the market be what it may. With the wheat crop of the world less this year than it was in 1891, the price of silver showing a tendency to advance, and a large supply of tonnage at this port and to arrive, we fail to see how it is possible for wheat not to sell at higher prices before the fall months pass.

Barley has held to fairly strong prices under moderate receipts and good demand. The stock of barley in the State is larger than many dealers had thought it would be, and consequently it is being used as a lever to depress the market. With unfavorable crop prospects in the Central States and in England, it looks as if there will be a larger demand from shippers the coming season than there was in the season drawing to a close.

Feedstuff.

For ground feed there has been a good demand at fairly steady prices. At the close, it is said, bran and middlings are very firm. The output of the mills is less, owing to the scarcity of milling wheat and the low price of flour.

The receipts of hay show a decided increase. It is said that the increase is due to new storage charges commencing soon, and to save this additional expense holders are letting go their last year's hay. New hay is coming in quite freely, but buyers are still slow in taking hold. It is hard to get over $10 a ton for the best new hay. A large part of new received so far this season has been poor and trashy.

Dairy Produce.

Choice to gilt-edged butter has been very strong throughout the week, with a slight advance obtained. Creamery gilt-edged was readily placed at 21 cents, and dairy, gilt-edged, at 20 cents. Off grades were slow and hard to place. The higher prices for gilt-edged were largely due to the packing demand. Off grades coming in competition with Eastern ladle are hard to sell except concessions are at times given.

Cheese is weak at a slight decline in prices Full cream is now selling at 8@8¼ cts., and fair to choice at 6½@7½ cts. Young America holds strong. It looks as if the supply at the low prices now current is being absorbed.

The egg market is in more or less of a mixed condition. Poor to fair eggs are very slow and hard to place except at low prices, but choice to strictly choice fresh laid are strong, with large-sized well-selected fresh laid sold even above our outside quotation. Eastern eggs are doing better; choice, of a well-established packer's brand sell readily at 20 cts.

Vegetables.

The warm wave immediately after the cool weather in April, and a hot norther in the past week, greatly damaged the growing crop of string beans, peas and tomatoes. The effect is witnessed in the high prices now current for beans and other vine vegetables. The cool weather which has prevailed the past four days has been of benefit to growing vegetables. We are still dependent on the southern part of the State for tomatoes.

Onions are hard to sell owing to the market east of the Rocky mountains being well supplied and prices low. The range of prices in this market is so very low that growers cannot net a profit.

Potatoes strengthened slightly under smaller receipts, but at the close some shading in prices is reported. The quality of this year's potatoes is said to average better than for two years past. Shipments overland are very heavy, which keeps our market from sinking to prices which would net a loss.

At to-day's market, string beans sold 2 cts. a pound less than yesterday's prices. Peas were also slightly lower, as were asparagus, rhubarb and summer squash. Tomatoes sold very high. The receipts of corn showed an improvement. Sales were made at 10@20 cts per doz.

Fruit.

Berries sold high the past week, owing to light receipts and a good demand. On Monday, strawberries sold as high as $20 a chest for Longworths. Gooseberries have advanced. Raspberries sold quite high, but toward the close prices are slightly lower under freer receipts. Blackberries are beginning to come in, but as yet prices are too high to tempt much buying. Currants sold slightly higher. The combination in Alameda county keeps the market so regulated that the average price does not go much below $4 to $4.50 per chest as an inside figure.

In tree fruit, we note a stronger market for cherries, with a slight advance obtainable. Low prices the previous week caused heavier shipments to the East and larger contract sales to canners. These naturally cut off a part of our receipts, and as there was a good demand the market strengthened. Apricots have fluctuated. The price, as usual, is controlled by the supply. Canners and dryers are as yet not able to buy, although some contracts have been made on the basis of $25 to $35 per ton. Peaches are coming in more freely. The quality is improving. A few consignments of Red Astrakhan apples have come to hand. The quality was fair for the first received. Cherry plums have ruled steady.

In citrus fruits, the market is largely overstocked with oranges, and sales are made with considerable difficulty. Cool weather is against both limes and lemons.

For 1891 dried fruit there is a better inquiry, with a slight advance obtainable. Raisins are also stronger. Stemless raisin grapes sell at 3@3¾ cts. a pound, but wine grapes about 1½ cts. less. For grapes on the stem there is no call.

To-day cherries sold lower, owing to heavy receipts. The quality of this year's crop averages large in size and excellent in flavor. Gooseberries were steady. Currants, under free receipts, are lower. Canners took a few at $3 a chest. Strawberries were slightly higher. This being between crops, receipts are light. Peaches and apricots were barely steady. The former are too green.

Canners are in the market at the following prices: Apricots, $25 to $35 per ton; cherries, 5 to 7 cents per pound; currants, $3 to $4 per chest; gooseberries, 4 cents per pound; peaches and Bartlett pears, $30 per ton. This is the price now talked, but it may be changed when growers are ready to contract.

Wool.

A fire in a wool house, whereby about 500,000 lbs. of wool was more or less damaged, and the death of a prominent dealer, had very little effect on the local market. The strengthening in the market noted for two weeks past appears to be more pronounced. An advance in cotton at the East and abroad and an improved demand for wools at the East, are largely in favor of holders. Scourers are kept busy; they are reported to be running to full capacity.

Live Stock.

There has been more or less pressure to sell, which causes both bullocks and mutton sheep to incline in favor of buyers. Nevada advices continue to report heavy purchases for this State and up north; they also report heavy receipts of cattle for grazing. Hogs are steady. Milch cows continue in good demand. The call is for better milkers.

Miscellaneous.

Poultry, outside of chicks, has held to strong price under moderate receipts and a good demand. Duck are lower and weak.

Beans are steady with a continued good demand. Crop prospects are said to have improved.

Hops are scarce and wanted, if choice to gilt-edged; For new crop, buyers are reported willing to pay 17@18 cts. ₱ lb.

From reliable advices up to June 8, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	256,835	326,457	*158,057	61,833
San Diego	12,420	18,798	2,603	.....
San Pedro	7,045	14,840	....	
Oregon	27,992	29,280	18,245	14,299
Puget Sound	20,352	26,878	.....	
Totals	332,245	426,253	178,932	76,132

*Engaged for wheat, 1892, 19,793; 1891, 34,991 †For new crop loading, 16,879

The statistics of produce exports from this port to July 1st to June 2d, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,996,158	13,154,868
Flour, bbls	1,016,414	1,128,729
Barley, ctls	1,107,400	.....

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 8, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 15
Butter	2 50	@	3 05
Pea	2 20	@	2 70
Red	2 00	@	2 20
Pink	1 90	@	2 05
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	1 90	@	2 25
Fld Peas, blk eye	3 00	@	3 30
Do green	1 50	@	2 75
Do Nies	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	17	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	21
Eastern	—	@	—
CHEESE.			
Cal. choice mild	—	@	7½
Do fair to good	6½	@	—
Do gilt edged	—	@	8½
Young America	—	@	10
EGGS.			
Cal. ranch, doz.	19	@	—
Do do selected	—	@	24
Do store	16	@	—
Eastern	17	@	20
FEED.			
Bran, ton	17 50	@	18 50
Feedmeal	26 50	@	29 00
Gr'd Barley	22 50	@	24 00
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7 50		
HAY.			
Wheat, per ton	11 00	@	—
Do choice	—	@	14 00
Wheat and Oat	10 00	@	12 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
Clover	—	@	—
New Hay	7	@	10
Straw bale	45	@	60
GRAIN, ETC			
Barley, feed, ctl	92½	@	—
Do Choice	96½	@	—
Do Brewing	1 02½	@	—
Do do Choice	1 07½	@	—
Do do Giltedge	1 10	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 37½	@	—
Yellow, large	1 35	@	—
Do small	1 37½	@	—
Oats, milling	1 47½	@	—
Feed, Choice	1 45	@	—
Do good	1 36½	@	—
Do fair	1 32½	@	—
Surprise	1 50	@	—
Black Cal	1 15	@	—
Do Oregon	1 30	@	—
Gray	1 30	@	—
Rye	1 25	@	—
Wheat, milling, Gilt edged	1 47½	@	—
Do Choice	1 45	@	—
Do fair to good	1 41½	@	—
Shipping, cho'oe	1 41½	@	—
Do good	1 38½	@	—
Do fair	1 36½	@	—
Common	1 33½	@	—
Sonora	1 33½	@	1 40
HOPS.			
1891 Choice to Ex.	25	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, CityMills	4 65	@	4 75
DoCountryMills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
New Reds	32½	@	37½
POTATOES.			
Early Rose, ctl.	50	@	75
Do do in boxes.	60	@	1 25
Pearless	60	@	70
Garnet Chilies	50	@	55
POULTRY.			
Hens, doz	6 00	@	8 00
Roosters, old	6 50	@	8 00
Do young	8 00	@	12 00
Broilers, small	3 00	@	4 00
Do large	5 00	@	6 50
Fryers	7 00	@	8 00
Ducks	5 00	@	7 00
Geese, pair	1 25	@	1 50
Goslings	1 25	@	1 75
Turkeys, Gobl'r.	17	@	19
Turkeys, Hens	15	@	18
Manhattan Egg Food ₩ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	9½	@	—
Medium	10½	@	—
Light	12	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	10½	@	—
do Eastern	13	@	—
SEEDS.			
Alfalfa	12	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	1½	@	2
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'l.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (S'ate)	15	@	19
HONEY.			
WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 8, 1892.

Limes, Mex	4 50	@	5 50
Do Cal	—	@	—
Lemons, box	50	@	3 50
Do Sicily	5 50	@	—
Oranges, Seedlings			
Redlands	2 50	@	3 00
Riverside	1 50	@	2 50
Los Angeles	1 50	@	2 00
Do Navels—			
Redlands	—	@	4 00
Los Angeles	—	@	2 50
Riverside	—	@	3 00
Duarte	—	@	3 00
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—			
Longworth	10 00	@	18 00
Sharpless	6 00	@	9 00
Gooseberries, lbs	3	@	05
Oregon Imp	6	@	7
do English	7	@	8
Raspberries, dr.	65	@	75
Currants chest	3 00	@	5 00
Peaches, box	1 00	@	1 25
Cherry Plum, dr	60	@	75
Figs, Arizona, lb	—	@	—
Apricots, Royal, pr box	1 00	@	1 25
Cherries, box Black	50	@	60
Royal Ann	75	@	1 30
White	40	@	60
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do green	—	@	—
Turnips, ctl	50	@	—
Cabbage, 100 lbs	45	@	—
Garlic, lb	2	@	4
Squash, Sum, bx	50	@	1 50
Tomatoes, box	3 00	@	3 50
Asparagus, box	1 00	@	2 00
Peas, green, sk	60	@	1 00
Rhubarb, box	1 00	@	1 35
String Beans	5	@	7
Do do wax	7	@	8
Do Refugee	7	@	8
Cucumbers, doz	50	@	1 00
Mushrooms	10	@	30
Egg Plant, lb	17½	@	20

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	5	@	—
Second quality	4½	@	—
Third quality	4	@	—
Bulls and thin Cows	3	@	—
VEAL.			
Range, heavy	6	@	—
Do light	7	@	—
Dairy	7	@	—
MUTTON.			
Wethers	7	@	—
Ewes	6½	@	—
Do Spring	8	@	—
HOGS.			
Light, ₩ lb, cents	5	@	—
Heavy	4½	@	—
Feeders	3½	@	—
Stock Hogs	4	@	—

Grain and Wool Bags.

Calcutta, spot	7	@	7¼
Wool Bags	36	@	38

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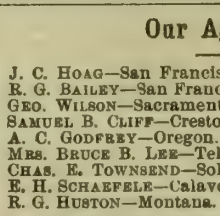
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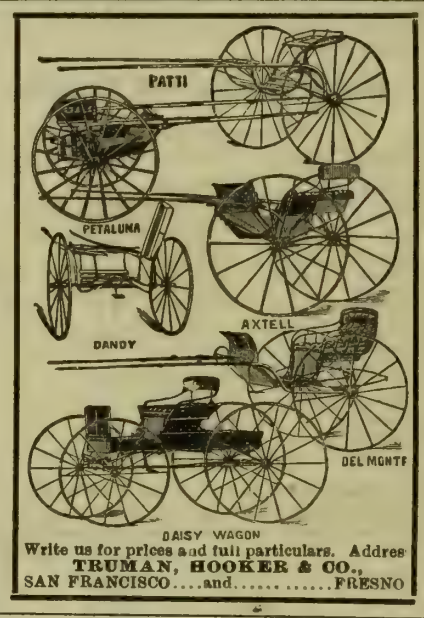
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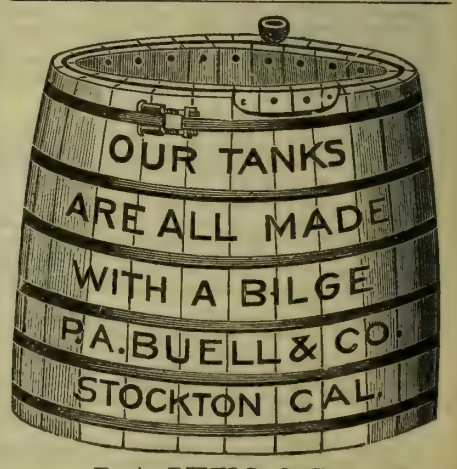
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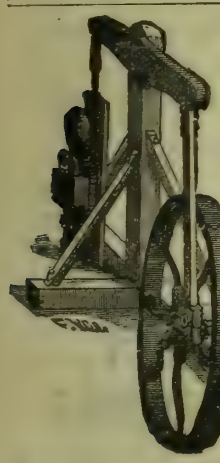
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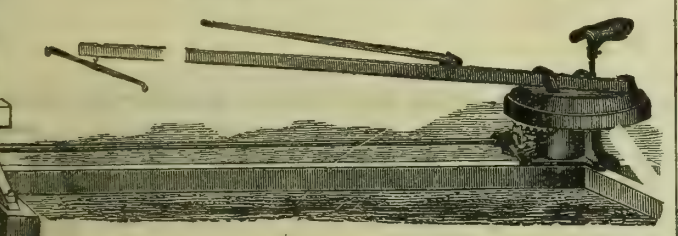


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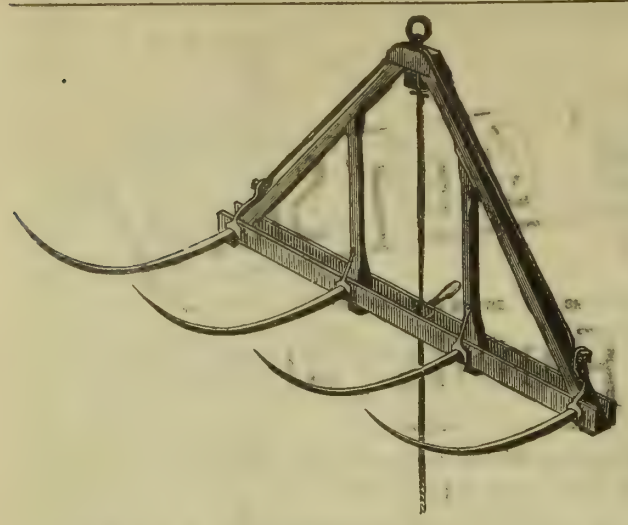
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No. 197,137	Nov. 13, 1877
No. 210,458	Dec. 3, 1878
No. 306,667	Oct. 14, 1884
No. 403,019	May 7, 1889

OTHER PATENTS PENDING.

"Nothing succeeds like success" When the Jackson Light Weight Horse Fork was introduced it immediately superseded the heavy and clumsy implements previously in use so that the manufacturers found it impossible to sell them at any price.

The preeminent merit of the Jackson Light Weight Fork and the great demand for it attracted the attention of manufacturers hungry for business, who commenced the manufacture of and offered on the market, Forks practically identical with the "Jackson," but trusted to technical evasion and slight differences in construction to avoid infringing the Jackson patents and consequent suits for royalty and damages. I have begun suits on every design of Horse Forks brought to my notice which infringed my patents. In every case the decree of Court has been in my favor and against the infringing Fork.

The purpose of this notice is to inform both farmers and merchants, who use or who sell Horse Forks, that I am fully protected by the Courts, in the exclusive manufacture and exclusive sale of Horse Forks like that illustrated in this article. Makers and sellers of these Forks infringing these patents will be promptly and rigorously prosecuted.

Arrangements have been made with manufacturers in the East for the making and selling of, not only the Jackson Light Weight Fork, as illustrated above, but of other designs similar to the Jackson Light Weight Fork, but which patents I control, for the Eastern trade; but these contracts or licenses expressly provide that such forks shall not be sold west of the summit of the Rocky Mountains under any circumstances.

PRICES JACKSON LIGHT WEIGHT HORSE FORKS.

3-Foot, with 4 tines, very light Fork for Hay	each $25 00
3½, 4, and 4½ feet, with 4 tines, for Threshing Machines and stacking Hay with my Walker Carrier	" 30 00
5 and 6 foot, with 6 tines, for light heading or large loads	" 35 00

Extra Fork Tines, $2.50 each. My tines are nicely finished and tempered. This Fork is constructed on common-sense, scientific principles; no unnecessary weight in it.

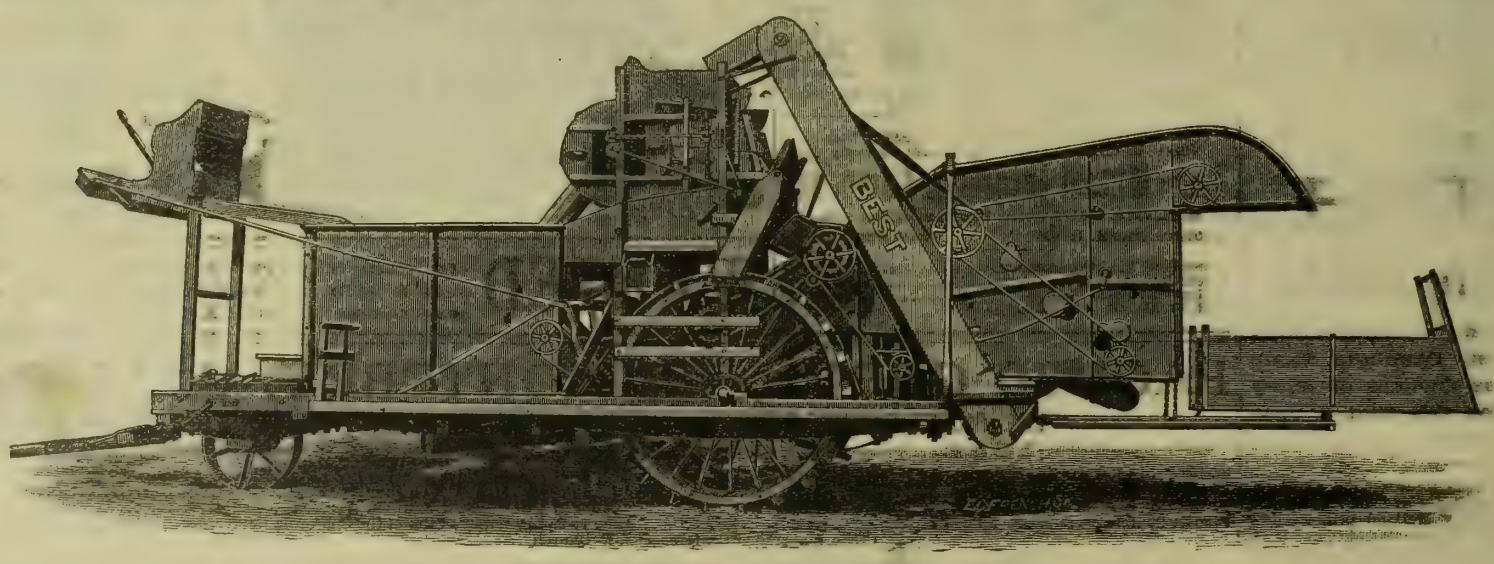
BYRON JACKSON, MANUFACTURER,

625-631 Sixth Street, 149-169 Bluxome Street, - - - - - - SAN FRANCISCO.

MITCHELL, LEWIS & STAVER CO., PORTLAND, OR., Exclusive Selling Agents for Oregon and Washington.

AT THE FRONT AND IN THE FIELD FOR 1892.

NEW MODEL!



NEW MODEL!

THE BEST

NEW MODEL COMBINED HARVESTER

FOR 1892, WITH LATEST IMPROVEMENTS.

THE PROMINENT FEATURES OF BEST'S NEW MODEL ARE

LIGHT DRAFT, HIGHEST MECHANICAL CONSTRUCTION, AUTOMATIC WIND GOVERNOR, THE CELEBRATED BEST'S CLEANER, THE WONDERFUL IMPROVED HIGH DRIVING WHEELS, MADE AFTER THE STYLE OF A BICYCLE WHEEL, AND THE NEW DRIVING GEAR, TEN-INCH DRIVING BELT, BUT ONE COUNTERSHAFT, AND ONE GEAR, DOING AWAY WITH THE EXPENSIVE CHAINS AND GEARING USED BY OTHER MACHINES.

And a Harvester that has proved itself by trial and use to be "The Model" of Combined Harvesters and the Great Adjunct of the California Farmer.

Send for Circulars. Come and See the "New Model" for 1892.

DANIEL BEST AGRICULTURAL WORKS,

SAN LEANDRO, CAL.

PACIFIC RURAL PRESS

Vol. XLIII. No. 25. SAN FRANCISCO, SATURDAY, JUNE 18, 1892.

THE DEWEY PUBLISHING CO
Office, 220 Market St.

The Barley Situation.

It has been fully two years since the barley market has been subjected to such a strong bear pressure as is now dominant on Call Board. There does not appear to be any just reason for the depression, unless it be done to bring new crop barley prices to a low range for speculative purposes. The consumption of barley is steadily increasing, and it requires a large carryover into the spring months to provide against any unexpected shortage in the crop, which is liable to occur any year through unfavorable weather.

In 1891 the acreage seeded in this State to barley was 1,167,627, against 852,902 seeded in 1890. This was an increase in the acreage of over one-third, and yet on June 1, 1892, the stock of barley in the State was only 45,652 tons, against 17,644 tons at the corresponding date in 1891. Under natural conditions, that is, with no material increase in consumption and no increased export, the surplus on June 1st in this year would have been fully 150,000 tons. The characterizing feature of the demand the past seasons was an increasing demand for rolled or ground barley for feeding, which will be more marked in the season of 1892–93 than ever before. This opinion is grounded on the well-established fact that there has been a large increase in fruit-planting and a largely increased attention given to the dairy industry, both of which call for more of the barley in grain and also ground or rolled for stock-feeding.

There were exported from this port from July 1st to June 1st the following: In 1890–91, 15,322 tons, and in 1891–92, 55,370 tons, an increase of 40,048 tons. The receipts of barley from Oregon and Washington at this port during the above two periods of time were as follows: In 1890–91, 13,495 tons, and in 1891–92, 2834 tons, a decrease of 10,661 tons, so that the increased shipments of barley so far this season, over the like time in the season of 1890–91, were drawn from the California crop. In the coming season the export movements promise to be fully as large, if not larger, than they were in the season drawing to a close. As the acreage seeded to barley in this year is not much, if any, larger than that seeded in 1891, the outturn will not be much more than will be wanted, unless the yield to the acre should be more than is now expected.

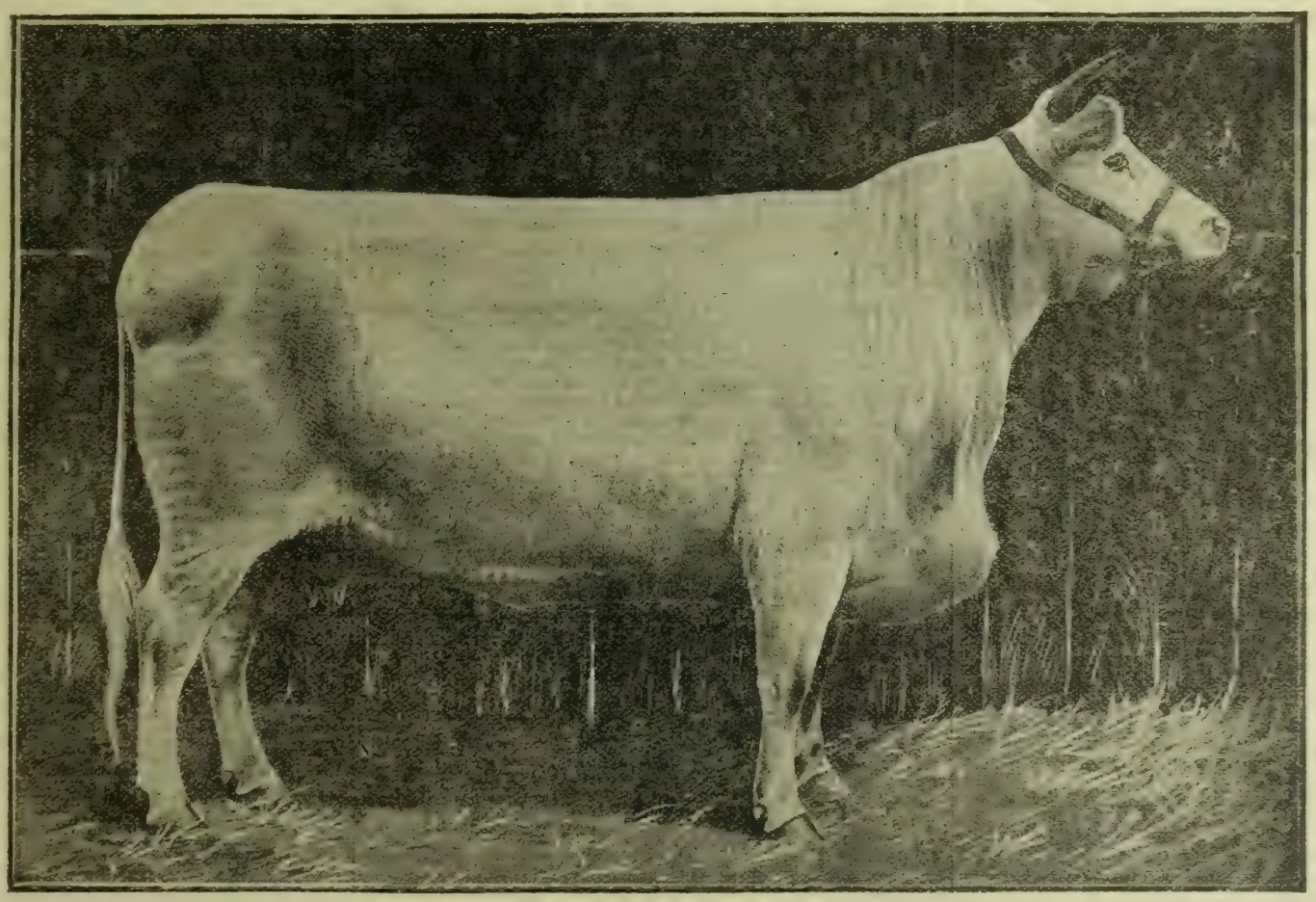
FREIGHT RATES ON WHEAT.—Traffic Manager Leeds has compiled comparative rates on wheat in Kansas and in California, which show that from points averaging 137 miles distant from Port Costa or San Francisco, the average rate charged per ton is $2.80½, while the average charge for the same weight and distance in Kansas is $2.32.

Rose of Connaught 3rd.

The animal portrait which we present on this page is one of the most striking which has ever adorned our pages. The *Breeders' Gazette*, from whose frontispiece we have reproduced the engraving, properly alludes to the outline of the white cow against the dark background as forming almost a perfect silhouette, and so graceful is the poise of the animal's head that the original photograph is really statuesque in its beauty.

Rose Connaught 3rd was bred by Hon. J. A. Angas of Collingrove, and was first at Melbourne and Adelaide as a two-year-old in 1888; first at Adelaide and second at Melbourne as a three-year-old in 1889; first at Adelaide and second at Melbourne as a four-year-old in 1890; and last year, in her five-year-old form, was not only first at Melbourne and Adelaide, but was made champion of Australia at the former show. She is clearly of Bates extraction, and from her hips forward is certainly an animal of rare character. The shoulders are well covered, the chine seems broad and thick, the ribs well sprung, chest wide and deep, neck vein well developed, and legs both short and neat. Her weakness appears to be in her quarters and thighs, with some inclination to patch about the rumps. She was sired by Duke of Hazelcote 62d from Rose of Connaught, and while we are without the extension of the pedigree it is a fair inference that she carries at least one cross of the famous Berkeley Castle bull Duke of Connaught, that did such royal service for Fitzhardinge.

In connection with the color discussion recently presented in our columns by Robert Ashburner, it should be noted that white does not bar to highest honors in Australia.



AN AUSTRALIAN PRIZE-WINNING SHORTHORN — ROSE OF CONNAUGHT THIRD.

COLUMBUS AT HOME.—The people of Genoa have already begun their festivities in honor of Columbus, which are to be continued until Oct. 15th.

The Dried Fruit Market.

The high prices that ruled for dried fruits in 1890 induced a larger drying in 1891, and as a result the markets on this coast and also at the East were overstocked and low prices were the order. The low prices entailed heavy losses on early fruit buyers, for soon after the season opened prices began to settle, which made buyers cautious unless offered concessions, and these concessions continued well into the season. Low prices and very heavy supplies enabled buyers to seek new distribution centers in the States east of the Rocky Mountains. This has opened up new markets for California dried fruits, provided prices are within the means of general consumers. A better understanding of the difference in prices at the East can be had from the following compiled comparisons of prices in the New York market on May 21st: In 1891 evaporated peaches sold at 24 cents per pound, pitted cherries at 30 cents per pound; in 1892 they were respectively eight and eleven cents per pound. Raisins in this year werefully 50 per cent less than they were at the corresponding date in 1891, prunes from 40 to 50 per cent less and apples from 55 to 60 per cent less. Apricots were very considerable lower as were other dried fruits. The low prices inthis year and, as for that, throughout the past season, allowed stocks to be worked off and to-day they are quite small on this coast and also at the East, with the better grades out of market. The cleaning up of supplies admits of new crop dried fruits coming on a bare market and if prices are not unduly inflated our surplus will be marketed at fairly renumerative prices quite early in the season.

J. J. Pratt, manager of the fruit cannery at Yuba City, Sutter county, who returned a short time ago from a business trip to the East, not only confirms the above but also states that some of the largest dealers informed him "that their dried fruit sales increased 50 and 100 per cent the past season, and bid fair to do the same this season." When it is considered that the population of the United States is over 60,000,000 and rapidly increasing, it is readily seen that the surplus for years to come can be consumed, provided the best varieties of fruits are cultivated and proper attention be given to picking, curing and packing the fruit.

THE PHYLLOXERA ABROAD.—The phylloxera has appeared in the provinces of Almeri, Barcelona, Cordova, Gerona, Granada, Jaen, Leon, Lugo, Malaga, Orense, Salamanca, Sevilla, Tarragona, Zamora and on the Balearic Islands. Six hundred and seventy-five thousand acres are affected.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 18, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Gas Engines—Union Gas Engine Co.
Fruit Trees—H. H. Berger & Co.
Spanish Merino Sheep—F. Bullard, Woodland, Cal.

See Advertising Columns.

The Week.

It has been rather an active week in weather circles, and not altogether an acceptable one to agriculturists. Heavy showers have caught some hay and floored some grain. Showers and winds and other things, known and unknown, have not been altogether favorable to the grape crop, and reduction in the estimates of the wine and raisin output is still in order. The rain has, however, been acceptable in Nevada, judging from a valuation of half a million which was put upon two inches of rainfall at Carson.

But our weather vicissitudes have been light as compared with Eastern disturbances as reported by telegraph, for while in the great Atlantic the death rate has alarmingly increased by prostrating heat, in the central west tornado and water have wrought disaster—even to blowing down again a part of the wall of one of the largest of the World's Fair buildings, which was flattened by a previous "twister." We prefer the monotony of the Pacific coast summer to the grand, gloomy and peculiar freaks of the elements on the other side.

Midsummer activity is beginning—the grain harvest, the Eastern shipment of fruits in expedited trains, the work in the canneries—all these are giving employment to all who desire it. The rush from the valleys to the coast and the mountains, and from the cities to the country, is at its height. Humanity sighs for a change, and this is the fashionable time for it.

VETERINARY PROGRESS.—At a meeting of the State Veterinary Society in this city last week several important papers were read. The president congratulated the members on the satisfactory progress made by the association during the past 12 months, which he hoped would continue until the whole profession was enrolled on the association's list of membership. The passing of the proposed bill for the protection of the profession by the next Legislature was indorsed and the members pledged themselves to use every effort in their power to secure the passage of the bill. We understand this is to regulate the practice of veterinary medicine with a view to excluding quacks and ignoramuses.

SCARED BY THE CATCH.—The Board of Supervisors of Monterey county have repealed the squirrel bounty ordinance. Since the last meeting of the board, one month ago, there have been deposited with the County Clerk about 125,000 scalps, which, at three cents each, have cost the county between $3000 and $4000. These facts should have induced the continuance of the ordinance, rather than its repeal.

Another Queen of the Jerseys.

The reigns of the Jersey queens are becoming shorter. Dethronement and coronation crowd closely upon each other. To hail the coming and speed the parting dairy potentate in the Jersey kingdom keeps the agricultural writer moving to quick music. It is as late as August 8th, 1891, that we gave in the RURAL the result of a years milk and butter test which proclaimed Bisson's Belle queen of the Jerseys upon a record of 1028 lbs. 13⅝ ounces of butter in a year which ended July 13. Bisson's Belle now retires to history and the reigning Jersey queen is Signal's Lily Flagg, owned by Gen. S. H. Moore and W. E. Matthews, of Huntsville, Alabama, who closed a year's record on June 1st, 1891, with a credit of 1047 lbs. 6¾ ounces of "well-worked merchantable butter."

The queen-finder whose authority we cite in this case, is the same as that of her predecessor, viz., W. Gettys of Athens, Tenn., who makes his announcement in the *Breeder's Gazette* of June 8th. He saw Lily Flagg produce four lbs. 10½ ounces of butter on the last day of her years trial. Her milk for the year weighed over 10,000 lbs., the best day was 50 lbs. 4 ounces, and her best month was 1356 lbs. which made 118 lbs. 15 ounces. Her best weeks record was the last one conducted officially, which made 27 lbs. 12½ ounces of butter. Of the treatment of the cow during the year Mr: Gettys writes:

Her feed consisted of oats and corn ground together, wheat bran and oil-meal. Of this she has consumed during the year's test an average of eight gallons per day with silage and hay in the winter. During the last days and weeks of her test she ate 12 gallons per dav of the above named grain food with a run to pasture. Her appetite and powers of digestion and assimilation are to me as wonderful as her butter record. The test was made under circumstances favorable to the cow. She started with perfect health, in a genial climate, owned by men of liberality in their ideas of feeding, and managed with great care.

It is interesting to recall the steps by which the successive Jersey queens have gained and lost their scepters. The series began with Jersey Belle of Scituate, 705 lbs. 3 oz.; Eurotas, 778 lbs. 1 oz.; Mary Anne of St. Lambert, 867 lbs. 14¾ oz.; Landseer's Fancy, 936 lbs. 14¾ oz.; Eurotisama, 945 lbs. 9 oz.; Bisson's Belle, 1028 lbs. 13⅝ oz., and Signal's Lily Flagg, 1047 lbs. 7¾ oz. Who will next ascend the golden stair of Jersey queenship?

It is interesting to note that the present queen is not nearly allied to earlier reigning families. Mr. Gettys' statement is:

Her breeding is plain—so plain that one is at a loss to know to what family she should be assigned. She is called a Signal cow, yet she has only 12½ per cent of that old bull's blood. Her sire, Georgian 6073, although out of Optuna, test 13 pounds for three teats—considered one of the best daughters of Signal—is not known to have any other tested daughters. Her dam, Little Nan, was known to have been a good family cow, but is without a week's test. Without high birth or rich kin she has, by virtue of her individual worth, forged forward into fame and become the founder of a new family. Notwithstanding her plebeian origin, she has demonstrated her prepotency—the power of transmitting her worth to her offspring—for she has two tested daughters, one over 14 pounds, the other over 20 pounds of butter in seven days. She has produced six calves—three bulls and three heifers. All the bulls are dead; all the heifers are living and owned by the Messrs. Moore and Matthews.

This fact will be encouraging to all who own well-bred Jerseys to push forward with their breeding and feeding in hope of reaching the first place, for the first place seems to be that of a democracy rather than a monarchy. The sovereigns are born to rule, but not by accident of birth; the American Jerseys, like the American people, have full encouragement to strive for the highest places upon the basis of merit and actual accomplishment.

It seems to us significant that the honors in the Jersey line are going south of Mason and Dixon's line. When enterprise works with the advantage of genial climatic conditions, similar enterprise under rugged winter conditions is surpassed. Tennessee last year and Alabama this year furnished the Jersey queens. Upon this same line, California should win, for we believe California excels even the Sunny South in environment which favors animal development and excellence. Where are our California Jersey breeders that they do not win such honors for the State and for their herds?

DRIED FRUIT FOR LONDON.—The enterprise of the State Board of Trade in endeavoring to develop an English market for California dried fruits is yielding promising results. At the meeting on Tuesday of this week there was read a letter from Parker, Wellesley & Co., of London, which stated that the profits of all fruits sent from California to Eugland, which had not to pay duty, was 9 cents and 2 mills per pound; and on apricots, plums and prunes, upon which duty was chargeable, the profit was 7 cents and 2 mills per pound. An agent who recently scoured the State for fine dried fruits for the London market could not find any, showing that all had been disposed of, even though low prices have ruled. We can, however, soon produce plenty, and new avenues for its exit are desirable.

Prize Letters on Fruit-Handling.

Do not forget the prize competition, for which letters must be mailed to us on or before July 1st. The following is the general announcement formerly made:

JULY.—FRUIT-PICKING, PACKING AND SHIPPING: To near and distant markets; all arrangements for picking—ladders, baskets, trucks, packing houses, graders, fruit wagons; methods of sale, etc.

Fruit-picking, of course, includes condition of fruit for various purposes, and how to detect it, and proceeds then to the best way to gather it, the best help available, and the best way of regulating pickers, and the outfit to provide them, etc. So proceed with each following act in handling the crop, writing fully and plainly, so that all readers may understand just what your experience approves. Do this for a single kind of fruit or for many kinds, as your experience warrants you in writing.

Do not think, because you are not a large grower or shipper, that your advice is not worth giving. We expect more from small growers than large ones. Even if you do not own an orchard, but have merely worked for others, write just the same. Perhaps your experience in different orchards, and with different methods of work, may enable you to give much good advice. No matter whether you are a subscriber to the RURAL or not, take up the subject if you understand it. We want the fullest, freest discussion of the subject. Never mind about stylish stationery. If nothing else is handy, write on the wrong side of a handbill with a lead-pencil. We are after facts and experience; we do not care how they come or who they come from. The searcher for trustworthy information is not particular from what corner of the realm of truth it is brought to light. We are trying to remove every obstacle from this competition. The prizes of $10 and $5 and the RURAL PRESS for one year will go to the writers who do best on these free terms.

THOSE FORFEITED RAILROAD LANDS.—United States Surveyor John F. Sheehan has prepared the official notification of the opening of the forfeited railroad lands in Monterey and San Benito counties, and will publish it in the Hollister *Free Lance*, of San Benito county, immediately. The notice announces Wednesday, July 27th, as the day when the office will be open for entries of the lands. All land in the tract which is held under Mexican grants will be protected and will not be open to entry. The department in this city advises parties seeking knowledge of the lands to proceed to Tres Pinos, where they can see the country for themselves better than it can be described in this city. Tres Pinos is 101 miles distant from San Francisco by rail, and the fare is less than $3.

THE VITICULTURAL COMMISSION.—At a meeting held in this city on Monday, the following officers were elected for the coming year: President, George West of Stockton; vice-president, Charles Bundschu of San Francisco; treasurer, Allen Towles of Towles, Placer; secretary, Winfield Scott of San Francisco; chief executive officer, C. J. Wetmore; executive committee, I. de Turk, Charles Bundschu and E. C. Priber. The Commission is urging the World's Fair Commission to double its allottment of $6000 for the display of California wines at Chicago next year.

THE FLORAL SOCIETY.—At its meeting held last week, it was shown that the flower show in May, in the Mechanics' pavilion, did not meet the expenses and the amount of premiums, but arrangements were made by which all obligations will be speedily discharged. The Society considered the effort a success, and will push forward for a grander display still at the chrysanthemum show in November. Prof. E. L. Greene, of the State University, read a paper on native ornamental shrubs, which we hope to publish at some future time.

ANOTHER INQUIRY ON ARTESIAN WELLS.—A Washington telegram says that the Census Bureau has issued a bulletin on the subject of artesian wells for irrigation, in which the statement is made that over one-half of the total number of such wells located on farms in the United States are in the State of California. The computed number for the entire country is 3930, and 2060 are in California, three in Oregon and none in Washington. The average area irrigated by one well in California was 18.63 acres, the total area being 38,738.

A WINE FOUNTAIN.—It is currently reported that Senator Stanford has resolved to make an exhibit of California wines on a grand scale at the World's Fair, and has applied for permission to build a wine fountain that shall play for two hours every day California vintages. Sometimes the fountain will spout red wine and often white. No partiality will be shown in the selection of wines, and every wine grower in California will have a chance to advertise himself. The application of Senator Stanford has not yet been answered.

From An Independent Standpoint.

Since the last number of the RURAL went to press, the national Republican party has put before the country its candidates for president and vice-president. As the RURAL has all along predicted, Mr. Harrison was renominated. This was in the nature of things inevitable. Mr. Harrison had the support of the best two-thirds of his party, and his candidacy had the further strength which comes from popular respect independent of party. Nobody denies that the record of his incumbency is one of the cleanest chapters of our national history; nobody doubts his ability or questions his purposes, and everybody admires the propriety and purity of his private life. The objections to Mr. Harrison will be radical, and they will no doubt be manfully put forth during the months between now and November, but they will have their basis in principles and not in personalities. He will be opposed as a Republican, as an advocate of the protective tariff, as an opponent to free silver coinage and probably for many other reasons, but they will be public and legitimate reasons with a basis in principles upon which intelligent and honest men may fairly differ. A campaign urged upon such lines, educates the people and advances their intellectual and moral standards; and is, therefore, of vast benefit to the country. On the other hand, a campaign of personalities, of recrimination and controversy, is a national damage and discredit. Mr. Harrison's nomination goes far toward assurance of a clean campaign and, therefore, from the nonpartisan ground from which we view it, is a happy one. The nomination of Whitelaw Reid for vice-president is the usual concession of the second place to the New York money power. Mr. Reid is an eminently respectable though by no means a great figure. He has a rich father-in-law—D. O. Mills, formerly of California—and rich associates in general, and will roll up a big barrel for campaign expenses. It is the bad habit of both parties to trade off the second place in this way—a habit that reflects infinite discredit upon the political methods of the country.

The opposition which Mr. Harrison met and overcame at Minneapolis was not the opposition of Mr. Blaine. If Mr. Blaine had, at the right time and in the right way, expressed a desire for the nomination or even a willingness to accept it, he would unquestionably have gotten it. He has the affection of the Republican masses while Mr. Harrison only has their approval. But Mr. Blaine did nothing of the sort—he declined in advance to be a candidate and when at Minneapolis his name was put forward it was without his authorization and by a set of men who have no claim to be his special friends. Finding no strength to oppose Mr. Harrison in their own character, they sought to accomplish his defeat by appropriating to their side the great name of Blaine. That this appropriation was unauthorized; that it was in itself a reflection upon Mr. Blaine's integrity, they cared not at all. The fight, we repeat, was not by Blaine but by a coterie of disgruntled politicians who, in their several States, had not been allowed to "handle" the executive patronage to their own notion. A nastier crowd of self-seeking politicians than Platt of New York, Clarkson of Iowa, Quay of Pennsylvania, Filley of Missouri, Thurston of Nebraska, De Young of California and their associates, never set up their claims against the decent public judgment. There have before been powerful coteries in American politics, but never before one so utterly destitute of national purpose, personal talent or private character. In the whole list there was not a man of broad respectibility. They did not represent Blaine and they were not beaten by Harrison—they represented themselves and they were beaten by the overwhelming decent sentiment of the country. It is one of the melancholy things of politics that their humiliation involved something like an affront to the man nearest the heart of the Republican party. But the delegates at Minneapolis saw clearly; and among those who voted for Harrison were the warmest and truest friends of Blaine. It was, in its broader aspects, a fight between the people and the bosses and the bosses went to the wall.

The platform adopted at Minneapolis, like most platforms, was made to placate different voting elements, but it represents the general purpose and genius of the Republican party measurably well. Respecting the doctrine of protection, it is the clearest utterance ever put forth officially by the party. It declares "that all articles which cannot be produced in the United States, except luxuries, should be admitted free of duty, and that on all imports coming into competition with the products of American labor, there should be levied duties equal to the difference between wages abroad and at home." This is plain enough certainly. On the subject next in importance, silver, there is less frankness. It "demands the use of both gold and silver as the standard of money, with such restriction, and under such provisions, to be determined by legislations, as will secure the maintenance of parity values of the two metals, so that the purchasing and debt-paying value of a dollar, whether silver, gold or paper, shall be at all times equal." The meaning of this, when it is carefully extracted from the rubbish of words, is a declaration for the gold standard, with an amiable wish to look out for the interests of silver. Both of the nominees are pronounced gold men, and, taken in connection with this fact, the plank under review affords small comfort to the advocates of free silver coinage. These—the tariff and silver—are the only real "issues," but there is the usual list of party "principles." A "free ballot," is demanded; "certain outrages in the South" are denounced; pauper and contract immigration should be restrained; there is a sop to the struggling Irish and the suffering Russian Jew; trusts are denounced; etc., etc. The only plank directly related to rural interests is as follows: "We approve the policy of extending to towns, villages and rural communities, the advantages of a free delivery service, now enjoyed by the larger cities of the country, and reaffirm our declaration, contained in the Republican platform of 1888, pledging a reduction of the letter postage to one cent at the earliest possible moment consistent with the maintenance of the Postoffice Department and the highest class of the postal service." Nothing is said about the more important matter of parcel postage, by which the postoffice would do cheaply the work now done with heavy charges by the express companies. The plank on the Nicaragua Canal is as follows: "The construction of the Nicaragua Canal is of the highest importance to the American people, but it is a measure of national defense, and to build up and maintain American commerce, and should be controlled by the United States Government." This is about all. The only two planks that really mean anything are those relating to the tariff and silver. In all likelihood, the leaders on both sides will be antisilver men, so the fight, so far as it will rest upon questions of future governmental policy, will be waged as it was in 1884 and 1888, upon the tariff issue.

The Democratic hosts are gathering in Chicago, where their National Convention will be held during the coming week. The division in the Republican ranks, manifested at Minneapolis, has added hopefulness to the Democratic situation, and the Chicago meeting will unquestionably be a spirited occasion. Democratic conventions do not nominate as easily as Republican conventions. A majority vote knocks the persimmon in the latter, while in the former a two-thirds vote is required. The Democratic practice is unquestionably safer, since, under it, it is practically impossible to stampede a convention, or to force upon it a nominee not in sympathy with the majority of its members and of the party at large. All indications point to the nomination of Mr. Cleveland. About half of the 900 delegates have been instructed to vote for him, so that comparatively few uninstructed votes will be required to give him the necessary two-thirds. It is not likely that there will be repeated at Chicago the record of the convention at Minneapolis. It is true that Mr. Cleveland meets with opposition of the same sort that Mr. Harrison has already overcome, but it is not likely to manifest itself in a convention contest. Already the professional politicians and machine workers in the Democratic party have been beaten in the several State Conventions, and it looks as if there would be practical harmony at Chicago, if not in support of Mr. Cleveland, for some other man who, like him, stands for the cleaner sort of politics. We take it that Mr. Cleveland's nomination is practically assured, and that the tickets for the contest of '92 will be the same as the tickets for '88, with only changes in the nominations for the Vice-Presidents, which goes for little with the country. The temptation to follow the Republican lead and give the vice-presidential nomination to somebody with a "pull" on the moneybags will be great; but there are indications that the convention will rise above it and name some Western man, like Boies of Iowa or Palmer of Illinois. If this shall be done, it will give the party a certain advantage in the campaign, though it must be admitted that the public regard is singularly apathetic respecting the Vice-Presidency. If, as we assume, Mr. Cleveland, or some man of his stamp, shall be the nominee at Chicago, it will be another signal triumph of decent American judgment over the "managing" element in our political system, and therefore a most welcome circumstance to those who view public affairs, with the RURAL PRESS, from a nonpartisan standpoint. The best hope of the American people lies in the dominating influence in public affairs of the respectable but unorganized masses of society, whose interest in politics reflects not an appetite for spoils, but a legitimate, patriotic interest in the affairs of the country. In the nature of things, the best sentiment of the country can never be "organized," but, thus far in our national career, it has always prevailed over the powers which, from time to time, rise to oppose it.

On the Fourth of July the National Convention of the People's Party will be held at St. Louis. What it will represent and what it will do are alike uncertain. It is claimed that every State in the Union will be represented in its councils, that a National ticket will be put into the field and that an electoral ticket will be nominated in every State. Present indications point to Mr. Weaver as the Presidential nominee. Indeed he is now about the only available man, since within the past week Col. L. L. Polk, the president of the National Farmers' Alliance and Industrial Union has passed away from earth. It is impossible to have even an intelligent opinion as to the effect of the People's Party movement upon the coming election. A few enthusiastic partisans profess to believe that it will sweep the country and land its nominee in the White House; and, on the other hand, the old party prophets sneer at it as a thing of no consequence. Both are mistaken. It will not sweep the country but it will get votes enough to disturb old-party calculations. The election in Oregon last week, where political conservatism lives in its favorite stronghold, gave the People's Party candidates a vote not yet reported in figures but which the dispatches call "surprising." There will, no doubt, be "surprises" in other States before the year is done.

The death of Col. Polk will be a grief rather than a blow to the Alliance movement. The favorite leader will be missed, but the cause has other able leaders, and it will suffer no check or embarrassment. Col. Polk was born in North Carolinain 1837, and his education was the log schoolhouse culture of the "Forties." Before the war he was a "planter," and in 1860 was elected a member of the legislature. He opposed the war and in the North Carolina Convention made a gallant fight against secession, but when the separation came, he entered the ranks of the Confederacy and became a colonel commanding a regiment. Before the war a man of considerable fortune, he came out of it penniless and took up the work of the farm. He was his own blacksmith and his own carpenter, and held the plow with his own hands. It was this practical experience that fitted him for the work which he was afterward to take up in the interest of the agricultural classes. He was a leading Granger in his State, and from that grew into the wider work of political agitation which he laid down only the day he died. His later years have been given wholly to the farmers' cause, and no matter how opinions may differ as to the political wisdom of his policies, nobody ever questioned the patriotism of his motives or the personal respectability and purity of his character. He was a pleasing and sterling man who deserved fully the high respect which he attained among those associated with him.

The State Press.

Santa Cruz *Sentinel*: "The formation of the League of Progress, an organization of young men who have banded themselves together to rescue California from the monopolies and other evils which threaten her welfare, is a good omen. The young men all over the State are called upon to unite with the central body now being formed in San Francisco."

Salinas *Index*: "The term 'cheap Chinese labor' is fast becoming obsolete in California through the operation of the Exclusion Act, which shuts out importations and makes the Chinese now here masters of the labor situation. The beet sugar farm had contracted the care of its beets this year to Chinamen, but the thinning out and weeding was being neglected and Superintendent Gaffey put on a force of boys to do this work. The Chinamen struck in a body, declaring that they would not be brought into competition with cheap white labor. Gaffey had to discharge the boys, and was absent at Sacramento at the time of your correspondent's visit, looking for more Chinamen."

Stockton *Mail:* "W. S. Hobart left an estate valued at about $6,000,000, which will be divided between his three children. Here is a chance for some social philosopher to arise and ask questions about how these three people are entitled to millions of dollars which they have not earned, and why a graduated income tax should not look after such cases, etc. These social philosophers always do ask such ridiculous and unpleasant questions."

San Jose *Herald:* "Everybody knows that the rates charged by the Southern Pacific Company in this State, taken as a whole, are at least 25 per cent too high. Everybody also knows that the policy of the company, taking it for all in all, is arbitrary, insolent and tyrannical to the last degree. There is not, as a rule, even a pretense of considering the interests, or consulting the wishes, of the people. Wherever a dollar can be squeezed from the public, the squeezing is done, and generally done in such a spirit as to add insult to robbery."

LARGE SHIPMENTS.—Six carloads of fruit for the Eas were sent from this place Tuesday afternoon. This is the largest day's shipment this season, and puts Winters among the prominent shipping points in the State.

Mr. Abbott Kinney on the Canal Question.

LAMANDA PARK, June 12, 1892.

TO THE EDITOR:—The concessions from Nicaragua and Costa Rica and Senate Bill 4827, being a bill to amend the Act incorporating the Maratime Canal Company of Nicaragua, are now before me. These documents modify my views on the canal question. With some amendments the scheme as a whole is not bad.

The situation in a nutshell is as follows: Nicaragua and Costa Rica grant rights of way and franchises for a ship canal. The canal and its ports remain neutral and all commerce passes through without any custom charge or any charge other than the canal company's toll. Each of these Governments give a land grant along the front of the canal, lake and river to the company. This is in alternate blocks extending back from one to six miles. These Governments receive, with certain minor advantages, stock in the company. Nicaragua gets six per cent of the total stock issue. The stock issued to her must be of the par value at least of four million dollars. Costa Rica gets one and one-half per cent of the total stock issue. In case one and one-half per cent of the stock issued would not amount to a million and a half dollars, Costa Rica is to receive stock representing this sum at par as a minimum. The canal company agrees to pay the expenses of the officers of these countries in preventing smuggling and maintaining order along the canal. The company has ten years from April 23d, 1887, to complete the canal. The concession is for 99 years. There is a lease proviso at the end of this time for another 99 years, the company to then pay 25 per cent of its net proceeds to Nicaragua and six per cent to Costa Rica. At the expiration of the lease the canal and all its appurtenances go to these two countries. The canal may be forfeited for various reasons that are not important. One of these possibilities, however, is dangerous—that providing for a forfeiture in case the canal is not operated for a continuous period of six months. This should be amended out, the time for completion should be extended, and, above all, the *concession should be made perpetual and without any reversion whatever.* Each of these countries has one director. The toll charged when it produces a net revenue of more than 15 per cent on investment, must be reduced to this point.

So much for concessions; now for the Senate bill: This provides for the payment to the promotors of all their bills for expenses incurred in the starting and prosecution of the canal, not to exceed four million dollars. The bills are to be approved by a commission duly appointed by the Government to audit these claims. This payment is made in Government bonds drawing six per cent interest. These bonds would be worth about 150 in the market. So the arrangement provides for a virtual bonus above the claims of two million dollars. These gentlemen agree also to receive the company's stock to make up the difference between what the auditing committee allows and seven million dollars. Presuming the stock to be worth no more than par, this would make the total bonus for their work and concessions about five millions. This should be changed to pay, after the bills for expenses have been settled in cash, a further cash bonus to be agreed upon, say two or three millions. They should get no stock, nor should any private person or corporation.

The bill goes on to provide for the issuing of bonds to the extent of $100,000,000 as the canal is constructed and for its construction under the supervision and approval of engineer officers detailed by the Government. It makes the issue of each lot of bonds subject to the approval by these engineers of the work the bonds cover. The stock of the company is $100,000,000. No stock is issued except that already mentioned as a bonus to the promoter and the agreed shares of Nicaragua and Costa Rica. But the companies books are to be open to actual cash subscribers. The Government holds an option on 70 per cent of the stock at par. This option continues until the bonds mature. The money going to the company, should their option be exercised, goes to pay any delinquent interest, or to pay the bonds directly or indirectly, as the Government may elect. The company is protected from foreclosure for five years and consequently would pay no interest for that period.

Supposing the concessions of Nicaragua and Costa Rica to be amended to become perpetual and annulling their provisions for a general subscription to the company's stock and the Sennate bill amended to cut out all provision for private stock holding we have this situation. Costa Rica has in stock 1,500,000; Nicaragua 4,000,000; United States 70,000,000.

If we exclude all private holders, which in the extreme case can be done by organizing another company, we have the canal constructed and controlled by the United States Government. All the subsidiary provisions of the bill, such as giving the Government five directors out of fifteen, are both useless, dangerous and ridiculous. If the Government has an arrangement such as is here outlined, it is in a safe and satisfactory situation.

If I am correctly informed, the promoters of the canal have concluded that the business is too large for them, and consequently they are willing to get out. Their organization, literary bureau, conventions, etc., have attracted public attention to the matter, and I do not see why an arrangement satisfactory to the people cannot be made and the patriotism of the canal promoters receive a proper financial phillip as they step out waving the flag and rattling the appropriation in their breeches.

The probabilities are that a straightforward policy on the part of the Canal Company and its special counsel will most facilitate a seasonable settlement. The people are more awake just now than they have been, and while disposed to be liberal, they are not so likely to be deceived by hurrah business as in times gone by. The packed canal convention that refused to hear Marion Cannon was as much a mistake as our old packed irrigation conventions that so disastrously failed in the attempt to control the legislature and judiciary of California in the interest of a private firm.

If a scheme cannot bear the light of free discussion, there is nothing that will so promptly make the fact apparent as a packed convention.

It is equally a mistake in my judgment to present any dodging scheme to hide the bonus for the canal promoters. The people are willing to give a fair bonus. Nothing, however, is more likely to alter this feeling in the present temper of the people than the discovery of a dodger in the bill. The proposal to pay for the work so far done in a 6 per cent Government bond will deceive no careful person. It is a bonus of 50 cents on the dollar approximating $2,000,000 on the deal.

The people want no shenanigan in bonds or company stocks. A clean-cut proposition excluding every one but the three Governments from any control of the canal will meet popular approval and continued support. No other proposal, even if adopted by Congress, has any certainty of being carried to completion; consequently no other should be considered by the real friends of the canal. The promoters scheme is organized upon the usual corporation plan, which is so justly unpopular. There is the Maritime Canal Company of Nicaragua, with Hiram Hitchcock as president and a staff of officers, and then there is the Nicaragua Canal Company with Warner Miller, of the old wood-pulp monopoly, as president. Here is a reminder to drift us back to the doings of the Pacific railroads and their construction companies, with all the wrongs of which they were guilty. But we might as well come back through the wreck of the Railroad Construction Company's burning books and declare, once for all, that any such form of public deception we will never again recognize, much less indorse.

The modifications in the concessions and Senate bill required to give the Government a perpetual control, to exclude all private complications, while giving a liberal price to the canal promoters for their work, and concessions are few and simple. A congressional bill on the lines suggested might be passed to become law on the amendment of the concessions to make these perpetual with an extension of the construction time by Nicaragua and Costa Rica.

This canal will be a great thing for the Pacific littoral. We can expatiate on what it is likely to do for us, but we will never really conceive it in its full benefits until the canal is finished. The opening of the Nicaragua canal will be the opening of an era of prosperity on this coast which no other work can produce. It will move us into touch with the great civilized world. It will reduce the time and cost of laying our goods down in the great world marts, as it will reciprocally take off a similar tariff on foreign goods brought here.

California struggles against both excessive artificial and excessive natural tariffs. Vast distances make natural tariffs against us, and combined monopolies in freight tariffs add their artificial incubus to those gathered at the customhouse. Let us stand together in working for the great relief this canal will give and straighten it into shape rather than oppose it.

ABBOTT KINNEY.

Weather and Crop Bulletin for Week Ending June 13th.

Following is a synopsis of the crop conditions as reported to Director Barwick by the numerous voluntary observers scattered throughout the State, and issued by the State Agricultural Society, in cooperation with the United States Agricultural Weather Bureau Branch:

Humboldt county reports a favorable outlook for most all the crops. In some portions of the county the peach trees are dropping their leaves.

Shasta county reports the fruit prospects as very good in Happy valley.

The Sacramento valley, generally speaking, reports all crops as doing quite well. The hay crop will be a good one, although slightly damaged by the local rains of the 8th and 9th.

Red Bluff reports the fruit crop as abundant and of excellent quality, but from some cause or another (probably late frosts), the raisin grapes are dropping badly.

The same report comes from the Fresno vineyards, the cause of which is unknown.

There has been some damage by the high winds threshing the grain and barley from the heads in the fields that were ripe enough.

As a general rule, the week ending last night has been an extremely cool one for so late in June, and the weather has retarded the rapid ripening of grain, fruits and berries, and prevented a glutting of the markets, which certainly is a good thing for the grower, if not for the purchaser.

About all the fruit that will be more than an average yield will be peaches. Reports from all over the State generally speak very favorably of the prospects.

That the season for hops is a peculiar one, is generally admitted by all people. Conservative and competent judges do not venture in giving an approximate estimate of what the yield will be, owing to the peculiarities of this season, which are something unknown to growers of long experience. The coming weather may materially change the present prospects, either for better or worse. Under the present circumstances and conditions, the prospective yield may now be estimated at about two-thirds of a crop throughout the entire hop-growing districts of the State.

The cry generally goes up all over the State for warmer and more settled weather. Harvesting has begun in a few localities, and will be general over the great wheat belts of the State during this and the coming weeks. Stanislaus county expects to have new wheat on the market by next Saturday, the 18th.

In the Montezuma Hills (Solano Co.) section the grain will be somewhat shrunken on account of the recent hot wave.

Napa county reports that warmer weather is needed to develop the fruits, and that cherries are being shipped East by the carload lots.

Alameda county reports barley slightly injured by the hot wave. Haying is completed and the yield is large. Peaches and prunes are doing well. Pears are scabby and apricots rusty.

In Santa Cruz county, cherries and prunes were greatly injured by the frosts late in May, and barley by the hot wave in May, but the late crops were benefited greatly by the late rains. The wheat and barley yield will be below the average, but oats will be a good crop.

In Monterey county, the cool weather has been beneficial to grain. The hay crop is light, but fruit promises a good yield.

Nevada county reports the cold weather as retarding haying, on account of the slowness in curing.

San Luis Obispo county reports the heavy trade winds as doing damage to beans by blowing them down or breaking them off.

The heavy thunder and lightning storm in San Joaquin county on the 8th did no apparent damage to hay. Grain is slowly ripening, and harvest will be, of course, later than usual.

Stanislaus county expects an average yield of grain. Rye harvesting has been going on for some time, but the grain ripened in spots, thereby making harvesting a slow process.

In Tulare county, the continued cool and rainy weather has damaged all crops in the vicinity of Visalia, but there will be a fair crop of peaches and prunes. All other fruits are short.

Glenn county, in the vicinity of Willows, reports peaches ripening, and the crop will be an unusually good one.

Amador county reports continued cold weather, with streaks of thunder and lightning, which struck in several places in the county. Frosts near Coyoteville have nipped the vegetables, and fires are glowing in the grates. It seems more like autumn than summer. The hay crop in Amador is generally good. The sheep and dairymen are leaving daily with their stock for the mountain ranges, where they will remain for the next three or four months.

The following dispatch from the Observer at Los Angeles shows the condition in Southern California: High westerly winds on the 9th injured the bean crop, necessitating the replanting of the same. The wind blew off some fruit, while the rain in some localities injured slightly the hay that was lying in the fields. Generally the weather has been fair and favorable.

OREGON WEATHER AND CROPS.

PORTLAND, June 14.—The Oregon Weather Bureau in its weekly crop bulletin says the outlook for crops is not of the best. The acreage is about the same as last year, with a preponderance of spring-grown grain. Up to May 20th the prospects were excellent, when a period of five days of hot weather seriously injured the crops, especially in Umatilla, Morrow, Gilliam, Sherman and Wasco counties. It is estimated the wheat crop of 1892 will not be over four-fifths of what it was last year, and the fruit crop will be 50 per cent short, owing to the cold rains of April. The indications are that the hop lice will do more damage than last year. The berry and hay crops are unusually heavy. Willamette valley wheat is quite good. Rains east of the Cascades within ten days will greatly improve the wheat prospects in that section.

THE average girth of trees in Britain is not more than 12 feet, nor the average height above 60 feet. But in New Zealand there are miles of kauris whose average height is not less than 100 feet and whose girth is not less than 30 feet. The largest kauri yet discovered was 70 feet in girth, and the trunk was 200 feet high.

QUERIES AND REPLIES.

Answers to Hay Queries.

SAN LUCAS, MONTEREY CO., June 10, 1892.

TO THE EDITOR:—The correspondence in your issues this spring, on hay-making and kindred subjects, has afforded me much pleasure and instruction, and, with the purpose of lending a helping hand, I will endeavor to answer the Ensenada letter in your issue of May 28th.

1st. The Eclipse stacker I believe to be fully equal to any of its type, though farmers naturally prefer the machine they have used and are familiar with.

2d. I have never found any actual saving, in the use of patent stackers, over the man and pitchfork method—excepting when it is desired to erect an extra high stack of hay or straw. They are very nice machines to have, when the farmer is mechanically inclined and willing to attend to it, or has sons who are working in the field. The machine saves a lot of muscle and heavy labor, but when it becomes a question of hiring men to work with or without the improved machine, I should say, stay with the old fork and wagon every time; for, after figuring on the investment, wear and tear on ropes and machinery, the owner will, as a rule, be out, both in the expense bill and time of work.

A cheap and expeditious way of putting up hay into low stacks, for baling or future moving, is to use a "buckrake," commonly called "go devil." Three men, with one span of horses, can stack a large quantity of hay, in the field where it is cocked, in one day. Farmers cannot be too careful as to their investments in farm machinery; if not, the chances are they will have many white elephants on their hands, in the shape of unnecessary machines. I am of the opinion that a large percentage of the profits of nearly every farm in California is expended in comparatively useless machines.

3d. Hay should not be stacked immediately after raking, and no hay should be stacked in less than one week after cutting. If cut at the right time, there is more chance of its becoming moldy and souring. If the hay is put up promptly after cutting, in good-sized, shapely cocks, and left for a week or ten days, bleaching by the sun will cut no figure, and light showers will not damage it.

As regards Chevalier barley for hay purposes, I would say:

(*a*) It is not better than common barley, excepting when both are grown on very rich, heavy soil with plenty of water, when the growth will be rank.

(*b*) The above holds good as to Bald barley.

(*c*) It is not supplanting wheat-hay, except, perhaps, for farm work horses.

(*d*) It has not the same range in climate and soil as ordinary barley, being affected to a greater degree by heat and cold.

(*e*) It yields less per acre, on an average, than ordinary barley.

(*f*) It does not entirely do away with sore mouth in animals, though less liable to cause the complaint, being of a softer tissue, and lightly bearded.

(*g*) It does not equal common barley for grain feed, being exceedingly heating; and, as to yield of grain per acre, it almost invariably falls short, by several centals, of common barley sown under similar circumstances.

S. SHERWOOD.

Letters in discussion of points already published in our hay articles are still in order. There is a prize of $5 for "discussion letters" on hay still awaiting award. Write soon, or the writer of the above letter will get it.

Measure for Weight of Wheat Hay.

MIRAMONTE, KERN CO., June 11.

TO THE EDITOR:—In estimating the weight of alfalfa hay in this district, in the stack, the custom is to allow a cube of 8x8x8 feet for a ton, after 30 days settling in the stack.

Grain hay is of course much heavier, but owing to the fact that but little has hitherto been raised, there exists no rule for measurement nor apparently any accurate knowledge on the subject.

Will RURAL readers kindly inform me what rule prevails among the growers of wheat hay ascertaining the bulk of hay, in cubic feet, required to make a ton, after allowing the stack 30 days to settle.

From two and one seventh acres here we have a stack measuring 24 by 16 feet, and 11 feet high, after making due allowances for averages etc. How many tons of wheat hay is in the stack? G. A. RAYMOND.

Let us have the rules and the computations.

AN OLD PEAR TREE.—Passengers to Lawrence via the Essex branch of the eastern division of the Boston and Maine railroad may see, in passing the high bridge approaching Davenport, a wonderful instance of the vitality of the pear tree, by glancing down into the little hollow on the left. It was planted by Governor Endicott, the first head of the Massachusetts Bay Colony, in 1630, and stands on the once famous colonial "Orchard Farm," within 60 rods, bearing southeast, of the sturdy Governor's mansion. The old tree, a mere shell, with apparently all its inner integuments gone, nothing but the outer bark remaining, and the substance of that split in twain, still stands, and renews again its vernal beauty in a wonderful display of blossoms.

ALL IN ONE ROSE.—Florists are not without their trials and tribulations. An old German florist, relating his tribulations, said: "I have so much trouble with the ladies when they come to buy mine rose. They all wants him hardy; they wants him dooble; they wants him nice gooler; they want him nice shape; they wants him fragrant; they wants him moondly; they wants him everydings in one rose. Now, I have to say to dem ladies, though not what you call an ungallant man, I says that I sees not that lady that is rich, that is young, that is good demper, that is beautiful, that is healdy, that is smart, that is everydings in one lady; I see her not mooch."

THE DAIRY.

The Dairy at the World's Fair.

BADEN, SAN MATEO CO., June 6, 1892.

TO THE EDITOR:—In view of the unusual facilities that will be offered at the World's Fair in 1893, for handling and testing the quality of milk produced by the various breeds of cattle exhibited, the American Shorthorn Breeders' Association has issued a circular to the Shorthorn breeders of America, in which are offered inducements for the encouragement of intending exhibitors, to prepare their best milkers for the coming national contest.

Mr. H. H. Hinds of Stanton, Mich., has been appointed commissioner of the association, for the purpose of securing the necessary cows, and all parties owning Shorthorns possessing unusual (?) merit as milkers are requested to report the same to Mr. Hinds without delay, he being authorized to visit and inspect such herds as may be deemed of sufficient importance.

The association invites the entire cooperation of Shorthorn breeders, and urges upon them the importance of embracing this opportunity of exhibiting to the world the dairy qualities of Shorthorns.

It is pretty generally known that the dairy qualities of the American Shorthorns have, as a rule, been pretty much neglected, yet we will live in hope. All have not neglected them as milkers, and there has of late been some little inclination on the part of a few breeders to develop the milking qualities of the breed, but as this can only be done by milking the cows and hand-feeding the calves, it involves more labor and attention to details than the breeding and rearing of cattle for beef purposes only, in which the best and most economical practice is undoubtedly to let the cows suckle their calves. I know that some men's ideas as to what is a good milch cow are very limited in regard to quantity of milk, and any cow that gives a gallon or two of milk a day more than her own calf will take, up to the time it is six or eight weeks old, is considered to be a good milker.

I hope, for the sake of the breed, that there will be some better cows exhibited at the World's Fair than have yet been exhibited at any State Fair in the Union, for the liberal premiums offered by the association for the best milking Shorthorn cows.

Where will they come from? Will it be from among the high-priced, line-bred, inbred or fashionably bred cattle? No; for, while they may do for highly fed show cattle, they have not the stamina and constitution required to stand the drain of heavy milking year after year, for which there *must* be sound breeding from animals sound and healthy on both sides for several generations back.

What is the breeding of the best milkers that have been awarded the association's premiums in the past three years? Not of the class named, certainly; and, if there has been in some of them a little inbreeding, it seems not to have gone beyond the bounds of prudence, guided by experience, but has probably been practiced a little in order to bring together and concentrate certain good qualities inherent in the family or families. In any case there is not one line-bred or fashionably bred animal in all those worthy the name of dairy cattle. It will be conceded that the quantity of milk and butter produced by some of the cows exhibited was ridiculously small, and not in any way likely to enhance the value of the breed for the dairy, but rather the reverse.

Now, I venture to predict that the majority of the best-milking Shorthorns will be, as they are now, descended from cows that were among the early importations of Shorthorns into this country, and of such families that were scarcely thought worthy of notice a few years ago by the majority of buyers. Yet there were those who prudently stuck to that which they had proved to be good, regarding not fashion for its own sake; only where usefulness was in an animal was worth and merit. This class of breeders are now having their day, whether it be in the breeding of dairy or beef cattle.

To return to the circular; it says: "The school will be in operation during the entire time of the Exposition, during which there will be a number of tests under varying conditions, so far as the methods of handling the milk and cream and the manner of determining the awards are concerned. One period of the school will be devoted to illustrating the methods of handling milk and cream, another period to making cheese.

"All cows must be on the ground not later than May 1, 1893.

"The entire product of the cows will become the property of the World's Columbian Exposition, but this association will furnish (free of expense to the owner) transportation, all stable help necessary for the proper care and handling of their cattle, and the help necessary to milk the same. The Exposition will furnish a liberal supply of water and food commonly fed to dairy cattle."

In the matter of awards, it says: In the three-months test, awards will be made based upon the value of the products obtained, after deducting the cost of the food consumed, and allowing for the increase or shrinkage of live weight in accordance with a scale provided by the chief of the Department of Agriculture. The awards in this test will be as follows:

a. For the best individual cow in each breed competing.

b. For the best individual cow in any breed competing.

c. For the best herd of five cows in each breed competing.

d. For the best herd of five cows in any breed competing.

e. For the best herd.

In the cheese test, the award will be for the best herd competing.

All cattle entered must compete in all the tests except that for young herds, which will be upon the basis of the butter yield, 80 per cent butter fat. Animals competing in the class for young herds must be under three years old, and cannot be shown earlier than September 15, 1893.

The circular concludes as follows: "The Shorthorn possesses too great merit to be left out of it (the contest), and this association is determined to do all it can to afford the various breeders of the country the opportunity to win for the breed the dairy honors which it undoubtedly deserves."

Yes, the Shorthorn has great merit, in more ways than one, to a greater extent than is possessed by cattle of any other breed, but merit is developed according to the channels through which the skillful and judicious breeder has guided its development. If beef has been the end and aim of the breeder, he will have beef for his reward, but, if dairy products, well, then, milk.

California has exhibited as good a cow as any other State, according to reliable reports, for the association's premiums. Will the State be represented at the World's Fair, under the inducements offered to Shorthorn breeders, by an exhibit of milking Shorthorns from any of our herds? Have we got the cattle, the enthusiasm and the necessary pluck for the undertaking? R. A.

HORTICULTURE.

Can Frost Injury be Prevented.

An essay by H. J. RUDISILL at the Redlands meeting of the Southern California Pomological Society.

This is a question that will not admit of a categorical answer, but like many other important queries on horticultural topics can only be intelligently answered when all the circumstances and conditions of the case are clearly stated and understood, nor is it in this as well as in other matters safe to establish a plan of action upon the success of one or two experiments.

Some 60 years ago the medical fraternity were very much at sea as to the best treatment to be given patients suffering from what is now usually named malarial fever, where the use of the old formulas of calomel and jalap was always followed by fearful salivation of the patient, and far too often by great suffering and death. A young physician who was feeling his way along in the treatment of this disease, and kept notes of his practice for future guidance, had a patient who was very low and was begging piteously for something of an acid nature to either eat or drink. The doctor refused it, telling him it would, in his present condition, be certain death to eat anything of the kind. The patient's importunities continuing and his condition becoming gradually worse, the doctor finally told him that if he would assume all responsibility in the matter, he might eat and drink what he wanted to. The conditions were accepted by the patient, and he called for sourkraut, ate freely of it, and to the astonishment of the doctor and friends soon got well. The physician made note of it in his memoranda, "that sourkraut was efficacious in certain stages of malarial fever." His next patient passed through all the stages of the disease under the usual treatment, until he was at death's door, but had not asked for anything sour, nevertheless the doctor thinking that sourkraut had succeeded so well in the other case he would upon his own responsibility prescribe it in this, and did so. The patient ate of it and died.

Unfortunately for science and the medical fraternity, the first patient was a German and the last one an Irishman, and the doctor permitted his judgment of the efficiency or inefficiency of the prescription to be influenced by a question of nationality instead of investigating more thoroughly the true cause of its failure to act alike in both cases, and amended his notes by the statement, "that sourkraut was good for a German in certain stages of malarial fever, but not good for an Irishman."

Horticulturists too frequently jump at conclusions in a similar manner, but as they have in semitropical California comparatively new fields for investigation, and grand opportunities for the continuous study of all the conditions of plant life, as well as for the study of the many new obstacles to successful horticulture, they will not be excused from hasty judgments based upon false premises. They occupy here a magnificent domain, in fact a territory where the forces of nature are more directly under their control than in any other portion of the United States. They have soils of unsurpassed fertility that will grow successfully everything that can be produced in semitropic as well as temperate regions. They can check the torrents in their mad career through the mountain passes and lead them over hills and through the valleys, and compel them to give life and beauty to the desert plains. They have a climate whose extremes of heat and cold are not excessive, and from the injurious effect of which they can in average seasons protect their plants and fruit.

Possessing all these, wherein lies the answer to the question of preventing injury to plants and fruit from frost by irrigation? First, in my judgment, is the preparation of the plant to resist frost. In localities subject to early frosts, say about the latter part of November, I would neither irrigate, fertilize or cultivate late in the season, but do this work early and as much as possible secure a strong and vigorous growth, and have it matured before there is danger of frost. A healthy vigorous tree with matured wood will stand both a much lower and higher temperature than one in a weak or immature condition. We find this is true of animal life also—the strong and vigorous withstanding the changes of temperature much better than the weak and sickly.

Under our irrigation systems water can be given or withheld at pleasure, and the growth should be continuous until such time as you desire to check it. I have found in several instances that witholding the irrigation that is usually given about the middle of September, checks the later fall growth, and enables the trees to mature their wood. But care must also be exercised in this, and if the rains do not appear at the usual time in the fall or the trees indicate a want of water before the rainy season, they should be irrigated, as it has been found that trees suffering from a want of water are as susceptible to frost injury as those growing too freely.

Some years ago the Riverside Land and Irrigation Company budded several thousand seedling orange trees that were in orchard in the lower Arlington district. The buds grew finely and as the season was warm and dry, they were cultivated and irrigated late in November, when an early frost caught them, killing thousands of the buds and hundreds of trees to the ground. In the midst of this territory was a ten acre tract of seedling orange trees of the same age and average condition. The owner budded them also at the same time the others were, and cared for them until he was called East, about July, leaving the care of the orchard for the balance of the season to a young man who cultivated and irrigated it in August, and then went to the seashore for a vacation. He omitted the usual September irrigation and cultivation, and did not return till October, when the buds showed that their growth was checked and that they needed water. It was given but it did not start them into growth again that season, and when the frost came in November they were not injured at all though those all around them that had been kept growing quite late were greatly damaged. In Colorado it is found that late irrigated decidious trees are very much injured in both bud and branch by the severe frosts. Whereas if the irrigation is withheld early in the fall to enable the trees to mature before their winter season sets in, they go through it without injury.

Late spring frosts, when following a dry winter with occasional hot spells, are liable to catch the trees in a premature growth, and cause considerable injury. The red oak, which grows as far north as Manitoba, and endures a temperature of from 20 to 50 degrees below zero, cannot be considered a tender tree, while the orange is; yet in March, 1890, a freeze occured in Mobile county, Alabama that killed the red oak, but it did not injure the orange trees much. The cause of this was that for weeks the weather had been warm. The orange, which there scarcely stops growing in winter, was well along in maturing its seasons growth, while the red oak, always tardy at starting, had been forced into that tender budding state which freezing hurts much; therefore, if the winter is a dry one, I would recommend irrigation to retard the growth, which it will do if not followed by cultivation.

For a second answer, to prevent injury from frost, I would recommend a stream of water running through the orchard, as a protection to plants and fruit, when a frost is threatened. The use of a tub of water by our mothers and grandmothers, to protect their house plants from freezing, is no doubt remembered by the older members of this society. The influence of large bodies of water in protecting vegetation for a considerable distance inland, and the testimony of our Mexican predecessors and the older residents of Southern California, that wet winters are warm and comparatively free from frost, all go to show the prevalent opinion of the influence of water in mitigating the effects of the frost. This influence is due to the heat evolved in the cooling process it undergoes in reaching a freezing temperature. Starting with water at 60 degrees Fahrenheit, reduced to the freezing point; releases some 30 degrees of heat, which must necessarily influence the temperature of the surrounding atmosphere, and to that extent prevent injury, and the greater the area of water exposed, the further the influence extends. If water could be turned loose in the orchard during nights when frosts are threatened, I believe it would be found efficacious in protecting both trees and fruits from injury, and the more freely it could be used, the better the result.

Some experiments of this kind have been made at Riverside by a few individuals with favorable results, but, to test it thoroughly, the condition of the trees must be noted, and several neighbors should unite and apply it upon 100 acres or more in a body, for the larger the area experimented upon, the greater the amount of latent heat released.

Possibly experiments have been made in other irrigation districts, but, if so, I have not found in my general investigations any report upon the subject.

In treating of this subject, I of course refer to frost as indicating a temperature of not lower than 24 or 25 degrees Fahrenheit. When a fruit-grower has neglected his trees and plants, or when the temperature drops to 18 or 20 degrees, it will require other means than the use of water by irrigating to preserve from injury, and, if the cold is prolonged for many hours, at this low temperature, it would probably be impossible to protect them from injury by any means now known to the horticulturist.

Orchard Devices.

A correspondent of the *Record Union*, visiting in San Joaquin county, sends the following notes from Senator Langford's ranch.

The senator's son George, is in charge of the place, and is determined that no weed shall be in sight when his father returns from the East. He showed me a San Jose truck with bent axles that bring the platform, mounted on good springs, within less than 20 inches of the ground. It has two separate reaches, crossing each other under the bed, extending from the left end of the front axle to the right end of the hind axle, thus causing the hind wheels to follow the tracks of those in front, no matter how you turn. This permits of using so long a platform even between rows of trees that you need not pile the boxes upon one another when hauling a large load. With its wide tires and easy springs this leaves little to be desired in an orchard truck.

Senator Langford's younger son is studying mechanical engineering at the Stanford University. For some time I have been looking over drying establishments, questioning fruit-men and trying to find or invent a device for raising a load of trays from the truck when it runs into the sulphur

box. I found it at Langford's, and found that it was the invention of his son.

The truck should be made about six inches narrower than the length of the trays, so that they may project three inches on each side when loaded. As the truck runs into the sulphur-house there is a scantling on each side of the truck resting on hinged legs that carry the load an inch higher than the platform when they are perpendicular. Near the back end of each scantling is a stop, against which the load strikes and carries itself up, grasshopper fashion, by the momentum of the load, until the hinged legs have passed the center and the load rests on the scantlings and against the back end of the house and the truck is free for other uses while the load of fruit is in the sulphur-box.

It is a good idea, and valuable to those who have that kind of work to do, in proportion to its simplicity. When you want to load the trays on the truck again, all you have to do is to run it under and pull hard enough on the stack of trays to swing back the grasshopper scantlings over the the center on their hinged legs.

The Langford sulphur-houses are on a brick foundation, with a little cellar two feet square and two feet deep, nicely bricked up and connected with the house by a flue. Here they burn the sulphur without any danger of setting fire to the house, provided they replace their wooden cover with one of iron, or line it with asbestos.

FRANK S. CHAPIN.

Thinning Fruit.

T. S. H. writes to the Pomona *Progress* as follows: I want to tell your readers something about the way the best and most successful peach and apricot growers in California thin their fruit. In St. Helena, San Jose and Vacaville during the past ten days, I have seen hundreds of white men and Chinamen busy thinning the fruit crops, although the yield there will be short. In the great Spencer orchard of 135 acres at St. Helena, I saw 70 men at work thinning the apricots. I saw fully 20 tons of young green apricots that had been pulled from the trees, and was told that as much more of the green fruit would be taken from the branches. I saw a small army of men and boys in the hundreds of orchards about Vacaville, all pulling green apricots and peaches from the trees, and there were big piles of the young fruit in every orchard. The rule in Vacaville and that region, is to leave enough fruit on the ten-year-old trees to make 200 pounds of fruit when it is ripe in July or August. In this way the trees are never allowed to overbear, and the grower gets steady returns from his property year after year. The workmen leave a space of two to three inches between each growing peach and apricot, or, in other words, they leave the distance covered by a man's four fingers between the growing fruit. In San Jose I saw literally hundreds and hundreds of green apricots and peaches lying under the trees where they had been thrown by the men who were employed to thin the crops.

"We people here have raised deciduous fruits for over 30 years," said a rich orchardist to us at Vacaville "and our long experience tells us that it is just as necessary to thin our fruit each year as it is to pick it when it is ripe. We look upon the man who allows his trees to overbear as a fool and a disgrace to horticulture. The trouble with Southern California deciduous fruit growers is that they are too new and young in the business. We make a science of fruit-growing, while Southern Californias are experimenting and hate to pull off green fruit from their trees. Your orchardists will, however, soon come to the conclusion that a systematic thinning of some fruits is the best. A ton of big plump fruit is better for the grower than a ton and a half of poor, small and measly fruit."

Pinching in Nursery and Orchard.

I. H. Thomas of Visalia has for some time been working upon the idea of forming the heads of his young trees while in the nursery. By this method the planter, instead of cutting them back to within 15 inches of ground in order to have the three buds next below throw out leaders for the main branches (as they do in the vase system of pruning), has his leaders already formed and is practically one year ahead, so far as fruiting is concerned.

This plan is specially adapted to the rank growth of stock secured in such rich land as Mr. Thomas' nursery is located upon, where he grows such trees that many nurserymen would take oath that his yearling trees were two years old.

When the buds have reached a little higher than the point where he wants to form a head, he pinches back the terminal and causes them to throw out side branches. These he checks with thumb and finger, from time to time, until he has trees formed upon the vase system in the nursery, and so avoids the common tronble of growing a large amount of wood to be thrown away. Perhaps this system might not give so good satisfaction in places where trees made only average growth. To avoid the trouble of handling such large trees as grow in that locality, his neighbors who run the Giant Oak Orchard and Nursery, are propagating June buds, principally intending to sell the trees at one year from the pit.

Mr. Thomas informed me that he was trying the plan on his young prune orchard. When the laterals had grown to the point where he would naturally cut them back next winter, on the old system, he pinches off the terminal, and so gets the side branches that he wants this year instead of next.

Possibly this system might not give laterals and branches sufficiently stocky to form a good head in soils that gave an average growth, but in soils that will grow a bud from ten to twelve feet in one year, as some of the Tulare and river-bottom lands do, it is more than half likely that Mr. Thomas is on the right track. His experiments will bear watching, and I hope to visit his orchard often enough to keep our readers posted upon the success of these experiments.—Frank S. Chapin in Record Union.

THE VINEYARD.

The Manufacture of Vinegar from Wine.

Wine or any other alcoholic liquor of moderate strength will, if left to itself in contact with the air, ultimately turn into vinegar, the alcohol absorbing oxygen, and being thus transformed into acetic acid through the aid of a microscopic organism. This process, however, is too slow to admit of its being adopted in practice, and several methods, having for object the more rapid oxidation of the alcohol, are had recourse to.

In France, three principal methods are adopted, which may be enumerated as follows:

1. The Orleans process.
2. The German process.
3. The Luxembourg process.

The Orleans process is the one which was formerly the most used. It enables excellent vinegar to be made, but is somewhat slow.

In the first place, the temperature of the building in which the vinegar is to be made must exceed 70 degrees Fahr. Provision must also be made for good ventilation. In this building the casks in which the vinegar is to be made are placed. These casks, capable of containing about 100 gallons, have a hole about six inches in diameter made in the upper part of the front head, in order to admit air. About 25 gallons of good, strong vinegar are placed in each cask, to which three gallons of the wine to be acetified is added every week until the cask is half full. It should then be left alone for a fortnight, by which time it will be converted into vinegar. One-half of this is then racked off, and the same process gone through again, care being taken to always leave 25 gallons in the casks after each racking.

The German or rapid process differs considerably from the above, and consists in causing the wine, heated to 80 degrees Fahr., to trickle slowly over shavings in a cask, in presence of plenty of air. The wine should be passed three or four times through the cask, when the acetification will be complete.

The Luxembourg process is a modification of the former one, and consists in leaving the liquid in contact with the shavings—for which marc (the refuse of the vintage) may be substituted—during the day, while this is exposed to the air during the night. This result may be brought about in different ways. Two casks may be employed—one containing the marc, and so arranged as to allow of the entry of air once the liquid has been removed, and the other as a reservoir for the latter during the night.

Another process which gives very good results is to place the wine in rotating casks which are filled with shavings. These casks are only one quarter or thereabouts filled with the wine to be treated, and an opening is provided in the center of each head to allow the free entry of air. These casks are turned round once every three hours, thus bringing fresh portions of liquid in contact with the shavings. Although not so rapid as the German method, this process is sufficiently so for practical purposes, in addition to which it presents the advantage of causing less waste. With the German process the loss through evaporation may become considerable.

The first, or Orleans process, is the one which produces vinegar with the best flavor and aroma, as the volatile perfume ethers formed are less likely to be lost through evaporation.

When making vinegar, it is well to see that the wine does not contain more than 20 per cent of proof spirit. If necessary, it may be reduced by the addition of water.—Australian Vigneron.

FRUIT PRESERVATION.

A Suggestion for Dipping Prunes.

Many RURAL readers will hear with regret of the illness of R. B. Blowers of Woodland, so well known for his progressive work in horticulture. Even in his illness he remembers his friends in the fruit interest, and recently gave F. S. Chapin the following for a letter to the *Record-Union:*

In dipping prunes it is desirable that the alkaline wash should be hot, and of about the strength given by one pound of concentrated lye to eight gallons of water. The prunes should remain in the hot dip just long enough to crack the skin, then be at once rinsed so thoroughly as to remove every trace of alkali, and finally run into three or four grades before drying. The proposition is to combine appliances calculated to handle several carloads per day in this way.

In the first place, suppose we have a galvanized iron tank, with sloping ends, 12 feet long, 3 feet wide and 2 feet deep, mounted on a brick arch with solid supports. Ten barrels of water and 50 pounds of concentrated lye would fill it a little more than half full. Then we could have an endless belt made of wire cloth, or similar material, to run over rollers so placed as to carry the belt through the tank under the dip and deliver the prunes upon a similar belt that should carry them through a bath of clear water.

The second belt should deliver them to a third, which should carry them over a dripping pan. While the fruit was passing over the third belt he would have a hose throwing a spray of fresh water over them and the dripping pan would be arranged to carry this water back into the rinsing tank. From the third belt they should run over a grader that would assort them into proper sizes before they went on the drying trays.

The speed of the belt could be so adjusted as to keep the prunes under the alkaline bath as long as desired—a thing that cannot be exactly regulated by appliances in use—and as they general y need to remain under about half a minute, and it would take more than 50 pounds of prunes to fill such a belt one deep, one may safely calculate the capacity of such a device at 100 pounds a minute, or three tons per hour, or a carload of dried prunes per day. It would take help enough to put them into the machine, keep up the fire and spread it on the trays. In other words, you touch the button and the machine will do the rest, and do it right.

FRUIT MARKETING.

Dried Fruits for the English Trade.

Campion Goodsell & Co., Lt., of London, have issued a circular on Californian evaporated fruits, from which we quote as follows:

As we have already advised you, the fruit which commands most attention is apricots, and the sales during the past few weeks have been sufficiently important to almost clear the market of this kind, and it is quite possible that a few more may be required to supply the probable demand before the close of the present season. We, ourselves, have effected a few sales at 50s., but the price at which most contracts have been put through is 48s. per cwt., and, if these prices offer any inducements for old stock, we should recommend our friends to make us some shipments.

With regard to the new crop, we are taking steps to create a demand "to arrive," and we should be glad to receive offers of apricots and other fruits for shipment during next season on cost, freight and insurance terms, as we think it more than probable that we may be able to put some contracts through with our buyers, and this will no doubt greatly facilitate the business for shippers.

For the guidance of our friends we beg to say that the kinds of fruit which are principally in demand are the following: Apricots, pears and apples (both in rings and whole). Silver prunes (unpitted) have also been in good demand, and during last season a fair quantity was sold at from 65s. to 70s., although this fruit is not likely to command the attention which apricots, apples and pears are likely to receive.

Silver plums and peaches are almost unsalable, and we do not recommend any shipments of these kinds, while nectarines only command a fair sale.

PACKAGES.

We have been requested by several of our friends to give our opinion as to the size of package most suitable, and we have no hesitation in saying that boxes of 25 lbs. net, as showy as possible, are liked better than anything else. A little expense in getting up these boxes, giving them a taking and showy appearance, will, we feel sure, be recompensed in the proportionately better price they are likely to obtain. Apples may be packed in boxes of 50 lbs. net, and perhaps this is the most suitable package for this fruit.

Dried fruit in bags and sacks is almost unsalable, and we strongly recommend our friends to ship nothing in such a package for this market.

We find that a good deal of doubt still exists in the minds of some shippers of Californian fruits as to the duty to which they are subject in England, and we take this opportunity of pointing out that apples, pears, peaches and nectarines are quite free and pay no duty whatever on entering this country. On the other hand, apricots, prunes and plums are liable to duty at the rate of 7s. per cwt.

Ventura Apricot Growers.

What are we to do with our apricots? is the question that now confronts the growers of that delicious fruit. There is a large crop this year in this county, but it is exceedingly small in other apricot-producing sections of the State, particularly that portion adjacent to and north of San Francisco. As a whole, probably, the yield of the State will be less than that of last year. There is no reason why prices should fall short this season, as there is no pretext of an oversupply. Buyers, however, have been a little tardy about coming into the field, though some offers have been made at figures not altogether satisfactory to growers.

The present crop of this county is estimated at about 4000 tons, and the handling of it is a question which is just now perplexing the minds of our orchardists. In view of this dilemma, a meeting was held at the courthouse last Saturday, at which was organized the Ventura Apricot Association, comprising 24 members, and more, we understand, are ready to join. The officers of the association are: President, A. Everett; vice-president, J. M. Sharp; secretary, T. G. Morrison; treasurer, Charles Barnes. The subject of handling the present apricot crop was informally considered, and the preponderance of opinion expressed was that the better policy would be to dry the fruit by a cooperative system, or other plan, right here at home. It was claimed by several present that the apricot could be sun dried anywhere hereabouts that space could be procured, as well as at Newhall or other remote points, the process being a little slower on account of the damper atmosphere nearer the ocean, but the cured fruit would be equal in quality to that prepared at any other place.

It has generally been believed that the fogs and dampness characteristic of the coast weather would present an insurmountable obstacle to success in that direction, but parties who claim to derive their knowledge of the matter from experience say there is substantially nothing in it; that apricots can be dried near home as well as elsewhere, except, as a rule, it will require longer time.

No definite conclusion having been reached in regard to future action in the premises, the association decided to hold another meeting, at the same place, at 2 P. M., Wednesday, June 8th, when the subject will be fully discussed and probably some decision arrived at.—Democrat, June 4th.

THE FIELD.

Our Duty to the World's Fair.

An essay read at the Redlands meeting of the Southern California Pomological Society by MRS. FLORA M. KIMBALL of National City, and a Member of the California Board of Lady Managers.

In a convention like this, where interests are identical and all have purposes in common, we are wise in taking counsel together on the most important question for fruit growers that has ever been presented to them. The opportunity of the century is offered to us to show the world what are our resources, our climate, intelligence, energy and our probable future. To do this successfully, we must exhibit that in which we excel. We have but three great industrial specialties—fruit-raising, agriculture and mining. We lack the manufacturing interests of Pennsylvania, New York and Massachusetts. A display at the World's Fair of manufactured articles will be overshadowed by these States, but with a backing of our products of the soil and our mines, California may stand at the head of the long list of States and Territories. Her exhibit next year will be a remarkable one—remarkable for its great excellence and the favorable comments it elicits, or remarkable for its meagerness and the unfavorable advertising the State will receive. There is something in the atmosphere of California and the magnetism of the people that produces extremes. There is little ordinary work done here. Great failures or grand successes are constantly being heralded from the moaning pines of Maine to the golden shores of the Pacific. And so the eyes of the world are always turned to this distant, western outpost of the Republic in expectant waiting for some extraordinary development. Already the newspapers in their chatty, journalistic way, are speculating on California's exhibit at the World's Fair, the great distance of transportation, the perishable nature of some of our products and the irrepressible energy of a people, to whom space and obstacles are like thistle down in the wind. Thousands are waiting to see what California reproduced in miniature in Chicago will be like. If it gives promise of the future, based on substantial merit, the most conservative and careful will not hesitate to cast their lot with us.

We cannot escape the conclusion that upon the fruit growers of California depends the success of our display next year. Upon the products of our orchards we must rely for an exhibit that will meet the expectations of the world. From the luscious berries of Del Norte to the golden oranges of San Diego, from Oregon to Mexico is every variety of fruit that can be grown wherever the genial sunshine is supplemented by the showers of heaven. Figs from the Mediterranean, olives from Spain and Italy, fruits of the Orient, pineapples and bananas from the tropics, and all the fruits of the temperate zone, have made us famous the world over, and bear unimpeachable testimony to the magical power of our climate. Climate is the grand boast of all loyal Californians, and we have no other way to exhibit it in Chicago except by a presentation of our perfect fruits. Some genius has suggested that a building at the Word's Fair be set apart to advertise California climate, the temperature to be regulated each day to accord with weather reports from here. Infinitely more convincing would be the product of our climate, fruits rivaling in excellence those of the famous health-restoring countries of the Old World. With the assurance demonstrated by the fruits of our orchards, that this State excels all others in her genial climate and productive soil, the home seekers, waiting in expectance for the judges' verdict in Chicago, will turn their faces toward this sunset land—not wild men led astray by a false alarm, but rational men and women who have seen the proof that no State in the Union can furnish equal facilities for making good and happy homes.

Population is the great want of the State, for population increases the production of the country, and increased productions bring increased facilities for transportation, and the only way to bring about an era of prosperity is to advertise in the most practical way to attain this result. All the fir and tamarack of the Sierra Nevada mountains converted into paper, and the paper covered with glowing accounts of California's incomparable resources, would have less weight with thinking people than one carload of California's best oranges arranged to catch the eye of visitors in our State building in Chicago.

France, with a population of 200 to the square mile, supports a population of 40,000,000, her chief industries being fruit and silk-raising, both products of the soil. California, with only a population of seven to the square mile, in the same ratio, ought to maintain a population of 31,672,000—28 times as many as she now supports in the State. To acquire this number of people is largely the mission of fruit growers, whose occupation, of all callings, is most enticing.

But I fancy that sometimes we press the fruit growers a little too hard. There are fruit growers and fruit growers. Men with small means, small ranches and large indebtedness may have the most excellent fruits, and we are frequently admonished that we must exhibit only the very best. We are as proud of our neighbor's fruit as of our own, and are as pleased to point it out in an exhibition as coming from our neighborhood as if it had grown in our own orchard. And so, when local or distant fairs are contemplated, we go at once to the producer of a superior article and pay him the compliment of soliciting his best fruit for exhibition. If we are refused, we are apt to say something personal about somebody's being unpatriotic and lacking in public spirit. The banker, the merchant, the professional man, the well-to-do artisan, are exempt from contributing, while the small fruit grower, whose industry, intelligence and self-denial have brought the grades of his fruit to a high standard, is never passed by. This is hardly just, and while every fruit grower in the State who has something worthy of exhibition ought to contribute to the great display next year, the small growers should be protected from actual loss by the moneyed men who will share the benefits arising from the exhibit.

Southern California cannot afford to hide her light under a bushel. We want the world to know that thousands of carloads of the finest oranges, lemons and raisins under the sun were grown on the desert wastes of 20 years ago. We want it to go out to the world that there are many thousands of other desert acres susceptible of the same magical transformation; that Southern California can easily do what the vast State did in 1890—load 2435 cars with dried fruits, 48,700,000 pounds.

The "wise men of the East" have visited us by thousands, quill in hand, and recorded stories more wonderful than the tales of the Arabian Nights, about the size of our pears, the beauty of our apples, the lusciousness of our oranges, grapes and apricots; and other wise men have staid at home, read these tales with an incredulous smile, and charged the exaggerations to the exhilarating effect of our wines. The doubters will be in Chicago en masse, and we all want to be there to see their confusion when they discover that the truth was not half told.

Not only the fruit but its products should be shown to the best advantage. The women of the State are already devising schemes that will call into exercise their ingenuity and artistic taste. A jelly palace, with contributions from every county, and every kind and shade of jelly, from the ruby red guava to the delicate apricot, will be a fitting tribute to the good taste of the women of the farm. Other and more elaborate designs are contemplated and will be carried out if the question of finance does not prove insuperable. The wit of women will serve the State a good purpose at the Columbian Exposition, but in no industry will it be more strikingly displayed than in the arrangement and presentation of our fruits and their products.

Our duty as fruit growers is to make the most of this opportunity that may not present itself again in half a century. Raisins surpassing the Malaga, crystallized fruits rivaling the finest imported confections, marmalades and jellies, fruits dried, preserved and canned, will open the eyes of wondering millions, if men and women work together for the same object.

Every town and village in the State should have its Woman's World's Fair Society, auxiliary to and working in conjunctlon with the county organization. In some sections of the State women are organized and enthusiastically at work, and there is where you will find the county organization strongest, and there will be found the best and most carefully prepared exhibits.

Since the day that Isabella pledged her jewels to aid Columbus in the discovery of a new world, men have found that the inspiration and help of the queens at their firesides was indispensable to success, and as we celebrate that historic incident, no more fitting tribute could be paid to the memory of the Spanish Queen than a royal exhibition of the finest fruits of this new world, that will win for us Columbian laurels, and teach the nations of the earth that California lesson we so delight to rehearse, that

> "The same mild season gives the blooms to blow,
> The buds to harden, and the fruits to grow."

THE PUBLIC LANDS.

A Forfeited Land Grant to be Thrown Open.

Many land seekers are deeply interested in the forthcoming order for the opening of a large tract in San Benito and Monterey counties, and the interest has been increased by the action of the Secretary of the Interior in ordering the publication of the legal 30 days' notice of the carrying into effect of the Land Grant Forfeiture Act, as far as the Southern Pacific grant between Tres Pinos and Alcalde is concerned. The fact of the issuance of the order was telegraphed from Washington, Saturday, and Registrar Sheehan of San Francisco expects to receive his official instructions some time next week. Just what these instructions will be he cannot now tell, but if the publication be ordered immediately that portion of the forfeited lands not already occupied will be opened for occupancy about July 15th.

The land in question, comprising about 768,000 acres, was granted to the Southern Pacific Co. by Act of Congress passed in 1866, which gave the company every odd section included within 20 miles on either side of the line of the road which was to be built; and if in this 20-mile limit were found any land previously taken up by settlers, the road could claim in lieu of this land to the same amount within a limit of ten miles farther on either side of the 20-mile limit, thus making the company virtual owner of every odd section not previously claimed in a stretch of territory 60 miles wide and as long as the line of the road. The Government claimed that the company had not fulfilled its contract to complete the projected line of road in several instances, and the Land Grant Forfeiture bill of September, 1890, was based upon this claim. It was the original intention of the Southern Pacific to construct a through road from Hollister and Tres Pinos south by way of Huron and intermediate points. The road, however, has not been constructed beyond Tres Pinos, and there is a big jump across San Benito and Monterey counties to Alcalde, where the road from Huron finds its termination.

It is the 60-mile strip between these two points that the Secretary of the Interior now orders forfeited. The railroad company raised the point that the original grant specified that the land should be its along the line where it intended to build a road and that the Government had no right to pass a law taking away the land simply because the road had not yet been completed between the points named. Pending the final settlement of the question there has naturally been great uneasiness among the many settlers on the land as to the validity of their titles. The forfeiture bill of 1890 was supposed to have settled the question, and a great many new settlers began at once to take possession of the odd sections referred to. The points raised by the road, however, were carefully considered by the Interior Department, and the Secretary has only now seen fit to overrule the company's claim and to promulgate the order of forfeiture.

As a matter of fact, there is not a great deal of desirable land unoccupied in the forfeited sections, so that there will not be another Oklahoma rush when the 30 days' notice shall have expired, but the present settlers will then know what they have to do to establish their claims, and new settlers will have something definite to act upon. Under the provisions of the Forfeiture Act all settlers who were in good faith located upon any of the restored lands at the time of the passage of the Act, September, 1890, and who were otherwise qualified, will have preference of the rights of entry under the homestead law, this right to be exercised within six months from the day of the promulgation of the order of restoring the lands.

Former rejected applications cut no figure under the new conditions, but persons with applications pending will no doubt be notified of the necessity of their making new applications. The Land Office and a good many lawyers have been besieged with inquiries from settlers and intending settlers ever since the passage of the Forfeiture Act, but it has heretofore been impossible for any satisfactory answers to be made, and even now it will be necessary for the Registrar of the Land Office to receive his official instructions from Washington before any further steps can be taken.—San Jose Mercury.

ENTOMOLOGICAL.

A Californian Meets Mr. Koebele in Australia.

MELBOURNE, May 11, 1892.

TO THE EDITOR:—It will doubtless be of interest to many of your readers to learn of the success of Professor Albert Koebele in discovering in this country parasites or beneficial insects preying on our most troublesome fruit tree enemies.

I accidently met him in Sydney, New South Wales, April 27th, and as I knew his mission here, I urged him to show me his specimens, which he did on the following day, and I can assure you they are a welcome sight to those interested in horticulture. I asked him to give me a short account of his work and success, as I had heard conflicting reports in San Francisco and Los Angeles before I left there.

Since he left San Francisco he has been in the Sandwich Islands, New Zealand, Queensland, New South Wales, Victoria, South Australia, and he is now in the Fiji Island or New Caledonia. In all, he has traveled over 16,000 miles, and has prosecuted his work in the driest portions of Australia, as well as in the tropical regions, and in heat of 116° in the shade at one time, experiencing at another time a rainfall of 17 inches in one storm; but in spite of hardships, he looks in good health and is enthusiastic over the value of his discoveries of beneficial insects since he left San Francisco. Up to the time I saw him, he had in all over 60 parasites for our most troublesome scales, and is "positive" that, with their successful introduction, our fruit growers, *in five years' time*, will be saved the trouble and expense of spraying and gasing their fruit orchards, and why should this not be so? The Australian beneficial insects or parasites have enemies in this country which they will not have in California, as they are not indigenous there, and should have their natural increase, which should be like the increase of the "cardinalis," which has proved so valuable for destroying the cottony cushion scale.

The lady-bird, *Orcus Australis*, of which he has specimens, is a *general feeder* on all *scale* and *aphis*, and should prove one of the most beneficial insects. He has found a large variety of enemies to red scale (including one fungus) preying exclusively on it. He has also found many enemies for the San Jose and black scale, and besides the above, many varieties of moths and fungus that live on all our California scale and aphis, and three insects that prey on grasshoppers, but the season was so late when he found the latter that he could not make successful shipments of them.

Several shipments of beneficial insects have already been made by him to California, none of which have been as successful as he desires, but he will continue to forward by steamer duplicate shipments, and with the hearty cooperation of his colaborers, he is confident of their successful introduction. So far, he has not found a parasite for the codlin moth, and is of opinion that it will be found in Europe, as it is a native of that part of the world. There is where he wants to go and look for it, and he should certainly have the opportunity presented to him by the fruit growers of California (if not sent by the Government).

It is to be hoped that he may be spared to the world to carry out his life's work, which has begun so successfully. The trip he is making to New Caledonia is a dangerous one for his health, particularly on account of his enthusiasm, which will expose him where, in ordinary pursuits, there would be but little danger. CHAS. E BLAKE.

DAMAGE BY DESTRUCTIVE LOCUSTS.—Dr. C. V. Riley, U. S. Entomologist, has just issued an important bulletin on the above theme. The season of 1891 was marked by widespread alarm felt at the presence in force of several species of destructive locusts in different parts of the country, and particularly in the Western States. A general summary of these incursions was given in Dr. Riley's annual report for 1891, and in this bulletin are brought together the detailed reports of the agents who were sent into the field and who carefully examined the country from which locusts were reported. Mr. Bruner visited portions of Colorado, Wyoming, the Dakotas, Minnesota, Montana, Idaho and Utah, and also made a short trip into Manitoba; Mr. Coquillet confined his investigations to the State of California, while Professor Osborn visited the State of Kansas only. Professor Osborn's report has previously been printed in *Insect Life*, Volume IV, pp. 49 to 56. We advise all who are interested in this subject to apply for the bulletin to the Secretary of Agriculture Washington D. C.

THE HOME CIRCLE.

The Tone of Voice.

It is not so much what you say
As the manner in which you say it;
It is not so much the language you use
As the tones in which you convey it.

"Come here!" I sharply said,
And the baby cowered and wept;
"Come here!" I cooed, and he looked and smiled,
And straight to my lap he crept.

The words may be mild and fair,
And the tones may pierce like a dart;
The words may be soft as the summer air,
And the tones may break the heart.

For words come from the mind,
And grow by study and art;
But the tones leap forth from the inner self,
And reveal the state of the heart.

Whether you know it or not—
Whether you mean or care—
Gentleness, kindness, love and hate,
Envy and anger are there.

Then would you quarrels avoid,
And in peace and love rejoice,
Keep anger not only out of your words,
But keep it out of your voice.

—*Youth's Companion.*

What's in the Frying-Pan?

OR

Mattie as Camper's Cook.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

(*Concluded*)

"A chowder!" Mattie sat bolt upright, all alert. "Could you really tell me how to make a chowder? Why, Tom, when Dr. Allen said he'd better go to the ocean, remarked groutily, he's that discouraged: 'What's the use going to the coast if you can't have a *chowder?* Seashore and chowder go together—always did when I was a boy and lived on the Atlantic coast. But Mattie isn't equal to a chowder, I guess, and you wouldn't let me eat one if I had it.' And the doctor said why of course he could have chowder—anything light and tempting—but to go slow on cakes and pastry and cold lunches; have freshly cooked, wholesome meals. And I just despaired, for I supposed I'd just *have* to have lots of this same 'cake and pastry' and cold-boiled meats, and lunch it along, only making tea and coffee and frying fish, perhaps, if we had any. And can I really make a chowder?"

"Why, goodness me, child, a chowder is a simple affair, first cousin to these scolloped dishes you have such ingenuity about. "Only," Miss Hetty added, "you must be sure and take one of your stove covers along."

"A stove cover!" and Mattie stared as though she thought Miss Hetty was going crazy.

"Yes, certainly, to moderate the heat; don't want to hurry your chowder, burn it on the bottom, do you? I don't see why people are so stupid," Miss Hetty went on, reflectively, "scorch and burn things like the man who thought he could cook on a chafing dish, I read about in a funny paper the other day. You can moderate the heat of a gasoline stove in so many ways. Have Tom get you some pieces of sheet iron that will fit over the stove. Then you can take your toaster along and toast up your stale bread. And if you have your stove protected with pieces of sheet iron, behind and at each end, the blaze won't flare so when the ocean breeze gets into your tent; the heat will be economized and dishes you've cooked will keep nice and warm underneath. But don't forget your stove cover."

"I savee," laughed Mattie; "it is so thick I can do slower cooking."

"That's it. And your deep cast-iron frying pan is just the thing for your chowders, kind you eat with a fork. The old-fashioned kind—I used to call it 'New England' chowder, but I understand they make it down South now more than anywhere else, the kind you can cook separately mostly, then mix, and that you eat with a spoon—why *that* you can make in these tin things. I like the other a little the best, but the beauty of the last is that you can use 'left-overs' for it"——

"That sounds natural," interrupted Mattie. "I haven't heard you say 'left-overs' for a long time. But what must I take for chowders?"

"O, crackers; better have a tin box for them to keep out the moisture, though you can bake them over in your oven—and onions and potatoes, too, though a chowder *with* crackers and *without* potatoes will be better for Tom at first, I think. And your condiments—you ought to get fish and clams down there. I suppose you had better take a little salt pork along. Some chowders are not chowders without it, according to the best authorities."

Here Miss Hetty read Mattie a dozen chowder recipes, talking them over with her till she understood the simple, underlying principles of a chowder, and could "cut according to her cloth," as Miss Hetty phrased it, or as Mattie put it, "make them up out of her head."

"And don't," urged Miss Hetty, "think you must live on stale cake and pies down there, and tire yourself all out stocking up on them before you go. You'll find so much coziness and pleasure, too, getting up appetizing little meals when you get the hang of it, and I know you will, and surprise Tom, too, as you did last year that soup-bone week." And Miss Hetty gave Mattie's hand an encouraging squeeze.

"And now as to the frying I was going to tell you about. The secret of the French style is in having the fat in the pan *hot* so as to brown—crisp—the contents quickly, form a crust on the outside, so that it will not fat-soak. For some things one needs to give the hot pan only the slightest sort of greasing, such as toasting thin slices of potatoes, making them almost as crisp and delicate as 'chips.' There's a 'fowl saute with peas' or 'mushrooms' I'll show you how to do sometime that is delicious. Top of the pot—clarified drippings, and some lard you'd better take; it's better than butter, besides being more economical—way ahead of butter, especially for fish. But where you need only slight greasing, as muffins or toasting potatoes, I use olive oil. It sounds extravagant, but it really takes so little, and one can get the pure oil here in California."

Mattie and her friend talked together till Jack West came along saying Tom had sent him to escort Mattie home. So with many a parting injunction, Miss Hetty bade Mattie "good-night."

In two days' time Tom and his little wife were at the ocean, and had set up housekeeping in Jack West's tent. There they stayed two weeks—an interesting two weeks, bringing their special trials to Mattie, which, like the brave little body she was, she met gracefully; but also bringing plenty of fun and, better than all, renewed life and strength to Tom.

Mattie managed economically, too. And such a reputation as she got as a cook! Mrs. Bailey was quoted among campers out as the authority on seacoast cookery. Tom was soon well enough to begin to fish off the wharf.

Miss Hetty sent down every now and then one of her funny, hastily scribbled little notes, written with pencil on cheap printing paper which she cut in strips for the purpose herself. These Mattie prized and pored over to a degree, that Tom said she acted as though they were the utterances of a Delphic oracle.

"And a sight better than that they are, sir," Mattie would cry, "or than all the temple jargonings put together. And I'd like to know what you'd do without her! Guess you *were* surprised that first time you came and found chowder for dinner. Yes, sir!"

And Tom would laugh to see Mattie "fire up," and offer to shake hands with his "little woman," or propose "three cheers and a tiger for Miss Hetty."

But one day she did surprise them. Some one left at their tent door a big earthen jar containing a bag of salt and some paper parcels. At first they thought it a mistake; but among the parcels they found a little note from Miss Hetty (the parcels contained some of her lovely tarts and famous cake) saying she had heard there was great mackerel fishing down there, and she thought they might like to salt some down for their winter's supply. It was so little trouble, so much better than that bought. She would like some, and advanced salt and jar to be paid for in mackerel, if they put down any. If they didn't want to, she gave the name of some one camping there she knew would like to, and would come and take jar and salt off their hands.

Tom and Mattie hailed the idea with alacrity. It was so simple—just to freshly dress the fish, leaving the heads on, wash in ocean water, and pack down with salt rubbed inside each fish, and liberally sprinkled over each layer in the jar.

They made their own brine. Before they received the note, Tom had had to quit fishing at times, for the mackerel had come in such shoals that he could haul them up hand over hand. Now he fished on delightedly.

He fished for yellow-tail, too, while Mattie did her best to catch bait for him; for this big, white salmon must have bait that is ever on the wriggle, or it will not bite. And Tom actually hooked, and, with plenty of help from enthusiastic neighbors, landed a thirty-pounder. Once he was one of many who landed a "jew fish," which tipped the scale at three hundred and forty pounds. Mattie was quite a fisherwoman, had great luck. Once, by accident, as she was holding Tom's pole one evening for him to pick up his traps, she caught a big "croaker," a fish never known to have been caught off the wharf before. "Or, in fact," as Tom put it, "the blundering old croaker caught himself—they never bite—and you should have seen how surprised Mattie was. 'Why, why, I've caught it on the timbers, I guess.' I thought she'd spoilt my line. But I grasped the pole, and there it was."

Tom was fond of telling stories of their seaside sport on his return from the beach. But there was one particular story he never tired of telling and chuckling over. The way Tom generally was started to telling this—his prize story—was this: One of "the fellows" would say:

"What's this I hear, Bailey, about one of the men off a steamer trying to flirt with your wife?"

And then Tom would "Ha! ha! ha!" and say——

But first I must introduce Tom's story by letting my reader know that, though Tom and Mattie are about the same age, he looks older than she does, and is much taller. Mattie's curly head does not reach his shoulder. "Pretty little Mrs. Bailey" is her *soubriquet.* She is young-looking for her years—petite, graceful. But for all the artless, girlish, impulsive ways she has under certain circumstances, when occasion requires, few women of twice her size have more dignity of presence, or can more readily put on the air with which pure, refined women ward off vulgarities and over familiarities.

And now for Tom's story, which I know I shall not do half justice to, for Tom is a good story-teller, after his own style:

"You see, as I got stronger, I enjoyed the fishing tiptop. Fresh fish, I'd caught myself, tasted good. Yum-yum! And then there was the excitement of hauling in the fish and keeping count with the other fellows. But I went down in such a hurry, feeling so miserable, too, didn't take any clothes to fish in. Told Mattie I wouldn't fish, all I wanted was to be let alone. You know how grip makes a fellow feel. Well, when I got the fishing fever, there I was—one good suit of clothes, and you know how dirty that wharf is. And it wasn't my style, nor Mattie's either, to want to smell of fish all the time. Couldn't get word home right off.

"But Thomas was down there. You know Thomas, eh! *Will* drink and use opium, but most entertaining man to talk with ever was, chock full of information, smartest stenographer in the State once, way up; but now—loafs and fishes and whoops her up mostly—one of the 'has beens'—regular decadence and walking temperance lecture—moral as large as life, and twice as natural. Well, he's about my size—bigger if anything. He's plenty of *old* clothes, you bet, and anxious to do us a favor. Poor old chap, Mattie's made him a cup of tea more than once. He thinks she's as good as you make 'em, and is as gentlemanly to her as can be—old-fashioned, courtly style. One day, what did he do but bring her, over to our tent, an old coat, whole but mighty rusty, a pair of clean but faded overalls, and an Upthegrove hunting-hat, very limpsey in the brim—all, he said, for me to use to fish in. Fish biting like the dickens that day, and we didn't want to hurt his feelings by refusing, so I put them on.

"Now, mind you, I was wearing big-eyed smoked glasses then, for my eyes were yet too weak to stand the sparkle of the sun on the water. Well, I went fishing in *Thomas'* suit and *my* goggles, and that very day a big passenger steamer touched at the wharf—some unpronounceable Spanish name I can't recall, but it came in place of the Eureka, which was disabled. I was fishing on the opposite side of the wharf—lazy, didn't want to stir. Mattie was flitting about—steamer more of a novelty to her than to me. By and by some of the officers began to come on the wharf and hover around in her vicinity. She looked very pretty and girlish, and you know how brash sailors are.

"Finally one of them began to talk to her, ask some general question, feeling his way to see if he couldn't get up a flirtation. Might think, if he'd the common sense you can buy anywhere, two for a nickel, he'd know a lady when he saw one. But no, he keeps on edging around and asking his questions and making his remarks, Mattie polite and indifferent. Finally he up and says, 'Who's that bloke over there?' meaning me. That was a crack! In a flash Mattie knew what was going on and saw what sort of a fellow he was. But she never let on right away, oh, no! She gave him one of her tootsey-wootsey stares, and said sweetly: 'That? Oh, that is my husband.' Then she came over to me and began to coo and purr around me too sweet for anything.

"Ought to have seen one of the other officers near by double up, holding his side, and go around the corner of a car to laugh. As for the one trying to make a mash on my wife, he was phazed sure enough; jaw dropped—watched Mattie and me a little—knew she was telling me all about it—then shot for the gangplank, and that's the last *he* was in sight. Heard afterward the other officers deviled him no end about it."

Aunt Hannah's Signboard.

NO DRESSMAKING DONE HERE.

LOOK OUT FOR THE DOG.

"There, Emilia!" exclaimed Aunt Hannah, bustling into the sitting room, "I guess that'll stop it. Nails ain't jest even," she lamented, holding out the above example of her mechanical skill, "but that sign's going to be put on the front gate. I'm goin' to spike it there myself. And, moreover, I'm jest goin' to toddle ev'ry thread of folderols in the house back home. I am."

"But, Aunt Hannah," Emilia broke in, laughing, "we have no dog."

"Wall, you've got a doghouse and a chain. I can fix 'em. They'll think the dog and bite and weak links are all there. What do you think about it, Samuel?"

Aunt Hannah's face wore a very innocent, respectful expression, but she laid her signboard down that she might hold her sides to keep them from shaking. She had cornered Samuel.

"Well," that worthy drawled, "I'm sorry, but I don't just see how we will get along without Emilia's help."

"Git along!" indignantly burst out Aunt Hannah, "do something yourself. I want to be respectful to my niece's husband, but I've no scruples on account of bein' in yer own house, for it's hers; every board and nail and belonging. She earnt 'em."

Emilia looked up anxiously. Aunt Hannah and Samuel had occasional explosions; and, if the truth be told, she knew some of her energetic relative's moral thrusts were well aimed and did effective work.

"Now, don't you think Emilia had better go home with me for the summer?" Aunt Hannah continued, leisurely dropping into a chair, "and shet up this dressmaker's shop for one year? She's going jest the same, but I'd like to see if I can squeeze a little human kindness out o' yer. She'll die if she tries to work any longer."

Samuel fidgeted. He did not want to waste energy in anger; besides, he knew Aunt Hannah would get the best of the argument if he did. He did not like to work; he had really come to believe he was not able.

"Yes," he at length answered, hesitatingly, "I think she better, but I don't see quite how she can."

"Wall, I do," and Aunt Hannah's eyes blazed.

"Expenses are pretty heavy, just now,' Samuel objected.

"Have you lain awake nights thinkin' what you would do to help pay 'em?"

"I rather guess Emilia and I can pull through together, and she can have a resting spell at home."

"The same kind she's always had? Now, look here, Samuel Weldon, when the Lord made you, I'm purty sure he was in a hurry and forgot some of the seasonin's, especially the saleratus and pepper. You never could rise to an emergency, and as for vim—"

"I'll think over about Emilia," and Samuel left the room.

"Aunt Hannah," Emilia began, seriously, "I must work through this summer. Besides, I want Clarence to go to college, you know."

"Humph! and while he is kicking football and singing college songs, you'll be j'inin' in the psalms up yender. Now, niece, do be reasonable. In the first place, his college course is short. If he can't git his own education he won't be good for nothin' when you push him through. But he can, and will, when he once understands the situation. He's got your blood in him. Now for objection No. 2."

"Work enough in the house for half the summer."

"Take it home."

"People must have their dresses."

"And you be trailin' yours over the golden streets, I s'pose."

"I should enjoy it above all things—to go home with you, but—" Her voice trembled and tears gathered in her eyes.

"And you are goin'. That ends it. Where is my signboard?"

"But you are not going to put it on the gate?"

"I am."

And she did. When the people first saw it they laughed and wondered. When they

learned all it implied they declared Emilia Weldon should not make their dresses anyway, not if she remained at home, for they loved her. And Aunt Hannah had her way. Besides, her home was Emilia's old home, too.

How restful to be taken care of! But what made her so tired, Emilia often wondered. How delightful it was to sit in the daisied fields for hours, drinking in the sunshine, without a care! Many times as she sat dreaming, with a favorite book lying half closed in her lap, she would recall the numerous castles built in her girlhood days, as she roamed over these same daisied fields. She could not find them now. Sometimes she would smile as she thought how in some way they were always associated with bright Harry Gray. Then her conscience would blush, and she would look over her shoulder to the fine white house on the hill, and wonder if its owner's cup of happiness was too full to even remember her.

The days glided peacefully by. Aunt Hannah knew that after the strain was off, reaction must come. But she began to lose faith in her fresh eggs and cream and Cherry hill air. Emilia drooped, though she tried to be cheery.

"We're goin' to the beach to-day," Aunt Hannah announced one morning, as old Dolly and the phaeton were led up to the door, and she appeared with a substantial luncheon.

Emilia's face colored for a moment with pleasure, then turned pale. She was silent most of the way. Her last visit to the sea was so long ago—on the day of her betrothal. What had become of all those happy dreams of memory? The blue waves with their puffs of foam soon beckoned her on to an old favorite haunt—a retired place beneath a cliff. It was there she had promised to be Samuel Weldon's bride. How handsome he looked in his fresh uniform, with those gorgeous shoulder straps! Surely one brave and manly enough to fight for his country would fight, for her, life's battles! But alas! memory slipped from the present to the past. The waves went on singing from her waking dreams to those of sleep. And when Aunt Hannah came to throw a wrap over her, a happy smile rested on the worn features.

"Poor dear," she murmured; "brave little heart," with a quiver of the upper lip. "Her color is fairly good, and she's not so very thin; quite plump; but where is the strength? I am just goin' to make Dr. Milo tell me the whole truth to-morrow mornin'; so there! Am glad we came down or that I thought of it."

The good old doctor shook his wise head as Aunt Hannah eagerly plied him with questions.

"Miss Hill," he said, "it is just like this. Mrs. Weldon has been doing—let me count how many women's work. She has brought up a family of children. To do that well is one woman's work. She has had all the care of the household work, and has done much of it herself, besides acknowledging the claims of society. That makes two women's work. She has carried on a sufficient amount of dress-making to equal two women's work. That makes it 15 years that she has been doing four women's work. And then we men grumble and wonder that a woman breaks down so easily, and wish *they* were stronger! But we physicians learn to detect symptoms of all kinds. She has had to do this without the aid of love and sympathy from the source that should have never failed. She is a lovely woman."

"But she won't die, will she?" Aunt Hannah broke in.

"I have great faith in her constitution, but—"

That night Aunt Hannah posted the following letter:

"MR. SAMUEL WELDON:—Come and view your handiwork. If God put you into the world to mar souls with your cruelty, you can be proud of one result. But He didn't. You'd better come and see what a wreck you've made of the casket containing one whom He cares for.

HANNAH HILL."

Harry and Mabel arrived first.

"It is all right, mother," Harry exclaimed after the greetings were over. "I have secured a position with Mr. Lane and that furnishes the money for my school, later. I rather think I am able to look out for myself," with a proud, manly air. "We are going to take care of you now. We've missed you awfully. Every pretty, cosy thing in the house just spoke right out loud, and told us what they had cost you. We didn't know before."

Then Mabel had her little confidences to tell when she and mamma were alone.

"You know, mamma, I was earning that money just for my own extra fineries and pleasures. I have leave of absence for three months, and have been at home trying to fill a little of your place. And when Frank Holbrook heard it, he declared it was a generous, womanly thing to do. That he did not mean—to like—me very much—because he thought I was heartless; but that he did—not think so any more. And—" She held up a finger with a new ring, and hid her blushes on mamma's neck.

"So young," Mrs. Weldon murmured, returning her daughter's caresses. But of all possible suitors, Frank Holbrook was her choice.

"And it might never have happened," Mabel laughed, "if Aunt Hannah had not brought you here."

In the evening Mr. Weldon came. He, too, had a confession to make before his other boy should come.

"I guess, Emilia, it would have been hard enough for you to live with me, if I had been a little kinder to you. I've been thinking it over. You are of a finer make than I. I can see it now. I have done considerable thinking since you have been away. I do not believe I shall make you furnish half the income any more, while I'm off spending money for pleasure, or playing lazy. And if the children need any more help, I guess I can do it. You have done your share."

Aunt Hannah accidently overheard some of the conversation as she stepped to the door to announce supper.

"It looks as if the Lord had been good enough to put an extra patch of heart onto that organ. Be thankful for small favors and continue askin' for larger ones."

"Circulation better, pulse better, appetite better, everything better," the doctor joyfully announced a week later. "Medicine has something to help it along now."

"Yes," Aunt Hannah declared, "a burden of care, an avalanche of future work have been removed. She has a whole year in which to rest, a lifetime, they all declare."

Aunt Hannah's signboard is preserved as a sacred family relic.—Farm and Home.

YOUNG FOLKS' COLUMN.

Bill Fasset and His Last Moose.

I am going to tell you how Bill Fasset killed his last moose, and I do not believe that any one, no matter who he might be, ever killed a moose in the same way. But first, who is Bill Fasset? Bill is an Englishman, and when seven years old, longing for adventure and disgruntled with his home, he ran away and left his father and mother, neither of whom he has ever seen since. I will pass over Bill's life, full of interest as it is, until the time when he reached Montreal. From there he went to Quebec, and then joined some settlers who were going into the woods to live. These settlers crossed the St. Lawrence and turned their way toward the State of Maine. Bill was one of the most daring of the party, and when they settled down and built houses, he moved on, and, wandering alone, hunting and fishing, became a true denizen of the woods.

When, according to the treaty of 1842, the United States and England caused the boundary line between Canada and Maine to be cut, Bill was employed as one of the head men. One day while working on the boundary, Bill found, near the junction of two rivers, a spot of land which exactly suited his fancy, and he made a vow that some day he would live there. Finally, after many more strange adventures, after wandering almost everywhere in the United States, about 15 years ago Bill obtained the position of "camp watcher" near his "stamping ground," as he calls that favorite spot. So he moved there, and lives there now alone and unaided. All he has to do as "camp watcher" is to see that no one steals the provisions stored in the supply camps of the lumbermen. The position is nominal, so "Mr. Bill," as many call him, has his time at his own disposal, especially in winter, when his camps are full of men and no "camp watcher" is needed. I could tell you much more about Bill and his hunting, but what I am going to tell you about now is his last moose. He killed this one in winter, when the crust was thick, for that is the time when he does most of his shooting. It was the biggest and fiercest moose Bill ever killed, and he has killed a great many.

The day was cold and the sky was clouded over with a thick, gray mist, which threatened every moment to burst into snow, but which all the day only hovered and lowered up and down. Bill had an errand to do some miles away, and hesitated some time before starting out. Finally, summoning his courage, he buckled on his big coat, strapped on his snowshoes, put his tomahawk in his belt, his rifle on his shoulder, and away he went, six miles an hour. About four o'clock in the afternoon he started for home. It was already dark, and the mist had sunk to the earth, and so it was "darker'n tar," as Bill said.

"Well, sirs," I will let Bill tell his own tale, "well, sirs, I was a-boomin' along, follerin' me own trail, when all on a sudden I seed straight ahead o' me th' biggest-lookin' critter ye ever seed, or me n'uther. I could a-just make out as he was a moose. He didna see me, so I hoisted me gun and fired. Lands o' goodness, boys, how he did jump! He whirled right around, got his eye on me, an' afore I knewed as what he was a-goin' te do, I was on th' ground flat on me back, with Mr. Moose a-snortin' an' a-blowin' in me face. With me big snowshoes on I couldna do nothin'; them's the ones over yere, hain't worn 'em since. 'Well,' says I te mesel', 'Bill, ye's done fur naow.' The old moose, he didna know what to do, no more'n me. How long as we would ha' staid yere, I dona know, but in twistin' around I felt me tomahawk; I made a pull at it an' yanked it out. I put it up as high as I could, an' struck at th' old un. I took a piece as big as yer hand out o' his fore thigh. He gave a yell an' sprang aside. Up I hopped as best I could with them snowshoes on, but afore I was on me feet he was at me ag'in an' I was down ag'in. I once more jabbed at 'im, an' this time I hit 'im in th' chest. Afore he could recover I was on me feet an' a-risin' me rifle; I never got it up, sir. Away I went, sir, up in th' air an' landed all in a heap flat on me face, boys, an' that, too, several inches deep into the crust. Mr. Moose was on top o' me ag'in, but he was madder this time, an' he was a-trying to bite me. Now, I never heard tell o' a moose bitin' afore, but sure as ye're born, he was a-tryin' to bite me. Ye look as if ye dona believe me; ye needn't if ye dona want te. I never aix no man to believe me, but I was a-tellin' o' th' truth. He couldna bite me coat much, but soon he got up to me neck; terrible disagreeable that! Well, sir, just then, thank 'im, he stepped on me right snowshoe an' busted it, ye see where. That freed me, an' I began a-strugglin' an' a-kickin'; somehow or rother I got turned over. Then we began it. I was a-slashin' round an' a-kickin' round; the old moose he was a-bitin' round' an' a-stampin' an' stampin' an' a-fightin' an' a-tryin' to get his horns under me. At last I dug me tomahawk into his head, an' that knocked 'im over. Well, then, boys, I was up an' he was down; then I put my tomahawk right through his skull, an' he lay dead, deader'n a boundary post. It was terrible dark naow, an' I was pretty well scarred, one snowshoe an' me rifle broke, too. Well, I started, an' I hadna gone more'n 20 rods but I had te turn round an' see if Mr. Moose was straight dead, fur I was afraid he might be after me ag'in. He was dead an' stiff, sir, as if he'd been yere a week. Next mornin' I went back to get 'im, an' he was yere, sirs, th' biggest one I ever seed. Boys, I never missed a shot in me life," and then Bill's dirty face would kindle into a smile, and his blue eyes roll round as they twinkled, "an' I never fired at a moose but I hit 'im; but somehow I never found th' bullet that I fired at that moose, nor th' spot where it went in, an' I hunted all day for it." Again his old face would grow calm, and shadows of contentment pass over it. "I was terrible scarred, but th' last moose I killed, I killed with that tomahawk."—Samuel Wells, Jr., in June Wide Awake.

Kenneth's Choice.

Every summer Mr. Allen purchases a supply of dry wood sawed into short lengths. Kenneth's work is to split the wood burned in the kitchen and heating stoves during the autumn and winter.

Mr. Allen, being a man of few words, said when he considered "Ken" sufficiently able to prepare this wood for use:

"Mind, son, you are never to leave mamma's wood boxes empty, though you must give up a pleasure to fill them. You may split this wood in a lazy man's way, barely providing enough for one day, or get a quantity which will last for a season. Mamma is not to be annoyed by complaints that the work is not pleasant."

Kenneth was a good boy. He really desired to make easier his loyal mother's hard work, but wood-splitting was detested exercise. For weeks he chose the lazy man's way, an unsatisfactory way all around.

A washday morning dawned upon a careless Ken and an empty wood box.

Mrs. Allen's head ached so sadly that she was forced to leave the wash to Aunt Vi'let and her assistant, a stout colored woman who looked so positive Ken decided "she'd stand no nonsense."

"Aunt Vi'let," snapped Mandy, "dis yer biler ought ter be on de stove dis minute. Dar's no wood. Who prepars it?"

"Mandy," replied Aunt Vi'let, "don't yo' 'sturb Mis' Allen when her haid ache bad. I mostly prepars de wood dat's lackin'. Massa Ken is a good boy, but he's kind o' keerless bout splittin' wood. I reckons you couldn't lop off a stick?"

"No, I cayn't. Forgits de wood, does he? He doesn't forgit to eat. Hit's easy ter forgit 'bout tejus duties. My mammy's been doin' for me 'twel her hands are stiff. I don' calkilate ter forget dat hit's time I commenced payin' her back. I s'pect he's done forgot he owes Mis' Allen anything. Boys don' 'pear ter hab the right onderstandin' dey'd ort ter hab," grumbled Mandy.

Kenneth heard every word. Straight to the woodhouse he went, beginning work in earnest. His cheeks were scarlet when he thought of the lazy man's way, a way that he had adhered to for several weeks, when he knew of the better one, the doing to-day the needed work, instead of delaying until a more convenient season.

When Aunt Vi'let hobbled down to the shed, hoping to find sufficient chips to "bile the kittle," she discovered a boy industriously preparing good stove wood.

There came a day when every stick was neatly piled into convenient rows. The kindling was not forgotten.

"You have done it beautifully," said Mrs. Allen, looking on approvingly, and Ken exultingly turned a handspring, saying:

"I like the sensible way of doing things lots better than the lazy man's way. Father knew I'd get tired of working lazy fashion. I just wish that Mandy could see this wood. She'd know that one boy at least has some consideration for his mother."—Ella Guernsey.

CONGRATULATIONS.—Our most sincere congratulations are extended to Mr. and Mrs. E. P. Segret of Stockton upon their recent marriage. Hosts of readers will join us in this expression when we state that the bride is none other than Ada E. Taylor, so widely known for her contributions to our Home Circle and for other literary work. Mrs. Segret is the daughter of the late John Taylor of Tuolumne county, who for nearly 20 years occupied an honored place among our contributors.

ROSEWOOD.—Many people suppose that rosewood takes its name from its color, but this is a mistake. Rosewood is not red or yellow, but almost black. Its name comes from the fact that when first cut, it exhales a perfume similar to that of the rose; and although the dried rosewood of commerce retains no trace of this early perfume, the name lingers a relic of the early history of the wood.—St. Louis Globe Democrat.

—She—"Will you write to me on your return to college.

He—"Why—er—you know I can't write—"

She—"O, I don't expect you to write brilliantly or amusingly; just write as you talk."

—"Robert, you may give the name of some wild flower," said the teacher in botany. Robert thought awhile, and then said: "Well, I reckon Injun meal comes about as near being wild flour as anything I know of."

—Mrs. Scrimp—"Johnny needs a new pair of shoes, Silas."

Mr. Scrimp—"Good gracious! One would think that that boy was a quadraped!—*Jury.*



A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

El Dorado.

AN IMPORTANT REDUCTION.—El Dorado *Republican:* The Sacramento and Placerville Railroad Co. has, without solicitation from the people of this county, made an important reduction on carload lots of fruit that will be of material assistance to our orchardists; and in connection with the reductions that have already been promised by other companies on through rates, it will greatly stimulate fruit production here. Last year the rates per carload were reduced from $50 to $37.50. The present reduction will bring it down to $26 per carload of 20,000 pounds. This abatement of almost one-third of the former rate is a great credit to the railroad company, and indicates that its managers regard their business with a broad and liberal spirit, and endeavor to build up a productive community. The General Freight Agent, Mr. C. F. Smurr, in addressing Mr. R. K. Berry, the company's agent at Placerville, says in referring to the matter: "This market reduction is a concession in the interests of fruit growers and for the purpose of stimulating shipments. As you can readily understand, it is clear that the company for this local service will not receive as much money as it would under the old rates, but we think we may derive an indirect benefit from the reduction in the encouragement it will give to growers, showing them that we do take an interest in the movement of fruit from your section and are anxious for further movement." With these new advantages, and a reasonable probability that fruit will b ing good prices in the Eastern market this year, our orchardists will probably make some money. The fruit crop in the country west of Placerville is quite heavy this season.

Fresno.

THE RAISIN QUESTION.—J. H. Harding in *Expositor:* Keep out of the vineyards until the grapes are fit to make raisins, and then what is good and ripe, pick and cure; the rest either leave to the hogs or send them to a winery for wine or brandy. When we get ready to do that, you will hear no more of glutted markets or poor raisins. We have been first rushing into the vineyard from ten days to two weeks too early picking half ripe grapes, and making a quality of raisins that are red, sour and have no weight. Then we keep stripping the vines as long as we can get a color, regardless of the future success or stability of the industry. Every grower knows by experience that at present prices there is not even wages in curing the second crop. Then why persist in trying to make raisins, and throw upon the market such poor trash that only works ultimate ruin?

Kern.

THE BEARDSLEY CANAL.—Bakersfield *Californian:* The new extension is doing its proper work right well and a goodly part of the 25,000 acres that it covers will speedily be brought under cultivation. If that had been the first canal ever built in this valley its completion would now be hailed as a great event, but the irrigated acreage here is of such magnitude that the conversion of a quarter of a hundred thousand acres from an arid state into fertile fields scarcely attracts attention and it does not even cause the least little ripple of excitement.

GRAIN ON UNIRRIGATED LAND.—Bakersfield *Echo:* W. R. Mashmeyer is now harvesting as fine a crop of grain as was ever taken from unirrigated land in this valley. It is on the Weedpatch near the eastern foothills and is yielding about 15 sacks of barley to the acre. The grain is very plump and heavy, the bags averaging about 125 pounds each. His wheat is equally as good. He has a crop of 1400 acres and will make a handsome thing this year. The Weedpatch will yet become the grain field of the San Joaquin valley.

Mendocino.

A DIVERSIFIED FRUIT ORCHARD. — Willits *News:* George Williams is making vast improvements on his fruit ranch. He has at the present time two and one-half acres of strawberries, one-third of an acre of gooseberries, one-half acre of blackberries, one-eighth of an acre of currants, one acre of raspberries, one acre of raisin grapes, 300 peach trees, 100 fig trees, and cherry, quince, prune, plum and pear trees, that an exact estimate would be hard to make. The climate is so mild that he was able to sell strawberries by the 9th of March. Mrs. Geo. Williams deserves credit for the extent in which the fruit ranch has been improved for she did her portion of the work, and also of the supervision.

Modoc.

WHAT THE ASSESSMENT ROLL WILL SHOW. Adin *Argus:* A. A. Smith, county assessor, says his work is about two-thirds done for this year. The assessment list will be considerably increased this year by the number of timber land claims taken within the county, and which are assessed at $5 per acre. This alone will increase the list from $125,000 to $150,000, and as a natural consequence will make a lower tax rate—probably $1.60. In regard to fruit trees, Mr. Smith says there are no more fruit trees reported this year than there were last season. This shows that the interest in planting orchards is dormant, precisely the reverse from what it should be. Fruit-raising is a profitable occupation, and is really of slight trouble, and we cannot understand why the people who can, do not put some of their attention to it instead of continuing to raise grain when there is now no market for what they have. A variety of crops is acknowledged to be more profitable than a crop of only one thing, and the fruit crop has always been the one to be neglected. We believe the money paid Sacramento valley fruit peddlers in one year would purchase fruit trees for every farmer in the county.

Napa.

UPPER NAPA VALLEY ORANGES. — Calistoga *Calistogian:* J. W. Roberts' farm and orchard is located near Calistoga, in the "thermal belt," where frost that will injure orange trees never occurs. He sold a large number of oranges from his orchard the past spring, and realized a fine profit, considering the age and size of his trees. The fruit was far superior to that of similar varieties grown in the southern part of the State, even surpassing many of the Navels shipped from there here. Mr. Roberts has no Mediterranean Sweets or Navels, but he proposes now to pay attention to these varieties and introduce them in his orchard. The trouble heretofore with oranges grown on his farm, and also on Dr. Cole's place adjoining, has been that the fruit was picked before being fully ripe. This was avoided last spring, and the result has been very satisfactory. Growing oranges for profit in this vicinity is something new, and we have believed it almost impossible, but we are now fully convinced that in certain localities on table lands in hills of the surrounding valley it can easily be done.

Orange.

WESTMINSTER CREAMERY.—Cor. Los Angeles *Express:* Probably no one product, unless it be Westminster apples, equals in quality the creamery butter produced by the Farmers' Creamery of this place. This creamery handles 5200 pounds of milk per day, and has a capacity of 10,000 pounds. They make 250 pounds of butter per day, and run six days per week, resting on Sunday; 43 farmers deliver milk, averaging ten cows each. The Babcock test is used and tells immediately the quality of the milk. The patrons get the benefit of this to the extent of enabling them to sell off cows whose milk does not come up to a paying standard; also improves the stock, and in this way benefits the farmer at large. Twenty-four hours after the milk is received, the butter is on the way to market. Los Angeles gets the product and could take much more if it could be had.

San Benito.

THE SQUIRREL BOUNTY.—Hollister *Advance:* Squirrel claims to the amount of $5200 were allowed and ordered paid by the Board of Supervisors. This represents the slaughter of 105,200 squirrels and gophers. Prior to this session the Board has allowed claims for about 121,000 tails. While it may seem to be a heavy drain upon the county treasury, it is considered a wise policy to keep up the bounty for an indefinite period. In April and May the squirrels produce their young, and the vast number slaughtered represent a crop that would have preyed upon the fields this summer. The squirrel bounty falls equally upon all taxpayers and compels the large land-owners, who would otherwise shirk the task, to bear their proper share of the expense. Each squirrel will destroy upon an average a dollar's worth of grain or pasture per annum. Here then we have prevented the destruction of property to the value of nearly a quarter million dollars by the expenditure of $12,000.

San Bernardino.

SUGAR BEET NOTES AROUND CHINO.—Richard Gird in Anaheim *Gazette:* At present I have 450 men on my payroll, and the other farmers are probably working something like 200 more. Our beet crop bids fair to be a great one, even with the short rainfall this season. I hope your enterprise is prospering, and anything I can do for you to assist you in understanding the sugar beet industry, shall be most happy to. There is no such thing as competition or jealousy in this business. The more beet sugar factories started the better. I hope to be connected with you by a railroad, when the two communities will be able to help one another to a vast extent. There is no doubt that the sugar beet business is going to be a great success, and in population and soil you have the best foundation of any community in Southern California. I think a general effort should be made to secure from the Legislature a small bounty for the farmers, such as they are giving in some other Western States, to run for a number of years after the enterprise has been started in a community.

San Diego.

FARMERS' INVENTIVE GENIUS. — Winchester *Recorder:* It is remarkable the number of contrivances that have been originated for harvesting the present crop. Those fortunate enough to have growing grain reasonably thick and high can, of course, get along in the usual way. But many are not so fortunate, and are resorting to all sorts of expedients for harvesting their short grain and hay. After cutting hay with the mower the problem has been how to rake it. The amount left on the ground by the rakes is very considerable. The difficulty has been partially remedied by covering the rake with canvas. But that is only a partial success. The failure of rakes this season to do good work has made the self-raking reaper very popular. In fact, judging from the number in use, it seems to be the most popular of all machines. But even this machine this year requires considerable alteration to make it do excellent work. To meet emergencies, mowers have undergone wonderful changes. Farmers have resorted to various schemes, such as adding platforms, putting plates of sheet iron behind the knife, adding small wheels, having an extra man follow with a rake, etc. Parties owning harvesters and binders have taken off the binding attachment and put on bunching or drop attachments. Nor has the header escaped some new mechanical contrivance. Two of these are at work with drop attachments. Strips of leather or canvas are attached to the fans of the reel in order to sweep the short grain to the draper, and thus prevent it from falling to the ground. The feasibility of sliding the front part of the platform on the ground by the aid of steel runners has also been demonstrated. Although this year will be discouraging to many farmers, yet they will be amply repaid for their skill and ingenuity. There is much fine grain in the valley, and likewise much poor grain, but the farmers of Pleasant valley are equal to the emergency. Hay will be very high and straw will be worth money.

Sacramento.

HOP NOTES.—Sacramento *News:* The vines are fully two weeks late. Growers can only account for this by the remarkably cool spring and summer. There are many yards now where the hills are but just eyeing out, the shoots not having appeared above ground. Some look upon this with some foreboding, while others declare that as long as the shoots come vigorous and strong, even though they are late, the crop will be sure. The theory will work all right, provided the moisture holds out, but the chances are that the hop which is now at the top of the pole, or at least well up, will mature a fine crop, while those coming now will bear short on account of drouth. Flood V. Flint returned yesterday from a trip to the Flint & Raymond ranch, on the Cosumnes river. He reports a discouraging prospect, prima facie, but by investigation discovered the supposed missing hills alive and in apparently vigorous condition. By uncovering the hills, large healthy shoots were found almost as large as asparagus. Mr. Flint believes that on the low bottom lands the backward hops will yet come out and make a good crop. It is now quite certain that there will not be as many hops raised as last year without the deficit is made up by the increase in acreage.

San Joaquin.

AN ORCHARD ON SEDIMENT.— Clements Cor. Sacramento *Record-Union:* Three miles above Clements, on the Mokelume river, Senator Langford has located an orchard upon deep sediment land underlaid by gravel, with water ten feet from the surface. He has 70 acres of peach trees, about six years old, pruned on the vase system and carefully cultivated, that would be hard to beat anywhere in the world. The leaves are rank and green, the trees are symmetrical, and from the drive which leads around the adjoining bluff, it seems as though one could walk upon the tops of the trees from one side of the orchard to the other. One hundred and twenty acres of young prune trees adjoining this orchard were destroyed by grasshoppers last year, but he has an island near by where there are 40 acres of large prune trees looking well. The chief damage done to the older trees was the destruction of the fruit crop for 1891 and most of the fruit buds for 1892. Some damage was done by frost, which was partially averted by burning straw piles during frosty evenings. Fruit so injured turned black at the pit and is now dropping. The crop will be small in number of peaches, but may be average in weight, and promises to be extra in quality. Considering the devastation by the yellows in the East, the prospective demand for peaches, and the quality of the soil, it may be questioned whether an owner has a moral and financial right to plant anything but peaches on such land as this. The operations of the Patent Office are quite extensive already, but it might be some advantage if land so peculiarly adapted to peaches as these sedimentary bottom lands of the Mokelume could be so patented as to be devoted to that product only.

Santa Cruz.

GOOD FOR APPLE ORCHARDS. — Watsonville *Pajaronian:* The horned caterpillar or tussock moth, which did such damage to some apple orchards during the past two years, does not appear to be here this year. The little parasite which made its appearance last year, very effectually cleaned out the horned crawler, and the orchards that were most affected with the pest, and which it was claimed would have to be cut down, are looking well this year and will bear good crops of fruit. The little beetle was all that saved the apple orchards of this valley from destruction by the tussock moth. Many of these beetles have been found at their old feeding grounds, and it has been suggested by an orchardist that they would be a good thing to induce to locate here, and to that end he recommends that strips of hides—on which they would feed—be hung up in orchards. The little fellow should be induced to remain here.

Stanislaus.

CHEESE FACTORY AT NEWMAN.—Selma *Enterprise:* The cheese factory belonging to Sherman & Dixon is in a flourishing condition, and is now turning out 100 pounds of cheeses per day. That this is destined to be one of the leading industries of this great West Side, there is no doubt, says an exchange. They are now milking 52 cows. With average alfalfa land, these 52 cows can be kept on 40 acres. From the milk of these cows, four 25-pound cheeses are manufactured daily, which find a ready market in San Francisco, at from 10 to 16 cents per pound. It will probably average 12 cents the year round. The work is accomplished by two men. T. E. Leonard, an old cheese maker of 15 years' experience, has charge of the factory, and says that with proper handling of the milk there is no better feed for cheese making than alfalfa. The factory, which is 16x32 feet, is a stone structure with 16-inch walls, with a double ceiling overhead, which in summer is as cool as an icehouse. Mr. Sherman says that as fast as he can get his ranch of 240 acres into alfalfa, he will increase the number of cows.

Sonoma.

POULTRY FARM.—Cloverdale *Reveille:* Mrs. Erastus Shelford's flock of 200 healthy, laying hens is a sight worth seeing, and that was the exhibition afforded us at this place. Aside from the old fowls, there was any amount of youngsters nearly ready for the market that will add materially to her bank account when sold. We were told by Mrs. S. that she gathered, on an average, six dozen eggs a day, which is not bad when one considers the number that drops out during the season to raise families. Fowls are certainly a source of much profit when properly managed, and we are satisfied that Mrs. Shelford knows all the ins and outs of taking care and rearing poultry.

PEACH CROP.—Healdsburg *Enterprise:* The peach crop in this neighborhood this year is said to be larger than ever before. The trees have been stripped to a great extent, and some orchardists are thinning the peaches a second time.

LARGE RASPBERRY CROP.—Petaluma *Imprint:* Dorr Hakes of Valley Ford was in town Monday. He has 17 acres in raspberries and he says this year he will have a tremendous crop. He says he will commence picking in about ten days, and then he wants 25 to 30 girls to pick the crop. He contracted with the Sonoma Preserve Company for 100 chests of berries. Mr. Hakes thinks the output of his berries this year will be 500 chests.

Sutter.

GRAIN SHELLED OUT.—Yuba City *Farmer:* Around the Buttes, where the grain crops are somewhat earlier than on the plains, loss is reported from the north wind, which blew quite hard during the latter part of last week. Some varieties, such as Pride of Butte, Proper, Early Harvest, Genesee, and others that ripen early and have an open mesh, were whipped out to some extent by the wind. Fields of Club wheat, or that which had not turned, were not injured at all. Barley was not damaged.

Tulare.

HARVEST AROUND HANFORD.—*Journal:* The grain harvest will soon be moving into the Hanford warehouses. A party who is well posted estimates that at least 50 per cent more grain will be hauled in here this year than last. The market is opening up fair, as the wheat market goes, $1.17½ per cental for No. 1 Sonora being quoted yesterday. This is less than the opening price last year, but more than for several years before that. Barley is also lower.

RAISIN GRAPE NOTES.—Hanford *Journal:* A gentleman of this vicinity, who is well posted on the raisin industry, informs that of all the large vineyards near Hanford which he visited during the past week he found none in which the first crop of raisins would not be heavy. He visited the following vineyards: Peerless, McJunkin's, Gordon, Banner, Grangeville, J. S. Robinson's, Scazighini's and several others. He found the grapes well set, the bunches of good size and well filled, and every indication of a first-class crop—better than that of last year and every indication that it would mature early. He found many grapes the size of buckshot and brought home some to make pies of.

NEVADA.

WHEAT NOTES —Hawthorne (Esmeralda Co.) *Bulletin:* The acreage of wheat in Mason valley will be much larger than ever before. This is due to the new flouring mill that has been in successful operation for the past six months. Wheat never looked better. Commissioner Wilson arrived from Pine Grove and says there is a larger acreage in wheat this year in Mason valley than ever before, and that the crop is growing finely. He says, however, that the ground rats (or ground hogs) are a terrible pest in that section. The ground seems to be alive with them and they are literally mowing down the growing wheat. Unless some means is devised to exterminate them, these little rodents will utterly destroy the crop.

OREGON.

PROTECT YOUR LAMBS.—Heppner *Gazette:* D. A. Herren constructed large sheds last year for the shelter of his flocks and hay and reports that they stood him in good stead this season during the lambing season, in protection to his ewes and lambs during the stormy weather. Mr. Herren saved 95 per cent of his lambs this year with this protection, while other breeders suffered heavily in loss of lambs from exposure to stormy weather. The matter of protection to young lambs is an economic feature of the sheep business that the really successful raisers would do well to consider.

The Latest Compilation of Election Laws.

Messrs. Armstrong & De Guerre, the well-known stationers and blank-book manufacturers, have just published a popular work upon the law governing elections in this State, including the amendments to the statutes of 1891, which is the best that we have seen. Their brochure is as full of meat as an egg; yet the arrangement of the code sections and the dissertation of the compilers upon the method of voting under the so-called Australian Reform Ballot System is so concise and clear that the most illiterate of voters will readily comprehend all the requirements of the new law, the entire text of which is set forth, together with sample ballot and detailed explanations of much value. We commend this pamphlet to County and State Committees of all parties for general circulation, price being 15 cents each by the hundred. The subjects treated comprise all that is necessary to know in the management of election machinery under the Australian Ballot Law, from which good results are to be expected. If this system is rightfully carried out, fraudulent voting will be an impossibility.

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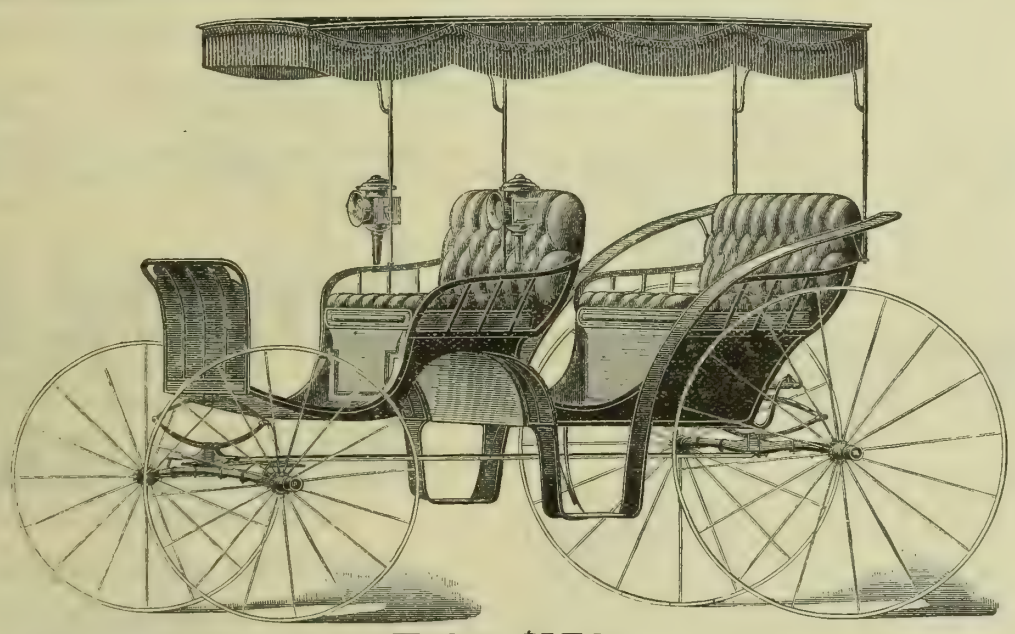
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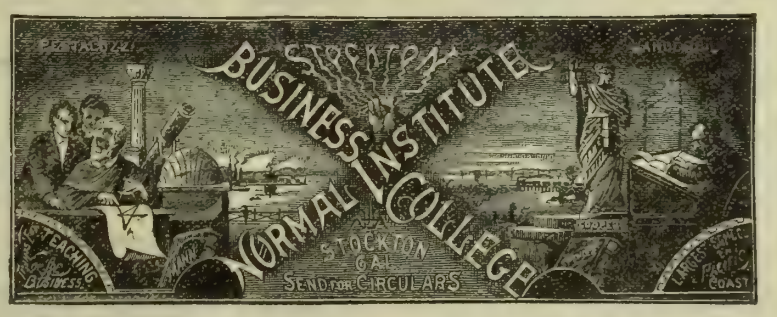
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PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

GRANGE INFORMATION.

The Secretary of the State Grange is always ready and willing to furnish all information desired (suitable for publication) which comes to his office from subordinate Granges, State officers and other Grange sources, to any and all reputable newspapers and writers, so far as it can be given without consuming an unreasonable amount of time and research.

We have always maintained that, for the good of the Order, proper information should be as free to obtain by the respectable press as possible. And right here, we are pleased to say further that previous Secretaries of the State Grange (as far as we are informed) have been more reasonable than those of other societies.

STATE GRANGE MEETING.—Interest in the coming session of the State Grange at San Jose is manifested in different quarters. We have every reason to believe that it will be a large and prosperous one. We hope, also, that it will be significantly a counsel of wise and progressive action for the cause. Let us have not only well-prepared speeches and discussions on important subjects, but let those who are able and willing to lead in reform matters have clear and practical plans to start the work which shall lead to the success of all good resolutions which shall be adopted. Who has some thoughtful views and substantial plans for future action to mention in the RURAL for discussion in advance in the subordinate Granges?

San Jose, a large and beautiful city, fortunately possesses one of the ablest and best Granges in the State. There is no doubt that its local committees will do all (and even more than should be) required to make the gathering a notable session of sessions. We hope to receive for our columns such suggestions from San Jose brothers and sisters as will enable Patrons from all over the State to cooperatively labor, in a measure at least, for the pleasures and success of the State Grange session of 1892.

THE PATRONS RELIEF ASSOCIATION should receive special attention between now and the meeting of the State Grange. There are dozens of Granges that should at least have ten members, entitling them to a local director in the P. R. A. Let those who have promised act without delay in this worthy and reliable enterprise.

A. P. MARTIN, P. M. of Two Rock Grange, visited S. F., Monday, on Grange and other business. He informs us that there are very favorable prospects for nearly all kinds of crops this year in his neighborhood.

OVER $600 was saved by members of Two Rock Grange during nine months of last year by Grange Trade Card and other cooperative buying. Two Rock Grange uses a blackboard as a bulletin for registering produce and other articles for sale or exchange between its members. It has proved of much convenience and profit to Patrons from time to time. A much larger saving is being made by the cooperative arrangements of Two Rock Grange this year.

BROTHER MARTIN has done a good deal of active work in reorganizing Petaluma Grange. We trust he will continue to aid its members until the Grange is well built up, with at least double its present membership of 34.

SONOMA COUNTY CHILDREN'S DAY.— Friday, July 8th, is the day set for the principal exercises of the picnic at Dillon's Beach, near Tomales, about 15 miles from Petaluma. It is expected that a large number will attend this picnic, many camping Friday and Saturday nights. The six Granges of Sonoma county invite farmers and friends, generally, to join them in making this Children's Day camp and picnic a glad success.

WATSONVILLE GRANGE will hold its annual picnic and celebrate Children's Day on the 18th of June. We presume the local papers will contain fuller mention of the occasion. Children's days come so seldom, all should do their best to enjoy it with the children and make it a season of great encouragement as well as happiness for the young folks.

AT WORK AGAIN.—A private letter informs us that after illness and disability from "la grippe" last November, Worthy Overseer Roache is now able to work a little in his field. We hope to see evidence of his soon being restored to labor in full strength in both field and Grange.

JOSIE FRENCH is the present Secretary of Watsonville Grange, our correspondent, Bro. Lilliencrantz, an able and conscientious officer, having felt obliged to resign some time since.

TWENTY-THREE is the No. of the reorganized Petaluma Grange. The seal of this Grange was recently found in posession of one of its old members. Who else can give information of the whereabouts of other property of the old organization?

DR. M. F. MUNSON, lately resident physician at Hotel Raymond, Pasadena, will spend the summer months in connection with Monte Vista, the home of Mrs. C. E. Kinney (a well-known writer to Grange readers) at Dutch Flat Station.

PLUMAS GRANGE has recently installed officers, including A. B. Huntley, Master, Addie Sigler, Sec'y. R. A. Heriot, Sec'y *pro tem*, in sending quarterly report, mentions that prospects look a little brighter in that highest altitude of our California Grange field.

ONE OF OUR ABLEST, as well as most faithful, California Patrons, a zealous supporter and stockholder of the *California Patron*, who for several years past has received the RURAL PRESS (a $3 paper in lieu of the *Patron*, a $2 paper), on account of his stock in the *Patron*, writes—and stamps his good faith and appreciation with the coin—as follows: "My five years' patent on the RURAL PRESS expires to-day, and aside from really admiring and desiring it, it would be consummate meanness not to renew after enjoying it so long for al most nothing. Enclosed find $3 for which please credit me for the proper term. I remain fraternally yours, etc."

QUARTERLY REPORTS.—Reports have been received during the year 1892, thus far, from 47 Granges. Taken as a whole there has been a loss of seven in membership in the old Granges noted above. An increase has been made in 23 Granges out of the 47 named, however. Following is a list of those that have increased five or more members: California 8, Dixon 10, Eureka 7, Lodi 12, Merced 7, Pescadero 12, Sebastopol 6, Selma 11, Tulare 7, Yuba City 20. Counting in the charter membership of two new Granges and three reorganized, shows an increase of 129, aside from those afterward admitted in new and reorganized Granges. This number may be either augmented or decreased by the dozen or so of subordinate Grange reports now overdue.

PAYING UP WELL.—Every Grange in the State seemed to willingly pay its 20 cents per capita dues to the State Grange for the quarter ending Dec. 31, 1891. An unusual number has reported promptly and paid the new rate of 15 cents for the quarter ending March 31st.

SONOMA AND THE WORLD'S FAIR.—A special meeting of Sonoma County Pomona Grange has been called to meet in Santa Rosa at 10 o'clock A. M., June 25th, for the purpose of considering the feasibility of making a county exhibit at the World's Fair.

ODE CARDS.—The State Grange will now furnish, through its Secretary, cards containing the opening, initiatory and closing odes (without music) at two cents per copy, postpaid.

PATRONS AT THE WORLD'S FAIR.—We hope Brother B. F. Walton (whose resolution was adopted at our last State Grange meeting, requesting the National Grange to arrange for cooperation in securing favorable accommodations for Patrons throughout the Union at the coming fair at Chicago) will have something of special interest to report at San Jose in October on this subject.

OREGON STATE GRANGE.

The following officers were elected at the recent meeting: R. P. Boise, M.; John Meddler, O.; H. E. Hayes, L.; J. D. Chitwood, S.; G. L. Stevenson, A. S.; David Eby, C.; J. B. Stump, T.; W. M. Hilleary, S.; J. M. Kees, G. K.; Lillie J. Searcy, Pomona; Annie E. Lacey, Flora; Carrie T. French, L. A. S.; J. C. White, Member Ex. Com.

Master Boise once filled for eight consecutive years or more the Master's chair, and I consider him one of the ablest, brightest and most judicious of Patrons in the Union, and one who will again highly honor his State in the National Grange.

H. E. Hayes, now Lecturer, who has just served four years faithfully and acceptably as Master, was formerly a most successful lecturer.

The Dalles was unanimously selected as the next place of meeting. Resolutions were adopted memorializing Congress for the improvement of Willamette river; favoring woman suffrage; free coinage of silver; amending the Constitution of Oregon, so that the legislature will have power to establish senatorial and representative districts in each county so that the people in each district may elect these members of legislature independently of each other.

Subscriptions are to be solicited for building a permanent home for the State Grange in Salem, to cost not less than $3000.

Idaho was represented for the first time in several years, Lilian Robinson of Charity Grange No. 15 of Grangeville being the delegate. The sister rendered a well written report from her State and Grange.

AN OLD ORGANIZER.—We met recently at Los Angeles, N. W. Garrettson, the National D puty sent to this coast in 1873, who organized many subordinate Granges and the State Granges of California and Oregon. While not at present a member of the Order, he has still a warm heart for his old fraternal companions, and is thoroughly as ever in sympathy with the aims and purposes of the Order. We hope to yet meet the old organizer of our cause at an annual gathering of the State Grange.

AGRICULTURAL REPORTS.—We have on hand duplicate copies of U. S. agricultural reports for years 1881-2 returned from Montezuma Grange, which will be sent to any Grange which will call here for them (or pay transportation) and distribute them to its members. The reports are too valuable to go for waste.

THE LARGEST STATE GRANGE.

The report of the 19th annual session of the New York State Grange is just at hand. The whole membership which paid dues in 1891 was 32,244. Total membership in existing Granges, 33,485. Increase of membership from initiations and the organization and reorganization of Granges was 4144. Total amount of fees and dues received was $12,143.48, which includes receipts from trade houses, under the Trade Card and other systems of cooperation, $887.43. The total amount of Order trade houses as reported for 1890 was $182,961. For the year 1891, $218,961, with a number of Granges yet to hear from (and the Trade Card business) not included, which was many thousands of dollars each year.

H. H. Goff, Secretary, Spencerport, Monroe Co., New York, has made an admirable report from this thoroughly organized and evidently prosperous and progressive Grange State.

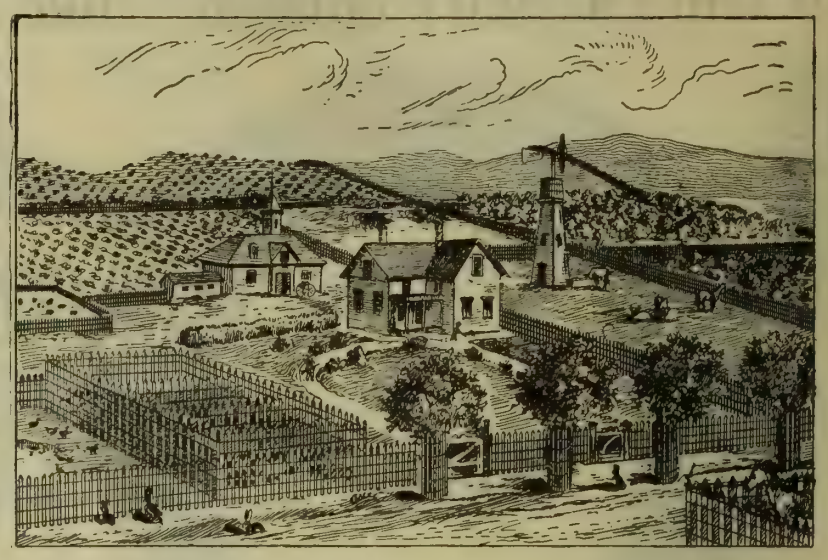
STILL FOR THE CAUSE.—J. W. A. Wright, first Master of the State Grange of California and author of that rarely inspiring document the National Grange Declaration of Purposes, while a prominent teacher in a leading and worthy educational institution of Alabama for the past few years, has also been laboriously studying for the Christian ministry.

He was for years, under the signature of "Ralph Rambler," one of the most interesting correspondents of the RURAL, and his note dated Livingston, Ala., April 23d, will specially interest many old time Patrons, viz.:

"Thanks for State Grange publication received. I am truly glad to see the evidence it bears of fresh life and vim in the greatest of farmers' organizations. Give my very fraternal regards to all our California Patrons, especially those who knew me in the early and lively struggles of our Grange work in California. Though now connected solely with educational and ministerial work, I shall ever feel the most sympathetic interest in the cause of our American farmers and the reforms they seek." Long may such able and noble-souled Patrons live and prosper in their good works.

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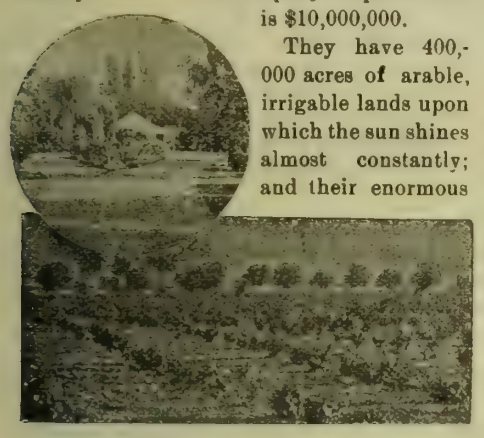


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They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

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KERN is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.



The 400,000-acre territory, of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

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The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

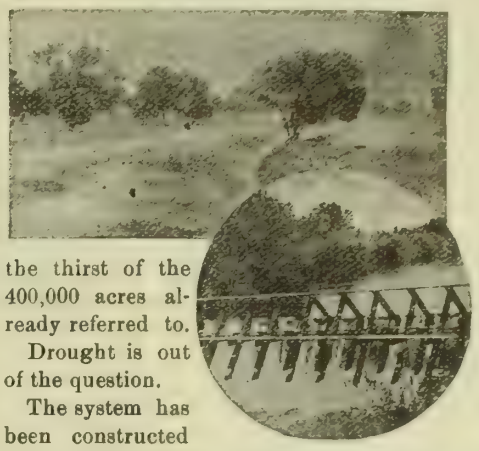
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Grows more alfalfa than any other county in California.

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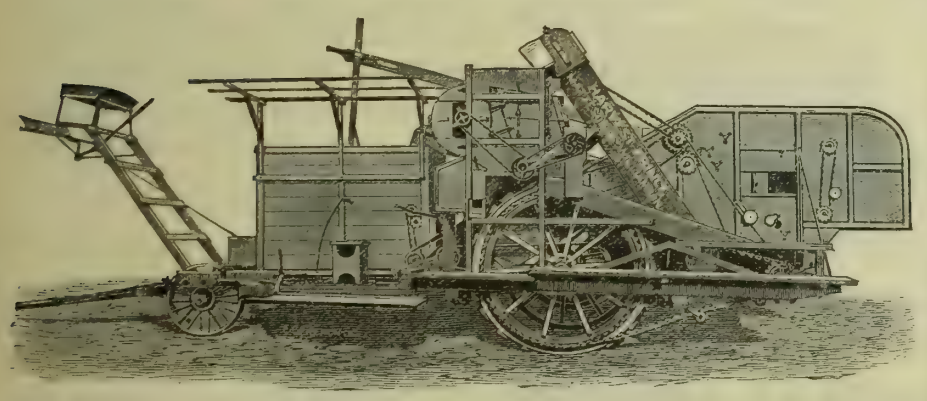
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It has had a thorough test, having cut 500 acres in two weeks. Size, 18 feet; drawn by 18 animals. It starts easy and possesses light-running qualities. Having two 6-foot drive wheels, 20-inch by ¼-inch tires, with a 5-foot header wheel, renders it very easy of operation.

OUR CLEANER IS ONE OF THE BEST MADE.

This machine will show that we still maintain our reputation of doing what we do well.

TESTIMONIALS.

STOCKTON, CAL., Nov. 3, 1892.

MESSRS. MATTESON & WILLIAMSON—Dear Sirs: I have run your "New Prince Belt Link Machine," having finished up the season of '91 with it, and will recommend it as a number one machine in every respect. As for saving and cleaning grain, it cannot be excelled. I also particularly recommend it for its lightness of draft, requiring but 20 animals to draw it, that being the number we used in running it for two weeks, making an average of 35 acres per day.

FRANK CORCORAN.

TWENTY-SIX MILE HOUSE, STANISLAUS COUNTY, Feb. 20, 1892.

MESSRS. MATTESON & WILLIAMSON—Gentlemen: The New Improved "Prince" Combined Harvester I purchased from you last year has proved one of the best harvesters I have ever used. I cut 1500 acres in 35 days with 22 head of horses, without change of team and without one breakage or delay. [Signed] JOSEPH MOLL.

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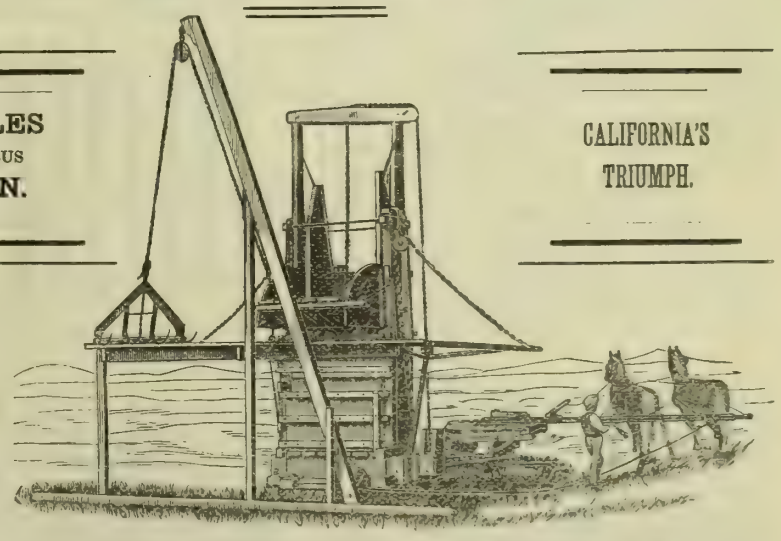
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PIE CRUST.—One heaping teaspoonful of baking powder, two quarts of flour, one teacupful of lard, two teacupfuls of water, a pinch of salt. Mix well, and sift a little flour on the molding board before rolling it out. This will make enough crust for four or five pies.

BAKED TOMATOES. — Having selected those of equal size, fresh and ripe, wash and cut out the hard centres. Place them on an earthen pie dish, and put a little sugar in the core of each as you would for baked apples. Bake in a quick oven for about one hour, or until tender. Grated cracker or bread crumbs could be sprinkled over them, if liked.

RHUBARB PIES.—Cut the young stalks in pieces about half an inch in length. Make a paste, cover the bottom of your pie plate, put in the fruit, with a great deal of sugar, about four tablespoonfuls to each pie; put on a cover and bake them till the fruit is soft.

FRENCH CREAM CANDY.—Half a cup of cream and two cups of powdered sugar, boiled five minutes in a granite kettle, counting from the time it boils all over. Place the kettle in cold water, and beat it until stiff enough to hold candied fruit. Add quarter of a pound of candied fruit, cut fine, and pour the cream into a bread pan, buttered or lined with paraffine paper. The second layer is the same, using in place of the fruit one teaspoonful of vanilla and one small square of chocolate melted. The third layer is colored pink with cochineal and flavored with chopped almonds. The fourth layer is like the first.

CHOCOLATE LAYER CAKE.—Three eggs, the whites; two cups of sugar, one cup of sweet milk, two large tablespoonfuls of butter, three cups of flour, two heaping teaspoonfuls of baking powder. Bake half of the batter in two pans, and to the remaining half add one-half cup of grated chocolate. Then bake. When done, pile up the layers alternately, light and dark, spreading chocolate icing between.

POUND CAKE.—One pound of butter, one pound of flour, one pound of sugar, ten eggs, one nutmeg grated, one glass of rose water and brandy mixed. Beat the butter and sugar to a cream, whisk the eggs till they are very light, then add them to the butter and sugar alternately with the flour. Stir in the spice and liquor, and beat the whole very hard for 10 or 15 minutes. Line your pan with two or three thicknesses of paper well buttered, pour in the mixture, and bake it in a moderate oven for about three hours. Two pounds of dried currants may be added to this cake, if you choose.

GRAHAM ROLLS.—Take one pint of pure cold water and mix enough flour with it to make a stiff dough, put this on a kneading board and knead for about half an hour, adding white flour to keep from sticking to the board, and roll the dough with the hands into a slender roll about three-quarters of an inch in diameter. Then cut into pieces about three inches long and bake in a quick oven from 30 to 40 minutes. Place the pan in the upper part of the oven first, and remove to the lower part of the oven after the crust is formed. The quantity of material named will make about 12 rolls.

LEMON CUSTARD PIE.—Two eggs, one cup of granulated sugar, one cup of water, one tablespoonful of butter, one tablespoonful of cornstarch dissolved in water, one lemon. Grate the rind; then peel off the thick, white skin and grate the rest of the lemon, being careful to remove the seeds. Save out one of the whites and beat to a stiff froth with a tablespoonful of sugar; put this on the top after it is baked and return to the oven until it is a delicate brown.

CHICKEN-PIE CRUST.— Take a quart measure full of flour and mix with it four teaspoonfuls of baking powder, a pinch of salt and one cupful of lard. Moisten with sweet milk sufficient to roll. Roll out once, spread with butter, lap it over and roll again. It is then ready to put on the pie.

HAM TOAST.—Slices of toasted bread with the crusts cut off, two eggs, two tablespoonfuls of butter, some cold ham or tongue grated. Put the yolks and whites, well beaten, into a stewpan, with the butter; stir them two minutes over the fire, spread them over the toast and lay over them a sufficient quantity of cold ham or tongue.

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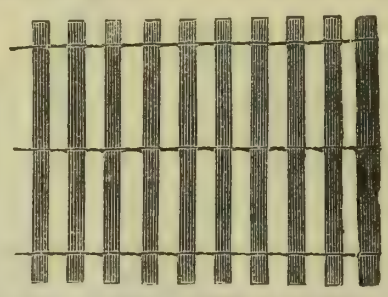
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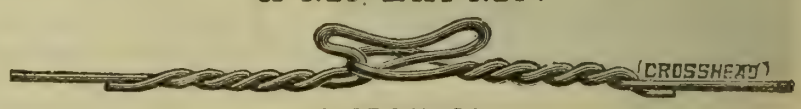
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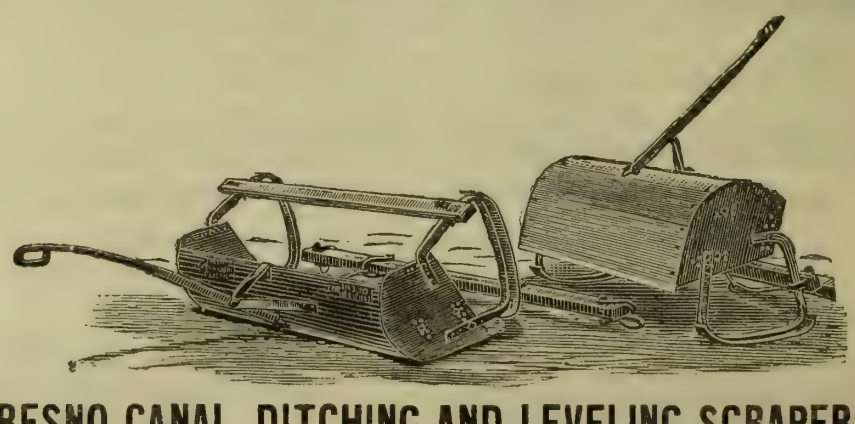
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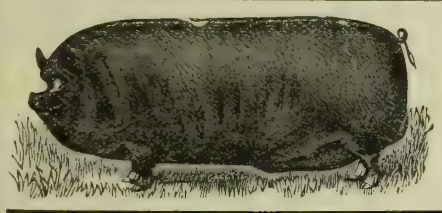
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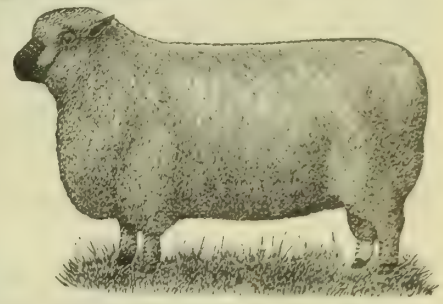
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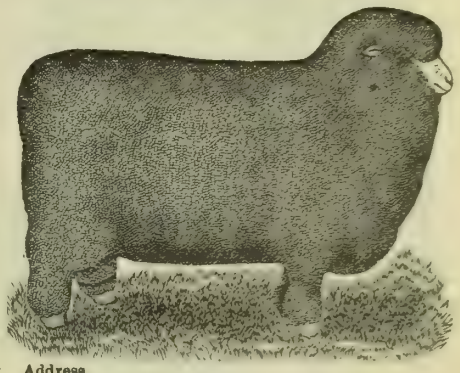
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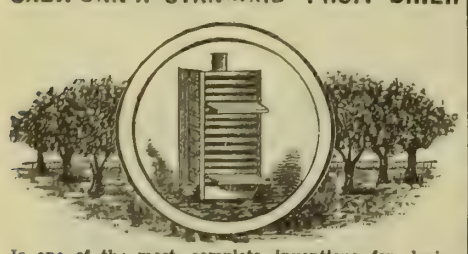
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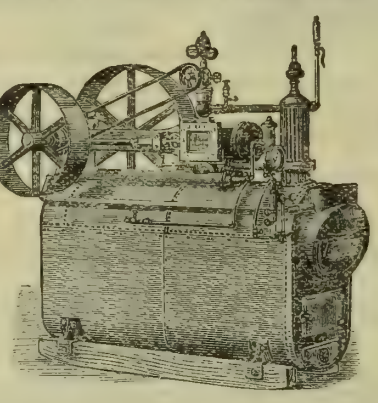
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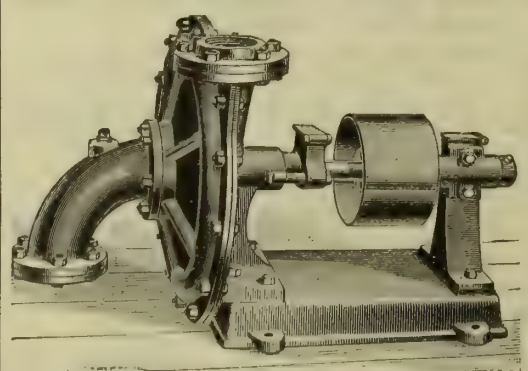
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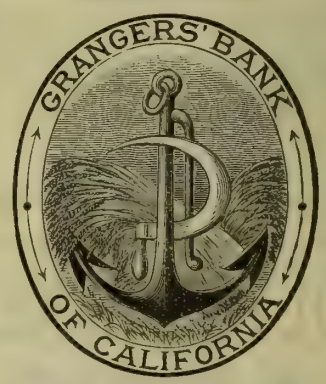
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, June 15, 1892.

General trade the past week was only fairly active. In farm products the bear pressure heretofore reported is more pronounced in wheat and barley. It looks very much as if a strong combination has been formed to reduce prices for the above two cereals to very low ranges for the purpose of buying the new crop at figures which will net a very handsome profit. In fruits there is an active movement with contract sales made on a slightly higher basis than ruled at this time in 1891. In the local money market the reserve continues very large but there is a spirit of caution with bankers and capitalists which causes them to be offish in making loans, except on call, unless gilt edged security is given, and even then the amount loaned is smaller than obtains when general trade is active and the rate of interest higher.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June.	July.	Aug.	Sept.	Oct.
Thursday	6s1u½d	6s1u½d	6s11½d	7s00½d	7s00½d
Friday	6s10½d	6s11½d	7s0c½d	7s0c½d	7s01½d
Saturday	6s09 d	6s09½d	6s11½d	6s11 d	7s03 d
Monday	6s08¾d	6s09¼d	6s10 d	6s10½	.....
Tuesday	6s09 d	6s09¼d	6s09¾d	6s10 d	6s10½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	35s3d	35s6d	35s6d	Steady.	Brilliant.
Friday	35s3d	35s6d	35s6d	Slow.	Fine.
Saturday	35s6d	35s6d	35s6d	Depressed.	Local Storms.
Monday	35s3d	35s3d	35s3d	Neglected.	Colder.
Tuesday	35s3d	35s3d	35s3d	Quiet.	Cold.

To-day's cablegram is as follows:

LIVERPOOL, June 15.—Wheat, slow. California spot lots, 7s 2½d; off coast, 35s 3d; just shipped, 35s 3d; nearly due, 35s 3d; cargoes off coast, easier; on passage, neglected and no business doing; Mark Lane wheat, easier; French country markets, steady.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug.	Sept.
Thursday	152	154	155	155⅜
Friday	150½	155	154½	154⅜
Saturday	146½	148	148½	148½
Monday	145	146⅝	146¼	147
Tuesday	142¾	144⅜	145	145½

The following are to-days' telegram:

NEW YORK, June 15.—Wheat, 86c for July, 87c for August, 87⅛c for September, 87⅝c for October, and 90⅛c for December.

CHICAGO, June 15.—Wheat, 87¼c for July and 87⅞c for September.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	140½	....	....	....	...
" lowest	140½	....	....	....	....
Friday, highest	141½	....	....	....	141½
" lowest	140½	....	....	....	142
Saturday, highest	139½	....	....	....	141½
" lowest	139½	....	....	....	141
Monday, highest	139½	....	....	142½	....
" lowest	139½	....	....	142½	....
Tuesday, highest	139½	....	....	141½	141½
" lowest	138½	....	....	141½	141½

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	94½	....	....	....	....
" lowest	94	....	....	....	....
Friday, higuest	93½	....	....	....	....
" lowest	93½	....	....	....	....
Saturday, highest	93½	....	....	....	....
" lowest	93½	....	....	....	....
Monday, highest	93½	....	....	....	....
" lowest	93½	....	....	....	....
Tuesday, highest	94½	....	....	....	....
" lowest	9 ½	....	....	....	....

The following are to-day's recorded sales on Call:

Morning Informal Session—Wheat—Seller 1892, 500 tons, $1.39½ ₩ ctl. Regular Session—Seller 1892, 100 tons, $1.39½; 1000, $1.39; 800, $1.38½. Buyer December, 100 tons, $1.44½ ₩ ctl. Afternoon Session—Seller 1892, 100 tons, $1.38½ ₩ ctl.

Regular Session—Barley—Seller 1892, new, 200 tons, 93c; 200, 93½c; 100, 93½c. December, 100 tons, 96½c; 100, 97c ₩ ctl. Afternoon Session—Seller 1892, new, 100 tons, 93½c; 200, 93c ₩ ctl.

Markets by Telegraph.

Foreign Grain Review.

LONDON, June 13.—Owing to brilliant weather last week, English wheat sold 6d lower than Whitsuntide rates. Indian and South American also declined. North American was irregular. California was 5s 1d dearer than English. Since last harvest 1,659,230 quarters of wheat flour has been imported, which was half American. Oats and barley are weak and maize dearer. In to-day's market English wheat, foreign white, 6d cheaper; foreign red, is cheaper on fortnight. Flour, especially American, sold readily. Barley, firmer.

Grain in Russia.

WASHINGTON, June 11.—The State Department is advised that the Russian Government has issued a ukase authorizing the free exportation of maize, both by sea and by the western continental frontier. This is understood to indicate that the famine is drawing to a close. It is believed a ukase will be issued on July 1st permitting the exportation of all grains except rye. A collapse in the price of grain has taken place, the decline being from 80 to 100 per cent, and the existence of vast quantities hoarded by speculators has been developed.

Wheat Supply.

NEW YORK, June 13.—Special cable advices indicate that the stocks of available wheat in Europe, with the total quantity afloat, aggregated on June 1st 78,469,000 bushels, or quite as much as on January 1st last, while in the United States and Canada the total available stocks have decreased 36,500,000 bushels since January 1st. European afloat and the American available wheat stock on June 1st amounted to 120,170,000 bushels, 30,000,000 bushels more than one year ago, 36,000,000 more than two and 38,000,000 bushels more than three years ago.

Eastern Canned Fruit Markets.

NEW YORK, June 12.—An indifferent attitude continues toward the new pack. The large surplus of good quality of the last crop promotes this feeling among many buyers who have secured supplies from first hands on spot and ship at the favorable rates lately quoted. This condition is likely to prevail until the Eastern possibilities of production are more definite in competing fruit. Besides the unusual headings of England are against any chance of a sudden call for replenishment. The past week discloses strong competition for yellow peaches at some of the best Delaware orchards. Shippers of fresh aim to anticipate canners.

First Receipts of Arizona Apricots.

NEW YORK, June 12.—A refrigerator car of Royal apricots from Phoenix, A. T., is due to-morrow. It the first car ever sent Eastward from there.

Eastern Hop Markets.

NEW YORK, June 13.—Since the brewers have bent prices their orders are more liberal, but middle grades form the main offering in this way. Twenty-five cents was paid for a lot rating close to prime. State or Coast extreme ranges closed at 22@28c, with best Coast 26½c. Options closed weak, June, 23½c asked; October, 20@23c bid and asked. Crop reports here and abroad favor the low side of the market.

California Fruit East.

NEW YORK, June 12.—During the week several cars of Tartarians brought from $1 65 to $2 a box; Biggereau, $1.35@3.20; Black Eagle, $1.65@2.90, and others, 95c@$1 80. Goodsell's car of cherries was in bad order. Biggereau ranged from 55c to $1.85; Tartarian, 70c to $2.05, largely $1.35 to $1.85. A few Governor Woods sold at $2.50.

CHICAGO, June 9.—Two carloads sold as follows: Tartarian cherries brought 90c@$1.35, Biggereaus 95c@$2, Royal apricots $1.50@2.15, peaches $1.20@2, Gurley apricots $2.10.

NEW YORK, June 11.—Carload cherries as follows: Some, poor condition, from 65c to $1 20; good condition, from $1.50 to $1 85, and fancy, $2@2.50 per box.

CHICAGO, June 11.—Two carloads of cherries as follows: Some, poor condition and small, 65@70c; good condition, 90c to $1.15; fancy, $1.95 per box.

CHICAGO, June 13.—Sold San Jose Black Tartarian cherries, in bad order, from 65c to 95c per box; fair condition, $1@1 15. Cherries are arriving in an over-ripe condition.

NEW YORK, June 13.—Sold Royal apricots at auction at $2@2.40 ₩ crate; Alexander peaches, $1.10 ₩ box

CHICAGO, June 14.—Apricots, moderate sales. Half crates, good, $1.50@1.90; ripe 75c@$1.25. Cherries were steady for fine goods and easy for soft; white, 10-lb boxes, fine large, $1.25@1.50; soft, 75c@$1; black, sound, $1.15@1.50; do. soft, 75c@$1. Peaches sold fairly; half crates, good, $1.25@1.50; small and green, $1. Cherry plums, 10-lb boxes, sold at $1 10.

CHICAGO, June 14.—Sold three carloads. Clyman plums sold at $4; Cherry plums, $2.25@2.30; small boxes, $1.05@1.10; Brill plums, $2.30; Royal apricots, $1 30@1.35; Golden apricots, $1.75; peaches, $1@1.60; Royal Ann cherries, $1.15@1.50; Black Republican cherries, $1.05@1.30.

Eastern Dried Fruit Markets.

NEW YORK, June 13.—Evaporated peaches, prunes and apricots have little wholesale interests. Boxes of the last have sold at 11½@12c. Raisins are running out well at 4@5c for bags, $1 to $1.40 for layers and 95c and $1.20 for loose boxes.

CHICAGO, June 14.—California Dried Fruits—There is nothing like activity, and it is not to be expected. Stocks are well reduced, and the market is cleaning up well of all kinds but raisins. There are fair stocks of these as yet—more than holders would wish they had.

Miscellaneous.

NEW YORK, June 12.—Lima beans are quiet at about the last spot rates. Green stuff now reduces the consumption.

Eastern Wool Markets.

NEW YORK, June 10.—New wools are coming forward more freely, but as they are held above the present market quotations, they are not meeting with a strong demand. Manufacturers, as a rule, have light stocks, but they are adding to them in a very conservative manner. Territory wools are coming along quite freely, and while some are heavy, other lots show improvement over those of last year. New wools from Ohio and Michigan have not come forward to any extent, although some small lots are now on the market. Shearing has not begun in many sections on account of rainy weather. Pulled wools are quiet. Stocks are light, especially in medium grades, and receipts will be very small for the next 60 days. Manufacturers have been buying Australian wools more freely. Many believe that prices at the London sales, which open June 14th, will be higher, and that an advance will be made here. The chances of an advance in London are favorable. About 385,000 bales will be offered, and of these but a small amount will be suitable for this country. It is generally expected that English and continental buyers will be strong competitors. Carpet wools are quiet, but prices are unchanged.

NEW YORK, June 13.—The situation is unchanged at the seaboards since last remarks. Stocks are forming, but there is no spot purchasing excitement. Sales at New York, 526,000 domestic. Foreign sold heavily here, mostly of low-grade carpet. There were many buyers from other cities. Boston sold 4,741,500 domestic. Besides this, 636,000 were foreign sold, of which over half was Australian, at 32@41½c. At Philadelphia the trade was in unwashed. New buyers were not urgent.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 7, '92, were as follows:

Flour, qr. sks	63,057	Bran, sks	3,965
Wheat, ctls	11,672	Buckwheat "	....
Barley, "	11,786	Middlings "	747
Rye, "	1,353	Chicory, bbls	120
Oats, "	1,395	Hops, "	....
Corn, "	5,587	Wool, "	1,061
*Butter, "	1,182	Hay, ton	2,184
do bxs	1,093	Straw, "	34
do bbls	10	Wine, gals	184,880
do kegs	97	Brandy, "	60
do tubs	5	Raisins, bxs	3,230
do ½ bxs	505	Honey, cs	25
†Cheese, ctls	1,018	Peanuts, sks	20
do bxs	99	Walnuts "	31
Eggs, doz	28,180	Almonds "	....
do " Eastern	16,500	Mustard "	....
Beans, sks	13,557	Flax "	1,814
Potatoes, sks	17,402	Popcorn "	....
Onions, "	4,481	Broom corn, bbls	....

*Overi'd, ... ctls. †Overland, 257 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to June 13, '91.	July 1, '91 to June 11, '92.
Flour, ½ sks	399,429	468,109
Wheat, ctls	1,404,854	1,290,922
Barley, "	269,912	56,791
Oats, "	366,108	430,278
Wool, bales	8,310	8,913
Hops, "	505	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,048

Cereals.

The cereal year in India begins April. The recently harvested crop is estimated to have been 285,000,000 or just the same as in 1890, though 20,000,000 bushels less than in 1891. The acreage and yield by districts for 1892, according to the London *Miller*, was as follows:

	Acres.	Yield, qrs.
Punjab	6,500 000	6 500,000
Northwest Provinces	5,300,000	8,000,000
Centre	3,750,000	4,000,000
Bombay	2,600,000	2,600,000
Berar	850 000	1,000,000
Bengal	1 000,000	875,000
Rajputana	1,500,000	1,875,000
Native Central States	2,500,000	2,500,000
Hyderabad	1,000,000	1,000,000
Mysore	15,000	15,200
Cashmere	500,000	685,000
Total	25,515,000	29,050,000

According to the official returns, the wheat crop of South Australia was only 4 bushels and 9 pounds against 5 bushels and 37 pounds the previous year. The acreage is 1,700,000 and the total production 7,000,000 bushels, against 9,400,000 in 1891 and 4,600,000 bushels in 1890. The export surplus is only about 4,000,000 bushels. The exports from Australia during the first 20 weeks for the present season have been 3,688,000 bushels, against 8,528,000 bushels last year.

The official returns show that 9,860,000 qrs of foreign wheat (including flour reduced to wheat) were consumed in France for the 9 months ending April 30th. On that date there was 1,816,000 qrs of foreign wheat in bond on which the duty has not been paid, and it was estimated that the imports for May would be 1,250,000 qrs, which, added to the quantity in bond, would give a total of over 3,000,000 qrs. As the consumption of the first nine months of the cereal year averaged 1,095,000 qrs per month, there was enough in sight to satisfy the demand for the last three months of the year, or to August 1st. In view of this condition of things, it is not expected that the French people will have any anxiety about food supplies for the present.

London cables June 14 report as follows: Imports into the United Kingdom for the week ending June 11th: Flour bbls, 170,000: Wheat, qrs. 364,000. Amount of wheat and flour on passage June 11: To United Kingdom, 2,905,000 qrs.: to continent, 1,115,000 qrs. Farmers' delivery of wheat for week ending June 11, 63,508 qrs; average price, 30s 8d.

The local wheat market has shaded off only slightly for spot parcels, while futures fell off under cross orders, chiefly, considerably, but not near so much as did the New York market. The strength of our market is due to the large tonnage in port, and confirmed advices that the crop in Oregon and Washington will not be more than four-fifths of what it was in last year. The shortage up north will operate against ships and cause charters to rule in favor of wheat. Referring to the poor crop prospect in Eastern Washington, which is similar to Eastern Oregon, the Colfax *Gazette*, June 10, says: "In some parts of the country, farmers are considerably alarmed over the singular condition of grain. The leaves are turning yellow, apparently from droughts, but as the ground is unusually moist, the majority of people seem to think the condition must be caused by something else than the want of rain. For a while the dry leaves were attributed to the work of a bug, but the little creature has kept safely hidden if he is responsible. The most generally accepted theory now is that frost, succeeded by a day or two of very hot weather, is the cause of the whole thing."

The local barley market shaded off slightly the past week notwithstanding the receipts were light. The strong bear pressure heretofore reported was not only relaxed, but appeared to have gained in strength. Advices received from up north, from the East and also from England indicate that there will be a good demand for shipment which will relieve our market of a large part of the surplus.

Notwithstanding heavy receipts, oats hold to strong prices under a continued good demand and small available supplies of old to draw from. The consumption is large.

Large, yellow corn is lower under free offerings and a light demand. Small, yellow corn and white corn are steady.

Rye is dull and heavy at the decline.

Crop prospects in the State have improved with cool weather. It is now claimed that all kinds of grain will average larger and heavier than was heretofore claimed. Harvest work has been kept back. The only fear now entertained is that the cool weather will be succeeded by hot north winds.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in May were as follows:

Sources.	Butter, lbs.	Cheese, lbs.	Eggs, dez.
California	1,631,200	580,500	206 350
Oregon	10 400	3,200	150
Eastern	71,500	132,200	329,670
Totals	1,713,100	715,900	536.170
January	502.200	476,900	420,345
February	622,550	313,500	200,765
March	1,188.700	574,200	358,756
April	1,793.050	802,900	590,068
Five months	5,819,600	2,883,400	2,166,104

During the first five months of 1891 the receipts were 5,329,300 lbs butter, 2,832,000 lbs cheese and 1,856,692 doz eggs.

Butter advanced, the past week, for choice to gilt-edged dairy and creamery, but, for other grades, the market held barely steady, with liberal supplies to draw from. At the advance for gilt edged, packing fell off, and the demand from dealers has also fallen off, the trade running largely to cheaper grades. Receipts are enlarging, with supplies coming in from all quarters.

Cheese has ruled weak, with prices barely sustained. Receipts and supplies are large. At the lower prices, the demand is said to be fairly large

Eggs advanced, the past week. Supplies are well cleaned up, and the demand has now to rely on daily receipts, which, at this time of the year, owing to hens molting, are small. The better prices will probably induce freer shipments to us from the Central States.

Fruit.

The market for all kinds of fruit, except strawberries, sold lower the past week. The heaviest break was in peaches and apricots. The quality of the former is poor, while apricots were too high for free use. At the lower prices, canners are in the market for currants and cherries. They are also taking apricots when they are of good size and sufficiently cheap to admit of handling. Canners this season discriminate more closely than ever before. The market is said to be well stocked with poor to fairly good canned fruits, but about bare of the better grades. The scarcity of choice grades of canned fruits necessitates canners buying the best fruits, and for which they pay good prices. The following are the prices named: Cherries, black, 4@4½c cts.; white, 5@7; Royal Anne, 7@9; apricots, 1¼@1¾; peaches, 1½@2; plums, 1@1¼; Bartlett pears, 1½@2. Dryers are paying 1½@1¾ cts. for French prunes in the orchard.

The second crop strawberries, it is said, will, like the first crop, be short. Canners are contracting for raspberries and blackberries, but we are not advised what they pay.

Apples from Australia are in the market at $2 per per small box. California apples and pears are still too green for free consumption.

Choice grades of apricots, prunes and raisins are scarce and higher. The poorer grades of all kinds of fruits are about cleaned up.

Cool weather is against the consumption of limes and lemons. Oranges continue a drug. Forced sales this week were made at 50 cts. per box, as is. They had been held for better prices until rotting set in. There are no choice oranges in the market.

The fruit market to-day did not show any change except in currants which were about $2 a chest higher. Strawberries were lower as were blackberries and raspberries.

Sales of oranges "as is" were made the past week as low as 30 cents per box.

Vegetables.

In garden stuff there is a fairly active demand, considering the high prices. Cool weather, while in favor of growing vegetables, is against free receipts. Peas are old and hard to sell. Beans are scarce and very high. Other vegetables have shaded off.

Onions are in oversupply, with the market still in buyers' favor.

Potatoes have held to steady prices, owing to receipts and demand being about equal. Overland shipments continue to be made from Los Angeles, where buyers are accommodated at from 5 to 15 cts. per cental lower than rule here. There is loud complaint of local freight rates being excessive. We were in a commission house on last Monday when a grower was complaining of the freight being 40 cts. per 100 pounds, and the price received for potatoes only averaged about 75 cts. per cental. The shipping point was near by.

Feedstuff.

The market for ground feed has ruled strong, at full figures for bran and middlings, weak for rolled and ground barley, and barely steady for feed meal.

New hay is coming in quite freely, and, under strong selling, prices has shaded off, closing the week weak Old hay has come in fairly freely; prices have held barely steady. At times, concessions had to be made to effect sales. Lower prices are looked for at an early day.

Wool.

Receipts have been large, with both Oregon and Washington large contributors. All desirable clips have been quickly taken up by buyers, with at times a shade advance paid. Scourers continue to run to full capacity. Many growers are having their clips graded and scoured. Better results are said to follow. The Eastern markets are reported fairly active, but with no material advance reported. The tone at the East is firmer.

Live Stock.

The market is weak, with some shading in bullocks, owing to free offerings. Mutton sheep are fairly steady; better prices are expected in the near future. Hogs are steady, as are calves.

Miscellaneous.

Poultry weakened for hens, roosters and small chickens, but strengthened for turkeys. Receipts of Eastern broke the market on the former. Choice stock is scarce.

Hops are firm at 18@20 cts. contract price for new crop. Old is scarce.

Beans are in liberal supply, but prices do not shade off.

Honey is scarce, but the demand is light.

Hams and bacon are higher.

The poultry market to-day was steadier and slightly higher for choice well conditioned hens, sales going as high as $9 for selected. Young chickens were weak and in oversupply.

From reliable advices up to June 15, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	266,129	344,323	*151,774	51,878
San Diego	18,578	23,160	1,152	.....
San Pedro	8,383	14,624	....	
Oregon	35,152	28 476	19,822	16,657
Puget Sound	31,156	23,506	.....	
Totals	359,398	434,089	178,932	76.132

*Engaged for wheat, 1892, 21,687; 1891, 23,986 †For new crop loading, 1892, 16,879; 1891, 17,715.

The statistics of produce exports from this port from July 1st to June 7th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,729,955	13,519,267
Flour, bbls	1,031,957	1,126,952
Barley, ctls	1,109,174	307,165

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations. WEDNESDAY, June 15, 1892.

BEANS AND PEAS.				HOPS.			
Bayo, ctl	2 00	@	2 15	1891 Choice to Ex.	25	@	—
Butter	2 50	@	3 05	Fair to Good	22	@	—
Pea	2 20	@	2 70	**FLOUR.**			
Red	2 00	@	2 20	Extra, City Mills	4 65	@	4 75
Pink	2 00	@	2 10	Do Country Mills	4 50	@	4 75
Small White	2 20	@	2 55	Superfine	2 75	@	3 10
Large White	2 20	@	2 45	**NUTS—JOBBING.**			
Lima	1 95	@	2 35	Walnuts, Cal. lb	4	@	—
Fld Peas, blk eye	3 00	@	3 30	Do Choice	6	@	—
Do green	1 50	@	2 75	Do paper shell	7	@	—
Do Nlies	1 30	@	1 40	Almonds, sft shl	10	@	—
Split	4 50	@	5 50	Paper shell	12	@	—
BUTTER.				Hard Shell	6	@	7½
Cal. Poor to fair, lb	15	@	—	Brazil	6½	@	8
Do good to choice	17	@	—	Pecans small	11	@	13
Do Giltedged	—	@	21	Do large	14½	@	16
Do Creamery rolls	—	@	20	Peanuts	1½	@	3
Do do Giltedge	—	@	22	Filberts	10½	@	12½
Eastern	—	@	—	Hickory	7	@	8
CHEESE.				Chestnuts	11½	@	16
Cal. choice mild	7½	@	—	**ONIONS.**			
Do fair to good	6½	@	—	New Reds	30	@	35
Do gilt edged	—	@	8½	do Silverskin	50	@	75
Young America	—	@	10	**POTATOES.**			
EGGS.				Early Rose, ctl	50	@	75
Cal. ranch, doz	20	@	—	Do do in boxes	60	@	1 25
Do do selected	—	@	26	Peerless	60	@	70
Do store	18	@	—	Garnet Chilies	50	@	55
Eastern	18	@	21	**POULTRY.**			
FEED.				Hens, doz	7 00	@	8 00
Bran, ton	17 50	@	18 50	Roosters, old	6 50	@	7 50
Feedmeal	26 50	@	29 00	Do young	9 00	@	12 00
Gr'd Barley	21 50	@	23 00	Broilers, small	2 00	@	3 50
Middlings	20 00	@	21 50	Do large	4 00	@	5 50
Oil Cake Meal	—	@	25 00	Fryers	6 00	@	7 00
Manhattan Food ₩ cwt.	7	50		Ducks	5 00	@	7 00
HAY.				Geese, pair	1 25	@	1 50
Wheat, per ton	11 00	@	—	Goslings	1 25	@	1 75
Do choice	—	@	14 00	Turkeys, Gobl'r	18	@	20
Wheat and Oats	10 00	@	12 00	Turkeys, Hens	15	@	18
Wild Oats	10 00	@	—	Manhattan Egg Food ₩ cwt	11 50	@	—
Cultivated do	10 00	@	—	**PROVISIONS.**			
Barley	10 00	@	12 00	Cal. Bacon, he'vy, lb	10	@	—
Alfalfa	8 00	@	10 00	Medium	11	@	—
Clover	—	@	—	Light	12½	@	—
New Hay	7	@	10	Lard	9	@	11
Straw bale	45	@	60	Cal. Sm'k'd Beef	11½	@	—
GRAIN, ETC.				Hams, Cal salt'd	11	@	—
Barley, feed, ctl	90	@	—	do Eastern	14	@	—
Do Choice	95	@	—	**SEEDS.**			
Do Brewing	1 02½	@	—	Alfalfa	9	@	12½
Do do Choice	1 07½	@	—	Clover, Red	14	@	15
Do do Giltedge	1 10	@	—	White	20	@	—
Do Chevalier	1 05	@	1 40	Flaxseed	2 00	@	2 25
Do do Giltedge	1 45	@	1 50	Hemp	3½	@	4
Buckwheat	—	@	—	Mustard, yellow	3½	@	4
Corn, White	1 35	@	—	do Brown	3	@	3½
Yellow, large	1 30	@	—	**WOOL.**			
Do small	1 35	@	—	**SPRING, 1892.**			
Oats, milling	1 50	@	—	Humb't & Men'cino	17	@	21
Feed, Choice	1 47½	@	—	Sac'to valley	16	@	—
Do good	1 41½	@	—	S Joaquin valley	11	@	16
Do fair	1 35	@	—	Cala'v & F'th'll	16	@	21
Surprise	1 55	@	—	Oregon Eastern	12½	@	19
Black Oat	—	@	—	do valley	18	@	23
Do Oregon	1 32½	@	—	So'n Coast, def	10	@	12
Gray	1 32½	@	—	Nevada (State)	15	@	19
Rye	1 20	@	—	**HONEY.—1892 CROP.**			
Wheat, milling, Gilt edged	1 47½	@	—	WhiteComb, 2-lb	8	@	11
Do Choice	1 45	@	—	do do 1-lb frame	10	@	13
Do fair to good	1 41½	@	—	White extract'd	6½	@	7
Shipping, cho'ce	1 40	@	—	Amber do	5½	@	6
Do good	1 38½	@	—	Beeswax, lb	25	@	28
Do fair	1 36½	@	—				
Common	1 33½	@	—				
Sonora	1 33½	@	1 40				

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@ —	Wethers	7 @ —
Grass fed, extra	5½@ —	Ewes	6½@ —
First quality	5 @ —	Do Spring	8 @—
Second quality	4½@ —	**HOGS.**	
Third quality	4 @ —	Light, ₩ lb, cents	5 @ —
Bulls and thin Cows	2 @ —	Heavy	4½@ —
VEAL.		Feeders	3½@ —
Range, heavy	8 @ —	Stock Hogs	4 @ —
Do light	7 @ —		
Dairy	7 @ —		

Continued on next page.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 15, 1892.

Limes, Mex	4 00	@ 4	50
Do Cal	—	@	—
Lemons, box	1 50	@ 5	50
Do Sicily	6 00	@ 6	50
Oranges, Seedlings			
Redlands	2 00	@ 2	50
Riverside	1 50	@ 2	00
Los Angeles	1 25	@ 1	75
Do Navels—			
Redlands	—	@ 4	00
Los Angeles	—	@ 2	50
Riverside	—	@ 3	00
Duarte	—	@ 3	00

Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.

Strawberries, per chest—			
Longworth	10 00	@12	00
Sharpless	6 00	@ 7	00
Gooseberries, lbs	3	@	05
Oregon Imp	6	@	7
do English	7	@	8
Raspberries, ch	7 00	@10	00
Currants chest	5 50	@ 7	00
Peaches, box	50	@	75
Cherry Plum, dr	45	@	65
Figs, Arizona, lb	—	@	—
Apricots, Royal, pr box	50	@	75
Cherries, box Black	40	@	50
Royal Ann	70	@	90
White	35	@	60
Beets, sk	—	@ 1	00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@ 1	25
Peppers, dry, lb	10	@	—
Do green	10	@	15
Turnips, ctl	50	@	—
Cabbage, 100 lbs	45	@	—
Garlic, lb	2	@	4
Squash, Sum, bx	50	@ 1	25
Tomatoes, box	1 00	@ 1	50
Asparagus, box	1 00	@ 2	00
Peas, green, sk	50	@ 1	00
Rhubarb, box	50	@ 1	35
String Beans	5	@	6
Do do wax	5	@	6
Do Refugee	6	@	7
Cucumbers, doz	20	@	50
Mushrooms	10	@	30
Egg Plant, lb	17½	@	20
Green Corn, sk	1 00	@ 1	50

Dried Fruits.

The quotations given below are for average prices paid. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.	
Sun-dried, ¼'s, com'on	2½@ 3½
Do do prime	3½@ 4
Do do choice	4 @ 4½
Do sliced, common	3½@ 4
Do do prime	4 @ 4½
Do do choice	4½@ 5½
Evap. bleached, ring, 50-lb boxes	7 @ 8
APRICOTS.	
Sun-dried, unbl. com	2½@ 4
Do do prime	5 @ 5½
Do do choice	6 @ 6½
Do bleached, prime	7 @—
Do do choice	7½@—
Do do fancy	8½@ 9½
Evap. choice, in boxes	9½@10
Do fancy, do	10 @10½
FIGS.	
Sun-dried, black	4 @ 5
Do white	5 @ 6
Do do washed	— @ —
Do do fancy	— @—
Do do pressed	7 @ 8
Smyrna boxes	10 @11
Do sacks	— @—
GRAPES.	
Sun-dried, stemless	3 @ 4
Do unstemmed	1½@ 2½
NECTARINES.	
Red, sun-dried	3½@ 5
Do Evap., in boxes	5 @ 6
White, sun-dried	4 @ 6
Do evaporated	6 @ 7
PEACHES.	
Sun-dried, unpeeled, common, bleached	4 @—
Do do prime, do	5½@—
Do do choice, do	6½@—
Do do fancy	7½@—
Evap, unpe'l'd, choice	7½@—
Do do fancy	8½@—
Sun-dr, pl'd, prime, bl	11 @—
Do do choice	12 @—
Do do fancy	13 @—
Evap, peeled, in boxes, choice	15 @—
Do do fancy	16 @—
PEARS.	
Sun-dried, quarters	3 @ 4½
Do sliced	4 @ 5
Evap, sliced, in boxes	6 @ 8
Do ring do	10½@—
PLUMS.	
Pitted, sun-dried	5 @—
Do evap. boxes, choice	— @—
Do do do fancy	— @—
Unpitted	2½@ 3
PRUNES.	
Cal. French, ungraded	5½@—
Do graded, 60 to 100	6 @—
Do do 40 to 60	8 @—
Fancy sell for more money.	
RAISINS.	
London Layers, choice ℔ bx	$1 50@ —
Do fancy, do	1 75@ —
Layers, ℔ bx	80@1 00
Loose Muscatels, common, ℔ bx	60@ —
Do choice, do	1 20@ —
Do fancy, do	1 50@ —
Unstem'd Muscatels, in sacks, ℔ lb	4@ 5
Stemmed do do	5@ 5½
Seedless do do	6@ —
Do do ℔ 20-lb bx	1 15@ —
Sultanas, unbl, bxs	1 15@1 40
Do bleached, in bxs	1 30@1 60

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

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Calcutta, spot	7 @	7⅛
Wool Bags	36@	38

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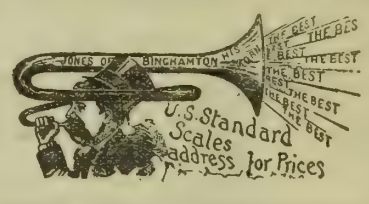
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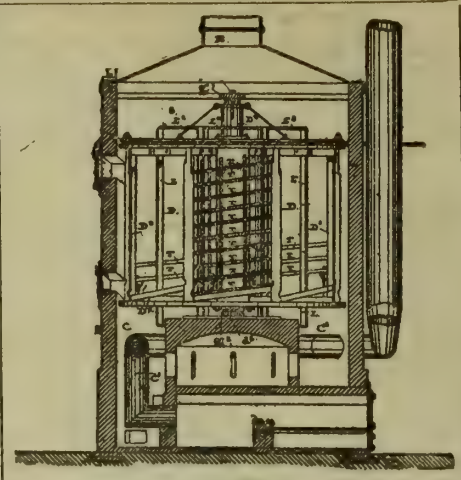
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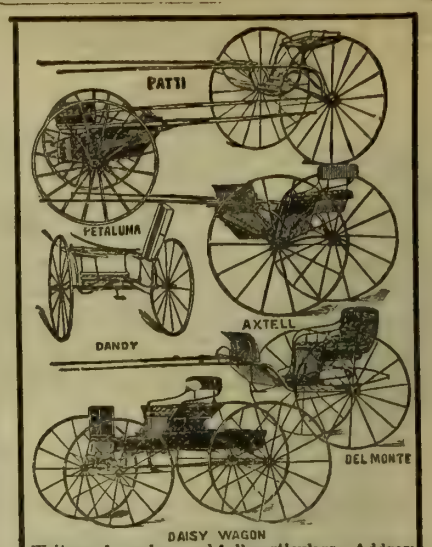
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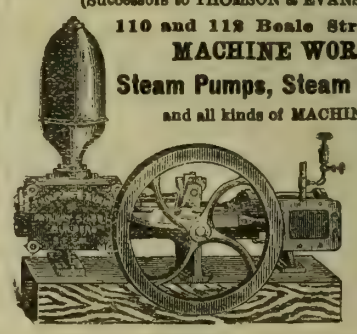
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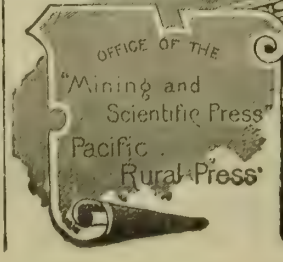
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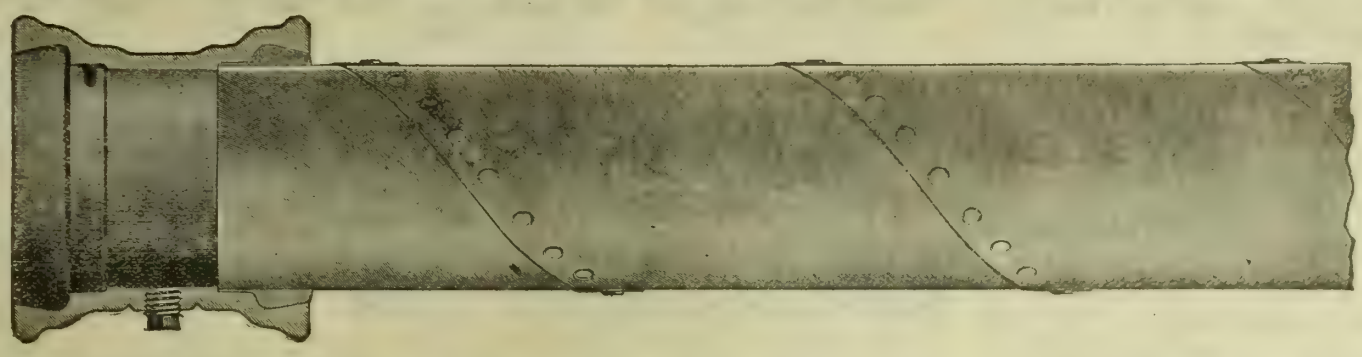
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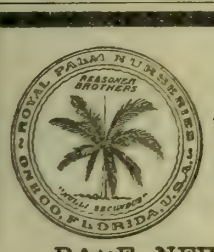
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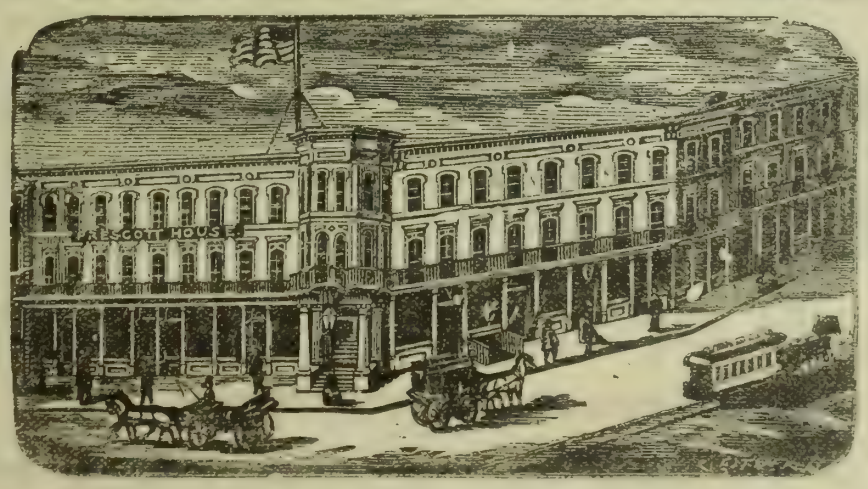
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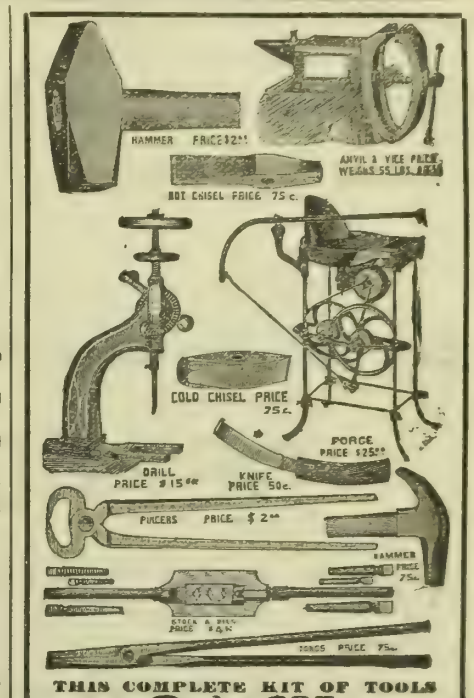
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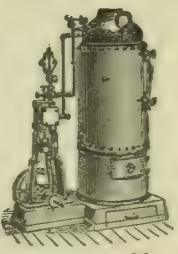
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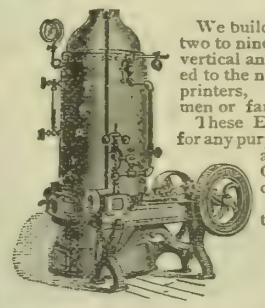
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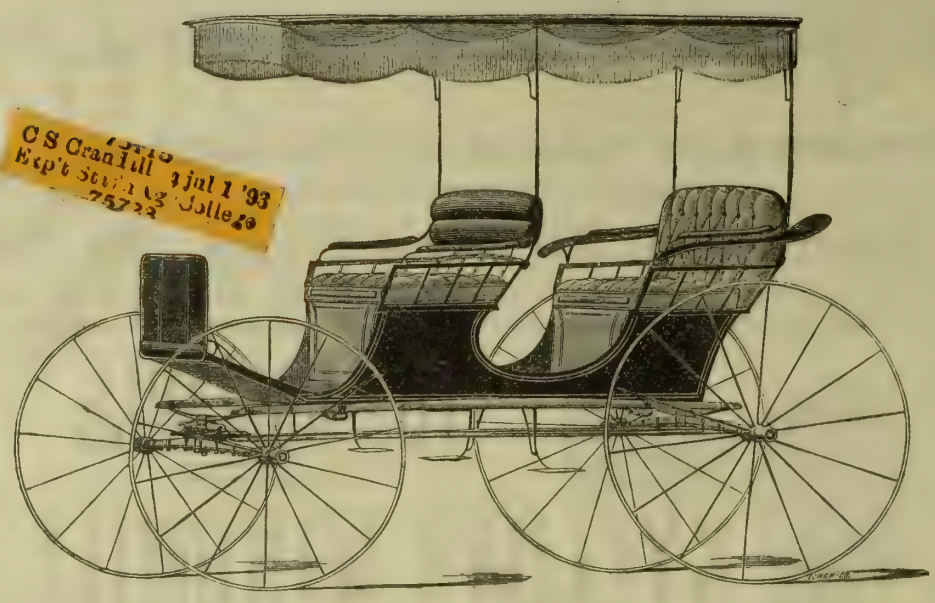
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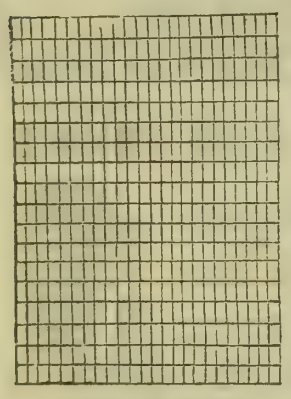
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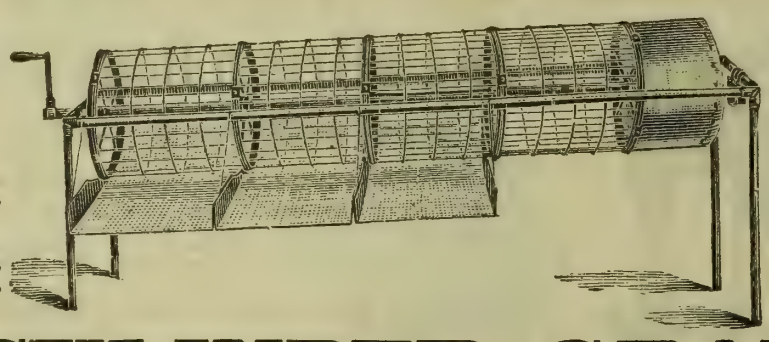
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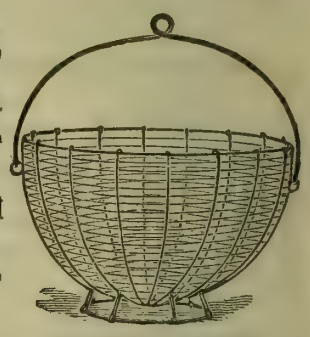


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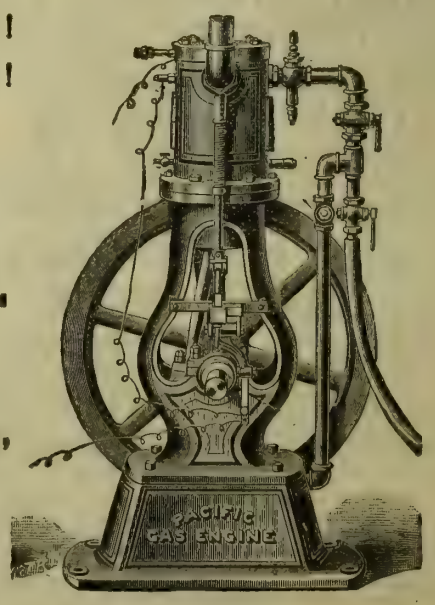
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PACIFIC RURAL PRESS

Vol. XLIII. No. 26. SAN FRANCISCO, SATURDAY, JUNE 25, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

From Wilderness to Garden.

The greatest delight of the amateur horticulturist and the greatest encouragement to labor and investment on the part of the commercial orchardist or vineyardist is the rapidity with which results can be produced in California. Nor is it difficult to explain this marked advantage which this State has over most other regions of the temperate zone. When growth starts in February and proceeds until November, or even later, it is not wonderful that plant energy is able to accomplish great extension. The fact is, that the valley and foothill portions of California have from once and a half to twice the length of growing season which can be relied upon in other regions lying under the same parallels of latitude, and where moisture is adequate to allow the plant to turn to its own account all the degrees of temperature which are furnished it, the growth and development of the plant is commensurate with the growing season which it enjoys. Hence our wonderfully rapid attainment of size in tree and vine; hence also the earlier year of bearing for trees which have practically made two years' growth in one. If distant readers in other climes will bear this point in mind, they will not be so startled with the records of growth and early fruiting which are sent them from this State, nor will they hesitate to believe reports which are honestly put forth. As corollaries to this proposition may be mentioned the facts that some deciduous trees become evergreen, that some annuals become perennial, that sometimes nurseries have to be re-located to get places where the leaves will fall before the time for digging and selling trees, that some deciduous fruit trees and vines sometimes put forth a second and even a third bloom and mature two and three crops, which, though as a rule undesirable, testify to the salubrity of the climate and to the stimulus which it gives to plant growth.







SIX MONTHS' DEVELOPMENT OF A HOME IN THE ROSEDALE COLONY, SAN JOAQUIN VALLEY.

With these things in mind, it is not wonderful that even in a portion of a year it is possible to transform a waste of arid land into a promise of golden-like verdure. Such a transformation is suggested by the photo-engravings which appear upon this page. They represent three points of time within the first six months after a colonist in the Rosedale Colony in Kern county had erected his humble habitation. The first view shows the cottage with its vines just putting forth leaf enough to show the rows; the second after two or three months of growth, and the third or lowest picture shows the vines nearly covering the ground and the trees having made good bushy tops. During the following winter the colonist will probably do as others do and plant shade trees and ornamental vines around his building, and a picture a year later would show the hastily-made dwelling embowered with leaf and bloom.

What is being done in Rosedale Colony, as shown by these engravings, is a reproduction of the earlier achievements in the earlier settlements of California valley and foothill regions and is suggestive of what will be accomplished in many other situations as the settlement of the State advances.

Discriminating in Eggs.

Dealers in eggs state that consumers are discriminating more in favor of large eggs. This demand causes the retail trade to watch the size more closely, for by getting large and attractive eggs they are assured of quicker sales, even when an advance in the price is demanded over that asked for the smaller. This is reflected by the trade of wholesale commission merchants, for with them small eggs are hard to sell, even at a decided reduction from the price of large and attractive eggs. Not only the size, but the quality also is given more attention. Eggs gathered and marketed daily command, if of good, average size, from three to six per cent more than do eggs "as is," and which are also of unequal or varying sizes. "Ranch eggs" do not now have the significance they formerly had, for now eggs sell on merit and not on name. The experienced handler can tell at a glance, or by handling, which are over two or three days old, and pays accordingly. By reference to our commercial department, the range in prices speaks more plainly than do words the exaction of trade in conforming to closer discriminating consumers. The eggs should be white, for the bulk of the Eastern eggs sold in our market are dark. To secure hens that lay large-sized, white eggs should be the chief aim of the farmer, and probably no better breed can be had than the Houdan Black Spanish. By breeding a pen of Black Spanish hens to a Houdan cock, hens are secured which are non-setters and which are layers of large, white eggs. Besides, the fowls have the large, juicy breast of the Houdan and the large limb of the Black Spanish, both excellent attractions to consumers.

ANGORA GOAT SKINS.—A circular letter from Washington has been received by Collector Phelps concerning Angora goatskins and the Treasury Department states that from an investigation it appears that the practice at the several ports in the ascertainment of the dutiable quantity of hair on Angora goatskins is not uniform, and for the purpose of securing such uniformity as may be practicable the Wharf examiner shall be directed to carefully examine all goatskins, and when any Angora goatskins are found in any mark or range of skins, 10 per cent of such mark or range shall be ordered to the Public store for examination.

FIRST CANNED GOODS EASTWARD.—The first shipment of the pack of 1892 went from the Golden Gate Cannery, San Jose, in two car-loads of canned peas to New York, containing more than thirty tons.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JUNE 25, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Loans Negotiated—C. H. Dwinelle, Oakland.
Commission Merchants—W. C. Price & Co.
Fireman's Fund Ins. Co.
Dividend—S. F. Savings Union.
Pecos Valley Land Co., Eddy, N. M.

☞ *See Advertising Columns.*

The Week.

This week's RURAL closes the first volume of the year. The index, which may be found upon the last page of this issue, has been prepared with care, so as to successfully guide those readers who keep the current issues, to articles which may be of value to them for reference. We have many testimonials to the acceptability of the changes in style and contents which have been introduced during the last half year. If we have succeeded in pleasing thus far in the new lines marked out, the future will be even more abundant, and the evolution of a first-class farm and family journal on this coast and for this coast will keep pace with the progress of the rich regions to whose advancement it is devated.

The week has been peculiar out of doors, as our detailed weather-crop report on another page will show. Fortunately no serious injury has followed either showers or hot waves, though both could have been dispensed with. Work is pressing forward, shipments are large, and, on the whole, a generous draft of money from distant consumers seems assured.

New Crop Dried Apricots.

It is now given out that new crop dried apricots have been offered in the New York market for July shipment at around ten cents a pound. This is an advance on last year's opening prices, but it is not any more than it should be when the quality of the fruit is taken into consideration. Apricots this year, and, as for that, all California fruits, are firmer and more fruity than they were in last year, and therefore when dried they will, with all else being equal, be of much better quality. Besides the improved quality, driers are reported to be selecting the larger-sized fruit, for experience has taught that the size has very much to do with the dried product meeting with quick sales in the distribution markets. The weather in nearly all fruit-growing districts is quite favorable for drying, and therefore another advantage is secured this year. If signs do not fail, we feel justified in claiming for California's 1892 dried fruit, better selected fruit for drying, better curing and better packing than ever before. In saying this, it must not be inferred that there will not be faulty packs, but what is intended to be conveyed is that the pack will, in all respects, average better than ever before.

Where Shall the Clod be?

We overheard a discussion the other day conerning the place of a clod in agriculture or perhaps, more accurately expressed, the life, character and public services of a clod We do not speak figuratively. We do not mean by a clod a social or political or industrial obstruction—an old fogy, a Silurian. We do not mean by a clod an embodiment of boorishness and ignorance—a clodhopper. We mean simply an indurated, dessicated aggregation of earthy particles. In its highest uses it serves to hold down the ashes of heroes and in poetical language we read of such dust resting "beneath the clods of the valley." But it is not even the patriotic, hero-crushing clod of which we write. It is the clod without metaphor, without sentiment—a mere dirt hunk—hard, hateful and harassing to the horticulturist. Now, where should such a clod be?

In the discussion to which we refer one speaker expressed a doubt as to whether his notions of fine pulverization of the earth's surface were after all desirable for some one had told him that if there were a good layer of clods upon the surface and fine earth below, the clods would shade the fine earth, and as the clods become harder and more hateful the fine earth below would retain its moisture better than if sun and wind played directly upon it. This clod philosophy set us to thinking and it did not take us long to decide that the speaker had heard a half-truth, which, like other half-truths, is more dangerous than a falsehood because it seems to "stand to reason" and is beguiling. It is true that if one is content to have his soil cloddy every clod should be on top. This is not merely to make him ashamed of his slovenly cultivation every time a neighbor comes to visit him, but because a clod on the surface can do very much less harm than a clod buried in fine earth just below the surface. A deeply-buried clod may be inert and innocent but a clod with one end in the air or but little covered acts energetically in drawing moisture from the surrounding soil and giving it off to the air—thus acting as a powerful agent in drying out the soil to a far greater depth than loose fine earth would dry in sun and wind. If one is content then to have clods at all, let them all be on the surface and let the fine earth below be absolutely clear of them. Then if this layer of fine soil be deep enough it will stop capillary draft of water to the surface and will retain moisture below. What then is the service of the clod on surface and its benign shade?

It may act slightly, but by no means to the same extent, that the same amount of dirt finely pulverized would act. In short, if the clods were pulverized and spread upon the surface, the dust resulting would serve to retain moisture incalculably better than all the clod-shadow in the universe. Where, then, should the clod be? We answer, nature abhors a clod. If she cannot disintegrate it with rain and frost and pelting hail, she will hide it with leaves and will set worms to boring into it until it loses its hateful arrogance and sinks back upon the bosom of mother earth restful and repentant. There should be no clod.

But whence come clods? From ill-timed or insufficient cultivation. There are, of course, times and seasons in which all due diligence on the part of the farmer who has refractory soil to deal with cannot bring the earth to the condition he approves. This is the exception to the rule, and it worries the diligent farmer as much as anything which comes in his line. We do not intend to reflect blame upon such aspects of the clod question.

More clods come from unwisely conducted irrigation than from any single cause. A man who has a baking, soil should handle water as carefully as he would fire. Many cases there are, no doubt, where a retentive soil can, by fine surface pulverization, be wholly lifted from the necessity of summer irrigation. Even where natural rainfall is light, the growth of deciduous trees on deep retentive soil can be well maintained by winter irrigation and summer pulverization, and where this policy is adopted and cultivation is done with the splendid implements which are now available, there should be no clods.

We have seen places where summer irrigation by flooding heavy soil and neglect to get in the cultivator at the right moment has produced a shameful condition of clods—clods so hard and large that little short of sledge and anvil would reduce them, and so heavy that in case of a riot the populace would not miss the absence of paving stones. Wherever such soil has to be summer irrigated the greatest care should be taken not to flood a square yard of it. Flooding of land for cultivated crops should never be thought of except on land which is so leachy that lateral percolation from ditches or furrows is so slight that the soil can only be thoroughly moistened by spreading the water in a sheet over the whole surface of it. Fortunately, such soils are of limited area and of such a character that clods do not readily form.

Irrigation of orchard or vineyard or cultivated field crops by flooding has been abandoned, wherever it is possible to carry water in small furrows and to distribute it by lateral as well as vertical percolation therefrom. On soil likely to clod then we should never wet a foot of surface that we could avoid. We would rely upon winter irrigation and rainfall, and upon fine summer cultivation for every growth which such treatment will satisfy. If there are growths of small fruits or nursery stock or citrus fruits which need summer irrigation, let the water be run long and carefully in small furrows, instead of a rush of water over and upon the surface. Just as soon as the soil reached by the water will not puddle by the teeth, run the cultivator and leveler and mix the dry soil of the furrow edges with the moist soil of the furrow bottom, thoroughly stir the whole surface. The moisture is safely stored below where it will do most good, and the clods are—on the next farm, and may the owner have joy with them.

Neighborhood Clubs.

There is an organization flourishing in the Niles region, in the lower part of Alameda county, which is worthy of commendation. We presume there are others somewhat like it in other neighborhoods, but there should be hundreds of them. The idea is to gather together once a month at the houses of members for the purpose of discussing, in an informal manner, the various topics which directly relate to the chief local industries, the details of every-day work and the methods and policies which secure best results. The meetings are held on Saturday evenings, when the chance of an extra hour or two in bed on a Sunday morning does not make early retiring a necessity. There is a president, a secretary-treasurer and a simple code of by-laws—just machinery enough to give the club necessary coherence. At a recent meeting which the writer had the pleasure of attending, there was a gathering of about a dozen ladies and gentlemen around the large dining table of one of the members, the board groaning not with a feast, but with specimens of fruit and plant beridden with insect and disease, which those present were examining with the aid of several microscopes, which had been brought together for the occasion. After a diversion of this kind the chairs were drawn back and free discussions were held upon methods of cultivation, the desirability of irrigation in the locality, the prices now being paid for fruit and the fruit supplies not only of the locality, but of the State and of the Eastern States. In such discourse as this, two hours and a half were pleasantly and profitably passed and the members bid good night to host and hostess and wheeled away over the excellent roads of the district to their several homes.

There was nothing burdensome about the meeting. There was no collation, which wearies the housewife and is too often a burden. There was no formality about the proceedings; all were cordially welcomed and a spirit of cordiality and sympathy prevailed. Such meetings afford most excellent opportunity for the comparison of views; they enable each member to learn by the experience of all the others upon any subject which may press upon him; they afford opportunity for discussion of the local value of new tools and practices, and for review of all published statements in the light of local experience and conditions. Such clubs are a vast improvement upon the dialogue in the fence corner, or over the buggy wheel, or in the village store, which are time-honored means of communication between farmers. Such clubs do not interfere with the work of more formal agricultural societies; in fact, they rather stimulate and improve such societies. We trust the idea will commend itself to neighborhoods of RURAL readers everywhere, and that such simple efforts at conference and sociability will multiply.

Adulterated Cheese.

It is claimed that the sale of skim cheese has grown to large proportions on this coast, but we dare say that there are few persons who deal in them, let alone the consumers, who are aware how they are made. On this coast, skim cheese is manufactured of emulsion of refined lard and skim milk. At the East, a large proportion is made of emulsion of refined lard and potatoes, no milk being used. How the emulsion of refined lard is prepared is a secret, but it cannot be very expensive, for skim cheese sell in our market, in jobbing lots, at around five cents a pound, while at the East they are sold for still less money. The manufacturer and also the dealer in oleomargarine and butterine are liable by law to severe punishment if they sell either without proper notice to purchasers, yet cheese made chiefly of hog fat or cotton-seed oil is sold to unsuspecting persons as cheese made from milk. Its consumption in quantity undermines health, even if it does not entail death, yet the person or persons who are instrumental in this health-destroying business go unpunished

Organized farmers, who did so much to have laws passed defining oleomargarine and visiting with severe punishment those who manufacture and also those who deal in it without proper safeguard for the general public, would do well to have similar laws passed about skim cheese.

From an Independent Standpoint.

As we write (on Tuesday) the National Democratic Convention in Chicago is in the early stages of organization. There have been three days of the usual preliminary bedlam, in which the friends and enemies of Mr. Cleveland have fought out their battle. Mr. Cleveland has won, and there is not a doubt of his nomination by a vote practically unanimous. The Democratic party is to be congratulated upon this result, for it shows that its better element is in control. The country at large is to be congratulated, for the nomination of Cleveland by the Democrats, taken in connection with the nomination of Harrison by the Republicans, assures a legitimate campaign upon broad principles of national policy, with the further comfortable assurance that whichever ticket may win, the Government will be in clean, able and safe hands. If ever there was a time when the election of a Republican, as such, or of a Democrat, as such, would have menaced the integrity of the Government, that time is now past. Those who read rightly the signs of the times and whose interest in politics rests solely upon regard for the welfare of the country, know that it is not Democratic or Republican success that is to be dreaded, but the success of bad Democrats or bad Republicans. The election of a Democrat under the spell and subject to the influence of the New York Tammany Society, and of such spoilsmen as Gorman of Maryland, Brice of Ohio, and it is with regret that we must include that brilliant man, Watterson of Kentucky, would, indeed, be a national misfortune; but no more a misfortune than would be the election of a Republican directed by such "practical" politicians as Platt of New York, Clarkson of Iowa, Quay of Pennsylvania and De Young of California. It is, indeed, a satisfactory and wholesome situation when each party can write a clean and honest name upon its banner, put its worst element to the rear, and go into battle upon questions of governmental policy concerning which honest and patriotic men may fairly differ.

The victory of Mr. Cleveland has not been so lightly won as to rob it of highest significance. Four months ago the loudest voices in the party proclaimed him "out of the race," and, indeed, it so appeared, for the professional and spoils-seeking politicians were all arrayed against him. There was Tammany and its bad idol, David B. Hill; there was Mr. Gorman, whose political standards and methods are precisely those of Platt, Quay, Clarkson, et al.; there was Brice of Ohio and New York; there was an office-hungry element represented by Watterson, and there were a few others like Carlisle of Kentucky, of better character but overawed by the managers. All these forces united in opposition to Cleveland, but not so much against him as against the better sort of politics for which he stands, came valiant and hopeful to Chicago. But they have been beaten by the overwhelming and irresistible force of the decent Democratic sentiment of the country at large, represented by the delegates from those States which have not sunk under the domination of party bosses. The result has the character, therefore, of a triumph of the people over the politicians.

The patience with which the American people have endured the "practical politician," and his continued existence as a factor in our politics, is due to a mistaken belief that he is a necessary evil. "Somebody," it is said, "must run the primaries and manage the game." True enough, but the "practical politician" never does this successfully for any long-continued period. Mr. Platt has never succeeded in winning an important election in New York; Mr. Quay found Pennsylvania overwhelmingly Republican and has succeeded only in giving it over to the Democrats; Iowa was the banner Republican State before Mr. Clarkson became its dictator, and so the story goes. Coming to the Pacific coast, who does not remember when Oregon, before her Republicans submitted to a "boss," was a sure Republican State? For six years she has had a Democratic governor. The interests of a party are never so successfully looked after as when its members stand upon the level of general equality. The truth is, and the parties are beginning to see it, that a "boss" is a source of weakness. He brings to a party arrogance and greed, and he robs it of patriotic motive and moral strength. "Practical politicians" have heretofore been powerful in conventions but never powerful in elections. It would seem now that they have lost their grip even in the conventions. Their day is passing—and so much the better for American politics.

The two great parties now stand face to face for the struggle of 1892. It will not be notable in its spectacular features because there are happily no issues that appeal strongly to popular passion, and there is nothing in the personality of either candidate to excite enthusiasm. The two men stand, each manfully and respectably, for ideas of public policy, and between these two classes of ideas the great mass of voters will choose. The silver question, which promised to dwarf all other issues, is out of the way. Both Harrison and Cleveland are committed to the gold standard, so, as between Republicans and Democrats, there can be no controversy, the situation amounting practically to a truce. Mr. Harrison stands for the protective principle as modified by reciprocity, for immediate and forcible protection to the negro voter in the South, and in a general way for radicalism in the government. Mr. Cleveland, on the other hand, stands for reform of the tariff on a revenue basis, with elimination of the protective idea, for a Southern policy that will allow time and education to work out their own ends, and in a general way for conservatism in the government. Both have sat in the presidential chair and both have the respect of the country. Neither in any sense stands for any one of the reforms which during the past three years have won many earnest supporters in the South and West among the farming and trades-union classes. If the People's party, at its Omaha meeting next month, puts forth a presidential ticket, as it undoubtedly will, there will be a large falling off in the regular Republican and Democratic votes. There is no means of judging what this falling off will be or which of the old parties will be the chief loser.

The old passions have gone out of politics and upon a good half of the American people the party tie rests lightly. It was this new spirit which wrought the defeat of the bosses at Minneapolis and Chicago and it is this spirit which gives point and interest to the coming People's party convention at Omaha. It is beyond question that vast numbers of voters have lost faith in both the old parties, feeling that the spirit of each is aristocratic rather than democratic, and that neither has the power within itself to expel its corruptions, escape from its traditions and meet without prejudice the immediate issues of the time. Whoever doubts that there are many voters in this frame of mind needs only to read the reports of the Farmers' Alliance meetings in California and elsewhere, or talk with members of the trades-unions; and whoever doubts that this feeling is strong enough to manifest itself at the polls, needs only to read the returns of the recent election in Oregon. If the delegates at Omaha will temper enthusiasm with a modicum of policy, if they keep within bounds of reasonable moderation, and if they will name candidates of approved character, they will attract a multitude of independent voters and will give their party permanent identity. It is the common fault of reform conventions to go too far—to repel the conservative and to frighten the wavering. This is a fact which the Omaha delegates, if they would establish the People's party in the political field, must not fail to heed.

Although the National Prohibition party is growing old in defeat, it is still buoyant with hope, illustrating again the vitality of that sort of politics which has its motive in conviction based on moral principle. Overtures looking to alliance with the People's party have been declined, and this year, as heretofore, a regular Prohibition ticket will be in the field. The convention will be held at Cincinnati on the 29th inst.—next Wednesday—in the hall where Hayes was nominated in 1880, and Mr. Dickie, Chairman of the National Committee, reports that every State in the Union will be represented. The rank and file will demand that St. John be again the presidential candidate, but he is disinclined to make the campaign, and will urge upon the convention the policy of putting forward a new man. Among the possible nominees, if Mr. St. John positively declines to run, are: H. Clay Bascom, of Troy; W. J. Demorest, of New York; General John Bidwell, of California; Walter B. Hill, of Macon, Ga.; J. B. Hobbs, of Chicago; Sam Small, of Georgia; Geo. W. Bain, of Kentucky; A. A. Stevens, of Pennsylvania; A. G. Wolfanburger, of Nebraska; Dr. D. G. Kelley, of Tennessee, and Colonel Ely F. Ritter of Indiana. If St. John should accept the nomination, then Gen. Bidwell of California will probably be named for the Vice-Presidency.

The most prominent and popular Republican in New York and one of the brightest men of this or any other country, is Mr. Chauncey M. Depew who, it is reported, has been or will be, offered the Secretaryship of State, recently vacated by Mr. Blaine. Mr. Depew's talents are fully equal to the place and he is perhaps the one available man who could step into Mr. Blaine's shoes without being made the victim of unpleasant comparison. His appointment would be a popular one in New York and might gain some strength in that State for Mr. Harrison in the coming campaign. But Mr. Depew is the president of the Vanderbilt system of railroads, has all his life been a railroad lawyer and is socially and otherwise related to the money interests of the country. And this being the fact, he ought not to be appointed Secretary of State. Mr. Depew's integrity is unquestioned—he is an honest man—but honesty of purpose is no security for soundness of judgment. The fatal objection to Mr. Depew is that by long association and affiliation with corporation and capitalistic interests he has come to stand—to honestly stand—for the rich man's view of things and against the poor man's view of things. The Republican masses of the country, respecting Mr. Depew as they do for his fine talents and for many manly traits of character, nevertheless see in him a man essentially and naturally opposed to principles which they hold to be vital for the best interests of all the people. As a mere matter of politics, apart from the higher consideration which ought to control the President in his choice, Mr. Depew's appointment would be a mistake, for it would be accepted in many quarters as confirmation of the charge that the Republican party is the party of the corporations.

Emmons, the eldest son of Mr. Blaine, died at Chicago on last Saturday. He had been sick but a day, and only for a few minutes before his death was his condition known to be serious. It was a sudden and awful stroke, the more sad as it followed within a year the death of a sister and a brother. The young man was a conspicuous figure at the Minneapolis convention and took seriously to heart the failure of that occasion, and it is believed that his death resulted from nervous reaction. He was an attractive and lovable man, aged 35, a husband of three years and very recently a father. In a career apart from the political life of his family he was notably successful, and he was the pride and hope of his father, now in many ways sadly bereft. The heart of the country has gone out to his family in a grief for which there is no balm. In the first session of the National Democratic Convention, on Tuesday—a convention met to combat the political principles of the great Republican leader, and in which there was no political friend of his—somebody moved a vote of sympathy with Mr. Blaine. Every man in the hall rose in approval. The chairman declared the resolution unanimously carried. Tears came as men grasped hands, and the great building rocked with the thunder of their cheers. Truly, the old passions of politics are passing away—thank God for it!

Just as we go to press late Wednesday night, the telegraph brings the news that Mr. Cleveland has been nominated for the Presidency by the Democratic Convention. The result was accomplished on the first ballot, which gave Cleveland 627 votes, Hill of New York 110 and Boies of Iowa 101. The nominations for Vice-President will not be made until to-morrow. We can only speak briefly of the platform. It is longer than the Republican platform, and contains two general arguments, one supporting the declaration against the Force bill and another supporting the tariff resolution which declares that whenever a tax is unnecessary it is unjustifiable, and that the only basis for taxation is revenue. The McKinley law is denounced as the culminating atrocity of class legislation, and the working men of the country are invited to view the dullness of the times in the labor market and the low price of commodities as some of its bad consequences. The silver resolution is, if possible, more artfully drawn than the corresponding plank in the Republican platform. "We hold," it declares, "to the use of both gold aud silver as standard money of the country and to the coinage of both gold and silver without discriminating against either metal on charge for mintage to the dollar unit. Coinage of both metals must be of equal intrinsic value, * * * with equal power of every dollar at all times in the markets and in the payments of debts." This is, of course, designed to mean free coinage to silver men and gold standard to gold standard men, or, taken in connection with the nomination of Mr. Cleveland, who stands solidly for a gold standard, it means just this and nothing more or less. Reciprocity is approved; trusts and combines are denounced; there is the usual condemnation of the Republican management of public lands; public office is declared to be a public trust, and the Civil Service Law is warmly endorsed; there is the usual declaration against the emigration of paupers and criminals from Europe; the present administration of the Pension Office is denounced as incompetent, corrupt, disgraceful and dishonest; the party renews its expression of appreciation of the patriotism of the soldiers and sailors, and favors just and liberal pensions; the importance of the Nicaragua Canal is "recognized;" liberal appropriations for public schools are recommended for the several States; there is the usual sop to the struggling Irish, the usual three lines of opposition to sumptuary laws, and the usual plank devoted to aimless approval of labor legislation. There is no declaration relating in any direct way to the agricultural classes of the country. The convention is still in session, but it will no doubt finish its labors to-morrow.

Weather and Crops for Week Ending June 19th.

The following crop reports are for the week ending Monday, the 19th of June, and were furnished by James A. Barwick, Director of the California Weather Service, viz.:

HUMBOLDT COUNTY.—*Mad River*—Crops look well and are growing fast. *Blocksburg*—Rainfall .12 of an inch. Highest and lowest temperatures, 87 and 40, which was of great benefit to growing crops. *Dyersville*—Fruit trees making fine showing; grain rusting slightly, owing to excessive moisture.

LAKE COUNTY.—*McTel Vineyard, Upper Lake*—Rainfall .29 of an inch; which has retarded haying and necessitated extra cultivation of vineyards and orchards. It has done no damage to fruits, and has helped the second growth of alfalfa. Grain is ripening fast, and will be a large crop.

SHASTA COUNTY.—*Redding*—Weather favorable for crops. Fruit of all kinds late, but the yield will be good. Haying about completed, with an average yield; but little grain will be harvested in this vicinity, it having been cut for hay. Highest and lowest temperatures, 92 and 53. *Anderson*—Highest and lowest temperatures, 94 and 60, which has been beneficial to hay-making. Fruit is coming on fast. Reports from all parts of the county are good.

TEHAMA COUNTY.—*Red Bluff*—The reported dropping of the grape is not so bad as first reported. The grain is suffering but slightly from rust. Apricot-picking and cutting commenced, and quality good. Grasshoppers not numerous enough to do any injury. Prospects for all crops quite favorable.

BUTTE COUNTY.—*Chico*—A trace of rain first part of week; the latter part warm and sunshiny. Haying mostly finished and somewhat damaged by the rain of the preceding week. Barley and grain yield good. Fruit crop very light. Apricots, prunes and plums almost a failure. Pears about half a crop. Peaches streaked, and the probable yield about one-fourth of a crop. *Palermo*—Harvesting will begin the coming week. Barley is unusually good and heavy. Early peaches are being shipped, and their quality is good.

YUBA COUNTY.—*Wheatland*—The weather has continued very favorable for grain; no damage has been reported from the north in this vicinity. Hops continue to do well. Peach crop good; apricots, pears and prunes will be light.

NEVADA COUNTY.—*Nevada City*—First part of week cooler than usual; the latter part has been much warmer and more beneficial to growing crops and curing hay, the temperature being 95° at 2 P. M., Sunday, the 19th. A trace of rain on Tuesday, the 14th; slight damage to cut hay by the rain of previous week.

SACRAMENTO COUNTY.—*Elk Grove*—Crops being harvested and yield good. *Franklin*—Haying about finished and crop good. Barley harvesting begun. *Sacramento*—Haying about finished, and it is being baled, stacked or barned, and the crop is a most excellent one in quality and quantity over the entire county. Harvesting is being rapidly pushed forward with the prospect of at least an average yield of good quality. Hops continue to improve under the warm weather. The temperature during the week has been for the first four days from one to six degrees cooler than the average, while the last three days have averaged from two to ten degrees above the normal; a trace of rain during the nights of the 13th and 14th. The warm wave and constant sunshine, with heavy dews at night, have been beneficial to all vegetation. The sunshine and extra warmth are bringing the hops forward quite rapidly; they are at least from two weeks to 20 days later than last year, consequently they do not look so prosperous now as they did at the same date last season, which causes some small hop growers to be rather disheartened; but no doubt there will be a shorter crop than last year, but do not think it will be below the yield of 1891 as much as the one-third of a crop. The hop reports from Washington, Oregon, Wisconsin and New York are not of a very flattering nature, although they are reported as doing well in New York. The lice is doing but slight, if any, damage in Oregon and Washington.

AMADOR COUNTY.—*Oleta*—There is a large crop of volunteer and grain hay; summerfallow grain, fair; winter-sown not so well filled.

YOLO COUNTY.—*Briggs' Vineyard near Davisville*—The weather has been unusually pleasant for harvesting. The highest and lowest temperatures were 92 and 54. *Rumsey*—Haying is well under way. Crop good. First fruit shipment last week and the fruit is of fine quality. Labor in great demand and is quite scarce.

NAPA COUNTY.—*Veterans' Home near Yountville*—The temperature and sunshine have been apparently above the normal the latter part of the week and have materially benefited the fruit and grape crop.

SOLANO COUNTY.—*Vacaville*—Weather warming up, which is the one thing needed for maturing crops. A continuation of it is what is most needed and desired. All crops are looking and doing well under the increased warmth.

SONOMA COUNTY.—Haying about finished and the crop is light. Peaches promise well. The grape crop in some localities will be a light one. Apricots, plums, prunes and pears are below the average yield. *Forestville*—Haying is progressing slowly on account of cool, foggy weather. Fruit growers do not complain. Corn is now taking a fair start. Highest and lowest temperatures 79 and 36. *Healdsburg*—Cool nights and foggy mornings have been the rule—it being too cool for corn, which is a poor crop so far; the cut and wire worms have necessitated resetting by hand and the stand is very uneven.

SUTTER COUNTY.—*Yuba City*—Average weather cooler, which is good for grain and fruit. Harvesting in progress and fruit shippers active.

GLENN COUNTY.—*Willows*—Prospects for an immense wheat crop still favorable. Highest and lowest temperatures 102 and 43.

COLUSA COUNTY.—*Williams*—Conditions continue favorable. Warm wave began on the 19th, but no damage anticipated.

SAN JOAQUIN COUNTY.—*Lodi*—Highest and lowest temperatures 88 and 48. Barley ripe and harvesting will begin to-morrow, the 20th. Wheat ripening rapidly; rust has appeared in some fields and is likely to pinch it. Apricots coming into market. The warm weather has greatly improved the watermelons, which are unusually late. *Stockton*—The cool weather and absence of wind have all been favorable to grain. Flattering reports come in from all directions. The week has been a perfect one for the maturing of grain. Harvesting is well under way.

STANISLAUS COUNTY.—*Modesto*—Harvesting begun and an average crop is claimed by the farmers. Fruit will be late on account of continued cool weather in the spring. *Turlock*—The weather has been beneficial to all crops. Highest temperature 100 on the 19th (Sunday). Rye-harvesting well advanced, while the harvesting of wheat and barley has just begun.

TULARE COUNTY.—*Visalia*—All crops will be about an average and are doing well. Highest temperature 90.

ALAMEDA COUNTY.—*Livermore*—Haying nearly over and in fine condition, but prices exceedingly low. Harvesting progressing, but the crop is not up to expectations, but the quality is good.

FRESNO COUNTY.—*Selma*—Harvesting is well under way and the promise of the crop is above the average. Grapes have suffered somewhat from a blight to the fruit, causing dropping of the first crop which will somewhat reduce the total output.

SANTA CLARA COUNTY.—*Santa Clara*—The weather has been beneficial to the gathering of the cherry crop, and also to other crops, generally. *Gilroy*—Rainfall on Tuesday, the 14th, .05 of an inch. Hay slightly damaged by the rains of Monday and Tuesday in some places. Weather remarkably cool during the greater portion of the week, which has tended to help grain and retard fruit.

SANTA CRUZ COUNTY.—*Watsonville*—The weather has been cloudy, foggy and cold. Haying is being delayed on account of the heavy fogs, and there is some danger of rust in the wheat from the same cause. Warmer weather is needed to bring forward late sown grain, beans and sugar beets.

MONTEREY COUNTY.—*San Ardo*—Weather favorable to the filling out and ripening of grain. Haying all finished and the yield is a light one.

CONTRA COSTA COUNTY.—*Hyde Ranch near Cornwall*—Harvesting well under way. Barley cut. Haying finished. A trace of rain on Tuesday, the 14th.

SAN LUIS OBISPO COUNTY.—*San Luis Obispo*—The weather has been all one could wish for, with no winds and fogs during the evening and southerly breezes and light fog in the mornings. Fruit and all green crops doing well.

VENTURA COUNTY.—*Hueneme*—The high winds of the past week will cause some beans to be replanted. Corn is looking well; heading is in full operation.

LOS ANGELES COUNTY.—*Lancaster*—Rain fell on the 7th amounting to one-fourth to one-half inch, according to locality. Considerable hay was wet, but dried in most cases before being much injured. Growing grain derived some benefit from the rain. *Rodeo de los Aguas Ranch*—Sugar beets are taking in sugar very fast; farmers are hopeful of a factory by next year, as beet raising is a success in the Cahuenga valley. Barley is very plump; corn is growing finely. *Los Angeles City*—The weather was generally fair during the week, but cooler than the seasonal average. High westerly winds prevailed on the 9th causing some injury to fruit. *Duarte*—Crops are looking well. A trace of rain followed by strong southwest winds blew off some apricots on the 9th. The weather has been clear and warm.

SAN BERNARDINO COUNTY.—*South Riverside*—Hay and grain is being saved in good shape. Fruit is doing finely.

ORANGE COUNTY.—*Anaheim*—The light shower of rain the forepart of last week nor the high wind following did any damage. Haying is completed, and heading now commences.

SAN DIEGO COUNTY.—*Vineyard*—Light rain fell on the 9th doing no damage. Late wheat has a light touch of rust, but the grain is too far advanced to be injured. Headers will commence on barley next week. No drying winds have occured. *National City*—Crops are growing and looking well. Ripe home grown apricots are in the market.

Sugar Experiments Promised.

It is reported from Washington that the House Committee on Agriculture has agreed to report a bill appropriating $20,000 for experiments in sugar culture. The proviso offered by Representative Caminetti has been adopted as follows:

PROVIDED, that so much thereof as may be necessary shall be expended in investigations and preparations to carry on experiments next year in sugar cane productions on reclaimed swamp lands in some suitable place in the San Joaquin or Sacramento valleys of California.

The Agricultural Department has agreed to ship to California the machinery now being used in Louisiana, as the season in Louisiana will soon be over. Professor Wiley is of the opinion that sugar culture in the San Joaquin and Sacramento valleys can be carried on, and will prove as successful as in the most favored sugar section of Florida. The recent experiments in the last-named State have been highly satisfactory. Sugar land in Louisiana has been very profitable, some acres netting as high as $350, and it is expected to soon have this great industry under way in California.

A Peculiar Season.

LOWER LAKE, June 14, 1892.

TO THE EDITOR:—Thus far this season has been a peculiar one. At first the clerk seemed to put April in the place of March, and then the June "hot spell" came in May, and now the "May showers" are coming in the middle of June. The most of the time it has been cold and windy, now almost to the summer solstice clouds and winds predominate. Some anomalous effects in plant growth have appeared. Some sweet corn I planted very early was killed down two or three times by the frost. It is now perfect in form with ear, silk and tassel, but miniature in size 10 to 14 inches high. I notice some fresh apple blooms on trees, with apples nearly half grown, also blackberry briers blooming fresh on new wood.

The first grape buds that started were mostly frost-bitten, but now, though late, a most wonderful growth of fruit stems from dormant buds are rapidly coming forward. as well as a great many suckers. C. P. SCRANTON.

ROPING TREES.—Heavily laden trees, which, in spite of proper pruning and thinning, are likely to spread apart and split down by the weight of their crop, can often be adequately sustained by the use of rope instead of props. In many cases, a bale-rope or other light rope, passed completely around the tree at a proper height, and caught here and there over a twig so as to prevent slipping down, will afford all the help needed to enable the tree to stand up well with a good load. Of course, as the pressure is downward and outward on all parts of the branches, each side of the tree pulls against an opposite side, and none can droop if the rope is strong and unyielding. Another way to use rope is to pass it back and forth through the center of the tree, so that each branch is balanced against an opposite one, but probably the encircling rope properly placed is best, for it not only sustains the vertical strain, but, to a certain extent, acts laterally also, and helps the whole tree in a strong wind.

RIVER TRAFFIC.—It is pleasant to learn from the Marysville *Democrat* that an examination of Feather river made last week shows that the river is in fit condition for freight boat and barges, and that such craft can probably run all summer. The building of new barges will proceed forthwith, and the prospect is that much produce, including grain, hay and fruit, will move down the valley to selling points by water. The result will be short hauls for the teams and low freights for the producers. This is an excellent piece of news. It demonstrates the value of keeping the rivers in good condition, and should suggest to many valley regions the desirability of improving the natural channels and of supplementing them with canals for navigation. This is one of the most important matters in many valley situations.

NEW FIRM.—W. C. Price, who is well and favorably known as a produce commission merchant, has disposed of his interest in the Price Berlin Company on Front street, and opened a store at 219 and 221 Davis street, where he will continue a general produce and commission business under the firm name of W. C. Price & Co.

Experiments in Manufacturing Olive Oil and Pickles.

Read before Farmers' Institute at Pomona by C. L. Loud.

The past ten years have marked a very large increase in the olive industry of this State. With the enormous acreage planted during the past season and the outlook for the next, it is fair to presume that it will soon rival the orange or prune industry in point of value. I have had occasion during the past two years to experiment a little in pickling olives and making olive oil. Although the means have been simple and cheap, they will demonstrate what can be done by those who, in the future, expect to handle their own olives. The making of pickles has been largely confined to the grower, it being a simple process and quite readily picked up, and with a little experience carried on successfully. The process generally used is known as the lye process, the bitterness being extracted from the olive by means of a strong solution of lye; one pound of lye to ten gallons of olives. It takes from 36 to 50 hours to extract the bitterness. The lye is then extracted by means of fresh water, changing from six to eight times during the first day and twice a day thereafter until freshened, requiring about eight days. The olives are then put into cold brine for a couple of days, and afterward into boiled brine, applied when cold, after which they are ready for market. In my work I have used 50 gallon casks for handling olives, but think troughs for extracting the bitterness and lye are much more convenient and cheaper when one expects to use them every year. The troughs save barrels, which are quite an item, cooperage being very high. It is a very difficult matter to give any rule to follow in picking olives, as they do not all work alike. I have found that nearly all rules that are printed in the papers, like signs in dry weather, fail. The best rule is care and watchfulness.

In making olive oil the same rule applies, with the addition of perfect cleanliness. My experience in making oil has been short and only in an experimental way, having made a short time ago about five gallons. The press used was an ordinary cider press with crusher attached. The machine being light, all the oil could not be extracted; but it served to show that it did not require a large outlay of capital and machinery to handle a few thousand gallons of olives. I am inclined to think a lever press, something that gives a constant and steady pressure, will be the best and more cheaply gotten up. With five or six such presses, a good crusher and a cool place to store the oil, one man can handle a great many olives. In pressing out the olives the liquid is put into a galvanized iron tank holding about 20 gallons. As the oil rises to the top it is skimmed into pans and skimmed from there into the filter. I used druggist's filtering paper, it being cheaper than anything else and answering the purpose as well. The points outlined in this short paper are not based on theory, but actual practice. There are many more things which might be said, but as my experience consists only of experiments in a small way, I do not wish to assert that which I do not know.

That Forfeited Land Grant.

Readers of the RURAL who desire to take a hand in making homes upon the forfeited railroad land grant in San Benito county should send to the publisher of the *Free Lance* at Hollister for a copy of his paper of June 17th. It contains the full official announcement of the opening of this grant for settlement. The lands lie between Tres Pinos and Alcalde. There are less than a million acres in the grant, six hundred and forty thousand of which are situated in San Benito county. The date set for the opening is Wednesday, July 27, 1892.

All persons who were actual settlers in good faith on any of these lands on September 29, 1890, and who were otherwise qualified, and who have not lost their rights in the meantime, will have preference rights of entry under the homestead law, this act to be exercised within six months from the date of the notice. These lands are subject to entry only under the homestead law and to disposal under Section 3 of the Forfeiture Act.

All persons who have heretofore offered to enter any of said lands, whether said rejected offers have been appealed from or not, have had no right conferred on them by such offer, and the lands so offered to be filed on will be opened to entry under the provisions of the Forfeiture Act without regard to such applications. All such applicants will have an opportunity of presenting new applications.

All persons who intend to claim the right of purchase under Section 3 of the Forfeiture must file in the Land Office in San Francisco a statement of their claims, properly describing the lands intended to be claimed by them within 60 days of the date of the notice. The filing of such claims will not bar homestead entry of the lands described, subject to perfection of the right of purchase.

The San Francisco Land Office is on Commercial St., No. 610.

Southern California at the World's Fair.

LOS ANGELES, June 21.—The committee appointed to receive applications for space at the World's Fair, have held a session. The result of their deliberations is given below: Agricultural department, 3000 square feet; Horticultural department, 3300; Mines and Mining department, 1300; Department H, 50; Department M, 300. These applications are independent of all individual applications for counties of Southern California. Department L goes under the head of State applications. San Bernardino county telegraphs that she will take 500 feet in the agricultural, horticultural and mining departments. Ventura takes 200 feet in the agricultural department. San Diego sends 60 applications for 5000 square feet in several departments.

HORTICULTURE.

Killing Morning Glory.

Although our older readers are well-informed on the morning glory problem and have read the numerous records of experience we have given on the subject, it will enlighten our newer subscribers and interest all to read the following very excellent review of the subject which A. Guillou of Ventura county writes for the Hueneme *Herald*:

Our morning glory is a root-stock plant, it grows not only from seed but from underground branches. The nodes on these root-stocks are from one to two inches apart and every node has in it the possibility and potency of a new plant. It is this characteristic which makes it spread so rapidly, exhaust moisture so early and renders it so difficult of destruction. If one node of the 50 or 60 on a single plant be left alive, the next season there results a new plant with its own 50 or 60 nodes. Hence, any method of extermination to be satisfactory must be extremely thorough, and the difficulty lies in securing complete work in a general and inexpensive way. All methods of killing vegetation may be divided into three classes: (a), by thirst, absence of moisture; (b), by smothering, absence of light and air; (c), by poison, introducing into the plant's circulation a substance which destroys its life.

Death by thirst results from either the absence of soil moisture or the inability of the roots through disease to absorb moisture when present. Death by smothering is due either to some covering of the soil surface through which the plant cannot live to penetrate, or by the cutting off of all growth above the soil by means of hoes, cultivators, plows, grasshoppers, potato bugs, pigs or any other sufficient instrument. Death by poison generally occurs from the presence of some noxious substance in the soil, black alkali, brine, oil or the like.

The conclusions of one who has done some systematic work in the matter and has investigated the problem with care may be of value, at least as suggestions.

Killing morning glory by thirst I do not consider practical. I have found the roots at a depth of 15 inches and am told they have been followed down two feet. To dry out the soil to such a depth would be too expensive and it is doubtful whether some nodes would not retain vitality until the next winter's rains. Nor can I learn of any crop which will so exhaust moisture as to kill it. It grows well under heavy alfalfa or unusually heavy barley, and even if such a plant could be found there would be the same risk of its surviving the summer drought.

To kill by smothering, both by mulching and also by cutting off continuously, is practical.

The mulch, in the former case, must be very thick and of a substance sufficiently compact. Straw will not do to a depth of three feet. I have seen the weed grow up through such a mulch, and I am told that it will penetrate bean straw to the same depth. Heavy manure, if deep enough, works well. Mr. Donlon seems to have checked it by a manure mulch about two and a half feet deep and of about the same depth has worked well in other cases. This method, however, would require 750 loads to the acre and manifestly is adapted only to very small patches. For larger areas the process of cutting down is less expensive and quite as effective.

The plan of feeding hungry hogs on the land and using their eagerness for food as a means of compelling them to root all through the soil and keep it fed down below the surface, is theoretically good, but practically it is very severe on the hogs, and I should think they would require very close and careful watching to prevent starving to death. It also requires a water supply and often injures the soil greatly.

Of tool work, all hand work must be set away as too expensive and the choice is of horse tools. Plows are objectionable both because they rarely bury everything and also because they turn up to the surface, moist soil full of nodes to grow forthwith; almost as important an objection is that after two or three plowings, the purchase for the land-slide is lost in loose soil and the share simply scoops a deep groove. Thus far, I have found a knife cultivator very satisfactory. If the knives lap sufficiently and the machine is carefully driven it covers every inch of the field and they can be run so deep that after two or three cuttings there is formed a dry mulch of top soil five or six inches deep, through which the weed must push to reach the light. The chief difficulty with the knife cultivator is the trashy soil in which morning glory is usually found. After a seven-inch plowing I found it impossible to run the knives, as they clogged and could not make a clean cut, and the ground was then plowed 14 inches deep. This turned the brush down, there was some little clogging the first time but now the knives run smoothly at a depth of five or six inches. The important elements in this method are to cover every square inch of the field and to run the cultivator before the least green blade appears. I have found that near Hueneme in a loamy soil, and cultivating five inches deep, one cannot safely allow more than five days to elapse between cultivations. As to the length of time required to kill the weed in this way I am in doubt. Professor Hilgard, at Berkeley, I believe, eradicated it in about a year; the character of his soil I do not know. Probably the same length of time would suffice across the river or on Las Posas, but the weed is of such a vigorous growth near Hueneme that I am inclined to think a longer time will be required. Although a summer weed, it often starts as early as February and grows into October, and the cultivation must, therefore, be practically constant. With sufficient stock and careful driving, the cultivation in this way costs about 35 cents an acre each time.

Killing by poison is accomplished by putting salt, oil or other noxious substances on the land so heavily as to kill the weed. The serious objection to this method is that it kills all other vegetation as well, and by reason of small rainfall and absence of frost on the ground, ruins the soil for many years to come. As yet no antidote for such poison is known, other than leaching out the harmful substance.

I think that the most satisfactory and least expensive methods are those of mulching for small patches and constant knife cultivation for larger areas. The mulch must be dense and deep; the cultivation frequent, before any greenness shows, and the deeper the better, by making a natural mulch to assist. Both must be completely thorough covering every inch of the ground and affecting every sprouting joint, and I am inclined to think that every disappointment with these methods has been due to carelessness, either careless driving or allowing the green sprouts to appear between cultivations, or not continuing the cultivation until an examination shows the root-stocks dead and withered.

FRUIT PRESERVATION.

Fruit-Drying in Southern California.

An address delivered before the Farmers' Institute at Pomona, May 27, 1892, by D. EDSON SMITH, of Santa Ana, Cal.

The subject of fruit-drying is one of special importance to us of Southern California, because our soil and climate are so peculiarly adapted to growing choice fruit, that our prosperity, to a large extent, depends upon our ability to put our dried products upon the market of the world in a condition that will keep indefinitely; will retain a large per cent of the aroma and flavor of the ripened fruit; also present an attractive appearance to the eye. Much time and money have been spent in this country, during the past 20 years, in trying to secure all these desirable qualities in the cheapest and still most perfect manner.

So far as sun-dried fruit is concerned, Southern California can excel the world, because of our exceptionally clear, dry atmosphere. But even here we are liable to have fogs or rains, especially in drying our late-ripening fruits, which at times is a very serious drawback to the most desirable results. But let the weather be never so perfect, there are other serious drawbacks to the sun-drying process.

A great amount of space and time must necessarily be consumed in this process, which means expense. Then, a large portion of the best flavor and aroma, the spiritual or electrical part of the fruit, if I may be permitted to use such expressions, is more or less dissipated during the long exposure of the cut surface of the fruit to the air and sunshine.

Next comes the moth and lays her eggs upon the fruit, which in time, to the great disgust of the buyer, results in a lot of wormy fruit, unless more expense is finally added by putting all the fruit through a steam bath, and redrying and resacking.

And last, but by no means least, the cut fruit, like peaches, apricots, apples, etc., has become so discolored by exposure to the air, that it is almost worthless in the market. But this last-mentioned evil has been overcome by a still greater evil. I refer to the sulphuring process. But the consumer is rapidly finding out that sulphured fruit is very undesirable in several respects; and I think it will be but a short time when such fruit will find no market whatever. Besides the experience of the consumers, Prof. Hilgard and other able writers are rapidly convincing the public of the undesirability of sulphured fruit. While the sulphur and molasses that I used to be filled with every morning before breakfast, during a part of my boyhood days, may have done a good work in killing parasites, still I can find no possible good that sulphur does to our fruit-drying, excepting to make it more attractive to the eye. But I long since became convinced that this catering to the joys of vision was far more than counteracted by the unattractiveness of sulphured fruit to the organs of taste. The fumes from the burning sulphur unite with the surface of the fruit, producing a chemical change, causing a tiny drop of the most intense acid to be deposited on each piece of fruit, which can never be eradicated or fully covered up by the addition of any amount of sugar. Therefore, for our home use of dried fruit, we long ago gave up the use of sulphur in its preparation.

Ten years ago, soon after I came to Southern California, a man came to Santa Ana and for several days displayed in the lobby of the postoffice, to our delighted eyes, the most desirable and attractive dried fruit imaginable, and he told us of his new drier, and the benefits its use would bestow upon the fruit growing of this vicinity. But we had no bearing orchards of any size about Santa Ana at that time, and consequently no sales were made. But my interest in the subject of driers was greatly aroused, for I saw how it might be possible to use them in preference to sun drying under any circumstances.

And from that time to the present I have taken a great interest in fruit-drying. Many kinds of fruit driers have been put up and used in Southern California during the past ten years, but most of them were so defective in one way or another that I do not know of any that have become popular.

Seven years ago I saw in the transactions of the American Horticultural Society a strong recommendation for the "Common Sense Fruit Drier," made in Ohio. The next year I learned that Leonard Coates, a prominent citizen and nurseryman of Napa, this State, owned the patents for these driers for this State. I sent to Mr. Coates for a small size to use on our cook stove to dry the fruit we wished to use in our family. While we found some mechanical defects about the machine, yet we considered it perfectly satisfactory for the price. We found that with this drier our fruit could be dried, ready to sack, in a few hours, and that it retained the pure flavor and juices of all fruit to a marked degree above sun or hot air dried fruit, and that there was also a large additional weight in the product over all other known methods, and that the fruit was entirely free from insects, worms, dust or dirt. I began writing out my experience with this drier for the *Rural Californian*, and inquiries began coming in as to where these driers could be obtained. But I found that Mr. Coates was so taken up with other projects that he did not care to go into the manufacture of these driers, but would like to sell his interest in the patent. But I never heard of his doing so.

Some months ago I heard that a similar drier to the one I had been so satisfactorily using was being made by a company in Los Angeles. And the first time thereafter that I had business in Los Angeles I called at the company's office and found that they were prepared to build any number or any size of the same kind of a steam drier that I had been using, excepting that they held the original patents of the machine, and were making a much better machine than the one I had been using.

Up to last season our nicely sulphured sundried fruit, no matter how little of fruity flavor it had, or how acid or dusty it was, or wormy it might become, would bring the highest market price. But it will be impossible to deceive the consumer of our dried fruits any longer by false appearance. And upon examination I found that the increased weight of the steam dried fruit and the saving of so much handling of the fruit, as unavoidably accompanied sun-drying, would pay me a large interest of the investment in a steam drier for market use, saying nothing about the superior quality of the dried fruit; and that it is dried so quickly in a dark compartment that it is equally as attractive to the eye as the sulphured sun-dried fruit, I immediately ordered a drier built for my orchard use the coming season. It has been built, set up, and is now ready for inspection and business. The special points of merit of this machine are:

1st. Uniform radiated steam heat. Never above 212 degrees.
2d. No changing of fruit or trays while drying.
3d. Evaporated fruit gains 20 per cent in weight over sun-dried or hot air dried.
4th. The quality of the evaporated fruit is 30 per cent greater than sun-dried or hot air d ied.
5th. Each piece of fruit is subjected to the *same* uniform heat.
6th. Each separate piece of fruit is subjected to a *strong current of hot air*, which removes *all* moisture as fast as the steam heat forces it out.
7th. Heat is controlled from 10 to 212 degress at will.
8th. The evaporating being done in a dark chamber, the fruit is *clear* and *bright*, no sulphurous bleaching being needed.
9th. Absence of dust, dirt or the attack of insects.
10th. Can be run night and day with no danger of exploding or burning up.
11th. From 3 to 25 evaporators can be operated by steam taken from one pipe from a stationary boiler under pressure by crosspipes connecting each evaporator.
12th. Each evaporator is encased with wood, thus retaining all the heat.
13th. No climbing up and down stairs to put the fruit trays on and off these evaporators, seven (6) feet being the limit in height.

Dry hot air will not evaporate. Steam-radiated heat, with *strong*, *rapidly moving* currents of *hot air*, will evaporate and *dry* perfectly, carrying off all moisture rapidly, retaining in the fruit all the essential qualities—juice, syrup, nutritious properties and flavor intact.

With this machine steam is passed through steam-tight shelves both over and under each tray of fruit, and by a peculiar device the hot air is saturated with moisture from the water in the fruit, and is *rapidly carried out* of the *machine*. The steam-heat is so *intense*, and the air saturated with moisture is so *quickly* removed, that the drying is *exceedingly* rapid.

The cost for fuel is very slight. It takes but little to keep a large volume of boiling water at the boiling point where the boiler is perfectly protected on all sides from radiating its heat. I have so constructed the furnace to my dryer as to enable me to utilize all my tree trimmings.

But where one has a large orchard, or where several small orchardists combine, a large drier or several small ones can be run by the steam from a stationary boiler at a mere nominal cost for fuel.

I believe this practical drier will give a new incentive to the fruit-growing industry of Southern California, especially of the fig industry. No locality in the world can compete with us in quality of fruit, and when it is put upon the market in the every way desirable shape that it comes from this World Beater Evaporator, it will be eagerly sought after, and will command a good price.

Paper for Drying Fruit.

RUTHERFORD, NAPA CO, June 12, 1892.

TO THE EDITOR:—Now that our fruits are beginning to ripen, I desire to publish a few ideas about drying, as my success was greater than the neighbors who used other methods and means. After carefully looking over the different trays and figuring the cost and labor of handling, my judgment led me to buy the standard black P & B paper of the Paraffine Paint Co., 116 Battery St., taking whole rolls, without cutting, 112 yards long. After cutting off the projecting canes of the grape vines, and harrowing and rolling the ground between the rows to make a smooth, even surface, being careful to select ground having a good slope (level surface would not do at all) this paper was laid and unrolled only as fast as the grapes were picked and ready to lay upon it, being sure to keep it perfectly straight. When the fruit is two-thirds dry, take a wooden hoe with a blade about four inches wide and two feet long, and draw the grapes from one side toward the other past the center, then reverse, and with the hoe push apart and separate the winrow thus formed in the center; this operation will turn most of the fruit and loosen it so drying will soon be complete. If rain comes before two-thirds dry, the water will run off and do no harm, but after that it is well to hoe the fruit to one side and then fold over the paper the same as the hemming of a piece of cloth; a few rocks along the edge will keep it there, and protect it from the wind. This can be done much quicker than trays can be piled up, and the work is not lost as the grapes are now turned. The reason for laying the paper perfectly straight is that it may not tear by turning over the hem, but if not straight then

turn up the concave side so as not to strain the edge and tear. The black surface draws and holds the heat when on the ground so there is no circulation of air underneath and at times was so hot the hand could not hold it. In our Napa Valley where many say grape-drying is not a success, I dried three lots on the same paper in the one season, and with reasonable care, the paper is good for three seasons, perhaps more. R. E. WOOD.

A Warning to the Public on the "Cold Process."

Prof. E. W. Hilgard, Director of the University Experiment Stations, has issued the following special circular concerning the so-called "Ohio Fruit Co.'s California Cold Process for Preserving Fruits, Vegetables and Liquids:"

It seems that a quiet but active canvass is being made in this State and probably elsewhere under the above caption, and the circular is headed by a notice that "any one printing or selling directions not obtained from us will be prosecuted to the full extent of the law." "Compound Extract of Salyx" is the sonorous name under which the alleged new nostrum is advertised.

The name of this "Compound Extract" is incautiously suggestive of salicylic acid. An examination of the sample fruit distributed by the canvassers accordingly shows, in the liquid around the fruit, one-third of one per cent of salicylic acid, which of course is well known to preserve fruit, as well as other vegetable and animal matter, but is better adapted to the preparation of show specimens than to preserve for human consumption. Doubtless there are persons who may for some time take such doses of the well-known preservative with impunity; there are others with whom its use would, in a short time, create very serious disorders of the digestion, and there are those whose digestion is stopped, point blank, when such "preserves" are eaten.

Any one is at liberty to take his choice as to which of the above classes he considers himself as belonging, and may take his dose of medicine with his dessert if he chooses. But should any one desire to do so, it is quite unnecessary for him to pay the "Ohio Fruit Company" at the rate of eight dollars a pound for what he can get at retail for one dollar and a half. Nor need he be alarmed about the fruit company's threat of prosecution. The use of salicylic acid (elsewhere forbidden by sanitary regulations) is guarded by no patent, and never has been; that of "Coffee C" sugar prescribed by the company certainly is not. All are therefore at liberty to sweeten their fruit according to taste, and to spice it with the antiseptic acid, without asking leave of anybody. E. W. HILGARD.

This is the substance which we repudiated on page 495 of the RURAL of May 28th. It is a good thing to let alone.

THE FIELD.

Handling and Marketing Grain.

Read by J. O. COURTRIGHT at a Farmers' Institute held at Garfield, Washington, under the auspices of the Washington State Agricultural College.

We will attempt to notice briefly several questions pertaining to the marketing of grain, but more particularly wheat.

The first thing is to see that the grain is properly harvested and threshed, and particularly to see that the wheat is not cracked in threshing. There is nothing more destructive than this, as the broken grain can only be used for feed and causes a direct loss.

We will next notice the question of sacking grain. It is generally conceded that it is cheaper and more convenient to sack the grain at the machine as it is threshed, and this is doubtless true as long as we follow the present ruinous practice of selling and shipping our wheat without cleaning. But when the practice becomes universal of cleaning our wheat, at the shipping point or terminal elevators, it will be far better and cheaper to have granaries on the farm to receive the wheat as threshed, and deliver it loose to the warehouses or elevators.

By comparing the cost you will find that granaries can be constructed of common lumber that will last several years, to cost less than the sacks would cost for a single crop, and they could be so constructed that an elevator could be attached to the thresher and the grain carried directly into the granary and drawn out into wagon boxes, without any of the hard labor of lifting and handling sacked grain. It is sometimes argued that our roads are so rough that the grain would spill out, but extra sideboards on the wagon boxes would prevent that.

Recent experiments in shipping wheat to Europe have proved that wheat can be shipped in bulk, and when the Nicaragua canal is completed we may expect to see the larger portion of the wheat exported from the United States shipped from the Pacific coast ports.

The question of cleaning our wheat for market is a very important one in several respects. It is often urged, and is at present in a great measure true, that our prices are based on what is called Walla Walla wheat, which means just as it is threshed, without recleaning, and that if we should clean it, we would not receive any better price and would lose just the amount cleaned out. That would only apply at all to Portland and Puget Sound markets; and there is no good reason why, with a careful selection of the best varieties of seed wheat and the practice of cleaning being universal, that our wheat should not grade with Willamette valley wheat in the market, and in our local and Eastern markets it would make a very material difference. In one instance coming under our notice, by docking from one-half pound to one pound per bushel, the grade was raised from seven to eight cents per bushel.

We believe the best place for cleaning grain to be shipped is at the shipping point, where the grain is being delivered to the elevators, thereby saving quite an item of freight and insuring a more uniform grade, and thus avoiding the pretext for rejecting.

And right here we would urge the necessity for State weighers and inspectors. Our experience has taught us that exporters, left to do their own inspecting, manage to enlarge their profits at will at the expense of the farmers by grading too low. With State inspection and weighing, a farmer could feel perfectly safe in consigning his wheat to a responsible commission merchant for sale.

The plan of cooperation in storing and selling grain is of great value to the farmers, inasmuch as it gives them the advantage of knowing just what their grain is worth on the market, and enables them to obtain full market value, besides the saving in storing and handling charges. We hear and read a great deal about gambling in grain, and a bill has lately been introduced in Congress to correct the abuses of Board of Trade dealings, and we hope such laws may be passed that will effectually prevent speculators selling large quantities of grain which they do not own nor expect to deliver, thereby depressing prices to the farmers until they get the larger portion of crops in their possession and then raising the prices to consumers, thus robbing the farmer on the one hand and largely the poor laborer on the other.

The question which probably perplexes the farmer more than anything else is the time to sell. Even before the crop is planted the intelligent farmer begins to look ahead to see, if possible, what the prospects are for prices for the coming crop; whether the outlook justifies a larger or smaller area of the different varieties of grain. Here we see the need of a bureau of information separate and distinct from that given by the Boards of Trade and speculators.

This the agricultural department of our Government is intended to accomplish, but at present the knowledge to be obtained from there is not sufficiently published. Bulletins should be published monthly at least in all the leading newspapers, that both the farmer and consumer may know all the facts appertaining to crops and probable prices, at different periods during the year. Until we are able to obtain such information, we will have to depend on such knowledge as we can obtain and our own best judgment.

One thing that is highly advisable, as a rule, is not to borrow money at a high rate of interest to hold grain. In certain cases it might pay to hold, as when prices are reduced by too much grain being offered; but in a great many cases it is akin to gambling.

Potato-Growing at the South.

Potato growers in all parts of the State will be interested in the following review of the southern situation as traced by the Los Angeles *Times*:

For a short period during the spring, Southern California can ship early potatoes East at a good profit, as they arrive there before any others are in the market, and consequently command high prices. The season generally extends from middle of May to end of July. After that, potatoes begin to arrive in St. Louis and Chicago from Arkansas, southern Missouri and Tennessee, and in New York and other Atlantic coast cities from Florida. Shipments of this character from Southern California have been made during the past four years. This year the land along the Mississippi, where early potatoes are grown, has been flooded, which will make the Eastern crop later than usual. At the same time the Southern California crop is late. Unfortunately the early potatoes shipped so far this season encountered the short hot spell and were "cooked" before they started, arriving in bad condition.

Last year was also a late season in Southern California, in consequence of which the later shipments came into competition with the early Eastern potatoes and the shippers failed to make money. As a result of this there was the usual reaction and this year will not see more than one-tenth as many potatoes harvested as were grown in 1891, the benefit accruing to those who had the courage to plant.

Last winter, during the cold spell, some potatoes planted in low lands were frosted, but most of them were replanted and will come in later.

It is the general impression that the potato business is largely in the hands of Chinamen, but this is an error. Probably not more than 20 per cent of the shipments from Los Angeles are made by Chinamen. The report that there is a combination among Chinese growers to ship direct to eastern points is also baseless, being founded on the fact that one Chinese firm ships direct to its representatives in Chicago and St. Louis.

Those who desire to make money by growing potatoes in Southern California should note the following points:

Suitable land should be selected which is not subject to severe frosts. Upon such land two crops a year may be grown in the following manner. The first crop should be planted in January or February. It will come into market in the early part of May, in time for the first Eastern shipments. Care should be taken that the potatoes are thoroughly mature and the skin firm when shipped, or they will turn black and heat on the road. The second crop may be planted in May or June. This crop takes longer to ripen, the tubers growing more slowely during the hot weather. It will be ready in September or October for local consumption, when the Los Angeles market is bare and potatoes are being shipped in from the north.

Scarcely less important than the question of when to plant is that of what variety of seed to select. It is a curious fact, which has been fully proved, that local seed gives out after the first year, so that, in order to grow fine, large potatoes, the seed potatoes must be imported from the north. Possibly the home seed may produce a fair crop the second year, but after that it is sure to deteriorate and yield small tubers. Lack of knowledge of this fact has led to much loss on part of some growers. As a fine variety of large potatoes, grown from imported seed, will always command at least 15 cents a hundred pounds more in the market, it is evident that the small difference per acre in cost of seed should not be considered.

The varieties recommended in this section are, for the first planting, Early Rose and Burbanks, which command the highest prices in the Eastern markets, and for the second planting Burbanks, which are good keepers.

Commission men say that the Chinese who are in the potato business are, as a rule, more successful than their white neighbors, as they study the market closely and do not hesitate after they have made up their minds. They pay the market price for seed and get their crop in early, while many white men lose a profitable market by haggling and waiting for a drop in the price of seed.

The potato market just now is glutted, on account of the rejection at Chicago of forty carloads, which were shipped from Los Angeles in a too green condition, and encountering a warm spell, as mentioned above, became heated and spoiled. Plenty of potatoes may now be had at 45 cents a hundred pounds, in carload lots, but this condition of affairs is only temporary.

As to the yield and profits of potatoes, a great variety of figures might be given, depending on soil, time of planting, variety, market and other circumstances. A good average yield is 125 sacks to the acre, averaging 110 pounds to the sack or 13,750 pounds, which should bring an average price of 75 cents a sack, or $107.25 per acre gross, for one crop, and $214.50 for two crops. The cost of production should not be over half of this, leaving the gross receipts for one crop as net profit. Land in every way suitable for potatoes can be had, within 20 miles of Los Angeles, at from $100 to $150 per acre.

Some potatoes are being dug in this section by a machine which costs $225 and saves the labor of seven men.

At Westminster, in the remarkable peat soil section, they have a variety of potato known as the "Early Blush," which yields from 225 to 250 sacks to the acre. This variety has, however, a very deep eye, causing much waste in peeling, and is therefore not very popular with consumers.

The trouble is that there is too little system in the business. A high price one year sets every one to planting spuds, and the next year there is, of course, a glut. Those who study the market and plant the right variety at the right time will, barring accidents, always make money. Potatoes, which are now selling at 45 cents, have been up as high as $1.40 this season, and will, in all probability, soon be there again.

TRACK AND FARM.

District Horse-Breeding.

In another article we have drawn attention to the fact that there is practically no supply of the stylish, heavy draft teams, for which such a brisk demand at high prices exists in large cities like Chicago. In that article the cause for this lack of supply is alluded to, and we shall now briefly suggest a remedy. We are of the opinion that the time has arrived for systematic work in the breeding of draft horses. There has, up to this era of the horse-breeding industry, been a sad lack of system and persistency. Lack of discrimination, want of faith, and a desire for new things, has led to a vascillating policy among owners of mares, the consequence being that there is scarcely one district where a buyer may always confidently count on finding horses of the type and blood he requires. The push of the stallion importers has placed horses of different breeds in almost every village throughout the West, and these horses have been used indiscriminately in succession as they arrived on the breeding ground. Had each locality stuck to the improved breed first used therein, to-day would have found a stock of high-graded horses for which the demand was constant and remunerative. As it is, however, a race of much-mixed mongrels and misfits has been produced with which the market is glutted, and for which the demand and prices are indifferent. The time has arrived, as we have said, for systematic breeding that shall counteract the faults of the past and bring about real progress in the future.

In every horse-breeding locality an association of breeders should be formed. A vote of the members should be taken to determine the most popular breed. A stallion purchase-fund should be subscribed and a committee appointed to select and buy the best horse of the desired breed that can be obtained for the money in hand. The stallion so purchased should then be used exclusively among the mares of the members at a stipulated fee sufficiently large to pay expenses and a good rate of interest on the original investment. If there are a sufficient number of mares among the members, no outside business will need to be done, but if not, a few selected mares may be bred for outside parties at the usual service fees. It would be a better plan if, as in Europe, a stallion could be hired by the association for the season, and we are coming to that just as surely as the plan has been found necessary abroad. In order to make the latter plan feasible, it would be necessary to hold a district or State stallion show each spring, at which the delegates from each breeding society could choose a stallion for the season's breeding. In Europe the stallions are hired in this way: A premium of say $500 is paid for the use of the horse in the district wanting him, and over and above this, the owner is guaranteed a certain number of mares to be bred at a stipulated fee at time of service and another when proof of pregnancy is complete. The result of this plan of breeding has been remarkably satisfactory. Each district has sought to procure the best horse; each member has been led to breed continuously in line to the same breed, and to-day the progeny are, as a rule, of very high class and value. There is nothing to prevent the success of a similar plan of breeding in this country, and such a plan would seem to be absolutely necessary in view of the present condition of affairs. Indiscriminate breeding should cease at once; breeding in line should be introduced and persisted in. The result will be a wonderful improvement in our horse stock, and each district becoming known as a place where a certain class of stock can be found, will be visited by buyers who will give remunerative prices for good stock. When one man in a district is carrying on breeding operations alone, he finds it difficult to match his horses, and a single good horse does not bring its real value in the market. Where a community is engaged in the breeding of one class of stock, it is a comparatively easy matter to match teams, obtain the full value and divide the proceeds.

Farmers throughout the country have wasted long years of work in trying every new horse that entered their district. The time has come for each district, or township even, to decide once for all which breed they will favor, and this done, stick to it and breed up until a steady supply of really good horses of one type and quality has been produced. This matter demands earnest consideration at the hands of all interested in the breeding of horses.—*Farmers' Review.*

The article referred to deals with the subject of the small supply of first-class draft horses in the Chicago market, that is, of horses with weight and quality combined, and goes on to speak of the great difficulty there is in buying well-matched teams of horses weighing 1600 and upward, that are perfectly sound, with good style, action and symmetrical form, such teams selling readily for from $400 to $600 and upward.

The same difficulties obtain in the San Francisco market, so do something like the same prices; but here as there the supply of horses that do not come up to the above standard are plentiful enough, while those of still smaller size and inferior quality are so plentiful that they injure the market for the fairly good quality of draft horse,

and thus have an ultimate effect in depressing prices for a still higher grade.

For this state of things, breeders are to blame, in a great measure, for not breeding better horses all round, and fewer of them, which latter would be fully compensated for by the higher price obtained for each animal.

Two fairly good ones are at any time worth three inferior animals, while one that is well-bred, well-fed and consequently well-developed and symmetrical in all his parts will generally sell for more money than three or four of the inferior sorts will bring, coupled also with the advantage of less cost in both feed and trouble. Let it be remembered, however, that it requires good feeding to keep the best breeds of horses from degenerating.

The *Review* sums up the whole matter by concluding as follows:

The market is glutted with indifferent draft horses lacking weight and quality. Prices, consequently, are kept constantly low, and will remain permanently so while this class of stock constitutes the supply. Breeders have themselves to blame for this unhappy state of affairs. They have lacked persistence in breeding; have commenced with native mares, crossed them with a pure-bred draft horse one year, and, like as not, next year have bred to a coacher, a trotter or a draft horse of some other breed. In short, they have been experimenting, and, as a rule, are no further advanced than they were at the start. They have sold the females of the first draft cross, instead of keeping them and breeding continuously to the original breed. We repeat with confidence that profit is assured to any community of intelligent farmers who will commence breeding their mares to a first-class heavy-draft-stallion and stick to the business. The fillies should be retained and bred again to the same breed. A good stallion should be kept in the district and changed whenever necessary. The colts should be properly fed from the start, so as to give them the necessary size and weight at marketable age. They should be broken in matched teams and sold always at a stated age when looking their best. It costs little more to raise a good horse than it does to feed a steer. The profits are greater in raising the horse, but many farmers miss it by not feeding the horse well, while they glut the steer.

RURAL IMPROVEMENT.

The City of the Angels—Climate, Progress.

Products and Wealth of Southern California.

LOS ANGELES, June 15, 1892.

TO THE EDITOR:—When, in 1780, the Jesuit priests, traveling north from San Diego in search of suitable sights for towns and Missions, came to the spot where stands now the city of Los Angeles, so favorably were they impressed with the beauty of the scenery, the richness of the soil, and the excellence of the climate that they made a halt, determined to found here a city, planting also a Mission near by. Usually a new settlement of this kind was called a *pueblo*, meaning a town or village, but upon this was bestowed the more dignified term *ciudad* (city), it being thought that it would, because of its great natural advantages, soon reach metropolitan proportions. So paradisiacal, indeed, seemed the place and its surroundings to these holy men, that they did, in the first instance, call the town *ciudad de la Reina de los Angeles*—the city of the Queen of the Angels! and although this title required a little *razeeing* to adapt it for practical use, how supremely lovely, how almost divine, must everything here have appeared to have caused these somber and prosaic monks to confer on the new city a name of such beatific significance! True, this drawing on the angelic host for a name may to some savor of profanation, yet to one who has long lived in this delectable land such act seems not irreverent, nor does this singular name seem farfetched or grandiloquent! The climatic conditions on "the other side" may be superior to those that here obtain, though I don't see any need for it.

And how little, after all, did these Spanish Padres comprehend the resources of this region or divine its future. Of these they remained all through the era of Mission rule almost as ignorant as the aborigines themselves, nor did these resources become more than partially apparent to our own people until many years after they had taken possession of the country. Only after much experimentation, made with care and distrust, did the thrifty and practical American come to find out the capabilities of this soil and climate. The olive and the vine, including a few other fruits and the more common cereals and vegetables, comprised about all that was grown by the pioneer inhabitants of this Southern California, for the successful cultivation of these irrigation being deemed necessary. But gradually were sowing and planting extended from the alluvial bottoms and the naturally moist soils to the higher lands, and finally the dry mesas, and even into the mountains themselves, for many localities there are in the latter where both orchards and vineyards do well.

And, just as they have enlarged the area of land adapted for tillage, so have the soil products been added to until they cover now as wide a range, perhaps, as in any other country on the earth. In growing and maturing the apple, the plum, the mango and the banana, as has been done here, the extremes of the vegetable kingdom would seem to have been brought very near together; nor in raising and perfecting the products of zones so far apart need one be very particular in the choice of localities, so extreme elevation be avoided. The pineapple ripens almost anywhere here, while on the beach at Redondo stands a full-bearing banana tree, with the ocean spray well nigh dashing over it.

As the material resources of this county have thus been multiplied, so have its economic pursuits been increased in number and varied in kind. Besides fruit and grain-growing in all their branches, many special industries have sprung up, and, although the most of these are yet in embryo, the major part of them promises to reach large proportions in the early future. Indeed, this people seem animated with a purpose of doing nearly everything in a large way! Their ambition is of the expansive kind!

They plant the sugar beet by the thousand acres, and set out fruit trees by the million, and ship away oranges by the hundreds of carloads. The vineyards, the wineries, the apiaries and the dairies are apt to be large, some of the grain fields being of imperial dimensions. On the Domingo Ranch there were raised last year 120,000 sacks of grain. This being one of the few places in California where Indian corn grows well, great quantities of that cereal are raised here annually. Wool is here a great staple, the vast flocks of sheep being mostly of the better grades. Neat cattle and horses are numerous, many of these being also blood animals. The increase of wealth here has of late years been very rapid. The property valuation of Los Angeles amounts now to over $70,000,000, there being only two counties in the State—San Francisco and Alameda—that outrank it in this respect.

By reason of these diversified crops and multiform industries, there has come to be here a perpetual ingathering, one harvest succeeding another the whole year round. Most vegetables are always in season, growing equally well winter and summer. In the spring come on the earlier fruits and berries, then the hay followed by the grain harvest, with the later fruits and berries all through the summer; then the work of the vintager, the gathering of the sugar beets, the olives, etc., the citrus fruits being picked in the winter.

Not by any means do the branches of business above enumerated comprise all that have here obtained a foothold. There are twice as many others, some of them, such as the petroleum, mining and lumber interests, being of great importance. And of the industries most advanced, none have as yet reached their full growth or anything like it. There is, in fact, even for these, room for great expansion. There exist in Los Angeles thousands of acres of tillable land that have never been disturbed by the plow share. As for her mineral resources, these remain comparatively virgin. When, as will happen in the future, all the life-sustaining capabilities of this county shall come to be utilized, it will be able to subsist more than a million inhabitants in health and comfort.

There prevails an opinion that the material progress of this county received two or three years since a general and disastrous check. This, however, was the case with only the city of Los Angeles, which, having for a while grown too fast, met with a considerable setback. From this the place has now nearly recovered. Building is again active, and the prices of real estate have of late undergone much improvement, while the volume of general business transacted seems to be larger than ever before. The value of the buildings erected in this city last year amounted to nearly a million and a half dollars. The shipments East by rail exceeded half a million tons, there being included in this 17,000 tons of potatoes and other vegetables. The overland travel has been greatly increased; also traffic coastwise, the imports by steamship having been last year for the first time larger at the new port of Redondo than at San Pedro, the former having already absorbed a large portion of the shipping trade that before went to San Pedro.

Of all the towns that have lately sprung up in this south country, none has had such quick and solid growth as Redondo. Though hardly more than three years old, the place contains one of the finest hotels on the Pacific coast, both as regards size, equipment and location. Occupying a height with gentle declivity, it looks out on the ocean to the west and eastward on a vast expanse of low, undulating hills, dotted with villas, vineyards, gardens, orchards and dreams of woods. Though so young, it has first-class water works, with church, school, and other public buildings, stately and costly. Capacious and substantial wharves have been built here, with water so deep that the largest ocean-going craft can, at all stages of tide, lie up to them; also two railroads connecting the town with Los Angeles, 18 miles distant to the east. Coast steamers and sailing vessels from all parts of the world put in here to discharge and take on cargo, which can be done with safety every day in the year. The place is growing rapidly in both business and population, a considerable percentage of the latter consisting of guests at the hotel, which is filled with visitors both winter and summer. In the elegance and completeness of its appointments this hostelry is not surpassed by any like establishment in the world. The beach in front of this hotel affords the finest salt water bathing, the air here being, for three-fourths of the year, clear, warm and balmy and the sea ever halcyon.

It has been sneeringly said that the land owners of Southern California, when negotiating a trade, sell the *climate* and throw the land in! And why not? Certainly the thing sold has been what the buyer most stood in need of, and worth all he has paid for it! What should a climate like this be worth to the invalids of other lands who come here seeking escape from death? What to the inhabitants of storm-swept Kansas and other sections of the Central West who venture from their cyclone cellars only long enough to bury their dead? Seeing the extent to which human life is elsewhere imperiled through exposure to tornadoes, floods, tempests, etc., it seems strange that more persons are not moved to come to this country through considerations of personal safety.

H. DEGROOT.

Mendocino County Notes.

TO THE EDITOR:—In a recent three weeks' trip through Mendocino county, the writer took occasion to look into its horticultural and dairy resources, with a view to furnishing a few notes for your readers. In forming general estimates on these subjects I have been greatly assisted by your sometime correspondent, Mr. Carl Purdy of Ukiah, whose quaint courtesy was unfailing. This gentleman is brimful of interesting facts which he has literally dug from the soil during years of practical experimenting in this picturesque region. As is well known, Mr. Purdy's special hobby is the collecting and propagating of native bulbs and plants, in which he has been phenomenally successful. His extensive exportation of bulbs, especially of the numerous varieties of calochortus, has made him the source of supply of all our large city florists, who in turn ship them East and to Europe.

The leading horticultural industry of Mendocino is the growing of hops. In fact, this county is only second to Sacramento in the output of this crop, while in quality the hops raised along the Russian river are given precedence to any produced on the Pacific coast. An acre of vines in Ukiah valley will annually produce a ton of dried hops, and the average price received during the last 15 years is 22½ cents per pound.

There are 600 acres of hops in the vicinity of Ukiah, and 18 kilns scattered about the mellow bottom lands of the river. This season is very backward, owing to heavy spring storms. In the last week in May there were only a few of the vines sufficiently advanced to start up the poles.

In late years many of the hop growers of Ukiah have added small orchards to their plantations, the majority of the trees planted being prunes and Bartlett pears. The kilns are utilized for the drying of the surplus fruit, thus making an appreciable saving in the labor and expense of handling the crop. With the exception of apples and pears, a great deal of fruit has heretofore been brought into this valley from adjacent counties. The thrifty young orchards now coming into bearing will do away with this necessity in the future.

Five years ago several of the older residents, among them Judge McGarvey, set out a number of acres to prunes which have since proved so profitable that others have followed their example. The prune and Bartlett pear are the only fruits raised here with a view to shipment. They are undoubtedly peculiarly adapted to the soil and climate conditions of Ukiah valley. On the other hand, apples raised in the valleys following the Russian river are liable to sun bake which seriously impairs their keeping quality and thus materially lessens their marketable value.

In the redwood belt of Mendocino, on secluded clearings and in high mountain nooks, the peach, nectarine, cherry and apple, attain a perfection of flavor not possible to the same fruit grown in lower altitudes. In August of last year while spending a memorable day in the heart of the redwoods a few miles beyond Orr Springs, I remember stumbling upon a small home-orchard which bore the most delicious strawberry perches I ever ate. Speaking of peach growing in Mendocino, Mr. Jerry Donohoe says:

"There is any amount of high, uncleared land where the soil is black and covered with the white thorn that if one has the patience to grub it out and plant to fruit, especially peaches, it will produce the finest varieties. All these ridges a few miles out from Ukiah can be had for ten dollars an acre, and the timber will pay for the clearing. I would rather have this bench land for orchard purposes than the best of our river bottom at a hundred dollars an acre."

The apricot cannot be raised in this section of the State, but there are mountain localities where the fig and olive thrive, and in certain foothill districts exceptionally good grapes are grown. The owner of one small vineyard a few miles from Ukiah sells 6000 gallons of wine annually, and boasts that he never parted with a gallon short of his regular price of 75 cents. One of his best customers is a San Francisco priest, who ordered 350 gallons of wine from this vineyard last season.

Striking across to the coast from Ukiah, the southern route traverses Anderson valley, one of the loveliest portions of the county. The Navarro river runs the entire 17 miles of its length, and every foot of the soil is rich with cultivated fields and orchards. This narrow valley is hemmed in by colossal mountain chains whose primeval forests have thus far escaped the devastation of lumber corporations, and even the tan-bark hunter finds a market too remote for him to ply his vocation other than in a desultory, half-hearted way.

The people of Anderson valley, while trusting to the wealth of their forests to bring them a railroad in the near future, have shown their enterprise by erecting evaporators to dispose of their extra fruit. Their nearest point of shipment is Cloverdale, 30 miles from their central town of Boonville. Large quantities of the produce raised hereabout are also teamed direct to the Greenwood Mills on the coast, where hundreds of men are employed in taking out the redwoods.

South of Greenwood the entire Pt. Arena country is given over to dairying. For miles following the abrupt and rugged seawall, the high green country billows back to the pine-steepled range fronting the broad Pacific. All this intervening land furnishes an unrivaled pasture throughout the greater portion of the year. The heavy fogs and cool winds keep the grass green far into the summer, when the vast fields of Belgian carrots and mangel-wurzel beets are then fed out to the contented cows. These cattle are mostly of the Jersey breed.

Various processes of butter-making are employed at these Pt. Arena dairies, but the majority make use of the latest inventions in machinery for separating the cream, the skim milk being afterward fed to droves of fattening hogs. The business is almost wholly in the hands of Americans, there being but few Swiss and other foreigners engaged in butter-making there. Last year's shipment of butter from Pt. Arena to San Francisco reached as high as 150 tons, while immense quantities were also sold to the lumber camps up and down the coast.

A few miles back from the sea fruit is grown, the apple pear, plum and cherry doing better than other varieties. As for small fruits, I have never seen such rank, productive growths of wild raspberries, blackberries, huckleberries and currants as cover miles of these Pt. Arena foothills. This unlimited berry field is yearly thronged with campers from the interior, who pick and can on the grounds their winter's supply of berries.

NINETTA EAMES.

OLIVE OIL PRODUCT.—The largest output of olive oil from any one orchard in the State is from that of F. A. Kimball of National City. Last year from 12,000 to 14,000 gallons were pressed at this establishment. Twelve tons of pickled olives had been put up at Mr. Kimball's works when the season closed, about the middle of April. Mr. Kimball has sent his foreman, Mr. Gaddi, to Italy to get further information on olive oil making and pickling, and he will be absent until October.

THE HOME CIRCLE.

Good-by, God Bless You!

I like the Anglo-Saxon speech
With its direct revealings;
It takes a hold and seems to reach
Far down into your feelings.
That some folks deem it rude, I know,
And therefore they abuse it;
But I have never found it so—
Before all else I choose it.
I don't object that men should air
The Gaelic they have paid for,
With "Au revoir," "Adieu, ma chere,"
For that's what French was made for;
But when a crony takes your hand
At parting to address you,
He drops all foreign lingo and
He says, "Good-by, God bless you!"

This seems to be a sacred phrase
With reverence impassioned—
A thing come down from righteous days
Quaintly but nobly fashioned.
It well becomes an honest face,
A voice that's round and cheerful;
It stays the sturdy in his place,
And soothes the weak and fearful.
Into the porches of the ears
It steals with subtle unction,
And in your heart of hearts appears
To work its gracious function;
And all day long with pleading song
It lingers to caress you.
I'm sure no human heart goes wrong
That's told, "Good-by, God bless you!"

—Eugene Field.

A Waiting.

Written for the RURAL PRESS by MARY E. BAMFORD.

A white artist had planted his easel at one end of the little Chinese fishing village, and he was beset by jabbering Chinamen, who looked over his shoulders and talked about his efforts. Outside the barbed-wire fence, upon the rocks beside the water, Miss Agnes sat drawing, too, in her sketchbook.

She looked up. Between her and the woods, on the road at a distance from the beach, passed a Spaniard on horseback, his red neckerchief, his blue shirt, his old hat, his ancient, large-sized stirrups showing plainly enough from this point of view.

Miss Agnes hummed as she sharpened her pencil. She would have hummed in Chinese, in order to be in sympathy with her surroundings, if she had known anything of that language. As it was, she hummed the only Spanish couplet she could think of at the moment—

"A wight of mlght
Is Don Money, the knight."

"*Poderoso caballero*
Es Don Dinero."

She pressed her pencil against a rock and reduced the lead to a mere point, as she hummed Francisco Gomez' couplet again and again.

A burst of Chinese syllables came to her over the barbed-wire fence and the roofs of the huts. She stood on tiptoe on top of the rocks and looked. The Chinamen around the artist were jabbering vigorously and gesticulating. Evidently ideas of art were being stirred in their minds, but whether the Chinamen admired the artist's picture or not it was impossible to tell. Miss Agnes was glad that they did not know that she was sketching, too. She sat down again in her rocky corner, and began her work once more.

"*Poderoso caballero*
Es Don Dinero,"

she hummed in unison with the splash of waves. She turned in her seat and looked back. Along the path by the rocks came a woman, walking slowly. Her hair was white, but her eyes were brown and vivacious still, in spite of their eighty years. Grandma Eaton would always be young.

"How do you do?" Agnes called.

The traveler halted and looked up.

"Well, well!" she said. "Is that you, Agnes?"

The younger woman held out her hand and helped the older one to a place among the rocks where the sun shone down warmly.

"How do you do?" asked Agnes, again.

"I'm well, well, thank you," said the old lady, cheerfully. "I don't see but I'm as strong as I was ten years ago. I didn't know anything all night. It's such a blessing to sleep so. Go to bed; no pain; no ache; nothing to worry me. My Heavenly Father's good to me. I remember when my daughter first come out here to California and found me, she wrote back to the folks East, 'Mother's all packed up and ready to go to heaven any time.' But I'm here yet."

"I hope you'll be here a good while yet," said Agnes, softly.

The old lady laughed a little.

"That's what they all tell me," she said, in her happy voice. "They make me think of that verse—

'Blest be the tie that binds
Our hearts in Christian love;
The fellowship of kindred—'

How does that go?"

"'The fellowship of kindred minds
Is like to that above,'"

repeated Agnes.

"Yes," said Mrs. Eaton, "that's it. I keep all those verses in my mind, ready to think of them."

There was a moment's silence. The splash of the water on the beach came to their ears. Some Chinese children went down on the sand to lie there and hunt for shells.

"I haven't brought any work with me," said Mrs. Eaton. "I always was a steamer to knit, but I guess I'll have to talk instead. It always comes so handy for me to talk when I've any one to talk to."

Agnes laughed. The boat with its crane was growing beneath her fingers. Some of the odd roofs of the Chinese shanties and some of the strings of fish showed in the background.

"Your daughter must have been glad to come to you," she said. "You and she always seem to think everything of each other."

"Oh, well, a mother's pride is very innocent," said Mrs. Eaton. "That's what I always used to tell my husband when he and I thought too much of Percy. "Yes, a mother's pride is very innocent."

"Who is Percy?" asked Agnes. "I don't think I ever heard you speak of him."

"He was my boy," said the old lady. "He was a beautiful, black-eyed, little fellow, just one of these children you read about, too good to live. But he was beautiful. Everybody noticed him."

Agnes, looking down at the old lady's face, more than ordinarily comely still, could well believe in the beauty of the little boy.

"When we come to California we were in the lumbering regions," went on Mrs. Eaton, "and one day Percy went to the mill and they thougbt he got a piece of bark in his throat. He came running to me kind of choking."

"Well, after that he seemed to be better; but all the time I was certain there was something the matter with his breathing. And it worried me so, and got to be so bad, that finally I took him on the stage to go to a hotel where the surgeons were to be. Well, that child"—the old lady paused to clear her throat—"that child would draw in his breath and sing. Everybody on the stage thought he was such a fine boy, and they said, 'O, it's such a pity for anything to be the matter with a boy like that.' He had learned to sing of his sister 'Jillie,' as he always called her. 'Ma,' he'd say to me, 'I learn best when I look Jillie right in her eye.' Well, I took him to the hotel and gave him to the surgeons. They were going to cut into his throat and remove the bark, you know."

"O!" said Agnes, horrified.

She stopped drawing and sat looking down at the face below her. She knew the old lady was living the scene all over again. She "gave him to the surgeons" once more.

Mrs. Eaton's voice recommenced.

"'Now,' I said to them, 'I suppose you don't want me.'

"'No,' they said.'

"Percy looked up at me.

"'Ma,' he said, 'where you go?'

"Well, I hurried the length of the hotel to my room, and there I lay on the bed in the awfulest agony that ever was. I knew I shouldn't ever see that child again just as well as I knew it afterward.

"By and by one of the doctors came and knocked on the door. I went to it and I said, 'Doctor, I know that child's dead just as well as if you told me.'

"'Yes,' he said, 'he's dead.'"

The old lady's voice stopped a moment, but she did not cry at all. There might have been the faintest quiver of the firm mouth, but it was the girl on the upper rock before whose eyes the white sands and the blue waters blurred. The clear brown eyes below had shed all their tears years ago.

"The surgeon had cut into his throat, and his breath just left him," the voice went on. "The surgeon cut in and blew just as hard as he could, so as to bring back his breath, but he never breathed again."

"O!" said Agnes. "O, you *poor* thing!"

Mrs. Eaton looked at the girl.

"There I was," went on the old lady, "with no friends in the hotel, no one I knew but the doctor. But the landlady was kind to me. I came into the room, and 'Oh, my child!' I began, and she come to me and took me right away. Wouldn't let me stay there."

The waves splashed upon the rocks behind the two. Sounds of Chinese jargon came from the little fishing hamlet before them.

"Well," said the old lady, "it seemed as if I couldn't stand it anyway in the world, but I determined I wouldn't go crazy. We had a little house where we lived, with a quilt hung up to hide the bed and such things, rough, the way they used to build in old times. The mill hands used to all come to our house to eat, and one man had a lot of these California canaries in a cage—beautiful they were—and I says to him, 'What you going to do with those birds? The mother bird won't feed them much longer? He says: 'I'll give them to you.'

"We'll, I couldn't set still, and I used to go round gathering grasshoppers by the hour for those birds, just to take up my mind so I wouldn't think of Percy."

There was a little pause.

"And then," the old lady went on, "a man brought along a puppy. He wasn't much account. We wouldn't have thought much of him in Illinois, but puppies were scarce out here, and law! I paid him five dollars for that puppy. I hadn't ever had pets, but I wanted something to take up my mind, and I gave Jillie that puppy. She missed Percy so. There wasn't but a few years between them, and she'd always taken care of him. We called the puppy 'Sport,' and we had a kitten, and—you ever seen a kitten and a puppy play? Well, we had such sport. He'd chase the kitten, and I'd catch the puppy and say, 'You! Sport, you!' and I'd throw him as fast as I could, and he'd lie still, pretending he was dead."

The old lady chuckled at the recollection, and Agnes, looking at her, marveled at the vivacious manner that treated the years as if they were nothing.

"Well," said Mrs. Eaton, with a little laugh, "next Mr. Eaton bought a pig for a hundred dollars, and there were so many little pigs that there was one she couldn't tend to, and he brought it in and I took care of it. It was the cleanest little thing, little white pig. We washed it, and the men used to come up evenings. We had a long board table, and they'd sit around it, and such fun as the men had with that pig! They hadn't anything else to amuse themselves with, and they named it 'Betty,' just to plague me, because that was my name.

"'Here, Betty! Betty!' they'd call, and the pig'd come. The men'd shove up the window and throw the pig out in the snow, just to see me go after it. It used to follow me everywhere I went, and the neighbors would say, 'Here comes Mrs. Eaton and her pig.'

"By and by the creature got so it would root, and then it had to go outdoors. I wouldn't keep it in the house after that. She'd go outdoors for sugar. Pigs are very fond of sugar. I'd say, 'Betty, go outdoors,' and the creature'd go down on her knees and smack her lips, so."

Mrs. Eaton made a noise, putting her lips together.

"She'd go if I gave her sugar," said the old lady with a little laugh.

The cheery face was alive with the recollections of past years. Presently it sobered a little.

"And so," she said, rising with a half sigh, "and so such things took up my mind, and the time went along. I try to be reconciled."

Agnes looked at the cheerful face that never seemed to have sorrow with which to sadden others. It all must have happened thirty or more years before, perhaps forty, and yet it was all fresh in the mother-heart still, as if it had been only a few days. The sharp pain of the first was over, but she missed her little dark-eyed boy still.

"You will see him again before so very many years," Agnes said softly.

"Yes," said Mrs. Eaton cheerfully, "yes."

Her eyes were on the splashing waves, but her thoughts were elsewhere.

"What must it be to be there?" she said.

Some Humane Hints.

Written for the RURAL PRESS by CLARA S. BROWN.

Are you sure that all the domestic creatures about your premises have access to plenty of water these warm days? Dogs, cats, chickens and birds drink frequently when they have the opportunity, which too often is not given them. There is a coal oil can sunk under a hydrant in our back yard which is kept full of fresh water, and many animals besides those belonging to us appreciate it. Tired dogs drink their fill, and it is a pleasure to watch the birds chirping around it and dipping into it. Sometimes, after dark, toads come out from their hiding places and take a bath in it. I saw one once immersed to his neck and hanging on to the edge of the can with his forelegs, looking as if the height (in this case the *depth*) of earthly bliss were reached. Don't forget to keep the water dish full.

Is it necessary, do any of my readers think, to shoot every strange cat that comes on the place? I know persons who are in the habit of doing so, and I have just been deprived of my special pet for the last three years in this manner. I know how annoying cats can be sometimes, but I should never think of killing one not my own. A cat or dog is property as much as a horse or cow is, and I maintain that no person has a right to shoot them, even on his own premises. My great gray Tom had been so treated that he was nearly human. His company and affection were worth a great deal to a lonely woman. I hope the young man who took him from me will never feel so badly over the loss of any of his possessions as he has caused me to feel, and I doubt if he ever can—his heart cannot be tender.

Why is it that parents do not more universally suppress the cruel streak which is visible in many children, especially in boys? It might be educated out of them if they were early trained to be humane. It seems to me that I could not bear to have a boy robbing bird's nests, tormenting cats, firing stones at dogs, hooting at Chinamen or anyone else, and that if I did not get such propensities out of him it would not be from lack of endeavor.

Oh, I know "boys will be boys," and we don't want them to be "sissies." They do not stop to realize what they are doing, and their parents do not appear to give any heed to it. Inhumanity should be explained to them, and the responsibility that God gave us when he made dumb creatures subject to us. In babyhood this teaching should begin, in degrees suited to the developing mind. I do not know why it is, but childless people often see these things when parents do not give them a thought. They are told by impatient mothers that they wouldn't do any better themselves, and they don't know what they are talking about, but the spirit of maternity is not always the strongest in those who bear children, and neither is the feeling of humanity gauged in that way.

There is a two-year-old girl in this city who has a mania for crushing little chickens in her hands, and the child's mother gets one of the downy things every day for her cruel amusement. Why cannot that mother see that she is fostering brutality in her child and laying up trouble for herself, even if she feel no pity for the poor chicken? Some day this murderous instinct may show itself in a terrible manner.

I heard another mother say that she wanted to get a kitten "for the baby to mawl around," and in the same house a puppy had just been done to death by childish hands, and the mother laughed when she told of it.

A nine-year-old boy with a "B. B." gun shot out one of our little dog's eyes a few months ago, and has killed no end of birds. If parents give their children such implements of destruction, I think they should forbid their being used to destroy or injure innocent life.

Last week the Los Angeles papers reported "the most ferocious fight on record" between two dogs, set at each other by "eight young men," who watched the contest in a state of "terrific excitement" and with "bated breath." Which were the most brutish, the dogs or the men? I certainly respect the dogs the most, for they did the best they knew how. A good dog is a more worthy friend than such libels on real manhood can be. If I were a society girl I would make it my business to find out the names of those "swell" young men, and if they proved to be acquaintances of mine I would quietly assure them that I did not associate with persons of that calibre.

Hold yourselves above coarseness and inhumanity, girls, and you will help to raise the social standard. Cock fights are another "amusement" that the "sports" of Los Angeles indulge in behind lonely barns. A writer, whose name you would recognize if I should repeat it, said, in my hearing, that she would rather go to a bull fight than to the best opera that ever was written. She knew what bull fights were, for she had lived in Mexico. Let us think a little more of the barbarity in our own country when the need of missionary work in foreign lands is urged. It is bad enough for responsible beings to pummel each other until they are nearly dead, and shameful enough for crowds of civilized (?) people to enthusiastically witness the bloody sight, and for thousands more to eagerly read columns of description in the newspapers. The worst brutality is reached, however, when speechless creatures, dependent upon man, are made to tear each other in pieces while "superior beings" revel in "terrific excitement" thereat.

San Francisco Fashion Letter.

SAN FRANCISCO, June 15, 1892.

DEAR DAISY:—This month has shown nothing strikingly new in the cut of dresses and jackets, but some of the new summer goods are original and beautiful. The newest ginghams have silk stripes woven in with the cotton, or even an entire silk facing, the patterns generally being crossbars of various colors. One pretty gingham has a pale gray ground traversed with a darker gray stripe of silk, across which runs a narrow crimson silk stripe. Another combination of colors that sounds gorgeous, but is really most artistic, is a ground of pale electric blue gingham, with a narrow chocolate colored stripe crossed by silk stripes of shrimp pink. These striped ginghams, plentifully trimmed with ribbon to match one or more of the prevailing colors, have a very rich effect. Another novelty in ginghams is a white lace pattern, figured on a delicately tinted ground of pink or pearl gray.

Some of the new cotton crapes are as pretty and more dainty than the ginghams. They are shown both plain and embroidered. As for the sateens, it is almost impossible to tell many of them from silk.

Old-fashioned gauzy-looking stuffs are much used, and silk grenadines in black and colors are shown with small and large patterns. The new light cloths are most artistic; some are figured, as for instance a light gray cloth dotted with Japanese fans in gold and silver thread, or a fawn cloth with sprays of chocolate colored flowers. Other cloths of one color have corded stripes or present a wrinkled, crapy appearance. Indeed, there is no end to the variety of charming materials that are now being shown in the stores.

A new fashion, and not a very clean one for the street, is not only to make the dress with a sweeping train, but also to wear the silk petticoat as long. The dress is held up for walking and the skirt displayed. These petticoats are made in the most delicate colors to harmonize with the dress, and one sees, at every step, ladies trailing one or two feet of pale blue, crushed strawberry or heliotrope silk through the dust. Sometimes the streamers worn from the belt, or the point of the Watteau fold, are as long as the train, and float for a couple of yards in the breeze, entangling the passers-by.

The Watteau fold is beginning to be much worn for street dresses. It usually starts from the yoke, or it may commence several inches below the waist and be finished off by a bow and streamers.

Bell skirts are as popular as ever, and for the street are made a little longer and more skimpy than last month. These skirts may be trimmed in endless ways, a band of passementrie being as new as anything. Seamless waists are still the most fashionable; for the Russian blouse they are generally made with a yoke.

For outdoor wear the Eaton jacket promises to become popular. It is a short jacket, not reaching the waist at the back, and cut square at the waist in front in imitation of the jacket worn by the boys at Eaton school. With the exception of the Eaton, jackets are worn quite long. A writer in a French magazine gives us the following hints upon lengthening a jacket that is too short to be fashionable :

A band of cloth, velvet or Ottoman silk may be used to lengthen a jacket; this band should be cut on the bias and turned up the front to form a sort of vest. Instead of having the edge of the jacket straight, it may be cut in scollops or points, but we must be very careful to see that the two sides correspond; indeed, it is better to make a paper model first, tack it on to one side of the jacket, and cut the two sides together. When the scollops are completed, the band of velvet or silk should be laid carefully under them and appliqued on. A little braiding or passementerie should then be put around the scollops. If you do not wish to cut the jacket, the band used to lengthen it may be cut in scollops or points and laid on to the jacket. With a little skillful braiding, an old-fashioned jacket may be made not only fashionable, but quite handsome.

Peasant belts are as much worn as ever; the points are growing deeper and deeper, and at the present rate will soon reach the neck. It is difficult to say whether ribbon or lace is most popular this summer for trimming; very often both are combined. Full sleeves and blouses are made of lace, and it is used of all widths to trim skirts, from the narrow rows of lace that edge the frills to deep lace flounces.

The newest style of hat is more striking than pretty and is positively unbecoming to any but a large woman.

It has a broad brim, turned up at the back, and a tall, narrow crown like a factory chimney, flat at the top. This hat is generally trimmed with large bows of very wide ribbon, but flowers and butterfly bone of lace may be used.

Streamers are still worn to hats and bonnets, but few really stylish women now wear them floating in the San Francisco June gales, for they get to look draggled and worn out directly. Perhaps the prettiest fashion is to wear only one streamer and to fasten it down to the hair at the back, either with a flower or a pretty pin and then draw the end over one shoulder and either fasten it with a bow or pin it carelessly.

There is quite a rage for Russian styles, not only for Russian blouses, which I described to you last month and which are growing more popular every day but also for belts etc. of Russian leather, Russian costumes and embroideries.

The cross-stitch so effectively used in Russia for embroidering underlinen, serviettes, etc., is both simple and pretty. Upon a piece of canvas—the very finest used for wool work—is traced an elaborate pattern, generally a sort of Greek design, the canvas is then loosely tacked over the linen to be embroidered, and with fine embroidery thread in fast colors, generally crimson and blue combined, the pattern is worked in the cross-stitch used for wool work, the stitches being taken through the linen. When the embroidery is completed, the canvas is cut a little and pulled out thread by thread, leaving the pattern standing out on the linen.

The chief requisites toward making this embroidery effective are a good pattern, very fine canvas and thread, and taste in blending the colors, though I have known Russian ladies, who, in embroidering their underwear and household linen, used only one color.

MARIE EVELYN.

Young Folks' Column.

Willie and the Vinegar.

Written for the RURAL PRESS by M. F.

A number of years ago, at the termination of one of the leading streets in San Francisco, there stood a beautiful structure, surrounded by lovely flower gardens and grassy plots. The house stood on a hill, overlooking the city and the ocean. On a bright morning the sun shone on the waves, which reflected its light on the windows of the house. The seagulls could be seen plainly from the house flying above the ocean, screaming in their piercing, mournful voice. A fresh, cool breeze blew from the ocean as a lady lowered the window to admit the refreshing air. One glimpse into the room revealed the family's wealth. The rich, white curtains swept the gorgeous carpet with ease as the air stirred them. The dainty hangings and bric-a-brac could only be purchased by the rich.

A second glimpse showed that it was the room of a boy whose every wish was gratified. A whatnot was full of picture books, some old and torn with hard usage, some new that had scarcely been touched. On the bottom shelf was a basket, with some strings, a few broken knives, some marbles, a top and all the nameless belongings of a wide-awake, ingenious boy. His airgun hung carefully at the head of his bed, with two toy pistols, one on either side.

The third glimpse showed a handsome boy lying on his snowy white bed. He is rather large for ten years, but his childish face can surely be no older. His petulant tones and impatient looks give his mother assurance that he is not too sick to be angry.

"Mamma, why won't you give me vinegar? my throat is parched for a drink."

The mother turned from the window, with a sweet, sorrowful face. She ignored the first part of Willie's question, but answered:

"I will get you a nice drink of milk, will I, dear?"

The mother's coaxing tones failed to touch Willie's heart.

"No, I don't want the old milk; it don't stop my thirst," was his angry rejoinder.

He watched his mother closely, and seeing no signs of relenting, he changed his tones to pleading. "Please, mamma, give me some vinegar. Then I'll never ask you for any more if you give me some just this once. I'll be a good boy, and take my medicine without crying."

"It hurts me to refuse you, but, my dear child, it is impossible for me to grant your request." She came to the bed and gently arranged the pillows, saying: "If I was to give you vinegar, dear, papa and the doctor would think I was crazy."

"Papa wouldn't think you was crazy. He would call you good for giving me what I want," said the child. "And the doctor would say it was all right if he gets his money; that is all he wants. Besides, who cares what he thinks. I'll get well so much the quicker if I get the vinegar."

"Willie, listen!" the mother reasoned. "If I was to give you vinegar while you are sick as you are, it would kill you. Then I would never forgive myself for giving it to you. Who ever heard of a person taking vinegar when they had the measles? It means instant death, child, and mamma cannot part with her boy yet."

She kissed him. Her kind tones touched his heart; but he wanted the vinegar and was determined he would get it, no matter if it was by foul or fair means. Vinegar he wanted, and vinegar he would have. All his threats, bribes and beggings availed naught. She would as soon give him poison as vinegar when he had the measles. It was hard for her to refuse her children their wishes, but when it was for their good, she could be gentle but firm.

Like a boy at ten years, he knew he was right; and like them, too, he was going to have his own way if possible. He knew when his mother pressed her lips tightly together after saying "no," there was no use to argue any more, for that was the final decision. So he concluded to ask the doctor when he came, which he would that afternoon.

The mother was surprised that Willie was so good all the morning; only calling her a few times, and never complaining as he was wont to do. Other days she was running to him all the time, and sat with him occasionally. Now he did not ask her to stay with him, after she gave him what he wished. She concluded the vinegar question was settled, and congratulated herself, that she need not deny him that anyhow. She was unconscious of the scheme on foot.

When the doctor made his appearance, and before he had the door closed, Willie could restrain his impatience no longer. He had intended to get gently around the doctor, but the sight of that burly form and smiling face sent his resolutions to the winds. He greeted him with, "Say, doctor, if you don't let me have some vinegar, I'll never speak to you again." This was his most persuasive argument. He used it a dozen times a day while trying to get the vinegar from his mother.

The doctor answered him with a smile and a question as to how he felt. Thinking this a bad omen, Willie turned his back without answering. The doctor bent over him and asked him if it was vinegar he wished. All Willie's anger fled as he imagined he read in the doctor's face that his wish was to be gratified. So, impulsive Willie said: "Say, doctor, if you let me have some vinegar, I'll take all my medicine."

"Ah! you have not been in the habit of taking it all, have you?" the doctor asked, peeping over his glasses, and trying to hide the amusement he felt at this boy's trick. He was not guiltless of the same act when he was a boy. "how do you expect to get well, if you do not take the medicine I prescribe, eh?"

"Your medicine does me no good. It's vinegar I should have to make me well, and I'll never get well without it."

"If that's the case," the doctor said, turning to the mother, "we are compelled to give him some. You can take a tablespoonful of vinegar and put it in a cup of water, of which give him a tablespoon every hour."

Willie imagined he could taste the vinegar, as he pictured to himself his mother pouring it out. A cupful seemed as nothing. If he could get the jug he would soon empty it. But it was only a tablespoon, and that in water, too. Well never mind, he would be patient. In this was conveyed a threat. He urged his mother to hurry up, now that he could have it.

The doctor left, after reminding Willie of his promise to take all the medicine.

The mother was not long in getting Willie's medicine, for she was quite willing to give it, since the doctor ordered it. She stood by the bed waiting for Willie to rise, with the cup in one hand and the tablespoon of the liquid in the other. Before she was aware of his intentions, he seized the cup and drank it all. He handed it back with a mischievous look, thanking her for it and asking for more. Part of his scheme was accomplished. She was in doubt whether to scold him for his naughty act, or cry over him as one who would die. She was on the point of sending for the doctor to ask his advice, so thoroughly frightened was she. Willie assured her he felt better already, and if she would give him some more he would be well before the week was out. This she utterly refused to do. When she left the room, he shook his head determinedly, saying: "I'll get it."

He waited patiently all the afternoon for a chance. He had drank enough to quench his thirst, but not enough to satisfy his appetite. About five o'clock, company came. Willie knew his mother would be unable to come now, and was confident that cook had not yet returned. Now was his opportunity. He slipped on the floor and cautiously walked to the door. He was almost too weak to walk, but with the help of chairs and the furniture he came in contact with, he reached the door. He slipped down the hall into the kitchen. He knew where cook kept the vinegar. He was not long in getting a cup and filling it with the precious liquid. From experience, he knew he had to make speed back to his room, for fear his mother might come. So, with one large swallow, he crept back and reached his room safely, without being detected in the act. Weak from sickness and the unusual fatigue, he had just presence of mind enough to set the cup on the floor and give it a gentle push with his foot under the bed out of sight before he fell in a faint across his bed. He soon revived and got into bed, first drinking the vinegar to make sure he had it Nothing tasted so good to him as that vinegar.

His small brother came in as he was finishing it. He tried to bribe him to get some more, but not tell his mother, which the child refused to do. He was still young and not skilled in the tricks of his brother. The mother was horror stricken when she heard it, for the child made it his business to tell. She immediately sent for the doctor, but he, wise man, told her to wait until the morrow to see what the effects would be.

The next evening, Willie was eating dinner with the family. He said it was the vinegar that cured him, and that the doctor's medicine was no use. It may be true. Who can tell? Although I do not approve of Willie's acts; still, he was a child and had his faults and failures. This Willie is still living to-day, and laughs heartily over his boyish trick. Although he is sorry for causing his mother pain, still he is confident that the vinegar cured him. As a doctor, he allows his patients to have what they are hungry for, if it is taken carefully.

Don't be Mean, Boys.

Sometimes I wonder, says Burdette, what a mean man thinks about when he goes to bed. When he turns down the light and lies down alone, he is then compelled to be honest with himself. Not a bright thought, not a generous impulse, not a word of blessing, not a grateful look comes back to him, not a penny dropped into the palm of poverty, not the balm of a loving word dropped into an aching heart, no sunbeams of encouragement cast upon a struggling life, no strong right hand of fellowship reached out to help some fallen man to his feet—when none of those things come to him, how he must hate himself, how he must try to roll away from himself and sleep on the other side of the bed, when the only victory he can think of is some mean victory, in which he has wronged a neighbor.

No wonder he always sneers when he tries to smile. How pure and fair and good all the rest of the world must look to him, and how careless and dreary must his own path appear! Why, even one isolated act of meanness is enough to scatter cracker crumbs in the bed of the average man; and what must be the feelings of a man whose life is given up to mean acts?

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

SOME ORANGE FIGURES. — Oroville *Register:* We have compiled a list of the orange and olive trees in this part of Butte, and the totals are given below: For Oroville and vicinity, this foots up 22 537 orange and 3835 olive trees. There are a large number of growers with from 50 to 100 orange trees, but the exact number we have not been able to ascertain. We would estimate the total of these at 5000, thus giving for Oroville 27,537 orange and 3835 olive trees. If to this we add 25,516 orange and 11,800 olive trees for Wyandotte, and 500 orange trees for Bidwell Bar and vicinity, we have 53,553 orange and 15,635 olive trees. To these may be added 95,300 orange and 9700 olive trees for Thermalito, making 148,825 orange and 25,335 olive trees, giving a total of 174,170. To this must be added the 160,000 citrus trees for Palermo, making a total for Oroville and adjacent colonies of 334.170 trees, or 3341 acres. Many of these trees have been planted from two to four years, and within another year or two will begin to yield large quantities of fruit. The output will regularly increase for the next 10 or 15 years, or until the trees are in full bearing. The quantity of fruit that will be produced by the trees already planted at Oroville and vicinity may be estimated from the yield of citrus orchards in Southern California. Riverside in 1890 had 287,300 orange trees four years old or over. The area planted is 3110 acres, which is 231 less acres than that planted at Oroville, or 46,000 less trees than Oroville has. At Riverside in 1889 and '90 there were shipped 1500 carloads of oranges, and in 1890 and '91 there were shipped 1428 carloads of the same fruit. It will be reasonable, therefore, to estimate that Oroville will ship within the next few years fully 1500 carloads of citrus fruits.

Calaveras.

THE TABLE MOUNTAIN RANCH.—Mokelumne Hill *Chronicle*: The Table Mountain ranch is situated in a beautiful little valley near Table mountain, from which it derives its name, and about a mile and a half from Murphys Camp on Coyote creek. It comprises about 320 acres of fine farming land at the above-named place, and a range of about 400 acres on the Stanislaus river, four miles east of Murphys Camp. About 18 or 20 acres of the first-named place have been sown in alfalfa, yielding about five tons to the acre, while several acres are devoted to horticulture. Peaches, prunes, apricots, nectarines, pears, apples and other fruits are produced in abundance. The principal industry of the ranch, however, is the breeding and raising of Jersey cows and pigs, and the manufacture of Jersey butter. Here may be seen some of the best thoroughbred Jersey cattle and pigs in the country, the stock of which were imported directly from the East. Unquestionably the finest butter in the State is produced at this place. All the latest modern improvements are used. The cream is separated from the milk by the De Lavel process, which, unlike the old method, requires but a short time, and is done immediately after the cows have been milked, thus preventing the souring and decay of the cream, which naturally follows through the slowness of the old process, to a greater or less extent. The butter is molded into prints or cubes, wrapped in parchment butter-paper, and shipped on ice to any part of the country. Perfect order and neatness prevails throughout every department of the dairy. The same attention in the way of brushing and currying is devoted to the milch cows as is given to livery horses. Each Jersey cow is named and registered in the American Jersey Cattle Club at New York, so that its pedigree may be easily traced. Six men are employed about the place—a foreman, head dairyman, vacquero and farm hands. The enterprising owner, Mrs. E. Adams, has expended upward of $30,000 in stocking and putting the ranch in its present condition, and it can be said without exaggeration that this is the finest ranch of the kind in the county.

Fresno.

WHEAT-GROWING.—Sanger *Herald*: Occasionally we hear a farmer assert that wheat-growing has ceased to be profitable in Fresno county, owing to the lack of natural moisture and the low prices that have prevailed during the past few years. It is true that the wheat market for several years, and until last season, has not inspired a large amount of confidence, but we believe bottom prices have been tapped and prices will rule high for several years to come. The moisture trouble is being gradually overcome by the extensive system of irrigating canals now in operation. Wheat can be produced by irrigation, if properly applied, just as well as fruits, vegetables and alfalfa, but these latter are just as important to successful farming as large crops and high prices. Heretofore our farmers have absolutely neglected to provide home comforts, in their rage for wheat and barley. The trouble is, they fail to provide against heavy expenses in the matter of produce and supply. With one of the richest and most productive counties in the world, where fruits, vegetables, butter and meat can be produced with but little trouble and expense, they pay large prices for these products from second and third hand dealers, thus depriving their purses of the profits of their wheat and other cereals to provide the actual necessaries of life. These necessaries, without a single exception, could be produced at a season of the year when nature is doing its work in the wheatfields and the farmer is idle, and too many of them are spending their time and spare cash away from home.

LATE CROP.—Reedley *Exponent:* Harvest in this vicinity is about ten days later this season than it was last. On the 6th day of June last year, J. H. Harden brought in the first load of grain for the season, but up to the present date none of this year's crop has reached either of the warehouses. A few days ago, one or two ranchers made an attempt to start their machines, but found the grain still too green to cut well. If there are any harvesters running at present, they are few in number, but another week will see the work fairly started.

ESTIMATED RAISIN CROP ON ONE VINEYARD.—Reedley *Exponent:* The California Fruit & Wine Land Company's vineyard is a beautiful place. The vines and fruit and ornamental trees are making a rapid growth, and are a living testimonial to the soil of Reedley and the superintendent, Mr. F. T. Briggs. Mr. Briggs informs us that, according to all present indications, the vineyard will produce, this season, 300 tons of raisins. The vines are in fine condition, not having been affected to any extent by the cool weather and the numerous late rains. But very few of the berries of the first crop have fallen off the bunches. There will also be a very fair crop of apricots at the California.

GRAPE CROP AROUND FRESNO. — *Expositor:* During the past week or two there has been much comment indulged in, in this county, regarding the present condition of the growing raisin crop, and there seems to have arisen a general uneasiness about the result of the first setting, or first crop. That the unusual amount of cool weather and the numerous late rains have not been conducive of the best results to the growing crop is a fact too well established among raisin growers to need comment here. It is known that what the maturing raisin needs most, to give it health, is sunshine from above and ample moisture from below. It is no uncommon occurrence for a few of the berries of either the first or the second crop to fall off the bunches, and there is not a season when most of the growers do not witness this to a greater or less extent. From the current rumor on the streets and in the offices for the past few days, one would think the first crop now entirely gone, and that only the second crop could be depended upon for a yield. Such is misleading, and is not warranted by the facts in the case. While it is true that the crop is not a full one, the shortage is very hard to correctly estimate, and, at this stage is liable to deceive the most conservative figures when the raisins have been cured, for while the number of berries will certainly be decreased, the size may be correspondingly enlarged. From observations made by an *Expositor* representative, who personally visited 30 or 40 different vineyards in different sections of the county, it is safe to say that the damage to the first crop does not exceed 30 per cent in numbers of vineyards, and many think this will be returned in better raisins when cured. The observations go to show that neither the age of the vines nor the kind of soil has anything to do with the matter, as the same condition is seen in all vineyards. The second crop will certainly be much lighter than the first, and is contrary to current rumors. Most growers who are conservative agree that the first crop will be a fair yield, and all the vines should support.

Humboldt.

THE HARPST & SPRING DIKE.—Arcata *Union*: The diking and reclaiming of overflowed marsh lands starts in on the bank of Butcher slough, just beyond the town line, and follows the course of the slough as near as possible to the bay. Here it follows along the edge of the mudflats for a mile or more and crosses Flannigan & Brosnan's railroad at the edge of the bay. It then goes down along the bay, comes up and crosses the big slough by the drawbridge where a flood-gate will be put in, and follows down the farther bank of the slough to the mouth of Jacoby creek. From there it follows up the bank of the creek till it gets out of the reach of the highest tides, and there ends. The dike is 10 feet wide at the base, 4½ feet at the top and 5 feet high. The outside is made of sod, cut square and fitted together, the grass side outward, and the inside is filled with mud. When the sods grow together, and the dike settles, it will make a solid embankment that the highest tides we have ever had will make no impression upon. The dike, when finished, will be 400 rods long, and will enclose about 350 acres of land. Formerly this tract was comparatively worthless. Now it affords fine pasture, and will do better when the dike is completed. When the salt water is kept off, the salt grass loses its substance and dies out, and its place is taken by wild clover, which grows fast and contains much nutriment for stock.

Kern.

THE 78 CANAL.—*Echo:* Another point has been gained for the 78 canal, and the prospect continues to brighten. On Monday, J. W. Northrup arrived from New York, accompanied by an expert engineer who was sent out here to examine the route of the canal and report whether the work could be done for the estimated figure. Soon after the delayed northbound train arrived, these gentlemen, with three of the local directors, took carriages and started for the works in the canyon. From that point the route of the canal was followed as far as the railroad—that is, over all the difficult part of the work. The directors were anxious to show the expert the remainder of the route, but he said he had seen all he wanted to. He was satisfied that the cost would come within the estimate, and that was all he came to learn. He had nothing to do with the character of the land. Some one else would report on that, and in fact the Eastern capitalists have already made considerable inquiry on that point. Toward the last of this month, one and perhaps two of the New York capitalists will be here, and then matters will turn one way or the other very speedily. Mr. Northrup predicted that ground will be broken by July 1st, but others are not so sanguine as that; but all hands are feeling in very fine spirits. One of the most important points is passed. The capitalists' own expert has said the work can be done for the figure given. It now only remains to satisfy them that the land is good security for $11.25 an acre, the agreed price to be paid for the water right. Our people will rest easy that that will come out all right. The grazing bands of sheep have trampled down many of the stakes along the route, and a corps of surveyors was started out to reset them so that everything will be in readiness for careful examination when the Easterners arrive a few weeks hence.

Monterey.

CANNERS TAKE ALL THE FRUIT.—Watsonville Cor. Castroville *Enterprise:* It is estimated that there will be but little of the tree fruit crop of the Pajaro valley that will not be handled by the packers this year. There are nearly a dozen firms engaged in the packing business in this section, and they have all the facilities and connections in San Francisco to successfully handle fruit in any quantity.

Orange.

THE DAIRY INDUSTRY.—Los Angeles *Times*: Orange county is rapidly forging to the lead as a dairying section. A creamery at Westminster utilizes the milk from 430 cows. The weekly output is 1500 pounds of butter from 31,200 pounds of milk. The capacity of the creamery is twice its present output, and the business is being increased as rapidly as possible. A creamery at Newport is also doing a good business. The Santa Ana *Blade* observes that the butter product of Orange county is a source of considerable revenue, and is growing in importance. It is safe to say that the butter product of the county amounts to 4000 pounds per week. The annual sales of butter are estimated to be nearly 208,000 pounds, equal to nearly $83,000 per year. The butter product of Santa Ana and suburbs finds a ready market in Santa Ana, Los Angeles and San Diego.

WHY POTATOES WERE REJECTED.—Anaheim *Gazette:* Mr. Littlefield is in receipt of a letter from a Chicago commission house giving reasons for the low price now ruling for Southern California potatoes in that market. The letter says there are now some 75 cars of Southern California potatoes on the tracks, and they are dragging and very difficult to close out. Not one car in ten can be sold. The general quality of stock from this section has been poor, not well matured, and arriving in the market peeling badly and considerably wilted. A great many cars that have been sold to arrive have been refused, and the majority of the cars now on the track will hardly bring more than freight and selling expenses. However, the market promises to be better as the potatoes become matured with the advance of the season. The quality of potatoes shipped from San Francisco has been good, and prices have been fair. Our potato shippers should see to it that none but first-class potatoes are sent to market.

San Bernardino.

LAND AROUND NEEDLES.—Mrs. S J. McClellan in Selma (Fresno Co.) *Enterprise*: There has been scarcely any attention paid to agriculture so far, but there are those who firmly believe that all of this valley will ultimately be settled and irrigated from the Colorado river. The bottom land near the river is rich, and cultivated to a limited extent by the Indians, but the annual spring overflow prevents planting any early crops, and the soil is so peculiar, and the current of the river so strong, that the main channel changes almost yearly; so one never knows but that his farm of this year will be the river bed the next, which fact you will at once see will prove a serious obstacle to the extensive cultivation of bottom lands. The land lying farther back from the river much resembles the "white ash" land of Fresno, and, while it yields well, requires a vast amount of water on account of the extreme dryness of the soil, the absence of hardpan underneath, and the rapid evaporation from the surface. Forty acres of such land under cultivation near town, which is irrigated with an engine, required as much water as a half-section does at the present time near Selma. When the ground is once thoroughly saturated, it may need less—at least we hope so.

San Joaquin.

APRICOT NOTES.—Lodi *Sentinel:* Charles H. Neall brought in a box of luscious, ripe apricots grown on his place two miles northeast of Lodi. The fruit was of the variety known as the Royal, and is always the first to ripen in this locality. This fruit was ripe two weeks ago, which was as early as any in the State. In most localities the first fruit that ripens is not of good flavor, but the samples from Mr. Neall's trees are superior, not only in size but in flavor as well. Mr. Neall did not irrigate his fruit, but practiced a thorough method of cultivation. His trees have not been troubled with any pests this year, although during last winter the red spider was noticed. About the time he was ready to spray his trees, he noticed a large brown bug about the size of, and somewhat resembling, the squash bug, which voraciously devoured spider eggs as well as spiders themselves. So thoroughly did this bug do its work that Mr. Neall says that if there be any spiders in his orchard now, they will have been brought there very recently by birds coming from infested orchards. Some species of birds, notably the orioles, are taking these spider-eating bugs very fast, and it is feared this little friend of the orchardist will be exterminated.

Sutter.

A NEW BARLEY, BLACK IN COLOR.—Yuba City *Farmer*: A few days ago we were shown a sample of a new barley grown on the Moore place, near the Buttes, which was perfectly black. In the field, where there were several acres of this new variety of grain, it resembled the common barley and was similarly bearded. The grain shells, similar to wheat, and leaves a plump kernel as black as coal. It ripens early, and will probably be experimented with further.

Tehama.

GRASSHOPPERS.—Red Bluff *Sentinel:* A short ride through the country near town discloses the fact that grasshoppers are already in great numbers on unplowed land. They are small, to be sure, but they will soon grow to be aged grasshoppers, and will lay waste orchards, vegetables and vineyards, unless something is done to exterminate them. Last year a number of "exterminators" were tried with varying success, and none proved so efficacious in preventing the pests from totally destroying trees, etc., as heavy paper bags. We commend their use to those having young orchards. General Chipman has already purchased 300 large bags to protect his young trees.

Tulare.

JOINT FRUIT SHIPMENTS.—Tulare *Register*: A movement has been started by a number of the smaller orchardists and those whose trees are just coming into bearing, which if carried forward, will result in adding much to the volume of green fruit shipments from Tulare, besides distributing the profits from eastern sales among our own people instead of permitting them to go to the middlemen. There are dozens of fruit growers in this portion of the county whose orchards contain as fine fruit as can be desired, and yet none of whom has sufficient to ship a carload at one time. The plan to which we refer is to form a combination among these people for purposes of co-operative shipment. This step has been taken somewhat late, but if matters are pushed, an organization properly constituted to do the work as it should be done may be effected. Those who have it in hand state that there will be no delay and that the cooperative shipments will soon begin.

PLOW IN STUBBLE. — Tulare *Register*: Wet your stubble, plow it at once and plow it again when planting time comes and you are dead sure of a crop. You pay for the water whether you use it or not, and you had better fall to work and use it.

A COOPERATIVE RAISIN PACKING HOUSE.—Hanford *Journal*: The raisin growers of Hanford and vicinity have formed a cooperative company, under the name of the Hanford Raisin and Dried Fruit Packing Co. The stock is mostly held in small lots by actual fruit growers. The amount of capital stock is $40,000, divided into 4000 shares of the par value of $10 each. Over 1000 shares have already been subscribed. The corporation is to exist 50 years and the principal place of business is Hanford. Following are the names of the directors: B. V. Sharp, W. G. Nicholson, N. W. Motheral, John A. Wilson and R. G. White.

DISEASE OF THE VINE.—Visalia *Times*: N. W. Motheral, R. H. McDonald and Major C. J. Berry appeared before the Board of Supervisors recently, and through Mr. Motheral, made a verbal report for the month of May. "The subject of investigation by the Board for the past month," said Mr. Motheral, "has been the disease of the vine, known as colure, which is a French word that has reference to the falling of the grapes, and is described by Mr. Eisen as the first form of powdery mildew (*uncinula spiralis*). Investigation under the microscope shows that we have no such disease at this season of the year, and that the use of sulphur is entirely useless and does not prevent the falling of the grape. Powdery mildew occurs later in the season, and is not at all like the colure. The disease known as colure is not a mildew at all, but is a secretion of salt and can be seen in crystals, under the microscope, both upon the leaf and the fruit of the diseased vine. It readily dissolves in water and can be seen to recrystallize when the water evaporates. This salt is accurate and destroys the leaf, turning it brown, and the bloom of the young fruit. This disease is much worse in a cold, damp spring and after cold winds than any other time. It can be readily recognized as a white milky substance on the edge of the leaf and fruit. The remedy has not yet been discovered as the source of the trouble is evidently in the soil or atmosphere. But one thing is sure, that sulphuring the vines does no good."

Yuba.

FARM NOTES.—Wheatland *Four Corners*: The apricot crop is ripening rapidly. The fruit is of better quality and ripening more evenly than last season. If the weather continues hot next week the local market will be flooded with over ripe fruit. In yield the Royals are just heavy enough to allow of good size fruit, the Moorpark and later varieties have a very small yield. There are a few early May peaches in this neighborhood. S. D. Wood has sufficient to supply the local market. Watermelons are very late this season. The latter part of July will see the first ripe melons. Bottom land farmers are busy planting Indian corn and pumpkins. A. W. Oakley will plant over 30 acres of broom corn this season. Nurseryman Scott has a gang of eight men budding the stock planted last spring. There are over 75,000 trees in the bed. The blackberry crop is as usual large. Earlier varieties will begin to ripen next week. Wild berries are out of market. The hop yards are looking much better than they were ten days ago, although in some spots the vines are very uneven and poor. S. D. Wood and D. P. Durst are irrigating portions of their hop yards with water flumed from Bear river. Irrigation is a noteworthy auxiliary even on the river bottom. John Roddan's new hop house is going up rapidly under the supervision of B. F. Monson. The kiln is on a new plan, known as the "hopper kiln." It will be an imposing looking structure from a distance, as it will be about 62 feet high and is situated on an elevated position between the residence and county road.

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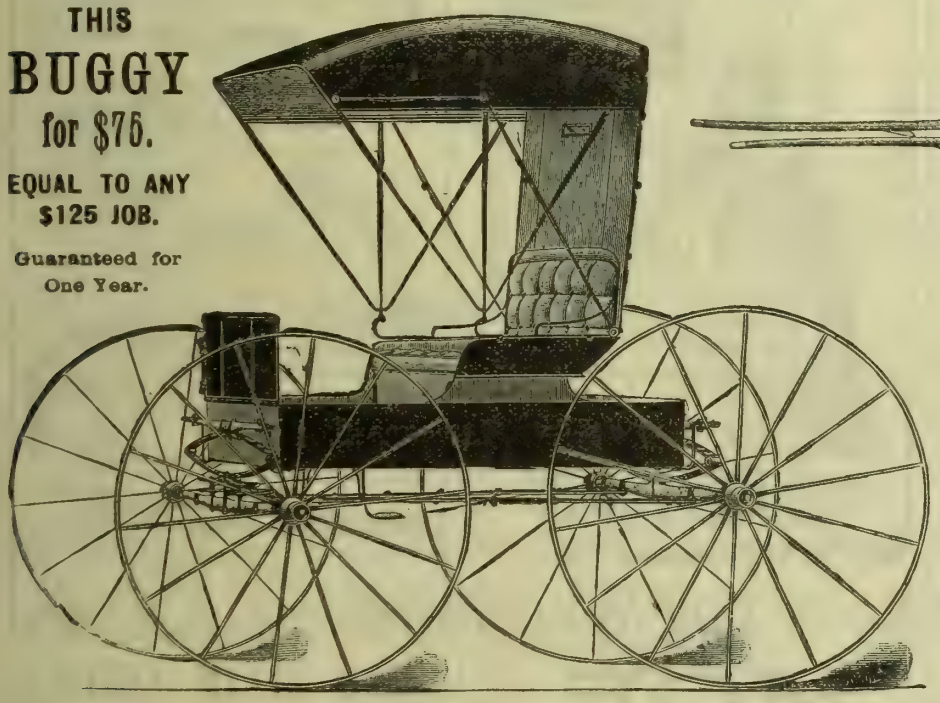
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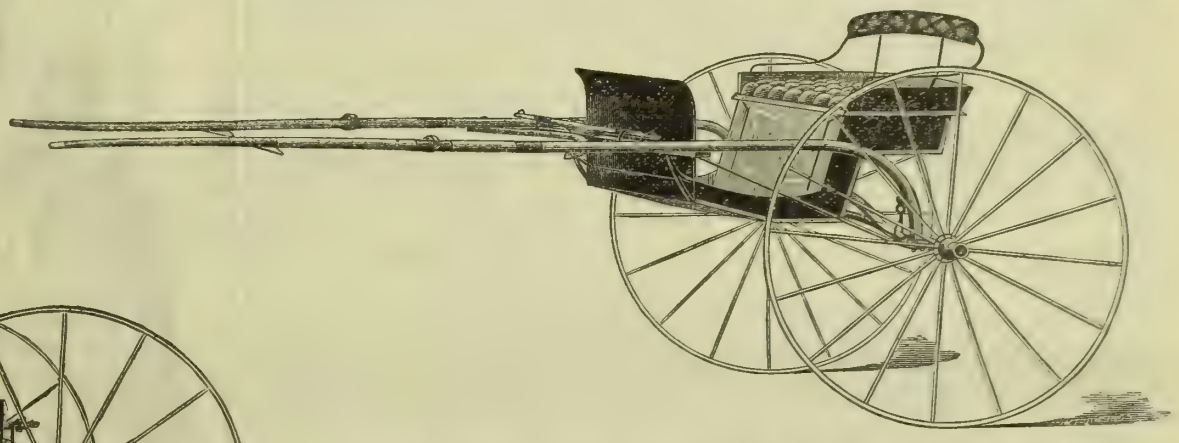
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DIVIDEND NOTICE.

SAN FRANCISCO SAVINGS UNION, 532 CALIFORNIA Street, corner Webb; Branch, 1700 Market Street, corner Polk.—For the half year ending with 30th June, 1892, a dividend has been declared at the rate of five and one-fifth (5 1-5) per cent. per annum on Term Deposits, and four and one-third (4⅓) per cent. per annum on Ordinary Deposits, free of taxes, payable on and after FRIDAY, 1st July, 1892. LOVELL WHITE, Cashier.



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PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

VACA VALLEY GRANGE.—Ella E. Ashley, Master, reports that Miss Florence Dexter has been elected Secretary in place of J. A. Webster, resigned.

GRANGE TEMPLE.

The National Grange, at its session in 1890 at Atlanta, Ga., adopted a resolution appropriating $20,000 out of its permanent fund, to be used in the erection of a "Grange Temple," as a home for the Order of Patrons of Husbandry, in the city of Washington; this sum to be available when the further sum of $30,000 shall have been raised by voluntary contribution.

The session of 1891 reaffirmed the above action, and assigned the work of raising the funds, etc., to the Committees on Women's Work. In 1890 we published a full statement referring to the object for building the Temple, including that of having a Grange home for meetings, preserving records, etc., and now add that the size, architectural design, finish and beauty of the Temple will depend upon the amount of funds raised. It should not be less than three stories high, with first and second stories fitted up for stores and offices and the third for the Grange hall. All the first and second floors not needed for the National Grange offices can be rented, and will bring in a handsome income to the Order.

PLAN OF WORK.

We suggest that in order to equalize the work of raising the required fund that each subordinate Grange send up *one dollar for each member* and two dollars for the Worthy Master.

We would suggest individual subscriptions first. Should this fail to raise the dollar per member let other devices be resorted to in the way of entertainments, suppers, experience meetings in which each one is encouraged to tell how the dollar was earned, or by any other plan deemed advisable by each subcommittee.

"BRICK BOOKS"

Have been prepared containing 20 brick, or red squares, on which contributors write their names and address and the amount contributed. These bricks when filled should be sent with the money to the Secretary of the National Grange at Washington city from time to time and receipts taken therefor.

All contributions from persons outside of our Order will be thankfully received and due credit given.

Patrons of Husbandry and farmers of our great American Union, shall this Agricultural Temple be built? We appeal to your philanthropy, your patriotism, and your love for our Order and your calling.

The Temple, when erected, will not only add dignity and character to our Order, but will reflect honor and credit to our National calling as an agricultural people.

Let us, therefore, hope that every Grange, and every member of our Order, will give with cheerful hearts and willing hands to aid in erecting an Agricultural Temple, which will be an enduring monument to the honor and glory of our grand Order and to the American farmer.

Correspondence from the different localities solicited by the Committtee: Mrs. E. Russell, Vancouver, Wash.; Mrs. H. H. Woodman, Paw Paw, Mich., and Mrs. L. A. Hawkins, Hawkinsville, Ala.

EQUAL RIGHTS FOR WIDOWS.

The following preamble and resolution were adopted by San Jose Grange on April 30, 1892:

WHEREAS, Great injustice has, from time immem rial, been done to widows and children of deceased husbands in the useless dissipation of property, the joint earnings of the husband and wife, in the useless, protracted and always expensive litigation in the Probate Courts; therefore

Resolved, That the legislature be requested to so amend the civil code of California as to give to the wife the same right in the disposition of community property after the death of the husband as is now possessed by the husband after the death of the wife.

The above preamble and resolution would seem to be self-explanatory; but lest the full purport of the resolution may not be self-evident to all, the Committee will say that it is the intention of San Jose Grange that the law be so amended as to give the widow as full and complete ownership of all community property for the support of herself and children at the death of the husband as the husband now has to the full ownership and control of all community property for the support of himself and children on the death of the wife, thus relieving the widow from the necessity of going to the expense of the appointment of an administrator and the costs of a Probate Court, which often absorbs a large percentage of all that is left at the husband's death.

San Jose Grange believes that husbands who, while living, intrust to their wives the duty of bringing their daughters up to virtuous womanhood and their sons to honorable manhood, should at least be consistent and not withhold any part of the joint accumulation of the married life from the widow for her lonely struggles to keep the wolf of want from her door, that the son and the daughter may not, through poverty, be tempted to evil ways.

San Jose Grange asks each subordinate Grange in California to not only take affirmative action on the above subject, but also talk the matter up with their neighbors, that public opinion may be formed favorable to a change in the law here predicated at the next meeting of the State legislature.—E. T. PETTIT, Master; S. P. SANDERS, Sec'y.

IT seems appropriate that action should be urged upon the legislature as recommended, and we believe no Grange will hesitate to endorse the resolution recently forwarded by San Jose Grange to other Granges in the State.

BRO. E. GREER'S resolution presented from Sacramento Grange, and adopted at the last State Grange session, was a good move for the same purpose.

PETALUMA GRANGE.—In looking over the quarterly report of this Grange for Dec. 31, 1875, we find that W. W. Chapman was Master; F. Parker, Sec'y, and Hugh Gaston, Treas. The membership consisted of 82 brothers and 66 sisters, a total of 148 members. This shows that there is doubtless a good field for the reorganized Grange of today. It is to be hoped that the number of its former membership may again be reached.

EVENING MEETINGS.—At its last session Temescal Grange voted to meet hereafter in the evening on the first Saturday of the month, the meeting on the third Saturday to be held at 2 P. M. as heretofore.

PAST MASTER J. V. WEBSTER, who has been dangerously ill for a brief period, we are pleased to say is now able to be about his home at Creston.

ON THE SILVER QUESTION.

Master H. E. Hayes, in his recent annual address to the State Grange of Oregon, speaking of the last session of the National Grange, says: It also passed, as in former years, the resolution for free and unlimited coinage of silver. But the two great political parties in this State have gone back on their demand made two years ago for free coinage. Wall street has told them to go slow. New England says go slow. Old England echoes back, go slow, and nearly every banker in America says, go slow; for gold must be the standard. Why is it, farmers, that these moneyed powers have no parties when the question of dollars and cents comes to the front? Simply because they want all the profits of your labor, leaving you a bare subsistence. What difference does it make in the gold and silver markets of the world, whether we coin silver or not? American coin is not money beyond the borders of our nation, and goes to other countries as bullion, where it is exchanged according to its commercial value, whether in coin or bar. If we establish free coinage in our Government, it will make a market at home for our silver, and will have a tendency to increase its value and the volume of our currency. The contraction of our currency was a severe experience to our people.

In 1866 we had $2,122,437,811.12 as a circulating medium; the same year there was destroyed $211,239,516.41, reducing the circulation to $1,550,506,311.60. Notwithstanding peace was declared, and over $10,000,000 bankrupt people from the South were added to our demands for money, in 1873 contraction had reached the enormous amount of $881,265,600. Mark the effect; in 1865, as reported, there were 530 failures, liabilities $17,625,000; in 1873 there were 5183 failures, liabilities $228,509 000, and the total failures for the eight years from 1866 to 1873 were 25,410, and the liabilities $812,226,000, which was near the full amount of the contraction.

Senator Sherman understood what this meant. He said, in an argument in the U. S. Senate, Jan. 27, 1869, in reference to changing the people's contract: "It means the payment of $35 when he has agreed to pay $100." Again he says: "When we consider the enormous indebtedness of a new country like ours, and where credit has been substituted in the place of capital, it presents a difficulty that may well cause us to pause."

Notwithstanding the distress of our people, silver was dropped from the coinage of our country in 1873, thus wiping out one of the metallic moneys guaranteed to the people of the sovereign States by the framers of the Constitution of the United States, placing gold and silver in that article as their legal money. Under the Bland law, approved Feb. 28, 1878, the Secretary was required to purchase not less than $2,000,000 worth, and not more than $4,000,000 worth, of silver every month, and coin into standard dollars. He only purchased $2,000,000 worth; thus, by his own power, contracted the amount of $25,000,000 annually. We may well ask the question, Who runs the Government? We again, at the last session of the National Grange, appointed a National Committee on Legislation, and they are now in Washington, hard at work with the different committees, urging the passage of such bills as the Grange has demanded. Were it not for the different organizations among the farmers and laborers, we should have no representation there. Now we have six U. S. Senators who stand up boldly for the rights of the toiling masses, also 65 Congressmen fearlessly advocating the interests of the producing classes, which we consider sufficient proof that the good seed sown 25 years by the founders of our Order is yielding many fold.

A MEMORIAL TRIBUTE TO MRS. MARY ALLING.

The silent messenger unbidden has entered our Grange, summoning one of our number to the higher degree of Truth and undying brightness, and we bow with resignation to the Divine law, which, though it fills our hearts with pain and sorrow, gives us the blessed assurance that in the life beyond there is one more to welcome us when we, too, shall be called to join the many who have passed over to the other side.

We shall miss Sister Alling sadly, not only in the Grange, where she so often reached our hearts with music, but socially as well.

We wish to express our sincere sorrow that one so kind, so gentle and so well beloved should be called to leave the life she was making so full of blissful kindness for others—ever ready with cheering counsel and willing hands to help in all good works—an affectionate wife, devoted mother and faithful friend; therefore

Resolved, We feel her cheerful patience under affliction, her charity to all, and her faith in God, has given us a shining example that will benefit all our lives; and while we miss her smiling face in our councils, we, the members of Stockton Grange, tender to her bereaved family our deepest and tenderest sympathy in this their greatest affliction, and commend them to Him who careth for us all.

Resolved, That in justice and commendation to the worth of our departed sister, a copy of these resolutions be placed on our records and a copy sent to her family and to the RURAL PRESS for publication.

MRS. G. L. ROOT,
MRS. LOU. E OVERHISER,
THOS. E. KETCHUM. } Committee.

June 18, 1892

THE COCOANUT TREE abounds in South Florida. It is not a native, nor has the fruit been cultivated for any great length of time. The introduction is attributed to the wrecking of a Bahama vessel. Some of the cocoanuts forming its cargo were planted and made trees, which have thriven wonderfully.

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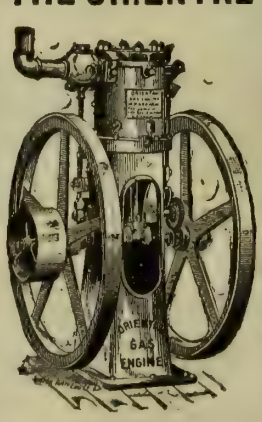
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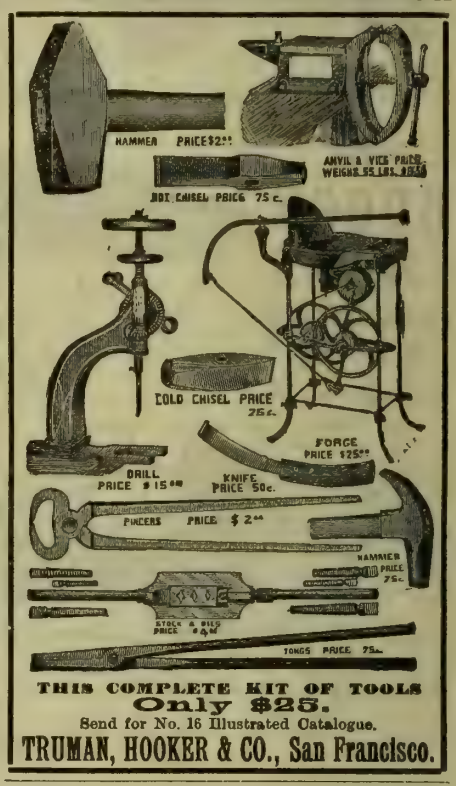
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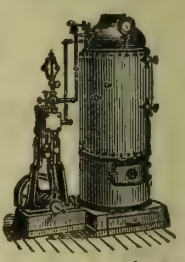
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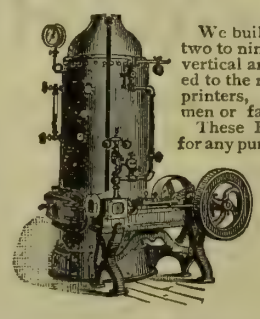
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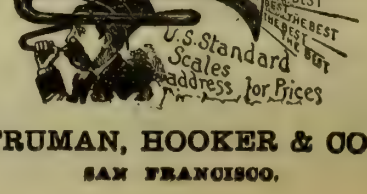
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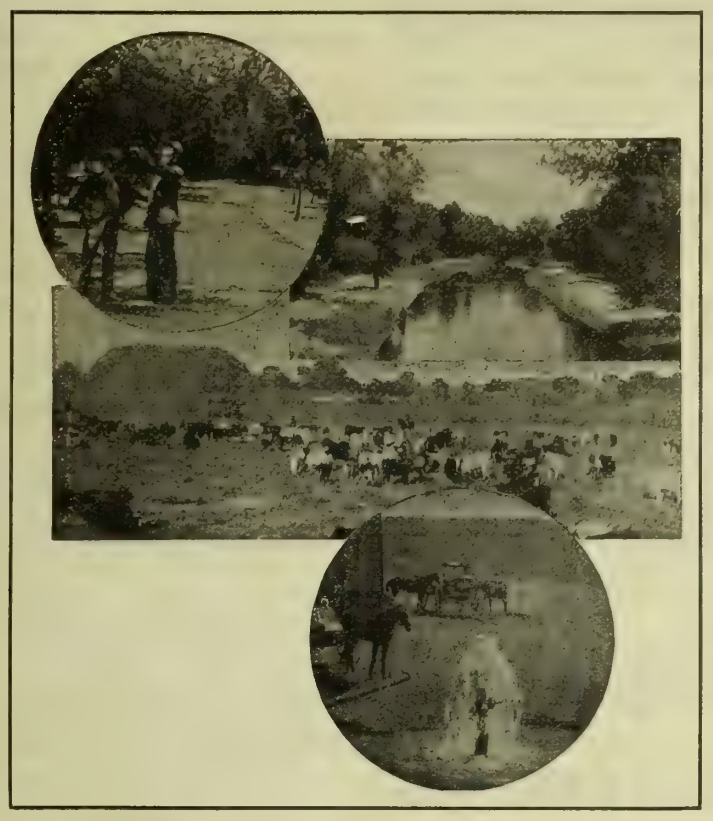
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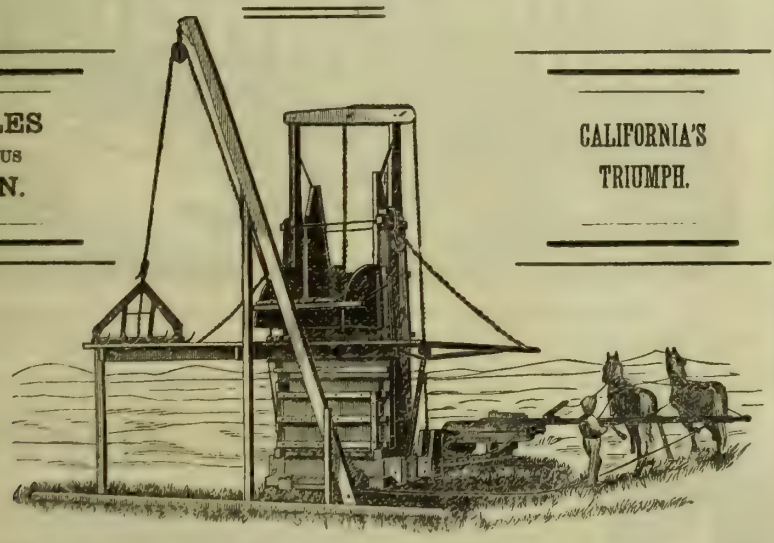
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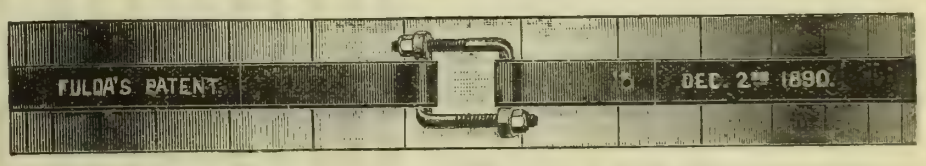
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Potato Omelet.—Two finely mashed potatoes, four eggs, the whites beaten first and then the yolks added. Mix all together and season with a little salt, pepper and nutmeg. Fry a light brown.

Potato Loaves.—Mash some nice potatoes and add a pinch of white pepper, salt and half a cup of butter or thick cream, form them into small loaves, and place them around a roast of veal that is nearly done. Turn when brown on one side.

Puff Omelet.—Beat the yolks of six eggs lightly, mix with a cup of rich milk or cream, melt a tablespoonful of butter, and mix with it a tablespoonful of flour and a little salt. Stir thoroughly, and add to the yolks and milk. Pour into a buttered frying-pan, and when it appears to thicken, add the whites, well beaten, over the top, first adding a little salt. Place in the oven till stiff, remove and put on a hot platter.

Mock Duck.—Procure a steak cut from the rump of beef and fill it with a nice dressing; sew it up, put a slice or two of pork on top, and set it in a pan, into which pour a pint of water. Cover tight, and let it cook slowly in the oven three hours; then take off the lid, brown quickly and serve hot.

Mulled Jelly.—Have ready boiling water; take one tablespoon of currant jelly, beat it thoroughly together with the white of an egg; pour over it a glassful of boiling water, add two lumps of loaf sugar and a teaspoon of wine or lemon juice. Eat with crackers.

Pineapple Marmalade.—Pare nice, ripe pineapples; take a silver fork and shred them; add one pound of loaf sugar to one pound of fruit, and cook carefully an hour or more. Very nice with ice cream.

Russian Cream.—One-quarter of a box of gelatine dissolved in one pint of boiling milk (soak first); add yolks of two eggs, well beaten, and one-half cup sugar, stirring constantly; let come to a boil, and remove from the fire; when cool, add the beaten whites of the eggs, pour into a mold and set on ice till hard.

Rice Pudding.—Pare and slice six good cooking apples, and stir thoroughly through them one-half cup white sugar and one teaspoon of lemon. Have ready the following: Boil one cup of rice till soft; take two eggs (beaten), one cup sugar and one of rich milk, and stir all together; then mix with the rice (not forgetting a little salt), and pour over the apples, which should be placed in a pudding dish. To be eaten with or without cream.

Sea Foam Pudding.—Soak one large cupful of tapioca over night in a quart bowl nearly filled with water; then put into a farina kettle and cook until clear, stirring only two or three times. When done, add one cupful of sugar and a small piece of butter; beat well, add the beaten whites of three eggs, and pour into a dish to cool; eat with cream. Pineapple is very nice with the pudding.

Currant Cake.—Two eggs well beaten, one cupful of cream or half cup butter, one cup granulated sugar, two cups sifted flour, two teaspoons baking powder; last of all, add one cup of currants or seedless raisins nicely picked over and floured. If butter is used instead of cream, mix the cake with chocolate. Bake in loaf, and when cool put in a cake tin for two days before using.

Wine Custard.—Stick a large square of sponge cake full of blanched almonds, and then lay it in a deep glass dish, pour over it a tumbler of sherry, and when the wine is all soaked into the cake, fill the dish half full of soft custard.

Wine Whips.—Into a pint of thick, sweet cream stir half a cup of sugar, half a cup of wine, and let it get very cold. Whip to a froth and fill the glasses.

Escolloped Onions.—Boil till tender six large onions; afterward separate them with a large spoon, then place a layer of onions in a dish and a layer of bread crumbs, alternately. Season each layer of onions with pepper, salt and butter, and on each layer of bread pour a little cream or rich milk; put in the oven and brown nicely.

Pickled Eggs.—Take hard-boiled eggs, remove shells, place in vinegar with a few slices of beets; season the vinegar with cloves, salt and pepper, and in 24 hours you will have a nice lunch appetizer.

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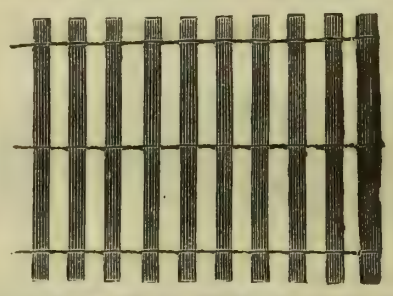
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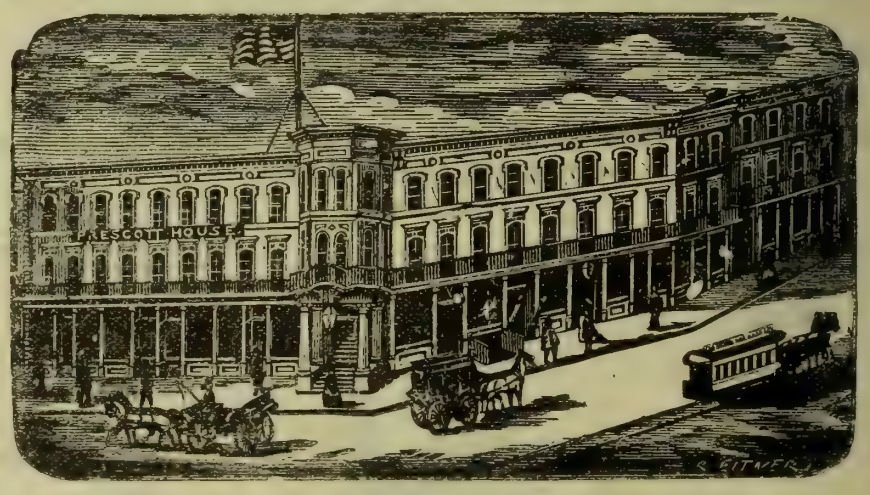
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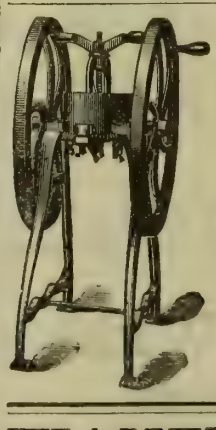
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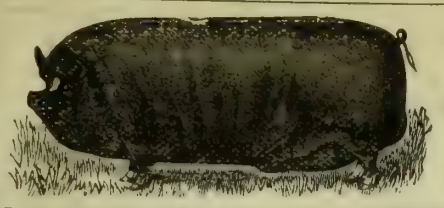
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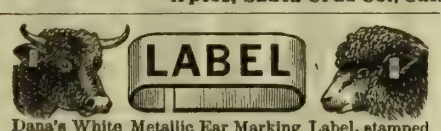
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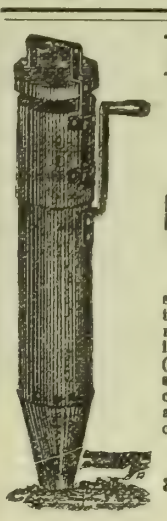
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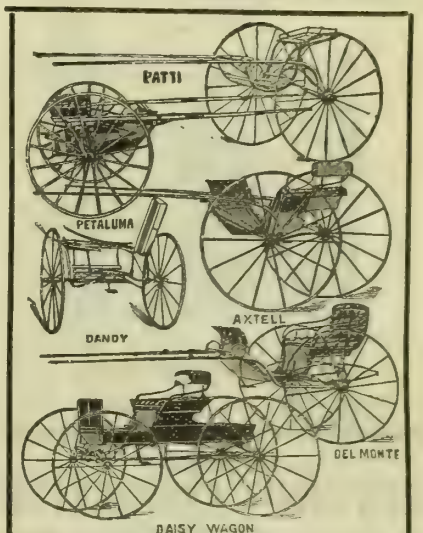
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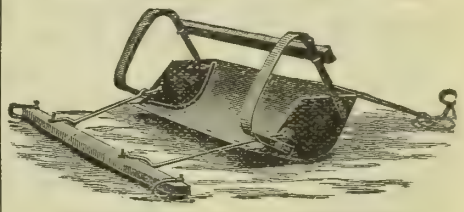
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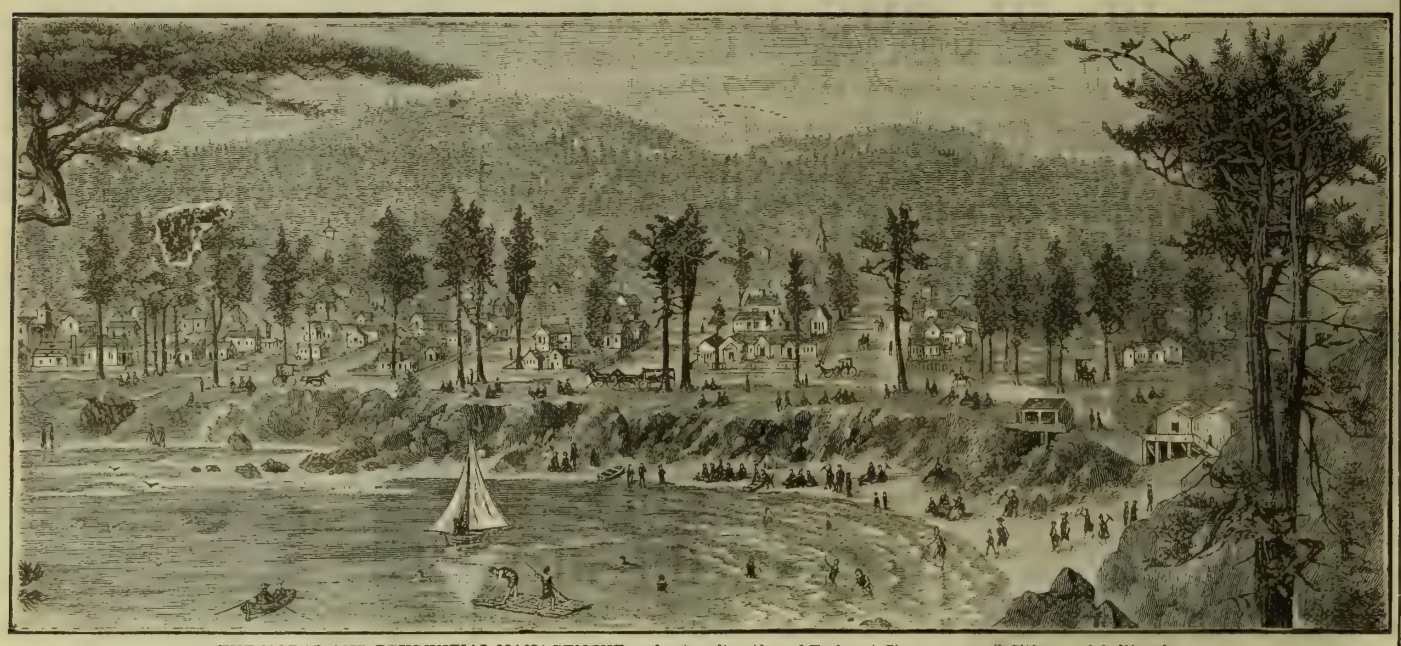
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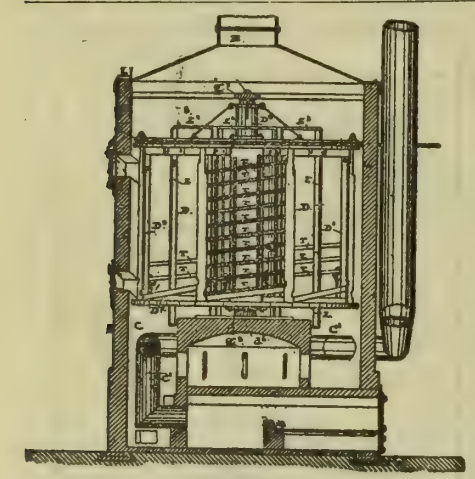
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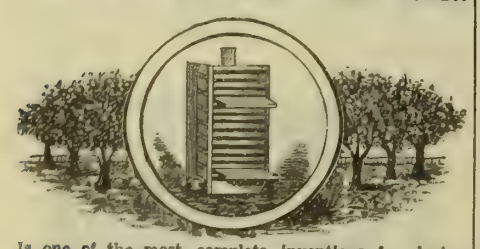
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, June 22, 1892.

In farm products trading the past week was very light in cereals, but active in fruit. Dealers in cereals will probably continue to pursue a conservative course until more definite information is received regarding crops at home and abroad, and also the probable demand. Buyers in June, July and August of last year did not come out as well as they would had a more cautious course been pursued. Those who sold at prices returning a fair profit, made money; but those who held for "big things" were in the end losers. Last year, prices in the month of June were quite high, but now they are low; and as far as wheat and barley are concerned, it looks very much as if they will prove a good investment on present quotations. The demand for fruit is very large, with canners, dryers and shippers in the market. The poor fruit, as usual, is being dumped on this market, and the better grades marketed in other directions. Harvesting is well under way in all parts of the State. The yield of both wheat and barley is said to average better than was expected Of course there are many isolated complaints of a poor outturn. Farmers are beginning to make deliveries, but as yet they are not offering to sell. Cheap money and low prices bid are against their selling much.

Foreign Grain Review.

LONDON, June 20.—Mark Lane *Express* says: The expected British wheat crop of the year will be 1 000,000 qrs. under that of 1891. Barley promises well. A good yield of oats depends on the rainfall. The continued drain on English wheats is liable to make the average price over 30s. Foreign has fallen off is, California selling at 35s 6d. Barley declined 6d; corn 2d at Liverpool and 6d at London; American oats are 3d cheaper. At to-day's market English wheats fell 6d and others 1s; flour 6d. Yellow and mixed corn is firm, and round cheaper; barley, dull.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.
Thursday	6s08 d	6s08½d	6s09 d	6s09½d	6s09½d
Friday	6s07½d	6s08½d	6s09½d	6s.9½d	6s09½d
Saturday	6s07½d	6s08½d	6s.8½d	6s.9½d	6s.9½d
Monday	6s08½d	6s08½d	6s.8½d	6s09½d	6s09½d
Tuesday	6s08½d	6s07½d	6s08½d	6s08½d	6s08½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s9d	35s d	35s d	Steady.	
Friday	34s9d	35s d	35s d	Firmer.	Fine
Saturday	35s d	35s d	35s d	Weaker.	
Monday	35s d	35s d	35s d	Easier.	
Tuesday	34s9 i	34s6d	34s6d	Inactive.	Warmer.

To-day s cablegram is as follows:

LIVERPOOL, June 22—Wheat—Rather easier. California spot lots, 7s 2d; off coast, 34s 6d; just shipped, 34s 3d; nearly due, 34s 3d; cargoes off coast, weaker; on passage, depressed; Mark Lane wheat, easier.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug.	Sept.	Oct.
Thursday	143⅜	145	145⅜	146¼	....
Friday	142½	145⅜	144½	145	....
Saturday	142¼	143½	144⅜	144⅜	146½
Monday	142⅜	144½	145	145¼	....
Tuesday	142	143½	144	144⅜	....

The following are to-days' telegram:

NEW YORK, June 22—Wheat—86½c for July, 86⅞c for August, 86⅝c for September, 87⅛c for October, 89⅛c for December, and 93¼c for May.

CHICAGO, June 22—Wheat—78⅛c for July and 78⅛c for September.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	139½	....	....	....	....
" lowest	139	....	....	....	....
Friday, highest	139½	....	....	....	....
" lowest	139⅜	....	....	....	....
Saturday, highest	139½	....	....	....	....
" lowest	139½	....	....	....	141
Monday, highest	139½	....	....	....	141⅜
" lowest	139⅜	....	....	....	141⅜
Tuesday, highest	139	....	....	141⅞	141½
" lowest	138½	....	....	141½	141⅜

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	94⅝	....	....	....	....
" lowest	93	....	....	....	....
Friday, highest	94⅝	....	....	....	94⅞
" lowest	94	....	....	....	94⅝
Saturday, highest	95	....	....	....	....
" lowest	94⅝	....	....	....	....
Monday, highest	95	....	....	....	....
" lowest	95	....	....	....	....
Tuesday, highest	94⅝	....	94½	....	....
" lowest	93½	....	94½	....	....

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, June 17.—The leading markets report light trading in wool. The London sales opened on Tuesday. The attention of the trade has been diverted from the domestic markets to movements abroad. The light supply would have prevented heavy buying even if the manufacturers had been inclined to speculate, but it is between seasons with them and the present wants are light. The closing prices of the last London sales have been maintained. Except low grade crossbreeds few wools suitable for this country have been offered. The firm situation abroad has strengthened the position of wools here, especially the wools of Ohio, Michigan and Pennsylvania and an advance in them is now considered certain unless values in London weaken. In domestic wools there has been little doing. New wools are coming along slowly, and as they are held above the market, the demand is only moderate. The dealers report an improvement in the quality of many wools over last year. The growers, as a rule, used more care in putting them up. Pulled wools are quiet. Stocks are light in the hands of both dealers and pullers. A good, steady demand is reported for Australian wools. The supply is not large and is being rapidly reduced. Purchasers at the present sales are not expected to increase the stocks here materially. A fair movement is noted in carpet wools.

Eastern Dried Fruit Markets.

NEW YORK, June 20.—Dried peaches, plums and prunes are no longer quotable here. Raisins—sales of 12,000 to 15,000 boxes in the past ten days leave the market unburdened. Prices were low, 95c@$1.25 for layers and three-crown boxes, 4¾@5c for three-crown bags, 4@4½c for twos and 3c for wet. Good stock has stood the trying weather well, but, as the prices indicate, sellers think the best place for "keeping" is in retailers' hands. Apricots—New sacks at nominal rates and not quotable above 10@10½c landed here. Buyers do not seem anxious to trade in early packed after last season's results, but there is a promising outlook for prime uniform quality of goods to come later on.

California Fruit East.

CHICAGO, June 16.—One firm sold at auction as follows: Tartarian cherries at $1 25@1 75; Bigarreaus, $1 40@1 55; Royal Anne, $1 75; Royal apricots $1 25@1 70; Alexander peaches $1 20@1 30; Clyman plums $3 55. This was the heaviest sale so far this season. Another firm sold four carloads. Royal apricots brought $1 25@1 60; Moorpark, $1 50; Royal Anne cherries, $1@1 45; Black Tartarian, $1 10@1 50; Black Bigarreaus $1 25@1 35; Peaches, 90c@$1 35; Royal Hative plums, $1 95; Clyman plums, $2 70@3 05; Cherry plums, $2 15.

NEW YORK, June 16.—A firm sold one carload today as follows: Tartarian cherries, 90c@$2; Orleans, 65c@1 35; Eltons, 75@85c.; Royal Anne 90c@$2 65; Black Bigarreau $1@1 50; Governor Woods, 80c@$1 65; Rockports, 75c; Black Eagles, 80 c.; May Dukes, 65c. Stock in fine order. Gross sales of this car amounted to $2100.

CHICAGO, June 17.—One firm sold at auction three cars of California fruit as follows: Royal apricots, 85c@$1 50; Alexander peaches, 85c@$1 25; Cherry plums, crates, $1 80; Raspberries, $1 60; Royal Anne cherries $1 20@1 50; Oregons, $1 30; Centennial cherries, $1 45; Clyman plums, $1 05@2 60. This is the first shipment of California raspberries to the Chicago market. Another firm sold five cars of fruit as follows: Early May peaches, $1 25 ℔ box; Alexander peaches, $1 35@1 50 ℔ box; Royal apricots, $1 35@1 45 ℔ half crate; Cherry plums, $1 40 ℔ box; Clyman plums, $3 55 ℔ half crate; Royal Anne cherries, $1 45@1 75 ℔ box; Black Bigarreau, $1 40@1 55; Republican, $1 45; Tartarians, $1 35; Fancy, $2 50. Some fruit in poor condition sold for less. And still another firm sold at auction: Royal Anne cherries, $1 40@1 55; Black Republican, $1 45; Tartarian, $1 40; Royal apricots, $1 30@1 40; Alexander peaches $1 20@1 45; Cherry plums, $1 45@1 55.

NEW YORK, June 17.—A firm sold at auction as follows: Royal apricots, $1 10@2; Alexander peaches, $1 55@2 15; Cherry plums, $1@1 90; Royal Anne cherries, poor condition, 70c.; good condition, $1 55; Republican, 90c.; Tartarian, 85c. Another firm sold one carload, realizing for Royal apricots, $1 70@2 05; average. $1 97; Alexander peaches, $1 80@2 05, average, $1 98; Clyman plums, $3 85; Brill plums, $2 80. The car sold gross for $1958.

NEW YORK, June 18.—The largest June arrival of fruit ever received here, 16 cars, has arrived. The weather has been severe, and much of the stock was in poor condition. Several cars were diverted. Sales at auction were as follows: Alexander peaches, $1 30@2 05; Apricots, $1 45@2 10; Fancy, $5 15; Royal Anne cherries, $1 30@2 65; Black Tartarian, 90c@$2; Bigarreau, $1@1 50; Governor Woods, 80c@$1 65; various, 65c@$1 35; Cherry plums, 55@80c.; Brill, $2 80; Clyman. $2 40@2 85.

CHICAGO, June 20.—A firm sold at auction as follows: Royal Anne cherries, $1 45@1 50; Tartarian, $1 30@1 70; Bigarreau, $1 20@1 35; Royal apricots, $1 25@1 50; Alexander peaches, $1 35@1 50; Cherry plmus, $1 55; Catherine, $1 60@1 90. Another firm sold one carload of California fruits. Royal apricots brought $1 40@1 95; Peaches, $1 55@2 50; Clyman plums, $2 25@2 90.

NEW YORK, June 20.—A firm sold three carloads to-day as follows: Apricots, $1 15@1 75; Peaches, $1 25@1 55; Clyman plums, $2 05@2 40; Royal Hative plums, $2 20; Cherry plums, $1 55; Royal Anne cherries, $1 70@1 70.

CHICAGO, June 22.—Apricots are plenty and of moderate sale. Half cases, good, $1 30@1.45. Cherries, active trade; prices range as follows: White, 10-lb. boxes, fine large, $1.30@1.60; soft, 80c@$1.10; black, sound, $1.20@1.40; do, soft, 95c@$1.10. Peaches, good, sell fairly; half cases, good to choice, $1.15@1.65. Plums vary a good deal in size and prices range accordingly: crates, 4 baskets, cherry plums, $1.40@1.60; Clyman, $2.50. The above prices are such as were obtained at auction sales. In small lots, and to fill orders, better prices were obtained.

California Potato Market.

CHICAGO, June 22.—Californian are not wanted to any extent. Owners are trying to get charges, but find it difficult, especially on stock held for some time. Prices are as follows: California, Northern, per sk., $1.20@1.25; Southern, 90c@$1; bad order, 50@75c.

Miscellaneous.

NEW YORK, June 20.—Beans—During the past ten days a good many California Lima beans to arrive by sail vessels now afloat and by Pacific Mail, have been sold in this and other Eastern markets. Spot goods have been cleaned up very closely also, and the quantity remaining in store for receiver's account is very light. Hops—There has been a decline of one cent since Monday. Holders of the best, dropped rates to gain some of the enlarging brewers' demand. Numerous old contracts have been settled. The position of the actual stock, therefore, is clearer. State '91's common to choice. 22 to 26; Pacific, 21c to 25½c, California options close weak. June, 25c asked; July, 22c bid, 22c asked; August, 22@30c; September, 30c asked; October, 26c.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 21, '92, were as follows:

Flour, qr. sks	57,768	Bran,	sks		4,873
Wheat, ctls	112,286	Buckwheat	"		....
Barley, "	16,892	Middlings	"		1,045
Rye, "	477	Chicory,	bbls		225
Oats, "	561	Hops,	"		12
Corn, "	2,130	Wool,	"		1,061
*Butter, "	1,116	Hay,	ton		2,207
do bxs	488	Straw,	"		180
do bbls	24	Wine,	gals		238,570
do kegs	44	Brandy,	"		3,250
do tubs	40	Raisins,	bxs		....
do ½ bxs	426	Honey,	cs		76
†Cheese, ctls	955	Peanuts,	sks		....
do bxs	65	Walnuts	"		....
Eggs, doz	41,540	Almonds	"		....
do " Eastern	66,000	Mustard	"		....
Beans, sks	1,180	Flax	"		550
Potatoes, sks	17,026	Popcorn	"		....
Onions, "	5,777	Broom corn,	bbls		....

*Overl'd, 163 ctls. †Overland, ... ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '90 to June 20, '91.	July 1, '91 to June 18, '92.
Flour, ½ sks	468,479	473,149
Wheat, ctls	1,405,764	1,302,250
Barley, "	26,912	56,791
Oats, "	373,912	443,889
Wool, bales	10,159	10,784
Hops, "	508	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,149

English Hop Market.

In its review of the London hop market the Mark Lane *Express*, June 6 says: Although the trade in hops continues very limited, the few orders received by merchants can only be executed at late rates, and indeed, in some instances, they have had to give a little more money to get what they required. Holders are very confident, and are hoping that the slight attack of fly in the plantations will have some appreciable effect on the market in the direction of alarming buyers, and so send them to the Borough to clear off the few remaining unsold lots of the 1891 growth. At present, however, there is but a mere sprinkling of aphides in the grounds, only what planters expect to find at this period, and it will have to develop much larger proportions before anyone in the trade will feel at all concerned about it. Growers having washing machines are getting them ready, so as to begin washing the plants, if necessary. The prospects of the plantations have immensely improved during the last ten days, thanks to the fine hot weather. The progress of the bine has been very rapid, and in many grounds already it tops the poles, while, in nearly every instance, it has quite run away from the tyers. Genial showers have fallen in most districts, and these have been most welcome. On the Continent prospects are also good, while the markets remain quiet but firm. There is a very general attack of fly in the plantations, the Worcester and Hereford gardens are suffering the most, and the Weald of Kent, Mid. Kent and Sussex nearly as bad; lice are being deposited freely. The market is quiet, buyers are waiting development; a few Australian hops have arrived.

Cereals.

The United States Agricultural Department crop indicates a production of 521,000,000 bushels, the largest of any year on record excepting last year. The record of the two years, with present indications, will be 1,132 000,000 bushels The consumption for the two years is about 730,000,000 bushels, leaving 402,000,000 bushels for export and reserve stocks. The exports for the current year will be about 230 000,000 bushels, leaving 172,000,000 bushels for export the coming year, and to add to the reserves July 1, 1893.

The crop report gives the following percentages of condition on June 1:

	1892	1891	1890	1889	1888	1887
Winter wheat	88 3	96.6	78.1	93	73.3	84 9
Spring wheat	92.3	92 6	91.2	95	92.8	87.3
Oats	88.5	85	89.8	93	95 4	91
Rye	91	95.4	92.3	95	93 9	88.9
Barley	92.1	90,3	86.4	95	88.8	87

The area of wheat, spring and winter, is about the same as last year, and oats about 250,000 acres less. The crop report figures probable crops by the percentages reported as follows:

	1892	1891	1890
Winter wheat	340,000 000	392,495,000	255 374,000
Spring wheat	181,000,000	219,285,000	143,888,000
Total	521,000,000	611,780,000	399,262,000
Oats	661,000,000	738 394,000	523,621,000
Rye	30,000,000	33,000,000	28,000,000
Barley	70,000,000	75,000,000	63,000,000

India is again shipping wheat to Europe on a large scale—larger than even that of last year, and, so far, unprecedented. From April 1st., which is the commencement of the cereal year in India, to May 22, the shipments amounted to 1,155,000 qrs. of wheat to Europe, of which rather more than a moiety is destined to the Continent: in the corresponding period of 1891 there had been 910,000 qrs. shipped, and 510,000 qrs. same time in 1890.

London cables received yesterday report as follows: In Russia, prohibition has been raised on all articles except rye. Imports into the United Kingdom for the week ending June 21st: Flour, bbls., 303,000; wheat, qrs., 369,000. Amount of wheat and flour on passage June 21st: To United Kingdom, 2,876,000 qrs.; to continent, 1,071,000 qrs. Farmers' delivery of wheat for week ending June 18th, 48,328 qrs.; average price, 29s 10d.

In the local wheat market trading has been lifeless. Offerings are light, while buyers only operate to meet immediate wants, preferring to buy largely only when new crop wheat is offering freely on the market. Present advices indicate that farmers will not begin to deliver freely until after the holidays, and even then they will not dispose of much. The favorable situation of wheat the world over for holders will unquestionably cause stronger holding and more storing than has been the case for two years past, unless buyers should enter the market and bid advances on present quoted prices. The world's wheat and corn crops will be considerably short of the 1891 crops, which, later on, must have a favorable effect on the demand markets.

Dairy Produce.

As indicated in last week's issue, the market for butter failed to hold up, and at the close lower prices are quoted. At the advance, packers stopped packing and supplies came in from all sections, besides which heavy consignments of ladle were received from the East. With stocks increased, a stronger ruling pressure is noted. Norton, Teller & Co.'s Eastern correspondents report an advance in butter East, under lessened receipts and a good demand.

Cheese appears to be working into better position for sellers. Receipts are not so large, while the stocks have been steadily drawn on. The week closes on a firmer market for cream and a steadier tone in skim.

The egg market has assumed its usual summer features, viz., poor demand and low prices for all eggs that are not strictly choice. Eggs "as is," whether store or so-called ranch, are hard to sell. Candled eggs are barely steady, while choice to strictly choice selected fresh laid are very strong and wanted. Small eggs are unsalable.

Vegetables.

Seasonable garden-stuff, under free receipts, is lower, with the tendency to still lower figures. Asparagus and rhubarb are hardly worth quoting. String beans and peas are coming in sparingly; only the more tender meet with a free purchasing from dealers.

The receipts of onions have been very large, considerably in excess of the demand. Many consignments could not be placed.

Potatoes have held to fairly strong prices under moderate receipts. There are no overland shipments, but to up north ports a fair outward movement has obtained. Our quotations are for consignments to wharf; from the store an advance of from 5 to 10 cents per cental is asked.

Barley sagged off 2¼ cents per cental, but toward the close of the week the decline was recovered. The tone of the market at the close is not satisfactory to the bulls. A very strong bear pressure is being put forth by the bears with the object of getting prices still lower, and failing in accomplishing it, then to keep the market from advancing. The stock of old barley has been reduced very materially the past week and the offerings of new are light. Free purchases of new crop barley, the more choice grades, are reported in the interior and at an advance on current quotations in this city.

Oats shaded off slightly under heavy receipts from Oregon; with these placed the market recovered, but it is said that the tone is weak. The crop up north, it is claimed, will not equal that in last year, but in California there will be an increase. There is a continued good demand in our market.

Corn has declined slightly. The tone is weak at the lower quotations.

Rye made several bad breaks the past week. At the lower prices it is claimed that exporting buying can be made with a fair degree of netting a profit.

Trading in futures on Call the past week was very light both here and at the East. At the East attention was diverted largely to the proceedings of the political convention held at Chicago.

To-day's market for potatoes was stronger for the more choice, well-matured for shipping. Garden stuff was unchanged.

Feedstuff.

Considering the excellent natural feed in nearly all localities in this State, the demand for ground feed is exceptionally good. Bran and middlings have held to strong prices, but barley has been barely steady while feedmeal and cracked corn rule in buyers' favor. The export demand is confined to small orders.

The receipts of hay have been large, consisting mostly of new. The quality of the new received is not up to general expectations, but it is said that farmers are holding their choice and selling their off grade. Advices from the large hay-growing sections are confirmatory that at present bids by buyers farmers are not selling but are storing; all they let go are, as stated above, the poor grades

Fruit.

The market for berries shaded off the past week under free receipts. Canners entered the market and took raspberries at around $5 a chest, but only bought blackberries when overripe sold at around $3 a chest. Strawberries are too high for canners' use. It is claimed that canners contracted with several large growers for their crop of blackberries and also raspberries, but the price paid we are not able to learn. Canners, dryers and shippers have been contracting quite freely for apricots at 1¼@1½ cts. per box, peaches at 1½@2 cts., Bartlett pears at 1½@2 cts. plums 1@1½cts. French prunes have been contracted at from 1½@1¾ cts in the orchard. Canners bought cherries the past week at the following figures: black 4@4½ cts per box. white 5@6 cts, royal Anne 6@9 cts. Cherries are going out. The receipts of peaches and apricots have been very heavy and low prices followed. The former are only for table use, while the latter are generally small. Quite a demand sprung up the past week for Red Astrachan apples and sales were made as high as $1.75 per box, the demand was chiefly for shipping. Common apples are slow. Pears are small and hard to sell. Black figs are coming in more freely. Cherry plums are in light receipt.

It is claimed that a better feeling prevails for grapes, but we are unable to have the prices named, verified.

New crop dried apricots are offered on the New York market for shipment next month at 9½@10½c delivered. The quality is not given. The general feeling is that the market for all kinds of new crop dried fruits will open higher this year than it did last year. The quality will average better.

Oranges are hard to sell. They are simply rotting in stores. Limes and lemons are weak.

To-day's market for fruit was generally stronger, with a slight advance for cherries, currants, choice, desirable shipping peaches and apricots.

We are informed that in Napa county they are bidding $17@17.50 per ton for Zinfandel grapes; in the southern counties they are bidding from $10 to $12 per ton for wine grapes.

Live Stock.

The market for bullocks is reported easy at slightly lower prices. Calves are also in buyers' favor. but mutton sheep and hogs are strong, with an advancing tendency. The driving of sheep to the summer ranges, make them scarce.

Wool.

Receipts are lighter. The market is strong for desirable clips. It is claimed that selections for the time of the year are poor, owing to buyers having taken the bulk of the more desirable clips as soon as they came in. Many had buyers in the country picking them up. The Chicago *Wool Grower*, June 15 reports that market as follows: "For the bright wools of the adjoining States there is a large demand, and prompt sales can be made at quotations. The low, medium and coarse grades—Shropshire, Cotswold, etc.—continue to be most called for, owing to the prevailing demand for that class of woolen goods; but supplies of other grades are exhausted and the call is for more. For the more Western wools (Texas and Territories), the demand is increasing, but receipts are yet small. Utah wools have, so far, been the principal receipts, and these have sold at 16 to 19 cents for fine, 18 to 22 cents for fine medium, 21 to 23 cents for medium, according to condition. The longer grown, strong staple wools, more generally found in other sections of the West, as Wyoming, Dakota, Montana, etc., are in good demand, but are scarce."

Miscellaneous.

Old hens, old roosters and young chickens went from bad to worse under free receipts, although at the close young stock is stronger and about 50 cts. per dozen higher. The break in the market for old stock is due to heavy receipts of Eastern with another carload (120 coops) expected in. At the low prices California dealers stopped shipping. Turkeys, geese and ducks were unchanged.

Beans have been moving off very freely at steady prices.

New crop honey is still in light receipt.

In hops nothing new is reported. Crop news is being closely watched.

Hams are higher and strong at the advance.

The car of Eastern poultry which was due to arrive to-day, met with two different accidents. Fully one-half of the fowls are reported to have been killed.

From reliable advices up to June 15, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	261,223	323,706	*†145,386	75,801
San Diego	22,108	26,018	2,326	.....
San Pedro	9,743	14,624	....	18,037
Oregon	46,382	29 454	21,722	
Puget Sound	22,782	30,431	.....	
Totals	362,238	424,233	169,434	93,838

*Engaged for wheat, 1892, 19,203; 1891, 27,821 †For new crop loading, 1892, 16,879; 1891, 31,595.

The statistics of produce exports from this port from July 1st to June 14th, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,781,236	13,653,312
Flour, bbls	1,047,405	1,149,119
Barley, ctls	1,109,799	312,298

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 21, 1892.

Limes, Mex	4 00 @ 5 00	Bl'kberries ℔ ch	6 00 @ 8 00
Do Cal	— @ —	Figs, blk box	75 @ 1 25
Lemons, box	1 50 @ 4 00	Apricots, pr box	35 @ 65
Do Sicily	5 00 @ 6 00	Cherries, box	
Oranges, Seedlings		Black	60 @ 75
Redlands	2 00 @ 2 50	Royal Ann	70 @ 90
Riverside	1 50 @ 2 00	White	35 @ 60
Los Angeles	1 25 @ 1 75	Beets, sk	— @ 1 00
Do Navels—		Carrots, sk	50 @ —
Redlands	— @ 4 00	Okra, dry, lb	15 @ —
Los Angeles	— @ 2 50	Parsnips, ctl	— @ 1 25
Riverside	— @ 3 00	Peppers, dry, lb	10 @ —
Duarte	— @ 3 00	Do green	10 @ 15
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.		Turnips, ctl	50 @ —
		Cabbage, 100 lbs	45 @ —
		Garlic, lb	1½ @ 4
Strawberries, per chest—		Squash, Sum, bx	50 @ 1 25
Longworth	10 00 @12 00	Tomatoes, box	75 @ 1 00
Sharpless	6 00 @ 8 00	Asparagus, box	1 00 @ 1 50
Gooseberries, lbs	3 @ 05	Peas, green, sk	50 @ 1 00
Oregon Imp	6 @ 7	Rhubarb, box	50 @ 65
do English	7 @ 8	String Beans	4 @ 6
Raspberries, ch	6 00 @ 9 00	Cucumbers, box	75 @ 1 00
Currants chest	4 50 @ 5 50	do Bay	1 50 @ 2 25
Peaches, box	50 @ 65	Mushrooms	10 @ 30
Cherry Plum, dr	45 @ 65	Egg Plant, lb	17½ @ 20
		Green Corn, sk	75 @ 1 25
		do sweet ℔ dz	20 @ 25

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, June 22, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 15
Butter	2 50	@	3 05
Pea	2 20	@	2 70
Red	2 00	@	2 20
Pink	2 00	@	2 10
Small White	2 20	@	2 55
Large White	2 20	@	2 45
Lima	1 95	@	2 35
Fld Peas, blkeye	3 00	@	3 30
Do green	1 50	@	2 75
Do Nlles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	17	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	21
Eastern	—	@	—
CHEESE			
Cal. choice cream	7½	@	—
Do fair to good	7	@	—
Do gilt edged	—	@	8½
Do skim	5	@	6
Young America	—	@	10
EGGS.			
Cal. "as is" doz.	16½	@	17½
Do candled	18	@	22
Do choice	23	@	24
Do fresh laid	25	@	26
Do do selected	—	@	27
FEED.			
Bran, ton	17 50	@	18 50
Feedmeal	26 00	@	28 00
Gr'd Barley	22 00	@	24 00
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₰ cwt.	7 50		
HAY.			
Wheat, per ton	11 00	@	—
Do choice	—	@	14 00
Wheat and Oat	10 00	@	12 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
New Wheat	10	@	12½
D Wheat and Oat	9	@	11
Do Oat	6	@	10
Do Alfalfa	7	@	9
Straw, bale	40	@	50
GRAIN, ETC.			
Barley, feed, ctl.	90	@	—
Do Choice	95	@	—
Do Brewing	1 02½	@	—
Do do Choice	1 07½	@	—
Do do Giltedge	1 10	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 35	@	—
Yellow, large	1 30	@	—
Do small	1 35	@	—
Oats, milling	1 50	@	—
Feed, Choice	1 47½	@	—
Do good	1 41½	@	—
Do fair	1 35	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	1 32½	@	—
Gray	1 32½	@	—
Rye	1 20	@	—
Wheat, milling.			
Gilt edged	1 47½	@	—
Do Choice	1 45	@	—
Do fair to good	1 41½	@	—
Shipping, cho'ce	1 40	@	—
Do good	1 38½	@	—
Do fair	1 36½	@	—
Common	1 33½	@	—
Sonora	1 33½	@	1 40

HOPS.			
1891 Choice to Ex.	25	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, CityMills	4 65	@	4 75
DoCountryMills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
New Reds	20	@	35
do Silverskin	40	@	70
POTATOES.			
Early Rose, ctl.	50	@	75
Do do in boxes	60	@	1 00
Peerless	65	@	85
Do in boxes	70	@	90
Garnet Chilies	50	@	60
Burbank Seedlings	65	@	85
Do do in boxes	70	@	1 10
POULTRY.			
Hens, doz	5 50	@	6 50
Roosters, old	5 50	@	6 50
Do young	7 00	@	9 00
Broilers, small	2 50	@	3 50
Do large	3 75	@	4 50
Fryers	5 00	@	6 00
Ducks	4 00	@	5 00
Geese, pair	1 25	@	1 50
Goslings	1 25	@	1 75
Turkeys, Gob'r.	18	@	20
Turkeys, Hens	15	@	17
Manhattan Egg Food ₰ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	10	@	—
Medium	11	@	—
Light	12½	@	—
Lard	9	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	11	@	—
do Eastern	14	@	—
SEEDS.			
Alfalfa	9	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (S ate)	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	28

Live Stock.

BEEF.		MUTTON.	
Stall fed	5 @ —	Wethers	7 @—
Grass fed, extra	5 @ —	Ewes	6½@—
First quality	4½@ —	Do Spring	8 @—
Second quality	4 @ —	**HOGS.**	
Third quality	3½@ —	Light, ₰ lb, cents	5½@ —
Bulls and thin Cows	2 @ —	Heavy	5 @ —
VEAL.		Soft	4½@ —
Range, heavy	4 @ —	Feeders	3½@ —
Do light	5 @ —	Stock Hogs	3½@ —
Dairy	6 @ —		

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Color in Plant Life.

Those familiar with the growth of flowers know how essential light is to the creation of color. The most gaudy blooms and the most brilliant foliage, if kept in the dark or overshaded, will become pale and almost white. This fact (according to the *Horticultural Times*) shows the presence in the plant of some chemical agent which is acted upon by the actinic rays. To some extent, this chemistry of nature is understood by florists, who, by the use of chemical manures and other means, strive to take the greatest advantage of it. For instance, it is a common practice to mix alum and iron filings with the soil in which certain plants are grown, in order to bring out special colors. The bluish-tinted hydrangea is the result of such treatment. Salts of iron, or sodium phosphate, added to the soil, turns the crimson of the peony to violet and produces blue hortensias. According to Dr. Hansen, who has studied the subject very closely for many years, there are only three distinct pigments to be found in flowers—setting aside the chlorophyl, which forms the green coloring matter in all plants. These colors are yellows, reds and blues. The yellows are mostly in combination with the plasmic sap, while the others exist chiefly in solution in the cell sap. The yellow pigment forms an insoluble compound with fatty matters, and is termed lipochrome. Orange is formed by a denser deposit of the yellow, and the color in the rind of an orange is identical with that found in many flowers. The red in flowers is a single pigment soluble in water and decolorized by alcohol, but capable of being restored by the addition of acids. Lipochrome combined with this red pigment produces the scarlets and reds of poppies and of the hips of hawthorns, but the varying intensity of reds in roses, carnations, peonies and other flowers depends on the presence of a greater or less quantity of acids. The blue and violet colors are also decolorized by alcohol, but reddened by acids. Florists have already succeeded in producing a very large scale of unusual colors in flowers, and there seems to be very good grounds for believing that it is possible so to manipulate nature that she will produce blossoms of every conceivable tint and hue.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	
Western Washington Industrial Exposition,	Tacoma,	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
1	Oakland	Aug. 8–13
2	Stockton	
3	Chino, J. D. Sproul	
4	Petaluma, Dr. Thos. Macleay	
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23–27
9	Rohnerville	
10	Yreka	
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28–Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield. J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	*, I. J. Rolfe	Aug. 23–28
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	
33	Hollister	Oct. 3–7
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug.
37	Lompoc, W. I. Nichols	Sept. 27–30
	—Glenn Co. Willows, W. V. Freeman	Aug. 9–13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

POLISHED WOOD.—For various ornamental purposes, wood with a mirror polish is now being satisfactorily employed in Germany as a substitute for metal. In carrying out this plan, the wood is suitably prepared by being first submitted to a bath of caustic alkali for two or three days at a temperature of about 175° F., then dipped into hydrosulphate of calcium for about 24 to 39 hours, after which a concentrated solution of sulphur is added. After being subjected to another dip in an acetate of lead solution at about 100°, a shining metallic surface is imparted by polishing when dry with lead, tin or zinc.

SALE OF CHOICE TROTTING STOCK.

Intending to Retire from the Breeding of Trotters, because I cannot find time to give proper attention to them, I am offering my

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At the Salesyard of KILLIP & CO., Corner Van Ness Avenue and Market Street, San Francisco, on

Wednesday, August 10, 1892, at 11 A. M.

KILLIP & CO. will Conduct the Sale and Issue the Catalogues.

AMOMG THE OTHERS TO BE SOLD WILL BE THE FOLLOWING FILLIES:

LOOKOUT. B f, foaled 1890. — DIRECTOR 2:17. 1989 — DICTATOR 113. DOLLY, 4 in the 2:30 list. — ADINA — ELECTIONEER 125. ADDIE LEE, 4 in the 2:30 list.

PINOLE — B f, foaled 1890. — NOONDAY 10,000 — WEDGEWOOD 692, 2:19. NOONTIDE, 2:20½. — VALONA — NUTWOOD, JR (by Nutwood 600). LUCY PATCHEN (dam o Jas. Madison, 2:17¾)

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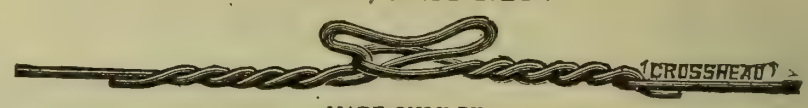
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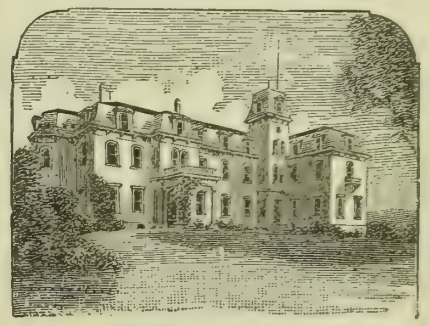
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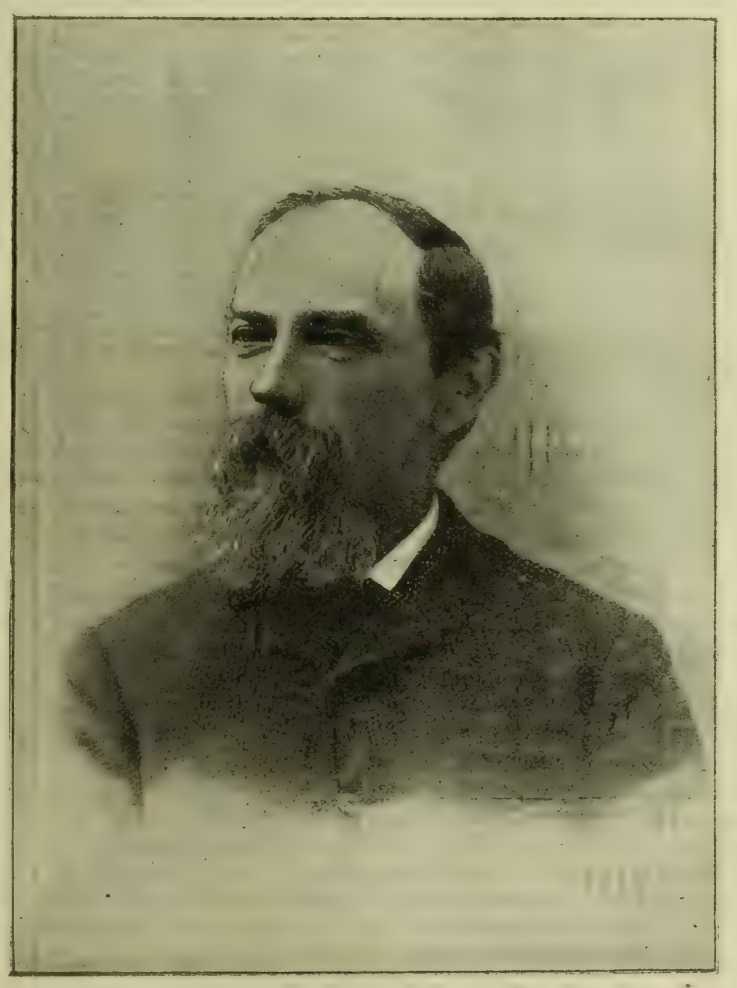
PACIFIC RURAL PRESS

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THE DEWEY PUBLISHING CO., Office, 220 Market St.

The Professor of Agriculture at the State University.

The bright and kindly face which adorns this page will be instantly recognized by many RURAL readers in all parts of the State, and the name written beneath is the one which is most frequently mentioned in connection with California agriculture in the household and in the public gathering. We are glad to have the opportunity to connect the face with the name, for both are alike good, and we are sure it will be acceptable to those who have hitherto been able only to honor the name, to admire the manner of man to whom the name belongs. And the opportunity comes in this wise: After nearly 18 years of unremitting service, the Regents of the State University granted Professor Hilgard one year's leave of absence for rest and foreign travel, and last week he and his family took their departure. In his absence, we bring to the attention of our readers certain phases of his life and work, which are not perhaps widely known here, and which, in the progress of his active labors among us, it did not seem so fitting to recall. It is not our intention to allude at length to the facts best known to Californians; to his coming here at a time when the relations between the agriculturists and the university were somewhat strained, because, perhaps, of mutual misunderstandings, and of his signal success in winning for the university new interest and favor, by his personal acceptability, by his earnest and honest zeal in the agricultural interest, and by the exceptional originality and ability which characterized his work. Nor is it necessary to enlarge upon his success in building up the agricultural department of the State University, and in undertaking agricultural experiment station work so early that California can claim priority in efforts which are now progressing in all the States and Territories. These facts are known to most of our readers, as are also the extent and variety of his agricultural researches, which have furnished a basis for many industries and a motive force in others. It is rather the personal history of the man and the features of his work which have attracted widest attention abroad, as well as in California, that we shall endeavor to present.



PROF. E. W. HILGARD OF THE STATE UNIVERSITY.

Eugene W. Hilgard was born in Zweibrucken, Rhenish Bavaria, on January 5, 1833, of distinguished parents. His father becoming dissatisfied with the Government, resigned the chief justiceship of the court of appeals and emigrated to America, settling on a farm near Belleville, Ills., where Eugene had a thorough schooling in all the details of agriculture, and where he received a superior education from his father. When 16 years old he went to Europe, and studied at Heidelberg, Zurich, and at the Academy of Mines at Freiberg, in Saxony, taking the degree of Ph. D. at Heidelberg, in 1853, at the age of 20. After two years in Spain and Portugal, he returned to America, in 1855, to take charge of the chemical laboratory of the Smithsonian Institution, and lectured on chemistry at the National Medical College. In 1858 he was appointed chief geologist to Mississippi, having, however, been connected with the geological survey of that State for some years previous. As State geologist his work was vigorously pushed forward, and in 1860 was printed his report on the Geology and Agriculture of Mississippi, though not actually published until after the war. No other State report contains so much original matter, presented in such a clear and orderly manner, as this. Up to the time of the publication of this report, the whole subject of the cretaceous and tertiary of the Gulf States and of their soils was, with the exception of the information contained in the two reports of Tuomey in Alabama, practicall in darkness. In the light of Prof. Hilgard's Mississippi report, the study of the cretaceous and tertiary formations of the other Gulf States becomes a comparatively easy task.

In 1860 Prof. Hilgard made a second trip to Spain and married, at Madrid, the daughter of Col. Manuel Bello of the Spanish army. During the war, Prof. Hilgard was mainly assigned to the duty of preserving the collections of the University of Mississippi at Oxford, continuing also the office work of the survey, so far as his connection with the Confederate "Nitre Bureau" permitted. He took a prominent part in scientific matters connected with the Confederate army, and at the close of the war resigned as State geologist to become professor of chemistry in the University of Mississippi. His interest in geology did not cease upon becoming professor of chemistry, and many of his most important contributions to the science of geology were made during the period from 1865 to 1873. We need mention only his papers on the Quaternary Formation of the Gulf Region, his Geological Reconnoissance of Louisiana, his articles on the Mississippi River and its Delta and Mudlumps, and his Geological History of the Gulf of Mexico, all of which are authorities on the subjects of which they treat.

In the Mississippi report, the soils of the State are for the first time adequately treated and this, the beginning of a long line of study and investigation of the chemical and physical properties of soils, continued up to the present time and still in progress. Some of the results of these investigations have been published from time to time, such as Soil Analyses and their Utility, Objects and Interpretation of Soil Analyses, Silt Analyses of Mississippi Soils, On the Flocculation of Particles, etc. These titles will show the position of the author in regard especially to the utility of the chemical analysis of soils, first taken in his Mississippi report, has been consistently maintained through all these years. When the Mississippi report was published, with the exception of Dr. Peter of Kentucky, Prof. Hilgard was about the only scientific man in the United States who held that it was possible to form any reliable estimate of the fertility of a soil from its chemical analysis. In the works above quoted, and particularly in the great work done by him for the tenth census, on Cotton Culture in the United States, the author has demonstrated that the chemical and physical analysis of our virgin soils, properly interpreted, together with accurate observations of the timber growth, and other characters of these soils, in their natural condition, furnish the data from which it is perfectly feasible to ascertain both their agricultural value and their proper treatment in cultivation. Hence, Prof. Hilgard is a warm advocate of agricultural surveys, for the benefit of farmers, and is constantly urging the general government to give proper attention to the bearings of geology upon agriculture, and the study of the soils in their natural conditions, while it is still possible to do so.

One of the results of this long and laborious series of investigations has been to carry conviction to the minds of a number of the scientific men of the country, and at the present time Prof. Hilgard has a strong support both in this country and in Europe, where his work is well known, and as much appreciated there as it is here.

An ingenious worker and expert glass blower, he constructed, himself, much of the apparatus needed by him in his lectures and in his soils' investigations. His apparatus for the mechanical analysis of soils is the best of its kind and appears to have overcome the difficulties which previously made such analyses of comparatively little value. It is largely used in Germany, where that class of careful and thorough-going investigation is more frequently carried on than here.

While Prof. Hilgard was in charge of the chemical department of the University of Mississippi, laboratory work was first introduced as part of the course of instruction in chemistry. This course, though for a long time entirely optional, was taken by a number of students, some of whom have since risen to distinction, and have spread the teachings of Hilgard into other States.

In 1873 Prof. Hilgard accepted the chair of geology and natural history in the University of Michigan; but the climate proving too severe for his health, he accepted the professorship of agricultural chemistry in the University of California; and in the spring of 1875, moved with his family to Berkeley, Cal., where he has since resided.

Prof. Hilgard has been a frequent contributor to the scientific and agricultural press. As may be inferred, he is a man of the people as well as of science, and is an indefatigable worker. His writings are characterized by great force, and clearness of expression, and sprightliness of style that make them all pleasant reading. In conversation he is bright, animated and sympathetic.

Prof. Hilgard is a member of the National Academy of Sciences and of other scientific bodies. He has three times received the degree of LL. D., first by the University of Mississippi, next from Columbia College on the occasion of the celebration of the centennial anniversary of that institution, in 1887, and subsequently, in the same year, the same honor was conferred upon him by the University of Michigan, at the celebration of its semicentennial anniversary.

In behalf of our readers who know so well the value of his life and work we express a sincere hope that his sojourn abroad will give him rest and recreation, and that he will return to us a year hence refreshed and eager for another score of years of California life and effort both of which are heartily enjoyed by him.

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ALFRED HOLMAN.....General Manager

SATURDAY, JULY 2, 1892.

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BUSINESS ANNOUNCEMENTS.

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☞ *See Advertising Columns.*

The Week.

The weeks are falling to the dead level of midsummer, but it is a monotony of activity, not of idleness. The fruit is pouring from the orchards in three steady streams; to the overland trains, to the canneries and to the drying grounds. For weeks and weeks to come, these courses will run, and, during a similar period, in the fruit regions of the interior, the sun will rise, glare and decline with scarcely a cloud to obscure it.

Even on the coast there will be long stretches of sunshine. Compilations made by the Weather Bureau last week show that during the last 15 years the greatest precipitation in July at Sacramento was a "sprinkle" and in San Francisco during 21 years it was less than one-quarter of an inch. And even these were rare exceptions. July in California has always been practically rainless.

The full tide of travel to the Sierra resorts, to the Yosemite and to Alaska has set in. The last of the schools, the two great universities have closed for the summer. Society in large towns and cities is at a standstill. Even politics will be handled lazily. Californians are either too busy or too lazy to do otherwise at present.

What Can Producers Do, Individually?

Is it possible that, as a result of all the honorable and commendable effort which is now being put forth to secure cooperative action among producers in the preparation and marketing of their products, an idea may prevail that individual effort and enterprise cannot succeed; that no man or woman can hope to develop a successful business by individual enterprise and exertion? If this notion should be too widely propagated, it would be unfortunate.

Although it is undoubtedly wise to promote concerted, harmonious and cooperative action among producers, and to secure for producers the commanding position which proceeds from control of ample capital and of a large product, it does not follow that the individual is relieved from doing any enterprising thing in his own behalf which his ability, energy and the character of his product make possible. No matter how great may be the amount and value of produce which may be handled by producers' cooperative associations, there will still remain the opportunity for the development of all the individual, productive and commercial enterprises which we have means and brains to carry forward. These enterprises, too, will add immensely to the wealth and comfort of our people. Any man or woman who can produce something of distinctive excellence, and can give it characteristic style which commands consumers, should not relax a single effort because of the agitation about cooperation.

There will always be gilt-edged products by those who have especial talent and zeal in production and marketing, which will minister to a special and remunerative demand. These will usually issue from establishments which enjoy locations near to good and capacious markets, which give opportunity for the exercise of the personal factors of brain, devotion and enterprise, which would fail of reward in unfavorable location and environment. What need have the producers of butter, eggs or bacon, who sell by yearly contract to clubs or wealthy families, for the creamery or the egg producers' association or the packing establishment? Evidently none; although it can be shown that it is to the advantage of extra choice products that prices of all goods in the same line be well sustained. We have no doubt a similar state of affairs prevails in our fruit products to a certain extent, although possibly not yet so fully developed.

These reflections are suggested by the reading of an excellent letter by Prof. W. A. Henry in the *Breeders' Gazette*, in which he argues that, although the tendency is toward the multiplication and extension of great meat-packing concerns, there is still room for a great number of small concerns developed by individual skill and enterprise. We quote a few of his illustrations:

Near a small city in Wisconsin, lives a farmer who started a few years ago with but a few dollars capital. Beginning in the fall and until spring he prepares sausage, which finds ready sale in his community. This man is thrifty and making money. I am acquainted with a farmer near another city who each year cures several tons of salt pork, bacon and hams, and has no difficulty whatever in disposing of it to city customers at good prices to the satisfaction of both parties. In a still larger way all have heard of Deerfoot sausage, ham and bacon. Years ago Mr. Edward Burnett one fall prepared the meat of eight hogs raised on his Deerfoot Farm, which he sold to friends in Boston. The meat was so satisfactory that the demand grew rapidly until now some 3000 hogs are each winter cured into products which find a ready sale at high prices all over the country. At times Deerfoot bacon is for sale in Madison, Wisconsin, and I have eaten Deerfoot sausage at Chattanooga, Tennessee. These products are also for sale in the city of Chicago. Think of Massachusetts sending pork products to Chicago! Yet such is the fact.

At Oconomowoc in Wisconsin, is located a small packing house which makes a specialty of small hams, bacon, etc. For this purpose young hogs not too fat are required, and I am informed that farmers are paid a fair advance over Chicago prices for all they can turn in. Only to-day a leading grocer of this city told me the following: He had handled Chicago hams for years and his trade in them had gradually diminished until not over ten hams were sold per month. Changing a few months ago to the Oconomowoc hams he has from that time been selling about fifty a month, with satisfaction to his customers and an increase in his profits.

Prof. Henry's mind naturally ran upon meat products, for he was writing with special reference to small enterprises as contrasted with great packing combines which are so powerful in the Central West. We seem also to be moving toward great concerns in the animal line, which shall lead to a great extension of our live stock production. If we attain these, there will still be opportunity for hundreds of small productive enterprises, which shall send out materials bearing the distinctive excellence which is only attainable by individual intelligence, devotion and energy. No matter how great the army, or how heavy the infantry firing, there is still the telling work of the sharpshooter as a factor of success. It is the same in general and special lines of production.

And what is true of meat products is applicable also to the higher arts of dairy, poultry, orchard, vineyard and other farm products. Individual high-class production is not likely to be overdone, because its requirements are great. It takes insight to discern what are the characteristics of an ideal product, and what means and materials give the nearest approach to it.

It takes business sagacity to lay the foundations of a trade and extend it, and without a degree of artistic sense and taste, an acceptable product in some lines cannot be secured. None of these and other essentials to success in the higher productive arts can be attained without more intense personal application to the subject, and often greater personal labor, than need be given to the outturn of the ordinary good commercial product. Any one having these requirements and the will to make use of them need not fear to embark upon the development of an individual line of production. His intelligence will insure style and quality, his business sense will prevent ventures for which there is no field, and his will to labor—why, we have, since classic times, had surety that it is irresistible.

Naturally, individual efforts begin upon small scale enterprises, and wisely so, because points have to be learned by current experience. The higher price which is usually attained for such products is but the fair reward for the greater thought and labor put upon them, and at first this is a great help to the producer with small resources, because it is earnings of the producer himself and his family, and turns to value time which might otherwise be unremunerative. Such efforts are possibly not Californian in spirit, for the Californian prefers an extension-bit, even if a gimlet would answer better. And yet, while we are working hard and zealously for our great enterprises, and may their shadow never decrease, let us not lose sight of the importance of individual effort, or gain the idea that cooperation relaxes individual responsibility among co-operators, or precludes special and incisive effort in one's own behalf.

Favorable Outlook for Wheat.

In cereals the market partakes of the usual midsummer holiday character, when all buying is for near by requirements. Wheat probably has been the most inactive. The slow market in wheat is said to be due largely to fears of operators that the antioption bill now pending in Congress will be passed by the Senate. This bill has been strenuously opposed by dealers in futures, and as strongly supported by organized farmers and persons opposed to anything like gambling. There are many who believe that dealers in options have brought strong bear influences to bear on the markets in this country and also abroad, so as to discourage the passing of the bill. If this opinion is well grounded, then, soon after the fate of the bill is known, more active times can be reasonably looked for, and the markets on this coast assume a bullish tone in conformity to the favorable condition of the money market in old financial centers, as well as to the favorable statistical position of the cereal.

Never within the commercial and financial history of the civilized world has money been in such large supply in leading financial centers with the rates of interest ranging so low as the present time. Loans have been made over night in London at the rate of one-quarter of one per cent per annum, while for three month loans as low as five-eights of one per cent per annum has been accepted. In France and Germany, while the rates of interest are not so low as they are in England, they range lower than at any time within the history of those two countries. At the money centers in the Eastern States the rate of interest ranges very low. With cheap money there should not be any difficulty in promoting a speculation in wheat with the statistical position favoring a supply of the latter barely equal to the world's requirements for the next twelve months.

The old season goes out on comparatively light supplies of wheat in the demand and supply countries. But light as are the supplies they are not felt materially, owing to an absence of speculation. With active speculative trading there is a hoarding of supplies and with a free withdrawal of grain from market an artificial scarcity is created, which soon causes the markets to respond.

While the leading centers for handling grain may possibly have fully as much wheat on hand on July 1st, 1892, as there was the corresponding date in 1891, yet the fact must not be ignored that high average prices in 1891 drew supplies from all available sources, and consequently the visible and invisible supplies will not now equal the corresponding supplies at this time last year. But admitting that the supplies are about the same, even then the situation is favorable for an advance in prices for wheat before nine months pass. In India, Great Britain, Australasia and the United States the crop is considerably less this year than it was in 1891. The large shortage in the above countries is very considerably greater than is the increase in other countries of the crop this year compared with the crop in 1891. Not only does wheat show a falling off, take all countries as a whole, but corn will be very materially less. In the United States the crop under the most favorable weather conditions will not be within 400,000,000 bushels of the yield in 1891. In Russia and other corn-growing countries the crop will not aggregate any more than it did in last year. The rye crop in Germany promises to be larger this year than it was in 1891, but even then it is not expected to be an average of the root crops outside of the United States. We are not so well advised, but the tenor of advices does not warrant the belief that the yield will be much more than it was in last year. In this country there will most certainly be a considerable falling off, particularly in potatoes. In speculating on the wheat supply the wheat crop is no mean factor and cannot be ignored, for potatoes and other root vegetables enter largely as articles of food and when the supply is short and prices are high wheat is eaten more extensively. With a certainty of shortage, when compared with the crops in 1891, in the world's crop of wheat and also in the crop of corn, and a probably lessened yield of root vegetables, the outlook for good renumerative prices for wheat is of the most encouraging character.

COMPETITION.—It is is a mean sort of competition, but perhaps the Southern Pacific will respect it. It is reported that 10-ton wagons are being built in Stockton for freight hauling to and from Fresno, in opposition to the railway. What kind of a railway must it be to be beaten by a mule team?

From An Independent Standpoint.

The telegraph dispatches announce that the presidential campaign was fairly started in the Senate on Tuesday of this week by a resolution offered by Mr. Hale of Maine, stating the fact that "at no time has so large a portion of the American people been employed at so high wages and purchasing the necessities of life at so low prices as in 1892; and whereas these conditions exist and are largely due to the Republican policy of protection, the Committee on Finance is directed to inquire into the policy of tariff for revenue only upon the labor and industries of the United States, and to report the same." This, of course, was throwing down the gauntlet to the Democrats, and Mr. Vest, in their behalf, accepted the challenge and had much to say as to the McKinley Act increasing the cost of dry goods and hardware, reducing wages and causing strikes and labor troubles, referring particularly to the troubles at Carnegie's works. He also commented upon the choice of the new chairman of the Republican national committee, being in line with the policy of encouraging monopolies. There was more talk, back and forth, between the two sides of the House, but, strangely enough, there was no man in the Senate of the United States who had the manliness and the sense of decent propriety to stand up and say that the Senate chamber of the nation was no place to inaugurate a political campaign, or in which to air partisan eloquence. It is a shame, indeed, if there are not stumps enough in this country for the politicians, without turning the chief hall of national legislation into a campaign wrangling place.

The immediate interest in politics, as is usual after national conventions is the attitude of the disappointed. No party can, or at least no party has the courage to depend wholly upon its better elements, and so, even when casting out its devils, it looks out so far as it can that they do not abandon it altogether. There is just now serious concern in the Democratic camp as to the policy of the New York Tammany Society in the coming campaign. Open hostility is not feared, for honorable frankness in any line of policy is never expected from Tammany, but apathy would practically be as bad as opposition. The active interest of Tammany is the essential condition of Democratic success in New York, and this accounts for the fact that the men who were manfully fighting the "tiger" at Chicago last week, and who succeeded in overcoming him, are now trying to coax him into good humor. The outcome is uncertain. Tammany is not exempt from that caddish sentiment of hatred to the country at large which is characteristic of New York, and nothing short of substantial considerations will induce him to forego his revenge. Tammany's price will be the Government patronage in New York, and it remains to be seen if Mr. Whitney, who is managing Mr. Cleveland's campaign, will be weak enough to give it. We believe that Mr. Cleveland is an honest man, who would rather be beaten than to make the concession. All the other opponents of Cleveland at Chicago—Watterson, Brice, Carlisle, and even Gorman—are marching gaily enough to the party music, and will give their efforts this year, as usual, to the party cause. The chairmanship of the Democratic national committee has not yet been arranged, but Mr. Brice will probably retire, leaving the place to Mr. Whitney or to somebody who will carry out his policies and move as he directs. The disappointed Republicans have been more prompt to announce their continued allegience. All have volunteered the assurance that they will "stand in" for the campaign, so there now remains on the Republican side no malcontents, save the silver advocates of Colorado, Nevada, Idaho and Montana. Mr. Clarkson spent some hours with the President on Saturday, and it was reported that he had been invited to continue in the chairmanship of the national committee, but at the meeting of the committee on Monday, he denied the story, declining to stand for the chairmanship on the express ground that Mr. Harrison preferred somebody else. Mr. W. J. Campbell of Ills., a new man in national politics, was then chosen in his place, and he it is who will command the forces in the coming fight. Mr. Campbell, it is reported, was the choice of Mr. Harrison, the committee having invited him to name its chairman; indeed, the whole temper of its meeting on Monday was that of complaisance to Mr. Harrison, who seems to have inspired the proceedings from beginning to end. It strikes us that, on the whole, it would be in better taste if Mr. Harrison would permit the party to select its own chairman and make its own campaign, resting content himself to perform his duties as President. The Chief Magistrate of the country has no time to spare in the promotion of partisan politics, even when his personal interests are at stake, and he would do better to leave it alone.

Mr. Clarkson made a speech at the committee meeting above referred to, which the telegraph reports as follows:

Referring to the campaign of 1888, and the work of Quay and Dudley, he said he hoped that there was no Republican in this land who would ever cease to render due honor to those two honorable men who went into the hottest fire for the Republican party, and emerged victorious and without detraction. He had known many men and had a large friendship in the country, and he wanted to say that upon his dying bed he could not name two men more to be loved and honored than Quay and Dudley. He warned the committee against the growing tendency in the Republican party, under the hypocrisy of the times, not to defend its party leaders. Quay and Dudley were attacked by a party whose success was derived from the use of the knife in the South, and the assassination of character in the North. They were attacked, not because they were guilty of anything wrong in the campaign, but because they had won victory for the Republican party, and had restored the Government to an honest basis.

In this there is the virtue of friendship and the courage of conviction, illustrating the difference between Mr. Clarkson as a man and Mr. Clarkson as a public man. It is this difference which makes him, and those who stand with him, dangerous to the interests of the country. Personally of fair character, they seem willing to do in politics, without scruple, what in ordinary affairs they would scorn as pale, cold villainy. Mr. Clarkson or his friends Quay and Dudley are no doubt to be trusted implicitly in the ordinary affairs of life, but in politics they are utterly without morals, have no regard for principles, follow only the devious ways of expediency, and seek only selfish ends. Such men are a curse to their party and their country. The surprise is to find in them the virtues and the courage of private manhood. But interesting as it is to know how these spoilsmen love each other, it was not the motive of our quotation from Mr. Clarkson's speech; it was to show the character in which the practical politician views himself. Mr. Clarkson's warning is against the growing tendency of the parties not to defend their leaders. Party leaders! Indeed! Here is the sublimation of conceit. The leaders of the American parties are not made of such stuff as Messrs. Clarkson, Dudley and Quay. Who goes to these men for ideas? Who seeks to know what their opinions may be upon questions of public policy, not to mention the more serious questions of Government? Who is foolish enough to imagine that they have any ideas or opinions not subordinated to the contingencies of immediate partisan success? The political leaders of this country are men like Mr. Blaine, Mr. Cleveland, Mr. Harrison, Mr. Carlisle, Mr. McKinley and Mr. Mills—men who, no matter what their political associations or antagonisms may be, nevertheless busy themselves with the principles and philosophies of things, and who furnish the country with ideas and arguments. For such men there is no lack of loyalty; the people do not have to be urged to their defense. It was not supposed until now that men of the Clarkson sort imagined themselves to be the leaders of the politics of the country. They have indeed about the same right to call themselves leaders that the sutlers of an army have to call themselves commanders.

The most striking fact concerning the Republican and Democratic platforms is their close likeness to each other. There is, in fact, something akin to parallelism in the satisfaction with which each views the continuing integrity of American institutions, and the anxious regard which each expresses for the pensioner, the settler upon unsurveyed lands, the long-enduring Irish, much-abused Jew, and in view of the evils threatened by indiscriminate emigration, but the climax of correspondence is found in the planks which relate to the currency, and for which both parties adopted the sense and something like the phrase of President Harrison in declaring that every dollar must be the equal of every other dollar. The only radical difference between the two platforms concerns the policy of dealing with election frauds in the South, and with the protective tariff. Here, indeed, is something like manly frankness—but here only. As to all else there is evasion, subterfuge and double meaning. The voter who would decide fairly between the two parties must study, not their official declarations of principle, but their character and tendencies as illustrated by their history. This is the only way to judge of parties. It is easy for a political party "in convention assembled" to declare itself illustrious in career, pure in character, noble in purpose and wise in judgment, but the discreet voter will not hearken to its own acclaim, but will study into its past—consider the principles and conditions in which it was founded, view the course of its relations to public affairs, and inspect, not only the men it presents for public office, but by whom the party policy is framed, and by whom its affairs are mustered and directed.

So far as the two parties are concerned, there is a truce as to silver. Both Harrison and Cleveland are positively committed against free coinage, and either may be depended upon to veto any measure which the silver advocates might be able to get through Congress. One or the other of these men will occupy the White House for nearly five years to come. So the situation is not especially flattering to the silver men; for the present their fight is lost, and however unpleasant the fact may be, there will be no advantage in trying to avoid or misconstrue it. Of all forms of deception, self-deception is the worst, and it is a folly which the silver men will do well to avoid. The discussion of the past six months has been clearly to the disadvantage of silver. The gold standardists have succeeded, if not in convincing the country, at least in alarming it. They have marshalled in force against the free silver proposition, and their lists have been found to include the financial doctrinaires, the capitalists and bankers, the chief political thinkers and leaders and the vast hosts of the timid. Against such a union of powerful elements, it has been impossible to make headway. It has been the misfortune of the silver cause to have few advocates save those who directly represent the mining interests involved and the political interests associated with them. Since there is no evil so ruinous as a deranged and depreciated currency, the conservative position of the country is, on the whole, a thing not to be regretted. The country cannot afford to make a mistake as to silver, and we believe its best course is to hold fast to the present until the nations of the earth, acting together, can come to an agreement as to silver that will warrant its use here to the fullest extent without hazardous experiment. This is the only safe, and as we look at it, the only possible solution of the silver question; and it is a solution to which the nations are being forced by the irresistible logic of facts. The mines produce less and less gold while the demand for currency steadily grows. The value of gold naturally goes up and as it goes up, the value of everything else goes down. It is not surprising that the debtor and producing classes feel the pinch and that they cry out for relief. Relief must come, however, from united action; no one country—not even the United States—is strong enough to carry the reform alone.

The advocates of free silver have assumed too much in reckoning their strength. They have talked broadly, and still talk of "The West" as united and urgent for their demands, and have indulged in the assumption that the question would develop, or had already developed, into a sectional one, with the West on one side and the East on other. The truth is, in the West there is the same division of sentiment, and the same preponderance of judgment against free coinage that there is in the East. The Pacific States, for example, are invariably scheduled for free coinage, while they are, in fact, three to five against it. In California there happens to be two leading newspapers who favor free coinage, but they have made no serious impression upon the sentiment of the country, which stands favorably by a large majority to the gold standard. We have recently seen how impossible it was to get a straight free coinage plank in either of the Democratic or Republican State conventions. In Oregon there is no public journal which favors free coinage. Both political parties have declared against it within the past three months, and the Oregon representatives in both the Minneapolis and Chicago conventions were active partisans of the gold standard. In Washington the situation is precisely the same. The leading newspapers, Democratic and Republican, are against free coinage, and neither of the political parties in their recent State conventions supported the silver proposition. The six Senators from California, Washington and Oregon are solid for gold and against the claims of silver. Nevada and Idaho, it is true, are silver States, and so are Colorado and Montana, but these are all. This question should be considered only with a view to the policy of the country as to its currency. We cannot afford to monkey with the currency to please even the favorite interest of four important States. If free coinage of silver is a good thing for the country, then let us have it and let us rejoice that it will be a good thing also for the four silver States; but if it will be a bad thing for the country, let us reject it without any regard for private or local interests. Delay at this time is the only fair policy.

The Democrats had a fine opportunity for fair advantage over the Republicans in nominating a candidate for the Vice-Presidency. There was no propriety in Mr. Reid's nomination, for he represented nothing save a general personal respectability and the money interests of New York City. There was no more propriety in nominating him than any other fairly intelligent man of good character with a financial "pull." If the Democrats had been wise, they would have named as his opponent some such man as Boies of Iowa, Gray of Indiana or Campbell of Ohio. It would have given their ticket a strength in the West, and would no doubt have captured a great many moderate Republican voters who resent the nomination of Mr. Reid. This advantage was utterly lost by the nom-

ination of Mr. Stevenson. It is probable that not one out of every ten thousand voters in the land had ever heard of Mr. Stevenson. His sole recommendation seems to be that he was born in the South and that he lives in the West. While his general respectability of character is unquestioned, he is distinguished for nothing, and such reputation as he has is based upon a single term in Congress as the representative of the Greenback party. The nomination was unfit and unwise, quite as unfit and unwise as that of Mr. Reid. It would be a humiliation to the country if, through any chance, either of these men should come to the Presidency that would go far toward cheapening the great office of Chief Magistrate.

On Wednesday, as we write, the Prohibition Convention is meeting at Cincinnati, and there is the promise of a very interesting session. Mr. St. John has succeeded, as he desired, in getting himself entirely out of way of the nomination, and it is believed that the chances at present lie between General Bidwell of California and Mr. Demorest of New York. The principal point urged in favor of Mr. Demorest is that he will subscribe liberally to the campaign fund, but the leaders want a man who will take well as a speaker, and therefore they will be solid for the Californian. Miss Frances E. Willard, who is a prominent figure, announces that she will use every endeavor to have the convention adopt a resolution pledging the party to withdraw the presidential candidate if the People's Party Convention at Omaha will put up a man satisfactory to the National Prohibition Committee, and to have the committee rested with discretionary power in the matter. She will also ask to have the name of the Prohibition Party changed to the Home Protection Party. On the other hand, there is strong opposition to fusion, some of the opponents going so far as to call Miss Willard a "Prohibition mugwump."

The leading men in the People's Party, soon to meet at Omaha, are looking about for a strong Presidential candidate. They succeeded last week in practical agreement upon Judge Gresham of Indiana. It was first understood that he would accept and make the campaign if the platform was sufficiently moderate to correspond with his views, but later it was understood that he absolutely declines, and will not, under any circumstances, accept the nomination. It is to the credit of Mr. Weaver and others that they are perfectly willing to stand aside and permit the nomination to go to who ever will give strength to the party, waiving entirely any personal claims they may have to party honors. Of course the nomination of a man like Judge Gresham upon a reasonably moderate platform would put the People's party in an entirely new position before the country. Such a nomination, it is safe to say, would immediately treble the strength of the party, but political wisdom is the last virtue of reformers, and it is not to be expected that it will be exercised in the present instance. They will probably insist upon the extreme tenets of reform, and General Weaver will probably be the candidate.

Whether or not Mr. Depew was offered the Secretaryship of State will probably never be known, at least not until this campaign is over. At all events, he will not be appointed, and it is reported this morning (Wednesday) that General Tracy of the Navy Department will take the vacant place in the State Department, and that Governor Cheney of New Hampshire will succeed as Secretary of the Navy. This information was given to the newspaper correspondents at Washington last night, by a member of the National Committee who professed to have the news directly from the White House, but there is as yet no authoritative announcement. During the week gossip has connected a good many names with the position, including Col. John Hay of Ohio, General J. W. Foster of Indiana, Congressman Hitt of Illinois, Henry Cabot Lodge and ex-Governor Long of Massachusetts. There seems to be an abundance of available material. It is probable that the formal announcement of the appointment will be made on Monday.

SOME one has said that if farmers were as careful to get rid of their poor horses as they are to rid their land of weeds, the scrub would soon be a horse of the past. From our observation, we believe the man who works most diligently to keep down the weeds on his farm is the man who drives a respectable team, and the scrub and weeds go hand in hand.

THE tallest horse in the world standing 22 hands high and weighing 2800 pounds, owned by T. E. Ridgeway of Fort Worth, Texas, died May 5th. This horse has been on exhibition in various States, and it was contemplated sending him to the World's Fair. Now that he is dead, his carcass will be stuffed and prepared for exhibition in Chicago next year.

FREE GRAIN.—The Czar sanctions in Russia the unconditional exportation of wheat, oats, barley and other cereals excepting rye.

ENTOMOLOGICAL.

A New Ladybird from Australia.

By B. M. LELONG, State Board of Horticulture, and Chief Horticultural Officer.

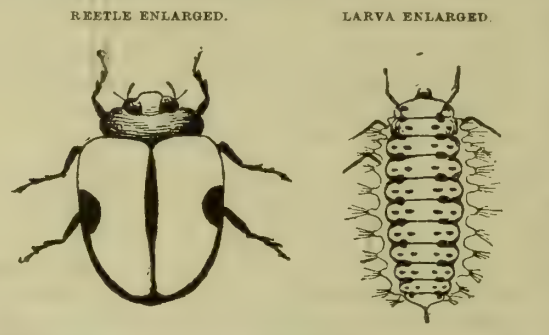
On April 14, 1892, we received three very small and insignificant-looking insects, that prey on the cottony cushion scale, from Albert Koebele, now in Australia collecting beneficial insects. Mr. Koebele discovered this insect in Australia and it was named in honor of our distinguished friend by Sidney Olliff, Government Entomologist of New South Wales.

As soon as these insects were received they were turned over to our entomologist, Alexander Craw, who placed them in a small glass jar in which branches infected with cottony cushion scale had been previously placed for them to feed on. Subsequently one of these insects died, leaving but two, which on April 26, changed to the pupa or chrysalis state, and on May 1st the perfect beetles emerged, and, fortunately were male and female. On May 4th the female deposited eggs, which hatched May 9th. The young larvæ were carefully reared and after passing through three molts, changed into the pupa state, and on June 3d, 55 perfect beetles came out, thus occupying just 31 days from the egg to the beetle stage. When liberated on trees they will, no doubt, pass through their transformation in much less time. In about a month we shall have thousands of these beetles for distribution.

The successful colonization of this insect was most fortunate, and, while we already have a cottony cushion scale exterminator in the *Vedalia*, an insect formerly introduced, yet this one adds another chapter to the annals of economic entomology hitherto unprecedented.

In previous articles the beneficial insects discovered by Mr. Koebele were reported to show what is being done by way of their introduction, with the hope that they would accomplish the same results here as in their native country, if once they became established. While this investigation was still in progress, statements appeared in the public press, advising that what was then said be taken with a great deal of allowance, and one in particular read, "It will be many years yet, perhaps centuries, but most likely never, before we succeed in introducing beneficial insects that will free our fruit trees of all the insect pests that attack them. The work that the Vedalia accomplished is without precedent in the entire annals of economic entomology, and, therefore, we can scarcely hope for a repetition of it in the case of the recently imported species." Thus a damper was thrust upon the objects in view, but fortunately, Nature triumphs over the unwarranted deductions of theorists. The discovery of this valuable insect, whose functions equal, if not surpass, the Vedalia cardinalis, ought to silence those who, on theory, condemn as impossible what is easily accomplished in the field of experiment.

Experiments will soon be made to determine upon what other species this insect will also work, and the results will be given to the public from time to time.



NEW AUSTRALIAN LADYBIRD—*Novius Koebelei.*—Olliff.

Description.—Beetle slightly smaller than Vedalia cardinalis, averaging one eighth of an inch in length. The elytra are cardinal red when the perfect beetle issues from the pupa case, afterward changing to deep blood red. The male has a black line down the center of the back from the thorax to the point of the abdomen where it widens, extending forward along the lower edge of the elytra to near the center, where it terminates in a small blotch. Head and thorax dark, and together with the elytra are densely covered with microscopic light or yellowish hairs. The legs are black with the exception of the tarsi, which are buff colored.

The female can readily be distinguished from the male in having the central black line extend only half way down the back; the balance of the wing covers are blood red, with the exception of two faint spots, one slightly under the center of each wing cover, but in some specimens this is not discernible.

Eggs.—These measure .03 of an inch in length by .01 of of an inch wide, and are deep blood red in color. The female deposits them upon or near the scale so that when the larva hatch they will conveniently find their food. The eggs are laid singly or in small patches upon their sides instead of being attached at the end to the leaf or twig, as is the case with the twice-stabbed and some other species of ladybirds. In five days they hatch into small, six-legged larva very much resembling the young of the Icerya upon which they feed. In confinement they pass through three molts and the chrysalis state into perfect beetles within 31 days, but in the warm orchards and sunshine this time will probably be reduced ten days.

Larva.—When full grown, measure about .18 of an inch and are thickly covered with white powder or fine cotton, but generally leaving the segments well defined. When newly molted, they are brownish-red or chocolate colored. Down each side of the back are what appear like two black lines; but when examined with a good lens or microscope, will be seen to be a double row of dots or short lines upon each segment, and between the segments are large black spots forming a central row to the other markings. Upon each segment along the sides protrude small warts, from each of which are four fine hairs. The first two segments from the head each have two extra, smaller warts with a single hair upon each.

Pupa.—When full grown, the larva seeks a suitable location to go through the chrysalis stage. This is generally upon the branch or a dry leaf, where it attaches itself, head downward, by a gummy matter exuded from the abdomen. In this position it remains a few days, when the back of the chrysalis splits longitudinally, exposing the pupa which later changes into the perfect beetle.

Crop Reports from Fresno, Tulare and Merced Counties.

FOR WEEK ENDING MONDAY, JUNE 27th.

The situation remains unchanged for the raisin industry. A careful canvass of this district made during the past week by experts, shows that in vineyards less than three years old, 75 per cent of them have lost their first crop entirely. The remaining 25 per cent have lost fully 75 per cent of the first crop. In vineyards over four years old, the loss varies from 25 to 60 per cent of the first crop. The smaller losses are due to careful and persistent cultivation. The clusters remaining on the vines will be fine, but the total crop of "London Layers" will be fully 50 per cent short of the 1891 crop. It is too early to suggest anything as to the second crop, except that at this date, everything looks favorable. The weather conditions for the past week have been good for all crops. Harvesting is going ahead in good shape, and results better than anticipated in all districts. Apricots are coming in, in vast quantities, and other fruits never looked better.

EASTON DISTRICT.—The weather has been good for all crops. Apricot harvest is well advanced. The peach crop will be large. The vineyards which dropped the first crop will have a fair second crop, but it will be late. Old vineyards that retained their first crop will have little or no second crop.

OLEANDER DISTRICT.—Harvesting in progress, with good yield. Raisin crop will be short, as the first crop has nearly all dropped off, and the leading growers of this district have made a compact to sell their second crop to the distillers as it will be of inferior grade, owing to lack of sugar and probability of being soaked by the fall rains. This move will take more than 1000 tons of raisins out of the market, from this district alone, and will probably be followed by other districts.

TULARE COUNTY—VISALIA DISTRICT—Weather not warm until 27th. Fruit ripening slowly; orchard men wish a few warmer days.

HANFORD DISTRICT.—First crop raisin grapes below average. Apricots and peaches average well. Weather good for all fruit crops.

PIXLEY DISTRICT.—Harvesting in full swing. Will average two sacks to acre on unirrigated, and ten sacks on irrigated land.

MERCED COUNTY—MERCED DISTRICT—Harvesting progressing rapidly. Yield better than anticipated. Quality generally good. Occasional crop shrunken somewhat.

J. R. WILLIAMS, Observer.

The "Poor Man's Dollar."

CARMEL GARDEN, June 27th, 1892.

TO THE EDITOR:—Some two years ago I pointed out the folly of farmers echoing the cuckoo cry of the silver ring, that the "silver dollar was the poor man's dollar." We are on the eve of another election and each party has taken up an eminently respectable and dignified position on the fence. Meaningless platitudes on the currency question appear in either platform. Does the farmer realize the situation? Does he know that 420 millions of silver dollars are already stowed away in U. S. Treasury vaults? Does that look as though the country were very anxious to use more silver coin? Does that show a need for coining $4,500,000 more every month? Does it foreshadow any probable benefit to the citizen at large if the U. S. mints should be directed to coin all the silver offered them, provided it is "American silver"? By the way, how do they earmark *American* silver? Is it understood how unavailing our efforts to keep up the price of silver have been? So unavailing that while silver sold for 120 cents per ounce only two years ago it now barely fetches 87 cents per ounce.

Is it not obvious to us that by an artificial demand silver production has been over stimulated and the supply has far exceeded market wants? What eminent services have our "Silver Kings" rendered the people at large that their product should be the one selected to be "bulled" by the Government at the expense of the people?

Have we forgotten that only a few years ago silver was at five or six per cent discount, and San Francisco merchants all made special contracts that *their* bills were payable in "U. S. *gold coin*" only? Have we all heard that Canadian banks already receive American silver dollars at five per cent discount? If this is a Government of silver miners, for silver miners and by silver miners, its action in this silver question is quite intelligible. If not, it behoves us to remember the truthful remark that fell some time since from President Harrison's lips, that if, unfortunately, one dollar gets to be of less worth than another the hands of the toiler are the first to receive the depreciated dollar.

Silver miners know what they want and why they want it. When farmers know what they want and why they want it, it is possible they will get it. But they must not ask for the moon, or more than their share of the earth. They must also know what they *don't* want. And I know one farmer who some years ago (not very many) had to take his pay very largely in silver, and then to pay his bills in San Francisco very largely in gold at a premium of about six per cent. Of course that can never happen again! O no! but that farmer knows that what has been, *may* be. Hence this squeal in time.

Then, in the sweet by and by, when the crash comes—when the cute American people discover that buying silver at 120 cents and holding it till it is worth 76 cents is not the most lucrative of all businesses—what then? When Uncle Sam thinks it's time to sell out, even at a great sacrifice, who's to shoulder the loss? Will it be the politicians? The silver ring? Not much. The burden will be saddled on that ever-patient ass, the farmer.

Farmers, you have been nipped in the past in this same old silver vice, don't stick in your fingers and turn that screw again. Murder! don't! it hurts. EDW. BERWICK.

FREIGHTS VIA. MOJAVE.—It is announced that in order to properly handle the large amount of canned goods and dried fruit shipments during the coming season the Atlantic and Pacific railway (Santa Fe route) will inaugurate a daily fast special freight line service from Mojave, Cal., to Chicago and New York. The schedule time from San Francisco, San Jose and Northern California points to Chicago via. this line will be eight days and to New York eleven days. Arrangements have also been made to have all carload shipments go through to their destination without transfer, thereby saving any delay or damage to the fruit while in transit.

POULTRY YARD

Organizing a Poultry Ranch.

LODI, SAN JOAQUIN CO. June 25.

TO THE EDITOR:—Having in a former article said something of what constitutes proper care of poultry and promised to say more, perhaps I had better give a little of my experience in organizing a poultry ranch. Experience is always better than theory, or rather the result of actual practical experiment is better than mere theorizing, for one may be done without much actual knowledge of the subject, but for the other there is absolute certainty where the experimenting has been thoroughly and intelligently done and the results carefully noted. The teachings of experience cannot however, be applied to all cases and all localities perhaps, without modifications or possible alterations in some particulars, but with a solid groundwork on which to build, such modifications and such alterations readily suggest themselves to the intelligent mind, so that in the commencement of any new enterprise it is always desirable to be able to avail ourselves of the "experience" of those who have been successful in the line we desire to follow.

Knowledge in any line of business is not to be acquired without some cost and the way for a beginner in poultry to learn the proper method in keeping them to ensure success at the least cost, is I think, not to attempt to jump at once into a full-fledged poultry raiser, but to commence in a comparatively small way, learning to take care of a small number properly and to enlarge the number as one acquires knowledge and ability in the pursuit. In this way one gradually and easily finds oneself capable of conducting an extensive business if he so desires, with ease and certainty of success and without having been subjected to any very considerable and discouraging losses.

I bought 250 hens with which to commence my poultry business, having what I thought a suitable place in which to keep as many hens as I desired to keep, having placed my limit at ten thousand laying hens. To accomodate my hens suitably I built four houses, each one 8x12 feet in in size with gable roofs and six feet high at the eaves They were built of 1x10 boards placed upright and battened to exclude draughts and having the gables filled in with lattice instead of solidly with board. For summer use I had lattice doors to ensure plenty of fresh air for the fowls, and having close doors for winter use.

The inside of the houses was arranged and furnished with a trough for water and one for feed. There was a coop built along the back end of each house inside, in which to confine broody hens until they would agree to go to laying again. The roosts were four in number of 2x4 stuff with rounded top edges and running lengthwise of the building, two on each side of the doorway and at a height of about two feet from the ground floor of the house; the doors being in the ends of the buildings. The feed and water troughs were very ingeniously arranged, I thought, being so arranged as to slide in and out of the doorway, one on each side, and sliding into a box of equal length with the trough, the box having its sides of laths placed upright and sufficiently near each other to admit the head and neck of the fowl, but not the body. In this manner I kept the food and water clean and readily accessible for them when desiring to eat or drink.

I placed my houses along one side of my ranch and at a distance from each other of about 30 yards and well out from the fence, and I divided my fowls among the four houses equally, the houses being supposed to be capable of accommodating, well and comfortably, one hundred fowls. Each morning and evening I took them food, having for the purpose a small hand-cart, and each noon fresh water was taken in a barrel or tank which could be placed in the cart and then filled.

For their morning feed I gave them a sort of vegetable mixture, being composed of vegetables of some kind, or carrot or beet tops, cabbage leaves and meat scraps, cooked together the night before, thickened with bran and properly seasoned, and left in the boiler with a chunk under it to keep warm all night, and give to the fowls warm in the morning as soon as they were ready to leave the roost. At night I gave a liberal feed of dry grain, principally of wheat, but sometimes of barley, corn, or Egyptian corn. Through the day the fowls ranged as far as they wished on all sides, finding an abundance of insects, gravel, etc.

One would certainly think that being so comfortably and even luxuriously fixed, that each hen would certainly lay at least one egg a day, but they didn't, even though they had nice nests placed for them, as secluded and inviting looking as a reasonable hen could desire. The nests consist of a box running along one side of the house, outside, and on the ground, divided into nests 12 by 16 inches and one foot high, each nest having an opening into the house, and a board so placed as to form a sort of hallway or runway, making the nests seem hidden away, as fowls seem to like them. But this was all to no purpose; they didn't seem to want to lay, anyhow. The nests were covered on the outside with a board hinged to the side of the house, and how a hen could help wanting to creep in through the hallway, open at each end, and select one of the inviting-looking nests, each filled with nice, clean-looking, chopped straw, and forthwith enter on the discharge of her duties as a conscientious and well-behaved hen should, is more than I could understand. But they went no farther than walking along by them, looking inquiringly into each one and making remarks to each other which I didn't fully understand at the time, but have since concluded to have been to the effect that they were very nice, but didn't fully suit them.

Then, desiring to suit them, if possible, I took coal oil cans and cutting them in two, crosswise, made of each a nice nest, which I fastened to the side of the house, inside, and at varying height from the floor, none of them more than two feet. These I filled with chopped straw, and for a time they seemed to like those better and would fly up on them and even scratch the straw out, but, after all, didn't seem any more inclined to lay than they had with the other nests. The upshot of the whole matter was that the perverse things, if they could find an old box or an old tin can anywhere, no matter how disreputable looking it was, they would lay in them what few eggs they did lay, to the utter disregard of the nice, artistically made and arranged nests which I had, with so much care and trouble, made for them. So they have continued to the present time, and all I have to do is to put a box in some place a little retired, as though it was thrown there to be out of the way, and they forthwith appropriate it and go to laying in it.

One may gather from all this, that there is something for each one to learn for himself in spite of and outside of all rules laid down in treatises on fowl-keeping, and so every beginner will find it; and, in fact, however experienced one may be, there is continually something to learn, and to be successful as a poultry keeper, one must study the nature of the fowls in all its different aspects, become familiarized with their habits and requirements, to know what they need and when they need it.

All localities are not alike, and the treatment and care requisite in one place would perhaps be altogether unsuitable in another. As a general rule, watch your fowls closely from day to day, and if they are not brisk and bright looking, they are then lacking something which you must try to supply them, or have been fed, perhaps, too much of something which must be discontinued, or their treatment in some way changed. Medicines and preparations of various kinds for the keeping of fowls healthy and preventing disease are, in my opinion, to be avoided just as much as "dosing" is in the human family. Scrupulous cleanliness in all may be said to be the main requisite in their care—fully as necessary as food and water where fowls are kept in numbers, and without it no one can have healthy or productive fowls.

T. B. GEFFROY.

HORTICULTURE.

Peach-Growing in Georgia.

Our readers will be interested in an account of the plans and progress of peach growers in Georgia, who propose to contest with us the peach supply of the Eastern States. We find the following over the signature of Mr. Mortimer Whitehead in the *American Florist:*

It would make a long story to tell of all there is of interest to be seen in and around Fort Valley, Houston county, Georgia. It seems to well deserve its title, "The Peach Paradise of the United States." The attractive little city has 2500 inhabitants, near the center of the State, on a high, level plateau 700 feet above the Gulf of Mexico, and when frosts kill the fruit blossoms on the lower levels, many miles farther south, here they bloom and reward the grower with bounteous crops that can be placed in the great cities of the North in from 48 to 70 hours; and while it is now only the very earliest days of June, hundreds of crates of beautiful peaches — Alexanders—beautifully ripened and colored by the southern sun are being shipped daily from several points in the county. Upward of 1,000,000 peach trees are already planted in great orchards and thousands of acres more that have for years been ruled and abused by "king cotton" are preparing to grow one of Pomona's choicest gifts, and pears, apples, plums and grapes as well.

Several large tracts of orchard planting are owned and managed by stock companies, among which may be mentioned the Ohio Fruit Land Co., with 1250 acres, and $25,000 capital stock; the Albaugh Georgia Co., with 1170 acres, $50,000 capital stock, and 80,000 peach trees planted. One orchard of 100 acres and 10,000 Kieffer pear trees is another sample. One of the places visited, so far the best developed, is that of E. M. Rumph, near Marshallville, on which, from one orchard of peaches covering 200 acres, $50,000 is said to have been made in 1889

The Hale orchard is planted upon an old cotton plantation, the former owner of which seemed to have some conscience and heart in soil culture, and was therefore not quite so much of a land destroyer as many others, and the portion of mother earth which he held in trust was therefore not as badly "run" as the average. But all who know the Hales know that even this condition was not foundation enough for them, and so several thousand dollars worth of fertilizers were used at the start, mostly cotton hull ashes, cotton seed meal and rock phosphate. It is less than seven months since the work of building this great peach farm commenced, and yet to-day on that 900-acre farm are growing in the most thrifty manner 101,000 peach trees, planted 13 feet each way, in rows one and a half miles long, besides hundreds of thousands more of young trees in nursery rows; two and one-half million Marianna plums to be used as stocks for budding more peach trees; a large variety of small fruits, including 60 varieties of strawberries, being tested in this soil and climate. One hundred acres of what is universally admitted to be the finest piece of corn in the county—and we saw nothing finer in all the trip from Washington to Georgia—is a sight to behold. Among the trees are growing hundreds of acres of cow peas, to be plowed under as a fertilizer, and to be immediately followed by scarlet clover, which grows here all winter and can be turned under when two feet high next spring. The Hale farm is a beautiful, level plain, smooth as a prairie, and from the house every acre of it can be seen. In cultivation all the improved implements are used, and modern, wide-awake, "intensive" culture on an "extensive" plan is the rule. Before planting, the farm was all carefully surveyed, being laid out in blocks 500 by 1000 feet and divided by avenues and streets. The avenues run north and south, the streets east and west. Very appropriately the avenues are named for the peach-growing States, with Connecticut in the well-earned center, with Georgia on one side and California on the other; then Delaware, Michigan, New Jersey, Missouri and Maryland. The streets are named for well known horticulturists, living and dead, Wilder, Augur, Berckmans, Barry and Earle.

The favorite peach of all this region is the Elberta, a native of this county, one of a lot of 1200 seedlings raised by Mr. Rumph, before spoken of, and judging by the grand crop we saw upon tens of thousands of bearing trees during the days of our visit, it may well be said that it "is chief of twelve thousand and altogether lovely." The cultivator who can produce such a new fruit is indeed a benefactor of mankind. The Hales show their faith in it also, as out of their 101,000 trees already planted, 60,000 are Elberta. Their other varieties are as follows: 10,000 Mountain Rose, 9000 Crosby, 6000 Stump the World, 5000 Lady Ingold, 4000 Tillotson, 4000 Thurber, 3000 Late Crawford.

A nice piece of alfalfa, together with experimental plots of milo maize, sorghum, and various grasses, are being grown to determine their value as soiling and fodder crops.

The whole of this enterprise, developed in so short a time and already so full of promise, was a surprise to the visitors and to others who were in the long procession of carriages furnished by citizens, who were glad of an opportunity to show the advantages of their pleasant land, and who drove over this grand farm on this round of sight-seeing.

And all this has been done with the native colored help, the darky and the mule (but the Hales have some good horses as well), under the direction of a bright New England young man, Mr. J. J. Molumphy, one of the boys that the Hales trained on their Connecticut farm, who, down here, far from friends and home, has, in the absence of the proprietors, worked for months, learned to use and control the labor, and to present on June 1 an orchard farm, well planted and cultivated, clear of weeds and a model in every way. If those who saw it with eastern, northern and western eyes were delighted with such thrift and management we may well believe it did "surprise the natives." But the spirit of enterprise is abroad and in the most pleasant relations possible, those from afar and those to the manner born are working out one of the grand enterprises of the "New South," and all tending to the glory of our favored land.

California must look well to her laurels, for nowhere outside of the Golden State have we ever seen such great orchards, such model growth of trees and vines, such perfect tillage, and all the conditions of soil and climate so nearly ideal. And this is nearer by 2000 miles to the markets in which competition will each year become closer. A young giant is awakening in middle Georgia; strong and healthy in his early youth he has entered for the race, and those who would hold their own with him must be up and doing.

MORTIMER WHITEHEAD.

Protection for Early Cucumbers.

Californians who are striving for the dollar which comes with the first cucumber to reach the San Francisco market, will be interested in reading of the arrangements which successful Florida producers employ to secure heat and protection for their vines. John Aspinwall of Eau Gallie gives the Indian River *Advocate* the following detailed description of his cheese-cloth "cuke" house:

My present cuke house has simply four walls of siding, seven feet eight inches high. The siding is nailed on a 2x4 frame, made by laying down a 2x4 on the ground and standing uprights on this sill, with another 2x4 for the plate; siding is simply nailed on without cutting to size; ends are squared or let butt where they will. There are benches two feet wide running all around the house next to the wall. In the central space are seven more benches, two feet wide, and of such length as to give a path across the ends. These benches are supported on 2x4 legs and under each bench is a trough in which artesian water, at 77 deg., can be run on cold nights. Between the benches are walks of four-inch flooring, with spaces between the pieces. The benches are made of two eight-inch boards on each side and the bottom of 1x3, with spaces. The bottom of the bench is about one foot above the level of the walk; running lengthwise on each bench, and above the centre of it, runs a three-foot "chicken wire," standing upright, the bottom of it being about ten inches above the earth in the bench. Over the whole of this structure is a layer of cheese cloth, tacked on 1x3 frame work, supported by 1x3 uprights. The secret of what success I have had in this house is due to this flimsy layer of material. Twenty-four hundred feet of cheese cloth covers this building.

The benches are filled as follows: First, on the bottom was put a layer of trash, such as dry weeds and grass; next, three inches of earth with cotton-seed meal; then a layer of cow manure, and, above all, a three-inch layer of sand (surface soil), making, when done, about eight to ten inches of material in each bench. White spine seed was planted about January 10th. I may add that a single strip of cheap cotton goods, one yard wide, was placed over each bench, drawn down at an angle each side, so as to shed the rain that precedes our "northers."

This is my cheese-cloth cuke house; and now comes the question, does it pay? At the present stage in the experiment, I cannot say that it does. I am shipping about 500 cukes per week, and the returns, so far, show them to have sold, on an average (fancy, choice and culls), at about four cents each. My first shipment was made April 1st, and it has increased each week, and, at this writing, the vines are in better condition than at any time since they started to grow.

Of course, it is understood that the vines climb on the upright wire, and the cukes hang down each side. It takes one man one-half day, each day, to fertilize the blossoms, pinch back the vines and train them up.

The fruit is of a dark green color, and from four and one-half to eight inches long. I am packing in the six-basket carrier, and one dozen fancy cukes just nicely fill each basket.

Several things, theoretically correct, have proved practical mistakes. For instance, with a house in as exposed a

situation as mine, cheese cloth is too flimsy to stand the blows we have. I shall search for some more suitable material for next year's use. Again, the flow of artesian water under the benches in a cheese-cloth house seems to have little effect upon the temperature. We have had a severe winter to try this experiment in, and though we are getting now a good crop, it is doubtful if we can carry our vines through the latter part of December and first part of January, so as to begin shipping in February or early part of March. Another year's experiment will be required to establish this point.

I omitted to mention that several applications of commercial fertilizer were made to surface soil after the plants were up.

To show the value of the cheese-cloth covering, I would say that on the same day I transplanted 50 plants—half into one of the benches and the other half out doors. Both lots were given the same treatment and care. Those in the house, under the cheese cloth, are now (April 25th) luxuriant vines, producing fine fruit and having leaves nearly a foot across, while those outside are practically dead and have only produced a few "nubbins."

Trained "Cukes" Under Glass.

We add the methods of another Florida grower, T. H. Hastings of St. Augustine, as described for the *Country Gentleman* by Stephen Powers. Mr. Hastings built a house 165 feet long by 22 feet wide, roofed with 3000 panes, 12 by 16, double strength French glass, 136 sashes, 4 feet 6 inches by 5 feet 10 inches—cost about $1400. He could build it now for about $1100 or $1200. To furnish water for general purposes, and for the irrigation of his out-door crops, he dug an artesian well 239 feet deep, 4 inches in diameter, costing about $450. This furnishes water sufficient to irrigate, as Mr. Hastings estimates, 80 or 100 acres, throwing a stream about 30 feet high, with about three horse power. The temperature of this water is uniformly about 79 degrees, and it occurred to him to utilize it for supplying bottom heat for his forcing-house, as the well is close at hand. He accordingly led it through the house in ditches, directly beneath the benches, which are about three feet above the ground.

Anticipating here a little, I may say that he has satisfied himself by two seasons' experience that the warmth of this water is not sufficient. It excluded frost from the house, of course, and even prevented frost from falling on his strawberries and other plants out doors, securing the tenderest of them complete exemption from injury when the temperature away from the irrigated beds was 28 degrees. But still it does not keep the heat high enough to secure the best results with such tender vines as cucumbers. On two or three of the coldest nights the fruits became so chilled that they rotted and fell off. The vines, however, were not affected, though their growth was checked a little, and their prolificacy was not impaired. But the prices are so fascinating early in the season, during the holidays, that he is not satisfied with the slow results of water heat and will put in a furnace, though with the water still running, he may not need it a half dozen times during the winter on frosty nights.

For his beds he used rotten cow dung and fine straw, or leaf mold and porous sod in lumps well beaten out for the bottoms of the benches, and commercial fertilizer as a food to be applied after the plants are started. Hills about two feet apart; one strong vine to the hill, trained upward within 15 inches of the shaded roof, "cukes" hang down. The two side benches are three feet wide, one row to a bench; the two middle ones are five feet wide, two rows to a bench. Under these benches, shut in dark and close, are beds in which he is experimenting with mushrooms, the white, mold-like stems just appearing above the ground.

Mr. H. tried the American or white spine variety the first year, but discarded it as it would bring only $2 or $3 a dozen, while the English varieties sold at $4 to $6. The varieties he has tested and approved are the Cuthill Black Spine, the Telegraph and the Sion Honse Improved. No cultivation is needed beyond pulling out the few weeds; the cucumber roots run so near the surface that the lightest scratching disturbs them. But it takes about all of one man's time to train the vines up the wires, tie them, pollenize the blossoms and clip off the ends of over-rank vines and tendrils. The male flower is plucked off and the petals removed, then the body of it is inverted into the female flower and pushed down a little so that it will fertilize it. A solitary bumble bee was seen buzzing about the flowers, but the English gardener whom Mr. H. employs prefers not to have bees in the house, as they are apt to mix the varieties and do not perform the work as systematically as he does himself.

As we moved along the long narrow aisles there were cucumbers by hundreds hanging down—they had not been cut for several days—so that we had to keep ducking our heads in order not to knock them about, and most of them were 10 to 12 inches long, many 15 to 18. Notwithstanding the delicious crispness of their flesh, which causes them to bring such high prices, Mr. H. finds them no more difficult to ship, when packed tight, than ordinary field-grown "cukes."

The fruits, which are of a uniform diameter throughout, are practically seedless, with rudiments here and there; but there are others with long, spindling necks and bulging ends, somewhat gourd-shaped, which are pollenized with special care and allowed to ripen for seed. Even these develop so few seeds that they bring a high price, and will be a source of no small profit. The seed cost in England 7s. 6d. for a quarter of an ounce, which would be about $121 a pound, with the freight and tariff to be added.

In February, 13 dozen were shipped, and in March 126 dozen, all of which sold at $6 a dozen in St. Augustine. I visited the house April 8. The tourist season was then drawing toward its close. Since the St. Augustine hotels closed, Mr. H. has been shipping to the North, but I have not learned the results. A few days ago I saw the last picking of the season in Jacksonville, where they sold at $1.25 a dozen. Mr. H. expected to make enough this season to pay for his house.

FRUIT PRESERVATION.

About Pickling Olives.

STATE UNIVERSITY, BERKELEY, June 20, 1892.

TO THE EDITOR:—Permit me a few comments on some points brought out in the discussions on the pickling of olives at the Farmers' Institute lately held at Pomona.

There seems to be a mistaken idea afloat that all olives may be treated alike in pickling. This is not at all the case, for it makes a wide difference whether the fruit is ripe or unripe, large or small, heavily charged with the astringent matters or not. A small olive requires less time for extraction, and is damaged by the same lye that may properly be used for large ones, if applied for the same length of time. A ripe olive requires less time for extraction than the same when unripe.

I have had no difficulty whatever in keeping olives even when pickled very ripe (the condition in which they are best for home consumption), provided they had been properly picked over so as to exclude all injured or otherwise undesirable fruit, *and were at all times kept fully submerged under the lye or brine.* A very short exposure on the surface will irremediably injure both the looks and the keeping quality and taste of the pickled olive; it will become soft, mushy and vapid-tasted, if not rancid, and of a sickly whitish tint; and any such olive will infect a hundred others around it. The same will be sure to happen if bruised or wounded fruit is mixed with the sound; it will happen in *any* case if the water used is impure, so as to become tainted if left to itself. If this condition exists or is suspected, the water should be boiled before using.

As regards the lye treatment, I have found it very undesirable to use it stronger than a pound to 4½ or 5 gallons of water; the action is slower than when the lye is stronger, but the fruit is not softened and the outside remains bright instead of dull. I see no object in using a larger bulk of the liquid than will just stand over the fruit at any one time, and successive extractions with weak lye leave the olives in better shape than one treatment with strong lye, for the latter will be sure to soften the outside portion ot the fruit, besides rendering it unsightly.

After the lye has acted; the quicker it is taken out of the fruit the better; and all excess over what is required to extract the bitterness, according to the actual experience in each case, should be avoided. I find that in treating ripe olives, one leaching with clean water after the lye is about all that should be allowed; all subsequent wash waters should have some salt added, as it favors the removal of the lye and prevents softening. In the case of very ripe fruit especially it is desirable to harden it by the use of pretty strong brine so soon as the lye is off; of course this makes the fruit shrink somewhat in size, but also makes it perfectly safe for keeping. The apparent waste of the salt in these brines used for washing are amply repaid by the staunchly keeping product.

If the above points have been attended to, a pound of salt to two gallons is all that is necessary to make the fruit keep; but as in this country the taste of customers runs rather in the direction of high saltiness, more may be used; the olives are easily freshened if desired.

Green olives of course keep much more readily than those which are nearly or quite ripe; but the consumer will eat a good deal more, and oftener, of the riper fruit, so that it is in the interest of the producer, although not so agreeable to the restaurant keeper, to have his pickled fruit as ripe as is compatible with good conservation. In this point, also, different varieties of olives differ; in general the oil-making varieties, if used for pickling, cannot be allowed to ripen as far as the more pulpy kinds that are specially adapted to pickling, and will not become mushy even when quite mature.

In olive-pickling as in other horticultural operations the producer must not rest satisfied with blindly following the precepts of others, that from differences in variety, soil and climate may be far from being the best for his particular case. Close observation and systematic trials, year after year, will put each one on the track of the best practice for his individual case. E. W. HILGARD.

FRUIT MARKETING.

Woman's Canning & Preserving Company.

SACRAMENTO, 610½ I Street, June 25, 1892.

TO THE EDITOR: Will you pardon my long silence, and permit me to sketch for your columns a brief history of an enterprise which has but lately come under my notice, which seems destined to prove itself no inconsiderable factor in the industrial world?

The Woman's Canning & Preserving Company, whose main office is now in Chicago, has been in existence scarcely a year and a half; but in that brief time has demonstrated not only the practicability of the inventions of a woman, but also the ability of women to manage successfully business affairs as well.

Every canner of fruits or other products knows from experience the objections to ordinary processes, and the various attempts to perfect them. Some even calling into requisition chemicals which are more or less harmful, which destroy the natural flavors, and the use of which has done much to bring the industry into ill repute, and to lessen materially the sales of canned goods.

Twenty years ago a woman already well-known in the literary world, abandoned what promised to be a brilliant literary career, and has given herself to study and experiment on lines which have culminated in the inventions now owned by the Woman's Canning & Preserving Company for canning *cooked* goods by the vacuum process, at a very low temperature and without the use of chemicals; and also for canning *uncooked* products without the use of chemicals, which latter process is especially desirable for delicate fruits: thus solving the problem which has disturbed manufacturers and scientists for 35 or 40 years.

First brought prominently to public notice by the Illinois Woman's Press Association, a stock company to utilize the inventions was formed in August, 1890, under the name of the American Woman's Canning Company; among its incorporators being such women as Miss Helen L. Hood, secretary of the Central Women's Christian Temperance Union of Chicago, Miss Mary Allen West, editor of the *Union Signal*, and secretary of the Board of Directors of the Women's Temperance Publishing Association, and Eliza W. Bowman, matron of the Chicago Newsboys' Home.

In December, 1890, by legal advice, the company reorganized under increased capitalization, and with the present corporation name. Practical work was begun in February, 1891, and during last year their specialties won success equalling their highest expectations, the best known wholesale dealers of New York, Chicago, St. Louis, Minneapolis and other places honoring the new company with their orders.

Already a branch fruit factory of large capacity has been started in Montello, Wisconsin; and a second, to work on vegetables and small fruits, at Aurora, Illinois, is probably by this time ready for operations.

The specialties on which the success of the past year were based, were "New Process Lunch Tongues," and apple, peach, and apricot tapioca puddings, English plum pudding and Indian fruit pudding. As there is practically no limit to the possibilities, the company proposes to extend the variety and amount of its manufacture with all possible speed consistent with good business management and the best interests of all concerned.

Among other advantages possessed by this company may be mentioned the following:

1. There is absolutely nothing which can be canned at all that cannot be successfully canned by the Jones processes.

2. These processes as far excel those now in use as the telephone does the Morse telegraph for local business purposes, and are based upon the one and only perfect method of food preservation, i. e., canning in a vacuum.

3. The number of cans of any product obtainable under the Jones processes from a given quantity of raw material, is fully equal to, and generally greater than the number of cans obtainable under any other process now in use.

4. The comparative number of cans per day by each operative, attainable under the Jones process, is equal to that of any process now used, and superior to most of them.

5. The market for canned goods is almost universal, and the stockholders practically control the market demand for the products of this company, while the management of the company is in the hands of persons of unquestioned integrity and business experience, whose aim and object it is to do the maximum amount of business at the minimum expense.

Among the stockholders and commissioners are Mrs. M. Louise Thomas, president of the Sorosis Club, New York City; Mme. E. Jennings Demorest, publisher of *Demorest's Magazine*, New York; Dr. Cora M. Bland, Washington, D. C.; Isabella Beecher Hooker, Hartford, Conn.; Mrs. Clara B. Colby, editor *Woman's Tribune*, Washington, D. C. Beatrice, Neb., and Mrs. Augusta M. Dolph, wife of Senator Dolph, Washington, D. C.

A peculiarity of the company's constitution is that stockholders are restricted to women, and the low price of the stock, $25 per share, places it within the reach of many women who could not invest were it held at extravagant figures.

Under all these considerations it would seem that the company's scheme offers a promising field for investment, and also insures immense commercial and financial success.

MRS. M. B. SMITH.

The Peninsula Peach Crop.

Reports of the Delaware and Maryland peach crops indicate a small product this year. We find in the N. Y. *Fruit Trade Journal* of June 18 some matters which are of much interest to those who have peaches to sell this year:

Congressman John W. Causey, who was in Philadelphia recently, explained the condition of affairs regarding the peach crop of Delaware. Mr. Causey is one of the largest growers in the Peninsula, and with his two brothers, owns some of the finest orchards in Delaware. He said:

"There is great disappointment among the growers all over the State at the outcome of the crop. The orchards in the early part of the year never looked better, and everybody was feeling very much encouraged at the outlook. The crop of last year was by no means a profitable one, and many hopes were building upon the money that would come this year. Now we have had a chance to look over the field, and the result is by no means encouraging. There will not be at the outside over one-eighth of a crop.

"The fruit has taken a queer freak. It is usually the first varieties that are hurt the most, but this year they are all right and so are those coming at the end of the season. The failure in the crop is in the fruit which comes in the middle of the season. This will have the effect of leaving us without any peaches for quite a while. Just what is the cause of this I cannot tell. Around Milford, where I live, this same complaint is general. There is, I understand, considerable fruit in Maryland, and down in Sussex county there will be a good and profitable yield of several of the late varieties.

"The yellows have caused considerable damage, particularly in Kent county, while there is scarcely any fruit in Newcastle county. It seems strange there is nothing to cure the yellows.

"Around Smyrna, which formerly was the center of the

peach district, there is scarcely any fruit. The large orchards owned by the various members of the Cummins family have very few peaches in them; this is equally true of the other large orchards. The yellows have done the work here and for several seasons the crop has been a failure in this section. The ravages of the disease, which first made its appearance above Middletown a few years ago, have gradually extended southward, until now it has reached below Wyoming. Very little hope is expressed of this section ever again being productive. Many of the old growers believe that before many years Delaware peaches will be a thing of the past. Thousands of trees have been torn out of the ground and now the lands are used to grow wheat and corn."

A Baltimore correspondent writes to say that after making a tour of the peninsula he is of the opinion that the peach crop will be light. He claims that his statement is not made for speculative purposes, but that there is in fact only a small percentage of the ordinary crop. Some few of the early varieties show good bearing but by no means a fair crop. The bearing is divided into three parts—the early, the middle and the late crop. Of these three the middle crop is the lightest.

The late crop is doing better, but here also there is a great shortage. Taken all in all the total crop will be, it is estimated by conservative judges, not more than a quarter of the crop of last year. This will be about two-thirds of an average crop, as last year was an oversupply.

The "June dropping" is yet to be undergone. The first peaches get to market about the middle of July and are most plentiful about the middle of August. During the month of June the first fruit that is not hardy or is undersized is liable to be blown from the trees. From this source a ten per cent loss is expected this year. This, in addition to the already short crop, will put prices very high. It is too early at this time to estimate what the price may be, but it is thought that the first quotations will be fully 20 per cent over the closing prices of last year.

This will bring out the speculative holdings. Last year, out of a crop of about 2,000,000 crates from the Maryland orchards, about 100,000 cases of canned peaches were packed and carried through the winter. This fruit will be unloaded upon the market in small lots, as soon as it is found that the crop this year is short and big prices will be realized.

Arizona Apricots in New York.

The *Fruit Trade Journal* of June 18th has the following: On Monday the first car of apricots from Arizona reached this city and was sold at auction on the Erie pier. The fruit landed from this car utterly ruined, and only averaged about 10 cents per half crate. Some of it sold as low as three cents per half crate, and its condition may be judged from the fact that the Board of Health seized 250 crates and had them carted to the dump. This car was rejected by the consignees, Messrs. Sgobel & Day, and was sold "for account of whom it may concern." Yesterday morning the second car, containing 1086 half crates royal apricots, arrived and was sold at auction by the above firm from 90 cents to $1.40 per half crate. The fruit was of very handsome quality, larger than that coming from California and well packed, but it was dead ripe, otherwise it would have brought much higher figures. This latter came in a different kind of a refrigerator car, which had been properly iced on the way, and therefore brought its contents in good condition. The fruit is fine and if packed a little greener, and the cars are properly iced on the way, there is no doubt but that it can be brought through here in good condition.

THE FIELD.

The Sugar Beet in California.

At the Pomona Farmers' Institute, Mr. Richard Gird, the well-known sugar beet grower of Chino, San Bernardino county, gave a lecture on the sugar beet in California. The following are paragraphs selected from Mr. Gird's lecture:

Some five years ago I commenced experimenting; I planted as many as 60 experimental patches, running over an area of 20,000 acres, and as soon as the beets got to be large enough I commenced analyzing. I learned to analyze for myself, and got the whole thing into my own hands, so that I didn't have to depend on any outside chemist. The result was I became perfectly familiar with what the soils in different places would produce and the kind of seed adapted to those soils, by the following up of which I could expect to make a success of beet culture. I then cast about to find the capital to put up a factory with. The erection of a factory is a very expensive matter, and has to be done by practical sugar men. In the first place, it costs from $500,000 to $600,000 to put up a good factory, and in the second place, years of experience to run one. Well, I found the capital, and the result is I now have 4000 acres, an area of one mile long and six wide, in sugar beets, growing as nicely as any one could wish, and there is going to be a great crop on the Chino ranch this year. All this we have had to cultivate as carefully as an onion bed—every weed and everything being taken out of the ground. I now have over 400 men and boys on my pay roll. Two years ago there were not, perhaps, a dozen houses on the place, but at the last school census, just made, there were 310 children, which, according to the usual calculations, would make a population from 1300 to 1400 people.

Beet culture is especially adapted for families; children are better at thinning beets than grown people. I have 40 or 50 boys in a gang (boys about 15), with a man looking after them, thinning beets. A boy's fingers are more nimble than a man's, and they can get a better hold of a beet. As an illustration: A man came in this spring and took 20 acres, and his family have done all the thinning and hoeing, and his beets are in as nice a shape as could be found.

As a diversity of product and an employer of labor, there is nothing equal to sugar beet culture; it takes at least one person to each ten acres after a patch is planted. You sow the seed very thick, as the beet has many enemies and comes up so weakly that it is necessary to put plenty of seed in the ground. I generally plant from 12 to 15 pounds to the acre, according to circumstances. After coming up the beets have to be thinned and weeded. I have now, probably 200 men and boys thinning and weeding, and am toward the end of the crop, having say two or three weeks more thinning. After this we have to cultivate, and for this we have special machinery, all of which I have made myself; in fact, everything I use of a special kind, I have made myself. I should therefore advise anybody or any community as the first thing to do, if they wish to go into sugar beet culture, to experiment with their soils and get about ten varieties of the best seed that has been tested, both in Europe and California, plant in different patches around in their fields until they understand the capabilities of their soil for beet culture. I want to say right here that this is something the Agricultural University should take in hand; they ought to send an expert beet culturist throughout the State to teach farmers how to raise the sugar beet. Special business needs special training.

Now, I tell you, gentlemen, that the sugar beet is going to be our great staple industry in California; our country being so well adapted, both in soil and climate, to its successful culture.

The seed of the sugar beet for many wears to come will have to be brought from Europe, although I have planted some to make a start with. It takes so much practical knowledge and requires so much care that I don't believe we will be able to take the matter up and realize a success until after a number of years.

The improved Klein Wanzlebener is adapted to shallow and clayey soils.

As a further illustration of suiting the different classes of beets to the various soils, I tried the beet they grow in Alvarado, but it would not do at all in Chino. I got four per cent more sugar with these beets than with the Alvarado beet.

The rule laid down by Vilmorin, who has been for many years a great beet seed raiser in Europe, is that the percentage of sugar is inverse to the weight of the beet. I can grow a beet as large as my finger so sweet that it will be just like a stick of candy. I had whole loads of beets on the Chino ranch last year that went 20 per cent crystallizable sugar.

The proper weight to work for is 1½ to 2½ pounds; a beet over 3 pounds is too large to carry a profitable per cent of sugar. I want to illustrate to you the proportions of a sugar beet. A beet should be equalized so that the area of the leaf surface is in proportion to the root—sufficient to secrete the carbohydrate from the air and deposit it in the root. That is why we look for large tops and small roots. We produce a richer beet than they raise in Europe or the other States of this country, because we have more sunlight.

The amount of seed that should be sown to the acre is about 15 pounds. You cannot transplant the sugar beet. The trouble is, that in pulling a beet up, the point, which is very fine and easily broken, breaks off and sprouts, when the beet grows out of shape and is worthless. The worms this year cut off the points and destroyed a large number of my beets. In thinning, you should space according to the soils. I thin from 6 to 12 inches—heavy, damp soils, about 6 inches; light soils, 10 to 12 inches, as the case may be. I give my orders for each field as to the distance to be left between the plants. It costs me $1.50 per day per man, including board. The cost per acre is from $14 to $28. It comes higher in other places, but I think, on account of our dry climate, we get along cheaper, as we have less weeding and cultivating than elsewhere. The ground for all beets should be rolled. First plow, then roll. In moist land that has an underdrainage of not more than 5 to 6 feet, you cannot plant early in the year.

The product should be about 15 tons to the acre and the price $4.50 to $5 per ton. Supposing they only get $4 per ton, that would be $60 per acre, and say it costs $30 per acre, we have left a profit of $30 per acre, and if your families do the work, most of this can be saved. Say a man has 10 acres. Without counting what he can save by his own and his families' work, his profit would be $300. I rent people land that will raise them enough hay for their horses, so they can take care of their stock. A great many of the people, after doing their own work, will make quite a little money working around among others.

The plowing and putting in of the the beets takes two months, and thinning and cultivating two months; that is, four months in the year. I am plowing now to put in beets where I have taken off this year 2½ tons of barley hay to the acre, and on this same land I shall raise $60 worth of beets to the acre. We generally calculate to leave the stubble on the land; still, last year I turned the land over again and put in beets. The calculation is to plow the stubble in as a fertilizer.

Too much stress cannot be laid upon the benefit that the sugar beet culture is to the land in improving it for other crops. I have seen land that has been cultivated for 16 years, and the last crop was better in sugar than the first.

I feed the pulp to cattle and it makes splendid feed. My plan this year is to run it into silos and let it lie there about six months, and I calculate to feed it to my cattle during the winter months.

I expect to have 40,000 tons of sugar beets this year.

In plowing the land for beets, the calculation is to plow from 10 to 12 inches deep. New land must not be plowed too deep; I found last year I turned up too much cold ground. You can till new land eight inches, next year 10, and the following year 12 inches.

I have not touched upon the immense benefit the sugar business is to the whole country. We import $100,000,000 of sugar into the United States every year. The Pacific Coast alone uses 90,000 tons of sugar a year, you can estimate what that costs us. We can raise that ourselves just as well as not. Now, there is Germany, an old, worn out country, thickly settled, that ships 200,000 tons of sugar into the United States each year. These are figures we ought to think about. The drawing out of our country of this enormous amount for sugar is more than we can afford. There is a general complaint among commercial men and farmers about their being too little money and too little currency. The reason is we send too much of it abroad. If we can grow these things in the United States, we should do so, and thereby keep our money here and give thousands of our own countrymen employment. I think the State ought to encourage this industry by giving a small bounty to farmers. They are offering it in Nebraska, Kansas and Iowa and all those Western States, and I think it would be proper to do so here. With such land as there is around Pomona you can raise beets yourselves. Land that will grow good grain will grow good beets. I want you to understand that up on the mountain slopes and clayey soils will not grow beets successfully; the soil hardens too much and the roots will not penetrate. It will take 700 factories the size of the one we have at Chino to supply the United States with sugar; therefore there is no trouble to be apprehended on the score of competition; the more competition we have the better.

In California we have a great advantage in the seasons for raising beets.

On the dry land you can commence planting in February and March and the beet will go down deep, and is then in a position to stand almost any extent of drought. One trouble with this upland is that if you have a gravelly subsoil the beet won't thrive.

California is a country where the planting season is long and the harvest season as well. I commence in February and continue planting till the end of May. I expect to commence harvesting in the middle of July and keep on till December, whereas in Europe they only have two weeks for planting, and about 60 or 70 days for harvesting.

Flax and Hemp.

The census bulletin relating to the production of flax and hemp in the United States has been prepared by Mr. John Hyde, special agent in charge of the statistics of agriculture. It shows the total area of land devoted to the cultivation of flax in 1889 to have been 1,318,698 acres, the production of flaxseed 10.250,410 bushels, the production of fibre 241,389 pounds, the amount of flax straw sold or so utilized as to have a determinable value 207,757 tons, and the total value of all flax products $10,436,228. While flaxseed is reported from 31 States, Minnesota, Iowa, South Dakota and Nebraska produce 80.06 per cent of the total amount, or 1,035,613 bushels in excess of the entire production of the United States at the census of 1880. South Dakota had the largest acreage devoted to flax and Minnesota the largest production of seed. Of the States containing 1000 acres or upward in flax, Wisconsin had the highest average yield of flaxseed per acre, 11.42 bushels, and the highest average value per acre of all flax products, $13.39. The average yield for the entire country was 7.77 bushels per acre. Throughout the greater portion of the flaxseed-producing region flax straw is of little or no value, and much of the so-called fiber is only an inferior quality of tow, used chiefly for upholstering purposes. There are indications, however, of the revival in the United States of a linen industry that will afford a market for fine flax fiber of domestic production, and revive a branch of agriculture that has for many years been almost extinct. The total area of land devoted to the cultivation of hemp in 1889 was 25,054 acres, and the production of fibre 11,511 tons, valued at $1,102,602 to the producers. This branch of agricultural industry is confined almost exclusively to the State of Kentucky, which produced 93.77 per cent of the total hemp crop of the country. The average yield per acre for the United States is 1029 pounds, and the average value per acre $44.01 or $95.79 per ton.

A NEW GRAIN TAKEN FROM A WILD GOOSE.—G. W. Coplen of Latah is this year tenderly nursing a couple of stalks of wheat which have a curious history, says the Puget Sound *Mail*. In the fall of 1890 a wild goose killed on one of the islands near the straits of Fuca was found to contain seeds resembling wheat. These were planted and grew profusely, Mr. Coplen securing two sample grains where it had grown at Nelson, B. C. The grains are nearly twice the length of ordinary wheat, shaped something like a grain of rye, but much thicker. The two grains germinated quickly, sent up thrifty blades and are growing well. It is hoped this will prove a valuable variety. It would seem that the bird from which the original grains were taken must have found the plant in the remote north, and if no grain is found now cultivated in the known world like this, still further color will be given to the supposition that there is a polar sea with vegetable life on its shore.

THE grooming of horses is only secondary in importance to that of diet. Health is secured by keeping the skin pores open, and this only can be obtained by the currycomb and the brush, removing the dead epidermis thrown off in form of pellicles. He is a bad groom that employs the comb roughly and the brush lazily. Not only comb the mane and tail from time to time, but occasionally wash the latter with soap and water. It is a bad practice to cover saddle and carriage horses with rugs when in the stable, with the view to preserving them from catching colds, keeping the skin cleaner and the coat shining. The best service to render such a horse is to accustom it to cold, to harden it. A rug ought only to be thrown across a horse when, being warm, it enters a cold stable, and only allowed to remain on the animal till the normal temperature of the body sets in. Horses with short tails may be covered with a light linen, in order to keep off the flies when in the stable during the summer.

The Home Circle.

The Watches of the Night.

Oh, the waiting in the watches of the night!
In the darkness, desolation, and contrition, and affright;
The awful hush that holds us shut away from all delight;
The ever weary fancy that forever weary goes
Recounting ever over every aching loss it knows—
The ever weary eyelids gasping ever for repose—
In the dreary weary watches of the night!

Dark—stifling dark—the watches of the night!
With tingling nerves at tension, how the blackness flashes white
With spectral visitations smitten past the inner sight!—
What shuddering sense of wrongs we've wrought that may not be redressed—
Of tears we did not brush away—of lips we left unpressed,
And hands that we let fall, with all their loyalty unguessed.
Ah! the empty, empty watches of the night.

What solace in the watches of the night?
What frailest staff of hope to stay—what faintest shaft of light?
Do we dream and dare believe it, that by never weight of right
Of our own poor weak deservings, we shall win the dawn at last—
Our famished souls find freedom from this penance for the past,
In the faith that leaps and lightens from the gloom that flees aghast—
Shall we survive the watches of the night?

One leads us through the watches of the night—
By the ceaseless intercession of our loved ones lost to sight,
He is with us through all trials, in His mercy and His might—
With our mothers there about Him, all our sorrow disappears,
Till the silence of our sobbing is the prayer our Master hears,
And His hand is laid upon us with the tenderness of tears
In the waning of the watches of the night.

—James Whitcomb Riley.

The Emblematic Eagle.

A Fourth of July Study.

Written for the RURAL PRESS by L. H. S.

The emblematic eagle is not, as one might suppose, an original of our young western republic. The honor and praise which we lavish upon it is in fact, its rightful inheritance from the sons of men. The eagle, it seems, developed very early in the world's history the ability to get itself elected to places of public honor and preferment, and succeeded in placing itself before the world even in the fabulous ages, as a fitting emblem of many of the valiant qualities which the multitudes look up to and revere.

The Book of Job, supposed to be a representation of the patriarchal age about the time of Moses, but written presumably in the days of Solomon, gives a word picture of the eagle, which is not paralleled any where in literature for its vigor and power of realistic description.

Doth the eagle mount up at thy command and make her nest on high?

She dwelleth and abideth on the rock, upon the crag of the rock, and the strong place, from whence she seeketh the prey and her eyes behold afar off. Her young ones also suck up blood, and where the slain are, there is she.

The eagle first introduced himself to the world in visible engraved or molten form, as an object to admire and adore, as Nisroch, the eagle-headed idol of the Ninevites. As Nineveh was founded about 2200 B. C. by Nimrod, known in the Bible as the "Mighty Hunter before the Lord," we may trace the connection of the fierce-eyed bird with the human family almost back to the time when the world was recovering from the great flood. From the analysis of the Rabbinical expositor, Rashi the commentator gravely explains Nisroch as a beam or plank of Noah's ark. Genesius suggests however, that the word is of Shemitic origin, and derived from the Hebrew *nesher*, which is in Arabic *nisr*, an eagle, with the termination *öch* or *âch*, so that Nisroch would imply "the great eagle."

Mr. Layard adopts this explanation:

Nisroch, the eagle-headed human figure, is one of the most prominent figures on the earliest Assyrian monuments; the same figure appears in the bas-reliefs in embroideries, and as ornaments of vessels.

The bas-reliefs always represent some conflict in war or encounter of the chase. A Nisroch is always represented as contending with and conquering the lion or the bull.

So this domineering bird has not changed its prominent characteristics in the past thirty-nine hundred years, for it has twice in our own times made successful warfare against the British lion.

Nisroch, as is shown in the Bible narrative, gave no protection to the overbearing monarch Sennacherib, who knelt in the shadow of the idol in its temple and was there slain by his own sons. Sennacherib had just returned from an ineffectual siege of Jerusalem, where he "came down like a wolf on the fold," and an "angel of the Lord smote in one night a hundred and four score and five thousand of the Assyrians." The ill-starred conqueror returned to die at the feet of the eagle-headed god, whe offered neither comfort nor aid to the tryant.

About one hundred years after the destruction of Nineveh, the Assyrian capital having been removed to Babylon, a Chaldean captive, a Judean priest, Ezekiel, saw in Babylon a vision by the river Chebar, a likeness of four living human creatures; they had wings joined together, and each figure had four faces, the face of a man, a lion, an ox and the face of an eagle.

The Babylonian kingdom was overcome by the Persians, and the eagle still seemed to go with the march of supremacy across the world. It was carried by the Persians as a standard of war and was probably the power referred to by the Judean priest in his vision.

Isaiah, also, prophesies of the coming of the Persian dominion, which was to supersede that of Babylon, as the coming of a "*ravenous bird* from the east, from a far country to execute the purposes of God."

The typical eagle of that time was probably the same as the Bald eagle of to-day, for the prophet Micah, speaks also about this time of the "baldness of the eagle" as a sign of mourning.

The eagle as a Falconidae is also referred to by Christ as a symbol of inevitable power and natural consequence.

The eagle is also used as a beautiful symbol of strength and protection in the nineteenth chapter of Exodus, where the Lord reminds Moses: "How I bare you on eagle's wings and brought you unto myself."

In mythology, the eagle generally represents the sun. The great mythical eagle of India, the Garuda, is the bearer of the God Vishnu—victorious by his brightness over all demons.

In the Scandinavian mythology, the eagle is a gloomy figure assumed by demons of darkness, concealed in gloomy night or in wind-swept cloud. The storm giant Kraswelgr sits in the form of an eagle at the extremity of heaven and blows blasts of wind over all peoples. And on the great tree Yggdrasil sits an eagle observing everything that happens.

When Zeus was preparing for his struggle with the Titans, the eagle brought him a thunderbolt, whereupon the god took the bird for his emblem He holds the bolts of Zeus in his talons, inspires heroes with courage and carries out the tyrannous behests of Zeus.

As an emblem of the immortal gods, he also became a symbol of abstract immortality and of the soul ascending after death.

From the analogy of the heavenly power of Zeus, the eagle also became the symbol of earthly power.

Ptolemy Soter made it the emblem of the Egyptian kingdom.

In the Roman story, an eagle was the herald to Tarquinius of his royal power, and it became one of the most important insignia of the republic. It was also assumed by emperors and adopted into medieval heraldry after the time of Charlemagne.

In the apothesis of the Roman emperors, an eagle ascending from a funeral pyre symbolized their reception among the gods. Even in Christian symbolism the eagle has preserved to the present day its significance as the symbol of St. John the Evangelist in the lecterns of churches.

As a standard of war, the eagle seems first to have been used by the Persians, and the Romans adopted the eagle as a standard of war in the year 104 B. C.

The most famous eagles of antiquity were those that so often carried the Romans on to victory. They were made of silver or bronze with outstretched wings and were carried before the legions upon long poles, just as the great armies of Napoleon, after 1804, carried gilded eagles with outstretched wings in place of banners.

The German imperal eagle was originally one-headed, and was first adopted by Charlemagne as a symbol of his empire after his coronation at Rome in 800, and it appears on the imperial banner at the time of Emperor Otto II.

The eagle is occasionally figured as two-headed toward the end of the 13th century, and is represented on the coins of Ludwig the Bavarian in 1325. The double-headed eagle may have symbolized either the eastern and western divisions of the Roman Empire or the union of the imperial and the kingly dignity.

The eagle continued to be the arms of the Holy Roman Empire to its close in 1500.

It was first crowned in the 15th century; later, the sword and scepter appeared in its claws, and on the breast of the eagle were the personal arms of the Emperor.

On the arms of the present German Empire, an eagle sustains on its breast a shield containing the arms of Prussia, also an eagle charged in turn with the arms of the Hohenzollern family. The Prussian eagle, being the original imperial eagle, was granted as a special mark of favor to the Teutonic knights by the Emperor Frederick II.

Austria has preserved the double-headed eagle of the earlier German Empire.

Russia assumed the double-headed eagle under Ivan III, to signify that the Czar sprung from the Greek Emperors, who had borne it as a symbol since the partition of the Roman Empire.

Poland has for a shield a white crowned eagle in a red shield.

In France, the eagle was assumed as his imperial symbol by Napoleon I. was set aside at his fall, restored by Napoleon III in 1852, but was once more abolished by the French republic in 1870.

The eagle was adopted by the United States of America as an emblem in 1785. It was imported from ancient Rome, just as the word "Senate" was. "The young republic," says Edmund Randolph, "boasted that they were treading upon the republican ground of Greece and Rome."

An eagle crest is found on a seal of Washington in the British Museum, on a letter written in 1758, and resembles one since discovered on the will, dated 1751, of Lawrence Washington, brother of General Washington. The eagle was the normal crest of the Yorkshire line of Washingtons, and the same use of the eagle is traced from Robert Washington of Brington to George Washington in Virginia.

The American eagle is dark brown with outspread wings, having in one of its talons a bundle of arrows, in the other an olive branch, bearing on its breast a shield whose upper part is blue and under part silver crossed by six red vertical bars. In its beak it holds a band with the inscription "*E pluribus unum*," surrounded by thirteen stars.

In James G. Percival's grand epic on "The Eagle" occur the following beautiful lines on the bird as the American emblem:

"But then came a bold and hardy few,
And they breasted the unknown wave;
I saw from far the wandering crew,
And I knew they were high and brave.
I wheel'd around the welcome bark,
As it sought the desolate shore,
And up to heaven like a joyful lark
My quivering pinions bore.

"And now that bold and hardy few
Are a nation wide and strong;
Danger and doubt I have led them through,
And they worshiped me in song;
And over their bright and glancing arms,
On field and lake and sea,
With an eye that fires and a spell that charms,
I guide them to victory."

True eagles inhabit all regions of the world, of which seven or eight species at least are found in Europe, the Sea eagle of the east of Asia being the finest and largest. The Golden eagle is widely distributed in Europe, Asia and America, of which the Imperial eagle is a closely allied species.

The white-headed or Bald eagle is the chosen emblem of the United States of America, and is by some considered a distinct species.

The genus Aquila of the Falconidæ family is characterized by hooked beaks and sharp, powerful claws. They have great powers of flight and vision, and are solitary in their habits. Large specimens measure 3½ feet in length and nine feet expanded wings. They breed in mountains or forests. They are all monogamous, and it is said that a pair will live together in perfect harmony till death. They are thoroughly attached to their young, and will not forsake them even if the tree on which they rest be enveloped in flames. Their tenure of life, it is supposed, will extend to one hundred years.

The Bald eagle is so called on account of its white head, neck and tail. It uses the same nest year after year.

The eagle is domesticated and used by the Kirghis Tartars, who call it Bergut, for the capture of antelopes, wolves and foxes. It is carried hooded on horseback, or on a perch between two men, and released when the quarry is in sight. Such a bird, when well trained, is valued, says Pallas, at the price of two camels. It is quite possible that more than one kind of eagle is thus used, and the services of *Aigle heliaca*, the supposed Imperial eagle, may be also employed. However, it is uncertain just what species of eagle may have been the Alis Jovis, the traditional emblem of Roman power. We only know that no Bald, or American, eagle has ever been enticed from his eyrie home against the azure blue, to be domesticated to base uses.

Doubtful Compliments.

Written for the RURAL PRESS by ELSIE ANGE.

How many people there are who honestly wish to be agreeable to others, but fail in the attempt! They are continually giving offense, when, in reality, they are desirous of expressing their admiration for or their appreciation of the persons they address. Have we not heard them deplore having been misunderstood in such language as the following:

"I wonder why Miss Brown treats me so coolly. I always try to be pleasant with her, but she seems to resent everything I say."

"I cannot understand why Mr. Jay is so reserved. He was very friendly when I first met him a year ago, but now he seems like a stranger."

Now, the coolness of the lady and gentleman is doubtless owing to the want of *tact* on the part of the person desiring their friendship. For instance, the latter meets Miss Brown and tells her how charming she looks. Miss Brown is pleased, when Miss Rasp continues:

"I came very near passing you. I could scarcely believe it was you. That hat makes you look so young and pretty. It changes your appearance entirely."

Is Miss Brown to be complimented because she is told she is looking unlike herself?

Mr. Jay spends an evening at Miss Rasp's. He loves music and sings at her request. Miss Rasp is delighted, so is Mr. Jay. He beams back his thanks, when Miss Rasp electrifies him by saying:

"Your singing is a surprise to me, Mr. Jay. I thought you could not sing a note. Your voice is so weak and thin in conversation, I was afraid you were consumptive."

Miss Rasp thinks that she impresses him as being kind and sympathetic. She does not know that her skill as a musician nerves him to make a second call. This time he learns that she has thought him ten years older than he is because she has discerned a thin spot on the crown of his head that he hoped no one knew of but himself. But "music hath charms," and he ventures a third time, never to return. What man of five feet four inches could, after learning that he had been considered fully three inches shorter than he is!

Miss Rasp met an acquaintance she had known from girlhood.

"I want you to tell me by what secret you retain your youth," she said. "You look exactly as you did when you went to school fifteen years ago."

The person addressed was a sensible woman, and rejoined laughingly that she would be sorry if she looked as old at sixteen as she did then.

"O!" said Miss Rasp. "You were not a young looking girl. You were so tall and sedate. I thought you were dreadfully old."

When they parted, the lady was glad that her meetings with Miss Rasp were few and far between.

Again, a bright, sprightly woman on the sunny side of middle life was entertaining some friends, when Miss Rasp exclaimed: "Mrs. Smith has learned the art of growing old gracefully."

The remark was ignored, and any one would think that Miss Rasp would be more cautious of her words afterward; but she said later at supper:

"Mrs. Smith, the highest praise I can pay this coffee is that it tastes just as my mother's did when I was a child."

Another guest tactfully changed the subject. It was evident to every one but Miss Rasp that she was making a mistake in classing Mrs. Smith among elderly women. And Miss Rasp cannot understand why she is no longer invited to Mrs. Smith's parties.

If people were more studious of the expressions they use, there would be fewer of these doubtful compliments which are so productive of vexation and annoyance. I have a friend who resents any one speaking of her "smiling face" as an impertinence. This is what she says: "There is nothing exasperates me like having any one say that he saw my smiling face here or there. It isn't pleasant to have people speak as though I am always grinning like a monkey or an idiot. If they must allude to my expression, why cannot they say it is bright or cheerful or pleasant instead of harping continually upon that threadbare word 'smiling?'" She has, in consequence, cultivated a cold, haughty bearing which is far from being as attractive as her former vivaciousness was.

Other words which usually excite resentment are "good-natured" and "clever" when they are used in the same sense. A lady was spoken to in this manner: "Yes, Mr. Blank often speaks of you. He says he

likes you because you are so good-natured."

Instantly, that adjective rankled like a thorn in the flesh. Could not Mr. Blank have said that she was kind or genial or even-tempered? There were so many pleasing words that he could have chosen from; then why select one that was so annoying in its effect? Then she wondered if she were not over-sensitive in regard to the matter. She resolved to put it to a test. So in calling upon a relative, she said: "By the way, Jennie, I have a compliment for you. Mr. Blank says he likes you because you are so good-natured."

Jennie's eyes flashed, and she replied indignantly: "I don't appreciate a compliment that you can pay a pig or a fool!"

Another very usual way of giving offense is that of complimenting young people upon their youthfulness, thereby inferring that they appear younger than they are. A blooming mother or a young wife will be told that she is young-looking, when she is really but a girl in years.

A man noted for his gallantry thus accosted a young married woman: "Mrs. Adams, I must compliment you upon your appearance. I mistook you for a young lady." "I am not old enough to appreciate that compliment, Major Grey," she answered. And his look of discomfiture showed that he had learned a lesson he was not likely to forget.

Then, too, many people spoil their compliments by saying too much. They make a good beginning, but a disastrous ending, as a young man did who approached a lady and congratulated her upon the success of some work she had undertaken. "I am charmed and delighted," he said.

The lady thanked him for his appreciation. Then he continued: "I cannot tell you how astonished I am to find you so witty and possessed of such ability. I had an entirely different opinion of you." Yet that young man thought he was extremely complimentary!

Another man told a girl that she had the most beautiful eyes he ever saw, and then went on to tell her how faulty her other features were. If he had stopped at her eyes, he would probably have won her friendship; but she never liked him, while he deplored the icy reserve on the part of the charming Miss Lovely toward himself. It was simply owing to his want of tact, which, after all, is the cause of many doubtful compliments.

Old Franz' Song of the Angels.

Written for the RURAL PRESS by ALICE KINGBURY COOLEY.

In a quaint garret in Paris lived an old musician. He had been second violinist in a minor theatre till, shielding a child from death in a terrible fire, he was badly injured. The parents were profuse in their thanks, and then—he was forgotten; so neglected, he became a paralytic and lost his place in the orchestra. He would have starved but for his one friend, the little dancer, who, besides helping, encouraged him to write music with his left hand.

One day, Fifine noticed Franz' happy look and said:

"What so pleases monsieur, to-day?"

"Aha! did you notice it, ma petite? The angels sang to me such melody, and to-day I wrote it, but I shall never play it, the *beautiful* soul that is here"—he tenderly touched his violin, "Franz can never summon again; one-half of him is dead, dead." His head drooped lower and lower till it rested on his loved instrument, and soon Fifine saw a little stream trickle down its side and sparkle in the sunlight.

"O, don't weep, dear monsieur! Take a beautiful walk instead." She, coaxing, put on his hat and they started.

"I would like to hear my Song of the Angels before I die," he said, "but that can never be; old Franz can never play again."

"Why does not monsieur let the orchestra play his beautiful piece?"

"Ah! would they, Fifine, would they?"

"Why does not monsieur try?" So it was all arranged what to do, as they drank their sugared water in a little "garden."

* * * * * * * *

At last the "Song of the Angels" was to be played. Franz, tremulous with joy and fear, sat with Fifine close to the orchestra. Soon the notes of the "Song" began. Franz looked troubled, then angry, then horrified.

"Ah! the violin," he muttered; then with a sudden motion he snatched the instrument from the leader's grasp, and, drawing the bow with a master's hand, poured forth such a flood of melody that the orchestra, amazed, ceased playing, and the audience listened spell-bound. As the "Song" ended, the violin fell from Franz' nerveless hands and he sank to the floor.

"I have heard it, Fifine; the soul came back at Franz' call. Did not the angels sing, Fifine?" The supreme effort breaking the paralysis, had also snapped the silver cord. Old Franz died with a seraphic smile upon his lips.

YOUNG FOLKS' COLUMN.

My Trip to Bogus Settlement.

Written for the RURAL PRESS by DUANE MORLEY.

In the year 1842, my father kept a supply store in the wilds of Michigan, bought furs of the hunters and friendly Indians, and in return sold them their supplies of food and ammunition. At the time I speak of, I was a strong boy seventeen years old, and always, when not assisting at the store, commissioned to do some errand or other in the settlement where my father's store was situated. Sometimes, though not often, I was sent miles away into the forest to carry some special article of merchandise to some hunter's camp, or, in its stead, deliver some message of consequence.

Prior to the date I mention, a gang of counterfeiters had built and occupied upon the banks of Pine river, and at a point 30 miles north of our place, a long, low, two-roomed house. Ostensibly, it was for hunting and fishing purposes, being not only upon the banks of Pine river, but near Pine lake also.

The settlements about that time becoming flooded with spurious currency, these fellows fell under suspicion, their camp was raided by the authorities, some of their number being captured along with the implements of their unlawful trade. At the time I speak of now, and for months before, the house was the residence of a man by the name of Goodleigh, his wife and daughter. He was the partner of a man by the name of Walker; the latter engaged in general trade at Pontiac, and the two together managing a trading post at this point in the old two-roomed house. To this place I was sent in the early spring of '42 to perform a responsible mission. My father had bargained to deliver for Walker to Goodleigh the sum of seven hundred dollars, paper money, and as he could not go, the task of delivering it fell upon me to perform. To make the trip was a pleasing and novel idea to me, as I had never penetrated quite that far into the northern wilds. I was rigged out for the trip with a horse and saddle, a small sleeping tent and some provisions. Then, mounted, with a small rifle in my possession, out I started.

The money was carefully placed in between the outer fabric of my pantaloons and the strong inner lining, and I was told to place it in Goodleigh's hands, and his only. Except from prowling wolves, there was no cause for fear, for the Indians were friendly, and among them all my father was held in high esteem. Over three-quarters of the way I made excellent time, nothing of note happening, and but little game making itself visible.

The ground was fast thawing out, and along a strip of marshes which I had finally to cross, by a tongue of hard upland, the path was very spongy and troublesome to the horse. I was anxious to get over ere nightfall and camp somewhere in the clumps of undergrowth on the other side. And, as I had luckily shot a brace of partridges on the near side of the marshes, I was, while slowly picking my way along the tongue of hard, or upland, revolving about in my mind how I would pitch my tent, prepare my fire and toast my birds in its blaze. All at once from out the thick brush, I was confronted by two desperate-looking fellows, both of whom were armed with rocks. One of them demanded my gun, but, instead of yielding it, I tried to bring it to bear upon them, realizing that the fellows were nothing short of desperadoes.

Before I could bring my gun to bear, I was hit by the rocks, one of them striking me upon the head and rendering me unconscious. When I came to myself again I was in an Indian's wigwam. It belonged to Canobway, an old chieftain, a man of good heart and great native intelligence. Above me, as I lay upon a bed of soft furs, bent the form of Kisco, niece of Canobway, a half-breed, born in lawful wedlock. Kisco quietly told how Canobway had found me insensible, my clothing torn and my face and head still bleeding. Evidently my assailants had left me for dead. After bringing me to his wigwam, Canobway had returned to investigate the trail for traces of the robbers. A nourishing broth of venison was served me, and after a little sleep I was nearly myself again. By daylight again, Canobway had returned and was in full preparation for a thorough pursuit of the robbers, who had despoiled me of my horse, gun, pocketbook and the little change in the same. The Goodleigh money was yet safe where it had been sewed into my pantaloons.

Kisco understood English, and my account of how I had been waylaid was plain to her. When Canobway heard it, he stretched himself up to his highest in the centre of the tent, swung his tomahawk over his head and exclaimed, "Heap bad pale faces! Canobway catch 'em, sure." We left the camp in the possession of Canobway's squaw—Canobway leading, Kisco following next, and myself last. Frequently the old chief would motion us to halt while he pushed forward alone. At the cry of a bird, or the imitation of it, which Kisco well understood, we would take up our march again. Coming up to an open space in the forest, near some marshes, Canobway held a short conference with Kisco, and then left us again. He was gone nearly an hour, returning to cautiously lead us forward along a circuitous way.

Then it was nightfall, and suddenly we came upon what appeared to be an illuminated haystack, a light shining from within it through an open doorway and through the interstices of the structure itself. It was a rude affair of poles covered loosely with coarse marsh grass, and standing in a thicket of pines. Confusion reigned within it, and whinnys of a horse and rude oaths of a man issued from it. The old chief gave a low grunt of satisfaction, laid his hand lightly on Kisco's shoulder and motioned us to remain behind. Then he ran swiftly forward and peered within the building. Then he fiercely swung his hatchet in a circle and flung it within, quickly clubbing his rifle and following after it. As Kisco and I reached the building Canobway came forth, dragging an insensible man. With our help he soon had the fellow gagged and bound to a tree.

The horse was my own and my rifle stood in a corner of the structure. Seizing the gun and extinguishing the light, we pushed rapidly forward. We were near Bogus settlement, its exact location being 20 yards up from the river on a rising bit of ground. One part of the two-roomed house was devoted to merchandizing, the other to domestic uses. Coming up to it, the family part we found in darkness, while bright light gleamed out from the store part. Peering in through the unchinked logs, we beheld Goodleigh bound to a post and two burly, wicked looking fellows going through the goods. Drawing back into the shadows, we talked a bit. Then Canobway reconnoitered an underground passageway which led from the back of the building to the river. Soon returning, he stationed me at an angle of the house and in its shadow. The plan of attack was as follows: Kisco was to attract attention at the front, and, under the ruse of having a pony mired, secure help of one of the men, and as soon as he should come forth I was to rush out and attack him, while at the same moment Canobway was to force an entrance from the rear. The plan was successful, for both of the plunderers were taken by surprise and easily captured. In the pockets of one of them was found my old purse and jacknite. Goodleigh we speedily released from his bonds and his family from the dark room where we found them confined. In their stead we chained up the robbers, including the one found at the marsh-grass stable. Making a search of the surroundings, we found in and about the stable base metal and some counterfeit coin.

Delivering the seven hundred dollars over to Goodleigh and leaving him and Canobway to hold the fort, I took Kisco up behind me on the horse, and by way of the wigwam rode back to my father's store to notify the authorities of our capture and put in our claims for the reward, there being a standing reward of two hundred dollars for each counterfeiter apprehended. It was quite a plum for us, and it was the last of the counterfeiting and plundering in those parts.

At another time, I made a trip to Bogus settlement, but as Goodleigh's daughter was the magnet drawing me, I'll not relate it here.

THE right faith of man is not intended to give him repose, but to enable him to do his work. It is not intended that he should look away from the place he lives in now, and cheer himself with thoughts of the place he is to live in next, but that he should look stoutly into this world, in faith that, if he does his work well here, some good to others or himself will come of it hereafter. —Ruskin.

AND how shall the higher life be won? And again we must answer as we answered before, by personal allegiance. No other power is large enough and flexible enough to make it. Loving obedience is the only atmosphere in which the vision of the general purpose and the faithfulness in special work grow in their true proportion and relation to each other.—Bishop Brooks.

DOMESTIC ECONOMY.

STRAWBERRY AND RASPBERRY SHRUB. Strawberry and raspberry shrub are made as follows: On four quarts of berries pour white vinegar enough barely to cover them. Let them stand for 48 hours. Then drain off the vinegar, squeezing the juice out of all the fruit with the vinegar. If strawberries are used, the vinegar must be poured over a second supply of the fruit before it will attain the proper flavor; but one supply of raspberries is sufficient. Measure out the liquor when it is ready, and to every pint allow a pound of sugar. Put it in a porcelain-lined kettle with the sugar and let it boil for ten minutes, then bottle it and set it away in a cold place. A cupful of this syrup is sufficient to flavor one quart of ice water. Either kind of shrub is very ornamental served in lemonade glasses with little handles, and is a pleasant, refreshing drink.

CHICKEN FRITTERS.—One cup chicken stock, one heaping tablespoon flour, one tablespoon butter, one-half teaspoon salt, one saltspoon celery salt, one cup cold chicken. Mix the flour smoothly in the hot butter, add the boiling stock gradually, and, when smooth, add the seasoning. The sauce should be quite thick. Pour half of the sauce into a small, shallow dish (buttered). Chop the chicken fine, and when the sauce has crusted over a little, spread the chicken evenly over the top. Then cover with the remainder of the sauce. Place on ice, and when cold and hard, cut into inch by two-inch pieces. Dip them quickly in fritter batter, and fry in hot, deep fat.

VEGETABLE SOUP.—One bunch of celery, one pint of stewed tomatoes, one onion, three carrots, four turnips, a little salt. Chop all the vegetables, except the tomatoes, very fine, and place them in the pot over the fire, with about three quarts and one pint of hot water. Let them cook slowly about an hour, then stir in the tomatoes, and boil about half an hour longer. Remove from the fire, and rub the mixture through a colander, then return the soup to the fire. Now stir in a tablespoonful of butter and half a cup of milk, with a little cornstarch or flour mixed with it. Let the soup boil up once, and it will be ready for the table.

CREAM OF RICE.—To one quart of consomme add a pint of rice prepared as follows: Boil the rice in three pints of milk until tender; rub it through a sieve and add the milk to it. Beat the yolks of two eggs and whisk them into the rice. When the consomme is slightly warmed, whisk the prepared rice into it, after which do not let it boil, but gradually bring to very near boiling point, and serve with toasted bread dice.

ASPARAGUS.—Cut off as much of the stalk as will leave the asparagus five or six inches long; scrape the remaining white part very clean; tie them in small even bundles; put them into boiling water and let them boil till tender, but not soft. Take them out with a skimmer and place neatly upon a thin toast laid on a dish, and serve immediately with butter sauce or cream sauce.

DRAWN BUTTER SAUCE.—One-half cup of butter, one pint of hot water, one-half cup of sugar, one-half teaspoonful of vanilla or the juice of one lemon, one tablespoonful of flour or cornstarch made to a smooth paste. Turn into the rest and let it boil five minutes; add a little grated nutmeg.



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FLORIST AND GARDENER.

California Pampas Plumes in Demand.

It seems that the demand for California plumes did not depend upon the political fate of the "plumed knight," as we anticipated in a recent issue, for the Los Angeles *Herald* says that pampas plumes from Southern California will form a feature of the political campaign this year in both parties. The Democrats have adopted as an emblem three white plumes mounted on a red standard, with a blue ribbon depending. An order has been given to Mrs. Strong of Whittier for 20,000 of them for use at the Chicago convention.

The Republicans have adopted a fan shaped design of red, white and blue plumes on a fan shape. The following article from the New York *Evening Post* is of interest in this connection:

"In the early days of last September, during a visit to Southern California, I chanced, while walking down Spring street, Los Angeles, to see in a show window, where artistic furniture and mantels were displayed, standing before a plate-glass mirror, a vase holding what seemed to be three beautiful white feathers, tall and fairly-like. A closer inspection showed a depth no ostrich plume can boast, for in its heart of heart was a soft salmon tone of great richness. I could not help exclaiming 'Grand!' I must know something of the new beauty.'

"Upon inquiring I learned that the objects which attracted my attention were pampas plumes, the product of the 'King of Grasses,' which is cultivated quite extensively for the European market. This grass is a native of South America, growing on the famous pampas or plains, where the cattle feed upon it, which pampas give name to the cultivated article now grown and cured in great perfection in California, producing the artistic effect referred to, that is as surprising as it is beautiful.

"Feeling greatly interested in an industry so little known, I visited one of the largest plantations in Los Angeles county, Ranchito de Fuerte, fortunately during the harvest season, thus witnessing the entire process.

"The plants or clusters, bush-like in form, are from 10 to 12 feet high, about the same in diameter and stand in rows 16 feet apart. Very little care is given the plants (they are evergreen) until the irrigation season, which lasts from early May until the middle of August. Water is used every 14 days. The harvest begins about August 26th, and continues 17 days. Before the husks open the long spikes are cut by laborers, their faces protected by masks and their hands by gloves, with gauntlets, as the edge of the grass is sharp as a knife. From the place of growth to the shade of trees, the plumes are taken in wagons. Shuckers sit under the pepper and orange trees stripping off the casing of green covering the plumes. Those who have practiced for a few years can shuck from three to four thousand a day. As this work is paid for by the thousand, long days are made.

"Next come boys who lay the fresh silky plumes—soft green in color—upon the smooth earth, prepared by rolling to receive them. About three hours are required at this stage to make them white and fluffy. They are gathered up and carried by arm fuls into the curing-house; here expert manipulation develops tone and a silk-floss finish that gives them their chief beauty. In the process they are handled sixteen times. No labor-saving machines can be used. A certain nicety in handling, a quick eye and ready hand, makes it an industry where women and girls can be employed. About sixty hands were required in the harvest of which I write. Plumes left upon the plants to open naturally are of no value, except as ornaments to the grounds.

"Great improvements have been made in the curing process during the past two years. The old method produced a beautiful plume, but very brittle. The best grades measure 30 to 36 inches in length, and are shipped to Europe. Germany, Russia and Italy are the largest consumers. England is latest to appreciate their beauty, and no doubt the eastern cities will, ere long, follow in their use.

The plumes that sometimes are seen for sale on the streets here are used by florists to "fill in" with, but the finest go to Europe, where there is an appreciative market.

"The regulation 'three plumes' in a single vase were no doubt suggested by the Prince of Wale's coat-of arms, as there are large quantities sent to London, where they are quite the fad. About half a million plumes were sent to England for the recent holiday season. The question, What can Europe do with a million and a half plumes year after year? can only be answered by the appreciation of a thing of beauty that is a joy for ever."

New uses for these plumes; or new methods of using, are developed every season. The artistic sense finds expression in endless designs that grace receptions, balls, church weddings and private houses on every festive occasion. As fabric for decorative purposes, none other produce their fairy-like appearance. It is essentially a wall decoration. Friezes, dadoes, etc., are made of wire, in art designs, and covered by the pampas stripped from the stem; while fringes for bordering mantels and book shelves, mats and rugs, and also tapestry hangings for the walls can all be produced by skilled hands. They are used in connection with draperies and soft India silk scarfs in colors to suit the apartments to be decorated and the taste of the hostess. They are also dyed, as silk or cotton can be colored, a favorite use is to adorn each room in a different color.

"For ceilings, festoons are made as we see "greens" fastened to wires or ropes, or the Childean or other square effect can be outlined by a soft feathery beading. A house so decorated becomes a fairy palace, unique and artistic.

"In California, the home of floral decorations, these plumes are used in combination with bamboo rods, are employed in frame work, that is then covered. A favorite design is the Japanese sea garden—a row down each side of a banquet hall hung with lanterns and decorated with bright colored scarfs, making charming booths in which to sip a cup of bullion.

One advantage in using these decorations is that they may be made extremely expensive or otherwise. The labor put upon the designs may cover several thousand dollars on a single entertainment.

This fabric bears the same relation to the art decoration that the thread does to the point lace of which it is made. Artistic grouping of the plumes is always in favor, and the "three plumes," on a single vase, before a plate glass mirror, be they Prince of Wales "Ich Dien" or not, will ever be to me the most graceful bit of mantel decoration, just as I saw them in the show window last September, 3000 miles away in sight of the Pacific.

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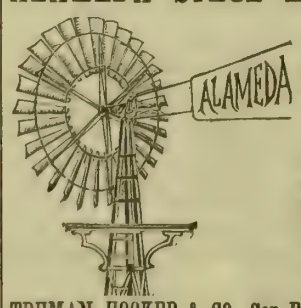
SAN FRANCISCO SAVINGS UNION, 532 CALIFORnia Street, corner Webb; Branch, 1700 Market Street, corner Polk.—For the half year ending with 30th June, 1892, a dividend has been declared at the rate of five and one-fifth (5 1-5) per cent. per annum on Term Deposits, and four and one-third (4⅓) per cent. per annum on Ordinary Deposits, free of taxes, payable on and after FRIDAY, 1st July, 1892. LOVELL WHITE, Cashier.

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526 California Street.

FOR THE HALF YEAR ENDING JUNE 30, 1892, A dividend has been declared at the rate of five and one-tenth (5 1-10) per cent. per annum on Term Deposits, and four and one-quarter (4¼) per cent. per annum on Ordinary Deposits, payable on and after FRIDAY, July 1, 1892. GEO. TOURNY, Secretary.

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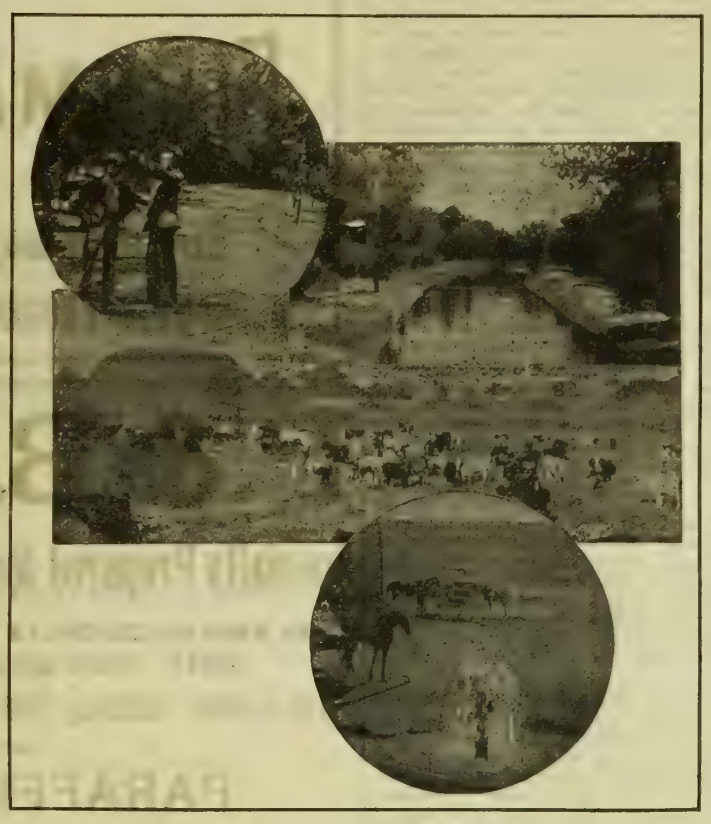
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PURE PRESERVATIVE

—FOR—

MILK AND CREAM

Will keep Milk and Cream sweet and fresh even in the warmest and muggiest weather. Butter and Cheese kept fresh in their original condition for many months.

A Simple Experimental Test.

Send for sample, which we mail free, and taking two separate quarts of new milk; into one put ½ of a teaspoonful of Preservaline; put nothing into the other, and set them side by side so that the temperature of the milk may be the same. See which keeps sweet the longer and which raises the more cream.

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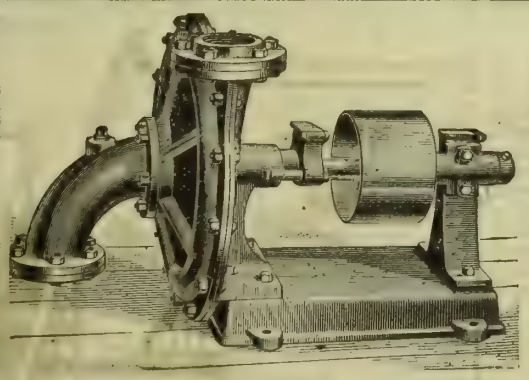
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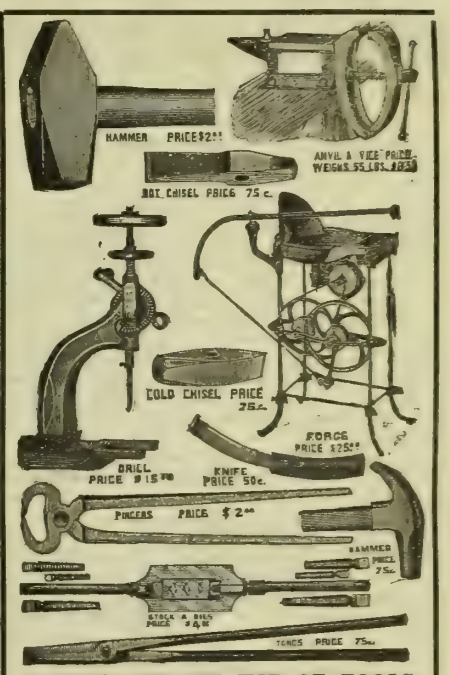
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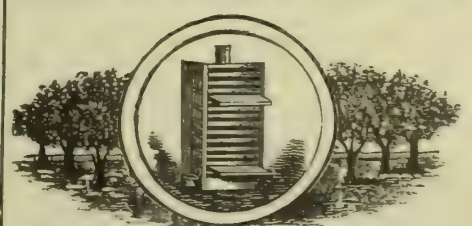


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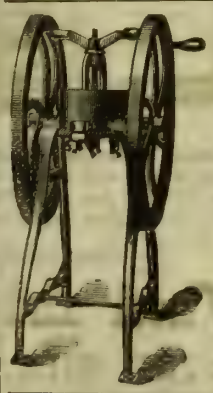
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Is one of the most complete inventions for drying Raisins and Prunes by steam in 24 hours—other fruits less time. No sulphur or potash used. Retains all syrup, juice and flavor in original purity. Capacity, dries from 75 lbs green fruit to 20 tons. Send for circulars. CALIFORNIA FRUIT EVAPORATING & M'F'G CO., 347½ S. Spring St., Los Angeles, Cal.



Mann's Green Bone Cutter

FOR POULTRY FOOD.

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WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock. COST OF FEEDING MATERIALLY LESSENED.

These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing vaulable information in relation to feeding green cut bones.

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Golden Italian Queens. Tested $1.00 each; untested, $1.00 each. L Hives, $1.90 each. Root's V groove sections, $5.00 per 1000. Dadant's comb foundation, 58c and 65c a pound. Smokers, $1.00 each. Globe veils, $ .00 each, etc. WM. STYAN & SON, San Mateo, Cal.

AGRICULTURAL NOTES.

CALIFORNIA.

Kern.

SOME WEEDPATCH CROPS.—Bakersfield *Echo:* An *Echo* reporter, in company with Under-Sheriff Valentine, took a brief trip over the Weedpatch one day last week and saw some grain that opened his eyes. At Verdier's place, in the Caliente overflow, was wheat and barley already harvested, and the stubble was again green with the second growth. This land is irrigated once or twice each year by the waters that rush down Caliente creek. The rest is a striking illustration of what can and will be accomplished in that part of the country as soon as the "78" canal is completed. A single irrigation on that land will insure a big crop of grain. Just what could be accomplished with the waters of Caliente creek if they were stored up next to the foothills and distributed through ditches, it is hard to tell. But it is safe to say that the present acreage irrigated would be increased many fold. But the most surprising thing to be seen out there is the splendid fields of grain grown by Messrs. Maschmeyer, Fowler and Knight. Along the foothills, near the "Rock Pile," are about 1500 acres of as fine wheat and barley as one could wish to see. There is not a weed to be seen in the whole field, and the grain is of uniform height and has large, well-filled heads. One hundred and sixty acres of barley just headed and threshed yielded 2496 sacks of grain that averaged about 125 pounds. The wheat is making from 10 to 12 sacks per acre, and is very plump and heavy. Another illustration of what can be done along the base of the mountains is seen at J. G. Stahl's place, near Rose's station. During the past week he has brought us samples of volunteer and seeded wheat and barley that are almost perfect. This grain stands about four feet high, the heads are of unusual length and are perfect in filling. Some of it made over two tons of hay to the acre. Mr. Stahl believes that by summer-fallowing that land, big crops could safely be expected every year. It has been observed for years that many showers of rain swing around next to the foothills when there is no precipitation at all on the plains, generally. This accounts for the extra fine crops near the mountains.

A NOVEL FARM WINDMILL.—Cor. Bakersfield *Echo:* Cumming's valley not only produces the best grain and hay in California, but it also is the home of genius. Mr. Denton Baisley has invented a wind motor which will propel a six gang plow, a mowing machine, or may be used as a delightful mode of conveyance. It is nothing more nor less than a windmill on wheels, which sails at great speed right in the face of the wind, but can be reversed by a lever accommodating itself to the wind from any quarter, and can be run by compressed air pumps without any wind at all. This novel machine was spoken of a year ago in a facetious manner in the Summit *Sun*. The invention was then in embryo. Since then a trial trip has been made on the ranch of Elijah Stowell with the most pronounced success.

Orange.

OCEANVIEW MESA OUTLOOK.—Cor. Santa Ana *Blade:* While visiting Ocean view mesa recently I was very much surprised to find such a large area in grain—something like 2500 acres are in barley, the most of which will be cut for grain. The average yield per acre is estimated to be eight sacks, which is considered very good for this season. In harvesting this crop six 12-foot headers are used, which require 25 men and 50 horses to handle them. The rope netting is used for unloading and stacking the grain. Threshing begins in about two weeks. Among the gentlemen who have large acreages are Messrs. Thompson, Pankey, Mills, Copeland, Matthews, Prothore, Lamb and Soles. It is a real pity that this beautiful spot of Orange county is not occupied by lovely farm homes instead of being occupied by a few nomads in the summer and as a sheep ranch in winter time.

Solano.

BARNHART'S LANDING.—Cor. Dixon *Tribune:* The grain is again accumulating in both our upper and lower yards, and schooners have already commenced to move it toward tide water. As we look north and east from the landing for miles there is one vast ocean of wheat and barley, and there are thousands of tons of grain on land that was never cultivated before; C. Mohring alone having from one to two thousand tons.

NORTHERN SOLANO'S FUTURE. — *Tribune:* Northern Solano is destined to become the greatest fruit country on earth. Its development in the past ten years has been something marvelous and there are yet vast possibilities before the industrious orchardist. The vast wheat fields of a decade ago have given way to thrifty orchards, dotted at frequent intervals with happy homes set in gardens of rarest flowers. One may ride from Dixon through the Vaca and Pleasant valleys and home by way of Putah creek, and his road for the greater part of the way leads through a continuous and unbroken line of orchards. The next ten years will witness the filling of the few gaps with trees and vines. By that time many of the largest tracts will be divided and set to fruit. The population will begin to increase instead of diminishing as under the era of cereals, and the general prosperity will increase in proportion. Northern Solano has always been considered a prosperous community, but from all appearances the future contains many more blessings for this favored section.

Sutter.

PRODUCTIVE YOUNG ORCHARDS. — Marysville *Democrat:* Ferdinand Hauss, proprietor of the large orchard on the river road about three miles south of Yuba City, has contracted to furnish 200 tons of peaches to the Marysville and Yuba City canneries, from his orchard. One hundred tons are freestone and the remainder clings. White, Cooley & Cutts have also contracted to furnish 300 tons of peaches from their young orchard near Live Oak, to be equally divided between the two canneries. Of this lot 200 tons are clings and 100 tons freestones. Mr. Hauss has also contracted to furnish 60 tons to the Sacramento cannery. Here is an illustration of what can be done in a few years on land in this vicinity, which only a short time ago was in the condition of thousands of acres more, common, plain lands or sheep ranges. There is less than 400 acres in these two orchards, but they are equal in value now to 1600 acres of wheat land of same quality. These places produce great quantities of other fruit as well as peaches, and there are several more like them near this city.

Stanislaus.

HARVEST NOTES AROUND WATERFORD.—Cor. Modesto *Herald:* Harvesting is going on in full blast. No idle men, except a few cronies, can be found around here. Fred Reynolds ran his harvester through what he thought was a poor piece of barley, and it turned out 350 sacks the first day. At Bishop's one can see as pretty a wheat field as one can find anywhere—800 acres as thick as it can stand, level as a table, and expected to yield 35 bushels to the acre. The probabilities are that it will yield more, as that club wheat generally goes far beyond all expectations.

Tulare.

POOR RETURNS FOR RAISINS'—Hanford *Sentinel:* Last season our esteemed townsman, E. P. Irwin, shipped through a firm that handled raisins in Hanford last year, 26,000 pounds of raisins. He did not get returns from his goods until recently and then at the close of a lengthy correspondence. But the returns finally came, and he tells us that his 26,000 pounds netted him 1¾ cents per pound. Is it any wonder that in the face of such results that our farmers are taking matters into their own hands and are organizing in self-defence?

NEW PROCESS FOR DRYING APRICOTS.—*Sentinel:* Chas. King is packing what he calls "Chas. King's New Process Evaporated Apricots." The pack at present will consist of a ton of dried goods put up in ten-pound boxes simply as a test. The fruit is from the orchard of W. G. Nicholson and dried whole, the pits being taken out through a small incision in the stem end. A sample box shown us is a handsome affair and very tempting.

THE EXPERIMENT STATION.—Tulare City *Citizen:* At the last meeting of Tulare Grange, considerable interest was taken in the discussion of the merits of various crops of grain and fruit experimented with at the Government Experiment Station near this city. Jules Forrar, who has charge of this station, in response to various questions, gave the result of experiments with a large variety of grain and fruits. He stated that several different varieties of wheat had given better results than the Sonora, so universally raised by the farmers of this valley; some of which had produced 46 pounds from six ounces of seed, planted in four drills, each 145 feet long. There is no doubt but the farmers and fruit growers of this valley could have saved heretofore a large amount of money and labor had they received the benefits of the practical experience and tests given to some varieties of fruits and grains heretofore boomed by nurserymen and others who were intrested in selling to the over-credulous farmer. Frequently, purchases of such varieties have been made that would have been a large saving to the purchaser had the money been thrown away. Parties who stock up with a new variety with high-sounding names have frequently been enabled by starting a boom, which gathered force and proportions as it traveled, to unload at exorbitant prices, accumulating fortunes at the expense of the masses, who lose many times more than the price of the worthless seeds.

ARIZONA.

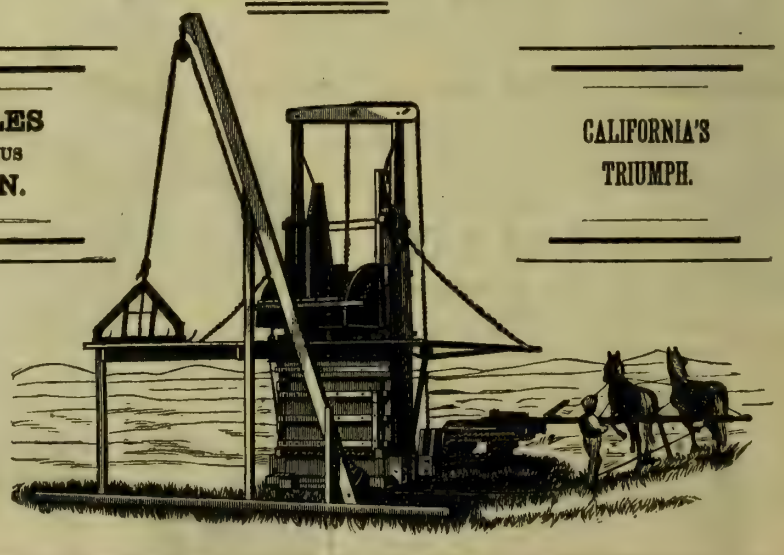
A CANNING ESTABLISHMENT AT PHŒNIX.—F. B. L., in Tucson *Citizen:* One of the most useful, and what should prove the most profitable enterprise inaugurated this year, is the packing factory operating under the corporate name of the Phœnix Packing Company. The gentlemen composing the organization are late of Minneapolis. Their outlay for the construction of a necessary building and for plant amounts to $20,000. Their process is of popular adoption throughout California, and only merits special notice from the fact that it is the first establishment of the kind in the Territory. A few years hence such institutions will be so numerous that their existence may fail to excite comment. This company is a pioneer, and deserving of every encouragement and the special patronage of the people generally throughout the Territory. I am assured that the company is ready to compete with any on the coast. Operations began June 1st, and they are expected to continue throughout the season. The estimated probable output will be 50,000 cans of apricots, 500 gallons of jelly and 2000 cans of jam. The aggregate amount will be about half a million cans of various fruits and vegetables. E. Hidden, the manager, told me that 76 men, women and girls combined are on the payroll at present. The employment of many more may be found necessary later. Among the many orchardists in the vicinity is the practical horticulturist, R. E. Farrington. His fruit orchard, nursery and vines cover about 100 acres. He has just made a shipment to Chicago and New York of apricots, and if successful (being about the first to try the experiment in carload lots from Phœnix), he will soon commence the shipment of table grapes. The only question regarding its practicability is the freight. With the terms exacted of Californians, Salt River people can compete successfully with any section of the Pacific coast.

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WITH THE STAUNCH OLD
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CAPITAL $1,000,000. ASSETS $3,000 000.
A PROMPT, PROGRESSIVE, PROSPEROUS COMPANY.

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Specially Prepared for Drying Grapes and Other Fruits.
NO NEED OF EXPENSIVE WOODEN TRAYS. NO NEED OF TURNING FRUIT. COSTS MUCH LESS THAN ANY OTHER METHOD.
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FREE Trial. Why suffer from the bad effects of the La Grippe, Lame Back, Kidney and Liver disease, Rheumatism, Indigestion, Dyspepsia, any kind of weakness, or other diseases, when Electricity will cure you and keep you in health. (Headache cured in one minute.) To prove this I will send to any one on trial DR. JUDD'S ELECTRIC BELT free. Prices, $3, $6, $10, and $15, if satisfied. Also Electric Trusses and Box Batteries. Costs nothing to try them. Can be regulated to suit, and guaranteed to last for years. A Belt and Battery combined, and produces sufficient Electricity to shock. Free Medical advice. Write to-day. Give waist measure, price and full particulars.
Agents Wanted. Address DR. JUDD, Detroit, Mich.

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SEND FOR CIRCULARS.

"THE DRESS REHEARSAL"

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WILL BE HELD AT THE

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OF 1892.

From September 5th to 17th.

California's Capabilities are Beyond Comparison. Let Not Apathy Prevent Their Being Exhibited.

The State has Appropriated Over $5000 for Premiums for Soil Productions.

REMEMBER THAT THE GREAT COLUMBIAN WORLD'S FAIR opens in May of next year. Hence, all agricultural exhibits must be collected this year.

The State Board of Agriculture stands ready to assist the producer, and by gathering your exhibits and showing them at home at the State Fair, you can take advantage of the cash awards to assist you in the good work. All exhibits shown at the State Fair will be kept free of storage until their removal. BEGIN WITH HARVEST.

MERCHANTS AND PROPERTY-OWNERS in each county are interested as much as the farmer, and should lead in the ORGANIZATION OF COUNTY-EXHIBIT COMMITTEES.

Do not overlook the chance of getting money to remunerate you, right here at home; it is to be given away at the State Fair of 1892. Come and get some of it.

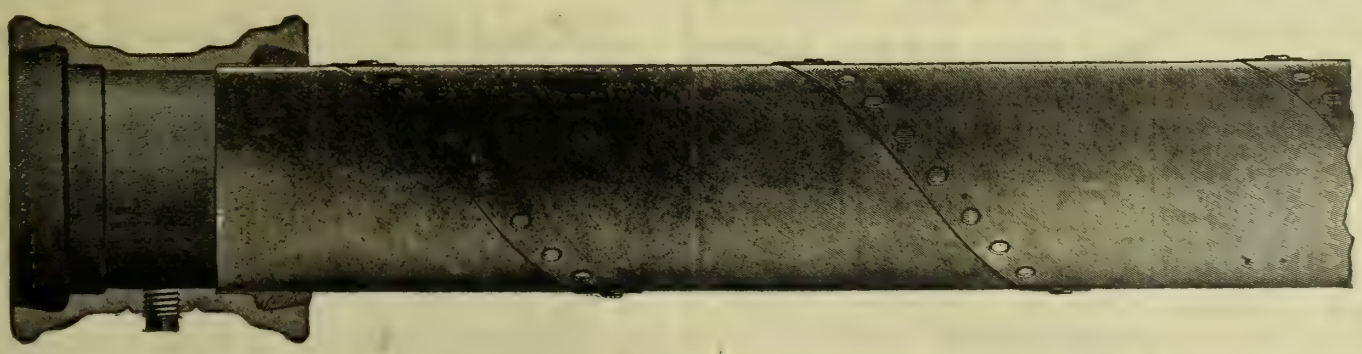
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3 TO 24 INCHES DIAMETER.

2 TO 25 FEET LENGTHS.



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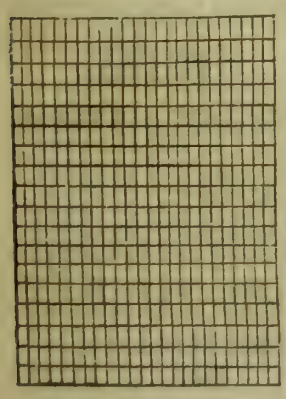
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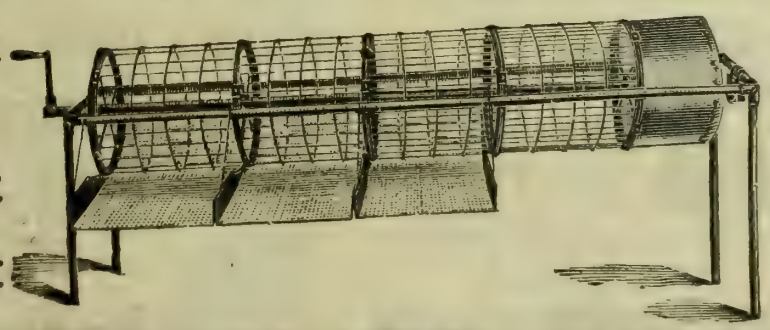
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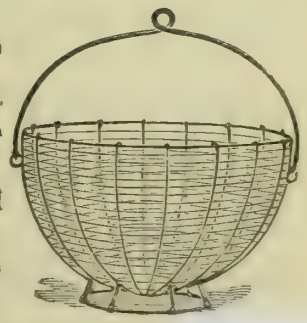


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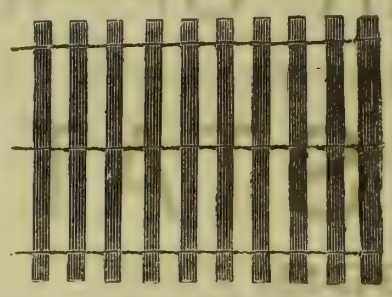
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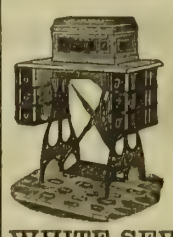
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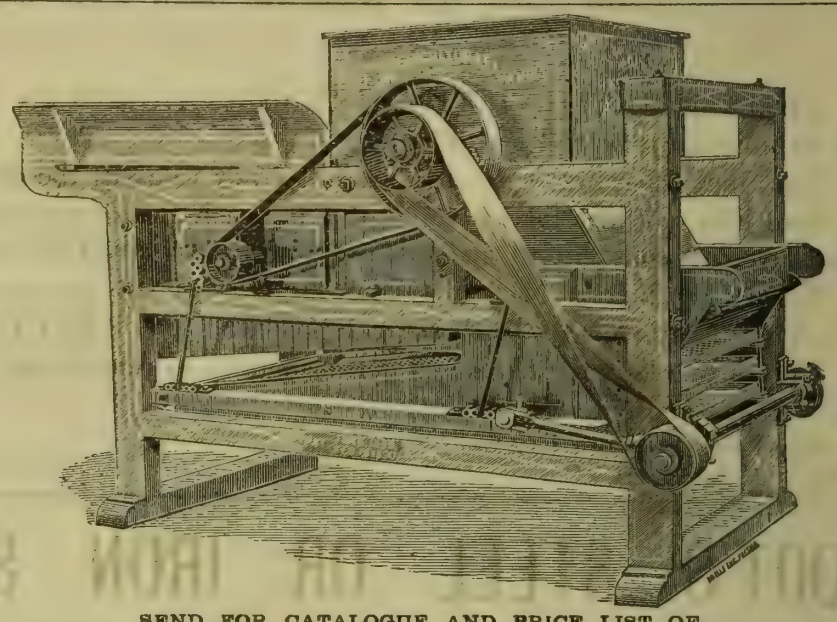
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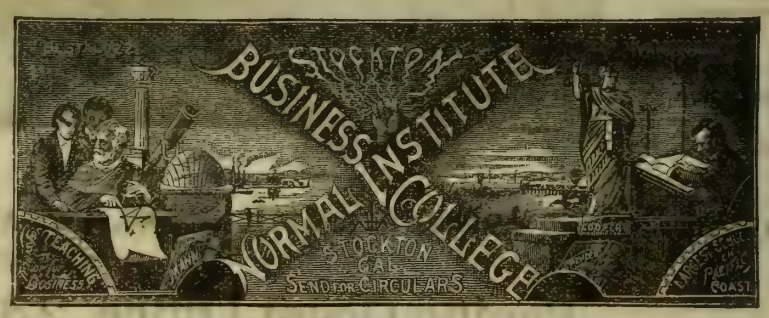
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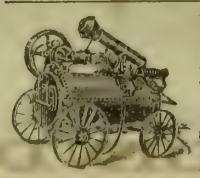
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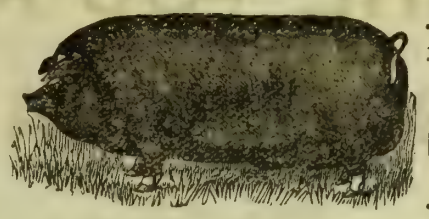
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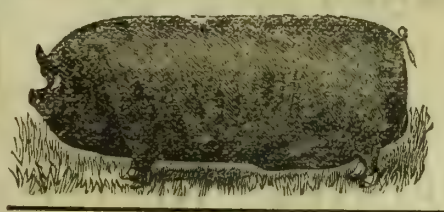
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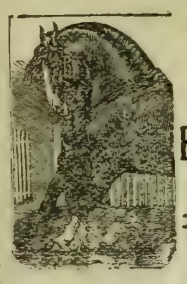
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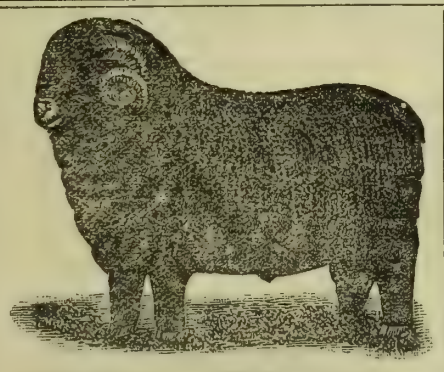


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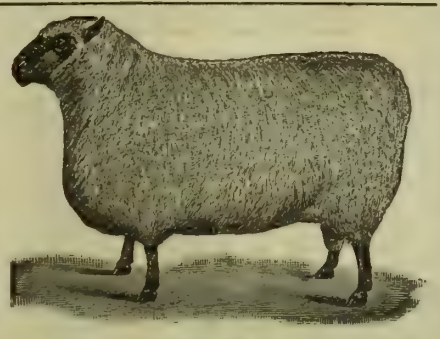
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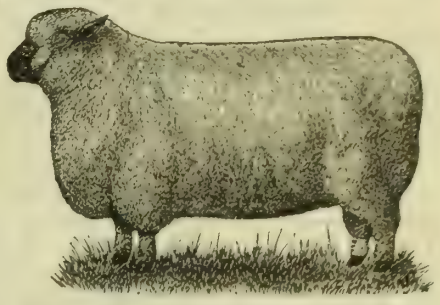
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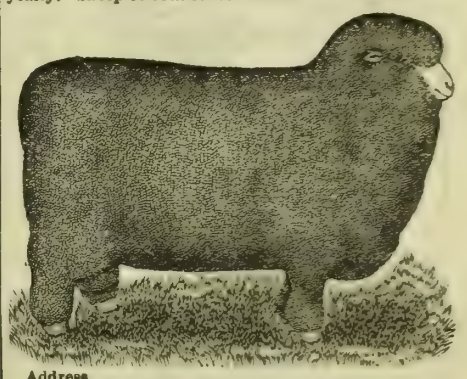
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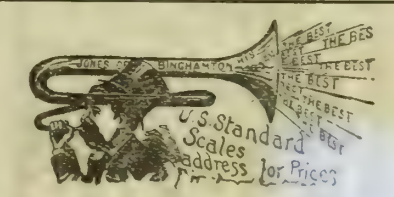
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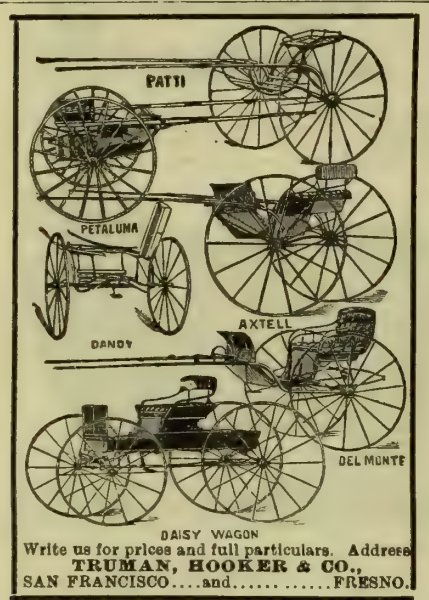
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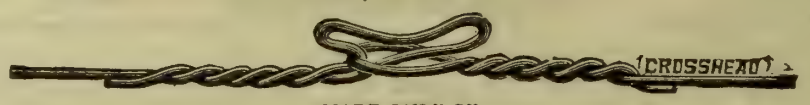
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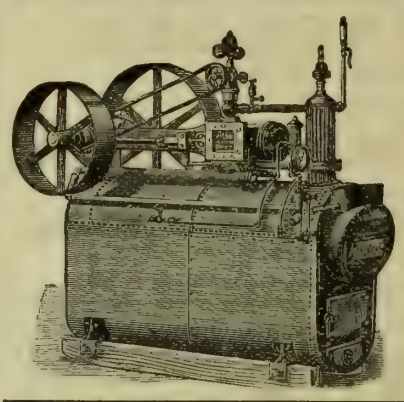
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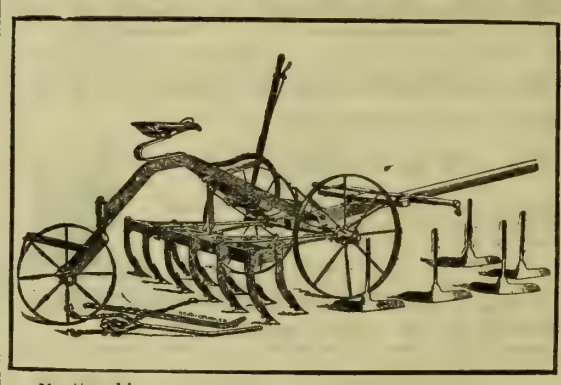
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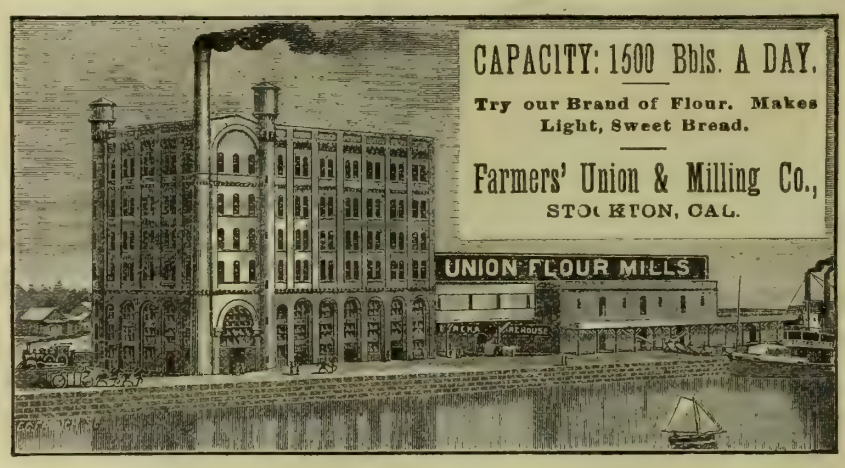
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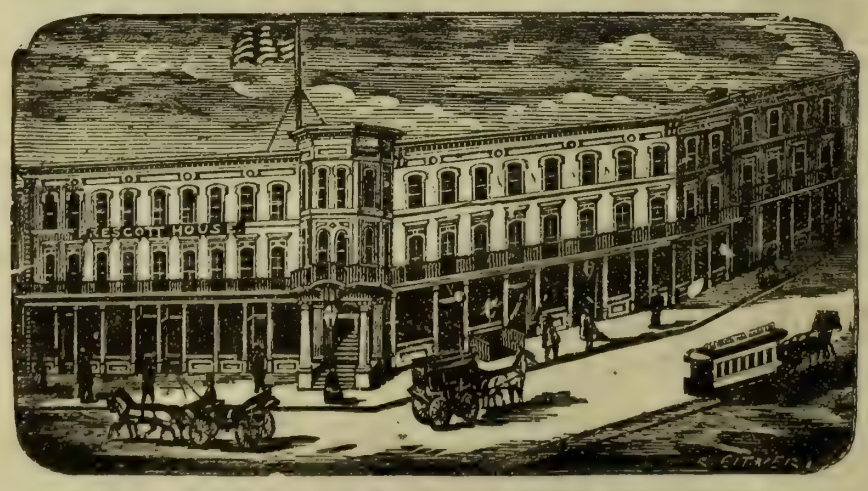
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, June 29, 1892.

The season of 1891-92 goes out on a lamb-like market. It is to be hoped that the new season will be more profitable to agriculturists than the one just past All information at this writing warrants the statement that the outlook for products in each leading farm industry is of the most favorable character. Farmers have done much to bring this about. As a rule, they are cultivating, in the latest and most approved methods, the best variety of everything grown that is specially adapted to each particular locality. By this they turn out larger and better crops, which, in selling, command the highest range of values. It no longer pays to market poor stuff, for the general public is discriminating more closely. The local money market is easy, with a large surplus of funds reported by the banks. To this there will be large additions next month, or as soon as the disbursements for interest, dividends, etc., find their way back into the general reservoir.

Foreign Grain Review.

LONDON, June 27.—Mark Lane *Express* says: English wheats are depressed by the withdrawal of the Russian prohibition. The outlook for the importers and farmers is bad: the 1,600,000 quarters of extra stock imported when the prohibition was enforced will now have to be sold at a terrible loss. American and Russian wheats have fallen 1s, Australian, Californian and Argentine, 6d. Oats are dull. At today's market, foreign wheats were 6d cheaper. English flour was irregular. Barley was 6d and Rye 1s lower. Oats were firmer.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.
Thursday	6s07½d	6s07½d	6s07½d	6s08½d	6s08½d
Friday	6s07½d	6s07 d	6s07½d	6s08 d	6s08½d
Saturday	6s06½d	6s07 d	6s07½d	6s.7½d	6s08 d
Monday	6s06½d	6s07 d	6s08 d	6s08½d	6s08½d
Tuesday	6s6 d	6s07 d	6s07½d	6s08½d	6s09 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s6d	34s6 i	31s6d	Held higher.	Very hot.
Friday	34s.d	34s6d	34s6d	Weaker.	Showery.
Saturday	34s6d	31s6d	34s6d	Inactive	
Monday	34s3d	34s3d	34s3d	Neglected.	Hot.
Tuesday	34s3.1	34s3d	34s3d	Quiet.	

To-day's cablegram is as follows:

LIVERPOOL, June 29.—Wheat—Higher prices asked, but no advance established. California spot lots, 7s; off coast, 34s; just shipped, 34s; nearly due, 34s; cargoes off coast, moderate demand; on passage, quiet but steady; weather in England, fair after rain.

New York.

The following shows the closing prices of wheat for the past week:

Day.	June	July	Aug.	Sept.	Oct.
Thursday	143½	144⅜	144⅜	144½	145⅝
Friday	143½	144½	144⅜	144⅝	145⅝
Saturday	143½	144½	144⅜	144⅝	145⅝
Monday	144	144⅜	144½	144½	145⅝
Tuesday	144½	144½	145¼	145½	146⅜

The following are to-days' telegram:

NEW YORK, June 29.—Wheat—86⅛c for June; 86⅜c for July; 87⅛c for September; 88⅛c for October; 89⅛c for November and 90⅜c for December.

CHICAGO, June 29. Wheat—79¼c for July; 79⅜c for September and 81⅛c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	138½	....	....	....	....
" lowest	138½	....	....	....	....
Friday, highest	138½	140½	....	140½	....
" lowest	138	140½	....	140½	....
Saturday, highest	137½	....	....	....	....
" lowest	137½	....	....	....	....
Monday, highest	137½	....	....	....	....
" lowest	137	....	....	....	....
Tuesday, highest	138	....	....	140½	....
" lowest	137½	....	....	140½	....

BARLEY.

	Seller '92.	Buyer Aug.	Aug.	Buyer Sept.	Sept.
Thursday, highest	93½	....	....	....	....
" lowest	93½	....	....	....	....
Friday, highest	93½	....	....	....	....
" lowest	93	....	....	....	....
Saturday, highest	92½	....	....	....	....
" lowest	92½	....	....	....	....
Monday, highest	92½	....	....	....	....
" lowest	91	....	....	....	....
Tuesday, highest	92½	....	94½	....	....
" lowest	92	....	94½	....	....

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, June 24.—The leading wool markets are quiet. Manufacturers seem to be waiting to see whether the higher prices being paid in the West will hold, and are endeavoring to prevent an advance by keeping out of the market. Meanwhile, new wool is coming forward and stocks are steadily increasing. Wools have, as a rule, been put up in a cleaner and better manner than for several years, and on this score should command an advance. Prominent dealers have freely expressed the opinion that Ohio and Michigan wools will show an advance of 1@2c ₰ lb within the next 30 or 60 days. London sales have shown strong compaction among the buyers and a hardening tendency to values, but a comparatively small amount of wool suitable for this country has been offered. There is a good demand reported for Australian wools here, and while prices are no higher, they are very firm.

NEW YORK, June 25.—Sellers still incline to buyer's views of prices. An active business prevailed at the sea-board markets. Supplies are fuller, but not well sorted. This gives manufacturers a case against the suggested advance. Prices are no lower, and sellers seem satisfied to work off heavy, unwashed at the former rate, much more going direct to manufacturers. The cleaned basis for California is 52@53c; for short, fine and free, 54@55c; for long, staple Texas, 55@58c; Wyoming and Utah, 59@60c; Western good is active and steady. The sales at New York were 416,000 and 889,000 lbs foreign. Boston had an active week. The sale of domestic was 2,084,050 and 1,500,000 lbs foreign, over one-third of which was Australian. The rest was chiefly carpet. Philadelphia reports prices no better. There is a good disposition to trade in better stocks, but is still lacking in grades not wanted.

California Canned Fruit.

NEW YORK, June 26.—Canned fruits seem to be shaping right for future business. Baltimore will put up much less small fruit than last year. Peaches have already advanced.

California Dried Fruit.

NEW YORK, June 26.—Cheap dried goods are not likely to repeat the competition severely next fall, and last winter's pack of Pacific canned is firm, with 5 cents advance in a few instances. The new crop of coast is regarded with more interest.

Raisins—There have been no farther large dealings. Remnants will go out, as there are only 25,000 boxes of Valencias held against 150,000 boxes last summer. New coast are not talked of.

Some cold storage bags of apricots are quoted at 12 cents.

Hops.

NEW YORK, June 26.—Hops still favor buyers; sales have been light on spot; brewers are picking up country lots cheap, which are pressed for sale by weak or tired holders; crop reports are favorable for the buying side of the market; there is no optional business of importance. State '91s range from 21@25c; Pacific, 21@25c.

California Beans.

NEW YORK, June 25.—Lima Beans—There is a strong market. Spot sales, $1.75@2.80, 1000 bags going to Chicago. Pacific Mail parcels to arrive, $1.70 @1.75.

NEW YORK, June 27.—The bullish sentiment is steadily developing in California Lima beans, and some enthusiastic bulls predict an advance to $2 ₰ bushel before August 1st. Spot parcels are about cleaned out.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce at this port for 7 days ending June 28 '92, were as follows:

Flour, qr. sks	61,929	Bran, sks	3,754
Wheat, ctls	9,015	Buckwheat "	....
Barley, "	27,039	Middlings "	1,984
Rye, "	1360	Chicory, bbls	20
Oats, "	580	Hops, "	....
Corn, "	8,122	Wool, "	1,614
*Butter, "	1,055	Hay, ton	1,638
do bxs	616	Straw, "	94
do bbls	2	Wine, gals	153,850
do kegs	117	Brandy, "	5,400
do tubs	144	Raisins, bxs	3,160
do ½ bxs	434	Honey, cs	110
†Cheese, ctls	752	Peanuts, sks	271
do bxs	76	Walnuts "	....
Eggs, doz	32,060	Almonds "	....
do " Eastern	73,700	Mustard "	....
Beans, sks	12,190	Flax "	5564
Potatoes, sks	14,170	Popcorn "	....
Onions, "	5,436	Broom corn, bbls	....

*Overl'd, 282 ctls. †Overland, 18 ctls.

Receipts Outside of California.

The receipts of certain articles of produce from Oregon, Washington and other distant points compare as follows.

	July 1, '91 to June 27, '91.	July 1, '91 to June 25, '92.
Flour, ½ sks	410,643	475,957
Wheat, ctls	1,410,129	1,305,052
Barley, "	276,332	56,791
Oats, "	379,188	446,910
Wool, bales	11,119	11,588
Hops, "	508	431
Rye, sks	210	3,498
Potatoes sks	101,769	141,149

Cereals.

Bradstreet's estimates that the reserve, visible and invisible, on July 1st, will be 70,000,000 of bushels, and the crop about to be harvested 550,000,000 of bushels, making a total of 620,000,000, which, after deducting 368,000,000 bushels for seed and consumption, will leave 252,000,000 bushels for export and reserves, of which 200,000,000 can be easily exported, and, if necessary, 220,000,000, or as much as has been exported the current season. The estimate of 200,000,000 or 220,000,000 for export seems excessive. It is based on the crop estimate of 550,000,000, of which there is apparently no real prospect. There is no likelihood of so large a crop, and an export surplus of 175,000,000 bushels will probably come nearer the mark.

The total shipments of wheat from India for this season to June 18th have been 14,880,000 bushels, against 14,540,000 bushels for the corresponding time last year.

A cable from St. Petersburg, June 22d, says that a drought is prevailing in Toltava, and crops are being blighted. Sheep and cattle are perishing from lack of fodder.

The latest official mail report from St. Petersburg announced that the condition of the growing wheat is unfavorably spoken of in three central and three southern governments, but it is good particularly in the Caucasus, some northern governments and the whole of Poland. In the province of Nizhni-Novgorod and the eastern government of Kazan, a surplus is promised. The whole area of grain it is said exceeds that of last year by 25 per cent.

The June crop report of the Iowa Weather and Crop Service, from advices of 1500 country correspondents, shows the reduction in winter wheat area to be 3 per cent, and condition 86 per cent; spring wheat area reduced 3 per cent, condition 88 per cent. Acreage of corn 17¼ per cent reduced, and with best conditions, prospects favor only 70 per cent of last year. The acreage of oats is reduced 11 per cent, and the condition is 82. The potato acreage is reduced 12 per cent. The conditions do not promise a yield of over 18,500,000 bushels of wheat, against 27,586,000 bushels last year. The corn crop of Iowa last year was 350,000,000 bushels, and 70 per cent would be 245,000,000.

The local wheat market has been inactive, owing to a strong bear pressure from buyers. So far as we are aware, this has been successfully resisted by farmers. A few sham sales, at lower prices, are said to have been made by and between bear operators. These sham sales were evidently made to have them published so as to get farmers to sell at a lower range of values. Toward the close of the week more samples are on the market, but whether in duplicates or not, it is hard to say. Many farmers send samples to two or more brokers or firms, and these, when offered, make it appear that more is for sale than there really is. This policy is short-sighted. Some of the exporters expect to be able to *borrow* wheat from one or two warehouses so as to meet urgent demands. By doing this, they are not forced into the market and compelled to pay higher prices. This loaning of wheat is entirely wrong, and should be guarded against. Buyers are bidding our quotations, but holders ask more money.

Barley has come to hand more freely, but the bulk is common grades and not desirable. These grades are largely sought for by millers to be used in turning out rolled and ground barley. The consumption of both rolled and ground barley appears to be enlarging. In the most of cases they give better satisfaction than either the whole grain or other ground feed. A strong effort is being made to force the market to lower figures; whether it will be successful depends largely on farmers. If the latter force sales, prices must go lower. There is more offering at the close; but so far as we can learn, no sales have been made at lower figures.

Oregon has sent us heavy supplies of oats, which are supplemented by freer receipts from southern coast ports. The grades of the bulk of the oats received are common to fairly good, so that the market for these is slow and lower. Naturally, the heavier offerings affect the more choice grades, although they are not quoted any lower.

Corn has sold to lower figures. Receipts have been free, while the demand has been sluggish; and to sell, concessions had to be made.

Rye is in fair supply. The market is dull at lower quotations.

Harvesting is under full headway. The outturn is, as a rule, larger than was expected, while the grain is generally plump and heavy. Many fields in which the straw was short, and which were thought would give a poor yield, turned out an average crop, while in all, the yield was larger than had been estimated. This holds good in both wheat and barley. A larger acreage has been cut for hay than thought possible, owing to favorable weather.

Feedstuff.

Dealers and feeders appear to be purchasing ground feed in a hand-to-mouth kind of way. This is evidently done to break the market to as low figures as possible and then stock up. Ground and rolled barley appear to be their chief aim. The receipts of bran and middlings are fair. There is a fair call for ground feed from lumbering camps.

Receipts of new hay have increased while that of old have decreased. It looks as if farmers are marketing their poorer grades, for the market is oversupplied with poor to fair. Receipts of new continue to come chiefly from river points. Oregon sent us some old hay the past week. It is claimed that the hay crop this year will be larger than that cut in 1891. Slowly maturing weather and lower prices for grain induced the increased cutting.

Dairy Produce.

It is now given out that the creameries in Carson and Mason valleys, State of Nevada, which are reputed to be controlled by a man named Evans Williams, are turning out oleomargarine. Considerable of this stuff is said to be marketed in this city as butter.

Butter has ruled weak throughout the week. Buyers have hesitated in taking much unless offered concessions; only in a small way were sales made at an advance on outside quotations for gilt-edged and creamery. It is claimed that considerable packing is going on, but of butter bought at inside prices. Eastern butter continues to come to hand.

A strong effort appears to be making to strengthen the cheese market, but so far it has proven futile, for receipts come in from unexpected quarters, and buyers will not stock up much beyond near by wants. Full cream cheese has a strong tone.

Eggs have shaded off. Large receipts of Eastern and a strong selling pressure caused prices for "as is" and also for fair to good candled to fall off, and as retail dealers were attracted to them the more choice had to be shaded. The market closes weak and in buyers' favor.

To-day, butter was very weak. The tendency is downward, for the sources of supplies are increasing and the outlet is decreasing. Packers are virtually out of the market.

We are informed that the statement made above that oleomargarine is made in Carson and Mason valleys, is evidently a mistake, but cheese is made principally of emulsion of refined lard.

Vegetables.

The market in garden stuff has been slowly declining under increasing supplies of seasonable kinds. The southern part of the State is sending us heavy supplies of tomatoes, which are breaking the market. During the week, ports on Puget Sound and others up-coast have drawn heavily of all kinds of vegetables, which aided in keeping the market from going to pieces.

Red onions fell to such low prices that they no longer paid expenses. Silver-skin onions are lower. At the lower prices there is a fair up-coast demand for the more matured, good keepers.

Potatoes have ruled firmer under fair receipts and a good shipping and local demand. For shipping, well matured in sacks are given preference. At times consignments of fancy potatoes are auctioned off on the wharf at an advance on outside quotations. The past week two of such consignments were sold by L. Scatena & Co., at $1.40 and $1.60. The potatoes are said to have been grown on loamy, sandy soil. It is claimed that they were better than anything heretofore received.

In the absence of a shipping demand, potatoes were easier but no lower.

Fruit.

The market is oversupplied with small, trashy apricots. They sell at low figures. Pears are also small. Bartlett and Dearborn seedling pears are in the market; they are taken chiefly for shipping. They are thinnings and windfalls. Tragedy and Duane purple plums are in the market; they sell at the outside figures. Black cherries are going out and sell higher, as do Royal Anne. Currants are going out. Blackberries and raspberries are in heavy supply. Sweetwater grapes are coming in more freely. Alexander peaches are going out. Hale's Early will soon be in.

Owing to confirmed advices of a short crop of peaches at the East, particularly in Delaware and Maryland, and a short cherry crop in New York, canners are buying fruit more freely than they expected, but they want the more choice varieties. A fair idea of the prices paid in the interior can be gained by the following, taken from the Yuba City (Sutter county) *Independent:* "The Sutter Canning and Packing Co. has contracted for about 700 tons of fruit for the season's pack, of which there are about 540 tons of peaches, 120 tons of apricots, 25 tons of pears and 15 tons of plums. The fruit is of extra good quality, and the contract price is 2 cents per pound for cling peaches, 1⅝ cents for free peaches and 1⅜ cents per pound for pears, apricots and plums. The fruit is from the orchards of S. J. Stabler, R. C. Kells, Mrs. G. F. Starr, B. G. Stabler, Ferd. Hauss, B. F. Walton, J. C. Gray, the Cutts' orchard and Chas. Weeman. Considerable drying will also be done at the cannery this season. The Marysville cannery has contracted for some fruit in this county." On the Sacramento river several orchardists have sold their peaches at 2 to 2¼ cents on the river bank Canners bought in this city the past week as follows: Apricots, 1¼@1¾ cts.; blackberries, $3@4 50 per chest; raspberries, $4@5.

Choice good keeping apples were in good demand the past week.

Schacht, Hempke & Co. report the sale of two carloads of new crop dried apricots at 10 cents, for shipment in July to Chicago. New crop dried apricots are quoted in our market at 9½@10½ cents per lb.

Oranges are slow. They have to be rehandled Limes are in large supply, but there is a good demand.

The market to-day was weak and lower for cherries and peaches, owing to there not being any shipping demand.

Live Stock.

Bullocks are weak and pressing the market, as are range calves. Mutton sheep are scarce and tending up. About all the large bands of sheep have been driven to the summer ranges. Hogs are higher and in good demand. The establishing of a large packing firm near this city will cause hogs in the future to be sought after. Fresh milch cows are said to be more inquired for.

Miscellaneous.

Poultry kept down until toward the close of the week, when a steadier feeling set in. The demoralized market was due to heavy receipts from Texas and Missouri river points. It is said that more is expected to arrive next week. Choice, well-conditioned young chickens are scarce. Well-conditioned turkeys are very scarce. For a coop of extra fine gobblers, 21 cents per lb. was bid yesterday.

The honey crop is short by from 40 to 50 per cent when compared with last year's crop.

Old hops are about gone. For new crop hops buyers name 13 to 15 cents per lb., which growers will not accept. The crop on this coast, compared with the crop in 1891, will be short.

The receipts of wool are lighter. There is a fair inquiry, but buyers appear offish when confronted with any degree of firmness from sellers. The Shire and Cotswold wools are the favorite kinds wanted.

Lima beans are doing better. The stock is nearly concentrated.

From reliable advices up to June 15, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	266,327	319,209	*†154,158	78,490
San Diego	20,307	25,279	4,019	.....
San Pedro	5,705	12,715		
Oregon	53,303	29,475	21,822	19,767
Puget Sound	29,992	27,859	.....	
Totals	372,634	414,337	189,999	98,151

*Engaged for wheat, 1892, 26,084; 1891, 25,409 †For new crop loading, 1892, 16,849; 1891, 36,696.

The statistics of produce exports from this port from July 1st to June 22d, compiled from the most reliable sources aggregate as follows:

	1891-92.	1890-91.
Wheat, ctls	12,835,424	13,698,398
Flour, bbls	1,053,718	1,174,550
Barley, ctls	1,110,123	312,35[illegible]

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, June 29, 1892.

BEANS AND PEAS.		**HOPS.**	
Bayo, ctl	2 00 @ 2 15	1891 Choice to Ex.	25 @ —
Butter	2 50 @ 3 05	Fair to Good	22 @ —
Pea	2 20 @ 2 70	**FLOUR.**	
Red	2 00 @ 2 20	Extra, City Mills	4 65 @ 4 75
Pink	2 00 @ 2 10	Do Country Mills	4 50 @ 4 75
Small White	2 20 @ 2 55	Superfine	2 75 @ 3 10
Large White	2 20 @ 2 45	**NUTS—JOBBING.**	
Lima	2 15 @ 2 40	Walnuts, Cal. ₰	4 @ —
Fld Peas, blk eye	3 00 @ 3 30	Do Choice	6 @ —
Do green	1 50 @ 2 75	Do paper shell	7 @ —
Do Nlles	1 30 @ 1 40	Almonds, sft shl	10 @ —
Split	4 50 @ 5 50	Paper shell	12 @ —
BUTTER.		Hard Shell	6 @ 7½
Cal. Poor to fair, ₰ lb	15 @ —	Brazil	6½@ 8
Do good to choice	17 @ —	Pecans small	11 @ 13
Do Giltedged	— @ 20	Do large	14½@ 16
Do Creamery rolls	— @ 20	Peanuts	1½@ 3
Do do Giltedge	— @ 21	Filberts	10½@ 12½
Eastern	— @ —	Hickory	7 @ 8
CHEESE		Chestnuts	11½@ 16
Cal. choice cream	7½@ —	**ONIONS.**	
Do fair to good	7 @ —	Silverskin	40 @ 70
Do gilt edged	— @ 8½	**POTATOES.**	
Do skim	5 @ 6	Early Rose, ctl	60 @ 75
Young America	— @ 9½	Do do in boxes	75 @ 1 10
EGGS.		Peerless	65 @ 85
Cal. "as is," doz	16 @ 17½	Do in boxes	70 @ 1 00
Do candled	18 @ 20	Garnet Chilies	60 @ 90
Do choice	21 @ 22	Burbank Seedlings	65 @ 90
Do fresh laid	23 @ 24	Do do in boxes	75 @ 1 15
Do do selected	— @ 25	**POULTRY.**	
FEED.		Hens, doz	5 50 @ 6 50
Bran, ton	17 50 @18 50	Roosters, old	5 50 @ 6 50
Feedmeal	26 00 @28 50	Do young	7 50 @10 00
Gr'd Barley	21 00 @23 00	Broilers, small	2 25 @ 3 50
Middlings	20 00 @21 50	Do large	4 00 @ 5 00
Oil Cake Meal	— @25 00	Fryers	5 00 @ 7 00
Manhattan Food ₰ cwt.	7 50	Ducks	4 00 @ 5 00
HAY.		Geese, pair	1 25 @ 1 50
Wheat, per ton	11 00 @ —	Goslings	1 25 @ 1 75
Do choice	— @14 00	Turkeys, Gobl'r.	17 @ 20
Wheat and Oats	10 00 @12 00	Turkeys, Hens	15 @ 17
Wild Oats	10 00 @— —	Manhattan Egg Food ₰ cwt	11 50 @ —
Cultivated do	10 00 @— —	**PROVISIONS.**	
Barley	10 00 @12 00	Cal. Bacon, he'vy, ₰ lb	10½@ —
Alfalfa	8 00 @10 00	Medium	11½@ —
New Wheat	10 00 @12 50	Light	13 @ —
Do Wheat & Oat	9 00 @ 11	Lard	9½@ 12½
Do Oat	6 00 @10 00	Cal. Sm'k'd Beef	11½@ —
Do Alfalfa	7 00 @ 9 00	Hams, Cal salt'd	11½@ —
Straw, bale	40 @ 50	do Eastern	14½@ —
GRAIN, ETC.		**SEEDS.**	
Barley, feed, ctl	87½@ 90	Alfalfa	9 @ 12½
Do Choice	72½@ 95	Clover, Red	14 @ 15
Do Brewing	1 00 @ —	White	20 @ —
Do do Choice	1 00 @ —	Flaxseed	2 00 @ 2 25
Do do Giltedge	1 10 @ —	Hemp	3½@ 4
Do Chevalier	1 05 @ 1 40	Mustard, yellow	3½@ 4
Do do Giltedge	1 45 @ 1 50	do Brown	3 @ 3½
Buckwheat	— @ —	**WOOL.**	
Corn, White	1 32½@ —	**SPRING, 1892.**	
Yellow, large	1 27½@ —	Humb't & Men'cino	17 @ 21
Do small	1 32½@ —	Sac'to valley	16 @ —
Oats, milling	1 50 @ —	S Joaquin valley	11 @ 16
Feed, Choice	1 47½@ —	Cala'v & F'th'll	16 @ 21
Do good	1 40 @ —	Oregon Eastern	12½@ 19
Do fair	1 32½@ —	do valley	18 @ 23
Surprise	1 55 @ —	So'n Coast, def	10 @ 12
Black Cal	— @ —	Nevada (State)	15 @ 19
Do Oregon	1 32½@ —	**HONEY.—1892 CROP.**	
Gray	1 32½@ —	White Comb, 2-lb	8 @ 11
Rye	1 20 @ —	do do 1-lb frame	10 @ 13
Wheat, milling. Gilt edged	1 47½@ —	White extract'd	6½@ 6½
Do Choice	1 45 @ —	Amber do	5½@ 6
Do fair to good	1 41½@ —	Beeswax, lb	25 @ 28
Shipping, cho'ce	1 40 @ —		
Do good	1 38½@ —		
Do fair	1 36½@ —		
Common	1 33½@ —		
Sonora	1 33½@ 1 40		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, June 29, 1892.

Limes, Mex	4 00 @ 5 00	Pears, Branbon's Seedling	1 00 @ 1 25
Do Cal	— @ —	Do Bartlett	1 00 @ 1 75
Lemons, box	1 50 @ 4 00	Apricots, pr box	35 @ 65
Do Sicily	5 00 @ 6 00	Cherries, box Black	50 @ 65
Oranges, Seedlings	1 25 @ 2 25	Royal Ann	70 @ 85
Do Navels	2 50 @ 4 50	Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.	
Strawberries, per chest— Longworth	9 00 @11 00	Beets, sk	— @ 1 00
Sharpless	5 00 @ 7 00	Carrots, sk	50 @ —
Gooseberries, ₰s	4 00 @ 7 00	Okra, dry, lb	15 @ —
Raspberries, ch	5 00 @ 7 00	Parsnips, ctl	— @ 1 25
Currants chest	5 00 @ 7 00	Peppers, dry, lb	10 @ —
Peaches, box	60 @ 1 00	Do green	10 @ 12½
Cherry Plum, dr	45 @ 65	Turnips, ctl	50 @ —
Bl'kberries ₰ ch	3 50 @ —	Cabbage, 100 lbs	40 @ 50
Figs, blk box	50 @ 1 25	Garlic, lb	2 @ 3
Do White do	25 @ 1 05	Squash, Sum, bx	10 @ 40
Apples, com. bx	50 @ 1 00	Tomatoes, box	75 @ 1 00
Do Red Astrachan	1 00 @ 1 50	Peas, green, sk	50 @ 75
Plums, Tragedy	65 @ 85	String Beans	4 @ 6
Do Duane's Purple	70 @ 90	Cucumbers, box	75 @ 1 25
		do Bay	1 75 @ 2 25
		Mushrooms	10 @ 30
		Egg Plant, lb	17½@ 20
		Green Corn, sk	50 @ 1 25
		Do sweet ₰ sack	1 00 @ 1 50
		Do swt. Bay ₰ dz	20 @ 25

Live Stock.

BEEF.		**MUTTON.**	
Stall fed	5 @ —	Wethers	7 @—
Grass fed, extra	5 @ —	Ewes	6½@—
First quality	4½@ —	Do Spring	8 @—
Second quality	4 @ —	**HOGS.**	
Third quality	3½@ —	Light, ₰ lb, cents	5½@ —
Bulls and thin Cows	2 @ —	Heavy	5 @ —
VEAL.		Soft	4½@ —
Range, heavy	4 @ —	Feeders	3½@ —
Do light	5 @ —	Stock Hogs	3½@ —
Dairy	6 @ —		

Grain and Wool Bags.

Calcutta, spot	7 @ 7¼
Wool Bags	36@ 38

Housewives, Attention!

Two *new* first-class Sewing Machines for sale cheap, will be sent direct from warerooms, if desired. Address H. F. D., Box 2517, San Francisco, Cal.

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

THE STATE GRANGE SESSION.—Patrons are all looking forward to the coming annual session at San Jose. In this issue we give a list of standing committees appointed by Worthy Master Davis, who are to take active part in the deliberations of the session. I would suggest that each member of these committees review the past work in their branch of duties and be well prepared to assist in the work of the session. To consider and report on matters referred to them is not all the work which members may well be expected to perform, but, in a manner, they should have an interest in seeing that any needed proposition should be duly submitted to the Grange. Should any members of the committees appointed be aware of any reason why they cannot attend the session, or for other reasons cannot act in performing their duties, early notice should be given to the Master, with any suggestions they deem advisable to him. The appointment of committees is a perplexing duty for any presiding officer. The Master has tried to divide the work among the several sections of the State, geographically, and also to name members who will give time and thought to the work required of them, thus acting, I believe, conscientiously in accordance with his best judgment.

NOTES FROM THE MASTER.

Brother Davis, W. M., writes, June 24th, that he is well taxed with demands on him for the Grange and individual work, correspondence, etc. He expects to visit Grimes Grange, July 7th, and assist in conferring the third and fourth degrees on a class of ten, speaking to an open meeting in the afternoon. There should be an old-fashioned turnout of Grangers, and it is pleasant to say that the citizens who attend will be rewarded with an eloquent and thoughtful address.

GOOD results of the State canvass are already apparent, and a larger increase anticipated from now on until the State Grange meeting; and no doubt after the fruit aud grain harvests there will be many new applications for membership. The fall campaign may require some more visitations, but the Master hardly looks for any large demand for speakers.

FOR CONGRESS.

There is a strong probability that E. W. Davis, W. M. of S. G., will be nominated and elected to Congress from the First District. The only difficulty in the way, according to the most reliable newspaper authority, is to obtain the Master's consent. It is certainly desirable that there should be lots more of as good representatives in Congress as we already know that Brother Davis would make.

TULARE is among the Granges that have endorsed the San Jose Grange resolution in favor of equal legal rights for women on the death of husbands to those of husbands on the death of their wives.

THE Grange of Oregon may expect a prosperous year. Master R. P. Boise announces that he will have more time than formerly to devote to the cause he has always so ably and faithfully espoused, while Past Master Hayes, who has been elected State Lecturer again, intends to take the field actively. Both should meet large audiences wherever announced to speak, and their superior efforts will, no doubt, lend much inspiration to many other earnest and active Patrons.

WE SHOULD HELP EACH OTHER.

One of our best Past Masters, who has been formerly a schoolteacher, and who has lately been farming in the interior, desires a situation in San Francisco at some reasonably paying business; perhaps would take a farm or business elsewhere, if he can obtain suitable opportunity for himself or self and wife. We make this mention unsolicited, desiring to assist a very worthy and capable brother, we believe, whose address will be furnished on application.

QUARTERLY REPORTS RECEIVED.

Reports to June 30.—Tulare Grange, Eureka, Roseville, Pescadero, Merced, American River, Lockeford, Stockton and Glen Ellen.

TWO ROCK GRANGE.—We are informed by Past Master J. C. Purvine that four new applications were received at the last meeting.

EUREKA GRANGE, near Auburn, is progressing favorably. The summer months should be particularly delightful ones to the mountain Grangers.

EQUAL RIGHTS, ETC.

By resolution of Sacramento Grange, Bro. E. Greer presented the following at the last session of the State Grange, which was in substance adopted:

WHEREAS, The Civil Codes of the State of California discriminate between husband and wife, relating to the disposition of community property, and should be so amended as to give the wife the same rights as are now enjoyed by the husband; therefore be it

Resolved, That the California State Grange, P. of H., instruct its Legislative Committee and representatives to give this matter their favorable attention, and to urge, by all honorable means, such amendments to the Civil Codes as will give the wife the same rights in the disposition of community property as are now enjoyed by the husband.

State Grange Committees for 1892.

Standing Committees.

ON LITERARY EXERCISES.—Sisters Amos Adams, S. P. Sanders of San Jose, S. H. Dewey of Temescal, A. P. Roache of Watsonville, C. D. Bonner of Santa Rosa and W. W. Greer of Sacramento, and Brothers Cyrus Jones and H. P. Brainerd of San Jose, John Denman of Two Rock, D. Fisher of North Butte, E. C. Bedell of Roseville, H. C. Stucke of Waterloo and E. W. Williams of Pacheco.

ON DIVISION OF LABOR.—I. C. Steele, J. W. Montgomery, J. W. De Golia, N. E. Alling, Sisters M. E. Donaldson and Ella E. Ashley.

ON CREDENTIALS.—E. B. Owens, J. W. Robinson. C. H. Wakefield, Sisters Roxie Dennis and S. C. Dunlap.

ON FINANCE.—D. Flint, E. T. Pettit, J. R. Denman, and Sisters S. T. Coulter and W. L. Overhiser.

ON GOOD OF THE ORDER.—S. T. Coulter, S. H. Jackman, W. A. Bowman, and Sisters Wm. Johnston and C. A. Merrill.

ON COOPERATION.—Brothers Wm. Johnston, Joseph Kline, P. L. Bunce, and Sisters S. T. Coulter and S. P. Sanders.

ON CONSTITUTION AND BY-LAWS.—Brothers W. L. Overhiser, C. D. Bonner, L. H. Applegate, Sisters Fannie H. Lawton and Daniel Flint.

ON FARMERS' INSTITUTE.—Brothers J. V. Webster, C. D. Bilderbeck, James S. Perrott, Sisters J. M. Talbot and Thos. McConnell.

ON TRADE-CARD SYSTEM.—A. P. Martin, W. T. Lain, J. M. Talbot, and the Executive Committee, viz: Thos. McConnell, Geo. P. Loucks and B. F. Walton.

ON WOMAN'S WORK IN THE GRANGE.—Sisters Hattie S. Jones of Yuba City Grange, Mary Merrill of Waterloo Grange, Amos Adams of San Jose Grange, S. J. Cross of Roseville Grange, S. H. Dewey of Temescal Grange, M. Brainard of San Jose Grange, N. A. Alling of Stockton Grange, E Z. Roache of Watsonville Grange, C. E. Kinney of Temescal Grange, E. Greer of Sacramento Grange, and Mary E. Saxton of Santa Rosa Grange.

ON COOPERATION FOR LEGISLATION.—J. V. Webster, Chas. Wood, C. W. Norton.

Auction Sales of California Fruits.

At New York.

June 22.—Two carloads: Apricots, $1 65@4 10; Peaches, $1 70@2; Clyman plums. $2 70@3 05; Brill plums, $1 90. Car sold gross for $2144.

June 23.—One carload: Royal apricots, $1 50@1 70; Alexander peaches, $1 05@2; Clyman plums, $2 65@3 25; Brill plums, $1 55. Car sold gross for $1988. Ventilated car No. 36,815: Apricots, $1 20@1 70 for Royals; Montagamet apricots, $3 85; Alexander peaches, $1 60@1 80; Clyman plums, $2 15@2 55; Koenig Claude plums, $1 55; Tragedy prunes, $6 50. Car sold gross for $1681

June 24.—One carload from Newcastle: Royal Anne cherries, $1 90@2 35; Black Oregons, $2 15@2 70; Alexander peaches, $1 60@2 25; Royal apricots, $1 @3 60; Cherry plums, $1 30@1 40. Car sold gross for $2760. Goodell Refrigerator Car No. 16,858, shipped from Tulare: Royal apricots, $1 10@1 25; Alexander peaches. $1 70@1 85.

June 24.—One carload: Royal apricots, $1 20@1 75, averaging $1 48 ₩ crate; Seedling apricots, $1 30 ₩ crate; Alexander peaches, $1 40@1 75 averaging $1 51 ₩ box; Early May peaches, $1 60@1 75 ₩ box.

June 25.—Two carloads: Royal Anne cherries, $1 45@2 20 ; Republican cherries, $2 15@2 20; Royal apricots, $1 05@4 15; Alexander peaches, $1 05@2 15; Royal Native plums, $2 05 @3 10; Clyman plums, $2 80@3 15; Koenig Claude plums, $2 10; Tragedy prunes, $5 25. Gross sale of both cars, $3926.

June 27.—One carload: Royal Anne cherries $1 25 @2 55; Black Tartarian cherries, $1 25@2 05; Eagle cherries, $1 10@1 45; Republican cherries $1 40: gross sale of this car, $3133. Also sold Goodell No. 16,158 — Apricots, 95c@$2 65; Alexander peaches, $1 25@1 75; average, $1 54; Cherry plums $2 10. Goodell Refrigerator Car No. 16,318—Apricots, small and overripe, sold at $1 05@1 10; Alexander peaches, $1 28@1 30.

June 27.—One carload: Alexander peaches, $1 35 @1 85; some small, $1 10@1 20; Royal apricots, $1 40 @1 55; some small, $1 15; Garland peaches, $1 30; Centennial peaches, $2 50; small, $1 60; Peach apricots, $2 50; Clyman plums $2 90; Cherry plums, small, $1 05; Black Republican cherries, $1 60; Royal Anne cherries, $1 80@2 40.

June 28.—Two carloads: Apricots, $1@3 20; Peaches $1 20@1 85; Royal Native plums, $3; Jackson, $3 15; Royal Anne cherries, $1 50@1 85; Oregon, $1 50@3 20; Black Tartarians, $1 70; Black Eagles, $1 35.

June 27.—Two carloads; Cherry plums, $1 25; Alexander peaches, $1 25; Japan Blood peaches, $1 40; Briggs May peaches, $1 25. Some peaches, overripe sold for less prices. Royal apricots, mostly over-ripe and small, 75@80c.

June 27.—Three carloads: Alexander peaches, $1 05@1 65; Apricots, 30@$1 40; Royal Anne cherries, $1 65@1 75; Black Tartarians, $1 10; Republican cherries, $1 65; Eagle cherries, $1 25 Clyman plums, $1 65; Koenig Claude plums, $1 95@2 25; Cherry plums $1 65@1 80, 10-lb boxes, $1; Tragedy prunes, $5.

June 28. — Four carloads: Apricots, $1@1 50; Montagamets, $1 55; Peaches, $1 10@1 65; Cherries, poor order, $1 60@1 75; Cherry plums, $1 90; Royal Native, $2 10@2 50.

At Chicago.

June 22.—Three carloads: Peaches sold for $1 15 @1 55; Royal apricots, 85c@$1 30; Montagamet apricots, $1 65; Clyman plums, $2 25; Cherry plums, $2 05.

June 23.—Three carloads: Royal Anne cherries, $1 60; Republican cherries, $1 50; Clyman plums, $2 05@2 15; Royal apricots, 90c@$1 25; Peaches, $1 15 @1 60; Royal Native plums, $1 25@2 10; Pears, $1 65; Tragedy prunes, $5.

June 24.—Two carloads: Royal apricots, $1 30 @1 80 ₩ crate; Newcastle apricots, $2 ₩ crate; Alexander peaches, $1 25@1 50 ₩ box; Royal Native plums, $1 50 ₩ crate; Cherry plums, $1 35 ₩ crate; Royal Anne cherries, $1 85@2 05 ₩ crate, Black Tartarian $1 50@1 75; Black Bigerreau, $1 55; Black Republican, $1 35@1 55. Some fruit arrived in poor condition and sold for less.

June 24. — Two carloads: Peaches $1 20@1 25; Apricots, 70c@$1 15; Koenig Claude plums, $2; Montagamet apricots, 75c@$1 35; Peach apricots, $1@1 30. Weather very bad, raining hard.

June 25.—One carload: Royal apricots, $1 10@1 20; some small, 90c@95c; Peach apricots $1 15; Smith's Triumph $1 35; Alexander peaches, $1 25@1 45; Early May, $1 25@1 30; St. Catherine plums, $2 30; Royal Native, $1 80; Peach plums, $1 90.

June 25.—Two carloads: Royal Apricots sold at 70c@$1 40; Moorpark apricots $1 40; Montagamet apricots, $1 50; Peaches, $1 25@1 50; Clyman plums, $2 20@2 30; Royal Native plums, $2 10; Brill plums, $1 85; Tragedy prunes, $4@4 25.

At Other Cities.

MINNEAPOLIS (Minn.). June 22.—Two carloads: Apricots sold for $1.25@1.40 per half crate; peaches, $1.25@1.50 per box: cherries, $1.40@1.85 per box.

OMAHA (Neb.), June 23.—One carload: Peaches, $1.25@1.50; apricots, $1.25@1.50; Royal Anne Cherries, $1.75@2

BOSTON, June 24.—One carload: Alexander Peaches sold to average $2.08; Royal Apricots, $2.23; Royal Anne Cherries, $2.49; Clyman Plums, $3.50. Car sold gross for $2767.

BOSTON, June 27:—One carload: Early May peaches, $2 10; Alexander, $2; Moorpark apricots, $1 60; Royal, $1 59.

OMAHA (Neb.) June 27. One carload: Peaches and apricots $1 25@1 50.



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Standard Painted, 3¾. GALV. 4¼.

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It is simple in construction, has no cogs or complicated gearing to get out of order. Has only three principal bearings, heavily babbited boxes and self oiling apartments.

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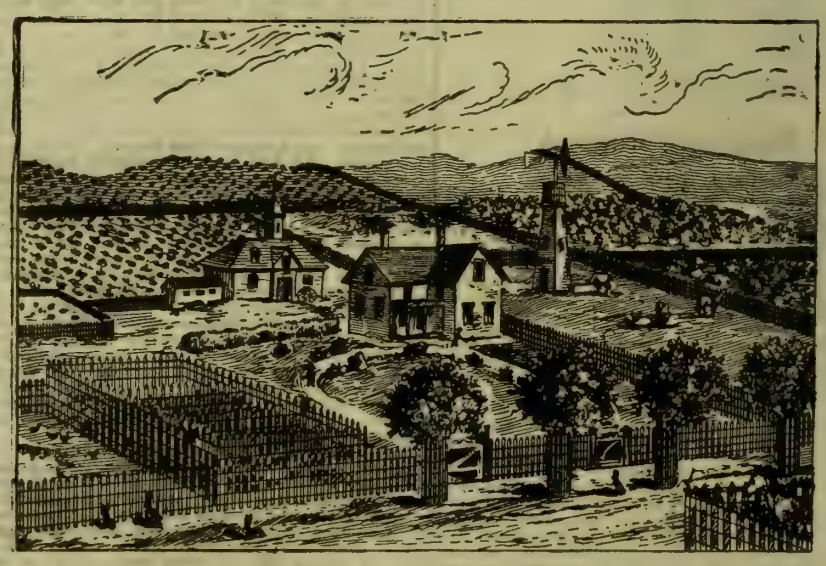
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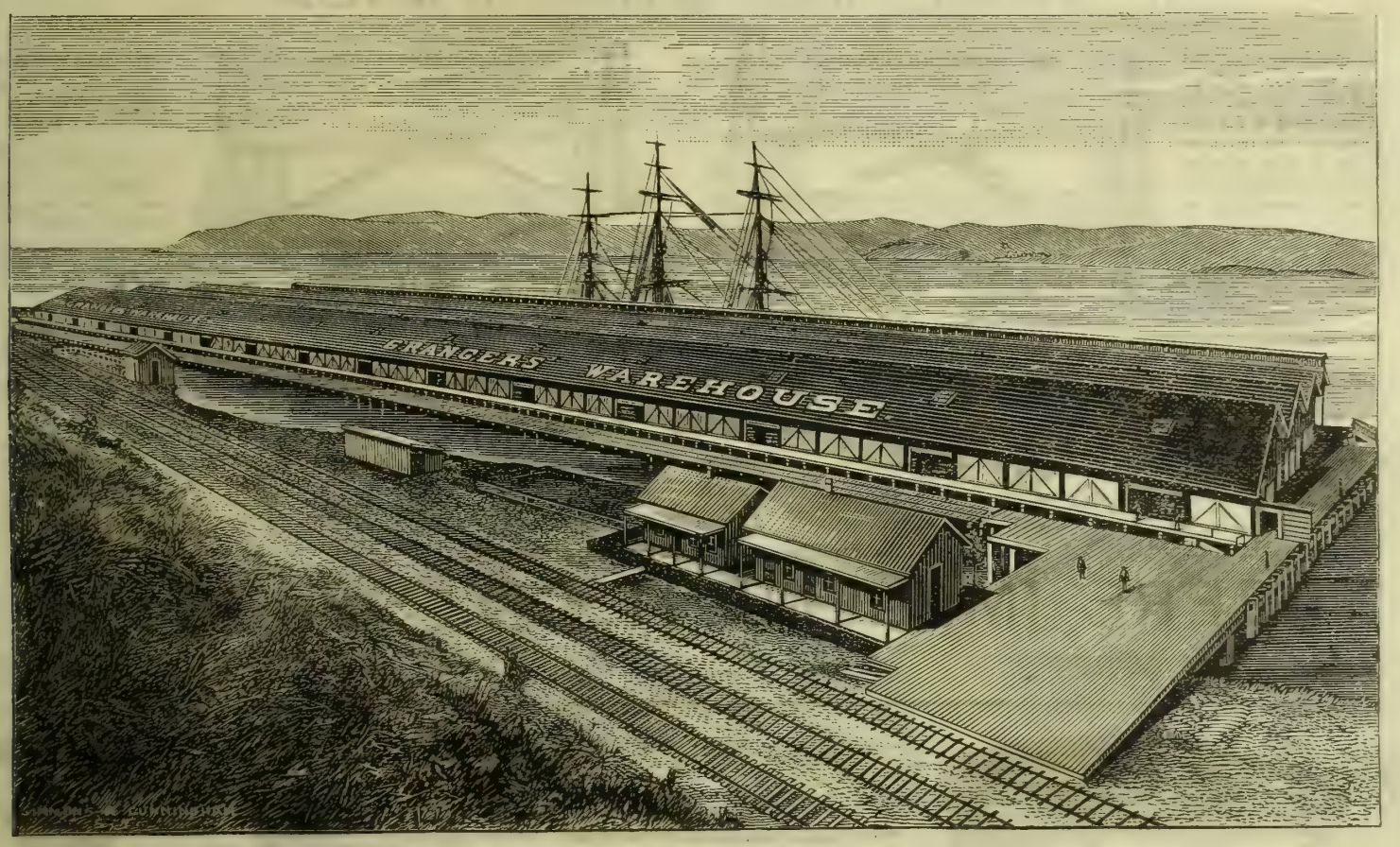
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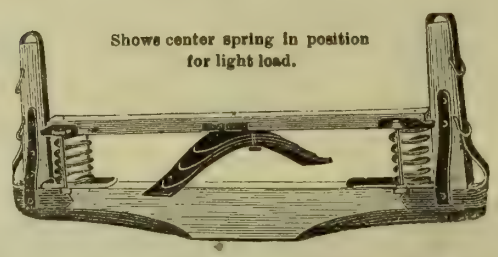
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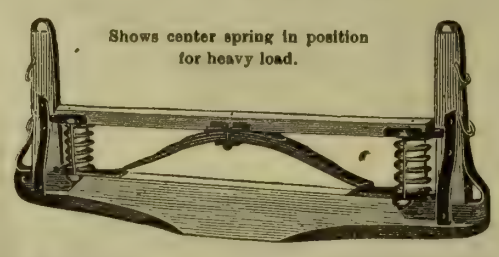
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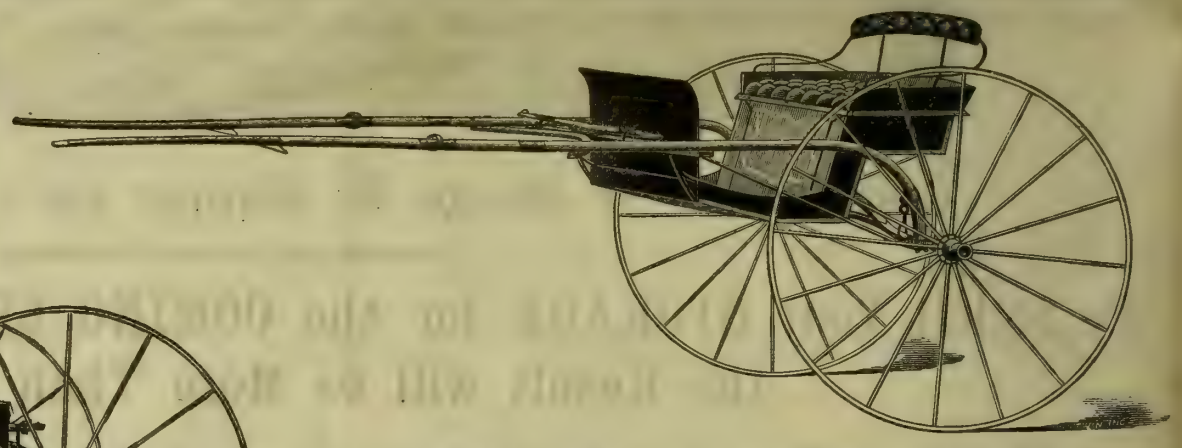
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PACIFIC RURAL PRESS

Vol. XLIV. No. 2. SAN FRANCISCO, SATURDAY, JULY 9, 1892. THE DEWEY PUBLISHING CO., Office, 220 Market St.

A Single Point But a Strong One.

Last week we indulged in a few remarks upon what producers could do by individual diligence and effort. In view of the important results now being attained among the Fresno raisin producers, as reported upon a following page, thought naturally returns to the benefits of united action. It will be seen by the report to which we refer that something like four-fifths of the larger producers had agreed with each other upon a certain line of action in disposition of their product, and that the work of securing fuller accord was progressing favorably. We doubt whether such a large proportion of the producers of a given territory has been before committed to a given measure. It may possibly have been done in some of the orange regions of the southern counties, but not elsewhere. Next week a meeting will be held which will show the outcome of the business—or at least the beginning of it.

In connection with the work as thus far carried, the question naturally arises why has this movement made such progress while other efforts have died in committee or are languishing just beyond? It may be claimed that the situation among the raisin men, judged by last year's experience, was a desperate one, and has forced producers to do something. This is, however, hardly truer of the raisin men than of other dried fruit producers. Why, then, do they combine more readily? It seems to us the reason is because they have made the bond of their union a single strand: Everyone can recognize it and understand and perceive its plain necessity. There is a point below which raisin-making does not yield a living. Producers agree with each other that in selling their product they will not pass that point. This secures a profitable price for raisin and it leaves the producer full liberty in every other way.

What shall the minimum price be? That is a difficult point to decide and the Fresno people are approaching its determination very wisely. They leave it for final adjustment. They seek every light upon it. They request the opinions of packers upon it. They appeal to public sentiment to approve their course. It is a very simple procedure and it seems to us a very strong one. We shall be glad to to see it win, and we expect to do so.

Is it possible that in other movements for cooperation for disposition of fruit and fruit products, too much is being attempted? The chief objections seem to be doubt of the wisdom of such a governing board as is usually contemplated and dislike to delegate away individual rights and judgment. For these reasons growers risk only the cost of a single share of stock, when they should have scores or hundreds, and they give no surety that they will do a dollar's business through the channels they themselves create. Thus far these movements have proved weak, except in small regions were mutual acquaintance seems to have fostered cooperative action. We believe existing difficulties, even in the more pretentious organizations can be overcome. They may be swept away by the confidence which may proceed from successful action in support of a single point. If the Fresno growers proceed to successful issue with their measure to establish a minimum price this year they will certainly not do less next year and they may do more. From all we can discern of the signs at Fresno, the situation must certainly be looked upon as promising, not for that region alone, but for the State.

Portland Residences.

The handsome residences of which we have photo-engravings upon this page are situated in Portland, Oregon. Some of them belong to people of wide reputation, but our purpose is merely to reflect the character of the dwellings of prosperous Pacific Coasters and not to remark their personality. The photographs were taken in mid-winter, which is unfortunate in losing foliage effects and yet perhaps desirable to distant readers in wintry climates in that they show the scenes at their very worst.



VILLA RESIDENCES IN PORTLAND, OREGON.

Dwellings in general aspect and dimensions like those at Portland are to be found in or near all our larger Pacific coast cities, and they represent sometimes the surplus products of successful local industrial or professional effort, sometimes the results of Eastern enterprise or inheritance expended to secure the possessor a handsome home in a genial clime.

The Los Angeles *Times* learns that the women principals of the Los Angeles schools are to be dropped and their places filled by men. "The ostensible object of this movement is, of course, to improve the efficiency of the force, but there is something more than a suspicion out that it is in the interest of practical politics." To this the *Times* enters a timely protest. Politics does quite enough mischief as matters now stand, and the public school system ought to be free from it.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

Saturday, July 9, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Windmills—R. F. Wilson, Stockton, Cal.
Barley Crusher—M. L. Merv, Chico, Cal.
Orange Seed—L. G. Sresovich.
Monte Vista Resort—Mrs. C. E. Kinney, Dutch Flat, Cal.

☞ *See Advertising Columns.*

The Week.

California fruit is going eastward steadily and in large quantities. The city bids fair to assume its indignant attitude of last year over the claim that Eastern people are getting the good fruit and San Franciscans the "culls." To the grower, however, there is but a single thought, and that is that the best fruit must go to the best market, and thus it will continue. Manager Buck of the Fruit Union has just returned from his Eastern investigations, and has a very encouraging report to make of Eastern trade and the season's prospects. He fears no conflict with the Eastern product, except a brief tussle with the Georgia fruit.

Just as we go to press, reports come of a serious conflict between the detectives hired by Pennsylvania iron masters and the locked-out operatives. Numbers of lives were lost in a battle on Wednesday, and the matter has a serious look which it is to be hoped will soon be averted.

Preventing Levee Breaks.

Mr. Daniel Flint recently gave us some hints how to prevent gopher hole breaks in levees and other embankments, that may be of practical use to some farmers not so wise as Sacramentans are supposed to be on the subject.

Often the difficulty of locating the water side end of a gopher hole has caused great destruction. The common expedient when water pours through a gopher hole in the levee is to tramp along the inner slope until roily water passing out below indicates the position of the opening, when the flow can be easily stopped at its head, if found in time.

Sometimes this system of tramping fails to succeed, and nonplusses the investigator. In an emergency of this kind, Brother Flint, when called upon to act, went in for heroic treatment. Being an "instantaneous case" of "root, hog, or die," he had a longitudinal cut dug in the embankment, found the opening, and plugged it with bags of sand, the usual way. After a short cessation, the stream again poured through the levee. The cut was again opened and sunk a little deeper, and the bags inserted partly below the gopher's tunnel, and the job was as successful as Pharaoh's march through the Red sea.

Too Much Sting. — Cannot we have our official entomology without so much wasp in it? The acidity and acridity among old school entomologists over questions of classifications and priority, become mild when compared with the recent sharpness among economic entomologists, and, strange to say, the ill feeling seems to be keenest over beneficial bugs, which certainly should provoke the blandest and sweetest sentiments among their devotees. And yet we find quarrels over discovery, introduction and subsequent handling and distribution, which ill become those who are diligent in pursuing beneficent missions. The work is a great one; there are achievements and honors enough for all. To quarrel and indulge in personal abuse will convince the public that the whole business is hateful and waspish, and will defeat ends which are only attainable through public interest and support. Let us have peace!

Pacific Coast Sugar Beets.

The Department of Agriculture at Washington, has just issued a special publication on the sugar beet entitled "Experiments With Sugar Beets in 1891," by Dr. H. W. Wiley, chemist. etc. It contains analytical results gained in the Washington laboratory by assaying beets grown from seed sent out by the Department, and transmitted to Washington by the growers in different parts of the country. The publication affords the widest data attainable on sugar beets grown in all parts of the United States, and is therefore an important contribution to industrial knowledge. Unfortunately, however, the data are not in all respects fairly representative, and in fact may in some cases create very wrong impressions. This is unquestionably so with reference to California, and as our State is the largest producer of beet sugar in the Union, this is peculiarly unfortunate. The distant reader will be wholly unable to reconcile the conflict between the showing of California beets made in this report and the fact that we are successfully conducting sugar factories. Such a distant and ill-informed person will conclude that we are fools to think we can successfully make sugar from such beets as the government says we grow here, and he will henceforth have nothing to do with us in that line.

We have tabulated the leading results obtained by the government analyses of beets received from Pacific Coast States as follows:

	Ariz.	Cal.	Nev.	Or.	Wash.
Samples	2	8	18	35	11
Average weight oz.	51	48	11	23	18
Sucrose in juice, %	8.09	11.64	18.10	14.57	15.23
Purity, %	56.09	75.8	88	82.2	83.9

It is upon such data that the government report makes the following deductions under the head of each State named in the table.

Only two samples were received from Arizona. They were both very much overgrown, being about three times as large as the normal beet should be. As would be expected, the percentage of sugar was very low.

Eight samples were received from California. The average size of the beets was entirely too large, being 48 ounces.

Of the Nevada beets, the numbers representing their quality are almost phenomenal with the exception of the average weight which is only about what it should be. This doubtless accounts for the fact that the beets were so exceptionally rich.

The samples from Oregon are, the report says, "uniformly rich in quality, and if they truly represent the capabilities of the State there certainly is a bright future for the beet sugar industry in that portion of the Pacific coast.

With the exception of two, all the samples received from Washington were of high saccharine strength.

These reports while they undoubtedly do justice to Nevada, Oregon and Washington, succeed in putting California and Arizona in a very untrue and unfavorable light. The samples were clearly not fit for sugar-making and should have been thrown out, because it was clearly the fault of the grower and not of the State. The grower erred in choosing wrong soil or wrong cultivation and his failure to produce a good beet is made to cast a shadow upon the State.

It may be said that Californians are to blame for the result. They did not send proper and sufficient samples as other States did, consequently the report is unfavorable. This might be the case were not Dr. Wiley so well informed upon what California can do and is doing in this line of production. His earlier reports show what California beets are, because he has given many analyses of them as secured from the analysts at Alvarado. If he had desired a hundred or a thousand other analyses he could have had them from the State University, or from Alvarado or Watsonville or Chino. He could also have shown exactly what has been done in actual sugar-factory practice in this State. For this reason we protest against the showing the State is given in this publication. It is a case where, in default of specimens, Dr. Wiley should have gone behind the returns and have fairly put forth the beet-sugar achievements of California in the light of his own knowledge and observation. The ill effects of the present publication is unfortunately likely to be wide-reaching and difficult to overcome.

It is true that Dr. Wiley says in his introductory note that the "results must be simply regarded as tentative, showing in general where beets of fine quality can be produced, but not in any way deciding on the comparative ability of the several States for the production of rich beets." This is a fair and frank admission, but the fact remains that this allusion will be seen by few and the general unfavorable reflection upon California beets will reach many. This should not have been made possible.

Statistical Review of Wheat and Barley.

The harvest season ending with June 30, 1892, will no doubt be often referred to by commercial writers owing to the large direct shipments of wheat from this port to France and Belgium. This movement assumed large proportions toward the close of the season of 1890–91, or as soon as reports of short crops on the continent were verified, and continued well into the first five months of the 1891–92 season. The exports to France within the twelve months ending June 30, 1891, aggregated 5,214,530 centals, and to Belgium 848,898 centals, the larger proportion of which, as above stated, was made in the last six months of the 1890–91 season.

The wheat shipments during the twelve months ending with June 30, 1892, aggregated to the several different countries as follows: Great Britain, 8,342,288 centals; France, 3,852,233; Belgium, 676,771; Peru, 33,824; Central America, 21,990; Australia, 8,393; Hawaiian Islands, 8,390; various, 2,067. Total, 12,945,956 centals, against 13,836,467 centals in the season of 1890–91. The highest, lowest and average prices of No. 1 white shipping wheat in the open market by months from July 1, 1891, to June 30, 1892, were as follows:

Months.	Highest.	Lowest.	Average.
July	$1 58¾	$1 43¼	$1 48⅜
August	1 72½	1 55¼	1 62⅞
September	1 71¼	1 60	1 64
October	1 71¼	1 66¼	1 68¾
November	1 90	1 67½	1 82½
December	1 85	1 73¾	1 80½
January	1 82½	1 65	1 74
February	1 72½	1 52½	1 63⅞
March	1 70	1 52⅛	1 63⅞
April	1 55	1 47½	1 50
May	1 51¼	1 40	1 47½
June	1 40	1 38¾	1 39½

The highest price for the season was $1.90, the lowest was $1.38¾, and the average was $1.63⅝. The average was the highest since the season of 1883–84, when it was $1.64¾. From the latter season to the season just closed the averages were as follows: 1884–85, $1.31⅞; 1885–86, $1.43½; 1886–87, $1.52½; 1887–88, $1.40¼; 1888–89, $1.34½; 1889–90, $1.28⅜; 1890–91, $1.46¼. The causes which brought about the high prices the first six months of the past season were given at considerable length in the Rural Press of February 6, this year, and it is to be presumed they are fresh in the memory of readers.

The exports of flour from San Francisco for six seasons past, were as follows in barrels: 1891–92, 1,083,577; 1890–91, 1,185,410; 1889–90, 1,189,629; 1888–89, 909,032; 1887–88, 854,735; 1886–87, 1,001,579.

The combined wheat and flour (flour reduced to wheat) exports from this port, aggregate by seasons as follows in centals: 1891–92, 16,196,687; 1890–91, 17,392,697; 1889–90, 17,271,078; 1888–89, 16,112,191; 1787–88, 11,324,398; 1886–87; 15,339,629.

Of the exports of barley from San Francisco the past season, Great Britain took direct as follows: For Cork, 247,629 centals; Gloucester, 46,840; Hull, 54,439; Liverpool, 232,148; London, 7,375. Total 588,431 centals out of total shipment of 1,037,982 centals. The exports to other countries and foreign ports were as follows: Antofogasta, 22,400 centals; Callao, 10,516; Hawaiian Islands, 66,623; Iquiqui, 70,151; Los Palmas, 69,500; St. Vincent, 82,152; Sydney, 2508; Tahiti, 3356; various 2804 centals. To New York there was shipped by sea 144,270 centals. No shipments were made eastward in last season by rail.

The highest, lowest and average prices by months in the season of 1891–92, were as follows for No. 1 feed barley, based on actual transactions:

Months.	Highest.	Lowest.	Average.
July	$1 20	$1 00	$1 13⅜
August	1 18¾	1 05	1 10¾
September	1 10	1 05	1 07
October	1 08¾	1 02½	1 06⅝
November	1 15	1 02½	1 10
December	1 15	1 05	1 10⅝
January	1 12½	1 02½	1 11¼
February	1 05	95	99½
March	1 05	97½	1 00
April	1 10	1 00	1 02
May	1 05	95	99⅝
June	98¾	92	92⅞

Average for the year $1.05¼; highest for the year, $1.20; lowest for the year, 92 cents. The average price of No. 1 feed barley by seasons, was as follows: 1891–92, $1.05¼ 1890–91, $1 39⅞; 1889–90, 81½ cents; 1888–89, 75⅞ cents 1887–88, 79½ cents; 1886–87, $1½; 1885–86, 1.28.

Los Angeles *Express*: "Some energetic steps should be taken to secure to California a fair share of the business of shipping deciduous fruit to Eastern markets. While the production of deciduous fruit is large in this part of the State, the crop is disposed of almost entirely in the dried or canned form. Northern and Central California are allowed to capture nearly all of the great shipping trade in this class of fruits. There is no sufficient reason for Southern California's lagging behind in this respect."

Stockton *Mail:* "The chief point of attack as respects matters connected with Yosemite valley should be the excessive tolls charged for the privilege of entering the great fissure. The valley is a national reservation, under the management of the State of California, and it is just as wrong to charge any tolls at all as it would be to exact an admission fee from visitors to the State Capitol grounds or to Golden Gate Park. There is a burning need of reform here."

From an Independent Standpoint.

The chief political event of the week was the birth of the National People's Party which was accomplished according to programme at Omaha on Independence Day. The leaders felt that there might be some advantage in the coincidence, and so managed their meeting that the platform was adopted and the candidates named on the Fourth. The sentiment was a good one, but it must be said that in political warfare sentiment of this sort is of small practical account. The temper of the Convention was radical from first to last, and the platform and the candidates alike stand for the extreme tenets of reform. The declaration which precedes the resolutions shows the spirit of the delegates. "We meet," it says, "in the midst of a nation brought to the verge of moral, political and material ruin; corruption dominates the ballot-box, the legislature, Congress, and even touches the ermine of the bench. The people are demoralized. Most of the States have been compelled to isolate voters at the polling places to prevent universal intimidation or bribery. The newspapers are subsidized or muzzled. Public opinion is silenced; business is prostrated; our homes covered with mortgages; labor impoverished; land concentrated in the hands of capitalists. Urban workmen are denied the right of organization for self-protection when imported, pauperized labor beats down their wages. A hireling standing army, unrecognized by law, is established to shoot them down, and they are rapidly degenerating into the European condition. The fruits of the toil of millions are boldly stolen to build up colossal fortunes unprecedented in history, and make the possessors of them in turn a menace to the republic and to liberty."

Of course a body of men coming together in this temper could not be expected to be politic, much less diplomatic, and it is not surprising that the formal platform following such a preamble should give voice to a good deal that is false and mistaken with much that is good and true. The platform proper is as follows:

"We demand a national currency, safe sound and flexible, issued by the General Government, full legal tender for all debts, public and private, and that without the use of banking corporations, a just, equitable and efficient means of distribution to the people at a tax not to exceed two per cent per annum, to be provided as set forth in the Sub-Treasury plan of the Farmers' Alliance, or a better system; also by payments in the discharge of its obligation for public improvements.

"A—We demand free and unlimited coinage of silver and gold at their present legal ratio of sixteen to one.

"B—We demand that the amount of circulating medium be speedily increased to not less than $50 per capita.

"C—We demand a graduated income tax.

"D—We believe the money of the country should be kept as much as possible in the hands of the people, and hence we demand that all State and national revenues shall be limited to the necessary expenses of the government, economically and honestly administered.

"E—We demand that the postal savings banks be established by the government for the safe deposit of the earnings of the people and to facilitate exchange.

"Transportation being a means of exchange and a public necessity, the government should own and operate railroads in the interest of the people.

"The telegraph and telephone, like the postoffice system, being a necessity for the transmission of news, should be owned and operated by the government in the interest of the people.

"Land, including all the natural sources of wealth is the heritage of the people, and should not be monopolized for speculative purposes, and alien ownership of land should be prohibited. All lands now held by railroads and other corporations in excess of their actual needs and all lands now owned by aliens should be reclaimed by the Government and held for actual settlers only.

In addition to the platform there are a host of miscellaneous resolutions submitted, not as part of the platform, but as expressive of the sentiments of the convention. There is a demand for a free ballot and a free count without Federal interference, and "through the adoption by States of the unperverted Australian or secret ballot system." The revenue derived from a graduated income tax it declares should be applied to the reduction of the burden of taxation now levied upon the domestic industries of the country. Fair and liberal pensions are pledged to ex-Union soldiers and sailors. The protective system as it is related to American labor is declared fallacious and ineffective. The Pinkerton system is strongly condemned. The eight-hour system of labor is recommended as a matter of justice to the workingman. There is a resolve favoring the constitutional provision limiting the office of President and Vice-President to one term, and providing for the election of Senators of the United States by the direct vote of the people; and another against the giving of any subsidy or national aid to any private corporation for any purpose.

When the Convention came together, the almost unanimous wish of its members centered upon Judge Gresham of Indiana as the Presidential candidate. For ten days or more, the leaders had been in constant communication with him, and although he had declined in positive terms to accept the nomination, there were still those who thought that he might be induced to do so at the last moment. Mr. Weaver was among those who heartily favored Gresham's nomination, and who were willing to shape the platform in accordance with his wishes. It was not until after the Convention was actually in session that a final and positive refusal came from Gresham, and with the possibility of his nomination out of the way, the radical spirit arose in force. It was in this spirit that the resolutions were framed, and it was in this spirit that General Weaver of Iowa and Mr. Kyle of Virginia were named for President and Vice President. The former is well-known to the public. For ten years past he has been more or less a figure in national politics. Formerly a Republican of the independent type, he represented his district in Congress. In 1880 he abandoned the Republican party and ran for President on the Greenback ticket. In 1886 he was again elected to Congress as a Greenbacker, but was defeated in 1888. He is an able lawyer, a man of large, "all-round" political information, and a power in debate. At the beginning of the war he enlisted as a private, rose through the minor degrees to the rank of Major, and for gallantry at the battle of Corinth, was brevetted Brigadier-General. Mr. Kyle is less known and has heretofore had no part in national politics. He has been identified with the People's Party movement in Virginia from the beginning, and is easily its strongest man in the northern tier of the Southern States.

There was a striking difference in the Convention scenes at Omaha and those at Minneapolis and Chicago. The drinking and rowdyism which was so conspicuous at the last-named places was wholly lacking at the former. The delegates were a sober-minded people in dead earnest. They came in homely garb, many of them in hickory shirts and brogan shoes, and more than two-thirds from the anvil, forge and the field. They were for the most part poor men with neither time nor money to waste in revelry and dissipation. The bar-rooms of Omaha did not have to double their force to meet the demands of a crowd, and throughout the whole period of the Convention, the city was as orderly as at ordinary times. There was, it is true, a considerable sprinkling of the worn out and cast off political "hacks" of the old parties—men like Ignatius Donnelly, who having failed in one cause are always seeking a new one, but these men were insignificantly few in number, and their part in the proceedings was only in proportion to their numbers. It was unquestionably a Peoples' Convention, and more democratic in its purposes and in its membership than any ever before held on American soil.

Marion Cannon, the Californian, was one of the striking figures of the convention and he succeded in giving it one of its most sensational incidents. The Pacific railroads did not allow the customary half rate to the delegates, and it was moved to request them to return half of the full fare which had been paid. This brought Cannon to his feet. "I want this convention to understand," he said, "that it is not by an oversight that the Pacific coast delegates were not accorded the usual privileges. Our request for a customary courtesy was denied deliberately and with insolence. I do not want this convention, so far as California is concerned, and so far as I am concerned, to go back to that railroad, cap in hand, and ask for any privileges whatever. The Democrats and Republicans secured half rates; but we, who are not connected with railroads, but are the producers of the earth, have been refused equal terms. We can stand the refusal. The people of California and of the whole country will operate their own lines in the interests of justice before the expiration of another decade."

The National Prohibition Convention finished its labors on Thursday last by nominating General John Bidwell of California for President, and Mr. Joshua Levering of Maryland for Vice-President. This result was accomplished without a "fight" and was accepted with perfect good feeling. The platform calls for the entire suppression of the manufacture, sale, importation, etc., of alcoholic liquors "as a beverage" by State and national legislation; maintains the right of women to vote; declares that money should be issued by the Government only; that a tariff should be laid only against those countries which discriminate against us; that railroads and telegraphs should be "controlled in the interest of the people"; that foreign immigration has become a burden; that no foreigner should be allowed to vote until one year after he becomes a citizen; that no alien should be allowed to own land; that all unearned land grants be reclaimed; that all men should be protected by law in their right to one day's rest in the week, and that speculation in margins should be suppressed. The party is pledged to support of the public school as against the sectarian school and the old parties are arraigned for treachery to the interests of the country, as false to their own professions and promises and as subservient to the enemies of public order and public morals. There is no declaration as to the silver question. The original draft, as it came from the committee contained a straight free coinage plank, but the convention voted to throw it out and a subsequent effort to revive it failed.

The candidate, General Bidwell, is one of the very early pioneers of this state and his biography partakes of the romantic interest which attaches to California in the "Forties." He arrived in the Sacramento Valley early in 1841 after a six months' trip across the plains. Soon after that he obtained employment at Sutter's Fort and remained in Sutter's employ for two years. He was interpreter and aide-de-camp to Governor Micheltorena for a year, until the revolt of 1844 and 1845 resulted in Governor Micheltorena's expulsion. Bidwell returned to Sutter's employ, and on the advent of General Fremont joined his forces, later being appointed magistrate of the district of San Luis Rey. He was for a short time quartermaster by appointment of Commodore Stockton. In 1849, at the age of 30, he was a member of the first constitutional convention at Sacramento and the following year was elected to the State Senate. In 1855 he was a delegate to the Democratic national convention at Charleston. During the war of the rebellion he was a brigadier-general in command of the Fifth Brigade, California Militia. He was a member of Congress from 1864 to 1867 and was honored many times by being sent to various important conventions. In 1875 he was a candidate for Governor on the nonpartisan and antimonopoly ticket, but was defeated, and a few years later he was a candidate for Governor on the Prohibition ticket. He is a man of large wealth, which he employs widely in benevolent ways. Politically he has been for years identified with the Prohibition party and with antimonopoly and anti-Chinese movements.

Before the delegates came together at Cincinnati, there was a good deal of talk, even in the Prohibition press, looking toward fusion with the People's party. Among the advocates of this policy was Miss Willard, who has heretofore been one of the strongest of the party leaders. Miss Willard had, also, a scheme to drop the name of prohibition and substitute that of "Home Protection party." The convention gave these and other suggestions scant courtesy, and remained true to the ideas and the name under which it has fought up to the present time. In four national campaigns it has stood by its colors, and has fairly earned identity among the established political parties of the country. In 1872 it gave James Black a popular vote of 5608 for President. In 1876 it gave Green Clay Smith 9522 votes. It had no distinctive condidate in 1880, but in 1884 gave John P. St. John 150,767 votes, and in 1888 it gave Clinton B. Fisk 251,147 votes. If the party is not very near success, it is at least growing, and its partisans are content to keep up the fight in the interest of their convictions, even if they do go regularly to defeat. It is not in the nature of things that California should be a prohibition State, but the party has maintained an organization here from the beginning. In a total vote of 250,220 in 1888, California gave the Prohibition candidate for the Presidency 6107. Gen. Bidwell's vote this year will probably exceed these figures.

After all, the Secretaryship of State, was not given to Gen. Tracy. On Thursday last the President sent in to the Senate the name of John W. Foster of Indiana, and confirmation followed immediately. Mr. Foster's appointment is clean apart from politics. He is, it is true, a Republican, but for many years has been out of the line of party affairs. He has served as United States Minister in Russia, in Mexico and in Spain; and is perhaps, the nearest approach among American citizens to the European model of a trained diplomat. Mr. Foster's experience abroad and his acquaintance at foreign Courts will stand him in good hand in the State Department. On the whole the appointment is a good one.

It is a very common remark that the religious interest is dying out in the United States, but the facts as we find them in an article by Dr. H. K. Carroll, Supt. of the Census of Churches, in the *Forum*, point directly the other way. New England, as Dr. Carroll's statements show is no longer Congregational, but Catholic. It contains 1,000,000 Catholic communicants as against 230,000 Congregationalists, yet take the country over, Congregationalism has been increasing more rapidly than Catholicism. In 1880, there were 384,000 Congregationalists and in 1890 512,000—a gain of 33 per cent. In 1880, the Catholic "population" according to Sadlier's Catholic Directory was 6,367,000; in 1890, the number of Catholic "communicants", according to the Census, was 6,250,000. Fifteen

per cent of the church "population" is below the age of 9, 10 or 11. It is difficult to figure the exact percentage of increase in Catholicism, but Dr. Carroll reckons it as only about 20 per cent notwithstanding the enormous emigration from Italy, Austria and French Canada. All of the great Protestant denominations seems to have done better. The Methodist Episcopal church shows an increase from 1,707,000 in 1880 to 2,229,000 in 1890—a gain of over 30 per cent. The Presbyterian church shows a gain of nearly 40 per cent., advancing from 573,000 communicants to 788,000. The various Lutheran bodies advance from 712-000 to 1,200 000—a gain of more than 60 per cent., largely due to emigration. The Christian or Campbellite Church shows an increase from 350,000 in 1880, to 641,000 in 1890—a gain of 83 per cent., without the assistance of emigration. There is no return for the Baptist or Episcopalian, but the report states that there is no reason to suppose that either of these denominations has fallen behind the rest.

Weather and Crops for Week Ending July 4th.

The following crop reports are for the week ending Monday, the 19th of June, and were furnished by James A. Barwick, Director of the California Weather Service, viz.:

HUMBOLDT.—*Mad River*—We are having for our section an unusually long spell of clear, warm weather. Cereals are looking fine, though some ground needs rain. Potatoes on high ground are doing well. Vegetables are in fine condition. Fruit is very light.

Blocksburg—Highest and lowest temperature 92° and 50°. All crops are doing well. Rainfall .02 of an inch.

Hydesville—Haying has commenced. There will be a large yield and of fine quality.

SHASTA.—*Anderson*—There is not much change in crops the past week. Harvesting is well along, with good crops. The latter part of the week has been warm, reaching 105° to-day (Sunday). Fruit is ripening fast. Happy Valley shipped some very fine peaches this week.

TEHAMA.—*Red Bluff*—The weather conditions have not been altogether favorable during the week. It is reported that grain has been damaged by the recent northers. Winter-sown is very light. Fruit suffered very little. A considerable percentage of pears were blown off by the storm. The other trees were scarcely affected. Highest temperature 103°, lowest 56°.

LAKE.—*Upper Lake*—Seasonable weather has benefited nearly everything, though it has been a little cool for corn, pumpkins, etc. Grain has ripened rapidly and reaping has begun. The grain crop will be heavy and good. Grapes continue to improve. The season is about two weeks late.

SOLANO.—*Denverton*—Cool west winds for the past week. To-day, July 1st, a hot north wind. As fast as possible threshing is being done. Crops are nearly up to the average.

Vacaville—The week has been quite warm, and for the past few days we have had a warm north wind, which is ripening fruit very fast. Apricots and early peaches are about all gathered, and Crawford peaches are now being shipped.

SUTTER.—*West Butte*—Harvesting of wheat and barley is well advanced. The yield is above the average and of good quality. Alfalfa for seed (not irrigated) is passing from bloom to well-developed seed pod.

Yuba City—The past week has been quite warm. The thermometer has registered over 100° in the shade for several days. The nights are cool. The north wind shelled some grain last Friday and Saturday and blasted some varieties of fruit. Harvest is in full swing. Good yields are reported. There is some grain that is shrunken.

SONOMA.—*Forestville*—Rising temperature; highest 98°, on Friday. Harvesting has earnestly commenced. The early crop of peaches is getting ripe.

Sonoma—Peaches and apricots, while a little backward, will be superior to last year, and in another week fruit will be coming in with a rush.

Healdsburg—The temperature was 101° on Friday. Corn is growing finely. Hay is good, plentiful and cheap. The canneries will soon open on peaches.

BUTTE.—*Palermo*—Shipment of fruit still continues, with good returns. Barley harvesting is over, and the harvesting of the wheat crop has begun. Temperature on Friday, 100°.

PLACER.—*Newcastle*—Highest temperature, 104°; lowest, 51°. All kinds of fruit is now coming forward rapidly and an abundant yield is looked for.

AMADOR.—*Oleta*—Haying finished and plentiful. Crops of grain on summer fallow good; winter sowing not so good.

STANISLAUS.—*Turlock*—The week has been quite warm taken as a whole. Highest, 102°, last Saturday. Rye harvesting is about finished, and wheat well advanced. Some fields of rye gave a large yield. Wheat is not as good as expected.

ALAMEDA.—*Niles*—The cool weather last week has been beneficial to fruit. No apricots picked yet. The wind is from the northwest; force, four miles, which may counteract the effect of the high temperature.

Alvarado—Harvesting has commenced. Fruit is doing well. Beets are growing finely, but a little late; onions, carrots, etc., not up to ordinary prospects.

Pleasanton—The hay crop will be less in quantity than was at first estimated, but the quality will be good. The wheat and barley very plump; harvesting began during the week. Hops are making a more rapid growth, but are fully three weeks late. Sugar beets doing well.

NEVADA.—*Nevada City*—The highest temperature was 90°, on Saturday. No damage has been done from the excessive heat. A light north wind prevailed the latter part of the week.

MONTEREY.—*Salinas*—Harvesting is under way and crops promise a fair average; not quite equal to last year, but better than many previous years.

SANTA CLARA.—*Gilroy*—The prospects continue excellent, with harvest in full operation.

SAN JOAQUIN.—*Stockton*—The last two days were very warm; harvesting going on well; outlook good.

Lodi—Highest and lowest temperatures were 104° and 52°, but causing no damage, as all the grain was ripe, and apparently no injury was done to the fruit or berries; good weather for watermelons, which are very late, and it will be some time before they are ready for market.

SACRAMENTO.—*Sacramento*—The temperature has averaged 4° above the normal during the past week, but on two days, Wednesday and Thursday, it was 2° and 3° cooler than the average; while on Saturday and Sunday was 15° and 12°, respectively, warmer than the average. The average or normal precipitation was nothing, and there was no rainfall during the week. The crop of grain is about secured and the yield is an average one. The fruit crop is rapidly ripening under the heated sun. The highest and lowest temperatures were 102° on Saturday and 52° on Thursday.

SAN LUIS OBISPO.—*San Luis Obispo*—We have had northwest winds all the week, but from 9 A. M. to 3 P. M. a light south breeze with light fogs, which is just what is needed. Warm weather is coming on, which will be beneficial if not too warm. Beans are doing well. Harvesting is going on nicely and grain threshing out better than was expected.

SANTA BARBARA.—*Santa Maria*—The weather has at last warmed up. Barley is threshing out a little better than anticipated, but average is not large. Beans are growing but are thinner than usual and have not a very good prospect. Apricots will soon be ready for drying and canning. Prunes are light. Highest and lowest temperatures, 93° and 48°.

LOS ANGELES.—*Los Angeles*—The *Observer* at Los Angeles telegraphs as follows: The generally clear and warmer weather the past week has been favorable to all crops, especially for fruit-drying. Apricots are an average crop in some localities and light in others, but the quality is fine. The drying of them is in full operation. Peaches are ripening very fast.

OREGON WEATHER-CROP BULLETIN.

PORTLAND, July 5.—Rain is very much needed, especially for late sown grain, corn and gardens. The total wheat crop of Oregon in 1891 amounted to fourteen million bushels. This year it will not be over ten million bushels. The nearest to an absolute failure is in parts of Morrow, Gilliam, Sherman and Wasco counties. Here in some localities not much more than seed will be secured. Potatoes are doing fairly well, but would be improved by more rain. Hops are in a promising condition. The peach, prune, apple and pear crop will not be an average quantity. The hay crop will be large.

FRUIT MARKETING.

A Strong Cooperative Movement Among Raisin Growers.

The raisin producers of Fresno and Tulare county are rapidly advancing toward an effective organization on the cooperative plan—or rather perhaps toward a mutual agreement among producers not to sell for less than an agreed price in the sweat-box.

At a meeting held June 23, the following form of agreement among producers was adopted:

We, the undersigned raisin growers of California, having become fully satisfied that the present demoralized condition of the raisin market is almost, if not entirely, due to the absence of any understanding concerning uniform selling prices among the parties who have the products of raisin vineyards in their hands for sale, and from the fact that numerous established agencies in the East are in the habit of competing and thereby underselling each other without regard to prices, we believe the time is at hand when this system of disposing of our vineyard products will bring the raisin growers of this State to poverty and financial ruin.

Now, therefore, in view of the facts above stated, we, the undersigned raisin growers, do most earnestly request, as a matter of protection to ourselves and families, even demand, that the packers who are producers of raisins, and packers who are not producers of raisins, and in fact all who have raisins in proper condition for the markets of the world, join together immediately and agree among themselves to establish a minimum price on each and every grade of raisins, and that they bind themselves not to sell any raisins during this present crop year for less than such minimum price agreed upon. And in consideration of such an agreement as above, we, the undersigned raisin growers hereby agree and mutually bind ourselves upon our honor not to give, sell or consign any raisins subject to our control, during the term above mentioned, to any party or parties who do not enter into our agreement establishing such minimum price.

A declaration of similar import was prepared for signatures of business men and citizens by which they could express their approval of the movement and sympathy with its purposes.

There was a long discussion as to what should be the minimum price in the sweat box, and most speakers argued that it should be 5 cents per pound. The final determination of the figure was, however, postponed.

A large committee was appointed to obtain signers to the above agreement throughout the settlements of Fresno county, and the active cooperation of other raisin producers was invited by the following resolution:

The raisin growers in convention assembled in the city of Fresno, respectfully request your cooperation to secure living prices for raisins and submit the following form of subscription to be signed by the raisin growers of your county to the end that all growers and packers in the State may sustain prices to protect our industry from its worst enemy—increasing competition.

THE MEETING LAST SATURDAY.

On Saturday July 2, there was a great meeting of raisin producers in Fresno, to which the above proceedings were preliminary. The *Expositor* said:

The canvassing committees had done their work well, and had reached all the principal districts in the county where raisins are produced. Thus, the convention was well ready to go into business in a businesslike way. Some of the best men of the country were present. Tulare county had its delegates in the convention, and strangers could be seen from other places. A glance at the people assembled showed that the movement was growing. The report of the executive committee appointed at the last meeting was read by Alexander Gordon, chairman of that committee, as follows:

"We, your committee, report as follows: That in accordance with instructions given at the late meeting of your body we have caused an invitation to be sent to every raisin grower in Fresno county, together with a copy of the petition, and also to every raisin grower in the State whose acreage exceeds 50 acres.

"In all we have sent out 1750 circulars and petitions, and up to 9 o'clock this morning we have received replies and assents to the petition from 729 raisin growers, representing 16,500½ acres.

In order to further the interests of the raisin growers throughout the State, with a view to establishing prices in the sweat-box, we recommend that this meeting be adjourned until the 14th day of July, 1892, for the purpose of obtaining the assent of those not already obtained; that a committee of raisin growers be appointed to present their petition to the packers and sellers of our vineyard products, and to confer with them, with a view of establishing minimum selling prices as indicated by petition. That a resolution be passed inviting all packers and sellers of raisins to meet a committee of growers in the city of Fresno on Saturday, July 16th, at 10 A. M., for the purpose of conference, with a view of establishing a minimum selling price for each grade of raisins for the present season. That the prices of raisins be discussed, but no definite action taken until the next meeting, July 14th.

Discussion followed upon the various points advanced in the above report, which was agreed to. Signatures taken during the progress of the meeting raised the aggregate to 849 signers, representing 18 803½ acres of raisin grapes, According to the figures on the subject, this was four-fifths of all the raisin lands in the county, and four-fifths of all the growers. Others were willing to sign, but felt themselves bound by existing contracts, and therefore not at liberty to do so. But many expressed their determination to join as soon as possible.

A resolution was adopted that a committee be appointed to draft a letter to Congressman Bowers, asking that a tariff of 2½ cents a pound be placed on Zante currants. The following gentlemen were charged with that duty: W. A, Noble, D. T. Fowler and Alex. Gordon.

The committee to meet the packers was appointed as follows: D. T. Fowler, Alex. Gordon, John S. Dore, Miss Hatch, Mr. Vanwormer, Mr. Oothout, Colonel Trevelyan, P. Y. Baker, E. P. Irwin, P. M. Pyle of Kern county, Mr. Maxwell of Yolo.

It was ordered that one representative from each county in the State where raisins are grown be invited to attend the meeting in Fresno on July 14.

The Santa Clara Movement.

At a meeting of the Fruit Growers and Driers' Association in San Jose June 26 a discussion arose as to the benefits to be received from the Fruit Exchange, which has recently been established. Colonel Philo Hersey, president of the exchange, being present, said:

The Fruit Exchange is of as much importance to the drier as to the grower. Were I a drier and knew what the market was I would like to buy on as close a margin as possible. Last year a great many of the driers sold their fruit for 5½ cents a pound, and a short time afterward fruit went up to 6¼ cents a pound. What was the cause of all this? Simply on account of the lack of such an organization as the Fruit Exchange. Eastern buyers said it was caused by no other reason. It only establishes the fact that we must have an understanding among ourselves. We are not organized to injure the driers, but to help them.

"Two million pounds of prunes will be raised this year, and if the Exchange can control three-fourths of the crop and the driers the balance, then we can hope in some way to arrange to hold up prices. We are charged with working for the interests of one house, but if we can keep up prices so as to save the one-tenth that was lost last year, then our purpose has been accomplished.

"If we can make the Fruit Exchange a success, then we will be able to cut loose from all commission houses."

"I am in favor of the Fruit Exchange," said Mr. Fleming, "but there are some parts of its objects that I do not like. The fruit driers and growers object to tieing themselves up. They want to be able to sell their own products at any time. I would like some information upon that subject."

Colonel Hersey—The West-side Fruit Exchange has seventy members, and as soon as the fruit is delivered at the drier they lose sight of their product because it is graded and credited up to them and then dumped into bins. When the fruit is sold they are paid pro rata. It is good, because better facilities are offered for not only grading but drying the fruit, consequently the goods and grades are uniform and better prices can generally be procured.

A MEETING OF THE EXCHANGE.

The San Jose *Mercury* gives the following report of a meeting of the stockholders of the Santa Clara County Fruit Exchange held July 2:

Colonel Philo Hersey presided at the meeting and W. H. Wright acted as secretary.

Quite a discussion took place in regard to the adoption of the by-laws. On motion of Colonel R. P. McGlincey, the following article was offered to be added to the by-laws: "No person can acquire by purchase more than 100 shares of the capital stock of this corporation." The amendment was favored by F. M. Righter, who said he understood that capitalists were ready to put their money into the Exchange as an investment, but such money was not wanted or needed by the corporation. It is desired to have for stockholders only those whose interests are identical with those of the fruit growers. The amendment was then unanimously adopted.

In response to R. P. McGlincey's inquiry President Hersey stated that more than five-sixths of the present stockholders did not own more than one share each. In explanation of that fact Director Righter stated that when the canvass was made the impression got abroad that it was not necessrry that a fruit grower should subscribe to more than one share.

In the afternoon a directors' meeting at which there were present Directors Hersey (president), Dawson, Gordon, Righter, Johns, Adams and Crandall.

President Hersey stated that circulars explaining the direct objects of the Fruit Exchange had been printed and sent to all fruit growers throughout the county. He also reported having the promise of about 200 more shares. A member of the other directors reported additional shares promised.

The directors decided to go into business this year and hope all fruit growers will rally to the Exchange's aid and help to make it a success by subscribing for stock.

HORTICULTURE.

Pioneer Fruit Growers of Tuolumne County.

The State Horticultural Society is making a commendable effort to gather information about the beginnings of horticulture in this State. For convenience, the subject is being worked up by counties and localities, and after much material has been accumulated it is expected to condense it into a horticultural history of California. Different counties and localities are entrusted to different writers, and their chapters are now coming before the society. At its last meeting, W. B. West of Stockton read a paper on early fruit growers of Tuolumne county, which is printed below. It is hoped that the current publication in the newspapers will draw out contributions from others who may possess interesting and important facts.

MR. WEST'S PAPER.

Tuolumne county was one of the first to make an effort to establish orchards and vineyards, and up to 1860 it had, perhaps, more land in cultivation and money invested in this interest than any other in the State. Many orchards and vineyards were planted; the population was large and furnished a good market for all the fruit and vegetables that could be produced. There was but little diminution in the yield of gold and everything was prosperous. In the virgin soil all kinds of deciduous fruit trees grew wonderfully, and the absence of insect pests, blights and mildew rendered the work of the orchardist comparatively easy, and the good market at home made the enterprises quite profitable.

Previous to 1865 there were apple trees that were a foot in diameter at the ground, whose products were reckoned by barrels, cherry trees 30 feet high and wonderfully productive. The mountain orchardist spared no pains to procure the choicest varieties of fruit and to cultivate them intelligently.

The prosperity of horticulture began to wane in 1860; the placer mines had been growing less and less profitable for two years. The fruit was not so readily disposed of; shipments to San Francisco, Stockton and eastward were made. Wagons were sent to the plains and the fruit disposed of to farmers. Every effort was made by the energetic fruit grower to render his business profitable, but the business could not be made to pay.

PRESENT CONDITION OF ORCHARDS.

It is sad to see the decadence of those promising and profitable orchards. On rich, deep and moderately moist land the apple and pear still remain and produce fruit much better than their condition would seem to warrant, but many plantations were made on soils where the depth was not great enough to sustain the trees without irrigation, and as the price of fruit became less with the constantly diminishing population, the proprietors became disheartened and let their places run down. The inroad of the codlin moth and scale finished the work in many places, and old, diseased and abandoned orchards remain where once was thrift and prosperity.

How great the disappointment has been can only be realized by seeing those abandoned orchards and beautiful little homes that are so common in the mountains.

SMART'S GARDEN, JACKSONVILLE.

This was the pioneer of orchards and vegetable gardens in Tuolumne county, and established in 1850 by Mr. U. S. Smart, a native of the State of Maine. He was at that time about 55 years of age, a thoroughly active, bright man and a money maker.

He commenced by inclosing a small piece of moist land upon Wood's creek, a little distance from its junction with the Tuolumne river, at the town of Jacksonville. He had for sale in 1850 vegetables of all common kinds. It is said that he furnished a vegetable dinner to miners at the moderate sum of $2.50 a head. It is also said that his price for cabbages, turnips and beets was $1 per pound. One party assured me that he paid him $6 for one head of cabbage.

In the fall of 1854 he received an invoice of trees and vines from the East. The assortment was very complete, and from these were propagated many of the orchards of Tuolumne county. These trees, and probably a few peach trees raised from seed sown in the fall of 1851, produced peaches in 1854, and a crop in 1855. Marvelous stories are told of the prices obtained for these first fruits. Visitors paid $5 to $10 apiece for what they could eat. Equally marvelous were the size and flavor of these novelties. With due deference to the word of the old '49er, and the time that has passed since these recollections, we must recognize the fact that at that time the commonest kind of fruit was not to be had; canned fruit was not so common or so good as it is to-day, and the miner who was working for a homestake would hesitate at paying $2, the common price, for a can of peaches or apricots. He would, however, pay $1 for a peach without a murmur.

The following is the statement of Mr. Peter Lesher of Modesto, who was then an orchardist and a fruit dealer in Sonora, Tuolumne county: I bought from Mr. Smart some of his first crop of peaches, for which I paid him 50 cents each. Took 500 or 600 at a time. I took these to Sonora where I sold them for $1 each as fast as I could pass them out.

In 1854 Mr. Smart had about three and a half acres enclosed and in fruit. In 1858 Mr. Peter Lesher leased the orchard. It then had sixteen acres of bearing fruit and was in a very profitable condition. In 1863 Mr. Smart sold the orchard to miners and the whole place was mined out, thus finishing one of the most profitable ventures in orchards in the county.

As everyone who has ever lived in Tuolumne county (and they are a host) has some recollections of Smart's garden, it may not be inappropriate to mention the latter days of the enterprising man who established it and what became of the fortune made by so much industry and perseverance. I quote from a letter of F. N. Smart, Lodi:

"After selling out Mr. Smart joined a company formed to grow cotton at the Galapagos Islands. The scheme was a failure and he was left alone on one of the islands for three years, living a Robinson Crusoe life. He succeeded in starting a garden, but in the mean time came near starving. He was finally taken off by a passing vessel and brought to California, where he died about 1870. His whole fortune was consumed in the enterprise and he died a poor man.

ORCHARD AT GARROTE NO. 1.

Statement of James L. Coggswell of San Francisco: In the spring of 1854, Mr. Otis Perrin, now Register and Receiver of the Land Office at Stockton, and myself, were residing at Garrote No. 1, Tuolumne county. Wishing to improve our property by planting an orchard, we sent to West Bros., Stockton, an order for trees. We received an assortment of apple, pear and peach trees. They were imported trees, grown at Stockton one year, and produced fruit the year that they were planted, and soon were producing fine crops.

Our vegetable garden was a great success. We had no blight or mildew, or insect pests, that I recollect. Our fruit and vegetables were fine and abundant.

ORCHARD AT MOUNTAIN PASS.

Statement of J. A. Goodwin, Mountain Pass: I settled on my place in 1854. I always had a desire if I ever was owner of a piece of land, to have an orchard on it; still I knew nothing about horticulture. In the winter of 1854 I bought a pound of peach stones (for which I paid one dollar) and planted them; not one came up the following spring, but after remaining in the ground a year they made their appearance. An old Englishman, a neighbor, taught me to bud, to prune and take care of the trees. He was very particular, and the result was, the fruit was very fine. I used to sell peaches at 25 cents per pound, or 75 cents per dozen.

In the spring af 1856 I bought from a peddler from San Jose a good assortment of trees and vines, There were apple, peach, plum and six common black fig trees, of which three are now living, and are, I think the largest in the State—the body of one being 12 feet in circumference. My trees have all grown and done well; the more I have cared for them, the better they have paid me. I have always been in favor of irrigation, and have used water freely, although I could have done without it, but was determined to have the best fruit.

ORCHARD AT GROVELAND.

Statement of Chamberlain & Chaffee:—We commenced to plant our orchard in the spring of 1859. It consisted of apple, pear, plum, peach, apricot, cherry and nectarine trees bought of West Bros. of Stockton. We had at that time no experience in fruit-growing, and paid dearly for knowledge obtained. The borers attacked our young trees, and not knowing how to combat them, we lost heavily. The climate was too severe for our stone fruit; the spring frosts killed much of it, and sometimes the trees. Plums were a failure, but peaches did a little better. We get fruit about one year in five. We set out two thousand grape vines, but they were still more uncertain; so we dug them up and planted apple and pear trees in their place. The only fruit that has paid us to cultivate is the apple and pear. In early times we took great care of our orchard, cultivating, pruning and irrigating, and could sell our fruit at good prices—3 and 4 cents per pound at home. As the population diminished, we found more difficulty in selling here, and shipped it to San Francisco, where it brought a fair price at first; but as the codlin moth increased, the market was full of wormy apples, which were sold at any price that could be obtained. Good fruit had to compete with it. We have not suffered so much from the ravages of the moth in our orchard.

At present we neglect our orchard, paying no attention to the trees except to pick the fruit, which is as good as it ever was, and on favorable years the quantity is ample. Upon deep land the trees thrive, but on shallow places they are dying out, as we do not irrigate now.

STATEMENT OF L. F. JARVIS.

I think, with you, that the names of the pioneers in horticulture, who at great risk and expense solved the problem of fruit culture in California, "should be recorded before they all pass away," and for that purpose will willingly contribute what I know regarding Tuolumne county.

My father, Edward S. Jarvis, and I bought Vine Spring Ranch of John Randoller and Joseph Lord, who had squatter titles to the land between Gold Springs and the Stanislaus river, and were raising vegetables and selling them to the miners of Sonora and other camps at two or three bits per pound.

The next year, 1852, I bought an invoice of peach, apple and pear trees from Oregon; but, owing to bad packing and exposure to the hot sun on the way, were completely dried up and destroyed—not one survived. That same spring, 1852, I got from Mr. Beard of the Mission of San Jose about 1000 cuttings of the Mission grape. Nearly all took root and produced the first grapes raised in the county, which sold readily for 25 cts. per pound.

In 1854, Capt. U. S. Smart of Jacksonville, on the Tuolumne river, received a fine lot of foreign grape cuttings—over 60 varieties of table and wine grapes—from Dr. Butte (Buist?) of Philadelphia. He also received a large lot of apple, pear, peach, cherry, plum, fig and other trees. His place being only 3½ acres, we bought most of these, started a nursery by root-grafting, and soon had all the stock we could use, and supplied most of the demand in the county.

Smart's Garden, well known to all pioneers, was a favorite resort in early days. His peach trees began to bear in 1855, and visitors paid from $5 to $10 apiece for what they could eat. H. P. Barber, a prominent lawyer of Sonora, went there one day with a lady. After eating what fruit they could, B. called for his bill. "$25, Mr. Barber." He paid it. Soon after, the Captain called at B.'s office for advice, got it, thanked him and was going out, when Barber said, "Hold on, Captain! You have forgotten my fee." "How much is it?" "Fifty dollars, sir." "Is not that rather steep?" "Not steeper than $25 for a little fruit."

In 1858, I think, C. & J. Parsons started a nursery in Columbia and sold a great many trees. For many years there was no disease in orchards or vineyards, and the fruit was of the first quality. The first pest to make its appearance was the codlin moth, sent from the States to Sacramento, thence to all parts of California. There was no mildew, nor do I think the vineyards in Tuolumne require sulphuring now. When I left six years ago, the orchards and vineyards were in good condition where they had been taken care of. The first wine made by me was in 1858, and was much praised by those whom I had the pleasure of entertaining. In early days the mining camps were the markets for all we could raise, afterward San Francisco, Stockton, San Joaquin valley, Nevada and Mono.

THE APIARY.

Recognition and Treatment of Foulbrood.

INDEPENDENCE, CAL., June 17, 1892.

Foulbrood is a contagious disease which attacks and kills the brood of bees while this brood is in the larva state. The disease germs are mainly contained in the honey, and, through the food prepared by the nurse-bees, conveyed to the brood, although it does not affect the perfect bees; nor does it destroy all the brood at once.

The symptoms of foulbrood are:

1. A peculiar, offensive smell, at first noticeable only when the hive is opened, but, as the disease spreads more, being strong enough to be detected at the entrance of the hive, or even in the surrounding air.

2. The capping over diseased brood always becomes concave, or sinks into the cell, and is often of a darker color than the cappings over adjoining healthy broods.

3. Frequently, but not always, there will be found a small pinhole in the center of the capping over the diseased brood.

4. The dead brood turns into a thick, sticky, coffee-colored matter. On pushing a small stick into a diseased cell and then withdrawing it, this matter will adhere to the stick and come out with it as an elastic string, which breaks when the stick is from one to two inches from the surface of the comb, and most of the matter flies back into the cell.

In course of time, this matter dries up and lies as a hard brown scale along the horizontal bottom wall of the cell.

Cells having contained diseased brood are never cleaned out by the bees, and are never used afterward either for brood or honey. Consequently, though the disease may spread slowly, the breeding space becomes gradually less, until there are so few cells left for the disposal of the queen that she cannot keep up the numerical strength of the stock sufficient to protect the hive, and the result generally is that other bees from the healthy hives rob them and carry the disease home, to run its course over again.

The disease is usually dormant, or nearly so, during the winter, but as warm weather comes on it increases in proportion to the general temperature, and the increasing amount of brood in the hive. If, however, the colony is naturally strong and has a good queen, the bees may be apparently as prosperous as any healthy stock, and have been known to store surplus honey through a whole season and pass through the ensuing winter. But the next spring or early summer will usually finish the career of a diseased stock, even if it is not robbed or destroyed by other bees. The principal danger lies in robbing.

The cure of foulbrood is simple and need not occasion any serious loss, if due precaution is taken in carrying it out.

In the first place a diseased hive should never be opened while bees are flying, if there is any disposition to rob in the apiary. Such work should only be done late in the afternoon, when the bees have about quit flying. Honey in frames or sections, or on plates from the household table, should never be exposed where bees can get at it, as the least drop is liable to convey the disease to a healthy colony. After handling a diseased hive, the beekeeper should thoroughly wash his hands and the tools he has used to prevent disease-germs from being afterward carried to other hives.

Prepare a hospital hive by taking any good, sound hive without any cracks or openings except the entrance, through which the bees can escape. Make a frame of one by two inch sticks, to fit on the upper rim of the hive, and to be fastened with screws. Cover this frame with wire cloth on one side.

At the proper time move the diseased hive off its stand, and set the hospital hive in its place. Put a cover over the wire cloth frame, but leave the entrance open. A few empty frames may be put into the hospital hive for the bees to cluster on, but they are not necessary.

Now take the combs out of the diseased hive, one at a time, and brush every bee off in front of the hospital hive and let them run in, as in hiving a natural swarm. Set these combs into an empty box. When all the combs are out, brush the remaining bees out of the diseased hive, but be careful not to scatter any trash or bits of wax on the ground, and under no circumstances shake the bees off the combs, as new, thin honey, containing disease-germs, may be spilled on the ground, and afterward sipped up by other bees. Carry the diseased hive, cloth, cover and box of combs to a safe place, where no bees can get at them.

When all the bees have entered the hospital hive, close the entrance with a stick, so that none can get out. Raise the cover over the wire cloth, so that they can get air, but still be shaded from the sun during the daytime.

Then prepare the following mixture: Salicylic acid and borax in equal parts. Dissolve four heaping teaspoonfuls of this mixture and two teaspoonfuls of salt in a pint of water. Shake occasionally, until most of it is dissolved, which will take several hours. For this reason, the mixture had better be prepared beforehand. Saturate a sponge, the size of a man's hand, with this solution, and lay the sponge flat on the wire cloth, so that the bees can suck it. Saturate the sponge, but not sufficiently to drip, three or four times a day, for 48 hours. At the end of that time the bees will have consumed most of the honey they have had in their honey sacks when they were confined. Now, change them into a clean hive, supplied with frames and full sheets of comb foundation, but give them no empty combs or combs of honey, in which they could deposit any disease germs. If any honey still remains in their honey sacks, this will be converted into wax, with which to build their new combs. As they have to make a new start, the best time is, therefore, when honey is coming in freely

The hospital hive may now be used for another diseased stock.

The combs from the diseased hive are to be cut out of the frames and melted up. The wax will be good for comb foundation or other purposes. Bringing the honey to the boiling point will destroy the disease germs contained therein, but care must be taken that the honey does not get scorched. The work must of course be done indoors, where no bees can get at the combs or honey. The frames, cloth and refuse must be burned up; also everything that can be scraped off from the inside of the hive and under side of the cover. Finally, the hive and cover should be boiled in clean water. If a vessel large enough for the purpose is not obtainable, the hive and cover may be charred by burning shavings, straw or brush in and around them. As soon as they are thoroughly charred, throw water on them to extinguish the fire. But as disease germs

may be lodged in the joints of the hive where the fire cannot reach, boiling is the safest.

It is advisable to leave the hive unoccupied and exposed to all kinds of weather for at least a year, when the charred surface may be scraped off and the hive may then again be used without any danger of contagion.

As long as any foulbrood remains in the apiary or in the neighborhood within flying distance there is always danger of the disease breaking out again It is therefore of the greatest importance, that when foulbrood is known to exist in any locality, a thorough examination be made of all colonies and that wherever the least symptom of the disease be found, a thorough cure be effected as soon as possible.

A beekeeper who handles foulbrood cannot be too cautious in regard to spreading the disease. Before going to any other place where bees are kept, he should not only wash himself but also change his clothes, which he has been wearing in the apiary. Foulbrood is suspected to have been conveyed through the mails in letters written with hands unwashed after handling diseased hives; and it is regarded as an almost criminal offense to send samples of foulbrood through the mails, or to bring such to another apiary for inspection. A beekeeper who is conversant with the disease can tell just as well from a general description, whether a suspected case is foulbrood or not, as if he personally examined the combs. By beekeepers unfamiliar wi h the disease, chilled brood which is of common occurrence in early spring, is often mistaken for foulbrood. But chilled brood occasions nothing but a temporary inconvenience to the bees, and will be cleaned out by them without causing any further trouble.—Wm. Muth-Rasmussen, in Inyo Register.

Sheep and Wool.

Delaine-Merino Sheep.

The distinction made between the common fine wool Merino sheep and the Delaine is one of importance to those engaged in the line especially of fleece production. A correspondent of the *Ohio Farmer* says that in writing an article on this valuable breed of sheep, I wish to tell, first, why their wool is more valuable and quoted higher than ordinary fine wool. First, the protection given to worsted goods by the tariff of 1867, aided by the enterprise of an eminent manufacturer, Mr. E. R. Mudge of Boston, resulted in planting in this country a branch of textile industry until then unknown; to wit, that of combing, spinning and weaving into fine worsted goods our fine combing and delaine wools. This new process of combing instead of carding is one in which the fibers or strands of wool are laid parallel with each other and spun at full length in yarn, thus getting all the strength of the fiber. It is thereby susceptible of being made the finest as well as the strongest and most durable of any other fabric of woolen production. There is no class of wool now produced that will yield a better return to the husbandman than the fine delaine wool. We are fully aware that the class of goods now manufactured from delaine wool is very fashionable, and that fashion increases the demand for the time being for the fashionable article that at other times would not exist; yet, aside from this, their comfortable and durable wearing qualities are so superior that no change of fashion will materially decrease the demand for such goods.

Textile fabrics from this class of wool can be made very firm and yet very strong, so that they can be worn in southern climates, even for ladies, where but a few years ago there were little or no woolen goods worn. If this class of goods is so valuable, then the wool necessary to produce them must be in demand and bring good prices. But what are the qualities peculiar to delaine wool, by which it is alone suitable for the manufacture of this superior class of goods? Since this class of wool has become so popular, many breeders call their wool delaine. All is not gold that glitters, neither is it all delaine wool that is called such. It is not every fleece with a fiber three inches long that deserves the name of delaine. There are certain conditions, such as healthy, strong-constitutioned sheep, uniform care and feeding, length and uniform strength and fineness of fiber, that are essential requisites to a good delaine fleece. The fiber should be at shearing time from two and one-half to three inches long, with white, well-distributed oil, enough to protect the wool, but not enough to form a black coating or crust on the outer ends of the wool that will not wash off, but remains to be broken off in the manufacture, or if not, will form a brittle place in the yarn and destroy it for spinning purposes. It must be a compact fleece, not loose and stringy, or else a long, brittle top will form on the fiber, which destroys its combing qualities.

A compact fleece also protects the animal from cold and wet. If the animal is chilled, even for a time, the fleece is destroyed for delaine purposes. The conditions for a good fleece of delaine wool are: A large, healthy, strong sheep, dark (not black) top, not an excess of oil, a long, strong fiber, the sheep always well cared for and in good condition. But sheep are kept for a twofold purpose—for wool and mutton. To combine the two qualities in their greatest development in the same animal is conceded to be a physical impossibility, yet the nearest approach to such results would certainly be a model as well as a most profitable sheep. The Merino is conceded to be the best wool-producing sheep, but is it a success as a mutton producer? If it is, then it becomes the more important and desirable. On this point, we claim for the Delaine-Merino mutton, equal quality to any other. The correlation which always exists in the different parts of the same animal is evidence that the finer the fiber of the wool the finer the fiber of muscle or flesh.

Mutton vs. Wool.—The culture of the special wool crop has cost the American farmers millions of money. There is five times as much profit in the mutton as in the fleece. A sheep may be fed for one-seventh of the food that an ox requires, and will make a growth of nearly three-quarters of a pound a day for the first 280 days of its life, when it becomes excellent mutton. For 600 days it will make nearly half a pound a day. Such sheep will easily net six cents a pound at the farm. But such sheep, too, having a large carcass, will have a large fleece in proportion. So the income from it will be large in both ways. There is nothing shadowy about this kind of sheep, but strange to say, in pursuit of the most transparent shadow referred to, this substance is lost.—Rural World.

Sheep Shearing by Machinery.—An interesting exhibition was held at the warehouse of L. A. Watkins at Denver, on the 6th instant, when two sheep shearing machines, manufactured by Bergen & Ball, of Sheffield, England, were tried upon a variety of sheep, ranging from the most wrinkled Merino ewe to thoroughbred Shropshire. In every case the work done was first-class, and astonished most of the spectators, who were representative sheep men from New Mexico, Colorado and Wyoming. J. D. Woodruff, a large sheep owner of Lander, Wyo., kindly assisted the exhibition by shearing several to satisfy himself of the practical utility of the machine. Never having seen the machine before, he could not be called an expert, but the first sheep was sheared in 12 minutes, and a better job was never seen. Professor Quick, of the Agricultural College at Fort Collins, also sheared some and expressed himself as very much pleased with the easy and clean way the machine did the work. Mr. Watkins had received a cablegram from the manufacturers requesting him to postpone the exhibition, as they had shipped 25 improved machines recently, but the work done with the two on exhibition was sufficient to demonstrate that in the near future they will be generally used on all large ranches. It is next to impossible to cut the sheep, and fully a pound more wool is taken off than by hand from heavy-shearing sheep.

The Upgrade.—The upgrade of sheep and the dairy has been attained on the line of the improved breeds. The hogs, too have been quite universally improved, and scrubs have given place to high grades and full bloods of the various improved breeds. Cattle and horses must follow the established law of improvement, and when farmers learn the necessity of breeding to only pure-bred bulls and stallions, they will then insure the success of stock-raising on the farm. The grade sire of any and every kind is a delusion, and a sire as the father of scrubs is a step backward from full blood sires.

The Dairy.

The Dairy Industry in the West.

New industries come into a country as the tides rise on the shore. There is a great wave which scatters itself on the rocks and then flows backward. The next wave breaks higher, and has less of a reflux. On the whole, however, there is a marked and substantial advance. It is in the memory of all middle-aged farmers when the butter product west of the Mississippi was rated as grease, and sold at grease prices. Then came the discovery to the butter-eating world that the Iowa product was greasy or golden, at the will of the maker, and the dairy industry at once took the form of a boom. The next decided move was the introduction of the creamery inch and the gathered cream system. Creameries sprung up over nearly all the States, and often far in advance of the dairy conditions. The grains were there, and in some cases the improved grasses, but a dairy population and dairy cows were wanting, hence many of these ventures were failures, frost-bitten blossoms and worm-eaten apples, which fell with the first wind, to the great relief of the proprietors. The raising of grains and the growing of cattle, horses and hogs was too profitable to induce men who were not reared on cows' milk and broken into the cow's way in their youth, to learn how to be on good terms with the dairy cow, and for a time the dairy interests were driven back from a large part of a natural dairy region. One of the great sources of grief and loss in these early ventures, was the fact that no way had yet been found of giving full value to the farmer who kept his own good cows, fed them well and took good care of the milk. Milk was sold like butter in the middle ages of the West, at the same price. Then came the separator, which made whole milk creameries on a large scale possible, the milk test, which enabled the creamery to distinguish between the blue milk and the rich, to get even with the pump if it put its snoot in the milk can, and finally the baby separator, which enables the dairyman with 20 cows or more, to milk, cream it and feed the skim milk to the calves as a morning chore, and saves him the space, with all that means, in his spring house. He has milked his cows, taken off the cream and put his skimmed milk in the best market for it—the calves' stomach—in the best condition, and needs but a small tank to take care of his cream. All these are marked steps in dairy progress. Meanwhile other changes of scarcely less importance has been going on. The low price of cattle and the high price of land have been forcing on the attention of the farmer this fact, that he cannot afford to board the ordinary cow a year for the chance of a calf. He must have something more than this, or find something besides cattle to eat his grass. To many men this is a most unwelcome view. They have perhaps been unfortunately raised to view milking as women's work.

They have never been inducted into the mysteries of feeding the calf, or, if they have, in the small way that tends to make a man disgusted with the business. It is not a pleasant thing for a man whose education has been away from the dairy to come down to pulling teats and feeding calves, but we are afraid that thousands will come to it, or do worse. When land gets up to a certain price, and has a certain rental value, the calf ceases to do the milking. Look eastward in any State, and see if this is not true as gospel. Why should it not be equally true in the West? Fortunately, butter-making and the management of cows is fast becoming a science. Farmers are learning how to organize creameries, and young men are choosing butter-making as a profession, and it will soon be possible to conduct creameries on a far less margin than in the past. The farmer will get a larger share of the proceeds, and when even the grain grower and the cattle feeder see that it will pay, they will be ready to enter the dairy kingdom as a little child, for the money that is in it. It would not surprise us if some of these new converts to dairying should surpass others who would not be happy unless they had ten cows to milk morning and evening. They will have nothing to forget, and will enter upon the study of dairy problems as a lawyer enters upon the study of a case at the bar.

They will test the milk of each cow, and quickly reject the unprofitable servant. They will bring to the subject of dairying their knowledge of breeding and feeding. In fact, the greatest improvement possible, as we see it, in the dairy business, is to make ten cows, with ten cow's cost and ten cows' keep, bring the profit that twenty do now. That this is clearly possible is manifest from the fact that it has been done over and over again, and is being done to-day. Heretofore, there were no means of ascertaining, short of churning each cow's milk by itself, which was the dead beat border at the bovine table. The milk test settles that for every man that will apply it. There are men who are going into the business that will apply the test. Then will come the science of breeding for milk, as yet applied to but three or four breeds, but which will in time be applied to many others. Then comes another question—whether the test will give the honest cheese value. There is a world of knowledge yet to be discovered about the cow, her milk, her ancestry and her posterity. There is plenty of room for the breeder, the feeder, the butter maker, the cheese maker and the scientist to distinguish themselves. The agricultural mind of the West is observing the cow, studying her possibilities. Formerly, farmers who were in the mire of debt were wont to get a good grip on the cow's tail in order to be pulled out. They are observing her teats now, and will in due time get a fourfold grip. The mechanics are studying how to get out the cream, the agricultural colleges are teaching the boys how to churn it, the bacteriologists are telling us all about the inhabitants of the milk can, the chemists are telling us all about the rations for the cow, the breeders are applying the laws of inheritance, and the farmer is "all ears" to hear what true things these men say and what wise things they may do. From all these he may get wisdom, and will apply it to the increase of his own bank account and the glory of the cow.—Western Farm Journal.

Swine Yard.

Points of a Good Hog.

There is not uniformity enough in the variety of breeds of hogs reared in the West to warrant a correct description of them under one general head; however, we think that a few remarks or indications would not be out of place, pertinent to what a hog of any breed should be to deserve the qualification, "good."

First of all there should be sufficient depth of carcass, and such an elongation of body as to insure a good lateral expansion. The loins and chest should be broad. The breadth of the chest denotes sufficient room for the heart and for a good play of the lungs, and the consequent free and healthy circulation of the blood, essential to the thriving or fattening of any animal.

All bones ought to be firm and small, and the joints fine. Nothing is more indicative of high-breeding than this. The limbs of a first-class hog ought to be no longer, than, when fully fat, would prevent the animal's body from trailing on the ground. The leg is the least profitable part of a hog, and we require no more than is absolutely necessary for moving about.

The feet should be firm and sound, the toes lying well together, and pressing tightly upon the ground, and the claws—even, upright and healthy.

Many think that the head is of little or no consequence, and that a good hog may have an ugly head; but I regard the head of all animals (as of all men) as one of the principal points in which pure and impure breeding will be obviously indicated.

A high-bred animal will arrive more speedily at maturity, will turn out more profitable than one of questionable or impure stock; and such being the case, I consider that the head of the hog is by no means a point to be overlooked by the purchaser. The description of a head most likely to promise, or be the concomitant of high-breeding, is one not carrying heavy bone, not too flat on the forehead, or possessing too long a snout. The snout should be short, and the forehead rather convex, curving upward; and the ear should be, while pendulous, inclining somewhat forward, and at the same time light and thin. In a word, the good hog must be an aristocrat, which means nothing more than lightness with strength of bone and suppleness of body.

Nor should the buyer pass even the carriage of a pig. If it be dull, heavy and dejected, reject him on suspicion of ill health, if not of some concealed disorder, actually existing or just about to break forth; and, attention, farmers; there cannot be a more unfortunate sympton than a hang-down, slouching head. Of course a fat hog ready for the shambles, or a sow heavy with young, has not much sprightliness of deportment.

If hogs, such as the description portrays, were reared, no matter of what grade or breed, an immense profit would accrue to the farmer who is interested enough to note

these few indications.—Perry Warren Davenport in Prairie Farmer.

TRANSFERS OF BERKSHIRES.—Jno. G. Springer, Secretary American Berkshire Association, Springfield, Ill, sends the following transfers of recorded Berkshires in California: Solano 27752, Sonoma 27753 and Belted Cruiser of Eden I. 27751, Henry P. Mohr, Mount Eden, Cal., to J. C. Penke, Mount, Eden Cal. Our Dick 27781 and Charmer's Duke 27767, Byron D. Brown, Nelson, Neb., to John H. Temple, Puente, Cal. Lynwood Fancy 27744, Lynwood Dennis 27743 and Lynwood Dottie 27430, Sessions & Bigelow, Los Angeles, Cal., to Sessions & Co., Los Angeles Cal. Mayday 27766, Mayfield 27765, Rayle 27764, Dayle 27763, Dinah 27762, Cora 26506, Sallie XX. 26504, Orima Donna 24437, Model Lass 24432, Model Sallie 24220, Cape Flower II. 24218, Redwood Charmer 24216, Royal Beauty XXVIII. 21630, Redwood Sallie IX. 21044, Perfection 21042 and Minerva 21041, estate of Andrew Smith, Redwood City, Cal., to Alfred Seale, Mayfield, Cal. Model Queen 24428, estate of Andrew Smith to Henry P. Mohr, Mt. Eden, Cal.

HOW TO MAKE LEAN PORK.—It is cheaper to produce meat that contains a large proportion of lean with the fat, than to fatten the hog to such a condition as to fit it only for the production of lard, and it is a fact that by feeding for lean meat a greater weight of carcass is secured, and at no more expense than in producing an excess of fat. This is explained by reason of the fact that when an animal is given food containing the elements of growth of bone and muscle as well as fat, the condition of the animal is sustained in a manner to permit more perfect digestion and assimilation, and a greater proportion for the support of the system of the nutritious elements that are required, and which are more evenly distributed through the body, instead of the semidiseased condition produced when corn is given as an exclusive diet. Hence the farmer who diminishes the ration of maize, allowing but a portion only—substitutig therefor bran, middlings, milk and clover cut fine and scalded—will have his hogs larger, heavier, healthier, and of a better quality of flesh than from corn. While giving the advantages of a systematic method of feeding for the best results in producing the heaviest pork, the fact that prime lard brings a price that makes it desirable on the part of the farmer to have his hogs fat, it must be admitted, is a serious obstacle in the way when lean meat is advocated, but the lean is simply interspersed with the fat, and the greater increase from the variety of food does not diminish the supply of lard. The farmer will find that in those portions of the carcass from which the lard is produced, but little difference will be observed, and the hog will be much more valuable as a whole.—Ex.

THE FIELD.

Yolo County Fruits and Farms.

WOODLAND, June 25.

TO THE EDITOR: While Woodland, Winters and Davisville have long been the chief fruit growing centers in Yolo county, and will doubtless remain so in great measure, they will not be the only ones. Within the past two or three years localities which had been considered unadapted to much else but agriculture have shown large orchard and vineyard acreage.

Winters was shipping fruit East a month ago, and the apricot and early peach harvest is about completed. A section that is bidding fair to rival Winters, and for which even more is claimed, though just where and why is not always evident, is Capay Valley. It certainly has temperature enough, as during four days of this week the thermometer registered above 100°, reaching 112° on Sunday, at the head of the valley. But a little thing as that is considered no drawback, and we hear expression of great hopes for this valley.

Like many other sections of this State, Capay valley owes its development ingreat part to the railroad Co., which secured some six thousand acres of the best land in the valley at an average of $40 an acre; built their road, and then, with their usual magnanimity, dispensed it to needy colonists in 10 and 20-acre doses, and even larger, at an average of $150 an acre.

The pioneer in the fruit industry in the valley is W. B. Still, of Guinda, who has 76 acres of 4-year old apricots and peaches. This year he expects to ship about 8000 boxes. What the actual capacities of the valley are in this line it is impossible to say. The industry here, as elsewhere, is considered an experiment, and the trees are still too young to bear their earliest. Some two thousand acres have been planted in orchards within the past two years. The soil seems splendidly adapted to rapid growth. The finest development the writer has seen anywhere was in the young orchard of Mr. G. W. Woodbury, of Guinda. This gentleman has about 30 acres set to apricots, peaches and almonds. The trees are but yearlings, yet they have a stock in nearly all instances of two inches and over, a corresponding height, and heavy foliage. This extraordinary growth is owing to the rich character of the soil. It is the heavy sediment bordering Cache Creek. Mr. Woodbury claims to have discovered a black scale pest preying upon his potato vines and other vegetables that has not hitherto been seen in the valley.

Five miles below Guinda and ten above Capay is the Tancred Colony, composed of 500 acres or more of young orchard and vineyard. Here all is owned and worked on the cooperative plan. All property owners in the colouy are shareholders in the company. Those who have holdings but live in the city or elsewhere pay certain fixed assessments to have their properties worked. Those who live in the colony and cannot secure a living at present on their own small place work on the other lands of the colony and are paid from the funds provided for such purposes. E. W. Hammon is superintendent.

Many other orchardists of the valley might be mentioned, as Messrs. Sprouhl and Sharpe of S. F., who have a young orchard and vineyard near Guinda under the charge of G. W. Kneeland. Samuel Allen has a fine almond orchard near Tancred.

YOLO CITY

Is another locality that promises to become a prominent fruit center, as several orchards have been set out within the past two or three years. The most extensive of these is the Yolo Orchard, as it is called, which is owned by a Woodland syndicate and comprises two hundred or more acres. E. C. Zane is superintendent. Among others who have gone into the business on a less ambitious but still promising scale are Messrs. W. T. Akers, O. Plantz and W. F. Hayden.

W. J. Reid of Dunnigan has set out several small orchards and vineyards, which give promise of success. However, all who are now rushing into the business consider it but a speculation, or at best an experiment, and occasionally one meets a grower, long in the business, who has had enough, and pronounces fruit-raising a losing proposition. They give two reasons—rates of transportation and commission men. As an old gentleman remarked a few days ago, "There is only one thing possibly worse than these, and that's the grasshopper. He takes everything, and offers no apology either."

Woodland and Danville will ship considerable quantities of fruit, though more in the dried state than heretofore, as the profit on this class is generally better than on fresh fruit. The fruit crop here, however, as everywhere, is light, and the only hope many of the growers have, is better prices than have ruled the past season.

Mrs. G. G. Briggs, who has large vineyards at Woodland and Davisville, is one who does not take an optimistic view of the fruit situation. On 63,000 boxes of raisins shipped last year, she lost on every box. There are many other producers who still have their last season's crop awaiting a market.

GENERAL FARMING.

Harvesting is in general progress throughout the county. In some places, as about Danville, the farmers were through a week ago, while in other parts, particularly on the tule, the grain has not ripened sufficiently.

The prospects of a generally large crop are good. There were fears of continued north winds, but the grain has met with no serious drawback. In many places on the high lands wheat will run as high as 15 or 16 sacks to the acre. The farmers, however, are but little more encouraged than the fruit men. Many are contracting their wheat now at $1.30—equivalent to $1.40 delivered at Port Costa—fearing even lower prices later in the season.

Those who have tule lands are the most jubilant, for promises of a tremendous crop are now assured. This is the first year in four that floods have not covered these rich lands and either prevented the planting of the grain or destroyed the crop just as it was ready for harvest. "Reclamation district 108" extends from Knight's Landing north a distance of 30 miles and comprises 68,000 acres. With the exception of two 80-acre plots on the border, every foot is in wheat, which will yield from 10 to 30 sacks to the acre, and the average, according to good authority, at least 15 sacks.

Harvesting will begin this week on many of the great farms. There are nine harvesters at work on the Curtis place alone. With such possibilities, there is no surprise that the owners of these lands should consider feasible a $750,000 canal to intercept the foothill waters that have prevented crops in past seasons. It is intended to run this canal along the west border of the tule. It will be over 30 miles in length, 600 feet wide, and have a mean depth of eight feet. Surveyors are at present running preliminary lines. When these tule-land farmers consider they have lost sufficient in the past three years to build six such canals, and, as it is, seem only assured of one crop in four, they may well take half their present crop and put it into the project. There seems general unanimity regarding the scheme and strong hopes that it will be a success.

C. E. T.

Killing Morning-Glory.

SATICOY, VENTURA CO., June 28, 1892.

TO THE EDITOR.—The article quoted in your last issue from a Hueneme correspondent on the subject of killing morning-glory is the first practical treatise I have seen concerning this dreaded pest and its extinction. The question seems to be generally avoided by correspondents presumably because they fear a discussion thereon would unpleasantly advertise their localities. As the pest is quite widely distributed throughout the State, this is certainly a mistaken sentiment. If people do nothing and say nothing concerning this formidable trespasser, fearing to detract from the value of their property, it will not be long before their fair lands will have little value to sustain.

Endorsing all that the Hueneme correspondent has said, it seems to me he neglects one phase of the subject. There is, doubtless, no question as to the efficacy of constant cultivation or "smothering" as a means of extermination, and on patches not exceeding a few acres in extent, the plan may be practical, but in fields of several hundred acres, where almost each individual acre is infested with varying degrees of hopelessness, the expense of such cultivation and more especially the loss entailed by two or three years idleness of the land, places the remedy out of the reach of any but millionaires. Even should the plan be followed, the expense and loss mentioned would place a value on the land entirely out of proportion to its real worth for raising any ordinary crop after the pest is eradicated.

Many people in this vicinity have adopted the following system, which is entirely practical, subjects the owner to no loss, removes the pest, and doubles or quadruples the actual value of the soil. The land is set out to fruit trees (preferably English walnuts, as they are planted far apart and give plenty of room for work) and beans or other hoed crops are raised between the trees until the latter are bearing profitably. Hoed crops do reasonably well, even in thick patches of morning-glory, necessitating only thorough cultivating and hoeing every few weeks until the crop is harvested, which, in the case of beans, is about three months from the time of planting. Very thick patches can be kept cultivated clean with a weed knife to avoid the trouble and expense of hoeing, and still not interfere with the crop as a whole. This summer cultivation and the shade of the bean vines seem to recompense for the draft made upon the moisture, and if the ground surrounding the trees for several feet be kept clean, the latter need not suffer materially. The number of bean rows between the trees is diminished year by year as the trees become larger. The number of crops raised this way depends, of course, upon the kind of fruit, apricots, apples, etc., bearing much earlier than walnuts.

Now, when the trees are bearing profitably, the "smothering" process can begin and continue, with no attending loss, until the pest is eradicated, the repeated cultivations being alike a boon to the trees and destruction to the morning-glory. When this desired condition has been reached, the owner will have a property which, however skeptical he may be concerning the profit of fruit culture, will be vastly higher in the market than his unimproved land, even if he had no morning-glory to contend with. Judicious interculture is quite generally followed, in this vicinity, to tide over the first few years until the orchard will pay its way, and the trees do not suffer perceptibly as a consequence. An exception would have to be made in the case of grains, which, not admitting of summer cultivation, dry out the soil to the detriment of the trees. I have never, however, seen such a practice followed.

Now, there has been no break in the receipts from the land, and the morning-glory is killed, when, if the owner should imagine that other crops would pay better than his orchard, he can dig it out (the wood paying for the cost of clearing) and still be far ahead in the operation. His land will be clean and greatly strengthened by the change, when, if he had done nothing, the pest would be growing each year more formidable.

But in the favored land of California, who will say that fruit is less profitable than any agricultural staple, and if the obnoxious morning-glory will thus add to the acreage of orchards, may it not, after all, like most of our afflictions, prove a blessing in disguise? H. F. CLARK.

World's Fair Notes.

The Kern County World's Fair Association has appointed a board of lady managers for the county.

An effort is being made to prepare a facsimile of the San Luis Rey Mission, which is the finest and most extensive one in southern California, to be set up at Chicago.

On June 14th, the Humboldt County World's Fair Association was formed at Rohnerville. A. P. Campton was elected president, and D. E. Gordan secretary, both of Rohnerville.

C. M. Wells, president of the Los Angeles County World's Fair Association, is quoted as saying that the women of that county are taking more interest in World's Fair work than men, outside of the Executive Committee.

On June 11th, a meeting of the Shasta County World's Fair Association was held at Yuba City, and an Executive Committee of seven members was elected. Glass jars of different shapes and sizes, to the number of 240 were ordered.

The Santa Rosa School, at De Luz, San Diego county, has prepared 50 beautiful specimens of wild flowers and ferns, neatly mounted on white cardboard. Committees have been organized among the children to continue the collection during the summer.

The Fresno County World's Fair Association reports that good success is following efforts to obtain excellent samples of wheat, barley, rye and oats for a World's Fair exhibit. The association will be ready to begin on fruit and other products in due season.

On June 20th, the supervisors of Orange county decided, for the present, to appropriate one-ninth as much money as Los Angeles county will appropriate for a World's Fair exhibit. As the latter county will appropriate $40,000, the appropriation by Orange county will therefore be about $4500.

The Alameda County World's Fair Association is having prepared an illustrated album of Alameda County, to be used at the Exposition next year to assist in advertising the resources of the county. The printed matter accompanying the album will be both descriptive and statistical.

R. H. Young, secretary of the San Diego County World's Fair Association, has forwarded to the State Commission for indorsement, applications from 37 different residents of San Diego county for a total of 4820 square feet of exhibiting space in the different department buildings at Chicago.

A public spirited resident of Siskiyou County has sent a communication to the Yreka *Telegram*, stating that as the California Commission has decided to maintain a restaurant and cafe in the State Building at Chicago, Siskiyou County should endeavor to furnish therefor butter, ham, bacon, eggs, etc., to show the superiority of the county's products in that line.

A design submitted by Miss Rose Brier of Oakland, Cal., for a panel for the Woman's Building at Chicago, has been approved by the National Board of Lady Managers, and Miss Brier has been given an order to execute the work. The panel is of conventional design on the Italian Renaissance style, of which the Eschscholtzia, or California poppy is the central figure.

THE HOME CIRCLE.

In the Orchard.

Lazy, languid shadows stretch across the orchard grass.
And warm and blushing snowflakes drift downward as I pass;
The robins whistle blithely, white butterflies float by;
One fleecy cloud has lost its way in the soft blue of the sky—
And the spring is in my thought.

Light streams down through pale green leaves that whisper in the breeze;
Deep in the heart of blossoms lurk drowsy, droning bees;
The willows bend down slender leaves and dip them in the stream;
The day floats by on fragrant wings like a sunny, golden dream—
And the spring is in my heart.

Happy birds through languorous air now tell their secrets sweet;
Clover leaves and tender grass are thick beneath my feet;
Sunshine lights my baby's hair as at my side he stands,
His treasure trove of dandelions in tiny, tight shut hand—
And the spring is in my life!

—Virginia Franklyn in Harper's Bazar.

A Summer Love.

Written for the RURAL PRESS by KATE MASTERS.

A foggy morning at Santa Cruz. The sea looks oily and calm; the fishermen's boats tied to, or anchored near the wharf, scarcely move on the tranquil waters, and the pelicans on the island rock near Phelan park ruffle up their feathers and try to think it is winter.

An hour later the fog has lifted and lies like a white curtain half way across the now sparkling waters of the bay. The beach begins to look like business; that is, the children and nurses are arriving. The children, happy and wild as colts; barelegged, sunburned and happy. Some in laces and finery playing with little strangers in cotton, while the French (?) nurses gossip and chat with each other to the perfect satisfaction of their charges.

In another hour the swells have arrived and the idlers are watching for the rival belles and beaux to take their morning swim.

Among the gayly dressed ladies on the wide porch of the bathhouse a young girl appears. She seems quite alone, and walks to the top of the steps and looks out at the water as if to judge if it is tempting enough for a swim.

She is slight, tall and very pretty, and has a quiet sort of dignity particularly noticeable among the noisy, chattering girls around her.

As she turns to go into the bathhouse she takes one glance around the sands. Her blue eyes show surprise for a moment. The expressive face is full of pain, as the dark lashes sweep down over her eyes as if to hide what she could not bear to see.

"He said he did not know her," she is thinking.

Her glance again strays to where a young man is laughing and talking to a very handsome woman. More than handsome, and he, too, is good to look upon, with curly hair, clear-cut features and the bold, blue eyes that women adore. He is probably twenty-six or seven years of age, while the beauty by his side is perhaps older.

They are only flirting. What else can it be? They have only known each other since the night before.

He turns and sees the girl he really loves and his first impulse is to excuse himself and go to her, but then he thinks, why should he not devote just one morning to the belle of the beach? He feels certain she is quite taken with him already and so he stays, and Helen looking straight at him a moment, smiles scornfully, then goes to get ready for her swim with a sad and bitter heart.

They are not engaged, these two. He hasn't even made love to her. In fact, she is the only girl he knows that he hasn't flirted with. Why? Because he loves her, he is afraid of her, afraid those blue eyes will flash in scorn, or, worse still, in laughter, instead of the soft, trustful glances she gives him now.

Many admire the graceful figure as she plunges into the breakers, and none more than Frank Saunders' companion, who knows full well that he has been her devoted slave, but now—why, he is her own, of course; he pleases her and that is enough.

That evening he meets Helen riding on Pacific avenue. She colors, but does not smile, only bows slightly. He feels hurt and tries to think she is rude, but knows in his heart he has offended her and how.

For a week he does not see her at the beach, but enjoys himself in a way with the gay people at the hotel. One day a gay young matron invites him to a picnic at the Big Trees, promising him a jolly time. "And Mrs. Montgomery is going, too." Mrs. Montgomery is the lovely widow whom Frank is already supposed to be madly in love with, and not a few whisper that the widow is more than pleased with him.

The next morning, at 11 o'clock, a three-seated carriage, drawn by four prancing grays, leaves the hotel and is soon whirling along the wild mountain road to the Big Trees. Even Frank's frivolous soul is impressed with the grandeur of the scenery. The murmuring waters of the San Lorenzo, so far below; the gray rocks and the railroad above, and, finally, the great redwoods, towering to meet the sky.

After they have had their lunch and are lounging about, a young lady on horseback and a gentleman of tender years, in fact, only ten, gallop in the grove. The girl is Helen. She looks very pretty on horseback and rides with the easy grace of a horsewoman.

Some one notices her and says, "You know who that is, don't you, Mr. Saunders?" with an arch look. Frank colors slightly and looks annoyed.

It soon appears that the hostess, who is a great friend of Helen's, had asked her to come, as she did not like Mrs. Montgomery and saw pretty well how things were going.

At first her little scheme seems to have no effect, as they hardly notice each other. Frank still devotes himself to Mrs. Montgomery, while another young fellow of the party starts a mild flirtation with Helen. But, after a time, this rouses Frank and he manages, as they are all strolling about the grove, to get a few words with her.

"Helen, what is the matter with you? Are you angry with me?" he says.

"With you! Why should I be angry?" But she does not look at him.

"But you are changed," protests Frank.

"If I have vexed you, I think you might forgive me to-day, when I have not seen you for so long, won't you?"

She says, "I have nothing to forgive," yet looks into his face with the old look that makes his heart leap.

"I will hope that you will grant me more; will you meet me this evening?"

She murmurs "Yes," and soon they separate.

It is a pet evening. Moonlight floods the bay and the breakers glint and glisten, their foamy crests almost ghastly in their unnatural whiteness. But it is not on the beach Frank meets his sweetheart. Out on the cliffs, where the waves dash and roar continually, instead of breaking in placid monotony on the sands, he meets her. She is walking with her huge friend and almost constant companion, a dog named "Victor."

Helen is the only daughter of an old gentleman in moderate circumstances. Fond and proud of his daughter, whose mother had died when she was a little child, but yet selfish and pleasure-seeking, he lets her have full liberty to find her own amusements. Had she been a different sort of a girl, it is hard to tell what troubles her independent spirit and perfect liberty of action might have got her into. As it is, her quiet dignity and perfect frankness with every one save her from the slightest breath of scandal.

When they meet, these two, this summer evening, they only look in each other's eyes, and the old story of love is told and answered in their mute language. They turn and walk back—back in the direction she has come. His arm steals round her waist and he tells her all his love. But she—how can she begin to tell him all the devotion of that brave young heart? Only the light in her soft dark eyes can tell, and he is not the man to read them. If he could, what trouble might have been saved for both of them.

Three happy weeks have passed and they have been together every day. They have arranged to get married the next spring. To-day he has returned to the city, and Helen is left to dream over the past and look forward to the future.

The autumn has come. The breakers are treacherous; sometimes mere ripples, the next minute mountains high. October heat has ripened the grapes on the mountain sides, the dust is deep, the fogs of the summer months have melted, and only the smoke from the forest fires darken the bluest of skies. Yet to-day the sea is angry indeed. Now and then there is a few minutes calm, and some timid bathers venture to don their bathing-suits, only to come out and find the breakers worse than ever; but for very shame they find they must at least get wet, and timidly advance to meet the foe, who coolly doubles them heels over head and rolls them up the sand, to the very feet of the laughing spectators.

Mrs. Montgomery is a swimmer, but a decidedly amateur one. She has not been in long before she finds that the breakers are too much for her. She tries for the raft, but soon feels she cannot reach it. She turns to come back. A mighty mountain of green water lifts her higher and higher, then suddenly drops her, and presently the undertow is rushing her, as she thinks, far out to sea. She is a brave woman, but, in her exhausted condition, she loses her self-control. She stops swimming and tries to call for help just as another great wave rushes over her head.

Helen has just come into the water. She dives through two green walls of water, and, as she opens her eyes the second time, she notices the red cap of a lady farther out, floating on the water, while the lady herself has disappeared. Then she sees her rise to the surface on the crest of the next wave. She calls on her big dog, who is swimming beside her, and together they go to the rescue. She knows there is a swimming teacher on the beach, but he cannot get there in time. She grasps the helpless woman on one side, while her brave dog catches the other, and they manage to keep her head out of the water. Then comes an awful struggle between them, as the poor woman tries to strangle them both; but Helen has had experience, and keeps well behind those clutching arms. But, even when she becomes quieter, it is hard to keep her up. At last the swimming teacher reaches them, and Helen swims off to the raft as if nothing had happened.

When Mrs. Montgomery recovers sufficiently to understand who her rescuer is, she insists on seeing her. She is quite affected when she does; insists on her accepting a handsome bracelet she wears, and says she must only mention anything she wants and it will be hers. But Helen only smiles and says: "All I wish from you is your friendship, for you are a very brave woman. As for me, I only did what I would have done for any one and am very glad I was able to do for you."

Some time after this, Helen gets a letter from Frank, who has not written for at least a month. He writes:

My Dear Helen:—When you get this, my mother will be in Santa Cruz. She is very anxious to see you, so I hope you will call on her as soon as you can, as she is not going to stay long.

Then a few more lines and the letter closes. Helen feels there is something wrong.

"So you are the fair Helen of whom I have heard so much!" says Mrs. Saunders when she meets her. She is a tall, dark-eyed, hard-mouthed woman; not at all like her son.

After a few minutes ordinary conversation she says, "Well, dear, what I really wanted to see you about was Frank. I am so pleased to find you such a nice, sensible girl, for really, you know, I didn't expect it. Frank, you see, came home really quite mad about you, and was so very serious about it; but you, I know, will understand and sympathize with me when I tell you he is my only son and—well, you see he has to support us both, and really it is out of the question for him to marry at present; unless, of course, he could marry money, which I have reason to think he could, if it were not for the fact that he feels bound in honor to keep some sort of promise to you."

Helen's face throughout this speech gets whiter and whiter. Then at last her cheeks flame.

This, then, is her sweetheart's mother cooly insulting her with smiling lips.

She says, "Did your son send you down here to say this to me?"

"Well, no! Not exactly. You see the poor boy is quite upset and worried about it, but I told him you would not consider it anything but a summer flirtation."

Helen draws off her glove. I do not *say* he made any promise," she says, "but there is the ring he put on my finger, and I shall keep it there till he himself asks for it, or—" faltering, "till he is married to money. *Then* I will give it to him."

Then she leaves the room. Neither of these women ever see each other again.

Weeks pass. Helen will not write for a long time, hoping he will write first; but at length she can bear it no longer, and writes, telling him what his mother has said, and asking if he really wants to break the engagement to tell her so. "But," she adds, "I can hardly believe I have given my heart to the wrong man, and that yours was only a summer love."

He does not answer her, and the strong young heart is half broken with the pain of suspicion. Then one day she sees in the paper the announcement of his marriage to Mrs. Montgomery. Then, God help her! Gone is her faith in men. The soft, kind mouth hardens, but who shall say her heart is broken. Not her friends, who find her far brighter and wittier than before, and one honest fellow's heart is filled with hope. Only her faithful dog has heard a complaint from her, or seen her bleeding heart. Once only, and then she had cried, "God forgive him! He did not know how I loved him, or surely he would not have done this cruel, cruel thing," and buried her face in his shaggy coat.

A bright, warm day in January. The tide is far out, and the hard, wide sands are a tempting place for a gallop.

Two people are strolling along; a lady and gentleman; both handsome and happy looking. She says, "Now, Frank, aren't you glad we came here? What could be more lovelier than this?"

He does not answer. Down the beach he sees a slight, swaying figure on a bright, sorrel horse, which seems mad with terror at the waves, at the shining sand, at the horse car and everything. Rearing, plunging, foam-flecked he comes toward them, his rider cool and firm, half-smiling at his mad antics. It is Helen. She is within a few yards of them, when suddenly her eyes meet Frank's. She turns deathly white. The horse, feeling the firm hold on his bit relax, leaps wildly forward, and she, forgetting herself, gives a cruel jerk at the Spanish bit.

Mad with pain, the sorrel rears up, up, till he falls over backward; over till the girl is crushed beneath him. Then he struggles to his feet and kicks at his helpless rider as she tries to rise.

Frank's heart turns sick as he hears the iron hoof strike her breast. His wife screams, but there is no sound from the motionless form lying on the sand. When they try to raise her, she opens her eyes and says, "Please don't move me. It hurts so. It will soon be over."

There is a thin stream of blood trickling from her mouth. Frank knows she is dying. She moans, "It was not the horse's fault. Mine! All mine." Then, very faintly, "Frank, pull off my glove." Wondering he does so. "Take off the ring." He shakes his head. "Yes, please." "Not now, Helen! I can't indeed."

With great effort she draws off the little golden circle, which meant so much to her, and so little to him; and hands it to Mrs. Saunders and says, "Take it! He gave it to me because—because he thought—he would marry me—but now—!"

"Frank, is this true?" cries his wife. "You told me there was no engagement; and she saved my life, and this is the way I have repaid her. Oh, you men! Will you never cease this cruel sport of breaking women's hearts!"

The dying girl lays her hand tenderly on Frank's bowed head and smiles bravely her old sweet smile. "He did not know or understand how I loved him. But I am not sorry I loved him so, because I am going away. Then she turns to look at her poor dog, who is lying with his great head on her arm, watching her face with sad brown eyes. Blue eyes dim with the shadow of death look into his. She smiles her last brave smile. "Good bye, old fellow," she whispers, "We will meet again, never fear."

Frank, whose face is buried in his hands, hears the dog give one piteous cry. He cries "Helen forgive me!" But his summer love is dead.

Name-Sickness a Common Complaint among Brides.

"It's an old trick of the trade with the novelists to tell how young women when in love never fail at a certain juncture to double lock their room doors, and with many flushes and heart-beatings write down their Christian name coupled with the surname of the man whom they have promised or hope to marry," commented a young married woman lately wedded to a fine man of her choice, says the *Illustrated American*

"I suppose it is the way with many sentimental girls, though I never did it myself; instead, I underwent a very different emotion, of which I don't think men have any comprehension, but which I find is not peculiar in my case. I mean grief of having to give up one's maiden name.

"All the time I was engaged I never took any thought for the day on which I was to drop my own nice surname and title, for which I had such a deep affection, and be addressed by my family, my friends, and people to whom I was introduced by an entirely different one.

"For the first week after my marriage even, I scarcely noticed the change, but one day there suddenly came over me a curious little lonesome feeling. It seemed so chilly and formal, so unlike myself, to be addressed as 'Mrs.' at every hand, and never to hear my own dear original name.

"The more I thought over the matter, the

more despairing I became. Never, never could I hear the old familiar "Miss" when anybody spoke to me.

"Thereupon I actually locked myself in my room, and wept so long and bitterly from pure name sickness that my husband besought me tearfully through the key-hole to tell him what was wrong.

"He was very much hurt when I first explained the cause of my grief, but when I brought him to a realization of my loss, he grew sympathetic, and do you know, for a long time he called me by my maiden name. That wore off with the honeymoon, however, but even to this day I think sadly of my lost name."

The Summer Boarder.

The business of keeping "summer boarders" has grown wonderfully for the past decade among the farmers of the country. We have always had our summer resorts—our Saratoga, Cape May, Thousand Islands, White Mountains, Lake George and kindred places—but to sojourn at them was too expensive for persons of moderate incomes. The great masses of the people who dwell in cities were shut up for the summer because they could not afford to pay the prices demanded at these noted resorts. The farmer then stepped into the breach. He found that he had something to sell which thousands wanted to buy, viz., entertainment in a country home at a price so moderate that thousands could avail themselves of it, and yet sufficient to pay a good profit to the farmer.

To-day the number of boarders who thus recreate in farmhouses and small country towns far exceeds the number patronizing the more famous and more expensive resorts. The thousands who are engaged in a small mercantile way, the great army of doctors and lawyers whose professional fame has not yet given them large incomes, the newspaper workers—most of such are patrons of the farmers. The wives and children are sent out for the season, generally from the middle of June to well along in August. The head of the family spends a brief vacation with them, but business calls him back, and he is obliged, for the bulk of the time, to content himself with a run into the country on Saturday, returning on Monday to his work.

The prices paid cover quite a wide range, depending, of course, on the accommodations. *The Rural* has heard of families being boarded in a farmhouse at the very low rate of $4 per week for each member. This, however, is very unusual. Prices generally range among farmers from $5 to $8 per week. At these modest figures there would be small profit to a denizen of the town. But it pays the farmer better. He converts his butter, milk, eggs, poultry, fruits and vegetables into cash, without the intervention of two or three middlemen. In other words, he realizes the highest retail prices for all the products of his farm consumed by boarders, even at the modest figures named, and in this fact lies the explanation of his profits at such seemingly low rates. It is estimated by careful judges that summer boarders pay more money to the farmers of Sullivan Co., N. Y., than would be realized by the sale of the entire agricultural products of the county in the open markets, and what is true of this county is doubtless true of many others.

By common consent, Decoration Day, May 30th, seems to be the time when thousands run into the country for the purpose of looking up a place where their families can be comfortably domiciled for the summer. The trains leaving the city on the eve of that day are generally crowded to the greatest degree. The railways contribute to this hegira by offering special rates, and stimulate the business by "summer home" pamphlets for distribution, in which the attractions of the points along their lines are glowingly set forth. Soon afterward, the families begin to go out, and before July 1st the number is at its greatest height.

A few points are essential to success in this business. Good beds, well-ventilated rooms, perfect cleanliness and a generous table. The bill-of-fare need not be so varied—it is wasted energy to attempt to rival the more pretentious hotels in this matter. There can be ample variety with but a limited number of dishes, by changing them at every meal. Abundance of milk, fresh vegetables, well cooked, with the fruit, eggs, and poultry at every farmer's command, are the staples of a diet which will always please.

The thoughtful farmer will see that lounging accommodations are at hand. Hammocks swung in the shade, armchairs on cool piazzas, swings for the young folks, and if a stream or lake is available, arrangements for bathing add greatly to the attractions of a summer home.

The average city boarder, who is spending his first summer in the country, is a source of much amusement to the farmers' family. His ignorance of everything rural is laughable in the extreme—quite as much so as would be that of a farmer who should be making his first visit to the metropolis. But he picks up a little knowledge, bit by bit. He finds out that buttermilk is the product of the churn and not of a special breed of cows, and the younger members of the family very quickly find out when the harvest apples are ripe. They achieve numerous colics in experimenting in this direction, but they always persevere. The young ladies find out where the most delightful walks are to be had, and, strange to say, the young men are equally alert in securing this information. In short, it is a delightful period for the city folks—a succession of halcyon days. Let us hope that the farmer will get a substantial benefit from the business, and yet make his home so attractive that all will want to come again.—Rural New Yorker.

A Great Pie Company.

The New York Pie Company has a small, unpretentious room in which pies are retailed by a rosy-cheeked and robust woman, and a plain archway at its side, through which the wagons of the company drive to the interior. That is visible from the street, but gives one no adequate idea of the size of the business which is carried on. Inside we find an area or court, filled with wagons, taking on their loads of pies or discharging their return loads of tins. There are a dozen ovens here, and offices, rooms for the manufacture of mincemeat, one for the preparation of fruit, and another where the dough is manufactured—in short, it is a very busy place. It consumes every day, except Sunday, 20 barrels of flour, 1200 quarts of milk, about 8000 eggs, 3000 pounds of lard, about 4000 pounds of sugar, 20 barrels of apples and other fruits in season and out. A very large number of employees are engaged, most of them going to work at 3 A. M., and leaving at 3 P. M. The pies are all delivered before or by noon—there is no demand for them later in the day. There are 40 wagons, in all, engaged in this work of delivery in New York, Brooklyn, Jersey City and Newark.

Twenty thousand pies are turned out daily, and the apple pie leads the year round, though mince is a good second about the holiday season. Five sizes of pies are made, known to the trade as "home-made," the twelve-inch, nine-inch, seven-inch and "buttons." The varieties on the list are apple, mince, peach, plum, lemon, cranberry, pumpkin, custard, cocoanut, rhubarb, pineapple, strawberry, currant, gooseberry, huckleberry, blackberry and cherry. Others are made at times, but these are the staples which are found on the lunch counters, and in the hotels and restaurants all over the city. The smallest pie is sold at wholesale at 4 cents, the next at 7, then 14, 20, 35 and 45 cents. Only the best material is used—no rancid or adulterated lard is wanted, and the most critical examination by nose and palate failed to find anything wrong. "They are made," said the president, "just as our grandmothers made them 50 years ago, only on a larger scale."

"How long has this company been organized?" said the visitor.

"For 21 years. I have been in the business all my life—started with my entire stock in a basket—you see what it has grown to."

It is a very ably managed institution and has a branch in Philadelphia, which is also doing a thriving, though smaller business.

A Unique Individuality.

A striking instance of feminine individuality was that of Miss Midy Morgan, a woman who was a marked and unique figure in New York, and who for 23 years had been in the service of the *Times* as stock and cattle reporter. Her history is a curious one. Maria—known as "Midy" Morgan, was born in Ireland in 1828. She received a good education, and in 1865, with her younger sister Jane, she went to Rome, where her sister wished to study art. Here she met Miss Charlotte Cushman and Miss Stebbins, both of whom became her warm friends. Miss Morgan had always loved animals, and King Victor Emmanuel, discovering her judgment of them, commissioned her to go to Ireland and purchase a number of horses for him, a commission in which she was so successful that he presented her with a watch, bearing his initials and a diamond pendent. In 1869 she came to New York, and has since served the *Times* as its live stock reporter, and she was also the station agent at Robinvale, N. J. She was a familiar figure on Newspaper row in New York. Over six feet in height, wearing a short gown of serge, with stout boots and a bonnet to defy wind or storm,—this odd exterior yet held such sterling qualities of head and heart that she commanded universal respect. She leaves to the metropolitan museum in New York the watch presented by the King of Italy, and a number of valuable and curious Florentine mosaics and cameos. This seems to be an age in which woman lives out her individuality, and does that which she was born to do. The *Times* says editorially of her: "It is fitting to record here the most cordial and grateful acknowledgement of her probity, her unfaltering fidelity, and the constancy with which the least of her daily duties was always performed. Nor can her companions in the office forget her kindliness of nature, the courtesy of her demeanor toward all, the native refinement and womanly grace of her character, and the patience and fortitude with which she bore the fatigues and difficulties of a calling that might well have taxed the strength of a man." This tribute is full of significance.

Young Folks' Column.

John Martin's Revenge.

In the cool of the morning John Martin kissed his wife and two little ones by-by at the door of their humble home, half frame, half dugout, took his team and went over the roll of the prairie to work at his plowing, about half a mile from the house.

As he paused on the top of the roll before going from sight, he called back to his wife:

"Mary, let George come to me at noon with a lunch and fresh drink of butter-milk. It's so far that I don't think I'll come home to dinner."

The team started, and chattering cheerfully to them for company's sake they went on to their work.

The sun climbed higher, and furrow after furrow was turned. John kept the team going steadily, but Fan was restive and would throw her head up and look around and then throw herself into the collar, and forge ahead as though suddenly anxious to get the work finished.

"What does ail you, Fan? You seem daft," said John finally; "does your harness hurt you, old girl?"

And then he went over the harness, carefully examining each strap and piece where it touched her sleek coat.

He went back between the handles of the plough, and Fan threw her nose up over her mate's neck, looking in the direction of the house, and whinned so shrill and mournful, that John involuntarily looked in the same direction.

He started.

Were his eyes deceiving him!

Was that a thin column of smoke rising in the clear air from over the roll in the prairie?

His heart almost stopped beating.

It is smoke!

Fast as his fingers could move he undid the harness fastenings from the team, threw the harness to the ground, released one horse and sprang upon Fan's back. She needed no urging or directing, but leaped like an arrow from the bow.

As they gained the summit of the rise of ground, John looked, and had to clutch the horse's mane to keep from falling. A thin blue column of smoke was rising from the ground where his home had stood, and as he cast an agonized look over the plain for some sign of life, he saw away off on the distant horizon a few rapidly diminishing specks and a little cloud of dust.

No use to urge the creature, she seemed to share his fear, and was doing the best that flesh and blood could do.

At the little bed of hot ashes she stopped and he rolled from her back. For a few seconds he could not see, and his limbs trembled so that he could not walk. He knew what sight would meet him. A few steps from him lay the body of his little boy Georgie, the one that was to bring his lunch and drink at noon.

He bent over and tenderly kissed the little dead face.

"Two more," he whispered to himself, "two more; where are they?"

They were not far away—the little girl, three years old, with long brown hair, and his wife—dead, and the scalping knife had done its work.

Side by side he laid the three, around whom all his hopes, all his ambitions, his love, was centered, now gone from him in a moment, it seemed.

As he turned away to look back again, he heard a light whinny come from the cattle yard, and he walked that way. There stood Fan over the body of her colt, whinnying pitifully and nudging it with her nose to induce it to get up.

"Your baby, too, Fan. Poor Fan! poor me!"

He stayed by his dead all day and night; then laid them gently in the grave he made them, pressing a last kiss upon the unresponsive lips of each. His task finished, he mounted Fan, and, drawing rein beside the mounds for a last look, raised his hand toward heaven and took oath:

"I swear before God, beside the graves of my dead, that so long as I have life, I shall hunt Apaches. They have robbed me of all, and my hate shall never be satisfied."

* * * * *

A couple of officers were enjoying their after-dinner smoke sitting in chairs tilted back against the shady side of the quartermaster's building

"Say, captain, have you noticed anything strange about these Apaches since we brought them back to the reservation?"

"Nothing special that I can think of. They're a grisly lot anyway. Why do you ask?"

"Because I've noticed now that they keep close to headquarters and don't go out in bands of two or three; and again, they're holding lots of pow-wows, and every day or so they bring in a dead buck."

"Oh, have you just found that out? Why, that's old to everybody but the reds, and with them it isn't allowed to get old. Ever since the Sandy Fork raid the Apaches have had a Nemesis after them. Who it is or how many, no one knows, but if a buck goes away from the crowd, it's ten to one he doesn't come back, and when they start out to find him, which they usually do, he has become a good Indian."

Just then a tall, gray-haired man, dressed as a scout, came past and changed the current of their conversation.

"Who is that chap?" asked the lieutenant of his brother officer, scanning the scout closely.

"I don't know," was the reply. "He comes to the post once in a while; gets a lot of stuff, mostly ammunition; never stays or stops to talk; always rides that same big bay mare."

The stranger dismounted at the door of the store and entered. He had scarcely passed out of sight when an Indian sneaked up cautiously and began to examine the horse, paying particular attention to her feet and her tracks.

"What do you suppose that buck's up to?" queried the captain.

"He's getting points so that he can trail the animal," was the reply.

"Look out! By gracious that was neat."

The exclamation was called forth by the action of the horse. The Indian, in his investigations, stooped and picked up her foot, presumably to examine the shoe. There was a quick move, a thud, and an Indian rolled over on the grass with a crushed skull.

Two or three white men ran up and the owner of the horse came out of the store. When he saw the dead brave, a smile lighted up his set face as he patted his horse's neck.

"Another one, eh? Fan, that's right; keep up the work, old girl. One more scratch on the rifle breech makes 181."—E. R. Collins in Texas Siftings.



A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

A new supply of rituals and National Grange Digest, of latest edition, has recently been received. Orders have also been sent for a small supply of "Grange Melodies." We have a few copies of the "National Grange Choir" on hand, also of "Glad Echoes," the songbook used mostly at the last State Grange.

Master E. W. Davis, in a recent note dated July 2d, has written some thoughts which I think all Patrons should read and try to answer soon and well:

"The work of the State Grange is already beginning to demand some time and thought from those who have the good of the Order at heart. "The spring campaign" has been a dignified and intelligent one. Good results are sure to come from it. It was aggressive enough to command respect, and dignified enough to hold the order on the high mental, moral, social and financial plateau to which it has won its way by 25 years of honest work. For my part, I am well pleased with the total results, and am fully convinced that many seeds are yet in the Grange farm that will germinate soon. Bro. Overhiser writes that he will probably be able to do some "field work" about the 1st of August.

Bro. Walton reports times very busy, but thinks that right away after harvest there will be some new Granges up there. I would much like to see our Order's banner floating in Yolo, Lake, Tehama, Humboldt, Fresno, Stanislaus, Kern, Napa, Los Angeles and San Diego Counties. Can we plant it there this summer? If so, in what way, by whom and at what expense?"

I. C. STEELE, P. M., writes from Pescadero that crops are fine in his locality. He expects to visit San Francisco on the 12th, and will then forward to Washington his quarterly report as Treasurer of the State Grange.

FROM NEBRASKA.—J. R. Cantlin, Secretary of the State Grange, writes from Webster, Neb., saying that the Patrons in that State desire to organize a life insurance association for the benefit of members, and desires us to send a copy of the "Patrons' Relief Association" constitution, and other publications relating to the organization, to which request we have liberally responded. Further, Brother Cantlin suggests that Wheatland, the P. O. address of his brother, D. L. C., who has lived there 30 years, would likely be a good Grange locality. Happy to inform Brother Cantlin that Wheatland Grange has recently been reorganized, and we hope that his brother will soon become our brother if he is not already within the Grange circle.

GRANGE HOME AND SCHOOL.—The Grange is like unto a well-regulated family home, where father, mother, sister and brothers sit down and exchange ideas and thoughts for their mutual benefit. The young boys and girls of the farm should be encouraged by all means to come to the Grange, and every opportunity should be given them, to advance them, to educate them, in order that they may be fitted and qualified for usefulness, honor and respect. The Grange is a good school for the young, and the older ones can be benefited by the teachings of the Grange. I would very much like to see every boy and girl who live on farms in this county all members of this or some other Grange, and it is my opinion the mission of the Grange will not be filled until that has been accomplished. —E. Greer before Sacramento Grange.

FOR SEPARATE COLLEGES.

The Legislative Committee of the National Grange has just issued an eight-page circular setting forth the different acts of Congress for appropriating means for establishing and maintaining Agricultural and Mechanical Colleges, Experiment Stations, etc., with a large amount of statistical facts and information of experience gained in this and foreign countries. It is prefaced with the following, offered by A. Messer and adopted by the National Grange, November, 1891:

WHEREAS, A large proportion of the agricultural colleges of this country are closely connected with classical institutions, with the funds and appropriations from the General Government paid into and disbursed from a common treasury of the combined institutions; and

Whereas, Owing to a variety of causes incident to such connection, the number of agricultural students in these combined institutions is reduced to a minimum, thereby rendering the munificent donations from the General Government for agricultural education practically worthless, so far as direct agricultural and industrial education is concerned; therefore

Resolved, That the National Grange respectfully ask Congress to pass a law requiring the different States, where combined classical and agricultural colleges exist, to separate the industrial from the classical departments and establish separate and distinct agricultura and mechanical colleges in other localities, with separate Boards of Trustees, directors, officers and teachers, that the true intent of the laws of Congress establishing agricultural colleges and experiment stations may be fully carried out, namely, the higher education of the rural population. And we further ask that all appropriations now paid to the combined institutions, and all unexpended funds heretofore appropriated by the Government for establishing and maintaining agricultural and mechanical colleges, shall be transferred to such separate and distinct agricultural and mechanical colleges as may be established in the several States.

Resolved, That the National Grange Legislative Committee be requested to bring these resolutions to the attention of members of Congress at its coming session.

The object of the circular is to awaken interest in the matter and urge the establishment of colleges devoted to agriculture, etc.

Copies will be mailed free to those applying to the Secretary of the State Grange.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	
Western Washington Industrial Exposition,	Tacoma,	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE
1	Oakland	Aug. 8–13
2	Stockton	
3	Chino, J. D. Sproul	
4	Petaluma, Dr. Thos. Macleay	
5	Santa Clara, George H. Bragg	Sept 26–Oct 1
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23–27
9	Rohnerville	
10	Yreka	
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28–Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield, J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	*, I. J. Rolfe	Aug. 23–28
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	Oct 3–7
33	Hollister, A. D. Shaw	Oct. 11–15
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug. ..
37	Lompoc, W. I. Nichols	Sept. 27–30
	—Glenn Co. Willows, W. V. Freeman	Aug. 9–13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

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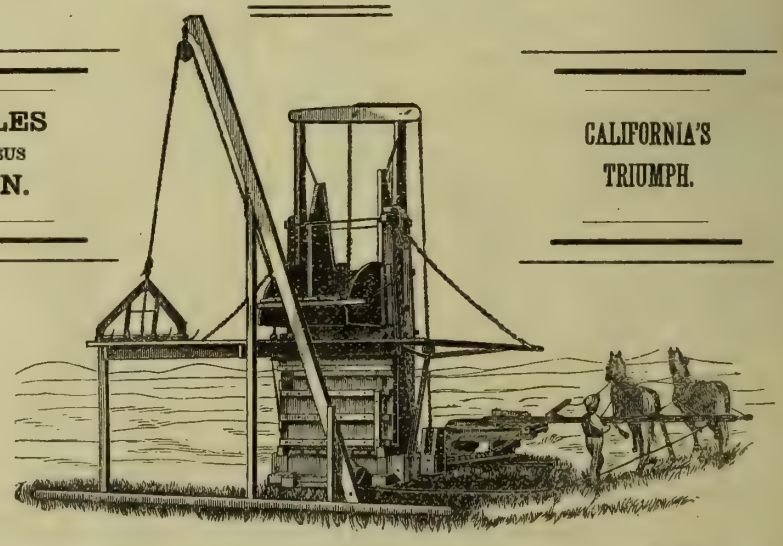
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A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

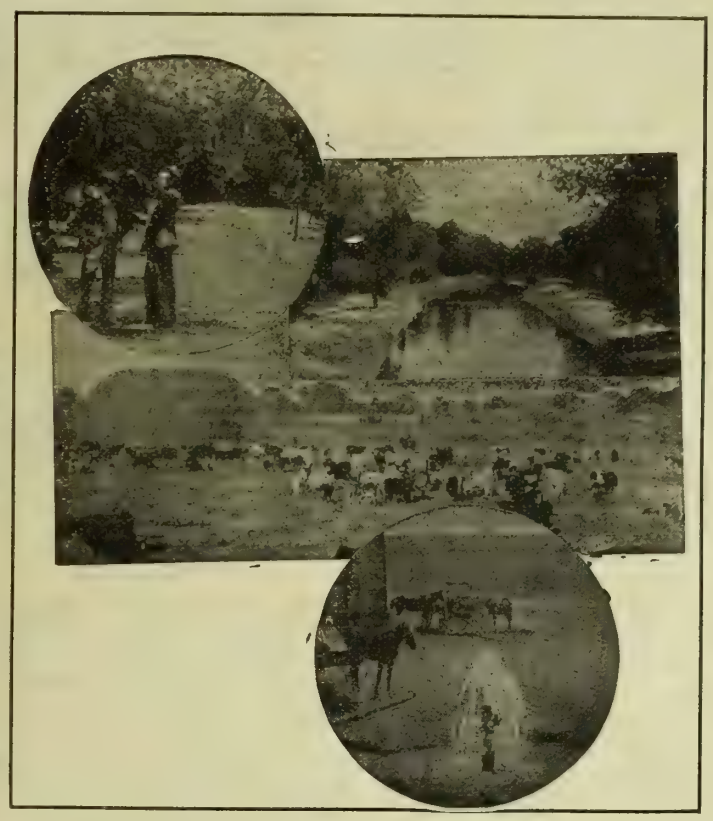
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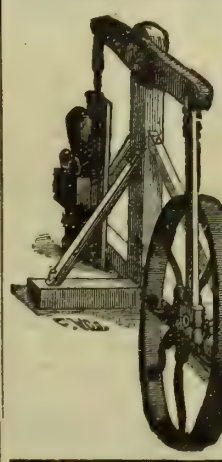


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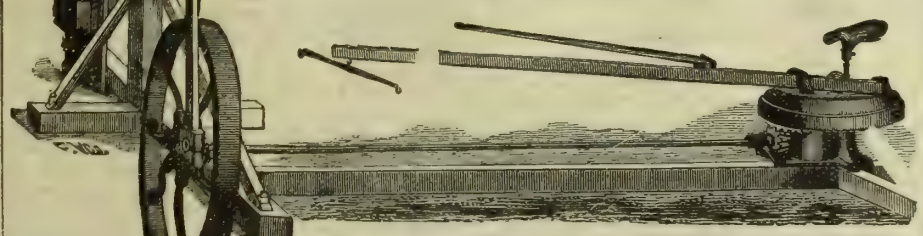


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AGRICULTURAL NOTES.

CALIFORNIA.

Contra Costa.

LARGE YIELD OF WHEAT.—Antioch *Ledger:* Harvesting is progressing rapidly. In the neighborhood of Brentwood and Byron, nearly half the grain is already harvested, and we hear the most encouraging reports from that section. Grain is turning out well, and in fact the yield is much better than the most sanguine expected. A yield of a ton to the acre is said to be a common thing, and we learn that in many instances a much larger yield is the result. Lo Welch, who farms in the immediate vicinity of Brentwood, is said to have harvested 2700 pounds to the acre. There is no use in talking, the Marsh Grant land is not only the natural soil for cereals, but the farmers of that section are about as good as can be found in the State. Such an immense yield of grain in a comparatively dry year is unprecedented, and speaks volumes for the industry and intelligence of the farmer and the quality of the soil.

Fresno.

THE WEST SIDE. — Selma *Enterprise:* The recent consummation of the deal by which the Sunset irrigation district has secured 3000 cubic feet of water and other concessions from Cheape and Perrin and the Sunset Canal Company, is the beginning of a stupendous enterprise that will require great engineering ability and a broad estimate of financial possibilities. The district comprises 300,000 acres of land fertilized by the fervid sunlight of eons of summers. It is proposed to build a reservoir covering 1490 acres to hold water for use during times of scarcity. The soil is said to be hundreds of feet in depth and of exhaustless fertility; the water abundant and the title perfect. The great west side is destined to be the arena where the full value of the Wright law is to be tested. If there is a region in the world where cooperative irrigation should be made a success, it is the west side.

PRACTICAL VIEWS ON A RAISIN COMBINE.—Cor. Fresno *Expositor*: There is probably not a grower in Fresno who does not wish that a combination might be made which will enable the growers to get 4½, 5 or 5½ cents a pound for their raisins. There is no disagreement as to what is desired, but there are some different views as to whether or by what means it may be attainable. In the first place, the growers should be reasonable. The price should not be arbitrarily set, without regard to the natural laws of trade. If so, it will fail. The price which growers must figure on must be based on the wholesale prices in the Eastern markets as they exist. Taking them as a basis, the prices which growers shall ask here should be proportionately lower. The growers should not calculate on causing the Eastern prices to advance, for that would be an uncertain thing to count on. * * * * The packer buys of the grower at 5 cents a pound. He pays 1 cent for packing, 1½ cents for freight, and sells to the wholesale man at 7½ cents a pound. When the grapes have reached New York they have cost the packer 5 cents purchase price, 1 cent packing, 1½ cents freight, equal 7½ cents a pound. He sells them at 7½ cents. This is a profit of a quarter of a cent a pound, or $5 a ton, or $50 a car. If this is not considered enough he would have to buy of the grower for a little less. Let it be insisted again that these figures and prices are not given as the actual ones, but merely as something near what may be found the true figures.

Mendocino.

WOOL SALE AT UKIAH.—*Democrat and Dispatch:* The Ukiah wool sale was held June 14th. Eight hundred and sixty-seven bales were sold. The general prices paid ranged from 19½ to 20½ cents per pound. A few choice lots from Willits brought 21 cents, and Baechtel Bros. of that place received 21½ cents per pound for their exceptionally fine clip. The prices were lower than those of last spring, although the wool was finer.

Modoc.

RECLAIMING SAGEBRUSH LAND.—Adin *Argus:* What was a sagebrush plain a few years ago is now pretty thickly settled with people who are endeavoring to improve and cultivate their claims. Most of these people are unable to make extensive improvements, and are, therefore, compelled to labor under difficulties. Mr. Auble's farm is midway between Aidin and Bieber, and is composed of about 200 acres of swamp land and a large body of rolling sagebrush land. It is well under cultivation, and, with his stock, he uses and sells all that he can produce. Mr. Auble is an energetic and shrewd business man, and is becoming one of our most prosperous farmers. E. Kellogg's place, of about 300 acres, is rolling sagebrush land, most of which has been cleared and produces yearly a large crop of grain. He has a windmill which furnishes water for irrigating his garden. Windmills are the only water supply now afforded, and of course there is but little water furnished, compared to what could and ought to be used to make large crops. Grain is much in need of water now, and it will be a grand thing for such portions of Big valley when some irrigation system is established.

San Bernardino.

NEW ORCHARD ACREAGE.—Chino *Champion:* While the planting of orchards on the Chino ranch this season has been overshadowed by the magnitude of the beet industry, it has nevertheless been no inconsiderable item. Without any particular boom in the planting of orchard trees, a good healthy growth has taken place in the acreage set. All kinds of deciduous fruits especially, have made splendid progress, and this spring olives have taken the lead. The total acreage of trees on the Chino is now about as follows: Oranges 102, prunes 152, peaches 22, apricots 14, olives 54, walnuts 81, figs 56, pears 15, mixed 116—total 611.

SUGAR BEET NOTES.—*Champion:* On Tuesday, July 5, will commence the work of harvesting this year's beet crop on the Chino ranch. It is intended to have a good supply on hand at the factory on the following Monday, when it is hoped to commence working them up. There are 4000 acres of beets on the ranch this summer, of which about 500 acres are now ready for harvesting as soon as they can be reached. The rest of the fields will mature in succession during the next three months so as to keep the harvesting force and factory continuously at work. One of the grandest agricultural sights in California is these broad level fields of beets approaching maturity, perfectly clean and with good stands. The tonnage is going to be very satisfactory, and the quality of the beets so far as tested is extraordinarily high. Almost without exception the farmers on the ranch this year are feeling sanguine of the profits on beets. There are many fields that will yield 18 to 20 tons per acre, and the present indications are that the average percentage of sugar in the beets will not fall below 15, and may go to 18. That will give a crop that cannot be equaled for profit by any other farm product grown in one season. The industry is of the very first importance to Southern California, and will most certainly enrich the communities where it is introduced. Hundreds of men have had steady employment here since the first of the year, and through harvesting a large force will be needed, so that a man can have employment here practically the entire year. Many farmers are building up for themselves homes here who came in without any means to draw upon, and who have devoted their time almost entirely to beet growing. This year's crop will start many out on the road to independence.

San Luis Obispo.

HAY, GRAIN AND FRUIT NOTES.—S. L. O *Tribune*: The hay crop has all been secured in good order and is being placed in shape and condition for future use. Hay baling is progressing, and, by the looks of things, the crop will soon be blocked up. There are three hay presses now at work and another one is expected to come into the valley ere long. A few of the ranchers have started their headers, and by another week harvesting will be in full swing. The barley crop is about all harvested now and a few have started on their wheat crop. The fruit prospect for this season throughout the Creston country will be on the slim order. Late frosts and other climatic changes have had the tendency to despoil the trees of their fruits. The grape crop, however, is reported all right and bids fair for a good crop yield.

Sacramento.

HOP PEST.—Sacramento *News:* Hop growers on the American river yards are very much alarmed over the sudden appearance of myriads of red spiders on their vines. Some yards have already been seriously damaged, and it is believed that unless something is done to stop the ravages of the insect, many promising fields will be ruined. F. V. Flint regards the situation as serious, and advises spraying without delay. He brought specimens of vines infested by the pests. The leaves have the appearance of being burned. The spider inhabits the under side of the leaves and weaves a close web. The insect is well known in England, where it not infrequently injures and even destroys tons of hops.

RED SPIDER AND HOPS.—Sacramento *News*: Much uneasiness is felt among the local hop-growers on account of the reappearance of the red spider on the vines. The insect appeared about this time last year and caused much alarm, but no serious results followed. A few acres of vines were injured and some destroyed. The hop was more advanced than at the present time, and the injury was confined to the burrs, which were then just opening. It now appears that the spiders have been reinforced and have appeared in larger numbers and over a more extended territory. The American River districts are the only ones reported as infested so far, and active measures have been taken to destroy the pest. The yards of Brewer, Whittenbrock and Gerber Bros. have suffered most seriously, and they have already had spraying apparatus constructed and are showering the pestiferous spiders with solutions of sulphur, acid and water. The spray pump is attached to a wagon on which is a tank holding 300 gallons. The liquid must be thrown upward from near the ground, as the spider inhabits only the under side of the leaf.

Santa Clara.

FRUIT CROP NOTES.—San Jose *Mercury:* A tour of investigation among the canneries by a representative of the *Mercury* recently brought out the information that the outlook for a large pack this season is promising. The first crop of strawberries is about gone and no more are expected in very large quantities till the middle of July. The gooseberry and pea crops are reported to be fair. This season J. Z. Anderson has shipped about 25 carloads of cherries East. The pear crop is expected to be unusually large, especially the Bartlett variety. The reason for this is that a great number of trees have come into bearing this season. The crop of Winter Nelis pears will be medium. The apricot crop will be about the same as last season. Apricots, pears and peaches are expected to be ready for canning about July 10th, and then the rush will come. The prices for green fruit have not been established as yet, because there is an abundant supply of fruit in sight, and the tendency of the handlers is to await the condition of the market before fixing prices. The Fruit Exchange which has recently been organized will help to fix prices this year, as the members of it control the majority of the fruit raised in this county. It is certain that a much larger percentage of fruit growers than ever before will dry their own fruit this year, and it is a pleasing fact that none of them are looking around for buyers—that day has practically passed, thanks to the Fruit Exchange and the cooperative dryers. Now the producers are on a fair way to control the markets, and before another season goes by they will have the business entirely in their own hands. No matter what the state of the Eastern crop, the California product will not be affected by it. Our products are more varied and in every way superior, and the consumers will demand them in preference to all others as long as they are to be had in the markets. No country in the world can compare with California in fruit-growing, and no other section can compare with Santa Clara county. Such a thing as overproduction is impossible. The market is extending and will continue to extend faster than the amount of product can increase. When every available foot of soil in Santa Clara county is devoted to fruit-growing the returns to the producers will be as great, if not greater, than at the present time.

Shasta.

FIRST CARLOAD OF FRUIT SENT FROM SHASTA CO.—Redding *Democrat*: The first carload of green fruit that has ever left Shasta county for the Eastern market left Anderson on June 27th. Al Smith, proprietor of the Anderson flour mill, says between 50 and 60 carloads of green fruit will be shipped from Anderson this season. That is news that will encourage and make the fruit growers of Shasta county smile. All the shipping fruit around Anderson has been contracted for at good prices.

Stanislaus.

GRAIN AND FRUIT NOTES.—Oakdale cor. Modesto *Herald*: The harvest is now well under way, and judging from several samples of the new wheat crop which have been exhibited to our dealers, the quality is inferior to that of last season. The reason given for the shriveled appearance of the kernel is that in many fields the crop was blighted by the extreme hot wave about the first days of June. The greater portion of the crop through this section will be harvested this season by combines. * * * * The many flourishing orchards and vineyards extending along the Stanislaus from Oakdale to the vicinity of Langworth have put on a rapid growth this season, but the fruit crop, as a rule, is light. These orchards and vineyards, as enumerated by the writer a few months since, contain about 500 acres. This statement includes the area planted to trees and vines in and around Oakdale. A. V. Stuart has made several shipments of peaches to San Francisco recently. He will start up his canning and drying establishment within a few days.

Sutter.

FRUIT NOTES.—Yuba City *Farmer*: Every day large loads of fruit are seen coming to town for shipping or to the canneries. Local shippers are kept busy handling the choice boxes of apricots, peaches, pears, plums and apples, and the hundreds of active employes at the two canneries handle an enormous quantity of fruit per day. At the orchards there is work for all, and besides the numerous pickers and packers, a large portion of the fruit is being cut and dried on the grounds. This is principally in apricots, the peaches not yet being ripe enough to dry to any great extent. We notice many women, girls and boys from town going out to the orchards and earning good wages cutting apricots. The work is not disagreeable and the young folks have a good time, besides earning a snug sum by their labor. The work at the cannery is progressing lively and from ten to twelve tons of apricots are being packed daily. The plant has every convenience and new improvements for putting the fruit into the cans in the best possible shape and quickest time. The apricot pack will close some time the fore part of next week, and no work on fruit will be done then until the peaches are ready for canning, which will be about the middle of the month. The peach pack will be quite large and the quality of the fruit was never better. On the drying ground a large number of trays are spread out, covered with apricots that were too soft for canning but in prime condition for drying. The drier will be run all through the season.

Tulare.

SUMMER PRUNING.—C. J. Berry in Tulare *Times*: I take the ground that the first and inevitable result of cutting any tree is to do it a direct and irreparable injury; that pruning either root or top destroys existing balance and makes necessary a readjustment of the functions of the root and foliage, causing a suspension of growth and, as a final result, a smaller tree than if it had gone unpruned. Pruning for growth I characterize as absurd. Some people prune to make trees bear well. There is no doubt it does make them bear, for it is an accepted fact that anything which threatens the vitality of a plant causes it to make an effort to reproduce its kind. The only reason, then, why pruning does make a tree bear is because it threatens its vitality. We complain loudly of the rapid increase of those hostile insects and dangerous diseases which now attack our trees and plants. In my opinion, the prevalence of both is due almost wholly to the low vitality and disarranged circulation caused by our defiance of the laws of nature. In attempting to improve upon nature we have got so far removed from her that, continually thwarted, she is unable in her own chosen and proper way to control those diseases and insects; so the duty devolves on us, with what success, satisfaction and profit, each can answer for himself.

A LARGE LEMON ORCHARD. — Visalia *Delta*: The Kaweah Lemon Company has filed articles of incorporation in the County Clerk's office. The capital stock is $72,000, divided into 240 shares of the par value of $300 each. The whole amount of the capital stock has been actually subscribed equally among the directors. This company has purchased 120 acres of fine citrus land in J. W. C. Pogue's ranch at Lime Kiln. Ten acres have already been set out in trees, and 110 acres will be planted next season. The Lisbon variety will be planted.

A GRAPE GROWER'S VIEWS.—Hanford *Sentinel*: C. M. Blowers, the well-known vineyardist, does not attribute the falling of grapes from vines this season to any disease whatever, but says it is due to the cold weather in the early part of the season. When the warm weather came on, the vines took an extraordinary rapid growth. The sap came up freely, and as a consequence the first crop of grapes that had set were partially thrown off. Some of his best vines have the smallest burden of fruitage. He says the vines are growing at a very rapid rate this season. He is a careful observer and not given to imaginary theorizing, and his opinion is reliable. The early summer was an extraordinary cool one for this climate, and the shortage in the first crop of raisins is doubtless due to that cause, as Mr. Blowers says.

SELLING SECOND AND THIRD CROP GRAPES TO WINEMEN.—Hanford *Journal:* A large number of the farmers and fruit growers of Selma held a meeting last Saturday to consider the proposition of the establishment of a distillery in that town to use up the second and third crop of grapes. All those present agreed to sell their second and third crop of grapes to a distillery in that town at $7 per ton. About 5000 tons were desired by Williams, Brown & Co., who are going to establish the distillery, and 3000 tons of this amount have been secured.

Ventura.

SESPE, June 28th.

TO THE EDITOR: It is pretty dry here. Last year we scarcely had our usual quantity of rain; so also of this year. Hay is of excellent quality, but it is light. It is all cut and mostly baled or stacked. We raise little but barley hay here; some few patches of alfalfa. On moist bottom ground corn is looking well, but on dry upland, like mine, it will not make a crop. Beans are growing finely, but for the most part I think the crop will be light. Not nearly so many planted this year as last, in this county. Fruit trees and fruit doing fairly well I believe generally; where irrigated as they are on the Sespe river orange and other trees are growing finely. I have a small garden on the Sespe which I irrigate and which of course looks finely. "They" are boring and getting oil all around me—think some of turning my farm into an oil producer. There are a number of derricks in sight, across the Santa Clara river, oil being pumped from some of them.

S. P. SNOW.

SALES OF NEW CROP LIMA BEANS.—Ventura *Free Press*. One of our largest growers, Wm. Shiells, reports that he has contracted part of his new crop of limas at 2½ cents per pound and that he refused to contract his entire crop at that price. We understand from several prominent growers that buyers have been quite numerous during the past week and $2.35 has been freely offered and refused. Most holders are firm in their views of from 2½ to 3 cents and we doubt if anything less than the latter price would buy any quantity. In view of the small acreage planted and the probable light yield, it would seem as though they were good value at even present prices, and we venture the prediction that no limas will be sold for less than 2½ cents for the next 12 months.

RABBITS INCREASING AS COYOTES DECREASE.—Ventura *Democrat*: Deputy Assessor Webster was over on the Cuyama last week on official business. He says the settlers are cursed with swarms of rabbits that are destroying everything in the shape of foliage or vegetation in sight. The presence of these pests in countless numbers is ascribed largely to the coyote scalp law. Since the latter animals have been hunted and killed for the bounty offered for their scalps, the rabbits have multiplied in such numbers as to threaten the destruction of crops in every section of the county. The enactment of the scalp law looks to us very much like jumping out of the frying pan into the fire.

OREGON.

CODLIN MOTH IN WESTERN OREGON.—Eugene *Register:* The destructive little codlin moth is already at work in the apples, and the chances are that by the time the winter apples are ripe the codlin moth will have them pretty well eaten up. An inspection of almost any apple tree will show that where two apples touch each other the codlin moth has begun his work and is boring into them. So far as we can learn but little spraying has been done in the country to dispose of these pests or to check their destructive work. Something must be done to rid the orchards of them or in a year or two the apples will be worthless.

FRUITS FOR THE WORLD'S FAIR.—Eugene *Register:* The State Horticultural Society is actively at work making arrangements for the display of Oregon products to be made at the World's Fair at Chicago next year. Last January a committee was appointed to take charge of the matter, and it announces that it has just received a shipment of nearly a carload of glass jars in which to put up the fruit for the exhibit. These are made especially for exhibit purposes. They are of all sizes, from one quart to seven gallons, and when filled with Oregon fruit will certainly make a very elegant exhibit. The committee is now ready to receive fruits of all kinds, with which to fill these jars. It is not only desired that the very best of all kinds that are grown in the State shall be thus secured, but that all parts of the State shall be represented. The name of the grower, with the address, together with the name of the fruit, will be placed on each jar.

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REMEMBER THAT THE GREAT COLUMBIAN WORLD'S FAIR opens in May of next year. Hence, all agricultural exhibits must be collected this year.

The State Board of Agriculture stands ready to assist the producer, and by gathering your exhibits and showing them at home at the State Fair, you can take advantage of the cash awards to assist you in the good work. All exhibits shown at the State Fair will be kept free of storage until their removal. BEGIN WITH HARVEST.

MERCHANTS AND PROPERTY-OWNERS in each county are interested as much as the farmer, and should lead in the ORGANIZATION OF COUNTY-EXHIBIT COMMITTEES.

Do not overlook the chance of getting money to remunerate you, right here at home; it is to be given away at the State Fair of 1892. Come and get some of it.

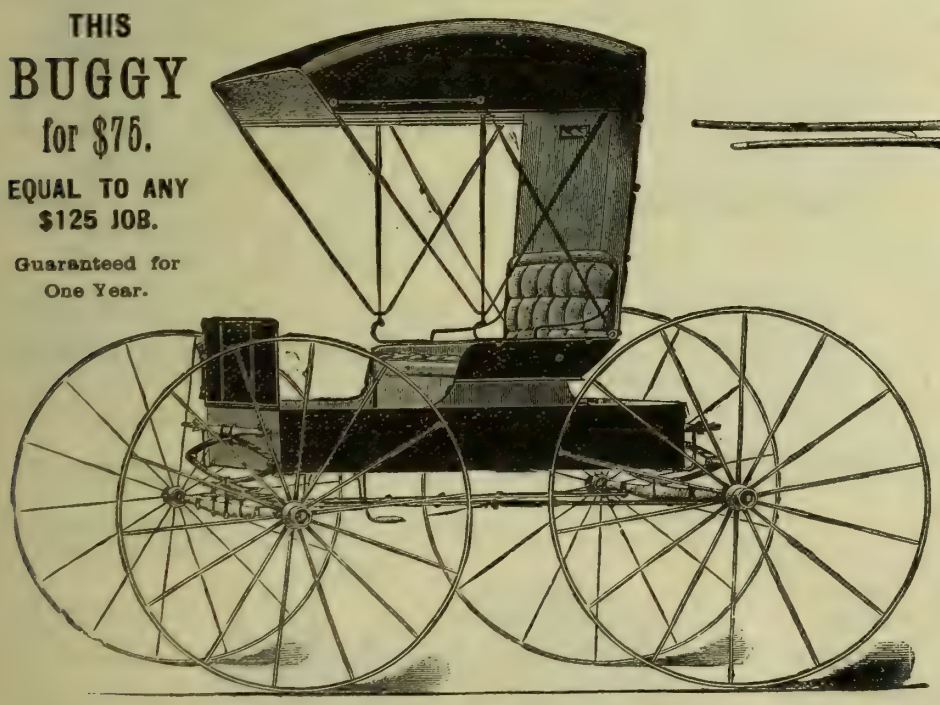
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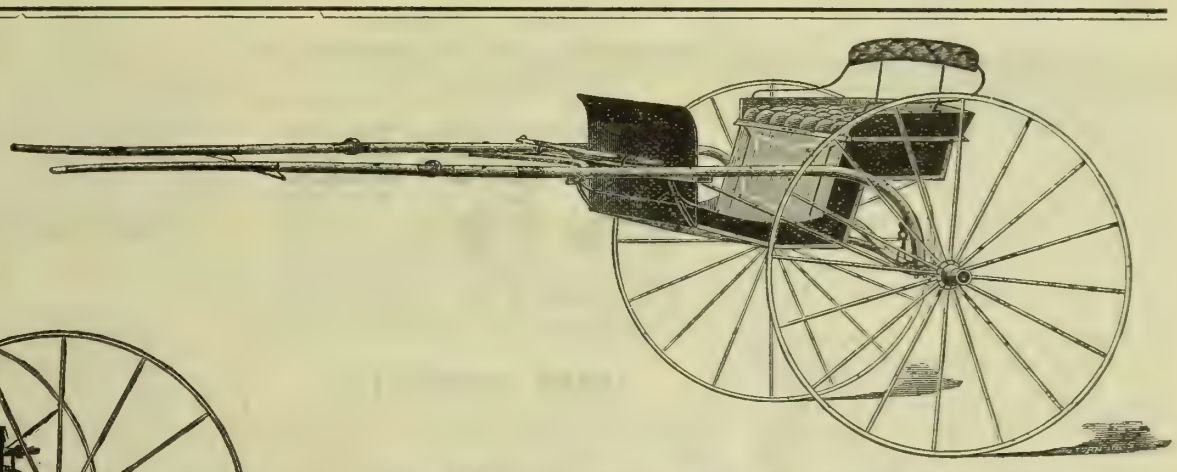
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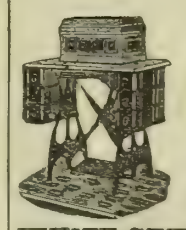
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DOMESTIC ECONOMY.

LAYING LINOLEUMS.—While it is difficult to follow a system in fitting oilcloths and linoleums, a few cardinal rules must be observed, and we venture to suggest them. In cutting linoleum from a diagram allow an inch at the ends. If it is not to be laid at once allow also a fraction on the width, for shrinkage is probable both ways. Get the diagram correct to the fraction of an inch, so that if cutting must be done for centerpieces or register holes it can be done before the cloth is laid on the room. Tack linoleum after butting the edges evenly within an invisible brad, say four inches apart, and if possible line the edges with an adhesive paste. Get the floor smooth by dressing the planks. Do not try to even it up by laying strips of paper lining over sinks in the floor. Nothing but a jack plane will serve. The future service of the cloth will depend upon the floor being perfectly smooth. A nicely laid linoleum needs no binding, but should binding be desired for sake of appearance, use one-half-inch brass binding. Let linoleum, like oilcloth, lay face down several days in the store before fitting it. Another reason for having the cloth made perfectly ready for the apartment is to avoid scratching the baseboard with surplus cloth, and the certainty of cutting the ends untrue. The balance of the detail must be left to the skill of the layer. We offer no antidote for blisters and puffs which appear in the center of sheets of linoleum and oilcloth. The manufacturer comes in there. The seller had better lie low, and hope that Mrs. Jones will not put much stress on that "little swell," for he is powerless to help it.—Carpet and Upholstery.

EGG AND MILK.—Take a fresh egg, break it in a saucer, and with a three-pronged fork beat it until it is as thick as batter. Have ready half a pint of new milk sweetened with white sugar, stir the egg into the milk, and serve it with a piece of sponge cake or slice of tost. It is considered very light, nourishing food for an invalid. Some prefer the yolk and white of the egg beaten separately. The yolk should be beaten till it is very light and thick, then pour it into the sweetened milk; afterward beat the white till it will stand alone, and add gradually half a teaspoonful of white sugar; pile the white on the top of the milk and serve as before.

ORANGE CUSTARD PUDDING.—Boil a pint of new milk, pour it upon three eggs lightly beaten, mix in the grated peel of an orange and two ounces of loaf sugar; beat all together for ten minutes, then pour the custard into a pie dish, set it into another containing a little water, and put it into a moderate oven. When the custard is set, which generally takes about half an hour, take it out and let it get cold. Then sprinkle over rather thickly some very fine sugar, and brown with a salamander. This should be eaten cold.

CHEESE FRITTERS. — Slice thin half a dozen large, tart apples, and prepare half as many thin slices of cheese. Beat up one or two eggs, according to the quantity required, and season high with salt, mustard and a little pepper. Lay the slices of cheese to soak for a few minutes in the mixture. Then put each slice between two slices of apples, sandwich style, and dip the whole in the beaten egg. Fry in hot butter and serve hot.

POTATO SOUP.—A quarter of a pound of butter, three large onions peeled and sliced small; stew in a stewpan until brown; stir frequently. When ready have peeled three or four dozen of medium size white potatoes, and slice them into the stewpan with the onions and butter. Pour sufficient boiling water over for the amount of soup desired. Let them boil for two hours, and then strain through a sieve in a soup tureen. Season with salt and pepper.

FRUIT MUFFINS.—Mix equal parts of well-cooked graham flour, B. oatmeal and water, and bake in muffin rings for 20 minutes, or until the cakes will slip through the rings without sticking. While hot, split in halves; on one half place ripe fruit, lightly sprinkled with sugar, then immediately cover with the other half. When all are thus fruit covered, set in a warm place for ten minutes before serving.

PINEAPPLE TRIFLE.—Pick a pineapple into small bits with a silver fork Make it quite sweet, and let it stand until the sugar is melted. Mix with it as much dry sponge cake, crumbled fine, as it will moisten. Bake half an hour and cover with a meringue.

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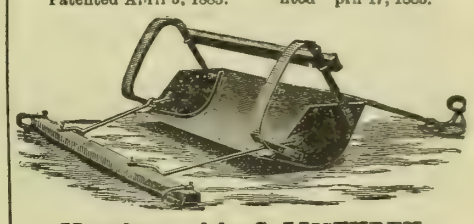
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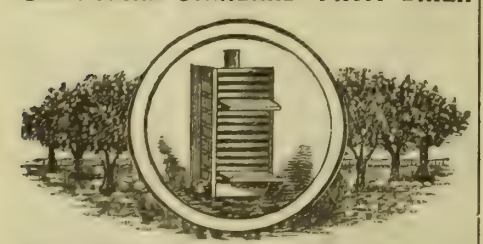
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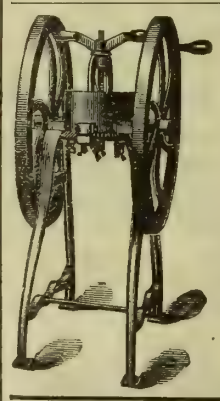
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, July 6, 1892.

General trade was interrupted by a two-day holiday, from which it has not fully recovered at this writing. A large number of business men is still absent (visiting at the various summer resorts), and will not probably return before the close of the week. By the 15th of the current month, it is claimed, business will have resumed its normal condition, when far more active times can reasonably be looked for. Harvest work is being vigorously pushed in all parts of the State under favorable circumstances. Crops are averaging larger than had been estimated, so that, with good crops, as a rule, and the outlook promising for remunerative prices, we should have more prosperous times. The money market continues to favor borrowers with first-class or gilt-edged securities.

Foreign Grain Review.

LONDON, July 4.—The Mark Lane *Express* says: English wheats are dull and 6d to 6s lower; foreign 6d lower. It is estimated that 3,000,000 quarters of foreign wheat and 100,000 sacks of flour have been placed in warehouse. Maize is weaker; oats have declined 3d, white American selling 17s. Rye is firmer; beans and peas 6d cheaper. At to-day's market, flour was weaker; English was in better demand than foreign. There was but little business in barley; grinding borts dropped 6d. There was a fair inquiry for maize; round corn fell 3d; other borts are unchanged. Oats and barley are lower. Beans and peas are neglected.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June.	July.	Aug.	Sept.	Oct.	Nov.
Thursday	....	6s07 d	6s08 d	6s8½d	6s08½d	6s09 d
Friday	6s07½d	6s06½d	6s07½d	6s.8½d	6s08½d	....
Saturday	....	....	....	....	....	....
Monday	....	....	....	....	....	....
Tuesday	6s03 d	6s06½d	6s07½d	6s08½d	6s09½d	6s09½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	
Thursday	34s3d	34s3 i	31s3d	Easy.	Weather.
Friday	34s3d	34s3d	34s3d	Weaker.	Warm.
Saturday	....	....	....		
Monday	....	....	....		
Tuesday	....	....	34s6d	Neglected.	Favorable.

To-day's cablegram is as follows:

LIVERPOOL, July 6.—WHEAT—Not much in demand. California spot 7s; off coast, 34s; just shipped, 34s; nearly due, 34s; cargoes off coast, quiet but steady; cargoes on passage, not much demand; Mark Mane wheat, slow; French country markets, under influence of fine weather, markets cheaper; weather in England, fair with showers.

New York.

The following shows the closing prices of wheat for the past week:

Day.	July	Aug.	Sept.	Oct.	Nov.
Thursday	143½	144½	147½	....	....
Friday	143½	143½	144	145½	....
Saturday	....	....	....	....	....
Monday	....	....	....	....	....
Tuesday	143½	143½	144½	145½	....

The following are to-days' telegram:

NEW YORK, July 6.—WHEAT—85⅞c for July, 85¾c for August, 89c for December and 93⅛c for May.

CHICAGO, July 6.—WHEAT—78⅜c for July, 78¼c for September and 80¾c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	137½	....	....	....	142⅜
" lowest	137	....	....	....	142
Friday, highest	137½	....	....	....	....
" lowest	136⅜	....	....	....	....
Saturday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Monday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Tuesday, highest	136½	....	....	....	....
" lowest	136½	....	....	....	....

The following are to-day's recorded sales on Call:

Morning Informal.—Seller 1892, 100 tons, $1.36½; 300, $1.37½ ₩ ctl. Regular Session.—Seller 1892, 100 tons, $1.36½; 2100, $1.36¾; 2300, $1.36⅝. Buyer December, 100 tons, $1.40½; 100, $1.40⅝; 100, $1.41¼ ₩ ctl. Afternoon.—Seller 1892, 1800 tons, $1.37½; 1100, $1.36¾. Buyer December, 400 tons, $1.40½; September, 100 tons, $1.37½ per ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, highest	92½	....	94	....	....
" lowest	92½	....	94	....	....
Friday, highest	92½	....	....	....	....
" lowest	92½	....	....	....	....
Saturday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Monday, highest	....	....	....	....	95½
" lowest	91½	....	....	....	95½

The following are to-day's recorded sales on Call:

Informal.—Seller 1892, new, 100 tons, 91½c. Regular Session.—Seller 1892, new, 600 tons, 91½c; 100, 91½c per ctl Afternoon.—Seller 1892, new, 100 tons, 9 ½c; 400, 91½c; 300, 91½c per ctl.

Markets by Telegraph.

California Dried Fruit.

NEW YORK, July 4.—The remaining raisins are in few hands. Five hundred boxes of common layers brought $1 10; good to prime three-crown bags are worth 4¾c and 5c. The proposed dictation of prices for new crop which reach us is deemed untimely and injudicious. The Coast has effectively pushed Spain aside, but with her natural inclination to regain her commercial position the 2½c duty on her product might not prove a severe handicap if domestic growers overweight their opening prices. Buyers doubt the short apricot crop rumors and are loth to pay 9½ and 10c free on board; still the inquiry is strong at the close and points to early materialization. There will be little sun-drying of North Carolina or Georgia peaches this season; also few Eastern cherries.

Eastern Wool Markets.

NEW YORK, July 1.—Manufacturers are buying wool more freely, though none of the leading markets can be called active. New wools are being bought in from the West at much higher prices than manufacturers are willing to pay, while the whole tendency is toward advance. Manufacturers will not accept it unless the quality of wool is superior to that of last year. At the old prices sales would now be large, for the majority of the manufacturers are short of stock. The supply of new wools which is now in the Eastern markets is large and is steadily increasing. There is a good demand for Texas wools. Territory wools are coming along more freely and sales are larger. There is a quiet trade in pulled wools. New lamb's wool is beginning to come forward. Receipts will steadily increase during July. Dealers have only light stocks. Pulled wools are holding quotations firm, as manufacturers will need all now on the market. A good strong demand is noted for Australian wools. London sales prices have been advanced from 5 to 10 per cent on fine Merinos and crossbreds. Prices abroad are higher relatively than here. Wools which are now being sold here cannot be duplicated at the same prices. It is estimated that 5000 bales have been taken for this country. The advance in London will influence greatly American markets, particularly prices in Ohio and Michigan wools, competitors of Australia. Some large sales in Cordova wool are reported. Otherwise carpet wools are quiet.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending July 5, '92, were as follows:

Flour, qr. sks	34,235	Bran, sks	4,071
Wheat, ctls	110,572	Buckwheat "	....
Barley, "	56,460	Middlings "	1,156
Rye, "	642	Chicory, bbls	105
Oats, "	2,482	Hops, "	....
Corn, "	3,895	Wool, "	2,657
*Butter, "	1,077	Hay, ton	2,213
do bxs	820	Straw, "	100
do bbls	17	Wine, gals	144,078
do kegs	32	Brandy, "	5,810
do tubs	259	Raisins, bxs	468
do ½ bxs	125	Honey, cs	114
†Cheese, ctls	953	Peanuts, sks	745
do bxs	191	Walnuts "	14
Eggs, doz	28,300	Almonds "	....
do " Eastern	108,500	Mustard "	....
Beans, sks	5,667	Flax "	6,468
Potatoes, sks	16,367	Popcorn "	....
Onions, "	1,949	Broom corn, bbls	....

*Overl'd, 269 ctls. †Overland, —ctls.

English Hop Crop Notes.

W. H. & H. Le May, in their London circular June 20, say: The low temperature of the last week has seriously checked the growth of the bine, and it has now a very yellow and sticky appearance, and in many gardens is still only half way up the poles; fly has increased in the Kent and Sussex plantations, and there is a sprinkling of lice to be found in all gardens; many districts of these counties, Worcester and Hereford, are in a black blight. It is easy to find from 20 to 200 fly on a pole in most gardens. Surrey and Hants are in about the same state as Kent and Sussex.

Cereals.

Mark Lane *Express*, June 20th, says: The present promise for the United Kingdom, allowing for diminished area under wheat cultivation, is for a crop about one million qrs. smaller than that of last year. The barley seems to have made very satisfactory progress of late, and on the fine malting barley soils of Suffolk and Essex should be a remunerative yield.

English wheat for May had an average of 31s. 3d. being a fall of 9s. 2d. on the twelvemonth, and of 11d. even from that very cheap year 1890. Since January 1st of the present year the fall was about four shillings. The first fortnight of June has seen a further retrogression of 10d. on the qr. in the country and of 7d. in London, where a mean value of 31s. 9d. is now quoted against 32s. 4d. formerly obtained. Value seems to be ebbing at a rate which will, if not checked, give us a June wheat average of under 30s. per qr. as in 1889, a year of depression in summer prices for which parallel has to be sought outside the nineteenth century. The last two days of trade, Friday and Saturday, afford some slight hope that the downward movement will go no further. There are no large reserves in farmers' hands, and if these reserves are held from now over harvest —even if only half of them are—the gravity of the present situation will be greatly mitigated. The following special table has been prepared to help the reader to estimate what further supplies of the three chief imported staples are likely to come to hand during the remainder of the present cereal year. Of the wheat afloat, the Californian will not all come to hand before August 31, but against this may be written off the shipments under contract from the Atlantic ports for July by steamer. These will arrive during August, and will come into this cereal year's figures, but they cannot yet be indicated in precise statistics:—

GRAIN AFLOAT ON JUNE 15 FOR SIX YEARS.

	Wheat. qrs.	Maize. qrs.	Barley. qrs.
1892	2,556,000	455,000	114,000
1891	2,839,000	444,000	157,000
1890	2 255,000	525,000	127,000
1889	1,320,000	498,000	156,000
1888	2,258,000	420,000	141,000
1887	1,824,000	385,000	100,000

This extended comparison enables us to see that the wheat now afloat is, if a large, at least not an unprecedented quantity, that the expectations of maize are as nearly as possible an average, and that the floating quantity of barley must be considered small.

Beerbohm gave an estimate on the Indian wheat crop making it materially less than had been anticipated. Estimates hitherto made a decrease in the crop of 25 to 30 million bushels, but his estimates to-day showed a decrease of 64,000,000 bushels in the crop in India, which would reduce the total to 191,000,000 bushels. The average is about 240,000,000 bushels. Some doubt was cast upon this owing to the fact that the Indian shipments for this season have been nearly as large as they were for the corresponding time last year The total from April 1 up to date amounts to 16,400,000, against 17,080,000 for the corresponding time last year.

The decrease in stocks has been quite rapid all over the world, and a well-known Liverpool authority, the *Commercial Trade Journal* estimates that the decrease in the world's visible supply in June will be 40,000,000 bushels. The crop outlook abroad is fairly good in nearly all countries. None of the advices indicate a heavy outturn and a few a serious deficiency.

In the local market wheat held strong, notwithstanding Saturday and Monday were holidays. Yesterday buyers entered the market and paid an advance in the country on last week's quotations. More deep sea vessels arriving, combined with several chartered vessels' lay days being about out, were important factors in our market. It is now authoritatively asserted that the crops in the United States will not be much if any larger than has been estimated by the RURAL PRESS. In this State harvesting is well under way, and the outturn is proving to be larger than was expected. The grain also averages plumper than the outlook promised three weeks ago. There are many localities where the grain is shriveled and the grade poor, but these are the exceptions rather than the rule. Advices from Eastern Oregon and Eastern Washington are confirmatory of a light yield. Although an increased acreage had been seeded, yet the outturn will be below that in last year. The grade will also be poorer.

On June 21st, the Oregon Crop-Weather Bulletin reported as follows (since that date no change for the better has taken place): As a rule, in Wasco, Sherman, Gilliam and Morrow counties, the wheat prospects are poor. "The prospects are gloomy," write several correspondents. Fall grain is past saving in these counties. It is estimated that two-thirds of the wheat in these four counties will not make over one-half a crop, and the other one-third will not make hay. In Umatilla county, north and east of Pendleton, the crop is in a fair condition, but not an average; to the west of Pendleton, it is almost a failure. In Union and Wallowa counties, the crop is better than in any other of the counties; but yet in these two counties it is not an average. In Baker, Malheur and in all counties south of the Blue mountains, the grain was more or less injured by frosts and the drying winds, so that, while the hay is an average crop, the oats and wheat are poor. Rye is generally a pretty good crop. Sheep-shearing is about completed, and most of the sheep have been moved to the summer range in the mountains.

The bears on 'Change succeeded in shading the barley market just before the Fourth, but on yesterday (Tuesday) prices were advanced under stronger buying. The heavy receipts in June were for delivery on last season's contracts, but as the grain went into strong hands, dealers and buyers in general were not able to secure any at lower prices. The crop in Oregon and Washington will not be as large in this year as it was in 1891. Crop advices from the Central States are conflicting, but the general tenor is that they will be short when compared with the crop in last year. In both France and England, the crop does not promise to be an average yield to the acre, and as the supply of old will be light, it is thought free importing will be necessary to meet the requirement. The outturn in this State promises to be larger than it was in last year, with the grade generally better.

Oats have held to steady prices. Receipts have only been fair, while the demand has been fairly active. The impression prevails that prices will average higher in the season of 1892–93 than they did the past season.

Corn ruled dull and easy throughout the past week, but at the close the market appears to be steadying. The crop in the States east of the Rocky mountains will be quite short, and higher prices are among the certainties.

Rye continues dull and in buyers' favor.

Corn was offering freely to-day at a decline. Samples of Utah corn for shipment were exhibited, which caused the decline.

Feedstuff.

The market held to firm prices throughout the week. The light receipts of bran and middlings caused the market in them to clean up, while ground and rolled barley and feed meal went off fairly well. The home consumption and shipping demand appears to be enlarging.

Now that the new storage season has been entered and the Fourth passed, a more active demand should set in soon. The crop in the southern part of the State is short; in the central counties it is fair, and in the northern counties it is fairly large. In the coast counties the crop ranges from fair to large. Western Oregon and Western Washington will have good crops, but east of the Cascades it will be light. The consumption in this State is enlarging.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in May were as follows:

Sources.	Butter, lbs.	Cheese. lbs.	Eggs, doz.
California	1,517,500	593,300	168,095
Oregon	16,600	12,500	1,350
Eastern	277,100	28,500	434,290
Totals	1,811,200	633,100	603,735
January	502,200	476,900	420,345
February	622 550	313,500	200,765
March	1,188,700	574,290	358,756
April	1,793,050	802,900	590,068
May	1,713,100	715,900	536,170
Six months	7,630,800	3,517,500	2,759,839

During the first six months in 1891, the receipts aggregated as follows: Butter, 7,034,100 lbs.; cheese, 3,249,200 lbs.; eggs, 2,560,032 dozen.

Butter shaded off the past week, with the closing barely steady. The lateness of the season for packing and a decreasing outlet are against sellers. Eastern advices are favorable to the holding interests, for the output of the dairies are said to be less up to July 1, than it was during the corresponding term in 1891. While a few brands of Californian sell at an advance, in a small way, on our outside quotations, yet to quote the prices would be deceiving in a dull and weak market.

Cheese has held steady for choice to gilt-edged full cream, but for poor to fair the market has ruled in buyer's favor. The market, taken as a whole, is steady, with a firmer undertone.

The strong selling competition between receivers of Eastern eggs appears to be giving way. The market is cleaning up. "As is" Eastern eggs are still poor sellers, but candled, and the packs of several well-known reliable packers are firmer. California eggs are firmer, with the market cleaning up. It looks now as if the market will soon do better.

Fruit.

Berries and currants are said to be better in quality and of larger general average size than for two or more years past. Prices have been quite remunerative in consequence of the improvement in quality and size, combined with barely an average crop. Currants are going out as are gooseberries. Longworth strawberries are scarce.

In tree fruit the market holds to good prices. Like berries, the fruit averages better in quality and of larger size than for two or more years past. Cherries are going out. Oregon advices report that we need not expect many cherries from that State, as the crop is short; the same advices are received regarding prunes and other tree fruits. Bartlett and Dearborn seedling pears are in fair receipt, and when suitable for shipping fetch quotations. Apricots are selling well, with canners running chiefly on Peach and Moorpark. Royals are taken chiefly for table use. Hale's Early peaches are coming in larger and better in quality. Duane's purple plums are in heavy supply and sell for less money. Apples are slightly lower. The first cantaloupes and watermelons came in on Tuesday from G. W. Thissell Jr., Winters. The watermelons brought $2.50 ₩ crate and the cantaloupes 50c each. M. Farrell of Vacaville, sent in on Tuesday the first white nectarines. They sold for $1.50 ₩ box. Canners and dryers are contracting at the following figures, prices being regulated by quality and location: Bartlett pears, $30@40 per ton; plums, $20@27.50; peaches, $37.50@50; nectarines, $30@35; apricots, $25@37.50; prunes, $35@45. Some claim that slightly higher prices are paid for choice in favored localities.

For raisins in the sweat, the range of prices is placed at 4½@5½c. With very few second and third crops cured, the grapes ought to average better than ever before and fetch better prices. Poor raisins do not pay to market.

For grapes previously quoted, contract prices are said still to hold good.

There are a number of inquiries from England about prunes. Dried apricots are meeting with a good demand, and, as for that, all new crop dried fruits are being inquired after by Eastern buyers, The market is strong.

The fruit market to-day was stronger. Dealers look for an active shipping demand to-morrow and Friday.

Vegetables.

Seasonable vegetables are coming in quite freely, causing more shading in prices. Early varieties are scarce, and when the quality is good, they fetch higher prices. Considerable complaint is heard of vegetables received by rail being more or less unmerchantable owing to extreme heat. At the close the weather is cooler, and it ought to come to hand in better condition.

Red onions are very low. The average price paid is 17½ cents per sack. Silverskin are easy under few receipts.

Potatoes have held up well, although at the close a weaker feeling set in under free receipts and a selling pressure to save expenses. A better shipping demand is expected to set in from Texas and other demand States. This year the potatoes in the central and northern counties are fair, but in the southern counties, buyers say they are, as a rule, poor.

Live Stock.

The consumption of all kinds of meats is light in this and neighboring cities, owing to free supplies and lower prices for fruit and vegetables. Hog product has advanced, which ought to create a better demand with farmers for mutton sheep, calves and hogs.

Miscellaneous.

The poultry market cleaned up during the holidays, and that now coming to hand finds a ready market at an advance in prices. It is said that two carloads of Eastern are due to arrive at the close of the week. It is claimed that these will be placed without disturbing values much. There is a great scarcity of choice, well-conditioned poultry.

A very strong bear pressure on hops continues to be made by dealers. So far as we are able to learn, this pressure is not warranted by crop advices, but perhaps it is done so as to buy cheap, well knowing that better prices are apt to rule.

Wool continues to move off freely. A lack of assortments is severely felt. Eastern advices indicate better prices; notwithstanding, manufacturers continue the practice of buying in a hand-to-mouth way.

New crop honey is coming in more freely, and better prices rule. The crop throughout the United States, it is now claimed, will be short.

Hams are higher, and bacon and lard are strong.

Lima beans are advancing. Contracts for new crop have been made in Ventura county at 2¼ cts. per pound. The crop this year will be light.

From reliable advices up to June 15, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	252,129	319,209	*172,521	41,894
San Diego	12,715	25,273	4,019	.....
San Pedro	9,131	12,715	....	
Oregon	57,098	29 275	23,212	19,761
Puget Sound	28,003	27,859	.....	
Totals	359,076	414,337	199.752	61,655

*Engaged for wheat, 1892, 47,724; 1891, 25,409.

The statistics of produce exports from this port from July 1, 1891, to July 1, 1892, compiled from the most reliable sources aggregate as follows:

	1891–92.	1890–91.
Wheat, ctls	12,835,424	13,829,947
Flour, bbls	1,170,517	1,183,026
Barley, ctls	1,110,474	316,178

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 6, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 15
Butter	2 50	@	3 05
Pea	2 20	@	2 70
Red	2 00	@	2 20
Pink	2 00	@	2 10
Small White	2 30	@	2 55
Large White	2 20	@	2 45
Lima	2 45	@	2 45
Wid Peas, blk eye	3 00	@	3 30
Do green	1 50	@	2 75
Do Niles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	17	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	21
Eastern	—	@	—
CHEESE			
Cal. choice cream	7½	@	—
Do fair to good	7	@	—
Do gilt edged	—	@	8½
Do skim	5	@	6
Young America	—	@	9½
EGGS.			
Cal. "as is" doz	16½	@	18
Do candled	18	@	20
Do choice	21	@	22
Do fresh laid	23	@	24
Do do selected	25	@	26

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED.			
Bran, ton	17 50	@	18 50
Feedmeal	26 00	@	28 50
Gr'd Barley	21 00	@	23 00
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt	7 50		
HAY.			
Wheat, per ton	11 00	@	—
Do choice	—	@	14 00
Wheat and Oate	10 00	@	12 00
Wild Oats	10 00	@	—
Cultivated do	10 00	@	—
Barley	10 00	@	12 00
Alfalfa	8 00	@	10 00
New Wheat	10 00	@	12 50
Do Wheat & Oat	9 00	@	11
Do Oat	6 00	@	10 00
Do Alfalfa	7 00	@	9 00
Straw, bale	40	@	50
GRAIN, ETC.			
Barley, feed, ctl	83½	@	91½
Do Choice	92½	@	96½
Do Brewing	1 00	@	—
Do do Choice	1 05	@	—
Do do Giltedge	1 10	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 27½	@	—
Yellow, large	1 22½	@	—
Do small	1 27½	@	—
Oats, milling	1 50	@	—
Feed, Choice	1 45	@	—
Do good	1 37½	@	—
Do fair	1 32½	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	1 32½	@	—
Gray	1 32½	@	—
Rye	1 20	@	—
Wheat, milling. Gilt edged	1 47½	@	—
Do Choice	1 45	@	—
Do fair to good	1 41½	@	—
shipping, cho'ce	1 40	@	—
Do good	1 38½	@	—
Do fair	1	@	—
WEDNESDAY, July 6, 1892.			
Do fair	1 36½	@	—
Common	1 33½	@	—
Butter	1 33¾	@	1 40
Sonora	1 33¾	@	1 40
HOPS.			
1891 Choice to Ex.	25	@	—
Fair to Good	22	@	—
FLOUR.			
Extra, City Mills	4 65	@	4 75
Do Country Mills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, std and.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	55
POTATOES.			
Early Rose, ctl	55	@	75
Do do in boxes	75	@	1 15
Peerless	65	@	85
Do in boxes	70	@	1 00
Garnet Chilies	60	@	90
Burbank Seedlings	60	@	85
Do do in boxes	75	@	1 15
POULTRY.			
Hens, doz	7 50	@	9 00
Roosters, old	6 50	@	7 50
Do young	7 50	@	10 00
Broilers, small	2 50	@	4 00
Do large	5 00	@	6 00
Fryers	6 50	@	7 50
Ducks	4 00	@	5 00
do, large	5 50	@	6 00
do, extra large	6 50	@	7 00
Geese, pair	1 50	@	1 75
Goslings	—	@	—
Turkeys, Gobl'r	19	@	21
Turkeys, Hens	16	@	19
Manhattan Egg Food ₩ cwt	11 50	@	—
PROVISIONS			
Cal. Bacon, he'vy, lb	10½	@	—
Medium	11½	@	—
Light	13	@	—
Lard	9½	@	12
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	11½	@	—
do Eastern	14½	@	—
SEEDS.			
Alfalfa	9	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL. SPRING, 1892.			
Humb't & Men'cino	17	@	21
dac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala's & F'th'll	16	@	21
Oregon Eastern	12½	@	19
do valley	18	@	23
So'n Coast, def	10	@	12
Nevada (State)	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Ambcr do	5½	@	6
Beeswax, lb	25	@	28

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 6, 1892.

Limes, Mex	4 00	@	5 00
Do Cal	—	@	—
Lemons, box	1 50	@	4 00
Do Sicily	5 00	@	6 00
Oranges, Seedlings	1 25	@	2 25
Do Navels	2 50	@	4 50
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—			
Longworth	7 00	@	8 00
Sharpless	5 00	@	7 00
Gooseberries, bs	4 00	@	7 00
Raspberries, ch	5 00	@	7 00
Currants chest	5 00	@	7 00
Peaches, box	50	@	75
Do in bkt	50	@	80
Bl'kberries ₩ ch	4 00	@	6 00
Figs, blk box	50	@	1 00
Do White do	25	@	75
Apples, com. bx	50	@	1 00
Do Red Astrachan	1 00	@	1 25
Prunes, Tragedy	65	@	85
Plums, Duane's Purple	70	@	1 00
Pears, Dearbo'ns Seedling	1 00	@	1 25
Do Bartlett	1 00	@	1 75
Apricots, pr box	30	@	60
do, per lb	1½	@	1½
Cherries, box Black	75	@	85
Royal Ann	70	@	1 00
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do green, box	50	@	75
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	50
Garlic, lb	2	@	3
Squash, Sum, bx	20	@	35
Tomatoes, box	75	@	1 25
Peas, green, sk	50	@	75
String Beans	2	@	3
Cucumbers, box	40	@	60
do Bay	75	@	1 00
Mushrooms	50	@	75
Egg Plant, lb	17½	@	20
Green Corn, sk	—	@	—
Do sweet ₩ sack	75	@	1 00
Do wt Bay ₩ dz	15	@	25

Continued on next page.

Live Stock.

BEEF.		MUTTON.	
Stall fed	5 @ —	Wethers	7 @—
Grass fed, extra	5 @ —	Ewes	6½@—
First quality	4 @ —	Do Spring	8 @—
Second quality	—@ —	HOGS.	
Third quality	3½@ —	Light, 90 lb. cents	5½@ —
Bulls and thin Cows	2 @ —	Medium	5⅝@ —
VEAL.		Heavy	5 @ —
Range, heavy	4 @ —	Soft	4⅝@ —
Do light	5 @ —	Feeders	3½ @ —
Dairy	6 @ —	Stock Hogs	3½@ —

Grain and Wool Bags.

Calcutta, spot	7 @ 7¾
Wool Bags	36@ 38

Auction Sales of California Fruits.

At New York.

June 29.—Two carloads: Montagamet Apricots $2.45; Royal, $1.25@1.30; Alexander Peaches, $1.35@1.75; St. Catherine Plums, $2.75; Royal Hative, $2.25@2 75. Some fruit overripe and sold for less.

June 29.—Two carloads: Royal Apricots sold for 95c,@$1.60; Montagamet Apricots, $3 45; Alexander Peaches, $1.30@2.35; Royal Anne Cherries, $2.10@2.20; Republican Cherries, $2.85; Royal Hative Plums, $2.40@2.45; Clyman Plums, $2.90. Gross sale of both cars, $6,510.

June 30.—Two carloads: Royal Apricots, $1.30@1.35; Alexander Peaches, $1.35@1.50; St. Catherine Plums, $2.65@2.75; Royal Hative Plums, $2.40. Some fruit which arrived in bad condition sold for less.

June 30.—Three carloads: Royal Apricots, 70c@$2.65; Alexander Peaches, 1.15@1.75; Tragedy Prunes, $5.05; Koenig Claude Plums, $2.40; Royal Hative Plums, $2.57; Figs, $4.50. Gross sales of three cars, $1,460.

July 1.—Five carloads: Royal Apricots, 75c@$1,25; Moorpark Apricots, $1@1.10; Alexander Peaches, $1.20@1 90; Tragedy Prunes, $3.30@3.65; Royal Hative Plums, $2 05@2 90; Figs, $3.60; Clyman Plums, $2.05. Gross sale of five cars, $6,087. New York dispatch reads: Raining very hard; weather bad.

July 2.—Three carloads: Royal apricots, $1@1.35; Alexander peaches, $1.30@1.90; Garland peaches, $1.65; Hale's Early peaches, $1.80; Briggs' Early May peaches, $1.55; St. Catherine plums, $3; Simoni prunes, $6.40; Royal Hative plums, $3.10@3.25; Peach plums; $3.45; California figs, $2.30@2.75.

July 5.—Three carloads: Peach plums, $6.50; Tragedy prunes, $4@6.50; Jackson plums, $2.70; Black figs, $6.75; Apricots, $1.05@2.65; Royal Hative plums, $2.05 @$3.

At Chicago.

June 29.—Two carloads: Royal apricots, $1.10@1.20; Alexander peaches, $1.35@1.50; Hale's Early peaches, $1.25; Briggs' Red May, $1.25; Garland, $1.14; Royal Hative plums, $2.30; St. Catherine, $2 35; Brunswick figs, $1.80. Some fruit in bad order sold for less.

June 29.—Two carloads: Royal apricots, 75c@$1.75; Alexander peaches, $1.20@4; Royal Anne cherries, $1.20@1 70; Clyman plums, $2.25; Tragedy prunes, $4@4 05; Blackberries, 80c.; figs, $2: Abundance plums, $4.

June 30.—Six carloads: Goodell Refrigerator Car No. 16,266 sold for $3,732 gross. Black Republican cherries in this car sold for $1.85@2.50; Royal Anne cherries, $1.65@2.25; plums, $1.85. Prices realized for other varieties of fruit were as follows: Apricots, $1.10@2; peaches, $1.25@1.60; Cherry plums, $1 35 for 10-lb boxes, 75c. for half boxes; Madeline pears, $1.40@1.60; Tragedy prunes, $3.30@3.80; Royal Hative plums, $2@2.80; Clyman plums, $1.85; Bartlett pears, $4.

June 30.—One carload: Alexander peaches, $1.40; Early peaches, $1.50; Briggs May peaches, $1.20@1.26; Cherry plums, $1.85; Peach apricots, $1.05; Royal apricots, $1. Some fruit overripe sold for less.

July 1. Two carloads: Tragedy prunes, $3.85; Alexander peaches, $1.20@1.50; Early May peaches, $1.25@1.40; Garland peaches, $1.40; Royal apricots, $1.10@1.40; St. Catherine plums, $2.85.

July 1.—Two carloads: Alexander peaches sold for $1.20@1.65; McKevitt's Early peaches, $2.65; Royal Hative plums, $2.60@2.70; pears, $1.55; Royal apricots, $1.00@1.40.

July 3.—Three carloads: Royal Apricots, 90c@$1.30; Alexander peaches, $1.25@$1.50; Figs, $1.60; Royal Hative plums, $2.30@2.90; Washington plums, $3.75; Peach plums, $2.60@3.75; Bartlett pears, $4; Tragedy prunes, $2.70@3.45; apples, $1.10.

July 2.—Two carloads: Cherries averaged $1.95 per box; Alexander peaches, $1.30@1.45; Hale's Early peaches, $1.40@1.37; Early May peaches, $1.25@1.30; Royal apricots, $1@1.35; Smith's Triumph apricots, $1 65; Newcastle apricots, $1.05; Moorpark apricots, $1.30@1.58; Cherry plums, $2.10; Bartlett pears, half-boxes, $2; California figs, $1.53; Black figs, $1.45.

July 5.—Two carloads: Royal apricots, $1.15@1.30; Triumphs, $1.30; Moorpark apricots, $1.15@1.40; Alexander peaches, $1.35@1.60; Hale's Early peaches, $1.35@1.50; St. John peaches, $3@3.25; Early Crawfords, $3.30; Royal Hative plums, $2.40@2.55; Peach plums, $2.85@3 35; Duane's Purple plums, $3.25; St. Catherine's, $2.45@2.55; Tragedy prunes, $3@3.25; Bartlett pears, $3.40; Figs, $1.65@1.50.

July 5th.—Four carloads: Bartlett pears sold at $3.20@3.55; Clapp's Favorites, $3.50; Beurre Giffords, half boxes, $1.40@1.55; Royal apricots, $1.15@1.35; St. John peaches, $2.45@3.25; Alexander peaches, $1.30@1.60; Hale's Early peaches, $1.35; Figs, $1.60; Peach plums, $2.60@3.35; Tragedy prunes $2.75@3.55; Plums, $3.45; Tragedy prunes, $2.75@3 55; Royal Hative Plums, $1.95@2.25 for very small stock, while good size stock brought $2.40@2.50; Purple Duanes, $2.60; Moorpark apricots, $1.15@1.25; Governor Garland peaches, $1.30.

At Minneapolis.

June 29th.—One carload: Plums sold for $2; peaches, $1.40@1.55; Apricots, $1.35@1 45.

June 29.—One carload: Royal apricots, $1.20; Alexander peaches, $1.40; Hale's Early peaches, $1.40; Cherry plums, $1.48; Centennial cherries, $1.25; Royal Anne, $1.25.

June 30.—One carload: Apricots averaged $1; peaches, $1.20@1.25.

July 1.—One carload: Peaches, $1.35@1.50; Apricots, $1@1.15; Plums, $2@2.30; Figs, $1.20.

July 5.—One carload: Peaches, $1.45@1.75; Apricots, 90c@$1 15.

At Boston.

June 30.—Two carloads: Apricots averaged $1.36; Peaches $1.85; Koenig Claude plums, $2.87; Clyman plums, $2.75; Tragedy prunes, $4.25; Figs, $3.12.

July 1.—One carload: Apricots sold to average $1.15@1.17; Peaches, $1.77; Royal Hative plums, $3 62. Gross sale of car, $1,685. Weather bad.

July 2.—One carload: Royal apricots, $1.24@2.05; St. Catherine plums, $2 69@5; Simoni prunes, $7.25; Royal Hative plums, $3.49; Alexander peaches, $1.24@2 75; California figs, $1.85@2.15; Newcastle apricots, $2.25.

At Other Cities.

ST. PAUL (Minn.), July 1.—One carload: Royal Apricots, $1.10@1.40; Alexander peaches, $1.50@1.75; Royal Hative Plums, $2.10@2.30; Tragedy prunes, $2.90.

PHILADELPHIA, July 1.—One carload: Royal Hative Plums sold to average $8; Clyman plums, $2.50; Royal apricots, $1.50; Alexander peaches, $2.

KANSAS CITY, July 1.—One carload: Peaches, $1 60 @—; Apricots, $1 50.

OMAHA, July 2.—One carload: Peaches, $1@1.50 per box; Apricots, $1.20@1.80 per crate; Cherries, $1.50 @1.75 per box.

TESTING EMERY WHEELS.—A mechanic recently learned a lesson about emery wheels by nearly getting killed by the bursting of one of them. The wheel was left running while he went out of the room on an errand. As he came back, a piece of the wheel came to meet him, passing within a foot of his head. Luckily no damage was done except to a window, the sash and glass of which went out of doors in company with the broken wheel. There is no need of having such a thing happen. Let a man take an emery wheel in his hand, place the forefinger of his left haud in the mandrel hole of the wheel, with a small wooden mallet (never use a hammer) tap the wheel lightly, and note the sound given forth by the blows. A crack can be quickly detected in this way, and if every wheel was thus tested when it came into the shop, and if the practice were followed up every time a wheel is placed upon the mandrel, there would be no accidents from broken emery wheels.—Woodworker.

CYPRESS TIMBER.—Cypress timber grows very tall, straight and thick, in isolated patches or groups called "brakes," in the shallow swamps, lakes and bayous, usually in from one to five feet of water, and, under favorable conditions, attains an enormous size. The trunk is straight and without limbs often to a height of 75 feet or more, and large trees measure 120 feet in height and 25 feet and over in circumference about the base, which at the ground is often three or four times the diameter of the trunk. Authorities disagree as to the varieties, some claiming that there are three kinds—red, white or yellow, and black—while others claim that they take their names from the color of their heart wood, which varies according to soil and conditions. The white or yellow variety grows largely in Arkansas, while the red and black varieties are found in Louisiana and other Gulf States.—West Coast Lumberman.

INDIA RUBBER PAVEMENT.—A German engineer has paved a bridge with india rubber, and the result has been so satisfactory that it is to be applied on a larger scale. It is found to be more durable than asphalt, and not slippery. "A section of roadway," says the *Railway Review*, "under the gate leading to the departure platform of the St. Pancras terminus, London, has for some years past been paved with india rubber, and many people must have been pleasantly surprised at the deadening of sound when passing over it on wheels, and at the grateful elasticity to the tread when traversing it on foot."

A SEWING MACHINE has been invented which stitches easily and rapidly through layers of leather five-eighths of an inch in thickness, this having been accomplished on a first exhibitory trial; in a second trial, stitches were made evenly and rapidly through a piece of bird's-eye maple three-eighths of an inch thick, and in a third test, the still more remarkable feat was achieved, viz., that of sewing through a layer of brass one-eighth of an inch thick, placed between pieces of leather.—Manufacturers' Gazette.

GLASS BRICKS.—For some time past, transparent glass bricks have been let into the walls to afford light at places where a window would interfere with the architectural plan. But now it is proposed to cast glass, not necessarily transparent, into large blocks for buildings. The material is practically indestructible, perfectly nonabsorbent, and, therefore, damp-proof in a manner which few bricks are, and in this way coarse glass of this kind could be made nearly as cheap as concrete, stone or baked clay.

A DOG belonging to Hercules Tyrius was one day walking along the seashore, when he found and ate a murex, a species of shellfish. Returning to his master the latter noticed that the dog's lips were tinged with color, and in this manner Tyrian purple was discovered. The color was used in the robes of emperors and nobles, and the expression "born to the purple" meant that the person was of high birth.

WE call attention of our readers to the advertisements appearing in our paper from time to time over the signature of Smith's Cash Store. This firm has a large country trade, and can be depended upon to fill all kinds of country orders promptly and at reasonable prices.

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PASTEURIZED MILK.—All methods of sterilization that are in use in this country have the disadvantage of giving to the milk the taste which is peculiar to boiled milk, and also of rendering it less easily absorbed by the body. In France and Germany a method has been adopted which accomplishes the purpose without injuring the taste of the milk. Machines are in use in Paris and some other cities which will heat great quantities of milk to a temperature of about 155° Fahr. for a few minutes, and then cool it rapidly to a low temperature. The method has been called the pasteurization of milk. It does not kill all the bacteria, but it does destroy so many of them that it greatly increases the keeping properties of the milk. Moreover, it almost entirely destroys the danger from disease germs in milk, since nearly all forms likely to occur in milk are killed by this temperature. The advantage of this method is that the temperature of 155° Fahr. does not give to the milk the taste of boiled milk, which most people find unpleasant, and does not render the milk difficult of digestion. These pasteurizing machines have not yet been introduced into this country, and the opportunity exists for some one to develop a thriving business by furnishing pasteurized milk in our large cities. A little experience with its superior keeping properties, and a little knowledge of its great wholesomeness, would soon create a demand for it in America, as it has already done in the larger cities of France and Germany.—Prof. H. W. Conn in Popular Science Monthly.

Monte Vista Resort.

This well established "Summer Resort" opened May 27th. A new feature of the present season is increased accommodations and the opening of a Medical Department. Dr. Munson, resident physician of "Hotel Raymond," Pasadena, will spend the interim of said hotel seasons at Monte Vista. She is a medical graduate of wide celebrity in southern California, making chronic diseases a specialty, to which she brings all latest discoveries. Years of study, and with one of the finest batteries on this coast, she has become an expert in its application to disease. Wonderful success attends her treatment of so-called incurable diseases by discovering that their cause is often the chronic effects of poison oak or ivy which she fully eradicates from the system.

Parties desirous of combining the tonic air of the "Sierras" in their "summer outing" with any needed medical skill will please address: MRS. C. E. KINNEY, Manager, or DR. M. F. MUNSON, Physician, Dutch Flat Station, Placer Co., Cal.

Complimentary Samples.

Persons receiving this paper marked are requested to examin its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos., $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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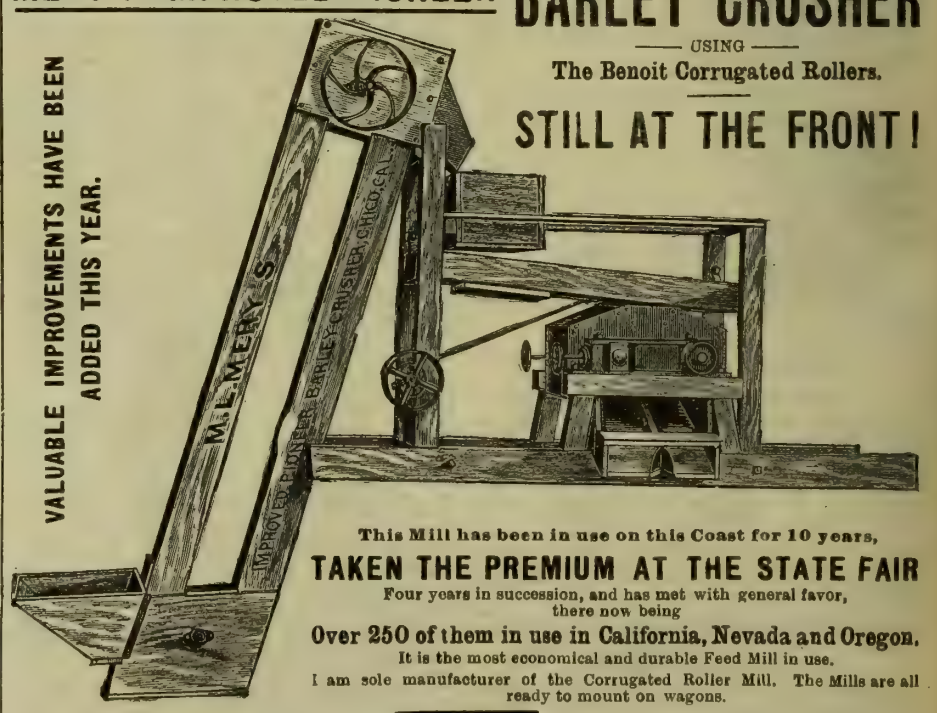
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VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.



This Mill has been in use on this Coast for 10 years,
TAKEN THE PREMIUM AT THE STATE FAIR
Four years in succession, and has met with general favor, there now being
Over 250 of them in use in California, Nevada and Oregon.
It is the most economical and durable Feed Mill in use.
I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND, BUTTE CO., CAL., June 9, 1887.
MR. M. L MERY—Dear Sir: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day and the Crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill. F. E. REAM, JNO. P. SUTTON.

DURHAM, May 21, 1887.
MR. M. L. MERY—Dear Sir: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, and if we got behind we could run through five tons an hour and do good work. The machine I use here is a No. 2. Yours, WM. M. TAYLOR.

I thank the public for their kind patronage received thus far, and hope for a continuance of the same.
M. L. MERY, Chico Iron Works, Chico, Cal.

WANTED IN EACH COUNTY ON THE PACIFIC COAST, RELIABLE MIDDLE AGED WOMAN, with some business experience. Address BOX Y, This Office.

Spontaneous Ignition of Wood Pulp.

Some interesting experiments were recently made in Boston by Edward Atkinson, to determine some questions relating to the spontaneous ignition of wood pulp. According to an exchange, the experiments were made in an Alladin oven, with a thermometer to indicate the temperature. Two slabs of wood pulp were tied in the oven, one in contact with a loose iron shelf, the other without any contact. The first ignited at 370, the last at 430 degrees. In two previous tests, the oven was open when the thermometer reached 425 degrees, but the pulp did not take fire until the introduction of air, when it ignited instantly. In speaking of the matter, Mr. Atkinson says:

"We have been able heretofore to imitate spontaneous combustion by putting animal or mineral oil on fibrous substances; we have tried experiments by mixing mineral or paraffine oil with animal oil to determine the exact point or proportion at which the paraffine or mineral oil will prevent oxygenation of animal or vegetable oil, but there has been no apparent means of making this oxygenation visible until the present test. This test may explain the cause of many fires. Heretofore there has been no knowledge of the ignition by rapid oxygenation of a highly heated substance, mostly carbon or almost pure cellulose, without any admixture of grease or chemical. It would appear that finely divided and moderately heated carbonaceous material, holding air in its pores, may ignite at a relatively lower temperature than ordinary wood. It would seem well, therefore, to avoid the use of sawdust for sweeping floors, and its storage near hot kitchens. Ice houses are kuown to be bad risks. A little gudgeon grease in the sawdust is said by some to explain the reason."

AT THE WORLD'S FAIR.—Sunday's issue of the New York *Herald* contains an article on the World's Columbian Exposition. Speaking of the electrical features of the Fair the article says: Twenty years ago little was known of electricity outside of the telegraph. At this exposition it requires a building of nearly six acres to hold the different electrical inventions, and Edison alone will use up about an acre of space. An electricity firm of Berlin wants nearly an acre, and this firm has offered to spend $200,000 on its electrical exhibit. Edison is getting up new matter for the Fair, and he proposes to show his kinetograph and other things which will be new. The exhibition of electricity in lighting and in power production will be shown in the different buildings in a way never dreamed of before. The electric plant of the World's Fair will cost more than $1,000,000, and electricity will turn night into day. The electrical water display will surpass anything ever attempted. The great basin which runs from the lake to the Administration building will be encircled with electric lights, and lights will be sunk under the water, and the effect will be a lake of gold. The fountain will flow over electric rays of all the colors of the rainbow, and there will be search lights, arc lights and all sorts of electrical appliances, even the most wonderful fireworks operated by electricity and made to go off by the playing of the keys of a piano-like instrument, so that they will change at the will of the player and produce wonderful fire pictures.

THE ALBERT MEDAL.—Mr. Edison has been awarded the Albert Medal of the Society of Arts for the present year, in consideration of the distinguished services rendered by him to the progress of electric-lighting, telegraphy and the telephone. This medal was instituted in 1862 as a memorial of the Prince Consort, for 18 years president of the society, and is awarded annually for distinguished merit in promoting arts, manufacturers, or commerce. It was first awarded, in 1864, to Sir Rowland Hill, and among the distinguished men of science who have since received it are included the names of Faraday, Whitworth, Liebig, Lesseps, Bessemer, Siemens, Armstrong, Thompson, Joule, Hofmann and Helmholtz. In 1887 it was presented to the Queen on the occasion of her jubilee. This is the second occasion on which it has been awarded to an American. In 1884 it was given to Mr. (not, as is often stated, Captain) Eads, in recognition principally of his great engineering works at the mouth of the Mississippi.

THE experiment of the killing of cattle by electricity will soon be tried at the Aberdeen abattoir, where the electric plant is now being installed. If the experiment proves that this manner of killing cattle has no bad influence on the quality of the beef, the application of electricity will hereafter be general.

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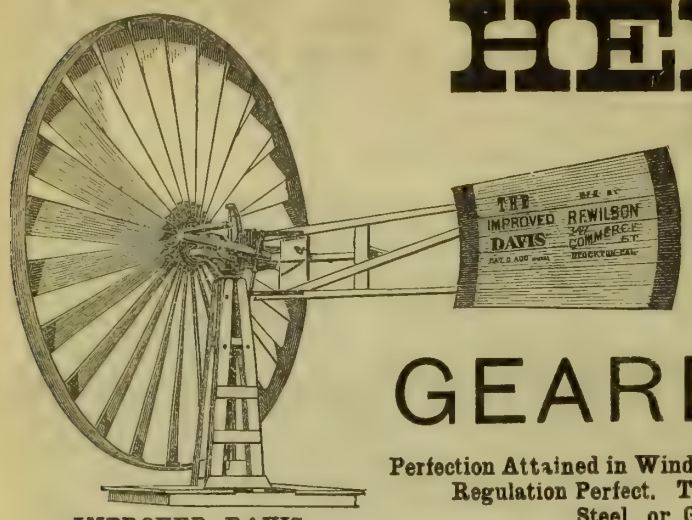
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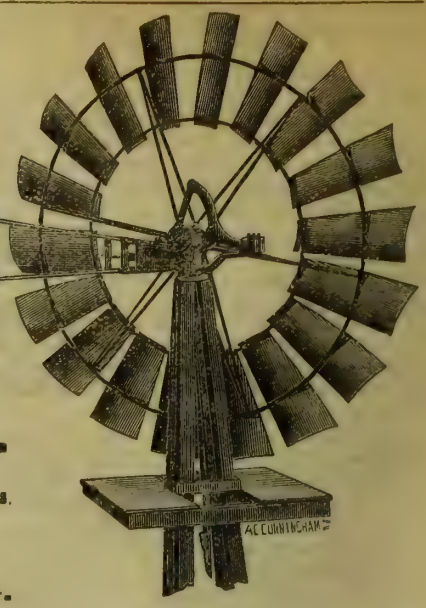
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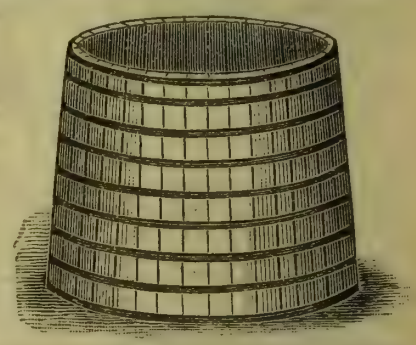
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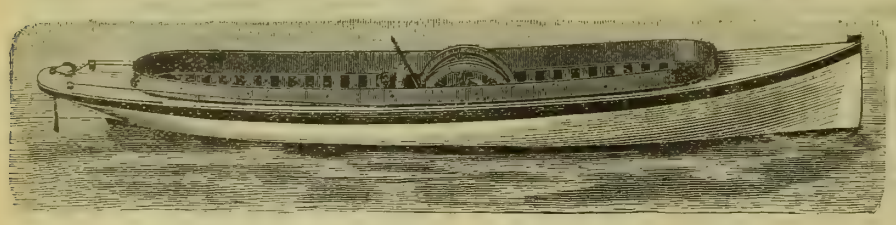
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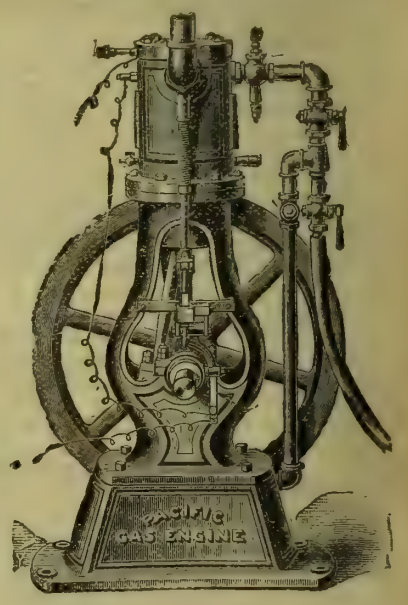
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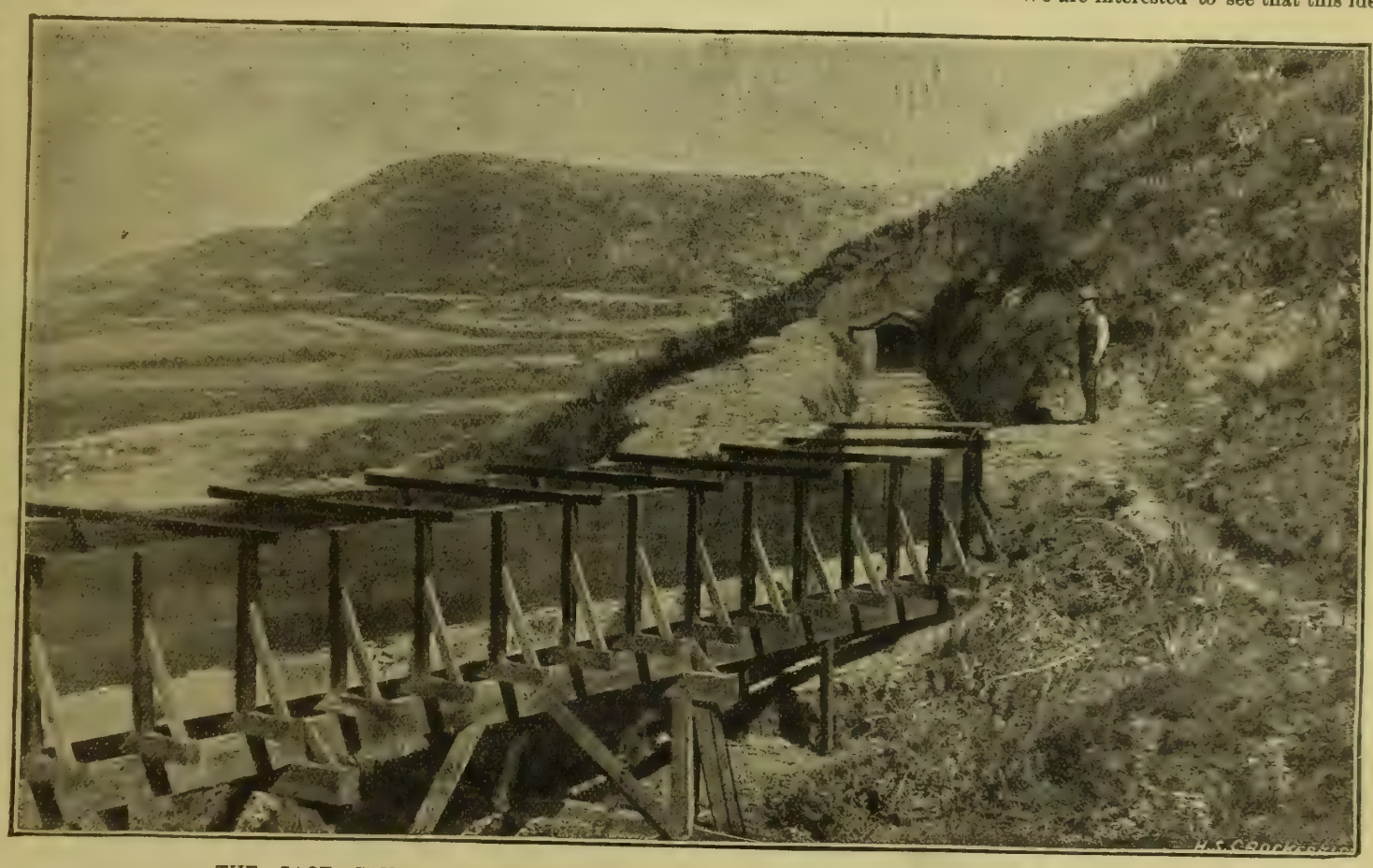
PACIFIC RURAL PRESS

Vol. XLIV. No. 3. SAN FRANCISCO, SATURDAY, JULY 16, 1892. THE DEWEY PUBLISHING CO
Office, 220 Market St.

An Irrigation Flume and Tunnel at Riverside.

Our illustrations have given from time to time glimpses of the various methods adopted by Californians to bring water from distant sources upon arid lands, and thus transform them into marvels of fertility and production. Thus simple in theory has been the method of the foundation of many of the most prosperous enterprises in Central and Southern California. The practical application of the method has been difficult, and, in many cases, has drawn heavily upon the resources of the capitalist and the engineer, but, fortunately, in most cases at least, the reward has been commensurate with the service and the sacrifice.

The engraving on this page is not typical of the difficult in engineering, and yet it must be counted interesting to contemplate the water crossing the depression in its trestle-supported flume, and then running through the brow of the bluff by tunnel, to flow again into flume or into hillside ditch, as the character of the surface determines.



THE GAGE CANAL AT RIVERSIDE—PASSING A BLUFF BY FLUME AND TUNNEL.

The picture represents a point upon the main canal of the Gage System at Riverside, San Bernardino county which is one of the most important and extensive system of canals in Southern California. Mr. Gage built the northern part of his main canal to irrigate some 6000 acres of land, lying east of, and above the flow of the upper canal of the Riverside Water Company. He subsequently purchased the tracts of land in Riverside, known as "Arlington Heights," and extended his canal along the foothills to a point about nine miles southwest of the business center of Riverside, thus enabling him to cover with water, an additional tract of some 6000 acres, making the entire area irrigable from this system some 12,000 acres. The supply of water for this canal is taken from artesian wells and the Santa Ana river. The canal runs southwesterly for a distance of five miles along the banks of the Santa Ana, receiving supplies from artesian wells bored so that their waters will discharge directly into the canal. The course is still southwesterly along the bluff bordering the Santa Ana river valley; crossing several large arroyos with flumes, and piercing the projecting points of the bluff with some 16 tunnels, until it enters upon the plains of Riverside, nearly 200 feet above the elevation of the canals of the Riverside Water Company.

After entering upon the plain, the canal runs in a southerly direction until it intersects the foothills, along which it closely follows in a southwesterly direction to its present terminus already stated. The water delivered by this canal to the lands along its course is distributed under the management or supervision of several corporations having their own reservoirs and pipe lines.

The development of wealth by this enterprise of Matthew Gage is one of the most interesting features of the progress of Riverside. Since its completion several years ago the productive area, population and prosperity of the region have been vastly increased.

A Commendable Work.—The State Board of Horticulture is about to make a very commendable effort, which we hope will yield satisfactory results. It is to prepare a comprehensive statement of the condition and extent of the fruit interests of the State. Secretary Lelong has sent out agents to different parts of the State for the purpose of obtaining a correct estimate of the amount of fruit produced in California. Prof. Allen will take the central coast counties, extending from San Francisco to San Luis Obispo, west of the Coast Range mountains. R. H. Hewett will attend to the entire southern part of the State. John Isaac will travel over the northeastern part of the State, the Sacramento valley and the counties east of the Sierra Nevada mountains. Mr. A. Craw will confine his work to Humboldt, Mendocino and Del Norte counties.

Fruit Studies.—Chemists Jaffa and Colby of the Agricultural Experiment Station at Berkeley, are proceeding with analyses of fruit specimens from different parts of the State. At present they are working Royal apricots from different parts of the State, so as to determine the composition of the same variety grown in different localities. Afterward, prunes and figs will be taken up. The University publications during the coming year promise to contain much of the chemical aspect of different California fruits.

Fixing a Minimum.

The idea upon which we favorably commented last week that the fixing of a minimum price by agreement among producers seems, upon further thought, to commend itself as perhaps the best first step to be taken toward cooperation among producers. We trust the more elaborate plans for cooperation will work themselves out successfully, and we believe some of them will do so, but where there is hesitation and distrust perhaps an agreement upon a minimum can be given wide support. If more can not be done at once, this act will certainly serve as a stepping stone to fuller understanding and cooperation hereafter.

We are interested to see that this idea is favored by F. H. Buck of Vacaville, a large fruit shipper and drier. If correctly reported, at a recent meeting in this city he said he did not believe a union of dried fruit growers practicable. If only a few of the driers worked together nothing useful could result. Such a union would not control prices, but would be the toy of the general market. If, by an agreement among driers, a minimum rate of sale for the various grades of fruit could be established, no further union or organization would be necessary. No union could prevent fruit-owners from selling for fancy prices if buyers could be found. But if a minimum was fixed and observed the Eastern buyers would be protected, and there would be no possibility of ruinous underbidding and cut-throat transactions.

Of course, when a body of producers agree to refuse any price below a minimum to be afterward agreed upon, they have perhaps only reached the outer borders of the question at issue. What shall the minimum be? may, after all, be a rock upon which the undertaking will fall to pieces. We hope not, however. The Fresno raisin producers will meet to establish their minimum on Saturday of this week and their success in that effort will be significant. The cost of producing a raisin has perhaps been as closely figured down as anything in our fruit production, and consequently a minimum can be more easily and confidently set than in some other lines of production. The first effort is well placed. Let us see what the Fresno people can do for themselves and for the State by their action on Saturday.

In some portions of the Province of Quebec prayers are being offered for rain, while in other portions supplications are made for a cessation of an excessive downpour.

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ALFRED HOLMAN.....General Manager

SATURDAY, JULY 16, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

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☞ *See Advertising Columns.*

The Week.

We desire to call attention most prominently to an affair of our own, to wit, the letters which should be mailed to us on August 1st upon this subject:

AUGUST.—FRUIT-DRYING AND RAISIN-CURING: Descriptions of all methods and appliances which are valuable either in sun-drying or machine-evaporating each and every kind of fruit; packing and marketing of products.

There will be three prizes for competition on this subject: First prize, $10; second prize, $5; third prize, one year's subscription to RURAL PRESS. As we have previously stated, these letters are not intended to be elaborately statistical or philosophical, but plain descriptions of how to do things by those who have themselves done them satisfactorily. Letters such as an inexperienced person would write for the information of those who are beginning are most likely to be widely useful.

We are preparing for publication the July letters on fruit-packing and shipping, and hope to present them in our next issue.

FRESNO FARMERS' INSTITUTE.—The next meeting of the Fresno Farmers' Institute will be held at Sanger on July 20th and 21st. It is contemplated to make alfalfa-growing, and the products which can be produced thereby, a leading subject at the Sanger meeting. It is being clearly seen that the great valley needs the development of other branches than fruit production, and alfalfa-growing has already yielded most satisfactory results. To discuss these results and the means by which they are attained will certainly be most important and profitable, and will, we hope, draw out large attendance at the Sanger meetings. Other subjects will be the representation of the county at the World's Fair, the raisin situation, etc.

CLYDESDALE OUTLOOK.—It is reported from east of the Rockies that there has been a decided improvement in the demand for Clydesdale horses during the past year. The active inquiry for Clydesdale mares during the past season has not been confined to beginners, but many of the oldest and most successful breeders have been liberal purchasers. The upward tendency in prices of well-bred Clydesdale stallions and mares gives increased confidence to breeders, who will not, for many years, be able to supply the large and growing demand for Clydesdale horses of approved form and breeding. This manifest and growing preference for home-bred stock is one of the most hopeful and encouraging indications for increased demand [illegible] our breeders for stallions and mares at better prices.

Midsummer Day Thoughts.

Heat and moisture are the span with which the plant makes the race. Neither of these is broken to go single, and the most disastrous results follow the attempt to thus employ them. Wise is he who can keep the two well in hand and pulling evenly.

It is just at this time of the year that the garden shows most clearly how much the gardener knows and how well he puts his knowledge into practice. Nearly up to this time plants have been able to sustain themselves even on uncultivated soil by persistent root penetration; but now, from soil thus treated, surface evaporation, fed by capillary action, has drawn the moisture from such depth that all save tar-weeds and other such salamanders show their day is up. The aspect is more drear now than later, because the winds will whisk away the dead leaves, cast down the parched stems of the annuals, and clear the decks for another season's action. The arid surface is swept and garnished with the neatness of desolation.

How different is the aspect where heat and moisture have not been sundered, and how well rewarded the skill and diligence of those who preserve their union. The dark verdure of the alfalfa preserved by irrigation even on the driest soils, the rich foliage of well-cultivated orchard and vineyard, contrast strikingly with the arid plain. Hardly less marked is the contrast between gardens well and ill kept. How to have one's residence in the former rather than the latter environment, is a pressing question in a land with a rainless summer. How shall the grass be kept green and the foliage and blooming season of plant and shrub be prolonged until the early rains bring new beauty to replace the old?

Irrigation is the art preservative in this connection, but the demand upon its services may be much lightened if one knows how to irrigate and how to prolong the effects of the act. Though much has been said and written of the ineffectiveness and delusion of constant inadequate watering, there are still many who stand flirting the hose nozzle in the air, throwing a tantalizing mist upon the leaves of plants whose roots are being parched and torn in a baked and contracting soil. Every day, possibly twice each day, the operation is repeated, and yet the poor plant gets as little relief as the famished traveler from a mirage. With wise husbanding of resources, the plant checks the exuberance of its bloom; later still, it cuts its leaves of smaller pattern in a vain hope that help will come. But the hope is vain; parched petioles relax their hold upon the stem, famishing buds perish ere they unfold. Still appear, with religious regularity, the rainbow tints in the hose spray in rising and setting sun rays; still the humming-bird dashes through the mist in gladness; still in the heart of the gardener there is the approving song of conscience telling of duty faithfully performed. But all these joys are but mockery to the fainting, expiring plant. At last its distress is perceived, and in conscious innocence complaint is made of its perverseness in dying when so well watered. Evidently the trouble must be at the root the complainant declares. Evidently the trouble is at the root the pick-axe replies, as it brings to light roots dry as whip-cords encircled with a clod hard as adamant.

Too many of our gardens show how hollow and ineffective is what is called garden-watering. For all save the grass, it would perhaps be better if the hose nozzle had never been invented. If the price of the nozzle be invested in a hoe and the roll of hose be shouldered, with the hoe handle thrust through it, the plants will all smile as the purchaser comes through his garden gate. Let the hoe sink deep in the soil around the plant, and into the trench which runs from plant to plant, let the water flow until the ticker in the water meter beats the reveille. With the trenches full until the soil is deeply saturated, go and settle with the water company while the soil is drying until it falls apart freely at the touch of the hoe. Then with hoe and rake loosen the earth thoroughly below the bottom of the trench, so that it may not bake into clods on drying; fine and level the surface with the rake, and you have done more irrigation in a day than you could do in a thousand years with a nickel-plated nozzle.

With one who thus irrigates, there also dwells usually knowledge of the value of a mulch. If it be but the pulverization of the surface to a sucffiient depth, it will serve a good purpose, but to cover such a properly prepared surface with a fine litter of well-rotted straw or manure or lawn clippings is to greatly prolong the retention of moisture, and consequently to postpone the time when a second trenching and soaking will be necessary. On heavy soils, sand, sifted coal ashes and like coarse material act finely as a mulch, and lighten the soil by subsequent working in. On a sail well mulched, too, one can often use the tabooed nozzle, if he is so inclined, providing the aim be at the earth and not at the sky, and the discharge be large enough for thorough soaking, not only of the mulch, but the soil beneath.

With adequate watering and mulching, the proper relations of heat and moisture can perhaps be better retained than in any other way, and plants thus treated will be the joy of the owner and the admiration of the neighborhood.

The Butter Industry.

The continued low range of prices for butter in our market causes surprise even to the best informed dealers. There cannot be the least question but the establishing of creameries has added largely to the output of choice to gilt-edged butter. The increase in the manufacture of better grades has been at the expense of the poorer grades, so that the increase in one is, to a great extent, neutralized by a decrease in the other. This but confirms a familiar law of trade regarding supply and demand.

The increased supply of creamery butter on this coast has cut off very materially the supply we formerly looked to the Central States to furnish, and greatly, so far this year, to consumers' advantage. If we had to look to the States east of the Rocky mountains for a large part of this summer's supply of the more choice grades of butter, the price here would have been largely increased, for advices from the large distribution cities at the East are confirmatory of a decided falling off in receipts. This decrease is said to be traceable to two causes, one of which was, during the spring months and extending well into June, the poor and also impassable roads in the rural districts, and the other to fewer cows milked. The heavy and almost unprecedented rains in the Central States made the roads so bad that it was next to an impossibility to go among farmers and gather cream. Now that the roads have improved, cream gathering has been resumed; and with good natural pasture for cows, the output of butter is very large. But it is conceded by the better informed that even with a continuance (which is not at all likely) for the next month or two of the present increase in the manufacture, the deficiency cannot be made good. In this opinion they are further strengthened by the accepted opinion that the general introduction of creameries has been followed by more thorough and scientific feeding, and also by testing the milk from each cow so as to keep only those whose milk gives the highest tests. This has been, and is still being done in European countries where creameries have taken strong hold. By this policy at the East there has been a weeding out of the poorer milkers, and they have not, as yet, been replaced, for it takes time to breed up to the standard now demanded by those dairyman and farmers who keep cows for all the profit that can be got out of them. This breeding calls for cows that give a good flow of rich milk and which also have carcasses and offspring that sell at the highest figures in the open market.

The decreased supply of butter at the East, while causing market values to appreciate, did not cause prices to advance as high as they should with all else equal. Probably one, if not the most important factor in keeping the market from going as high as the supply and demand under ordinary circumstances would send it, is the inincreasing numbers of oleomargarine factories at the East. In Chicago alone there are six factories, whose combined product is estimated to displace the product of over 300,000 cows. The *Mercantile and Exchange Advocate*, published at New York, in its issue of July 2d, claims that there are about 20 oleomargarine factories in the United States. The same authority boldly asserts, and the facts evidently bear it out, that under the present law there is a continued increase in the manufacture and sale of the article. This should be accepted as proof positive of the correctness of assertions heretofore made that the present national law bearing on oleomargarine is in the interest of rich and powerful companies. With a large and steadily increasing output of the stuff in the hands of rich combines, the profits in dairying are threatened to be reduced to such low percentages as to draw the dairying industry down to the lowest standard of agricultural enterprises. With this inevitable result staring in the face all that are directly and indirectly interested in dairying, it seems the height of wisdom that more energetic measures should be taken to fight to a successful issue the manufacture and sale of oleomargarine as now carried on.

SMITH'S IMPERIAL EARLY PEACH.—W. W. Smith of Vacaville kindly sends us a sample of his new early peach bearing the above name. The origin of this variety was fully described in the RURAL of August 1, 1891, and a photo-engraving was then given of a fruit-bearing twig. The peaches sent us this week run larger than those we had last year, and Mr. Smith assures us that this is true of the whole crop which the original tree bears this year. The value of the variety as the earliest good-sized freestone, at least as compared with any of the old varieties, seems clearly established. How it will compare with McKevett's Early, which originated in the same valley, is still to be determined. Mr. Smith writes us that he began picking his Imperial Early on June 27th, and will finish this week. He has no Crawfords ripe yet.

From an Independent Standpoint.

The attention of the country has been centered during the past week upon the little town of Homestead, Pa., near Pittsburg, where four thousand men employed in the Carnegie-Frick steel works are striking against a reduction of wages. The strike began some weeks back in the usual way, the mills shutting down because the men refused to accept the wages proposed. Although a few watchmen employed by the company remained in nominal charge of the establishment, it has in reality been in the possession of the strikers, who have attempted to intimidate the mill owners by threats of violence in case a movement should be made to start up with non-union workmen. This was probably the intention of the mill owners, or at least the strikers surmised it to be, and they announced ten days ago that they would hold the mills against any attempt on the part of the owners to occupy them. Early on Monday morning of last week a barge bearing two hundred Pinkerton guards, who, in the employ of the mill-owners, came up the river to the Homestead works and attempted to land. But a signal to arms was given before they reached the shore and the whole population of the town—men, women and children, to the number of twelve or fifteen thousand—began a defensive assault. Cannon which had been placed in position in anticipation of plans of the mill owners, poured hot shot upon the incoming force. Dynamite bombs, floods of burning oil and a hail of rifle balls added to the deadliness of the terrible defense. The tugboat which brought the barge to the landing was soon damaged and sought safety in flight, leaving its burden with its human cargo helpless and exposed to the fury of the mob. For eight hours the bombardment continued, and although the boat was housed in and protected on the inside by heavy steel plates, frightful havoc was done by chance shots through the port holes. The caged and helpless men tried to surrender, but the blood of the strikers was up and it was several hours before they would respect a white flag. There was a brief conference, in which the Pinkerton men (whose loss in killed and fatally wounded was already one-sixth of their number) agreed to surrender and abandon their arms in return for safe conduct through the town and to the railroad station. The promise was given and the men filed ashore unarmed, many of them blood-stained and suffering from wounds.

While the strikers were making such terrible havoc among the men imprisoned on the boat, the latter, though overmatched, were not wholly idle. They fired as best they could through the port-holes of their craft, and five dead and a greater number wounded among the strikers bore terrible witness of their prowess. This, of course, increased the rage of the mob, which lined the streets on both sides as the surrendered Pinkertons passed by each in charge of two deputies. The protection was not sufficient, for at every step in their march the mill-men kicked them and threw some of them down. From the dispatches of the day we quote:

The unfortunate Pinkertons begged for mercy. Some had pistol-shot wounds in their heads, and three had had their eyes shot out. Several could scarcely limp along. Blood was running in streams down their shirts, and they fairly yelled with pain. Fully 30 injured men were taken to the town hall. One had his eyes punched out by an umbrella in the hands of a woman. Sand was thrown in the eyes of others. Millmen struck the captives over the head and shoulders with rifles, inflicting serious and, in some cases, perhaps fatal injuries. As the procession reached the Amalgamated Association building, the prisoners had to remove their hats and salute the flag. When they removed their hats, men and women hit them with umbrellas and sticks and abused them in every way imaginable. There seemed to be a determination to kill the prisoners, and it was with the greatest difficulty that the fiendish crowd could be restrained. The men were finally locked up in the rink, where they were to be kept for the night. Thousands, however, gathered around the building, and the wounded men were kept in a constant state of terror. It was a long time before their wounds could be dressed.

After this terrible scene, the frenzied strikers returned to the barge and set it on fire, and in the light of its flames held such revelry as only the stories of savage warfare can parallel. Taking the whole proceedings of the day together, it was the most dreadful event outside of actual war ever witnessed in this country.

By this frightful exploit the strikers were left in absolute possession of the works, and they announced that they would hold them until the owners came to their terms. A strict military organization was maintained, with a double line of pickets, and all persons not known to be in sympathy with them were summarily ejected. Several newspaper reporters were roughly handled and only escaped with their lives. The mill-owners called upon the General Government for a force to protect them in their rights to their own property, but the President referred them to the Governor of the State, who in turn referred them to the Sheriff of the County who admitted himself to be helpless. After six days of this sort of thing, Gov. Pattison on Monday ordered out 8000 State troops who to-day (Tuesday) took possession of the works. Realizing that to oppose so strong a force would be suicide, the strikers received the troops cordially and at last there is peace. The owners say that they will start up their mills with men who have applied for work, but the strikers declare that "the troops will not remain always," and that as soon as the force is removed they will wreak vengeance on the "scabs," and, of course, no man can say what the end will be, but the opinion is general that the spirit of last Wednesday will be the spirit of the future and that more bloodshed is inevitable. Gov. Pattison was elected as a "friend of the workingman" and it is believed that he will withdraw the troops as soon as there is an appearance of peace and the outcome is looked for with the deepest concern.

In the meantime, the matter has been taken up by the politicians, and the opponents of the protective tariff are attempting to make capital out of it. "Here," they say, "is a sample protected industry, and here is an instance of how the workingman's interests are served by Protection. He no sooner is established in his work and in his home than the mill owners, who are profiting to the extent of millions through his toil, cut down his wages and send hired thugs to enforce his unwilling labor." Of course, much of this is the baldest buncombe. There has been no attempt to compel the mill-men to labor at reduced wages. The mill owners have only claimed the right to replace the strikers with other workmen who are willing to accept the wages offered. These wages the owners claim to be fair when the state of the market for manufactured steel is considered. They cannot pay more, they declare, and make a profit. As a matter of fact, only ten per cent of the four thousand men employed are affected by the cut, and they are the highest-priced men on the list. From a statement made by Mr. Frick on Friday last, we quote:

The skilled workmen in the Amalgamated Association worked under what was known as a sliding scale. As the price of steel advanced, so did the earnings of the men, and vice versa. While there was no limit to the advance, there was a point at which the decline stopped. Said Mr. Frick: "We believe that if the earnings can advance without limit, the workmen should be willing to follow the selling price down to a reasonable minimum, and instead of $25 as a minimum we fixed $23. The reason for this was that we spent large sums of money in the introduction of new machinery, by means of which the workmen were enabled to increase the daily output, thereby increasing the amount of their wages. Another point was the date of the expiration of the sliding scale. We asked that the date be changed from June 30th to December 31st, so as to enable us to make our estimates beginning January 1st, so that we would be enabled to make contracts for a year accordingly. The Amalgamated Association declined. The third matter was the proposed reduction in tonnage rates. We are prepared to show that in nearly every department, under the proposed reduction, the skilled workmen would make more than they did when the scale of 1889 went into effect. As a rule, the men who were making the largest wages were the ones who most bitterly denounced the proposed revision, for out of 3800 men employed, only 325 were directly affected by the reduction. Finding it impossible to arrive at an agreement with the amalgamated officials, we decided to close the works."

On Thursday last Voorhees, of Indiana, introduced in the Senate a resolution for inquiry into the trouble at Homestead. Hale, of Maine, in replying, criticised Voorhees for converting such a grave matter into partisan politics, defended the Republican party from the charge of the responsibility of the conflict, and assumed for the party and the policy of protection the credit of building up such great industrial establishments as those at Homestead and Bethlehem, Pa. Palmer, of Illinois took up the defense of the resolution, and we give his remarks as incorporating the views of the strikers:

He maintained that the workingmen at Homestead, having spent their lives in their line of work, had the right to insist on the permanency of the employment and reasonable compensation. At the time of the assault on them, they were where they had a right to be. He urged that some principle to solve the problem should be sought. If capital was master and the people were slaves, the country would be involved in anarchy. Palmer said that the presence of a Pinkerton force at Homestead was in contempt of the authority of the State of Pennsylvania. It was difficult for American citizens, whether in the right or in the wrong, to submit to being driven by an armed force. He maintained, however, that the citizens of Homestead were in the right, as, according to the principles of law which should hereafter be applied in the solution of such troubles, they had the right to be there. Those large manufacturing establishments would have to be regarded as holding property subject to the correlated rights of those without whose services their property would be utterly valueless. He conceded to them only the right to a reasonable profit on the capital invested in their enterprises. Manufacturing establishments were, Palmer claimed, public institutions just as railroads were, because they worked for the public, employed the public, and because the men in their service became unfit for other service. While conceding the right of the capitalist to control his property and to a reasonable return for his investment, Palmer claimed that the laborer had the right to permanent employment during good behavior. Of course the laborer was compelled to submit to the exigencies of business. Where the profits were small, the parties would have less to divide, and where they were large they would have more t divide. That, he maintained, was the law to-day, because th law was the perfection of reason. We talk about civil servic law as applicable to Government employment. I assert tha there is a law wider and broader than that, which gives t these men who have been bred in these special pursuits—a for instance, in the service of railroads, or of these vast manu facturing establishments—the right to demand employment, a right which can only be defeated by misconduct on their part

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We have given much space to this matter, not alone be cause of its exceptional interest as a public event, bu because it promises to be related in an important way t the coming presidential campaign. Mr. Carnegie, th head of the Homestead establishment, is one of the leader in manufacture in this country, and is among the prom inent apostles of the Republican protective policy. In s far as there may be in the Homestead affair any reflection o apparent reflection on the Protective policy, it puts a bur den upon the Republican party; and the disposition of the Democrats to make that burden as heavy as possible i shown in Senator Palmer's speech. There will be an effort by Senator Palmer and others to put the Democratic party into line as the defender and apologist—as the politicians put it, the "friend"—of organized labor and to force the Republican party into the opposite position. It is too soon yet to judge whether or not this effort will succeed, but as a study in partisan tactics the matter is worth watching. Of course, so far as the politicians are concerned, there is no sincerity on either side of this controversy. Mr. Hale, who professes himself so shocked at the attempt of Voorhees and Palmer to make partisan politics out of this sad affair is the man who only two weeks ago attempted to open up the presidential campaign by introducing in the U. S. Senate a grossly partisan resolution. He has a short memory. Looking at the Homestead business apart from its political aspects, and as we imagine the mass of plain people throughout the country will view it, the RURAL sees two sides and two very serious wrongs. The mill-workers were wrong in taking possession of property not belonging to them and in attempting by violence to prevent the mill-owners from operating their works. There ought to be no controversy as to this proposition among reasonable men. The mill-workers were certainly wrong in their efforts to intimidate the mill-owners and shamefully, cruelly wrong in their treatment of the vanquished Pinkerton men who fell helpless into their hands. On the other hand, the mill-owners were wrong in attempting to maintain their rights by the aid of a private mercenary army. They should have called on the proper authorities to protect them in their rights and not have resorted to lawless force. If they had followed this course, no fight would have occurred. The mill-workers would have yielded to the proper authorities a week ago, just as they have done in the end. The "Pinkerton guard" is not a legitimate officer. He is an illegitimate force which the rich assume the right to employ against the poor. His existence is a Public outrage because it is a reflection upon the regular authorities and a menace to equal rights. It is not surprising that the workingmen at Homestead and elsewhere regard these lawless hirelings with resentment and hatred, for they see in them the assassins of equality in citizenship. As to the rights and wrongs of the original question of wages we know nothing, and that is not the consideration at this time.

The State Press.

In commending the revivalist, Rev. B. Fay Mills, who has just closed a series of successful meetings at Sacramento, the *Bee* casts indirectly some pretty severe reflections upon the methods of the ordinary modern revivalist. It says: "He did not burst forth upon our startled gaze a promiscuous blackguard and sacrilegious buffoon, nor depart a contemptible and convicted liar. He did not proceed at once to abuse the people of Sacramento, to sneer at the chastity of our women, and to shriek out that our little girls who attended school are beer guzzlers and inebriates. He did not, before he had been here three hours, denounce the city as the vilest hellhole he had ever seen, and declare that Sodom and Gomorrah were capitals of cleanliness and chastity in comparison. In fine, he did not commence to lie and to blackguard the moment he opened his mouth, but he impressed all his hearers with an idea somewhat new to many of them—that a modern revivalist can be an earnest and a sincere gentleman, and that his Christianity loses no vigor because it is clean, decent and respectable. The *Bee* lifts its hat to Mr. Mills, and wishes him Godspeed in his work."

Stockton *Mail:* "The manufacturer is no longer dependent on the jobber or wholesaler. The country is full of commercial agents, representing manufacturing houses which are selling directly to retailers, and the railroads through the United States encourage this condition of things. In fact, the whole tendency of modern commercial methods is to eliminate the middleman. It is the law of civilized life to work in the direction of greater economy, and intimacy of communication brings the producer and consumer nearer together by a cross-cut which leaves the middle man and the profit-earner to one side. San Francisco is therefore in revolt to-day against an inevitable condition."

Weather and Crop Bulletin for Week Ending July 11th.

The following report shows the condition of crops, as reported by voluntary observers from Susanville to San Diego, and by telegraph from Observer Franklin at Los Angeles and Observer Williams at Fresno to James A. Barwick, Director of the California Weather Service. The conditions show that, while all crops will not reach the average throughout the State, the quality will increase the price so as to bring the grower about as much ready cash as though the crop were larger, with prices low. The grain is somewhat shrunken in San Joaquin county and very much below the average in Monterey county. The wheat yield is not up to expectations in portions of the Sacramento valley, while other portions report a good yield of good quality.

The highest temperature during the week was 101° at Red Bluff and Redding, and the lowest 46° at Blocksburg, Humboldt county. There has been no rainfall during the week, which is the normal condition in the agricultural and fruit districts of the State.

LASSEN.—*Susanville*—Haying has commenced, and the wild hay is a little below the average yield. Alfalfa is up to the standard. Vegetables are very good. The fruit is of a good quality, but not so heavy a crop as usual. Plenty of help for harvesting; the county is full of men, and wages range from $1.50 to $1.75 per day and board. Highest and lowest temperatures, 90° and 56°; mean for the week, 69°.

HUMBOLDT.—*Eureka*—Haying is about finished, and was a satisfactory crop in some portions of the county, while in others it was somewhat blighted from the hot north winds.

Blocksburg—Highest and lowest temperatures, 96° and 46°. The nights are too cool for corn, but the grain is looking and doing well.

Dyersville—Early peaches are ripening, and fruit of all kinds will be short. During the forepart of the week the weather was hot, but the latter half was much more pleasant and cooler. Haying is about completed, with an average yield of good quality.

Upper Mattole—The grain crop will generally be a good one in this section, although some fields will be short. On account of the excessive rains in April and May, the fruit crop will also be short.

Mad River—The weather still continues warm and dry, but is good for haying. Vegetables of all kinds are suffering for the want of moisture, as we are not having the usual amount of fogs. The sun rises clear in the morning and shines all day. There is no dew and fog of a morning until 10 or 11 o'clock, as is so usual in this vicinity, in consequence of which the grasses for grazing are drying up very fast.

SHASTA.—*Redding*—Haying has been completed, with the results of a good yield of a most excellent quality, and the grain crop is a good one. The weather is hot and clear, but not more so than is expected and looked for at this season of the year. There has been more high wind than usual for the season up to date. The highest and lowest temperatures were 101° and 59°.

TEHAMA.—*Red Bluff*—The crop conditions have been favorable during the past week. The apricots have been gathered and dried. The yield, though not so large as usual, is better in quality and size. Wheat has not turned out any better than was reported last week, so far as heard from. Highest and lowest temperatures, 101° and 61°.

LAKE.—*Upper Lake*—The season is a peculiar one on account of such frequent spells of warm weather, followed by cool ones, although the average temperature is normal. Heading begins this week, and the grain is better than usual. The fruit crop is two weeks later than is generally seen in this vicinity. Grapes are improving daily and will yield a full crop.

YUBA.—*Wheatland*—The weather has been favorable to all growing and maturing crops, with the exception of a little too much wind, which has slightly damaged hops. The yield of hops was not so good as was at first expected.

NEVADA.—*Nevada City*—Peaches are ripening fast, but the crop will be very short. What there are ripening on the trees will be of a much larger size than usual and of a better quality. Sunday was quite a cool day for so late in July. Highest temperature, 72°.

SONOMA.—*Healdsburg*—A slight earthquake shock occurred on the 9th. The weather still remains cool, which has a retarding effect upon all growing and ripening crops.

Forestville—Peaches and blackberries are now ripening sufficiently for shipping to the market. The quality is good. Threshing will begin at once. The outlook for corn is very good in every particular, as it also is for all vegetables and all growing crops.

CONTRA COSTA.—*Cornwall*—Threshing is well under way, and the grain is turning out nearly a full crop. The fruit is coming in in good shape. The Black Diamond Cannery is being run full time on apricots. It has been extremely windy during the entire week.

ALAMEDA.—*Niles*—The highest and lowest temperatures during the week were 90° and 61°. The weather has been cool and pleasant. Threshing has commenced. Apricots are ripening. The nights are quite cool.

Pleasanton—Grain and volunteer hay has all been cut, and the second crop of alfalfa is now being harvested. The weather continues favorable for baling and threshing, which is going on at a lively rate. Hops are growing rapidly.

AMADOR.—*Oleta*—Haying is over, with a fine crop of good quality. Threshing has commenced, but has not advanced far enough to tell whether the yield will be an average one or not.

Sutter Creek—Harvesting operations are about over in this section, and the hay-balers are at work. New hay is selling at prices ranging from $12 to $15 per ton.

Shenandoah Valley—Peaches are ripe in this section of the county; while some of the fruit-growers have hardly any crop, others will have quite a fair yield of good quality, the fruit making up in size what it lacks in number, and the flavor is fine.

YOLO.—*Capay Valley*—Fruit is now being shipped in large quantities to San Francisco.

Black's—The harvest season is in full blast, and the farmers are quite busy.

Esparto—Large shipments of wheat are being made from this point daily.

The tule farmers of Yolo are feeling quite jubilant over the prospect of big yields of wheat, being the first successful crop grown on tule land in Yolo for several years past on account of [illegible]

SACRAMENTO.—*Sacramento*—The temperature during the week has ranged from 2° to 10° below the normal or average temperature, as deduced from records of many years. The highest and lowest were 96° on Thursday and 50° on Monday, the 11th. The normal rainfall is nothing, and there was no precipitation during the week. Haying and harvesting are over, and the hay and grain lie in the open field baled and sacked, something that can be done only in the State of California. The orchardists are busy getting ready for picking fruit on a large scale, as it has not been coming to market in any very large quantities on account of the backwardness of the season, which is at least two weeks to twenty days later than last year. Grapes are looking and doing nicely, and hops appear to be holding their own; but the cooler weather of the past week has been of no benefit either to hops, peaches, berries or grapes.

GLENN.—*Willows*—The wheat harvest is in full blast and turning out well, while the yield will be above the average. Peaches will be plentiful and of an excellent quality.

COLUSA.—*Williams*—The weather has been favorable for haying and harvesting and for the ripening of the fruit crop.

SAN JOAQUIN.—*Lodi*—Highest temperature, 97° on the 7th; lowest, 50° on the 6th, with westerly winds prevailing. The wheat harvest is well under way, and the output is rather below that which was expected. In some fields the grain was shrunken. Berries and peaches are coming forward in good shape, but the yield will be below the average. Almonds will be a full crop.

Stockton—The weather for the past week has been unusually fine, the temperature being considerably below the average. Harvesting is progressing with all the haste possible, and the yield will be up to the expectations of the majority of the ranchers.

STANISLAUS.—*Modesto*—The farmers are quite busy harvesting their grain, and the output will be shorter than expected, but is of good quality; consequently, the loss in shortness of yield will be made up in the price as to quality.

MONTEREY.—*San Ardo*—The weather for the past seven days has been very favorable to the fruit crop. Heading grain is in full blast, but the grain crop is very light. There will be a short crop of grain in this section of the county.

SAN LUIS OBISPO.—*San Luis Obispo*—The week has been a cool one, with light southerly winds and light fogs, which is just what is needed for beans and other green crops. Harvesting and thrashing are going on at a lively rate. Highest temperature, 78°.

FRESNO.—*Fresno*—The weather has been favorable for all crops, and the grain yield is exceeding expectations. Apricots are about all gathered. There appears some sunburn on raisins, otherwise there is no change in the prospects from what they were last week.

LOS ANGELES.—*Los Angeles*—The warmer weather during the past week has been very favorable to all crops. Fruit is ripening quite fast. Early peaches, pears, plums and watermelons are in market in abundance. Apricot drying and canning is in full operation. The harvesting of the sugar beets has begun, and the crop is an exceedingly large one, of exceptionally good quality. Oranges are looking and doing well.

CROPS IN OREGON.

PORTLAND (Or.), July 12.—The weekly report of the Oregon Weather Bureau says: Cool and occasional showery weather has been of great benefit to growing crops. The grain crop has been considerably improved, and a better yield than anticipated will be secured. Heading has begun in Eastern Oregon and Jackson county. Hops are doing well, though lice are quite plentiful.

The Columbian Features of the State Fair.

SACRAMENTO, July 11, 1892.

TO THE EDITOR:—The associated effort in aid of the annual exhibition of the State in this Columbian year has committed to this Section the matter of historical exhibits. Whatever success is achieved by this or any other Sections will be for the benefit of the whole State, and tend to enlarge and stimulate the California exhibition at the World's Fair. Only the few can go to Chicago in 1893, but the many can see in California in 1892 a greater and more varied display, and of profounder interest, than ever before.

At the State Fair in September this "Section" will endeavor to conduct a historical exhibit. We have classified it above sufficiently to suggest to you its scope, and how valuable, satisfying and educating it can be made. All exhibits loaned will have the care of the State Board of Agriculture and of this section, and be returned. No cost for transportation is involved. In every county, town and city something is possessed by one or more typical of one of the periods above scheduled. We wish to get into immediate communication with such people. Will you kindly make public this desire, and ask the people to address this "Section" at once?

Many things we will deem typical and valuable which the possessors may not; let them stop and think, however, that historical exhibitions are made up of many small things, generally, and that even a trifling object may serve to illuminate the civilization, history, trials, successes, failures, progress and triumphs in a period of California history. Will you kindly give rein to your public spirit and pride in our State, to make this matter public in your community? The time is short, and immediate action is imperative. All communications should be addressed to F. M. Woodson, box 495, Sacramento.

D. LUBIN,
Chairman of Historical Section.

Uses of Clods.

LOWER LAKE, June 27, 1892.

TO THE EDITOR:—In the essay on clods, in the RURAL of June 25th, they got the worst of it, and I come to the rescue.

The changing and uncertain conditions of cultivation caused by the weather are such that no uniform course or theory can be exactly followed. The point is to attain the desired end in the shortest time and the least labor.

First: Then I will presume it to be well-known that a hard, level, smooth crust on the surface is the most inimical to the retention of moisture and for plant growth. Such a crust is soonest formed on smoothly pulverized land by a sudden shower, but if the clods are numerous and harrowed to the surface, no such crust is quickly formed.

Second: When a clod or lump of earth is detached, capillary action between it and other portions of the soil ceases, the water is expelled, and ammonia and other fertilizing gases are absorbed from the atmosphere. In this simple fact lies a part of the benefit in summerfallowing.

Of late years my method has been to harrow the clods to the surface in the early spring. Then, when all probability of more rain has past, grind and sled down the clods with a plank "rubber." I also leave fall-sown grain as rough and cloddy as possible; then no smooth and uniform crust is formed by the winter rains. Then, late in the spring, harrow or roll, or both. There is no danger of wheat or other plants being lifted out of the ground by freezing if cloddy and no uniform level crust is formed by the rains.

C. P. SCRANTON.

Important Points on Artesian Wells.

MIRAMONTE, Kern Co., June 30.

TO THE EDITOR: I have seen in many of the California papers, of late, notices of the Census Bulletin recently issued by that Department.

Without exception the articles have been written after a very hasty perusal of the report and convey many false impressions to the reader. For instance the *impression* is given that the average capacity of California artesian well is for 18.63 acres, while the bulletin, which I have before me, states that is the amount of land being actually irrigated. And as it further states that the average flow per minute is 164 gallons it is easily seen that the average capacity is many times greater.

My full knowledge on this subject is limited to Kern County. By a reference to the bulletin it will be seen that the average flow of wells in this county is 1072 gallons per minute and that there are 89 wells. This makes a total flow of over 90,000 gallons per minute, or about 5,500,000 per hour. A daily total of 132,000,000 gallons. It can readily be figured that this means an irrigating capacity of fully 100 acres per well.

Again the papers state that as new wells are sunk they diminish the flow of the previous ones. This is true enough where the wells are shallow and hence with a limited reservior of supply, and where to amount to anything they are sunk in close proximity to each other. In this Artesian Belt there are perhaps less than half a dozen wells that flow less than at first. In every case they are wells of very small capacity, due to bad management in sinking them. The decrease is wholly due to the sand below that runs into the casing, and from a low velocity of flow gradually fills up the casing instead of being forced to the top and out of the well. With these few exceptions there is not a well here that is not constantly, if slowly, increasing its flow, from the fact that the sand from below being carried out at the top, the underground channels are being gradually opened up more and more, permitting the water to come more freely.

In this immediate district our wells will irrigate from 150 to 1000 acres of land, excluding the above-mentioned defective wells.

I regret to say that as yet but a very small percentage of that acreage is getting the benefit of the superabundant supply of water. We are growing, however.

GEO. A. RAYMOND.

Prizes for Southern California Products.

LOS ANGELES, CAL., June 25, 1892.

TO THE EDITOR:—The following proposition has been received from A. Phillips by the Southern California World's Fair Association, wherein he offers to furnish a round-trip ticket to the World's Columbian Exposition in Chicago in 1893, to any one person living in either of the six southern counties who will produce for competition the best samples in quantities as follows:

20 stalks of corn with ears attached (tallest).
20 ears of corn of one variety (yellow).
20 ears of corn of one variety (white).
20 stock beets.
20 sugar beets.
20 turnips.
20 onions (any variety).
5 squashes (largest).
30 pounds Irish potatoes.
20 pounds sweet potatoes.

The same to be delivered to the Chamber of Commerce in Los Angeles not later than the 1st day of November, 1892. Duplicate specimens of the vegetables are to be furnished the 1st of August, 1893. All samples to become the property of the Southern California World's Fair Association. The judges, to determine the awards, to be chosen by the association outside of its membership. Such samples as are accepted will be exhibited at the World's Fair as Southern California products.

The Los Angeles County World's Fair Committee makes the following offer of premiums to residents of the county:

For best three sheaves of wheat, each eight inches in diameter and as tall as can be obtained, and best 100 pounds of wheat:
First premium, $10.
Second premium, $5.

For best three sheaves of barley, each eight inches in diameter and as tall as can be obtained, and best 100 pounds of barley:
First premium, $10.
Second premium, $5.

Grain should be cut as close to the ground as possible, and be cured kept in a dark place to prevent bleaching. All samples entered for competion shall become the property of the World's Fair association, and must be delivered at the rooms of the Chamber of Commerce on or before September 1, 1892. A committee of three competent judges, not members of the organization, will be appointed by the World's Fair Committee. A large amount of grain, both in the sheaf and in the measure, will be required for the display at Chicago, and it is earnestly hoped that all persons having good grain will enter it for competition.

For further particulars, address the association at the Chamber of Commerce, Los Angeles.

Thanks; Awfully!

The PACIFIC RURAL PRESS has been making some very decided improvements during the past six months. It has improved greatly in appearance as well as in the quality of its contents. The editorials are especially readable—the writer having the knack of holding the reader's attention on the dreariest subject. In the number of June 25th, for instance, he writes over a column on the subject, "Where Shall the Clod Be?" A very prosy subject, all will admit, and yet he handles it in so sprightly a way that it is fascinating. The RURAL is a fine paper, and every farmer and fruit-grower who takes pride in his calling should read it regularly. It will pay.—Paso Robles Moon.

RURAL IMPROVEMENT.

Roadside Trees for California.

From an essay by W. S. Lyon, State Forester, at the last meeting of the Southern California Pomological Society.

A naiton's advance in civilization is just as strongly indicated by its per capita plantation of trees as by its per capita consumption of soap. More so in fact, as the results from soap are instantaneous and those from tree planting the outcome of patient toil and waiting, which necessarily implies the exercise of higher faculties than those called into action to appreciate the tangible and immediate values of cleanliness. In no way is this faculty displayed to a higher degree than in the intelligent planting of roadside trees. The random planting of orchard, grove or windbreak is wholly commendable though it betokens no exceptional prescience in the planter. It is a simple matter of cause and effect and he knows that in due time they will yield their fruits and products. He whose acumen prompts him to plant and build perfect highways, contemporaneously with his orchard, is not planting for random results. He is anticipating and minimizing the cost of transportation, in viting population and consequently enhancing the value of his property, present and prospective from the start.

Most of us are responsible to our early training or rather experiences for the public inertia which prevails in the matter. To most of us reared outside of California, trees conveyed but slender ideas of their precious value. They were ubiquitous. No village street or county highway could be planned or opened that when completed should not embrace at least occasional shade trees. We took no thought of them, they required no planting, were there always, and familiarity with them, if it bred no contempt, at least tolerated the vandalism of their occasional destruction without much of a protest They were as common as air and water and could be wasted with equal impunity.

The hegira from the Egypt of our youth has brought us to a land that teems with milk and honey, but lacking sadly in both trees and water. So precious the one, that we can hardly adulterate our milk with profit, so scarce the other that we will even contaminate the honey we have by planting the pepper tree, whose pungent nectar the bees, despite our objections carry to their hives. This brings us face to face with the proposition of what we shall or shall not plant for this purpose.

To this end and in order that our highways be finally crowned with success, we should adhere as closely as possible to certain standards with which we will deal seriatim First it behooves us never to sacrifice the useful—the practical to any sentiment for the picturesque, or to gratify a fad for any unsuitable tree.

There are long avenues and driveways in California planted to our native fan palm which have been set for shade and their alleged tropical effect. A failure in each instance, as they yield but a minimum of shade when young, and at maturity practically none. Striking tropical effects are to be had with these plants where they are massed with groups of bamboos, cannas, bananas and plants of similar habit; but when arranged in long unbroken lines as they never naturally appear in the tropics, and in juxtaposition with the fruit trees and grain fields of the temperate zone, the result is mostly inharmonious, and a complete defeat of the original purpose. Conditions of soil and climate are other potent factors in determining what we shall or shall not utilize.

In Northern California, indeed in any portion where the soil is heavy or clay-like, and where the annual precipitation reaches or exceeds twenty-five inches, any evergreen tree is contra-indicated. First, they furnish shade at that brief winter interval when we rejoice in all the sunlight we can get. Next, they prevent the rapid drying out of the street surface the constant aggravation of the evils of mud and mire.

For Southern California, and where these conditions do not frequently obtain, we universally favor evergreen species. For the benefit of those favored with fair rainfall and interested in highways that traverse adobe lands, it will not be amiss to here name three deciduous sorts that will prove satisfactory. The first is the Acacia of Constantinople (*Albizzia Julebrius*). The others are the Spanish chestnut and the Texas umbrella tree. The first has the merit of more rapid growth, but the two latter have the commendable habit for the south of being very tardily deciduous; rarely becoming defoliated till January and normally being in leaf again by April.

The planter of deciduous trees enjoys advantages unknown to one who confines himself to evergreens. First, he contributes in no small measure to create that charming realization of spring which the bursting of bud and leaf always carries with it. Next he encounters few perplexing difficulties in the matter of selection, for of suitable deciduous trees, both endemic and foreign, the name is legion—whereas the planter of evergreen species is restricted to very, very few—and many of those of still problematical value. Still, as we admit the general advisability of the evergreen for Southern California with it we will now deal. First, caution is demanded in the selection of kinds which, if given a helping hand to start and encourage their early growth, will quickly assume their own responsibilities without further solicitation on the part of the grower. Any tree is obviously unfitted to this purpose which exacts either irrigation or cultivation beyond its first or second year.

Irrigation is always a menace to the roadbed, and unless followed by cultivation is a reprehensible practice. The moment cultivation is had the utility of your sidewalks are destroyed and the scheme of a perfect highway vitiated.

These considerations would lead us to reject such beautiful and symmetrical trees as the camphor laurel and the magnolia foetida, both of which are being utilized to some extent for avenue planting in Southern California.

Few trees in the many desirable traits of hardihood, longevity, cleanliness and freedom from the attacks of pestiferous insects or rodents are the peer of the former, or rival the splendor of the latter when in flower. They will, however, fail to give maximum results unless copiously watered and, except upon lands both naturally moist and well drained, must prove unprofitable.

The immense family of conifers—any and all kinds are, or should be, utterly tabooed.

The well-known hardiness and phenomenal growth of some of our native pines and cypresses has led many planters into undue enthusiasm, and I regretfully notice them planted in many localities for street uses. With but rare exceptions the habit of growth of the whole order is either columnar like the Italian cypress or pyramidal. The former, like the palms, supply no shade, hence obviously unsuitable; the others must sooner or later enroach upon the sidewalk or driveway, and then public convenience demands the removal of the lower limbs for a height of 10 or 12 feet; with the resulting destruction of any claim to beauty that the tree ever possessed.

Only a few years ago I was questioned upon, and enthusiastically advocated the planting of an avenue to a coniferous tree—the *Bunya Bunya* or famous and beautiful *Araucaria Bidwellii*. It was, however, to be a central alignment upon a boulevard of one hundred and fifty feet, with ample room for the development of the trees; for cultivation, an irrigation trench, and abundant room for a driveway on either side. Upon a scale of such magnificence the objections made against the camphor laurel, magnolia and many conifers vanish—only holding upon the village street or ordinary country road of 30 to 50 feet. The planting of road trees is an operation that should take into consideration the far distant future—hence, longevity of species becomes a factors of prime importance. On this point we are at a serious disadvantage with the Eastern States and Europe where suitability of kinds has been tested for hundreds of years.

We happen to know that the pepper and gum trees are long-lived, but of their behavior and appearance under existing conditions here we know absolutely nothing that extends beyond the short span of thirty years. How insignificant then is the sum of our knowledge of the host of exotics that we have been testing lately, our acquaintance with which does not cover over one-half that time.

We are in a hurry for all things from riches down to shade, and from the seed planted to-day expect the developed tree to-morrow. The policy dictated by the greatest wisdom and forethought, would indicate the planting of slow-growing endemic species, and satisfy the popular clamor for immediate results by interspersing them with short-lived, quick-growing sorts, which could be removed when their mission was fulfilled.

Since we have rejected the great army of conifers and have conceded the general virtues of evergreens for Southern California, we are practically restricted to two native species which have accidentally occurred on roadways, long enough to guarantee their remarkable fitness. One is the evergreen oak, the *Quercus agrifolia*—the other the native laurel, *Umbellularia Californica*. The enduring longevity of both is beyond dispute, and the habits of each as well known to-day as they will be a hundred years hence. We know that the former will thrive upon arid, gravelly soils, that the latter demands valley or bottom lands of some little natural moisture. Both branch low, but pruning is no infringement upon their beauty. They should be extensively planted upon every bit of roadside where these conditions exist. Their somewhat tardy development is the only defect that can be alleged and it does seem somewhat strange that we should have gone wild in the pursuit of strange exotic sylvan gods to the neglect of these two species. From the standpoint of beauty as well as utility, the laurel stands without a peer. The species heretofore named dwindling into relative insignificance.

Two sorts, however satisfactory, would result in a distressing monotony if universally planted, and this paucity of native species is in a measure accountable for our experiments with exotics.

Of them, our ignorance (for such practical work as street planting) is voluminous; our knowledge, with the single exception of the pepper and blue gum, is simply nil. These latter, except for their rapid development and well-known endurance of drought and our extremest temperatures, would not be tolerated an instant as avenue trees, nor will they be for even a day after the determination of similar merits in other species. This without slightest disparagement of the inestimable worth of the blue gum when confined to its legitimate uses as a wind break or fuel plantation. The pepper tree is even more objectionable. Its undeniable beauty and graceful drooping habit has furnished texts for eulogists, themes for poets and inspiration for profanity to the luckless pedestrian whose hat is knocked off by the same pendulous branches or marred by its sticky exudations. So pronounced are these objections that municipalities have had to provide ordinances for their pruning—a never-ending expense and annoyance to the abutting owner. In many country districts, as intimated heretofore, the pungent nectar of their flowers is communicated largely and deleteriously to the honey made in their vicinity.

Another exotic evergreen that seems to be in popular demand is the *Grevillia Robusta*, or Silky Oak. I regret to say that I cannot get enthusiastic over it. Of unsurpassed beauty in early life, it speedily deteriorates, and by excessive defoliation loses caste as an ideal street tree. This defect can in a measure be overcome by a vigorous pruning every few years. Its brittleness in high winds is still another objection, although it was noting the subsequent vigorous growth upon wind-broken trees that opened our eyes to the beneficial results of judicious pruning. All of the feather-leaved acacias are, in my judgment, chargeable with a similar fault as the Grevillia—that is a deficiency of foliage and bad habit, which augument with increasing years. Furthermore, and like the Grevillia, the constant dropping of their foliage and fruit pods is an objection for which their glorious wealth of fragrant flowers hardly compensates.

So far, we have not proceeded much further than a sweeping denunciation of most of the trees in general use, and the question naturally follows, what can we plant? Is there anything left? Or, because of these alleged defects, must our highways and roadsides continue to remain in their present uninviting condition? Most unequivocally no, and the number left worthy of trial is indefinitely great, but I shall only name a half dozen of species which, experimental though our knowledge of them yet is, seem to offer less prospect for future disappointment than any yet observed. At the top of the list I would place one of the entire-leaved acacias, the Blackwood, *Acacia melanoxylon*. My preference is not based upon any sentimental enthusiasm, but from observation of its behavior as a sidewalk tree for nearly 20 years. Quite unlike the feather-leaved acacias, it is at its worst in early life; its scantiness of foliage being noticeable until at four or five years and a height of 25 feet it begins to improve continuously, until at 20 years it forms a most imposing specimen of 60 feet, with a straight robust stem, crowned with a symmetrical and amply umbrageous crown, invulnerable to ordinary gales, enduring our extremest frosts or heat. Its leaves are of good color and of a texture to which dust does not readily adhere, remarkably free from litter, and last, but not least, not at all fastidious about soils or exposures, unless of extremest aridity. The fact that it is in common with the family subject to the attacks of the cottony cushion scale should be no deterrent to its planting, now that we have the means to keep that pest in subjection. Its severely formal habit is an objection to its promiscuous planting upon winding country roads or such as climb hills or descend dales, but for the streets of most modern towns and villages which mainly intercept at right angles, it is most suitable, this feature being in harmonious keeping with the plan, and the esthetic is enhanced, not marred.

Next in point of importance, I rate a eucalyptus or rather four of them. Observation of them in Southern California under conditions not dissimilar from what we expect upon highways, only extends over six to ten years, and actual experience with them as sidewalk trees only covers about four years; yet our knowledge of the longevity of the genus and their phenomenal rapidity of growths is almost a temptation to plunge into heroics on their behalf. The four species are *E. diversicolor* and *E. corynocalyx*, *E. hemiphloia* and *E. polyanthema*. I group them in pairs because the behavior and appearance of each couple, except to the expert botanist, are identical.

The first pair possesses round or uniform leaves in youth, gradually losing that character and assuming the long lanceolate foliage of most species, but never acquiring (unless crowded) the slender spindling habit of most of the linear-leaved species, such as the blue, red or manna gums—a habit difficult to suppress even with continuous heading back. Given ample room, and their tendency is to make a sufficiently branching and compact head.

The showy yellow blossoms of the *E. diversicolor* are an attractive adjunct, and the flowers of both species are eagerly sought by bees and yield a most excellent honey. Both, when young, are more susceptible to frost than the blue gum, and may prove unsuitable to any point where the winter minimum ever falls to three degrees below zero. As an offset to this, they have successfully withstood extremest heat and soils of excessive dryness, and though exceeded in rapidity of growth by some few species, are sufficiently "fast" even for this age of hurry.

The other two species—*E. hemiphloia* and *E. polyanthema*—have successfully endured lower temperatures than the former, and seem as well prepared to stand excessive drought and heat as the others. They have not been so extensively planted, and hence our knowledge is still more limited; yet they give abounding promise for service in the future. In point of umbrageousness, they far outrank any eucalypti we have, and their round leaves (continuous through life), of a pleasing silvery gray color, form an agreeable contrast to the uniformity and sameness of most of the gums. Their cleanliness, freedom from insect pests and alleged therapeutic value, in addition to the merits already dwelt upon, would seem to justify, despite our insufficient knowledge of their future behavior, limited experimentation with them upon our highways.

Briefly, I desire to speak of one more tree that I have had opportunity to observe during the past ten years, as isolated examples upon sidewalks and driveways in both Los Angeles and Ventura counties. I refer to the Moreton Bay rubber tree—*Ficus macrophylla*. Its only radical defect is a tendency to make a good deal of litter, but the atmospheric dryness of our climate, so uncongenial to the magnolia, just meets its requirements. If a relatively tardy development be considered a drawback, it can, or the effect of it, be overcome, as in the case of the laurel, by the interplantation of other short-lived, rapid-growing sorts.

The jumbling together of a variety of species on any street or drive is to be deprecated. A better general effect is produced with few varieties. The planting should be uniformly one kind until a bend, turn or angle in the road occurs, when another species may be introduced with propriety. These suggestions are made in conformity with my ideas that road-making and road-planting are sciences that should not be followed out in a haphazard way, but that the building and planting of them should be in the hands of qualified experts, of whom a strict accounting should be exacted.

Our present lack of system results as might be expected in many sections of the State, in having trails worse than no roads, unplanted, or if planted, incongruously or improperly done. Still, so impressed are we with the advantages that follow the planting of anything upon our thoroughfares, be it no more than a shrub, that, lacking anything like an intelligent system of road supervision, we must make the best of what we have, and urge upon every one the planting of even peppers or grevillias as a stride in the right direction, as an evidence of civilization, that will increase our material comfort and prosperity and elevate us in the eyes of the world.

THE IRRIGATIONIST.

Excessive Irrigation.

An essay at the Farmers' Institute in Pomona, May 27 and 28, by Mr. K. McLennan, foreman of the Southern California experiment station.

There is a prevailing idea among a great many people of this State, especially the northern part of the State, that no good orchards or good fruits can be raised and grown on the dry lands and irrigated districts of Southern California without an enormous supply of water. This idea is erroneous, misleading, and arises from the lack of sufficient knowledge of the country and of the conditions required to grow good orchards and good fruit.

And from this idea arises the practice of irrigating too much and at all times of the year, which sooner or later will bring its own reward with it.

While some irrigation when judiciously used is beneficial and even necessary, half the quantity used would be quite sufficient, and in a great many cases less would be better.

As proof of this, one can see many good orchards planted here and there throughout this valley that never receive any irrigation whatever except rainfall from the sky, and yet these orchards bear large crops of the very best of fruits. They have a higher color and are of a better flavor than those that are irrigated.

OVERWATERING YOUNG STOCK.

This is generally practiced by unprofessionals and inexperienced men, and I fear by some professionals too, who have no other object or motive in view than the money there is in the business.

Their aim is to force the trees by irrigation, and raise the greatest number of large trees in the quickest time possible, and shove them on the market, often regardless of quality or variety; and generally, on account of their large size, they sell better than medium-sized trees that are not irrigated but are decidedly of a better quality.

When these forced trees are transferred from the nursery and planted in the orchard they are always found to be very slow in starting, many of them will die and a great many will start from the ground (where the older and more mature are always to be found). The result will be a very uneven and unsatisfactory orchard.

At this stage of the game the orchardist takes it up and commences irrigating the trees as much and as often as he can get water to do it with, thinking that this will force them into bearing sooner than they otherwise would. This practice is a grave error, for they will not bear as early as they would if left more to the natural climatic conditions and seasonable changes of the year. Instead of forcing them into bearing, they are forced to make unnatural growths and the result will be that they are overgrown, top-heavy, with poor root system almost swimming on the surface of the ground; and when the winter rains and storms set in many of them will be found tottering over here and there throughout the orchard.

Thus they are kept in a forced state of growth and excitement from the time the seedlings appear in the seed beds until the trees commence to bear, and very often after that.

There is another evil attending too much irrigation that is not properly looked into. It impoverishes the ground by washing away the finer ingredients and materials necessary to feed and sustain plant life.

By way of illustration, we will take a ten acre orange orchard with the trees planted eighteen feet apart each way. We now prepare for irrigation by running furrows along the rows two feet from the trunk of the tree, leaving a space fourteen feet between the furrows or irrigating ditches that is not to be irrigated. Then the water is run in the ditches at a distance of fourteen feet apart until the whole orchard is irrigated, and this is repeated every two months or oftener.

The result of this will be that an enormous quantity of plant food is washed away every year, and fertilizers must be resorted to before the trees have hardly time to come into bearing.

DANGER OF OVER-IRRIGATING STONE FRUITS.

Stone fruits should never be irrigated when the sap has commenced to move and circulate through the body of the tree, as they are at that time in their most delicate and sensitive condition and any sudden change at this time will chill the roots, the circulation will cease, or at least until the ground commences to warm up, when they will assume their normal condition and blossoms and wood-buds burst out all at once, and the ever-ready and eager wood-buds lead in the race, thus diverting the sap from their slower neighbors—the first buds—causing the blossom and fruit to drop, and a short crop will follow.

Should the season be very cold and wet at this interesting period of their growth, different results may follow. In order to explain this it would be necessary to follow the course and circulation of the sap. The sap ascends through the cells in the wood or body of the tree until it reaches the branches; there it will divide and circulate through every branch on the tree. On reaching the ends of the branches it changes its course and returns and descends on the outside of the wood—between the wood and the bark—until the collar of the tree is reached. There it will meet an obstacle; the ground is cold and wet and perhaps the water is standing around the collar of the tree, and the sap being on the outside of the wood brings it in close proximity to the cold and wet ground, which causes the circulation of the sap to cease. The consequence will be the sap sours and ferments, the bark splits and the tree dies.

This was the cause of so many fruit trees dying three years ago.

The best time to irrigate stone fruits is after the stone hardens in the fruit and again immediately after the fruit is picked.

The aim in raising young and good orchards should be to let them grow more dependent on their own resources. In this way they will become acclimatized and will stand the climatic conditions and changes of the seasons better. Of course I mean that they should receive good and thorough cultivation, and when it will be found necessary to irrigate them they should receive a good, thorough one, but not often. The furrows should be made as deep as possible—the deeper the better; they let the water down deep into the ground and will draw the attention of the roots downward instead of up to the surface of the ground as they usually do.

To the doubtful minds I would only say, look over the valleys of Southern California, note the vegetation growing there, plants, shrubs and trees of all descriptions and in all stages of growth, and aided by no hand but nature's. They too had a beginning and were small once; some are now large and old and still grow, blossom in their season and bring forth after their own kind. How much more, then, are we able to accomplish with good cultivation and a reasonable supply of water?

POULTRY YARD

Poultry and Eggs in the Petaluma Region.

PETALUMA, July 6, 1892.

TO THE EDITOR:—I wish to give your readers an estimate of the total number of coops of poultry received at Petaluma for the year ending June 1, 1892, that has been compiled. Of fowls there were 2696 coops (each coop containing 50 head) making 134,800 heads for the year; and the value per head would range from 25c to $1. This embraces chicks, turkeys, ducks and geese. The total number of eggs shipped was 1,432,908 dozen, which sold for an average of 27½ cents per dozen. During the cheap season 15 cents was an average price and the highest price during the last 12 months was 48 cents. Counting these a low average rate, say 25 cents per dozen, the aggregate value is $378,227. This does not include the eggs shipped by rail from Petaluma, or from other points in the country. The grand total from Petaluma and Santa Rosa is 1,882,188 dozen and valued at $470, 547.

In an interview with the proprietor of the Incubator factory, he gave me the following when I asked if poultry-raising would pay.

"Those of large experience concede that good hens will lay 12 dozen eggs per annum, but as a safe estimate let us take ten dozen as the average egg production for a flock of good, healthy hens. Prices of eggs in the San Francisco market range from 20 cents per dozen (the lowest) to 55 cents or 60 cents (the highest), averaging 30 cents per dozen. Again let us be on the safe side and say 25 cents per dozen, which is very reasonable, since choice ranch eggs command from two to five cents per dozen more than those ordinarily sent to market. Now, if we sell ten dozen eggs at 25 cents per dozen the proceeds are $2 50 per hen. After deducting $1 for feed, which is a high estimate, we have the neat little sum of $1.50 per hen per annum for eggs alone, to say nothing of what chicks can be raised.

"The use of the Petaluma Incubators and Brooders set at rest this question as to whether poultry will pay." He said: "Returns are large and frequent. Capital is turned over several times during the year, and for the small amount of cash required to start in the business we know of nothing that will pay as well. For example, do a little figuring. Broilers sell all the way from $4.50 to $10 per dozen, and it is estimated by those who have been long in the business that the cost of raising a chick ten to twelve weeks old is less than 15 cents. Now, this leaves a large margin for profit. The amount of money that one may make is only limited by one's capacity for conducting the business. The advantages of having a good incubator are that eggs can be set at any time so as to have broilers when they command the highest prices. Incubators never break eggs, leave the nest or breed vermin. Hens can be kept laying instead of sitting. The hatching can be done cheaper and more reliably with a good incubator and not give a tenth part of the labor to look after it the number of hens would that are required to hatch the same number of eggs, besides a great many other advantages well known to those in the business."

One dealer and raiser of poultry informed me that he had 1½ acres and had 400 laying hens that produced $1000 worth of eggs and young chickens. The total expense was a little over $300 per year for food, a profit of $700 per year, but agreed all the feed should be raised also, if possible.

W. A. Platt has several incubators that hold 2200 eggs. He says that 75 per cent of the eggs will hatch out.. Then he will lose 10 to 25 per cent of the small chicks. After three years the hens should be sold, being best to sell them then. Chicks lay at five months old. The profit per hen will be $1 to $1.50 each per year. Good wheat being purchased at market price is the feed used; in fact, he says, "good feed is cheaper in the long run." This gentleman will double his capacity this year. He has 600 duck eggs in the machine now.

A gentleman who lives within five miles of Petaluma gives the figures on what he has made off of 500 hens the past year. They are as follows:

Commencing with 500 hens on the 1st of January, 1891,	
Sold 4,658 dozen eggs at an average of 30 cents a dozen	$1,397 40
150 hens sold at $5.50 a dozen	68 75
18 dozen broilers at $4.50 a dozen	81 00
Increased flock 100 pullets at $7 a dozen	60 00
Gross receipts	$1,607 15
Cost of feed for the year	700 00
Net profit	907 15

Which gives a profit of $1.80 for each hen.

The following article from the pen of A. Armstrong appeared in the Petaluma *Courier:*

There is not millions in it, but it certainly pays, and pays well, in the district surrounding Petaluma. For a man of small capital who has a liking for poultry, it is the best business he can follow, provided he locates near a cash market. Petaluma is par excellence in that respect. No barter in ours, You can sell one-half dozen eggs or 1000 sacks of wheat and get cash every time. I saw an old gentleman once bring his eggs to market in his coat-tail pocket, get his cash and go away smiling.

Petaluma is now and always will be the greatest poultry district in our glorious State. Besides our own market town we are handy to San Francisco. If you wish to ship your eggs it only costs 25 cents per case of thirty-six dozen eggs and cases returned free of charge. Petaluma fresh ranch eggs always sell above quotations. At a fair estimate there must be in a radius of fifteen miles from Petaluma close to half a million hens in flocks ranging from 100 to 1500 hens. We consider there is more clear profit in keeping twenty-five hens than one cow. We do not make $5 on a hen, but we do clear $1.50 to $2 50 per hen per year. How many men have I heard exclaim: "If it had not been for my chickens I would have run behind." And dairymen also say: "I make more money out of my hens than I do the cows." And so it goes. Now to illustrate. In my own neighborhood, neighbor No. 1 keeps twenty cows and 500 hens. He says the hens beat the cows all hollow; his profit on hens last year was $800. No. 2 has fifteen acres of land, a family of four, keeps 400 hens (no other income), lives and dresses well, has money to spend, rides in his carriage and enjoys life well. No. 3, your humble servant, does not make an exclusive business of poultry, but keeps a flock of 300 hens on the side, gives them good care, and they cleared him $500 last year. But neighbor No. 4 has the model chicken ranch. a Mr. Treat, who has ten acres of land, well improved, fine residence, and all other buildings in fine shape, one-third in fruit trees, who started there with small means a few years ago. I don't suppose $5000 would buy him out to-day, and he made it all from the humble hen.

W. H. MURRAY.

HORTICULTURE.

How Fruit-Growing Has Progressed on this Coast.

There has been placed on our table by a pioneer resident on the "Eastern Slope" a curious and interesting relic connected with the early history of that section of country. This reminder of the past consists of an article taken from the *Territorial Enterprise*, published in Carson City, and bears date Sept. 1, 1860. It comes to us aged and dingy, having been printed on brown wrapping paper, for often in those early days it happened, at points in the remote interior, that the newspaper man, his stock of white paper being exhausted, was obliged to borrow from his neighbor, the merchant, enough wrapping paper to tide over the emergency. Commenting on the California fruits arriving in that country, the editor of the *Territorial Enterprise*, in the issue referred to, discourses as follows:

Our markets are now being supplied with every variety of fruit from California, and at prices not at all unreasonable, considering the distance it has to be brought and the care required in its transportation. Pears, peaches and apples are selling at 35 and 40 cents a pound. The apples, for the most part, get over in tolerable condition, but the pears and peaches, unless packed with extra care, bruise a good deal with the long and rough journey. Of all the peaches brought over the mountains, the finest we have yet seen were a lot from Garcelon's nursery, Calaveras county, one of the Eden spots of California. This delicious fruit, although of immense size, and not picked until fully ripe, had been boxed and handled with such care, that they reached here with but slight damage, the bloom on their ruddy cheeks being scarce tarnished with the journey. But for some detention on the road—the Big Tree route—these peaches would have been here in four days from the time they were picked, as they will be hereafter; it being the intention of the proprietors, we believe, to supply our market regularly with the products of their orchard.

With this bountiful supply of fruit, living has been rendered much more tolerable in Washoe than aforetime. Those who were here last summer will remember that we saw but little fruit then, and what little did get here was nearly worthless and arrived late in the season. Possessed of so many sheltered and fertile spots, we do not see why our own soil could not be made to contribute something in a few years toward furnishing ourselves with these products, now wholly imported from California. It is generally believed, from the ill success that has attended the efforts thus far made, that fruit trees will not thrive in this country. The more tender, perhaps, would not; yet we believe apples, plums and grapes could be cultivated with success. Currants, plums and a variety of berries are found growing wild, and the cultivated varieties could, no doubt, with proper management, be made to adapt themselves to our soil and climate. The experiments heretofore made have been on a limited scale, and probably not conducted with as much judgment and care as they should have been.

Persons going into a new country, having a climate different from that to which they have been accustomed, are very apt to question its adaptability to the growth of such products as they have been familiar with. When our people first arrived in California, they looked upon most of the country as a mere desert, and were very timid about undertaking even the cultivation of grain, while they had not the remotest idea that vegetables and trees in endless variety could be raised with facility almost everywhere. Yet such, on trial, proved to be the case. The present proprietor of the nursery mentioned took up the spot, then the site of an old Indian rancharia, in 1851, intending to test its fitness for gardening and fruit-growing, with many doubts and misgivings as to the results; and feeling very much, it may be presumed, as our friend Nash would do were he to undertake a like experiment at this time, on the old Eagle ranch, having all the reported failures of peach growers in Upper Carson before his eyes.

These mountain orchards of Mr. Garcelon, upon the cultivation of which he entered with so much distrust, scarce nine years ago, now beat the world in the variety, excellence and abundance of their products, hundreds of tons of the most delicious fruits being raised every year with but little labor. Now, while we have no idea that results like these can attend the labors of the nurseryman in Western Utah, still, we believe there are many places on our river bottoms, as well as hundreds of little dells in the mountains, where the more useful and hardy fruits could be grown with the greatest success. At all events, the matter should be fully tested at the earliest practicable moment, and we trust our people will not suffer another planting season to go by without taking measures for giving the fruit-growing capacities of Washoe a fair trial.

It will be observed with how much of misgiving the writer of the above article speaks of the fruit-growing prospects in Western Utah, now the State of Nevada, venturing to suggest that possibly the hardier varieties might, in favorable localities, be grown with success. Up till that time, the only fruit trees that had been set out over there consisted of the peach and apple, a few of which had been planted in Carson valley, but with such disappointing results that no further trials in this line had been made either there or elsewhere in that country. Now, Carson valley is notably a breezy locality, the wind sweeping through it often with almost cyclonic violence, to which fact, coupled perhaps with ignorant planting and careless cultivation, was due the failure alluded to.

With the large immigration incident to the discovery of the Comstock mines, there was created such a demand for

fresh fruits in Western Utah that the planting of fruit trees was soon after begun, and, favorable localities having been selected and the business conducted with more care, has come to reach there large proportions, enough of the more hardy fruits, and of the best quality, being now raised for home consumption, with some to spare.

And thus has it been with this fruit-growing business from the start. Commencing in the rich alluvial valleys of California, it has been traveling all the while east. Its first movement in that direction having brought it to the foothills of the Sierra Nevada, it made there a short halt, advancing soon after into the mining districts, this being the site of the Garcelon nursery, the pioneer in the mining regions of the State. Gradually it crept up to higher altitudes, and finally passed over the great snowy range into the arid sage lands beyond, where, as above related, we find it flourishing to-day. For now nearly a quarter of a century both Ceres and Pomona have found prosperous homes in a region laid down on the not very old maps as the Great American desert! These experimental plantings made by men of the Harris Garcelon type constitute the mile stones by which is measured the horticultural progress made by our people since they came to this coast.

Orange Growing.

The following paragraphs are taken from the excellent paper on the above subject which Henry H. Wheeler of Pomona read at the recent meeting of the Farmers' Institute:

VARIETIES.

The next important step is to select the varieties desired. It can hardly be denied that the Washington Navel has no equal for quality, promises the highest market value, is an excellent shipping orange, and is of unusually uniform quality. I do not, like many, give the Mediterranean Sweet either second or third place. My experience with it is that it is not of uniform quality on the trees—there being many coarse, puffy ones, especially in the latter part of June and July—tends to overbear, and is a larger orange, on the average, than I think will soon come to be of market value next to the Washington Navel. It is not to be questioned that a good Mediterranean Sweet is an exceptionally fine orange.

Second in commercial value is, or soon will be, the paper rind, or thin-skinned St. Michael. It is fine flavored, a good keeper and shipper, and in size growing to be the most popular in the retail market. If you have seen the catalogue of auction sales this season you have noticed that the very smallest sized oranges have brought higher prices than the large ones.

The Ruby Blood orange is highly recommended, but I have not grown or tested it. The Blood orange always has commanded high prices in the markets. For two or three years I have been deliberating about the Nonpariel (known here as the Valencia Late, and in Florida called Hart's Late). This is an orange ripening very late—July and August—of fine keeping and therefore shipping qualities, and fairly good to eat out of hand. Without doubt, a few carloads of this variety would sell wonderfully well in the large Atlantic coast cities—even as high as eight or nine dollars a box. But since the markets are then (July and August) filled with all kinds of green fruits, I have come to the conclusion that several hundred cars of this variety would sell to the shippers' profit.

Now-a-days I seldom advise. If I were setting out ten acres to oranges, perhaps I should plant one-half to Washington Navels, the other half to paper-rind St. Michaels.

PRUNING.

We do not pay much attention to pruning. The French or English gardener will spend more time and thought over a single tree than we give to a ten-acre orchard. As I go about I am amused, and also nearly vexed, to see all trees in some orchards trimmed up exactly alike, the fig and prune, apricot and lemon, so that a horse can rub up close to the trunk. My friend, you call yourself an intelligent horticulturist, have you ever considered for what you are growing and trimming trees? Is it for productiveness, that is, profit, or for your own ease in working around them, that your hat may not be knocked off by branches, or a little backache saved in hoeing? I will wager almost anything that the extra amount of fruit produced on a low-headed and low-branched tree pays for hoeing around it many times over.

I am a strong advocate of low pruning of orange trees for these seven reasons: The fruit-bearing surface is greatly increased. The tree is made more stocky, and is thus better able to withstand high winds. The bark of the trunk is shaded, a most important consideration in this country. The soil immediately about the trunk is shaded and thus kept more moist and loose. The picking of fruit is greatly facilitated, and less expensive. A large olive grower has told me that it costs him four times as much to pick olives from some of his high trees as it does from the low-trained ones, and any one can see how much help it is in the case of lemon trees, from which pickings are made several times a year. I have not had to use steps or ladders in picking oranges from my seven-year-old trees.

There might be seven equally cogent reasons in favor of high pruning, but it has not been my lot to fall upon them. To show the increase in bearing surface, I call to mind some trees pruned high, of the same age as mine. When I had a small first crop, they had nothing. The next year I had about half a box to a tree; they had one or two dozen. A good maxim about pruning is, train a tree as you wish it to grow, and don't try to make it as you wish when it is old—when you have to use a two-horse pair of shears and a buck saw. I do not favor letting new growth get more than a foot or two long. Fruit borne on the extremities of long branches is always coarse and poor. Large trees should be thinned inside—especially seedling trees. Let the sunlight air into the heart of the tree; it will keep the tree clean, and the fruit will ripen more uniformly, leaving none of those puffy, coarse, sickly-looking oranges so common in the centers of large trees.

VALUE OF AN ORANGE GROVE.

It is unsatisfactory to talk about profits. There is a case on record of $1800 an acre; Riverside can furnish proofs of $1000, $1100 and $1200 an acre; but it would be difficult to get at the average net profit. If I had capital, I would not hesitate to offer for all bearing, complete, well cared-for orchards, of good varieties, $300 per acre in advance, for the next ten years, or $3000 cash per ten acres for the crop. For ten years to come, I believe choice oranges will bring good prices. If the fruit growers are not fools they will get their just share of the profits.

Lemon Culture and Curing.

Excepting a short preface, the following is the paper of Judge Frank A. Newell of the Kingsley tract, read before the Los Angeles County Farmers' Institute at Pomona, May 28, 1892:

As to the cultivation of the lemon tree in bearing (I do not care to speak of it at an earlier stage) all that need be said is, it should be kept in thrifty condition to a marked degree, that the fruit may have healthy and rapid growth to attain commercial size before the least change of color. This can be accomplished by reasonable moisture and generous fertilizing. I have so far used domestic manure in best form. As to which is the best of the several commercial fertilizers I cannot, for want of proper knowledge, venture an opinion. Neither as to which variety of lemon is the best. I have the Eurekas, and none other. No one has yet shown me by actual demonstration there is a better variety; and I am waiting for some person of good repute to come and demonstrate to me in the presence of at least two good citizens, "worthy and well qualified," that there is a variety whose fruit can be gathered with less discomfort, is more prolific, that looks better, feels better, tastes better, keeps better and is better. When he comes, if I am not too old, I agree to tell all interested parties that I meet, that they may know and obtain the better kind. Some believe that those persons who produce fine cured lemons possess secrets that the masses do not possess. In the broadest sense of the word, that is true. So there are secrets clustering around the process of making good pie, but in a strict sense of the word there are none in either. The superior knowledge possessed has been gained by study and experiment, often attended with considerable loss. The greatest secret (if the word may be used) consists in intelligently severing the fruit from the tree. In this consists the exercise of good judgment and the highest order of care. The lemon that will appear to best advantage when thoroughly cured, was of commercial size and rich, green color when severed. A lemon that has changed color from intense green to yellow, though in a slight degree, can never compare when cured, in color or quality, with its more fortunate companion above mentioned. If the fruit is expected to remain from six to ten months in storage awaiting favorable market, then, if possible, fruit measuring at least 2¾ inches in diameter and upward should be selected; but if known to be wanted much sooner, then those of less diameter may be selected—2¼ inches and upward. When the fruit is maturing on the tree I gather as often as two or three times each month, and at each gathering sever everything, great or small, that shows the marked sign of turning. However small, they cannot grow better, and it relieves the tree to take them off. As I have already stated, the greatest care must be exercised to obtain the best results in severing fruit from the tree and placing in sweating box. If there shall be any shirking of duty in that behalf on the part of the orchardist, he will surely find his fruit, when cured, inferior in just proportion, suggesting to his mind the ancient common law maxim that "a man cannot be permitted to take advantage of his own wrong."

Now, a few words of detail and I am done: Cut the stem—never pull off, for it will not keep as well; place in basket or other convenient vessel lined with some soft substance, holding not exceeding 50 pounds; place in sweat box three to five feet deep, placing boxes one above the other to convenient height, placing one or two empty boxes on top and bottom to relieve top and bottom boxes from drying, as it is found the top and bottom boxes are most sensitive to heat; let the boxes fit as close together as possible; then cover to exclude all light; let the boxes be surrounded with air, but at all hazard protect from currents of air reaching them. With the usual average temperature in ordinary barn or shed, in 35 to 40 days after so placing the fruit, open up, select everything worthy and place in trays one deep, holding from four to six dozen; trays should be of uniform size to fit closely when stacked, making as near air tight as possible; place newspapers in bottom and top of trays to absorb any excess of moisture which often accrues. When this is all done, stack and cover in manner aforesaid and let alone until wanted; the sooner marketed the better, if outside of a first-class storage.

The doing of the things above stated has secured to me fine cured fruit, as many citizens of this city have seen and know, and will surely secure to others the same result who are willing to exercise the same care. Whether any better method will be discovered, I cannot say. If so or not, we have reached such a degree of excellence in curing as to encourage liberal planting of lemon orchards, whose wholesome fruit is more extensively known and used than any other, and the production of which in its best possible form is of more interest of vital character to the human family, in sickness and in health, than the production of all other fruits combined; and I believe that very soon, by force of right, the lemon will arrogate to itself the dignity of kingship of the citrus family. Respectfully,

FRANK A. NEWELL.

Fruit Marketing.

The Santa Clara Fruit Exchange.

CAMPBELL, Santa Clara Co., July 6, 1892.

TO THE EDITOR.—On the 2d inst. the stockholders of Santa Clara Co. Fruit Exchange met and adopted by-laws. The directors of that Exchange met on adjournment of the stockholders' meeting and unanimously decided to immediately select a location and erect suitable buildings thereon in which to conduct the business of a Fruit Exchange. The amount of stock thus far subscribed, together with the almost unanimous promise of our fruit growers to give such further financial aid as may be required, impelled the directors to this prompt and decisive action.

At Campbell about 50 persons subscribed $1500 and promised more if more be needed. Other places will doubtless do as well when the advantages of a Fruit Exchange are as thoroughly understood.

The "Exchange Buildings" will most probably be fireproof, two-story brick, contain the best modern appliances for grading and packing fruit. Thus the Exchange may be enabled to put a grower's brand of fruit on the market, at least equal to the best, if not an unequaled brand. This alone will be worth many thousand dollars to the fruit growers. The Exchange promises to be ready to handle the present year's dried fruit crop of Santa Clara valley. Growers should very promptly subscribe the balance of the stock required, and thus place their business on a solid basis. This is virtually a fruit grower's Exchange, as there are a hundred or more growers to every canner or drier. If growers want their business properly done they must do it.

Apricots are beginning to ripen. The crop will be very short. There are acres together not worth gathering. Not only are apricots withering, but not a few prunes will also fail to mature.

It may be peaches will do better. Some say the cause is frost and cold weather, others add "dry weather" as the principal cause.

I think that it is due to the early frosts and the later cold, dry weather combined.

There will be a great deal of small fruit this year, besides a large quantity will not mature.

ENTERPRISE OF THE CAMPBELL GROWERS.

The "Buxton Fruit Drying Works" at this place was this day transferred to the "Campbell Fruit Growers' Union," an association of the fruit growers of this district, by which they propose to handle their fruit on cooperative principles. The purchase of the Buxton plant puts them in possession of one of the largest and finest equipped drying plants in the State, with buildings and grounds of almost unlimited capacity, and with all the most approved appliances and labor-saving machinery, run by steam power, for the rapid and economical handling of fruit. The laying of the third rail from San Jose to these works, which is now in progress and which will be completed in time for this season's business, will give unsurpassed shipping facilities, giving broad gauge communication with all points East without change. The acquisition of this plant is considered fortunate by the growers as it is located in the center of the great fruit growing district of Santa Clara valley, and there is practically no limit to its capacity for handling fruit. The fruit growers of this district have acquired a reputation for enterprise and push, and this move is considered important in view of the fact that it is the first step toward the handling and sale of the fruit by the growers, one of the principal objects that was sought to be brought about by the organization of the County Fruit Growers' Exchange. M.

The Trade in Spanish Raisins.

Vice-Consul Romaguera, of Gandia, Spain, reports that the demand for this fruit, which is the principal product of that region, has decreased considerably during the last few years, and, in consequence, its price, which about six years ago was on an average 25 pesetas (20s.) per cwt., had fallen at the end of last year to 10 pesetas (8s.) per cwt., which price does not cover the expenses of cultivation. Such a depreciation is attributed to the lowering of the duties on currants in England, but it is principally owing to the considerable increase of the duties which raisins from Spain have to pay in the United States since the McKinley bill has been in force, and also owing to the increase of that product in other parts of the world. The crop of oranges has been most abundant, and has obtained regular prices, but if a lowering of railway tariffs is not obtained, so as to extend its consumption in Spain, the depreciation of this beautiful and valuable fruit will soon be felt, as the market in England is not sufficient to give outlet to the production, which day by day is increasing. Mr. Vice-Consul Morand, of Denia, reports that damp weather, with some rainfalls since the beginning of September, caused much damage to the crop of raisins, which at first was estimated to be a good average one, say about 3500 tons. The demand for the United States of America has been very limited indeed, owing to the heavy duty there and the large crops in California, which have considerably depressed the price of this fruit in that country, and greatly affected its value in all the other markets; and, as in the previous year, speculators (among whom were cultivators themselves, who had shipped largely on their own account) lost a good deal of money. The district of Denia in consequence is much impoverished, the value of landed property has depreciated, and money is becoming more scarce. Consul-General Holmwood, of Smyrna, reports under date May 1: "The recent revision of the French tariffs fully accounts for the value of raisins in 1891, the present tariff provisions virtually prohibiting the shipment of raisins to France, to which country so large a proportion of this staple production of Asia Minor had hitherto been exported."—Fruit Trade Journal.

The Home Circle.

Her Exalted Station.

I used to think it an easy thing,
As easy as any one asks,
To keep a family neat and prim
And manage the household tasks.

It seemed to me, in my foolish pride,
That the heft of a woman's toil
Was simply to sit by the door inside,
And wait for the dinner to boil;

While out in the summer's scorching heat,
We men were sweating away,
With aching shoulders and jaded feet,
From dawn to the close of day.

But, sir, I would have you be assured
That thoroughly, one by one,
My notions of housework have all been cured,
And this is the way it was done.

My wife suggested a day's exchange,
As she dropped a kiss on my brow—
"'Tis hard," she said, "holding on to the reins
And riding the sulky plow.

"You better stay in the house, my dear,
And wash a few of the things,
And churn, and sweep where it needs it here,
And read till the dinner-bell rings.

"The horses are gentle and pretty true;
I guess I can drive them straight—
I'll try and turn a furrow or two,
For the season is getting late."

So off she rode on the sulky plow,
With her jaunty hat and blouse,
While I was inwardly vowing a vow
How I would manage a house.

But, somehow, I found the morning chores
Were not in my usual line,
Like those I had finished out of doors
At least for a thousandth time.

Against the stove my fingers I hit,
And blistered them stinging sore;
In trying to scrub the clothes a bit,
I scrubbed my knuckles the more.

The churning acted 'specially mean;
The butter would almost come,
And then go back to frothy cream,
As if I had just begun.

The fire went out, as a fire will do
When the wood is not put in;
And as I thought of a meal for two,
I did not know where to begin.

But, while I was fixing potatoes and pork,
Not fit for a dog to eat,
My wife returned from her forenoon's work
As fresh as a rose and as sweet.

With a mortified air I quit the room,
And betook me to the shed,
While she got a dinner exactly at noon,
As good as ever was spread.

We sat at the table opposite-wise,
As always we did before,
When she asked with a smile in her sweet blue eyes,
If I would exchange some more.

Then, sir, I confessed my faults and said:
"My dear, you're as good as a queen;
The woman who keeps the family fed
Is running a big machine."

—J. P. Trowbridge in "The Housewife."

The Colonel's Wife.

Fort Ludlow is a beautiful place to the few people from the city who, nervous and tired from a long winter of overwork, go down there in the sunny springtime for a day's rest.

During the war this fort was commanded by Col. Baxter. He was a brave old man, of more use out of the active fighting than in it, and just the officer to command this place, which at the time was of some importance from the fact that it served as a prison for Southern captives. They tell odd stories of old Baxter, and from all accounts he was not of the mildest disposition toward either his prisoners or his own men. Of all who suffered from the colonel's tyranny, however, the most tried was his young wife. She had been married to him by her parents when she was still very young, and having gained a right to his name and money, had lost, as it seemed, all hope of happiness. The old man undoubtedly loved her, as was often proved by the license he allowed her in many things, but he loved her in a way that could call for no response, and he made her life most wretched. To add to her distress, she was almost worshipped by every officer in the fort, and as a consequence sincerely hated by their wives.

So matters stood here at the fort in midwinter of '63. There were at the time few prisoners confined here, and if the colonel had chosen, the life might have been almost pleasant. As it was, the only bright spot in the long, monotonous days was in the morning visit of the colonel's wife to the prisoners. The old man's permission that this daily visit might be paid had cost the young woman much pleading and many tears, but now that it was accomplished, the deed of charity seemed to bring a little joy into her sad life. To the prisoners it was a deeply-felt blessing, while to the Union soldiers in the fort it also brought pleasure, for they saw that the colonel's wife was happier for her work, and they all loved the colonel's wife. The visits were short, but in them the girl managed to say much that was comforting to the discouraged Southern captives, and after them each man felt that he too had a mother, or sister, or wife, for whom he must still live and fight on.

January came and with the New Year a fresh batch of prisoners from the front. The colonel's wife soon knew them all, and they, at first sullen and discouraged, began once more to gather hope from her kind words. All but one, and that one had no need for encouragement. This young Southern officer, strong in the belief that his cause was right, firm in the trust that he should live to fight once more for this cause, and confident in the love of the girl who would long ago have been his wife if the war had not broken out, had never for a moment let his courage fail. Escape was the word that was always in his mind. Escape was what he thought of, escape was what he dreamed of, and escape was what he finally attempted.

But for three long months he was a prisoner confined in one of those narrow cells, just there across the ditch. And there every day the colonel's wife visited him, and there she talked to him of his home and of himself. The man was a noble fellow, and when he opened his heart to the young wife, never for a moment dreamed of the harm he was doing, while she, poor girl, never having known happiness, hardly understood why she was happy. But finally, when he told her of the girl who was waiting for him at home, she understood, and he, to his sorrow, also understood. Then he saw a double reason for leaving the place, and she, too, saw that he could not stay. Duty to her husband and her country, love for the man whose very presence brought her happiness, yet who was not for her, above all, the knowledge that in helping him to escape, she was sending him to that other one waiting for him in the Southern home, all these thoughts filled the mind and soul of the colonel's wife. And then, one bright April morning, after a calm, almost sultry night, the report spread through the garrison that No. 34, Capt. Low, 4th Carolina Cavalry, had escaped. No one knew how it happened; no one could understand how No. 34 could have cut away the stone-work of his window enough to have pushed through. Above all, no one could believe that the prisoner had slipped through the opening, crossed the ditch, and fled out into the night without being seen by the sentry, whose beat was not 20 paces from the course the prisoner must have taken. The sentry himself was for a time suspected of negligence, but was soon cleared of the suspicion by the evidence of the colonel's wife, who had herself, in taking her usual evening walk about the ramparts, seen him at his post. The escape had been discovered very soon afterwards, so that there was no reason to believe the sentry asleep. The man himself, freed from the charge, did not care to tell that the colonel's wife not only saw but spoke to him that night. That moreover, she called him to the further end of his beat, and called his attention to a noise which she thought she had heard far down the sea wall. 'What good would it do,' the fellow said to himself; 'sure, it ud be loike impaching the lady herself, which is foolish indade.'

The colonel never saw a letter which a year or two afterward came to his wife. He was not in the room to see the tears come slowly to her eyes as she read the words:

"That night when I saw your face in the dusk, looking at me, while you pointed with your hand in the other direction, then for the first time did I realize the risk you ran, and I felt ashamed to profit by your danger: You saved my life, and gave to me the woman who is now my wife. From the promise I made to you she will never know your name, but she joins with me in wishing all happiness to the colonel's wife."—Halsey DeWolf, in the Harvard Advocate.

How to Drink a Farm.—Bob Burdette gives this simple recipe: "My homeless friend with a chromatic nose, while you are stirring up the sugar in a ten-cent glass of gin, let me give you a fact to wash down with it. You may have longed for years for the free independent life of the farmer, but have never been able to get money enough together to buy a farm. But that is just where you are mistaken. For some years you have been drinking a good improved farm at the rate of a hundred square feet a gulp. If you doubt this statement, figure it out yourself. An acre of land contains 43,560 square feet. Estimating for convenience the land at $43.56 an acre, you will see that it brings the land to just one mill per square foot; one cent for ten square feet. Now pour down the fiery dose, and imagine you are swallowing a strawberry patch. Call in five of your friends and have them help you gulp down that 500-foot garden. Get on a prolonged spree some day, and see how long it requires to swallow pasture land enough to feed a cow. Put down that glass of gin; there is dirt in it—100 feet of good, rich dirt, worth $43.56 per acre."

Apricots Are Here.

Santa Ana, Orange Co., June 29, 1892.

To the Editor:—It is the last week in June.

The trade winds are driving away the fogs which have too long lingered overhead.

The grevillia trees, whose gorgeous sprays so long upheld tiny chalices brimming with honey, whereof mocking bird and humming bird did hourly sip, are showing their glory. The pistils only cling on, like stiff and withered finger-tip pointing heavenward.

Now, at morn and eve, the humming birds leave shady coverts to probe the depths of the long-tubed Marvels of Peru, which star our gardens.

Mocking birds, perched on windmill fans, trill night and day, only stopping to flutter to the fig trees near, dipping beaks deep into the drooping, bursting figs, lunching on the luscious sweetness within.

Pomegranate bushes are all ablaze. "Golden Gate" poppies rival Solomon in all his glory. Roses are marshaled in pomp for the third time this year. And chrysanthemums have to be severely nipped back to keep them from blooming before the "autumn show is on."

It is the last week in June.

Irrigation water is half an hour to the acre. But the little ranches hereabout only need water for their alfalfa patches. Corn and pumpkins which have never seen water above ground are making a luxuriant jungle.

We of the Southern California valleys open to the ocean have all this month been getting most of our fresh fruits from the hot northern inland valleys. We have paid ten to 15 cents per pound for cherries, and currants we do not have, and a "bit" a pound for early raspberries and blackberries. Of the "almond-eyed Celestials," we have had strawberries, fourteen pounds for a dollar. Memories of all there are on the shelves of the thrifty housewife—tempting jars of preserves, jams and jellies.

This same thrifty housewife knows that blackberries are coming in from the "artesian belt" or swamp lands near, and she is watching the green grocer's prices. When they are $1.50 per crate, she will order for canning.

Yes, it is the last week in June.

We of the Santa Ana valley are beginning to have our innings as to fruits. Early pears and "Saucer" peaches have been tantalizing us in our orchards, till the lord of the season, brave in red and gold, claims all our attention.

He has come. He is here. *Apricots are ripe!*

The very birds of the air seem to sing it.

The bees scent the aroma of the laden trays from afar and hum the news to each other.

The chickens rush out early in the morning, before the pickers come, to breakfast off the fruit which has dropped over night, and during the day they stick their heads through the meshes of the wire netting inclosing the drying ground, clucking angrily.

The baker in the country town finds ready sale for all his empty flour sacks, the accumulation of a year, at five and six cents apiece, and still there is call for more. The tardy ones who have neglected to engage the floury bags, now have to pay nine to ten cents apiece to the wholesale grocer for sacks, or buy a bolt of cloth and make them for seven or eight cents apiece, not counting the work. The thrifty housewife on the little ranch tells "her John," "I told you so," as she wearily seats herself at the sewing machine and thinks for the thousandth time, "We women would manage things better if we had them in hand."

The rancher who sold his fruit green, early in June to Cook and Langly or some other firm, for $15 per ton, glares wrathfully at his neighbor who tells him he has just sold his for $20 per ton, and "ten to one," rushes off to see if he can "sneak" out of his bargain.

The middleman who bought for $15 per ton sells out to the one now paying $20, and concludes he will do something else.

Children of those in moderate circumstances go about hand-in hand to get work "cutting" for a bit a box for the season, that they may earn money for the "4th" and the circus near at hand, and for clothes and new school books in the fall.

The rancher whose head is full of the discussions, pro and con, in the paper, about snlphuring, who has burnt more French sulphur to the tray, and left his fruit in the sulphur-box longer than the intelligent, conscientious fruit-grower does, now flops about, buys some wondrous new invention of a dryer, off-hand, on the recommendation of one of those agriculturists, "who talk too much in the papers," (and who, rumor hath it, "was paid for his puff"), struggles along, gets behind hand with his fruit, devastates his woodpile, "magnifies his English," and goes back to the old style, more ruthless, more defiant of chemical residuums, more eager for the almighty dollar at any cost, than ever.

But the small rancher, the reader, the conscientious, who sticks to his ranch right along, averaging up the years, who is sure "apricots are in it this year," laughs at them all.

When the middelman comes along offering $15 per ton for his fruit, green, he began to laugh, saying:

"O, I know why you fellows are bearing the market. You lost last year. Sorry, but they are worth more than that to me."

When the same middleman comes again, offering $20 per ton, this same persevering rancher grins a broader grin and says:

"O, I'm onto you fellows. I dried last year, made small wages to be sure, but I didn't lose. This year may be one of the years that *pay*. *I'm going to be there* if it is. Besides, you are figuring on six to seven pounds of green fruit to one of dried. I know my orchard, I don't irrigate, I cultivate. My fruit always runs five pounds green to one of dried. Yes, sir, if it pays you to buy and dry, it will pay me more. There won't be any waste fruit then. See? The middleman smiles a left-cornered smile and rides away.

So this small rancher with his family's help and the help of eager neighbors who have no orchards, greets the five o'clock morning sun, and "Foster's hot weather" which comes on apace, and settles down to his summer's work with a satisfied "Ha! ha!

But the "tenderfoot" from the Middle States, and the visitor from Florida, go about through the rainless weeks to come staring in astonishment at the green alfalfa patches, the wilderness of corn and pumpkins. They pluck the juicy apricot, learning to distinguish in flavor between the red and white, developing dainty preference, never eating the apricot skins, when at first they raved over fruit picked off the ground. They sit to meals of apricot short-cake with whipped cream accompaniment; and the "tenderfoot" reads of the revels of wind, rain and thunder in his home paper, and takes another piece of short-cake spread with its slices of golden fruit, to make himself doubly sure that he is in California. The Floridian thinks of his orange grove and homestead in the couutry of sand and daily summer rains; of endless pine forests and hammocks; where tiny cows wander, giving only a bowl of milk a day, half starved on the scanty "wire grass;" where vegetables and fresh meat are at starvation prices; where every place has its well-holes filled with empty tin cans; and he ladles himself out another spoonful from the generous dish of cream, and says

"After all, California—" and stops his mouth with a toothsome piece of short-cake.

Yes, it is the last week in June and *apricots are here*. Augusta E. Towner.

A Rose Jar Recipe.

It always seems a pity to see such quantities of fragrant rose leaves go to waste every year, when their delightful perfume could be so easily preserved in a rose jar. For the benefit of such of our readers as would like to utilize their rose petals in that way, we append the following recipe taken from *The Garden's* Story:

"I don't refer to the dry, soapy-smelling article of commerce labeled, 'Tea Rose Potpourri from Japan,' but to the old-fashioned 'rose jar' made from your own garden roses, blended with a sufficiency of other sweets to hold its perfumes immutable. It is difficult to give a precise recipe for a rose potpourri, for no two ever turn out alike. I would say, however, with fat old Baron Brisse, in a preface to an entree in his Petite Cuisine: 'There is one point in this preparation rather difficult to seize; but this is the way to set about it in order to be complimented.' The roses employed should be just blown, of the sweetest-smelling kinds, gathered in as dry a state as possible. After each gathering, spread out the petals on a sheet of paper, and leave until free from

all moisture; then place a layer of petals in the jar, sprinkling with coarse salt; then another layer and salt, alternating until the jar is full. Leave for a few days, or until a broth is formed; then incorporate thoroughly and add more petals and salt, mixing daily for a week, when fragrant gums and spices should be added, such as benzoin, storax, cassia buds, cinnamon, cloves, cardamon and vanilla bean. Mix again and leave for a few days, when add essential oil of jessamine, violet, tube rose and attar of roses, together with a hint of ambergis or musk, in mixture with the flower ottos to fix the odor. Spices such as cloves should be sparingly used. A rose potpourri thus composed, without parsimony in supplying the flower ottos, will be found in the fullest sense, a joy forever."

A Bride's Household Belongings.

Perhaps a few words to the brides who are getting things ready for housekeeping will not come amiss, says Carrie May Ashton in *American Agriculturist*. One writer says: "Allow at least five sheets, one pair of blankets, two comforters and a spread for each bed. Provide an extra spread for every two beds, and then they can be washed turn and turn about." For sheets, the double width, which does not require a seam in the middle, is best. The forty-inch unbleached is, of course, much less expensive, and wears well, but requires a seam in the middle. Pillow-shams are made of fine linen, hemstitched and embroidered in white rope silk or in floss. Others are trimmed with Irish and Venice point around the outside instead of hem-stitching. Bath cloths, more commonly called washrags, can be bought by the yard or piece, and should be overcast all around, and then finished with a pretty edge crocheted of white cotton. Made in this way, they last much longer than as if they were left to ravel. Some prefer to knit or crochet them of cotton, in some plain stitch, but it seems like a waste of time to put so much work on a little thing.

Bureau and washstand scarfs are of linen, hem-stitched or fringed, and done in outline work. Mats for the brackets on the bureau can be crocheted of white and colored zephyr in whatever color the room is furnished. A pretty pair have the foundation of white yarn, and are rounded to neatly fit the brackets. White saxony is used for the fluffy edges. Fourteen stitches crocheted very loosely are put in each stitch around the edge, then the next row inside has twelve, the third ten and the fourth eight. Into the center of each of these is crocheted the same number of stitches in pink saxony. In regard to the quantity of table linen, that dedends upon how much you expect to entertain. Five tablecloths, three for every day, and one dozen napkins, one fringed teacloth, with napkins to match, and one fine, long one for company will answer very well to commence with. A dozen and a half of the large napkins, seven-eighths, as they are called, will be needed for company, and a set of fruit napkins to save the others. Many prefer to purchase for every day wear the unbleached in pretty patterns, which wear well and are very pretty in their brownest tint. Much of the new table linen is hemstitched. A cover of felt or canton flannel is needed to put under the cloth, and makes a table look much nicer. Six or seven traycloths will be needed, and can be purchased already hem-stitched, fringed and stamped ready for outlining, or they can be made at home from web linen. The fine German linen is much used for these at present. Others are of handsome damask. Conventional designs are the latest thing for outline work, which is done in white silk or linen floss. Red is used for every day wear because it washes so well, but white has the preference. Carnation pinks, yellow and pink roses, buttercups and daisies, are seen on many of the beautiful traycloths and overlays, in their natural colors. Sideboard scarfs are of Momie linen or plain German, and made in similar style. Doilies are round and square, either fringed or hemstitched, and as dainty and pretty as it is possible to make them.

Everything should be marked with the maiden name of the bride. My advice to brides is, to have everything as nice as possible, but do not spend weeks and months making enough things to last half a lifetime. Better spend your time outdoors in the glad sunshine and fresh air, or in reading good books. A young man was heard to say, not long ago, it looked as if a girl never expected to have anything more, when she laid in such a supply of clothing and household linen. Whatever you buy, be sure that it is a good article. It is poor economy to buy cheap goods.

YOUNG FOLKS' COLUMN.

Tommy's Lady's Slipper.

"Thomas Henry," said Mrs. Blake, as she saw her boy looking from the south window, "you're thinking about those flowers like you brought home last year from the lower end of the island. But, Thomas Henry, there are things more important closer to hand." She pointed to the empty wood-box and the large basket in which drift-wood chips were brought up from the beach.

Tommy's face flushed as though he meant to say that he was tired of bringing home chips. But he quietly took up the basket and went slowly toward the shore.

The short grass among the rocks and ledges showed scanty signs of life in that dry season. Farther down, toward the edge of the sea, dwarfed spruces and huckleberry bushes looked as though they had long ago become discouraged in trying to grow. They appeared rough and lonesome.

But when Tommy came nearer to these he saw a man eagerly searching among them.

"Have you lost something?" he asked as he hurried forward. "Maybe I can find it for you."

"Thank you," said the stranger in a very pleasant tone, "but I've found something instead of meeting with a loss. And I'm sure you'll enjoy seeing it as much as though you had helped look for it."

And when Tommy glanced down where the man pointed, there was a very fine pink lady's slipper.

"O, that's just like the flower I found once in the woods at the lower end of the island, right by an old pine stump," said Tommy, with sparkling eyes. "I'd seen two green leaves close to the ground lots of times, but that was the only blossom I ever found with them. I wanted to keep that one, but mother thought maybe it was poison."

That was all Tommy said, though he remembered how angrily his plant had been thrown out of doors, as his mother told him there "was no sense in hunting after such things as that."

"It's a brave little beauty to hide away here among the rough bushes," said the man. "I'm sure you can find more of them if you look around. I see you enjoy such things. Maybe you'll like to write me all about the different plants you find here on the island."

"I should like to if I had time," answered Tommy, slowly, as he looked down at the flower. "But I must help mother what I can. I must go for the chips right away. I'm so glad you showed me this so close by home."

And the boy could not move off toward the shore until he had stooped and touched the lady's slipper as softly as though it were made of velvet.

The man seemed to be gazing out to sea when the boy bade him good-morning.

"He answered me very pleasantly," thought Tommy, as he picked up the chips. "But he was thinking hard about something. I guess he felt real sorry because he couldn't stay here all day."

And then Tommy began to think so hard that for several minutes he forgot to put any chips in the basket. When at last he started for home, however, he had a good supply of driftwood for his mother.

He stopped to look again at the lady's slipper as he went off the shore. He was still gazing at it when he heard his mother coming rapidly toward him.

"Something must have happened," thought Tommy, but before he could ask what it was his mother spoke. "Why, Thomas Henry, you've been seeing things real clear for a boy of your age. I guess there is some sense in looking at plants and such things, after all. There's been a man at our house who's changed my mind a good deal.

"I was weeding in the garden when he came along. Guess I looked pretty discouraged because my garden seeds and plants ar'n't doing as well as I expected. And he told me in such a kind, polite way how I needed to shelter things with some spruce boughs and the like of that, just as though he'd worked in a garden all his life."

"Did he have on a light brown overcoat?" asked Tommy eagerly.

"Yes. And he said he'd noticed you so willing to do as I wished. Said he'd like to have such a boy to hunt up flowers and plants, as he hadn't but a little while to stay on the island. And I told him right out that you could help him. I couldn't keep from it, he seemed so kind and obliging. And, Thomas Henry, he's going to send me one of the fancy ferns that grow in the house, like one Mrs. Captain Bunker is so proud of."

"And I haven't got to the end of it all, either," Mrs Blake went on before Tommy could say a word. "Mrs. Bunker came running down almost as soon's he'd gone, and told me he was the great botanist professor at Harvard College. She said he was so kind and good to boys. She thinks he'd do more for you. And then, Thomas Henry, I must own up. From the way she talks it does pay to have an eye to the posies as well as to fish and such things. But then it was his nice way of talking about the garden that first opened my mind, just as his his heart was moved toward you by your seeing so clear that your first duty was to obey your mother, if you did have a great liking for posies."

"I shall hunt hard after the plants," said Tommy, with a happy smile. "And if he sends me books to study I shall make good use of them."

"There's no doubt but the books will come," said the mother. "Mrs. Bunker said this Prof. Gray has always been real kind to willing-hearted boys."—Charles N. Sinnett.

One Little Newsboy.

The day was cold and dreary. The piercing wind blew fiercely, chilling the body and causing all humanity to wish themselves within their homes.

The sun played hide and seek with the threatening clouds. The streets were partly deserted, and those brave enough to face the storm hurried on, anxious to seek shelter.

At a certain street corner where many people were passing stood a little newsboy.

His ragged clothing and pathetic face told only too plainly that poverty was not unknown to him. Few noticed him as he called lustily, "Have a paper, sir? Tribune, Herald, Times," etc., until it seemed as if his small lungs would collapse.

His hands were bare and cold, and he muttered to himself, "I must hold out even if I almost freeze; for if I'd go to Granny now we wouldn't have no supper." Again he began calling his papers with renewed energy.

The streets were at last almost deserted and he began to think it useless to stay longer in the cold. But an old gentleman came up to him and purchased several papers. After finding the change the gentleman slipped his pocketbook carelessly into his pocket, leaving it ready to drop out at any slight disturbance.

The newsboy, with the keenness of his race, saw it all and said gaily,

"I will follow that fellow and see that his fat old wallet don't get stolen," and he chuckled contentedly to himself.

A slight thud on the pavement caused him to look down, and lo! there lay the precious pocketbook, its owner plodding on through the storm, evidently lost within himself, his pocketbook farthest away from his thoughts.

The newsboy looked about him, and after assuring himself that no one had noticed the loss, thrust the pocketbook into his own pocket and ran swiftly on, bent on finding some secret place where he could examine his find.

A dry goods box in a back alley gave him his vantage ground. He was happy, for once, in the anticipation of what was to come.

"Massy! I've struck a gold mine," said he as he saw roll after roll of large bills, I'll buy Granny a shawl and get some shoes for myself, and some fuel—and my! we're rich."

So meditating he started for the place where he and his beloved Granny lived.

I wonder now if that money really belongs to us," he mused. "Maybe I'll have to give it up. I believe my teacher in the mission school would say so, and I know Granny would, so I'll just not tell her— I'll think what to do with it."

"What's the matter? Are you sick?" his grandma asked kindly as he entered a small room in a large tenement house, or rather, what they called "home."

"No, just cold and hungry," said Teddy.

The grandmother hurried to cook the meagre supper that her kind little grandson had earned by selling papers.

That night, sleep refused to visit his weary eyelids, the pocketbook was evidently troubling him, and at last after trying to convince himself that it would be all right to keep it, and still not finding rest, he began to wish he hadn't found it.

"Maybe I kin take it back to him. He'll have it put in the paper about losing it, and I'll do that."

Although I want the money awful bad, it makes me feel mean."

The next morning after a scanty breakfast he pocketed the money that was beginning to be a source of annoyance to him, and went out to begin another day of tiresome routine.

The sun shone brightly and he said to himself as he purchased his roll of morning papers:

"I'll just look and see whether that fellow has advertised or not."

So saying he rushed madly across the street, looking neither right nor left. But, alas! for our poor little newsboy. A pair of run-away horses ran him down, and before the frightened spectators could be of any use, they had passed over him.

By the time they reached the next crossing the horses were stopped. The occupants, an old gentleman and lady, returned to see what damage had been done. When the lady saw the bleeding form of a child lying there she ordered him to be put in the carriage and the three were driven rapidly away and soon reached a beautiful home.

Marble steps led to the doorway, and within there was every evidence of luxury. Teddy was carried tenderly into a dainty little bedroom, contrasting strangely with his ragged clothes.

A doctor was summoned, and after examining his wounds pronounced them serious, but not fatal. When the nurse removed his tattered clothing she found the pocketbook that he had stowed away so carefully. When she handed it to her master he exclaimed:

"It is my pocketbook that I lost yesterday. Little did I think I would ever see that again. Nurse, give the boy the best attention and when he gets better I will come up and see him."

When Teddy regained consciousness he was very much surprised to find himself in such a strange place, but when all had been explained to him he sent a note to his granny, telling her of his accident.

When he was entirely well and his cheeks rounder and rosier than ever before, his kind friend gave him a situation in his dry goods store.

He rapidly gained in health and spirits, and his strict honesty and faithfulness induced his employer to give him higher wages, so that he and his faithful granny no longer know what hunger is.—Mary B. Vale in Prairie Farmer.

Where Are Our Ostrich Egg Painters?

Ostrich eggs, artistically painted in a prize competition, are to be a feature in the exhibit from Cape Colony, South Africa, at the World's Fair. This competition has been held. Nineteen contestants, mostly young women, participated, and furnished designs which the Cape press praises highly as being very artistic and beautiful. Each contestant submitted half a dozen beautifully decorated eggs, all of which will be exhibited at the World's Fair. The subjects of the paintings include flowers, birds, animals, landscapes, public buildings, etc. The gem of the whole collection, painted by Miss Van Reenan, winner of the first prize of £7 10s, is reported to be a fairy figure standing on a vine leaf drawn by a butterfly, with underneath the words, "to Chicago."

The American Ostrich Company has sent to Chicago for exhibition at the World's Fair 30 birds from its ostrich farm at Fall Brook, San Diego county, California. The ostriches have been sent on thus early in order that they may become thoroughly acclimated by the time the fair opens and appear at their best., But this will not have the esthetic features of the Cape display.

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FIG NOTES.—Oroville *Register:* Mr. C. H. Leggett, who has given much attention to the fig, the giant of fruit trees, recently said: "E. Ruhlman, of the firm of P. Ruhlman & Cox of New York City, recently examined some of the white Adriatic figs that we put up last season and pronounced them a perfect fig. He opened the boxes and examined them with care and found them free from worms or other insects, yet said that at this season of the year it was almost impossible to find the imported figs free from worms. He thinks the California figs can be sold in quantities in New York City. He is president of the New York Produce Exchange, and is well posted as to the fruit markets of that city. He said it was advisable to put up the figs in the same manner that they were put in foreign lands and promised to send us a sample box to show the manner of packing. He thought it advisable to use the same style and kind of packages that the imported figs came in. If the fruit was nicely and attractively packed, he was certain there would be a good sale for it at remunerative prices. Mr. Leggett, in speaking of his own trees, said he could not see much difference in the growth of the trees in the bottom or on the bluff. Possibly the former is a little larger tree. They found the fig would sour when irrigated, and had learned by experience that labor was too high to pick this fruit. If they had to gather the figs by hand they would dig up the trees, but the fig would dry on the tree and fall to the ground. They ought to be graded after being dried, so as to put the largest and finest in one grade, the second in another, and the inferior in a third. They had found no insect injures the trees, but that the fruit will occasionally sunburn. They scalded the fruit in hot water or weak brine. The fruit was then drained, put in a sweat box, and, later on, dipped in hot water a second time before being packed for market. The sweating equalized the moisture, the dry ones taking up the surplus moisture of those that were too damp. He was confident that at five cents per pound for dried fruit, there is money in growing figs.

Fresno.

RAISIN ACREAGE IN THE STATE.—William Harvey in Fresno *Republican* says: After a careful investigation of the best authorities, and a partial comparison of the same with the assessor's books of Fresno, I find that Fresno has 1002 raisin growers who own 24,103 acres of raisin vines, a little more than one-half that which she is credited with. The California Directory Company of San Francisco printed a list of all the growers in the State to December, 1891. While the directory gives no totals, I have taken the individual data and added them together, with the following result:

Fresno	1002	24,103
Alameda	31	184½
Butte	14	614
Colusa	25	387½
Contra Costa	5	135½
El Dorado	14	120
Inyo	3	9
Kern	40	1,191
Los Angeles	6	23
Merced	14	212
Orange	1	4
Placer	24	510
Sacramento	20	312
San Bernardino	225	2,632
San Diego	170	4,414
San Luis Obispo	1	1
San Mateo	1	15
Santa Clara	14	98
Santa Cruz	5	21
Shasta	63	241½
Solano	19	430
Stanislaus	4	529
Sutter	29	282½
Tehama	21	227
Tulare	144	3,006
Ventura	12	197
Yolo	22	1,125
Total in California	1929	41,024½

These totals are important, inasmuch as they afford a basis upon which can be calculated the probable output of raisins for the State of California this year, and will negative the cry of overproduction, which cry seems to have taken hold of our farmers and had a very depressing influence upon prices.

Inyo.

BEEKEEPERS' ASSOCIATION.—Bishops' *Register:* At the beekeepers' meeting held July 2d, Messrs. T. F. A. Connelly, H. Trickey and Don Burdick were appointed a committee to prepare by-laws for a Beekeepers' Association. A vote of thanks was tendered Mr. Burdick for having discovered the existence of foul brood and his efforts toward its suppression. It was decided to call a meeting, to be held July 23d, of all the beekeepers of the valley, to form an association for general systematic protection. Every owner is invited and urged to attend, no matter how few hives he may possess.

Kern.

HOW TO UTILIZE ALKALI LAND.—Bakersfield *Echo:* On the Rio Bravo vineyard ranch there is a piece of pretty bad alkali land, and Supt. Hanilton has been experimenting with various crops. This year he planted some tobacco seed and has secured a splendid growth. The value of the leaf cannot yet be determined, but it may come about that tobacco and alkali will go well together. If the right kind of leaf can be produced, there will be a good profit in it. Speaking of alkali, reminds us of a plan suggested by J. A. Rarick a few days ago for seeding such land to alfalfa. Where this salt is too strong to admit of the growth of alfalfa seed, he says it may be stocked by transplanting the roots. For instance, put the alkali spot in good condition as regards moisture; then break up a piece of alfalfa and haul the roots that are plowed out on to the alkali land and distribute them along fresh furrows and at once cover them over. He says the worst fields can be stocked in this way. As is well known, land impregnated with this salt produces the heaviest crops of hay when it is once seeded. It is only in the worst cases that this method has been resorted to.

THE ARMY WORM.—Bakersfield *Californian:* In certain localities the army worm has made its appearance in this county. It seems to generate in sunflower thickets, where they are let grow along the banks of some canal, and also appears in orchards, where, between the rows, potatoes and other vegetables have been planted. But a simple method has been devised, which knocks him out of an orchard of young trees in short order. This is the prescription given by one who has practically applied it with entire success: Make a layer of wood ashes and spray it with kerosene oil. Put on another layer of ashes, spraying again with the oil, and keep on so doing until enough material for the needs has been prepared. Mix this thoroughly and put a charge into a sack, which can be carried in front of the distributor and from which a handful can be thrown upon each infested tree. The ashes serve as a mordant for the oil, which of itself would be too strong as a spray upon the leaves. One handful thus dusted upon a young tree is sufficient to kill all the army worms that have infested it. The remedy is certain in its effect and costs hardly anything beyond the labor of application.

Los Angeles.

THE "MAMMOTH RYE."—Cor. L. A. *Express:* R. J. Long of Florence has harvested a small strip of rye of an entirely new and distinct variety, which has a large grain, plump and of light color. He calls it "The Mammoth." This grain he has grown from a few seeds sown last year, and now has sufficient seed to plant quite a piece of land, and will give it a thorough trial. He will also place a sample of the seed at the Chamber of Commerce.

COMPTON CHEESE FACTORY.—Cor. L. A. *Express:* One of the busiest places to be found at Compton is the Anchor Cheese Factory, where is manufactured a fine quality of cheese, which is known to consumers as the Anchor brand. The factory receives daily 6000 pounds of milk supplied by the farmers of this vicinity, requiring the milk of 400 cows. From this amount of lacteal fluid 650 pounds of cheese is turned out every 24 hours. This factory is operated on something of a cooperative plan, the manager, J. J. Harshman, receiving so much per pound for making the cheese, the patrons getting the difference between the cost of manufacturing and selling price, less the cost of marketing.

WALNUT GROWERS' ASSOCIATION. — Downey *Champion:* The Los Nietos and Ranchito Walnut Growers' Association, whose members are all growers of this section, has been for several years the principal shipper of this great staple crop. The crop of 1890, handled by the association, representing the product of 47 growers, amounted to 761,019 pounds (6536 sacks), for which was received $59,611.84. The crop of 1891—51 growers—was 702,469 pounds (6619 sacks), and brought $58,020.83. In addition to the above, growers, not members of the association, raised and shipped walnuts in amount and value equal to about 25 per cent of the association's shipments. This year upward of 90 growers have joined the association, and with the big harvest now in prospect and the increased acreage of young groves coming into bearing, the prospects are that the yield and receipts for the crop of '92 will be largely in excess of previous years.

Placer.

A RANCH FARMED FOR GOLD, GRAIN AND FRUIT.—Georgetown *Gazette:* About a mile north of town is the Holmes ranch, which within the past eight months has produced nearly $4000 in gold, including a $1000 gold nugget and a field of oats standing seven feet above the ground, from which a bunch of stalks was taken by B. C. Currier (a '49er), and placed on exhibition at the postoffice, which measured seven feet and six inches in length. The ranch also contains a large orchard of mostly winter apples, noted for their fine flavor and good keeping qualities.

San Bernardino.

ONTARIO CITRUS FRUIT SHIPMENTS.—Los Angeles *Times:* The fruit shipments in June were as follows: Oranges, 560 boxes; lemons, 96 boxes; green fruit, 12,170 pounds; dried fruit, 2380. The summary of citrus fruit shipments for the season to date is as follows:

	Oranges, boxes.	Lemons, boxes.
December	400	80
January	438	268
February	305	80
March	4,780	133
April	1,957	176
May	1,580	165
June	560	96
Total	10,020	998

This is 36 cars of oranges and nearly 4 cars of lemons—40 cars. There are some oranges yet to ship and about a carload of lemons.

EFFECTS OF FERTILIZING AN ORANGE GROVE.—Ontario *Observer:* Byron Ford's orange grove is one of the oldest in the colony. It has never made a satisfactory growth, nor has it ever borne a fair crop of fruit. When Mr. Ford came in possession of it one year ago, he knew nothing of orange culture, but he knew what the grove needed to make it one of the finest in Ontario. Upon his return last fall from the East, he had the grove plowed and heavily fertilized. The change which this treatment has wrought is wonderful. So rapidly have the trees grown and so dense has the foliage become that few who knew the grove in its days of starvation would recognize it now. The trees are now healthy and vigorous, and being well set with fruit, promise to mature a large crop of oranges.

DECIDUOUS FRUIT.—Ontario *Observer:* Harwood & Woodford have finished picking the cherry crop on the Dwinell place, at the head of Euclid avenue. The 100 trees, which cover one acre, produced 2838 pounds of fruit, which was sold for $283.80. We get this statement direct from the foregoing persons, and it can be relied upon. The trees have not been irrigated for two years and have been cultivated but once within a year. The elevation of the mesa lands is that required for the successful production of cherries, and as this popular fruit can be grown on them without water and with but little cultivation, we hope to see them more largely utilized for this purpose. There is now every encouragement to persons owning land in this locality, unfit for citrus fruit culture, to plant same to deciduous fruit trees. Here we have a cannery and drier capable of utilizing 1000 tons of fruit each season, and at North Ontario is a fruit company that is prepared to buy and prepare for market a large quantity. At present all fruit is either canned or dried, but in the future a large per cent of the crop will be marketed green. Both the Santa Fe and the Southern Pacific are running green fruit trains to the East on passenger time, and much of the crop of Northern California is being shipped direct to the trees in a fresh state to Chicago and New York. Next season much of the fruit in this locality will be marketed in this way.

ORANGE OIL.—*Observer:* A Riverside man has just succeeded in extracting from ten pounds of orange peel, oil in the proportion of 50 pounds to one ton of peel. Orange oil is a valuable commodity, it being worth $7 a pound. As a ton of peel will yield oil to the value of $300, the profits of such an industry will doubtless prove satisfactory to its founder. In this connection, it may be said that orange blossoms also yield a valuable product. The facilities for utilizing the by-products of our fruit orchards time will soon bring, and, when established, all fruit not fit for shipment in its natural shape can be profitably utilized in other ways.

Siskiyou.

A LARGE FARM.—Sisson *Mascot:* The Edson ranch at Gazelle comprises 3200 acres of choice lands and has yielded a fortune to Edson Bros. within the past few years. They have all the latest improved farming machinery, and employ from now until late in the fall upward of 20 men, their daily expenses exceeding $50. They are now cutting their first crop of alfalfa, and will have about 125 tons. The second crop will give them at least 100 tons more, making a total of 225 tons in a single season. Their hay crop alone insures them an income of $1500. From the raising of grain and cattle they realize probably $8000 more per annum.

Santa Clara.

CUPERTINO FRUIT NOTES.—Cor. S. J. *Mercury:* Peaches are ripe and apricots will soon be. Plums are also ready for the market; that is, of course, the early kinds. The prune crop will be short but of superior quality. The grapes, during the past two weeks, have been dropping badly, so that crops will be much shorter than first estimated. Apricots in this vicinity have a fair crop, but peaches are very light in most orchards. Mrs. D. Durkee has built a neat drier on her place. Antonio Zicovich intends putting another pumice still up in his distillery on his ranch at this place. The Lincoln Wine Company is contemplating a considerable addition to its already extensive plant.

Tehama.

WHEAT RUST.—Corning *Observer:* Wheat is turning out very bad on many of our small farms—it is so much rusted. Never before was there such a fine prospect for a splendid crop, but a hot sun coming after a shower caused much rust. There will be one-third less of of wheat than was expected. Some farms have very fine wheat. Out on the hills the wheat could not be much better. On the whole, if nine sacks are averaged, it will be the outside. Many small farmers had their crops mortgaged, and the poor souls will not have enough to pay for goods and money received.

Tuolumne.

A CORK OAK.—Stockton *Independent:* J. T. Salmon of French Camp has brought to the *Independent* office a section of cork bark which was taken from a tree near Tuttletown, Tuolumne county, from land belonging to the Paterson mine. There are two trees there of vigorous growth and unknown age, as no one now there knows when and by whom they were set out. These trees are between 40 and 50 feet high and about 18 inches in diameter. The trunks are smooth and without limbs until near the tops. Mr. Whitney, who is in charge of the property, intends to peel the trees, which can be easily done, and use the bark. Mr. Salmon intends to plant across from the trees at his place in this county and raise cork trees. [The trees are probably from acorns sent out by the Patent Office in the '50s. There are similar trees from the same source in half a dozen counties of the State.—EDS. PRESS.]

Tulare.

LIVE STOCK AND IRRIGATION MILEAGE.—Visalia *Times:* The assessor returns the following live stock and irrigation mileage in this county: Live stock—Calves, 3060; beef cattle, 226; cattle (stock), 15,600; colts, 7547; cows (thoroughbred), 110; cows (graded), 6792; goats (common), 1759; hogs, 15,346; horses (thoroughbred), 10; horses (standard), 51; horses (American), 2806; horses (common), 12,087; jacks and jennies, 59; mules, 1429; oxen, 80; sheep (imported), 1000; sheep (common), 185,521; lambs, 3885. Irrigation ditches in miles: K. C. & I. Co., 25; Con. People's D. Co., 4; K. and Mill Creek Co., 5; People's ditch, branch, 12; People's ditch, main, 7; People's ditch, branch, 8; L. K. R. D. Co., 14; Griffis Side D., 5; Settlers' D. Co., 15; Extension D. Co., 3; Lakeside D. Co., 25; Mussel Slough D. Co., 10; Pioneer D. Co., 3½; Wutchumna D. Co., 16.

FRUIT CROP.—Traver *Advocate:* The fruit crop in this vicinity is still looking well. In some localities a good many of the grapes have fallen off, while in other places the vines are as full as they should be. The apricot crop is turning out well, and considerable of it has already been disposed of. The peach crop promises to be very heavy. The early peaches are nearly all gone now, but later varieties are beginning to come on.

DRIED FRUIT NOTES.—Grangeville Cor. Visalia *Times:* The fruit on the Verona orchard has been purchased by Tin San. He paid $75 an acre for it. He has just about finished drying the apricots. He sold part of the fruit for 10½ cents per pound, and has been offered 10½ cents for the remainder. He expects to have 25 tons of peaches. He expects that peaches will not sell for over seven cents per pound. Peach-drying will start in about three weeks. The peach trees in the Verona orchard are so heavily loaded that they are compelled to prop the branches up. Herman Nathan has had a splendid bleacher erected. It holds 360 trays at one charge, and works to perfection.

OREGON.

HOPS IN THE WILLAMETTE VALLEY.—Eugene *Register:* Thomas Osburne, of London, has been looking up hop matters in Oregon, California and Washington the past few weeks. Mr. Osburne thinks Willamette valley hop-raisers have an important advantage over the growers both of Washington and California. In the last mentioned State the extremely hot weather prevents the lice from doing much damage, however. But the land there is high-priced and in the Puyallup valley it is beyond the reach of the small hop grower. The soil and climate of the Willamette valley is well suited to the production of hops. The area is so large that the price of land is kept within reasonable limits. Mr. Osburne is of the opinion that most of the Willamette valley hop growers do not cultivate their fields with proper care. The lack of proper care becomes evident when it comes to marketing the crop. Formerly New York hops were preferred over those raised on the Pacific slope, but now the two bring about the same price in the English market. But the Pacific coast must soon lead in both quality and quantity. The hops of Lane county are among the best received in London, and it is worth while making the effort to get them.

NEVADA.

SUGAR BEET GROWING.—Virginia *Enterprise:* The U. S. Department of Agriculture has just issued Bulletin No. 33, Division of Chemistry, upon the Sugar Beet Experiments in 1891. Eighteen samples were received for this State from three counties, from one of which, Washoe, was received 15. The average percentage of sugar in the beet for the State was 17.20, and the average weight of beet 11 ounces. Washoe county, which practically furnished all the samples from the State, also leads in the quality of the beets obtained. The numbers representing them are almost phenomenal, with the exception of the average weight, which is about what it should be. This doubtless accounts for the fact that the beets were exceptionally rich. The 15 samples from this county showed an average percentage of sugar in the beet of 18.02, and average eight of 9 ounces. These figures place Nevada at the head of the list of beet-growing States for quality, and such beets raised in quantity would soon enable the people of Nevada to erect sugar plants, and thus open up an industry which would be of great value.

WASHINGTON.

CROPS IMPROVED.—Spokane *Chronicle*, July 6: People who have traveled through the grain sections of the State report that the general damage to crops is comparatively slight. There are some sections, however, that have sustained heavy losses. Medical Lake, Endicott, Cheney, Marshall Junction, the western part of Spokane and Whitman counties and a good portion of Adams county have suffered losses which will probably aggregate 30 per cent. The damage in Walla Walla county is greater than throughout the Palouse belt, but in all it will not reach a loss of 10 per cent. Stevens county will have an average crop if no further damage is done. The recent rains, with the cool winds, have restored the confidence of the farmers, and they do not now fear further loss. In a few days the harvest will begin, and should the weather again become hot and dry, the crops are so far advanced that no damage could be done. The predictions are that the aggregate yield of grain in this State will equal, and probably excel, the production of any former year, owing to the fact that the acreage is in excess of any previous season. The farmers are making vigorous preparations for harvesting. Much of the hay crop has already been cut, and by the time the first crop has been stored, the grain fields will be ripe and ready for the reapers.

$500,000

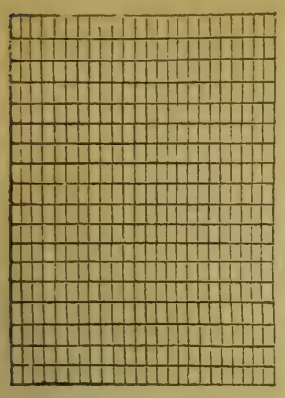
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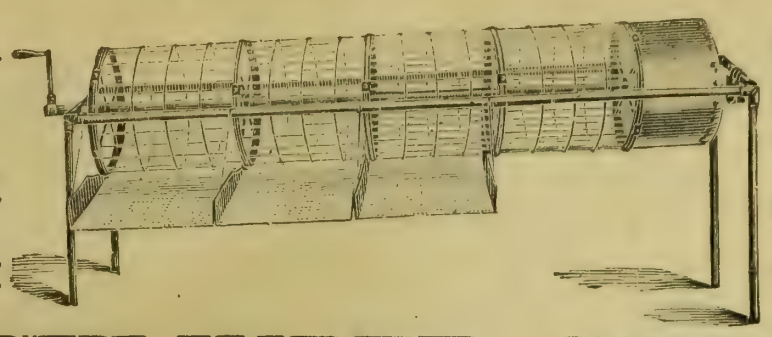
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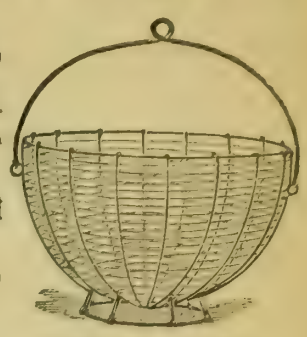


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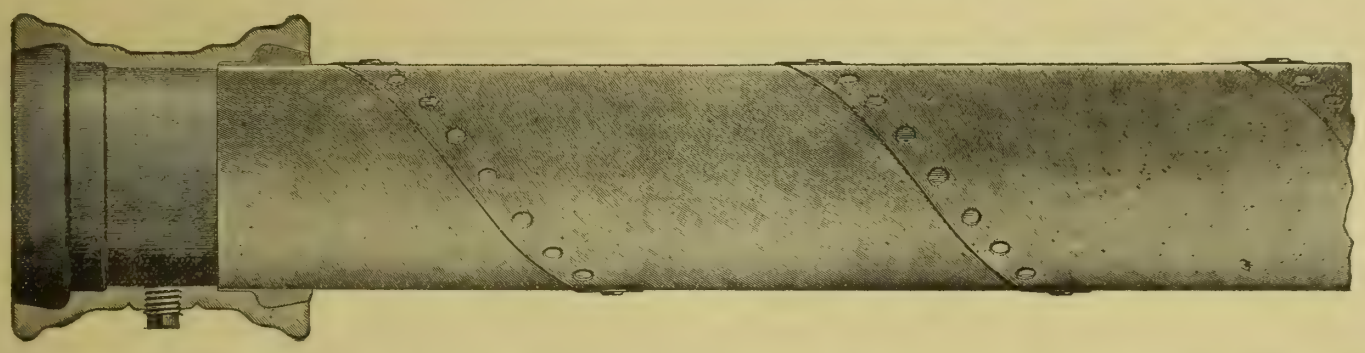
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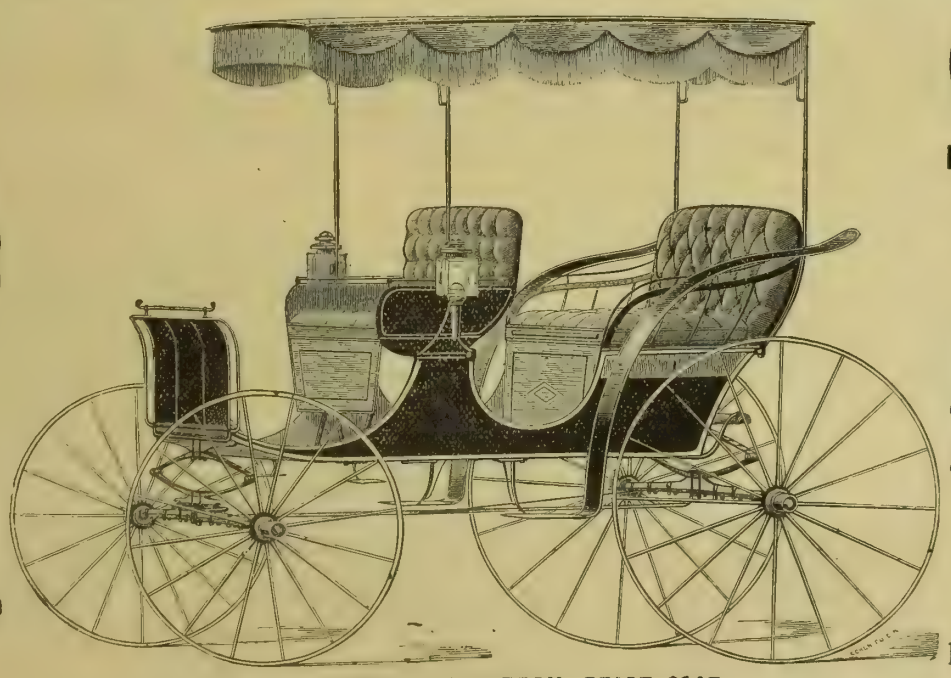
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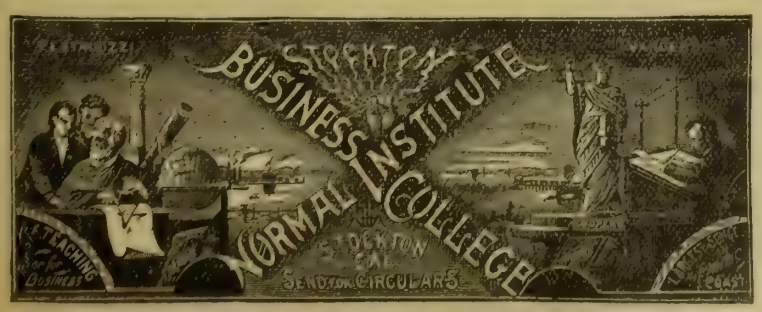
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THE STOCK YARD.

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Too many stockmen lack courage to face adversity bravely. Years ago many wanted buyers for their sheep at any price. Now some of the same parties are buying sheep at very high figures. The same persons probably sold cattle, hogs or horses, too, at a sacrifice, in order to get into the sheep business again. The wooly tribe is paying its way handsomely in recent years, and following the common inclination, all wish to rush into this line of work, and, of course, they will break it down. The young man who has a special adaptation for sheep breeding is fortunate at being able to begin at this time; but he is liable to be tempted to try some other kind of stock when reverses come. Several varieties of animals on the farm, with one as a specialty, is the safer policy, and when one's specialty is "down" is a good time to improve by buying a better type of breeding females as well as the best sire one's means will warrant. The prosperous shepherd should now be hedging against a day of small profits, by securing some pure-bred cows, draft mares, etc., while they are cheap. The majority of farmers cannot afford to be specialists continually; neither can they afford to abandon wholly the kind of stock with which they succeed best. The one who was successful with driving or road horses ten years ago, and did not abandon their breeding and handling for the draft variety exclusively, is destined now to succeed with drivers more surely than he who now sells his draft horses or cattle and begins with the quick steppers. It is largely from experience in handling any variety of stock that profit is to come. If one is in any line of work but half the time (when the boom is on) he loses time in adapting himself to the work. Guarding against losses is difficult even when one is familiar with the farm animals. The kind of stock one keeps from choice, and cares for zealously and wisely, will usually, if not always, pay better even in their depressed season than other kinds about which he has much to learn. Nearly every farmer can keep a few hogs year after year profitably, by giving heed to their needs.

Many farmers, too, can keep sheep in moderate numbers to advantage. Few men are not in position to keep two or more brood mares, and few have any good reason for not owning some cows. Know something about all kind of farm animals and all possible about one or two varieties. Two or more neighbors can cooperate to advantage. Let one study and experiment on the breeding, feeding and diseases of cattle and swine; the other on horses and sheep. Each can be of much service to the other in the emergencies which will frequently arise from disease, accidents, etc.—The Orange Judd Farmer.

Sale of "Doddies."

At Mr. J. R. Harvey's sale of Aberdeen Angus cattle at Dexter Park, Chicago, June 20th, an average of $358.60 was obtained for 25 head. Six bulls averaged $333 33, and 19 females $366.58.

The bull Jim Jams sold for $1000, and the highest-priced cow was Blackbird of Turlington 2d, which sold for $800.

The Turlington herd of "Doddies" has for some time been considered to be the best on this continent, no expense having been spared in the first cost of the foundation animals, nor in the after management.

The herd has been principally under the care and management of Mr. Wm. Watson, son of the late Hugh Watson of Keillon, Scotland, who was one of the first, if not *the* first, to take in hand the improvement of this now superior breed of beef cattle. He was the breeder of the celebrated bull Old Jock (1), calved in 1842, and was one of the greatest show bulls of his day.

It seems a pity that such a herd of cattle, bred and managed with such success, should be dispersed altogether, to do which is Mr. Harvey's intention.

There are still left about 40 head, which will be sold at Chicago on the 14th of September next.

The portion already sold has made the highest average price of any sale of any breed of cattle so far this year, and it is doubtful if it be surpassed.

Doubtless the September contingent is the equal in quality of that already sold, and, under the able management of Mr. Watson, will undoubtedly be brought forward in shape to command top prices.

DOMESTIC ECONOMY.

EASY WAY TO WASH DISHES.—I have an improved plan for washing dishes which has been practiced in some households in this city, and which has been pronounced a great success. First, have your water boiling hot. This is essential. Provide yourself with a common painter's brush, with a handle about 10 inches long. If the bristles are not found convenient, tie a piece of soft rag at the end of a stick of the same length. Take the plates, and, after removing the scraps, pile them on top of each other in the empty dishpan. Pour enough hot water on the topmost dish to fill the dish. Then, tipping up one end of the dish with your finger, wash front and back with the brush. In France, special brushes trimmed with thin rope about four inches long, instead of brushes, are used for this purpose. Remember, it is not the heat of the plates, but the hot water, that pains the hands. When this is completed, the water will be in the next dish. Lift the clean dish out, and place it on its edge against the wall. Put in more hot water, and perform the same operation on all the other dishes, and when the work is finished, you will find that the heat has dried the plates, and that they do not require to be wiped. By this method, you need not scald or wet your hands, and you also avoid the trouble of wiping, which is half the work.—Detroit News.

ENGLISH BATTER-PUDDING.—An English batter-pudding with green gooseberries is made as follows: Pour a pint of milk over a slice of bread, crumbed. Stir in ten even tablespoonfuls of flour. Add the yolks of four eggs, half a teaspoonful of salt, and finally, the whites of four eggs which have been beaten to a stiff froth. Beat this batter carefully, and stir into it a quart of green gooseberries. Put the pudding in a greased mold, or tie it up in a thick cloth which has been thoroughly greased and floured. Let it boil two hours. Serve it with an English brandy-sauce or an old-fashioned hard sauce.

STRAWBERRY CUSTARD.—Separate four eggs, put one pint of milk into a double boiler, beat the yolks of the eggs and four tablespoonfuls of sugar until light, add them to the milk, stir constantly until the thickness of cream, take from the fire and stand aside to cool; beat the whites of the eggs until stiff, add to them four tablespoonfuls of powdered sugar, and beat again until stiff and white. Put about a pint of strawberries into a glass dish, pour over the custard, heap the whites in spoonfuls over the top, dust with sugar, stand in the oven a moment to brown. Serve icy cold.

VERMICELLI SOUP.—For eight people, take a quarter of a pound of vermicelli, which blanch in boiling water to take off the taste of dust. Strain it, and throw it into some broth that is boiling, otherwise the vermicelli will stick together and cannot be separated unless crumbled into a thousand pieces. Mind, the vermicelli must be boiled in broth before you mix it with any of the puree, and take care to break the vermicelli before you blanch it in the water, otherwise it will be in long pieces and unpleasant to serve up.

WHITE SPRUCE BEER.—Mix together three pounds of loaf sugar, five gallons of water, a cup of good yeast, adding a small piece of lemon peel, and enough of the essence of spruce to give it flavor. When fermented, preserve in close bottles. Molasses or common brown sugar can be used, if necessary, instead of loaf and the lemon peel left out. Sometimes, when unable to obtain the essence of spruce, we have boiled down the twigs. This will be found a delightful home drink.

BERRY SHERBET.—Crush one pound of berries, add them to one quart of water, one lemon sliced, and one teaspoonful of orange flavor, if you have it. Let these ingredients stand in an earthen bowl for three hours; then strain, squeezing all the juice out of the fruit. Dissolve one pound of powdered sugar in it, strain again, and put on the ice until ready to serve.

RHUBARB CREAM PIE.—One pint stewed rhubarb, four ounces sugar, one pint cream, two ounces powdered cracker, three eggs. Rub the stewed rhubarb through a sieve, beat the other ingredients well together, and just as the pie is ready for the oven, stir in the rhubarb; pour the whole into a plate lined with pastry. Cover with strips and bake.

STRAWBERRIES WITH ORANGE JUICE.—This is an exceedingly nice way to serve a sweet berry. Have them picked carefully and placed in a serving dish, dust with sugar, and then to each quart pour over carefully the juice of two oranges; serve at once.

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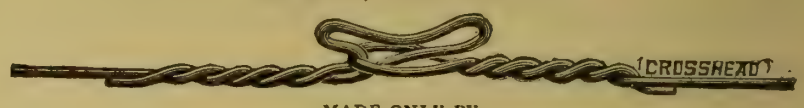
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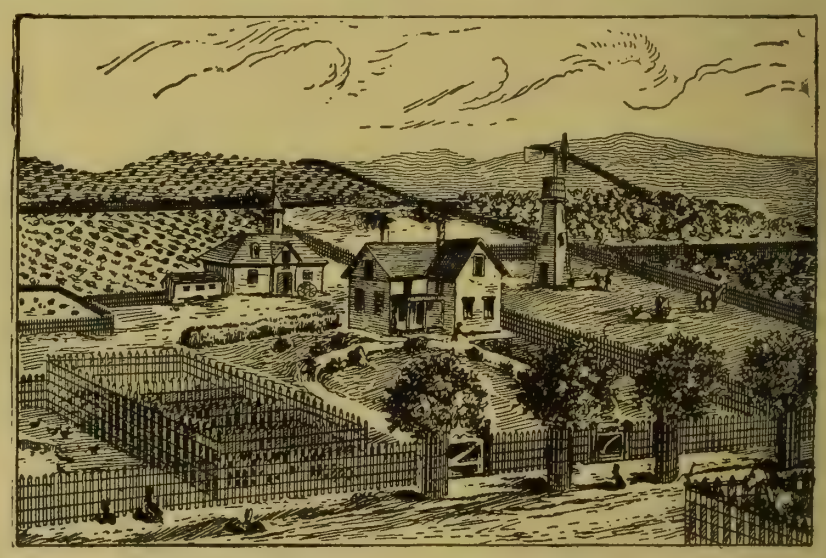
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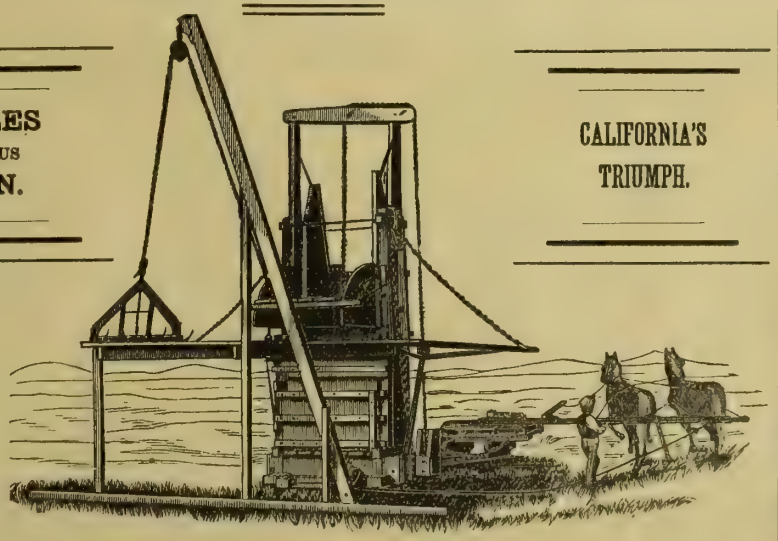
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THE DAIRY.

On Calf-Rearing.

BADEN, SAN MATEO CO., July 10, 1892.

TO THE EDITOR:—I read in an Eastern publication as follows:

At the Iowa station, experiments have been made to determine the feeding value of ground flaxseed for young calves. A bull and heifer calf of the Holstein and Shorthorn breeds were chosen, the two bulls being fed on whole milk, and the two heifers on milk skimmed after being set 12 hours, with as much flaxseed as they could assimilate without scouring. These experiments lasted three months, the calves being weighed every 15 days. The results indicate:

1. That a ration of skim milk and ground flaxseed compares favorably with a new milk ration for young calves.

2. That the skim milk and flaxseed meal-fed calves were less interrupted in their growth by weaning, than were the whole-milk calves.

3. A saving value of butter fat alone of $1.11 per month, on each calf, was effected by substituting the ground flaxseed.

4. The cost of producing a pound of gain, estimating new milk at 87½ cents per hundred pounds, skim milk at 15 cents per hundred pounds, grain one cent per pound, hay $5 per ton (the latter two being fed alike to both lots), and flaxseed meal 3½ cents per pound, was 7.6 cents per pound increase with the fresh milk ration, and only five cents with the skim milk ration.

It appears from this that where there are proper facilities for converting the butter fat into butter, it is much more economical to feed calves skim milk and flaxseed than whole milk.

In connection with dairy-farming there is no doubt but that calves can be reared more economically on skim milk, with the addition of flaxseed gruel in due proportion, which will vary according to the tastes and powers of digestion in each calf.

For neither cows nor calves can we make up a fixed ration that will suit all animals alike.

Chemists may tell us of what certain foods are composed, and how much of this and that goes to make up a perfect ration, theoretically, for growing animals and milch cows; but there are problems in stock-rearing that even chemists cannot solve. When an experienced feeder wants to make the greatest growth in the shortest time, he pays little heed to any fixed rules or proportions of food; it is true that a certain quantity, perhaps the bulk of it may be mixed for all alike, but in order to obtain the best results individual tastes must be studied and, in a sense, anticipated. It is the little extra handful of one kind or other of tempting food, now to induce one to clean up the more bulky mixture, again, as an addition to what has been eaten, or, perhaps, by way of finding out how much each animal can make good use of. By some such process the observing attendant will soon find out what suits each animal best and thus be able to make the most of both time and food.

It is particularly the case in young and growing animals, and the younger they are the more care and discrimination is required in the feeding of them; hence the difficulty many have in successfully rearing calves on skim milk, the majority being barely more than kept alive, with the smallest modicum of growth imaginable.

In regard to using flaxseed with skim milk, it is now nearly half a century since I heard an experienced and successful breeder say that he found, by experience, that calves did about as well when good oilcake gruel was substituted for that made with the ground seed, saying that the latter, he thought, contained too great a proportion of oil, while the cake contained enough for the calves to do well on it.

This has been my experience, having always found that I could make a very good growth with skim milk and oilcake gruel after the first three or four weeks, due attention, however, being given to all or any other food required. If it is the season of green grass, there is nothing better than a mixture of dry bran and oilcake for preventing scours, which will also, at the same time, help on the growth; it seldom, if ever, comes amiss to growing animals of any description.

As regards cost of producing a pound of growth in a calf, in butter dairies there will not be so much difference with us, as in the example given by the Iowa experiment station, on account of the higher price of hay and grain in California, but, all the same, the principle applies here, as there, as far as the milk and gruel has to do with it.

The feeding value of oilcake is not known as it ought to be in this State. R. A.

Tuberculosis.

In regard to the prevention of the spread of tuberculosis among cattle, Prof. M'Fadyean of Scotland says:

There are one or two very well known, but generally misinterpreted, facts that have an important bearing on this question. Why are cattle, above all other domesticated species, the victims of tuberculosis? Not altogether as some suppose, because their tissues furnish a specially suitable soil for the growth and multiplication of the tubercle bacillus. Sheep are so rarely the subject of tuberculosis that it is doubtful whether any natural case has been observed in this country, and yet we know that when attempts are made to infect sheep with that disease, the experiment succeeds well enough. Again, both experiment and observation have shown that the tubercle bacillus, when once it gains entrance to the system of a horse, is capable of setting up a deadly form of the disease, and yet the proportion of tuberculosis among horses is insignificant. These facts suggest that the prevalence of tuberculosis among cattle may be less due to any inherent susceptibility of the ox tribe, than to something in man's method of keeping these animals. May it not be due in a great measure to the fact that cattle, particularly dairy cows, as they are commonly kept in this country, are found in circumstances specially favorable for the transmission of the disease from the affected to the healthy animals? No well-informed person now imagines that overcrowding can generate tuberculosis; but what everyone must see is that the more constantly animals are housed, and the smaller and worse ventilated the buildings are in which they are confined, the greater will be the risk of the disease spreading, provided there is one tuberculous individual in the stock.

A cow that is the subject of tuberculosis of the lungs expels tubercle bacilli from the air passages in the act of coughing. These bacilli, when desiccated, rise as particles of dust, and are then apt to be inhaled by other inmates of the same building. Such, in the great majority of cases, is the mode of infection in the case of cattle, and hence the two main things to be attended to with a view of prevention are: 1. To permit no animal suspected of being tuberculous to stand in the same building with other animals; and (2) to see that the buildings in which cattle, and especially dairy cows, are housed, are roomy and well ventilated. To provide sufficient air space and adequate means of ventilation in the most obvious manner diminishes the risk of one animal infecting another. No wild animal in a state of nature has ever been known to die from tuberculosis; and, with the exception of the few cases in which the disease is inherited, or transmitted to the calf by means of the milk, cattle of even the most susceptible breeds remain free from tuberculosis as long as they are not housed. In short, tuberculosis is a disease of domestication—of close housing and bad ventilation. Long before the discovery of the tubercle bacillus, and even before it was generally recognized that tuberculosis is contagious, medical men had come to the conclusion that insufficient ventilation had much to do with the prevalence of the disease among human beings, and a most convincing proof of the correctness of their view was furnished by the sudden decline in the mortality from phthisis among our soldiers when a greater air space per man and better means of ventilation were provided in the barracks. There is every reason to believe that, in like manner, a great check could be put to the spread of the disease among cattle if byres (cow stables) were made larger and better ventilated.

A Correspondent's Congratulations.

TO THE EDITOR:—I always read with deep interest the articles of John Taylor, of Tuolumne county, to the PACIFIC RURAL PRESS, and regretted exceedingly to hear of his death. Then, afterwards, Miss Ada E. Taylor wrote for the PRESS. I said in my heart that she was a daughter of John Taylor. In the PRESS of June 18th my surmises are confirmed. If I might be permitted, I also would extend my sincere congratulations upon her recent marriage. May long life, prosperity and happiness attend her and hers. Now that she is married, may she not drop her pen.

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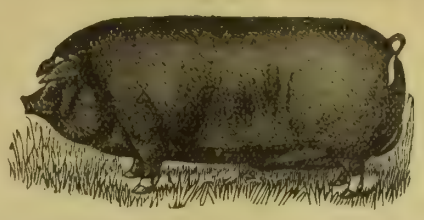
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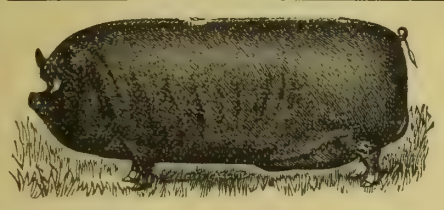


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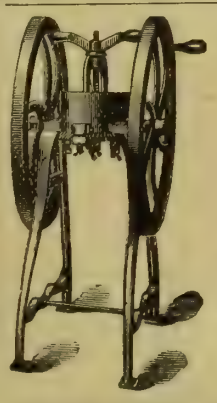
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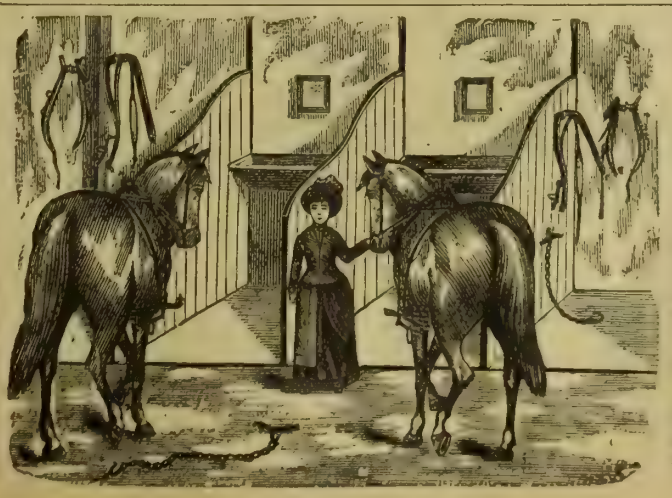
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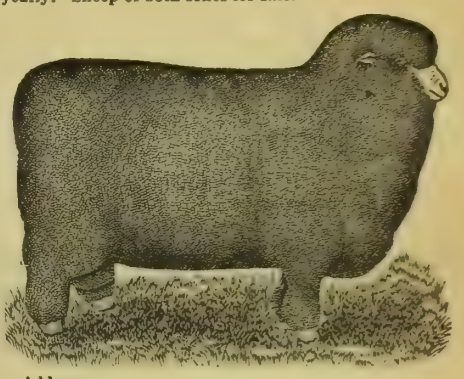
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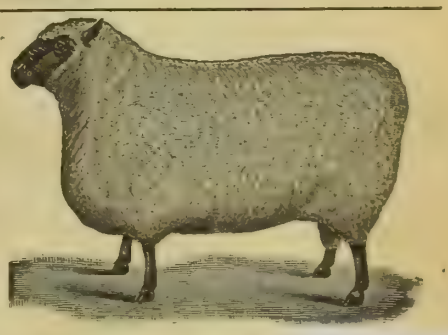
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Is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

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Breeder of Registered Holsteins and Berkshires.
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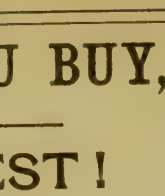
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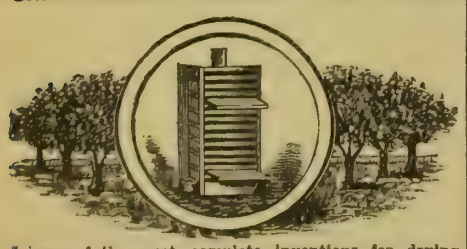
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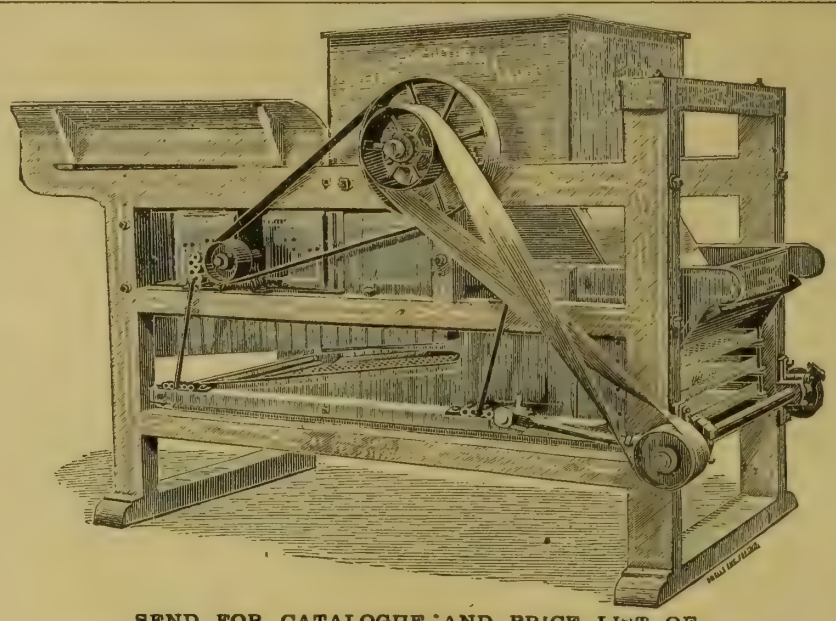
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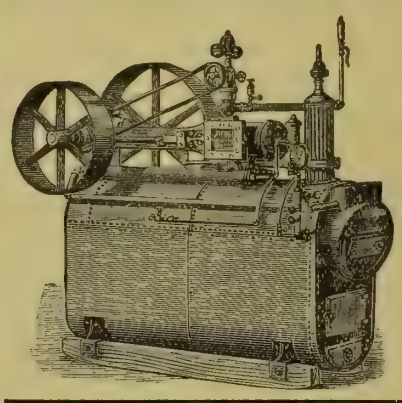


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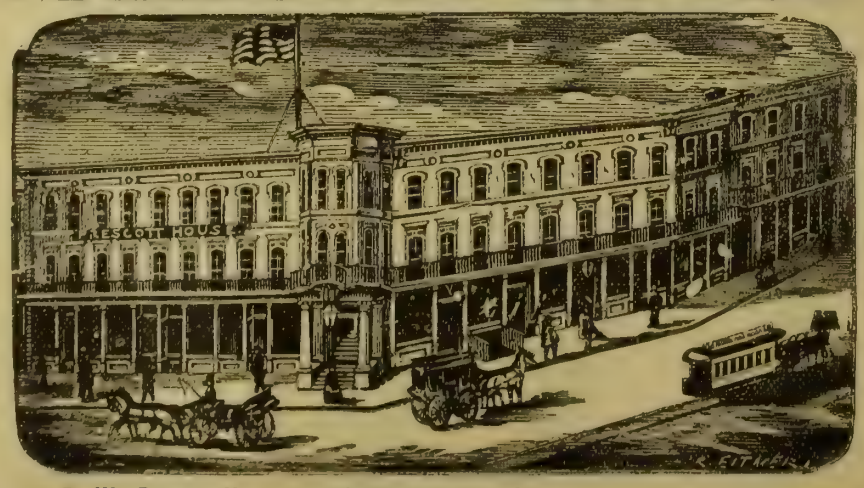
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WELL SUPPLIES All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind & Steam Mach'y. Encyclopedia 25c. The American Well Works, Aurora, Ill.
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ELM STREET, DALLAS, TEXAS. }

S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, July 13, 1892.

General trade has assumed its normal condition. Buyers for firms at the large distribution centers in the agricultural districts, report that their purchases are larger than at this time in last year, and, as for that, in any former year. They claim that the crops (fruit, grain and vegetables) average larger than had been estimated, and, consequently, more hands have been given employment. One buyer for a prominent Marysville firm says that he bought in June over $5000 worth more of grain bags than in the like month in 1891. In farm produce, present indications point to more general activity in grain at an early day. Dealers appear to be waiting for the Government June crop report before dealing on a large scale. Fruit is meeting with an enlarging demand and at improving prices. Last year the market opened high and declined afterward, but this year it opened low and has been slowly advancing. Vegetables continue to move off freely and at better prices than obtained in last year. Feedstuff is meeting with a good demand, which appears to be steadily enlarging. Dairy produce (cheese and butter) is shaping itself into a better position for the selling interest. In eggs, the market has been kept down for poor to good by heavy receipts of Eastern, which are forced on the market at the best obtainable figures. Eggs in cars that have been long on the way and unnecessarily exposed to heat have been placed as low as 12½ cents per dozen "as is." A large part of these arrivals are only suitable for Chinamen and bakers, who can and do use ammonia to kill any bad odor that might be present. Poultry, after making a rapid and unexpected jump on last Friday, has fallen back to prices lower than were ruling at the close of last week's review: Livestock is strengthening. Other farm produce is reported fairly firm.

In the local money market there appears to be more inquiry for funds for crop purposes. There is a steadily growing feeling of confidence and as this takes firmer hold, more disposition will be manifested to make ventures, both speculative and legitimate, which will be instrumental in bringing about more active times.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	June	July.	Aug.	Sept.	Oct.	Nov.
Thursday	...	6s06½d	6s07 d	6s8 8 d	6s05 d	6s08¾d
Friday	6s07½d	6s06 d	6s06¾d	6s07 d	6s08 d	6s08 d
Saturday	....	5s06 d	6s06¾d	6s07½d	6s0 ¾d	6s08 d
Monday	....	6s05½d	6s0 ¾d	6s06¼d	6s6.6¼d	6s06½d
Tuesday	6s03 d	6s05¾d	6s06¼d	6s 6¾d	6s0.¼d	6s07¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week.

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s3d	34s0d	31s0d	Steadier.	Stormy.
Friday	33s6d	....	....	Quiet.	Fine.
Saturday	33s6d	34s6d	34s6d		
Monday	33s6d	34s6d	34s6d		
Tuesday	...	....	34s6d	Neglected.	Favorable.

To-day's cablegram is as follows:

LIVERPOOL, July 13.—WHEAT—Cheaper to sell. California spot lots, 6s 10½d; off coast, 33s 3d; just shipped, 34s; nearly due, 33s 6d; cargoes off coast, rather easier; on passage, red wheat firmer held, white very dull.

New York.

The following shows the closing prices of wheat for the past week:

Day.	July	Aug	Sept.	Oct.	Nov.
Thursday	141⅞	141½	141	142⅝	....
Friday	140⅝	141⅜	140⅝	....	....
Saturday	140	139⅝	140⅛	141⅜	....
Monday	139⅞	138½	139½	140⅝	....
Tuesday	139⅛	138½	139	140	....

The following are to-days' telegram:

NEW YORK, July 13.—WHEAT—82⅝c for August, 82⅞c for September, 86½c for December and 90½c for May.

CHICAGO, July 13 —WHEAT—76¼c for July, 75¼c for September and 78½c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, high st	137½	....	....	....	141½
" lowest	136½	....	....	....	140½
Friday, highest	137	....	....	....	141½
" lowest	136⅝	....	....	....	141
Saturday, highest	136½	....	....	....	....
" lowest	136⅛	....	....	....	....
Monday, highest	135½	....	....	....	140½
" lowest	135¼	....	....	....	140⅝
Tuesday, highest	135⅛	138	137½	....	140½
" lowest	135	137½	137¼	....	140½

The following are to-day's recorded sales on Call:

Morning Informal—Seller 1892, 300 tons, $1 35. Buyer December—100 tons, $1.40½; 100, $1.40 per ctl. Regular Session.—Buyer December—100 tons, $1.40; 200, $1.40½. Seller 1892, 100 tons, $1.35 per ctl. Afternoon.—Seller 1892, 400 tons, $1.37½; 800, $1.35¼. Buyer December—400 tons, $1.40¼; 400, $1.40½; 200, $1.40¾ per ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	92½	....	94	95	97½
" lowest	91½	....	94	95	97½
Friday, highest	92½	....	....	....	....
" lowest	92½	....	....	....	....
Saturday, highest	91½	....	....	....	....
" lowest	91½	....	....	....	....
Monday, highest	90	....	....	....	95⅝
" lowest	90½	....	....	....	94½
Tuesday, highest	91½	....	....	93⅝	96½
" lowest	90½	....	....	93⅛	95½

The following are to-day's recorded sales on Call:

Informal.—Seller 1892, new—300 tons, 90½c. Regular Session.—Seller 1892, new—100 tons, 90¾c; 100, 91¾c; 100, 91½c per ctl. Afternoon.—Seller 1892, new—300 tons, 91½c; 300, 91½c. December—100 tons, 96c; 200, 95½c; 200, 95¾c per ctl.

Markets by Telegraph.

Eastern Raisin Market.

NEW YORK, July 10.—From present indications new California raisins will come upon a pretty bare market. Should the new crop show care in curing and preparing and be offered at reasonable prices, California packers will probably experience no difficulty in promptly placing their goods among dealers. Regarding Valencia raisins, the stock here to-day is probably the smallest upon record, and only 6000 boxes are now in transit to this market, which is bare of salable fruit. The growers in Spain do not propose yet to relinquish this field to the California product. They are handicapped by a heavy duty, but intend to stubbornly contest the ground. They will be early in the market with new fruit and endeavor to get in some good work before the California product can be landed. But with two varieties in the field prices will be regulated to a proper level, ganged by the law of supply and demand. Malaga have been driven from the American market, but the more ordinary Valencia continues on deck. With a steady increase in the Pacific Coast product, however, and a cheapening in cost, as it is believed, it is only a question of time when the foreign article will entirely disappear from our markets.

Fruit Crop East.

NEW YORK, July 10.—Georgia expects to market fully 200 cars of peaches. Hunterdon county, New Jersey, estimates a yield of not over 250,000 baskets, 20 per cent below that of last year. This is favorable for late Californias. It is reported that Almeria grapes, the only important competitor of California, though of large crop, are badly mildewed, and our receipts are not likely to exceed the moderate ones of last season.

Eastern Dried Fruit Markets.

NEW YORK, July 10.—An encouraging expression for the situation of California fruits has become audible. Everything points to a good cleaning up prospect for old packings, with its improving effect upon the basis for new. In a word, there is decided evidence of readiness to meet Coast values if they do not run into restrictive figures.

Eastern Canned Fruit Markets.

NEW YORK, July 10.—Large blocks are in treaty and enough have gone through, particularly for the West, to give a firmer tone. Better spot quotations are expected to be listed before the present week is out.

Eastern Wool Markets.

NEW YORK, July 8.—The wool markets all report quiet trade. The cause is the holiday, which has kept buyers away. Sales for the week, however, foot fair, the amount being about equally divided among all grades. New wools are coming forward in increasing amounts. The supply of fleeces is quite large, and, as a rule, growers have improved on the methods of putting it up, but it falls far below the condition in which Australian wools are put on the market, at least those brought to this country.

At the London sales a strong competition among buyers is maintained. The advance is firmly held and sales are expected to close strong. It is estimated that about 12,000 bales have been bought for this country. The sales will close July 13th. There is little doing in Territories, Texas or California wools. Pulled wools are very quiet. A fair demand is reported for carpet wools.

NEW YORK, July 10.—Wool dealings were principally at New England. The general market is strong, but no higher. The mills are getting a good deal of direct stock, which gives buyers a temporary advantage over spot sellers. Foreign wool is quiet. Fine domestic is now drawing some of Australia's customers. All woolen goods are in good form. The wool sales at New York were 163,000 pounds of domestic, 162,000 pounds of foreign spot and 1,000,000 common in course of delivery. Boston sold 2,229 000 lbs. of domestic; also 35,500 foreign. The Philadelphia trade was satisfactory, with some hardening tone in prices.

Wheat Exports.

NEW YORK, July 10.—Exports of wheat, including flour as wheat, from United States seaports on both coasts for the seven days ending July 7th equal 2,060,504 bushels, a smaller total than in any preceding week for more than a year, a decline of nearly 40 per cent from the like export total in the preceding week, and of 10 per cent as compared with the like week a year ago.

Miscellaneous.

NEW YORK, July 10.—Honey—The reported light Coast crop is much regretted here. Our strained is nearly used up. Lima Beans—Added supplies have no weakening effect upon $1 80, the spot price per bushel. Hops—Last ranges are unchanged; State are not offered freely and Pacific has the run of the brewers' demand, especially at 22@23c for styles best to choice; options are inactive.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending July 12, '92, were as follows:

Flour, qr. sks	81,883	Bran, sks	6,726
Wheat, ctls	125,108	Buckwheat "	....
Barley, "	80,838	Middlings "	2,586
Rye, "	....	Chicory, bbls	102
Oats, "	8 829	Hops, "	....
Corn, "	3,050	Wool, "	1,091
*Butter, "	917	Hay, ton	2,444
do bxs	497	Straw, "	252
do bbls	13	Wine, gals	117,886
do kegs	8	Brandy, "	470
do tubs	20	Raisins, bxs	670
do ½ bxs	310	Honey, cs	301
†Cheese, ctls	6.8	Peanuts, sks	....
do bxs	....	Walnuts "	....
Eggs, doz	20,026	Almonds "	....
do "Eastern"	117 150	Mustard "	....
Beans, sks	11,077	Flax "	2,730
Potatoes, sks	18,?22	Popcorn "	....
Onions, "	1,914	Broom corn, bbls	....

*Overl'd, 243 ctls. †Overland, —ctls.

Cereals.

We excerpt the following from the report of the Oregon weather service, in cooperation with the U. S. Weather Bureau of the Department of Agriculture, for the week ending July 5: The total wheat yield of 1891 in western Oregon amounted to nearly 9,000,000 bushels, while this year it will not amount to more than 7,000,000 bushels, the unfavorable weather conditions lessening the yield for this year. The oats crop, while fair, will be short of last year's crop by about 20 per cent. Haying is now in progress in all sections and good yields are generally reported, though in a few localities it is not up to the average. In 1891 eastern Oregon had a total yield of nearly 6,000,000 bushels, and it is estimated that not over 3,000,000 bushels will be harvested this year. The greatest injury and loss are in Wasco, Gilliam, Sherman and Morrow counties, where last year they had 2,300,000 bushels; this year the four counties will not have a total yield of 1,000,000 bushels. A great many farmers are discouraged and many will not be able to secure seed and feed. The conditions are nearly as they were in 1889. Wheat on the higher belt of Umatilla county and on the reservation is in fine condition and it will yield about as well as it did last year. In Union county the prospects are good. In the other counties the unfavorable prospects continue. Haying is in progress and very good yields are reported.

In the local wheat market trading in samples has been slow, owing to many large buyers confining their purchases to desirable points in the country. It is also claimed that buyers who were pinched for immediate delivery wheat were accomodated by one or more warehousemen who *loaned* the wheat probably for a consideration. This loaning of wheat works an injury to the market. Farmers in warehousing their grain should put a private mark on each sack, and take receipts for the same, so that when the grain is called for they will get that which was stored. This appears to be the only way of breaking up this nefarious practice. It is said that as soon as the Government's crop report for the month of June is made public, buyers will be more disposed to enter the market, when we can reasonably look for active times. Paying higher prices on Call for November and December delivery, indicates that operators believe in better prices later on.

The barley market has shown considerable activity and at strong prices. For parcels favorably situated an advance has been paid on current quotations. The buying has been and still is being done for shipping to New York and England. Present low prices in our market and a certainty of a shortage at the East and in Europe of malters' grades are a decided inducement to make ventures. Taking this State as a whole and the crop this year will not be any larger than it was in 1891, while in Washington and Oregon it will be short.

Oats have been cleaning up, and in consequence, the market for old held to steady prices. New coast oats have come to hand but as a rule the grades are poor, which cause buyers to bid down.

Large yellow corn has held fairly steady, but small yellow and white advanced slightly under light supplies and a fair demand.

Rye has ruled steadier. Crop advices from abroad indicate another shortage, but it will not likely be as marked as it was last year.

Australian and Proper 1891 wheat, suitable for milling, are very scarce and wanted; gilt-edged will fetch quickly $1.47½@$1.50, and other grades that can be used by millers will fetch from $1.42½ upward. Millers who never look at Club wheat are now taking it owing to their not being able to get Australian and Proper.

In futures, legitimate trading on Call has been light, but there have been many cross sales so as to beat down the market for both wheat and barley.

Feedstuff.

Bran and middlings have met with more attention and at stronger prices. Ground barley is going out more freely. Other feedstuffs are essentially unchanged.

Old hay is not quoted; only new will be quoted in future. Receipts have been quite free, but all received has not only been placed, but a slight advance made in the more choice grades.

Dairy Produce.

Butter has moved off quite freely at last week's reduced quotations. The supply of gilt-edged butter is getting lighter, and, as it becomes scarcer, the more choice grades should appreciate. The southern part of the State is drawing from us. Eastern advices report increasing receipts and a weaker market with concessions in order.

Cheese is getting scarcer, which causes the better grades to hold to strong prices, with, at times, an advance obtainable for gilt-edged full cream.

The receipts of Eastern eggs have continued on a large scale, while those of Californian have fallen off. Poor to fair stock is in buyers' favor, at from 12½ to 14 cts. "as is," in carload lots. Choice packs have not changed much. Fresh-laid near by California eggs have held strong under a good demand and moderate receipts.

Live Stock.

The market is stronger for all kinds, with a slight advance for bullocks, mutton sheep and hogs. Calves are also doing better. The selling pressure appears to have relaxed.

Vegetables.

In garden stuff, we note decreasing supplies of both beans and peas. Tomatoes, cucumbers, green corn, summer squash and other seasonable varieties have come in liberally, causing a shading in prices. There has been and continues to be a good demand on shipping days for the better keepers.

Onions continue in oversupply. The outlet so far this season is restricted, which causes a low and weak market.

Notwithstanding that the receipts of potatoes have been quite free, the market cleaned up each day at good prices for well-matured and good keepers. The trouble appears to be that too many unripe potatoes are marketed, and, being poor keepers, low prices had to be accepted. They generally turn green, and are therefore unattractive to consumers. The demand for the more choice well matured is largely for shipping.

Fruit.

New York mail advices report the receipt of a sample of California new evaporated apricots, split and pitted by a patented device that leaves the fruit in much better condition than it appears when manipulated by the old method.

The English fruit crop promises to be short, and now comes a circular letter from Louis Ritz & Co., Hamburg, June 23d, which says: The outlook for the growing fruit crops in Austria and Germany is rather discouraging. There will be few if any pears. The apple crop has suffered from the start by frost and winds, and will certainly not yield more than one-half of last year's crop. The prune crop does not look as well as last year, but may improve later on; we think, however, that there will be a shortage of one-third compared with 1891. This, with almost no stock of last year's fruit will gradually force prices higher. New crop October-November shipment quoted about $3.45 per 100 lbs. c. i. f. New York.

The New York correspondence of the *United States Miller* says: "As a whole, therefore, the crops of the world promise more favorably than a month ago, in spite of the unparalleled bad weather we have had in this country, for the greater part of that period. Regarding the London financial troubles and their probable effect on the grain market, it is significant that they were caused by the decline in silver held by banks doing business with India, largely, where exports of wheat have been enormously stimulated by the same unprecedentedly low price of silver, by reason of which she is able to undersell gold standard grain-exporting countries, in the markets of Europe, and yet realize as much, or more, for her wheat at home, as before."

Chicago *Western Rural Market and Crop Review*, July 4th, says: The weather has been fairly good during the past week for the winter wheat harvest through Central and Southern Indiana, Illinois, and over the States of Missouri and Kansas. The late planting of corn for fodder is now interrupted by the wheat harvest and the advent of haying time. The superior quality of seed corn produced last year is proving to be a valuable element in aiding the crop already planted. In the northern district of Illinois a shortage of 15 per cent, and in the middle district of 16 per cent in area of corn planted is now conceded. This means so much out of the margin for export after usual demand for home consumption is supplied.

The local market for green fruit has shown continued activity with better prices ruling for desirable canning varieties. Apricots now coming in are meeting with a quick demand from canners, dryers and shippers. Peach apricots and Moorpark apricots have sold at from 2@2½c. per lb., according to size and locality grown. Royals sold lower. Tragedy and also German prunes are coming in more freely. They meet with a quick market. Bartlett and Dearborn's seedling pears are in good request for shipping and canning. Choice and good keeping apples are meeting with a quick market at good figures. The peaches coming in are clings. The quality is good. Some poor Crawfords came to hand. They will soon be followed by the best grades. Cherries and currants are going out. The former, unless very choice, are poor sellers. We withdraw quotations. The grapes that are coming to hand are poor and hard to sell; it would be misleading to quote them. Melons are coming in more freely. The market is declining. Figs hold up well; the consumption of the green shows an increase each season. Nectarines are scarce and high; with freer receipts, prices will shade off. More will be canned and dried this year. In berries the market has held firm under a good demand at last week's prices.

There is an improving demand for canned fruits. The market is strengthening.

Dried apricots are moving off freely at from 9¼@11c. per lb. The East is drawing heavily, while merchants on this coast are large buyers. For dried prunes there is a large inquiry, as there is for peaches, but we are not able to procure reliable quotations for this issue.

For raisins the market is shaping into good position for the more choice grades. Buyers will discriminate closely, and stuff only fit for hogs will have a poor show of being marketed, except at a loss. Growers should fight against each and all who are trying to kill the reputation of California raisins by marketing poor grades. It will pay them well to do so.

The market to-day cleaned up well. Canners are paying as follows: Peaches, clings, 1¾ to 2 cts. per lb. f. o. b.; freestone, 1⅛ to 1¼ cts.; Bartlett pears, 90 cts. to $1.10 per box and 1⅛ to 1⅜ cts. per lb. f. o. b.; apricots, 1¼ to 2 cts. f. o. b. according to size and locality. Some few, it is said, paid slightly higher for small parcels of selected to put up a fancy article for a special or particular trade.

In next week's issue we will give quotations for California wines.

Miscellaneous.

On last Friday the poultry market made a big jump in hens, roosters and young chickens. Choice, well-conditioned old hens sold up to $10.50 per dozen, and in one or two instances slightly more; old roosters up to $8.50 and $9, and young up to $11. Broilers and fryers advanced also. On Saturday the market kept up, but on Monday it was easier, with quite a break on yesterday under heavy receipts of Californian and the arrival of a carload of Eastern stock.

Honey is coming in more freely, but the market holds very strong under a good demand and confirmed reports of a half crop. The crops East are also light.

Hops are stagnant owing to dealers waiting for more definite advices regarding crops. At this writing, while our advices are now favorable, yet they do not warrant the expecting of a full average, taking the world as a whole.

In wool we are not advised of any material change. Receipts are decreasing, while stocks are moving off fairly free at current quotations.

Poultry fell off badly to-day, our quotations covering the range. Another car of Eastern is about due. Young pigeons are doing better. They sell at $2 50 to $3; old sell at $2 75 to $3.50. Dealers are gathering the latter for a shoot.

From reliable advices up to July 12, the following summary, tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	262,954	331,952	*174,188	74,451
San Diego	13,595	25,818	2,815	.....
San Pedro	4,830	5,525	.....	3,981
Oregon	57,098	32,169	23,212	
Puget Sound	30,292	39,295	.....	
Totals	368,769	427,759	200,245	83,432

*Engaged for wheat, 1892, 41,418; 1891, 67,095.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 13, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 15
Butter	2 50	@	3 05
Pea	2 20	@	2 45
Red	2 05	@	2 35
Pink	2 00	@	2 15
Small White	2 00	@	2 45
Large White	2 00	@	2 30
Lima	2 40	@	2 50
Fld Peas, blkeye	3 00	@	3 30
Do green	1 50	@	2 75
Do Niles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	17	@	—
Do Giltedged	—	@	20
Do Creamery rolls	—	@	20
Do do Giltedge	—	@	21
Eastern	—	@	—
CHEESE			
Cal. choice cream	8	@	—
Do fair to good	7	@	—
Do gilt edged	—	@	9
Do skim	5	@	6
Young America	—	@	10
EGGS.			
Cal. "as is," doz	16½	@	18
Do candled	18	@	20
Do choice	21	@	22
Do fresh laid	23	@	24
Do do selected	—	@	25
Eastern "as is"	12½	@	14
Do candled	15	@	18
Do selected	18½	@	19½

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED			
Bran, ton	18 00	@	19 00
Feedmeal	25 00	@	28 00
Gr'd Barley	20 50	@	22 50
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7 50		
HAY.			
Wheat, per ton	10 00	@	—
Do choice	—	@	13 50
Wheat and Oats	9 00	@	12 00
Wild Oats	8 00	@	11 00
Cultivated do	7 00	@	10 00
Barley	6 00	@	9 50
Alfalfa	7 00	@	9 50
Straw, bale	40	@	50
GRAIN, ETC.			
Barley, feed, ctl	88½	@	93½
Do Choice	95	@	—
Do Brewing	1 00	@	—
Do do Choice	1 05	@	—
Do do Giltedge	1 10	@	—
Do Chevalier	1 05	@	1 40
Do do Giltedge	1 45	@	1 50
Buckwheat	—	@	—
Corn, White	1 27½	@	—
Yellow, large	1 20	@	—
Do small	1 27½	@	—
Oats, milling	1 50	@	—
Feed, Choice	1 45	@	—
Do good	1 37½	@	—
Do fair	1 33½	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	1 32½	@	—
Gray	1 32½	@	—
Rye	1 20	@	—
Wheat, milling. Gilt edged	1 47½	@	—
Do Choice	1 45	@	—
Do fair to good	1 40	@	—
Shipping, cho'ce	1 38½	@	—
Do good	1 36½	@	—
Do fair	1 35	@	—
Common	1 30	@	—
Sonora	1 33½	@	1 45
HOPS.			
1891 Choice to Ex.	20	@	—
Fair to Good	18	@	—
FLOUR.			
Extra, CityMills	4 65	@	4 75
DoCountryMills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@	—
Do Choice	6	@	—
Do paper shell	7	@	—
Almonds, sft shl.	10	@	—
Paper shell	12	@	—
Hard Shell	6	@	7½
Brazil,	6½	@	8
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	1½	@	3
Filberts	10½	@	12½
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	60
POTATOES.			
Early Rose, ctl	60	@	80
Do do in boxes	75	@	1 15
Peerless	65	@	85
Do in boxes	70	@	1 00
Garnet Chilies	90	@	90
Burbank Seedlings	60	@	80
Do do in boxes	75	@	1 15
POULTRY.			
Hens, doz	6 50	@	7 50
Roosters, old	6 50	@	7 50
Do young	7 50	@	9 00
Broilers, small	2 50	@	3 50
Do large	3 50	@	5 00
Fryers	4 50	@	6 00
Ducks	4 00	@	5 00
do, large	5 50	@	6 00
do, extra large	6 50	@	7 00
Geese, pair	1 25	@	1 50
Goslings	—	@	—
Turkeys, Gobl'r.	18	@	20
Turkeys, Hens	16	@	19
Manhattan Egg Food ₩ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	10½	@	—
Medium	11½	@	—
Light	13	@	—
Lard	11½	@	12
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	11½	@	—
do Eastern	14½	@	—
SEEDS.			
Alfalfa	9	@	12½
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Mend'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll	16	@	21
Oregon Eastern	12½	@	18
do valley	18	@	23
So'n Coast, def	10	@	12
Nevada (State)	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	28

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 13, 1892.

Limes, Mex	4 00	@	5 00
Do Cal	—	@	—
Lemons, box	1 50	@	4 00
Do Sicily	5 00	@	6 00
Oranges, Seedlings	1 25	@	2 25
Do Navels	2 50	@	4 50

Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.

Strawberries, per chest—Longworth	7 00	@	9 00
Sharpless	4 50	@	6 00
Raspberries, ch	5 00	@	7 00
Peaches, box	—	@	—
Do Crawford	75	@	1 15
Do Hale's Early	75	@	1 10
On wharf 15c. less.			
Bl'kberries ₩ ch	4 00	@	5 50
Figs, blk box	1 00	@	1 50
Do White do	75	@	1 00
Apples, Bell Flower	90	@	1 25
Do Red Astrachan	75	@	1 50
On wharf 15c. less.			
Prunes, Tragedy	1 00	@	1 25
Do German	85	@	1 00
Plums, Duane's Purple	70	@	1 00
Pears, Dearbo'ns Seedling	50	@	1 00
Do Bartlett	1 00	@	1 50
Apricots, pr box	40	@	65
do, per lb	1½	@	1¾
Beets, sk	—	@	1 00
Carrots, sk	50	@	—
Okra, dry, lb	15	@	—
Do green	7	@	8
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do green, box	50	@	1 25
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	50
Garlic, lb	2	@	3
Squash, Sum, bx	20	@	35
Tomatoes, box	40	@	75
Peas, green, sk	50	@	1 75
String Beans	2	@	4
Cucumbers, box	50	@	75
do Pickle	60	@	75
Mushrooms	30	@	50
Egg Plant, bx	1 00	@	1 50
Green Corn, sk	—	@	—
Do sweet ₩ sack	75	@	1 00
Do swt Bay ₩ dz	15	@	20

Continued on next page.

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@ —	Wethers	7½@—
Grass fed, extra	5½@ —	Ewes	7 @—
First quality	4½@ —	Do Spring	9 @—
Second quality	4 @ —	HOGS.	
Third quality	3½@ —	Light, ⅌ lb, cents	5½@ —
Bulls and thin Cows	2 @ —	Medium	5½@ —
VEAL.		Heavy	5 @ —
Range, heavy	4 @ —	Soft	4½@ —
Do light	5 @ —	Feeders	3½@ —
Dairy	6 @ —	Stock Hogs	3½@ —

Grain and Wool Bags.

Calcutta, spot	7 @	7½
Wool Bags	36@	38

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

COOPERATIVE LEGISLATIVE COMMITTEE.

The following resolution by J. V. Webster was adopted at the last session of the State Grange:

WHEREAS, There is great diversity of opinion among the several Orders and Associations in this State, seeking redress of grievances, as to subjects which should be made prominent issues, and as to the methods which should be used to secure actual results; therefore be it

Resolved, By California State Grange, that the Worthy Master appoint a committee of five to confer with similar committees, which are, or may be hereafter appointed by reform associations or industrial unions. to the end that a joint agreement may be reached and joint action taken in the advocacy and support of a few of the most vital issues, which, at the present time, confront the people of this State.

The committee appointed by Worthy Master Davis is as follows: J. V. Webster. C. W. Norton, S. T. Coulter, Chas. Wood and J. H. McKune. A meeting was held some time since, as before mentioned in our columns.

GRIMES.—By request of Worthy Master Davis, Past Master Coulter attended the meeting of Grimes Grange last week.

NEW HOPE GRANGE CHARTER, No. 301, has been duly signed by the Master and Secretary and forwarded to New Hope.

VISALIA GRANGE is holding meetings regularly during harvest season with fair attendance, we are informed by Secretary Ingram. Business seems fair at Tulare City, with farming prospects improving, on account of increased and reliable water supply for irrigating.

THE GRANGE AND POLITICS.

Leonard Rhone, Master of Pennsylvania State Grange, and member of the Executive Committee of the National Grange, one of the foremost leaders of the Grange in the nation, one year ago gave the following excellent statement of the Grange position in politics:

"There seems to be some misapprehension in the minds of many good people concerning the attitude of the Grange on political questions. This misapprehension grows out of the fact that the Order of Patrons of Husbandry is severe in its denunciation of partisan action, and some, reasoning from wrong premises, conclude that therefore the Grange is also nonpolitical. The mistake or misapprehension is quite natural to those who cannot distinguish between partisan or political action. Partisanship works for the success of party, and subordinates everything to the triumphs of party, while political action keeps steadily in view the advantages to be derived from good laws, honestly administered.

"When an individual becomes a Patron of Husbandry, he does not divest himself of the sacred duties of citizenship, but rather elevates his standard of patriotism, so that instead of working solely for the success of party, he now labors for the good of the entire country. Partisan action is no longer congenial, because antagonistic to the principles which underlie good government. No Patron who is true to himself, true to the principles of the Order and true to his country, can fail to take a lively interest in all political struggles, because it is on the result of these contests that the future prosperity of the farmers depends. The Patron is derelict in duty, and false to the high prerogatives of citizenship, who does not use all honorable means to secure the election of honest, competent and faithful men to positions of honor and emolument.

"It is not claimed that an individual should, on becoming a Patron, break with his old party, nor is such action desirable. But every member of the Order should seek to purify the party with which he stands identified; should do all in his power to put down bribery and corruption; should turn out to the primary elections and see that only good, true, intelligent men are sent as delegates to the nominating conventions, so that his party may place on the ticket only the names of men for public offices whose integrity and capability are above suspicion.

"If the political party with which a Patron has hitherto acted refuses to yield to these just and proper demands and persistently carries out the mandates of the political boses, nominates dishonest and incompetent men for public positions, it is the duty of the true Patron to stand loyally by the principles of the Order, and to sever his allegiance to his party. To support men for public office who are known to be incompetent or untrustworthy, be cause the party has placed them in nomination, is partisanship; to ignore party ties, to put love of country above love of party, to put devotion to good government above fealty to party is to exemplify the highest order of patriotism, and is carrying out in the right spirit the principles of the Grange.

"The Order is nonpartisan, and while no Grange has the right to discuss party or partisan questions, every Grange has the right to discuss all questions which in any way affect the interests of those engaged in agricultural pursuits, and to investigate both the principles and characters of those who are candidates for public office. It is only by this means that our membership can act intelligently, or arrive at a knowledge of the truth.

"It is a misapprehension to say that the Grange is nonpolitical, or to assert that the members take no part in political contests. To admit that would be to confess that we were derelicit in the discharge of the duties of citizenship and deficient in patriotism.

"It is evident that in the future the power of the Order will be invoked in the support of purer politics and better men for office, and the political party which in the coming contest fails to honor the agricultural people by placing a farmer on the State ticket, commits a serious blunder and greatly impairs its prospects of success. The Order of Patrons of Husbandry will stand by its colors, will endeavor to do for its members what other Orders do for those who belong to them. It will take no partisan action, will war against no political party, but will unalterably and determinedly oppose the election of incompetent and untrustworthy men to positions of public trust. This action it will take in the interest of good government, and for the perpetuity of our institutions. The Grange is nonpartisan, but it is not and cannot be nonpolitical, so long as it is true to the highest duties of American citizenship."

PETALUMA GRANGE.—Brother and Sister Winans of this Grange visited us Wednesday. They reported a very pleasant picnic and camp meeting of Sonoma county Granges on the ocean beach last week. Friday, Children's Day, was specially enjoyed. The other days were occupied with hunting, fishing, bathing, visiting, etc. Each evening, musical and literary exercises were held. Petaluma Grange prospects are good. Two candidates recently joined and more are coming. Regular meetings are held at 1:30 P. M. on the second and fourth Saturdays of the month, at K. of P. Hall. The Grange will soon have new badges and songbooks.

EDEN GRANGE.—Past Master Hollister has been ill from neuralgia. Sister Hollister reports interesting meetings of the Grange. The "Rustler," a manuscript paper read at each meeting, adds decided interest. Last Saturday, Judge Blackwood gave his views as to how the McKinley Bill affects the interests of farmers, etc.

PAST MASTER STEELE of Pescadero visited San Francisco this week. Pescadero Grange has rented the I. O. O. F. Hall by the year, it having recently been enlarged and improved. The Grange expects to occupy it soon, having a class of applicants to be initiated.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon	Salem, J. T. Gregg	Sept. 12–17
California	Sacramento, Edwin F. Smith	Sept. 5–17
Washington	Spokane	Sept. 19–24
Nevada	Reno, C. H. Stoddard	
Western Washington Industrial Exposition	Tacoma,	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
1	Oakland	Aug. 8–13
2	Stockton	
3	Chico, J. D. Sproul	Aug. 23 27
4	Petaluma, Dr. Thos. Macleay	
5	Santa Clara, George H. Bragg	Sept 26–Oct 1
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23–27
9	Rohnerville	
10	Yreka, C. S. Smith	Oct. 5–8
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28–Sept. 3
14	Santa Cruz, Oscar L. Gordon	
15	Bakersfield. J. J. Kelly	
16	San Luis Obispo, J. H. Barrett	
17	*, I. J. Rolfe	Aug. 23–28
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	
25	Napa, D. L. Hackett	Aug. 22–27
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, H. R. Hook	Aug. 17–20
31	Hueneme, T. H. Merry	
32	Santa Ana, W. A. Beckett	Oct 3–7
33	Hollister, A. D. Shaw	Oct. 11–15
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug. 27–30
37	Lompoc, W. I. Nichols	Sept. 20–23
	—Glenn Co. Willows, W. V. Freeman	Aug. 9–13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

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At New York.

July 6.—Two carloads: Apricots $1.10@2 30; Peaches, $1.25@2.55; Tragedy Prunes, $3.75@4.25; Abundance Plums, $2.50; Figs, $2,37, Gross sale of two cars, $3368.

July 6.—One carload: Alexander peaches, $1.35@1.80; Hale's Early peaches, $1.30@1.80; Royal apricots, $1.10@1.30.

July 7.—One carload: Peach plums, $3.80 to $4 15; Cherry plums, $1.65; Alexander Peaches, $1.65@2.30; Royal apricots, 90c@$1.50.

July 8.—Refrigerator car No. 16,366; Royal Apricots sold for $1@2.05 Alexander Peaches $1.35@2.15; Hale's Early Peaches. $1.30@2.15; Royal Hative Plums, $1.87@2.87; Figs, $1.35@2.25. Gross sale, $1723.

Refrigerator car No. 16,314. Royal Apricots, $1.10 @1.20; Hale's Early Peaches, $1.35@2; Royal Hative Plums, $2.62; Peach Plums, $2.37@4.12; average, $4; Tragedy Prunes, $3.37@3.50; Simoni Prunes in boxes, $2.87; half crates Simoni Prunes, $5.50; Comet Pears, $4; Figs, $2.40 Gross sale, $2150.

Refrigerator car, No. 16,662. Apricots, 95c@$2; Hale's Early Peaches, $1.35@1.65; Alexander Peaches, $1.65@1.80; Royal Hative Plums, $2.25@2.87; Figs, $2.15; St. Catherine Plums, $2.50. Gross sale, $1654.

Refrigerator car No. 16,322. Apricots, $1.05@1.55; Hale's Early, $1 65@1.85; Alexander Peaches, $1 60@ 2.20; Beurre Gifford Pears, $2 75 per crate; Bartlett Pears, $4.62@6; Peach Plums, $3.37; Royal Hative and Purple Duane Plums, $2.50; Tragedy Prunes, $3.12@3.62; Black Hamburg Grapes, $2.25; Sweetwater Grapes, $1.62. Gross, 947 packages, $2752.

July 9.—Two carloads: Royal Apricots, $1@1.65; Hale'e Early Peaches, $1.45@3.20; Alexander Peaches $1.05@2.05; St. John Peaches, $1.40@2 05; Bartlett Pears, half boxes, $1.65@1.75, whole boxes, $3.37@ 4.25; Royal Hative Plums, $2.27@2.75; Figs, $2.62; Brigg's May Peaches, $1.80 per box; Bloodgood Pears; $3.12; Peach Plums, $2.87@3.25; Royal Anne Cherries, $3; Cherry Plums, $2.25.

July 9.—Two carloads: Alexander Peaches, $1.75; Royal Apricots, $1.05@1.40.

July 12.—Two carloads: Hales Early Peaches sold for $1.10@1.80; Gov. Garland Peaches arrived in bad condition, 10@70c ⅌ box; Peach Plums, $2 30@3; Tragedy Prunes, $2.80; Koenig Claude Plums, $2.05; Apricots, 85c@$2.50; Moorpark Apricots, $1.

July 11.—Two carloads: Two hundred and eighty-eight boxes of Cherries sold for an average of $3.15 per box, or 35c per pound. Bartlett Pears, $3.60@3.65; Tragedy Prunes, $3.05@3.15; Peach Plums, $2.10@3 05; Alexander Peaches. $1.75@1.85; Hale's Early Peaches, $1.40@1.80; Peach Apricots, $1.25@1.35; Royal Apricots, 65c@$1.35.

July 11.—One carload: Apricots, 85c@$1.60; Peaches, $1.95@2.30; Pears. $3 50@3.87; Royal Hative Plums, $2.12@2.50; Peach Plums, $3@3.50; Cherry Plums, $1.75; Tragedy Prunes, $3.50@3.62. Car sold for $2533 gross.

At Chicago.

July 6.—Three carloads: Royal Apricots, $1.20@ 1.45; Alexander Peaches, $1.20@1.80; Royal Hative Plums, $1.70; Tragedy Prunes, $3.20; Peach Plums, $3.25@3.50; Bartlett Pears, $3.45@3.55; Beurre Gifford Pears in crates, $1 65.

July 7.—Two carloads: Plums $2.90@3.25; Tragedy Prunes, $2.65@3 15; Royal Hative Plums, $2 80; Apricots, $1.35@1.70; St. John Peaches, $1.80@3; Hale's Early Peaches, $1.60@2.40; Figs, $1.40@1.45; Grapes, $2.50.

July 8.—Two carloads: Bartlett Pears, $3.55@3.60; Peach Plums, $2.85@3.50; Tragedy Prunes, $3.15; Alexander Peaches, $1.75; Hale's Early Peaches, $1@ 2.65; McKevitt's Early Peaches, $2.10@2.60; Royal Apricots, $1.55@1.60; Moorpark Apricots, $1.90; Simoni Plums, $5.10; Mikado Plums, $3 50; Royal Hative Plums, $2.10@2.60; Pedro Plums. $2.10; Figs. $1.55.

July 9.—One carload: Bartlett Pears. $3.55@3.75; Tragedy Prunes, $3 30; Peach Plums, $3.05@3.30; some small, $2 50@2.90; Purple Duane Plums, $3; Simoni Prunes, $5.15; Black Republican Cherries, $2.60; Royal Anne Cherries, $2.35@2.50; Hale,s Early Peaches, $2.05; Royal Apricots, $1.30@1.50

One carload: Alexander Peaches averaged $2. Royal Apricots, $1.40@1.60; average $1.55 per crate.

One carload: Royal Apricots, average of $1.53 per crate for the entire car.

July 9.—Three carloads: Bartlett Pears, $3.65; Purple Duane Plums, $2.80; Peach Plums, $2.75@3; Tragedy Prunes, $3 05@3.40; Alexander Peaches, $1.60@2.40; Royal Apricots, $1.45@1 90; Royal Hative Plums. $2.50@3; Hale's Early Peaches, $1.70@2.10; St. John Peaches, $1.80@2.25.

July 11.—Four carloads: Bartlett Pears, $3.10@3.65; half boxes, $1.40; Peaches, $1.50@2.50; Apricots, 90c @$1.80; Plums, $2@2 35; Tragedy Prunes. $3.25@3.50; German Prunes, $2.75; Peach Plums, $2.55@3; St. John Peaches, $1.55@2.25; Hale's Early Peaches, $1.70.

July 11.—Two carloads: Peach Plums, $2.65@3; Royal Hative Plums, $2.50; Early Crawford Peaches, $2@2.25; Hale's Early Peaches, $1.45@2; Alexander Peaches, small, $1.95; Royal Apricots, $1.35@1.55; Moorpark Apricots, $1.05@1 45.

July 12.—Two carloads: Bartlett Pears, $3.78; Tragedy Prunes, $3.55; Peach Plums, $2.94; P. D. Plums, $2 72; Cherries, $2.45; Hale's Early Peaches, $1.95; Peach Apricots, $1.50; Moorpark Apricots, $1.43; Royal Apricots, $1 32.

July 12.—Four carloads: Bartlett Pears, $3.60; Apricots, $1.60@1.70; Hale's Early Peaches, $1.75@1.85; Tragedy Prunes, $3@3.25; Ickworth Plums, $2.70; St. John Peaches, $1.80@2.60; Figs, $1.25@1.85; Royal Hative Plums, $2.60@2.90.

At Minneapolis.

July 7.—Car No. 16,530: Peaches, $1.50@1.80; Apricots. very ripe, $.75@1.15; Plums, $2.40.

July 7.—One carload: Royal Hative Plums, $2.25@ 3; Peach Plums, $2.25@3; Hale's Early Peaches, $1.60; Royal Apricots, $1.20@1.25.

At Boston.

July 6 —One carload: Royal Apricots averaged $1.23; Alexander Peaches, $1.96; Tragedy Prunes, $4.76 Royal Hative Plums. $2.75.

July 7.—Car No. 16,336: Royal Apricots sold to average $1.59; Alexander Peaches, $2 01.

July 8—One carload: St. Catherine Plums, $3.85, Royal Hative Plums, $3; California Figs, $2.50; Hale's Early Peaches, $1.85@2.35; Alexander Peaches, $1.60 @2.60; Royal Apricots, $1.30@1 50.

July 9.—Car No. 16,588: Royal Apricots sold to average $1 37; Peaches, $2.19; Peach Plums, $3.98; Royal Hative Plums, $3 66.

July 11 —Two carloads: Hale's Early Peaches, $2.10@2.20; Strawberry Peaches, $2; Alexander Peaches, $1.85@2.10; Royal Apricots, $1.25@1.35; California Figs, $1.45.

At Omaha.

July 11.—Car No. 16,556: Peaches, $1.50@1.75; Apricots, $1.40@1.60; Plums, $2@2 50.

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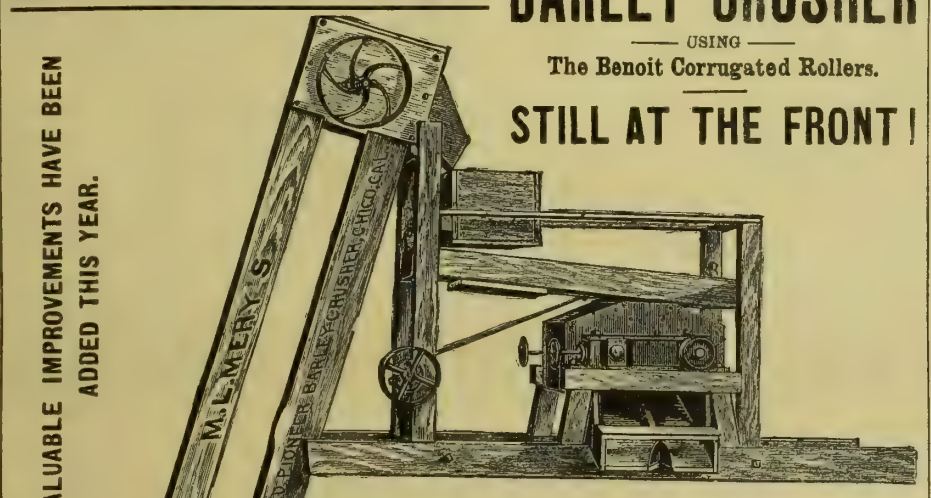
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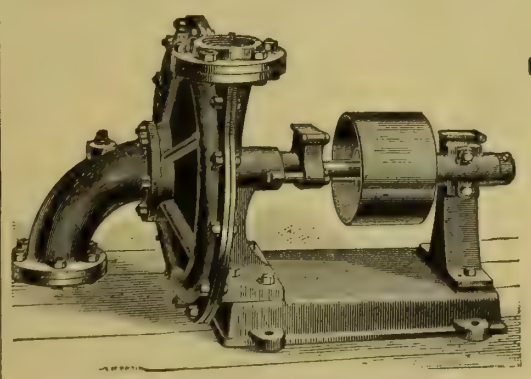


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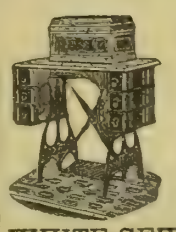


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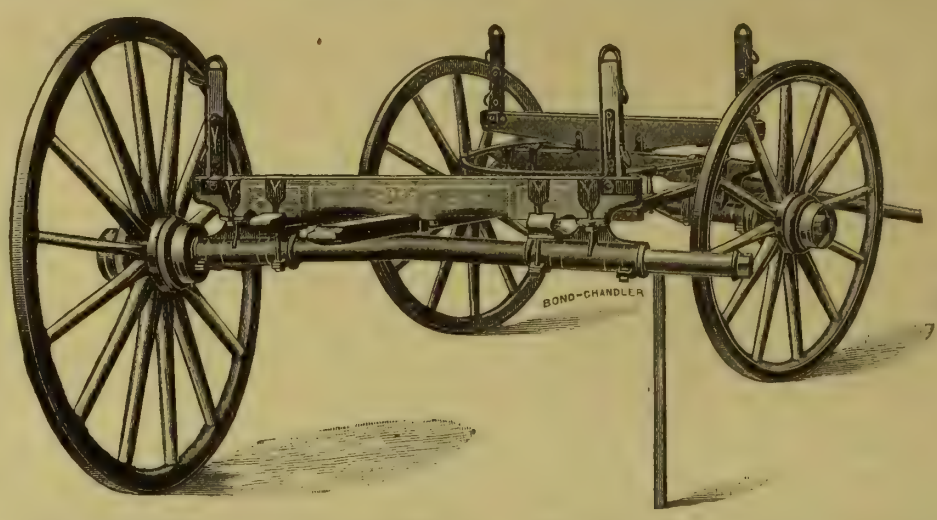
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EDWIN F. SMITH, Secretary.

PACIFIC RURAL PRESS

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A Glimpse at Hydraulic Mining.

The fact that the House of Representatives has this week passed a bill providing ways in which hydraulic mining may be carried on, and prohibiting it when not thus pursued, will reawaken the interest of our readers in the subject. The bill is considered morally certain to pass the Senate, and when its course is complete, we will give an outline of its provisions. Present reference to it will add to the interest inhering in the views we present on this page. Readers outside of the hydraulic regions have perhaps little idea of the way in which this kind of mining, which has in the past wrought such injury to our rivers and valley lands, is carried on. To such, the following statements will be acceptable.



SCENES IN A TRINITY COUNTY HYDRAULIC MINE.

The mine, of which some of the features are shown, is located in Trinity county, California. It comprises some 1100 acres of mining land. The bank of the low bar runs from 25 to 150 feet, and on the upper bar from 100 to 200 feet in depth. It was originally opened as a drift mine a number of years ago, but the claim was very rocky indeed, and in 1872 Mr. E. M. Benjamin, the present general manager and superintendent, went up there to bring in the water from the head of Canyon creek. He built a ditch and flume some nine miles long, with a capacity of 2000 miners' inches. In order to get the pipe on to the claim, it was brought across the Trinity river on a suspension bridge. The largest pipe that comes from the pressure tank down to the bridge is 22 inches in diameter, and runs into an 18-inch pipe. On the claim are six Giants, two of them nine inches in diameter, one of seven, one six, one five and one four.

At this mine they strip from six to ten acres of bedrock a year. The gold obtained is coarse, cucumber-seed gold. The bridge for bringing the pipe across the river was built under considerable difficulty. It is 350 feet span, with a 12-foot pressure. The cables are five inches in diameter, made of 1050 strands of No. 10 Bessemer steel wire. The cables weigh 11 tons each, and had to be made on the ground, because they could not be carried over the mountains. The towers for the cables are made of hewn timbers of sugar pine. The bridge is 34 feet above what is known as high-water mark, and stood the big winter when all the other bridges in the region went out. This bridge alone cost $36,000.

The bedrock ditch on the high bar is 45 feet. The cut is 1344 feet long from the dump to the head of the ditch. The engraving gives a good view of this bedrock ditch and flume.

We have reproduced from photographs made by E. H. Benjamin, son of the manager of the mine, a few characteristic features of this claim. One of the nozzles shown is the largest in the State—a 9-inch one. The smaller, 6-inch nozzle, under the pressure of 500 feet, will discharge 1375 miners' inches of water (15,500 gallons) per minute, at a velocity of 175 feet per second. This means about one ton of water each second hurled against the bank with a velocity of two miles a minute. This stream is capable of exciting a force of six tons, and doing an amount of work nearly equal to 2000 horse power. With the 9-inch nozzle, proportionately greater results are obtained.

Even the brief statements made will show that considerable capital must be invested in a fully equipped hydraulic mine to work it properly. The water supply must be abundant, and the reservoirs, ditches, flumes, etc., necessary to bring it to the mine are very expensive.

THE Tomales Creamery, Marin county, is turning out daily about 900 pounds of cheese and 500 pounds of butter.

He Says We Don't Know Alfalfa.

A writer in the *Field and Farm* of Denver begins an article in this way: "While the writer was in California lately he was surprised to find how little the farmers there knew about the cultivation of alfalfa. All of them whom he talked with, expressed a desire to know more about the methods of cultivation in Colorado." Then follow a few remarks on how they do it in Colorado, which advises sowing immediately after the last snow, etc. If the Californian should follow such instructions he would never get his seed in the ground.

But it is rather rich for Colorado to say Californians do not know about alfalfa. We would like to know what part of the State the writer was in. That might explain his sayings for there are regions where alfalfa does not succeed as well as other forage plants and consequently little attention is paid to it. But to charge the State of California with not knowing alfalfa is laughable. Why, youngster, California had alfalfa as a leading forage crop before Colorado was born agriculturally.

REGRETTED We regret that recent reports from Sacramento indicate that W. R. Strong & Co., the well-known fruit shippers and nurserymen, have been unable to recover from their troubles of last year, and are unable to proceed with their business this season. It is claimed that their assets, if well handled, will meet their liabilities; but as their credit is impaired, they cannot secure the advances necessary to continue business. It is a misfortune that such an old and reputable firm should be obliged to withdraw, and we hope it may only be temporary.

THE RAISIN ARRANGEMENT.—A report upon another page shows that the raisin producers at their meeting last Saturday successfully passed the critical moment in their effort at organization, and, with agreement of a capable body of packers, decided upon a minimum price. There is still very important work to be done in building up the organization so that it includes 95 per cent of both the growers and packers, as well as in other directions. The fullest cooperation of all raisin-producing regions is courted. The affair has a very promising look about it.

PACIFIC RURAL PRESS.

By THE DEWEY PUBLISHING CO.

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JULY 23, 1892.

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[NEW THIS ISSUE.]

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☞ *See Advertising Columns.*

The Week.

The activity of the week clearly lies in fruit lines. A notable advance in values, as discussed elsewhere, is enough to accelerate all other things connected with the commodities involved, and so it does. Our contents this week reflect this fact. Two notably good letters on fruit-handling speak for themselves. The first through train of California fruit for English cities is an event of much moment. The announcement of the first auction sale of fruit by growers in San Francisco is also novel and startling. The progress of the movement by which a minimum price for raisins is jointly fixed by growers and packers shows that our producers are beginning to understand themselves and the advantages thereof. Certainly there is enough in all this to occupy the scant time the producer has for reading during the busy season.

We are unquestionably advancing rapidly in the development of the horticultural resources of the State—quite as fast as we should, perhaps. After a few more doubtful issues are determined, we shall be ready for the great gain in population which is promised us after the World's Fair.

Fruit-Picking and Packing.

Our offer of prizes for letters on fruit-handling has not drawn out the response which we had hoped, because, doubtless, the pressure of the actual work has prevented its treatment upon paper. We hope this will not be also the case with the August subject, "fruit-drying," although we recognize the fact that midsummer duties render attention to other things almost impossible. This fact should indicate the better field for those who are fortunate enough to have a little leisure.

Though the letters on fruit-handling which we publish in this issue are not as numerous as we desired, we are glad to note that their character is eminently satisfactory, and the deductions from experience and observation will be interesting and suggestive to all engaged in the business. The awards are as follows:

First prize, $10, to C. E. Williams of Yuba City.
Second prize, $5, to Felix Foreman, Elmira.

The points made in the letters which we publish elsewhere in this issue are all open to discussion, either at once or whenever our readers have leisure for such discussion.

ACTIVITY IN BEANS.—Beans evidently consider themselves a kind of fruit, and are spurting in harmony with the movement in fruits. Our market review this week should be carefully read by bean growers.

Fruit Auctions in San Francisco.

Ever since the success of the auction plan of selling California fruit was demonstrated by the California Fruit Union in Chicago there has been discussion upon the practicability of employing the auction method in San Francisco. The experience of producers in disposing of their products in this market through existing channels has been unsatisfactory for so long a time that the memory of man runneth not to the contrary. Investigations in the growers' interest have frequently been made and they have never done more than to show that the discontent among growers was wider than had been supposed. Nothing in the way of remedy has been proposed except that in some way producers should undertake the distribution of their own fruit. Such a movement, though theoretically advocated, has never been reduced to practical operation, because of obvious difficulties which were clearly foreseen. The last impulse in this direction was put forth at the Marysville Convention last autumn, and it was hoped that something might be done this summer in the way of a growers' cooperative marketing enterprise. Such a work has not risen to view.

The State Horticultural Society has discussed the auction method as applicable to San Francisco and has usually concluded that existing conditions did not favor it. It has been reserved for an enterprising community of growers upon the Sacramento river to attack the proposition by a bold, resolute move. The way to resume is to resume, and the way to try the auction plan is to auction. This the Sacramento growers have resolved to do. There was a meeting of these growers held at Walnut Creek last Saturday. It was decided to hereafter sell fruits in San Francisco at auction instead of the present way, by commission houses, and all signers of the agreement are to instruct their different commission men to turn over all fruits consigned to them to P. Steinhagen, to be sold at auction to the highest bidder, eight per cent commission to be allowed on all sales, to be divided between the auctioneer and commission men as they may agree upon. This agreement was signed by a large number of growers, but it is for no specified time. The principal growers in the movement are said to be John Miller, T. W. Dean, P. Crew, G. A. Knott, William Johnston, L. D. Green, A. T. J. Reynolds, W. J. Smith, Sol Runyon, O. R. Runyon, Sperry Dye and Mrs. M. A. Jackson.

This is in brief the way in which the venture has come about. How it will result can only be told by experiment. Next Monday at five A. M. the first auction will be held on the wharves where the fruit is brought by the Sacramento river boats. The movement is, of course, awakening the full opposition of the old fruit handlers, who are aghast at the thought of the innovation of selling fruit without draying it out to their sheds along Washington and Jackson streets. Prediction is made of combination among jobbers and associations of retailers who will take the fruit at their own price on the block. Such things were freely talked also when the auction plan was mooted in Eastern cities. It is the natural conclusion of timid minds and of those who are interested in other procedure. The Sacramento growers are of a bolder sort. They know the losses and exactions to which they have been subjected in former years, and now that a sharp demand has arisen for the fruit they are now marketing, they propose to try a change. The conditions are most propitious to begin such a method. Too many people want the fruit to make it possible for them to peaceably combine and divide it. Each wants more than his share. It is just such a condition of affairs which makes an auction quick and satisfactory. We admire the enterprise of the Sacramento growers. We hope and believe they will succeed, and, by so doing, they will not benefit themselves alone, but all producers of whatever commodity comes to this market.

THE STATE BOARD OF HORTICULTURE.—This body held a regular meeting in this city on Tuesday of this week. The Secretary made a report upon the publication and quarantine work of the year, of which we shall give an outline at another time. The time for the next Fruit-Growers' Convention will be November 15th to 18th, and the place, San Jose. The board elected officers for the ensuing year. Ellwood Cooper was reelected president of the board, Fred C. Miles of Penryn treasurer, and J. L. Mosher of San Jose auditor.

FRUIT PRICES.—Our market review this week gives the current news concerning the sharp advance which has occurred in certain kinds of fruit now being marketed. Those who contracted apricots for 1½ cents a month ago find their neighbors able to command twice as much by not selling too soon. The rise now recorded in certain fruits bids fair to exert a salutary influence during the balance of the season. The bears have lost their hold and the victims arise.

The Fruit Situation.

Those fruit growers who, during the past few months, have given close attention to the market reports of the RURAL PRESS, and have followed its suggestions, have cause for self-congratulation. Of all the market reporters of this city, the RURAL was the only one which foresaw and foretold the shortage of the fruit crop east of the Rocky mountains.

Not only was this information given, but it was supplemented by the statement that the markets were cleaning up of dried fruit, and that by the time the 1892 product was ready for marketing, the surplus from the 1891 crop would be gone. That this position has been verified, events of the past few days fully establish.

The prediction of a poor fruit crop at the East was formed on unfavorable weather conditions—late frosts and cool nights during the period of early bloom in the Atlantic coast States, and excessive rains, which robbed the blossoms of the pollen or beat off both bloom and young fruit, in portions of the Ohio and Missouri valleys. To this was added a drouth in the Delaware peninsula and increasing ravages of insects and blights.

Of the small fruit at the East, blackberries are the fullest crop; currants are far from abundant, while strawberries, raspberries and gooseberries are a little over five-eights of a crop. Of the peach crop the small orchards of southern New England will give a full average yield, while in New York and in the Delaware peninsula it will be from 40 to 50 per cent of an average yield. Georgia has a very large peach crop, due to more trees coming into bearing and improved methods of cultivation. The Carolinas have a short crop. In the Missouri valley States the yield will not reach much, if any, more than one-half of an average. The pear crop East does not promise more than 75 per cent of an average. The apple crop, last year, was an enormous one and admitted of heavy exporting, both green and dried, to Great Britain. This year it does not promise to be 60 per cent of an average crop. So far as present information points, there will be a large crop in Nova Scotia and nearly as good in Maine. In southern New England it will be poor. In New York it will be very poor, as it will be in Kansas, in the Ontario region across the lakes, in Ohio, Michigan, Missouri and Arkansas; but in Minnesota and the Northwest the crop promises to be fairly good.

It is not at the East alone that the fruit crop will be very light, but mail advices, confirmed later by cables, report short crops in Great Britain and Germany. In the other European countries the crop, while promising to be larger than in the above two countries, will not be anything like an average. Probably the best evidence of this is the strong and higher markets at the East for imported prunes, raisins and other foreign dried fruits.

The promise this year of a short fruit crop at the East sent buyers into the different distribution markets for canned fruits, and in a very short time the carry-over of the 1891 pack was under control. Eastern canners, finding that this year they would not be able to pack within 50 per cent of their usual pack, withdrew from the market or else issued price lists at a high advance over those given out in July, 1891. In this, California canners have pursued the same course.

The position of the RURAL PRESS on the dried fruit situation has been as completely verified as has been its position on the crop. Our conclusions were based on the outlook favoring a very small crop of fruit at the East, and also that the enormous consumption induced by low prices during the season just closed would cause the markets to be bare of the 1891 curing by July of this year. The very high prices which ruled during the season of 1890-91 restricted the consumption and entailed heavy losses on those who had bought with the expectation of unloading before that season closed. In July, 1891, dealers from Omaha to New York, and even in the cities beyond New York, were loaded with the dried product of 1890. To add still further to their demoralization, the crop of green fruit in all sections was very large, larger than ever before produced. Largely increased quantities had to be dried, which gave an enormous supply. This, owing to the conservatism of buyers, had to be worked off at low prices. Unnecessarily low prices were made just before and after the midwinter holidays, owing to a scare on the part of both buyers and sellers. The low prices placed the product within the reach of all, which, as stated above, resulted in the surplus going into consumption and the product of the 1892 curing coming in on a bare and hungry market, with families at the East having less preserved fruits than for years, if ever before. This, of course, will conspire in promoting a demand from those who could have been content with what they had preserved. It does not require, we think, a further presentation of the favorable situation or of argument to prove that a higher range of values should exist during the next 12 months, yet if they be forced to too high figures, consumption will be restricted and the last holders meet with heavy losses.

From an Independent Standpoint.

There is little change in the situation at Homestead, Pa., since our last writing. The steel works are in possession of the owners under protection of the State troops, and preparations for resuming work are being made by a small force of non-union workmen, who are fed and lodged under guard within the enclosures. The strikers declare that they will not allow the mills to be operated by non-union men, and it is certain that they are only restrained from immediate violence by the presence of the troops. Strong as the guard is, it has not been considered safe to bring bodies of non-union men openly to the mills, and they have been smuggled in in small squads at night, or disguised as messengers or militiamen. Before work can be resumed in full force there must be more thousands in the mills than there are now hundreds, and it is doubted if they can be brought in without another fight. Thus the situation rests at Homestead. Very much nearer home, at Cœur d'Alene, Idaho, there is a condition of affairs closely similar. Some months ago the silver mines in the Cœur d'Alene district shut down. Three weeks ago they undertook to resume work, but under a new scale of wages, substituting a rate of $3 per day for the former rate of $3.50, and explaining that the low price of the silver product made the cut necessary. There was immediate protest from the workmen; then a strike; then an attempt by the mine-owners to put in new and non-union men. The strikers then began a sort of guerrilla warfare. At several of the mines non-union men were shot down and others were waylaid on public roads and murdered. In several of the mines which the strikers took forcible possession of they laid magazines of dynamite and connected them with fuses, to destroy both life and property if they should be driven out. After the usual preliminaries, U. S. troops were sent into the district last week, and after a sharp fight, in which several strikers were killed, they took charge of the mines and now control the situation. Here, as at Homestead, there is quiet, but the sort of quiet that requires the service of armed sentinels.

The failure of Senators Palmer and Voorhies to swing the Democratic party into line as a defender of the Homestead outrage and as an advocate of the extreme demands of the trade-unionists is absolute. Mr. Voorhies' fierce resolution and Mr. Palmer's fiercer speech have fallen flat. In his speech, it will be remembered, Mr. Palmer took the ground that the Homestead strikers were in the right. Manufacturing establishments were, he claimed, public institutions just as railroads were, because they worked for the public, employed the public, and because the men in their service became unfit for other service. "We talk," he said, "about civil service law as applicable to Government employment. I assert that there is a law wider and broader than that, which gives to these men who have been bred in these special pursuits—as, for instance, in the service of railroads, or of these vast manufacturing establishments—the right to demand employment, a right which can only be defeated by misconduct on their part." In other words, Mr. Palmer's position is that the ownership of the Homestead and other similar establishments by the men who have created them, is a conditional ownership limited by certain rights of the men who are employed in them. The absurdity of this position, not to mention its mischievious revolutionary character, is seen when the principle is applied to other sorts of property. Where, for example, is the farmer who would allow the ownership of his acres to be a conditional one, subject to definite "rights" therein on the part of his field hands? Of course, the proposition is monstrous. Senator Palmer knows better than this. He is simply a blatant demagogue seeking to make partisan advantage in the crisis of a Presidential campaign. That his party is wiser than he and more self-respecting, is demonstrated by its repudiation of his doctrine. Both the Democratic and Republican parties frequently make sacrifices of principle for partisan advantage, but neither have yet gone so far as to put forth revolutionary doctrines.

Organization is labor's legitimate weapon of defense. The right to combine forces and mass strength belongs as fairly to labor as to capital. It is in the province of labor to accept or decline engagements, either individually or in the mass, but it is not in its province to do more than this. At Homestead and at Cœur d'Alene the employers had the right to fix wages; the workmen the right to refuse to work for the wages offered. But there is another right in the case, that of the non-union men. They are denied the opportunity to work by seizure of the Carnegie establishment. They are maltreated, murdered, blown up with dynamite, driven out of the country, for exercising the right to work in the Cœur d'Alene mines. These are the men at whom the brutal violence of the strikers is aimed. Theirs is the interest that society is putting forth all its power to protect. In doing this, organized society is simply maintaining the principle of its organization. It is simply defending the exercise of that individual liberty of choice which is the essence of civilization. It is protecting the right of the individual to make a choice and to carry it out without molestation. Here is work to be done. Here are men willing to do it for the wages offered. Other men stand by and say they shall not; destroy property to prevent them; threaten them if they undertake it; murder them if they persist. If organized society cannot protect the men who want to work, and control those who would prevent them by violence, its organization is a sham; it has no force or vitality; it is rotten at heart and is on the point of falling to pieces. The *Oregonian* of Portland, a journal exceptionally clear in its perceptions as to the justice of things and equally strong in its ability and courage, remarks:

> The very existence of civilized society is at stake in this matter. The personal liberty of every wage-worker in the country is threatened by the organization of certain workmen into unions to forbid other workmen to accept employment. The State that permitted this would abdicate, commit political suicide. The State that is fit to live will put forth all its force, exhaust all its resources, expend all its energy, to protect its weakest citizen in the common right to earn his bread by toil without consulting a self-appointed guardian society. However tolerant a State or a community may be of trade-unionism as a voluntary system, no State can indorse the tyranny of coercive labor organization within its borders and retain its natural powers and the respect of its citizens.

Every word of which is gospel truth.

Already it is evident that many whose support was reckoned as part of the strength of the new National People's party will not abandon their old political relations. Significant evidence to this effect is furnished in an article written by Mr. Samuel Gompers, President of the American Federation of Labor in the current number of the *North American Review*. Mr. Gompers admits that within the Federation there exists a feeling of dissatisfaction with and bitter antagonism to both the Republican and Democratic parties. He charges these parties with broken promises to labor, with insincere, half-hearted support, and even antagonism of labor in the interests of the toiler and with alacrity and devotion to the interests of the corporations and the wealth-possessing classes. "There was," he declares, "no real improvement or deterioration in the condition of the working people as a result of the changes when Mr. Cleveland succeeded Mr. Arthur or when Mr. Harrison succeeded Mr. Cleveland. I venture to predict," he says, "that so far as wage-workers are concerned, it will matter little if President Harrison or some other Republican, on the one side, or any member of the Democratic party, on the other, should be elected to succeed the present incumbent, or even should the Peoples' Party succeed (though I doubt they even entertain a belief that they will succeed) in electing its candidate to the Presidency." "The members of the organizations affiliated with the labor federation will," he says, "in a large measure, as citizens, vote for the candidate of the party of their own political predilections," though he admits that the number is ever on the increase who disenthral themselves from partisan voting, and exercise their franchise to reward or chastise those parties and candidates that deserve either their friendship or resentment. Are such changes and improvements, he asks, promised by the People's Party that the workers can with any degree of assurance throw in their political fortunes with that party? To this question he answers clearly that in his judgment they will not. "To support the Peoples' Party," he declares, "under the belief that it is a *labor* party is to act under misapprehension. It is not in the nature of its make-up a labor party or even one in which the wage-workers will find their haven. Composed as the Peoples' Party is mainly of *employing* farmers without any regard to the interests of the *employed* farmers of the country districts or the mechanics and laborers of the industrial centers, there must of necessity be a divergence of purposes, methods and interests." The italics are Mr. Gomper's own and are designed to emphasize the distinction. Mr. Gompers goes on to say that he has no desire to belittle the efforts of the organizers of the Peoples' party or to withhold sympathy due them in their agitation to remedy the wrongs which they suffer from corporate power and avarice. He concedes that they are doing excellent work in directing public attention to the dangers which threaten the body politic of the Republic, but "before there can be any hope of the unification of the labor forces of the field, factory, and farm and workshop, the people who work on and in them for wages must be organized to protect *their* interests against those who pay them wages for that work."

There is going to be an interesting fight in the Republican State Convention, which meets next week at Sacramento, over the railroad question. The Stockton Convention, while going out of its way to make a platform when none was needed, had nothing to say about the railroad situation in this State. On the other hand, the Democratic Convention at Fresno took strong ground against the course of the Railroad Commission and demanded reforms in the management of the roads. It is beyond question that there is no other issue in State affairs so closely related to public interest and to public sentiment; and the position taken by the Democrats was, in view of the Republican silence, a strong "hit." At the coming convention at Sacramento the Republicans will be called upon to vote for or against a resolution condemning the policy of the Southern Pacific Railroad Company—and it remains to be seen how the vote will stand. It is possible that the politicians may be able to avoid the issue by putting forth no platform at all, but this would be a palpable dodge and as such a direct play into the hands of the Democrats.

The *Christian Union* of New York takes a novel view of the census report concerning the growth of American churches. It believes that a better net result would obtain from limitation than from growth in the number of church organizations. It claims that great harm is done to the cause of Christianity by the rivalry of the different evangelical denominations in the limited field of work. In small villages, it points out that there will be three or four weak churches fighting for supremacy, when if their membership and resources were united there would be one strong effective church. Sectarianism, it claims is destructive of Christian spirit and destructive to the best efforts of religious extension. Better, it says, far better, would it be if the evangelical churches would come to a common agreement by which the spirit of rivalry would give way to the spirit of co-operation. Here is its suggestion:

> Let the Home Missionary Societies form a syndicate. Let the National Secretaries, or the State or District Secretaries of the Home Missionary Societies meet once a month. Let them confer concerning all new territory; and agree first, never to put an evangelical church into a town already adequately supplied with evangelical churches, and second, to allow the sister denomination to put in the second church when a second church is needed.

There is good sense in this, not only good sense, but a regard for the broad interests of religion.

The Raisin Situation at the East.

A leading New York commercial exchange just to hand reports the raisin situation as follows:

California raisin growers and packers are laying their wires for the coming season, and are deeply interested in the condition of the country's markets, statistically and otherwise, at the present time. The outlook for them is certainly very favorable. The crop of 1891 has been pretty well distributed, the stock remaining on the Atlantic coast now being regarded as not any too great to cover the requirements of consumers between this and fall. The supply here is centered in the hands of one concern (there being only a single parcel of 5000 boxes outside, and this is held above present market limits), therefore when the dealers of the country require additional goods they will be forced to make their selections from the Washington street merchant who had the pluck to venture early in the season upon quantities in anticipation of the demand which usually precedes the receipt of new goods. The quantity held here in bags and boxes is fair, though in comparison with corresponding period of previous years, the total quantity is said to be considerably below. Prices are certainly low, and the principal holder is free to offer upon the basis of to-day's values; at the same time, should the demand suddenly improve, buyers will undoubtedly be compelled to meet gradually advancing ideas for anything of a desirable quality. From present indications the new fruit will come upon a comparatively bare market, but from this it must not be supposed that dealers intend rushing to the Coast with advance orders, or that they will listen to extreme values. Should the new crop show care in the curing and preparing for market, and offered at reasonable prices, California packers will probably experience no difficulty in promptly placing their goods among the dealers of the country, but should there be haste during curing season, and indifference, except to surface packing, coupled with fancy ideas as to the value of the fruit, they will find that the trade will proceed cautiously and not stock up to any extent early in the season. Regarding Valencia raisins, the stock here to-day is probably the smallest upon record, and only 6000 boxes are now in transit to this side. Another 60 days will probably find the market bare of salable fruit. The new crop is said to be progressing favorably abroad, and an average yield is counted upon. Growers in Spain do not propose as yet to relinquish this field to the California product. True they are handicapped by a heavy duty, but in the face of this duty intend to stubbornly contest the ground. They will be early in the market with their new fruit, and will endeavor to get in some good work before the California product can be landed, but with the two varieties in the field, prices will be regulated to their proper level, gauged by the law of supply and demand. Malaga, it may be said, have been driven from American markets, only a few of the very choicest variety being brought forward, but the more ordinary Valencia continue on deck. With a steady increase in the Pacific coast product, however, and cheapening of the cost, it is believed to be only a question of time when the foreign article will entirely disappear from our markets.

Weather and Crop Bulletin for Week Ending July 18th.

The following condition of the crops for the week ending Monday, July 18, 1892, are from the reports of the numerous voluntary observers throughout the State, reporting to the Director of the California Weather Service at Sacramento, including telegrams received on Monday night from Observer McKean at Red Bluff, Observer Williams at Fresno and Observer Franklin at Los Angeles. It will be seen from a perusal of the reports that this State is so large that some portions of it have crops over an average and others below and some portions an average; and in the great valleys, harvesting and thrashing are nearly or quite finished, while the coast counties are just beginning to head their grain preparatory to thrashing. It speaks well for the intelligence of our crop correspondents, for from the first report down to the present time they have all along been reporting shortage of all crops save hay and barley, and it also shows them to be conscientious men and not given to exaggeration, knowing which the general reading public can and will place the utmost confidence in these gentlemen who, voluntarily, and to benefit this great State, send promptly each week a report of the crops to the Director at Sacramento:

HUMBOLDT.—*Eureka*—All crops are doing well; the hay crop, both in quality and quantity, was never better. Grain is heading, but is of fine condition and will yield more than an average crop. Fruit of all kinds will be short.

Upper Mattole—Corn, potatoes and all summer crops are not doing well, there having been too much drying winds. Highest and lowest temperatures, 88° and 68°.

Near Arcata—The weather has been clear and warm, with high and drying wind in the afternoon. A shower of rain would do much good. Highest temperature, 88°.

LAKE.—*Upper Lake*—The cool weather has retarded the ripening of fruits and grain; heading is, however, well under way. Late-sown wheat on low lands has rusted badly, otherwise no damage is reported. The yield of wheat and barley will be above the average.

SHASTA.—*Anderson*—The temperature has been below the normal the greater part of the week. Sunday was warmer, the highest temperature being 95° and the lowest during the week 50°. Wheat is not turning out as well as was expected. There will be a carload of Bartlett pears and other fruits shipped this week. The fruit crop is better than was at first expected.

ALAMEDA.—*Pleasanton*—During the past week heavy coast fogs have been carried inland by prevailing high westerly winds. Temperature below the normal, the maximum being 86° and the minimum 40°. These conditions have both retarded and damaged the ripening grain. Rust has appeared in the wheat and oats. Chevalier barley has lodged and shelled out. Hops are very backward. Sugar beets are doing well and give promise of a large yield.

Livermore—Harvest is about over and thrashing begun. Grain is better than expected. Hay is being stored, as prices are too low. The fruit crop, except olives, is good. Grapes are doing well and promise a good yield.

COLUSA. — *Williams* — Conditions continue favorable and harvesting continues satisfactory.

NAPA.—*Napa City*—Grapes are doing well, but will be late. The apricot crop is short; early peaches lack flavor; threshing is progressing nicely; temperature growing warmer, which will be beneficial to grapes and fruit.

Yountville—Temperature and constant sunshine beneficial to all growing and maturing crops. Highest and lowest temperatures at 7 A. M. were 60° and 54°.

SONOMA.—*Healdsburg*—Threshing began this week. The yield will be average, but the quality will be poor; slight mildew on grapes; apricots ripe and other fruits growing well.

Santa Rosa—The hay crop is a heavy one and is well cured; grain will be about the average yield, while vegetables are rather below an average, but are of an excellent quality; berries yield well, and the indications are strong for a splendid crop of hops.

SANTA CLARA.—*Gilroy*—The grain crop is now being harvested and is turning out well; the fruit crop is somewhat short, but the quality is better than usual.

YOLO.—*Woodland*—The Curtis ranch presents a very busy scene at present, as seven harvesters are at work on the place and a large number of teams are hauling the wheat to the river. A shipment of 15,000 sacks was made on Wednesday.

Winters—Large shipments of melons, cantaloupes and dried fruits are made daily from this point and Yolo. Splendid wheat crop should put a lot of money in circulation among the farmers. The fruit crop is rather short, but good prices will almost even matters up and the fruit growers are likely to be a little "flush" also.

Guinda—Harvesting is progressing very satisfactory to the farmers, and fruits going to market are more delicious and larger than those marketed last week, and at present prices of grain the farmers prefer storing to selling.

Capay Valley—The wheat crop did not come up to expectations. The news that the market for apricots suitable for canning is strong, and steadily advancing, comes too late to be of any substantial benefit to the fruit growers of Capay Valley, as the apricot crop of this vicinity is already marketed. Fair prices were realized, but it is singular that the sharp rise did not occur sooner, in view of the fact that it was generally known before any of the fruit had ripened that the apricot crop would be short.

Esparto—Several hundred tons of wheat are received at the warehouse daily, and shipping to Port Costa will begin in a few days.

Dunnigan—The wheat crop in this section is an exceedingly large one; the grain is yielding 17 sacks to the acre.

BUTTE.—*Palermo*—The weather has been exceptionally fine and favorable for the growth of hay and grain, and good for fruit, though not especially conducive to early ripening. The hay crop was never better, while barley and wheat are quite up to the average or a little above.

PLACER.—*Newcastle*—Crawford peaches are now coming into the market, of which there will be a good crop generally. Highest and lowest temperatures, 92° and 51°.

YUBA.—*Wheatland*—The weather during the past week has been remarkably cool and pleasant. Harvesting is progressing finely. Hops are making rapid progress and promise an average yield.

SACRAMENTO.—*Sacramento*—The daily mean temperature during the past week has averaged from nothing to 7° below the normal for six days, and above the normal on the 18th 5°, showing a deficiency in heat of about 18°; that is, the sun heat received in the past seven days has not been as much as the usual amount for this season of the year by 18°.

The rainfall normals were nothing, and there being no precipitation during the week, it can be classed as normal, while the temperature showed an abnormal condition of or above minimum of 18°. Fruit and vegetables are getting more plentiful, but appear to be considerably scarcer than last season, causing prices to be higher than usual.

Galt—The Grain output in this section is better than was at first expected. The grain growers generally have to order more sacks, as their first estimates on the crop output were much too low.

AMADOR.—*Oleta*—Threshing is in full blast, and the summer-fallowed wheat that was well put in is turning out good. The lazy, slack and slovenly farmers, who are those who sow winter wheat, will reap but a poor crop, and, according to the survival of the fittest, the lazy farmers must go to the wall and succumb to the energy and push of their more ambitious neighbors.

Sutter Creek—Hay is nearly all baled, and already new hay is plentiful in the market. The yield is about an average one, but owing to an increase in the acreage being cut to hay, it is more plentiful and commands lower prices. The barley crop is also cut and the crop reported good.

SAN JOAQUIN.—*Lodi*—Highest and lowest temperatures, 88° and 48°, with westerly winds prevailing and blowing fresh in the afternoon. The cool, damp mornings delay the harvesters. Wheat harvesting progressing with variable results as to the quality and the output. The average yield will be short of a full crop. Watermelons are coming in very slowly, and it will be the first of August before they are in the market in any quantity.

TULARE.—*Visalia*—Nearly all the crops are turning out better than was at first expected, and the yield will be above the average. Highest temperature 95°.

MONTEREY.—*San Ardo*—The weather during the week has been quite favorable to the fruit crop. Heading grain nearly all finished; threshing about commenced, and the yield of grain will be a light one. Highest and lowest temperatures, 87° and 42.°

SAN LUIS OBISPO.—*San Luis Obispo*—The weather has been warmer this week, which is good for beans and corn. A little moderately warm weather and a cool week, alternately, would give us good crops. Beans are doing very well. We are having light southerly winds and fogs the greater portion of the time. Highest temperature, 82°.

SANTA CRUZ.—*Watsonville*—The area of crops this season in Santa Cruz county and the portions of Monterey county tributary to Watsonville may be divided as follows: Fully one-half of the total acreage was sown to black oats, and the yield will be an unusually large one in the valleys and on the foothills.

In the Cornros and San Miguel canyon districts the black, loamy soil is peculiarly adapted to the growth of the black oats. The other half of the acreage in grain is divided between barley and wheat, about three of barley to two of wheat. Barley is turning out a good average yield of plump white barley.

Wheat is not yielding as good as was expected on the bottom lands, but in the canyon districts mentioned above many fields will turn out as high as 25 to 30 sacks to the acre. The fruit crops of the two counties, and also of San Benito adjoining, are far above the average in quality and yield.

TEHAMA.—*Red Bluff*—No rainfall during the week, and the temperature has generally averaged below the normal conditions for this season of the year, which has been beneficial to all crops. The sunshine has been somewhat above the average, which is favorable for harvesting crops.

LOS ANGELES.—*Los Angeles*—The unusually cold weather for the season has a tendency to retard the ripening of the fruit crop in some districts of Southern California. Apricot-drying still continues. Nine to eleven cents is being paid for dried fruit. The oranges are dropping in the Vernon district; the trees are too full. The citrus fruit growth is not up to the average in the Covina district. The threshing of grain and mustard is progressing rapidly, with prospects of but a fair crop.

OREGON CROP REPORT.

PORTLAND (Or.), July 19.—The weekly crop report of the Oregon Weather Bureau says: Fall wheat is being harvested in all sections. The yield is better than expected. Spring-sown wheat is filling out very well. Oats are being cut in a few localities. Although the wheat and oat crops are good, they are not equal to last year's, nor quite up to the average.

A New Yellow Freestone Peach—The Glen Holly.

PENRYN, PLACER CO., July 16, 1892.

TO THE EDITOR:—I have expressed to you a box containing 20 of the early "Glen Holly" peach. These are the very last of the crop on the original tree here, and are a *fair* sample of the crop in size, color, etc. They are, you will see, very like the Crawford Early, except that they are much smoother and more uniform in size and more highly colored. They ripen side by side in orchard with Early Crawford, at least *one week earlier* than the latter variety, making them, in my opinion, the very earliest of good yellow peaches.

From the original tree owned by Mr. A. C. Short, of Penryn, the fruit has all been harvested while we are just opening the Early Crawford season. These ripened *this year* about July 7th or 8th. This is a seedling tree, a fine, vigorous five-year-old one. Doubtless on older trees it will ripen earlier.

I should like your opinion on these very much. Yours very truly, H. E. BUTLER.

The peach is a large and fine yellow freestone, and has the Early Crawford's characteristics strongly marked, as Mr. Butler says. His description in all points is well borne out by the fruit which he sends. If its advance of the Crawford in time of ripening will hold good in future, it will be a most notable addition to our peach list. It runs larger than the new Vacaville Early Yellow varieties, as the specimens sent us are 8½ inches in circumference measured at right angles with the suture. So far as present data go, it is, however, not quite as early as the new Vacaville peaches. The variety should be propagated and tested in all early regions.—ED. PRESS.

LIMA BEANS AT THE EAST.—The latest received New York mail advices report the situation for California Lima beans as follows: "The market for California dried Lima beans has undergone a decided improvement during the past week. Parcels in transit by sail and steam vessels have been sold at $1.77½@$1.82½ per bushel laid down here, which is relatively higher than the best prices thus far obtained for spot parcels, and stock remaining on the coast is held for even higher rates. Western purchases have figured with some prominence in the movement, but Eastern buyers have not remained in the background, although more conservative than their Western competitors, despite unfavorable reports as to the growing crop."

First Special Train of Fruit for London.

Quite a number of fruit shippers and others interested in the enterprise were at the depot at 10 o'clock Tuesday to witness the departure of the special train of five cars loaded with choice fruits for the London market. Agent Appel of the California Fruit Transportation Company—under the management of which the shipment was made—was the busiest man in the city last evening, getting the cars in readiness for their departure.

The cars were handsomely decorated with banners reaching their entire length, reading, "C. F. T. Co. Export Special, California Fruits, Liverpool and London," with the American and British flags streaming from the roofs.

The fruit consisted of selected peaches, pears, plums, nectarines, etc., shipped by A. T. Hatch, C. W. Reed, Cook & Langley, and Gregory Brothers Company. The train will be run on passenger time over the Southern Pacific, Union Pacific, Chicago & Northwestern, and Erie Dispatch Railways, connecting at New York with the steamer Majestic of the White Star Line of United States and Royal Mail steamers, which made the speediest passage from New York to Liverpool, her record being 5 days and 18 hours.

The fruit is consigned to James Adam, Son & Co., Liverpool, and will be sold at auction.

In the car shipped by Gregory Brothers Company, the firm sent a package of Bartlett pears to Senator Leland Stanford, who is now in Paris; one to her majesty, Queen Victoria, and another to Mr. Bapst, managing editor of the *Journal des Debats*, as a luscious sample of the magnificence of California products. These three lots were grown on the famous Vina Ranch, owned by Senator Stanford.

The California Fruit Transportation Company deserves credit for opening up this service, which, if it proves a success, will be the means of giving to California fruits a new and much wider market.

The officers of the California Fruit Transportation Company are progressive men, and after being the first to demonstrate the feasibility of transporting successfully California fruits under refrigeration to domestic markets, are sparing no expense or pains to prove the adaptability of their method in successfully laying down the choicest California fruits in the extensive European markets.

The refrigerators fitted up on board the steamers are of the most approved pattern, and as the time necessary to transfer a load to the steamer will not exceed 30 minutes, the fruit will not be exposed to the outer air a sufficient length of time to change the temperature.

The train, leaving Sacramento at 10 P. M., should arrive at New York at 7 A. M. on the following Tuesday.

It is the expectation of the California Fruit Transportation Company to make this a weekly service, leaving Sacramento at 10 P. M. on Tuesday of each week and to continue until December, as it is expected the highly colored and handsome Tokay grapes will meet with quite a success in the European markets.

It is arranged to have a regular California Day in Liverpool, where buyers from all over Great Britain will come to procure California fruits, when it will be distributed over the United Kingdom.—Record Union, July 20th.

THE New York *Mail and Express* says that the exports of breadstuffs from the United States for the year just ended were enormously large, owing to the tremendous shipments of wheat and flour. The exports of flour for the year have been 14,860,459 barrels, against 11,007,638 barrels the previous year, wheat, 152,863,086 bushels against 54,201,286 bushels; corn, 73,770,002 bushels against 29,894,380 bushels; oats, 9,018,404 bushels against 916 323 bushels; rye, 11,827,044 against 332,729 bushels; barley, 2,799,729 against 966,079. The exports of wheat and flour for the year are equal to, after adding two per cent to cover all points, 223,609,953 bushels, against 109,430 466 bushels the previous year. The largest previous exports were 186,475,251 bushels in 1880–81. The exports of all kinds of grain, including flour, were equal to 321,024,832 bushels, against 141,539 977 bushels the previous year. The value of the exports of all kinds of breadstuffs was $288,925,000, against $123,156,520 the previous year.

DEDICATING THE WORLD'S FAIR BUILDINGS.—It is next to certain that the date of dedication of the World's Fair buildings will be changed from October 12th to October 21st, the latter being really the 400th anniversary of the landing of Columbus, allowance being made for the correction in the calendar made in the time of Pope Gregory. The Senate has passed a bill making the change referred to, and it is not doubted that the House of Representatives will take like action. The change was requested by the World's Fair Commissioners of New York, the Legislature of which State had provided for a Columbus celebration on October 12th. It was thought that the two celebrations, if held simultaneously, would detract from each other.

ON July 5th, a petition was presented to the Board of Supervisors of Yuba county asking for a tax levy of 50 cents on the $1000 of all taxable property in the county for defraying the expenses of a World's Fair exhibit. Those who signed the petition embraced the principal tax payers in each supervisor's district, the total property representation being $2,800,000. As no opposition to the appropriation was developed, it is thought that the Supervisors will vote unanimously in favor of the tax levy. This will create a fund of about $3500.

A FORESTRY EXHIBIT.—The Washington State building at the World's Fair will show to some extent the forest resources of the State. The foundation alone will contain 171 logs, some of them 120 feet long and 42 inches in diameter at the small end. The superstructure of the building will contain, besides heavy timber, fine finished woods showing the grain and structure of the woods, and a complete exhibit of ship-building material.

PICKING AND PACKING.

Orchard Work Which is Now Actively Going On.

SUGGESTIONS FROM LONG PRACTICE AND OBSERVATION.

DETAILS WHICH WILL BE FOUND INSTRUCTIVE.

Rural Prize Letters for July.

YUBA CITY, July 6, 1892.

TO THE EDITOR:—On the subject of picking and packing fruit, there are so many and such various ideas and methods of conducting the different branches of the business that no one can say that this or that way is always best. Methods entirely at variance with each other frequently produce results equally satisfactory or unsatisfactory. In fact, it must be admitted that fruit-shipping is always more or less of a lottery, but the prizes are drawn most frequently by him who exercises the greatest care and displays the most ability in the packing of his product. All fruits, with the exception of perhaps apples and pears, are best when allowed to ripen on the trees. As this is an impossibility in the case of fruit which is to go to a distant market, we should remember that those methods which come nearest to presenting the fruit to the consumer in its natural condition are sure to be the best, although I must admit that the careful man does not always get full pay for his care.

PICKING.—The degree of ripeness which fruit that is to be shipped should be allowed to attain, depends upon three points—first, the length of time that must elapse between the picking of the fruit and its consumption; second, upon the method of transportation, whether in ventilated or in refrigerator cars; and third, upon the variety of fruit that is to be shipped. The present standard of ripeness for shipping in refrigerator cars on peaches, apricots and plums is about the same as that for picking the same varieties for the canneries—the fruit to be ripe, but perfectly firm and hard, not quite full size, say from two to three days before it would begin to get soft on the tree. This same rule will apply to fruit that is to be shipped in an ordinary ventilated car to a near-by market, such as Portland by passenger train; but in this connection it is well to remember that many of the buyers in these near markets want this fruit to be reshipped so that it will have to hold up two or three days more before it reaches the consumer, and every car should have some lines just as firm as if they were to go to Chicago. If the fruit is to go East in a ventilated car, it should be picked some three days earlier than for refrigerator cars, leaving them only partly ripe. In the case of apricots to go in these cars, they must be left still greener—just commencing to ripen at the pit. The results of shipping apricots in anything but refrigerator cars has been so uniformly disastrous that it has been almost entirely discontinued, and no shipper will advise it. In picking Bartlett pears, it is well known that if the pear is large enough, it is ripe enough. This fruit is one like all others that must not be allowed to get too ripe, as it can go to pieces as fast as any of them if it is overripe. Grapes should be allowed to get ripe. A grape never improves in any way after it is off the vine. If it be green, it has a greater tendency to shrivel and pucker than when it is ripe. A green grape is always sour, and the longer it is off the vine, the sourer it gets.

If possible, pick your fruit early in the day, say before 10 A. M., or else in the evening, so that it can cool off during the night, to be packed the next morning. This is of most importance if the fruit is to be shipped in a ventilated car, as the refrigeration of the other car is supposed to do the same thing. I think it is better in any case, as it saves the steaming of the hot fruit for several hours before it gets under the influence of the refrigerator.

The best ladder to use is a light, strong stepladder. The old three-legged affair weighing 200 or 300 pounds has been or should be dismissed to the wood yard. You want something that can be handled quickly and easily, and is at the same time substantial.

The question of what to pick in is more difficult. It has always seemed to me that the proper thing was to pick in baskets and pack from them directly. Few shippers follow that practice, however, giving as a reason that the extra time consumed in handling the baskets, and the greater difficulty in hauling them to the packing shed, more than makes up for the damage done the fruit in emptying from buckets into picking-boxes. I believe that if great care is taken in emptying, that the best way is to pick in buckets, empty into boxes and haul to a packing house. I do not favor packing in the orchard. It is too hard to keep your material in place, add stencils and stamps are never where you want them. There are many sizes and shapes of cannery or picking boxes, and I do not know that it is of material difference what one is used, except that you should avoid getting one that is too deep—say over ten inches deep.

As to the different kinds of labor, I do not believe that any standard can be set up. I have always believed that young Americans were the best help that could be obtained, if you can get the right kind. Frequently the question of labor resolves itself into the necessity of taking whatever you can get, and you can only do the best that the time and circumstances permit. I think that the best packing that I have ever seen done was by Chinese. I have understood that some shippers have this season had most excellent work done for them by women, and I think that this will be the best help possible when a sufficient number have had the necessary training. A skillful fruit packer should be classed among the ranks of skilled labor and treated and paid accordingly.

PACKAGES.—There are now uniform sizes of packages used that have come to be standard for the different varieties of fruit. All boxes are made the same length and width and vary in depth according to the size of fruit and requirements for space. These sizes are 19¾ inches long, 11¾ inches wide and from 3 to 8 inches in depth. In speaking of a peach box the depth only is mentioned, as a 4 or 4½ inch box. But one other package besides these boxes is used—the crate. These are made to hold four 5-lb. baskets and are termed half crates, or eight 5-lb. baskets when they are termed full crates. Peaches and pears are always shipped in boxes; plums, sometimes. Grapes, apricots and usually plums are shipped in crates. A box of peaches is supposed to contain about 18 pounds net weight, and consists of two layers. The peaches should be packed, if possible, so as to break joints. I regard the four and five system of packing as the best for average-sized peaches. This is done by wrapping and placing four peaches against the end of the box, leaving a space between each one so as to divide the distances about equal; in the next row put five peaches, so as to allow the sharpest part of the peach, if it is not very nearly round, to come in the space left between the peaches in the first row. If the peaches are good size, they will very nearly or quite fill the row, leaving but little space between each of them. The next row will contain four, then five, and so on until the bottom layer is finished. In packing the bottom layer, place the peaches stem end downward, as this gives a greater surface to rest upon the bottom of the box. Commence the second or top layer exactly opposite to the first layer, that is with five peaches in the first row and four in the second. In this manner you will be able to place your fruit so that no peach rests directly over another, thus giving the greatest possible amount of surface to bear against each peach. When finishing each layer, take hold of the last row with both hands and pull it toward you, as closely as possible, so as to have the fruit tight in the box endways and sideways. Be very careful that no fruit is packed slack. It injures the sale in two ways; first, the buyer thinks there is not as much fruit in the box as there should be, and the apparent lack of a few peaches is usually magnified five or ten times in the price he offers for the box; second, the fruit that is packed slack never carries well. If it once commences to move in the box, the whole outside of it gets jammed, and, even if not spoiled, it presents a bad appearance. This is one of the most important things connected with the packing of fruit. In packing peaches it is necessary that you have boxes four to six inches in depth, varying a half inch. In addition to this you need cleats of different thicknesses, from one-eighth to one-half inch. Having got your fruit tight in the box, endwise and sidewise, you do not need to have the cover press on the top of the fruit, but can leave a quarter to a half inch space between the fruit and the cover. If your boxes are not the right size to leave this space, you can put one of the thin cleats under the cover, in this way raising the cover so as to allow the air to circulate between it and the fruit.

In packing apricots and plums in crates, it is always best to put them in layers, putting a piece of paper between each layer. Cover the bottom of the basket with the end of a strip of paper, cut the width of the basket and long enough to make four or five turns across it. On this put a layer of fruit arranged in the best manner possible to make it cover the bottom of the basket and leave the least amount of space between each one. Turn the paper back over this layer and arrange another layer in the same manner, if possible, fixing the fruit so that it will break joints and continue this until the basket is full, which will take from three to five layers, depending on the size of the fruit being packed. The top layer should be arranged in rows across the basket; average sized plums and apricots can be put five in a row each way. Much of this will depend on the size of the fruit and its shape, and no general rule can be laid down for it except this: make your basket full as possible, and have the top row as symmetrical as possible. Of course, no one will attempt to ship fruit to a distant market and go to the trouble or be so foolish as to attempt to pack any inferior fruit in the bottom of the basket or box, as the case may be. This point is so well understood, and should be so commonly practiced among our fruit growers and shippers as to need no further mention.

In packing grapes, great care should be taken to handle them as little as possible, and what handling is done should be done by taking hold of the stem of the grape rather than catching it carelessly in the hand in any way that happens. All imperfect, dried or loose berries should be clipped from the stem with a small pair of shears. Greater care should be taken to get rid of any berries that have been partly loosened from the stem and are leaking a little juice than any other one thing, as these berries will not only spoil themselves, but will ruin others that come in contact with them. The most difficult part in packing grapes lies in the ability of the packer to judge whether or not a bunch of grapes will fit the place he has for it in the basket. A good packer will have several baskets under way at once, and will thus be able to dispose of each bunch, as he picks it up and trims it, with the least possible amount of handling, and at the same time will give his basket a fully rounded, even appearance without any great amount of cutting of the bunches. It will sometimes be necessary to cut bunches into small pieces in order to fill up the corners and edges of the baskets. A five-pound basket of grapes should weigh, when it leaves the packer's hands, about five and one-half pounds, as there is a shrinkage in weight in carrying, and dealers have come to expect that they will weigh fully five pounds, if not more, when they arrive in the Eastern markets.

In packing pears, the method is similar to that of peaches, except that the box used is an eight-inch box, and is supposed to contain not less than 40 pounds net of fruit. The fruit is wrapped and laid down on its side. The layer is commenced by placing a row of pears, the number varying according to the size, with the blossom end against the end of the box, no space being left between them, but pressed in snug and tight. The next row is reversed, and the stem ends are laid between the stems of the first fruit, but crowded toward the end of the box so as to raise the stem and give the pear a little slant. The layer is then continued in the same manner as the second row, crowding the pears up a little so as to give them a good slant. Each layer is put in in the same way until the box is full. The number of layers, of course will depend entirely upon the size of the fruit, though it is seldom advisable to ship anything that takes more than five layers to fill a box, except, perhaps, very early in the season, when six-layer fruit may bring fair prices. In packing pears, some effort should be made to put the largest toward the middle of the box, and in this way give covers and bottoms an opportunity to spring. They should be sprung out from a half to three-quarters of an inch in the center.

In packing any kind of fruit, the grower should remember that it pays to cull without mercy; nothing that is imperfect in any way should ever be put in a box or crate. Look out for worms, bird picks, bruises, scab or any imperfection. Remember that the freight is just as much on poor stuff as on good, and you have to pay it whether your fruit brings ten cents a box or $5. In buying your packages, you can get a neat and attractive one almost as cheap as a rough, poorly made one, and a half cent or cent saved on each box amounts to nothing. Have good stencils and a good assortment of rubber stamps with which to mark on each box the variety it contains. If you have large lots and the fruit is to be sent East and sold at auction, divide them into separate lots of 30 to 60 boxes each, marking each lot with a letter or number in addition to your name. If your fruit does not run even in quality, put each quality in a separate lot, so that the buyer will know that the fruit he buys will be just the same all the way through. All grading should be done by the packer as he packs. If the fruit runs uneven in size, have the packer pack the size of which there is the most, laying out other sizes into boxes as he packs. This is most necessary with peaches; other fruits are not expected to run so even in size. If the grower has done proper work in thinning, there should be very little variation in the size of peaches. Never run any fruit that is to be shipped through a grader. It will get bounced around enough without your doing it unnecessarily.

LOADING CARS.—This is a matter of more importance than many think. In loading a ventilated car, it is necessary to so arrange the boxes and crates that the ventilation will be perfect from one end of the car to the other. If you can, put all the crates in one end and the boxes in the other. It is in all cases necessary to nail each box. Strips should be sawed ⅜x1 inch and about four inches shorter than the car is wide. Nail a strip on the bottom of the car so that each end of the box or crate will rest on the cleat. Put on these cleats a row of boxes or crates, if boxes, six, crates five, in the ordinary car. Divide the distance across the car equally, so that all the boxes will have a space between them. Nail a cleat on each end of this row of boxes, putting a nail in each box. Continue this until the top of the car is reached, putting each box directly over the one below it. In putting on the cleats, have the first one hit against one side of the car, the second against the opposite, thus alternating until the top of the car is reached. Each tier will be loaded in the same manner, the ends of the boxes fitting snugly against each other. Finish in the middle, firmly bracing the last tier against the opposite ones with 2x4 lumber, so that there can be no possibility of the fruit moving from its place in the car. It will have a rough experience, and too much care cannot be used to make it firm. Pear boxes should be loaded with the side down instead of the bottom.

In loading a refrigerator, there will be but little difference, except that the packages will have to be placed somewhat closer together.

In conclusion, I will add that nothing but practice and experience can make a fruit shipper. Added to this it will require patience and perseverance, sometimes a good bank account to fall back on, and always lots of hard work. The grower who first attempts to ship his own fruit will usually have the varied experience that all fruit shippers have had of alternate profit and loss. If he does good, careful, honest work, is in a locality that produces the right kind of fruit, ripening at the right season of the year, I believe his profits will be greater than his losses. If a grower is not in the right locality, he had better keep out of shipping, as it will only end disastrously. There are so many details connected with getting together a car of fruit in good shape that it is impossible to more than touch upon them.

C. E. WILLIAMS.

OBSERVATIONS OF AN EMPLOYE.

ELMIRA, SOLANO CO.

TO THE EDITOR:—Fruit picking, packing and shipping are the three most important steps in a fruit-grower's occupation, for it largely depends on these three items whether his means of livelihood are profitable or not. The large orchardists and vineyardists have generally the latest appliances to hand for picking and handling their fruit, besides a readier method of disposing of the same, for the buyers generally prefer to buy from and seek out those possessing large acreage; so I will write more for the small fruit-rais-

ers, hoping they will derive a little information from my experience.

First of all, fruit wants to be handled, generally, with dispatch, and as little as possible, for at times one day tends to spoil fruits of certain kinds for the use to which they are best adapted. As for the handling of fruit, I have seen some pretty rough handling, also some very careful handling, so I can judge pretty well the results.

When the spring work on the land is completed, is the time to prepare for the golden fruit harvest in having everything ready for it, such as ladders repaired, clean picking baskets, or whatever you use, packing house in shape, trays, etc., in fact everything in spick and span order, for fruit brooks no delay when once off the trees. I have seen men who, just when they want anything cannot find it, and have to hitch up and go to town for it. They are in nothing but a bustle the whole time.

I am an employe, so gain my information personally in my work in different orchards. As to the variety of fruits best suited for shipping, etc., each one has his own ideas, and the choice depends largely on the owner's location and upon his facilities for shipping to local or distant markets (not forgetting the canneries), each requiring their own particular kind of fruit for handling, etc.

The ordinary light stepladder is, I find, as handy as anything for picking, if picking in ordinary 20-pound baskets, made especially for the work, which are very handy. I find by screwing a hook, something like you find in cupboards for hanging clothes on, on the right side of the ladder, on which you can hang your basket by its rope handle, you make the picking much easier. If you have the basket on your arm or perhaps on the top of the ladder, you are spending half the time preventing the fruit from tipping out. Another way is by having a bag made of strong cotton or canvass with a long handle to put over the shoulders, leaving both hands free to work, and when the bag is full you take the fruit out and transfer it to a box ready for hauling to the packing house. But one is liable to be careless with this method, in dumping the fruit from the bag into the box carelessly, so I would not advise owners to allow their hired men to use the bag. The basket is, I think, the best all-round method, and it saves handling the fruit too often.

When the fruit is picked, keep it in the shade of the trees till the wagon comes around to haul it to the packing-house. Thes best wagon I have found for this purpose is the ordinary fruit truck without springs. The bed is low, resting on four small wheels with wide tires about three to four inches wide; the front wheels pass right under the bed in turning, thus is handy for both vineyard and orchard, being able to turn in very small compass. This truck is good only for orchard and vineyard *where the ground is mellow*; on the rough roads it is liable to jolt the fruit into a pulp before you arrive at your destination. There are two or three more trucks of different make for this kind of work, which I think are all about as good as one another, each having its advantages and disadvantages, so it is best to leave this to the owner's discretion as no two men have the same ideas.

The fruit has now arrived at the packing house. I think the best packing house I have seen is a plain board building about 60x30 feet, according to the ranch's requirements, with a large door at each end to allow of a fruit truck passing clear through, thus saving a lot of walking to pack the fruit, where it is wanted. One or two smaller doors on the sides are also handy. Now for plenty of ventilation, which is the great essential in this warm climate, especially for the fruit; have a continuous window clear around the building, about four to six feet deep, but instead of glass have wire mosquito bar tacked on to keep most of the flies, etc., out, outside of which have shutters fastened from the upper edge on to the building with hinges. The shutters can be kept open just by using a small stick. When closed they give the building a solid appearance, one hardly being able to tell the presence of shutters. It is also desirable to have one large window in each gable covered with wire mosquito bar. This greatly adds to the ventilation.

The inside of the packing house must be fitted up according to the owner's idea with benches, shelves, etc. A well near by is also a very essential item.

Before packing the fruit, it ought to be graded. This saves the packers a lot of work, as it is always a golden rule to ship nothing but the best, in which lies the secret of success. Some have graders, of which there are several of different makes, each having its own peculiarity, but the owner, if he cannot afford to buy this machine, can grade very quickly by hand. Of course I speak of the small ranchers. Large ranchers have their graders, and, having so much fruit to handle, necessitates having one or more. Generally what is too ripe to pack you can either dry or can, thus preventing waste.

The packing of the fruit is a simple enough operation when once learned. I think the best way for a fruit man who has just started is to visit one or two large packing houses, where he will pick up the idea much more readily than he could from mere reading. By such a visit he will find out the size of boxes, crates, etc., kind of paper and method of packing, nailing and marking preparatory to its being finally shipped.

Any spring wagon will do to haul the fruit to the depot or elsewhere, from the small wagon we see most frequently up to the large fruit wagons mounted on heavy springs to prevent shaking the packed fruit more than necessary. On some of our roads one needs a good wagon. I have seen fruit hauled in ordinary wagons without springs to the depot or elsewhere, and on taking the boxes out you could hear the peaches, etc., rattling, the owners wondering why they could not get anything for them on the fruit's arrival East; so one can see the folly of having anything but a good *spring* wagon, especially when they have a long distance to haul their fruit.

Speaking of shipping and the best ways of doing so, is a matter of much discussion at the present time. First, there are the commission men, to whom I would not ship a box of fruit if I could help it, for very often it will not be a profitable transaction; then there is the California Fruit Union, Earl & Co., Strong & Co., besides several others. The last two generally buy the fruit on the trees or vines, or pay so much per box for them packed, delivered at the depot. When they buy the fruit on the trees and vines they generally furnish their own packers, etc., the owner simply picking and hauling to the packing house. They have their agents distributed over the fruit sections, with whom the owners can arrive at favorable terms without going to their headquarters.

In the California Fruit Union you buy a share, which is, I think, $5, then you ship your fruit to their headquarters at Sacramento, where they take charge of it, shipping it East, where it is sold on the auction plan. The Union sends you particulars of the sale, together with what price your fruit brought. From this is deducted freight, cartage, commission, etc. I generally find, if you ship first-class fruit, you will generally have a good margin after all expenses are deducted. By this plan the small man stands on an equal footing with the large raiser; no matter where you are located or the number of boxes you have, you will have just the same facilities and consideration. The "C. F. U." is as near the poor man's friend as it is possible to get nowadays.

To conclude, I sincerely hope ere many years have elapsed, that there will be an entirely new system for the shipping and selling of fruit, doing away with the middlemen, who seem at present to grow rich on the poor man's products, not forgetting also a still further reduction in the freight is needed badly; then fruit-raising will, notwithstanding its hard work and disadvantages, be a profitable occupation, and not as it is at present with most I have met, a bare living and hardly that in places.

FELIX FOREMAN.

FRUIT MARKETING.

An Old Californian Gives Advice.

Among the papers recently read at a meeting of the Washington Horticultural Society was one by J. M. Hixson, now of Seattle, but whom many readers will remember as a commission merchant of this city. His reminiscences of his Calffornia experience will be found readable and his advice in many instances pertinent. We quote as follows:

No matter what variety of fruit is marketed, great care should be taken. The time devoted to picking, assorting and packing will bring in a larger return than any other devoted to the crop.

Fruit should be picked at just the right time; it should not be picked before it is fully matured, nor suffered to hang on the tree until overripe. Some kinds are better to eat when fully ripened on the tree; others should lay several days after gathering before eating. The cherry, peach, plum, nectarine, and in fact most all stone fruit, should be ripe before picking to have their full flavor. Some kinds of pears, and especially the Bartlett, are better by laying awhile after being taken from the tree. If a Bartlett pear hangs on the tree until fully ripe, it is coarse and grainy, and not so juicy and finely flavored as when it lays several days after picking. As soon as they have obtained their full size and show mothy spots, they should be picked. If they are to be shipped a distance, they should be wrapped in fruit paper, and they can be depended on to keep from 8 to 12 days, and come out in about the proper condition for eating. If intended for local market, wrapping may be dispensed with, but they should be shipped at once, and let your commission merchant put them on the market as they commence to color up. If it is an object to get some in market early, they can be picked before they are fully matured, and they will color up and be juicy, but not so finely flavored as if fully matured. One can determine when it is safe to pick by raising up the pear; if the stem and fruit bud part freely, they will color up; if the stems break, then they will rot in the place of coloring up. These characteristics of the Bartlett, which is the only pear used by the cannery, makes it a very desirable variety.

The Gravenstein apple should be treated very much as the Bartlett pears. It is not particularly attractive when first picked; after laying awhile, it becomes very attractive in appearance, and has a very fine aroma.

A heavy per cent is often lost to the grower in selling his own fruit, or intrusting the sale of the same to parties who are not familiar with the business.

I have sold the Gravenstein apple in Chicago from California at $1.50 per box—at the same time the apples coming in from Michigan in barrels would sell for $1.50 per barrel and it would take four boxes to make a barrel.

Tender fruits, such as berries, cherries, peaches, in fact all stone fruits designed for shipping, should never be picked in the heat of the day. This country where the dawn of day is long before the sun is up to heat the fruit, is well adapted for shipping tender fruits.

ASSORTING AND PACKING.

After the fruit reaches the packing house (or an improvised shed, if it is far to the packing house, as they should be in the shade soon after being picked), it should be carefully assorted. All the No. 1 packed by itself and the No. 2 by itself, and all that is overripe, bruised or defective should be utilized at home; or, if it is shipped, packed separately and marked culls. If the distance to ship is not great, I would pack apples on the side. Take the cover off the box and lay the apples in rows, with the highest colored side down, packing the box all the way through. If four layers will fill the box, they are considered good-sized apples; if they do not fill the box full, and another row makes the box too full, put a smaller apple between the last layer, what is called breaking joints, then put a cleat on the end of the box and raise it so the cover can be nailed down, fitting snugly on the apples to prevent their moving in handling; then turn the box over and mark, so when they are opened the side which is down when packed will be the top. If it requires five layers to fill the box, proceed in the same way. Some varieties will take six tiers or layers to fill the box, and they will still rank as No. 1 of their kind. If the apples are to be shipped a distance, or designed to be kept long in the box, pack them on the end, putting the stem end down, so when the box is opened the stem end will be up. The variety and number of tiers should always be marked on the box, so the seller will not have to open the box to find that out. The least opening that has to be done the better. No one who has not had experience in selling fruit has any idea of the effect of having to open the box. If a buyer sees the box has been opened, his first thought is, some one has looked at that box and rejected it, and of course he does not want what some one else has rejected. Buyers soon learn the brand and the manner of packing. If the fruit is assorted and packed honestly, it is sought after, and soon there is little occasion to open the boxes. The same care in handling, assorting and packing should be taken in all kinds of fruit.

The party who wants a first-class article and is willing to pay for that, does not want a second class mixed in, and if he finds there is second grade mixed in, he will not seek that brand the second time. If he buys at all, he will want a reduction amounting to as much as the value of the second grade. Then why not leave it out and save the expense of boxing and freight? I do not want to be understood that all the fruit that is not No. 1 should be thrown away. There is often good sale for second grade. What I strenuously contend for is to have it so assorted that the party wanting the No. 1 does not have to take and pay for such as he does not want, and the party who can use what would be classed as second grade, on account of color or some other cause, would not have to pay an extra price because there were a few high colored or fancy ones on top of the box. What I contend for is assorting your fruit into three classes, packing with care Nos. 1 and 2, and if the third grade cannot be utilized at home, and it will pay to ship, so mark it that the seller knows what it is and can price it accordingly. A good way to mark is by letters, A, B and C; No. 1, mark A. If you have something extra good, better than the run of what you class No. 1, mark it @ (a, with a circle); mark No. 2, B, and culls C, otherwise your No. 2 might be as good as some other No. 1's, and by its being marked No. 2 would prevent its bringing as much as it should, as compared with the others' pack-mark No. 1.

In an experience of 30 years in the commission business, I have seen the effect of careful assorting and packing, as compared with careless and positive slovenliness on the other hand. I cannot refrain from dwelling on this subject at the risk of being called cranky. If one can make from 10 to 15 per cent, with but a small loss of time, is it not worth the effort? I can recall many instances in which shippers from adjoining orchards of the same class of fruit have made that much. I will name an instance: I drove into a cherry orchard near San Jose, California, and found the owner in quite a state of excitement, having just received his account ot sales of cherries from our house in San Francisco. His first greeting was "Mr. Hixon, I would like to know why it is you can get 10 cents per box more for my neighbor's cherries than you do for mine?" I replied, I suppose it must be because they are better. "They are no better; you can see them hanging side by side. Mine are as good as his or any others. And you sell his for $1.10 and mine for $1. The price is good and $1 would be satisfactory, but I do not like to have my fruit sold for less than my neighbor." I said I did not know how to manage, unless I knocked down and pocketed the ten cents extra I got on his neighbor's, as $1 was all the buyers would pay for his, and they would not do that as long as any of his neighbor's were to be had at $1.10.

After a little more badinage on my part, I concluded it was time to pacify the old gentleman. I said, Mr. Conney, I think I can explain the matter satisfactorily. Mr. Hill packs two rows and then fills the box full, and when the boxes are opened they are smooth and show full from one end to the other. You pack but one layer, and when your boxes are opened, a corner has broken down and the stems show, and they are not attractive. "Well, well, I guess that does have something to do with it." After that Mr. Conney packed two rows, and got just as much for his cherries as Mr. Hill; and when I drove into Mr. Conney's orchard four years afterward, I had a pleasant greeting. A minute or two of time did the work, and a half-dozen or so extra cherries filled up the corners of the box, and it not only saved ten cents, but the old man's temper. And it is a very bad thing to get angry with your commission merchants about something that is your own fault.

I will give an instance of the effect of neat packing of dried fruit: While I was in Chicago, among the large list of consignments of dried fruit from California, I received a lot of unbleached, sun-dried apricots from Dr. Chandler, of Sutter county. They were packed with such care and taste, I said to my brother: "You must take a box with you to show how they are packed. If you take a sample in the usual way they will not bring but little more than the ruling price for that class of fruit," which was about 12 cents per pound. The broker took the box and showed the apricots in the box. It was not long until he returned, having sold the entire invoice to one of the largest handlers of dried fruit in the city (Sprague, Warner & Co.) for 16 cents per pound.

I could count hundreds of instances all along the line, not only to small dealers and consumers, but in large quantities to large dealers in the great fruit centers, the effect of careful packing. There is a perceptible difference between fruit packed with moderate care and that with which special pains has been taken. When a shipper is a don't-care kind of a fellow, who thinks it does not make much difference how fruit is packed, as he can't see why fruit packed is any better than when it is not packed, and argues if one man don't buy it another will, you will find he is apt to be in about the same mood when he meets his commission merchant as the old man who shipped the cherries was when I first drove into his place.

Raisin Growers and Packers Agree Upon a Minimum.

The committee and convention meetings which occupied the last three days of last week at Fresno were characterized by many discussions, but there was agreement at the close, provided the conditions can be complied with.

The following named delegates from county raisin conventions were present: W. S. Potter and B. A. Bateman, Hanford; E. L. Hooper of Merced; L. S. Harmon of Rosedale, Kern county; H. Murdock of College City; W. N. Byron of Lemoore; E. Sanborn of Tulare; J. M. Hawley of San Diego; C. Wistanley of San Bernardino; W. N. Oothout, John S. Dore, D. T. Fowler, W. M. Vanwormer and Col. Trevelyan, of Fresno.

The packers represented at the meeting were: The Curtis Fruit Packing Company of Fresno; F. P. Devine of Riverside; Fresno Raisin Packing Company of Fresno; Griffin & Skelly of San Francisco and Fresno; Eugene Gould of Woodland and Malaga; Home Packing Company of Fresno; S. B. Holeton; Selma Packing Company; Kingsburg Packing Company; J. Lemoore of Lemoore; H. W. Bryan of Lemoore; Noble Bros. of Fresno; Producers' Raisin Company of Fresno; Traver Raisin Company; Williams, Brown & Co.; A. D. Barling, Fresno; Easton Packing Company; Logan Vineyard Company.

The morning session was occupied in the discussion of a basis of action.

Alexander Gordon reported that the raisin growers had now 23,000 acres, owned by 900 persons, represented in the organization and pledged to support those packers who would agree with the growers not to sell raisins at a price which would fail to give the grower a price per pound for his raisins in the sweat box to be agreed upon by the joint committee.

In order to test the power of the packers present to enter into such agreement, they were asked to see how many carloads of raisins they packed during the past season. The list was made up, from which it appeared that they packed 1359 carloads, each carload containing from 10 to 15 tons of raisins, making the total a very large proportion of the whole shipment of the State.

The committee of raisin growers then withdrew for the purpose of allowing the packers, who had just arrived, to agree among themselves as to what proposition should be made to the growers. After the growers withdrew, they reassembled and resolved that it was the sense of the growers' committee that all raisin growers should receive five cents per pound for good raisins in the sweat box.

When both parties came together again, the packers proposed that the packers and the growers should organize, and if 95 per cent of the packers and 95 per cent of the growers could agree upon the proposition, the packers should bind themselves not to sell any raisins for a price that would give less than 4½ cents per pound in the sweat box to the growers, and that 95 per cent of the growers should agree to do business with those packers.

The committee from the growers' convention refused to accept 4½ cents per pound, and expressed their willingness to enter into a five-cent per pound combination.

The following morning the discussion was renewed, and an agreement was reached upon the terms named by the packers. This action was reported to the convention on Saturday and was agreed to, thus constituting 4½ cents per pound the minimum price for good raisins in the sweat box.

Alexander Gordon said that the first thing to be done by the growers was to get the stipulated 95 per cent, so that the packers could then unite in their part of the contract.

John S. Dore said that, in order to accomplish the work, it was necessary for the body to act together and be unanimous. If any one did not understand the matter, he should acquaint himself, and then let his presence be felt. Sympathy and earnestness is absolutely necessary to success.

D. T. Fowler read a telegram from a convention of raisin growers at Riverside, in which the growers there expressed themselves willing to enter the compact, if one is formed.

Discussion was had upon the organization of a State association.

C. C. Agnew of Solano county, was added to the committee. The committee was given the authority to add to their number any members they might consider necessary or proper. Alexander Gordon was elected treasurer of the State Association.

Steps were taken looking to the establishing and maintaining a grade and standard of raisins, to be the same all over the State.

THE DAIRY.

A Progressive Establishment Near Marysville.

Frank S. Chapin writes the following interesting letter for the *Record-Union:*

Six miles northeast of Marysville I passed the 3400-acre ranch of T. B. Hall of Sacramento, where he has started to breed up and work up a model dairy of Holstein cows. In several respects it is the best calculated for making good butter in hot weather, without ice, of any establishment that I ever saw, and its leading features are worthy of extended notice and careful study by dairymen. The creamery and poultry business, as auxiliaries to fruit-growing, in the valleys just coming under irrigation, are such essential factors in the settlement of the State and development of its industries, that a successful dairy, where high-grade butter is made from alfalfa, in the very hottest weather, without ice, ought to be driven about the State on wheels as an object lesson, made a dairy-school, or used in some way to lift those thousands out of the depths of silurianism who claim that dairying doesn't pay and are able to prove by their own experience that nothing pays.

R. H. Wells, the superintendent of the ranch, attends to the creamery personally, and informs me that they have had too little butter to supply their trade, and that their lowest price in Sacramento has been 27 cents, when best goods in San Francisco were quoted at 19. To-day the temperature of his butter-room was 70°, that of his churn-room 76°, and that outside 92°. Last week, when the temperature rose to about 115° at some time every day, the temperature in his butter-room rose only 6° during the day. The secrets of this success are

CONSTRUCTION OF THE BUILDING.

It is of three rooms, one for the engine, one for the churn and a third for the butter. The engine-room is made to allow a free draft of air so as to prevent heating other rooms. It is about 16 feet square. The walls of the butter-room consist of a wall packed with eight inches of sawdust and two inner walls of lumber, so carefully lined with paper as to make two air-tight chambers. The ceiling is about the same, and he has an elaborate system of ventilation from the ceiling overhead. The churn-room is much the same, except the sawdust wall. All the floors are of cement or artificial stone, and the doors are made like those of an ice-chest or refrigerator. Mr. Wells deserves great credit for having kept up a grade of butter to bring eight cents a pound above the market without having used any ice until to-day; but his success is not due to the building alone.

BRINE SALTING.

He watches the churn very carefully, and when the granules of butter are about as large as pin heads, he stops the churn, draws off the buttermilk and rinses the butter in the coldest water he can get, until the clear rinsing water shows that the buttermilk has been removed. For his brine he uses about one pound of salt for every five pounds of butter in the churn, and water enough to float the butter easily. This salt makes the brine six degrees colder than the water was, and when the butter is in such fine grains, it will take up as much salt as is needed, from brine of this strength, in the course of an hour. As his well water is 64°, the brine stands at 58°, and he takes the butter from the churn in very fine condition for working. Of this there is very little to be done, as the buttermilk has all been removed and the salt perfectly distributed already.

It is well understood among butter makers that the less working the better, so long as buttermilk and moisture are removed and salt perfectly distributed.

Mr. Wells uses a Sharpless cream separator, driven by a direct jet of steam, which troubled him some about heating the cream, until an expert came from San Francisco to show him how it should be operated. Now he has no trouble on that account, and has invented a cooler over which the cream runs from the separator to the cream tank. It looks like a tin box, about six inches deep, with the top made out of a washboard. This is set so that the cream will run very slowly over the corrugated surface, while the pump drives a stream of water from the well through the box of the cooler.

He never allows his cream cans or vat to be closed, and in this way any bitter taste that might arise from alfalfa or similar feed is dispelled while the cream is ripening.

THE BARN.

The barn is arranged so that the stalls can easily be kept clean and dry, and the silo and feed cutter are conveniently arranged. It is proposed to dairy with thoroughbred Holsteins only. They will produce butter principally in the fall and winter, and will feed a ration of hay, ensilage and grain. Besides feed produced on the ranch, considerable bran will be used, and I suggested a slight addition of oil-cake to the ration.

There is a device for watering the cows with a trough long enough for four to drink at once. This trough is hung by wires to a little car, at each end, running on a track overhead. The trough is supplied with water by a hose, and as soon as four cows have done drinking, it is run along to the next. When all have drank, the trough is run up by pulleys out of the way of the cows' horns and returned to its place at the head of the row. I think a similar device for distributing the feed, and especially for the ensilage, would be desirable.

The creamery could be made cooler by porches on the east, south and west sides. A perforated pipe along the ridge of the roof, from which the pump could throw a spray sufficient to keep the roof damp, would help very much in keeping the room cool.

A SUGGESTION FOR TEMPERING AND AERATING CREAM.

All creamery men know the difficulty in tempering cream for the churn, or for the ripening process, by the use of ice, steam or hot water. I have seen many devices for cooling and airing milk by pumping air through the can. Suppose we attach the cylinder of a force pump to the wall of the butter-room and arrange to drive it from the engine. With the suction of this pump connect a T, from which one pipe shall draw air through a coil sunk in the well or in an underground vault, and the other from a coil heated in some way from the boiler. Connect the discharge of the pump with a hose terminating in a perforated tin tube.

When you want to cool the cream, open the pipe leading to the cold-air chamber, throw the perforated tube into the cream can, or tank, and in a twinkle you will have your cream thoroughly, stirred, aired and reduced in temperature. The same rule would apply for heating the cream when you opened the cock leading to the hot-air pipe.

In this device it would be an important feature that the opening where the air entered either pipe should be where no odor tainted the atmosphere. In many places it might be well to have the pipes extend some distance above the roof. On the other hand, any objectionable flavor in the cream would be, in large measure, dispelled by driving pure air through in this way.

These tubes could be introduced in the churn to temper the cream there, when necessary. If the operator was in a great hurry, he could give it a pretty high temperature until the butter was on the point of breaking, then reduce the temperature to a point where the grain would come firm and hard.

By the addition of $500 in machinery and the help of a common laborer, Mr. Wells could handle the milk to make 500 pounds of butter daily.

If he was able to work on that scale and hold the present prices for his output, he could credit $40 per day for the extra advantages of buildings and machinery and his skill as an expert. That would pay the interest at ten per cent on $146,000 over average dairying. Mr. Hall is experimenting on a safe plan, with the prospect of finally reaching that point where the increase of his herd will permit.

Yet the silurians of the plains and the Micawbers of the mountains are commenting every day on the old "fool and his money soon parted" proverb. They are of the kind that won't go across the road to visit an experimental station, nor take an agricultural paper, because they don't believe in book farming. They know that farming doesn't pay, because all other classes are combined against them. At the same time, they never think of using their brains in in a way to make farming pay, and willful ignorance is their greatest oppressor. In the meantime, they nurse their own misery, discourage others, retard the development of the country, and are stumbling blocks in the way of general prosperity.

Mr. Hall's money and Mr. Wells' skill have demonstrated that dairying can be carried on profitably in the very hottest climate of the interior valleys of California. The application of these principles to cooperative dairying is what is needed where families of limited means are settling small tracts of irrigated lands with a view of making fruit ranches. It almost always takes more than was expected to bring fruit trees into bearing and support the family in the meantime.

If instead of planting the whole 20 acres to fruit, 12 are thus planted, and the other eight put in alfalfa, so as to keep a dozen cows, a dozen brood sows and 200 hens, the farmer who gives it careful attention can expect to make a good living and pay interest on first cost of land while his trees are coming into bearing. To do this, the community must run a creamery embodying essentially the features described in Mr. Hall's establishment—building thoroughly protected against changes of temperature, pure air and water, well-planned ration, cream separator and modern appliances, expert creamery man. These will be followed by cash trade, home comforts and prosperous communities.

THE VINEYARD.

An Early Experience with Long Cuttings.

Wm. Pfeffer, the well-known Santa Clara grape grower, writes for the *Wine and Spirit Review* as follows:

The reason why I have attempted in former articles, under this heading, to criticise some systems of training the vine in California, is because they have not given satisfactory results, and to be more convincing I will give my own experience and observations from the beginning to the present time, and to show how easy it is to adopt faulty ways and the extreme difficulty in correcting them is the object of this writing.

We cannot train the vine in a correct way if not planted in accordance with this view, and, consequently, vines planted or trained in an incorrect way cannot yield the highest perfect product, wine. Disregarding the fact that it is easy to grow grapes here for anybody, no matter where born and under what conditions brought up, I hold that the planting, pruning and training the vine are so closely allied one to another that no one of these factors can be disregarded with impunity.

My first lesson in growing grapes here was in digging out grape vines, and this happened to be in the year 1869, in the month of February, at Mrs. Yount's place, Yountville, Napa county, shortly after my arrival from the southern part of Illinois. When Mrs. Yount learned that I had a leaning toward grape culture, she set me to work digging out rooted grape-vine cuttings, with the intention to plant with these an addition to her already established vineyard of considerable size. These rooted cuttings had the butt ends about 24 inches below the surface and were planted many years before I had to dig them out. It was a hard job to get all of the original cutting to the surface without leaving the principal roots still in the soil torn away from where they started at the cutting. In Illinois I had bought and planted rooted vine cuttings which measured no more than six to eight inches and had generally been made from cuttings of two buds or joints, and I consequently uttered, in the presence of the good lady, my disapproval of the unique way of producing rooted grape-vine plants, but the lady reproached me by saying, "William, I don't want you to speak in a disrespectful way about Mr. Yount or the way he planted these cuttings." I need not say that I never forgot it, but bad precept caused me considerable annoyance and loss.

In the following fall I started a two-acre vineyard in Santa Clara county, on the very same farm I have worked ever since, but the cuttings I planted then, after the principle "the deeper the better," failed to grow, and I had to plant and replant for five years, till these two acres showed no more empty gaps to be still replanted. When they arrived at bearing I found that nearly every other vine was of a different kind, and there was no other way of bringing order into this chaos than by grafting them all into a certain kind. While digging around these vines preparatory to grafting, I learned that many vines resembled in shape a carrot, while some lost the butt end by rot. After this I did not bury the butt end of a cutting two feet below the surface—in fact, eight or ten inches deep gave me the best results.

As to the distance apart of planting vines I, of course, was led to adopt what others did, and to-day I pride my

self in having the greatest variety in that line. Six feet apart in the row, and the rows from six to seven feet apart, had been my first planting, but when the great grape-vine-planting boom broke out in the early eighties, and the driving of one horse was considered a poor man's business, I increased the distance to six by nine and seven by eight, and, as already recorded, to a small extent, twenty by twenty. *a la chaintre.*

TRACK AND FARM.

Hambletonian's Monument.

Several years ago a project was started to raise by subscription sufficient money to erect an appropriate monument over the grave of Rysdyk's Hambletonian. From time to time the project was revived by one journal and then another, advocated for a short time and then dropped, until early this season, when a few large subscriptions placed the matter on a substantial basis, and an order was given to the Syenite Granite Company, of which William Russell Allen is president, to place at Chester, Orange county, N. Y., over the grave of this famous horse, a substantial red granite monument, similar to the one erected by this firm at Stony Ford for Green Mountain Maid.

As almost every breeder and owner of trotting and road horses have descendants of Hambletonian, which are his most valuable and best; while every American takes more or less pride in the fact that the American trotter so far surpasses in speed the best of all other countries, and nearly all holding the fastest records have, since the days of Dexter, been close descendants of his famous sire, the public generally are, to a greater or less extent, actually interested in the erection of this monument, to the cost of which a large number have directly contributed, and will take pride in whatever is really in good taste pertaining to it.

There has been considerable discussion as to the most appropriate spot for erecting such an elaborate memorial. John H. Wallace proposed and presented the strongest arguments he possibly could in favor of Central Park as the best location, but the recent hostility, so plainly manifested by such a prominent element, against providing for our typical American production a driveway corresponding to the "Equestrian Road," which for several years has been kept in the best possible condition for the exclusive use of the very limited class of bang-tailed horses, ridden chiefly with English saddles and mounted by awkward riders, a hostility which, aided by the misrepresentations of the *Sun* and other prominent daily papers, finally brought about the repeal of the driveway bill by the same legislature which had passed it, has demonstrated very clearly that Central Park would have been the least appropriate place which could possibly have been selected.

The most fitting site, the most suitable material, and a firm interested in furnishing the best possible work, are those finally decided upon, and the only reasonable criticism to be made is relative to a small portion of the inscription, which is to be:

HAMBLETONIAN,
THE GREAT PROGENITOR OF TROTTERS,
Born May 5, 1849.
Died March 27, 1876.
HIS NOBILITY WAS THE ACT OF INHERENT POWER.

On the plain marble slab originally erected over his grave was the inscription, "Hambletonian, foaled May 5, 1849; died March 27, 1876," and we have not yet ascertained who is responsible for having changed the correct word "foaled" to the more sentimental "born." Occasionally a catalogue has been received, usually the production of some novice not overburdened with brains, where the colts and fillies, though not, as a rule, sufficiently well bred to bring, under the hammer, ordinary draught horse price, are all entered as having been "born," though none of them have yet mentioned anything about midwives, nursing bottles, safety pins or Mrs. Winslow's soothing syrup.

The first monumental example of that line of inscriptions was relative to Green Mountain Maid, which is carried to a greater extreme, including "In Remembrance of the Great Mother of Trotters, Born 1862, Died 1888, at Stony Ford, the Birthplace of all Her Children." As Mr. Backman paid for erecting that monument with his own money, he had, of course, a perfect right to use any inscription he chose, and it may have been appropriate in that connection to refer to Stony Ford "children," of which the world never before heard, though quite familiar with the history of the horse Electioneer, the gelding Guy (2:10¾) and the filly Elaine, which held at one time the world's fastest three and four-year-old records, and subsequently produced the champion yearling trotter, Norlaine.

With Hambletonian, however, thousands are interested who prefer a statement of facts in good plain English to any sickly sentimentalism. Furthermore, if any personification was necessary in this case, it should have been introduced at the other end, for while Hambletonian was foaled an ordinary, plain, every-day, nonstandard colt, which with his dam brought only $125, not more than $25 of which could have been reckoned for the colt, as the dam was certainly worth at least $100, honors were showered thick upon him near the close of his career, so that it would certainly be far more appropriate to start off with the time he was "foaled," and then wind up with "passed away," "climbed the golden stair," or something of that sort.

Taking into account that his soles had been previously removed, on the recommendation of a prominent authority on horses' feet, so that the old Hero in his last days could hardly walk or even stand, the picture of him, emaciated as he then appeared, with his sprung knees and hollow back, a-climbing the golden stair, would certainly be beautiful and picturesque in the extreme, and might perhaps be appropriately illustrated on his elaborate monument. His rather coarse head could be represented as up among the clouds, or with a distinct halo over it.

The closing line of the inscription is a trifle too deep for our comprehension or comment.—Vision, in American Cultivator.

THE FIELD.

Opening the Season at the Chino Beet Sugarie.

Especially as the recent report of the U. S. Department of Agriculture may by inference convey the impression that California does not produce good sugar beets, we take pleasure in republishing from the Chino *Champion* an account of the opening of the season's run at the large beet sugar factory at that place:

On Monday morning, July 11, work on harvesting this season's crop of beets was commenced, and at 8:30 A. M. the first load was delivered to the factory. This was about five weeks earlier in the season than work was commenced last season, and the perfect organization and improved methods will make it possible to put beets in much more rapidly.

Mr. Gird alone has been using during this week ten plows for losening the beets in the rows, allowing them to be easily lifted from the soil by the toppers, who pull them, trim the tops with a large knife and throw the beets into baskets especially made for the purpose, from which they are emptied into the wagons. This week there have been about 90 toppers at work, and next week this force will be increased to about 130 to 140. Mr. Gird has 15 four-horse wagons hauling to the factory. Besides this, quite a number of other farmers have commenced to haul their own beets. Yesterday there were delivered to the factory 221 tons. Next week, when the routine work is well established, from 300 to 350 tons will be delivered per day.

It is a noticeable fact that the beets, even from the upper and dryer lands (which are being harvested first), are of a good size and uniform, clean and smooth—as fine a lot of beets as any one could wish to look upon. The sugar percentages are very satisfactory—better than many expected. We append a few of the results of the analyses made at the factory, and upon which the price paid for beets will be based.

	Sugar.	Purity
Asa Kimble	15.9	81.5
Frank Niebel	17.4	82.8
F. L. Prouty	15 5	84.5
J. W. Welte	14.7	80.3
J. H. Palmer	15.2	83.3
F. A. Williams	15.9	81.9
Samuel Hayward	19.7	81
Martin Karcher	15.6	84
R. Gird	17.09	81
Bittle & Johnson	15.7	84.6
F. A. Williams	15.7	80 3
R. Gird	19.4	84.6
Fred Schlueter	16 2	82.9
Samuel Hayward	17.8	81
R. Gird	18.8	87.2
Frank Niebel	17.4	82.8
R. Gird	19.3	85
Asa Kimble	15.9	81.5
Samuel Hayward	16.7	83
R. Gird	15.2	84.7
R. Gird	19.8	87.8
R. Gird	17.7	84.6

These figures are taken at random from the books of the chemist, and are fair samples of the entire number of tests made at the factory. They were not selected for high figures only. Each one of these tests is an average from three or four loads. The manner of testing is to take samples from each of three or four loads of a farmer's beets as they are delivered. These samples are then mixed, and a sample of the mixture is taken for analyses. This makes as fair a test of the entire crop as can be arrived at. In contrast with these analyses it is interesting to note the results attained in Germany, the birthplace of the industry, and where for years it was thought that beets had been brought to their highest perfection. We quote from H. Pohlmann, superintendent of the sugar factory here, and who spent many years as analytical chemist for German factories. In the *Champion* of July 3; 1891, he says: "The highest per cent of sugar in the beet ever experienced by me in Germany has been 14 per cent, and the average ran from 12 to 12½ per cent."

AT THE FACTORY.

A visit to the sugar factory now reveals a scene of the greatest activity. The full complement of men will soon be at work, and then will commence what now promises to be a magnificent campaign. Early on Wednesday morning the last syrup which remained from last year's campaign was worked through the centrifugals, and since then a force of men has been busy cleaning the tanks, floors, etc., so as to have everything in good condition for the long campaign to follow. The output of sugar from the standing syrups was 517,375 pounds, or 258 tons. The government regulations require that when work is commenced on beets for the season the factory be entirely free and clear of all syrups or substances from which sugar can be made, so that no beets could be worked up until the syrup tanks were all empty of last year's product.

Only one of the five 1200-horse power boilers has been used in working up the syrups. The fireman tells us that the machinery is so greatly improved and in such perfect condition that not more than one-half as much steam as was required last year is necessary this.

There are three driveways over the beet sheds this year—one for unloading with shovels, one for the large dump beet wagons, and one for the wagons with nets—so as to insure the most expeditious unloading. Chas. E. Lawrence has charge of the unloading business. Mr. Gird has put in a unique arrangement for unloading the wagons with nets by water power. It is simply a water wheel connected with a windlass. Over this windlass pass the ropes, to one end of which are attached the hooks for raising the net and load from the wagon. It does the work which was done by horse power last year.

ENTOMOLOGICAL.

Orange Insects in Tahiti.

PAPEARI, TAHITI, June 10, 1892.

TO THE EDITOR:—At different times I have called the attention of the people of California to the great danger arising from the importation of Tahiti oranges without subjecting them to inspection and having them disinfected before distribution.

An orange tree cannot be introduced without a great outcry, but vessels loaded with fruit from the same localities can discharge their fruit without any trouble. If the mischief has not been already done, I request that the next cargo of Tahiti oranges received in San Francisco be inspected, not for scale upon the fruit, but for a worm or grub within. During the latter part of May and first half of June the greater portion of the ripe oranges are stung by a beetle, the egg of which soon hatches and the grub passes into the fruit, and in a short time the fruit will fall to the ground. If the orange is stung by a number of beetles it will fall at once.

One fine orange tree upon my place, which was just ripening its second lot of fruit, was attacked by this beetle and in three days time fully two-thirds of the oranges had fallen to the ground.

I failed to find the parent of the grub last season, but this season, having more time, found it and studied its work. Fruit having this grub has been sent to California for a number of years, but it may be that the grub leaves the fruit before the cargo reaches California.

This same beetle attacks melon and squash vines and causes great destruction among them. It very closely resembles a beetle common upon the squash vines in America. I will send specimens of this insect to California and then we can know a little more about its classification.

In connection with this same matter I would like to call the attention of the authorities to the fruit introduced from the Sandwich Islands and from Mexico. The bananas should be carefully examined.

We have two parasites which feed upon the woolly aphis, and during the past few months it has been difficult to find a specimen of the aphis. I can ascertain if the parasite—a ladybird—is near here or not. I did not discover it until the month of October, when I found it in abundance upon my beans, tomatoes and coffee plants, and in a very few weeks all signs of woolly aphis had disappeared from these plants. ELMO R. MESERVE.

[We shall be glad to see specimens of the insects to which Mr. Meserve refers. We believe that cargoes of fruit arriving at this port are inspected by the officials o the State Board of Horticulture. The above communication may be a warning to all concerned.—ED. PRESS.]

Kerosene Emulsion for Lice.

Prof. A. J. Cook, of the Michigan Agricultural College, speaking of a bulletin issued last year advising the use of the kerosene emulsion to kill lice on cattle, horses and hogs, and ticks on sheep, says:

We had then only used it on cattle lice. We have since used it on horses, hogs and sheep, and are fully persuaded that it ranks first in effectiveness and cheapness as a specific in all such cases. The many letters that we have received the past summer relating to the emulsion, the more timely date and the exceeding importance of the matter, make us repeat with emphasis the advice we then gave. Lice and ticks are very common in nearly, if not all, parts the flocks and herds of the States. They claim no mean per cent of the strength and vitality of our animals. Well-fed animals are not always sleek and fine. The cause is not infrequently found in the tormenting, blood-sucking louse. Tobacco decoction, crude petroleum and the various commercial dips are less efficient, not so wholesome and more costly.

Kerosene emulsion not only kills all the lice, but also nits or eggs, and if the stable be well sprinkled with the emulsion at the same time the animals are treated, the application will need to be repeated only at rare intervals. Again, brushing the animals thoroughly with soap wash seems to cleanse the skin and make the coat more bright and glossy. Without any question, the kerosene emulsion barrel should find a place in every stockman's barn.

The soft soap emulsion is best for this. The more liquid nature makes it easy of manipulation in cold weather, and the large quantity of soap is very cleansing and wholesome. To apply, we use a common brush in case of cattle, horses or hogs, and in case of sheep, dip the animal right into the warm diluted emulsion. The cost of material for an average cow is about three cents, and the time required for treatment less than five minutes.

COOKING THE LIME, SALT AND SULPHUR WASH.—P. B. Armstrong of Lodi has a set of kettles and arches on the second floor of an outbuilding that has a capacity for cooking liquid enough for 14,000 trees daily. It is a great convenience to have it thus elevated, as he can draw it off into the spraying tanks without delay. Harry P. Stabler of Yuba City has a steam boiler and two 300-gallon tanks for cooking the liquid. By running the steam pipe into the tanks while cooking the wash, he keeps up such an agitation that the liquid is thoroughly mixed, and by steaming it two hours or more it becomes thoroughly cooked and mixed in a way to secure desired results when applied. Mr. Stabler finds that some take so little care in cooking the wash that it has no more effect than whitewash. Next year his tanks will be mounted on a staging, so that he will combine the advantages of his plan and Mr. Armstrong's. Frank S. Chapin in Record-Union.

The Home Circle.

Friendship.

Once on a time—perhaps 'twas when
Haroun Alraschid ruled—two men
Greeted each other at the gate
Of Bagdad, famed throughout the State.

"Oh, friend," the first exclaimed, "now, say
Why gleam your eyes so bright to-day,
While mine are filled with tears, that run
To lose themselves my beard among?"
"Know, then, I have a friend most dear
In Kandahar this many a year,
Who now has come my lot to share,
My thoughts, my house, my work, my fare!"
"Ah!" cried the first, "my friend has gone,
Whose face I've daily looked upon.
Forever from my sight he's passed
Across Arabia's desert vast!"
Just then they heard the muezzin's call,
"Come, come to prayer!" from turret tall;
And each, with closed ears and bowed head,
"Allah il Allah! Kismet!" said.
Then parted; one with flying feet,
His thoughts on intercourse most sweet;
The other, slow, with stifled groan,
To muse upon his friend, alone.

When some ten years had passed away
The two men met again, one day.
The solitary man seemed glad;
The other downcast, tired and sad.

"Oh, friend," the first one cried, "I fear
You've lost the one you held so dear!
What else could change your joy to mar
In him, who came from Kandahar?"
"Alas!" the other cried, "we still
Abide together and fulfill
The treadmill round of daily life;
There is no bickering nor strife.
Alas courteous, civil, decent—yet
I feel, deep down, a keen regret;
He shares my house, my work, my fare,
But in my thoughts he doesn't share!
You're glad to-day—your friend's returned
From o'er the desert?" "Nay. I yearned
To see him; but I might not see;
Yet well I knew his love for me
And would not shame that love. I tried
To live as though he stood beside
To warn, to comfort and to bless;
So grows our friendship more, not less."
The other answered with a sigh.
Just then, from out a turret high,
The muezzin's voice rose clear and loud:
"Come, come to prayer!" Each head was bowed;
And as the sun set, round and red,
"Allah il Allah! Kismet!" said.

Oh, heed the moral well, I pray!
A friend may go and friendship stay,
Or come and friendship fly away.
"Allah il Allah! Kismet!" say.

—Arthur Chamberlain, in Boston Commonwealth.

A Visit to Miss Hetty.

Written for the RURAL PRESS by AUGUSTA E. TOWNER.

It is the middle of July.

A tall, slender woman, in a stylish costume of Bedford cord, and holding a jointed parasol in her daintily gloved hand, may be seen leaving the yard of a highly ornate cottage on the main street of a Southern California town. Hesitatingly, she glances up and down the street as if trying to get her bearings as to points of the compass. Then, murmuring, "Really, this must be west," she turns to the left. Perceiving a thick growth of pepper trees over the sidewalk, she shuts her parasol, and, walking on, glances critically about her.

It is her first summer in California. Naturally fastidious, hypercritical, she, like many another Easterner, notes and magnifies blemishes in her environment, she would, "in the States," pass unnoticed. Her animadversions are miscellaneous and contradictory.

During most of the month of June, the lingering fogs and cool winds, after the taste of heat and sunny skies in May, caused her to sneer at "this boasted California climate." She dubbed it "X—," the unknown quantity, when the oldest inhabitant told her it was every year different, so one could not sa ely prophesy. And she laughed with disagreeable incredulity when told that the winter of '91–'92 was the coldest seen in 17 years. "I've heard that talk in the Bermudas," she said. Even the ruin of the orange crop by freezes, unprecedented before, did not convince her that the "oldest inhabitant" wasn't up to prevaricating excuses.

When the contented resident, from the same part of "the States" as herself, expressed friendliness for the fogs, saying that they gave a welcome night irrigation while the fruit was swelling, she viewed her good nature distrustfully, as a specimen of the *dolce-far-niente* influence of the climate.

She could not, or would not, understand why, when it was so warm in the sun, one often needs a wrap in the shade; nor why, at 80° to 90° and over, she did not swelter as in the East. She almost resented her comfort as a design of the climate to trick her senses. And when, no matter how high the mercury climbed by day, she could cuddle under her blankets at night and sleep, cool and restful, she admitted the fact and tendered her meed of praise, grudgingly.

But the dust! No matter how she had borne dust in the East, alternating with wind, California's dusty roads she anathematized unceasingly. And when the amiable Californian asked, "Did she really expect heaven, and streets paved with gold?" she dubbed the country unenterprising.

By-and-by, she is beyond the limits where the streets are sprinkled, and it is here she must turn down a cross road. Holding up her skirts and shaking a foot at every step, she tiptoes across, looking like a hen with St. Vitus dance.

But to-day, even she has no heart to fret at the dust. The influence of the climate is upon her. The heat, so deliciously tempered by the coast breeze, charms her. So does the appearance of plenty and thrift everywhere, the lovely gardens around the cottages, the glimpses of cultivated fields.

Once she mistook the restful air of the inhabitants for laziness. Now she has seen how they "hustle" during a fruit season, and she reads steady, contended industry on the faces of the passers-by. She realizes this easy air is the result of living on a fruitful soil, where every season has its crop, which an equable climate takes its time to mature—where there is no long winter's freeze, and a hot, short summer in which to prepare for that winter.

Yes, and her fastidious soul has really condescended to enthuse over the present crop—apricots. She thinks it the loveliest, the most esthetic of fruits. Having seen specimens of apricot preparations, and hearing of others, she has determined to secure as substantial memories of the season as her culinary skill can prepare, to take with her back to the bleak New England coast.

The object of her walk is to find a person she has often heard quoted, and get some recipes and instruction as to preserving apricots. "I have never met her. Ridiculously informed," she says to herself. But she walks on, nevertheless. The influence of the climate is upon her, a feeling of amiable restfulness, of happy-go-luckiness penetrating even her "N. P.—" ridden soul.

Presently she hesitates before a small, unpretentious cottage, with a wonderfully pretty garden on one side and a green square of closely shaven lawn in front, whereon, from a whirly spray, falls a sparkling shower of mimic rain. She views the scene with satisfaction. A smile spreads over her face as she sniffs the cool, moist air, laden with sweet scents. And when, from around the corner of the house, a something, brownish-yellow and fat and downy, comes waddling on webbed feet and begins nibbling the green grass with its flat bill, about the corners of her mouth appear long-lost dimples, and she murmurs:

"Yes, this must be Miss Hetty's, and that is her pet gosling Mrs. Bailey told me about."

Then, walking with an approving air over the neatly kept gravel walk, she knocks at the front door of the little cottage.

The door is opened by a plump little woman in a fresh print gown, whose dark hair streaked with gray is smoothly banded back and whose round, dark eyes meet her visitor's with a peculiar child-like directness, while a welcoming smile wrinkles her tanned and ruddy cheeks. This plump little body extended a hand to her visitor, leaning forward as she does so with a cordial air which seemed to say, "Walk right in, please."

"Dear me," thought the tall, prim woman as she involuntarily accepted the warm hand-clasp, "she does not know me from Adam, and I—why, I forgot to ask her name. I have only heard her called Miss Hetty. How ridiculous! I cannot call her so, a stranger," and she is tempted to turn and walk back the way she came; but before she hardly knows it she is seated in a rocking-chair, her hat is off and a fan handed her, while the bright-faced woman with the child-like eyes has been saying: "Walk right in, Mrs. Adams, and sit down. It's warm, too warm to keep your hat on. Here, take this fan and I'll get you a glass of lemonade. I've just made a pitcherful."

And Mrs. Adams, wondering how the little woman knows her name, sips her lemonade gratefully, and her sprightly hostess prattles on: "Mattie was in last evening. Said she thought you'd be in to-day to see about ways of cooking apricots. I've seen you in church several times. Our Episcopal congregation is not so large but that we notice newcomers. Some one told me your name. ("She takes it for granted I know her," thought the visitor). Isn't that breeze nice? My home is so fixed east and west, catches sea and land breezes. Never suffer from the heat if thermometer's in the hundreds. Set my spray going, too; watching the drops makes me cool all over. Imagination works easier that way, don't it, than when one tries to get warm on it, like Col. Sellar's candle in his stove? Ha! ha! ha! And it's such nice weather for drying 'cots, too, isn't it? With a fog now and then nights to moisten up the dried ones. I'm so glad for the fruit drier; and when you are rested wouldn't you like to come right into my kitchen and see some of my marmalade and jelly out of 'cots? Made my jelly all up first; preserves and marmalade now. And oh! don't you want some more lemonade, and will you excuse me a minute? I've some 'cots on my gasoline stove now. My kichen's cool, too, and smell of fruit is so nice."

Miss Hetty flutters away, and Mrs. Adams, smiling amusedly to herself, thinks: "I feel just as I did when I was a little girl and went calling on one of my playmates."

By and by Mrs. Adams is ushered into the neat kitchen with a porch on the south side, dark and cool, covered with Australian pea vine, and one on the north inclosed with wire netting, while tall pepper trees shaded the west windows through which came the ocean breeze. Here she was seated in an old-fashioned "Boston" rocker, comfortable with cushion and head-rest; here she was shown various forms of apricots preserved, and personally observed the bottling of several quarts, and here she posed over cook books, printed and written, asked many questions, was told many things she did not know enough to ask about, and enjoyed such a long free-and-easy chat as she had not had she could not remember when.

At last Mr. Adams tears herself away, but she takes with her a roll of manuscript, notes and recipes, some in Miss Hetty's round, copy-book hand, but most of it in Mrs. Adam's aristocratic chirography, pointed, slanting, the letters looking as though out in a high wind, or else running a mad race, trying to get to the right hand side of the page first.

As Mrs. Adams reached her own door again, she laughed softly to herself, saying: "Why, I do not know her name yet. If I have not been calling her Miss Hetty all the time? Mercy, what is there about that little woman bewitches one so?"

And little Miss Hetty, as she stands in her kitchen blanching kernels for a jar of apricot marmalade, nods her head as she says to herself:

"My!] wouldn't she be horrified if she knew I came from 'Bosting' too."

Tom Was a Wise Man.

Senator Stanford has taken lately to exercising by walking up and down the block on Connecticut avenue, writes Kate Field. On one of the last walks he took before sailing for Europe, he met a poor man whom he had helped freely on former occasions. The Senator stopped Tom and inquired how he was getting along.

"Pretty well, Mr. Stanford," replied Tom, "but it is mighty hard work; we just manage to keep out of the poorhouse."

"How many children have you got now, Tom?"

"Ten, sir, I think," said Tom.

"I tell you what, Tom," responded the Senator, "you give me one of the ten to bring up and I'll give you a railroad in exchange." Tom looked delighted for a minute, then scratched his head with a puzzled air.

"Well," prompted the Senator, "what do you say to that?"

Tom looked embarrassed, then stammered out: "Well, now, I don't want to be disobliging, Mr. Stanford, but while you might know what to do with a baby, I was thinking that I wouldn't know what to do with a railroad when I got it."

The Senator thought Tom was one of the wisest men he had met for some time.

WHITTIER'S COLOR BLINDNESS.—John G. Whittier is color blind, and Lucy Larcom, the poet, relates the following anecdote illustrating his infirmity: Driving with Mr. Whittier a few years ago, she saw red columbine growing by the roadside, and asked the poet to gather some for her. Mr. Whittier at once left the carriage, fumbled around among the grass and columbine, and, with his hands on the flowers, called out in despair, "Where are they? Where are they?" "In your hand," said Miss Larcom, who had forgotten the poet's color blindness. Green and red were alike to him. Except in form, Mr. Whittier saw no difference between the green grass and the red columbine.

—First visitor (to museum)—"Did you see that man dining on carpet tacks and nails and things?" Second visitor—"Yes. How I envied him!" "Envied him?" "Just think how he must enjoy shad."

The Spectre Wedding.

Mr. Martin Dupont was a Justice of the Peace in the little town of Marlburg. He had been elected to office at the close of the war of 1812, and had acted in his present capacity for nearly nine years. Men of Mr. Dupont's type were very common in those days, and even now one does not have to search far to find one of these self-complacent, pompous gentlemen, who delight in winning admiration from their associates, who always have at their tongue's end a great many stories in which they played the leading part, but who are, nevertheless, very superstitious, so much so, indeed, that a glimpse of the moon over the left shoulder, or a howling dog, has the power to make them melancholy for a week.

Having failed to secure for himself as large a share of the world's goods as he had wished, Mr. Dupont was fully resolved that his two children, Henry and Margaret, should not be lacking in wealth. As for his son, he very wisely concluded that a good education, added to his natural abilities, would secure for him a place in the world; and already Henry was showing the wisdom of the plan, and by his rapid advancement in business was more than fulfilling his father's expectations. It had always been Mr. Dupont's desire that his daughter should marry some rich man, but Margaret had fallen in love, very foolishly, according to her father's idea, with the principal of the Marlburg High School.

Charles forster had several times pleaded his suit in vain before Mr. Dupont. There was no fault in the young man, Mr. D. rather grudgingly admitted, except that all he had to depend upon was his salary, but still no man should presume to become his son-in-law who had not money enough to support his daughter in better style than that in which she was then living. He liked the school teacher very well as a friend, but as a son-in-law—that was quite another matter.

Nevertheless Charles and Margaret did not despair of their cause, although Mr. Dupont was seemingly immovable. The thought of an elopement was banished by them both as being dishonorable, and as no other plan seemed practicable, they very wisely resolved to wait until some kind fate should come to their aid. This, then, was the condition of affairs when our story begins.

Mr. Dupont's duties as Justice of the Peace did not confine his law practice to to Marlburg, but very frequently he was called away to attend various lawsuits in neighboring towns and hamlets, and it so happened that at this particular time he was engaged in a case of some considerable importance in an adjoining town. On account of the nearness of the place, it was Mr. Dupont's custom to drive his own horse back and forth and to spend his nights at home.

One night, on account of an unusual press of business, he was obliged to remain beyond his ordinary time of leaving, and after the work was completed he yielded to the urgent invitation of his client to chat for a few moments. As they puffed away at the choice Havanas, they began telling each other of various exciting adventures and wonderful experiences. Time slipped away so rapidly that it was after 10 o'clock before Mr. Dupont suddenly remembered that a seven-mile drive lay between him and his home. Hastily bidding his friend good-by, he started for the hotel stable to get his horse.

The weather had changed while the two gentlemen had been chatting, and now the ominous stillness and the cloudy sky admonished Mr. Dupont that, if he wished to get home before the rain began to fall, he must hasten. Hastily throwing a quarter to the sleepy hostler, he sprang into his buggy and set out on his homeward way.

The road was a lonely one; houses were few and far between, and a few miles out of Marlburg some lonely woods lined the road on either side, and adjoining the woods was a graveyard. As Mr. Dupont drove on into the darkness he began to become nervous, the wierd stories that he had just been hearing kept flashing through his mind, a great many wrong deeds of his life came before him, magnified by the darkness and solitude, and among other things he began to wonder if he was doing just right in refusing his consent to his daughter's marriage. In this frame of mind he approached the woods; involuntarily he tried to quicken his horse's pace, but the darkness and the low murmurings of thunder seemed to have affected the horse too, and the sagacious brute tried constantly to slaken his pace. How lonely it seemed there—no houses, no living being, nothing but the dead in the graveyard beyond. Suddenly the horse stopped and

snorted. Mr. Dupont saw two white figures suddenly dart into the road; one stood beside his horse, and the other beckoned him to descend from his wagon. His hair rose and his tongue seemed glued to his mouth. The silence was terrible. If those white beings would only speak; but no sound came from them. At last in desperation he stammered out:

"Who are you, and what do you mean by stopping me here in this way?"

"We are spirits of the departed dead," a sepulchral voice replied, "and we have need of your services; descend from your vehicle, do as we bid you, and on the word of a ghost you shall not be harmed."

The terrified lawyer descended and stood by the speaker's side, while the other ghost tied his horse to a tree and joined them.

"Yield yourself entirely to us and you shall be safe," said the spokesman. "You must needs walk far and must allow us to blindfold your eyes, in order that you may not discover before your time the way to the land of the shades. No more words must be spoken. Obey."

Mr. Dupont was so terrified that he could not speak, and in silence allowed a cloth to be bound over his eyes; then, escorted by his ghostly companions, he began to walk. It seemed to him that he would never be allowed to stop; seconds seemed ages; every attempt of his to speak was checked by impatient groans of his guides. At last, after walking half around the earth, as it seemed to him, he realized that he was being piloted up some steps, and by the feeling of warmth he knew that he had left the open air.

"The justice of the peace may be seated," said the ghost who had done all the talking.

Mr. Dupont sat down and the cloth was quickly removed from his eyes, revealing to his astonished gaze the interior of a room dimly lighted by wax candles. Every side was hung with black curtains, and on four black-covered stools facing him sat four white-robed spectres, while beside him stood another dressed like his companions. Before he had time to more than wonder at his surroundings, the spokesman began:

"Mr. Dupont, we have a solemn duty for you to perform. You are a justice of the peace in the world of the living, and a man dear to us on account of your noble life; therefore are you here. We have in these abodes of the dead two young shades recently come from the other world. Each of these died of a broken heart because a stern parent forbade them to marry. What do you think, sir, of such a parent as that?"

Mr. Dupont wiggled about uneasily in his chair, and at last he said: "I think, good shade, it was very wrong of him."

"We knew you would," resumed the ghost, "because you are a kind man, and one who loves his children. Now do we understand you to say that if the poor girl had been your child it would never have happened?"

"Surely it never would," replied the frightened Mr. Dupont.

"We have not misjudged you, then," replied the shade, while the other four ghosts nodded approvingly. "We have summoned you in order that you may unite them in wedlock, so that in this world at least you may be happy. Such a marriage as this is not common among us, so we brought you here, a good justice of the peace, rather than a minister, who might have been shocked at these proceedings. You can marry them just as well as a clergyman. Now, sir, will you oblige us by marrying these two shades? If you will consent you may depart at once to your home. Will you?"

Marry the two shades? Of course he would; anything to get away from this terrible spot. And so, without the precaution of stipulating his fee, he stammered out:

"Oh, yes, surely, anything you wish."

No sooner had he given his consent than one of the black curtains was drawn aside and two other beings in white entered and stood before him. The other shades rose, and Mr. Dupont, not wishing to be the only one to keep his seat, rose too. The good justice had never married shades; he did not know quite how to proceed. They looked exactly alike; he did not know which was the bride and which the groom. He wished he were well out of it, and the only way to gain his wish was to proceed quickly with the ceremony, and so he began at once. In some way he managed to get through, although he could not have told afterward how it was done. He turned to the bride when he said: "Do you take this woman to be your wedded wife?" and to the groom when he should have addressed the bride; but at length, much to his relief, the "I do" was said by each, and the justice finished with the "I pronounce you man and wife."

But all was not yet over. No sooner had the words left his lips than one of the beings before him threw aside his ghostly robe, and there, in a beautiful wedding gown, stood—his daughter, Margaret. Mr. Dupont started to speak, but he only gasped, for around him stood the other ghosts; they too had thrown aside their robes and stood revealed. Could he believe his eyes? Yes, there was no mistake, he had married his daughter to Charles Foster, in the presence of his wife, his son, and three family friends; and the justice knew enough of law to realize that the ceremony was binding. The black curtains, too, were torn down, and there they all stood in his own parlor.

There was no help for it, consequently Mr. Dupont submitted, and someway all his friends thought that he was very glad that the joke was played upon him; at any rate, in later days, as he trotted his grandchildren on his knees, he never tired of telling over and over again into their wondering ears the tale of the spectre wedding.—Frank D. Blodgett in the Amherst Literary Monthly.

Thackeray's Hearty Meal.

This pleasant story is told of Thackeray by a woman at whose house he visited. After having told a lot of delightful stories, Mr. Thackeray remarked that he must leave, he was so terribly hungry. We told him that we could give him a very good dinner. "There is nothing, my dears, you can give me," he said with a funny sigh, "for I can only eat the chop of a rhinoceros or a slice of an elephant." "Yes, I tan," exclaimed Dot, the three-year-old daughter of the house. She disappeared into a big cupboard, and soon emerged with a look of triumph on her fat little face, holding in her hands a wooden rhinoceros and an elephant from her toy Noah's ark. Putting the two animals on a plate, she handed them with great gravity to Mr. Thackeray. The great man laughed and rubbed his hands with glee, and then, taking the child in his arms, kissed her, remarking: "Ah, little rogue, you already know the value of a kiss!" Then he asked for a knife and fork, smacked his lips and pretended to devour the elephant and rhinoceros.

Chaff.

—There is always room on top—especially for the largest strawberries in the box.

—Young Authoress (reading MS. aloud)—"But perhaps I weary you?" Enthusiastic friend—"O, no; I long to hear the end of your story."

—Scads—"You say he left you no money?" Baggs—"No. You see he lost his health getting wealthy, and then he lost his wealth trying to get healthy."

—Tommy—"Paw, when a man commits political suicide does he shoot his head off?" Mr. Figg—"No; merely his mouth?"

—New Wife—"To-morrow is your birthday, darling, and I am going to stop at the jeweler's and buy you a present." Her Hubby—"Get something cheap, pet. I haven't paid him for my Christmas present yet."

—"WHAT is a propaganda?" inquired the teacher. The boy looked at the ceiling, wrinkled his forehead, wrestled with the question a minute or two, and answered bravely that he guessed it was the brother of a proper goose.

—CONSUMPTIVE: "Yes, the doctor says I won't live six months if I stay here. Is your section of Florida healthy?" Florida Man: "Healthy? Half the people down there want to sell out and come North." "Eh? Why?" "Tired of life."

—HER IDEA OF IT.—Maudie's papa is night-editor on a newspaper—a fact which Maudie apparently hasn't learned; for, when some one asked her a few days ago what her father did for a living, she replied: "I div it up. I dess he's a burglar, 'tause he's out all night."

—A: "WHY have you thrashed your son so unmercifully?" Peasant: "Because he dreamed last night that he won 500 marks in the lottery and then went and spent every cent of it on a bicycle."

THE POPE'S WIT.—A Vatican correspondent relates the following story of the days of Pio Nono: A great French lady, having obtained an audience, threw herself at the Pope's feet and fervently thanked him for having restored her to health. "But how have I done it?" inquired the Pope. "I procured a stocking that belonged to your holiness,' she replied. "One of my stockings?" "Yes, I put the talisman on my diseased foot, and it has been completely cured." "Madame," replied the Pope, a little maliciously, "fortune has been very kind to you. You need only put on one of my stockings and your foot is healed, while I put on both my stockings every morning and I can hardly walk."

YOUNG FOLKS' COLUMN.

Grandfather Longlegs Shedding His Skin.

Written for the RURAL PRESS by ISABEL DARLING.

I heard a softly-cooing tone
And happy, smothered laughter,
And then a sob, and pitying words,
So gently followed after.

To where, just through the door ajar,
Curled close within the corner,
Was blue-eyed Mabel all alone,
Like little Jacky Horner.

"Poor 'ittle bug!" she said and sighed,
Who stole you' head, I wonder?
Did Kittie bite it off, or Dod
Bang-shoot it wiz a funder?

"Oh, Oh! what lots of long, long legs!
One, five, two-forty, maybe!"
And when I softly knelt beside
The loving, wondering baby,

She spread her chubby hand and cried,
With trembling lips and tears of sorrow,
"His head is losted, mamma, see!
Do make him one to-morrow!

"Get what? What's mi'scope? O I know,
The spec'le wiz 'e footies.
I see it now, and wee bit eyes,
Such shiny, teenty beauties!

"What makes his legs so squirmy. Why
They're all in loops and scollups!
He tumbles all across my hand,
Like Robby goes ker-wollups!

"He's pus'in' off his panties, see!
He didn't say 'Please 'scuse me.'
His head's so 'ittle he don't know
It's nice to say 'Please 'scuse me.'"

She gazed from where the shell-like form
Still seemed with motion quaking
To where its newer counterpart
His toilet he was making.

And then in wondering tones she asked,
"O was he just a-bornin'?
He's one, he's two! or did he die,
And is it Gabri'l's mornin'?"

In the Changing Monsoons.

We were upon an American trader, bound for Manilla. The Yellow sea is true to its name, being colored from the mud of the great Si river. It is open to every wind that blows, and to every current that runs, and is always uneasy.

The season was the worst of all the year, for it was just at the changing monsoons. The captain was a daring Yankee skipper, and, with every inch of sail which the schooner could carry, he drove her like the gale itself over the angry Yellow sea.

Just before daylight the men on the port side were thrown unceremoniously out of their bunks. There was a rush for the deck. The wind had shifted without warning. The schooner had suddenly keeled. Men were cutting away the mainmast, for she was capsizing. Her bows were well under water before the strain was relieved, and she emerged, slowly, from the sea that had almost engulfed her.

She was a sorry-looking sight as she fell off before the gale, though the whole transformation was the work of less than ten minutes. What we saw, too, was far from the worst.

The captain's face was grave as he stood by the man at the wheel, watching the prow swinging a hundred feet to the lee at a sweep, then setting down into the dragging, seething foam, as though it had no energy to rise again.

The mate came aft and the captain said: "Man both the pumps and have the extra pumps ready. Set the carpenter at work if he can. Get the tarpaulins out and report." But he did not take his eyes from the prow.

There was something in that weather-beaten man that fascinated me, in spite of the storm, as he stood there, with fixed eyes and folded arms, solely responsible for the lives and cargo about him, master of a leaking and disabled vessel in the midst of a terrible gale. All was hurry and confusion about him, but he did not heed it. There was no shadow of cowardide. He was calmly calculating the frail chances of life against the overwhelming probabilities of death.

The mate reported that the leak was out of reach and that the water was coming in nearly 800 strokes an hour.

"The capacity of the pumps is a thousand stokes," replied the captain. "Keep them hard at it."

All day long the sailors worked at the pumps. The captain was everywhere, relieving an exhausted sailor, working at the ropes, watching the horizon for a sail, examining the water in the hold, always the same calm, quiet, bronzed face, without a trace of anxiety even, except in his Yankee-blue eyes.

The water rose and rose in spite of the tarpaulins and in spite of the pumps. The leaks were increasing and the gale did not abate.

All night long the work went on, and at daylight it was the worst of all. Old, bronzed sailors were fairly white, strong men lay utterly exhausted upon the deck, rolling as the vessel labored in the heavy seas. Even the schooner seemed to have given up the struggle. She drove her bows sullenly into the waves, with no effort to rise above them. Only the captain was unchanged.

When it was fully light, the captain, naked to the waist, appeared among the men at the pumps. "Boys," said he, "the water is gaining on us. If the gale lets up we may hold her till daylight to-morrow. If it keeps on we shall go down with the sun. We are a hundred miles from the shore, making four miles an hour. There are two boats left. Those who wish can take them now."

There was silence for a moment. Even the gale whipping through the rigging seemed to wait and listen as one poor, haggard fellow who had fallen upon a coil of rope staggered to his deserted post, exclaiming:

"To the pumps, men! For life and the captain! Who dares desert the ship?"

That was enough. The pumps worked away as they had not for 12 hours. The wind abated more and more. The tarpaulins caught, and two hours later came the cheering news that we were gaining on the water. Still, for more than 20 hours we worked.

I have seen the ship that carried me on fire, I have been cast upon the rocks at midnight in a hurricane at the foot of the Red sea, but I would rather go through both again than repeat those two days and nights upon the Yellow sea.

Not a sail appeared, but we sighted land at last, reached the harbor, and ran the schooner aground.

As boats started with the ropes for shore, and the sailors burst into a cry of joy, the Yankee skipper, who had kept hope and strength in us all, pressed his hand over his eyes for an instant, and then fell senseless to the deck.—Lieut.-Col. Thorndike, in July Wide-Awake.

DICK'S AFTERTHOUGHT.—A certain celebrated Southern judge, who was not a believer in revealed truth, was in the habit of twitting his body servant on religious matters. "Dick," he said one day, "you say the devil besets you; now I want to know why he lets a sinner like me off free?" Dick could not tell why, but the next day he went duck-shooting with his master. The first time the judge fired into the flock he killed two or three and wounded as many more. At once the hunter threw down his gun, and with sticks and stones tried to make sure of his wounded game, but paid no attention to the dead ones floating down the stream. "Massa," called Dick, "it jist come to my mind why de devil troubles me so much, sah, an' lets you 'lone. You like de dead duck; he done got you safe, sah. I is de wounded duck; I is tryin' to get away, an' he feared I gwine to do it. If you wuz to flutter a little, sah, and mek' out you gwine git 'way, I spec' he mek a big splash arter you, same he do arter me, sah."

ROYAL


BAKING
POWDER
Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

THERMALITO FRUIT ITEMS.—Oroville *Register*: The fruit trees at Thermalito this season are doing better than ever before. The new orchards are being taken excellent care of and the ground is in fine condition. The orange trees are exceptionally large and thrifty and they are thoroughly cultivated. This fact is noticeable and patent to all, that whenever the land has been well cultivated the trees have thriven marvelously. On the other hand, whenever poor and stunted trees are found the ground shows that it has not been kept in good condition. We never saw the whole colony looking better than it does now. On every hand improvements are going ahead, land is being prepared for winter, when a large additional acreage will be planted. We learn that a 60-acre olive grove will be planted next winter on land east of Chas. Retson's residence. This is higher toward Table Mountain than any land yet planted in the vicinity. Messrs. Fogg, Harkness, Martin and others are interested in this big grove. Mr. Stanton will put out 17 acres of oranges this coming winter, and many other improvements are contemplated. There will be a good orange crop at Thermalito this fall and winter.

Kern.

GRAIN WITHOUT IRRIGATION. — Bakersfield *Californian:* Between this valley proper and mountains which encompass it upon three sides, there are elevated mesas which until recently have been considered comparatively worthless, as irrigation by the present system of canals is out of the question. But of late, led perhaps by the remarkably good results in the similar-lying lands around the mountain valleys of Tehachapi, different parties have been sowing grain, and it seems reasonably assured that good crops can be obtained for probably four seasons out of five. It is generally conceded that the best way is to summer-fallow, then, in the fall, cross plow. It will not do to scratch the ground, the plowing must be deep—ten inches will be three times as productive as three inches. And it is also advisable to sow the grain with a drill rather than broadcast, as by that means it roots deeper under the ground and is better protected when first sprouting if a few hot days should come. This season, Pogson & Bailey have 330 acres in section 34, which they cut for hay, and are now regretting it, because, had it been harvested it would have yielded at least 13 sacks of grain to the acre. J. G. Stahl has 30 acres, and J. F. Morris 45 acres, outside of the Tejon fence, that would have yielded handsomely if harvested, and has cut form one and a half to three tons to the acre. Within the boundaries of the Tejon rancho, 1350 acres were sown in grain. It is being cut and stacked under contract, by the Oldershaw brothers of Antelope, and will probably average two tons of grain-hay to the acre. Had this been harvested, it would have returned a splendid yield of grain. The lesson of these results is, there are now tens of thousands of acres of idle land able to yield a handsome revenue under cultivation without irrigation, which the owners, if wise should no longer neglect.

FARMING ON THE WEED PATCH.—Grangeville Cor. Visalia *Delta*: George Mashmayer reports things flourishing in the Weed Patch. His father, William Mashmayer, will clear $20,000 over and above expenses this year on his grain. It is going 16 sacks to the acre. They own their own combination harvester. But little water is required for irrigating purposes, and what is needed they furnish with a steam pump. They have 80 acres set to fruit, which is two years old and in a thrifty condition. Mr. Mashmayer has a section and George has a quarter section, all fenced rabbit tight. He was on his way to San Francisco to purchase another quarter section adjoining his present holdings. Mr. M. will be remembered as the owner of the place now known as the Del Monte vineyard, opposite George Reaves' place. George M. also stated that two years since land in the vicinity of the Weed Patch was selling at $3 to $5 per acre, but now it is $25 to $30 per acre. Although George thinks the Weed Patch is a dandy, he does not hesitate to say that the Lucerne country is far the best.

Los Angeles.

POMONA APRICOT CROP.—Cor. L. A. *Express*: The latest and best reports of the apricot crop in Pomona this season are that the yield will run over 1000 tons.

ARTESIAN WELLS.—L. A. *Farmer:* Los Angeles county has 627 artesian wells, the second largest of any county in the State. Orange county leads with 649. The average depth of the artesian wells of this county is 187 feet, the shallowest being 20 feet and the deepest 600 feet deep. These spouters cost an average of $394 each, and flow at an average rate of 192 gallons per minute. The ordinary flow from one of these underground streams would therefore cover one acre about ten inches deep every 24 hours.

Nevada.

FINE WHEAT.—Grass Valley *Telegraph:* Mr. Peaslee, who has a farm about 16 miles southerly from Grass Valley, brings us a sample of wheat grown on his place this year. The wheat is the White Australian. The stalks are fully five feet long and the heads are large with full and plump white grain. Mr. Peaslee has just cut eight acres of this wheat, and it will give over 35 bushels to the acre. The wheat patch was beautiful to look upon before it was cut, the heads all being on a level. Mr. Peaslee holds that a man reaps what he sows, and that when he plants good seed he will get good results. He says our foothills, with proper planting and cultivation, can beat the valley sections in the way of raising grain. Mr. Peaslee's barley this year is as fine as his wheat, and it is the same thing with all his crops.

Orange.

DRIED APRICOT CROP.—Orange *News*: The output of dried apricots from Orange county this year will be at least 300 tons. The fruit is in good demand, and offers of ten cents per pound have been freely made. The bulk of the crop has already been sold at that price, but many are holding for an advance with good prospects of receiving it. Ten cents is a fair price, and the chances are that those who sell now will do as well as those who hold.

Plumas.

A MOUNTAIN CREAMERY.—F. S. Chapin in Sacramento *Record-Union:* At Sierraville, A. S. Nichols has gathered a dairy of nearly a hundred grade Durham cows. He has a nice creamery, with De Laval separator and modern appliances, and sells no butter less than 25 cents per pound. He has a hill range for dry cows and beef cattle a few miles from the home dairy and carries on quite a butcher business, as a man needs to do who is buying cows for dairy purposes. He bought three high-priced sires because they were Holsteins, and has reached a point in his dairy education where he is in the market for a bull representing a long line of ancestors noted for prepotency in the direction of butter. He is well pleased with the beef qualities of the breed, but wants a stock that will produce butter as well. His grade calves look almost as fine as a lot of thoroughbreds, but it is partly owing to his excellent system of feeding the warm milk directly from th separator in such a way that each calf gets his share in a clean pan. He has a row of 40 stanchions, with gates leading to two outside pens and a third to the calf pasture. For the first week or two, the calves are kept in the kindergarten on milk as it comes from the cow. Here they are taught to drink. Then they are promoted to a place in the pasture. When feeding time comes, 40 calves are turned at once from the pens to the stanchions. Each has his share of milk in a clean pan that was scalded since last feeding. No one can disturb his neighbor. The older calves are getting a little oilcake every day, and many of them are now fit for veal. Mr. Nichols intends to keep on testing, selecting and breeding cows, until he gets 100 that reach his high standard, producing not less than 300 pounds of butter per year. He is almost equally interested in swine, and is a good customer for the best Berkshire breeders. He killed, for the Fourth, a grade Berkshire that was 90 days old and dressed 68 pounds. The mothers produce seven to eight at a litter, and the whole crowd will average one pound live weight for each day of their age. A large share of this remarkable result is due to their being fed on plenty of milk as it comes warm from the separator.

San Bernardino.

HIGHLAND FRUIT AND HONEY NOTES.—Cor. *Times-Index*: The apricot crop is of very insignificant proportions this season, hardly warranting the expense of picking. The peach crop, however, is a very large one, and the quality of the fruit promises to be exceptionally fine. Dried fruit buyers, of whom there are a number in the field at present, are offering 9 to 9½ cents per pound for dried apricots, and at these figures have managed to pick up an occasional small lot. Our advice to deciduous fruit growers is to hold their products for higher prices, which will assuredly rule later on in the season, as both domestic and Eastern markets are completely depleted of dried and canned fruits of all descriptions, and will, on account of shortage in Eastern fruit crops, necessarily be compelled to purchase extensively of our products. Similar conditions are prevalent in the honey market, and our apiarists would be exceedingly foolish to dispose of their crops early in the season at 5 cents per pound, which several buyers are now offering for extracted. We are pleased to note, however, that the apiarists are not inclined to accept the above price, and are holding for 6 cents per pound, which they will undoubtedly obtain.

San Diego.

AN ENEMY OF THE RED SPIDER DISCOVERED. *San Diegan:* Horticultural Commissioner Jones reports a new discovery in the form of a natural enemy to the destructive red spider. The red spider has become one of the most destructive foes to horticultural interests, and especially on the uplands near the coast. It has been particularly troublesome at Chula Vista, and all treatment has failed to permanently eradicate it. Commissioner Jones observed lately, however, that in an orchard previously affected, the spider was disappearing without special treatment. He looked for a cause, and finally found it in a short-winged fly. Commissioner Jones will have specimens of this fly on exhibition, and will report further results.

Santa Barbara.

FRUIT CROP.—S. B. *Independent*: At the monthly meeting of the Santa Barbara County Horticultural Society, Mr. Knapp of Carpinteria reported apricots abundant, but not up to the usual standard of quality; peaches were said to be fine; pears early, with good prospect; walnuts, heavy crop and doing well. Mr. Stevens reported on Montecito. He said there was a large crop of apricots, but being under size there was no sale for them, while Mr. Knapp stated that at Carpinteria apricots were bringing from ten to fifteen dollars per ton, delivered at the depot; that 20 boxes of 50 pounds each was a good day's work for a picker; 50 boxes are hauled per load to the station, thence shipped to Newhall to be dried in the sun. Mr. Holden of Goleta reported a fair crop of fruit in his vicinity. Walnuts were looking well; apricots small. (It seems a great pity we have no factory here for the manufacture of jam and jelly, when fruits are off size and abundant. It would present a desirable addition to our resources and give much needed employment to women and children.) Owing to the unfavorable season, so Mr. Holden stated, but little planting of orchards had been done. Mr. Stevens said that 2500 lemon trees were about being planted in his immediate neighborhood, besides the smaller groves that had been planted.

Santa Clara.

CREAM OF TARTAR WORKS.—S. J. *Mercury*: A new industry, and one of great importance to the county, too, has been established on Bush street, near the narrow gauge depot. The California Cream of Tartar Works, of which G. De Latour is manager, were opened in San Jose last summer and $10,000 were expended in the erection of a building and plant on the present site of the factory. The cream of tartar is made from the pomace from the wineries, which before the establishment was a total loss, but for which Mr. De Latour pays $1.50 per ton, and he uses all there is to be had in the county. The pomace is first boiled in tanks on the upper floor and then carried by a large crane and lowered into a press on the second floor. Here the liquor is pressed out and run into large copper tanks, where it is crystallized by cooling. There is very little machinery to be operated. Mr. De Latour says he proposes to spend $7000 in improvements before the season opens this fall.

FRUIT NOTES.—Los Gatos Cor. San Jose *Mercury:* The fruit-gathering season may be considered fairly commenced. Early peaches are coming in quite plentifully, though some weeks will elapse before the varieties sought by the packing companies will be in condition. Apricots of all varieties are beginning to show the golden hue, which means that every orchardist must have a full team for picking in a short time. As usual, the Moorpark is not a full crop. The size, however, is all that can be expected. Other varieties are not quite up to the average size. Conflicting reports as to abundance or scarcity occur, depending upon whether a buyer or seller is interviewed. Averaging the reports, a fair crop may be expected. The prices certainly have an upward tendency. It is now known that the dried fruit of last season has been pretty much cleaned up or consumed, leaving but a small margin until the new fruit gets into market, and there is a general tendency to hold for good prices or dry on the farms.

WINE NOTES.—Los Gatos Cor. San Jose *Mercury*: According to the best accounts, the wine interests are looking better than for some years back. The Saratoga and Los Gatos Winery, as well as the Los Gatos winery, has worked off nearly all its last year's stock to good advantage—a fact thus proved by the prices of stock which are at par or above. The Los Gatos Winery tried the experiment of concentrating grape juice to a point beyond fermentation with good success. This must will keep in any climate and bear any amount of transportation, and is much used where thick, heavy, syrupy wines like Port are wanted. Besides being non-fermenting, the freight on its transportation is only about one-third that on the unconcentrated juice. It is worthy of notice that the Old Mission grape, raised by the Mission Fathers, is coming to the front again, especially for white wines, for which it is especially adapted on account of its high percentage of sugar, or resulting alcohol. Having no particular flavor of its own, it is readily qualified by judicious blending with grapes of positive flavors like the Zinfandel. The latter grape seems to be the standard for red wines. The Pinot, Malbec, Sauvignon, Vert, Cabernet, etc., will continue in demand for blending purposes.

Solano.

YIELD OF GRAIN. — Dixon *Tribune*: The *Tribune* has interviewed a number of farmers and presents the result below. Very few could be seen at this busy season, but a fair average can be gained. Frank Robben's summerfallow wheat yielded 14 sacks and winter-sown 9 sacks to the acre. H. Peterson's summerfallow averaged about 15 sacks, and his winter-sown 10 sacks per acre. S. R. Benninghoff's winter-sown wheat yielded 11 sacks to the acre. N. B. S. Coleman's summerfallow wheat averaged 12 sacks an acre. J. M. Dudley's summerfallow wheat is averaging about 15 sacks. H. Barnhart's summerfallow wheat is averaging about 10 sacks, volunteer wheat 6, barley 15 sacks. R. E. L. Stephens' winter-sown wheat is averaging 9 sacks to the acre. R. J. Currey's summer-fallowed wheat is averaging between 13 and 14 sacks to the acre, and the winter-sown about 10 sacks.

NUMBER OF FRUIT TREES.—Benicia *New Era:* Solano county has, at the present time, 1,046,482 fruit trees in bearing and 896 nonbearing. They consist of the following varieties: Apple, 3194; apricot, 228,584; cherry, 25,897; fig, 14,673; olive, 6187; pear, 185,781; prune (French), 123,546; lemon, 160; orange, 4346; almond, 89,499; walnut, 4468; nectarines, 9699. There are 3385 acres of grapevines in the county, of which 1228 are devoted to table and raisin grapes and 1158 to wine grapes. The remaining 896 acres are not yet in bearing.

Sonoma.

A LARGE SALE OF WINE.—Cloverdale *Reveille*: The largest sale of wine for some time in this section is the one which Mr. Smith of this place consummated with wine dealers in San Francisco. It embraced wines in his cellar of the vintage of '88, '89, '90 and '91—in fact all the wines he had for sale. Several carloads have already been shipped, and the balance is being forwarded as fast as possible. Altogether, it makes 15 carloads of ten tons each, or 150 tons gross of wines. These wines are highly thought of by dealers in the city, and much more could have been disposed of had the Smith cellars contained it. The prices were satisfactory, of course, to both dealer and manufacturer.

Sutter.

THE HONEY CROP.—Yuba City *Farmer:* The honey crop is being harvested at this season, and this county has quite an output of this product. At South Butte, Wm. Thompson & Son have several hundred hives which, with attention, will usually net from $2 to $3 per hive. The honey is excellent quality, the bees feeding on the wild mint along the tule borders. Those who have tried the business in this county report good profits from the same.

PEACH CROP SOLD TO A CANNER.—Yuba City *Independent*: The entire peach crop of the Abbott orchard, with the exception of the Crawfords, Alexanders and Fosters, was sold Friday to a San Francisco cannery. The sale will call for the delivery of from six to seven hundred tons of fruit, of the approximate value of $20,000. The purchasers take all fruit down to two inches in freestones and two and one-eighth in clings. The varieties excepted from sale will go East.

WHEAT CROP. — *Independent*: The harvest has now progressed far enough that an approximate estimate can be made of the yield of grain in the county. From information received from all parts of the county, we conclude that the yield will be good but not up to the standard of the best years either in quantity or quality. While the winter and spring on the whole were favorable to a good stand and uniform growth, short spells of mildly unfavorable weather had a slightly injurious effect. The wheat samples that have been brought in are good, but do not weigh quite as much to the bushel as the best wheat of last year. The average yield per acre will probably go 80 per cent of the best years; but as but little grain was drowned out, the aggregate will be nearly a full crop. The price of wheat remains low.

Tehama.

LARGE FRUIT-PLANTING.—Corning *Observer*: We had an interview with Mr. C. F. Foster of the Maywood Colony firm, and he informs us that arrangements are already made to plant about 500 or 600 acres in fruit trees for parties who have bought land in the colony.

Tulare.

DRYING APRICOTS WHOLE.—Hanford *Sentinel:* W. G. Nicholson has finished up his apricot harvest. His four-year-old apricot orchard yielded him $100 per acre net. He has dried a couple of tons of the fruit whole, and has made a great success of the plan. The cots are pitted without being split in two, and when properly cooked are equal in taste, if not superior, to canned apricots. Mr. N. says that the fruit should be soaked over night, then simmered (not boiled) in cooking. Boiling dried fruit of any kind detracts from its flavor.

FRUIT NOTES FROM AROUND GRANGEVILLE.—Cor. Visalia *Delta*: J. E. Tilton has got seedling apricot trees of the "Tilton" variety that yield considerable fruit. The fruit from two trees was picked and weighed. One tree yielded 15 sixty-pound boxes and the other 16 sixty-pound boxes. One tree, when six years old, produced 1100 pounds of fruit. The trees are now seven years old. The fruit is a fair size, good flavor and fine drying apricot. Ed. Gerow obtained four tons of apricots off three acres of orchard; that would be $266.66 per acre gross, at 10 cents per pound, which they are selling at. Raisin trays are being hauled in all directions, and the sound of the hammer can be heard from sun to sun.

LATE CROP GRAPES.—Hanford *Journal:* A way of disposing of the second and third crops of grapes produced in Lucerne, which are unfit for raisins, is a subject of much interest to fruit growers, and the distillery of the same into brandy seems to offer the best inducements for profit. In conversation with A. Hillstrom of this city, who was engaged for several years in the distillery business at Fresno, we gain some information which will be of interest to the raisin growers. He says that for a sum not exceeding $6000, perhaps for $5000, a distillery can be built that will have a capacity of producing 500 or 600 gallons of brandy daily. In Fresno the prices paid for second-crop grapes range from $8 to $14. He says that he purchased grapes there at $10 a ton, and then made a good profit in distilling them.

GRAIN CROPS TURNED OUT WELL.—Traver *Advocate*: Harvesting is well advancing and many machines are neatly tucked away for another year's use. The grain, taken as a whole, is considered excellent, and the general acreage good. The warehouses are becoming well stocked with grain, and a few shipments to intermediate points have been made, although many of the farmers are awaiting higher quotations.

ARIZONA.

CROPS IN SALT RIVER VALLEY.—Phœnix *Herald:* The crop of fruit in the Salt river valley this season is exceptionally large in quantity and fine in quality. The apricot crop was splendid, and the whole thing has been canned and dried in fine shape. Early peaches have also been on for some time, and nectarines and figs are ripening rapidly and in abundance, and the whole crop will be saved this season, thanks to our canning and drying facilities. These fruits should be secured by our merchants here and handled in preference to foreign fruits. Home industry is worthy of recognition. The farmers never received better average prices for all of their produce than they are receiving today with a demand for everything they can raise. The chances are that the supply of wheat, flour, barley and hay, furnished by this valley, will be exhausted long before the new crops put in an appearance next year, and prices will be accordingly good.

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

EXECUTIVE COMMITTEEMEN Hon. Thos. McConnell and B. F. Walton will be at Sacramento next week, and probably Master Davis and Committeeman Loucks.

ELK GROVE GRANGE recently lost its property (except the seal and minute books) by fire. The suffering Patrons and citizens of Elk Grove have our sympathy and hopes that they will shake off the ashes and work and prosper even better than of old.

QUARTERLY RETURNS.—Many reports for the quarter ending June 30th have been received. Others due, we trust, will soon be received, showing that Granges are alive and prospering all around the circle.

OFFICERS' REPORTS.—There is a standing resolution that annual reports from all officers of the State Grange shall be forwarded to the Secretary at a date not later than the 1st of September, and that the same shall be printed and ready for circulation at the opening of the State Grange. This resolution has been a dead letter heretofore from the fact that very few reports have ever been received by the Secretary in time to have the same printed. Shall the resolution remain dormant? Will not most, if not all, officers forward their reports in season for advance printing this year?

AMENDMENTS.—Patrons, remember that all proposed amendments to the constitution must be forwarded to and submitted by the Executive Committee, through the Secretary of the State Grange, to each subordinate Grange one month in advance of the State Grange meeting.

SAN JOSE.—E. T. Pettit, W. M., writes: "We are keeping up our usual interest in Grange work and planning for a hearty welcome to the State Grange next October." San Jose is the beautiful "Garden City" of California, and all old State Grangers know that a grand reception will be in store for Patrons at the coming session.

"GRAND AND PURE."—J. W. A. Wright, the first Master of California State Grange, and author of the National Grange Declaration of Purposes, in a recent letter, remitting one year's dues to Temescal Grange, remarks: "I certainly wish to have the privilege of retaining my membership; indeed, when Death's call comes, I want it to find me in good standing in that grand and pure agricultural brotherhood that I have loved so heartily and for whose good I have labored with all my might, and with no small personal loss pecuniarily to myself, so long as I had the opportunity and its official duties to perform. Had the ventures of life blessed me with an abundance, or had not my great financial loss on the dry plains of Southern California involved me with such payments of debts as I have been able to make (so that I have never yet gotten ahead), I would not only keep my dues advance paid, but would *give* to the cause that I have so loved. In kind and fraternal remembrance to all, etc."

EXCURSION RATES.—No doubt the usual reduction of one-third fare, first-class rates, will be granted by the transportation lines to all members and visitors to the State Grange meeting at San Jose, October 4th. This will furnish a favorable opportunity for many from all parts of California to enjoy a visit to that delightful city and its surrounding fruit farms and vineyards; to the Lick Observatory, close by, on Mt. Hamilton; the famous New Almaden quicksilver mines, 13 miles southwesterly, and the elevated vine and fruit regions of the Coast range in the direction of Santa Cruz, which pleasant watering place is about 30 miles, by narrow gauge railroad, west of San Jose.

MRS. HUER, of Mt. Eden, is editor of the *Rustler*, read at each meeting of Eden Grange.

"THE WORK OF ANOTHER DAY, ETC."

During the past four years the State Grange of California has been well building up in financial strength. It has also been gaining the confidence of each other and of the world at large. But has there not been a large amount of real Grange work that has been neglected during the years that have gone by? Should there not be preparations already going on for some course at our next annual session whereby there will not remain so "many things undone that ought to to be done?"

Our State Grange, as a rule, resolutes first-rate; but how do we carry out our resolutions? Do we not need a decided change in some respects? Can the State Grange expect an Executive Committee of three persons, who receive no pay for their time, and the sacrifices that have to be made of their private business to attend sessions of the committee, to pay their fare and board in attending all sessions, and do all the work that ought to be done between the annual sessions of the State Grange?

Ought we not to have at least five members on the Executive Committee, representing different interests and localities of the State? Are there not capable and zealous men and women enough to provide a larger board to meet to advantage at least once a quarter instead of semiannually, according to our present constitutional provision? We have a good committee; but is it numerous enough, and do they meet often enough, or can they be expected to without remuneration for time or expenses?

I ask these questions as a matter of present duty to my fellow-Patrons, believing that they have not thought of, or duly and fully considered the questions here stated. Let them be considered by the many, and also in time to provide for action, if thought best, at our next State Grange. So far, there has been no proposed amendments to the Constitution and By-Laws offered for the next session.

FOR THE GOOD OF THE ORDER.—Officers, Deputies and Secretaries can serve the good of the Order by putting information into as condensed and convenient shape as practicable for both local and State publishers Many Patrons could render publishers, readers and the Grange excellent service by sending in items, whether written in elegant style or not. Many can write better than they think for before trying their hand.

ORDER OF EXERCISES.—It is customary in most States for the Executive Committee to have prepared and published in program form a proper order of exercises for the annual session of the State Grange. A liberal number of copies are sent to each Grange sufficiently in advance to apprise its members of the important subjects to be discussed, and the rare musical and literary treat to be spread before them. This inspires interest in the coming session, and adds much to the pleasures and profits of the gathering. It certainly is a good policy for such important gatherings to have, as far as practicable, the leading announcements for the session understood in advance, and not have many of the best features of the program through the entire session announced only from day to day.

NOW FOR GRANGE WORK.—The rush of the grain harvest is over in most parts of the State. The live membership of the Grange doubtless stands better than it did one year ago, but there has not been that large increase which we ought to expect in prosperous times. The Grange is a solid, permanent organization. Its members owe the Order their good services. There is still nearly three months of the Grange year to cooperate in establishing new Granges and increasing the membership of others. Our annual session opens in the "Garden City" of California on the 4th day of October next. Let the members of every Grange use their efforts to make the best annual report possible, and then (as numerously as feasible) attend the session with the representatives and alternates and help make the session of 1892 not only an unusually profitable, but a specially memorable gathering.

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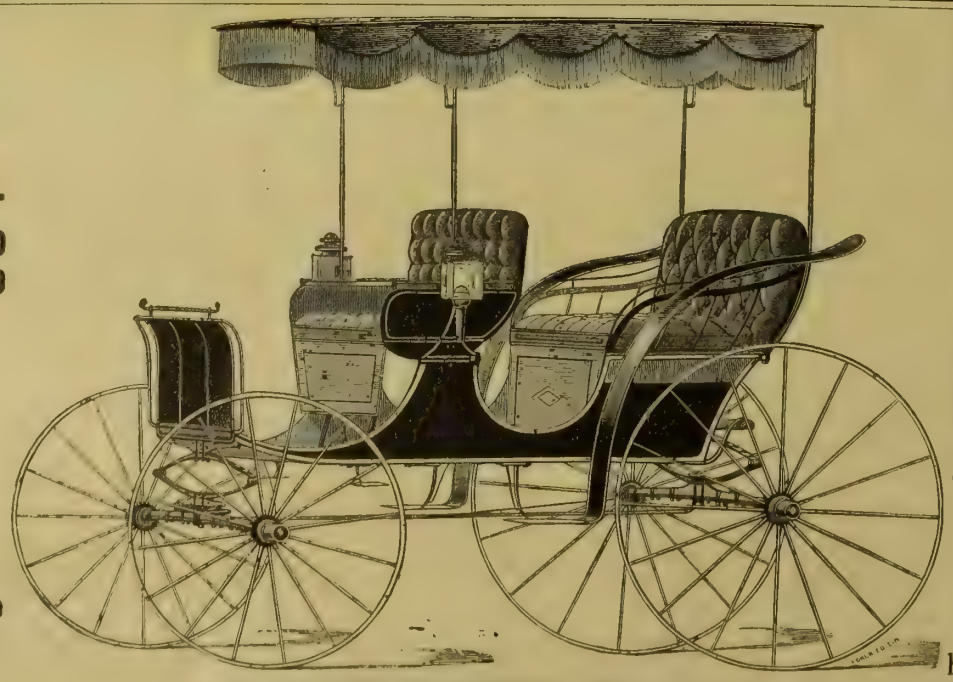
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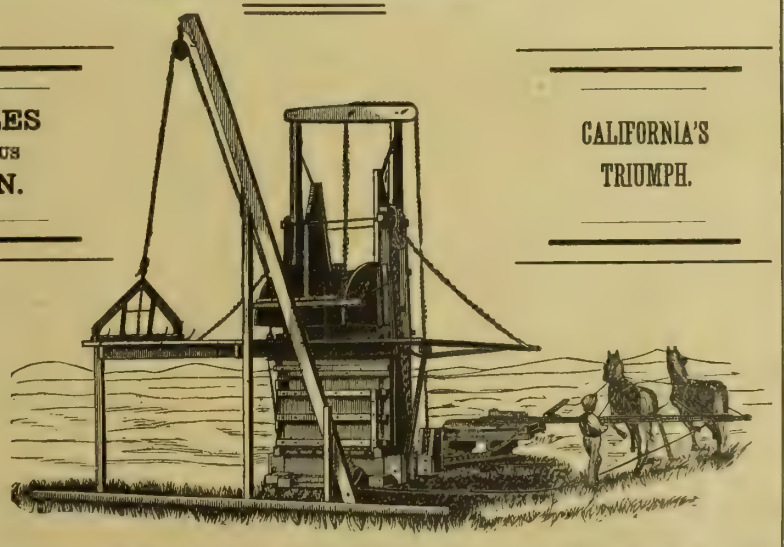
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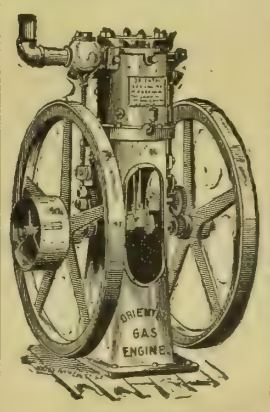
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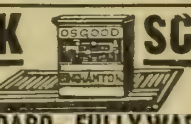
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POULTRY YARD.

Sallee's Home-Made Incubator.

J. W. Sallee of Clinton, Mo., who if we mistake not was formerly resident in Southern California, writes to the *Poultry Keeper* as follows:

I have made an incubator in my cellar, which is 8x8 feet. The tank is just eight feet square, and the walls of the cellar eight feet two inches square, leaving a space of one inch all around for ventilation. The walls are double, and filled in with sawdust. The water is heated by an upright tubular steam boiler. The steam is forced into the water near the bottom of the tank and in an oblique direction, so the water is forced in a rapid current around the tank. When the water is hot enough in the tank, the steam is turned off. I have several thermometers on the eggs at different points, but this is unnecessary if the incubator is properly constructed and the egg trays all on the lever. The top of door into incubator should be below the eggs, so the hot air cannot escape except through the ventilator. There is no necessity to have the bottom of the cellar filled up too near the eggs. I had mine arranged thus, save a ditch in center in which I went to turn the eggs. But the proper construction is to have the top arranged as above described, and have at least six feet space below the eggs, the whole cellar in fact, with walls close, so air cannot get out or in except as desired. The hot air from the tank will not fall to the bottom of the cellar, nor the cool air in the bottom rise to the eggs. With disinfectants and absorbents, all poisonous gases from eggs are absorbed, and the large body of pure air around the eggs will insure a better hatch. Moisture is supplied in the usual way, but more particularly by turning the steam hose loose in the cellar, both warming and dampening the air. This steam moisture is the best of agencies to success. I am going to enlarge the incubator to hatch 1200 dozen eggs at one hatch, and have the trays arranged so I can go under them, with at least six feet of space below the trays, and also have the trays double, with eggs confined between, and hung on pivots, so I can turn by simply revolving on the pivot. In this way I can turn the whole 1200 dozens in 15 minutes without exposing myself to the hot air above the eggs, as I now have to do. The air in the ditch, below the eggs, is always cool, and the air in cellar, below the eggs, will be pleasant when the eggs are at 103° temperature. The difference in the temperature of the eggs, the thermometer standing up between fertile eggs and one laying with the back upon the eggs, is four degrees. I aim to keep the one laying on its back at the temperature of the hen. This I do by putting my thermometers—each one of them—under a healthy hen and getting the correct temperature. Then I make a scratch opposite this standard, and always aim to keep the temperature near the "hen scratch." One thermometer stands at 108, another 103, another 105 and so on; but when the correct standard is registered on the thermometer, you only have to look for that. With so large a body of water and walls, so the air cannot escape, and made of good nonconducting material, there is no trouble to keep the temperature at just what you desire. A little heating, morning and night, is all that is necessary. You see that I have built upon the principles exactly of the "Poultry Keeper Incubator." But mine is nearer the correct principles, having more pure air, an easier way of supplying moisture, more perfect heating apparatus, and, what you have not, the earth itself at the bottom of the cellar to absorb carbonic acid gas. I built this incubator upon my own ideas of what was necessary for a large incubator, and I have not been disappointed in a single particular. My hatch, all through the season, has been 80 per cent, and much of the loss was because I thought the temperature, a little above the "hen scratch" about the time of hatching, would not hurt anything, but it *did* kill many chicks. The instructions of letting the temperature fall a little the last few days should be strictly observed. About the fourth day is another time the heat should not be allowed to run high. I did let the temperature run too high when one-half the eggs in the incubator were just four days in, and the other one-half had been in nine days. The first eggs put in were not injured, but many of the last I lost. The germ is more tender at that age—four days—and cannot stand much exposure either way. I have over 2500 chicks hatched at two sittings. The chicks are do[illegible] well.

How to Select a Good Layer.

How many poultrymen can pick out a good laying hen from a strange flock? Not many can do it; yet it can easily be accomplished after a short study of the make-up and characteristics, says the *O. C. Farmer*. There goes a hen with a thick neck, long head, ill-shaped, walks listlessly about, seemingly with no purpose or intention in view. She doesn't care to scratch, but hangs around the hen-house, evidently waiting for her next feed. She gets up late in the morning, and goes to bed early in the evening. That hen may be put down as a very poor layer. The eggs of some of the other hens go to help pay her keep. Here comes another hen. She walks briskly, and there is an elasticity in her movements that denotes she has something in view. She is neat and natty in appearance, small head, with slim neck, nicely arched or curved. She forages and scratches all day long, and may be too busy to come for her evening feed. She is at the door in the morning waiting to be let out. She snatches a few mouthfuls of food, and is off to the meadow, looking for insects. Before she gets out in the morning, she generally deposits her daily egg in the nest, or returns after a short forage. She is neat, clean and tidy, with a brightness and a freshness pleasing to the eye. That is the hen that pays for her food and gives a good profit all the year round. The writer has noticed these traits since boyhood, and knows that they are infallible. By studying these traits, any man may in a few years, by selection, have a fine laying flock of hens. Fanciers perforce must have good and bad layers, as they breed for feathers in the main, and the poor layer may be the bird with the fine plumage and markings. This is not wholly the case, of course, but it is partially so.—Farmers' Review.

FEEDING.—The results of several feeding experiments, made by the New York Experiment Station, indicate that for laying fowls of smaller breeds, Indian corn or cornmeal can be fed in quite large proportion with a considerable margin in its favor over certain more nitrogenous foods; but that while smaller fowls, even when confined, suffer little serious disadvantage under the ration, larger breeds will not endure for long periods a very large proportion of cornmeal in their feed, and unless at liberty, will do better with a somewhat more nitrogenous ration. For exhibition stock, a highly nitrogenous ration is to be recommended, except perhaps for a short period when extra weight is desired. From the fact of better "condition" attending the nitrogenous ration, and the tendency to have the production of eggs limited to a shorter period, an advantage will doubtless be found in the more nitrogenous and oftener varied ration for breeding stock.

FIBER CULTURE AT THE STATE FAIR.—A special exhibition of fiber culture will be made at the State Fair this fall at Sacramento of flax, ramie and cotton. This promises to be a good display, as ramie plants will be exhibited that are growing in the building at the present time. If any of the readers of the RURAL have samples of flax or fiber plants grown in California, they will be thankfully received by W. H. Murray, the State Superintendent of Ramie Culture, who will have charge of the exhibit. Mr. Murray may be addressed at 810 Castro St., S. F.

Fills the Bill.

Farmers perhaps more than any other class suffer from the charges and dishonesty of middlemen. If the farmer could sell his produce at best market rates and have honest returns made, his profits would be greatly increased. An agency or organization that would carefully supply the farmer with information in advance of his shipment, look out for his produce when it arrives, report to him as to the honesty of firms he may think of dealing with and do his purchasing at the best market rates, would be of almost incalculable benefit. To fill this want, lately a number of reputable San Francisco business men have organized a Farmers' Protective Bureau, with offices in the *Chronicle* building, San Francisco.

A Good Thing for Jackson.

We have learned, upon what we believe to be reliable authority, that the Aspinwall Manufacturing Company, of Three Rivers, Mich., will remove their entire plant to Jackson, Mich., about September 1st, where they have erected new buildings, equipped with the latest improved machinery specially adapted to their business. This old and reliable firm have manufactured potato planters and potato cutters for so many years that their name has become a household word in every farming community, and their customers will be pleased to learn that their plant at Jackson will furnish them with additional and better facilities for turning out their popular machines.

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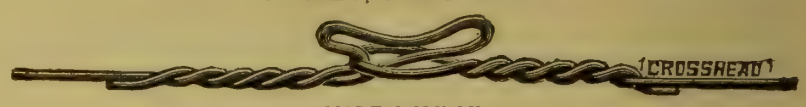
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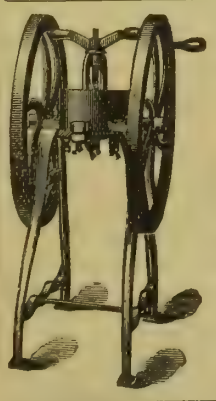
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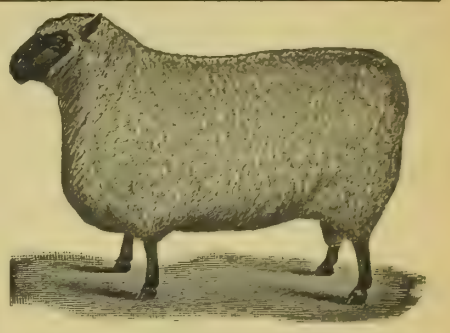
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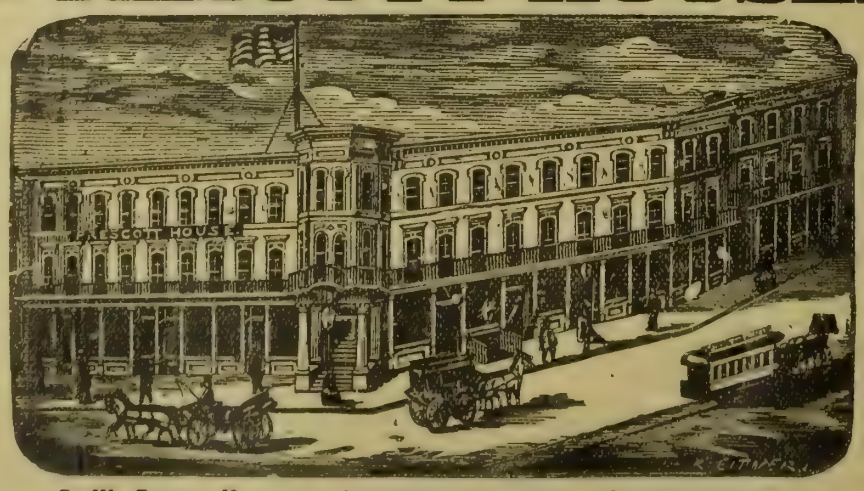
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, July 20, 1892.

More activity in farm products was developed the past week than has been exhibited at any time during this year. Under the stimulus of bad harvest weather in England and on the continent, wheat gained in strength on last Thursday and Friday, but with more favorable weather the market relaxed, only to make a decided jump on yesterday upon receipt of confirmed advices of very bad harvest weather abroad. The unfavorable weather, while at this writing only affecting wheat, will tend to give strength to barley, for that, too, as also oats and rye, will be more or less damaged abroad by the unseasonable weather. If signs go for anything, they point to an active export demand, and as there is a large tonnage in port, facilities are at hand to accommodate exporters. The receipt of hay has been largely in excess of the demand, which has caused buyers to hold off and bid lower. As the crop was short in the southern part of the State, and natural pasture or feed very scarce, it looks as if the forced selling is wrong. In dairy produce there is a firmer tone to gilt-edged butter and cheese, and also selected fresh-laid eggs sent in from near-by points. Garden-stuff, outside of two or three kinds, has cleaned up well on each day during the week. Onions have dragged, but choice, well-matured potatoes, suitable for shipping, have moved off readily at firm prices; poor stuff has hung, with concessions in order. There has been a somewhat excited market for prunes, apricots and peaches. The strength and higher prices for the first named are due to advices from abroad pointing to a light crop in the southern part of Europe, and home advices reporting a light crop in Oregon and the crop in this State not turning out as large as it was estimated about 30 days ago. The poor crop at the East of peaches favorably influenced our market for peaches and apricots, with canners buying heavily. Another influence which caused better prices was the slow delivery, owing to cold weather, of contract fruit to canners. The latter, to keep running, have been forced into the market to buy daily supplies, to get which they had to bid well up. There was another factor also, viz., many fruit growers who had contracted their apricots found the fruit to be so small as to create fears that if sent on the contract they would be rejected. Acting on these fears, canners were advised of the situation, who, on sending agents to inspect the orchards, found them to be well grounded, and as a result canners had to buy in other localities, and this buying sent prices up for good stuff, while poor was not affected; but at the close the market is more quiet. Shippers to the East have been liberal buyers also. Pears have strengthened under a good shipping and canning demand. Nectarines are doing better, as are the better varieties of plums. At this writing the peach plum appears to be the favorite in the plum family, with Washington a good second. Nectarines and figs command good figures. There are more of the latter being cured this year. Grapes are in better demand for future delivery. In dried fruit the market is strong at an advance for apricots, prunes, and peaches. Dried grapes and raisins for future delivery are gaining in strength. The market for beans is very strong at an advance for colored, owing to a large export movement to Mexico. The drouth in the latter country destroyed the crop and induced the Government to to take off the duty on the mports. Honey is very strong under short crop advices. Hops are strengthening under confirmed advices of a shortage in this State, a large shortage in New York, and more favorable advices from abroad. Poultry was demoralized and irregular up to yesterday, when a steadier tone set in. Live stock appears easier under freer selling offers. Wool is more quiet. Fall and lamb wools are coming to hand.

Markets by Telegraph.

Foreign Grain Review.

LONDON, July 18.—*Mark Lane Express* says: English wheats are unsettled at generally 2s lower. Foreign wheats are weak in London and firm in Liverpool. Arrivals of American and Indian are in excess of the demand. American red winter sells at 29s 6d. and California native at 34s. Corn is firmer at 21s 6d. Barley is weak. Rye is firm at 33s. Oats quiet; mixed American, 16s 6d. At to-day's market, foreign grains were slightly dearer.

Eastern Wool Markets.

NEW YORK, July 15.—Large quantities of wool are passing into the hands of manufacturers. The markets are now fairly well supplied with all grades, and buyers are able to obtain about what they want. Prices, however, are not in their favor as heretofore. The supply of Montana and Michigan wools is not as large as it generally is at this season. Shearing in these States has been delayed because of wet weather. From other States wool is coming forward quite rapidly. London sales closed on Thursday. About 18,000 bales are said to have been bought for this country. An advance on all wools suitable for this country was maintained to the close. Inferior grades were easier, competition for them not being strong. Manufacturers are buying freely of Australian wools. Sales at New York—25 000 pounds of spring California, 200,000 pounds other domestic and 700,000 foreign, chiefly cheap China. Boston reports exceptionally large sales, largely composed of unwashed—4 613 900 pounds of domestic and 707 000 pounds of foreign, of which over two-thirds was Australian. Philadelphia reports an active market at steady prices and increased offering.

Eastern Dried Fruit Markets.

NEW YORK, July 17.—Raisins—Five thousand boxes comprise the stock in first hands, so the new crop will meet a bare wholesale market. A line of fancy clusters 91 pack, brought $1.75.

Apricots—There were bids of 11¼c for August. From the present outlook, buyers must bend to the coast view of prices for unpeeled peaches.

Eastern Canned Fruit Markets.

NEW YORK, July 17.—Canned fruits continue strong. The possibility of a curtailed output by the advance in Pacific coast prices for canners' fruit heightens the demand for 9is on ship and makes Eastern prices at the moment somewhat feverish. Baltimore has put Standard peaches up to $1.85 for three-pound boxes.

Light Supply of Fresh Fruit.

NEW YORK, July 17.—The supply of fresh fruit is light. Much that was destined for New York has been diverted to Chicago. This was fortunate for the owners, as the weather here was adverse for ripe stuff. Our few cars made money. Bartlett pears sold quickly. Georgia peaches yet outsell California.

Miscellaneous.

NEW YORK, July 17.—Lima beans are active and firm. Spot or near-by choice, recleaned, $1.80@1 85. Hops—Several prominent State plantings have been held in the interior in the bull interest.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	July.	Aug.	Sept.	Oct.	Nov.
Thursday	6s0 2d	6s06½d	6s06½d	6s06½d	6s07½d
Friday	6s06½d	6s07½d	6s 7½d	6s07½d	6s07½d
Saturday	5s06½d	6s07½d	6s07½d	6s08 d	6s07½d
Monday	6s06½d	6s07½d	6s07½d	6s07½d	6s07½d
Tuesday	6s05½d	6s06½d	6s06½d	6s0 ½d	6s07½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. O.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	33s3d	34s9d	33s6d	Steadier.	Damp.
Friday	33s3d	34s3d	33s6d	Firmer.	Fair.
Saturday	33s3d	34s3d	33s6d	Held higher.	Warmer.
Monday	33s3d	34s3d	33s6d	Firm.	Fair after rain.
Tuesday	33s3d	34s9d	33s6d	Improving.	Wet & cold.

To-day's cablegram is as follows:

LIVERPOOL, July 20. Wheat Quiet. California spot lots, 7s ½d; off coast, 33s 3d; just shipped, 34s 9d: nearly due, 33s 9d; cargoes off coast, firmly held, higher prices asked; on passage, no advance established; weather in England, stormy.

New York.

The following shows the closing prices of wheat for the past week:

Day.	July	Aug.	Sept.	Oct.	Nov.
Thursday	141¼	140	140½	14 ⅜	....
Friday	140⅜	141¼	140⅞	142½	....
Saturday	....	....	140⅜	140⅜	142	....
Monday	....	....	....	....	....	....
Tuesday	....	....	142¼	143	....	....

The following are to-days' telegram:

CHICAGO, July 20.—Wheat—79⅜c for July; 78¼c for September and 81½c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	136½	....	....	....	141½
" lowest	135½	....	....	....	141
Friday, highest	136⅝	....	....	....	142⅜
" lowest	136⅜	....	....	....	14 ⅛
Saturday, highest	136⅜	....	139	....	142¼
" lowest	136⅜	....	138½	....	142
Monday, highest	137⅛	....	139½	....	142
" lowest	136⅛	....	139¼	....	141⅜
Tuesday, highest	138⅜	....	....	....	144
" lowest	137¼	....	....	....	143¼

The following are to-day's recorded sales on Call:

Morning Informal. Buyer December—500 tons, $1.44½; 100, $1.44⅜. Seller 1892, 200 tons, $1 38½ per ctl. Regular Session. Buyer December—100 tons, $1.44; 300, $1.44¼; 100, $1.43⅜; 100, $1.43¼; 1500, $1.43½; 600, $1.43. Seller 1892, 100 tons, $1.38⅝; 100; $1.38; 200, $1.37½; 4 0, $1.37½; 100, $1.37⅜; 500, $1.37½. Buyer September 200, $1.40½; 1.0, $1.40½; 200, $1.4 ¼ per ctl. Afternoon.—Seller 1892 100 tons, $1.38½; 300, $1.38. Buyer December—100 tons, $1.43⅜; 100, $1.43¼ per ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, highest	91⅝	....	....	94	96½
" lowest	91½	....	....	94	96½
Friday, highest	91½	....	....	....	96½
" lowest	91¼	....	....	....	96½
Saturday, highest	91¼	....	....	....	....
" lowest	91	....	92½	....	....
Monday, highest	91¼	....	92½	....	96⅝
" lowest	90⅝	....	....	....	96
Tuesday, highest	91⅝	....	....	....	....
" lowest	91½	....	....	....	....

The following are to-day's recorded sales on Call:

Informal.—Seller 1892, new—100 tons, 91½c. per ctl. Regular Session.—October—300 tons, 94c. Seller 1892, new—700 tons, 91½c; 200, 91c; 200, 90⅝c; 200, 90½c. December—100 tons, 95½c; 200, 96c per ctl. Afternoon.—Seller 1892, new—200 tons, 90½c; 300, 90¼c per ctl.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending July 19, '92, were as follows:

Flour, qr. sks	83,519	Bran, sks	12,230
Wheat, ctls	13,450	Buckwheat "	
Barley, "	75,472	Middlings "	3,265
Rye, "	585	Chicory, bbls	101
Oats, "	1,412	Hops, "	....
Corn, "	455	Wool, "	732
*Butter, "	773	Hay, ton	4,327
do bxs	804	Straw, "	74
do bbls	13	Wine, gals	214,470
do kegs	95	Brandy, "	880
do tubs	11	Raisins, bxs	370
do ½ bxs	182	Honey, cs	10
†Cheese, ctls	1,132	Peanuts, sks	....
do bxs	79	Walnuts "	....
Eggs, doz	20,988	Almonds "	....
do " Eastern	12 060	Mustard "	....
Beans, sks	895	Flax "	1,324
Potatoes, sks	19 117	Popcorn "	....
Onions, "	4,6 0	Broom corn, bbls	....

*Overl'd, 243 ctls. †Overland, —ctls.

From reliable advices up to July 19, the following summary tonnage movement is compiled:

	On the way 1892	On the way 1891.	In port 1892.	In port 1891.
San Francisco	256,597	326,128	*181,554	79,647
San Diego	22,917	25,0 0	4,307	.....
San Pedro	4,830	2,525	.....	.....
Oregon	52,3 9	33,212	26,285	8,474
Puget Sound	26,545	30,337	.....	.....
Totals	363,198	417,272	212,146	87,521

*Engaged for wheat, 1892, 46,934; 1891, 69,618

Exports by Sea from San Francisco from July 1 to July 14.

	1892-93	1891-92
Wheat, ctls	298 871	412,499
Flour, bbls	23,596	85,647
Barley, ctls	69,823	58,926

Cereals.

According to the official report. the wheat crop in the Bombay Presidency is estimated at 2,536,000 qrs., as against 3,500,000 qrs. last year; the total wheat crop in India this year is not yet officially returned, but is expected to be about 29,000,000 qrs., as against 33,000,000 qrs. in 1891.

Prospects of cereal crops in the middle and western parts of the continent of Europe continue satisfactory, and have generally spoken of improvement. In Hungary, the barley crop is said to be good but rather late. In Germany, the crops are represented to be equal to an average. In France, the harvesting of rye and winter barley has begun, and the colza crop is nearly ready.

The Toledo *Market Report* says the salient points of European advices are a deficient crop in England on a reduced acreage, say of 8,000,000 bushels, and a poor crop of potatoes, and that means always a resort to bread. In France, the crop may be an average one, and that is by no means settled, and, in any event, France will be a free buyer Beerbohm does not believe in the ability of Russia to export freely, and that opinion coincides with the general fitness of things. The rye crop is believed to promise only a limited yield, and stocks of food in that country must be light. Still, poverty will induce sales as close to the surplus as possible. We expect to see a fair demand for export at fair prices. One element favors prices which did not exist last fall. Ocean freights promise to be lower, because of far less pressure for shipment than last year.

The Chicago *Daily Trade Bulletin* offers the following: "Accepting the general supplies of the United States—crop and surplus on July 1, 1891—as 650,000,000 bushels, the statistical position may be stated as follows: Consumption during the 1 st 12 months, 300,000,000 bushels; seeding, 53,000,000 bushels; exports, 225,000,000 bushels, making a total of 578,000,000 bushels. This would leave an aggregate supply of all wheat in the United States on July 1st about 72,000,000 bushels, or 32,000,000 bushels in excess of one year ago. The supply is about 48,000,000 bushels, outside of the official visible supply. The aggregate supplies in the United States and Canada, in Europe and on passage July 1st were about 132,058,000 bushels, against 147 979,000 bushels one month ago—a decrease of 15,921,000 bushels."

The Salinas *Index* says that J. P. Raymond has returned from his annual tour throughout northern and central California inspecting the grain prospects for this year. Mr. Raymond had made a pretty thorough canvass of this county before he left, and from his own observation and information from producers in whom he had confidence had placed the wheat yield of the county at one-third of a crop and the barley at two-thirds of an average crop. Going north from Salinas, the first point visited was Pajaro valley, where he found a good average crop. In San Benito county there is an unusually large crop of barley. The wheat is not up to the general average. In Santa Clara and Alameda counties the barley, mostly chevalier, looks well. In Contra Costa the crops are fair, although light in the neighborhood of Cornwall. Across Suisun bay, in Solano county, are magnificent crops of wheat. Mr. Raymond went up the west side of the Sacramento, through Yolo, Glenn, Colusa and Tehama counties, as far as Red Bluff, and found magnificent crops all the way. Coming down on the east side of the Sacramento, through Tehama, Butte, Sutter and Sacramento counties, he found the wheat not so good as on the west side, but a fair crop. In conversation with parties from the northern coast of California, he learned that the barley crop in that section would be very considerably more than it was last year. Mr. Raymond's estimate, based on his own observation and from information gained from others, is that the barley crop will be considerably greater than it was last year, some putting it at one-third more, and that the wheat crop of the State will exceed the aggregate of last year. Mr. Raymond attributes the excellence of the crops in Solano county and on the west side of the Sacramento river to the practice of summer-fallowing adopted by the producers of those localities. In the Montezuma hills in Solano county, where to his personal knowledge the land 15 years ago was considered only fit for grazing purposes, he saw the best wheat on the whole trip. This land is not summer-fallowed in the sense of allowing it to rest every other year, but it is thoroughly cultivated on the off years and no weeds or anything allowed to grow upon it, to pump from the soil the moisture needed for the next year's crop. And Mr. Raymond is confident that the arid lands of this county, if treated in this manner, would yield a certain crop every other year greater in amount than is now secured from two years' cropping under present methods.

Acreage and Production of Wheat.

The following table exhibits the estimated acreage and prospective yield of wheat in the United states for 1892, compared with the reported yield in 189.:

States. Winter.	1892. Est'mat'd Acreage.	1892. Estimated Yield, bu.	1891. Yield, Bushels.
Ohio	2,715,800	34,984,000	45,531,000
Michigan	1,890,600	22,268,000	30,205,000
Indiana	2,888,3 0	37,2 9,0 0	5 ,8 7,00
Illinois	1,906,9 0	27,459,000	35, 25,000
Missouri	1,645,10	23,492,000	25,732,000
Kansas	3,409,000	56,322 0 0	54,86 ,0 0
Kentucky	1,048,200	11,635,000	13,181,000
Tennessee	1,22 ,50	9,78 ,000	11,626,000
Connecticut	1,8 0	27,000	31,000
New York	625,9 0	10,244,000	10,685,000
New Jersey	138,80	1,885,000	2,12 ,000
Pennsylvania	1,324,000	17,055,0 0	20,861,000
Delaware	100,500	1,182,000	1 250,000
Maryland	535,100	6,891,000	8, 07,000
Virginia	841, 0	7,490,000	7,651,000
North Carolina	775,500	6,017,000	4,97 ,000
South Carolina	198 400	1,57 ,000	994,000
Georgia	331,400	2,297,000	2,3 ,000
Alabama	292,500	1,801,00	2,251 000
Mississippi	63,200	537,000	483,000
Texas	573,800	6,197,000	6,435,000
Arkansas	239 80	2,254,00	2,236,0 0
West Virginia	332,200	3,159,000	3 423 000
California	3,012,0 0	42,168,000	36,595,000
Oregon	690,000	11,385,000	13,149,000
Total	26,564,000	345,857,000	392,495,000
SPRING.			
Minnesota	3,206,800	41, 03,000	55,332,000
Wisconsin	898,000	10,865,000	14,043,000
Iowa	1,73 ,900	21, 82,000	27, 86,0 0
Nebraska	1,293,700	15 6 1,000	18,080,000
North Dakota	2,488,200	31,3 1,000	52, 5,000
South Dakota	2,30 ,700	30,679,000	29,714,000
Colorado	112,' 00	2,464,000	2, 37,000
Washington	788,800	13,409,0 0	12,216,000
Nevada	2 ,300	343 00	372,000
Idaho	91 400	1 645,000	1,81 ,000
Montana	97,400	1,832,000	1,356 000
Wyoming	3,5 0	100,000	110,000
New Mexico	94,200	1,547,00	1,037,000
Utah	142,20	2,658,000	2,395,000
Arizona	27,8 0	489,000	395,000
Maine	41,00	656,000	669,000
New Hampshire	8 80	135, 00	148,000
Vermont	19,400	342,000	344,000
Total	13,369,100	176,552,000	219,785,000
Grand total	39,933,100	522,409,000	611,780,000

Liverpool cables report as follows: Imports into the United Kingdom for the week ending July 19.h: Flour, bbls., 248,000; wheat, qrs., 463,000. Amount of wheat and flour on passage July 19th: To United Kingdom, 2,073,000 qrs; to continent, 801,000 qrs. Farmers' delivery of wheat for week ending July 16th, 38,701 qrs; average price, 22s 1d.

As noted in the introductory of this department, the local wheat strengthened at the commencement of the week, shaded off again, only to make a decided jump on yesterday. The upmove verifies our position. At this writing, it looks as if the market will do still better. This opinion is based on the statistical and weather influences heretofore given. Wheat is nearly always good property when values of No. 1 white shipping are at around $1.40, but when above that figure, it is risky.

The strong bear pressure heretofore noted is still felt in barley, but, as stated in the introduction to this department, the unfavorable weather abroad will cause free buying with us. This buying is even now being quietly done. Buyers are acting in such a way as not to excite holders. The receipts have been very heavy, but the more choice grades that have come to hand were for exporting.

Oats have gained in strength, with an advance established, owing to the demand being in excess of receipts, which has necessitated withdrawals from warehouses.

Corn is very strong at an advance. The strength to the market is due to light receipts and a good export and home demand, combined with supplies being under better control.

Rye has strengthened with an advance established under a freer export inquiry, due to more unfavorable weather abroad

Cables received to-day from London report the weather clearing, which caused a strong selling pressure of futures with us; but spot wheat is still scarce and high.

Feedstuff.

The market for ground feed is very strong, with an advancing tendency. The demand is steadily enlarging.

The receipts of hay have been very heavy, largely in excess of current requirements. With the heavy deliveries, buyers became more offish and required concessions to induce buying. The quality that is coming in is fair to choice, with a good sprinkling of poor stuff. Judging from our exchanges, and also from the remarks of those in trade, we think there will be a good demand from the southern part of the State. The crop was short while feed is scarce.

Dairy Produce.

New York mail advices to July 11th report as follows: The receipts of butter to date are way behind last year—nearly 140.000 packages since May 1st—and this together with the fact that Western refrigerators have no more stock, if as much, as at this time last year, and want more goods. Comparatively little has been put away here. Other Eastern markets are short of the quantity usually held at this season, and will be active competitors until filled up. This tends to impart confidence; to many holders who claim prices must be kept close to present basis to continue to attract shipments this way.

Gilt-edged butter is getting scarcer, which causes some of the more favorably considered brands to command a slight advance. The market appears to be also cleaning up better for choice grades, but the poorer stuff is still slow and in buyers' favor.

The receipts of Eastern cheese are very large, which unfavorably affect our market. While it does not send prices down, it keeps them from advancing. The demand is reported to be fair.

There is a very wide range in eggs. Store eggs that have been kept on hand, and were shaky, had to be sold at the best prices obtainable, and as the Chinese and a few of the bakers are the only buyers of poor stock, 11 cents had, in several instances, to be accepted. The poor stock is about closed out now, and if Eastern do not come in heavily, the market should appreciate slightly.

Vegetables.

In garden stuff the market shows several changes. Young and tender string beans and peas command an advance on quotations. Summer squash is more or less demoralized. Egg plants and Chili peppers are selling lower. Garlic is hard to sell. Green corn is coming in more freely; and as supplies increase, prices shade off. River tomatoes are still scarce and sold in large boxes up to $2 50 per box on the wharf. Cucumbers are in liberal supply and in buyers' favor.

Onions are in heavy receipt, with prices favoring buyers. Red, on the wharf, sell at 15 to 25 cts. and silverskin at 40 to 50 cts.

As stated in the introductory to this department, there is a good demand for choice good-keeping potatoes, but for poor keepers the inquiry is slow, with prices favoring buyers.

Potatoes were lower to-day under free receipts and a light demand.

Fruit.

Cull tree fruit continues to be sent to this market, and for which low prices have to be accepted. These low prices we do not quote. Apples continue poor. The size is small. It looks as if growers are marketing them before the fruit is too far gone with worms. Choice large-sized apples will sell at an advance on our outside quotations. In the introductory (first column) to this department we report the situation on the local market at some length.

Berries have held to steady prices throughout the week.

For dried fruit of the 1892 pack a large inquiry has developed the past week, causing holders to entertain higher views. Dried apricots are now quoted at 10@13c f. o. b. in sacks; the four sizes of prunes at 9@10c; peaches at 8@10c for bleached unpeeled

Raisins in the sweat are, as a rule, quoted at around 4½c, although some growers name a higher figure. More care will be exercised in selecting, curing and packing this season.

Canners, driers and shippers quote the following ranges for green fruit: Apricots, 1¼@2¼c ₰ lb: peaches, cling and freestone, 1¾@2¼c; pears, 1¾@2¼c; prunes, 2@2½c; nectarines, 1¼@1¾c.

To-day the receipts of fruit were large and prices generally lower. Warmer weather hastened the ripening.

Live Stock.

Under a holding back of shipments bullocks and mutton sheep appreciated, but toward the close they are easier with more offering. Lambs and dairy fed calves are scarce and command full prices. Hogs are in fair request at unchanged quotations.

Miscellaneous.

Poultry was completely demoralized on last Friday and Saturday. Continued heavy receipts stocked retail dealers up, and to sell, commission merchants had to accept the best offers made. With lighter receipts on Monday and yesterday the market for hens and roosters is about $1 per dozen higher. Turkeys, geese and ducks did not change much

For new crop hops buyers are bidding more money. Eastern mail advices continue to report a strong bear pressure, and this too in the face of poor crop prospects in this State and at the East.

Lamb and fall wools are coming in. The market is reported slow for all kinds. The clip of spring wool is well cleaned up for the time of the year.

Beans have moved off more freely with colored selling for more money. The influences on the market are noted in the introductory to this department.

Honey continues to command attention owing to the small crop on this Coast and the promise of a light crop East.

Hog product is in good demand at firm prices.

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@—	Wethers	3 @—
Grass fed, extra	5½ @—	Ewes	7½@—
First quality	4½ @—	Do Spring	9 @—
Second quality	4 @—	HOGS.	
Third quality	3½@—	Light, ₰ lb, cents	5½@—
Bulls and thin Cows	2 @—	Medium	5½ @—
VEAL.		Heavy	5 @—
Range, heavy	4 @—	Soft	4½@—
Do light	5 @—	Feeders	3½ @—
Dairy	6 @—	Stock Hogs	3½@—

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 and 4 yarns	9½	Pure Manila Hop, in balls, tarred	12
Do, 2 yarns, light	10	Do, Grape-Vine, in balls	
Duplex, 3 yarns	9½	or coils	12½
Manila, mixed, 3 yarns, heavy	11	Do, Sp ing	16
Pure Manila, 3 and 4 y rns	12½	Duplex Hop, in balls, tar'd	10
Do, 2 yarns, light	13	Do, Grape-Vine, in balls or coils	11

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

WEDNESDAY, July 20, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 50	@ 2 75	
Butter	2 50	@ 3 05	
Pea	2 25	@ 2 50	
Red	2 50	@ 2 60	
Pink	2 50	@ 2 60	
Small White	2 00	@ 2 45	
Large White	2 00	@ 2 30	
Lima	2 50	@ 2 80	
Fld Peas, blk eye	3 00	@ 3 30	
Do green	1 50	@ 2 75	
Do Nies	1 30	@ 1 40	
Split	4 50	@ 5 50	
BUTTER.			
Cal. Poor to fair, lb	15	@ —	
Do good to choice	17	@ —	
Do Giltedged	—	@ 20	
Do Creamery rolls	—	@ 20	
Do do Giltedge	—	@ 21	
Eastern	—	@ —	
CHEESE			
Cal, choice cream	8	@ —	
Do fair to good	7	@ —	
Do gilt edged	—	@ 9	
Do skim	5	@ 6	
Young America	—	@ 10	
EGGS.			
Cal. "as is," doz	15	@ 17	
Do candled	18	@ 20	
Do choice	21	@ 23	
Do fresh laid	24	@ 25	
Do do selected	—	@ 26	
Eastern "as is"	14	@ 16	
Do candled	17	@ 18	
Do selected	19	@ 21	

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED.			
Bran, ton	18 00	@19 00	
Feedmeal	27 00	@30 00	
Gr'd Barley	20 50	@22 50	
Middlings	20 00	@21 50	
Oil Cake Meal	—	@25 00	
Manhattan Food ₱ cwt.	7 50		
HAY.			
Wheat, per ton	9 00	@ —	
Do choice	—	@12 50	
Wheat and Oats	8 50	@11 00	
Wild Oats	8 00	@11 00	
Cultivated do	7 00	@10 00	
Barley	6 00	@ 9 00	
Alfalfa	7 00	@ 9 00	
Straw, bale	40	@ 50	
GRAIN, ETC.			
Barley, feed, ctl	83½	@ 93½	
Do Choice	95	@ —	
Do Brewing	1 00	@ —	
Do do Choice	1 05	@ —	
Do do Giltedge	1 10	@ —	
Do Chevalier	1 05	@ 1 40	
Do do Giltedge	1 45	@ 1 50	
Buckwheat	—	@ —	
Corn, White	1 30	@— —	
Yellow, large	1 25	@— —	
Do small	1 30	@— —	
Oats, milling	1 50	@ —	
Feed, Choice	1 45	@ —	
Do good	1 37½	@ —	
Do fair	1 32½	@ —	
Surprise	1 55	@ —	
Black Cal	—	@ —	
Do Oregon	1 32½	@ —	
Gray	1 32½	@ —	
Rye	1 20	@ —	
Wheat, milling.			
Gilt edged	1 48	@ —	
Do Choice	1 46½	@ —	
Do fair to good	1 42½	@ —	
Shipping, cho'ce	1 40	@ —	
Do good	1 37½	@ —	
Do fair	1 35	@ —	
Common	1 30	@ —	
Sonora	1 33½	@ 1 45	
HOPS.			
1891 Choice to Ex.	20	@ —	
Fair to Good	18	@ —	
FLOUR.			
Extra, City Mills	4 65	@ 4 75	
Do Country Mills	4 50	@ 4 75	
Superfine	2 75	@ 3 10	
NUTS—JOBBING.			
Walnuts, Cal. lb	4	@ —	
Do Choice	6	@ —	
Do paper shell	7	@ —	
Almonds, sft shl.	10	@ —	
Paper shell	12	@ —	
Hard Shell	6	@ 7½	
Brazil,	6½	@ 8	
Pecans small	11	@ 13	
Do large	14½	@ 16	
Peanuts	1½	@ 3	
Filberts	10½	@ 12½	
Hickory	7	@ 8	
Chestnuts	11½	@ 16	
ONIONS.			
Silverskin	40	@ 50	
POTATOES.			
Early Rose, ctl	50	@ 75	
Do do in boxes	65	@ 1 00	
Peerless	60	@ 75	
Do in boxes	65	@ 1 00	
Garnet Chilies	60	@ 85	
Burbank Seedlings	60	@ 75	
Do do in boxes	75	@ 1 00	
POULTRY.			
Hens, doz	6 50	@ 8 50	
Roosters, old	6 00	@ 7 50	
Do young	5 00	@ 7 50	
Broilers, small	2 00	@ 3 50	
Do large	3 50	@ 4 00	
Fryers	4 50	@ 5 50	
Ducks	4 00	@ 4 75	
do, large	5 00	@ 5 50	
do, extra large	6 00	@ —	
Geese, pair	1 25	@ 1 75	
Goslings	—	@ —	
Turkeys, Gob'r	18	@ 20	
Turkeys, Hens	16	@ 18	
Manhattan Egg Food ₱ cwt	11 50	@ —	
PROVISIONS.			
Cal. Bacon, he'vy, lb	10½	@ —	
Medium	11½	@ —	
Light	13	@ —	
Lard	9½	@ 12	
Cal. Sm'k'd Beef	11½	@ —	
Hams, Cal salt'd	11½	@ —	
do Eastern	14½	@ —	
SEEDS.			
Alfalfa	9	@ 12½	
Clover, Red	14	@ 15	
White	20	@ —	
Flaxseed	2 00	@ 2 25	
Hemp	3½	@ 4	
Mustard, yellow	3½	@ 4	
do Brown	3	@ 3½	
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@ 21	
Sac'to valley	16	@ —	
S Joaquin valley	11	@ 16	
Cala's & F'th'll	16	@ 21	
Oregon Eastern	12½	@ 19	
do valley	18	@ 23	
So'n Coast, def	10	@ 12	
Nevada (State)	15	@ 19	
HONEY.—1892 CROP.			
White Comb, 2-lb	8	@ 11	
do do 1-lb frame	10	@ 13	
White extract'd	6½	@ 7	
Amber do	5½	@ 6	
Beeswax, lb	25	@ 28	

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 20, 1892.

Limes, Mex	2 50	@ 4 00	
Do Cal	—	@ —	
Lemons, box	1 50	@ 4 00	
Do Sicily	5 00	@ 6 00	
Oranges, Seedlings	1 25	@ 2 25	
Do Navels	2 50	@ 4 50	
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—Longworth	7 00	@ 8 00	
Sharpless	4 50	@ 6 00	
Raspberries, ch	4 50	@ 6 00	
Peaches, box	—	@ —	
Do Crawford	50	@ 75	
Do Hale's Early	50	@ 75	
Bl'kberries ₱ ch	3 50	@ 6 00	
Figs, blk box	2 00	@ 2 50	
Do White do	1 00	@ 1 25	
Apples, Bell Flower	65	@ 1 00	
Do Red Astrachan	75	@ 1 25	
Crabapples	75	@ 1 00	
Canteloupes, pr crate	2 50	@ 4 00	
Melons, pr doz	1 50	@ 2 50	
Grapes, pr box—			
Do Sweetwater	75	@ 1 10	
Do Black	85	@ 1 25	
Prunes, Tragedy	50	@ 1 00	
Do German	60	@ 1 00	
Plums, Duane's Purple	65	@ 75	
Do Peach	65	@ 90	
Do Wash	55	@ 75	
Pears	50	@ 75	
Pears, Dearbo'ns Seedling	50	@ 1 00	
Do Bartlett	75	@ 1 25	
Apricots, pr box	40	@ 65	
do, per lb	1½	@ 2½	
Beets, sk	—	@ 1 00	
Carrots, sk	50	@ —	
Okra, dry, lb	15	@ —	
Do green	8	@ 10	
Parsnips, ctl	—	@ 1 25	
Peppers, dry, lb	10	@ —	
Do grn Chili, bx	50	@ 75	
Do do Bells	1 00	@ 1 25	
Turnips, ctl	50	@ —	
Cabbage, 100 lbs	40	@ 50	
Garlic, lb	1½	@ 3	
Squash, Sum, bx	20	@ 30	
Tomatoes, box	40	@ 50	
Do River lrg bx	1 50	@ 2 00	
Peas, green, sk	50	@ 1 75	
String Beans	2	@ 4	
Cucumbers, box	50	@ 75	
do Pickle	75	@ 85	
Mushrooms	30	@ 50	
Egg Plant, bx	1 50	@ 1 75	
Green Corn, sk	—	@ —	
Do sweet ₱ sack	50	@ 75	
Do swt. Bay box	1 00	@ 1 50	

Grain and Wool Bags.

Calcutta, spot	7	@	7⅛
Wool Bags	36	@	38

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal	10	@	15

Auction Sales of California Fruits

At New York.

July 15.—Two carloads: Bartlett Pears sold for $2.75@3.37; Tragedy Prunes, $3.62@4; Purple Duane Plums, $2.25@3 37; Hale's Early Peaches, $1.20@1.60; Peach plums, $2.37@3 37; German Prunes, $3.37; Moorpark Apricots, $2.70. Gross sale of two cars, $4095.

Three carloads: Hale's Early Peaches, $1.05@1.50 ₱ box; Bartlett Pears, $3.50@4; Peach Plums, $2.37@2.75 ₱ half crate; Purple Duane Plums, $2 37½@2.50; Washington Plums, $2.75; Bulgarian Plums, $2.10; Tragedy Prunes, $3.12½@4.25; Peach Apricots, $2.50. Car sold gross for $2153. Goodell refrigerator No. 16,188.

July 15.—One carload: Bartlett Pears at $3.15 to $3.70 per box.

July 16.—Ventilated car No. 36,803, shipped by slow freight, $1219 gross. Bartlett Pears sold for $2.50@3. Refrigerator car, No. 16,100, sold for $2137 gross. Hale's Early Peaches, 80c@$1 40; Bartlett Pears, $3 12@3.25; Purple Duane Plums, $1.65@2.55; Peach Plums, $2 Bulgarian Prunes, $1 90; Cherry Plums, $1.05; Tragedy Prunes, $2.35@3.87; Peach Apricots, $3.05.

July 18.—Three carloads. Bartlett Pears, $2.50@3, average, $2.60; P. D. Plums, $2.37@3 62, average, $2.71; Peach Plums, $3.75; Washington Plums, $3 62; Tragedy Prunes, $2 50@4.12, average, $3.60; German Prunes, $2.62@3.37, average, $2.75; Bulgarian Prunes, $1.50; Hale's Early Peaches, $1.09@$1.40, average, $1.35; Crawford Peaches, $1.40@1.70, average, $1.56; Yellow Peaches, $1.55; Apricots, $1.70.

July 18.—Two carloads. Peach Plums, $2.60@2.90; Alexander Peaches, $1.55: Bartlett Pears, small, $2.40; Royal Apricots, 75c@$1.70.

July 19.—One carload Early Crawford Peaches, $1.05 @2.05; Bartlett Pears, $2.25; Peach Plums, $2.20@3; Apricots, $1.30.

At Chicago.

July 14.—Three carloads: Peaches, $1.25@2.25; Foster Peaches, $2 35; Hale's Early Peaches, 80c@$1 60; Crawford Peaches, $2.05@2.55; St. John Peaches, $1.50 @2.25; Grapes, $2.30; Figs, $1.15@1.40; Nectarines, $1 05 @1.30; Apricots, $1.20@1 60; Bartlett Pears, $3.45; half boxes Pears, $1.35@$1 60; Plums, $2 55@3.05; Purple Duane Plums, $3.15; Tragedy Prunes, $2 60@3.15; Royal Hative Plums, $2.50; Peach Plums, $3 05@3.25.

July 14.—Two carloads: Bartlett Pears averaged $3.38 ₱ box; Alexander Peaches, $1.80; Peach Plums, $2 85; Royal Apricots $1.05@1.55.

July 15.—One car Bartlett Pears averaged $3.40 ₱ box; Peach Plums, $2.75 to $3; Royal Hative Plums, $2.50; Early Crawford Peaches, $1.55 to $2 25; Strawberry Peaches, $1.25 to $1.70; St. John Peaches, $1 55 to $1.85; Hale's Early Peaches, $1.30 to $1.70; Alexander Peaches, $1.50; Peach Apricots, $1 30; Royal Apricots, $1.10 to $1.70; Moorpark Apricots, $1.25 to $1.55.

July 15.—Four carloads: Bartlett Pears, $3 05@3 45; Peach Plums, $2.80@3.10; Purple Duane Plums, $2.35 @2.75; Apricots, 90c@$1.60; Peaches, $1.20@1.50; Crawford Peaches, $2.10@2.30; Hale'e Early Peaches, $1.25 @2; St. John Peaches, $1.55; German Prunes, $2.95@ 3 35; Tragedy Prunes, $1.80@3.55; Washington Plums, $2.30@2.50; Royal Hative Plums, $2.50; Nectarines, $1.70; Beurre Gifford Pears, $1.85 ₱ crate.

July 16.—Two carloads: Bartlett Pears, $3.20@3.25; Crawford Peaches, $1.75@1.95; Hale's Early Peaches, $1 55.

July 18.—Three carloads. Bartlett Pears, $2.90@ 3.25; Clapp's, $2.80; Early Pears, $2.60; German Prunes, $2.90@3; Crawford Peaches, $1.35@1.70; Hale's Early Peaches, 90c@1.50; Nectarines, $1.20; Peach Plums, $3.20; Tragedy, $2.60@3.35; Blood Plums, $2.90; Washington Plums, $2.10@2.90; P. D. Plums, $2.10@2.90; Peach Plums, $1.05@1.50; Japan Plums, $3.15; Bulgarian Prunes, $2.70; Royal Hative Plums, $2.10@ 2 40; Prunes, $2 85: Apricots, $1.25@1.40; St. John Peaches, $1 45@2; Grapes, $3 35.

July 19.—Four carloads Bartlett Pears sold at $3.50 @3.15; Early Crawford Peaches, $1.35@1.80; McKevitt's Early Peaches, $1.25@1.45; Hale's Early Peaches, 95c@$1.15; Strawberry Peaches, $1.05: Royal Apricots, $1.45@1.80; St. John Peaches, $1.25@1 35; Tragedy Prunes, $3.05@3.65; German Prunes, $2.80@3.85; Green Gage Plums, $1.90; Purple Duane Plums, $3 70@2.85; Fontainbleau Grapes, half crates, $3.55@3.70; Royal Hative Plums, half crates, $2.60; Peach Plums, boxes, $2.15; half crates, $2.95@3.05; Clapp's Favorite Pears, $2.45.

At Boston.

July 15.—Two carloads: Peach Plums, $3.35@3.50; Tragedy Prunes, $4.10; Bartlett Pears, $2.65@3.25; Hale's Early Peaches, $1.15@1 25; Royal Apricots, $1.10; Peach Apricots, $1.15@1 25.

July 18.—One carload. Apricots, $1.37; Alexander Peaches, $1.21; Hale's Early Peaches, $1.14; St. John Peaches, $1.28; Strawberry Cling, $1.22; McKevitt's Early, $1.05; Tragedy, $4.83; Peach Plums, $4.03; Royal Hative Plums, $2.50; St. Catherine Plums, $1.89; Figs, 90c.

July 18.—One carload. Bartlett Pears to-day at $3.55@3 75 ₱ box.

At Minneapolis.

July 14.—Refrigerator car No. 16,292: Peaches, $1.30 @1.60; Apricots, $1.25@1.50; Royal Hative Plums, $2.15; Peach Plums, $2.85.

July 19.—One carload Bartlett Pears, $3.05@3.15; Purple Duane Plums, $2.35@3.50; Tragedy Prunes, $2.40@2.50.

At Omaha.

July 18.—Two carloads. Pears, $2.75@3; Peaches, $1.25@1.50; in crates, $1.50@1.75; Apricots, $1.25@1.50; Plums, $2@2.25.

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5 lbs dry Granulated Sugar, med. fine	25
1 lb Smith's pure Java Coffee	30
½ lb Nob Hill mixed Tea, best	25
4 lbs No. 1 extra choice table Rice	25
8 lbs No. 1 small white baking Beans	25
5 lbs Tapioca or Sago	25
3 packages Corn Starch	20
1 can Epps's or Baker's Cocoa	20
1 roll best table Butter	40
1 dozen fresh ranch Eggs	25
1-lb. frame new comb Honey	10
1 gallon "S. C. S." Golden Drips	35
1 bottle Lemon or Vanilla Extract	10
2-lb can Corned Beef, key opener	15
1 can "S. C. S." Lemon Sugar, fine	15
1 bot. "S. C. S." plain or mixed Pickles	15
1 bot. Tomato Catsup or French Mustard	10
2 cans choice Tomatoes	15
1 can American Sardines	06
2 lbs good Raisins	10
2 lbs best Currants	15
1 lb Lemon or Orange Peel	15
1 can pure Pepper, Mustard, or Ginger	12
10-lb bag table Salt	10
⅛ gross Empire Matches	10
1 pot Scrub, Chinese	02
5 lbs Washing Soda	10
1 lb Baking Soda	05
1 lb Smith's powdered Borax	12
2 bars soap, White Rose	08
Total,	$5 00

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The German Savings and Loan Society,

526 California Street.

FOR THE HALF YEAR ENDING JUNE 30, 1892, A dividend has been declared at the rate of five and one-tenth (5 1-10) per cent. per annum on Term Deposits, and four and one-quarter (4¼) per cent. per annum on Ordinary Deposits, payable on and after FRIDAY, July 1, 1892. GEO. TOURNY, Secretary

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THE ZIMMERMAN

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FOR BOYS AND YOUNG MEN.
Special university preparation, depending not on time, but on progress in studies.
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Surveying, Architecture, Drawing and Assaying,
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Open All Year.
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Assaying of Ores, $25; Bullion and Chlorination Assay, $25; Blowpipe Assay, $10. Full course of assaying, $50.
ESTABLISHED 1864 Send for circular.

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Analytical Chemists and Assayers.
ESTABLISHED 1887 — 109½ COMMERCIAL ST., LOS Angeles, Cal. We have fitted up the best laboratory in Southern California and are prepared to make Assays and Analyses of all Metals, Minerals, Ores, Waters, Fertilizers, Etc. ASSAYING TAUGHT.

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BUSINESS COLLEGE,
24 POST ST., S. F.
FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.
SEND FOR CIRCULAR.
E. P. HEALD, President.
C. S. HALEY, Secretary.

SEMI-ANNUAL STATEMENT

OF THE

GRANGERS' BANK OF CALIFORNIA,

Amount of Capital actually paid in U. S. Gold Coin, Surplus paid up and Reserve Fund..... $901,643 23

STATE OF CALIFORNIA
City and County of San Francisco.

A. D. Logan and A. Montpellier being each duly sworn, severally depose and say that they are respectively the President and Cashier of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

(Signed) A. D. LOGAN, President,
(Signed) A. MONTPELLIER, Cashier.

Subscribed and sworn to before me this 12th day of July, 1892.
(Signed) JAMES L. KING, Notary Public.

SEMI-ANNUAL STATEMENT

SHOWING THE ACTUAL CONDITION OF THE

GRANGERS' BANK OF CALIFORNIA,

AND THE VALUE OF ITS ASSETS AND LIABILITIES

At the Close of Business June 30, 1892, viz:

ASSETS:

Loans on wheat, real estate and other securities	$1,501,268 02
Real estate	144,698 93
Office furniture, fixtures and safe	6,075 00
Cash on hand	101,050 22
Total	$1,753,082 17

And said assets are situated in the following counties in the State of California, to-wit: Alameda, Butte, Contra Costa, Colusa, Fresno, Merced, Monterey, Placer, Stanislaus, Sutter, Solano, City and County of San Francisco, Tehama, Tulare, Yuba and Yolo.

LIABILITIES.

Capital stock paid in U. S. Gold Coin	$800,000 00
Surplus paid up and reserve fund	101,643 23
Due depositors, banks and bankers	814,053 87
Interest	37,385 07
Total	$1,753,082 17

STATE OF CALIFORNIA
City and County of San Francisco.

A. D. Logan and A. Montpellier, being each duly sworn, severally depose and say that they are respectively the President and Cashier of the Grangers' Bank of California, above mentioned, and that the foregoing statement is true.

(Signed) A. D. LOGAN, President,
(Signed) A. MONTPELLIER, Cashier.

Subscribed and sworn to before me this 12th day of July, 1892.
(Signed) JAMES L. KING, Notary Public.

Sherwood Hall Nursery Co.
TIMOTHY HOPKINS.
EXPORTERS, IMPORTERS AND GROWERS OF
TREES, PLANTS, SEEDS, BULBS.
WHOLESALE FLORISTS.
427-29 SANSOME STREET, - SAN FRANCISCO, CAL.
NURSERIES: MENLO PARK, CAL.

SWEET PEA SEED FREE—We will mail, free, a packet of Mixed Pea Seed (our own growing) to each person who will send us the names and addresses of ten people who have gardens and are interested in flowers.

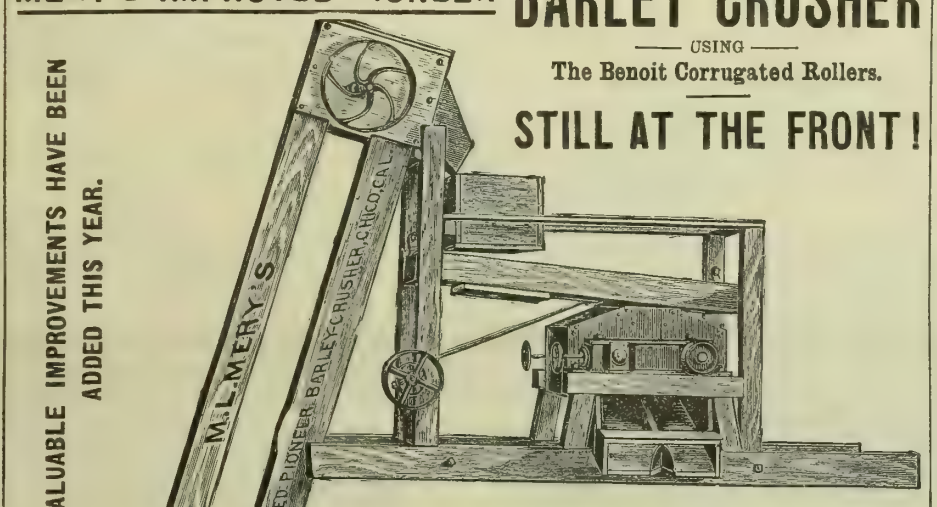
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Have you a Plant or Fern in your home? If not, send for some. We have choice specimens.

STOCKTON NURSERIES,
ESTABLISHED 1853.
FRUIT TREES. FRUIT TREES.
GRAPE VINES.
Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.
PLANTS IN GREAT VARIETY.
Correspondence Solicited.
E. C. CLOWES, STOCKTON, CAL.

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USING
The Benoit Corrugated Rollers.
STILL AT THE FRONT!

VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.



This Mill has been in use on this Coast for 10 years,
TAKEN THE PREMIUM AT THE STATE FAIR
Four years in succession, and has met with general favor, there now being
Over 250 of them in use in California, Nevada and Oregon.
It is the most economical and durable Feed Mill in use.
I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND, BUTTE CO., CAL., June 9, 1887.
MR. M. L. MERY—Dear Sir: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day and the Crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill. F. E. REAM, JNO. P. SUTTON.

DURHAM, May 21, 1887.
MR. M. L. MERY—Dear Sir: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, and if we got behind we could run through five tons an hour and do good work. The machine I use here is a No. 2. Yours, WM. M. TAYLOR.

I thank the public for their kind patronage received thus far, and hope for a continuance of the same.
M. L. MERY, Chico Iron Works, Chico, Cal.

ST. ALBANS TREAD HORSE POWERS FOR ONE, TWO AND THREE ANIMALS.



Especially adapted for
Driving Cream Separators,
CHURNS, PUMPS, SAWS, FEED CUTTERS.
Guaranteed to produce
MORE DRIVING POWER,
To wear longer, run evener, and give better satisfaction than any other make.
The only Horse Power that we sell with our De Laval Separators and guarantee the whole outfit to give entire satisfaction.
There are nearly one hundred of these
Horse Power Cream-Separator Outfits
In this State to-day and all doing well.
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IMPERIAL PEACH.
The Earliest Yellow Freestone Known.
CURL LEAF PROOF.
TWO WEEKS EARLIER THAN FOSTER OR EARLY CRAWFORD.
The Best Peach Known for Early Shipment East.
Reasonable prices to dealers and canvassers. For particulars apply to
W. W. SMITH, Vacaville,
A. T. FOSTER, Dixon,
Or, I. H. THOMAS & SON, Visalia.

NAPA VALLEY NURSERIES.
AN EXCEPTIONALLY FINE
GENERAL NURSERY STOCK
FOR
SEASON 1892-3.
Warranted free from all disease, true to name, and home grown.
Nurseries at Napa, near R. R. Depot. Residence of proprietor at Sausal Fruit Farm, 4½ miles north of Napa.
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505 Sansome St., S. F.

Protect Your Trees from Sunburn, Borers, Rabbits, Etc., by Using
THE PACIFIC TREE PROTECTOR
(Patent applied for)
AT A COST OF FROM 1 CT. TO 2 CTS. PER TREE.
It is the only Perfect Tree Protector, and is being used by many of the Largest Growers in the United States. Waterproof, adjustable and convenient. Saves time and trouble and expense.
Write for samples of above; also for samples and catalogue

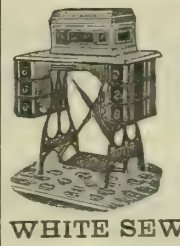


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Manufactured by
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Wholesale Paper Dealers,
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Send for Samples.



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WHITE IS KING
OF ALL
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Simple in Construction, Light Running, Most Durable and Complete.
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"Greenbank" 98 degrees POWDERED CAUSTIC SODA (tests 99 3-10 per cent) recommended by the highest authorities in the State. Also Common Caustic Soda and Potash, etc., for sale by
T. W. JACKSON & CO.,
Manufacturers' Agents,
No. 5 MARKET ST., - San Francisco.

Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping promptly attended to at this office.

"THE DRESS REHEARSAL"

FOR THE

WORLD'S FAIR OF 1893

C S Crandall 9 jul 1 '93
Exp't Stat'n Agr College

WILL BE HELD AT THE

CALIFORNIA STATE FAIR

OF 1892.

From September 5th to 17th.

California's Capabilities are Beyond Comparison. Let Not Apathy Prevent Their Being Exhibited.

The State has Appropriated Over $5000 for Premiums for Soil Productions.

REMEMBER THAT THE GREAT COLUMBIAN WORLD'S FAIR opens in May of next year. Hence, all agricultural exhibits must be collected this year.

The State Board of Agriculture stands ready to assist the producer, and by gathering your exhibits and showing them at home at the State Fair, you can take advantage of the cash awards to assist you in the good work. All exhibits shown at the State Fair will be kept free of storage until their removal. BEGIN WITH HARVEST.

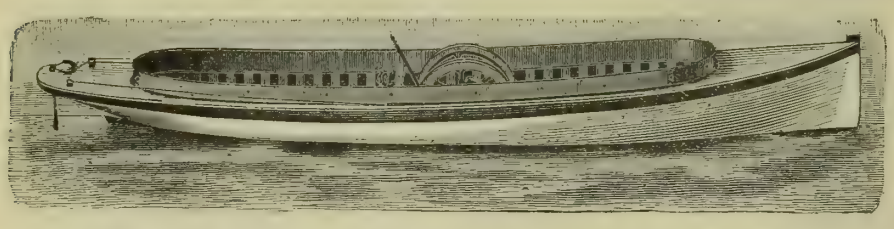
MERCHANTS AND PROPERTY-OWNERS in each county are interested as much as the farmer, and should lead in the ORGANIZATION OF COUNTY-EXHIBIT COMMITTEES.

Do not overlook the chance of getting money to remunerate you, right here at home; it is to be given away at the State Fair of 1892. Come and get some of it.

FREDERICK COX, President.

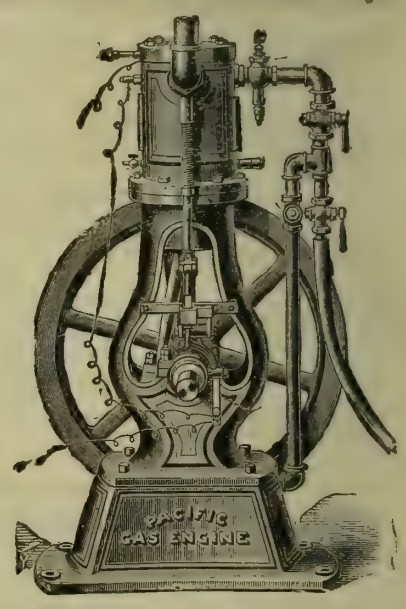
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NO FIRE! NO BOILER!
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No Danger!



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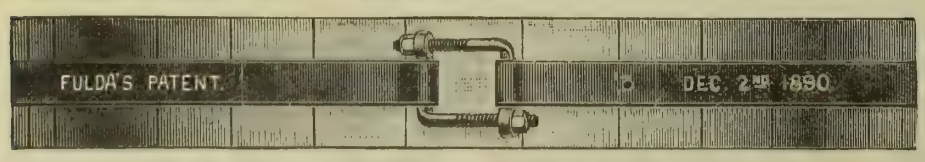
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The Best, Simplest and Cheapest Coupling for Tank Hoops.
A sufficient lap of hoop renders it unnecessary to rivet the hoop. It will fit the circle of any tank, regardless of size
Made in sizes to fit any width of iron
Prices, $1.00 to $1.50 per Pair. For sale to the trade. Liberal discount in quantities.

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MANUFACTURERS OF MINING AND WATER TANKS.
Send for Catalogue.

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Home Mutual Insurance Company,
N. E. Cor. California and Sansome Sts.,
INCORPORATED A. D. 1864. San Francisco.

Losses Paid Since Organization	$3,175,759 21
Assets, January 1, 1891	367,512 19
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 901 10

WAGONS
Positively Made to My Order for California Trade.
Lowest Prices.
Surries, Buggies, Carriages, Phaetons, Carts.
Osborn Mowers, Self-Raking Reapers & Binders,
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(Patented Feb 28, 1888.)

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SAMPLES AND CIRCULARS FREE.

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Write for confidential facts.
Bicura Company, S. F.

PACIFIC RURAL PRESS

Vol. XLIV. No. 5. SAN FRANCISCO, SATURDAY, JULY 30, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

At the World's Fair.

As the time draws nearer to the opening of the great Columbian Exposition at Chicago interest becomes keener in everything pertaining thereto. We have no doubt our friends who are serving upon county commissions and local committees, in solicitation and preparation of exhibits, are continually impressed with the fact that they have much to do in a short time. Those who anticipate a visit to Chicago and the East next summer, after long years of absence, feel their anticipations becoming ruling thoughts. With so much interest to cater to, we cannot probably do better than to present occasional glimpses of the great affair of the future as space permits.

The engraving on this page shows a perspective of the Machinery Hall, or, as its formal name runs, the "Palace of Mechanic Arts," which is now approaching completion at Chicago. The beauty of the building and its environment are striking. This building will be 850x500 feet and cost $450,000. It is located at the extreme south end of the park, midway between the shore of Lake Michigan and the west line of the park.

The building is spanned with three arched trusses, and the interior will present the appearance of three railroad train-houses side by side, surrounded on all the four exterior sides by a 50-foot gallery. In each of these long naves there is to be an elevated traveling crane for mining machinery. Steam power for this building will be shipped from a power-house adjoining.

The two exterior sides adjoining the grand court are to be rich and palatial in appearance. The two facades of Machinery Hall on the court are rich with colonnades and other features.

The design follows classical models throughout, the details being followed from the renaissance of Seville and other Spanish towns, as being appropriate to a Columbian exposition. An arcade on the first story admits passage around the building under cover. A colonnade with a cape at either end forms the length between Machinery and Agricultural halls.

Wheat and Barley Acreage and Crop Estimates.

In the commercial department we give a tabulated statement by counties showing the acreage devoted this year in California to wheat and barley, in comparison with the acreage by counties for the three preceding years. The acreage seeded to wheat shows, when compared with that in 1891, a slight falling off, but the estimated yield to the acre is considerably larger. So far as the most reliable advices tend to show, the yield this year is about nine centals to the acre, which gives, in round numbers, a total of 1,400,000 tons, against a yield of 1,184,229 tons in 1891. The acreage devoted to barley shows an increase over that in 1891 of nearly 12 per cent and the yield to the acre an increase of fully five per cent. This year there were fewer of the fields seeded to grain cut for hay than has been the case for several years past. This falling off was due to weather influences more than to anything else. With more fields harvested the percentage of yield is naturally higher.

WHALEBACKS PROPOSED FOR WHEAT.—It is said that there is some talk of building one or two whaleback steamers to carry grain from California to Europe as an experiment, those now running to the lake ports having proved remunerative.

The Advance in Lima Beans.

The advance in the market value of Lima beans causes considerable speculation with those not well informed on the subject. This bean appears to be a great favorite at the East, where consumers will have it, let prices be what they may. The high prices which obtained two and three years ago induced heavy planting last year in the bean districts of this State. With a very large increase in the acreage planted and favorable weather, the crop was larger than ever before. Not only was the crop of Limas very heavy, but other varieties showed a decided increase over that gathered in 1890. The East was also favored with good bean crops. With heavy crops of beans, particularly Limas, on this coast, and a large increase in the crops East, prices sunk to such low figures that a loss, instead of a profit, was netted to those growers who held only to sell at the low prices which ruled in the winter and early spring months. The low prices naturally induced less attention to planting beans, and with the usual result, a large prospective falling off in the crop outturn and higher prices in consequence. The acreage seeded this year to beans in California can be safely placed at fully 15,000 acres less than that of 1891. In one county (Ventura) alone the acreage seeded to beans is returned this year by the County Assessor at 10,000 acres less than was returned in 1891.

GRAPE FOOD.—We are indebted to Eveleth & Nash for a specimen of "grape food," as produced by R. E. Wood of Rutherford, Napa county. It consists of comminuted dried grapes. It is shown by analysis to be nutritious and the taste approves it. It is commended for all uses to which raisins are put.



PALACE OF MECHANIC ARTS AT THE WORLDS' COLUMBIAN EXHIBITION.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.*; *Elevator*, 12 *Front St.*, *San Francisco.*, *Cal.*

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Our latest forms go to press Wednesday evening.

Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

SATURDAY, JULY 30, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Prune Grader—W. C. Hamilton, San Jose.
Hay Presses, Wagon Scales, Etc.—Truman, Hooker & Co.
Cream Separators—A. J. Van Drake.
Fruit Trees—James T. Bogue, Marysville, Cal.
Artesian Well Tools—W Zartman & Co., Petaluma.
Auction Sales of Fruit—P. Steinhagen.
New Plants—Reasoner Bros., Oneco, Fla.
See Advertising Columns.

The Week.

The fruit interests are still the lines of the greatest activity. The auctions of Sacramento river fruit, the results of which are given elsewhere, began on time—5 A M. Monday morning—and up to the time we write on Wednesday, the movement is certainly on the upward course, and is commanding increased support. The growers hold confidence, and the river steamers bring more each succeeding day. It looks now as though there would be an escape from many of the ills which shippers to this market have complained of, and now there comes in an advance in dried fruits and nuts just to encourage those who have the fruit to dispose of. The outlook is in every way encouraging. The second trainload of fruit for Liverpool goes along this week.

The meeting of olive growers in this city last week was very interesting and encouraging. We publish a part of the proceedings this week, and more will follow. Those in the olive interest propose to carry on the war against adulteration and in favor of the popularization of their product with full vigor. Free investment is being made in the outfitting of oil-making establishments, and the olive output will soon be respectable in amount.

Not So!

I have been long convinced that older States will produce, for their own use, the products which California seeks to send to them. By selection from the results accomplished by older workers, grafting on favorable stocks, developing improved seedlings from native and hybrid seeds, and especially from choice foreign seeds, acclimated by being born on the soil they must occupy, it will be proved that the older States need no wholesale supplementing of their products from any distant State.—H. S. W., Amador Co., in *R. N. Y.*

We think our generous Californian who thus seems willing to give away all the peculiar advantages of his adopted State, is wholly wrong both in his premises and his conclusions. The products which California is now chiefly sending to the Eastern States are such as they cannot produce there. The fruit trees and vines which thrive so well and yield so richly here have been tried for the best part of a century at the East and have failed again and again. To attempt to develop hardy varieties of these fruits has always failed thus far, and, granting it possible by such means as this writer names, it would take a good part of a century to do it. But the whole statement which we quote is a gratuitous mockery at California's natural endowments, which the writer does not appreciate, and possibly he should make room for some one who could better esteem his environment.

The Man With the Hoe.

The writer has been indulging considerably of late in earth-tickling with a hoe and reflections suggested by the work come to the mind with as much force and directness as the sun-flash from the blade to the eye which is held intent upon it. In fact, hoeing is an act which naturally prompts to cogitation and a man who hoes unthinkingly should have the hoe handle brought down upon his back with considerable speed and pressure.

And in thinking on hoeing we do not mean the thinking on the hoe, which is a pursuit of some historic standing. The boy thinks on the hoe when he denounces the interminable length of the row before him and declares that Joshua has been again at his astronomical intermeddling, for the sun has stood still for an hour above him. The man thinks on the hoe when he lingers at the fence to arrange the affairs of government with his neighbor across the fence, so that things will not collapse until he comes to the fence again at the end of the next row. To the mind meditative, too, there comes thoughts on the hoe which lead to wrapt expressions on the countenance as one contemplates the beauty of the landscape or as one loses sight of material things and fixes his gaze upon the heavens above or the firmament under the earth, and the hoe becomes the pillar of thoughts philosophical or devotional.

All these are thoughts on the hoe, perhaps, but they are not thoughts on hoeing, and it is the latter in which we have ourselves indulged. The first and most obvious reflection which comes to one who does summer-hoeing in an arid land is that the handling of the hoe which he practiced in his boyhood in Eastern garden or cornfield is not the hoeing which avails most now and here. The light, shallow stroke which fell just below the root crown of the weed, stirred the immediate surface a little and left the field clean, used to be the touch for Eastern hoeing, and a man could almost do it at walking speed for hours upon hours. Except a little extra deep work, which was called for when the occasional short drouths threatened, this shallow weed-cutting was sufficient to give the crop the upper hand in the struggle with weeds, and the frequent showers kept the surface moist enough to prevent baking.

If we are correctly informed, there is less shallow hoeing done now than a generation ago at the East, and deeper summer cultivation has been found profitable there. However this may be, it is clear that shallow hoeing is a delusion and a snare in this country. Practice it through the spring and as long as the weeds start, and your garden surface will be dusty. Think then contentedly about what you have heard of a mulch of fine earth retaining moisture. Lie in the shade and wait for the plants to rise triumphant above the dust-bed you have so zealously prepared. Can it be possible, instead of sprouting upward, the plant just holds its own and then goes backward, wilting, yellowing its leaves, and all but dying in its distress. Surely there must be a worm at the root. The hoe is seized and brought down upon the soil at an angle and with a force it has not known all summer. How the dust flies from the surface, and how the hoe flies from the hardpan just beneath the dust as though it had been brought down upon a marble slab. Then there come to mind thoughts on hoeing which never came before. Then it becomes plain that the shallow weed-cutting stroke is not the dash of the hoe which saves the plant.

If the season is not too far advanced and the plant too shallow-rooted, you will work over those plants as though for their dear lives. That deadly hard-pan, which has formed with hoe-polished surface just beneath the dust, must be shattered, hauled to the light and battered with the flat of the hoe until it assumes some likeness to pulverization, and then possibly the plant may revive from its root extension into the moist soil below, which is now adequately protected from evaporation by the deep layer of fine soil above it.

One who goes through this experience once will know better how to hoe next time. He will see that by sharp, deep strokes, often using the corners of the blade, he will maintain a loose layer upon the surface which will be thick enough to prevent direct evaporation from a hardpan layer and thus to break the connection between capillary action and the atmosphere. Such hoeing is harder than light work with the blade nearly horizontal. It takes muscle to give a strong vertical stroke which penetrates well, and one cannot waltz along the rows whistling a lively tune, as is quite possible while weed-cutting in moist soil in February.

There is little grace, we admit, in the attitude of the Italian market gardener, as he straddles the row and arches his back and grunts as he sends his heavy mattock its full depth into the soil around the plants. The American with his fine, new, full-width, bronze-shanked, green-labeled, steel hoe, marching along the rows, touching the the soil with disdain as ill-worth exertion on his part, is a much handsomer picture. But the Italian's plants laugh at drouth. When irrigated the soil takes water like a sponge and it goes plump down to the roots of the plant. Irrigate the shallow-hoed plat; a pailful will run a rod and the plant root gets but the gurgle of the water as it flows along the surface of the hardpan.

Evidently, if one begins early in the season with deep hoeing, the midsummer tussle with hardpan will be obviated. This is really the lesson to be learned. And all that has been said about deep hoeing in preparation for the dry season applies also to deep cultivation in field or orchard.

Prospective Demand for Potatoes.

Although prices for potatoes in the San Francisco market have fallen off within the past few days, the general situation is encouraging to growers. The acreage planted this year is very much less in this State than it was in 1891. While the acreage is smaller, the demand promises to be larger. Last year the potato crop in the Central States was very large, with the quality generally good. The large crop gave such a liberal surplus as admitted of marketing large quantities in the Southern States, particularly in Texas, which State usually looks to us to furnish it with all required. This year the large potato-growing States east of the Rocky mountains do not promise to give a yield to the acre within 15 per cent of what it was in 1891, while the acreage planted ranges from 10 to 20 per cent less. The decreased acreage was due to heavy rains in the planting season, and the wet season caused considerable complaint about the seed rotting. The unfavorable weather caused larger late planting, much of which no doubt has been more or less damaged by extreme hot weather which prevailed East during the past week. Mention is made of potato bugs appearing in many districts earlier than usual.

Since writing the above we are in receipt of the *Farmers' Review*, July 20th, from which we excerpt the following synopsis of returns from its valuable corps of correspondents in the Central States:

The potato crop is not so good, being generally good in only Kentucky, Minnesota and the Dakotas. In Illinois 28 per cent of the correspondents report good, 40 per cent report fair and the rest poor. In Indiana 45 per cent report good, 30 per cent fair and the rest poor. In Ohio 60 per cent report good, 14 per cent fair and the rest poor. Nearly all in Michigan report fair to good. In Missouri 40 per cent report good, 30 per cent fair and the others poor. In Kansas 28 per cent report good, 32 per cent fair, the rest poor. In Nebraska 46 per cent report good, 43 per cent fair and the rest poor. The crop in Iowa is reported good by 38 per cent, fair by 30 per cent, poor by the rest. In Wisconsin the crop is fair to good in four-fifths of the State. Much rotting has been reported in nearly all of the States, and there is danger that, as the season progresses, the damage from rot will greatly increase. The past wet weather has been favorable for the development of the spores that produce the rot, and these conditions have been quite universal. In the cases of Minnesota and Dakota, the late planting has probably prevented the production of spores, and it is not likely that those States will be much affected.

ACTIVITY IN DRIED FRUIT AND NUTS.—Dried prunes, peaches and raisins were somewhat excited on Wednesday under firm offers wired from New York, at an advance on previously received offers. For the five sizes of prunes 9½ cents were bid, and for sun-dried, bleached peaches 12½ cents were bid. Both offers were free on board of cars here. Under advices from New York a large operator entered the market yesterday and bought all the 1891 raisins that could be secured. The prices paid, while private, are known to have been at sharp advance on the bids made a week ago. For 1892 raisins, future delivery, an advance is also bid. Not to be behind the times, almonds are strong and tending up. Other nuts, it is claimed, will sympathize. The upward movement is caused by confirmed reports received at New York of a very light crop of Tarragona and Avica almonds, a short crop of Brazil nuts, and reports that the crop of filbert nuts will be light. The advance in the price of almonds at New York ranges from 2 to 4 cents a pound and in Brazil of from 1 to 2 cents a pound.

IMPERIAL PEACH AND SIMON'S PLUM.—Mr. I. H. Thomas writes us that the Early Imperial, the early yellow freestone of W. W. Smith, sold in Chicago, July 2d, at $3 per box, being twice the price of any other peaches then in. Simon's plum (*Prunus Simoni*) sold at the same time at $5.50 per box of 20 pounds. We notice that reports of Eastern growers are all against this plum, some even pronouncing it worthless in quality. It bids fair to be the greatest instance of the diverse effects of climate and soil, for certainly the Simon plum grown in Tulare county, judging from the specimens we have seen and tasted, are very good indeed for an early plum. They also seem good to Eastern buyers, judging by the prices they have brought thus far. Let us remark again that, although the botanical name of the fruit is *prunus Simoni*, it is not a *prune;* it is simply an early plum.

THE Maryland peach crop is a short one.

From an Independent Standpoint.

Sensational incidents closely follow each other at Pittsburg and at Homestead, Pa., where the striking workmen at the Carnegie-Frick mills are still angry and defiant. On Saturday, during business hours, a young man of good appearance pushed his way through the outer office of the Carnegie Steel Company at Pittsburg, and into the private room of the manager, Mr. Frick, and as he advanced fired at him three times. Each shot found its mark, and without waiting to see their effect, the assassin plunged a knife four times into Mr. Frick's prostrate body. There was no attempt on the part of the man to escape, and he submitted quietly to the clerks in the office, saying that he intended to kill Frick and did not care what the consequences might be to himself. Mr. Frick's wounds were found to be very serious, but not necessarily fatal, and now, after four days, it is believed that he will recover. The name of the assailant is Alexander Bergman, his age 22, and his nativity Germany. He was formerly for two years in the employ of the Carnegie-Frick Company, although his usual occupation has been that of a compositor in connection with socialistic and anarchistic journals in different parts of the country. He declares that he had no personal motive for the assault, but thought that it would be good for mankind to have a tyrant removed; and although he disclaims that others are implicated with him in the attempt, it is certain, from hints inadvertently dropped, that he acted with the knowledge of his anarchistic associates, and with their approval and assistance. The strikers are not supposed to be directly interested in his attempt, although there was undisguised satisfaction at Homestead when the news of the assault reached that turbulent community. The leader of the strikers, Hugh O'Donnell, who saw the damaging significance of the act, was profoundly affected by the news, but others greeted it with marks of approval and satisfaction.

Among the men at Homestead who were especially pleased was a young fellow named Iams of Company K, Tenth Pennsylvania National Guard, who proposed three cheers for the assassin. He found in short order that he had made a mistake, for his arrest followed immediately; and acting in accord with the extreme letter of the Pennsylvania Militia Code, Col. Streator, in command, ordered him strung up by the thumbs, and this operation finished, to be drummed in disgrace out of camp. The young man is the son of Judge Iams of Green county, and is otherwise well connected, and there is loud complaint, not only throughout the State, but all over the country, against the punishment, which is charged to have been arbitrary and cruel. Justification for Col. Streator's severity is found in a law enacted after the riots of 1877. At that time the militia sympathized with the mob and refused obedience to their officers at a critical time. During those riots, especially on the Saturday preceding the burning of the Union depot in Pittsburg and the bombardment of the Philadelphia troops in the roundhouse of the Pennsylvania Railroad, some of the State troops were so pronounced in their sympathy with the strikers that they systematically foiled all the efforts of the officers to disperse and control the mob. This sympathy on the part of the militia for the strikers, and their utter inefficiency at a critical moment, induced the next legislature to enact more stringent laws for the enforcement of discipline. The legislature at that time was dominated by the agricultural element of the State, with whom the conviction prevailed that the city troops in particular were responsible for the disgrace of the militia. The country members of the legislature, always stern in the maintainance of law, determined that any further shortcomings of the State troops should be punished severely. Under this law, young Iams was punished. Its greatest penalty is disfranchisement, and Iams will suffer in this respect as he has already suffered personally, unless he shall receive executive pardon. It may readily be imagined that these incidents, in combination with the general situation as it existed a week ago and still exists, have kept the Homestead affair before the public as the foremost topic of general interest. All other subjects have been secondary and subordinate.

The Homestead affair is prolific in lessons for the American people. It shows the need of quicker and more direct methods of action in suppressing riots. Under the existing system, the owner of property in peril must appeal to the local sheriff, and he failing, then to the Governor of the State, and he failing, then to the President. All this means delay, even when the officials are well disposed, in which millions of property may be destroyed. The time has come when the Government should take matters of this sort directly in hand. The next lesson is the necessity of amending the immigration laws. Too long, far too long, we have held the doors wide open not only to the industrious and well-intentioned foreigner, but to the hordes trained in discontent and criminality. It is time to discriminate, and to discriminate closely, between the useful and the vicious. The principle that has already been put in force against the Asiatic must be applied to the European. Only those who give promise of useful citizenship should be allowed to come in. The old sentiment which made America an "asylum for the oppressed of the earth" is a fine one, and it worked well enough before the steamship and the railway, but now, when it is but a cheap and brief journey from Central Europe to America, the old rule will not work. Either we must keep out the disorganizing elements of European life, hatched and bred under tyrannical systems of government, or they will destroy us. Another lesson is the old one that violence begets violence. If we are to suppress arbitrary force on the part of the workman, we must suppress arbitrary force on the part of the master. A Pinkerton army always meets a mob. There must be no armed forces in America save those organized in the interest of society and under its authority. Still another lesson is the necessity for the suppression of partisan spirit in matters of administration. It was this spirit which tied the hands of the sheriff at Homestead. It was this spirit that made Governor Pattison delay. And this spirit it was that is primarily to blame for the shameful battle of two weeks ago.

It has not escaped the notice of the Democracy, either before or since the national convention, that the Mugwumps hold Mr. Cleveland to be their very own and a Democrat only in a secondary sort of way; and concerning it there has been a good deal of dissatisfaction and some positive resentment. Mr. Cleveland no doubt had this fact in mind when he arose last Wednesday evening in New York to respond to an address by Mr. Wilson of West Virginia, notifying him officially of his nomination by the Democratic national convention, and his remarks were shaped accordingly. "The message you deliver from the national Democracy," he said, "arouses within me emotions which would be well nigh overwhelming if I did not recognize here assembled representatives of the great party who must share with me the responsibility your mission invites. I find relief in the reflection that *I have been selected to stand merely for the principles and purposes to which my party is pledged and for the enforcement and supremacy of which all who have any right to claim Democratic fellowship must constantly and persistently labor.*" There was more of the same sort, all tending in the most positive way to connect his candidacy with, and to demonstrate his allegiance to, the Democratic party. Of course, this will stop the mouths of those who have been loud in declaring that Cleveland was less of a Democrat than a Mugwump, and that he held allegiance to the Democratic party subordinate to his independent proclivities. The address following was chiefly devoted to the tariff question and asserted in strong and definite terms the extreme views of the tariff reformers, but there was a paragraph in it which many who have greatly admired Mr. Cleveland's independence of character read with profound regret. Supporting his argument against the tariff, Mr. Cleveland says: "Our working men are still told the tale oft repeated in spite of its demonstrated falsity, that the existing protective tariff is a boon to them, and that under its beneficent operations their wages must increase. While they listen, scenes are enacted in the very abiding place of high protection that mock the hopes of toil and attest the tender mercies the working man receives from those made selfish and sordid by unjust governmental favoritism." This remark gave no strength to Mr. Cleveland's argument, and it was unquestionably designed as a sop to the strikers at Homestead, Pa. If the question between the mill owners and the mill workers at Homestead and Pittsburg was the original one of wages, then Mr. Cleveland might have been justified in saying what he did, but the question of wages has been superseded by the broader questions growing out of the violated rights of citizenship, liberty of personal action and the rights of property. In such a crisis, great leaders like Mr. Cleveland are in duty bound to take the side of public order and cleave firmly to it. It is not a time for demagogy, and Mr. Cleveland was the last man in the country who might have been expected to turn the occasion of turbulence and irritation to political profit. Mr. Cleveland's remark's will be construed by the strikers as a message of sympathy to them, and following as it does the absurd and revolutionary utterances of Senators Palmer and Voorhees in the Senate when the trouble at Homestead began, will do much to lessen the tone of the coming campaign. In saying this much, we would have the reader carefully distinguish between the rights involved in the original question of wages and the wrongs involved in the later development of riot. The wages question is no longer the question at Homestead. The question now is as to right of the strikers to control and destroy the property of mill owners and to prevent by violence other men who stand ready to work for the wages offered from the exercise of their free choice. To this question there is only one answer consistent with civilization and orderly government.

The Republican State Convention which met, transacted its business and adjourned on Tuesday was the shortest political convention in the history of the State. To be sure, it had but little to do, but conventions with the least to do usually take the longest time to do it, and it was a happy surprise when the job was finished on the evening of the day it was begun. The platform is brief. It reaffirms the platform of the Stockton Convention held last May; adopts the platform and resolutions of the National Republican Convention; pledges cordial support to Harrison and Reid; welcomes the Republican College League as an ally in the political field; recommends the passage of the mining bill now pending before Congress, and wanders finally into a resolution concerning transportation. Here, of course, was the rub. The resolution is as follows:

Resolved, That the Republican party of California has always stood for the material development of the State, and believing that increased facilities of transportation both by water and rail will conduce to that end, it demands from the General Government the early completion, under Government control, of the Nicaragua Canal, and the liberal expenditure of money to improve our harbors and internal waterways, and it invites capital to build into the State other and competing transcontinental lines of railway, pledging protection and support to all instrumentalities existing and to exist that may promote the general welfare and give to the people the benefit of the law of competition.

We very much fear that the farmers of California who were looking for bread will feel that in this resolution they have been given a stone. There was an effort on the part of Mr. Fuller of San Diego, supported by others, to secure a plank pledging the Republican party to do all in its power to force the Railroad Commission to reduce the local fares and freights of the S. P. R. R. system, but the usual force of railroad lawyers and politicians was on hand, and Mr. Fuller's proposition was buried out of sight. For electors at large, Thos. H. Bard, of Ventura, and Joseph C. Campbell, of San Francisco, were named by the convention, with Geo. B. Crook of Merced and A. S. Hallidie of San Francisco as alternates. E. W. Davis, Master of the State Grange, was nominated for Congress from the First District, with Wm. Carson of Humboldt as District Elector; from the Second District, John F. Davis of Calaveras was nominated for Congress, with Geo. B. Sperry for District Elector. From the Third District, S. G. Hilborn was named for Congress, with James A. Waymire for Elector. In the Fourth District, C. O. Alexander was nominated for Congress, with I. Hecht for Elector. In the Fifth District, Eugene F. Loud was nominated for Congress, with H. V. Morehouse for Elector. The Sixth District chose John T. Porter for Elector, but adjourned to meet in Santa Cruz on the 29th for the purpose of nominating its candidate for Congress. In the Seventh District, S. L. Hanscom was named for Elector, but no nomination was made for Congress. The convention is described in the reports as quiet and harmonious.

John and Charles Ruggles, stage robbers and murderers, were taken from the Redding jail last Saturday night by a mob and hanged. There was no violation of substantial justice, since the guilt of the victims was self-confessed. But this fact does not excuse the act. A lynching bee is an object lesson in disorder. It puts in contempt the authorities whose respect is essential to the well-being of society. Incidents of this sort always breed lawlessness, because they destroy the moral force of law and of social discipline. A community which suffers this sort of thing once is likely to suffer it again. Nothing so much promotes order as obedience to law and nothing so much promotes disorder and social anarchy as disregard of law. Those who sow the wind always reap the whirlwind. The dispatches which reported the affair at Redding said that people came from all the surrounding country to see the dead men dangling in the air. If the reporters are to be credited, people brought their young children to witness the revolting sight. This is almost past belief. If there is a phrase in the language strong enough to name the folly of a parent who would thrust upon youthful innocence a sight so horrible and demoralizing, we do not know it. Such a scene never did anybody good; it never fails to do harm.

Death of Palo Alto.

The death of this famous stallion from pneumonia occurred on Thursday of last week at Senator Stanford's ranch in San Mateo county. His speed achievements last fall gave him a world-wide reputation. At the record meeting on the Stockton kite-shaped track last year he trotted the following miles:

October 13	32¼	1:04	1:38 —2:12¾
October 21	33¼	1:05¾	1:39¼—2:11¼
October 27	32	1:03½	1:36½—2:10
November 3	32¼	1:04	1:36½—2:09½
November 10	31¾	1:03¼	1:[illegible]—2:10¼
November 10	31¾	1:03¾	1:36½—2:09¾
November 16	32¼	1:[illegible]	1:[illegible]
November 17	31¾	1:03¾	1:36½—2:08¾

Palo Alto was ten years of age at his death. Senator Stanford estimated his value at $150,000, but no offer could induce him to part with the horse. There are a number of his colts at Palo Alto, all yearlings, which are promising.

Weather and Crop Bulletin for Week Ending July 25th.

The following report of the crop conditions for the week ending Monday evening, July 25th is from the reports of the voluntary crop correspondents, forwarded to the Director of the California Weather Service in cooperation with the State Agricultural Society, and shows that prices of fruits have rapidly advanced and all crops are considerably below the averages of years that have yielded ordinary crops. The Grasshoppers are quite destructive in the neighborhood of Blocksburg, Humboldt county, destroying garden stuff, feed, and in some cases even the young trees. There was no rainfall during the week, which is a normal condition. The highest temperature was 99° and the lowest 42°. New barns have been erected for storing baled hay, and the roof will not be put on until just before the weather warnings of the first rains.

HUMBOLDT. — *Eureka* — There is a great deal of sameness in the weather; that is, cloudy at night and clear and warm during the days. Grain of all kinds is doing well. Fruit, although a short crop, will be of an excellent quality. The potato crop will not be as large as last year.

Blocksburg—The season is unusually cool, the highest and lowest temperatures being 86° and 48°. Heavy northwest winds every day, with cool nights and foggy mornings. The corn crop is almost a failure, and grasshoppers have made their appearance in greater numbers than ever before known, and they are destroying garden stuff and feed; in some cases even the young trees.

Hydesville—Hay is mostly all cut and put up in good shape. It is of a good quality. Oats are looking well.

LAKE. — *Ma Tel Vineyard, Upper Lake* — The week has been fairly cool, and fruit is still slowly ripening. The crop is small but quality good. Heading (harvesting) is well along and the yield promises to be good. Threshing begins next week. Rust has not done as much damage as was at first expected. Grapes are doing well, but there is a prospect of a late vintage.

BUTTE. — *Palermo* — The first shipment of Early Crawford peaches was made on Monday, the 18th, at 4⅝ cents net, to San Jose, per ton. Shipments are now made daily, consigned to different parties in Sacramento, for Eastern shipment.

SUTTER. — *Yuba City* — The weather has been about the average for this season of the year; viz., cloudless skies and no rain, with plenty of heat from the sun, which is good for ripening all classes of green and growing fruits. The grain yield is a fair one. Large quantities of fruit being shipped East. Corn, hops, buckwheat, vegetables, etc., doing extremely well.

YUBA.—*Marysville*—Wheat is being rapidly harvested. The crop will not be up to the average, and the fruit crop is generally light.

PLACER.—*Newcastle*—Orchardists greatly encouraged with so favorable an outlook for their products during the season, the quantity and quality being a good average and prices satisfactory.

AMADOR.—*Oleta*—Clear and fine weather, but quite cool for the season. Threshers report an average yield.

SACRAMENTO—*Sacramento*—The weather has been below the normal during every day except two, and one of those was normal and the other three above the normal; the daily average was 1½° below normal. The normal rainfall is nothing. The past week was normal in a precipitation aspect. The cool weather has retarded the rapid ripening of fruits and berries, thereby giving ample time for picking and marketing the crop without glutting the markets.

SOLANO.—*Vacaville*—The weather has been warm and fruit of all kinds has been benefited. Grapes are doing well and being shipped in large quantities.

SONOMA.— *Healdsburg* — Canneries open on Thursday on Crawford peaches. More foggy nights would help the corn. Hops promise well. The fruit buyers are anxious to buy, but they were a week late, otherwise they might have made contracts at their own prices. Peaches are selling for $40 per ton.

Santa Rosa—Conditions unchanged from last week. Hops are growing well and setting nicely. It is too early to make any prediction as to the yield. Orchardists show a disposition to hold on to their fruit and propose to make the packers pay them all they possibly can. Hay nearly all in and heading and threshing well advanced.

ALAMEDA—*Niles*—Royal apricots all gone; Moorpark apricots are being marketed and prospects good for a fair yield and fair prices. Highest temperature 91°.

Pleasanton—Highest and lowest temperatures 92° and 43°; the average temperature about normal for the week, with favorable conditions for ripening and maturing fruits and cereals. Threshing is being vigorously pushed. The yield will be lighter, both in quality and quantity, than was at first anticipated. Hops are *arming* out, but are fully three weeks later than last year on account of the cool spring weather. Sugar beets doing well.

SANTA CLARA.—*Gilroy*—Grain has all been cut and is being threshed, with the output fairly good and quality excellent. Most fruits show a light crop but of a fair quality, and most excellent prices being obtained.

SANTA CRUZ.— *Watsonville*—Weather very favorable to all growing crops and harvesting operations. The sunshine has been very beneficial to fruits. Threshing is going on in full blast all over this and the adjoining counties.

SAN JOAQUIN.—*Lodi*—Highest and lowest temperatures 95° and 51°, with westerly winds prevailing. The wheat yield is below the average and quality fair to good. The first carload of watermelons shipped on the 21st, two weeks later than usual, and it will be some days yet before they become plentiful.

Stockton—Wheat is coming in this market freely at the present time, The average yield is good, but some of the grain is slightly shrunken, making the crop not quite so valuable as was at first anticipated.

MONTEREY.—*San Ardo*—The weather has been quite favorable to the fruit crop. Highest and lowest temperature, 99° and 42°. Grain turning out poor and very much below the general average.

TULARE.— *Visalia*—The wheat crop is yielding much better than at first expected. There will be an extra large crop of prunes; all other fruit an average crop. The weather has been extremely cool for this season of the year.

TEHAMA.—*Red Bluff* (telegram)—The temperature during the week has been about normal and the weather generally favorable to harvesting. The yield of wheat and barley in Butte county is above the average both in the quality and the quantity.

FRESNO—*Fresno* (telegram)—Weather cloudless and temperature below the normal, which has been very beneficial to all crops but has delayed the ripening of fruits and berries. Bartlett pears, Early Crawford peaches, plums and nectarines are being shipped from three to five carloads daily, and they are of the finest quality. Harvesting is progressing; yield fair.

ANGELES.—*Los Angeles* (telegram)—The weather still continues cool with cloudy mornings in the coast districts. Apricots are about gone in the western district; drying of the apricots continues in the eastern section. Pears are beginning to be marketed and the crop promises at least a fair one. The grain harvest continues in the Antelope valley and the yield is about the half of a full crop while the quality is below the average.

FRUIT MARKETING.

Lodi Watermelons.

LODI, July 24.

TO THE EDITOR:—Perhaps the largest district in the State of Callfornia growing watermelons for the general market is a region of about four miles radius around Lodi, Woodbridge and Acampo in San Joaquin county and but a few miles from Stockton. Some 2000 acres have been planted this season, but the season is full three weeks late as compared with other years. The first two cars were shipped from Lodi on July 21st by J. Peirano and July 22d by L. O. Gillespie. This introduces the melons to the trade of 1892 One car was sent to San Francisco and the other to San Jose. The former sold for $3 per dozen.

For the early crop last year, the freight via railroad was $22.50 per car to the points named. This year a new departure has been made by the growers. A watermelon association has been formed by the growers agreeing that they will sell the melons in San Francisco and not be dependent entirely on the commission merchants. I am told that all the acreage of melons but 40 acres is represented. The growers have named L. O. Gillespie to supervise the selling in San Francisco. He is to have his own bookkeeper and make all he can out of the crop for all the members.

This year, on account of the lateness of the season, the yield will be such that it will take two acres to fill a car; that is the way Mr. Peirano explains the quantity grown to an acre.

While visiting the district, I noticed that a large number of acres are being grown without irrigation, and large numbers are planted in between the young fruit trees, thus giving profit to the grower while the trees are coming into bearing.

W. H. MURRAY.

ANOTHER ACCOUNT OF THE MELON GROWERS' ENTERPRISE.

For a number of weeks the melon men have been holding meetings in Lodi, for the purpose of combining for mutual benefit in the disposition of this year's watermelon crop, which has come on the market during the past week. The meetings were held in secret, but now that the combine has been made, the result of the organization has become known. With but one or two exceptions, all of the growers are in the combine, which has decided to ship all San Francisco consignments to Riley & Enos, and everything to Oakland to S. Angel & Co. Whenever a grower sells a car of melons, ten per cent of the net proceeds is withheld and deposited in the Bank of Lodi. If the grower stands up to the stipulations of the combine, he will be given this amount so retained, at the end of the season; but if he should, at any time during the season, dispose of melons contrary to his agreement with the combine, then this ten per cent will be distributed equally among the other members of the organization. The Bank of Lodi has been selected as treasurer, through which all checks will pass to growers from the commission merchants. Growers are permitted to ship to points other than San Francisco or Oakland, at any time and in any amounts desired. In other words, the combine has to do with San Francisco and Oakland consignments only. Growers are confident they have done the right thing, and are looking forward to good prices in consequence of their action. They have come to the conclusion that it is better business policy to lose melons than to be out their melons and the cost of picking, loading and shipping, too.

Two cars, the first of the season, were shipped Thursday, one to San Jose from G. Peirano, and the other to San Francisco fram Chong Kee of Lockeford. L. O. Gillespie shipped a car to San Francisco yesterday, and S. S. Gillespie sent a car to San Jose.

Colonel L. O. Gillespie will look after the growers' interests in San Francisco, and C. W. Norton will represent the melon men in the Oakland market.—Lodi Sentinel.

Fruit Sales by Auction in San Francisco.

The following are the three days' auction sales of Sacramento river fruit which have been held, up to our going to press on Wednesday:

Monday, July 25.—Henry Meyers, Early Crawford Peaches, 37½c ₱ basket; W. N. Runyon, Peaches (180 baskets), 47½c ₱ basket; W. N. Runyon, Early Crawford Peaches, 50c ₱ basket; W. N. Runyon, St. John Peaches, 45c ₱ basket; W. H. Barry, Peaches, 45c ₱ box; H. D. Kercheval, Peaches, 50c ₱ basket; J. R. Olsen, Peaches, 40c ₱ basket; E. Crofton, Peaches, 40c ₱ basket; E. Crofton, Pears, 55c ₱ box; Mrs. M. A. Jackson, Peaches, 42½c ₱ box; Mrs. M. A. Jackson, Potatoes, 47½c ₱ sack; A. J. Reynolds, Peaches, 42½c ₱ basket; *A. J. Reynolds, Pears, $1.50 ₱ box; P. Crew, Peaches, 40c ₱ basket; J. S. F. & Mow Lung, Peaches, 37½c ₱ basket; L. Strothman, Peaches, 40c ₱ basket; C. Hansen, Peaches, 42½c ₱ basket; C. Hansen, Nutmegs, 50c ₱ box; D. & N., Peaches, 50c ₱ basket; John Miller, Peaches, 42½c ₱ basket; John Miller, Peaches, 40c ₱ basket; John Miller, Peaches (60-lb. boxes), 55c ₱ box; B. Bates, Peaches, 42½c ₱ basket; B. Bates, Pears, 45c ₱ box; Johnston & Son, Peaches, 50c ₱ basket; E. Dann, Peaches (No. 1), 50c ₱ basket; E. Dann, Peaches (No. 2), 30c ₱ basket; George B. Greene, Peaches, 40c ₱ basket; D. Osborne, Peaches, 42½c ₱ basket; S. Runyon, Peaches (Seedlings), $1.55 ₱ basket; S. Runyon, Plums, 45c ₱ basket; S. Runyon, Early Crawford Peaches, 60c ₱ basket; R. Kercheval, Peaches, 40c ₱ basket; D. D. Gammon, Peaches, 40c ₱ basket; D. D. Gammon, Pears, 50c ₱ box; O. R. Runyon, Pears, 75c ₱ box; George A. Smith, Tomatoes, $2.50 ₱ box; D. T. Lufkin, Tomatoes, $2.50 ₱ box; J. R. Olsen, Tomatoes, $2.50 ₱ box; R. D. H., Tomatoes, $2.25 ₱ box.

*Donation to Protestant Orphan Asylum.

Tuesday, July 26.—D. D. Gammon, 70 baskets Peaches, 42½c; Henry Meyers, 300 baskets Peaches, 35c; C. W. Gammon, "B. B. B.," 79 baskets Peaches, 37½c; W. J. Smith, 9 baskets Peaches, 30c; A. J. Dailey, 27 baskets Peaches, 35c; R. Kercheval, 253 baskets Peaches, 40c; R. Kercheval, 18 baskets Peaches, 40c; H. D. Kercheval, 186 baskets Peaches, 37½c; L. Strothman, 94 baskets Peaches, 37½c; J. R. Olsen, 47 baskets Peaches, 37½c; John Crofton, 90 baskets Peaches, 40c; John Miller, 101 baskets Peaches, 40c; John Miller, 40 baskets Peaches, 40c; L. D. Greene, 109 baskets Peaches, 40c; L. D. Greene, 11 boxes Peaches, received yesterday, 50c; L. D. Greene, 3 boxes Pears, 42½c; Dann & N., 23 baskets Peaches, 50c; Mrs. M. A. Jackson, 87 baskets Peaches, 45c; A. J. Reynolds, 17 baskets Peaches, 40c; J. Collins, 220 baskets Peaches, 37½c; C. Goldman, 141 baskets Peaches, 37½c; Geo. Smith, 11 baskets Peaches, 40c; J. S. Foster & Mom Lung, 3 baskets Apples, 30c; J. S. Foster & Mom Lung, 56 baskets Peaches, 42½c; F. Gomez, 86 baskets Peaches, 40c; O. P. Stuart, 166 baskets Peaches, 40c; O. P. Stuart, 7 boxes Pears, 45c; A. W. Stuart, 209 baskets Peaches, 42½c; C. Hansen, 73 baskets Peaches, 47½c; D. Osborn, 26 baskets Peaches, 45c; D. Osborn, 3 boxes Tomatoes, $1.35; W. N. Runyon, 6 boxes Tomatoes, $1.50; W. N. Runyon, 24 boxes Pears, 37½c; O. R. Runyon, 27 boxes Pears, 77½c; G. McIntyre, 20 boxes Pears, 62½c: Sol Runyon, 8 boxes pears, 50c; Sol Runyon, S. Seedling Peaches, $1.25; D. Leary, "J. J. & L.," 4 boxes Tomatoes, 90c; Ah Poy, 5 boxes Cucumbers, 35c; Tong Yen, 22 boxes Tomatoes, $1.37½c; J. Albert, 12 boxes Tomatoes, $1.40.

Wednesday, July 27.—L. D. Greene, 120 baskets Early Crawford Peaches, 40c; L. D. Greene, 12 baskets Cling Peaches, 45c; L. D. Greene, 5 baskets Peaches, 50c; J. P. Koch & Co., 5 baskets Apricots, 40c; N. Ruggles, 3 baskets Early Crawford Peaches, 35c; A. J. Dailey, 70 baskets Peaches, 42½c; A. J. Dailey, 1 basket peaches, 35c; W. H. Barry, 43 baskets Peaches, 37½c; W. H. Barry, 26 baskets Peaches, 45c; W. H. Barry, 3 baskets Prunes, 90c; W. H. Barry, 10 boxes Pears, 70c; J. R. Olsen, 11 boxes Pears, 75c; A. J. Reynolds, 10 boxes Pears, 75c; A. J. Reynolds, 60 baskets Peaches, 50c; C. W. Gammon, "B. B. B.," 50 boxes Tomatoes, 50c; D. D. Gammon, 27 baskets Peaches, 40c; D. D. Gammon, 15 boxes Pears, 57½c; D. Osborn, 27 baskets Peaches, 40c; Geo. Smith, 9 boxes Tomatoes, $1.62½; Geo. Smith, 23 baskets Peaches, 47½c; S. F. M., 20 boxes Tomatoes, $1.25; W. N. Runyon, 80 baskets Peaches, 42½; W. N. Runyon, 93 baskets Peaches, 40c; W. N. Runyon, 80 baskets Peaches, 42½c; W. N. Runyon, 22 baskets Prunes, 77½c; W. N. Runyon, 11 baskets Prunes, 60c; O. R. Runyon, 19 boxes Pears, 70c; John Crofton, 6 baskets Nectarines, 30c; John Crofton, 74 baskets Peaches, 47½c: John Crofton, 2 baskets Peaches, 47½c; D. Hollister, 5 baskets Plums, 42½c; D. Hollister, 1 basket Prunes, 25c; D. Hollister, 6 baskets Peaches, 47½c; B. Bates, 28 baskets Peaches, 42½c; Green Bros., 40 baskets Cling Peaches, 50c; Sol Runyon, 34 baskets Sawyer Seedlings, $1.52½; Sol Runyon, 122 baskets Early Crawford Peaches, 50c; Sol Runyon, 2 baskets Plums, 75c; Sol Runyon, 8 baskets Prunes, $1; P. Crew, 100 baskets Peaches, 45c; P. Crew, 176 baskets Peaches, 42½c; J. Miller, 69 baskets Peaches, 45c; J. Miller, 3 baskets Plums, 65c; E. Dann, 74 baskets Peaches, 50c; J. S. Foster & Mow Lung, 33 baskets Peaches, 47½c; Joe Albert, 55 baskets Peaches, 42½c; Mrs. M. A. Jackson, Peaches, 45c; H. D. Kercheval, Peaches, 45c.

Progress of the Liverpool Fruit Shipments.

NEW YORK, July 26.—A consignment of California fruit for England was to-day stowed away in the immense hold of the Majestic, which has been properly fitted up to keep fruit in good condition. This shipment consists of five carloads, including Crawford peaches, Bartlett pears, plums and apricots, valued at $5000. Their transportation to Europe is something of an experiment, as it is not certain that it will arrive there in good condition. Most of the fruit is going to John Adamson & Co., large fruit dealers in Liverpool.

The time from San Francisco was the quickest ever made by a fruit train. The train left on July 19th and got in last night. This is the first large cargo of fruit ever sent to Europe. One car contained a tempting assortment of delicacies for Queen Victoria.

SACRAMENTO, July 26.—G. H. Appel, agent of the California Fruit Transportation Company, to-day received a telegram announcing the safe arrival in New York of the first London special fruit train, which left Sacramento one week ago to-night. The train arrived at 3 o'clock this morning, and the five carloads of fruit were quickly transferred to the swift steamer Majestic, which leaves New York Wednesday morning for Liverpool. The running time made from here to New York was 140 hours and 7 seconds.

The weekly special for London left Sacramento to-night at 10 o'clock. A. T. Hatch loaded two cars, the California Fruit Union and Frank Buck of Vacaville one car, Gregory Bros. one car and C. W. Reed one car. Agent Appel is very sanguine of the complete success of the enterprise.

Santa Barbara Notes.

CARPINTERIA, July 24, 1882.

TO THE EDITOR :—The weather now is cool, with some fog, which is good for the growing crops.

Beans are blooming nicely. The vines are of small growth, owing to so little moisture in the soil. If August proves very sunny and dry, corn and beans will suffer, and much less than an average crop will be harvested.

Buyers are bidding up in prices for beans, so we may get fair prices for what are grown.

Hay is a fair crop, selling at $8 to $12; more grain, barley and wheat being threshed than usual.

The fruit crop is coming on. Apricots are nearly gone. Some few—two or three carloads—for the cannery at Colton brought $1.25 per hundred pounds, delivered at railroad station at Carpinteria. Many were sold at $15 per ton, to be dried at Newhall or other sunny places in the interior. Apricots averaged smaller than usual, so that many that went away to dry did not look very promising. Several of the growers evaporated their crop at home, or what they could manage of it, and sold most of the product for 8½ to 11 cents per pound. Many apricots went to waste where there were not many trees. We are not careful enough to save the "littles." The best way is to harvest and save, that nothing be lost.

Peaches begin to ripen. There will be many more than the local markets will take, so they must be dried or lost. The Colton Packing Co. has secured most of the best Bartlett pears for canning. The surplus must be dried or rot. A great deal of labor is required to fit pears for drier, so that very low prices for the product will not pay, but perhaps this year dried pears may pay.

Grapes begin to ripen and are a fair crop, unless mildew comes later and spoils them.

Nectarines are a fair crop. Plums very few. This is not a very good locality for plums or prunes.

O. N. CADWELL.

HORTICULTURE.

Eastern Nurserymen and the California Quarantine.

From the annual report of B. M. Lelong, Secretary of the State Board of Horticulture, we take the following concerning the points at issue between California horticulturists and Eastern nurserymen:

I have received the following resolutions, passed by the American Association of Nurserymen, at their meeting at Atlanta, Ga., viz.:

Resolved, That the secretary of this Association notify the president and secretary of the California State Board and other proper officers that the people east of the Rocky mountains consider the present inspection laws of California a measure uncalled for and a great discrimination, and demand their prompt repeal.

Resolved, That in the event of having to pass such laws, the Executive Committee be requested to employ a good attorney to draft a uniform law to be passed by the respective States east of the Rocky mountains, and one which shall be so framed by a schedule of fees as to be no expense upon the State.

Accompanying the resolutions was a letter from the secretary of the Association, as follows:

AMERICAN ASSOCIATION OF NURSERYMEN,
SECRETARY'S OFFICE,
ROCHESTER, N. Y., July 1, 1892.

I am requested by a unanimous vote of this Association to forward to you the enclosed resolutions.

Allow me to volunteer a few lines of explanation in regard to the position of our nurserymen as I understand it:

We consider California a part of the United States, open to commercial intercourse, without obstructions; but we find the California State line is now more effectually blockaded against the sale of our products than the border lines of any foreign country. This condition might be borne by us with better grace if an equal barrier was in force against products of California coming East, but no such barrier exists, and California fruits are poured into our Eastern markets in enormous floods, to the injury of Eastern fruit growers.

We desire reciprocity with California. This is a more liberal policy than California offers Mexico, as will be noted by the following excerpt from a recent California fruit grower: "If, therefore, reciprocity with Mexico means the free admission of citrus and other California-grown fruits to the United States, it is the first duty of every fruit producer to oppose and resist it to the last extremity. Such a governmental policy would sound the funeral march of our most promising industries and would postpone the settlement and development of this State to a vague and indefinite future. It must not be."

Your reply will be that your people are simply protecting their orchards from insects and diseases, but this is considered by us simply a pretext. Such pretexts are offered by Germany in order to exclude American pork, and by France to exclude our evaporated fruits.

A similar pretext was attempted by a northern State in order to shut out nursery salesmen from all other States, claiming that such salesmen sold trees that were not adapted to the North, etc. Numerous pretexts of similar character might be raised by Georgia, Tennessee or any other State where peach yellows never has, and never will exist on account of incongeniality, as is the case in California, and where disease and insects could not possibly be shut out by legislation if naturally inclined thereto.

If one State can shut out all commercial dealings with another State by such pretexts, and yet sell her own produce to the abused States, surely our United States will become a misnomer—they will become disunited commercially.

But further than this, California has been arbitrary and reckless of the losses which she has imposed on nurserymen of other States, by burning carloads of trees, etc., which have caused many anxious hours to produce, and the loss of which may seriously cripple the owner. Men poorly qualified to judge of this burned stock have consigned them to ashes when they should have accepted them as a healthy product.

There are many nurserymen dependent on their California trade, who now know not whither to turn for a market. Instead of having done California harm, they have, as pioneers, aided California to reach her present condition.

You may reply that the present California exclusion of nurserymen from other States is the action of fruit growers, not California nurserymen, but we cannot see it in that light. So long as the exclusion of outside nurserymen will increase the profits of California nurserymen one-half or more, it must be apparent that California nurserymen are at the head of the barricade, though they may be shrewd enough not to let their lights shine too brightly in public discussions.

After California did her worst in making State laws against us, your Congressman attempted legislation in Congress, which, if passed, would have been a death blow to the nursery trade of the entire country. He would listen to no compromise until the prompt action of this Association had, through its members, killed his bill.

We desire just and fair dealing, such as should prevail between neighbor and neighbor. We do not desire monopoly on our part, nor will we permit it in other.

Hoping to be favored with a reply at your earliest convenience, I am yours respectfully,

CHAS. A. GREEN, Sec'y.

MR. LELONG'S REPLY.

In reply to this letter, I have but repeated what I have said, as given on page 190 of the Report for 1891, as follows:

"There have been various assumptions that the action of the State Board of Horticulture is one of persecution leveled against Eastern nurserymen in the interest of California tree growers. An imputation of this character is too small to require serious consideration. Suffice it to say that no member of the Board, nor any of its officers, has ever lent himself to so small a business as boycotting any one. The statutes of California providing for the preventing of the introduction or spread of insects or diseases injurious to our fruits, are general, and are not in any manner aimed at the Eastern nurserymen, nor do they reach in any way stock that is not infected with diseases or pests that may endanger our orchards. Eastern trees, or trees from any foreign country, may be imported into California in any number, provided they are not infected.

"The laws which have been enacted to protect the horticultural interests of the State are general, and people, whether residents of California or not, are presumed, and conclusively presumed, to have notice of their provisions; and no one in any prosecution under these acts can plead ignorance of their provisions.

"It is incumbent on every orchardist to disinfect all fruit trees grown on lands infected with any insects, or any contagious disease known to be injurious to fruit, etc. This not only applies to home-grown trees, but to any that may be brought from any districts, whether in the United States or in foreign countries.

"The fact of the deadly yellows and rosette abounding in many of the Eastern States, and destroying the peach orchards everywhere, has caused every load of Eastern trees to be rigidly inspected. If the slightest trace of infection is found, the trees are condemned and proceedings at once instigated to have them destroyed. If one tree infected with the yellows gets in here, and afterward the disease develops, the duty on foreign fruit can be taken off, for there will be no need of protection; for if the disease spreads with the rapidity it does in the Eastern States, California will have no fruit to protect, and the disease will never be gotten rid of, as there is no cure for it.

"There is more danger of ruining the California fruit industry by importing diseased trees than by removing the tariff. We might recover from the effects of tampering with the tariff, but if the yellows ever gets here, it will come to stay, and California will never recover from its effects.

"Lastly, the districts in the Eastern States where the yellows has appeared were once flourishing orchards, and now are nothing but leafless, bare-limbed trees and trunks. California is so situated that careful espionage should be exercised over every importation, and it is the bounden duty of every citizen interested in the future welfare of the State to keep out all known tree diseases and fruit pests. The fruit interests of California bid fair to become the greatest of all in the world, and from it many families will derive comfortable support in years to come, and some will amass exceeding great wealth. Therefore, these interests deserve, aye, they demand *protection*"

B. M. LELONG, Sec'y.

A Glance at the Olive Belt.

A paper read by REV. C. F. LOOP of Pomona at the Olive Growers' Meeting in San Francisco, July 21.

Having been invited by the Secretary of the State Board of Horticulture to assist at this meeting, in deepening the interest already felt in olive culture in California, I will direct your attention to a few of the many points suggested to our minds by our experience, our observation, and by reading the publications upon this subject, with which we are so highly favored.

Let us then, in the first place, mentally survey the olive belt of the world. Our research would naturally begin in those eastern countries of the old world, in Syria and Greece, where traditions and historical records locate the first olive trees. In the northern hemisphere, the limit of this belt touches the 44th parallel, and in a very few favored locations plantations are found near the 45th. The southern limit, like the isothermal line, varies from the 25th degree down to the 18th. There is also a corresponding belt in the southern hemisphere. You see, then, that this belt or zone is not subject to torrid heat or polar frosts. Being fanned by southern breezes, toned by the invigorating aerial currents of the north, the climatic conditions are most favorable to man in his well directed efforts, in creating his Arcadias, his Elysian fields, and his Gardens of Hesperides.

It is in this belt where the olive grows that you find the artistic ability manifesting itself in immortal creations, sculpture and bronze, of painting and carving. And amidst his fairest gardens man rears the artistic home, the grand and noble structures dedicated to divine worship and monumental fabrics indicative of the highest achievements in human action.

And thus we may traverse this favored belt, going from the charming landscape and garden, the home of the Muses, to the magnificent city, from mainland to lovely islands, whose shores are washed by southern seas, and finding as we go the palate delighted with the most delicious fruits, the eye greeted with the marvelous works of art, and the achievements in architecture, and our ears saluted by the sweetest music in poetry and vocalization.

The cradle of the human family was in this olive belt, and an all-wise Providence, to satisfy the essential wants in alimentation and growth, gave to man the triad, the cereals, the vine and the olive. In his inimitable Hymn of Praise and Thanksgiving, the sweet singer of Israel refers to this gift when he speaks of the "wine that maketh glad the heart of man, oil that maketh his face to shine, and bread which strengtheneth man's heart."

Now, in all the intervening years has there been a substitute found? Could we look to-day upon the hardy laborer of those eastern lands resting to take his midday meal, if he is supplied with bread, with well cured, ripe olives, and a flask of light wine, he is satisfied and happy and prepared to do a strong man's work. This belt includes Italy, the island of Sicily, the southern part of France bordering the Mediterranean, Spain and Portugal, the northern shore of Africa, and parts of those countries bordering upon the eastern shore of the Mediterranean.

Leaving those scenes in the distant east, where the sun first flashed his golden beams upon man in the beginning of his history, following the shores of the Mediterranean to the rock of Gibraltar, we can sail away as Columbus did 400 years ago, to the western world and landing upon the Pacific coast, in California, we may ask the question, "Are we still in the olive belt?" Without hesitation we answer, yes. And the demonstration is complete, as we look with admiration upon the trees planted 100 years ago by the Franciscan Friars at the Missions, and the results of well directed labor in forming new plantations at Santa Barbara, San Diego and other points, as well as the growing and fruiting of new varieties which we have imported from the shores of the Mediterranean. We are confirmed in our belief, as we look around, that we are not only in the olive belt, but that we have all the conditions necessary, in soil, climate and exposure, between San Diego and Mount Shasta, to rival the fairest and most important olive plantations on the Mediterranean, either in Italy, Spain or France.

If you are not satisfied with my assertion, examine for yourself the red mesas of San Diego, the old and the new plantations along the foothills and in the interior, follow up the San Luis Rey valley and stay over night at the old branch Mission of Pala. There you will see olive trees a century old, and while you will find in the soil all the ingredients necessary to successful cultivation, at midnight in midsummer you will find the air as soft and balmy as at Amalfi and Sorrento, where the olive revels in its luxuriant growth and fruitage. Go over the divide to Temecula and cross the red plains at the west base of the San Jacinto mountains, where water is being carried to transform that vast area into a blooming, fruitful garden. Pass along the base of the mountains from San Bernardino to San Gabriel, stopping at Pomona to examine, not only old trees planted 50 years ago, the new plantations of imported trees, but the nurseries where the olive is propagated more extensively than at any other place in the world. Continue your observation and study in San Fernando valley, in Ventura and the Ojai, in Santa Barbara, San Luis Obispo, in Kern and Fresno counties, and along the foothills of the Sierra until you reach the Wolfskill ranch in the north, and even the foothills of Mount Shasta, and I am sure you will be satisfied with the gently sloping mesas bathed in the warm sunshine and protected by the mountain chain from the cold winds of the desert in winter.

Having found your location for olive culture, you ask: What shall I plant? I will answer this question from my own standpoint. You can ascertain definitely from those who have worked with the Mission olive for 10 or 15 years, and if you are satisfied, plant the Mission. If you would like to try some of the new varieties, I will state for your benefit the fact that it will not be necessary to send abroad for trees. We have imported and propagated from these imported stocks, the varieties which produce the oil bringing the highest price in the London market. If we have the fruit which produces the largest quantity of the finest oil in the world, what more do you want? We have also the trees producing the best and largest fruit for table use. If there is anything more delicious than the white olive of Ascoli, larger than the Santa Catarina, or more satisfactory than a number coming to us under the commercial name of Queen olive of Spain, we have never heard or read of them.

I will give a list of those varieties which I esteem most highly for oil, giving the name under which I received the trees from Senior Rafello Peccori of Florence, who is now esteemed as the most eminent horticulturist in Italy: Razza, Infrantoia, Corregiola, Grossaia, Atrovialacea, Bellmonte, Rossalina, Leccino, Rubra, Uvaria, Piengente, Morenello, and the Picholine I received with the Rubra from Southern France of the eminent horticulturist, J. Audibert, one of the Directors of the National Experiment Station of France at Hyeres. I have also for table use the white olive of Ascoli, the Saint Agostino, the Santa Catarina, the Regalis, and one of the Queen olives named Hispania.

We cannot cause the olive to spring up under our command as did Minerva in the early days of Attic tradition, but with the very best varieties in the world within our reach, we can take the young plant, give it the best conditions, treat it with the care and attention due to a child and a friend, and we will be able to see it grow, developing in beauty and graceful proportions until it rivals the fabled tree of the Acropolis at Athens; and being endowed with longevity, with comparative immortality, it becomes in the plantation the abiding substance, while the owners or masters as the years roll by become the fleeting shadows

You ask why I place the Razza at the head of my list of press olives. I answer, because in Tuscany, where the best Italian oil is made, a given quantity of this fruit yields the largest amount of oil of the finest quality. This variety, under good conditions, has given satisfactory results from time immemorial, and this, with other kinds, will take to our soil and situation like natives, and will, we believe, prove quite as satisfactory here and quite as remunerative as on the hills and plains of Tuscany.

Among the 50 varieties imported into California, quite a large number have already fruited in different locations. Among those which are very promising are: the Rubra, the Uvaria, the Atrovialacea, described in the annual report of the State Board of Horticulture for 1889.

If the native Californian desires the old black olive cultivated by the Moors in Spain under the familiar Arabic name of Acituna, he will find it now in the nurseries under the name of Praecox. As years pass and this industry is promoted and extended throughout the olive belt of this State, it will no doubt be ascertained what varieties are best adapted to the different locations, especially as the map shows us that this belt extends from south to north at least 500 miles.

And to-day we think the prospect is encouraging, as we see capitalists willing and anxious to aid in promoting this industry, and we believe that in a few years California will be able to supply the market of the United States with bottled olives for the table and with pure olive oil. And we hope our respected pioneers, Mr. Cooper and Mr. Kimball, who are with us, will live to see that day and the consumation of their hopes, and, remembering then the day of

small things, when the stranger within their gates asked what those olive trees were planted for, they will be able to exclaim with the Hebrew prophet, with reverend benediction, as they see the pipes of *golden oil* distributed for the alimentation of the people, "Grace, Grace, be unto it."

Transactions of the State Board of Horticulture.

As briefly noticed last week, the annual meeting of the State Board of Horticulture was held in this city July 19th. There were present president Ellwood Cooper, A. Block, Santa Barbara; I. H. Thomas, Visalia; A. F. White, Santa Rosa; Fred C. Miles, Penryn; Frank A. Kimball, National City, and J. L. Mosher, San Jose.

The treasurer reported a total expenditure for the fiscal year of $9687.92, leaving a balance of $312.08 on hand of the $10,000 yearly appropriation. Of the special appropriation of $5000 to defray the expenses of an expert to foreign countries, $4063.65 was expended.

The secretary, B. M. Lelong, reported that 151,000 copies of reports and pamphlets and 31,700 copies of bulletins were issued since the last meeting, and 30,000 copies are in course of distribution. He recommended the enactment of a new law which would cover the defects in the old law, regarding the adulteration of olive oil and products sold under false labels. A law to prevent the wholesale adulteration of fertilizers which are placed upon the market, and which are of less value than sand, was also recommended.

A further suggestion as to the passage of a package law was made. Great quantities of inferior fruit is put upon the market by unprincipled dealers, and sold in boxes bearing the stamp of growers of high-class goods. By this means great injury is done the business of reputable firms. It is proposed to enact a law making it a misdemeanor to use boxes which have another man's stamp on them.

It was decided to hold a convention of California fruit growers in San Jose, from November 15th to 18th inclusive.

The report of the Quarantine Inspectors, shows that from April 30, 1891, to June 30, 1892, 47 steamers, 7 sailing vessels and 23 cars were inspected, as follows:

Steamers from Japan and China	23
Steamers from Australia and New Zealand	12
Steamers from Sandwich Islands	8
Steamers from Central America	4
Sailing vessels from South Sea islands	7
By rail, cars from Eastern States	14
By rail, cars from Southern States	9

Plants and trees inspected in above shipments:

Ornamental plants	74,445
Fruit trees	53,893
Citrus trees	372,700
Citrus trees disinfected	47,700
Citrus trees destroyed	326,500
Fruit trees destroyed	36,225
Ornamental plants destroyed	525
Total number of trees quarantined	53,893
Total number of citrus trees quarantined	372,700
Total number of ornamental plants quarantined	74,445
Total	501,038

President Ellwood Cooper was reelected, Fred C. Mills elected treasurer, and J. L. Mosher, auditor.

ENTOMOLOGICAL.

The Work of the State Board of California.

Quarantine.

The work accomplished in enforcing the horticultural quarantine laws is shown by the report of the Quarantine Officer, Alexander Craw, as follows:

As San Francisco is the principal port of entry for trees and plants coming into the State from the Orient, Australia, New Zealand, the islands of the Pacific and Central America, and as those countries in the past have sent us the most destructive of the pests that now annually cause so much damage to the fruit industry of California, I have given this branch such close personal attention that I have been compelled to let such important matters as the study of the life history of pests, especially those that have never been investigated, remain for the present.

Nearly all the fruit-growing counties of the State have from one to thirty deputies looking out for insect pests, whereas I have this important doorway to attend to alone, besides visiting and giving a general surveillance to most of the counties in their quarantine work. However, I am satisfied that I have done my duty and carried out to the best of my ability the rules and regulations of your honorable board. I cannot say that this has been accomplished without friction or hard feelings, for it is well known that the enforcement of law is bound to give offense to some individuals. The fruit growers and the press of the State have given it their unqualified approval, and even one of the leading horticultural publications of the East, *American Gardening*, has the following in the March number: "The course of the State fruit inspectors of California in seizing diseased fruit trees, shipped by Eastern nurserymen at large expense, has called forth some vigorous protests from the growers, but without effect upon the inspectors. The quarantine against Eastern trees is further justified on the ground that some counties of the Golden State quarantine against others, so anxious are they to prevent the acquisition of any new obstacles to fruit culture. Eastern nurserymen must make up their minds that California horticulturists are wide-awake and are not going to run chances against the importation of any enemies to their fruit-growing industries."

This has the proper American ring to it, and is in marked contrast to some of the silly and shallow threats of retaliation made by some of the Eastern nurserymen because we object to furnishing new quarters for some of their superabundant pests and diseases.

In a general summary since my last report, I will state that as live "mining" scales were found in December upon the Tahiti orange trees that arrived on the 15th of June last, and were held in quarantine on the beach at San Pedro, I addressed a letter to the Attorney-General calling his attention to the fact that the importers of the trees had had ample time to destroy all the scales and had failed, not because of any neglect upon their part, but, in my opinion, because it is impossible to kill this "mining" scale without also killing the trees. I advised that he commence proceedings to have the trees destroyed, as they were a menace to the fruit-growing industry of the State. The case was set for January 28th, and on the evening of January 25th I left for Los Angeles, and arrived there on the evening of the 26th. On the 27th we made an examination of the trees and still found living scale. The following day the case was called before Judge McKinley in Department 6, Judge Waldo M. York appearing for the people. The defendants asked to have the restraining order removed, as they had verbally disposed of the trees to a party that intended planting them in the Salt River valley, Arizona. The motion was denied and the case was proceeded with and occupied that and the following day. On the 30th the court and those interested visited San Pedro and inspected the trees, returning in the evening. On February 2d and 3d it was again heard and arguments set for Monday, the 8th. On the night of the 3d I left Los Angeles for Sacramento to inspect three carloads of Florida grown orange trees, which I found infested with purple scale, *Mytilaspis citricola*. long scale, *Mytilaspis gloverii*, and the chaff scale, *Parlatorii pergandii*. I ordered them fumigated with hydrocyanic acid gas, and to remain in quarantine for 14 days. At the expiration of the specified time, I made another examination and found live scales, and ordered the trees regassed and another 14 days quarantine.

From Sacramento I visited Sutter county, where the County Commissioners had in quarantine a consignment of 2000 plum trees from Alabama infested with root borers. After consultation with the commissioners and importer, the latter decided to destroy the trees.

On December 11th, the Placer County Commission telegraphed the arrival of 14,500 Eastern peach trees at Auburn. I immediately visited there and found root borers, and ordered the trees removed from the State. I allowed time for the importer to correspond with the nurseryman to ascertain if he could dispose of them, and as they refused to do anything in the matter, he burned the entire shipment.

As the important fruit-growing county of Santa Clara (through some local jealousy and antagonism on the part of some fruit growers) had no horticultural commission until the 4th of January last, it was made the dumping-ground for some of the Eastern nurseries, and consequently took a good portion of my time. On December 15th, I quarantined 19,000 Eastern grown peach trees infested with root borers in one of the tree yards, and ordered the trees removed from the State. The importer refused to comply with the order, and brought his lawyer to convince me I had no authority to do so. However, I held my position, and after consultation with the Attorney-General, the latter drew out a complaint against the importer and the Eastern nurserymen for maintaining a public nuisance. I delivered the papers for service at San Jose, but for some reason they were not served. The Horticultural Commissioner saw that the trees were not distributed, and on March 16th I went down to attend to the case, and found that the black aphis had developed upon the trees very seriously. I called the owner's attention to their condition, and gave him two days to destroy the trees, and the next morning he burned the lot.

After a very careful inspection of peach trees in other portions of his yard, we failed to find any trace of the pest. I consider this a most fortunate escape of the Santa Clara valley, and the whole State, from a serious pest.

Another lot of 3000 peach trees was received by another firm in San Jose on January 1st, and upon inspection I found them infested with root borers. The owner remarked that he had no desire to have a quarantine notice served upon him, and so immediately burned the trees, including the packing material. Other small lots have arrived in different portions of the State, and have been attended to.

On March 1st, I received telegrams from Attorney-General Hart and Commissioner Scott at Los Angeles, stating that Judge McKinley had rendered his decision in the Tahiti tree case in favor of the people. This was a very important victory for the fruit growers, and was a source of general congratulation, as they were confident that it would have a salutary effect in the future upon intending importers.

The decision is a very lengthy one, a copy of which (revised by Judge McKinley) I herewith submit.

On March 29th, I was officially advised by Mr. Scott that he had carried out the orders of the Court and cremated the Tahiti trees.

The Japanese stock has required constant attention to see that none of it was removed before every insect was killed. In some cases I found it necessary to destroy the trees.

In February, the Japanese Consul, Mr. S. Chinda, called upon me, at the request of his Government, to ascertain if there was any way that the trees and plants could be disinfected in Japan before shipment to this country, so that they would not be detained in quarantine upon arrival here. I gave him the bulletins and publications of the board to send to his Government, and informed him we would be pleased to have them attend to the disinfection of the stock in Japan, but that that would not guarantee its acceptance here, for it would still be subject to inspection, and, if necessary, disinfection, or possibly destruction.

Three new scales have been received from Japan this season—one upon orange trees, one on peach, and another upon maples. These were destroyed.

Upon a shipment of ornamental plants from Australia, I found a new cottony cushion scale, about one-third the size of the *Icerya purchasi*. The body is jet black; down the center of the back and along the edges of the insect are bands of yellow cotton, giving it a very unique appearance, while the cottony egg sac is plain instead of fluted or corrugated, as in *purchasi*, and is of a slate or dove color.

Some little hard feeling has been raised in several of the counties on account of the wrong identification of some insects or supposed diseases by the inspectors in their zeal to exclude insects upon trees going from one county to another. This state of affairs can hardly be avoided, and is likely to continue as long as some of the counties persist in paying less than laborers' wages to their inspectors.

Three other carloads of Florida orange trees have been received at Sacramento besides those mentioned.

A carload of 48,000 trees arrived in Lancaster, in Los Angeles county, from Seaford, Delaware, and a telegram received from Horticultural Commissioner Scott, dated March 28th, stated that the local inspector A. B. Cox had reported the trees apparently free from insect pests and positively refused to quarantine them; also that the district attorney said that the trees came under my jurisdiction, and as it was left in my hands, I had to go down and attend to the case. I wired "that he attend personally or appoint another inspector." To this I received another dispatch stating that the district attorney maintained that I must attend to Lancaster matter. As the danger was very great and prompt action must be taken before the trees were planted, I went down on March 31st to make a personal inspection. Upon the receipt of the first telegram, I wrote to Commissioner Scott and Inspector Cox to carefully examine the trees for black aphis, for Delaware is one of the four States where this recent and very destructive pest has secured a foothold. Upon arrival, I learned that Mr. Scott and his deputy, Mr. Compere, had examined the trees and found them very seriously infested with the Eastern peach crown borer, *Algeria exitiosa*, and the black aphis, *Aphis persica niger*. The "peach yellows," or the "peach rosette," will not, in my opinion, compare with this pest in destructiveness. It has practically exterminated the peach industry in portions of Australia, and Dr. E. F. Smith, of Washington, reports having seen one nursery of 100,000 trees killed outright in two or three week's time, and having heard of half a dozen other large nurseries that were entirely destroyed or very seriously affected.

The importers of this Lancaster shipment, from what I learned, had taken every precaution to have the trees received and planted before it was brought to the attention of the commissioners. The fact that the land is owned by a company that are under contract to plant it out with trees, and their endeavors to keep the matter quiet, would appear to substantiate the reports. We made an inspection, and found enough to justify the immediate commencement of proceedings in the Superior Court of Los Angeles to have the entire consignment condemned as a nuisance and destroyed. As a portion of the trees had already been planted, the attorney for the people, Waldo M. York, filed an injunction restraining the owners from moving the trees, and the case was set for hearing Monday, April 11th. When called, the defendants, through their attorney, moved for a continuance of two weeks, as it would be impossible to get their evidence from the East in less time, but after hearing a statement from Mr. Scott and me as to the great danger of delay in the matter, Judge McKinley informed them that they must be prepared to proceed with the case in one week (Monday, 18th inst.), and set the following day for hearing my testimony, after which I returned by way of Fresno, where I stopped over to attend to some quarantine business, and arrived on the afternoon of the 14th.

ALEXANDER CRAW,
Quarantine Officer.

FLORIST AND GARDENER.

California Seedling Pelargoniums.

The Santa Cruz *Surf* has an article on seedling pelargoniums which, though it has a sort of a two-edged advertising sword in it, we publish for the floral information it carries:

John T. Sullivan, of the Sea Beach, is a well-known and successful florist. In fact, he was a florist before he was a hotel man, though it has always been in an amateur fashion; and even when he was in the New York postoffice, his love for flowers would find a way of expressing itself.

One of the things which delights him most is the producing of new seedlings among his floral beauties. Since the hotel and grounds have been remodeled, Mr. Sullivan's most pronounced successes have been with the beautiful variety of geranium family known as the pelargoniums. His seedlings of these lovely flowers number up into the hundreds, and many of them are exceptionally choice.

But he has been contented to let them grow and blossom for the pleasure of his guests, and to the latter they have been a constant wonder and delight. No effort has been made to place them on the market or to reap any financial benefit from them.

However, a new Columbus was coming to discover this western world of floral beauty. It was Timothy Ryan, the veteran and experienced florist and nurseryman of Yonkers, N. Y., who has been visiting at the Sea Beach, and whose keen and practiced eye told him that here was a source of profit as well as pleasure.

Mr. James B. Kidd, now of the Sherwood Hall Nursery Company (Timothy Hopkins' place), but lately of the leading firm of seedsmen—J. M. Thorburn & Co. of New York—was also here on Sunday and Monday, and was quite as delighted as Mr. Ryan at the rare "find" in the Sea Beach gardens.

Mr. Sullivan was invited to select some 30 or 40 of the best ones for naming and classification. This will be known as "Sullivan's Santa Cruz collection of pelargoniums." and the plants will be placed upon the market by the Sherwood Hall Company.

It was a very pleasant duty which devolved upon the

two florists, Mr. Sullivan and one or two others to name the beauties—each one a queen in its own right—and it was a difficult task to stop choosing when the "forty" limit had been reached.

However, they were named, and as Santa Cruz will have reason to be proud of the fine collection which will go forth to the world stamped with her name, the list is given herewith. A description of the flowers has not been attempted. They range from the most delicate pearl white and pale mauve to deepest and richest maroon. Some of the varieties are azalea-flowered, others have petals with deeply ruffled edges, and each one is conspicuous for some especial beauty.

Following are the names: Sadie, Lurline, General Goodman, Liberty, Anna, Minnie, Edith May, Sensation, Miss Hopkins, Mrs. McDonald, Mrs. Raymond, Mrs. J. T. Sullivan, Mabel, Commissioner McDonald, Sea Beach Beauty, Mrs. Potter Palmer, Col. Sanborn, Bride of the Morning, Wonder, Gov. Markham, Fanny Dickinson, Mrs. Colbert Meade, Pride of Santa Cruz, Gen. Dimond, Puerto d'Or, Loma Prieta, Mrs. H. R. Judah, Horace Greeley, Thomas L. James, Wm. Elliott, Dr. Gibson, Aurora, Mrs. Rennie, Mrs. Chadbourne, Mrs. Winans, Mrs. H. M. Porter, Midday, Columbus.

Mr. Ryan was so fortunate as to arrive in California in March, thus being able to enjoy the wild flower season at its height of beauty and the roses in their May-time glory. He is enthusiastic in his admiration especially for California's own flower—the eschscholtzia in its wonderful masses. Mr. Ryan says that he fears he has ruined his reputation for veracity among his Eastern friends by the letters he wrote home during the early spring, but when he saw acres and miles of the glowing, golden eschscholtzia, he thought that no more glorious flower could be planted at the gates of Paradise.

THE VINEYARD.

Further Action by the Raisin Growers.

The Fresno *Expositor* gives the following account of the closing proceedings of the raisin producers' meetings, the earlier transactions of which were given in last week's RURAL PRESS:

The committee appointed to draft a memorial to Congress, asking that a duty of 2½ cents a pound be levied on Zante currants, which are now admitted duty free, presented their report and were instructed to draw a memorial in consonance with their report and present it to Congressman Bowers. The following is the report:

WHEREAS, The raisin industry of the United States has grown under the fostering care of Congress to be a great and important industry, in which is invested large capital and giving employment to many thousands of American farmers and laborers; and

Whereas, The Zante currant, a seedling grape, is admitted to our ports of entry free of duty, thus coming in direct competition with the raisin product of our vineyards; and

Whereas, The competition of the Zante currant seriously interferes with and threatens the continued prosperity of the raisin industry in California; therefore be it

Resolved, That we, the raisin producers of California, in general convention assembled, at Fresno, this the 16th day of July, 1892, and representing 26,000 acres, do memoralize and petition the Congress of the United States, at Washington assembled, to levy a duty on imported Zante currants, that shall be the same and equal to that now levied upon imported raisins.

Mr. Van Wormer presented the following resolution:

WHEREAS, For the purpose of uniting more closely the interest of all engaged in the raisin industry and securing a uniform and honest pack, thereby establishing a reputation for California raisins, both at home and abroad, be it

Resolved, By the raisin growers and packers of this State, in convention assembled, that the chairman, by the advice and consent of those interested in this industry, appoint a committee of nine or more names of experience in the raisin business to formulate a plan by which the objects mentioned above may be secured, and to further and mature some plan for the appointment of a raisin inspector, working under State authority.

The resolution and the matter of forming a permanent State organization were referred to the executive committee.

The following names were read as the State executive committee:

D. T. Fowler, Alexander Gordon, Miss Hatch, W. N. Van Wormer, W. N. Oothout, John S. Dore, Colonel Trevelyn of Fresno; F. Winstanley of Etiwanda, San Bernardino county; G. M. Hawley of El Cajon, San Diego county; E. Sanborn of Tulare county; H. W. Byron of Lemoore, Tulare county; M. Murdock of College City; L. S. Harmon of Rosedale, Kern county; E. L. Hooper of Merced county; J. Maxwell of Yolo; D. M. Pyle of Kern; P. Y. Baker of Tulare; W. S. Porter of Hanford; B. A. Bateman of Hanford; C. P. Irwin of Hanford.

John S. Dore moved that it is the sense of this body that a committee be appointed to confer with the packers for the purpose of securing better railroad rates on raisins.

The motion was carried.

Mr. Applegarth said that the growers wanted a rate of not more than one cent per pound from Fresno to the East.

E. G. Chaddock read a resolution adopted by the conference committee, expressing it as the sense of the committee that $1 per 100 pounds would be a fair rate of freight.

This was unanimously carried.

The following named were elected on the committee on railroad transportation: D. M. Pyle of Kern; W. S. Porter of Hanford; Alexander Gordon of Fresno, and D. T. Fowler of Fresno.

On motion of Mr. LaRue, it was decided to meet again on July 30th, at 10 A. M., and that the executive committee shall meet immediately after the adjournment.

Grape Cuttings and Their Treatment.

F. T. H. of Bishop, Inyo county, writes of local practices with grape cuttings, to the *Rural New Yorker*, as follows:

1. We propagate by cuttings, which can be bought at $1 to $1.25 per 1000, or one can go on a vineyard and cut his own cuttings, if he undertakes to clean up the brush after him.

2. The vines are pruned from February 1st to the end of March, and the cuttings are taken directly afterward.

3. The length of the cuttings will depend on the variety and distances of the buds apart. Those from the Muscat Muscatelle, English Alexandria, etc., are from 10 inches to 14 inches; those from the Malaga and long-jointed vines from 12 to 18 inches. When the cuttings are cut, they are tied in bundles of 100, and a trench 3½ to 4 feet deep is dug in a moist, cool place, and the cuttings are put in and covered as deep as possible. About the middle of March we begin to set them to root. For planting I like sandy land, as they grow better and have more roots there than in heavier soils. When the land has been well plowed and allowed to settle, plow three furrows with a 12-inch plow at about one-fourth the width of the field, and deepen the last furrow with an Oliver B. V. vineyard plow. Do the same at the same distance from the other side. While the team is plowing in the second land, three men will be able to plant the first. When that is planted the team comes to cover the vines, which are two inches apart and with one bud above the surface, plowing three furrows around the land and deepening as before, while the men plant the other land, and so on. When the vines are planted out for a vineyard the holes are dug and the vines put in immediately, at a distance of 8 or 10 feet each way.

4. Here they do not use trellises for vineyards. Most of the raisin grapes are cultivated to a height of two feet from the ground and the wine grapes to four feet in height. The Sultana and white wine grapes are cultivated high, are tied to 2x2-inch cedar stakes about eight feet out of the ground, so that the land can be plowed and cross-plowed until the grapes are matured. Here there is no snow at any time and no rain during May, June, July, August, September and October, and the vines have to be irrigated every month.

THE STOCK YARD.

Bulls, Their Value.

How often have we urged dairymen to secure the best bulls, regardless of cost. "Buy a bull," was the quaint but very pertinent reply once given in a Wisconsin Dairymen's Convention to the question, "How to Start a Dairy?" If the logic of facts can teach anything, our readers ought to know that dairymen are keeping many of their cows at a positive loss. We venture to say that one-third of the cows in any State of this Union do not pay for their board and lodging. If these were selected out and killed and buried, the profits of dairying would be materially increased. We may safely make the statement more personal, and say that every dairyman has cows in his herd that consume more than they return. What other business would stand such a drain?

The above is from *Hoard's Dairyman*, and we feel confident that the advice given is not based upon theory, but upon proof that can be brought forward by every intelligent dairyman who is an observer of facts and their causes.

For the breeder of beef cattle, as well as he who breeds for the dairy, it is false economy to buy a low-priced and inferior bull.

Buy the best bull you can get, is sound, practical advice that has been, from time to time, given in the columns of the RURAL by some of our correspondents. A few dollars, or a hundred dollars, more or less, counts for little between a good bull and a middling one, not to say inferior, when one is sure of getting what will answer his purpose for breeding.

There are many who do not consider the difference between buying the cows to start a herd with and the bull to use, in that, with the former, each one has an influence on her own individual progeny only, while the latter, for good or bad, stamps his own peculiar characteristics on the calf of every cow.

A bull that is good in every point, as a bull to head a herd ought to be, and descended through several generations of good animals on both sides, will be sure to have a beneficial influence on any herd upon which he is used, increasing its value as far as that influence has been brought to bear upon the younger portion of the herd, whereas exactly the contrary results are obtained from the use of an inferior one that is lacking in any desirable quality, whether of individual merit or pedigree. In fact, the use of the best bull means gain at every point and the use of one not so good, loss.

This is ably illustrated in an article by A. Devereux in Deposit (N. Y.) *Courier*, and reprinted in *Hoard's Dairyman*.

Mr. Devereux has for his subject, "Poor, Good and Extra Cows," in which he gives his experience in weighing the products of his own herd of 70 cows, which he divides into three classes, viz., 27 extra, which made an average of 364 pounds of butter each; 20 good, which made 260 pounds each, and 23 poor, including some heifers, which produced 139 pounds each.

On the basis of the above products he reckons that his best cow, which made 646 pounds of butter, made a profit of $120.50 for the year and the poorest cow a loss of $12.75.

This, however, is based on the assumption that the cows were all fed alike, which, if so, must be put down to bad management, which we cannot think of one being guilty of who takes so much trouble to get at the separate value of the product of each cow or class of cows.

It is both natural and right that the cows which made 364 pounds of butter a year should be fed more than those which averaged only 113 pounds, or less than one-third that of the extra good ones.

In the ordinary management of dairies the cows giving most milk are fed more and better food than those giving a smaller quantity.

Taking the dairy as a whole, Mr. Devereux puts the cost of food for each cow at $41 for the year, and says: "The 27 extra cows would show a profit of $50 each, the good cows a profit of $24 each, and the 23 poor cows a loss of $9.25 each.

"These figures show that we would have made more money with the 47 best cows than we did with the whole dairy of 70. These figures teach a lesson to every butter maker that ought to be profitable. They are not founded on guesswork, but from actual weights of milk and tests of each cow.

"If I am asked how to improve the common dairies of the farmer, I must say, as has been said a thousand times before, secure the best bull you can."

All the extra cows were by one bull, since using which Mr. D. says he has purchased several others, but has never secured the equal of that one as a butter bull, and says: "I fear that I have been too careful as to price, thinking that I could secure a good animal for $100 when, if I had paid $1000 for a bull equal to Lord Broome (sire of the extra cows), he would have been a very cheap investment."

THE APIARY.

The Development of Bee Culture.

Prof. A. J. Cook, now of the Michigan Agricultural College, but who is soon to become a resident of Southern California, gives the following suggestive review:

It is doubtful if any manual labor pursuit can show as rapid and substantial progress for the last 50 years as can bee-keeping. The whole business, methods, manipulation, and entire care and management of bees have been totally revolutionized. Fifty years ago the old box hive, or "straw skep," or "bee gum," or very likely the old salt barrel, served for hives. Comb honey was produced in the body of the hive, or, possibly, in large boxes on top of the hive, and was generally a combination of honey, bee bread, and, possibly, young bees. Then all liquid honey was strained, and was an extract of the above. Then there were no bee books worthy of the name, for Langstroth and Quinby had not yet taken their pens to record the marvels of the hive, and the improved methods of honey production. Then the only literature was Huber and other foreign works, which were very rare in American libraries. Even the agricultural press was almost silent on this subject. The whole business was so rudely carried on, and so restricted in its limits, that the most enterprising editor could not get information that would be helpful to his readers. Then the words, movable frame hives, sections, honey extractors, comb foundations, supers, not to speak of queen cages, bee escapes, smokers, etc., were entirely unknown.

THE MOVABLE-FRAME HIVE.—The movable frame hive, the invention of the scholarly Langstroth, is not yet 40 years old. This at once revealed the marvels of the bee world to every observing bee keeper. He no longer worked in the dark; he could look in upon the entire economy of the hive, and knew the needs and conditions of his bees as truly as the farmer could know of the thrift or unthrift of his horses or cattle. Of course this meant revolution, and bee-keeping at once changed from a happy-go-lucky pursuit to one that was largely under the control of the bee-keeper. Soon the excellent books, "Quinby's Mysteries of Bee-Keeping" and "Langstroth on the Honey Bee," came to explain the new and better methods. The first gave, in plain, simple style, the methods of one of the most practical and successful beekeepers that America ever produced. The other was a veritable classic. It gave, in most elegant diction, not only the marvels connected with the natural history of the bee, but pointed out the path, through a study of the bee's habits and history, to a better and more successful system of bee management. Thus the revolution in bee-keeping methods was quick to spread, and soon every State, and very many counties, had beekeepers who not only knew but practiced the best that was taught in this fascinating field of work. About 20 years ago our first bee associations were formed. To-day we have hundreds of these organizations, even single States having well nigh a score. The National Association is very vigorous and influential.

THE HONEY EXTRACTOR.—About 25 years ago Germany gave us the suggestion of the honey extractor. The inventive genius of Americans had no sooner secured the idea than they hastened to change the rude instrument into the perfect machines in use to-day. These give us the beautiful extracted honey, which is just as excellent, perhaps more wholesome and digestible than is even the immaculate comb honey. By this means we have nearly twice as much honey as we can secure in the comb, and the increase tends greatly to lessen the prices of this incomparable sweet. Thus we have another revolution which cheapens honey, and at the same time takes away none of its excellence. The extractor also prevents swarming, one of the things that the beekeeper desires to control, but knows no sure way except by use of this valuable machine.

COMB FOUNDATION AND OTHER IMPROVEMENTS.—Soon after the invention of the extractor, Germany again came to the front with comb foundation. This article was so improved in America that it became hardly second to the extractor as a valuable adjunct in the bee yard. With this we get only worker combs, which are straight and true, and secure a much larger and finer product from our apiaries. Even before these last improvements, the smaller sections became favorites, and before the foundation was in full use we also had the white poplar sections, which hold a pound of comb honey, all so white, so neat and so clean, that to show them is to sell them. Thus, though the honey product is increased from thousands to millions of pounds,

the markets are not overstocked. People admired and desired honey before; now they regard it as one of the most attractive luxuries of the table. To-day we have our queen excluders, so that no bee bread is stored and no breeding done where we secure our comb honey. To these have been added the bee escape, bee tent and smoker, so that we can manipulate our bees as safely and as easily as we can manage the most docile horse.

BREEDING.—The science which has ever kept the lead of practice in bee culture has discovered that the laws of breeding hold just as truly among bees as among our higher animals, that there is quality among bees, and that by selection we may greatly improve our honey bees. Thus queen-rearing, a thing entirely unthought of 50 years ago, is now an industry in itself, and bees are bred with all the care and success that waits on the best breeders of horses or cattle. More than this, these queens are shipped around the world. Men have studied out the requirements, so that now we have cages and food that make it safe to send bees to Australia and Japan.

WINTERING AND DISEASES.—Twenty-five years ago, the matter of wintering bees was a sore puzzle. Thousands of colonies were often lost in a single winter, but now, thanks to hard study and thought, we have almost no dread of winter. Again, the deadly microbe attacked the bees. This is a sort of cholera that is terribly contagious and as terribly fatal. Yet our bee keepers have studied out the nature of this malady, and to-day we know how to stay this "foul" brood, which is one of the most virulent of maladies.

ONE BARRIER TO CERTAIN SUCCESS.—There is just one serious impediment in the way of perfect success in bee-keeping. As yet, we do not know how to secure honey when the flowers do not secrete nectar. For the past few years the honey seasons have been very poor, and in most sections of the country the honey crop has been very disappointing. Whether the keen eyes of science or practice, or both, will ever discover a way to remove this one remaining barrier to certain success remains to be seen.

BEES AND FERTILIZATION OF FLOWERS.—One aspect of bee-keeping in which the farmer and fruit grower may well take a deep interest is the necessity of bees in the fertilization of the flowers of most of our fruits. We positively know to-day that bees not only give us honey, but, in gathering the nectar from the flowers, they perform a most valuable service, without which a full or even profitable fruitage cannot be expected or hoped for. Thus the importance of bee-keeping becomes greatly augmented. We see that Nature is a grand whole, that each part is in some way related to every other part, so that failure in one line often means general failure. We have in apiculture a fine illustration of this truth. Agriculture, the hope of our country, can only attain the highest development through the success of apiculture. As the bees must have the flowers, so the flowers must have the bees.

SCIENCE AND ART IN BEE-KEEPING.—Bee-keeping combines science and art as do few manual labor pursuits. The progressive beekeeper must understand the natural history of bees, and, therefore, he must be a student and a thinker. He must use constantly his best mental faculties as well as brawn. Thought and study, when combined with physical effort, bring real satisfaction and insure enthusiasm. Thus the beekeeper is a student and an enthusiast, and is mentally very wide-awake. He is prepared to lay hold of new and better methods, which are sure to be suggested to the man who is mentally alert, to see all there is in and about his business that will help him to a higher position. This explains the fact that hardly a year goes by without some new method or device which is fairly revolutionary in its influence on bee-keeping practice.

TRACK AND FARM.

Suggestions on Hitching Up.

A writer for the *Country Gentleman* remarks that there is no farmer's boy ten years old who would not make an affirmative reply with some indignation if he were asked whether he could hitch up a horse; but there is many a man both on and off the farm who does not know when a horse is properly hitched up, and no work of the average farm hand needs the final review of the owner's eye more than this, whether the horse goes to plow, wagon or carriage. In adjusting different horses to different harness and different tools, the comparative importance of the neck-yoke straps, or chains, the hold-backs, the traces, the collar and the belly-band, according to the work to be done, must be perfectly realized in order that the horse or team may work to the best advantage without chafing, galling or injury.

In a wagon with a stiff tongue, where the chains are intended solely to hold back by and should swing quite loosely except when going down hill, a man will often shorten them up (probably with the idea that it looks neat and trim) so that the weight of the tongue and a portion of the load hangs constantly on the horses' necks, and every time a wheel strikes a stone in the road, the tongue whips around and wrenches the horses at the top of the collar or on the shoulders, and very soon there is galling, a running sore, followed by blister and scar which disfigure the horse permanently. For a working team, the adjustment of the belly-band is unimportant if the saddle is flexible, unless it carries cross-straps attached to the breeching to hold back by, when of course it should be tight; but with a stiff saddle, whether for wagon or carriage, single horse or team, the belly-band must be tight to avoid rubbing, and sore back and wither. And for a single horse the outside or shaft belly-band must be as tight as it can be drawn without [illegible] inging the shafts in, so there will be no rapping on [illegible] ulders or poking of the shafts skyward when going [illegible] ill, for this strap is an accessory to the breeching [illegible] must hold the shafts down to make that efficient. A careless man is most apt to show his fault with this and the hold-back or quarter-strap. Often the latter is made so tight that the horse cannot move his limbs freely, and in a very short time the breeching wears all the hair off where it hangs. It has repeatedly been within my personal experience, after starting from home with a horse hitched up by a hand, to stop and let out the quarter-straps two holes on each side, giving fully six inches more play to the breeching. When traveling on level ground with the traces stretched, the breeching ought not to touch the horse's legs, except in a lengthy stride, and then not enough to rub him or impede his motion, and if the shafts are properly held down by the belly-band, the breeching will perform its office on a down grade well enough when it is quite loose on a level.

The tendency in building vehicles now for light driving is to curve the shafts up and bring the draft nearly on a line with the body. This throws the cross-bar and single-tree high, and admits of the horse being hitched back close to his load, which gives him great advantage in ease of pulling and prevention of side motion. In either light driving or draft work it is desirable to have the traces as short as they can be, allowing the horse's legs to work clear of the cross-bar. To strike it would be alarming to most high-strung horses. That expert horseman and intelligent lover of the horse, the Rev. W. H. H. Murray, advises that all horses be taught to hold back the load without breeching, so in case of the breaking of a quarter-strap they will not become frantic and want to run away. A little patience will suffice to bring almost any horse to this state of discipline. In fact, horses might be taught a great many more useful things than they usually are. We are progressing in this direction, however, and it is something that professional trainers usually speak of "teaching" or "educating" horses instead of "breaking" them.

The old-fashioned "breaking" process is somewhat out of favor. The writer has a childish recollection of seeing this process employed in its most horrid simplicity in this wise: On a farm where I was visiting was a colt, slight and small, but having reached the age of three years it was thought she ought to be "broke;" and one of the sons of the family—a stalwart man of over six feet, and more than 200 pounds weight—announced that he meant to do it. Never having had a strap of harness on her, the little creature was backed into a corner of the stable, and the breaker, with the aid of two men, succeeded in getting the saddle and bridle on her. Then the breaker, armed with a "black-snake" wagon whip, threw himself into the saddle, and at the first lunge of the colt for freedom began to ply his whip with all his strength, and drew blood freely from belly and flanks before the colt abandoned her rearing and plunging for a straight-ahead run. This was what the rider wanted, but he probably thought it necessary to inflict a certain amount of punishment in order to prove his mastery, for as far as the two could be seen flying down the road, every leap was accompanied by a stroke of the whip. In the course of an hour the big brute came riding back, and the little one covered with dust and sweat and blood was glad to drag her weary limbs in a walk under her heavy burden. Then the former announced that the colt was "broke." The owner of the farm was an intelligent farmer and an educated physician, but to my childish surprise and indignation neither he nor any of the other men who were looking on seemed to think there was anything to criticize in this method of "breaking." This was many years ago, and more reasonable ways are now almost universally in use, thank the Lord!

The use of a collar instead of a breast-strap with a heavy one-horse carriage has become quite common in city driving, and it is a fashion that deserves to be encouraged. The breast-strap is light, and a horse looks better with it when he is in a light vehicle, but it is out of place when he has a heavy load to draw. When I see a horse drawing a two-seated carriage with four persons in, by hames and traces on a well-padded collar fitting snugly against his shoulders, I think he has a visible air of content on his face, as if he knew he was rightly equipped for his work. More especially is this the case if he carries a natural head, without check or bearing rein, and his large, expressive eyes are not covered by blinds. I believe any horse that is well enough bred to be called a carriage horse, and is properly trained, will look better and go easier without a gag or check-rein. He may not carry his nose straight out in the air, or hold his head back until the muscles of his neck swell with the tension, as some like to see him, but he will look more natural and graceful and be less apt to stumble. Let the trainer at the beginning pull his head up with the snaffle every few steps, by extra lines running through the side gags of the bridle, and the horse will soon learn to carry up when in motion. But of all useless and abominable and indefensible pieces of harness, the blinds or blinkers are the worst. Why any one should want to cover up the most expressive and beautiful feature of a fine horse with a square piece of leather, it is hard to see, and why in harness more than under saddle! If nature had intended that he should only see straight ahead, she would probably have placed his eyes on the end of his nose; but as she intended him to look before and behind and on all sides (if man would let him), she placed them where they are. The idea that partly covering his eyes and restricting his range of vision makes him safer and less apt to scare, seems queer indeed. It would certainly appear more reasonable that he should be scared when familiar objects are distorted and assume strange shapes by a partial glimpse of them, or when things that are new appear grotesque and fearful for the same reason, when if fully seen they would scarcely excite curiosity. It is sometimes said that a horse in an open bridle will become lazy by watching when the whip is ready for use and when it is not. It may generally be said that a lazy horse is the fault of a lazy driver. If the horse is kept well in hand, and held up to his work by an alert and watchful driver, he will not be lazy unless of a very sluggish disposition. By all means, give your horse an open bridle for carriage, wagon or plow, as well as for saddle work. He will enjoy it, and you will take more pride in looking at him.

THE FIELD.

A Large Wheat Farm in Yolo County.

In company with M. Diggs, a representative of the Woodland *Democrat* recently made a visit to the scene of the farming operations of W. C. Curtis, who is farming more extensively than any other Yoloite this season.

A few miles north of Yolo we first reached the Curtis possessions. After striking the first grain on what is known as the Kaye ranch, a person may ride due north a distance of 10 miles without once leaving an immense grain field, which is one solid body of as good wheat as can be found in California. During our trip we viewed about 5000 acres, and there was not a spot in it where the yield will be less than 15 sacks to the acre. On Grand Island, Mr. Curtis has about 4000 acres which were attacked by smut, and the yield was cut short in consequence at least half. But taken altogether, the crop will be a magnificent one, and Mr. Curtis will have a big balance on the credit side of his ledger when the season's operations are over. He has already purchased 100,000 sacks, and about 60,000 more will be required. The wheat is plump and heavy and weighs from 138 to 140 pounds to the sack. But for the rust on Grand Island, Mr. Curtis thinks that his sack purchases would have amounted to 200,000.

It is all winter-sown. There is not a single acre of summer-fallowed grain in the entire field, and the manner in which a great deal of it was put in, is calculated to upset the theory of some farmers that deep plowing is necessary to insure a big crop. When some of the neighbors saw Mr. Curtis sowing 5000 acres of grain on unplowed land and covering the seed with a Randall harrow, they freely expressed the opinion that it would never come up, and that all the seed, labor and expense represented so much capital that would be thrown away. In view of these gloomy forebodings, the result is both surprising and extremely gratifying.

Of course, a large force of men and horses was necessary in order to seed such a large area of land, and now that the harvest season is at hand the number of men employed has been increased to 75 and the horses to 150. Many more of the latter would be necessary but for the fact that by the introduction of steam as a motive power, the necessity for at least 150 horses has been done away with.

Mr. Curtis has seven combined harvesters and two headers at work. Of the harvesters, three are propelled by horse power and four by steam. One of the engines pulls the big Berry separator which cuts 32 feet, and was manufactured at Benecia. It is roofed with corrugated iron, and viewed at a distance has the appearance of a building on wheels and in motion.

A Preble separator is propelled by a Laufenberg engine, and has a capacity of 16 feet. A Pitts engine hauls a Holt harvester, which also cuts 16 feet. The three harvesters hauled by horses each cut 16 feet and require 26 animals.

A Holt engine and separator commenced work on the farm Monday morning. Mr. Curtis has not purchased the outfit, but pays the Holt Brothers so much an acre. He is quite enthusiastic in his praise of it, however, and says the engine is better than any of his own, and the separator has one advantage over all others. It is provided with a small engine by which the machinery continues in operation even after the road wagon has been stopped. When a clog is about to occur it is not, therefore, necessary to stop all the machinery and remove the straw by hand. The road wagon is stopped, but the small engine continues to run the separator and the mass of straw is cleared away in a few minutes. The test Monday and Tuesday was a very hard one, but it was entirely satisfactory. In many spots the grain was almost flat, but the harvester lifted it better than it could have been done by a header, and the waste was comparatively small.

The engines move at the rate of about 2½ miles an hour, and they consume from 1500 to 1600 pounds of coal per day. The smokestacks are protected by twilled wire cloth, so that it is impossible for sparks to escape. The engines are never cleaned except when they are standing still, and a tank of water beneath the door of the furnace reduces the danger from fire to a minimum. The separators hauled by the engines thrash from 350 to 700 sacks per day, according to size. The harvesters cut in lands, and where some of them were operating Tuesday, it was six miles around from start to finish. Occasionally, there is a delay of an hour or two in starting in the morning, on account of the dew, but there has been but little delay otherwise. One of the engines has lost but half a day in 22, and none of them have lost to exceed a day and a half.

At the beginning of the season, Mr. Curtis procured a policy of insurance for $100,000 on the Kaye ranch of 5000 acres. As fast as a block of wheat is harvested, the insurance is cancelled and transferred to another block. For instance, when a thousand acres of wheat had been cut last week, the insurance was transferred to an equal number of acres of the Grand Island ranch. This item of expense is no small matter, but it is necessary, for if a fire should once break out in such a vast field of rank grain, especially while a high wind prevails, it would be absolutely uncontrollable. Not a single precaution to prevent fire is neglected. No smoking in the field is permitted, and two watchmen patrol the fields during the night.

A Citizens' World's Fair Association has been formed at Santa Maria, Santa Barbara county. The work was segregated, and committees appointed on dairy products, minerals, cereals, fruits, vegetables, mill products, soil, nuts, honey, grasses, machinery, inventions, native flowers and plants.

In Orange county the Board of Supervisors is virtually in charge of World's Fair work. All expenses incurred are to be paid directly by them, but in order to facilitate the collection and preparation of exhibits, a World's Fair Association has been formed.

The Home Circle.

A School Idyl.

Ram it in, cram it in,
Children's heads are hollow;
Slam it in, jam it in,
Still there's more to follow—
Hygiene and history,
Astronomic mystery,
Algebra, histology,
Latin, etymology,
Botany, geometry,
Greek and trigonometry—
Ram it in, cram it in,
Children's heads are hollow.

Rap it it in, tap it in,
What are teachers paid for?
Bang it in, slam it in,
What are children made for?
Ancient archæology,
Aryan philology,
Prosody, zoology,
Physics, clinictology,
Calculus and mathematics,
Rhetoric and hydrostatics—
Hoax it in, coax it in,
Children's heads are hollow.

Scold it in, mold it in,
All that they can swallow;
Fold it in, hold it in,
Still there's more to follow.
Faces pinched, sad and pale,
Tell the same undying tale—
Tell of moments robbed from sleep,
Meals untasted, studies deep,
Those who've passed the furnace through,
With aching brow, will tell to you
How the teacher cramed it it in,
Rammed it in, jammed it in,
Crunched it in, punched it in,
Rubbed it in, clubbed it in,
Pressed it in, caressed it in,
Rapped it in, and slapped it in,
When their heads were hollow.

—Puck.

The Whitebrow Family.

Written for the Rural Press by Duane Morley.

"David, you must finish digging the potatoes tu-day and get in the remainder of the winter apples, and du not forget to turn the cows into the back pasture nor tu work up some firewood, for I shall want a good fire when I come home tu-night. Oh, yes, there are a few turnips left tu dig in the west garden."

In a moment more the boy was out of sight, in the direction of the barn and potato field, to execute the orders that Luther Whitebrow, his father, had just given him.

"Luther, you are loading that boy down with hard work," said Mary Whitebrow, the wife and mother.

Whitebrow's answer was: "I calkilate I had tu work when I was a boy; worked for my father right along until I was of age, an' my father was a worker, I tell ye—took the lead of all his men all the time."

"That is where the difference is, husband; for you leave the work for David to do, nearly all of it, while you are off after some horse speculation."

"Wal, Mary, if I didn't du somethin' 'sides work this yeller pine soil, I guess nothin' would come; an' what little there is left tu dig an draw in 'll not hurt David, I guess."

"Yes, Luther; but David is our only child, and everything shouldn't be left for him to do."

"Wal, I don't believe in bringin' him up no-account, makin' a pet of him, if he is an only child; he's strong an' healthy, never's sick a day, an' can du what there is tu du."

This was one of the talks the parents had together about their boy, and it was evident that there was a measure of disagreement between them respecting the way he should be treated.

At another time the talk was after this fashion:

"Do you know," said the mother, "that David is very bright?"

"No, hadn't noticed," replied Whitebrow. "David is a good boy, an earnest worker—why, yes, come tu think, he's bright an' its most school time again—near December. I hope David 'll du well this winter."

"Luther, we ought to send David to college."

"Pshaw, wife, not yet; he hasn't learned all the teacher can learn him, an' sides that, the money it would take tu send David away to college must go on the mortgage. The winter term will du David for a year or so, wife."

Mrs. Whitebrow had, as is too frequently the case with mothers, an exaggerated idea of her son's mental ability, and she was anxious for David to receive college training, and after that, to prepare for the ministry. But Whitebrow more nearly understood his son's capabilities. and was carried away by no extraordinary hopes or desires.

The soil of Whitebrow's State of Maine farm was thin and poor, and a mortgage was plastered on every acre of it; so it was all he could do to keep the interest paid and the obligation within bounds. Even that he could not have done had he not made an occasional safe investment and speculation in horseflesh. His natural tendency was toward "stock," and again and again did he try to seed down the shifting sands of the place to clover, hoping in the end to make of it a stock farm; but his every effort failed, for the grass roots either froze out or the sun scorched then out. As a member of the Fair Association, it was true, as reported, that Whitehrow spent considerable time talking horse, and he even went so far as to train one or more of his colts on the track to arrive at its speed. And still more officious neighbors, who should have spent the time minding their own affairs, carried exaggerated reports of Whitebrow's doings to the wife.

It was Whitebrow's purpose to increase his son's educational facilities as soon as he had, in a measure, reduced the incumbrance, or exchanged the farm for a smaller one less incumbered. Either was difficult to do; and, as time passed, neither was accomplished. Then the sensitive wife brooded over fancied wrongs and exaggerated hardships, declaring herself, somewhat openly, as "martyred" and her son "neglected." After awhile there were storms and criminations, the wife averring that her husband was a common horse-jockey, turf-gambler and drinker. This, and his neighbors' interference, aroused Whitebrow's independence of spirit; and, between the sunrise of a day and the sunsetting of the same, he made one supreme effort, thereby disposing of a promising thoroughbred colt and a pair of ordinary two-year-olds; applying the proceeds of the sale upon the interest part of the mortgage. From an acquaintance who had confidence in Whitebrow's honesty and native shrewdness, Whitebrow succeeded in borrowing enough money to ticket himself to California, besides a portion to leave with his wife and son.

With capital, a shrewd man can accomplish much in a short space of time; without it, and in a new section of country as Whitebrow was, the success is uncertain and slow. So it was with Whitebrow in his newer field of endeavor; and, as the local phrase has it, he was "cinched" by sharpers and victimized by irresponsible portions of the ever-shifting population. Himself an adventurer, about all that he could do for his home folks was to send them a small sum quarterly or semi-annually for their personal wants, besides enough to keep the interest on the mortgage paid.

Did the farm contribute anything? may be asked. Oh, yes, something, under the management of the mother and her boy; but, inflated with the idea of a college education and its vaunted advantage in the life-race, and out from under the father's watchful eye, David became careless, while his mother became disheartened and irritable. And, as years passed, chasing one another like cloud-shadows across the fields, she recognized and denominated herself as "The Forsaken." Slight, sometimes, are the causes of alienation and separation, and potent as they are slight; but, could Mrs. Whitebrow—in time, and void of selfishness—have had sufficient discernment, the results might have been different. Eventually the boy received his college education; but the crops from the fields were scant in quantity and poor in quality, and as the months and years yet rolled by, the buildings became shaky and dilapidated. Then the boy blossomed out into a full-blown preacher, to dispense the Word with some grace and more or less unction. And the farm—as a natural sequence—became the stamping ground and stopping place of every preacher of the connection who had occasion to pass that way. And like all other young preachers of that denomination, David had to undergo the starving process, whether as a matter of faith-education or of official control is as yet unknown. Then, too, his elders decided—for prudential as well as for other reasons—that he should marry. So, in time, Mrs. Whitebrow had under her hovering wing a delicate, gentle-spirited daughter-in-law.

I am sorry that I cannot chronicle David's rapid advancement, but I cannot, for such was not the fact—he still starved. And his latest charge was rendered doubly difficult by reason, first, of its great breadth; and second, by the encroachments of a certain proselyting preacher upon the membership at one of his principal appointments; and he was horse-less, carriage-less, without a library, and had, besides, agnosticism and all manner of scientific questions to confront. Poor David! he needed his great namesake's unfaltering faith and invincible courage.

Latterly, the senior Whitebrow's communications had been none too well received at the farm, though there were in them cash remittances. More recently still, a friend of his—a lawyer in a distant city—undertook, in person, that duty. And one day he searched out the mortgage, redeemed the farm from its deep indebtedness, and placed, besides, in the hands of Mrs. Whitebrow, a goodly sum for her own especial use and nourishment. But no word from Whitebrow; then speculation was rife in the woman's mind as to the real intent of the action. It seemed an augury of Whitebrow's return, but eventually she considered it to be his last message. One day, travel-stained and weary, David drew up at his mother's door. Somehow the mail had miscarried, and no word had reached him of the payment of the mortgage. David's call was one of business, hoping that, by his mother's assistance, some way could be devised whereby he could obtain a horse and carriage sufficient for his needs. His parishoners, though clever, were poor, and the horses loaned him were usually overworked, and proved to be more of a hindrance than a help. The back door of the farm house stood open as David and his mother sat inside discussing his necessity and devising the means of satisfying it.

Said Mrs. Whitebrow: "The lawyer who came over and satisfied the mortgage left me a sum of money for my own especial use, and I had to sign a receipt to that effect; but I can take that money, David, and buy you a horse and carriage."

Just then a voice interrupted: "Ye needn't du any sech a thing, Mary; that money's yourn. I've got quite a band of thurrerbreds from Kern county, Californy, comin' in on the railroad tumorrer, an' amongst the lot is a fine carriage span fer David, an' a carriage tu—the best I could rake up in the city. An' there's a parson feller tu that came with me on the overland that can jest knock the headlights off of any agnostic that ever breathed, an' spill the dish besides, for that water-sopper that is sneakin' David's members intu his own fold. David an' this feller-preacher of mine can take turn about a dosin' out the milk and meat of the Word. In New York, he an' I spent tu hull days a pickin' out theology an' science books for the boy—about three thousan' dollars' worth, an' a whole raft of biblical maps an' charts. I hain't forgot ye, David, if I have been a long time gone from home."

It was Whitebrow's voice, he himself, standing in the open farmhouse door. Catching breath and clearing his throat, he started in again:

"Give me a bite o' somethin' tu eat, Mary, an' a blanket tu roll up in in the barn until tu morrer, an' I'll be obliged. I've learnt to rough it, stack up twenty-dollar pieces, an' gether in thurrerbreds, an' when my men an' stock come up tu morrer we'll start in on a year's campaign that'll make 'Ol' Sandy,' as I used tu call her, shine. I've got all manner o' grass an' grain seeds, one o' my men's an engineer, an' on the north slope we'll bore for artesian water. When that comes spoutin' up, it'll settle the question o' seedin' down, I guess."

Some months afterward, a neighbor some distance out interviewed one a little closer in asking how Luther Whitebrow stood on the question of religion. "Has he got it?" were the words. "I don't know whether he has got religion or not," was the reply, "but he has christianity, that I am certain of. You knew Sile Perkins?" "Yes, him we called 'poor Perk' from Hiram Falls way—wife an' six children." "Wal, Whitebrow's bought out widder Joneses twenty-acre strip near his old farm, an' sold it again to Sile on long time, so's he can pay for it, an' he receipted the first payment free an' gives Sile stiddy work among his thurrerbreds at good pay; an', too, there ain't a tramp goin' that way that isn't fed an' sheltered. The Bible says somethin' about bein' doers of the Word. I calkilate Lute Whitebrow's a doer for he *does*."

"How about David?" "Oh, David's doin' fine now with his horses an' carriage an' his library. An' they've got a boy baby. Named it Lutey 'fore it was a day old—big turn about amongst the Whitebrow family, I tell ye."

—What Did She Mean?—She (to Cousin George, who has just returned from the tropics): "O George dear, how kind of you to bring me this dear little monkey! How thoughtful you are! But—but—it is just like you."

—Charlie—"I pity you, Jack, when I see your creditors pushing you. That is a trouble I never had." Jack—"No. You probably never had any credit."

Come, Great Deliverer, Come.

Voices were borne out on the air one Winter night, voices of many people singing in a little upstairs room. The broad avenue was as light as day with the flare of electric lights. Crowds were surging up and down.

The voices went on singing:

I've wandered far away o'er mountains cold,
I've wandered far away from home;
Oh, hear my cry, be gracious unto me,
Come, Great Deliverer, Come.

A woman was standing inside the doorway listening to the words.

She was dressed in a gayly beaded wrap and cheap silk dress with faded trimming. Her face had been pretty once, but now there were hollows in the once rounded pink and whiteness of the cheeks and dark circles under the blue eyes. She looked weak and ill.

A sweet-faced woman just coming down the stairs from the meeting turned and looked at her, first with a feeling of repugnance. Then the pitiful weakness of the face overcame her. "Can I do anything for you?" she said, and gently touched the woman's arm.

The face turned toward her in reply worked with an emotion the poor creature tried to restrain. She threw her hands over her face and moaned out, "Oh, you can't; nobody can. It's me they're singing about. I've wandered far away from home. Oh, my God! there is no help." She was sobbing so the thin frame shook with the strength of her emotion.

The voices were singing, "I have no home, no refuge from the storm, come, Great Deliverer, come."

"My friend, there is help. But you are not well—let me take you home."

"You!" the poor woman lifted her tear-stained face from her hands as she spoke. You wouldn't be seen inside of it. See me! I've got nothing in the world but these things I've got on till Jim comes back from his trip. I live with Jim. I'm sick and faded, and he don't care for me any more. Oh, I want to die—why can't I die!" She dropped to the floor faint with exhaustion.

Miss Reigh spoke to a passing policeman. "Here, call a carriage for me, please." Then helping the woman to her feet, she said, "I shall take you to the hospital." As they were rolling along over the pavement, Miss Reigh asked, "have you had any thing to eat to-day?"

"Not since morning. I've been trying to find work with some dressmaker. I used to sew pretty well, but I'm too sick."

After being put to bed she fell into a stupor. Miss Reigh stayed until the woman was made comfortable, then went home promising to come again in the morning. She was detained, however, and it was well on in the afternoon before she reached the hospital. The matron told her the woman was in a bad way.

"Dr. Osborne says she may live a couple of weeks, but her mode of life has exhausted her vitality, and with the best of care she cannot last longer than that."

As Miss Reigh went in the ward the woman was muttering to herself, "Come, Great Deliverer, come." Her cheeks were flushed, and as she opened her eyes they were bright with fever.

"There must be some goodness in the world if there are many like you," she said, recognizing the face bending over her.

"My friend I want you to tell me about yourself—who you are. You are very sick—perhaps will not get well. Wouldn't you like to see a minister?"

"No, I won't see one. I hate them all. They preach about One who was good to such as me, but I tell you, till you spoke to me yesterday, I haven't heard a kind word from such as them for years. I'm not a good woman. I can't get it out of my head that about how I have wandered far away from home. Oh, I want my home. I want to see my little girl."

"Ten years ago I left my husband and ran away with Jim. I loved Jim, and I didn't love my husband. You think I was awful wicked, don't you? But I might have been worse, for I've always been true to Jim."

"Why did you marry your husband if you didn't love him?"

"He had a good trade and was doing well. I didn't like sewing, and I was only seventeen. He was thirty. I guess I was kind o' flattered to think he wanted me, for he never had much to do with girls."

"Wasn't he good to you?"

"Yes, ma'am, but after we were married he didn't seem to care so much about me, least ways he never showed it. I was always affectionate, but he thought I was silly to want to be petted. Women are queer things—they want to be told that you love 'em.

After little Annie was born, I thought it would be different, but it wasn't. I most hated the baby he was so fond of her. I remember how one day I dressed up in my new dress. I looked pretty in it, too. I kept thinking maybe he'll kiss me to-night if I look real pretty. But all he did was to pick up the baby and ask me if supper was ready. I slammed the dishes on the table and was pretty short with him all the time he was eating. That was what decided me to run away. I had been seeing a good deal of Jim. He was young and handsome, and told me my husband didn't love me. I had made a mistake to marry such an old man. Still I think if my husband had acted different, I wouldn't have gone away. Jim said marriage didn't amount to much—if one had made a mess of it the sooner they got out of it the better. He always called me his wife, but I'm awful afraid he don't care for me like he used to."

"Where is he?"

"Traveling for Duncan's cigar firm. He'll be back next week. Will you write to him and tell him I'm sick? J. H. Kidder, No. 97 Mason street will find him."

The nurse then came and gave the medicine, and rearranged the coverings that the restless tossings of the patient had made an untidy heap.

"I am afraid you are talking too much," she said, with professional anxiety.

"I think she will not be worse for it," Miss Reigh said. "I shall not stay much longer."

The bed was in the corner of a ward quite by itself. The nurse had placed a screen around it so they might talk unobserved. Miss Reigh looked earnestly at the face on the pillow. It was not bad, but pitifully weak. She believed the story just told her was true. But the woman began to cry.

"Oh, don't look at me. You are good, and I wish I was. Come, Great Deliverer, come. Oh, I want to die."

Miss Reigh slipped to her knees, and taking the woman's hand in hers, she prayed.

"Thou Great Deliverer, come to this child, who has wandered so far from Thee. Forgive her and bring her to Thy fold, bring her home. See, Lord, she is so sorry, and she wants to find Thee. Thou who never turned away from human woe, come and help this child. Amen."

The sobs had ceased and a look of awe was in the blue eyes.

"Do you think he'll hear you?" she whispered.

"I *know* he will. He is near us now—so near, longing to forgive and help you. Won't you believe Him when He says, 'Come unto Me all ye that labor and are heavy laden and I will give you rest? Don't you remember how Christ told the sinful woman who was brought to Him to be condemned to 'go and sin no more?'"

"I remember," she said, and a smile came over her face. "I learned about it when I was a little girl and went to Sunday-school. I never thought then I should be like that woman."

Day by day she grew weaker. One afternoon when Miss Reigh sat beside her she said:

"I want to know if you will write to my husband and tell him I'm sorry and want him to forgive me, and—" she hesitated, her voice broke into a sob, "ask him to let me see little Annie. I know I don't deserve to after I've left her all these years, but I want to see her so."

And Miss Reigh wrote a letter to the address given her, telling the sad story of the wife's nearness to death and her patience, asking him to send a word of forgiveness, and, if possible, bring the little girl to see her.

The answer came in a few days: "Tell Maggie I forgive her, but I can't let Annie see her. When she went away she died to me. Annie thinks her mother is dead."

Maggie was brave when she saw the letter.

"I wasn't fit to be Annie's mother, so I guess it's all right. Don't you think God will let me be her mother when I get to Heaven?"

"Indeed I do. Perhaps you can do more for her there than you could on earth. I wish you would let me bring my minister to see you."

"I'd rather you wouldn't. I never had much to do with ministers and churches after I ran away. One Sunday night Jim and I went to church. It was one of these 'Piscopal churches. The music was sweet and pretty, and the minister preached about the Book of Common Prayer. 'Well,' says Jim, when we went out, 'I hope you're satisfied. What do you care about the Book of Common Prayer?'"

Miss Reigh rose to go, but Maggie drew her down. "Have you heard from Jim? Is it wrong to love him so? It seems as if I couldn't die without seeing him again."

"I am sorry, dear. I have not heard a word from him."

Maggie turned her face to the wall. Miss Reigh stooped and kissed her forehead. She caught her hand and said, "when I get to Heaven I'll tell the Lord how good you was to me."

The following morning a note was brought her saying that Maggie had died in the night. Mis Reigh went at once to the hospital. The nurse said that the end was peaceful. "I gave her the medicine at two o'clock. She whispered, 'I've wandered far away,' but roused to take the medicine. When I went to her again she was gone."

Miss Reigh telegraphed the husband at once. He came on, and when he saw his wife laying so quietly at rest, he broke down.

"My Maggie, my Maggie! I did forgive you. Forgive me that I wasn't better to you."

Before leaving the city he called on Miss Reigh.

"God bless you, ma'am, for your goodness to poor Maggie. I guess I never made enough of her. She was such a lovin' little thing—Annie's just like her."—Sarah Anderson in American Cultivator.

YOUNG FOLKS' COLUMN.

The True Story of the Three Sisters, the Genius and the West Side.

Written for the RURAL PRESS by L. H. S.

Once there were three lovely sisters, named Applecheeks, Goldylocks, and Rubyheart, who lived in a hill country and were daughters of a great and noble prince, whose flocks and herds found unlimited range, whose valleys were set out in rare fruits, and whose river bottoms were perpetually green with fragrant alfalfa.

He was a rough and ruddy prince, well beloved by all his people, whose pretty homes were in the little vales and on the borders of the low rivers.

These three beautiful maidens lived with their noble father in his wonderful castle. They had been instructed in *belle lettres*, music, domestic economy, and the art of adorning their lovely persons. They danced with grace and rode their fleet ponies like an Austrian empress. But for all this they were not happy.

Applecheeks and Goldylocks and Rubyheart were known to wander often hand in hand far out in the fields by moonlight, or over the hills and through the forests by day. They were very sad, and they wept in the shaded retreats of the deep canyons, or sighed as they walked in the bird-haunted park, and their beautiful locks hung disheveled, which made them seem more lovely than ever.

One day these three maidens were bewailing their fate, sitting in the soft grass by a clear, cool spring, in a distant part of the castle park.

"Oh, I do wish something would happen," cried Goldylocks in a pet, flinging a valuable gold bracelet into the water. "This is too slow for anything."

At once something did happen. A stranger of impressive and dignified appearance rose up out of the water and stood before them. He had white hair and beard and a thoughtful countenance, but a very pleasant smile. His manner was most affable, he held a cane in one hand and lifted a shining beaver with the other.

"Do not be alarmed, ladies," he said, "this is a charming day."

The princesses murmured that it was, and gathered up their trailing robes ready to run.

"I beg you to remain," said the stranger. "I have come to offer you my services. I have long observed your sorrow and distress. If I can relieve your miseries I will be charmed. But you must first tell me the cause of your tears and sad wanderings."

The maidens dropped their skirts with blushing cheeks.

"You tell him, Rubyheart," said Applecheeks. "You went to school the longest."

Rubyheart drew near, and lifting her embroidered veil from her sad and beautiful features, told him the

STORY OF THE SORROW OF THE THREE SISTERS.

"We are literally prisoners on the domain of our father, the noble prince," she said. "We are forbidden all flirtations and real pleasures. All we can do is to read a few old novels and crochette, and help around the house."

"And we are tired of it," interrupted Applecheeks.

"Stupid," cried Goldylocks, shaking her shower of golden curls.

"But we have three noble lovers," continued Rubyheart, "who are longing to come and rescue us; but, alas! they cannot. They are named Broadchest, and Workwell, and Greatheart. They are princes of a great country across the Yellow river, called the West Side. They are possessed of immense wealth, and their fertile lands extend far and wide; but, alas! they are tied hand and foot in their homestead cabins by a cruel monster called Driought. They have to stay there, and wait, and wait, and hope. They cannot cross the Yellow river or write us a note even. The wicked monster blights the seeds they plant and chokes their cattle till they die. The monster, Driought, holds them back from us. They are handsome and noble and loving."

"And jolly," said Applechesks.

"And papa," cried Goldylocks, "says if we can't marry decent young farmers we shan't marry at all."

Rubyheart sank down in a fainting condition, and Applecheeks and Goldylocks fell to weeping bitterly. The stranger was visibly affected. He drew out a fine linen handkerchief and wiped his eyes.

"This is very, very sad indeed," he said, but I can help you. I will rescue your lovers."

"Oh! Oh! Oh!" they all cried.

"I am a *genius*."

"A what!"

"A regular genius."

"Oh! oh!"

"I am a descendant of those genii who inhabited the earth in the days of Sheherazade and Aladdin. We were known to the ancients as angels, but in course of time we fell, and there were good genii and bad genii, as in the time of Dorathil-goase. There are not many geniuses in the world to-day, and a great many who think they are geniuses are very bad ones. We are gradually losing our remarkable powers. But my blood is pure. I will kill the monster Driought."

The princesses would have embraced him, but he waved them back.

"To tell the truth," continued the genius, "I generally work for monopolies, and my pay is something enormous. I invent motors and lights and such things. But you, ladies, are very beautiful and I will help you. But I must first have gold to propitiate the King of the Genii. Return at this hour, to-morrow, with your aprons full of gold, and I will kill the monster Driought."

The genius then disappeared in the spring and only the circles caused by the fall of the bracelet were to be seen on the surface of water.

Now, the lovely princesses had no gold, but they determined to get some any way, just to try the experiment.

They rose in the middle of the night and gathered up all the loose gold in the castle; they took a little from each servant and emptied the pockets of their father, the noble prince, while he slept.

At the appointed hour the maidens appeared at the spring, and Goldylocks threw her other bracelet into the water.

Instantly the genius rose up, bowing as before. When he saw the heap of gold in the grass his face beamed, and he requested the charming princesses to put it in his pockets.

"Now," he said, "we will work the charm. I will make Reigne. The very smell of it will kill the monster Driought."

Then Applecheeks and Goldylocks thought he was an imposter and turned away weeping, but Rubyheart pressed them to remain.

Then the genius produced a bit of copper from his pocket and waved it in the air. Instantly a slave appeared, branded on his cap "S. P. R. R. Baggage Master," and deposited on the ground an average-sized trunk, much battered, with a cracked cover and ruptured lock. Then the slave bowed low, took the bit of copper and vanished.

The genius, with a resigned smile, knelt on the ground, unstrapped the trunk and took off the cover. Then he took out a curious-looking apparatus and some large bottles.

"And now," he said, "if you will lend me the use of your sheep-herders' cabin, I will make Reigne."

Applecheeks ran and unbolted the door and the genius took his bottles and things and shut himself up in the cabin, while the three beautiful princesses clasped their hands and wondered.

Soon they saw a thin smoke curl up out of the cabin chimney; it grew black and dense and rose up and filled the air about them. Then they saw it lift up in a huge volume and it was carried by a south wind as far as the West Side.

The fair sisters threw up kisses on their hands to send to their lonely lovers. Then the genius stood before them.

"The charm has worked," he said. "There will be Reigne. Your lovers will be free and they will come, as the brave knights of old, to rescue you. Fly to the shelter of yon oak."

But the sisters were spell bound. Soon the bright silver drops of the magic Reigne came tumbling down out of the air. Applecheeks put up her round face and red lips and sipped the drops as they fell.

Goldylocks spread out her bright curls and laughed to see them get wet and ragged.

Rubyheart opened her lace robe and let the cool drops run down her ivory throat.

They kissed each other with joy. "Reigne will put an end to Driought," they cried.

"And now," said the genius, "run to your castle tower and watch three months, and if your lovers do not come, then I am no son of the genii."

Then the beautiful princesses ran to the tower and watched and waited, though the great prince, their father, raged and fumed and ordered them to come down and have done with such nonsense.

"What seest thou, sister Rubyheart?" cried Goldylocks.

"In the far distance I see, sister mine," said Rubyheart, mounted on the high parapet of the tower, "that the great plain on the west side of the Yellow river grows green to the tips of the western hills. And I fancy I can hear the larks singing in the waving grass. I can see children playing in the roads and cattle on the hills. In the place where Greatheart and Broadchest and Workwell live, I can see houses being erected and piles of lumber in the sun."

Then Applecheeks lifted up her lovely face.

"And what dost see now, sister?"

"I see," said Rubyheart, "all the plains grow lighter and brighter and the waving of heavy grain in the west wind. I see young men in the fields, tossing hay. And now, as I look, dear sisters, I see the plain grow yellow as gold and the warm, dry air quivers in the distance. And now I see a great machine, run by steam; it is cutting the grain and laying it down in sacks in the field. And there is another machine puffing smoke also, and hauling heavy loads to the long warehouses by the iron road. Take the glass and look, Applecheeks. My heart throbs and I grow faint with joy."

"Yes," said Applecheeks, "and Broadchest and Workwell and Greatheart are there, and they have been paid cash on delivery. They are smiling and folding up checks. Our lovers are free!"

The field glass fell over the parapet and broke into a thousand pieces, and Applecheeks and Goldylocks ran off to their boudoirs.

"And now," mused Rubyheart, "I suppose they will come on three magnificent coal-black chargers, gaily caparisoned in velvet and gold and silver. I will have a ruby on my ring. Goldylocks must have an amethyst and Applecheeks a diamond.

Then Applecheeks flew up the stairs, her eyes shining like stars.

"Rubyheart, sister, sister," she cried, "come down and curl your bangs. The boys are driving through the big gate. They're not dressed like knights at all. They've got three new, spick and span top buggies and big, beautiful, bay mares.

—A summer school for females is to be established in the Eiffel Tower. This should interest those persons who believe in the higher education of women.

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Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

HORTICULTURE.

Eastern Nurserymen and the California Quarantine.

From the annual report of B. M. Lelong, Secretary of the State Board of Horticulture, we take the following concerning the points at issue between California horticulturists and Eastern nurserymen:

I have received the following resolutions, passed by the American Association of Nurserymen, at their meeting at Atlanta, Ga., viz.:

Resolved, That the secretary of this Association notify the president and secretary of the California State Board and other proper officers that the people east of the Rocky mountains consider the present inspection laws of California a measure uncalled for and a great discrimination, and demand their prompt repeal.

Resolved, That in the event of having to pass such laws, the Executive Committee be requested to employ a good attorney to draft a uniform law to be passed by the respective States east of the Rocky mountains, and one which shall be so framed by a schedule of fees as to be no expense upon the State.

Accompanying the resolutions was a letter from the secretary of the Association, as follows:

AMERICAN ASSOCIATION OF NURSERYMEN,
SECRETARY'S OFFICE,
ROCHESTER, N. Y., July 1, 1892.

I am requested by a unanimous vote of this Association to forward to you the enclosed resolutions.

Allow me to volunteer a few lines of explanation in regard to the position of our nurserymen as I understand it:

We consider California a part of the United States, open to commercial intercourse, without obstructions; but we find the California State line is now more effectually blockaded against the sale of our products than the border lines of any foreign country. This condition might be borne by us with better grace if an equal barrier was in force against products of California coming East, but no such barrier exists, and California fruits are poured into our Eastern markets in enormous floods, to the injury of Eastern fruit growers.

We desire reciprocity with California. This is a more liberal policy than California offers Mexico, as will be noted by the following excerpt from a recent California fruit grower: "If, therefore, reciprocity with Mexico means the free admission of citrus and other California-grown fruits to the United States, it is the first duty of every fruit producer to oppose and resist it to the last extremity. Such a governmental policy would sound the funeral march of our most promising industries and would postpone the settlement and development of this State to a vague and indefinite future. It must not be."

Your reply will be that your people are simply protecting their orchards from insects and diseases, but this is considered by us simply a pretext. Such pretexts are offered by Germany in order to exclude American pork, and by France to exclude our evaporated fruits.

A similar pretext was attempted by a northern State in order to shut out nursery salesmen from all other States, claiming that such salesmen sold trees that were not adapted to the North, etc. Numerous pretexts of similar character might be raised by Georgia, Tennessee or any other State where peach yellows never has, and never will exist on account of incongeniality, as is the case in California, and where disease and insects could not possibly be shut out by legislation if naturally inclined thereto.

If one State can shut out all commercial dealings with another State by such pretexts, and yet sell her own produce to the abused States, surely our United States will become a misnomer—they will become disunited commercially.

But further than this, California has been arbitrary and reckless of the losses which she has imposed on nurserymen of other States, by burning carloads of trees, etc., which have caused many anxious hours to produce, and the loss of which may seriously cripple the owner. Men poorly qualified to judge of this burned stock have consigned them to ashes when they should have accepted them as a healthy product.

There are many nurserymen dependent on their California trade, who now know not whither to turn for a market. Instead of having done California harm, they have, as pioneers, aided California to reach her present condition.

You may reply that the present California exclusion of nurserymen from other States is the action of fruit growers, not California nurserymen, but we cannot see it in that light. So long as the exclusion of outside nurserymen will increase the profits of California nurserymen one-half or more, it must be apparent that California nurserymen are at the head of the barricade, though they may be shrewd enough not to let their lights shine too brightly in public discussions.

After California did her worst in making State laws against us, your Congressman attempted legislation in Congress, which, if passed, would have been a death blow to the nursery trade of the entire country. He would listen to no compromise until the prompt action of this Association had, through its members, killed his bill.

We desire just and fair dealing, such as should prevail between neighbor and neighbor. We do not desire monopoly on our part, nor will we permit it in other.

Hoping to be favored with a reply at your earliest convenience, I am yours respectfully,

CHAS A. GREEN, Sec'y.

MR. LELONG'S REPLY.

In reply to this letter, I have but repeated what I have said, as given on page 190 of the Report for 1891, as follows:

"There have been various assumptions that the action of the State Board of Horticulture is one of persecution leveled against Eastern nurserymen in the interest of California tree growers. An imputation of this character is too small to require serious consideration. Suffice it to say that no member of the Board, nor any of its officers, has ever lent himself to so small a business as boycotting any one. The statutes of California providing for the preventing of the introduction or spread of insects or diseases injurious to our fruits, are general, and are not in any manner aimed at the Eastern nurserymen, nor do they reach in any way stock that is not infected with diseases or pests that may endanger our orchards. Eastern trees, or trees from any foreign country, may be imported into California in any number, provided they are not infected.

"The laws which have been enacted to protect the horticultural interests of the State are general, and people, whether residents of California or not, are presumed, and conclusively presumed, to have notice of their provisions; and no one in any prosecution under these acts can plead ignorance of their provisions.

"It is incumbent on every orchardist to disinfect all fruit trees grown on lands infected with any insects, or any contagious disease known to be injurious to fruit, etc. This not only applies to home-grown trees, but to any that may be brought from any districts, whether in the United States or in foreign countries.

"The fact of the deadly yellows and rosette abounding in many of the Eastern States, and destroying the peach orchards everywhere, has caused every load of Eastern trees to be rigidly inspected. If the slightest trace of infection is found, the trees are condemned and proceedings at once instigated to have them destroyed. If one tree infected with the yellows gets in here, and afterward the disease develops, the duty on foreign fruit can be taken off, for there will be no need of protection; for if the disease spreads with the rapidity it does in the Eastern States, California will have no fruit to protect, and the disease will never be gotten rid of, as there is no cure for it.

"There is more danger of ruining the California fruit industry by importing diseased trees than by removing the tariff. We might recover from the effects of tampering with the tariff, but if the yellows ever gets here, it will come to stay, and California will never recover from its effects.

"Lastly, the districts in the Eastern States where the yellows has appeared were once flourishing orchards, and now are nothing but leafless, bare-limbed trees and trunks. California is so situated that careful espionage should be exercised over every importation, and it is the bounden duty of every citizen interested in the future welfare of the State to keep out all known tree diseases and fruit pests. The fruit interests of California bid fair to become the greatest of all in the world, and from it many families will derive comfortable support in years to come, and some will amass exceeding great wealth. Therefore, these interests deserve, aye, they demand *protection*"

B. M. LELONG, Sec'y.

A Glance at the Olive Belt.

A paper read by REV. C. F. LOOP of Pomona at the Olive Growers' Meeting in San Francisco, July 21.

Having been invited by the Secretary of the State Board of Horticulture to assist at this meeting, in deepening the interest already felt in olive culture in California, I will direct your attention to a few of the many points suggested to our minds by our experience, our observation, and by reading the publications upon this subject, with which we are so highly favored.

Let us then, in the first place, mentally survey the olive belt of the world. Our research would naturally begin in those eastern countries of the old world, in Syria and Greece, where traditions and historical records locate the first olive trees. In the northern hemisphere, the limit of this belt touches the 44th parallel, and in a very few favored locations plantations are found near the 45th. The southern limit, like the isothermal line, varies from the 25th degree down to the 18th. There is also a corresponding belt in the southern hemisphere. You see, then, that this belt or zone is not subject to torrid heat or polar frosts. Being fanned by southern breezes, toned by the invigorating aerial currents of the north, the climatic conditions are most favorable to man in his well directed efforts, in creating his Arcadias, his Elysian fields, and his Gardens of Hesperides.

It is in this belt where the olive grows that you find the artistic ability manifesting itself in immortal creations, sculpture and bronze, of painting and carving. And amidst his fairest gardens man rears the artistic home, the grand and noble structures dedicated to divine worship and monumental fabrics indicative of the highest achievements in human action.

And thus we may traverse this favored belt, going from the charming landscape and garden, the home of the Muses, to the magnificent city, from mainland to lovely islands, whose shores are washed by southern seas, and finding as we go the palate delighted with the most delicious fruits, the eye greeted with the marvelous works of art, and the achievements in architecture, and our ears saluted by the sweetest music in poetry and vocalization.

The cradle of the human family was in this olive belt, and an all-wise Providence, to satisfy the essential wants in alimentation and growth, gave to man the triad, the cereals, the vine and the olive. In his inimitable Hymn of Praise and Thanksgiving, the sweet singer of Israel refers to this gift when he speaks of the "wine that maketh glad the heart of man, oil that maketh his face to shine, and bread which strengtheneth man's heart."

Now, in all the intervening years has there been a substitute found? Could we look to-day upon the hardy laborer of those eastern lands resting to take his midday meal, if he is supplied with bread, with well cured, ripe olives, and a flask of light wine, he is satisfied and happy and prepared to do a strong man's work. This belt includes Italy, the island of Sicily, the southern part of France bordering the Mediterranean, Spain and Portugal, the northern shore of Africa, and parts of those countries bordering upon the eastern shore of the Mediterranean.

Leaving those scenes in the distant east, where the sun first flashed his golden beams upon man in the beginning of his history, following the shores of the Mediterranean to the rock of Gibraltar, we can sail away as Columbus did 400 years ago, to the western world and landing upon the Pacific coast, in California, we may ask the question, "Are we still in the olive belt?" Without hesitation we answer, yes. And the demonstration is complete, as we look with admiration upon the trees planted 100 years ago by the Franciscan Friars at the Missions, and the results of well directed labor in forming new plantations at Santa Barbara, San Diego and other points, as well as the growing and fruiting of new varieties which we have imported from the shores of the Mediterranean. We are confirmed in our belief, as we look around, that we are not only in the olive belt, but that we have all the conditions necessary, in soil, climate and exposure, between San Diego and Mount Shasta, to rival the fairest and most important olive plantations on the Mediterranean, either in Italy, Spain or France.

If you are not satisfied with my assertion, examine for yourself the red mesas of San Diego, the old and the new plantations along the foothills and in the interior, follow up the San Luis Rey valley and stay over night at the old branch Mission of Pala. There you will see olive trees a century old, and while you will find in the soil all the ingredients necessary to successful cultivation, at midnight in midsummer you will find the air as soft and balmy as at Amalfi and Sorrento, where the olive revels in its luxuriant growth and fruitage. Go over the divide to Temecula and cross the red plains at the west base of the San Jacinto mountains, where water is being carried to transform that vast area into a blooming, fruitful garden. Pass along the base of the mountains from San Bernardino to San Gabriel, stopping at Pomona to examine, not only old trees planted 50 years ago, the new plantations of imported trees, but the nurseries where the olive is propagated more extensively than at any other place in the world. Continue your observation and study in San Fernando valley, in Ventura and the Ojai, in Santa Barbara, San Luis Obispo, in Kern and Fresno counties, and along the foothills of the Sierra until you reach the Wolfskill ranch in the north, and even the foothills of Mount Shasta, and I am sure you will be satisfied with the gently sloping mesas bathed in the warm sunshine and protected by the mountain chain from the cold winds of the desert in winter.

Having found your location for olive culture, you ask: What shall I plant? I will answer this question from my own standpoint. You can ascertain definitely from those who have worked with the Mission olive for 10 or 15 years, and if you are satisfied, plant the Mission. If you would like to try some of the new varieties, I will state for your benefit the fact that it will not be necessary to send abroad for trees. We have imported and propagated from these imported stocks, the varieties which produce the oil bringing the highest price in the London market. If we have the fruit which produces the largest quantity of the finest oil in the world, what more do you want? We have also the trees producing the best and largest fruit for table use. If there is anything more delicious than the white olive of Ascoli, larger than the Santa Catarina, or more satisfactory than a number coming to us under the commercial name of Queen olive of Spain, we have never heard or read of them.

I will give a list of those varieties which I esteem most highly for oil, giving the name under which I received the trees from Senior Rafello Peccori of Florence, who is now esteemed as the most eminent horticulturist in Italy: Razza, Infrantoia, Corregiola, Grossaia, Atrovialacea, Bellmonte, Rossalina, Leccino, Rubra, Uvaria, Piengente, Morenello, and the Picholine I received with the Rubra from Southern France of the eminent horticulturist, J. Audibert, one of the Directors of the National Experiment Station of France at Hyeres. I have also for table use the white olive of Ascoli, the Saint Agostino, the Santa Catarina, the Regalis, and one of the Queen olives named Hispania.

We cannot cause the olive to spring up under our command as did Minerva in the early days of Attic tradition, but with the very best varieties in the world within our reach, we can take the young plant, give it the best conditions, treat it with the care and attention due to a child and a friend, and we will be able to see it grow, developing in beauty and graceful proportions until it rivals the fabled tree of the Acropolis at Athens; and being endowed with longevity, with comparative immortality, it becomes in the plantation the abiding substance, while the owners or masters as the years roll by become the fleeting shadows

You ask why I place the Razza at the head of my list of press olives. I answer, because in Tuscany, where the best Italian oil is made, a given quantity of this fruit yields the largest amount of oil of the finest quality. This variety, under good conditions, has given satisfactory results from time immemorial, and this, with other kinds, will take to our soil and situation like natives, and will, we believe, prove quite as satisfactory here and quite as remunerative as on the hills and plains of Tuscany.

Among the 50 varieties imported into California, quite a large number have already fruited in different locations. Among those which are very promising are: the Rubra, the Uvaria, the Atrovialacea, described in the annual report of the State Board of Horticulture for 1889.

If the native Californian desires the old black olive cultivated by the Moors in Spain under the familiar Arabic name of Acituna, he will find it now in the nurseries under the name of Praecox. As years pass and this industry is promoted and extended throughout the olive belt of this State, it will no doubt be ascertained what varieties are best adapted to the different locations, especially as the map shows us that this belt extends from south to north at least 500 miles.

And to-day we think the prospect is encouraging, as we see capitalists willing and anxious to aid in promoting this industry, and we believe that in a few years California will be able to supply the market of the United States with bottled olives for the table and with pure olive oil. And we hope our respected pioneers, Mr. Cooper and Mr. Kimball, who are with us, will live to see that day and the consumation of their hopes, and, remembering then the day of

small things, when the stranger within their gates asked what those olive trees were planted for, they will be able to exclaim with the Hebrew prophet, with reverend benediction, as they see the pipes of *golden oil* distributed for the alimentation of the people, "Grace, Grace, be unto it."

Transactions of the State Board of Horticulture.

As briefly noticed last week, the annual meeting of the State Board of Horticulture was held in this city July 19th. There were present president Ellwood Cooper, A. Block, Santa Barbara; I. H. Thomas, Visalia; A. F. White, Santa Rosa; Fred C. Miles, Penryn; Frank A. Kimball, National City, and J. L. Mosher, San Jose.

The treasurer reported a total expenditure for the fiscal year of $9687.92, leaving a balance of $312.08 on hand of the $10,000 yearly appropriation. Of the special appropriation of $5000 to defray the expenses of an expert to foreign countries, $4063.65 was expended.

The secretary, B. M. Lelong, reported that 151,000 copies of reports and pamphlets and 31,700 copies of bulletins were issued since the last meeting, and 30,000 copies are in course of distribution. He recommended the enactment of a new law which would cover the defects in the old law, regarding the adulteration of olive oil and products sold under false labels. A law to prevent the wholesale adulteration of fertilizers which are placed upon the market, and which are of less value than sand, was also recommended.

A further suggestion as to the passage of a package law was made. Great quantities of inferior fruit is put upon the market by unprincipled dealers, and sold in boxes bearing the stamp of growers of high-class goods. By this means great injury is done the business of reputable firms. It is proposed to enact a law making it a misdemeanor to use boxes which have another man's stamp on them.

It was decided to hold a convention of California fruit growers in San Jose, from November 15th to 18th inclusive.

The report of the Quarantine Inspectors, shows that from April 30, 1891, to June 30, 1892, 47 steamers, 7 sailing vessels and 23 cars were inspected, as follows:

Steamers from Japan and China	23
Steamers from Australia and New Zealand	12
Steamers from Sandwich Islands	8
Steamers from Central America	4
Sailing vessels from South Sea islands	7
By rail, cars from Eastern States	14
By rail, cars from Southern States	9

Plants and trees inspected in above shipments:

Ornamental plants	74,445
Fruit trees	53,893
Citrus trees	372,700
Citrus trees disinfected	47,700
Citrus trees destroyed	326,500
Fruit trees destroyed	36,225
Ornamental plants destroyed	525
Total number of trees quarantined	53,893
Total number of citrus trees quarantined	372,700
Total number of ornamental plants quarantined	74,445
Total	501,038

President Ellwood Cooper was reelected, Fred C. Mills elected treasurer, and J. L. Mosher, auditor.

ENTOMOLOGICAL.

The Work of the State Board of California.

Quarantine.

The work accomplished in enforcing the horticultural quarantine laws is shown by the report of the Quarantine Officer, Alexander Craw, as follows:

As San Francisco is the principal port of entry for trees and plants coming into the State from the Orient, Australia, New Zealand, the islands of the Pacific and Central America, and as those countries in the past have sent us the most destructive of the pests that now annually cause so much damage to the fruit industry of California, I have given this branch such close personal attention that I have been compelled to let such important matters as the study of the life history of pests, especially those that have never been investigated, remain for the present.

Nearly all the fruit-growing counties of the State have from one to thirty deputies looking out for insect pests, whereas I have this important doorway to attend to alone, besides visiting and giving a general surveillance to most of the counties in their quarantine work. However, I am satisfied that I have done my duty and carried out to the best of my ability the rules and regulations of your honorable board. I cannot say that this has been accomplished without friction or hard feelings, for it is well known that the enforcement of law is bound to give offense to some individuals. The fruit growers and the press of the State have given it their unqualified approval, and even one of the leading horticultural publications of the East, *American Gardening*, has the following in the March number: "The course of the State fruit inspectors of California in seizing diseased fruit trees, shipped by Eastern nurserymen at large expense, has called forth some vigorous protests from the growers, but without effect upon the inspectors. The quarantine against Eastern trees is further justified on the ground that some counties of the Golden State quarantine against others, so anxious are they to prevent the acquisition of any new obstacles to fruit culture. Eastern nurserymen must make up their minds that California horticulturists are wide-awake and are not going to run chances against the importation of any enemies to their fruit-growing industries."

This has the proper American ring to it, and is in marked contrast to some of the silly and shallow threats of retaliation made by some of the Eastern nurserymen because we object to furnishing new quarters for some of their superabundant pests and diseases.

In a general summary since my last report, I will state that as live "mining" scales were found in December upon the Tahiti orange trees that arrived on the 15th of June last, and were held in quarantine on the beach at San Pedro, I addressed a letter to the Attorney-General calling his attention to the fact that the importers of the trees had had ample time to destroy all the scales and had failed, not because of any neglect upon their part, but, in my opinion, because it is impossible to kill this "mining" scale without also killing the trees. I advised that he commence proceedings to have the trees destroyed, as they were a menace to the fruit-growing industry of the State. The case was set for January 28th, and on the evening of January 25th I left for Los Angeles, and arrived there on the evening of the 26th. On the 27th we made an examination of the trees and still found living scale. The following day the case was called before Judge McKinley in Department 6, Judge Waldo M. York appearing for the people. The defendants asked to have the restraining order removed, as they had verbally disposed of the trees to a party that intended planting them in the Salt River valley, Arizona. The motion was denied and the case was proceeded with and occupied that and the following day. On the 30th the court and those interested visited San Pedro and inspected the trees, returning in the evening. On February 2d and 3d it was again heard and arguments set for Monday, the 8th. On the night of the 3d I left Los Angeles for Sacramento to inspect three carloads of Florida grown orange trees, which I found infested with purple scale, *Mytilaspis citricola*, long scale, *Mytilaspis gloverii*, and the chaff scale, *Parlatorii pergandii*. I ordered them fumigated with hydrocyanic acid gas, and to remain in quarantine for 14 days. At the expiration of the specified time, I made another examination and found live scales, and ordered the trees regassed and another 14 days quarantine.

From Sacramento I visited Sutter county, where the County Commissioners had in quarantine a consignment of 2000 plum trees from Alabama infested with root borers. After consultation with the commissioners and importer, the latter decided to destroy the trees.

On December 11th, the Placer County Commission telegraphed the arrival of 14,500 Eastern peach trees at Auburn. I immediately visited there and found root borers, and ordered the trees removed from the State. I allowed time for the importer to correspond with the nurseryman to ascertain if he could dispose of them, and as they refused to do anything in the matter, he burned the entire shipment.

As the important fruit-growing county of Santa Clara (through some local jealousy and antagonism on the part of some fruit growers) had no horticultural commission until the 4th of January last, it was made the dumping-ground for some of the Eastern nurseries, and consequently took a good portion of my time. On December 15th, I quarantined 19,000 Eastern grown peach trees infested with root borers in one of the tree yards, and ordered the trees removed from the State. The importer refused to comply with the order, and brought his lawyer to convince me I had no authority to do so. However, I held my position, and after consultation with the Attorney-General, the latter drew out a complaint against the importer and the Eastern nurserymen for maintaining a public nuisance. I delivered the papers for service at San Jose, but for some reason they were not served. The Horticultural Commissioner saw that the trees were not distributed, and on March 16th I went down to attend to the case, and found that the black aphis had developed upon the trees very seriously. I called the owner's attention to their condition, and gave him two days to destroy the trees, and the next morning he burned the lot.

After a very careful inspection of peach trees in other portions of his yard, we failed to find any trace of the pest. I consider this a most fortunate escape of the Santa Clara valley, and the whole State, from a serious pest.

Another lot of 3000 peach trees was received by another firm in San Jose on January 1st, and upon inspection I found them infested with root borers. The owner remarked that he had no desire to have a quarantine notice served upon him, and so immediately burned the trees, including the packing material. Other small lots have arrived in different portions of the State, and have been attended to.

On March 1st, I received telegrams from Attorney-General Hart and Commissioner Scott at Los Angeles, stating that Judge McKinley had rendered his decision in the Tahiti tree case in favor of the people. This was a very important victory for the fruit growers, and was a source of general congratulation, as they were confident that it would have a salutary effect in the future upon intending importers.

The decision is a very lengthy one, a copy of which (revised by Judge McKinley) I herewith submit.

On March 29th, I was officially advised by Mr. Scott that he had carried out the orders of the Court and cremated the Tahiti trees.

The Japanese stock has required constant attention to see that none of it was removed before every insect was killed. In some cases I found it necessary to destroy the trees.

In February, the Japanese Consul, Mr. S. Chinda, called upon me, at the request of his Government, to ascertain if there was any way that the trees and plants could be disinfected in Japan before shipment to this country, so that they would not be detained in quarantine upon arrival here. I gave him the bulletins and publications of the board to send to his Government, and informed him we would be pleased to have them attend to the disinfection of the stock in Japan, but that that would not guarantee its acceptance here, for it would still be subject to inspection, and, if necessary, disinfection, or possibly destruction.

Three new scales have been received from Japan this season—one upon orange trees, one on peach, and another upon maples. These were destroyed.

Upon a shipment of ornamental plants from Australia, I found a new cottony cushion scale, about one-third the size of the *Icerya purchasi*. The body is jet black; down the center of the back and along the edges of the insect are bands of yellow cotton, giving it a very unique appearance, while the cottony egg sac is plain instead of fluted or corrugated, as in *purchasi*, and is of a slate or dove color.

Some little hard feeling has been raised in several of the counties on account of the wrong identification of some insects or supposed diseases by the inspectors in their zeal to exclude insects upon trees going from one county to another. This state of affairs can hardly be avoided, and is likely to continue as long as some of the counties persist in paying less than laborers' wages to their inspectors.

Three other carloads of Florida orange trees have been received at Sacramento besides those mentioned.

A carload of 48,000 trees arrived in Lancaster, in Los Angeles county, from Seaford, Delaware, and a telegram received from Horticultural Commissioner Scott, dated March 28th, stated that the local inspector A. B. Cox had reported the trees apparently free from insect pests and positively refused to quarantine them; also that the district attorney said that the trees came under my jurisdiction, and as it was left in my hands, I had to go down and attend to the case. I wired "that he attend personally or appoint another inspector." To this I received another dispatch stating that the district attorney maintained that I must attend to Lancaster matter. As the danger was very great and prompt action must be taken before the trees were planted, I went down on March 31st to make a personal inspection. Upon the receipt of the first telegram, I wrote to Commissioner Scott and Inspector Cox to carefully examine the trees for black aphis, for Delaware is one of the four States where this recent and very destructive pest has secured a foothold. Upon arrival, I learned that Mr. Scott and his deputy, Mr. Compere, had examined the trees and found them very seriously infested with the Eastern peach crown borer, *Algeria exitiosa*, and the black aphis, *Aphis persica niger*. The "peach yellows," or the "peach rosette," will not, in my opinion, compare with this pest in destructiveness. It has practically exterminated the peach industry in portions of Australia, and Dr. E. F. Smith, of Washington, reports having seen one nursery of 100,000 trees killed outright in two or three week's time, and having heard of half a dozen other large nurseries that were entirely destroyed or very seriously affected.

The importers of this Lancaster shipment, from what I learned, had taken every precaution to have the trees received and planted before it was brought to the attention of the commissioners. The fact that the land is owned by a company that are under contract to plant it out with trees, and their endeavors to keep the matter quiet, would appear to substantiate the reports. We made an inspection, and found enough to justify the immediate commencement of proceedings in the Superior Court of Los Angeles to have the entire consignment condemned as a nuisance and destroyed. As a portion of the trees had already been planted, the attorney for the people, Waldo M. York, filed an injunction restraining the owners from moving the trees, and the case was set for hearing Monday, April 11th. When called, the defendants, through their attorney, moved for a continuance of two weeks, as it would be impossible to get their evidence from the East in less time, but after hearing a statement from Mr. Scott and me as to the great danger of delay in the matter, Judge McKinley informed them that they must be prepared to proceed with the case in one week (Monday, 18th inst.), and set the following day for hearing my testimony, after which I returned by way of Fresno, where I stopped over to attend to some quarantine business, and arrived on the afternoon of the 14th.

ALEXANDER CRAW,
Quarantine Officer.

FLORIST AND GARDENER.

California Seedling Pelargoniums.

The Santa Cruz *Surf* has an article on seedling pelargoniums which, though it has a sort of a two-edged advertising sword in it, we publish for the floral information it carries:

John T. Sullivan, of the Sea Beach, is a well-known and successful florist. In fact, he was a florist before he was a hotel man, though it has always been in an amateur fashion; and even when he was in the New York postoffice, his love for flowers would find a way of expressing itself.

One of the things which delights him most is the producing of new seedlings among his floral beauties. Since the hotel and grounds have been remodeled, Mr. Sullivan's most pronounced successes have been with the beautiful variety of geranium family known as the pelargoniums. His seedlings of these lovely flowers number up into the hundreds, and many of them are exceptionally choice.

But he has been contented to let them grow and blossom for the pleasure of his guests, and to the latter they have been a constant wonder and delight. No effort has been made to place them on the market or to reap any financial benefit from them.

However, a new Columbus was coming to discover this western world of floral beauty. It was Timothy Ryan, the veteran and experienced florist and nurseryman of Yonkers, N. Y., who has been visiting at the Sea Beach, and whose keen and practiced eye told him that here was a source of profit as well as pleasure.

Mr. James B. Kidd, now of the Sherwood Hall Nursery Company (Timothy Hopkins' place), but lately of the leading firm of seedsmen—J. M. Thorburn & Co. of New York—was also here on Sunday and Monday, and was quite as delighted as Mr. Ryan at the rare "find" in the Sea Beach gardens.

Mr. Sullivan was invited to select some 30 or 40 of the best ones for naming and classification. This will be known as "Sullivan's Santa Cruz collection of pelargoniums." and the plants will be placed upon the market by the Sherwood Hall Company.

It was a very pleasant duty which devolved upon the

Breeders' Directory.

Six lines or less in this directory at 50c per line per month.

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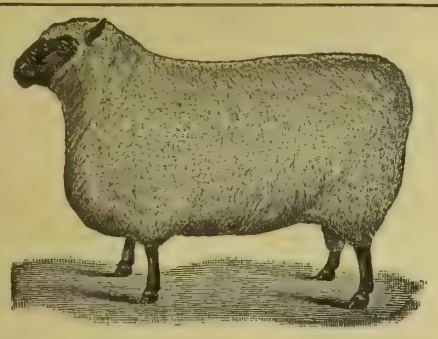
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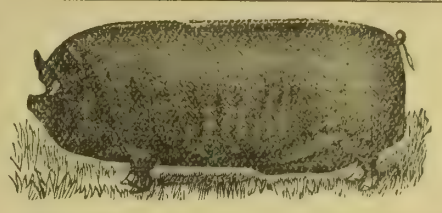


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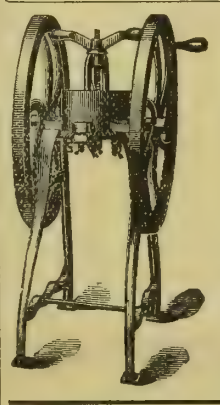
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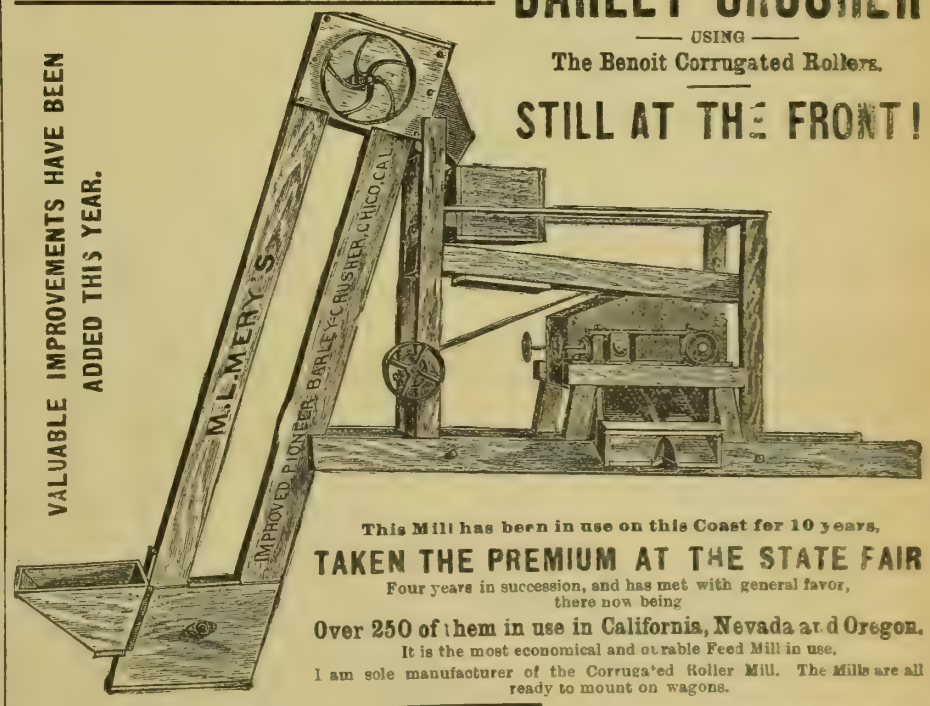
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Menlo Park, Cal., January 22d, 1889.

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BY ITS INTELLIGENT USE hotels, restaurants, saloons, stores and offices may be kept free from all troublesome insects. It is now regarded as a necessity in most of the principal hotels in the United States, and wherever it has been introduced it has given complete satisfaction. Owing to an increased production of Pyrethrum flowers, from which this valuable article is made, and their improved facilities for reducing them to powder, the manufacturers have this season made a material reduction in their prices.

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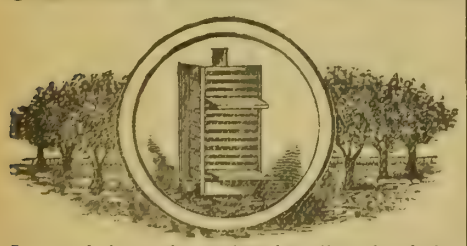
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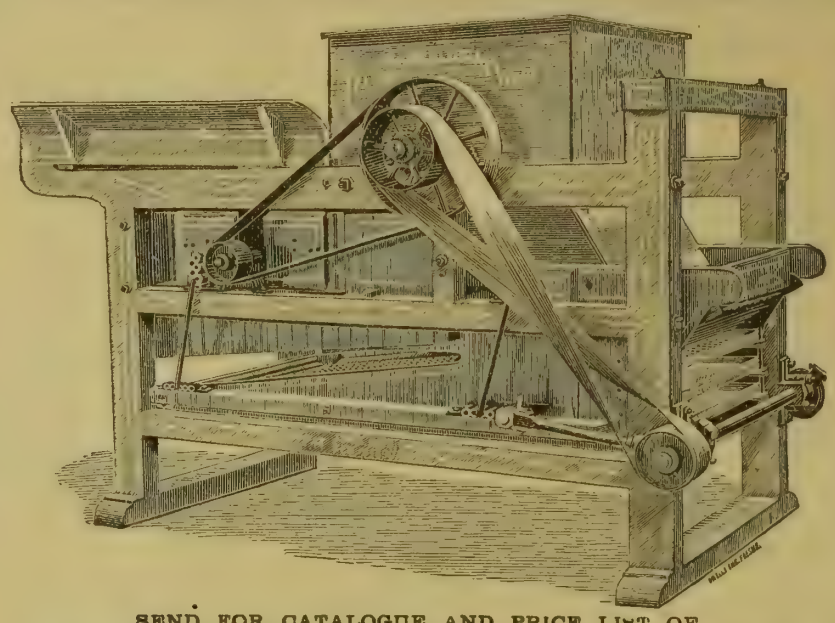
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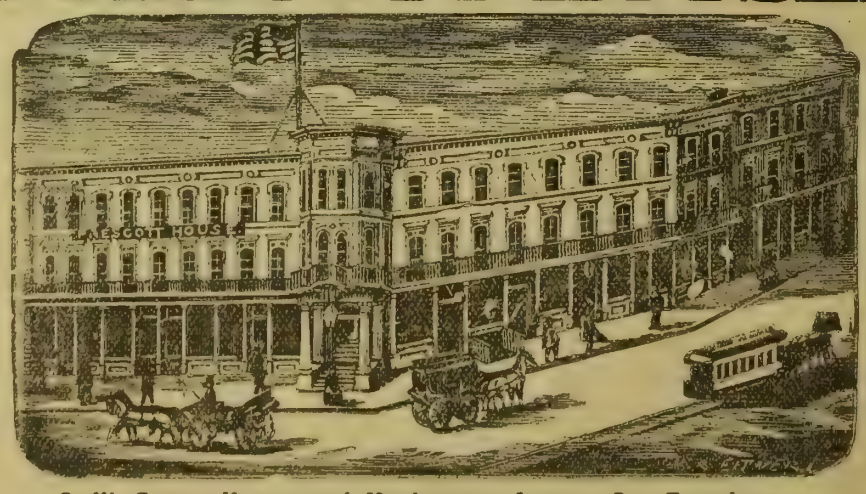
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Manufactured by G. LISSENDEN.

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This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, $40; Steel two-horse, $31. Address all orders to G. LISSENDEN, Stockton, California.

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The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

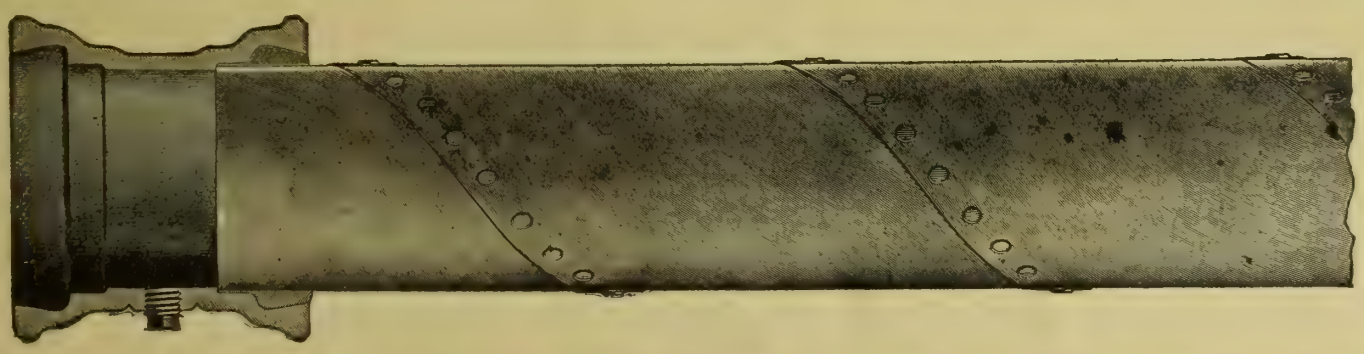
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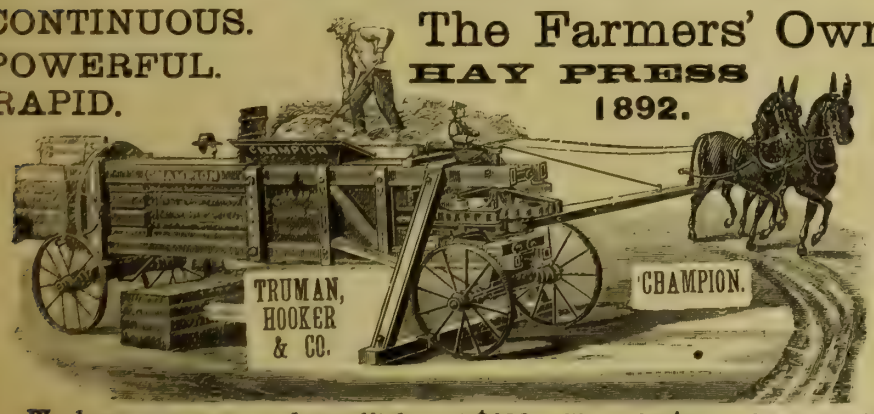
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CONTINUOUS.
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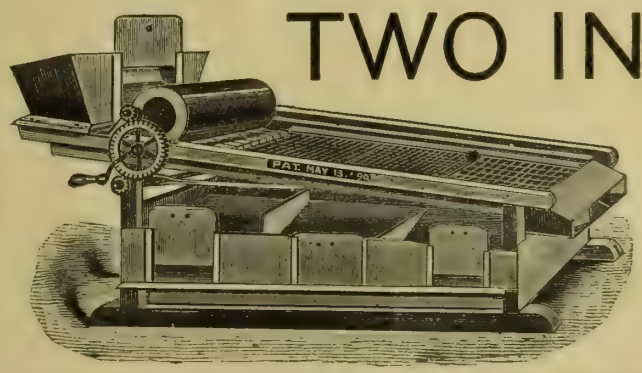
The Farmers' Own
HAY PRESS
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We have one press used very little, cost $400, will sell for $250, if ordered this month. Full circle, 10 to 20 tons per day, $425. Send for circular.

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TWO IN ONE.



1892.

HAMILTON
PRUNE GRADER

The only machine that will grade with equal facility both green and dried fruits. It is desirable to grade prunes both before they are dried and absolutely necessary after.

ECONOMICAL.

It is the best economy to have one machine which you can use for both green and dried fruit, saving time, money and valuable space. No complicated machinery to get out of order and do imperfect work.

VERY SPEEDY.

No machine compares with this in speed. Will grade apricots for drying, also walnuts and pecans.

W. C. HAMILTON, near Narrow Gauge R. R. SAN JOSE, CAL.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

MORE THOROUGH CULTIVATION FOR ORANGE TREES. — Oroville *Register*: Orchardists, especially those growing the orange, should cultivate the ground thoroughly. We have examined 40 or 50 orange groves lately and noted in every instance that the rankest growing, most vigorous and richest colored trees are those receiving the best tillage. Water alone will not answer, but the ground must be worked until it is as mellow and moist as land can be made in a hot, dry climate. The soil should be plowed or cultivated at least five or six times during the season. If more work than this is put on the land the trees show quickly a still more vigorous and rapid growth.

RECLAMATION DISTRICT No. 542.—*Register*: A large number of land owners living on the east side of Butte creek in the vicinity of Nelson have organized the above named reclamation district, which includes about 6000 acres of land. There is a strong levee on the west side of the creek and this forces the water in winter over the lands to the east. It is the purpose of the members to erect a levee, 50 feet wide on the bottom, 12 feet high and seven miles in length. It will be about six feet wide on top. Each land owner will be assessed in proportion to the number of his acres and the advantage the levee is to him. The owners of the Pratt Grant will extend their levee a mile and a quarter, while all will unite in clearing the stream of all obstructions. The levees will be from 100 to 300 yards apart. The slope of the land is to the southwest and the grade is about six feet to the mile.

Contra Costa.

AGRICULTURE.—Monterey *Gazette*:

Wheat, acres	43,365
Oats	1 750
Barley	27,375
Corn	2 100
Hay	51 413

Grape vines growing:

For table, acres	425
For raisins	216
For wine	3,845

Fruit trees growing:

	Bearing.	Non-bearing.
Apple	7,715	3,560
Apricot	23,460	15,321
Cherry	7,300	3,422
Fig	1,800	1,100
Olive	.....	12,000
Peach	6 315	6,220
Pear	30,345	29,500
Prune	33,712	31,560
Lemon	150	75
Orange	320	225
Almond	25,225	22,310
Walnut	.....	3,500
Quince	750	625
Pecan	900	.....
Persimmon	200	.....

Kern.

AN EXTENSIVE ORCHARD. — Bakersfield *Echo*: The California Land and Commercial Company of London is now improving for its clients nearly 4000 acres of land, some of which has already been planted in trees and vines. All of the remainder is under cultivation preparatory to making orchards and vineyards of it.

Most of the California Company's new land has been planted this season in grain or Egyptian corn preparatory to setting out orchard and vineyard next season.

A NEW PEACH.—Bakersfield *Californian*: C. A. Maul has discovered a new variety of peach in his orchard. Two years ago he budded a quantity of seedlings to Orange Cling and this was among the others. It flourished, but bore no fruit last season, yet, from its similarity to the Orange Cling variety, he felt sure that the bud had grown. This year, to his surprise, it produced a new variety of freestone. The peach is round, rosy red upon the outside, yellow meat within, with a very small pit. It has firm, juicy meat of delicious flavor and is fully ripe by the first day of July. It fact, it can be gathered so as to reach the Eastern market by the first of July. It is as large as any early Crawford, averaging at least three inches in diameter, and is a handsomer peach every way. From its firm meat it will make a splendid shipping peach, and its early ripening quality makes it a very valuable addition to the peach varieties of Kern.

Los Angeles.

A LIGHT YIELD OF HONEY.—Pomona *Register*: An extensive apiarist living near Pomona, and keeping about 1000 swarms of bees, states that for this year he will have only about three tons of honey. This is the third successive bad honey year.

THE LARGEST APRICOT CROP FOR YEARS.—Pasadena *Blade*: The apricot crop this year is pronounced by competent judges to be the largest ever known in this valley. In this connection, it is interesting to know how much fruit is being produced per acre. Dr. E. F. Greenleaf's orchard is a fair specimen of the orchards seen on the outskirts of the city. He has four acres of apricots from which he will this year produce over seven tons of dried fruit. It takes six tons of green fruit to make one of dried, and it is thus seen that his little orchard will yield over 42 tons, or nearly 11 tons per acre. Two years ago the doctor's orchard produced nine tons per acre. Heretofore his orchard has never received any irrigation. This year, however, he irrigated a portion of it as an experiment. The result has been that the irrigated trees are more heavily laden, have larger fruit and show a more rapid and a healthier growth. The irrigated fruit, however, ripened a few days later, but was of a more uniform size. A ride through the apricot orchards reveals an interesting sight. Broken branches everywhere betray the fact that the trees are overloaded. Pickers are everywhere at work, and here and there are gangs of girls and boys engaged in pitting fruit for progressive ranchers who prepare their own product for market. One man living between this city and Tustin has 300 tons of apricots on 25 acres. This is a yield of nearly $200 per acre. Pears and peaches are also a large crop, and oranges promise a prodigious yield next year. Prunes in this valley, however, are almost a failure this year, the first time in four years. Walnuts also promise the largest crops for several years.

PUMPKIN SEED TO THE ACRE.—*Delta*: J. E. Tilton is great on the little things. In order to find out just how much seed is required to plant an acre to pumpkins, he weighed out a pound and counted them, and, by allowing three to a hill and the hills ten feet apart, it required just one pound per acre.

Orange.

APRICOT CURING.—Orange *News*: Joel B. Parker, who has the most extensive apricot orchard in this section, has in his packing house all the necessary appliances for evaporating fruit; but as they are not in use this season, he evidently considers sun-drying the more satisfactory method, and it is certainly a very simple one. The fruit is "picked," if placing great sheets of cotton underneath the trees and shaking the fruit off by means of long forked sticks, which are inserted among the smaller branches, may be so termed. It is then turned into boxes holding about 50 pounds, and thus conveyed in wagons to the packing house, where they are piled up ready for the cutters, who see them weighed and are given tickets marked accordingly. The cutters then sever the fruit in halves, eject the pits and place the fruit inside up, and one layer deep, on large, shallow, wooden trays. When the trays are covered with fruit, they are removed by attendants and piled on cars, which run them into the sulphuring houses. Here the fruit is subjected to the fumes of sulphur for a few minutes to bleach it and protect it from the depredations of insects while drying. After being thus treated, it is sent over tracks running in different directions to the drying ground, where the trays are spread out in the sun. In three or four days, or as soon as the fruit is sufficiently dried, it is packed in sacks and turned over to the shippers. Mr. Parker's orchard comprises 30 acres, and he estimates that his crop will this season aggregate not less than 30 tons when dried. Thirty tons of dried apricots mean about 180 tons of whole fruit.

Santa Clara.

BIG PROFIT IN PRUNES.—Gilroy *Gazette:* Mr. J. C. Zuck informs us that he has sold the prunes, the produce of nine acres, at $50 per ton delivered in San Jose. He will have between 40 and 45 tons, and as the cost of picking and delivery is less than $5 per ton, he will net from that nine acres something over $2000. Not a bad business—$200 per acre.

AGRICULTURAL AND HORTICULTURAL STATISTICS.—S. J. *Mercury:* The following statistics are of interest, showing the number of trees and vines in the county in good condition: Fruit trees, one year old, 472,950; fruit trees, two years old, 280,720; fruit trees, three years old, 264,295; fruit trees, four years old, 256,115; five years old and upward, 1,325,620; total number of trees, 2,599,700. Acres of vines, grape, one year old, 215; grape, two years old, 356; grape, three years old, 418; grape, four years old, 734; five years old and upward, 10,300; strawberry, 267; blackberry, 72; raspberry, 42; gooseberry, 11; total number of acres, 12,415.

Sutter.

FRAUDS PRACTICED BY DRIED FRUIT DEALERS. Yuba City *Independent:* At the last meeting of the Sutter County Horticultural Society, R. C. Kells gave his own system of drying which, he said, was not drying, but curing. He did not believe in exposing fruit to the sun until it would rattle like a lot of gravel when poured out. His rule was to spread the fruit in the sun in trays for a short time and then remove it in the heat of the day to his sweathouse, where it was bulked on the floor to a depth of from one to three inches. Here he stirred it frequently with scoop-shovels, gradually increasing the depth of the bulk and decreasing the area of floor room occupied until the fruit was in condition to sack for market. It was then not dried, but cured. It would not rattle when handled, but was like soft leather. This way of curing did not suit those dealers whom the speaker designated as manipulators. The manipulators preferred to receive the fruit in a hard, dry condition, so that by adding large quantities of water they could increase its weight and thus add to their profits. This was a condition which the fruit growers of California would have to meet. They should stand together and insist that their cured fruit be sold to consumers just in the condition in which it left the producers' hands. When in St. Louis last winter he saw on the fourth floor of a large establishment a pile of 30 tons of Missouri dried peaches. They were poured out in bulk at one end of the room and men were engaged with rakes in stirring the fruit, while other men were turning on the hose. In this way 25 per cent was added to the weight, and this alone was a fair profit to the dealer. Fruit growers should insist that this fraud be discontinued.

FRUIT SHIPMENTS.—Y. C. *Farmer:* The close of this week will see four more carloads of choice fruit on the way East loaded from the orchards in this vicinity. At every orchard busy hands are packing plums, peaches, nectarines and pears into crates and baskets for Eastern markets. The returns are very encouraging and prospects are good for a continuance of the good prices that the growers are now realizing. Very few lots of fruit fall below 3½ cents per pound net to the grower, while many carloads go much higher. Peaches are the principal fruit and the varieties are the Crawfords, Decker and others. The Tuscan Cling will soon be ready. Grapes are ripening and in a week or ten days will be shipped to a considerable extent.

Tulare.

HONEY YIELD.—Visalia *Delta:* F. M. Hart had fresh honey in the market July 11th this year. This early date breaks the record. He has about 300 swarms at his place near Traver, and states that the bees are doing better this season than for eight years past.

LUCERNE APRICOT CROP.—Hanford *Sentinel:* The season's crop of apricots has been a very satisfactory one. A good price has awarded the toiling producer, and every man with an orchard of this fruit feels his bank account growing. The season was marked with perhaps the strongest competition ever known here among the buyers of apricots, and the average price paid the producers is about 9½ cents per pound. The amount of the crop is about three times that of last season, and most of it was sold to Charles King, 19 carloads in all, worth to the growers on an average of $2000 per car, or $38,000, as the result of the harvest this year in Lucerne. There will be a large increase of bearing trees next season. The peach crop will be ready to begin on in ten days, and it promises a splendid yield. Prices promise to be good, also.

Ventura.

INTERESTING CROP NOTES.—Cor. Santa Barbara *Independent:* Barley is now being threshed and has already begun to arrive in Ventura and Hueneme—principally in the latter place. Conservative estimates from recognized authorities place the yield of Ventura county at about two-thirds that of last year. On the Las Posas, the great barley-producing tract, it is estimated that the yield will be about 250,000 sacks. The quality is excellent. The acreage is somewhat larger than that of last year. This year there is a decreased acreage of beans to the amount of about 10,000 acres. This is made up by the increased acreage of corn and barley. Of the beans the consensus of opinion is that the outlook for a good yield is very poor. The weather is unfavorable for such tender plants and the lack of moisture is keenly felt. The beans require heavy fogs and cool nights. Corn is looking magnificent and promises a heavy yield. While the weather is very unfavorable to beans it is very favorable to corn. Perhaps I might explain this seeming inconsistency. The corn plants stand high, with broad, wide leaves, and every drop of moisture gathered from the atmosphere is led down to the roots. From this, corn will thrive on very little moisture. But the bean plant sits low on the ground and has not the ability, from its peculiar shape, to gather and utilize as much of the atmosphere's moisture as the corn. The few leaves about the center of the stock gather what they can of the moisture and it trickles down the stock to the rootlets. A good heavy fog allows this to be done in a sufficiency and, as a result, a cool night with a heavy fog is everything for the beans. Just now the beans are putting out their runners and blossoms and the pods should form at once. It will need moisture to give the plant strength to accomplish this. Apricots are now being shipped to Newhall and Fillmore for drying, but by far the larger part of the crop goes to the former place. Many of the growers are drying their fruit on home places. Fruit reports along the railroad lines are not flattering for good fruit. The apricots are going into market very small in size. The belief now is that the dried fruit market will not be as well stocked as usual. Buyers are on the ground and eagerly buying carloads as they appear. I hear of several heavy shipments already being made and sent on their way East. As to hay, we may say that, while the yield is not large, it is of very fine quality, and if the supply is not large it is ample, as there will be but little wasted. There is no reason to believe prices will of necessity run to great extremes.

Yolo.

CLAIMS THAT SWEET CLOVER IS DETRIMENTAL. Woodland *Democrat*: Balfour, Guthrie & Co., the wheat buyers, have written a letter to a Willows merchant, in which they deplore the tendency in many parts of the State to promote the growth of sweet clover. They claim that it is a serious detriment to wheat; that it taints cargoes and involves great loss to shippers. They urge that the attention of farmers be directed to this matter as much as possible, with the object of inducing them to put forth special efforts to exterminate the weed from their wheat fields, as, in fact, the longer it is delayed the worse the evil will become, with its corresponding pecuniary loss and dissatisfaction.

Yuba.

HOP NOTES.—Wheatland *Four-Corners*: The hop yards are in the blossom. Cultivation has ceased in several yards. Picking will commence about the second week in August. S. D. Wood has ordered lumber for a new hop kiln. He will build a hopper kiln on the same plan as two being erected by John Roddan.

SWEET CLOVER RUINING GRAIN FIELDS.—Marysville *Appeal:* Harvesting is progressing very favorably, the weather being unusually cool. There is a good deal of smut and rust noticeable in the grain from many sections this year. The growth of sweet clover is rapidly spreading in some sections of this State, which affects the quality and quantity of the yield; it grows like alfalfa and has a yellow blossom. The presence of sweet clover is a serious detriment, and many entire crops of wheat have been affected by it this season. It can easily be detected by the odor arising from it, and the presence of the little seeds may be readily discerned. Such tainted wheat can only be handled at a large discount.

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Exercise Better than Medicine.

Much of the food actually digested and assimilated is not used to the fullest extent for want of sufficient oxidation to make it yield the greatest amount of vitalizing power to the tissues of the body. Such partially unoxidized products have an irritating effect on the organs and tissues, and predisposes them to disease if they do not directly affect them with it.

Exercise has a stimulating effect on all parts of the body by inducing further oxidation in all the tissues and organs. This increased oxidation is attended by a greater demand on the part of the system for oxygen—as indicated by the greater number, force and frequency of the respirations.

During exercise the heart beats faster, and forces more blood through the lungs to all parts of the body, bearing in its little blood cells the precious life-giving factor, oxygen. These little cells—one constituent of which, hœmoglobin, has the wonderful faculty of quickly loading and unloading itself with oxygen—thus act as direct aids to the process of oxidation in the tissues and organs.

It is the combining of oxygen with unoxidized products in the blood that gives to each individual cell its possibility of sustaining life. Any process which increases the oxygen supplied to all parts of the body tends to strengthen the life in each individual cell, and to give it more power to resist disease.

Exercise of all factors does this most effectively, and besides actually producing in each individual cell a greater vitality, it gives a favorable opportunity for the waste products of the tissues to be thrown off rapidly. By thus causing a further oxidizing of certain matters in the blood, it conduces in a double sense to life and health.

Habitual outdoor exercise, with suitable protection from extremes of weather, is the most effective means of prolonging life to old age.—Youth's Companion.

MINERAL WOOL.—An industry has been established at Roanoke, Va., for the manufacture of mineral wool, the material for which is obtained almost close to the works. Some of the finer grades, though produced from the hardest rock, are as soft as the finest cotton. This mineral wool is indestructible and odorless. It will not burn, decompose or granulate, but will retain its fibre wherever placed. It is coming into large use as a lining between walls of buildings, thus providing a safeguard against fire, and insurance companies are reducing their rates on buildings so fitted. It is introduced into dry kilns, making them almos fireproof.

SOAP PRODUCTS.—A degree of superiority has long been claimed for some of their specialties in soap products by German manufacturers, and especially in the processes of coloring. This latter, however, depends largely for its success or attractiveness on the materials used, these being mainly lard, tallow, cocoanut oil, palm oil, and to some extent, almond oil. The method of insuring a satisfactory color is thus a matter of discrimination—heavy, earthy or metallic colors, such as umber or vermillion, being added only when the soap has acquired a thick consistency, while dissolved colors may be added when the soap is still thin. Very few colors only can be made use of before all the lye has been run in and saponification begun, and aniline colors almost disappear at first under the action of the alkali, but return after cooling. The beautiful marbling effects produced is the result of simply stirring up the required color in melted cocoanut oil, runnning it into a funnel closed at the lower end by a finger, and allowing the contents to run over the soap as it is run in layers into the frame, and, on the frame being full, a stick is drawn in fancy figures through the soap to distribute the color. As compared with foreign countries, German manufacturers produce a much larger proportion of their toilet soaps by the color process.

SUMMER FOOD.—Half the illness that occurs at one season, I think I can safely say, is due to improper dieting taken at another. We hear of people feeling weak in the spring, or suffering from those different ailments due to malnutrition, such as boils, skin diseases, obesity or debility. Now this would not be so if the person adapted his diet to his requirements and to the season. No sensible person would think of keeping a large fire burning in his room in the summer. If he did, he would undoubtedly soon feel the effect of it, but many a man who would feel himself insulted if he were not thought a sensible person will eat in the summer to repletion, foods the particular action of which is to supply heat in excess. Perhaps I cannot do better here than to explain that the foods that are converted into heat—that is, keep up the heat of the body—are starches, sugar and fat; and those that more particularly nourish the nervous and muscular system are the albumen and salts. The largest proportion of summer food should consist of green vegetables, cooked or as salads; white or lean meats, such as chicken, game, rabbits, venison, fish and fruits.—Popular Science Monthly.

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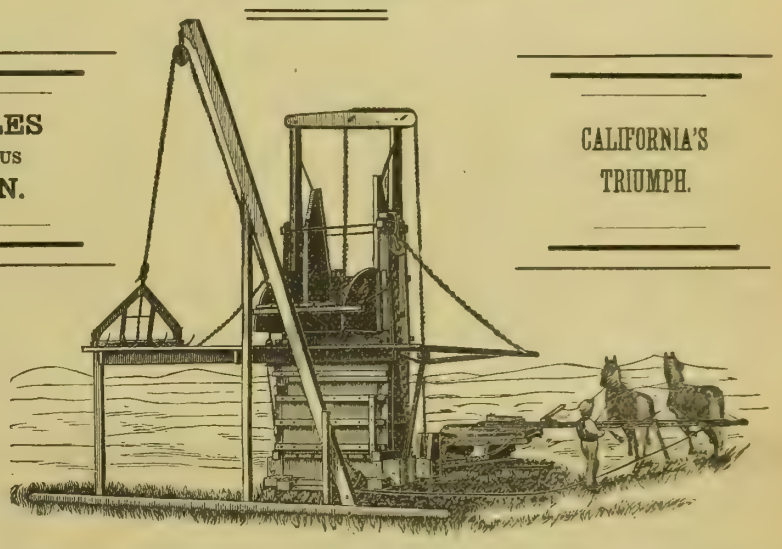
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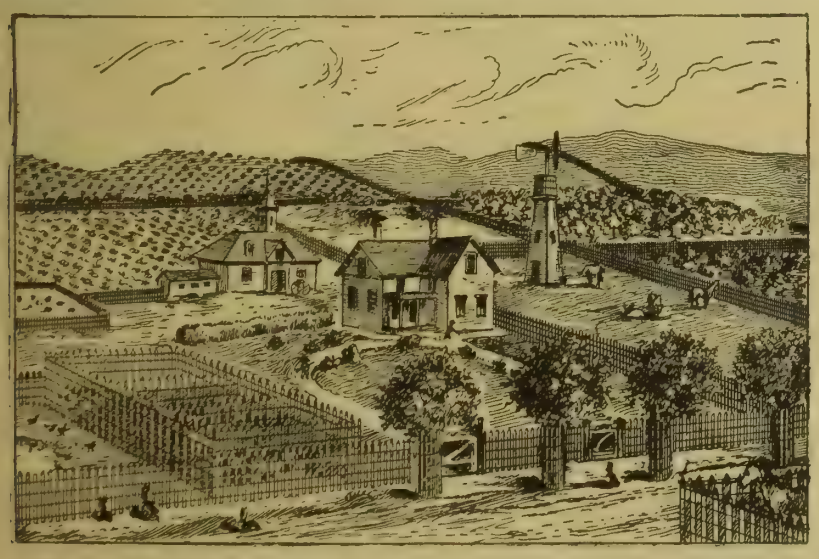
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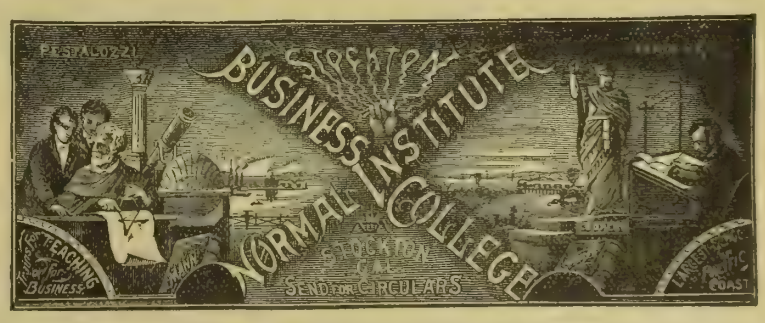
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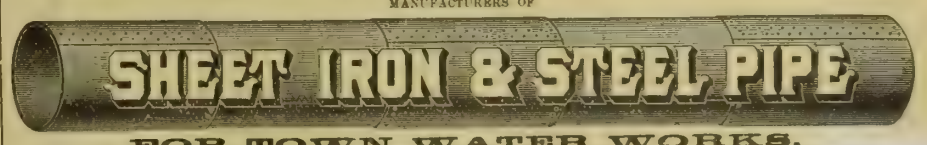
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Domestic Economy.

Concerning Salads.

Salads are not as universally appreciated as they should be. To many the preparing of a salad seems a laborious task, It is not as much work as it appears to be, as many of the dressings, which are the chief part, can be prepared beforehand. The dressing should not be added to a salad till just before serving, as it becomes watery if mixed long before being used. This is an excellent way to dispose of remains of fish, vegetables, poultry and meats of various kinds.

Summer Salads—One-half small head of cabbage, two heads of lettuce, one onion and one cucumber. Chop all together, salt and pepper to taste, using both black and cayenne pepper, and cover with the following mayonnaise.

Mayonnaise Dressing—Mix one even teaspoonful each of mustard and salt, with one and a half teaspoons of vinegar. To this add the yolk of one egg. Beat well together and add nearly half a pint of salad oil.

Egg Salad—Cut two boiled potatoes fine, slice six hard-boiled eggs and shred one bunch of lettuce. Arrange a salad bowl and pour over a mayonnaise dressing, highly seasoned with onion and cayenne.

Potato Salad—Small potatoes not suitable to cook with larger ones can be laid aside and used for salads. Boil them and while warm slice thin and serve with a cream dressing, made as follows: One teaspoon each of sugar and salt, one fourth teaspoon each of dry mustard and black pepper. Mix and add gradually one-half cup of sweet cream and two-thirds of a cup of vinegar.

Turkey Salad—Mince the remains of cold turkey, mash the yolks of eight hard-boiled eggs, add salt, pepper and mustard to taste, and two tablespoons of sugar. Chop three heads of celery with the whites of the eggs, and a teacup of vinegar, and pour over the meat.

Cabbage Salad—Cut the cabbage very fine and season with salt and pepper. Serve with the following dressing: Take two teaspoonfuls each of butter, sugar, flour and mustard, one egg and one cup of vinegar. Stir all together, and let it come to a boil. Pour over the cabbage while hot.

Chicken Salad—Cut the meat of one boiled chicken in dice, and mix with the same quantity of chopped celery. Just before serving, pour over it the following dressing: Rub the yolks of two hard-boiled eggs through a sieve and mix with a tablespoon of cream and two tablespoons of salad oil. Add a teaspoon each of salt and dry mustard, and three tablespoons of vinegar.

Salmon Salad—Take one can of salmon, pour off the liquor and pick the fish into flakes with a fork and lay it on a flat dish; cut some lettuce leaves and mix with the fish. Rub together the yolk of a raw egg, a teaspoon of sugar, half a teaspoon of salt, and one-fourth of a teaspoon of cayenne pepper. Thin with a tablespoon of vinegar and add the powdered yolks of four hard-boiled eggs. Lastly, add the beaten white of an egg and pour over the fish.

Apple Salad—One quart of steamed apples rubbed through a sieve, six tablespoons of salad oil or melted butter, salt and pepper to taste, one teaspoon made mustard and one teaspoon of sugar. Serve cold.

Lettuce and Ham Salad—Chop fine one slice cold boiled ham and cut up one head of lettuce. Serve with the following dressing: Mix together thoroughly one-fourth cupful of salad oil or melted butter, one-fourth teaspoon of pepper, one teaspoon of made mustard, one-half cupful of vinegar, and salt to season.

Celery Salad—Separate the stalks of four heads of celery, cut in pieces an inch long and pour over it half a pint of mayonnaise dressing.

Watercress Salad—Wash and break apart fresh, crisp leaves of cress, cover with mayonnaise dressing and serve immediately. Margaret Palmer, in American Cultivator.

Fills the Bill.

Farmers perhaps more than any other class suffer from the charges and dishonesty of middlemen. If the farmer could sell his produce at best market rates and have honest returns made, his profits would be greatly increased. An agency or organization that would carefully supply the farmer with information in advance of his shipment, look out for his produce when it arrives, report to him as to the honesty of firms he may think of dealing with and do his purchasing at the best market rates, would be of almost incalculable benefit. To fill this want, lately a number of reputable San Francisco business men have organized a Farmers' Protective Bureau, with offices in the *Chronicle* building, San Francisco.

Personal Appearance of Columbus.

Columbus was of powerful frame and large build; of majestic bearing and dignified in gesture; on the whole well formed; of middle height, inclining to tallness; his arms sinewy and bronzed like wave-beaten oars; his nerves high-strung and sensitive, quickly responsive to all emotions; his neck large and his shoulders broad; his face rather long and his nose aquiline; his complexion fair, even inclining to redness, and somewhat disfigured by freckles; his gaze piercing and his eyes clear; his brow high and calm, furrowed with deep workings of thought.

In the life written by his son, Ferdinand, we are told that Columbus not only sketched most marvelously, but was so skillful a penman that he was able to earn a living by engrossing and copying. In his private notes he said that every good map-draftsman ought to be a good painter as well, and he himself was such in his maps and globes and charts, over which are scattered all sorts of cleverly drawn figures. He never penned a letter or began a chapter without setting at its head this devout invocation: "*Jesus cum Maria sit nobis in via.*"

Besides his practical studies, he devoted himself to astronomical and geometrical researches. Thus he was enabled to teach mathematics, with all the advanced knowledge of his time he was conversant, and he could recite the prayers and services of the church like any priest before the altar. He was, as I have already said, a mystic and a merchant, a visionist and an algebraist. If at times he veiled his knowledge in cabalistic formulas, and allowed his vast powers to degenerate in puerile irritation, it was because his own age knew him not, and had dealt hardly with him for many years—from his youth until he had reached the threshold of age—without taking into account the reverses which darkened and embittered his later years. Who could have predicted to him, in the midst of the blindness that surrounded him that there in Spain, and in that century of unfading achievement, the name of Columbus was to attain to fame and unspeakable renown? There are those who hold that this was the work of chance, and that the discovery of America was virtually accomplished when the Portuguese doubled the Cape of Good Hope. But I believe not in these posthumous alterations of history through mere caprice, nor in those after-rumors of the discoverers who died in obscurity.—Emilio Castelar, in June Century.

How To Make a Rose Jar.

That a delightful effect is produced throughout the house by the daily use of a rose jar is not as universally known as it should be. The followlng directions were given in *Harper's Bazar*, with the assertion that the potpourrie would retain its fragrance for 20 years.

"During the rose season gather a quantity upon fine, dry days. Remove the petals, and, when a half peck is obtained, take a large china or glass bowl, strew a handful of table salt on the bottom, then three handfuls of leaves, then salt, and so on untll all the leaves are used, covering the top with salt. Let it remain five days, stirring and turning twice a day. They should now appear moist, when add three ounces of bruised or coarsely powdered allspice and one stick of bruised stick cinnamon. This forms the stock. Allow it to remain a week, turning daily from bottom to top. Then put into the permanent jar one ounce of allspice, and adding the stock, layer by layer, sprinkle between the layers the following mixture: One ounce cloves, one ounce cinnamon, two nutmegs, all coarsely powdered, some ginger-root, sliced thin, half ounce anise-seed bruised, ten grains finest musk, half a pound freshly dried lavender flowers, two ounces powdered or finely sliced orris root. Then add the following essential oils at pleasure, some preferring one odor, some another: Jasmine, rose geranium, lavender, lemon verbena (or vervain), musk, neroli, patchouly, rosemary, violet, etc. Lavender, (amber), Florida, magnolia, Ixoro, Breoni, California and Hedyosmia water and Turkish extract are excellent, added from time to time, as also any fine cologne, rose or orange flower water. Orange and lemon peel, and such freshly dried flowers as violets, tuberoses, clove-pinks, or other highly scented varieties, should be added each year in season, and fine extracts of any kind will add greatly to the fragrant odor, while fresh rose leaves, salt and allspice, made as at first, must be added, when convenient, in the rose season. Shake and stir the jar once or twice a week, and open only during the daily odorization given to the apartments."

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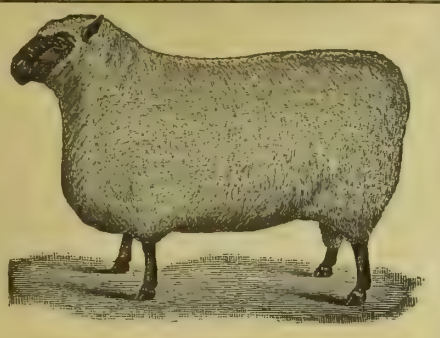
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POULTRYMEN, Hens are beginning to stop laying and consequently the price of eggs is advancing. Every one should now feed Wellington's Improved Egg Food regularly if they desire to have eggs to sell when they reach high prices. Get it of any MERCHANT or of Proprietor, B. F. WELLINGTON, 425 Washington St., San Francisco

ORANGE CULTURE A Practical Treatise by T. A. Garey giving the results of long experience in Southern California. 196 pages, cloth bound. Sent postpaid at reduced price of 75 cts. per copy. DEWEY PUB. CO., 220 Market, S.F.

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Hay Baler? If so, do you use our Patent

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FIVE FIRST PREMIUMS IN 1891.

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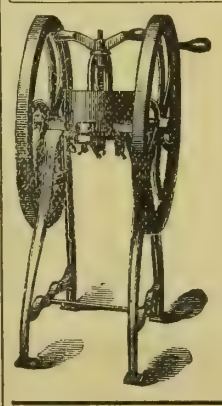
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WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock. COST OF FEEDING MATERIALLY LESSENED.

These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing valuable information in relation to feeding green cut bones.

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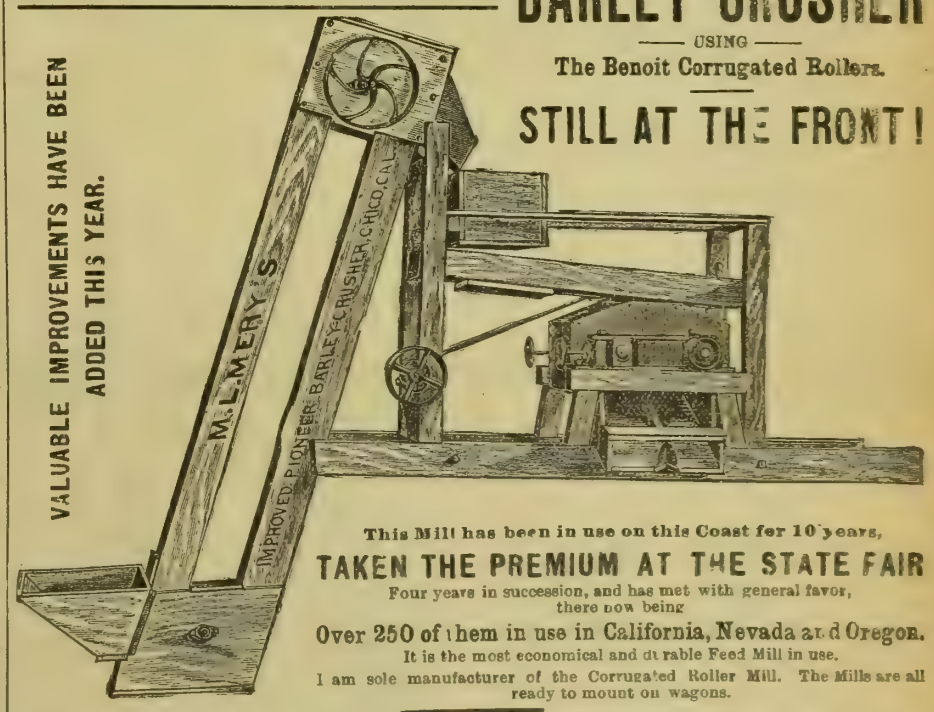
MERY'S IMPROVED PIONEER BARLEY CRUSHER

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The Benoit Corrugated Rollers.

STILL AT THE FRONT!

VALUABLE IMPROVEMENTS HAVE BEEN ADDED THIS YEAR.



This Mill has been in use on this Coast for 10 years,

TAKEN THE PREMIUM AT THE STATE FAIR

Four years in succession, and has met with general favor, there now being

Over 250 of them in use in California, Nevada and Oregon.

It is the most economical and durable Feed Mill in use.

I am sole manufacturer of the Corrugated Roller Mill. The Mills are all ready to mount on wagons.

GRAINLAND, BUTTE CO., CAL., June 9, 1887.

MR. M. L. MERY—Dear Sir: We have used one No. 2 Roller Barley Crusher now for eight years and have used it steady during that time; have crushed 45 tons a day and the Crusher is as good to-day as when it came out of your shop. I am satisfied that it is the best mill made. You may reconstruct this testimonial to the best advantage for you and sign our names, for you cannot overrate the merits of your mill. F. E. REAM, JNO. P. SUTTON.

DURHAM, May 21 1887.

MR. M. L. MERY—Dear Sir: In reply to yours of the 19th, would say that I crushed from two to two and a half tons per hour, but could crush three and a half tons if my elevators were large enough to carry the barley from the machine. The No. 1 machine I used at Gridley was run on a sack a minute, and if we got behind we could run through five tons an hour and do good work. The machine I use here is a No. 2. Yours. WM. M. TAYLOR.

I thank the public for their kind patronage received thus far, and hope for a continuance of the same.

M. L. MERY, Chico Iron Works, Chico, Cal.

BRIGGS CARRIAGE CO.,

We are now positively closing out regardless of cost our entire stock of First Class



Extension Top Carriages, Surreys, Phætons and Buggies,

TO CLOSE UP BUSINESS.

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WHEN YOU BUY,

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THE BEST!

— THE —

H.H.H.

Horse Liniment

Is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (10½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours, FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

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H. H. MOORE & SONS,

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BY ITS INTELLIGENT USE hotels, restaurants, saloons, stores and offices may be kept free from all troublesome insects. It is now regarded as a necessity in most of the principal hotels in the United States, and wherever it has been introduced it has given complete satisfaction. Owing to an increased production of Pyrethrum flowers, from which this valuable article is made, and their improved facilities for reducing them to powder, the manufacturers have this season made a material reduction in their prices.

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Paper Manufacturers and Dealers.

FRUIT PAPER!

Lining Paper of every description for Dried Fruit Boxes.

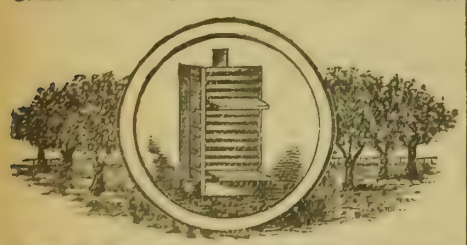
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Best and Strongest Explosives in the World.

JUDSON POWDER.

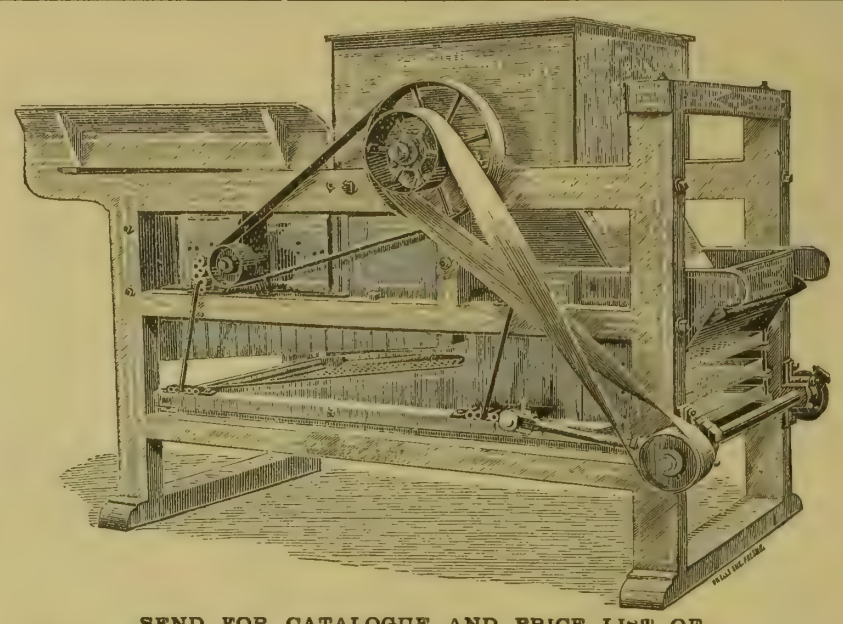
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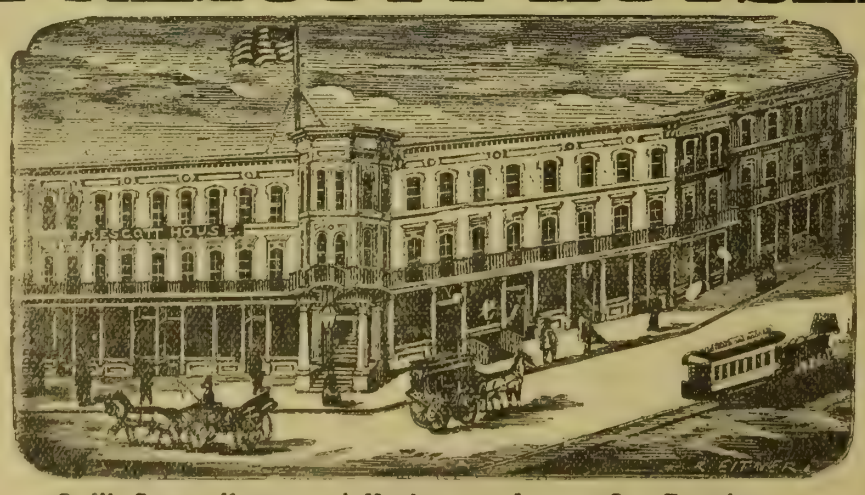
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WOOL, GRAIN, FLOUR

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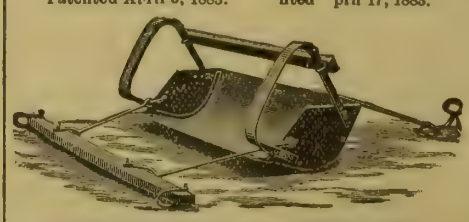
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And Dealers in Fruit, Produce, Poultry, Game, Eggs Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223 225 and 227 Washington St., San Francisco.

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Patented April 3, 1883. nted pril 17, 1883.



Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, $40; Steel two-horse, $31. Address all orders to G. LISSENDEN, Stockton, California.

S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, July 27, 1892.

For the week under review cereals have had good support, notwithstanding strong bear raids on Call and reported fictitious sales at prices lower than were paid for actual delivery. The large list of deep sea vessels, engaged and disengaged, in port, with a liberal supply on the way to California, Oregon and Washington ports, are greatly in favor of the wheat growers. The acreage seeded to wheat in this State was not as large as had been estimated, but the yield is larger than it was in 1891. Foreign advices, as a rule, are in favor of a bull market, as are advices from the great grain-growing States east of the Rocky mountains. Barley has met with a free demand. The buying has been chiefly of the more choice grades for home and export. The acreage seeded to barley was about ten per cent more than was that in 1891, while the yield to the acre is also larger; but a short crop East and only fair crops abroad give a reasonable hope that the surplus will be marketed at fairly remunerative prices. Oats shaded off under freer receipts and stronger selling. The crop is larger than was that in 1891. The acreage planted to corn was considerably less than was that in 1891, while the yield to the acre promises to be hardly an average Eastern mail advices state that estimates of the corn crop in the United States have been reduced. Many well informed authorities place the aggregate yield at from 1,400,000,000 to 1,500,000,000 bushels. If these estimates should prove to be correct, then the outturn this year will be about 750,000,000 bushels below that in 1891. Rye has had good support in both an export and home demand. Ground feed has moved off quite freely at steady prices. Hay began to strengthen under lighter receipts, but toward the close receipts are again large, which created a more conservative feeling in buyers. As indicated in last week's issue, the more choice grades of butter and cheese are doing considerably better with an advance established. Eggs are cleaning up and as the supply of poor to fair lessens the better kinds stiffen. Garden stuff, except corn and river tomatoes which sold lower, has moved off quite freely at around prices current the preceding week. Onions have moved off slowly at unchanged quotations. Potatoes had poor support from buyers, and with free receipts concessions were in order. Poultry has ruled quite steady. Colored and Lima beans scored another advance under moderate supplies, a good demand and a light crop. Honey has held firm. Hops have strengthened with buyers willing to contract at an advance on bids lately current. This is due to unfavorable crop advices received from New York, England and Germany. Wool has held to unchanged figures. Live stock has not changed essentially, although a weaker tone is reported in bullocks. Fruit has fluctuated. Berries sold lower on Friday and Saturday, strengthened on Monday, and yesterday blackberries sold lower, while the other varieties held steady. Peaches held up well until Monday, when at the auction sale lower prices were established, with another lower range at the auction sale yesterday. Bartlett pears suffered in a like manner. Apricots, none of which have been sold at auction, shaded off slightly on Friday and Saturday, but were firm on Monday, and yesterday they sold higher. Canners were the leading buyers. Apples have been steady, as have plums, nectarines and prunes. Only peaches and pears have been sold at auction, both of which have sold down. There is a very strong buying competition between canners and shippers for peaches, apricots and pears. Canners are quite anxious for the two former. They are also taking plums and pears more freely than for over two years. Confirmed advices of short crops at the East, and an active demand at higher prices for the canned product, are the stimulus. Dried fruit is doing better with higher prices bid for all kinds. Even apples show signs of advancing. Our Eastern advices report strong and somewhat excited markets at improving prices, yet the same advices report that the trade is not taking hold much as yet, being skeptical. This indicates that the movement is largely, if not altogether, speculative. Raisins are creeping up. Buyers are taking everything in sight and freely contracting for future delivery. New York advices report the market higher for 1891 stock, with the tendency still upward. Some dealers claim that if the cholera, now reported in Russia, should spread to Italy, Spain and France, California prunes, raisins, etc., will be the gainer, for importation from the above nations will stop. Not to be outdone, nuts are stronger. At New York, Tarragona and Ivica, almonds have moved up considerably, while Brazil nuts gained several points. The advance is due to short crops abroad. The advance in almonds and Brazil nuts has strengthened the other varieties.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	July.	Aug.	Sept.	Oct.	Nov.
Thursday	6s08½d	6s08½d	6s08⅝d	6s09 d	6s09 d
Friday	6s08½d	6s08½d	6s08⅝ d	6s08½d	6s08½d
Saturday	5s08 d	6s08½d	6s08⅝ d	6s08½d	6s08½d
Monday	6s07 d	6s07½d	6s07½d	6s07½d	6s07½d
Tuesday	6s07½d	6s08 d	6s08½d	6s08½d	6s08½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	33s9d	34s9d	33s9d	Warm.	Favorable.
Friday	33s d	34s9d	33s9d	Quieter.	
Saturday	31s d	34s9d	33s9d	Downward.	Fine.
Monday	34s d	31s6d	33s9d	Slow.	
Tuesday	31s6d	34s9d	33s9d	Steady.	

To-day's cablegram is as follows:

LIVERPOOL, July 27.—Wheat rather firmer. California spot lots, 7s; off coast 34s 6d; just shipped, 34s 9d; nearly due, 34s 3d; cargoes off coast, firm; on passage, firmer and held higher; Mark Lane wheat, steady.

New York.

The following shows the closing prices of wheat for the past week:

Day.	July	Aug.	Sept.	Oct.	Dec.
Thursday	....	143	143½	....	149⅝
Friday	....	141⅞	142⅝	....	148⅝
Saturday	....	141¼	141⅞	....	148
Monday	....	141	141⅝	....	148⅛
Tuesday	....	141	141⅛	....	148

The following are to-days' telegram:

NEW YORK, July 27.—Wheat, 83⅞c for August, 84¼c for September and 88⅛c for December.

CHICAGO, July 27.—Wheat, 77¾c for September and 80⅝c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, high st	138½	140	140⅛	....	144
" lowest	137⅝	1 93	140	....	143½
Friday, highest	137⅞	....	....	....	143⅜
" lowest	137⅝	....	....	....	143
Saturday, highest	137¼	....	....	....	142½
" lowest	137	....	....	....	142¼
Monday, highest	137	....	....	....	142¼
" lowest	136⅝	....	....	....	142⅛
Tuesday, highest	137⅜	....	140½	....	143½
" lowest	137⅛	....	140⅜	....	143

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal—Seller 1892, 300 tons, $1 37⅜; 100, $1.37½ ℔ ctl. Regular Session—No sales. Afternoon — Wheat — Buyer December, 300 tons, $1.42⅞ ℔ ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	91	....	....	....	96⅛
" lowest	90⅞	....	....	....	96⅛
Friday, highest	91	....	....	92½	....
" lowest	90⅜	....	....	93	....
Saturday, highest	91	....		....	....
" lowest	90¾	....	92½	....	....
Monday, highest	90⅞	....	92½	....	96¼
" lowest	90⅜	....	....	....	96
Tuesday, highest	91½	....	....	94	....
" lowest	91¼	....	....	93⅜	....

The following are to-day's recorded sales on Call:

Barley—Seller 1892, new, 1100 tons, 91¾c; 300, 91⅞c. December—200 tons, 97½c. No. 1 Brewing, July-August, 100 tons, 99¾c ℔ ctl. Regular Session—Seller 1892, new, 100 tons, 91⅞c; 400, 91¾c ℔ ctl.

Markets by Telegraph.

Eastern Canned Fruit Markets.

NEW YORK, July 24.—The market is active and wholesomely excited, as buyers all comprehend the crop situation. The sales for the week reached 50,000 cases, if not more. The B. F. Packard's large delivery this week was more welcome than depressing. Baltimore is forced to retain her identity in the each trade, and is for coast packed through New York brokers. Operations here are at the following list: New standard Crawford peaches, f. o, b., $1 80; Lemon Cling, $1.90; apricots, $1 45; plums, $1.30; pears, $1.75; white cherries, $2.91. Spot or future are quoted on a similar basis.

Eastern Dried Fruit Markets

NEW YORK, July 24.—There is some inquiry for unpeeled peaches, f. o. b., at 11½c; also for Royal apricots at 13c; Moorparks, 14c. New York is buying raisins outside for use at 4¼ to 6c per bag.

Eastern Wool Markets.

NEW YORK, July 22.—There is good business doing in wool. The mills are busy and large amounts are going into consumption. The markets are well stocked and daily arrivals from the West are heavy. The receipts from Montana are steadily increasing. These wools, and, in fact, nearly all western wools are showing up much better than was expected. Prices are steady and, while the tendency is upward, no change in quotations can be made. Manufacturers are giving their attention almost exclusively to domestic wools, comparatively light trade being reported in foreign grades. Fleeces show considerable activity, as, in fact, all wools from Ohio and Michigan. Heavy rains in Michigan at a time when shearing was going on injured to some extent a large part of these wools. Large sales of Texas wools continue to be reported. Territories are being looked over very carefully and large amounts have been taken by manufacturers. Pulled wools are rather quiet. It is said that 21,000 bales were taken at the London sales for this country, This was much larger than the dealers expected.

NEW YORK, July 24.—Another week of heavy trading is reported. At Boston the sales ran largely upon clothing sorts. Texas wools are said to be nearly all in manufacturers hands. Some desirable lines are being lofted with a view to ultimate better prices than those so long current. Sales at New York, 460,000 lbs domestic and 673,000 lbs of foreign. Sales at Boston, 4,918,100 lbs of domestic and 667,000 foreign. Sales of unwashed were largely Utah and Texas. Philadelphia markets were less well attended, but sellers are hopeful of early active trade, as few mills are idle and prices suit the demand.

English Hop Crop Notes.

W. H. and H. Le May, in their London circular, July 11, say: The market continues in a very quiet state, and prices are decidedly in buyers' favor, holders being anxious to clear out, although stocks never were smaller and the crop prospect is not all that could be wished, as there is certainly an increase of vermin in most grounds, and it is possible that the groth may turn out a dirty one, similar to that of 1888, when two-thirds of the hops were black at the core. American advices confirm the reports that there is a good deal of vermin in Washington and Oregon, but Californian and New York are going on very favorably. The American markets are very weak. Continental markets are also in a very depressed state, the demand being very small, crop reports from most of their districts being favorable.

Foreign Markets by Telegraph.

LONDON, July 25. — The Mark Lane *Express* says: English wheats are firmer, averaging 30s; foreign advanced 1s. Markets have stiffened. Flour is in demand, 3d higher. There have been increased dealings in corn, American selling at 21s 6d: Barley, 8d higher; oats, beans and peas firm. In to-day's markets English wheats were readily taken 6 1 higher; foreign, 6d dearer for Indian; others unchanged. Flour, corn, oats, beans and barley 6d better.

Miscellaneous.

NEW YORK, July 24.—Honey—The Coast offer of 6¾c for water white and 6½c for light amber are above buyers' views. Lima beans have advanced daily, closing firm at $2.10 per bushel spot. There is not enough stock in sight to fill new orders. Hops—State have advanced through the efforts of a few spot and country holders, and now range from 22@26c, with strictly choice held above 26c. Brewers' purchases are moderate. Pacifics range strong at 22@25c.

NEW YORK, July 26.—Hops are strong with a firm undertone. Pacifics, choice '91s, 24½@25c. European advices regarding crops are rather unfavorable, reporting increased vermin in some parts of England. Beans—Sales of dried California Lima Beans are reported at $2.10 ℔ bushel. The spot market is quicker.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending July 26, '92, were as follows:

Flour, qr. sks	85,109	Bran, sks	12,959
Wheat, ctls	82,161	Buckwheat "	....
Barley, "	54,644	Middlings "	3,512
Rye, "	235	Chicory, bbls	101
Oats, "	8,202	Hops, "	....
Corn, "	1,312	Wool, "	530
*Butter, "	633	Hay, ton	3,047
do bxs	709	Straw, "	36
do bbls	4	Wine, gals	175,600
do kgs	159	Brandy, "	4,440
do tubs	3	Raisins, bxs	....
do ½ bxs	182	Honey, cs	152
†Cheese, ctls	615	Peanuts, sks	....
do bxs	123	Walnuts "	....
Eggs, doz	28,500	Almonds "	....
do " Eastern	28 000	Mustard "	....
Beans, sks	4,712	Flax "	838
Potatoes, sks	22,983	Popcorn "	143
Onions, "	4,019	Broom corn, bbls	....

*Overl'd, 243 ctls. †Overland, —ctls.

From reliable advices up to July 26, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	261,368	326,128	*179,225	63,754
San Diego	19,457	25,000	4,307	.....
San Pedro	6,602	2,525	....	8,474
Oregon	58,212	33,212	26,285	
Puget Sound	25,847	30,337	.....	
Totals	371,486	417,272	209,817	77,228

*Engaged for wheat, 1892, 50,785; 1891, 59,136

Exports by Sea from San Francisco from July 1 to July 19.

	1892-93	1891-92
Wheat, ctls	294,750	587,940
Flour, bbls	33,666	18,603
Barley, ctls	57,248	83,895

Acreage Seeded to Wheat and Barley.

We are uder obligations to Hon. Chas. M. Coglan, Sec'y State Board of Equalization, for returns of county assessors of the acreage seeded to wheat and barley in this State in 1892, which we give in comparison with the three preceeding years:

WHEAT.

Counties.	1889 Acres.	1890. Acres.	1891. Acres.	1892 Acres
Alameda	21,265	16,429	30,685	35 785
Alpine	450	400	400	350
Amador	4,560	3,575	3,800	*4,000
Butte	92,208	73,767	91,117	*96,000
Calaveras	8,500	6,500	6,500	5,400
Colusa	403 008	386 477	203,128	*210,000
Contra Costa	77,915	50,250	44 502	43,365
Del Norte	60	36	.....	19
El Dorado	2 597	973	4,134	4,700
Fresno	169,512	196 904	295,150	324,000
Glenn	.....	.....	150,425	985,000
Humboldt	20,564	1,526	2,517	2 010
Inyo	399	2,316	1,379	1,797
Kern	12,000	17,000	20,000	23,000
Lake	6,220	4,200	7,950	6 650
Los Angeles	50,760	75,150	63,242	48,765
Marin	343	.....	644	543
Mariposa	639	527	459	408
Merced	240 000	177,500	230,500	*230,000
Modoc	45,800	35,200	43,500	32,200
Monterey	120,000	135,000	145,000	13 ,000
Napa	8 653	7,462	8,385	*7,500
Placer	16,249	11 147	16,037	16,120
Sacramento	78,100	55,000	81,150	*80 000
San Benito	46,600	35,800	51,202	*50 000
San Bernardino	3,551	4 651	4,302	*4 500
San Diego	14,026	25,145	26,038	24,476
San Joaquin	290,805	199,579	301,150	275,018
San Luis Obispo	98,385	95 617	101,650	125,750
San Mateo	1,825	1,500	2,000	2,000
Santa Barbara	71,427	54,720	55,725	38,240
Santa Clara	17,240	15,950	16 300	15,312
Santa Cruz	5,126	5,248	5 517	5,312
Shasta	14,051	2,154	13,620	16,400
Sierra	151	300	200	300
Siskiyou	9,554	13,125	16,215	*18,000
Solano	57,624	48,210	83,616	83,866
Sonoma	15,820	12,250	13,460	*12,000
Stanislaus	283,182	211,342	291,431	260,339
Sutter	123,920	43,412	66,414	78 589
Tehama	91,410	82,312	83,678	60,841
Trinity	10,008	100	1,200	1,500
Tulare	349,000	350,865	415,585	358,000
Tuolumne	4,000	3,500	3 600	3 900
Ventura	2,637	3,671	5,810	*6000
Yolo	155,000	103,500	149,843	198,043
Yuba	28,375	15,760	30,000	21 247
Totals	3,073,527	2,586,950	3,190,716	3,147,245

*Estimated—returns not in.

BARLEY.

Counties.	1889. Acres.	1890. Acres.	1891. Acres.	1192. Acres.
Alameda	20,967	20,415	63,432	67,932
Alpine	460	400	400	50
Amador	12,515	10,980	19,000	*12,000
Butte	24 619	19,721	25,800	*26,000
Calaveras	1,100	250	3,000	3,300
Colusa	48,683	23,0 2	26,925	*26,000
Contra Costa	42,270	30,540	28,400	27,375
Del Norte	300	164	320	43
El Dorado	2,002	560	1,506	1,640
Fresno	36,242	34,471	40,250	*40,000
Glenn	.....	.....	12,560	29,109
Humboldt	19,450	1,513	2,069	1,970
Inyo	571	455	397	444
Kern	25,000	3,000	4,500	*4,505
Lake	3,870	2,600	3,100	4 025
Los Angeles	35,290	34,170	38,124	36,203
Marin	417	.....	225	257
Mariposa	5,078	1,802	1,6 2	4,080
Merced	52,000	25,000	36,650	36,000
Modoc	33,000	32 100	31,600	30,300
Monterey	75,000	60,000	80,000	75,000
Napa	5,847	6,374	5,985	*6,000
Nevada	587	.....	.....	150
Orange	.....	19,760	50,000	30 000
Placer	9 670	1,718	10,368	11,662
Sacramento	38,460	26,725	34,215	*34,000
San Benito	16,915	13,680	15,140	*15,000
San Bernardino	103,587	93,450	91,260	*91,000
San Diego	30,447	27,350	41,086	48 719
San Joaquin	108,920	53,049	58,120	74,142
San Luis Obispo	48,360	51,429	75,360	89,000
San Mateo	3,720	3,000	3,500	.....
Santa Barbara	38 149	32,865	38 840	31,690
Santa Clara	20,370	18,560	17,820	16,195
Santa Cruz	3,110	3,226	3,292	2,117
Shasta	6,215	545	7,116	8 9 0
Sierra	1,850	1,600	4,000	3,000
Siskiyou	5,360	2,588	4 065	4,000
Solano	35,720	22,510	31 059	31,359
Sonoma	13,159	.....	8,352	*8 000
Stanislaus	33,149	28 150	33,163	35,163
Sutter	21,840	4,899	14,174	19,887
Tehama	27,840	21,760	16,659	15,594
Trinity	200	200	200	160
Tulare	63,425	65,346	71,250	75,000
Tuolumne	2,000	1,800	1,500	2,000
Ventura	58,738	33,625	45,150	*45,000
Yolo	20,000	12,700	13,550	17,890
Yuba	11,060	4,850	8,500	8,414
Totals	1,167,627	852,902	1,118,867	1,257 710

*Estimated—returns not in.

Cereals.

The Minneapolis *Market Record* says that the wheat crop in southern Minnesota and South Dakota is from 10 days to 20 days behind last year. In the north the crop presents a much more uneven appearance and in North Dakota a good deal of wheat sown on unplowed ground is in very poor condition. Considerable of the acreage in the north may bring out a fair yield, while on the other hand South Dakota has promise of an excellent yield, providing there is no frost and the weather conditions are good. Prime says that all things considered it was a fairly good week just ended, although higher temperatures would have been more favorable for corn. A good part of the winter wheat crop is in shock, but threshing has been delayed by rain. So far the yield is very irregular, both as to yield and quality. Reserves in farmers' hands are very large and there is nothing to prevent the early marketing of the new crop. Satisfactory progress has been made in spring wheat, and the greatest danger now is in early frost. The unevenness of corn still continues and will follow the crops to the end. Oats are beginning to turn and in about two weeks will be ready to cut. The crop of wheat in Australia and New Zealand this year is reported at 34,034 000 bushels, against 33 890 000 bushels last year. This will give approximately the same export surplus as was obtained from the crop last year.

Mark Lane Express, July 4, reports as follows: The rainfall of the last two days of June added considerably to the total for the month, and in some districts sufficed to bring it up to an average. As a rule, however, the June rainfall was deficient over the chief wheat-growing areas, and the present expectations of farmers point to a crop of moderate bulk, short in straw, but of excellent milling quality, and likely to be available for early use after harvesting. The generally favorable promise of the potato fields already supplies a reason for imagining that the consumption of breadstuffs in the approaching cereal year may be somewhat less than usual. In Germany, as well as in the United Kingdom, a cheap and abundant potato harvest has a more direct effect on bread sales than has any other agricultural event. The mean price of English wheat for June was only 30s 1d ℔ qr, as compared with 39s 9d last year, 32s 8d in 1890, 28s 6d in 1889, 31s 8d in 1888, 35s 1d in 1887, 31s 7d in 1886, 33s 6d in 1885, 37s 2d in 1884, and 42s 10d in 1883. The fall on the 10 years, therefore, amounts to 12s 9d ℔ qr, and represents the entire difference between prosperous wheat-growing and crop cultivation at a loss even on good land.

Mail advices just to hand report as follows from France: La Vendee is in full harvest and it is reported that the wheat will scarcely yield sufficient for seed on the light lands, while on the average soils half a crop is expected, but an average on the well-farmed lands. The harvest may be reckoned at three-fourths an ordinary year; the quality appears likely to give satisfaction. With regard to oats, there will be neither quantity nor quality, and it is very probable that several of the central departments will not afford much more satisfaction. The French imports for 11 months of the French cereal year amount to 13 470 000 qrs, the biggest record since the war year, with its partial suspension of home culture of the soil. Stocks have naturally increased in Paris, but not to anything like the extent which might have been looked for. At the present moment 588,593 cwt of wheat and 803,000 cwt of flour are in the Paris granaries, stocks considerably exceeded on each point by what is held in London. It is somewhat curious to note that Paris holds an exceedingly large stock of oats—665,580 cwt, against 220,376 cwt this time last year. There seems little expectation of any change of importance on French wheat prices after harvest, the spot price for old wheat being 39s to 39s 6d ℔ qr, and the speculative price for new wheat 39s to 41s ℔ qr. Such little difference as there is, is in favor of the future.

The wheat market the past week has ruled quite steady, with a strong undertone owing to favorable influences at home and abroad. Buyers have been compelled to pay an advance on current quotations so as to meet urgent requirements. All advices confirm previously received information that farmers are not offering much, prefering to store, believing that present bids by buyers offer inducements to such a course.

Barley has held to strong prices for the more choice grades under free buying for home and export. The consumption of feed grades in this State continues to enlarge.

Oats shaded off under free receipts, but at the close the market is steadier. Holders do not appear disposed to let go freely when buyers bid down.

Corn has advanced, with a strong tone at the close. The improvement is due to a good demand for export, a lessened acreage in this State and a light crop at the East.

Rye continues to strengthen. The support to the market is largely due to a quiet but strong demand, supposed to be for export.

Trading in futures on call has been quite active, with more genuine business done than for weeks past. The fluctuations, while small, are attracting attention.

London cables report as follows: Imports into the United Kingdom for the week ending July 26th: Flour, bbls., 112,000; Wheat, qrs., 262,000. Amount of Wheat and Flour on passage July 26th: To United Kingdom, 1,992,000 qrs.; to Continent, 790,000 qrs. Farmers' delivery of Wheat for week ending July 23d, 40,970 qrs.; average price, 29s 3d.

Feedstuff.

Bran and middlings, under freer receipts, have ruled in buyer's favor, but other ground feed has held to strong prices.

The market for hay continues oversupplied with poor qualities, but there is a scarcity of choice to extra choice. Hay baled with wire sells at from one to two dollars a ton less than do the same grades baled with rope.

Dairy Produce.

Butter has been coming in more sparingly, and as the consumptive demand is enlarging, the more choice grades have fetched an advance, with the closing strong. Eastern advices are still favorable to dairy interests.

Cheese has strengthened under a stronger holding and a good demand. Eastern cheese continues to come to hand quite freely.

In eggs, the market continues to show a wide range, but as the stock of poor to fair is cleaning up, the range will soon be not so wide. Strictly fresh-laid, sent in from near-by points, are gaining in strength, with at times an advance secured on outside quotations.

Vegetables.

Garden stuff has ruled fairly steady for all kinds except green corn and tomatoes, which are lower under heavy receipts and offish buying.

Onions have held around the quotations ruling last week.

Potatoes have come in freely, which sent prices down; but to-day the market appears to be steadier, owing to a shipping demand.

Fruit.

The market has ruled weak for blackberries, but fairly steady for raspberries and strawberries. The receipts of berries are not large, but with heavy supplies of other fruit, they are slightly in excess of the demand.

Peaches and pears have sold lower. Apricots, after shading off, are now selling higher under an active demand. Choice apples are very scarce, but poor are in overstock. Plums are in fair receipt. The market holds up well. Prunes are unchanged. Interior advices continue to report an excited market,

with buyers anxious for prunes, choice apricots and peaches.

It is said that better prices are bid for grapes, but we are not able at this writing to get particulars.

There was a good demand for fruit to-day for shipping, and in consequence good keeping fruit was in demand.

The dried fruit market is excited and higher. Buyers are cleaning up all the 1891 stock that can be found. Offers were made by New York buyers for 1892 prunes at 9½ cts. f. o. b. here for the five sizes, and for peaches bleached 12½ cts. was bid. Apricots are a little easier, yet the tone is far from unsatisfactory. It is only a natural easing from so rapid an advance. A large operator is in the market to-day securing all the 1891 raisins that can be had. He offered an advance on prices ruling a week ago. For new crop raisins $1.45 is bid for good and $1.65 for choice, with better figures for grades still higher. The impression prevails that dried apples and all other kinds of dried fruits will soon be advancing in sympathy with the up-move in prunes, peaches and apricots.

At private sale on yesterday (Wednesday), Crawfords sold up to 67½ cts. per basket. This was the highest price realized, except for Sawyer's Seedlings.

Canneas are paying the following prices: Apricotss, 1½@2 cts. ℔ lb; plums, 1½@1¾ cts.; pears, 1½@1¾ cts.; peaches, 1¾@2 cts.; nectarines, 1¾@1¾ cts. For something extra an advance was paid on the outside quotations.

Live Stock.

The market is slightly easier for bullocks and barely steady for mutton sheep. Dairy-fed calves are firm. The consumption is light owing to more liberal supplies of fruit.

Miscellaneous.

Poultry has held to steady figures throughout the week. Poor, scrubby stock sells at lower figures than quoted, while extra stock sells at an advance on outside quotations.

Hops are more inquired after. The first bale of the 1892 crop went forward the past week.

Wool is fairly steady. Assortments are somewhat broken. The East reports an active market.

For hog product there is a good demand at unchanged prices.

Honey is coming in quite freely, but holders are firm.

Grain hogs are lower and very slow.

Nuts are quiet, but the tone is strong in sympathy with an advance at the East in almonds and Brazil owing to short crops abroad.

Colored beans and Limas are strong and higher but whites are weak.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowe quotations.

WEDNESDAY, July 27, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 75	@	3 00
Butter	2 50	@	2 85
Pea	2 25	@	2 50
Red	2 75	@	3 00
Pink	2 50	@	2 60
Small White	2 20	@	2 45
Large White	2 10	@	2 35
Lima	2 75	@	3 05
Fld Peas, blk eye	3 00	@	3 30
Do green	1 50	@	2 75
Do Nlies	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	18	@	—
Do Giltedged	—	@	24
Do Creamery rolls	—	@	24
Do do Giltedge	—	@	25
Eastern	—	@	—
CHEESE			
Cal, choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Do skim	5	@	6½
Young America	—	@	11
EGGS.			
Cal. "as is," doz.	16	@	18
Do candled	19	@	22
Do cnoice	23	@	24
Do fresh laid	25	@	26
Do do selected	—	@	27½
Eastern "as is"	14	@	16
Do candled	17	@	18
Do selected	19	@	22

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED.			
Bran, ton	17 00	@	18 50
Feedmeal	27 00	@	30 00
Gr'd Barley	20 50	@	22 00
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ℔ cwt.	7 50		
HAY.			
Wheat, per ton	8 00	@	—
Do choice	—	@	12 50
Wheat and Oats	8 50	@	11 00
Wild Oats	8 00	@	11 00
Cultivated do	7 00	@	10 00
Barley	6 00	@	9 00
Alfalfa	7 00	@	9 00
Straw, bale	40	@	50
GRAIN, ETC.			
Barley, feed, ctl	88½	@	91½
Do Choice	92½	@	—
Do Brewing	93½	@	—
Do do Choice	1 01½	@	—
Do do Giltedge	1 05	@	—
Do Chevalier	1 05	@	1 25
Do do Giltedge	1 30	@	1 35
Buckwheat	—	@	—
Corn, White	1 35	@	—
Yellow, large	1 30	@	—
Do small	1 35	@	—
Oats, milling	1 50	@	—
Feed, Choice	1 45	@	—
Do good	1 37½	@	—
Do fair	1 32½	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	1 32½	@	—
Gray	1 32½	@	
Rye	1 20	@	—
Wheat, milling.			
Gilt edged	1 48½	@	—
Do Choice	1 46½	@	—
Do fair to good	1 42½	@	—
Shipping, cho'ce	1 40	@	—
Do good	1 37½	@	—

Do fair	1 35	@	—
Common	1 30	@	—
Sonora	1 33½	@	1 45
HOPS.			
1891 Choice to Ex.	20	@	—
Fair to Good	18	@	—
1892 Bid	15	@	17½
FLOUR.			
Extra, CityMills	4 65	@	4 75
DoCountryMills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	6	@	—
Do Choice	8	@	—
Do paper shell	9	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil,	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	50
POTATOES.			
Early Rose, ctl.	40	@	60
Do do in boxes	55	@	90
Peerless	50	@	65
Do in boxes	55	@	85
Garnet Chilies	60	@	85
Burbank Seedlings	50	@	65
Do do in boxes	65	@	90
POULTRY.			
Hens, doz	6 50	@	8 00
Roosters, old	6 00	@	7 00
Do young	5 00	@	7 50
Broilers, small	2 00	@	3 50
Do large	3 50	@	4 00
Fryers	4 50	@	5 50
Ducks	4 00	@	4 75
do, large	5 00	@	5 50
do, extra large	6 00	@	—
Geese, pair	1 25	@	1 75
Goslings	—	@	—
Turkeys, Gobl'r.	18	@	20
Turkeys, Hens	16	@	18
Manhattan Egg Food ℔ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	10½	@	—
Medium	11½	@	—
Light	13	@	—
Lard	9½	@	12
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	11½	@	—
do Eastern	14½	@	—
SEEDS.			
Alfalfa	—	@	—
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL. SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll	16	@	21
Oregon Eastern	12½	@	19
do valley	18	@	23
So'n Coast, def	10	@	12
Nevada (State)	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	8	@	11
do do 1-lb frame	10	@	13
White extract'd	6½	@	7
Amber do	5½	@	6
Beeswax, lb	25	@	28

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	4½	@	—
Second quality	4	@	—
Third quality	3½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	4	@	—
Do light	5	@	—
Dairy	6	@	—
MUTTON.			
Wethers		@	—
Ewes	7½	@	—
Do Spring	9	@	—
HOGS.			
Light, ℔ lb, cents	5½	@	—
Medium	5½	@	—
Heavy	5	@	—
Soft	4½	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 and 4 yarns	9½	Pure Manila Hop, in balls, tarred	12
" 2 yarns, light	10	Do, Grape-Vine, in balls or coils	12½
Duplex, 3 yarns	9½	Do, Spring	16
Manila, mixed, 3 yarns, heavy	11	Duplex Hop, in balls, tar'd	10
Pure Manila, 3 and 4 yarns	12½	Do, Grape-Vine, in balls or coils	11
Do, 2 yarns, light	13		

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, July 27, 1892.

Limes, Mex	2 50	@	3 50
Do Cal	—	@	—
Lemons, box	1 50	@	4 00
Do Sicily	5 00	@	6 00
Oranges, Seedlings	1 25	@	2 25
Do Navels	2 50	@	4 50
Oranges frosted and poor sell at a decline of $1@$1 50 per box on the above quotations.			
Strawberries, per chest—			
Longworth	7 00	@	9 00
Sharpless	5 00	@	7 00
Raspberries, ch.	5 00	@	7 00
Peaches, box	—	@	—
Do Crawford	35	@	60
Do Hale's Early	30	@	50
Bl'kberries ℔ ch	3 50	@	5 00
Figs, blk box	1 50	@	2 50
Do White do	75	@	1 00
Apples, Bell Flower	65	@	1 00
Do Red Astrachan	75	@	1 25
Crabapples	75	@	1 00
Canteloupes, pr crate	2 50	@	3 50
Melons, pr 100	12 00	@	18 00
Grapes, pr bx —			
Do Sweetwater	60	@	1 00
Do Black	75	@	1 25
Prunes, Tragedy	50	@	1 00
Do German	65	@	75
Plums, Duane's Purple	50	@	65
Do Peach	65	@	85
Do Wash	50	@	65
Do Pedro	40	@	50
Pears	50	@	75
Do Bartlett	75	@	1 25
Apricots, pr box	40	@	65
do, per lb	1½	@	2
Beets, sk	—	@	75
Carrots, sk	35	@	—
Okra, dry, lb	15	@	—
Do green	6	@	8
Parsnips, ctl	—	@	1 00
Peppers, dry, lb	10	@	—
Do grn Chili, bx	40	@	50
Do do Bells	75	@	1 00
Turnips, ctl	50	@	—
Cabbage, 100 lbs	40	@	50
Garlic, lb	1½	@	3
Squash, Sum, bx	15	@	25
Tomatoes,	—	@	—
Do River lrg bx	1 00	@	1 50
Peas, green, sk	50	@	1 75
String Beans	2	@	4
Cucumbers, box	35	@	50
do Pickle	60	@	75
Mushrooms	30	@	50
Egg Plant, bx	75	@	1 25
Green Corn, sk	—	@	
Do swt Bay prdz	10	@	15
Do Berkely box	35	@	55

Grain and Wool Bags.

Calcutta, spot	7	@	7⅛
Wool Bags	36	@	38

Auction Sales of California Fruits.

At New York.

July 23.—Two carloads: Bartlett Pears, $2.05@2.85; Crawford Peaches, $1.10@1.40; Hale's Early Peaches, $1.15@1 30; Blood Plums, $3.30; Japan Plums, $2.85; Peach Plums, $2.70; P. D. Plums, $1.65@2.70; Washington Plums, $2.65@3 25; Tragedy Prunes, $3.60@3.70; German Prunes, $2.75@3.

July 25.—Five carloads: Bartlett pears, $2.10@2.80; Hale's Early Peaches, 80c; Crawford Peaches. 80c @ $1.30; Purple Duane Plums, $2 50; Washington Plums, $2.90; Bradshaw Plums, $2 50; Egg Plums, $3.05; Tragedy Prunes, $2.40@3.50; Nectarines, 85c@$1.50.

July 26.—Three carloads: Strawberry Cling Peaches, 65c@$1.10; Crawford Peaches, 75c@$1.40, Hale's Early Peaches, 50c@$1.05; St. John Peaches; 65c@$1.25; Foster Peaches, $1.05@1.35; Snowflake Peaches, 63c; Nectarines, 25@30c; Grapes, $1.45@1.50; Prunes, $2.25; Yellow Plums, $3 05; German Prunes, $2.75@4.25; P. D. Plums, $1.85@2.70; Japan Plums, $3 37; Bradshaw Plums. $3.95; Tragedy Prunes, $4; Bartlett Pears, $2.25@2.55.

July 26.—Three carloads: German Prunes, $2.35; Bartlett Pears, $1.80@2.10; Purple Duane Plums, $1.60; Early Crawford Peaches, 65@80c. Some fruit overripe and in bad order sold for less.

At Chicago.

July 23.—Two carloads: Bartlett Pears $2 10; Fontainebleau Grapes, half crates, $1.65@2.25; German Prunes, $2 60; Centennial Apricots, $1.60; Red Nectarines, $1.40: Foster Peaches, $1.05@1.20; Strawberry Peaches, $1.05@1.10; Early Crawford Peaches, $1@1 35; some Peaches overripe and in bad order sold for less.

July 25.—Five carloads: Bartlett Pears, $1.70@2 10; half boxes, 85c; Crawford Peaches, $1@1.15; Cling Peaches, $1.30; Strawberry Peaches, 75c; St. John Peaches, 90c; Peaches, 65c@$1.25; Grapes, $1.80; Apricots, $1.35; Nectarines, 55c@$1.70; Plums, $1.70@2.90; Hale's Early Peaches, 70c; German Prunes, $2.40; Egg Plums, $2.20; Peach Plums, $2.10; Bradshaw Plums, $1.70@2; P. D. Plums, $1.80@2.30; Washington Plums, $1.95 for crates; boxes, $1.35; Tragedy Prunes, $2.05@3.25.

July 25.—Two carloads: Bartlett Pears, $2.05 ℔ bx.; Red Nectarines, $1.50; Columbia Plums, $2.10; Peach Plums, $2.40; Early Crawford Peaches, 75c@$1.20; Foster Peaches, $1.10; Hale's Early Peaches, 65c@$1; Strawberry Peaches, 65@90c.

July 26.—Two carloads: Bartlett Pears, $1.80@2.05; Early Crawford Peaches, $1@1.10; Centennial, $1.25; Moorpark Apricots, $1.30; German Prunes, $1.65; Hungarian, $1.70@1.90; Washington Plums, $1.80; half crates Fontainebleau Grapes, $1.50. All the Plums were in poor condition.

July 26.—Seven carloads: Bartlett Pears, $1.65@2.15; Apples, $1.60@3.05; Early Crawford Peaches, 75c@$1.15; Nectarines, $1.05@1.10; half crates Fontainebleau Grapes, $1.50@2; Golden Drop Plums, $1.50; Apricots, overripe, $1.05@1 15; Bernard Peaches, $1.19; Tuscan Cling, $1.05; Foster, $1.05@1.10; St. John, 80c@$1.

At Boston.

July 21.—Two carloads: Japan Plums, $2@2.30; Peach Plums, $2.35@2.55; Purple Duane Plums, $1 25 @1.40; Tragedy Prunes. $4.60; Bartlett Pears, $2.90; Hale's Early Peaches, $1.05.

July 22.—Two carloads. Bartlett Pears, $2.25@2.40; Purple Duane Plums, 95c@$1.60; Peach Plums, $1 25@2.25; Royal Hative Plums, $1.15; Japan Plums, $1.50 @2; Hale's Early Peaches, 75c@$1.15; Early Crawford Peaches, 90c@$1.25.

July 23.—One carload Bartlett Pears to-day realized an average of $2.22 ℔ box.

July 25.—Three carloads: Bartlett Pears, $2.25 ℔ box; Tragedy Prunes, $4.10; Early Crawford Peaches, $1.25@1.35; Purple Duane Plums, $1.70.

July 26.—One carload: Bartlett Pears, $1.70@2.

At Minneapolis.

July 21.—Two carloads: Peaches, $1@1.70; Plums, $2.20@2.75; Nectarines, 75c@1.20; Grapes, $2.05@2.15; Tragedy Prunes, $2 75.

July 22.—One carload Bartlett Pears at $2.15@2.25 ℔ box.

July 25.—Two carloads: Bartlett Pears, $2.15@2.25; Peach Plums, $2.50; Purple Duane Plums, $2.50; Hale's Early Peaches, $1.20; Early Crawford Peaches, $1.25.

July 26.—One carload: Bartlett Pears, $1.85; Early Crawford Peaches, 85@90c; German Prunes, $1@2; Bradshaw Plums, $1.85; Washington Plums, $1 80@ 1.90; Peach Plums, $1.90; Japan Plums, $1.90; Purple Duane Plums, $1.90@2.

July 26.—Two carloads: Pears, $1.75; Crawford Peaches, 75c@$1; Hale's Early Peaches, 50@75c; Purple Duane Plums, $2; Peaches, 40@50c. Weather very hot.

NOTICE.

Regular AUCTION SALES of

Green Fruit, Vegetables & Produce of all kinds

Will Take Place **EVERY DAY at Jackson Street Wharf, and at the Store,**

408 & 410 DAVIS ST., SAN FRANCISCO.

P. STEINHAGEN.

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

SANTA ROSA.—Secretary Babcock, of Temescal Grange, who visited Santa Rosa several weeks ago, informs us that Sonoma County Pomona Grange concluded not to recommend the Supervisors of the county to make an appropriation in addition to the State's appropriation for the World's Fair. Four candidates took the first degree in Santa Rosa Grange, and two applications were received, including the youngest son of Judge S. T. Coulter.

EVERY Grange in California has paid its dues to the State Grange up to March 31st except Nos. 289, 147, 203, 242 and 15. We still hope for a good report from each of these Granges. Let us hear from all.

LAST year, owing to droughts fatal to crops the previous season in portions of Nebraska, quite a number of Granges had their dues remitted by the State Grange, showing a truly "paternal" as well as "fraternal" side to our Order.

W. P. CRANE, P. M. of Bennett Valley Grange, was recently married to Miss Edith Hughes.

FARMERS TO THE FRONT.

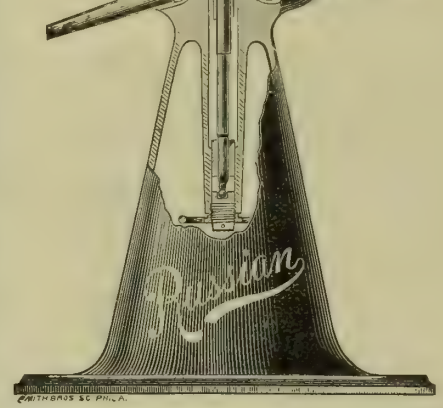
E. W. Davis, Master of the State Grange of California, was nominated for member of the U. S. House of Representatives from the First District of California at the Republican District meeting at Sacramento on July 26th, by a vote of 50 to 31. We wish Congress could be filled with as good men as Brother Davis and are glad to see that it is becoming more the fashion with political parties to nominate now and then an honest farmer for high and trustworthy positions. Who next?

STATE GRANGE ALTERNATES.

Every Grange should elect alternate representatives to the State Grange to act in the case of absence of the Master or the Master's wife or husband during any portion of the session. There being no fixed period of election, Granges can make their selection at any time previous to the coming session, Oct. 4th. The election of alternates should be promptly reported to the Secretary of the State Grange for placing on the record and roll call.

The amended Constitution of the National Grange provides as follows: State Grange: Article I, Sec. 1—Fifth Degree, Pomona (Faith).—Composed of Masters and Past Masters of Subordinate Granges, and their wives who are Matrons, *and such fourth-degree delegates as may be found necessary to secure to each subordinate Grange two representatives.* The fourth-degree members above provided for to be chosen in such manner as the respective State Granges may prescribe. Provided, that Past Masters and their wives, who are Matrons, shall be honorary members, eligible to office, but not entitled to vote.

Messrs. Brown, Craig & Co., a leading insurance firm on this Coast, is now sending out a valuable map complimentary for every Grange hall in this State. The maps will doubtless be carefully preserved and referred to by members during the present and future political campaigns.



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Russian CREAM Separator.

Adapted to Every Requirement of the Dairy.

THE IMPERIAL RUSSIAN,
Capacity, 2000 to 2500 Lbs. per hour.

THE STANDARD RUSSIAN,
Capacity, 1500 to 1800 Lbs. per hour.

THE DAIRY RUSSIAN,
Will Skim 700 to 800 Lbs. per hour.

THE ONLY DIRECT STEAM ACTION CREAM SEPARATORS IN THE WORLD.

Operated on an entirely different principle from any other steam separator on the American market.

Like all wonderful inventions, the very simplicity of this machine is what makes it so remarkable. This separator is driven by the direct action of the steam, on a turbine bucket rim, or wheel, attached to the bowl. A steam pipe from the boiler is attached to the separator, and an exhaust steam pipe conducts the exhaust steam away. No other fittings of any kind are needed, the simple turning on and off of the steam valve starts or stops the separator.

The first of these Russian Steam Separators were sold during the Spring of 1891, and during the balance of that season some hundreds of them were placed in different creameries and dairies throughout the United States.

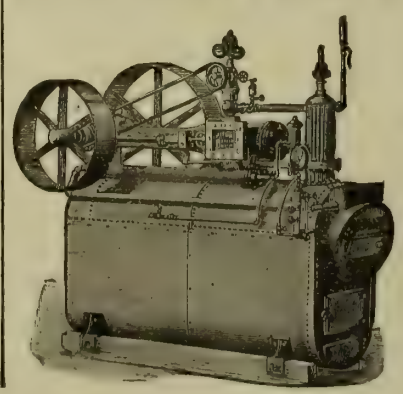
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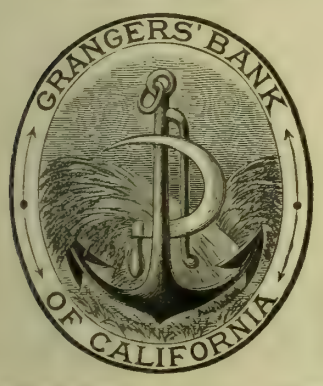
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C. S. HALEY, Secretary.

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Capital paid up and Reserve Fund	800,000
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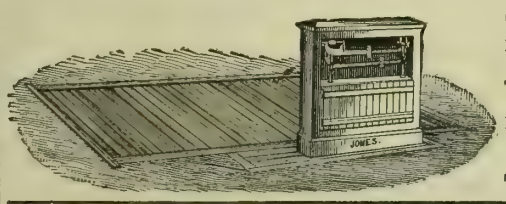
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The State has Appropriated Over $5000 for Premiums for Soil Productions.

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The State Board of Agriculture stands ready to assist the producer, and by gathering your exhibits and showing them at home at the State Fair, you can take advantage of the cash awards to assist you in the good work. All exhibits shown at the State Fair will be kept free of storage until their removal. BEGIN WITH HARVEST.

MERCHANTS AND PROPERTY-OWNERS in each county are interested as much as the farmer, and should lead in the ORGANIZATION OF COUNTY-EXHIBIT COMMITTEES.

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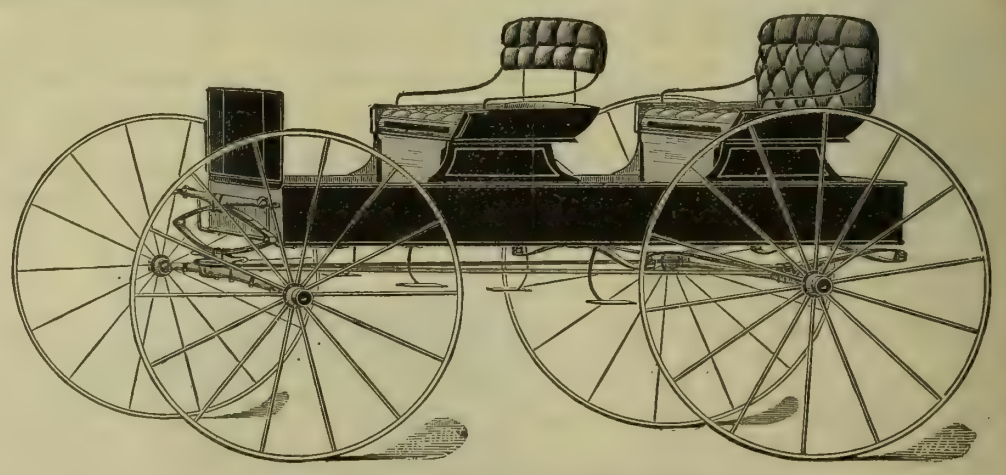
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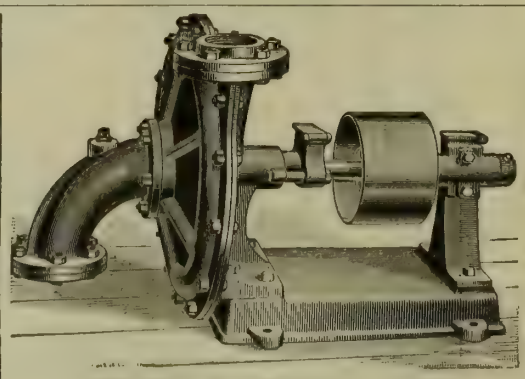
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PACIFIC RURAL PRESS

Vol. XLIV. No. 6. SAN FRANCISCO, SATURDAY, AUGUST 6, 1892.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Commercial Floriculture.

The production of flowers and flowering plants, together with the seeds and bulbs thereof, for distant shipment, cannot yet be counted a great industry of the State, and yet it is one of our most interesting lines of out-door activity and one most promising of substantial increase. It is true that anticipation has not always resulted in material realization. Several large undertakings projected for supplying florists' stock, and for the production of various perfumes, met with obstacles which seemed to their promoters insuperable, and yet smaller undertakings beginning in a small way, and proceeding upon the results of local experience, have attained respectable prosperity and growth. Those engaged in such undertakings have already attained a national reputation. Though we have one instance of a great nursery and florist business proceeding with the aid of large capital and business skill of demonstrated capacity in other lines of vigorous endeavor, most of our successes in commercial floriculture have been secured by those who brought little to the effort but individual knowledge and devotion. These enterprises have been built up gradually, catching every breath of public favor as a motive power for progress. Such undertakings are as safe in commercial floriculture as in every other line of productive effort, and California conditions of soil and climate are most faithful allies of those who put forth the effort.

We have said the aggregate floral interest of the State is as yet not large. The California State Floral Society appointed a committee to secure an approximate report of the "ornamental horticultural industries of California" for the Census of 1890. It was shown that 300 acres, with 500,000 square feet of glass area, were at that time devoted to commercial floriculture in California, while 1000 men and 150 women were given employment, and the total value of the establishments was estimated to be $200,000. These figures related to the year 1889, and so great has been the increase of late that we should calculate the present investment at twice these figures.

Flower culture for profit is so nearly allied to amateur floriculture that it naturally commands wide attention, and is fostered in current popular literature. One of the best recent magazine articles was by Ninetta Eames in the *Overland* last December. We take therefrom three views which appear upon this page. They are in part illustrative of the facts we are presenting. The broad field of callas will certainly interest our Eastern readers who know the plant only as imprisoned in a pot in greenhouse or window garden. Of late, the Eastern demand for calla bulbs has greatly increased, and commercial plantings like that in the engraving have been inadequate to the supply. It is stated that a very large shipment was made from San Diego, the florist collecting material from the great masses in private gardens. It is only natural that a country where the calla thrives in the open air and attains such size of bloom, and such strong root extension, should furnish the stock for growth in regions where the plant requires protection.



GLIMPSE AT A HEDGE OF PAMPAS PLUMES.



FIELD CULTURE OF CALLAS AS PRACTICED IN CALIFORNIA.



BEATING OUT SMILAX SEED IN A VENTURA SEED GARDEN.

Another plant which has attained considerable commercial importance in California is the pampas grass. The plume product has been too frequently mentioned in the RURAL to require further comment. Mrs. Eames remarks that "in 1887 the plumes were in demand at $50 and $60 per thousand, but the average wholesale price is $30. An acre of pampas grass has been known to yield 10,000 plumes annually. England and Germany send the largest orders for California pampas blooms." Of course, one calculating on planting for profit will understand that these figures are, in some respects, extremes.

Smilax still retains its popularity as a decorative material, and though other embodiments of airy grace are becoming popular, smilax will never stale. The product of smilax seed in this State is notably fine. An engraving shows the seed-gathering at Mrs. Theodosia Shepherd's seed garden in Ventura. Last year she produced 160 pounds of the seed. The smilax vines form high screens of fine varnished foliage. When the tiny, star-like flowers have given place to innumerable scarlet berries, the vines are cut close to the ground and piled into large squares of cloth to be thoroughly flailed by the Chinese help. Afterward, the bruised leaves and berries are put into a tub of water, the leaves and pulp floating to the top, when they are skimmed off, while the seeds settle to the bottom.

SAWYER'S SEEDLING PEACH.—Many fruit growers who read the detailed reports of the auction sales of Sacramento river fruit last week doubtless wondered what is the Sawyer seedling peach which sells at about three times the price of other peaches now in the market. We happened to meet Sol Runyon, the well-known Sacramento river fruit grower, who is now shipping this variety. He tells us that the Sawyer seedling originated on the Sacramento river, and is a very handsome white freestone, ripening just after Hale's Early, or about with the Early Crawford. He reports the tree as tender and subject to both curl leaf and mildew, which, however, are less troublesome since the use of salt, sulphur and lime as a winter wash for scales has been in vogue. Mr. Runyon does not recommend the Sawyer seedling as a peach to plant, although the small crop which he has of the variety brings high prices. So far as we know, the variety has not been propagated by our nurserymen.

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ALFRED HOLMAN.....General Manager

Saturday, August 6, 1892.

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Windmills—R. F. Wilson, Stockton.
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Money to Loan—Howe, Bandmann & Co.
Insurance—Brown, Craig & Co.

See Advertising Columns.

The Week.

If the World's Fair Commission desires to exhibit at Chicago next year the rarest thing in California, let them offer a reward for a man who sells his fruit early. This year's experience will lead all to wait till the fruit is almost ready to drop. If one figures up his recollections pro and con, there will probably be a good balance in favor of selling a crop about the time it is ready for market rather than selling futures on it. But like other great movements, produce selling goes in waves; after a dull year the producer is an early seller, and *vice versa*. Some time or other, when we get this all reduced to exact knowledge, we shall know just when to sell and what to sell for, and then probably there won't be but a a crop or two to sell before the millenium. But the present activity and the money pouring in from fruit and fruit products are delightful. They will encourage renewed investment, increased planting, and nurserymen and newspaper men will be in for their share of the general prosperity. It will be good all around.

Classifying Dried Fruit Shipments.—Shippers of dried fruit to Eastern points, says the San Jose *Mercury*, should bear in mind that a new order went into effect yesterday in regard to the way of filling out their shipping receipts. In their receipts they must show the different kinds of fruits and the weight of each, and whether they are in packages, sacks or boxes. Figs, dried grapes, prunes and raisins must be billed separately.

The Caminetti Bill.—The hydraulic mining bill, which passed the House, has been considered by the Senate Committee on Mines and Mining. Senator Felton desired to offer one or two amendments, and the Senate Committee thought the measure of too much importance to be hastily considered during the closing days of the session, so that the prospects of passing it this session are gone. The matter will be deferred until Congress again convenes.

Juicy Meat Coming.—During the last two weeks over 15,000 head of beef cattle have been brought from the mountains to fatten in the alfalfa fields in Salt River valley preparatory to shipment to California and Eastern markets. The cattle shipments this year will be unusually large, and the wool clip is also surpassing the calculations of the sheepmen.

Money from Fruit.—The statement of the Bank of Vacaville shows receipts for fruit of $231,000 since May 1st. Last year the receipts for fruit for the same period were only $171,000. A gain of $60,000 is more remarkable when the fact is considered that apricots and plums were light this year and the season late.

Midsummer in the Rose Garden.

Most rose growers must carry with them gratitude and anticipation if they are to derive much satisfaction from visiting their favorites at this season of the year. Let gratitude prompt remembrance of the winter and spring bloom which has passed and anticipation picture the fall bloom, which kind and generous treatment will make hardly less satisfactory. Without such thoughts in mind the dusty bushes, with their load of dried bloom and foliage shriveled with mildew or tarnished with orange rust, can evoke but a single thought, and that is commiseration. The owner commiserates the bushes and possibly condemns them; the passing rose grower commiserates or condemns the neglectful owner. Plainly it is not the fault of the the bushes that they have fallen into such straits; how can they be helped out of them?

It is perhaps impossible under ordinary conditions to obviate the midsummer droop in condition in the rose garden, but it may be unquestionably greatly mitigated. The distressful aspect of the neglected garden can certainly be prevented if one has a drop of water more than he needs to drink. If he has enough to wash himself in he could keep quite a large plantation of roses in fair condition, providing his interest and devotion prompted him to put the waste water where it would do the most good. If he has water enough to flow in a hoe-ditch or to run from a hose, he could reclaim his rose garden, if he had the time and the will, and the latter usually finds the former.

But though water applied so as to cleanse the dust from the foliage and thoroughly moisten the roots of the plant is the chief essential of midsummer decency and comfort to the rosebush, it is not the only desirable thing, nor can it by itself give full satisfaction. The whole year has its successive duties which the grower owes his rose, and condition at any time depends much upon foregoing treatment. He who prunes his bushes guillotine-fashion in the early winter, digs in a coat of manure and then thanks his stars that the roses are fixed once more, will get some good spring roses on some bushes and some magnificent blooms, perhaps, on others, but some will not bloom well and all will be in distress in midsummer. One heroic treatment a year, followed by neglect, will not enable the rose to do its best.

It seems to be generally known that removing the fading blooms will conserve the strength of the plant and encourage it to put forth more bloom. Acting upon this belief, some growers go among the bushes, taking off the old bloom as though they were picking cotton. Others take small scissors and clip off the bloom with as little stem as possible, as though every particle of wood was precious to the bush. Others do a little better and cut off the old bloom just above the first leaf on the stem below it. All these treatments are better than neglect. They all obviate the distressful appearance of a bush full of dried bloom, and all free the plant from the exhausting effort at seed formation. It is possible, however, to pick roses and to cut off old bloom in a way which will maintain good condition in the bush, lengthen its flowering period and reduce the extent of heroic pruning at any time. It consists simply in cutting with a long stem, the length dependent upon the habit of the variety, down to a good leaf bud, from which a strong new shoot will start. This applies both to gathering good flowers and to clearing the bush from dried bloom. When the buds are opening one at a time on a spray, they may have to be cut with short stems, but when the last bloom of the spray has come to its best, it should be severed clear down to a good bud below the branching flower stem. If this practice is observed, the bush will be freed from the mass of brush and the hosts of weakly shoots which can yield no satisfactory bloom. New shoots will be strong and the whole foliage of the bush large and vigorous.

A bush thus treated during its winter and spring flowering period comes to midsummer in far better condition than one which has been allowed to take its own course after its winter pruning. If, then, when the spring flowering is over, the bush be looked over for weakly shoots, or for overcrowded growth, and these removed, it will be trim and vigorous and ready to take on a good growth for fall blooming. With its roots well protected by a mulch, or by deeply pulverized surface soil and its top thinned to admit sunshine and air, it becomes far less subject to parasitic insect or fungus. Such a rosebush shows its master's care and repays it as only a lovely, fragrant rose can do it.

The Green Fruit Market.

For green fruit the market has held very strong with an established advance in apricots and peaches and a stronger tone in pears and plums suitable for canning. This has been done in the face of an attempt on the part of large buyers to get concessions from commission merchants on the plea that the same kind and quality of fruit sold for less money at auction. The writer was a witness to two such attempts on the part of a canner, but failing to get the desired reduction the latter paid the full asking price. The strength to the market is due to supplies being well in hand and heavy shipments eastward, where prices realized have been fairly remunerative. By reference to the reported sales by auction at the East it will be seen that on August 1st, 33 carloads of California fruit were sold, 18 of which were placed in Chicago. These are the largest sales ever before made in one day, and which go far to disprove the often repeated fallacy that the fruit industry in this State is being overdone. In the light of the past we think the future holds out for many years to come the promise for good returns on fruit. We have in the United States a population of about 70,000,000, and if they will consume even one pound of California fruit per capita per month, it will be seen how much can be provided for, as it will equal 840,000,000 pounds or 20,000 carloads a season. At two pounds per capita a month the consumption will exceed our production for a long time to come. Of course as the production enlarges lower prices will unquestionably rule, but then this will be largely met by cheaper freight rates and improved facilities for marketing the surplus. The railroads are fast solving the problem of cheaper freights and better cars in which to haul the fruit so there will be less loss in transit, for each year witnesses an improvement in these lines.

The Orange Industry.

The orange season for 1891–92 has ended. From the southern part of the State the shipments aggregated in round numbers 2800 carloads, against 4600 carloads during the season of 1890–91. From other parts of the State we have no data of the shipments, but they were in excess of the quantity shipped the preceding season. The quality of the fruit grown in Yuba and Butte counties was excellent, and, as usual, came in earlier than did oranges grown elsewhere. The oranges marketed from the southern part of the State were, with the exception of those sent from Redlands and Highland in San Bernardino county and two or more other favored localities, more or less frosted and consequently were very poor and unmarketable, as far as quality was concerned. The marketing of the trashy stuff had a demoralizing effect and caused even the more choice to feel its unfavorable influence. Had all the frosted oranges been destroyed, it would have been far better for the industry, not to say anything of much better prices for the merchantable fruit.

If the season of 1891–92 had been favorable to the growing crop in the southern part of the State, there is not the least doubt but the shipments would have been all of 5600 carloads, and that they would have been marketed at fairly remunerative prices. This opinion is grounded upon the favor with which the fruit had been previously received in the East. The growing crop promises to be above an average in yield, and, if not injured by frost, of good size and of superior quality.

Of the 2800 carloads of oranges shipped from the southern part of the State, Riverside contributed, or at least that place is credited with, 1406, equal to 402,030 boxes. This was only 40 boxes short of the quantity shipped during the season of 1890–91; which goes far to substantiate the statement that if the season had been favorable to the growing crop, the quantity for shipment would have been all of what we claim—5600 carloads. There was a large increase of trees which came into bearing, that largely offset the lessened quantity of fruit to the tree which was marketed.

At this writing it looks very much as if the 1892–93 crop of oranges will come in on a fairly hungry market, and if so, good prices will rule. This opinion is largely grounded on the fact that when deciduous fruit (green, dried and preserved) has ruled too high for general consumption, that citrus fruit finds better favor with the mass during the winter and early spring months, and, therefore, any increase in the crop will undoubtedly be cared for before the end of June 1893. This assertion is made with the full knowledge that the orange crop of Florida will, the coming season, be all of 4,000,000 boxes against 3,500,000 boxes in the season of 1891–92. That part of the very large crop of Florida oranges (there were 1,050,000 boxes more than in the season of 1890–91) the past season which was sent up north, was marketed at an average of $1.88 per box gross, or $1.11 per box, net to the grower at the shipping point in that State. Commenting on this price, Pres. Fairbank of the Florida Fruit Exchange, said in his annual address: "A very abundant fruit crop at the North, and consequently very low prices of apples, grapes, etc., reacted upon our orange crop, and prices ruled very much lower than the preceding year." This year the crop of apples and all other deciduous fruit in the northern, middle and central States was the lightest on record, and, therefore, there will be no cause for complaint about large supplies of apples, grapes, etc.

From an Independent Standpoint.

In regions east of the Sierra Nevada mountains the population has been employed industriously during the past week in fanning itself. From Nevada to the Atlantic seaboard the weather has been intensely hot—so hot as to eclipse all previous records. The greatest distress was of course in the large cities and in the manufacturing establishments where fires are maintained. In New York city the lowest point reached at any hour of the day or night from Tuesday till Sunday was 75 degrees, while at the same time the humidity ranged from 64 to 78. In the central and southern parts of California we are acquainted with degrees of heat that put the New York record "in the shade," but here it is dry, while there it is damp almost to saturation. The distress may be judged by the results as shown in the death record for the week as follows: Sunday, 179; Monday, 190; Tuesday, 187; Wednesday, 171; Thursday, 198; Friday, 213; Saturday, 286. Of the whole number 573 were infants and 775 were under five years of age. In the Williamsburg sugar refinery at Brooklyn over six hundred men were prostrated by heat and seventeen died in the works during the afternoon of Friday. Many affecting episodes were witnessed on Friday evening when the wives of the men were taking their suppers to them and were met with the news that their husbands had already been sent home, overcome by the heat; or, as in three instances, were met by a cortege of men carrying their husbands out of the sugar-houses. In the streets and houses of the city the people literally sweltered, while horses and dogs fell dead by scores. From Philadelphia, Baltimore, Chicago and elsewhere come similar reports, all bearing testimony to the most severe week in twenty years. On Saturday night a "cool wave" spread over the parched land and for the first time in a week the people went comfortably to sleep. Blessed indeed are we who dwell on the Pacific shore!

The striking workmen at Homestead, Pa., show no signs of weakening. The mills are operated in a partial way by non-union men who are lodged, fed and even preached-to within the enclosure. The troops are still on guard; and the business of arresting persons guilty of specific instances of violence on the day of the great fight goes on. While at the center of disturbance matters have thus settled into routine, the country at large is profoundly agitated over the questions which this affair has raised up. The controversy between Mr. Carnegie and his workmen is lost sight of in the larger controversy which it has provoked. The assertion by the Homestead men of a property right in the mills in which they labor, and the support of that assertion in the Senate of the nation has raised a new issue in American affairs. To the RURAL it appears to be a plain issue between law and lawlessness. If the claim of the strikers to a right in the management and profits of the Homestead works be admitted, what becomes of the rights of the owners of the mills? If this claim be conceded, then the farm hands and fruit pickers in California have rights in the farms upon which they labor—then what becomes of the rights of the land owner? If the strikers be allowed to dictate terms upon which other men may or may not work in the Homestead mills, what becomes of the rights of those other men to individual liberty of choice and action? If trades-unions are to be allowed to make the laws which must be obeyed by labor and capital, what becomes of the authority of Congress? The plain truth is that the Homestead men are wrong. Every so-called principle they are contending for is a false principle, for it cannot be allowed without violation of the rights of others. To allow their claims would be to elevate the dictum of the trades-union above the enactments of Congress and to destroy our whole theory of personal liberty. Our forefathers exchanged government by an aristocracy for government by the people. If we should surrender this heritage, if we should exchange government by the people for government by the mob, it would be the most shameful dereliction of human history. But we will not do it. The laws which protect the rights of all will be enforced. The Homestead men will be given a stern lesson in the American doctrine of liberty for all and protection for all, and this lesson will not be more for them than for the whole country.

The pity of the whole affair is that it widens the breach between capital and labor or to speak more exactly, between the capitalist and the laborer. The true relation between capital and labor is that of co-operation. In the present organization of human society neither can walk alone. For one department of industry to quarrel with another is as if one's right hand and left hand should fall to contending with and rending each other. Even when the present trouble is ended, there will be at Homestead on one side the haughtiness of victory, and on the other the humiliation of defeat. There will be, not the helpful spirit of accord, but the evil spirit of deep hatred. Co-operation under such terms cannot be genuine. And far away from Homestead, between mill and mine owners and mill and mine workers everywhere, the spirit of class will be promoted by this unhappy controversy. Where formerly there was cordiality and friendship, there will be suspicion and estrangement. The mine workers in Nevada who have publicly resolved approval of the false principles contended for at Homestead and Cœur d'Alene, have made enemies of their employers. And so, wholesome co-operation between employer and workmen is being destroyed, and, as a consequence, the moral rights of the workmen which no law can ever enforce, and which most always rest upon identity of purpose and mutual good, will lose there force. Here, indeed, is the pity of the thing. The workingman, be he ironmonger, ploughman or other, is not serving his own interest when he substitutes the letter of the contract with his employer for the spirit of friendliness—when he exchanges the warm blood of good will for the cold blood of business calculation.

Just as the New World is solving problems for the Old, the newer West is solving problems for the East. The broader minded among theologians, and philosophic men in general, have long observed that the training of the theological seminaries is arid, narrow and artificial, but they have not seen a way to improve it. While they have been speculating concerning the fact, the bolder men out in Colorado have been seeking the remedy. In the *Christian Union* we find a report of the foundation of the Colorado Divinity School, which starts off upon nonsectarian lines. The Rev. Dr. Kerr B. Tupper, a Baptist, is to be Dean of the Faculty; Bishop Spaulding, of the Episcopal Church, is to be Professor of Ecclesiastical History; the Rev. Myron W. Reed, a Congregationalist, is to teach the Ethics of Social Reform; the Rev. Samuel A. Eliot, a Unitarian, is to teach Comparative Religion; the Rev. W. S. Selleck, a Universalist, is to have charge of the History of Christian Doctrines; and the Rev. Albert A. Pfanstiehl, a Presbyterian, is to be Professor of Systematic Theology. The school is born of the great need in the Rocky Mountain region for such an institution. It is to be nonsectarian; it is to investigate religious truth seriously and impartially; it is to be broad and catholic in its spirit; it is to be hospitable to the intellectual methods of the day; it is to offer theological study without reference to denominational bearings; and it is to aim, not to fill men with information, but to teach them to think and act for themselves. Commenting on the new establishment, the *Christian Union* says: "This is a bold experiment, but it starts in a new country with a clear field, and it is in accordance with the spirit of the times. Its progress will be watched with great interest. The possibilities of such an institution in the way of emphasizing essential Christianity, destroying denominationalism, developing the spirit of Christian unity and relieving theological education from the too exclusively abstract character which has been its weakness, are almost without limit."

The presidential campaign is undeniably slow. Usually at this season the country is in a roar, but outside of the editorial columns of the political journals there is scarcely anything to call to mind that this is a campaign year. For this happy condition there are two main causes: First, there is well nigh universal confidence in the capability and honesty of both Harrison and Cleveland, and since one or the other is certain of election, it is felt that in any event the government is sure to be in good hands. Second, whoever undertakes to instruct the people must talk about the issues of the time and these issues happen to be "dangerous." There is not time in the period between July and November to correct mistakes, and so on both sides the managers are trying to avoid mistakes by keeping off from dangerous ground—in other words, by leaving the labor question and the issues newly raised in connection with it severely alone. At the same time it makes a "slow" campaign, for the attempt to discuss the tariff with a public whose attention is all for the labor question is like trying to interest a girl who has her eye on another man. Thus the cowardice of the parties leaves the real issues of the time alone, and since nobody will hearken to the old songs, politics gets small attention.

FARMERS' INSTITUTE MEETING.—The third quarterly session of the Southern California Farmers' Institute will be held in the Opera House in Chino, August 17th and 18th. Franklin Cogswell, of the Executive Committee, was here on Monday making arrangements for the meeting, which promises to be of great interest. The transaction of some necessary business and the reading and discussion of a number of interesting papers will occupy the first day, and the forenoon of the second day will be devoted to a drive over the beet fields, a visit to the factory in operation, and a lunch given the members from abroad by Mrs. Gird on the beautiful lawn at her home.—Chino Champion.

Another Effort for a Dried Fruit Exchange.

At the meeting of the State Horticultural Society, July 29th, E. W. Maslin submitted the report of a committee previously appointed to consider the feasibility of establishing a dried fruit exchange in San Francisco, to the effect that a meeting had been held with fruit growers and others interested to discuss the question on July 7th, and it was the sense of the meeting that the season had too far advanced to begin the enterprise this year, but the following resolution had been passed:

Resolved, That the scheme of establishing a dried-fruit exchange is feasible and necessary for the interests of the fruit growers of the State.

Resolved, That we advise the State Horticultural Society to appoint in each county having a dried-fruit interest a number of persons whose duty it shall be to canvass the county for the purpose of inciting an interest among the fruit growers in the project of establishing the said dried-fruit exchange, to establish an association of fruit growers in each county where there is no county fruit association, and to ask the cooperation of associations already formed, and to induce the sending of delegates to a convention to be held in San Jose on November 15th, then and there to organize a dried-fruit exchange.

The recommendations in the report were adopted by the Society, and the same committee, with the addition of the secretary, was authorized to select names in the different counties and submit them for adoption at the next meeting of the Society.

Auction Sales of Fruit.

The auction sales of Sacramento river fruit have continued with good amounts offered and prices favorable. P. Steinhagen, the auctioneer, addressed the State Horticultural Society, by invitation, on Friday last concerning this method of sale and was well received. The following are the summaries of Monday and Tuesday's auction sales:

2500 baskets Crawford Peaches, 30@55c ℔ basket; 300 baskets Orange Clings, 55@70c; 40 baskets Nectarines, 40c; 75 baskets Plums, 37½@40c; 35 baskets Crabapples, 45c; 60 baskets Prunes, 50@70c; 25 boxes Nutmeg Melons, $1@1.25 ℔ box.

1500 baskets Crawford Peaches, good to choice, 25@67½c, inferior, 25@40c ℔ basket; 150 baskets Orange Cling Peaches, 60@65c; 28 baskets Sawyer Seedling Peaches, $1.15; 150 baskets Plums, 30@47½c; 50 baskets Crabapples, 40c; 600 boxes Bartlett Pears sold Monday at 1 o'clock at 85c@$1 for No. 1 and 45@75c for No. 2.

SHORT CROP OF PRUNES AND CURRANTS ABROAD.—The strength of the dried fruit market reported in last week's RURAL PRESS is not only sustained, but a slight advance is reported in prunes, peaches and raisins, which is noted at some length in the commercial department. The market has strong support in short crops abroad independently of the short crop of deciduous fruit at the East. The latest cables received from France not only confirm previously received information of a short crop of Turkish, but also report a short crop of Bohemian prunes. The currant crop in Greece is also reported as being short. From the general tenor of advices it looks as if all kinds of California dried fruit will be marketed early and at good, remunerative prices.

A PURE FOOD EXHIBITION IN NEW YORK.—A circular upon another page shows that our olive growers propose to show their products at a Pure Food Exhibition to be held in New York next October. At the meeting of the State Horticultural Society on Friday last, the same subject was favorably considered, and an effort will be made to secure the display of California dried fruits. This is thought to be especially desirable because of the warfare which some eastern nurserymen have threatened to make upon our products in retaliation for the exclusion of eastern nursery stock. Messrs. Lelong, Coates and Joseph Shinn are a Committee to propose ways and means at the next meeting of the Society.

NATIVE FOOD PRODUCTS.—S. L. Watkins, of El Dorado county, who has been authorized by the State Commission to make a collection for Chicago of the native food products of northern California, writes from Grizzly flats that he will endeavor to secure the following: All the plants, grasses and flowers indigenous to the Sierra Nevada mountains, and the foliage and samples of wood of the different trees; the different varieties of wild fruit, including wild cherries, several varieties of wild plums, wild strawberries, wild grapes, thimble berries, blackberries, raspberries, gooseberries, currants and other wild fruits if possible. There will also be the different varieties of nuts and the burrs containing them.

RATES ON NORTHERN SHIPMENTS.—The present rate from San Jose to Spokane Falls, Wash., and points in Montana on deciduous fruit in carloads lots on freight trains will be $1.25 per hundred pounds. The rate on potatoes or vegetables in straight or mixed carloads will be 82 cents per hundred pounds. The rate for deciduous fruit, vegetables and potatoes in mixed carloads to the same points is $1.25. Freight cars attached to passengers trains containing deciduous fruit will be taxed $1.25 per hundred weight, as quicker time is made.

Weather and Crop Bulletin for Week Ending August 1st.

The following crop report for the week ending August 1st, as furnished by Director Barwick of the Weather Bureau, and California weather service, shows a rainfall that was appreciable to the pluvialites in Shasta county and the northern portion of Tehama county, at least so reports the observer at Red Bluff. The observers or crop correspondents not giving the highest and lowest temperatures (save one or two of them), it would be folly to quote them as being a representative temperature of the State, either by sections or districts. The temperature has been rather below the normal in all portions of the State except in the Fresno raisin district, where it was about normal. Hops are doing remarkably well, at least so reports Mr. Chris. Wagner, who is general hop reporter for California.

SHASTA.—*Anderson*—The past week the temperature has been about normal, heavy thunder and lightning on Wednesday, 27th, passing to the north; shower on the hills, 23rd; light rainfall, .03 of an inch. Wheat now turning out well in the valley; fruit is fine. One carload left this place on 30th for Chicago. Crawford peaches, Bartlett pears are a large crop. Highest temperature 100°, lowest 60°. Melons coming in plentifully.

HUMBOLDT.—*Eureka*—Heavy fogs along the coast have prevailed through the week. The sun has not shown up in the last six days. Wheat and oats are being harvested and the crops will be good in quality and quantity. Corn is not doing well from lack of warm sunshine. Fruit is ripening slowly.

Hydesville—Foggy and misty weather has damaged the hay a little and should it continue it is feared the grain will rust.

Upper Matole—Harvesting in progress; small grain rather below average on account of the cool, wet spring and the drying winds which followed; summer crops very backward, but growing; the stand of corn not good.

LAKE.—*Ma Tel Vineyard, Upper Lake*—Threshing has begun. So far, the yield is above the average in quality and quantity. Had it not been for the wild oats and rust the crop would have been the largest ever raised here. Grapes doing very well and no signs of mildew in sulphured vineyards. Fruit ripening slowly. Crop short, especially prunes. The latter attacked by a louse which yields to spraying.

YUBA.—*Marysville*—The damp mornings have retarded harvesting to some extent, but it is progressing favorably. Fruit is yielding somewhat better than anticipated.

PLACER.—*Newcastle*—The weather has been delightful for gathering the fruit crops. This month, generally, has been cool, but not so cool as to injure the fruit in the orchards.

NAPA.—*Napa*—Napa fruit growers shipped a carload of fruit to Butte, Montana, Saturday. The fruit was purchased here at the following guaranteed prices: Peaches, 75 to 85 cents per basket; apples, $1.00 to $1.25 per box; plums, $1.25 per box. The temperature for the past week has been below normal. Mornings foggy. Prunes selling for $45 per ton. Other fruit in proportion. Fruit crop below average. Grain above average. Grapes doing well. Temperature growing warmer.

SOLANO.—*Vacaville*—The even temperature the past week has greatly benefited fruit growers in the proper handling of their fruit. A continuation of this weather is just what is needed.

SONOMA.—*Healdsburg*—The last week has been good growing weather, foggy mornings and warm afternoons. Corn looking well and growing, besides ripening slowly, also prunes. Grapes will fall one-fourth to one-third short around here.

Santa Rosa—The past week has been unusually propitious for the ripening fruit. The cool weather has retarded the early ripening of peaches, pears and apricots, thereby giving them opportunity to more fully develop, which they have done with remarkable success. Canners say the fruit will be rather short in quantity as compared with last year's crop, but the quality will be very much superior. Hops are growing nicely and promise a good yield.

AMADOR.—*Oleta*—Unusual cold weather for July; fruit not developing as usual. Fire necessary most evenings and mornings.

STANISLAUS.—*Oakdale*—The weather for the past seven days has been too cool for farm operations, retarding the working of the harvesters until 9 or 10 A. M. each day, owing principally to the moisture in the atmosphere. The best weather for harvesting is when the thermometer ranges from 71 in the morning to 107° in the afternoon. The crops this year should have been very good, as the weather was most favorable throughout, but almost all farmers complain that they are coming out short.

TULARE.—*Visalia*—All crops turning out far better than expected. We have had the lowest temperature for 15 years.

ALAMEDA.—*Livermore*—Grain turning out well. Fruit crop fair. Grapes—some varieties—not filling out well; but, generally speaking, the crop will be fair. Prices for all produce average low.

Pleasanton—The cool weather, accompanied by brisk winds and fog, has retarded harvesting, and has also checked the growth of hops and sugar beets, and from the same cause "Couleur" has appeared in the vineyards, the best French varieties (particularly "Cabernets") suffering most, and are damaged fully 25 per cent.

SANTA CLARA.—*Gilroy*—Grain being rapidly harvested. Fruits yielding better than expected. Grapes are showing well in most places and will be of fine quality.

SANTA CRUZ.—*Watsonville*—As threshing continues, the outturn proves the truth of the estimate I made and reported two months ago. Wheat is yielding far below an average in the valley or bottom lands on account of lodging and rust, and also to the fact that Pajaro valley land has been sown to wheat and barley continuously since 1850 and 1852, and is too worn out for wheat or barley. Sugar beets, potatoes, corn, beans, are doing splendidly.

MONTEREY.—*San Ardo*—The past week was rather cool, with fog in the morning, sometimes lasting until 9 o'clock in the morning; but this day (Saturday) is again turning warm. Highest temperature 95°, lowest 45°. Grain threshing still going on; yield poor.

SAN LUIS OBISPO.—*San Luis Obispo*—We have another cool week, the highest temperature in the shade at noon being 80°. We have heavy northwest fogs and light southeast breezes and fogs, being beneficial to our large bean and potato crop, but a little warmer weather would help on corn crop. Some parties are drying apricots, but the crop is scattering and light in most places.

SANTA BARBARA.—*Santa Maria*—For past two weeks weather has been favorable for beans and summer crops. The new cannery has been in successful operation for the past two weeks, working on apricots. The fruit crops are lighter than at first anticipated—prunes are almost a failure Grain has been better than anticipated. Weather below normal temperature every week of the month.

SACRAMENTO.—*Sacramento*—The temperature during the week, although warm, has been below the average or usual amount of heat that the earth receives at this time of the year. The normal precipitation is nothing, and there having been no rainfall during the week, the conditions have been normal. The weather conditions have been beneficial to the grape and fruit crop.

COLUSA.—*Williams*—All weather conditions continue favorable for the grape and fruit crop.

GLENN.—*Willows*—The wheat crop is above an average. Peaches are plentiful and pears appear to be good. The prune crop is very short. Highest and lowest temperature, 101° and 52°.

SAN JOAQUIN.—*Stockton*—As the harvest progresses, it becomes evident that the average quality of grain is slightly below the usual; at the same time, the yield seems rather above the average.

Lodi—The highest and lowest temperatures during the week were 91° and 50°. The prevailing winds were from a westerly quarter, and in connection with the cool, damp mornings, have somewhat delayed the wheat harvest. Watermelons are coming in more plentifully, and are of a better quality. The peach crop will be, or rather is, a short one, but the quality will be very good. Grapes are coming on slowly, and are every bit of two weeks later than usual, and the crop will be short.

TEHAMA.—*Red Bluff* (telegram)—The temperature has been below the normal, with light rain falling in Shasta county, amounting to about .03 of an inch at Anderson. Fruit is ripening very slowly.

FRESNO.—*Fresno* (telegram)—The weather has been cloudless and the temperature normal; the grain harvest and fruit shipments progressing. Storage of water in creeks on account of the cool weather not rapidly melting the snow in the mountains. Thousands of acres of pasturage have been destroyed by fire.

LOS ANGELES.—*Los Angeles*—The cloudy nights and clear days during the past week, accompanied by no extreme heat, have not been beneficial to growing or maturing products that are grown in this vicinity. What is needed is more warm weather to mature fruit. Peaches and nectarines coming in, and there will be a fair crop of deciduous fruits.

Special Hog Premiums at the State Fair.

SACRAMENTO, Aug. 2, 1892.

TO THE EDITOR:—We have just been notified of an offer by the Union Stock Yard Company, of San Francisco, of special premiums at the State Fair of 1892, for the encouragement of hog-raising in California. They have kindly offered the following inducement to exhibitors:

For the best litter of hogs for packing purposes	$25 00
For the second best	15 00
For the third best	10 00

It comes somewhat late, but we hope the producers will take advantage of this liberal offer, and make a showing of packing-house stock. A good exhibit would, no doubt, encourage the continuance of these premiums by the Union Company.

We desire to assist them in every way, as it will certainly revert to California's interest to produce what we have been annually importing for our own consumption. There is no reason why the hog-raising industry should not be made one of our principal resources, as it is certainly a paying investment, and when we shall have established the proper packing facilities, this industry will warrant considerable increase to furnish the company with the necessary packing material.

I hope you will call attention to these facts, that our hog raisers may be induced to make some progress in the industry. EDWIN F. SMITH, Sec'y.

Work of the Santa Clara Fruit Exchange.

SAN JOSE, Aug. 1, 1892.

TO THE EDITOR:—F. M. Righter has been appointed Assistant Manager of "Santa Clara County Fruit Exchange." He is expected to look after the interests of the stockholders of the Exchange residing near Campbell. Campbell Fruit Growers Union will sell all of their fruit through the Exchange. Bids will be received on this fruit up to Aug. 10th, at which time, judging from bids already made, at least the fruit now ready for market, and possibly a good portion of their prunes, will be sold.

For "extra Moorpark apricots" 16 cents has been offered. This "extra" lot was made of Moorpark apricots ranging from 1¾ to 2½ inches in diameter; $62.50 per ton has been offered for green prunes, and 10 cents freely offered for dried prunes, four sizes. Driers are holding for higher figures—11 cents and up. OCCASIONAL.

An interesting general sketch of the Santa Clara Fruit Exchange may be found on page 107 of this issue.

Points on Eucalyptus Species.

LOS ANGELES, July 30, 1892.

TO THE EDITOR:—Will some one of experience oblige several readers of the RURAL in this vicinity by telling them what variety of the gum tree is the best to plant, and how many cords of wood can be expected per acre from trees five years old; also, what is the best time of the year to cut the wood so as to secure a good growth from the stump? SUBSCRIBER.

We shall be glad to hear from our readers on these points. They are very important.

Oxford Down Sheep.

W. A. Shafor writes us that he will leave England July 16th, per S. S. Canopus, from Liverpool to Quebec, and bring 300 Oxford Down sheep. Among them is the champion ram at the Royal show this year and a lot of other winners at the Royal and other shows in England. He expects to go into quarantine at Quebec 15 days, and to reach Middletown, Ohio, by the middle of August, and will then have a full line of Oxford Down sheep for sale. Mr. Shafor is the largest American importer of Oxford Down sheep, and he will be pleased to hear from intending purchasers on his arrival at his home place at Middletown, Ohio.

A Los Angeles newspaper states that Ventura county is more advanced in World's Fair work than any of the other six southern counties, with the exception of San Diego county.

"Big Jaw" or "Lumpy Jaw."

The interest which has been shown by the stockmen of the United States in regard to the disease known as "lumpy jaw," or that form of actinomycosis which appears as external swellings on the head, renders it desirable that a preliminary statement should be made concerning the treatment of this disease. Until recently it has been the opinion of the veterinary profession that a cure could only be obtained by a surgical operation, and that this should be performed in the early stages of the disease in order to insure success.

In March last an important contribution to our knowledge of this subject was made by M. Nocard, of the Alfort Veterinary School, in a communication to the French Central Society of Veterinary Medicine. He showed clearly that the actinomycosis of the tongue, a disease which appears to be quite common in Germany and is there known as "wooden-tongue," could be quickly and permanently cured by the administration of iodide of potassium. M. Nocard calls attention to the success of M. Thomassen, of Utrecht, who recommended this treatment as long ago as 1885, and who has since treated more than eighty cases, all of which have been cured. A French veterinarian, M. Godbille, has treated a number of cases with the same remedy, all of which have been cured. M. Nocard also gives details of a case which was cured by himself.

All of the cases referred to were of actinomycosis of the tongue, and no one appears to have attempted the cure of actinomycosis of the jaw until this was undertaken by Dr. Norgaard, veterinary inspector of the Bureau of Animal Industry. He selected a young steer in April last, in fair condition, which had a tumor on the jaw, measuring 15½ inches in circumference, and from which a discharge had already been established. This animal was treated with iodide of potassium, and the result was a complete cure, as stated in the reports which were recently given to the press at the time the animal was slaughtered in Chicago. If lumpy jaw can be cured so easily and cheaply, as this experiment would lead one to suppose, the treatment will prove of great value to the cattle raisers of the country. As is well known, there is a considerable number of steers weekly coming to our markets which are condemned because they are diseased to such an extent that the general condition of the animal is affected. If these could be cheaply and readily cured by the owners, it would prevent the loss of the carcass, and solve all the troublesome questions which have been raised in regard to the condemnation of such animals.

The curability of the disease does not affect the principles which have been adopted in inspecting and condemning animals affected with it. This Department has never considered it necessary to condemn animals affected with actinomycosis on account of the contagiousness or the incurability of the disease. Such condemnations have been made when the disease was so far advanced as to affect the general condition of the animal, and all such carcasses would be condemned whether the disease from which the animal suffered was contagious or not, or whether it was curable or incurable.

The treatment with iodide of potassium consists in giving full doses of this medicine once or twice a day until improvement is noticed, when the dose may be reduced or given less frequently. The size of the dose should depend somewhat upon the weight of the animal. M. Thomassen gives one and one-half drams of iodide of potassium daily in one dose dissolved in a pint of water until improvement is noticed, which he states is always within eight days. Then he decreases the dose to one dram. The animals do well under this treatment, showing only the ordinary symptoms which follow the use of iodine, the principal ones being discharge from the nose, weeping of the eyes, and peeling off of the outer layer of the skin. These symptoms need cause no uneasiness, as they never result in any serious disturbance of the health.

M. Godbille has given as much as four drams (half an ounce) in one day to a steer, decreasing the dose half a dram each day until the dose was one and one-fourth drams, which was maintained until the twelfth day of treatment, when the steer appeared entirely cured.

M. Nocard gave the first day one and one-half drams in one dose to a cow; the second and succeeding days a dose of one dram in the morning and evening, in each case before feeding. This treatment was continued for ten days, when the animal was cured.

Dr. Norgaard gave two and one-half drams dissolved in water once a day for three days. He then omitted the medicine for a day or two, and continued it according to symptoms. These examples of the treatment as it has been successfully administered by others will serve as a sufficient indication for those who wish to test it.

Experiments are now being conducted on a large scale by the Bureau of Animal Industry in the treatment of lumpy jaw with this remedy, and the results will be published as soon as possible. In the meantime, it would be well for all who have animals affected with the disease to treat them according to this method, and report results to the Department of Agriculture, Washington, D. C.

Barley Grinding.

At Clements, San Joaquin county, a grist mill is running full blast, and in calling on the proprietor, he informed me that the charges for grinding the farmers' barley was $1.25 per ton, but the farmer furnished the sacks and twine for sewing. If 20 sacks of barley is brought to the mill, 27 sacks of crushed will be the result. This increased bulk is desirable because the feed is more easily digested by the animals.

Much is also being done with portable barley mills, the owner and crew going from ranch to ranch, carrying their own boarding and camp outfit. Their usual rate is $1.50 per ton, I am informed. W. H. M.

Horestry.

"Approved English Names for Western Trees."

Prof. Sargent's Criticisms Considered.

OAKLAND, July 30, 1892.

TO THE EDITOR:—Having kindly opened your columns from the first to the discussion upon the establishment of certain English names as being suitable for our western trees, I desire further to employ your valuable journal to report from time to time the progress of the new departure.

Returning recently from an extended reexploration of the forested mountains of Southern Arizona, we find awaiting us much interesting data concerning the proposed English names. I may say in general, that the reform movement seems to meet with almost unanimous support, which was not to be expected in certain quarters, where radical changes were proposed, and such approval is therefore all the more gratifying.

Where criticism or differences of opinion are given, it is generally offered in a considerate, kindly spirit, which is exceedingly helpful, and for which I am truly grateful.

The State Superintendents of Oregon and Washington write approvingly, and recommend that the Handbook (lately introducing these names) be placed in their school libraries, while most of the county superintendents of California receive the English names with favor, and several Eastern journals give extended notices of the Handbook, and encourage the preparation of the larger work to follow.

The most important indorsement of my efforts to establish suitable English names comes from Prof. Sargent, editor of *Garden and Forest*, for May 11, 1892. He gives a two-column editorial notice of the Handbook, quoting several paragraphs and giving nearly the full list of English names proposed for our Cone-bearing trees, "in the hope," he concludes, "of aiding the author to bring about a most desirable reform."

He also takes exception to a few of the proposed names, giving reasons therefor; and it is to these helpful criticisms that I wish particularly to refer at this time, for in most instances the exceptions are not well grounded, as I will endeavor to show.

"Alpine White-bark Pine" of the Handbook, designating in English our *Pinus albicaulis*, which we find with its white bark and its white annual branchlets fringing the upper limits of our alpine forests, he considers sufficiently designated by the shorter name of White-bark Pine; but all the trees of this order in high, wind-swept situations are apt to have more or less silvery white bark, whatever their color in less elevated localities. "White-stem Pine," alluding to the stout annual stems, would be a better name, and, moreover, it is a literal translation of the botanical one. This correction will appear in the next edition.

"Nevada Nut Pine" for *Pinus monophylla* he thinks not well chosen, because the species is not confined to the State of Nevada. To be sure, it extends to contiguous territory, but its headquarters of best development are in Nevada; and the same remark is true of the "New Mexican Piñon," which extends sparingly to adjoining regions, but is abundant in New Mexico. "Stone-seed Mexican Piñon" Prof. Sargent thinks "a rather unnecessarily long and awkward name." Awkward it certainly is, but exactly descriptive, and a similar name is necessary to distinguish this hard-seeded species from the two other soft-shelled piñones partly included in Arizona, though the "Stone-seed" is the principal one, and largely cultivated for food in Mexico, where it abounds.

"North Coast Scrub Pine" for *Pinus contorta* he thinks might be changed to Contorted Pine. As neither the tree nor any of its parts are contorted (despite the fancy of Douglas, who named it), and considering that the tree is the smallest of our species and confined exclusively to the North Coast region, the preceding name was naturally suggested.

"Arizona Five-leaved Lumber Pine" is criticised as "an unfortunate designation, as the leaves are not always in 5's and the species does not produce especially valuable lumber." To this I have to say that the leaves—like those of other species—are usually constant in their number; and as to the other objection, this pine is one of those growing in the reach of the white man, and has been mostly cut away in certain localities and manufactured into lumber which is similar to the yellow pine of California, belonging to the same group—the "Broken-cone Lumber Pines."

"Canada Horn-cone Pine," for the curious little Canadian Pine, with its horn-like cones pointing forward along the branchlets, my critic thinks "not preferable or easier to remember than Gray Pine, by which this species is universally known in Canada." But the horn-like cones of this species are unique in the great family of Cone bearers; the tree is not particularly gray in color, only "dull grayish green," according to Gordon, while we have agreed to call our gray, cloud-like *Pinus Sabiniana*, the "Gray-leaved Pine," which would conflict.

The approved names for our firs fare better, owing to the fact that "their identity and synonymy are more confused than the trees of any other group of conifers;" but "Feather-cone Red Fir" the editor thinks "inappropriate." Pray wherein? Its Latin name *Abies nobilis*, meaning Noble Fir, and so called by some authors, is certainly inappropriate because the tree is less majestic than two other species, while the cones are clothed with recurved, beautifully fringed, brown bracts, resembling the feathers of a bird—hence Feather-cone.

Concerning our redwoods, Prof. Sargent writes: "It hardly seems necessary to designate *Sequoia sempervirens* as the 'Coast Redwood,' as it is the only California conifer that is called Redwood; or to call *Sequoia gigantea* 'Giant Sequoia.' To our taste," he continues, "Big Tree is a simpler and better name." It happens that both Sequoias are decided Redwoods and both called Big Trees, hence some distinction is necessary. I thought to call one the Coast and the other the Sierra Redwood, but "Giant Sequoia" is already in use and quite distinctive for the larger species.

"Alaska Ground Cypress" is objected to because "the tree sometimes attains a height of 100 feet, and it is by no means confined to Alaska." To this I have to remark that, compared with the other genera of cypresses, the trees of the genus *Chamæcyparis* are found with low, spreading branches, as the Latin name signifies, while Alaska is the principal home of this species.

"Arizona Red-bark Cypress" falls under criticism, "as it is the only species known to grow in that Territory, and so, simply Arizona Cypress would do as well." Late explorations in the Chirricahua mountains of Southern Arizona reveal, as we expected, that there may be two or three species of stringy-barked cypress, until the present unknown, in that Territory.

"Nor do we like 'North Coast Cypress' for *C. Goveniana*," writes our friendly critic, "as the species is found as far south as Monterey bay; or 'California Mountain Cypress' for *C. Macnabiana*, a rare and local species which grows on the foothills rather than on the mountains." I'm glad that the first-named cypress is admitted to be limited to the comparatively northern coast named, while the Mountain Cypress seems to have its headquarters, according to Mr. Carl Purdy, "on the top of Red mountain near Clear Lake;" also, according to Mr. Jeffrey, it was found by him "on the flanks of Mt. Shasta, at an elevation of 5000 feet."

I am glad to concede one exception as well taken: "Pacific Yew" of the Handbook is no better than Western Yew would have been; and, especially so, as Nuttall once called it *Taxus occidentalis*. This correction will be printed in future editions.

Lastly, Prof. Sargent alludes to my following the lead of Prof. Greene in taking up the name of *Tumion* of Rafinesque (not *Tuminon*, as twice printed in the *Garden and Forest* article) in the place of *Torreya* of Arnott, and states that "the species in Florida is known by the vernacular name of *Torreya*."

Is it, indeed? Prof. Sargent's own census report of N. A. Forest Trees gives it as Stinking Cedar—one of the kind of names I am trying to get the public to discard.

A better name given the tree by other citizens is Nutmeg Tree. Only botanists would call it by the Latin name of *Torreya*, a name commemorating one of the first botanists of America—Dr. John Torrey; but, hallowed as is the name, when botanists learn that it is not available for this genus of Cone bearers, because it was previously applied to another genus, they must of course, however sorrowfully, take up the proper name, as I have done.

The editor of *Garden and Forest*, to whom I am indeed greatly indebted for his assistance in thus reestablishing on firmer grounds my proposed English names, concludes: "Such criticisms as those which we have ventured upon show the difficulty of fixing on any plant a vernacular name which will be acceptable to every one, and will serve to emphasize the fact that the best name for any plant is the Latin one which is given in accordance with a fixed and recognized principle and which cannot be changed except in accordance with that principle."

If the editor of *Garden and Forest* and other tree lovers will give the "Approved English Names" thoughtful attention, they will not find that I have entered upon this important innovation—which it must perforce appear to be in a few instances—without many years' examination of western forests and much careful comparison and balancing of appellations.

In this connection it should be mentioned that important discoveries have been made lately, concerning the conifers in the Territories of Arizona and New Mexico, but their discussion must be deferred to future articles, perhaps until the close of the exploring season, when time shall have been given for the examination of data and comparison of specimens. At present we can only pause to notice the evidences of approval nearly everywhere extended to the attempt to introduce appropriate vernacular names to the public, in the hope that they will be taken up by tree lovers and gradually established, thus realizing the prophetic phrase of Sir Joseph D. Hooker: "Good English names for your noble western trees." J. G. LEMMON.

The Height of Douglass Firs.

Hon. Wm. Alvord of San Francisco, President of the American Forestry Association, was naturally put out a little by current newspaper statements that there are Douglass firs in Washington that are over 600 feet in height. Of course he did not believe it, and as will be seen by the appended letter, one to whom he appealed for testimony, and who is an authority, says the statement is a great exaggeration. We are under obligation to Mr. Alvord for the privilege of printing the following:

SAN FRANCISCO, July 19, 1892.

William Alvord Esq., S. F.—DEAR SIR: Referring to your inquiry as to sizes of trees in the Northwest, which we referred to Mr. Cyrus Walker, our manager at Puget sound, we would say that we are in receipt of a letter from that gentleman, under date of the 15th inst., reading as follows:

"Yours of the 12th was this morning received, referring to a letter from William Alvord, President of the Bank of California, regarding the measurement of the Big Trees of the State, mentioned in an article in the *Chronicle* of July 10th.

"I consider the statement that trees have been found anywhere in the Sound country 650 feet high is a great exaggeration.

"From the information I have received in this matter, it is possible some of the largest fir trees may be 7 feet in diameter on the stump and 300 feet high, but I have never seen one.

"The statement in regard to the size of cedar and spruce trees is also greatly overdrawn. Out of 85,838 logs we received last year, there were only 50 logs from 60 to 67 inches in diameter, and most of them were about 60 inches.

"I have never heard of more than 214 feet of saw logs being cut from any one tree; this tree measured 300 feet long."

POPE & TALBOT.

The Stock Yard.

Suggestive Notes on the English Royal Show.

Written for the RURAL PRESS.

In the *Breeders' Gazette* of July 6, 1892, is a very interesting letter by the editor (who is now on a visit to Great Britain) on what he calls "Britain's greatest summer show." He praises the managers and management of the show throughout in the highest terms. The first thing that attracts his attention is that no vehicles are allowed inside the gate. All visitors alight and enter the grassy park on foot. Not even a mounted marshal rides up and down the yard to the possible discomfiture of pedestrians.

He commends the practice as being worthy of a trial by some of our American fair management, saying that it contributes amazingly to the comfort of visitors, enabling the people to circulate much more freely and with greater safety to life and limb, besides which there is a remarkable freedom from dust or mud, worked up by hoofs and wheels.

A CATALOGUE OF EXHIBITS.

We have before now urged upon the managers of our fairs the importance of having a catalogue of all things on exhibition, as is the case at all British live stock shows of any importance. Here is what Mr. Sanders says on the subject:

"The next thing to command our admiration is the complete catalogue of every article or animal on exhibition obtainable on the morning of the day the judging begins and ends. None can so thoroughly appreciate the value of this perfectly-arranged volume as a newspaper reporter. In America we enter a fair ground with a blank book and pencil and, by an amount of work, worry and traveling undreamed of by the average reader of our reports, manage to dig out the necessary mass of data relating to breeds, owners, ages, pedigrees, classification, winners, etc. Here it is all before you in plain black and white, and the thoughtfulness of the management extends, in the case of press representatives, to complimentary copies interleaved with blank pages for memorandum notes. Visitors at large pay for this invaluable document one shilling—say 25 cents. To any really interested visitor, it is worth ten times that amount."

In order to have a catalogue of everything on exhibition, it is necessary to have all entries made by a given date, previous to the opening of the show. Why can we not have it so here as well as there, is a question that has often been asked, but still remains without any satisfactory answer. In fact, there is no reason why exhibitors should not make their entries at least one or two weeks before the fair. Such a course would be much easier and more pleasant for all parties, also a great saving of time and trouble for both exhibitors and officials, who would be spared much or all of the hurrying and annoyance consequent upon having all entries to make during the first days of the exhibition.

JUDGING.

By having the entries made and the judges selected before the show, the judging could be done during the first day or two, or at latest the second and third days after the opening, according to the size and character of the exhibition. One day would be sufficient for the judging of all live stock if everything was properly prearranged. On the further management and arrangements in the cattle classes, Mr. Sanders continues:

"As is generally understood, the judging here is all concluded on the opening day, the sum of five shillings being charged for admission that day. Immediately afterward a prize sheet giving all the awards is issued, the prize winners are all conspicuously placarded, a low fee is put upon the gate, and weather permitting, the crowds then come to the show in numbers emphasizing sharply the interest felt by all Englishmen in agricultural affairs. As the animals are all arranged in their stalls by classes (or rings), according to age and breed, the visitor can study out the various problems presented at leisure and with infinite satisfaction as compared with what can be done in an American show-yard after the ribbons are tied. If one, for instance, wishes to compare the relative merits of the aged bulls of any given breed, they may all be found all week standing side by side just as they were seen in the ring. The value of such an arrangement is self-evident."

The overpowering show of the cattle classes is made by that most widespread of all British breeds, the Shorthorn (136 entries), and three out of every five are *roans*. Furthermore, nine out of every ten of the best ones are roans; yet, strange to relate, both the male and female championships fall to reds, but in neither case was such honor fully deserved.

THE COLOR QUESTION.

In regard to the color of the champion bull the English *Agricultural Gazette* says: "He is a red and white bull, mostly red, but with those white points, such as "stockings," which in former years were much abhorred, but have distinguished so many of the best winning Shorthorns of recent years that they are now excused, if not liked, while judges have wisely refused to allow their partialities toward roan or whole-red to rule their decisions when real superiority has come before them in association with unfashionable markings or with pure white."

As to the color of the champion cow, Truth, she is entered in the herd book as "r. & w.," which means red and white. Besides, this is not the first time she has been awarded the highest honors at the "Royal."

SATISFACTORY AWARDS.

Beginning with the large class of 20 aged bulls, the judges, Messrs. Chas. Tindall (formerly with Lorn) and Geo. Ashburner of Low Hall, it appears were not of one mind as to which bull should have the first prize, and eventually called in Mr. Chas. Howard as arbitrator, who sent the winning card to Mr. Williams' Major, also the champion bull of the show, bred by the Queen, the second and third prize bulls both being of Mr. Cruikshank's breeding. After some remarks on the comparative merits of several of the animals in this class, Mr Sanders concludes: That the judges hit upon the three best bulls of the class was universally conceded, and as they were judged by an English bench and in competition with big, scaly English

bulls, this is a tribute to the north-country blood which was as fairly won as it was thoroughly deserved.

Two large classes of two-year-old and yearling bulls are well spoken of, as are also the cows in milk or in calf, the winner in this class being the champion female of the show.

Heifers in milk or in calf, calved in 1889, were a small class of six, but in Mr. Sanders' opinion, the class of heifers calved in 1890 formed the great feature of the entire beef cattle section. He says:

The writer has attended practically all the great Western American fairs for a dozen years past, but has never yet seen a ring of cattle of similar age that could be compared with this magnificent line of heifers—24 in number. Here was a bunch of roan cattle that ought to be bought up by some enterprising syndicate (if such a thing were possible) and traveled about (like the White Heifer of ye olden time) through all our Western States as a revelation of what can be accomplished by breeding for good results regardless of color or particular lines of blood. Such a bevy of thick, blooming, sappy young cattle as was sent into this competition by the Queen, Mr. Brierly, Mr. Thompson, Mr. Eckroyd, Deane Willis, the Duke of Northumberland, Lord Polwarth, and Messrs Lynn, Hosken, Clayton, Chalk, et al., would make a sensation at the Columbian Exposition or any other great gathering of the clans anywhere on earth. It was, in brief, a display well worth going across the Atlantic to see.

CATTLE WITH GOOD COATS.

After some lengthy remarks on the individual merits of several of the animals, he draws a comparison between the English and American customs of showing, in regard to the hair, the latter smoothing down a short coat, and the former showing up, as much as possible, all the hair that can be got to grow, and rightly so, for of what good is a beast to stand the ordinary exposure to which stock cattle must needs be subjected, without a good coat of hair, which ought naturally to grow upon it for protection against weather at the time it is most wanted. Mr. Sanders writes:

As a lot, this was the best string of two-year-old heifers I have ever seen, and reflected infinite credit upon the Shorthorn breeders of Great Britain, the evervarying lines of blood observable in the pedigrees demonstrating once again the folly of any one school of breeders claiming a monopoly of merit for their particular favorites. In speaking of this royal group of heifers, it may be noted, for the benefit of such American herdsmen as are disposed to insist upon showing cattle with the hair smoothly laid by dint of careful grooming, that these charming roans all had their furry coats just as skillfully dressed, but with an eye single to the enhancing of their appearance of sappiness. "Cow licks" and "frizzly" effects of various sorts were everywhere observable, and especially if there was a slack point to be built out. Some of these bovine hair dressers have quite as much cunning as the most artful shepherd—and any one who has gone through the sheep pens at an English Royal will be ready to acknowledge that in the production of optical delusions in the matter of curing carcass faults, the British shepherd is *sui generis*.

OTHER BREEDS.

Whether the editor of the *Gazette* has a weakness for Shorthorn cattle or not, we do not know; he, however, devotes more space to that breed than to all the rest. About 50 head of Herefords were exhibited. After reviewing the several classes on the comparative merits of the leading animals, there is a word of encouragement added for American breeders, which is: "That English breeders are ahead of our own in the matter of Herefords is certainly "not proven" by the Warwick show; and this is no disparagement to the old-country herds, either." Of the other herds he says:

Devons, Sussex, Red Polls, Black Welsh and Jerseys all make good exhibits. In fact, I have rarely seen such specimens of the three breeds first named as have been shown here this week. The Welch cattle are beyond my expectations. Some grand good carcasses of beef are to be found among them. Jerseys are a big show of 175 head, but I do not believe as a lot they are equal to those to be found at our leading shows, although some superb udders and rich skins are observable. Guernseys are well shown (45 head) and some extra cows are to be seen among them. A few Longhorns are in view, but are of interest only as a mere matter of curiosity. They seem valuable firstly for soup-making purposes and secondly as material for glue and fertilizer works.

In regard to the dairy cattle at this show, the *Agricultural Gazette* has the following summary:

There were only 15 entries in the three classes for cows giving the greatest quantity of milk containing, on the average of two milkings, not less than 12 per cent solids and 3 per cent butter-fat. In the first class for cows which had calved not less than three months before the date of the show, Mr. Salisbury Baxendale was first and second with Shorthorns, Mr. Church being third. The other two classes had no restriction as to date of calving. The first was for cows of 1100 pounds or over live weight, and here Mr. Pratt was first with a Shorthorn, and Mr. Baxendale was second with a Shorthorn. The first prize in the class for cows under 1100 pounds live weight was won by Mr. Adeane's Kerry, Mr. Church being second with a Red Poll.

The half a dozen different breeds of sheep on exhibition were represented by about 600 head, of which 250 were of the Shropshire breed.

AMERICAN PURCHASERS.

In spite of the restrictions laid by the U. S. Government on further importations, there were buyers present, from both the States and Canada, looking out for bargains in the line of show and breeding sheep, and made many purchases.

CONCLUDING COMPLIMENTS.

After concluding his remarks upon the sheep classes, he adds a further tribute of respect to the British sheep breeder, and also to the management of the show, in the following words:

The display in this section is too big for me to cover properly, and I will therefore close, for the present, by saying that the money-making power of the sheep seems to be much more thoroughly appreciated throughout Britain than in America. The different breeds are brought to an astonishing perfection, and it is evident that this class of stock not only contributes largely to the agricultural wealth of these islands, but their breeding is pursued with a skill and intelligence not surpassed in any other known line of breeding. The Warwick Royal will long be famous for its glorious show of sheep, and my only regret is that I had so little time to spend in that portion of the yard. In passing, let me note another point tending to show the thorough management observable at this exhibition. Every morning, at a stated hour, a certain contracted quantity of freshly cut tares (a forage plant of the pea family) was delivered at the sheep pens for the use of exhibitors. This is called the best of all feeds for show sheep on exhibition, and the condition in which it was delivered indicated that whoever had charge of that particular piece of work understood his business. The society seems to be exceedingly watchful in attending to all these little details, and it is unnecessary to add that this goes a long way toward insuring satisfaction to all exhibitors.

I can only characterize the Royal, as a whole, as the most perfectly managed show I have ever attended. It is a well-oiled machine, moving forward with one-half the friction and confusion attending the average American fair. That we can learn something from our English cousins in show-yard management must be conceded without reservation.

POULTRY YARD.

Starting a Poultry Ranch.

CHICAGO, ILL., July 23, 1892.

TO THE EDITOR:—I have perused with interest the letters from the pen of Mr. Geffroy on this subject, and would suggest that he give us more details as to the breeds he kept, the age of his stock and, last but not least, the financial success, or otherwise, of his undertaking.

As an old poultry breeder, I agree with him that experience is better than theory, but I would strongly advise the beginner to try the two together as the easiest way of attaining perfection.

Instead of stationary houses, as used by Mr. Geffroy, I would recommend, where a large stock is to be kept, and plenty of space, that portable ones be substituted, so that the stock may be readily moved from place to place, thereby insuring untainted ground. The space under the houses will serve as a shelter from rain as well as the sun and will be much appreciated by the stock. This plan has been adopted by farmers in Europe (who do not make their poultry a specialty) and they are thereby enabled to put their stock over the stubble after the grain has been mowed and get them to act as gleaners of the fallen seed, so that nothing is lost.

I consider 50 or 60 fowls enough to be assigned to one house, as overcrowding is one of the chief things to be guarded against. The internal arrangement of the houses used by Mr. Geffroy are, with the exception of the food and water, quite to my mind, and if the nest boxes are made large enough and kept scrupulously clean, there will be little trouble with the hens using them.

Instead of placing the food and water inside the house, I would place these commodities at a respectable distance therefrom. There is nothing worse than encouraging poultry to be lazy, and while I used to feed the soft food in hoppers near the houses, I invariably scattered the grain around and gave them a little work to find it and, where practicable, this plan may be adopted with advantage, as it will train the stock to forage on their own account.

The best breeds to keep will depend pretty much upon the purpose for which they are kept and the taste of the owner. The dark Brahma is, and always has been, my favorite from a show point of view, but for all-round qualities I think the colored Dorking superior to any other known breed. I have not seen them mentioned in your columns, yet to the farmer, to the poultry keeper, and to the epicure, there is no finer fowl living. It excels all in weight, early maturity and quality of flesh, and it can compare favorably with any other breed for hardiness and laying qualities. Then follows the Plymouth Rock, Brahma, Langshans, Game, Indian Game and Wyandotte, all useful breeds, while, if a cross is wished, any of the first four named breeds will answer the purpose admirably.

If farmers would only give this matter a little attention and try the experiment, they would find that it is a very pleasant as well as a very profitable branch of their business, and if once they catch the idea, very few of them will give it up.

Personally, I would keep pure-bred birds only, and that, too, of one breed, as thereby, with the exception of a few breeding pens, the stock will not require to be separated nor any chances run of a cross breed.

Poultry clubs and shows are great incentives to poultry-keeping and they ought to be encouraged and well supported. Every county ought to have its club and show, while once a year, at least, there ought to be a State show, supported by every one of the county clubs, when I venture to predict that thousands of people will catch the "fever" and the industrious, intelligent poultry keeper will be rewarded. It does not require a million dollars nor a million acres to become a fancier, or to breed poultry successfully, and it is a fact worthy of note that in Great Britain the best poultry and dogs (if I may mention another paying hobby) are bred by what may be classed as the poor people, and sold at fabulous prices to those who have more money than brains and who fail where the poor man, who studies his business, succeeds. It must not be forgotten that the cost of keeping pure-bred stock is no greater than keeping mongrels, and although they may cost a little more at first, they will pay better in the end. It is on this rock that many an otherwise good farmer founders in this branch of his business, and it is not to be wondered at, as mongrels cannot compare with pure-bred stock in any way. Let farmers then take up stock-breeding on a proper basis, and they will find that their stock is not only "a thing of beauty and a joy forever," but also a very profitable investment. Yours,

J. A. BERNARD-HOSSACK.

A Penn's Grove Poultry Grower.

E. A. Hoadley, living near Penn's Grove, says the *Sonoma County Farmer*, has 16 poultry houses, 10x12 feet and 7 feet high in front by 4 feet in rear. All have cement floors, which serve the double purpose of keeping out vermin and ease in keeping clean—two of the most essential points in poultry-raising. He keeps about 1200 hens and is raising this season about 500 chickens. Everything on the place is very clean and not one sick chicken did we see. Mr. Hoadley buys his feed by the carload, and of course gets it at carload rates. He feeds wheat, middlings and barley, which is cooked three times a week in summer and every day in winter, in a large kettle holding 40 gallons, which is set in a cement furnace conveniently located in the yard, and requiring but little fuel for cooking purposes. At night the kettle is tightly covered, and in the morning his fowls have a warm, healthy breakfast. He does not deal it out in dippersful here and there, but loads the feed on a sled and drives from one house to another until the flock is all fed. He feeds in troughs about 10 feet long, 8 inches wide and 4 inches deep. After feeding is over, barrels of water are put on the sled and the round made again. The water is put in "V"-shaped troughs where the fowls quench their thirst at will. After feeding and watering, every perch goes out in the sun and the floors are cleaned of all droppings. The poultry range of 10 acres is planted to corn or potatoes, thus serving a double purpose. The balance of this 20 acres is planted in corn. His henhouses are built in rows running north and south, and 180 feet apart each way. There are several capons running around in the yard that look very nice. Mr. Hoadley says from this time on he intends caponizing all his surplus cockerels, as they take on more flesh and bring a better price in the market.

THE VETERINARIAN.

Answers to Questions from Rural Readers.

Nasal Gleet, Chronic Catarrh, Ozæna.

405 BRODERICK ST., S. F., July 29, 1892.

TO THE EDITOR:—The definition of this disease is a continuous, remittent, or intermittent discharge of a varying character from the nasal chambers. After a protracted severe case of simple catarrh, and where debilitating influences, either extrinsic or intrinsic, have been in operation, it not infrequently occurs as part of the general atony that the secreting membrane of the nasal chambers and upper air passages require a longer time than usual to regain its normal tonicity and healthy function, during this time exhibiting, as the most marked feature of the unhealthy condition, a continuous or intermittent nasal discharge.

Treatment.—In every case of chronic nasal catarrh, until we are thoroughly satisfied that the discharge with which we are dealing is not glanders, and not likely to propagate itself, the animal must be strictly isolated and the stable utensils kept solely for that animal. The horse ought to have rest or very light work, good and liberal diet, and to be under the influence of correct sanitary conditions. The most successful constitutional treatment, medicinally, I have found consists of arsenic or salts of iron. The arsenic can be given as Fowler's solution, half an ounce morning and night in the food or water, with one drachm of the powdered sulphate of iron. Sulphate of copper in one-drachm doses is also highly recommended, powdered cantharides from three to five grains administered twice daily.

As a local application, the astringent tonics of the mineral salts, as the sulphate or chloride of zinc or sulphate of copper, five grains of the zinc chloride to 40 grains of sulphate of copper to the ounce of water. There is no merit in nasal injections unless the liquid is regularly distributed over the whole surface of the nasal membrane. This can be only accomplished by tact and patience.

Iodoform may be driven up the nostrils once or twice daily by means of an insufflator. This method of local stimulation I have seen attended with much good.

If this disease does not quickly succumb to the above treatment, a surgical operation will have to be performed, which consists in trephining the sinuses of the head.

Nasal gleet may arise from other sources than catarrhal inflammation, such as external injuries, caries of the upper molar teeth, alveolar abscesses, disease of the facial bones, and in cattle and sheep from the lodgement of the larvæ of the *œstrus bovis*.

LOUSINESS, PHTHIRIASIS.

Horses are liable to a disturbed condition of the skin from the residence there of at least three species of what are ordinarily known as lice. Two of these are individuals of separate families of the same order, and the third is an accidental visitant received from cohabitation with poultry. Of the two former, the *Hæmatopinus equi* is the proper pediculus and a true blood-sucker; the other, the *Trichodects equi*, lives among the hair and on the skin, not finding its food supply from the blood direct, but in the exuvia of the structures. These two species are more apt to be found on horses neglected or suffering from poverty, while the inroads of the louse of the domestic fowl are regulated by the poultry houses, their condition and proximity to stables.

Treatment.—In the case of the poultry louse, *Gonioctes Burnetti*, any attempt at the destruction of those on the horses will be unavailing without the removal of the original cause. In the application of a wash to the skin, the difficulty is not that of destroying the insects, but of obtaining at the same time the destruction of their eggs. The best way is to repeat the applications of parasiticides until the whole are destroyed as they appear. There is nothing better than an infusion of stavesacre seeds, or tobacco, in proportion of one ounce to 20 or 40 of water.

A. E. BUZARD,
Veterinary Surgeon.

PARTIES looking for a favorable location for a starch factory have found the conditions favorable at Petaluma, Sonoma county. It will afford a fair and assured market for large or small potatoes and give new impulse to that crop. The parties interested intend to have the manufactory in running order for the crop of this fall.

HORTICULTURE.

Exhibits of Olive Products.

The Olive Growers' Association of California, at the meeting held in San Francisco, July 21, 1892, decided to make an exhibition of olive oil and olives at the Italian-American exposition at Genoa, which opened last June and will continue until December next. The association requests that those desiring to exhibit their products shall send no less than one case of the finest olive-oil they have. Exhibitors will find no difficulty in transporting goods to Genoa, there being direct communication between New York and the port of Genoa, and to save time should be sent from here to New York by express. Exhibits will be free of tax and exempt from custom and municipal duties. Cases thus to be sent should be addressed to E. DeGiovanni, Italian-American Exposition, Genoa, Italy. For further information address the agents, Cevasco Bruzzolara & Co., 632 Montgomery street, San Francisco, Cal.

The association also decided to make an exhibition at the Manufacturers, Dealers and Consumers' Food Exposition, to be held at Madison Square Garden, New York, under the auspices of the Food Manufacturers' Association, the object of which is to promote the manufacture, sale and consumption of wholesome food products, etc. The association desires to make a collective exhibit from throughout the State, and is now in correspondence as to space, cost, etc.

Those desiring to be represented in said exhibition are requested to at once let us know what they wish to exhibit (olives or oil) and in what manner put up. No less than one case is requested from each grower. The only expenses to be incurred will be the cost of space and the care of the exhibit while on exhibition, this expense to be met by assessment, each exhibitor paying his pro rata and no more. Freight or express charges to be paid by the exhibitors.

The producers of olive oil are also requested to forward to the the Columbian World's Exposition at Chicago at least one case of their finest olive oil, and pickled olives, put up in the most attractive style possible.

B. M. LELONG, Secretary.

Assessing Fruit Trees.

William H. Robinson, Secretary of the San Joaquin County Board of Horticultural Commissioners, has filed his monthly report with the Board of Supervisors. In it he said:

It gives me great pleasure to report that the cultivation of fruit trees in San Joaquin county is gradually increasing—notably peaches, apricots, prunes, pears, almonds, and olives. There has been no boom, but a steady enlargement of the area devoted to its culture, and good fruit is sure of fair prices and a steady market. No distinctive effort has been put forth to present the claims of this county as a fruit-growing region to the notice of the assembled world at the Columbian Exposition, and San Joaquin promises fair to be an unknown quantity at Chicago. Efforts heretofore made to establish a cannery have failed from lack of interest, inducement or faith in its ultimate profits as an investment, or in the business capacity of its promoters. Individual enterprise, however, promises to pioneer the way. It will soon become necessary to establish them on large orchards like the Armstrong tract and the Langford colony in order to can the surplus fruit when there is a glut in the market, or it becomes too ripe for shipment.

In view of the relation I occupy to the horticultural interests of the county, it is reasonable that I also report upon the methods of assessment and taxation of fruit trees, which, like codlin moth, phylloxera, scale and other insect pests, aid to destroy them and discourage all effort to raise the same. It is an Eastern proverb that the paramount duty of every man is to plant a tree, build a house and raise a child. The tax gatherer has included the first two in his category, leaving the rather unprofitable burden of the last wholly exempt, in view of the fact, possibly, that it is not wise to "kill the goose that lays the golden egg."

The constitution of the State provides that growing crops shall not be taxed. The interpretation of this provision has been practically applied to wheat, barley, oats and rye. If peach trees and wheat grow side by side, or jointly occupy the same ground, the wheat is not taxed, while the peach trees are. Why? One is taxed as an improvement and the other is not. Why? Both are valuable additions or ameliorations made and cost equally as much labor.

It is not possible for the Assessor to tax the oak, ash or willow trees growing in a state of nature, nor would it be possible to tax trees as such, if they grew in a state of nature, although they produced the most valuable fruits—even oranges, peaches, etc. Why? Because they are not improvements in the legal sense. Since the cost of cultivation of corn, beans and other vegetables are not taxed as improvements, it is fair to assume that the whole tax levied is made upon the stump and leaves of a barren apricot, peach, pear, or grapevine, since by law the growing fruit is not taxable.

The purchase and planting of a fruit tree costs about 25 cents each, and vines 50 per cent less. For three years it is not customary to tax them; subsequently they bear fruit and come within the category of taxable property. Why? Because they bear fruit; but growing fruit is not taxable. Because they produce an income; but an income is not taxable. But they are taxed as an improvement. Why an improvement? They are not for three years, and the growth and maturity of plant life is not a fit subject for taxation, and during those years the trees have become a portion of the realty. But the land becomes more valuable, which is true; therefore it must be taxed. How? Simply as land. Here another provision of the constitution intervenes and says that improved and unimproved land shall be taxed the same. How! then can an orchard be taxed more than other lands without orchard? The whole theory of taxation of fruit trees as an improvement, as enunciated by the State Board of Equalization, runs in a vicious circle of false reasoning that is a disgrace to the intelligence of the age. The undisguised spirit, motive and intent of this provision has been wholly ignored in the tax upon fruit trees.

If it were true that taxation was legally placed upon land according to productive value (which is not true, in fact), it would still be difficult, if not impossible, to show that the productive value of a fruit crop was any greater than of a crop of onions, tomatoes or wheat. Dried plums retail today for five cents a pound in the market. Any intelligent man can soon find out that this will not pay the cost of production. The State Viticultural Commission in a report made by Commissioner West, a year ago, warned the public against planting raisin grapes in view of overproduction, and consequent loss. Since then raisins have been brought here, shipped from Fresno at $25 per ton. To assess lands growing fruits at $100, $50, $25, or even $10 per acre additional in view of these facts is absurd, unjust and iniquitous.

Very few that are not engaged in the business appreciate the care, labor and expense involved in planting, growing, cultivating and pruning fruit trees, to say nothing of picking, boxing, canning, drying, shipping and marketing their products. This has, as a rule, so far been attended, with few exceptions, with loss rather than gain to the producer, taking the inequitable tax into consideration. Some more rational method of assessing and collecting taxes upon growing crops (misnamed improvements) should be devised, and the power of the State Board of Equalization restricted or defined in matters of classification, or the fruit industries of this State will soon be paralyzed and our fruit growers bankrupted.

Horticultural Displays at the World's Fair.

FREIGHTS ON DISPLAYS.—J: M. Samuels, Chief of the Department of Horticulture, writes to the Secretary of the State Horticultural Society as follows:

Under the present arrangement between the World's Columbian Exposition and the railroads of the country, the latter agree to carry exhibits to Chicago at regular schedule rates, and return them, to the regular owner, free of charge. On account of the perishable nature of most horticultural products, the above terms will be of no benefit to this large class of exhibitors, as they cannot be returned to the original shipper, nor are they in condition to be sold in Chicago after having remained on exhibition the requisite length of time. I would suggest that all State and other horticultural societies take the matter up at their summer meetings and pass resolutions requesting the railroads to modify this agreement in such manner that the shippers of perishable articles may receive the benefits of a half rate, at least, to the Exposition, and the same on articles which are returned. Copies of such resolutions should be forwarded to all railroads running through the territory covered by the Society, and a copy sent to this office for reference to the Traffic Manager of the Exposition. This is a question that might also be taken up by the different State World's Fair Boards, as they will have great influence with the roads doing business in their respective States, and may result even in securing free transportation over at least part of the route for collective exhibits made by and at the expense of the State organizations.

PUTTING UP FRUIT SAMPLES.—The Southern California World's Fair Association distributed 4800 glass jars and tumblers during the first three weeks of July. The committee is having great difficulty in supplying, as fast as needed, glassware for the six county organizations in the southern district. Pomona has filled her first invoice, and now wants an entire carload of jars. Riverside telegraphs for 240 jars and jelly tumblers, while Orange, Ventura and other counties are making equal demands. About 2000 jars were received from the East on July 23d, and it was thought this supply would not last more than one week. The glassware and dried fruit packages are furnished free by the Association to those donating fruit for the exhibit. Frank Wiggins, secretary of the Southern California World's Fair Association, writes to the State Commission as follows, with reference to his experience in the matter of liquid preservatives for putting on fruit: "The most successful preparation that I have been able to obtain is what is known here as the Baker compound, which is used in preparing water similar to the sulphurized method as given by Prof. Hilgard. It is more easily prepared and produces a better effect, although bright-colored fruit does not retain its color. This process we used at the Los Angeles Chamber of Commerce for two years with more satisfactory results than any other preparation. Just now we are having good results from the use of bisulphide of soda; also the salicylic preparation. If our preservatives prove failures, we will have a good stock of empty glassware to take to Chicago, to be filled with fruit after we reach there." San Diego county growers are putting up fruit for the Columbian Exposition in four ways: In salicylic acid water; in alcohol; sulphurated water; and in syrup made of the very purest white sugar. All those who have experimented in the matter of putting up fruit in jars agree that to effect the best results the fruit should be large, not too ripe, and must be carefully handled.

WASHINGTON FRUITS.—William L. LaFollette, Superintendent of the World's Fair agricultural exhibit for the State of Washington, is arranging for a complete model farm in miniature for the Washington exhibit. He will have a farmhouse, barns, fences and fields of growing grain. There will be fields of summerfallow, with tiny gang plows and furrows. Threshers, binders, and all other farm machinery will be shown in miniature as they appear when in use in the West. Mr. LaFollette will also erect a large cold storage safe with glass sides and neatly arranged shelving. The fruits of Washington will be shown in this during their season, and collectors throughout the State will renew the supply by sending fresh fruit daily to Chicago, by express. First, the safe will be filled with luscious strawberries, and from that on during the succeeding seasons, as the fruit ripens, the cold storage fruit display will be kept replenished with all varieties of ripening fruit from May 1st to October 30th, 1893, or during the entire time that the Exposition is open.

BEARING ALMOND TREES.—P. B. Armstrong, President of the Armstrong Fruit and Nut Co. which owns in the northern part of San Joaquin county one of the largest orchards in the world, covering 1015 acres, is preparing to send to Chicago 10 almond trees in full bearing to replant them on the Exposition grounds. The trees will be transplanted in boxes each four feet square. He also proposes to have as fine a display of peach and other fruits in jars as any fruit grower in the country. With this object in view he picked off nearly all the blossoms on certain trees, leaving only a few to mature, thus making the fruit larger and better. He expects to place on exhibition no peaches that are less than a foot in circumference.

JUDGE J. S. STABLER, an expert in fruit matters, says that the growers, dryers and canners of fruit in this State this year will probably make more money than in any preceding one. Last year the crop here of all deciduous fruits was phenomenally large, which, however, had to contend with the largest crop, including apples, east of the Missouri river that had been harvested during the past ten years. This year California will produce fully as many peaches as last, nearly as many apricots and nectarines, and about half as many French prunes, while the pear crop promises to be even larger, and prices this year will rule nearly twice as high as last. Ever since the organization of the California Fruit Union, facilities for shipping and marketing green fruits have been improving; refrigerator cars have become eminently successful; new markets have been opened, and the auction plan for selling fruit immediately upon its arrival in Eastern cities has worked well. Fruit growers flatter themselves that they are insured two prosperous years, as a very poor prophet could foretell that the Columbian Exposition in 1893 will be the means of greatly enhancing the consumption in that line. It is noticeable that the leading canneries are receiving orders from the East and Europe well up to their packing capacity.

FRUIT MARKETING.

What the Santa Clara Exchange Will Do.

Vice-President E. F. Adams, of the Santa Clara County Fruit Exchange, publishes in the San Jose *Mercury* a letter outlining the work of the organization, which all those contemplating similar movements will read with interest. We quote as follows:

I will begin by saying that the Exchange will certainly buy a lot, put up a warehouse and begin business. The present directors will not do this until, in their opinion, we are entirely ready. I presume that the directors will buy a lot whenever a suitable one offers at a proper price, and during the winter and spring call in sufficient funds to build a warehouse, so that our successors can begin upon it as soon as they are elected and have it ready on July 1, 1893. The reason for so little haste is the belief of the directors that, with prices as they are, most of the dried fruit will pass out of first hands and out of the county without the aid of the Exchange, because growers will be satisfied with prices offered and think it better to take them than to trust to the chances of doing better through the medium of an Exchange which has got its reputation to make. If we are mistaken in this, and if the business offers, I think we shall lease a warehouse and attend to the business in that.

I made this statement at the outset because I am satisfied that it is true, and I wish the fruit-growers of the country to understand it and not to be misled by statements to the contrary emanating from interested parties. The commission men and fruit-brokers of the State, in pushing their own business, have practically erected the fruit business of the State and made it possible for fruit-growers to live, and this has been done, I think, not by crowding out the products of our brothers in the industry elsewhere, but by tempting multitudes who have not been consumers of fruit, and by taking advantage of the early ripening of our product. We may be sure that these dealers fully appreciate all that they have done for us, and view with extreme dislike any tendency toward a cooperative movement on our part to do the very necessary work which they are now doing. They honestly believe we shall fail for lack of mutual confidence and of business ability and experience among growers. They say among themselves, and believe it, that we farmers are a cantankerous lot, ignorant of business methods, suspicious of business men, unwilling to pay for business ability, and unable to grasp the scope of a large business enterprise, but quarrelsome over unimportant details, and certain to go to smash on the rocks of our own ignorance and obstinacy. This is the honest opinion they have of us, and they say we shall not hold together for a single season. They believe that in so far as we have any success, it will be by the efforts of some one or more firms shrewd enough to capture the enterprise and steer it where it will do themselves the most good. But while this is what they think and say to each other, what they say to us is very different; the pushing and useful men whom they employ to contract for them tell us that this is a movement "exactly in the right direction;" they heartily hope it will succeed, but "dreadfully fear it won't;" in fact, it is "generally understood" already that "Beck has got it," or "Weber & Co. have got it," or the "San Jose Fruit Packing Company has got it," or somebody else has "got it;" it "may be all right," but the really safe way is for the growers to "wait a little" and see what is done; in the meantime they are ready to handle the fruit, and guarantee "several per cent better than the Exchange can do."

Now, the directors of the Exchange hear of all these things as soon as they are said, and while it would be undignified and improper for them as a body to take public

notice of such floating gossip, as an individual in a position to know I wish to say that there is not the slightest foundation for any of these stories; nobody has "got" the Exchange except the growers themselves, and I don't believe any one else is trying to get it. A clear majority of the directors have no interest in the matter except as producers, and the canners and driers who are joined with us on the board went into the movement in good faith, on the distinct understanding that the enterprise was to be controlled by the producers, entirely willing that it should and cordially giving us the great benefit of their experience in perfecting our plans.

I think it important that fruit-growers generally should understand how it is that the interests of canners and driers are one with those of the growers in this movement. I find that many—perhaps most—growers think them our natural enemies, and that they would not join us except with the intent to devour us. Take the canners for example; when they have bought and put up their fruit they naturally wish to get all they can for it; canned fruit is comparatively an expensive product, and their worst competition is from the dried fruit, which is much cheaper; a demoralized dried fruit market, enabling large consumers to stock up at very low rates, tends greatly to reduce the sale of canned goods; the majority of the dried fruit is of varieties that canners use little or not at all, so that increase of price of the fresh product does not affect them; and in the case of apricots, peaches and pears, which are both canned and dried, the canners will gain much more by a general stiffening of the dried fruit market than they will lose by any probable increase in the price of raw fruit, because the sum paid for the fruit itself is but one part of the cost of the canned product, which involves more outlay for sugar, labor, machinery and boxes than for the fruit itself. The position of the driers is but little different, but leads to the same conclusion; when they have bought and dried their fruit they wish to get all they can for it. The worst competition they can have is from the growers who retain their fruit, and whose interests are not large enough to warrant the expense necessary to obtain accurate information about the markets of the world. The driers desire these growers to organize, get their fruit together in one place, and inform themselves about the market. Then all will be able to obtain whatever prices the state of the market will warrant and all be prosperous together. No plan proposed for the Exchange interferes with individual trading among those who desire it and there will always be a great deal of business of that kind. In the conduct of the Exchange there can be no conflict among growers, producers and raisers. Some driers may suppose their interest to be served by keeping the growers discouraged and ignorant in order that they may buy cheaply, but the trouble is that the disorganization and ignorance continues after the driers have secured their stocks, preventing the driers from securing the advance which they might otherwise hope for. They are in the position of the merchant trying to compete with the manufacturer in the latter's own goods. It cannot be done.

Further Work by the Raisin Producers.

On Saturday, July 30th, the Fresno raisin growers assembled again to advance their cooperative movement. William Harvey, the secretary, made the following address upon the progress which has been made so far, and the condition in which the association is at present:

"Up to 6 o'clock last evening there had been signed 33,160 acres, and 2000 more are reported from Tulare.

"Packers who last year put up 1,500,000 boxes of raisins have signed. They say that the reason for low prices last year was the scarcity of money. This condition does not exist this year. Last year the growers had to sell at figures which netted the grower 1½ to 2½ cents for their raisins. There is no overproduction, and this year's crop will work off easily.

"It was thought for a while that A. D. Barling and A. Griffin had violated the compact—the former by buying at 3 and 4 cents and the latter by selling at those figures. But, on inquiry, it has been learned that Mr. Barling furnished the trays and does the hauling, thus making an equivalent of 4½ cents per pound.

"There is no excuse for any man selling for less than the stipulated price, as the bankers of Fresno will advance money on raisins which are in packing houses, and any grower can realize 50 per cent of the value of his crop as soon as it reaches the packing house, and he is not forced to sell for less than 4½ cents."

Secretary Harvey then read the following communication, which is self-explanatory:

FRESNO, CAL., July 29, 1892.

William Harvey, Esq., Secretary Raisin Growers' Convention. Fresno, Cal.—DEAR SIR: I take pleasure in reporting to this convention that, pursuant to the call of the chairman, about 15 of the raisin packers of this county were together all of Monday last, in making minimum selling prices. For packed raisins, the f. o. b. prices finally agreed upon are as follows: Fancy layers, $2; 3 crown layers, $1.70; 2 crown layers, $1.50; fancy loose unfaced, $1.45; fancy loose faced, $1.50; 3 crown loose, boxes, $1.35; 4 crown loose, sacked, 6½c; 3 crown loose, sacked, 5½c; 2 crown loose, sacked, 4c; seedless muscatel, 4½c.

These prices are based on 4½ cents for good raisins in the sweat box. We have now the signatures of 22 packers, aggregating about 1,500,000 boxes, and we have promise of several others that will sign the agreement adopted at the last State convention, and some have declined to sign it at all.

We are, however, hopeful that the required 95 per cent will be obtained, and to secure that desired end, a committee has been appointed consisting of G. B. Olufs, F. Romaine and G B. Noble, to get such legal advice as may be necessary in drawing up a paper that will be binding upon those packers who sign it.

It is further agreed that this committee shall either personally interview or correspond with those packers who have not yet signed the agreement, and obtain from them their signatures, if possible, or in any event a definite statement of their attitude toward this movement.

I am, GEO. B. NOBLE, Chairman.

After discussion, it was decided to form an incorporation to advance the work thus far done by the growers and packers as an association.

METEOROLOGICAL.

The Weather Bureau and Its Relation to Agriculture.

Read by B. S. Pague, U. S. Weather Bureau, Portland, Oregon, before the Oregon State Grange, at its annual meeting recently held at Albany, Oregon.

The honorable Secretary of Agriculture, the official head of the agricultural intersts of the United States, says of the farmer of the future that "he must be sufficiently well educated in science as far as it is applicable to agriculture, and he must be intelligent enough to study his surroundings and to apply his knowledge to the conditions about him. The farmer of the future will be a business man, able not only to compel his soil to do its best in the matter of production, but to study the markets and know what will sell the best, and what will command the highest price. The farmer will keep his accounts like any other business man. As to the question of his education, when you consider that he must have a knowledge of all the principles of animal and plant life; that he must understand the constitutent elements of soil and fertilizers, and that he must have some knowledge of meteorology, chemistry and the other sciences closely connected with crop raising, you will see that the ideal farmer of the future will have to be not only a brainy, but a well educated man." This opinion coming from the source it does, carries with it a weight that should be impressed upon every tiller of the soil throughout the country in order that the coming generation may be able to cope with those conditions which will most likely surround the then farmer. It is my privilege to engross your attention for a few moments on one of the subjects which the farmer must know in the future and which he knows more of now that he did five years ago, and that is meteorology or the science of the weather. There is no element or collection of conditions of any order or degree which enters so minutely into all our being and vocations as does the weather. Upon the climate of a place depends the physical being, the productions, the existence of all animate as well as inanimate things, and any thing which so affects us should have more study and investigation than is generally accorded to it.

The National Weather Service, a bureau of the United States Department of Agriculture, is a creature of Congress, for the purpose of making observations and reports of storms, the investigation of the growth and development of crops, the giving of information to mariners relative to storms that may affect them, the giving of information relative to rains and fair weather, the approach of frost, the collection of statistics relative to the efforts of the weather on health, statistics for the engineer, the merchant, the physician, the lawyer, for, in brief, all classes, all professions, all people.

The Weather Bureau is an organization for the people, no special class, but for the public in general, and owing to the peculiar effects of the weather on agricultural operations, it is of no greater benefit to any class than it is to the farmer.

It is of value to the farmer to know the amount and distribution of rainfall, the extremes of temperature, the amount of sushine, evaporation, the temperature of the soil at various depths, the temperature of the rays of the sun, the radiated heat from the earth, the occurrence of frost, and, in fact, all of those peculiar weather conditions upon which the growth and development of crops depend.

The weather enters directly into your daily occupation and I have no doubt, that many of you have a personal diary in which you note daily the weather changes and the effects of the weather on your crops.

The Oregon State Weather Service cooperates with our national bureau. The instruments used by the State service are furnished in part by the State and in part by the national bureau. Salaries and office expenses are borne by the general government. The State service is for the purpose of going into more minute investigation concerning our State's climate and production than the national bureau is able to do, and it is for this purpose the State legislature, in 1889, so wisely created the State bureau.

We now have instruments, especially thermometers and rain guages, all of standard make, distributed, at least one set to each county, and thus have such a distribution of instruments that the general and quite minute conditions are ascertained, recorded, and from a common basis of standard instruments are comparable,

The general climatic conditions of the State are fairly well understood, but it is the local peculiarities that affect productions; for example, the frosts of April 12th to 17th generally injured fruit. Now, most of you know, possibly, though I hope not, from sad experience, that the fruit on low lands was more seriously injured than that on the higher ground, and it is these occurrences, these peculiar locations and situations that need to be examined into. The Weather Bureau cannot examine every farm, nor every section; these are the things you farmers must examine into. Practical experience is very good, but theory mixed with practical experience is better, and, by investigating, you form theories, from the theories more investigations, then the practical work. Your Agricultural college and Experiment station is for theories, investigations and experiments, for the purpose of demonstrating just what can be produced under certain conditions, or what results follow certain conditions.

The Weather Bureau is now conducted on a plan in keeping with the spirit of the times; it is in a stage of advancement; its object is to benefit all, and you farmers we wish to have cooperate with us and see if we cannot be a mutual benefit. A merchant, for example, buys a large stock of goods and his object is to sell them at the highest price he can get for them; and so to do that, advertises what he has for sale, the more he advertises the greater will be his sales. This assertion is at least true of those selling specialties. Now if the merchant, who does not produce that which he has for sale, advertises to sell it, why not the farmer, whom we all rely upon for good times financially and for sustenance,—why not he advertise what he has for sale. The Weather Bureau does that for him every week when it issues the weekly Crop-Weather Bulletin. In that report the general conditions, advancing week by week from seed time to harvest, are reported; it is an advertisement, for from those reports the farmers throughout the whole country can closely determine the approximate results of harvests, the general supply and demand, and hence the prices, thus allowing him to sell at the most advantageous time. The manufacturer sells, when he can, when the supply is the shortest and the price the longest, as it were; and through a systematic course of observation, comparison and study, the farmer may become just as successful in selling his own productions as the manufacturer is in selling his, or the middleman selling that which you produce.

The Weather Bureau is endeavoring to furnish to every community, having telephone or telegraphic connections, the daily weather forecasts. We do not claim these forecasts to be absolutely correct, but they can be relied upon at least four days out of five; and as investigation and comparison proceeds we hope to be able to furnish even better forecasts. The daily forecasts are of especial value to the farmer, and by the extension of telephone and telegraph lines the forecasts can be disseminated more directly to him. The weather forecasting is one of the practical benefits to the farmer. The weekly crop-weather reports is another, at least it is so univerally acknowledged. The collection of the various meteorologic conditions in their various phases, to be reduced and worked down to practical application, which is now being done, form so numerous a collection of examples that time will forbid their classification or numbers.

As the vintage season for the year is nearly at hand, the wine makers of the State are again confronted with the question of storage room. They must sell their stock to make room for this season's wine or provide additional cooperage. The wine product was short last year and will be this; but the wholesale men do not want to pay figures which the makers consider fair. They are counting on the wine makers having to sell to make room for the new crop. The St. Helena *Star* (Napa Co.) says there is only one way to overcome this state of affairs. The problem of cheap storage has been solved, and is now in operation by several large wine makers. Instead of securing small cooperage to be lodged in large and costly edifices, thereby adding to the cost of the wines, they have begun by obtaining cooperage at a low rate, the building being an after consideration. They first order large tanks from 12 to 15 feet high and from 14 to 16 feet in diameter, capable of holding from 14,000 to 20,000 gallons each. These tanks are sent from San Francisco, carried to their destination and set up in place by competent men at a total cost to the purchaser of 1¼ to 1½ cents per gallon. When these tanks are set up in the place, they may be inclosed in a cheap frame building which will be sufficient for all purposes. Heretofore they were obliged to pay 2½ to 3 cents per gallon for the privilege of storing their wine in cooperage belonging to another man and in another man's cellar, together with the incidental expenses of drayage, gauging, watching, etc. By following the process mentioned, storage costs 1½ cents a gallon at a maximum for the first year, the wine is always under the maker's own supervision, and the cooperage is his own. When the San Francisco wholesaler sees that the wine makers are independent, and not obliged to rid themselves of their old stock to make room for new, he will be less disposed to treat them like beggars and impress upon their minds that without his good wishes they must starve.

The Los Angeles World's Fair Committee has prepared a plan of cases for making an exhibit of curios at the World's Fair. The cases occupy a floor space of 20 by 40 feet, the center one being 10 feet high, 30 feet long and 10 feet wide. This is surrounded by counter showcases resting on a three-foot counter, where an attendant can stand as bodyguard over the cases. The cases will be nickel plated, the estimated cost thereof being between $700 and $1000. The committee on a nut exhibit has arranged a plan for a pyramid of glass showcases, covering a floor space of ten by ten feet. On top of the pyramid will be a glass column 15 feet high surmounted with a glass urn. The cases are to be filled with walnuts, the display of grade and quality being made from a front view of the cases, the column being the ornamental feature.

THE water from the Colorado river is flowing into Salton lake, Colorado desert, San Diego Co., but it has attained only a depth of 23 inches in the deepest part of the lake. For the past week the water has been at a stand, possibly lowered a little. The varying winds make it impossible to determine any fall. The salt works are in full operation, and there is good reason to believe there will be no suspension of work.

VACAVILLE, Solano county, is very active. The fruit crop in the valley is the best ever known, and already this season over $1,000,000 has been paid to the fruit growers for orchard products, and it might be said the season has but commenced. A corporation has just been organized for the purpose of erecting a fine hotel in the town. It will be three and a half stories in height, with all modern improvements.

THE big raft which was towed down from Noyo by the steamer Noyo consists of nearly 2,000 piles. It was 70 feet wide and nearly 1,000 feet in length. The raft was taken to Mission bay and broken up last week.

THE Southern Pacific has a special steamboat to travel up and down the Sacramento river gathering fruit for shipment East. The boat collects large quantities to be made up in carload lots.

The Home Circle.

Inadequacy.

The haste, the bended knee, the cry
With eager youth's ideal warm,
The sad love in the Master's eye
That followed the departing form:

Fine ardors quenched in caution cold,
Pure dreams that never dawned again—
A picture here to thrall and hold
The fleeting memory of men.

O weak and melancholy doom,
To his young heart's bright festival
To bid fair guests and not find room
For the most gracious guest of all:

To hail the Holy, greet the Just,
To ask, and crave, and still not stay,
Wistful and frank to almost trust,
Yet pass to gilded want away!

O boundless misery, dismal fate
Of minds that self but half subdue.
To reach, of loftiest life, the gate,
And valor lack to venture thro':

To cheat the infinite desire,
To halt and falter near the goal,
To kill the spirit's mounting fire,
To save the shadow, lose the soul!

A story old, yet vital now
The vision and the voice abide,
A beckoning shape with star-bright brow
Travels our paltry lives beside;

A voice that clear, persistent, low,
Softly persuades, and lingers long,
Breathes where the ghosts of beauty grow
From color, music, marble, song;

Calls in blue morn's bird-echoing air,
Murmurs amid the twilight pines,
Whispers in sighing streams, and where
The rosy globe of sunset shines;

Speaks from shy blooms in spring that b ow,
From the still stars that beam above,
From lights in conquering eyes that glow,
And the strange charm of woman's love.

For duty's self-forgetful pain,
For stainless thought, for service high,
Still pleads the urgent inward strain,
While one like God seems gliding by.

But we, indifferent, deaf and blind,
In mean, contented ways drift on—
Some moment we shall start to find
The voice hushed and the pilot gone

—Joseph Truman, in the Spectator.

Rest in Rose Forest.

Written for the RURAL PRESS by DUANE MORLEY.

Crossing the angle of a field, to save the remaining sides of the triangle by highway, I came upon Rose Forest. And a forest it was, such as could not have been outside of California or a tropical climate. Rose Forest. And I was taken with it, intoxicated by it. And, since seeing it, exploring it—its every nook; since inhabiting it; since devouring it with my eyes—yea, with all my senses—heaven, if there be aught of heaven for me, must be a place of roses, a wilderness of wildflowers. Now, I am as susceptible of sensations as a thrush or canary, and the first burst of Rose Forest upon my vision struck in upon me more eloquently than a royal pageant; as eloquently as a gorgeous sunset; and more perfectly than either or both would have done, because it was altogether unexpected. Imagine an acre, densely wooded, the rose trees thereof in fullest flower—rose trees gigantic as alders, dense as hazels, and nearly as clear of thorns as either—and before you is the picture I would present. For some reason it was unfenced, and, to every wayfarer free of access.

I am a paper hanger (known in the city as decorator, in the metropolis as embellisher), and there, with overalls and shears beneath my arm, I flung myself down in Rose Forest to rest. Mirabeau, while dying, cried: "Cover me over with beautiful flowers." While *living*, came that wonderful boon to me—embowered with roses. To enumerate the ten thousand fancies which the scene, the *presence*, inspired, would prove an endless task. From repose comparative, I passed into repose positive, perfect—and slept. The sleep had been superinduced by a full half day's walking, it then being high noon, and by a strolling band of sheep, with their monotonous, multitudinous nibblings and wheezy breathing. I must have slept an hour, awakening to hear the gossipy chatter of two middle aged dames. So near to me were they, that I could not move without attracting their attention; and, recollecting how nervous the sex generally are, I concluded to remain an unwilling—as I was an unbidden, listener to their talk. Practice makes perfect, and these middle-aged knitters (they were knitters as well as talkers) ran the yarn from their tongues as freely as they did that from their bobbins. And it was comprehensive; at least, so I judged from the multiplicity of subjects introduced, from the breaking of the leg of a horse to the reported engagement of a rural pair. After an hour, the yarn of their bobbins ran out, that of their tongues came to an end, and they went away. Once more alone, I arose from my couch of fallen rose leaves, freed myself from dust, revived myself by a face and hand-bath in a brooklet, and then resumed my course.

A few hundred yards therefrom, I came to an orchard, and in the orchard, a magnificently painted house, a thing unusual in rural districts. Upon a trellis and before the house, flourished a clambering vine, which the owner, as I rightly divined, was that moment trimming and training. Entering into conversation with him, I found that he was in need of just such services as I could render, and that he had an elegant pattern of paper and a full supply on hand. In short order we struck up a bargain, himself to help at the pasting, myself to lay the paper the day following. Our conversation that evening ran upon current politics and economic topics, little being said outside those lines; and I retired early, and next morning rose early to prepare for the work of the day.

You, reader, are probably as well aware as I of the fact that a decorator, like a barber, is nothing if not communicative; and, as I had a workbound listener, I rained the stream of talk upon him. I can work better when I talk, and I laid the paper on at a most prodigious rate. Three-quarters of the day were gone, and three-quarters of the paper placed, when I turned on the stream from its most recent sources.

"Bill Barlow's horse has broken its leg short off."

"Yes," said Benson, my employer, in response; "I knew as much, but how did you hear of it? You came from D. and by the D. road." I managed to evade a direct answering of the question, and after awhile started in afresh.

"The Jenkinses are in a bad way, I hear; quite likely they will lose their place, by Jake's running away, the old man's gambling propensities, and ——"

"How in time did you get wind of Jake's escapades and the old man's gambling? Do you know the Jenkinses?"

"Never saw one of them in my life," I slowly replied to the last question, at the same time wondering how I could avoid answering the first one. Just then Mrs. Benson came in to look at the two rooms done and the one we were finishing. I kept quiet—*shudderingly* quiet—about matters not strictly business; nor did Benson, as I feared he would, renew his inquiry. As the paper was difficult to paste, that was in my favor; besides, I rolled it on as fast as I possibly could, in order to keep Benson busy. Mrs. Benson finally withdrew, and, after a while, I launched out again.

"Jennie Dalton's siege with the smallpox has ruined her beauty; and they say that Will Plimsoll has forsaken her and taken up with his old love, Bessie Harlowe; and Kittie Jackson and Brad Furlong are engaged."

"Great Scott, man! you must be a wizard, knowing all things near and far. You ——" Just then a breechy cow broke through the palings into Benson's flower garden, and Benson, running out, blunderingly knocked the shears into the paste bucket and the wet paste brush off on to the figured side of the wall paper. He never stopped to look at the damage done within, in his haste to repair that without; and I shouted to him to take his time, as I could finish the room. That being the remainder of the work, I knew I would be unmolested with questions I did not care to answer, though self-provoked; and, as Benson was aware that I wanted to get to the next town that night, he had his horses and hired man ready to take me, as soon as the evening meal should conclude. And the meal was nearly over when Benson addressed his wife. Said he: "Wife, our paper hanger is a wizard, a seer, a clairvoyant, a mystery-monger or something like. He knows that Barlow's horse has broken its leg; that Jake Jenkins has run away, and ——" Just then I caught his eye and shot him a look both of entreaty and warning, and he subsided. Then we turned the talk into another channel, the while a *rosy* hue overspread Mrs. Benson's face. Just as I climbed into the carriage with the hired man, to leave, said Benson:

"How did you come by all your news?

"Whispered me by the birds of Rose Forest," was my answer.

"Just as incomprehensible as ever!" exclaimed Benson, as he turned to go back to the house.

—Dolly—"It seems strange that we don't hear of Charlie Bullion's engagement to Miss Flipp; she is continually throwing herself at his feet." Cholly—"Yes, my dear boy, but you must remember that women can't throw straight.'

Dross.

There is a rickety little house in one of the side streets of lower Second avenue in New York, a street where the unclean majority swelter, where they air bedding from the windows, and throw garbage into the gutters, and where, at night, whistles and whoops and cries tell of doings that even the unclean majority would scorn by day—a dirty, unhealthy, poverty-stricken street.

On the third floor, the upper floor of the house, there lived, some time ago, an old man and his son. Their name was McCloy. The old man was very feeble, and only went out to do his slim marketing. His son Danny supported him.

Danny was a lumbering "longshoreman," who worked hard, rarely got drunk, and loved his father with the rude, pitying love of a chuckle-headed Samson. The prevailing expression, in fact, of Danny's face was stupidity—the insurmountable stupidity of a man essentially uneducated, work-hardened and Irish—the stupidity of the mastiff.

These two always ate supper together, and the old man always told Danny about the dead wife, "a foine, hard-working woman," and Danny always amused his father, throwing scraps of food into the street to see the children and dogs scramble for them. Then every morning Danny would leave a little money at his father's bedside for the day's expenses.

When Danny had gone to toss boxes, bags and barrels, and to swear upon the docks, Mr. McCloy would set aside half of this money for his day's expenses, and put the rest in his straw tick. It was a safe bank, for no one ever disturbed the straw tick but Mr. McCloy. Mr. McCloy had done this ever since he had been too weak to earn a living, ever since he had been a dead weight on Danny's shoulders, and had thus saved quite a sum, nearly $80. No one knew it, not even his son; the $80 were all his own; and then, when he died, his son Danny would not have supported his father for nothing. So, year in and year out, Mr. McCloy denied himself the poor meals of the "eating-joint" around the corner, and hoarded up a reward for his son.

Of course, Mr. McCloy felt like a very worthy man, through his unselfish economy. A miser? No, only a wise and loving father; but still, for yellow-white old men a slowly growing silver hoard has, though unadmitted, a subtle charm, a self-rewarding essence.

One evening Mr. McCloy, according to his custom, was counting his money on the floor by his bedside. He was happy. He had saved 25 cents that day, an unusually large sum, for he had been too weak to go out, so that his meals had cost him nothing, for they were not. Lost in the vast calculations which this unusual gain had called up, he had not noticed the lateness of the hour, and he still counting and recounting the little silver coins, glittering in the dusk light. Clink, clink, clink, they went, as with trembling hands he dropped one upon another, adding up the sums with the laboriousness of a schoolboy and the precision of a bank teller.

Suddenly the door creaked in a complaining nasal tone, and, with a frightened gasp, the old man looked up. There in the doorway was Danny's towselled red head, the rest of his body vanishing in the blackness ness of the hallway, gaping in blank astonishment at Mr. McCloy and his money. The old man crowded back guiltily into the corner of his bed, and gazed, as though mesmerized, into Danny's little shining eyes, and Danny's little shining eyes gazed at the old man, slowly losing their look of wonderment and taking on the look of a suspicious, angry dog.

At last, with a clumping of heavy boots and a reeling gait, Danny made for the bedside, clawed up the neatly piled coins, and stood over the old man, swaying unsteadily, the last handfuls of money peeping through his clenched fingers.

"Danny," the old man began timidly, "hold a bit an' Oi'll"—the soothing spell of silence was broken, the drunken idiot became rabid. "Ye sneak! ye—ye ould thief! ye durty beggar!" he stuttered, "take that!" kicking the old fellow viciously in the belly. Then, with a volley of tipsy curses, he thrust the remaining handfuls of money into his overalls and reeled clumsily out of the door and down the stairs.

Night passed amid the whisperings of foul pain and pleasure in the poverty-damned streets; the stillness and grayness of the dawn came; the noisy, glaring day faded into dusk, and ever the sharp, smoky city wind crept in at the window, and the white hairs of the insensible heap on the bed fluttered airily; then, just as dusk was dimming into night, with a moan the heap on the bed opened his eyes. "Plase, Danny, plase won't ye wait, an' Oi'll tell ye"—he stopped speaking. Where was Danny? He had been there only a moment ago, how could he have disappeared so suddenly? Oh, it was all a nightmare. He hurriedly and anxiously thrust his hand into the mattress. The money was gone and—Danny.

With a beseeching cry the old fellow made for the window, and in a cracked, agonizing voice called his son. His strength failed him then, and he fell beside the window, with his arms dangling over the sill and his head resting on it; thus he knelt in a half-stupor, staring out into the street. Soon he began a whispering to himself, his voice growing gradually louder, "Yes, he'll come back, will Danny. Oi can spy him whin he passes the gas lamp at the ind of the shtrate; Oi'll watch that; thin Oi'll tell him all about it. Ah, Danny, Danny, ye must come back to dad!"

Dan McCloy had been on a spree. It was one of the finest sprees he had ever been on, and the best of it was that he had made a lot of money. It pays to go on a spree when you find $50 or $60 in your pockets on coming to yourself. Dan had not the faintest notion where the money had come from, but then—let well enough alone was a wise motto; good luck didn't come every day.

Of course, Danny felt rather guilty about staying away so long from his father—it had been three days since he had seen the old man; but Danny guessed it would be all right, with such a fine surprise for him, all this mysterious money; for money covers a multitude of sins.

Filled with these reflections, Danny steered for home, in a bunged-up, battered condition, but withal cheerful. As he turned the corner of his street he paused to reconnoitre. Suddenly a warm glow of repentant affection sped over his heart—there—up the street—at the window—there, was his father waiting for him—looking down the street—at him!

With a wave of his crownless derby Danny set out on a run for the house. "Hillo! Daddy! come back at last!" he shouted, as he drew near. He bounded wildly up the two rickety, rattling flights and burst into the room, crying, "Here do be a trate for ye, dad! Oi've made a sight of a—dad!" he suddenly exclaimed with a start, why—why doant ye spake?"

The old man was looking out of the window.

A shudder crawled over Dan's body, and a vague recollection of something that had happened in this room flitted through his brain. Slowly his memory grew clearer and his heart sickened; before the unwilling eyes of his brain, memory, returning, held up a clearing picture. He turned trembling hither and thither, glancing at the well-worn, tumble-down furniture, the dirty bed, with a slit visible in the mattress, the dead heap at the window, and felt the horror in his mind dumbly vouched for by every silent object in the room.

"O-o-oh!" he shuddered at length in a low, awakening tone.

The house was very still, as still as that pitiable heap by the window—it could not be dead! He stepped reluctantly toward it craning his neck on this side and on that to catch a glimpse of the face, while his heart drummed, and his ears sang with the stillness. At last with an effort he pulled it from the sill. It fell with a thump on the floor, startling the surrounding stillness. How stiff he was, the old man—with such a miserable sadness about the blue lips! His father had worn that expression when he died—looking out of the window to the street corner—watching for *him*.

When they found the old man dead two or three days after this (people in poor districts are not troubled with sensitive nostrils) the floor was covered with $50 or $60 worth of small coin; so to-day the dingy little brick house is pointed out as the house where the old miser starved to death amidst his money. Henry B. Eddy, in the Household Advocate.

About Centenarians.

Written for the RURAL PRESS by CLARA S BROWN.

Men of science have maintained that the natural life of man is nearer 100 years than the accepted three score years and ten. The nearer one approaches to primitive simplicity of living, the more likely one is to prolong existence until the century mark is reached. Late hours, improper food, excess of stimulants and the many strains upon the nervous system entailed by fashionable life should be avoided by the person who would acquire the experience of a hundred years in this mortal sphere.

We are told by investigators that the average life is 38 years, that one-fourth of the race die before completing their eighth year and one-half by the end of their 17th year, only one person in 100,000 living to

the age of 100. Married people, the sages say, live longer than the unmarried, tall persons longer than short ones. Women have a better chance of life than men while they are on the sunny side of 50, and a less favorable one after that. Persons born in spring have a more robust constitution than the children of other seasons.

It was an English lord who aptly remarked that many men nowadays die of old age at 45 and 50. There is a marvelous child in the United States whose development is so abnormally rapid that physicians say he will reach senility by the time he is 25.

Unquestionably, the duration of human life was longer in Bible times than it is now, and the rush and conflict of the 19th century are responsible for many premature deaths.

It is encouraging to read that in the last ten years the average man's life has increased five years and woman's eight years. The physical culture "craze" may have had something to do with this added longevity. Certainly the youth of to-day are more robust than those of the preceding generation and more interested in outdoor sports. There is every indication that the generation to come will be superior to its predecessors physically, if not mentally, in part as a result of the emancipation of women from conventionalities that forbade healthful exercises in the open air.

The would-be centenarian must not only be careful in his manner of living, but he must think life is worth living, cultivate a cheerful habit of mind and refrain as much as possible from worry. Hard work will not hurt him so much as a disposition to fret, and a conviction that this world is a poor place anyhow.

I have been taking an interest in the matter of centenarians for some time and have been surprised to see how many there are in the United States. We think it a wonderful thing if a resident among us attains the age of 100 years, yet investigation shows that this has occurred, and is occurring, in many parts of the Union. If complete data could be obtained, its publication would create astonishment, I am sure.

My own list of centenarians is too long for this article and I will only mention a few instances of longevity in this State. Some years ago a disgruntled visitor to California, after returning home, wrote a remarkable letter to the *Prairie Farmer*, in which he made the statement that no old people were to be seen here, the climate being unfavorable to advanced age. He had not heard of the Indian woman at San Gabriel who was 118 when she died, and who received such distinguished visitors as Helen Hunt Jackson and Mrs. Custer. There is now living in this city a Spaniard named Garcia who is 112 years old, yet walks the streets with firm and elastic step, has a clear memory and all his faculties well preserved. Curiously enough, he was once blind, but has recovered his sight. There is no doubt about his age, for he has a certificate showing that he was baptized by a padre at Santa Barbara in 1780. Ramon Gonzales, who died at Azusa some months ago, was known to be more than 100 years old.

Mrs. Sarah Davis, an inmate of the Colusa county hospital, is 101 years of age. Probably the oldest printer in the world died at Ventura last December aged 102—Jose de la Rosa. He was sent to Monterey by President Santa Ana in 1833 with the first printing outfit brought to California, and for many years printed public documents. A Spanish lady, Mrs. da Perris, died in Los Angeles a short time ago, whose family records proved that she was born in June, 1787. Her memory was vivid until two years ago. She recollected her cousins leaving Mexico and going to Spain to fight against Napoleon, knew all about the Mexican war, and witnessed the taking of Los Angeles by Gen. Fremont. Her eldest son died three years ago at the age of 85, and her first husband has been dead 72 years. Another veteran resident of California died at Napa last winter. Mrs. Martha Higuerra Frias was born in San Francisco 104 years ago, when the city consisted of three houses. At one time she owned a large amount of land under a Mexican grant.

This by no means exhausts the list of California centenarians, as I have made no special search for them. It is true that, with one exception, those I have mentioned are of foreign birth, but that is easily accounted for. Half a century ago, Americans on this coast were few and far between. Those who afterward settled here were either in the prime of life or the hey-day of youth. Fifty years hence California will challenge the world to equal the number of her centenarians, who will be living attestations of the rejuvenating powers of this sunny shore. Give them time to grow old, my skeptics, and they will astonish you with their abilities in that line.

Young Folks' Column.

The Little Tea Set.

Written for the Rural Press by Mary E. Bamford.

A boy was walking on the rails of the track as Miss Mildred waited in the little station. She looked after him. He had brown eyes and light hair, and he made her think of a small tea set she had at home. There were four plates and four cups left. Miss Mildred kept the little things in a paper at the bottom of her leather trunk.

The blue and the red were yet gay in spots on the little dented tray that belonged to the toy tea set, and one very dented, misused sugar bowl without any lid remained, with two teapots, one lidless, also. One cup was squeezed half out of shape, as if it had been rocked on sometime, and an inch-wide plate had on the bottom a remnant of something that looked like molasses candy considerably along in years. Some of the flowers on the side and the nose of one teapot had a little color, as had the bits of wreaths on one or two of the plates. The little cups were large enough so that a person might put the end of a finger into each. Miss Mildred seldom looked at the tea set now. Once in a while when she was going through her trunk, some little cup or plate would slip out of the paper or the limp folds would fall apart and disclose the old plaything, but she did not care to have the tea set around the house.

Miss Mildred's train came while she was thinking. The boy she had noticed came and sat opposite her in the car. He certainly resembled Ben. Miss Mildred went to thinking again about the little tea set. There had been three to use it, two sisters and a boy cousin. Mildred was two years older than the others.

It was well that the little tea set was not made of anything that could break, or its existence would have been short, for there were a great many birthdays and Fourth of Julys and merry-makings when Mildred and Annie and Ben had little dinners by themselves out of doors, and a great many tiny cups of milk and water were drank after the candy and the cake were eaten. The merry-makings often ended with the children staying over night at one or the other's house, and the three would lie in their beds and tell each other stories of wonderful giants, and of Indians who came to folk's houses so that people had to run and hide under the ash-pile, and Ben was always telling a sea story of a whale that some sailors took for an island; and the next morning, before the three separated, the little tea set must be used at breakfast, if Ben was staying at Mildred and Annie's house.

The three always had very good times together. There was a hole among the bales of hay in the barn at Ben's place, and he taught Annie and Mildred to slide down it. The three, one after another, would slip away, away down till they came to the floor under the bales, where there was just room for the children to sit down on the floor and look out of the big cracks in the side of the barn and see the hens and chickens walking around outside. The air in the hole was rather overladen with the odor of hay, but cookies tasted as well there as anywhere else, and the fowls that were fed through the cracks never expressed any astonishment that food should come from beneath so many bales of hay. The passageway leading to this place was quite narrow, however, and once Mildred, who had descended alone, had so difficult a task going up again, being stuck between the bales, that she was quite alarmed.

When the three children were at the girls' house, there were the goats to be played with. The children would make the little white kid lie down and they would cover him entirely with grass. He would lie still for a time, and then suddenly he would spring up and dance while they laughed at his antics. He understood the play at last as well as they did. He played "teeter" with the children, too, standing for a very little time on one end of the board, while one of the children sat on the other end.

Bales of hay might vanish and goats might be sold, yet the little tea set retained its attractions still. For years it was a constant plaything for the three, till they came to look upon it with a queer sort of affection, as a kind of companion that had been with them during so many good times that it must not be forgotten. And so, when the three children were grown to be seventeen or eighteen or twenty, at the times when they met they not infrequently hurried the old tea set out of its place in some cranny, and put the tiny cups on the dinner table, and after the real meal was over, the three would laughingly fill three bits of cups with tea and drink the half a dozen drops in memory of old times.

One day Ben came to see Mildred and Annie unexpectedly. The girls and their mother had heard that he thought of taking a voyage. Ben brought a boy friend with him as usual, and the four gathered around the old melodeon and sang and whistled the "Mocking Bird," and "Way Down Upon the Suwanee River," and "Annie Laurie," and then the mother had supper ready, and the old tea set was brought out. They laughed and talked, but Ben looked thin and coughed often.

"I came to say good-bye," he said. "The doctor says a long sea voyage will do me more good than anything else. I want to get rid of this cough, and I'm going to start next week on a whaler for the Arctic."

"Oh, I wouldn't!" protested Annie. "Supposing something should happen to you! The whalers don't always come back, you know. Supposing you were shut in by the ice and couldn't get out! We'd feel awfully! Don't go, Ben!"

But the young man laughed, and told how another family had cried over another boy who was going too.

"His sisters say he won't come back alive," laughed Ben. "Why, it's perfect nonsense! The whalers come back every year. You see their vessels in the bay. Will and I are going to eat blubber and grow fat. I'll bring you a piece of blubber, Annie, when I come back. You can see how you like it. Lots of whalers come back all right. Don't you worry."

He had made up his mind. He would go, and the girls tried to be cheerful, thinking that perhaps their fears were indeed womanish and silly.

The three drank again out of the little cups of the tea set. The boy visitor, Tom, was graciously allowed to take the fourth little cup and drink, too, and he laughed and they all laughed, though their laughter was pretense after all.

They went back to the parlor. They sang some more, and then Ben kissed his aunt, and Annie and Mildred, and said "Good-bye."

Ben stood in the doorway, smiling back, a light-haired, brown-eyed, fresh-cheeked young fellow. The girls' mother looked at him regretfully.

"Don't forget your father's God, Ben, she said.

"No," said Ben very gravely, "I won't forget."

They all kept the tears back bravely till he had gone. They wanted Ben to start off happily.

The whaling vessel sailed the next week. One letter came back from him several weeks after he had passed out of the Golden Gate. The whaler had met a home-coming vessel and sent word by it. Ben was better, he wrote, and they expected to be home by October, as the vessel was not provisioned for winter.

The girls wrote a long letter and sent it to him. They never knew whether he received it or not.

The months went by.

"Two weeks, and maybe Ben will come," the girls said to each other.

The weeks went by.

"He may come any day, now," they all said, as the whaling vessels began to come back one by one and take winter quarters in the bay.

Two or three of the whaling vessels did not appear. People who were interested in them, or who had friends on board, began to grow anxious. There were rumors of the ice closing in earlier than usual that year. There began to appear surmises in the newspapers as to the missing whalers. There was some hope expressed that the sailors might in some way have communicated with the natives on shore, and have obtained help.

The months went by. Again it was spring, again it was summer, again it was winter. A vague rumor floated from the North of a wreck or two that had been seen drifting.

The months came and went. Consumption, which had laid hold on the boy cousin, touched the girl.

"Does Annie cough much nights?" Mildred's father asked her, and Mildred, listening in the darkness, often heard the sound.

There came long nights of coughing and weariness, long days of faintness and panting for breath. There came a day when Annie's thin, thin face lay on the pillow. Her mother bent over her, her father stood fanning her, and the mother's voice said: "Though I walk through the valley of the shadow of death, I will fear no evil, for Thou art with me.

Annie faintly nodded assent. The dear eyelids drooped.

"Perhaps you will know, sooner than we shall, what really became of Ben," the mother had said to Annie after she knew that she was going to the land where sickness never enters.

"Yes," she answered, "I shall see him. I am sure I shall see him there."

It was a few weeks after this that Mildred first wrapped the little tea set in brown paper and put the bundle away in the trunk.

Miss Mildred's train stopped at her station. The boy that she fancied looked as Ben used to, rose and went into another car. He was not interested in Miss Mildred at all. How should he know of what she was thinking?

Miss Mildred hurried away from the station. She said to herself that she would go up another street and look at that place where they used to live so long ago when Ben came to play with Annie and herself. There was a horse car running on the street now, and most of the land that Miss Mildred's father had owned had been built on, but there was one little strip yet vacant. The strip used to be part of a hay field, and Miss Mildred remembered how, in the warm summer evenings, she and Annie and Ben had slid down the piles of hay, and afterward had sat in the pleasant darkness telling each other stories. There was an old pear tree yet in the lot, and next the fence were the little scrub oaks that used to bear small brown balls that she and Annie strung.

Miss Mildred thought that one of the houses must cover the spot where she first tried to ride Ben's horse, old Henry. She remembered the awkward, ready-to-fall feeling she had when she mounted. Near by was the place where Ben's father had stood the time she tried to frighten him with a large Chinese imitation spider held by a string.

"It is so long ago, so long ago," said Miss Mildred to herself, thinking of the three children who used to play together, "I wonder if Annie and Ben ever remember me nowadays? It doesn't seem as if they *could* quite forget."

After supper that night, Miss Mildred stood at the window a while and watched the stars. She was ordinarily a very busy woman and did not usually spend time standing still and remembering. After a while she quietly wiped her eyes, and, stepping back, let the curtain fall between herself and the outside world. She smiled.

"Some time," she said to herself, "some time, through His grace, I shall see them again."

There was no *miserere* in her heart; a *Jubilate Deo* sang itself there.

—Uncle Tom (shaving) — Yo', C'loe! Fotch me some o' dat babby powder to smoof mah face.

Aunt Chloe (to her grandson)—Chile, jest han' yo' ole gran'fadder that pot o' chimbly soot.

—"Are you pretty well acquainted with your mother tongue, my boy?" asked the schoolmaster of the new scholar.

"Yes, sir," answered the lad timidly, "ma jaws me a good deal, sir."

—Mamma—How many sisters did your new playmate tell you he had?

Willis—He's got one. He tried to catch me by saying he had two half-sisters, but he'll find out I've studied fractions.



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Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

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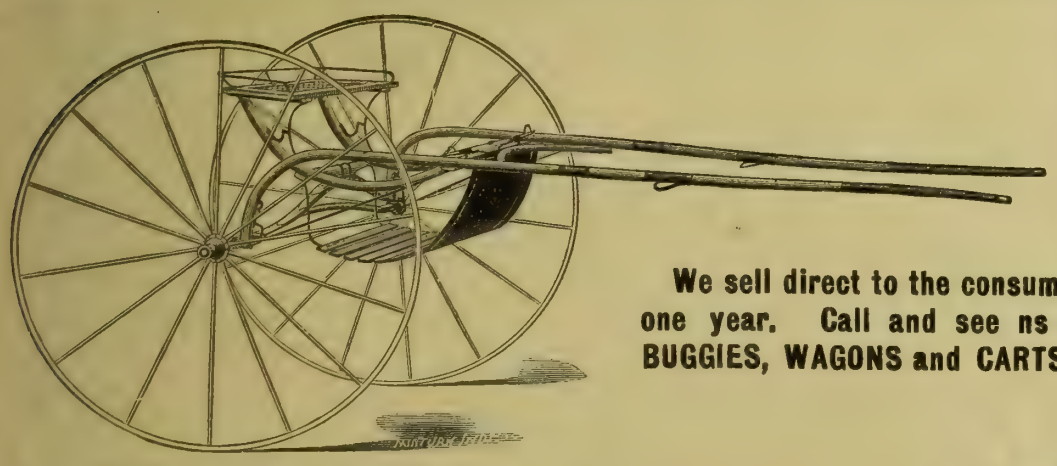
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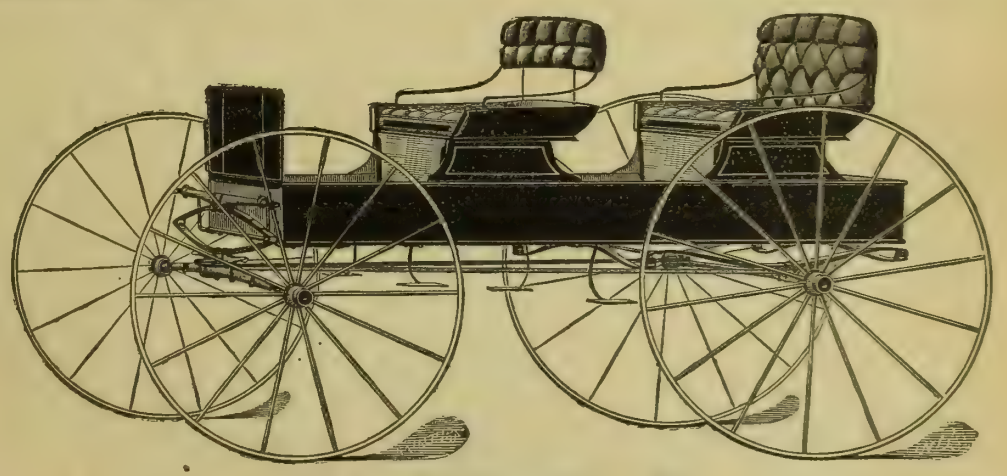
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AGRICULTURAL NOTES.

CALIFORNIA.

Fresno.

RAISIN DRIER AT MADERA.—Fresno *Republican*: W. W. Boust, superintendent of the Dorn vineyard near Madera, says that some important improvements are now being made on the property of the Madera Improvement Co. of which D. S. Dorn of San Francisco is manager and president. Preparations are now being made to erect on this vineyard an improved Blatchy raisin drier to handle the second crop of the vineyards of that locality. It will have a capacity of 60 tons of grapes. Work will also be commenced to-morrow on a new packing house, the dimensions of which will be 50x60 feet, with a sweat-room 25x30. It will be supplied with all the latest machinery, including a Porteous steamer and grader, label presses, etc. It will be conveniently arranged for doing work expeditiously and in first-class shape.

Los Angeles.

THE PRUNE CROP.—Pomona *Progress*: The Pomona fruit growers have been offered $50 a ton for their prune crop, delivered at the fruit-drying and canning establishments in this place. This is the second season in two years that prunes have gone to $50 on the trees. In 1890 there were some growers, who did not make contracts for their prunes until late in the season, and got $60 a ton. In 1888 prunes went to $40 a ton, and in 1886 they went to $50 and $55 a ton, but in each of the last-named years the orchards here were so young that the yield was small. In 1890 we had an overwhelming crop of prunes and very high prices. The present prospect for prunes in Pomona valley is two-thirds of a full yield. Up to a few weeks ago it was thought we would have a full crop of prunes, but there has been so much of a dropping off of the fruit that the estimates have been reduced. The crop will be ready for delivering in about three weeks and, as the prunes ripen slowly, the trees will not be cleared of their yield for six weeks after that.

Monterey.

GRAIN CROP.—Watsonville *Pajaronian:* The threshing season is not going to be a long one in the Pajaro valley this year. Young orchards and the beet crop have cut down the grain acreage in the Pajaro from the old-time figures. The yield is good and threshers state that the returns per acre are averaging better than last year. The Salinas *Journal* says: The harvest season, including cutting and threshing, will be much shorter than was expected in this locality; not that the crops are so much shorter than other years, but because of the increased facilities for handling them. So far as yet threshed and sacked, most of the grain from Chualar to this city, and from here on to Moss Landing, is turning out fully as well as expected, although the crop is considerably short of that of last year, when the yield was extraordinarily good. The crops in this locality are fully up to the average, if we take the last ten years as our criterion for basing our estimate upon.

FRUIT NOTES.—*Pajaronian:* The peaches and apricots being brought into the local market are of unusually good quality. A load of fruit of these varieties from the Majors' place, Hazel Dell district, was brought into town the other day that was of gilt-edged quality and would have found ready sale at the San Jose canneries. Packers state that they have examined much of the apricot crop of the Santa Clara valley this year, and that they have not found any fruit there as good as that raised on the San Juan road, in and near the Carneros district. And yet but a few years ago it was said that the Pajaro valley could not raise good apricots. The care was not taken with the fruit then that is now manifested in its cultivation, and the varieties have been found that will do well here.

SUGAR BEET CROP.—*Pajaronian*: The beet crop continues to look gilt-edged. The season has been most favorable for this crop. The percentage of loss on the acreage seeded is much less than it has been at any time in the past.

Orange.

FARM NOTES AROUND CENTRALIA.—Cor. Downey *Champion:* The corn crop in Orange county will be very light. Centralia, however, is more favored than the other parts of the county, despite the fact that we have no irrigation system. The apricot yield in this county this season is the heaviest known in years. There are over 600 people engaged in drying apricots, night and day, and from present indications, that number will continue for several weeks more. Most of our people are shipping their apricots into Anaheim to the San Valin fruit drier. In that drier alone, over 100 hands are employed night and day.

CONDENSED MILK FACTORY.—Centralia Cor. Downey *Champion:* The condensed milk factory at Buena Park, near this place, is running in full force, and shipping condensed milk and coffee every day to the four corners of the earth, which shows that true merit is always appreciated. The company, for several years, has been running at a heavy loss, but the enterprise is on its feet again and the stockholders are in a fair way to make their fortunes out of the concern.

San Benito.

IRRIGATED FRUIT.—Hollister *Advance*: The benefits of irrigation can now be readily seen in the various fruit orchards. Where the land was not irrigated, the fruit is going back, dropping from the trees. Upon irrigated land the trees look healthy and bright, the fruit hanging firm and sound. Mr. Bowman, lessee of the Donovan orchard, is authority for the statement that the irrigation of the land this season is worth $2000 to him.

San Bernardino.

THE OLDEST VINEYARD IN SOUTHERN PART OF THE STATE.—Ontario *Observer*: The Cucamonga vineyard of 340 acres, of which J. C. Sommer has charge, is perhaps the oldest in Southern California. Sixty years ago Spaniards crushed into wine, grapes grown in this vineyard. Though the oldest vines were extirpated two years ago, there are now in the vineyard 50 acres of vines which are 40 years old. At the winery 125,000 gallons of wine and brandy are made annually. Cucamonga wine is of superior quality and is known wherever domestic wines are used. Last week two carloads were shipped east.

A LARGE SILO.—Chino *Champion*: Richard Gird is making excavations for a silo just south of his cattle yards on Central avenue, in which to preserve beet pulp for winter use. The silo will be 500 feet long, 60 feet wide and 9 feet deep, and its capacity will be 10,000 tons of pulp. Beet pulp is easily preserved and makes the best kind of feed for beef cattle or milch cows. Pulp-fed beef used here last fall and winter was as tender and juicy as any Eastern stall-fed, and milch cows fed upon it gave the most satisfactory results. No artificial floor or covering is used for the silo, as the outer layer of pulp forms an impervious coating which excludes the air and very effectually preserves the mass.

San Diego.

EXPLANATION WANTED. — Escondido *Times*: There are some nine-year-old soft shell almond trees on the Trussell ranch in San Pasqual; they have attained a large size and have a vigorous, rampant growth, but are very shy bearers. They are on dark, rich soil and the roots must be very near if not reaching the water. In common with the rest of the trees, they have been irrigated during the early part of the season. What is the trouble? Close to the almonds are some olive trees that have made a magnificent growth, and are very heavily loaded with fruit. It has always been supposed that the olive was best adapted to a high, dry soil. Will some one from practical experience explain.

Santa Barbara.

NO FRUIT GROWER CAN AFFORD TO GROW INFERIOR FRUIT. — Santa Maria *Times:* One grower says that if the cannery cannot take all of his fruit, he will not let them have any of it. Another says that if they are going to sort out all the undersize and inferior fruit and make him haul it back home, he will keep it all at home. Some of our growers who have given the subject a little study are endeavoring to deliver to the cannery only such fruit as is desired. The fact is, no one can afford to grow fruit which is not desirable. Each different market requires a certain kind and quality of fruit, and any other kind handled by them must be at a loss to some one, consequently growers must cater to the wants of the market or suffer the consequences. The remark most frequently heard is, "If I have to fix up to dry part of my fruit, I can just as well dry all of it," which, in one sense, is true, but if you have a lot of inferior fruit and mix it with the good, the grade of the whole lot will be lowered to at least so nearly the cost of production that the profit is hard to find after the season's business is settled up. If growers would bear in mind that it pays to grow first quality fruit, and that it does not pay to grow inferior fruit, it would help them to grow a better crop. It has been suggested that the cannery should arrange to dry and evaporate fruit so that it could take all that is offered—a very good suggestion, and will no doubt be done in the near future, but that should be no inducement to growers to produce poor fruit. The biggest profits are in the best goods, whether canned, sun-dried, evaporated or sold green, and in order to make a success of the drying business, it will be necessary to have good fruit to commence with. The evaporator will be a big help; it will make expenses out of the inferior fruit by turning out a high grade from which to get a profit, and thus furnish a market for the whole crop.

Santa Clara.

CAMPBELL FRUIT NOTES.—S. J. *Mercury*: The cannery is still running away into the night. Apricots will be out of the way in a few days, but peaches are coming on quite rapidly, and prunes are coloring somewhat. Sixty-two dollars per ton has been offered for good prunes, and rumor places the price at $70. This price seems at first sight inflated, but first-class prunes will probably sell at 12½ cents per pound, which will give a good margin for drying. Of course, the lower grades would not be accepted at such a price.

TO CORNER THE GRAPE CROP.—Cupertino Cor. S. J. *Mercury:* The report concerning the attempt to corner the entire grape crop of this county is gaining currency as the days pass. Our once mysterious distillery, now the property of Alex. Montgomery and John P. Bubb, will commence operation in about a week to turn the wine now on hand (or, in other words, held in the various cellars) into brandy, so as to make room for the new crop. It is the intention of the winemen to turn a portion of this year's crop into brandy also, and in that manner relieve the market of overproduction, that seeming to be generally conceded now to be the cause of the present depression in prices. This, taken together with the shortness of crop this year, ought to materially advance prices the coming season. And that the crop is short no one can any longer doubt, for even in this much favored section, the unusual cold weather that prevailed this spring has shortened the crop over one-fourth, and in the center of the valley the falling off in quantity will figure up over one-half. The shortness of crop, taken together with the amount they intend to turn into brandy, will enable the cellars in this side of the valley to make up all that is grown, thus effectually cornering the output. The brandy will be put in bond, where 30 cents a gallon can be raised on it if necessary, and it will be left there for its entire period, thus practically taking that quantity of wine from the market for three years. The San Jose *Herald* says: The wine makers of the Cupertino district held a very interesting meeting on July 27th. A thorough discussion relative to the condition of the wine market and the prospective grape crop was held, and an effort will be made to store the present stock of wines in warehouses, and increase the capacity of the various wineries in the neighborhood to handle the prospective heavy crop of grapes. A bank, in the interest of grape growers and wine makers exclusively, is to be established very shortly. The Cupertino winemen will be present in a body at the Viticultural Convention to be held in this city the second Saturday in August.

Sonoma.

GRAPE-DRYING.—Healdsburg *Enterprise:* J. R. Hotchkiss says: The outlook for the 1892 grape crop of the Healdsburg district is not discouraging. The yield for the State at large is very short, and the demand has grown a little during the year. Those two facts ought to give prices a bit of a lift. But the local situation will be made somewhat better by still another cause, for I intend to go into the grape-drying business again. Hunt Brothers lost heavily on grape-drying last year because of rain-storms, and I dare say the wine makers have been feeling happy over the belief that no one would risk anything in the drying trade very soon again; but, as Bobby Burns says, "The best laid plans of mice and men gang aft aglee." How many tons do I intend to handle? Well, at least 1000, and there's no telling just how much more. I'll take enough grapes on the drying trays, at all events, to send prices to somewhat like a reasonable level.

HIGHER PRICES FOR DRIED GRAPES.—Healdsburg *Tribune*: The boom in the fruit market has removed the depression in the price of grapes also, and this week there were dried grape buyers here from San Francisco purchasing all that was left unsold last year and contracting with several growers for their production this year. That dried grapes a month ago would bring no more than 1¼ cents and now sell at three cents demonstrates the fact that there is a lively boom existing, and it is predicted that it will continue to the close of the year at least.

Sutter.

LARGE HAY CROP.—Yuba City *Independent*: Sutter is not usually regarded as a hay-producing county, but there are now several thousand tons for sale in the stack besides the large quantities sold in the fields. In the hay-producing districts in Yuba and Butte counties the amount on hand is simply wonderful, and it is said that near Williams, Colusa county, 20,000 tons may be seen. Most of the livery stables have contracted for their hay, and as many private barns are filled, it is a matter of speculation what will be done with the surplus. Much will likely be shipped below and the balance baled and stored. Little hay will probably be raised next year on account of the present overstock and the fact that most of the hay-ground will be summer-fallowed next spring. The alfalfa crop is also unusually good. Much has been hauled into town during the last week or two, and has been sold at $6 per ton. Oat and wheat hay is worth about $7 delivered. It can be bought in the stack a few miles from town at $5. On the approach of the rains, hay is likely to be still cheaper, as the quantity is greater than will be the demand or the facilities for storing it.

Tehama.

A BIG WHEAT SALE.—Red Bluff *News*: H. Kraft, a few days ago, purchased C. B. Ashurst's crop of wheat on the Eastman place, paying $1.25 per cental delivered on the Sacramento river bank. About 7000 acres are cultivated on the ranch, although the full acreage is not tilled every year. Mr. Ashurst expects to sell Mr. Kraft some 25,000 sacks. The grain is of the Snowflake variety, and Mr. Kraft says it is the best he has seen this year.

ASSESSMENT RETURN. — Red Bluff *People's Cause:* Number of acres sowed for crop in 1892: Wheat, 60,841; oats, 3138; barley, 15,594; corn, 819; hay, 17,912. Number of acres of grape vines growing: For table, 310; raisins, 607; wine, 2914. Number of fruit trees growing, in bearing: Apple, 2784; apricot, 24,108; cherry, 2449; fig, 2514; olive, 99; peach, 190,483; pear, 15,842; prune (French), 21,416; prune (other kinds), 8008; lemon, 10; orange, 187; almond, 4475; walnut, 314. Fruit trees not bearing: Apple, 3447; apricot, 17,312; cherry, 2884; fig, 9511; olive, 6992; peach, 47,815; pear, 23,914; prune (French), 33,711; prune (other kinds), 8008; lemon, 179; orange, 1249; almond, 24,181; walnut, 1543.

ARIZONA.

GRAPE SHIPMENT FROM SALT RIVER VALLEY. Phœnix *Herald:* Two more carloads of grapes went out from Tempe July 27th, and yet the good work of shipping out fresh valley fruits goes on. It looks as though all the raisin grapes will be shipped out in a fresh condition this year. Other portions of the Territory to the south are taking considerable quantities.

OREGON.

HOP LOUSE EXTERMINATOR.—Eugene *Register:* Two correspondents of the Oregon Experiment Station report that a decoction of bearberry bark with soap makes a very effective spray against the hop louse. As it is said to be quite plentiful, a cheap solution can be obtained from it. One of the correspondents says of it: "The bearberry solution kills every louse. It is the black alder which grows on low swamp lands in Washington and Oregon. In the fall one finds a black berry on it about the size of a wild cherry, of which the bear is very fond. It is a great purgative medicine, is very bitter, and the bark is shipped by carloads to the East, where medicine is made from it."

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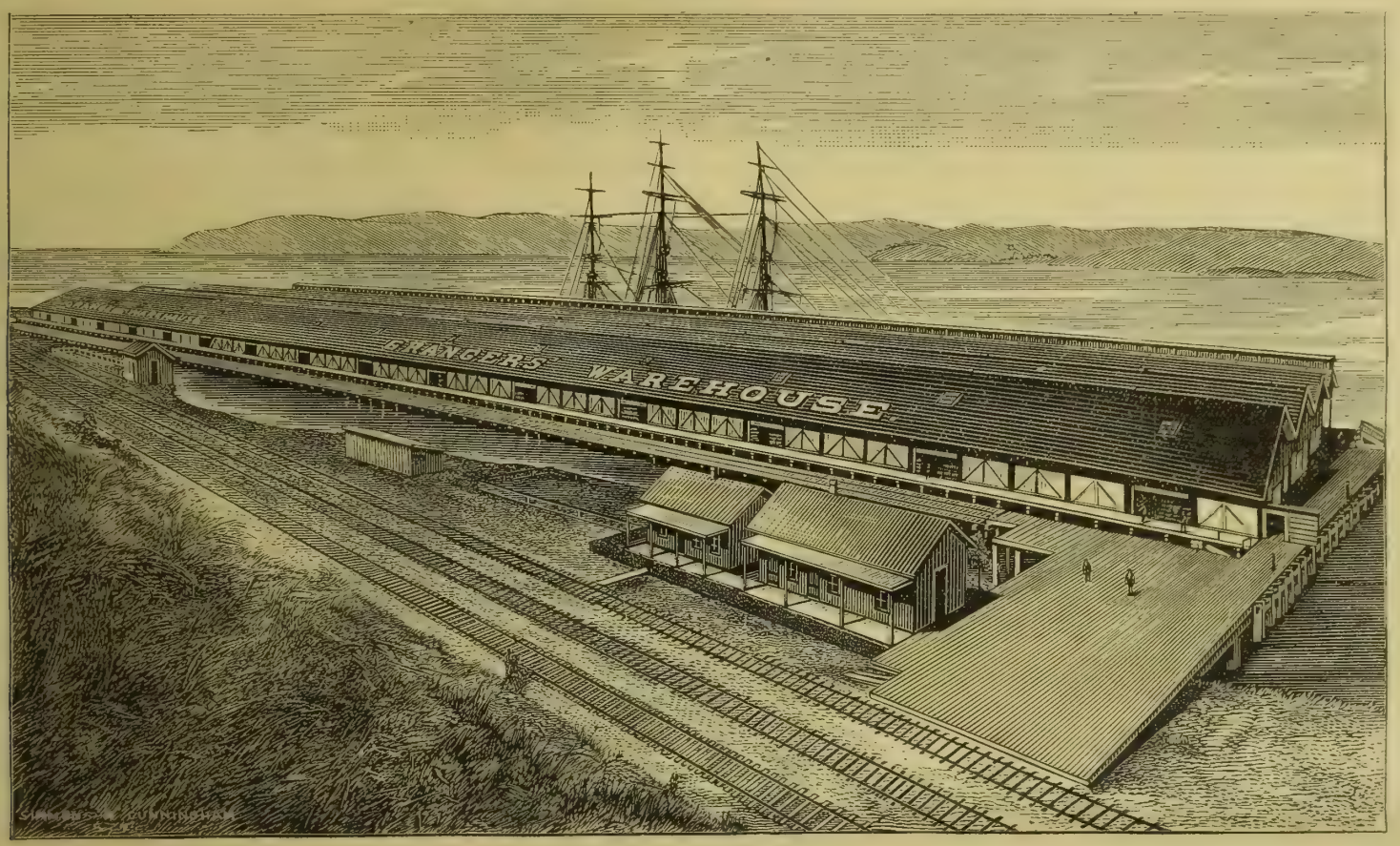
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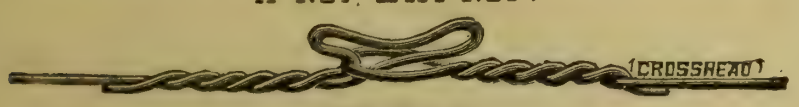
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PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

INVESTMENT AND LOAN ASSOCIATION RECOMMENDED.

The following important proposal by the Master of the National Grange should receive due attention:

DELTA, O., July 20, 1892.

The usual committees have been appointed to serve at the next session of the National Grange, P. of H., to be held in Concord, N. H. Some of the subjects to be considered will require much thought and investigation, and the announcements are made at this time to afford ample opportunity for full thought and investigation by the committees having such matters in charge. I have assumed that the special committee appointed to consider all matters relating to National Finance would be continued, and have therefore appointed members of said committee.

It has occurred to me that an Investment and Loan Association can be formed within our Order, which may render an important service to those who desire to make safe investments at reasonable rates of interest, and also to those who must, for some years to come, be borrowers.

The Building and Loan Associations in cities and villages are great blessings to those who desire to secure homes and have not the means to do so. These Associations also furnish safe investment for the savings of all who have money to loan.

I believe it is feasible to adapt this system to the needs of the farmer who would like to secure or save a home for himself and family, and I have therefore appointed a committee to consider this subject, examine the methods of such Associations and report results to the next session of the National Grange.

I am thoroughly convinced that it is possible for farmers to "help themselves" along this line. I have appointed an indefatigable worker as Chairman, with an able corps of assistants, and have also named an Advisory Committee to confer with the regular committee.

I am aware of the fact that we have many good thinkers in our ranks who have not been named as members of either committee, but they are invited and urged to send to the Chairman of this Committee (Geo. A. Bowen, Woodstock, Conn.) any suggestions in regard to the subject that they would like the committee to consider. We expect to make the enterprise a success—a help for those who need help and a feature of our Order which will commend it to the farmers who wish something practicable from an organization.

I appeal to every member of these committees and every member of our Order to do their utmost to make the next session of the National Grange the most important and useful gathering of farmers that ever assembled in this or any other country. J. H. BRIGHAM, Master National Grange.

N. G. COMMITTEES.

Special Committee on National Finances—S. L. Wilson, Chairman; Thos. Mars, J. M. Thompson, A. Messer, J. C. Higgins.

Special Committee P. of H. Investment and Loan Association—Geo. A. Bowen, Chairman; E. W. Davis, O. E. Hall, J. D. Clardy, W. C. Gifford, J. B. Long, Aaron Jones, N. J. Bachelder, A. P. Reardon.

Advisory Committee to above—F. M. McDowell, Chairman; Leonard Rhone, C. G. Luce, James Draper, Fred Robie, J. J. Woodman, X. X. Chartters.

For want of space, we give only the name of the Chairman of the following committees: Women's Work—Mrs. L. A. Hawkins; Credentials—C. H. Knott; Order of Business—D. L. Russell; Division of Labor—Ava E. Page; Publication—G. A. Bowen; Claims and Grievances—A. P. Reardon; Dormant Granges—J. M. Thompson; Accounts—H. M. Murray; Mileage and Per Diem—M. B. Hunt; Finance—Jno. C. Higgins; Digest—A. M. Belcher; Ritual—John Statesir; Constitution and By-laws—J. D. Clardy; Cooperation—Hiram Hawkins; Resolutions, Thos. Mars; Good of the Order, S. H. Ellis; Foreign Relations—W. R. Williams; Education—Alpha Messer; Transportation—W. C. Gifford; Agriculture—John B. Long.

E. W. Davis is also on following committees: Publication, Ritual; Mrs. Davis, Foreign Relations, Mileage, etc.; R. P. Boise (of Oregon), Constitution and By-laws, Good of the Order; Mrs. Boise, Education; Mrs. D. L. Russell (Washington), Women's Work, Claims and Grievances.

AMENDMENTS, RESOLUTIONS, ETC.—All proposed amendments to the Constitution of the State Grange must be forwarded to the Secretary in time for submitting the same to each subordinate Grange about the 1st of September, in order that they may be legally acted upon at the coming session. We further suggest that Patrons desiring to bring resolutions, or subjects for discussion, before the State gathering, soon furnish the same for publication and the attention of subordinate Granges, that the minds of members shall be better prepared for exchanging views on the same.

PATRONS' RELIEF ASSOCIATION OF CALIFORNIA.

This Association, established by act of the last session of the State Grange, (and later its organization recommended by the Executive Committee,) has been so well patronized by Patrons of Eden and Temescal Granges that if all other Granges were to supply proportionately one-half as many members to the new organization it could not otherwise than prove a success. While some members of other Granges have expressed their favor to the P. R. A., with promises to secure applicants from their own districts, returns have not yet come in.

The Directors of this Association have used earnest effort to create one of the very best auxiliaries for the benefit of the Order, and it seems to us that greater efforts are due the worthy enterprise from other Patrons, and it is to be hoped that before the State Grange meets a membership will be secured sufficient to make the Association, with the benefits it offers, one of the standard inducements for others to join the Order and continue within its gates. How many Granges will make an effort within the next 60 days to secure at least ten applicants, so as to be entitled to a local Director, by the time the State Grange meets? Give the matter a trial and, if possible, bring in new sheaves, as a result of your labors, to the State Grange.

Let the Secretary, or some other member, bring the subject before each Grange and secure at least one applicant. The Constitution of the P. R. A. is printed in the Annual Proceedings for 1891. A number of copies, with blank applications, were also mailed to each Secretary some months ago. For further information, address S. Goodenough, Secretary, 1414 Myrtle street, Oakland.

J. J. WOODMAN, Past Master of the N. G., has been nominated for Congress in Michigan by the dominant party in his district.

PETALUMA.—Secretary D. G. Heald writes: Our Grange starts out with a strong membership. We have six new applications. We meet on the second and fourth Saturdays at 1:30 P. M.

BRO. JOHN TRIMBLE, Secretary N. G., has been for a few days with his wife at Atlantic City, where she has been dangerously ill. We are glad to learn from Bro. T. that she is improving, and he hopes soon to return to Washington. This will account for any possible delay of business in his office, the Secretary being proverbially prompt.

STOCKTON GRANGE.—We learn from Sister W. D. Ashley that this Grange is quite prosperous. A class of six young ladies, including the Master's daughter, were lately instructed in the first degrees. We are indebted to Sister Ashley for many generous and kindly fraternal acts.

COMING TO OAKLAND.—V. M. Still, District Lecturer, writes from Auburn for Grange Trade Card lists, and states that he expects ere long to remove to Oakland. Therefore, a good addition to Temescal Grange is expected. He adds that Magnolia Grange is prospering nicely.

BRO. THOS. MCCONNELL writes that Elk Grove Grange saved its organ from the recent fire, but they now have to buy new badges and other Grange material.

MANY friends of Mrs. Julius Chester will learn with sorrow of her recent death at Alameda. She was a member of Eden Grange and for years a sufferer from painful illness.

HISTORICAL EXHIBIT.

Bro Lubin, Chairman of the Historical Exhibit of the State Agricultural Association, has invited the State Grange to make an historical exhibit at the coming fair. We think it is an excellent opportunity for the State Grange to be permanently and favorably represented before numerous visitors from this and other States to the Agricultural Pavilion at Sacramento. It would make manifest the progress of the Grange since the date of its organization in this State in 1873, and its characteristic and permanent features among the leading State institutions of California. Portraits of the first officers of the Grange, antique documents and characteristic emblems of office in the fraternity, etc., will be among the articles desirable for exhibition.

We would call upon the Lecturer of the State Grange and Committee on Women's Work to lead in the enterprise of making an exhibit creditable to the Order. We ask both the officers and members of State and subordinate Granges to make suggestions to this department of any features they would deem of interest in connection with the proposed exhibit. Who has emblematic or characteristic articles that they can contribute? Act at once; there is no time to lose. Let us have a good exhibit or none.

AGAINST GAMBLING IN FARM PRODUCTS.

The Anti-Option bill, which passed the House in June, was discussed last week in the U. S. Senate. July 24th, Senator C. M. Felton telegraphed to a S. F. friend as follows: "Do the Grangers and farmers desire the passage of the Anti-Option bill? Have they considered its effects, and do they believe it would promote their interests?" etc. He also stated that he would willingly represent their views. The following telegram was furnished Mr. Fulton's representative:

"SAN FRANCISCO, July 25, 1892.

The Executive Committee of the State Grange in February last endorsed the petition recommended by the National Grange for the passage of the Anti-Option bill. John Trimble, Sec'y of the National Grange, 514 F St., doubtless has petitions from California. Further by mail."

The Sec'y of the State Grange by letter to Senator Felton repeated the above information, inclosing copy of the petition mentioned and other printed matter showing the position of the Grange on the subject of gambling in farm products, with the statement that numbers of our subordinate Granges had doubtless forwarded petitions signed by their members to the Legislative Committee of the National Grange in care of Sec'y Trimble; also copies of other petitions endorsed by the Executive Committee and forwarded in February last to the subordinate Granges for their consideration and endorsement, in favor of legislation "for the encouragement of Silk Culture," "Free Delivery of Rural Mails," "Pure Lard" and "Pure Food." We hope to hear of Senator Felton's activity in securing the passage of the Anti-Option bill and of its final passage by the Senate.

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INCORPORATED A. D. 1864. San Francisco.

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AMOMG THE OTHERS TO BE SOLD WILL BE THE FOLLOWING FILLIES:

LOOKOUT. B f, foaled 1890. — DIRECTOR 1989 2:17. — DICTATOR 113. DOLLY, 4 in the 2:30 list. — ADINA..... ELECTIONEER 125. ADDIE LEE, 4 in the 2:30 list.

PINOLE— B f, foaled 1890. — NOONDAY 10,000 WEDGEWOOD 692, 2:19. NOONTIDE, 2:20½. — VALONA..... NUTWOOD, JR. (by Nutwood 600). LUCY PATCHEN (dam o Jas. Madison, 2:17¾)

BET MADISON B f, foaled 1891. — JAMES MADISON 17,909, 2:17¾..... ANTEEO. LUCY PATCHEN. — BETSY TROTWOOD..... ..... ABBOTSFORD 707, 219½. ALPHA MED'UM (Dam of Katy S.) 2:25.

☞ The Stock will all be at Salesyard a few days before the sale for examination.

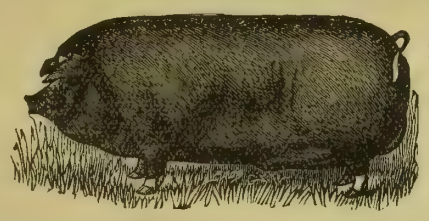
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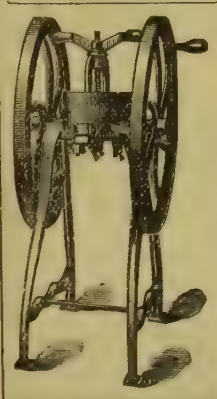
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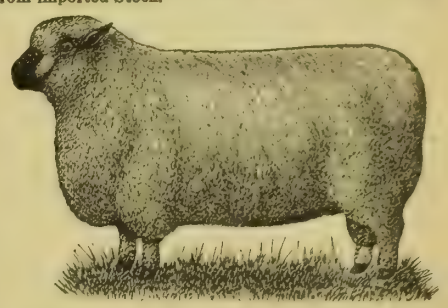
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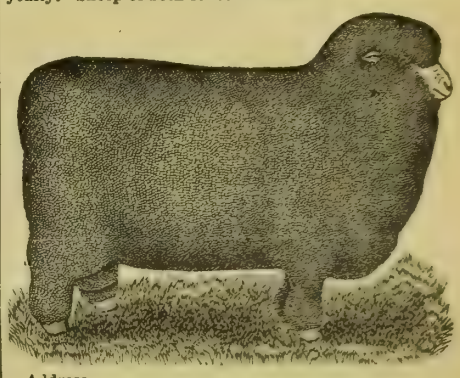
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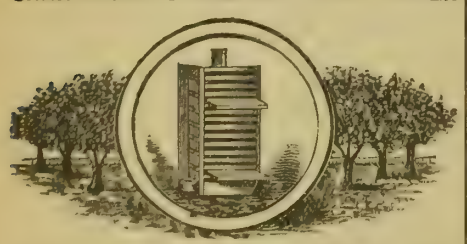
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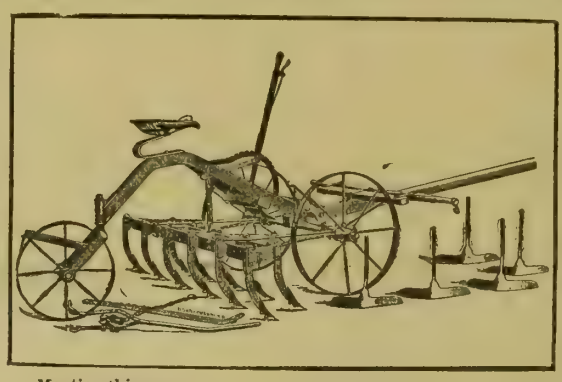
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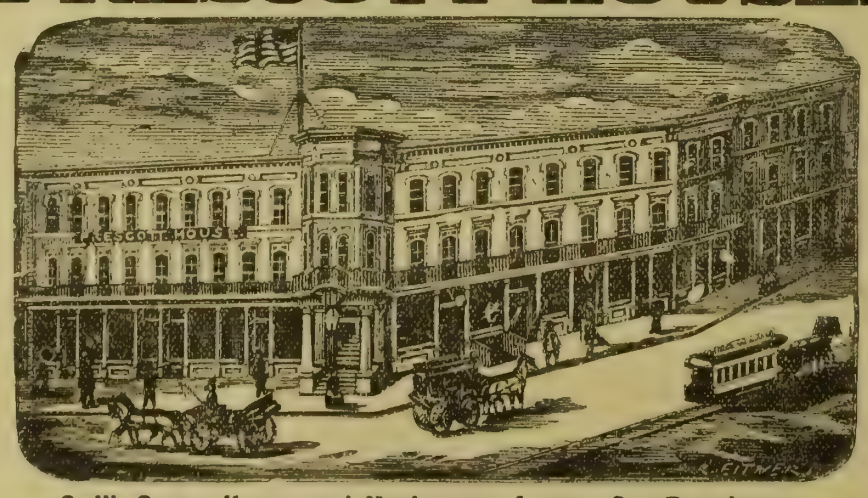
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AT A COST OF FROM 1 CT. TO 3 CTS. PER TREE.

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DEWEY & CO., PATENT AGENTS, 220 Market St., San Francisco. Elevator, 12 Front St.

S. F. Market Report

Market Review.

San Francisco, Aug. 3, 1892.

For the week under review the produce market held to fairly strong prices, with the tendency to still better figures for some lines. As yet, the weather in the more northern of the Central States and also abroad, is a large factor in the wheat market, with a very strong probability that the cholera in Russia will play an important part. At last telegraphic advices it was spreading in that country, which will undoubtedly cause Germany, France, England and other European countries to adopt strong quarantine laws, in which event it is not at all unlikely but the importation of cereals from Russia will be prohibited. While, in the light of scientific researches, cholera has lost much of the fear in which it was formerly held, yet it is still felt in sufficient dread to cause a rigid quarantine, since it has been found to be contagious. From the most reliable sources of information we feel warranted in asserting that the world's wheat crop this year will be short of the outturn in 1891, but that the rye crop, although not a full average, will be larger, while the corn crop will fall very considerably short. Barley has strengthened, with a higher range of values toward the close. This was to have been expected, for prices had been run down too low, when it is considered that in Oregon and Washington the crop is short, while at the East and also in Europe the yield is not proving to be an average. Oats have been marked up in sympathy with the advance in barley, light receipts and a continued good demand. White corn made quite an advance, owing to short supplies, light crop prospects and a good demand from Mexico; but yellow corn has barely held steady. Rye, after weakening slightly, is again showing signs of strength under a fair inquiry for export. Ground feed is enjoying a steadily enlarging demand. Hay has come in quite freely, but as the largest proportion is of poor quality the more choice grades have held to firm prices, while the other grades shaded off. In dairy produce the market held strong for gilt-edged dairy and creamery butter, but the attempts to get still higher figures have, so far, proven futile, owing to the trade turning to other grades. Cooler weather at the East will induce shipments to this coast. Mild, gilt-edged cheese has been fairly strong, but other grades have been slow and largely in buyers' favor, particularly the poorer kinds. There is too much adulterated cheese pressing the market. Eggs continue to have a wide range. Shaky eggs have sold very low, while extra sizes of uniform white color and strictly fresh laid from near-by points sold, toward the close, above our outside quotations. More Eastern eggs are on the way. In garden stuff, tomatoes, cucumbers and green corn have sold at lower figures, but other garden stuff was fairly steady. Onions have been been weak. Potatoes sold lower, but at the close they are stronger under an improved demand from the South. Of course the call for shipment only covers well matured of good quality, poor keepers not being wanted. Poultry held to remarkably steady prices up to Monday, when, under a better demand, the more choice stock strengthened, resulting in an advance on yesterday. Live stock is weaker, with supplies liberal and the demand only fair. Honey is scarce and wanted, with a slight advance established. Hay product has held to firm but steady prices. New crop mustard seed is putting in an appearance; indications point to good prices throughout the season. Hops are reported firmer under unfavorable crop advices from the East and also from abroad. Wool is hard to report, owing to conflicting advices, but the general tenor points to low prices for poor and defective fall wools but unchanged prices for the more choice grades. In fruit, the market has held quite steady for berries, but for tree fruit suitable for canning, better prices ruled, particularly in apricots, peaches and pears, with, toward the close, a strengthening in other kinds. Apples begin to show more life, with slightly better prices paid at the close. The market is witnessing stronger competition between buyers than ever before. The demand is from canners, driers, local traders and Eastern shippers. Prunes continued to hold very strong, with sales reported to have been made in Santa Clara county as high as $70 (3½ cts. ₰ lb.) per ton for a straight parcel of good size and choice in quality. Canned fruits have been steadily advancing at the East, which admits of canners paying the advance for green fruit. Dried fruit of all kinds is higher and in active request. As yet, the movement is largely of a speculative character. It is claimed that, at the advance, large, shrewd operators are selling, preferring to let others make all that remains, rather than take chances themselves. Confirmed reports of a short prune crop abroad are a favorable factor in the market for that fruit. Raisins and dried grapes are very strong for future delivery. All the old stock on this Coast and at the East has been cleaned up, and will go into consumption before the new crop comes on the market.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.
Thursday	6s07 d	6s07 d	6s07½d	6s07½d
Friday	6s07½d	6s07½d	6s07½d	6s07½d
Saturday	6s07½d	6s07½d	6s07½d	6s07½d
Monday	....	....	....	....
Tuesday	6s06½d	6s06½d	6s07 d	6s07½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s6d	34s6d	34s3d	Quiet.	Favorable.
Friday	34s3d	34s3d	34s d	Quieter.	Warm.
Saturday	34s3d	34s3d	34s d	Quiet.	Unsettled.
Monday	....	....	....		
Tuesday	34s3d	34s3d	33s d	Steady.	Unsettled.

To-day's cablegram is as follows:

Liverpool, August 3.—Wheat—Moderate demand. California spot lots, 7s; off coast, 34s 3d; just shipped, 34s 3d; nearly due, 34s; cargoes off coast, steady; on passage, firmly held; Mark Lane Wheat; quiet but steady; French country markets, quiet; weather in England, mild.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Aug.	Sept.	Oct.	Dec.
Thursday	138½	140	....	146⅝
Friday	137½	139	....	145⅝
Saturday	137½	139⅝	....	146
Monday	138¼	139½	....	146½
Tuesday	138¾	140⅛	....	146⅞

The following are to-days' telegram:

New York, Aug 3.—Wheat, 83⅞c for August, 81⅝c for September and 85⅜c for December.

Chicago, Aug at 3. Wheat, 78⅛c for August, 78⅝c for September and 81c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, high st	137⅝	....	....	....	142½
" lowest	137⅜	....	....	....	14 ⅜
Friday, highest	137½	....	....	....	142½
" lowest	136½	....	....	....	142
Saturday, highest	137½	....	....	....	142½
" lowest	136½	....	....	....	142
Monday, highest	136⅝	....	....	....	142½
" lowest	136½	....	....	....	142⅜
Tuesday, highest	....	....	139	....	142½
" lowest	136⅞	....	139	....	142½

The following are to-day's recorded sales on Call:

Wheat—Morning Informal—Buyer December—200 tons, $1.42½. Seller 1892—200 tons, $1.36⅝; 300, $1.36¾ ₰ ctl. Regular session. Buyer December—100 tons, $1.42½; 100, $1.42½. Seller 1892 500 tons, $1.36½; 1400 $1.36¾ ₰ ctl. Afternoon Buyer December—700 tons, $1.42½; 100, $1.42⅜. Seller 1892—100 tons, $1.36½; 600, $1.36¾ ₰ ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, highest	93	....	....	....	98½
" lowest	92¼	....	....	....	9 ¼
Friday, highest	94⅜	....	....	....	99⅜
" lowest	94⅛	....	....	....	98⅛
Saturday, highest	..	....	....	....	98⅜
" lowest	..	....	....	....	98⅜
Monday, highest	94⅜	....	95	98	10
" lowest	93¾	....	93	97⅞	99½
Tuesday, highest	95	....	....	....	101¼
" lowest	94⅜	....	....	....	101¼

The following are to-day's recorded sales on Call:

Barley—Informal—Seller 1892, new—100 tons, 95½c December—200 tons, $1.00½ ₰ ctl. Regular session: Seller 1892, new—200 tons, 95c; 200, 95½c; 200, 95⅛ December—100 tons, $1.00½; 100, $1.00⅜ ₰ ctl. Afternoon—Seller 1892, new—100 tons, 94½c. No. 1 Brewing, new, spot—100 tons, $1.02½ ₰ ctl.

Markets by Telegraph.

Foreign Grain Review.

London, Aug. 1.—The Mark Lane *Express* says: English wheats are in favor of the buyers. The prospects are for good crops, although the harvest is generally likely to be late. Foreign wheats are quiet, but steady. Flour firm. Barley stronger, grinding grades 6d higher. Indian corn is firm, 6d to 9d higher. Beans and peas are in fair demand. Oats are 3d higher.

Eastern Canned Fruit Markets.

New York, July 31.—Canned fruits are firmly supported by the active intermediate Western demands for peaches and apricots and the prospective wants of the same for seaboard distributing points. Baltimore yellow peaches are now quoted up to Pacifics.

Eastern Dried Fruit Markets.

New York, July 31.—Prunes—Though a limited crop of prunes is admitted, there are a few buyers at 10 cents free on board for sixties to nineties. There have been large sales of Sultana at 7½c, duty paid.

Peaches—Evaporated peaches also are slow.

Raisins are not expected to last thirty days; bags range from 3½@6c; layers have sold at $1.75@2, all in a few hands. Some sales of new of the early shipments have been made at $1.70 for layers and $1.50@1.60 for three-crown loose and 5½c in bags. As matters stand these are inviting figures.

Apricots—Slow, buyers shy at the high rates, as consumers have been accustomed to cheap stock. Two cars of new sold for prompt use at 41@41½c for fresh fruit. The hot weather forced prompt selling, and returns to shippers will not be gilt-edged for the week.

Pears—Only prime green Bartletts exceeded $2 ₰ box. The five cars for export arrived in good order, and their reception abroad is expected Wednesday next.

Eastern Wool Markets.

New York, July 29.—The movement in wool continues active and prices are firm. Stocks are heavy in all markets, the bulk of the clip having passed out of the hands of the growers. The demand for fleeces and the strong manner in which they have been put on the market is a subject of general comment. The grower has learned a lesson from the low prices he received last year and has put his wool up better, and in consequence has received an equivalent advance In Delaine wools there is good movement at unchanged prices. Unwashed wools sell well. The quantity which has come forward in this condition is larger than usual. Combing wools are being bought quite freely. Large sales of Texas wools continue to be reported. Quite a trade is noted in California wool. The receipts of Territories are large and seaboard markets are heavily stocked with them

New York, July 31.—The steady large sales of the month have taken out of the way a weighty proportion of the unwashed clip that is considered well sold even at the ruling easy prices, and with the same position for fabrics the better sorts of California, Texas and Territory stock are now quoted with strong confidence. If not at the moment dear. Sales at New York were: 39,900 pounds domestic, 621,000 foreign. Boston sold 4,104,700 pounds domestic, 555,000 pounds foreign.

Miscellaneous.

New York, July 31.—Lima beans, after a brief lull, closed strong and active at $2.10 spot per bushel. California Horse Beans are as well liked as Italian; jobbing at 2½c per pound.

Hops show a stronger undercurrent; prime sell for 23½c; for the grades more readily taken by brewers the general quotations are as before; options are neglected. The increased state acreage is expected to make up for the losses in the damaged old yards.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Aug. 2, '92, were as follows:

Flour, qr. sks	67,548	Bran, sks	9,449
Wheat, ctls	313,302	Buckwheat "	....
Barley, "	11,958	Middlings "	2,765
Rye, "	226	Chicory, bbls	120
Oats, "	7,391	Hops, "	....
Corn, "	2,364	Wool, "	1390
*Butter, "	815	Hay, ton	3,960
do bxs	347	Straw, "	220
do bbls	24	Wine, gals	201,220
do kgs	91	Brandy, "	26,620
do tubs	9	Raisins, bxs	....
do ½ bxs	396	Honey, cs	275
†Cheese, ctls	823	Peanuts, sks	....
do bxs	13	Walnuts "	....
Eggs, doz	31,89	Almonds "	....
do " Eastern	36 00	Mustard "	....
Beans, sks	2 381	Flax "	....
Potatoes, sks	24,661	Popcorn "	....
Onions, "	4,662	Broom corn, bbls	....

*Overl'd, 243 ctls. † Overland, —ctls.

Exports by Sea from San Francisco from July 1 to July 27.

	1892 93	1891 92
Wheat, ctls	482,933	819,985
Flour, bbls	5 ,255	123,847
Barley, ctls	78,024	113,110

Cereals.

Probably one of the most important compilations made lately, and which should be preserved for future reference, is that of Mr Brown, Statistician of the New York Produce Exchange, giving a basis on which to furnish crop estimates based on figures obtained from the Agricultural Department, Washington, for ten years past. The conclusion is reached that a condition of 100 in barley would mean 24 4 bushels per acre; in rye, 13 bushels, and in potatoes 94.7 bushels. Mr Brown, in the *Produce Exchange Weekly* of New York, says: Taking the figures for the years which have been reported, and the resulting meaning in bushels per acre of 100 has been as follows:

Wheat.	Condition at Harvest	Average Yield, Bushel	100 Condition Means, Bushel.
Winter (7 years)	82.5	12 1	14.6
Spring (7 years)	83.8	12 5	14 8
Corn (10 years)	84.7	24.3	28.7
Oats (10 years)	89.3	26.3	29.5
Barley (10 years)	90 1	22.0	24.4
Rye (10 years)	9.16	12 0	13 0
Potatoes (10 years)	8.13	77.0	94.7

The Minneapolis *Market Record* says that, while in some parts of the Northwest wheat is very promising, in others it is very uneven, and opinions regarding the outturn vary from as large as last year to 40 per cent less. A bonanza farmer in the Red River valley is quoted as saying that the crop is so late that ⅓ of it will remain to be cut by Sept. 15th.

According to the report of the Hungarian Minister of Agriculture, the area of wheat sown this year was 5,365 861 joch, equal to 3,000,000 hectares. Beerbohm estimates the outturn at 1 5-6 hectoliters per hectare, making a crop of about 143,000,000 bushels, or about 11,000,000 bushels more than the average.

It is stated that France has imported about 20,000 tierces of lard ahead of the increase in the new duty.

Dornbusch says that the past week has shown a general improvement in agricultural conditions in England, and quotes the *Agricultural Gazette* as saying that the outlook is for an average crop of grain. The conditions in France have been fairly good, and the harvesting so far shows a crop of about 300,000,000 bushels of wheat, indicating foreign requirements of 30,000,000 to 40,000,000 bushels. In Russia, official reports are generally satisfactory, but mercantile reports are less encouraging.

The Chicago *Tribune* says: "The State reports from the surplus corn States show that everwhere the crop is uneven, has not generally received its usual amount of cultivation, that it is not only beginning to tassel out, but to-day is from three to four weeks late as compared with an average season. Nebraska seems to be the only State which has anything like a prospect of making as good a yield as last year; but when the corn has only just tasseled out and has not made a single ear, and the weather of the next 20 days being the weather which makes the ears, it seems the height of folly to attempt to estimate, with the extreme conditions through which we have gone this season, how big or how small a corn crop we are going to make in 1892. We all recollect how poor our prospects were in July, and also August last year, and then what September did for us. Last year we had an even and fine stand of corn, while this season it is just the reverse."

In the local market wheat has exhibited more strength in a quiet way, with higher prices paid than reported by the daily press. The demand was larger from both exporters and millers, and their purchases strengthened the market for the more choice grades. More vessels were taken the past week than in any one week since the new crop season set in, and it was the purchasers for stiffening and topping purposes that gave the strong support to our local market. Vessels under charter are receiving quicker dispatch.

At last barley has made an upward move in the local market. Heavy purchases by exporters and home malsters have been the leading influence on the market. Holders have also shown more disposition to store, believing that at the low prices which ruled in last month it was a safe proposition. The crop up North, at the East and also abroad is not, taken as a whole, an average. The consumption of feed is enlarging.

Oats are selling at higher prices. The advance is due to stronger buying, firmer holding, light receipts and depleting local stocks.

White corn met with a strong demand from Mexico which caused holders to advance prices, but at the close it is quiet. Yellow corn is steady, but firm.

Rye has been in fair inquiry, but trading is slow owing to the advanced views of holders.

Feedstuff.

Ground feed is in good demand. Ground and rolled barley are higher, but other kinds are firm but unchanged.

Poor hay continues to press the market, which causes the market to rule in buyers' favor for all that does not come up to choice. It looks very much as if farmers are holding their more choice hay back and selling the poor. The demand shows signs of enlarging.

Dairy Produce.

Butter has held strong for the better grades, while ruling irregular for the poorer grades. Some of the commission merchants are asking a cent advance on outside quotations for gilt-edged, which is causing the retail trade to restrict purchases of that quality and turn more largely to good. The market acts at the close top-heavy, which inclines some to the opinion that slightly lower figures might rule before another advance sets in.

Gilt-edged mild cheese is scarce and commands outside figures, but good choice cheese is slow, while poor is hard to place. There are no signs of the stock cleaning up. The manufacture of adulterated cheese from skim milk and emulsion of lard is against the market.

Eggs have had a wide range. The receipts of both Californian and Eastern have been light, which has admitted of the market being cleaned up to better advantage, although there is still an oversupply of poor stock. For shaky and otherwise poor eggs sales are made at 12 to 13 cents. Eggs that are very choice, fresh laid, of extra size and good white color sell readily at 30 cents, and at times even higher.

Fruit.

Oranges of the 1891-92 crop are about cleaned up. The outlook for the 1892-93 crop is of a most promising character. The market is largely supplied by importations from Tahiti. Limes are very weak, but lemons are steady.

For deciduous fruit the market has held steady for berries, but strong for tree fruit. The supply of the more choice is under good control and purchasers have to pay top figures, with, at times, a slight advance to secure something extra. The overland shipments are very large, larger than in the history of the State. The fruit is firm, good keepers and of most excellent quality. The shipments from San Jose alone aggregated for the week ending July 30th, 221,320 pounds, and of canned fruit, 183,375 pounds.

The first carload of this year's pack of dried apricots of Santa Clara county was shipped from San Jose on Monday, August 1st, by W. W. Cozzens to C. M. Weber & Co., dried fruit merchants of Chicago, over the Southern Pacific Company's Odgen route. It will reach its destination in seven days.

The market for new crop dried fruit has ruled very strong, with buyers bidding higher and sellers reserved, although, toward the close, large operators are selling and, at the same time, trying to get others to hold. Our quotations give the range of values so far as they are obtainable at this writing.

From N.Y our mail advices report as follows: A line of California canned pie peaches, to arrive, was offered at $1.05 for 3-lb and $3.25 for gallon tins. Eden Center and Seneca gallon canned apples realized $2 35 on spot, and $2.50 was again obtained for some specially fine goods. Actual sales here were reported of new crop California prunes in sacks, sizes 60's to 90's, at 10c f. o. b. on the Coast, first half of October shipment. About three weeks ago upward of 25 carloads of California fruit were secured for drying purposes by a Western firm. Green fruit shippers subsequently bid higher prices, and the grower, as usual, forgot about the former sale. The Western firm managed to secure one carload. New evaporated peaches, fancy quality, in sacks, are now quoted at 12½ to 13c f. o. b. on the Coast. The goods are not selling in this vicinity. The prices are looked upon as being extravagant California apricots, 1892 crop, that have been offered latterly at $1.40 f. o b. San Francisco, are now held at $1 45, and the same packers' peaches are now quoted at $1 80 there, against $1.75 last week. There are still some offerings here of prime quality evaporated apricots in sacks. Royal variety at 13c f. o. b. Pacific coast. and coast packed box fruit was said to have been offered at 15½c delivered here. Western quotations on apricots were 13½c f. o b. upward.

The *Commercial Bulletin*, New York, says: Cables have been received from Fiume to-day indicating a further rise in the value of forward shipments of new-crop Turkish prunes, and, singular to relate, the advance there is attributed in a great measure to the improvement which has occurred here. The latest quotations received would make the lay down cost of bag fruit 6½c, but at the same time some shippers there decline to make firm offers of stock, and in response to cables sent thither ask for offers of goods held here, thus indicating a speculative interest existing among the trade at primary sources. The crop of Turkish, it is now acknowledged, will be a short one The crop of Bohemia, it is also expected, will be less than last year, and from cable advices the cost to import forward goods is placed at 5⅜c. Upon the spot the market continues to show an upward tendency, and values to-day are uncertain. As for instance, '91 fruit in casks is quoted by some 5¼ to 5⅜c, but where orders have been held brokers have been confronted with 5½ to 5⅝c as holders' limits. There are renovated goods in the market which are offered at less money, some buyers accepting the fruit without question. The process of renovating has very nearly absorbed the stock of old. French to-day are held at 9c as inside for the four sizes, and small sales are said to have been made at this price. California are about out of market, and prices in consequence are nominal. California raisins continue to improve in demand, and the market is in rather a sensitive condition, holders being reserved in their offerings, and prepared to place an additional fraction on their ideas at a moment's notice. There is further inquiry from Chicago, and negotiations are pending for some considerable quantities for that destination. Currants are in better demand, and the tone of the market is decidedly stronger. Cables received from Greece state that the growing crop has been injured somewhat by too much rain, and that the total yield will be considerably less than last year.

Live Stock.

The market has an easier tone, with concessions secured by buyers for bullocks and mutton sheep which cannot be cut up to advantage, and also for those which are not in thoroughly good condition. Calves and hogs are essentially unchanged.

Miscellaneous.

Poultry held steady up to Monday, when a firmer feeling set in, with an advance established on yesterday and a stiffer market to-day owing to no receipts from Petaluma and a good inquiry from dealers. We do not quote the higher prices paid today, for with the receipts, prices will fall back.

The market for Lima and Bayo beans is very strong at an advance. White are stronger.

Hops are beginning to receive more attention in a quiet way. Crop advices from the East are, as a rule, unfavorable

Wool is essentially unchanged, except for poor stuff which is hard to sell except at low prices.

Honey is strong New York advices report a strong market with an advance established. The crop at the East is said to be short.

From reliable advices up to Aug. 3, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	264,043	359,336	*180,948	76,634
San Diego	17,958	27,176	11,060	.....
San Pedro	6,602	7,098	1,338	5,783
Oregon	56,250	43,936	18,666	
Puget Sound	27,905	32,713	.....	
Totals	372,758	470,259	212,012	82,467

*Engaged for wheat, 1892, 50,785; 1891, 59,136

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

Wednesday, Aug. 3, 1892

Limes, Mex	2 00	@ 3 50	Apricots, pr box	50	@	75
Do Cal	—	@ —	Fruit in bulk to canners:			
Lemons, box	1 50	@ 4 00	Apricots, ₰ lb	1½	@	3;
Do Sicily	5 00	@ 6 00	Pears,	½	@	2;
Strawberries, per chest—			Plums, white,	1½	@	2;
Longworth	7 00	@ 9 00	Peaches, freestone,	1½	@	2½;
Sharpless	5 00	@ 7 00	clings,	2	@	3.
Raspberries, ch.	5 00	@ 7 00	Extra choice fruit for special purposes sells at a slight advance on outside quotations.			
Peaches, box	—	@ —				
Do Crawford	35	@ 60	Beets, sk	—	@	75
Do Hale's Early	30	@ 50	Carrots, sk	40	@	—
Blkberries ₰ ch	3 00	@ 4 50	Okra, dry, lb	15	@	—
Figs, blk box	2 00	@ 2 50	Do green	6	@	10
Do White do	75	@ 1 00	Parsnips, ctl	—	@	1 25
Apples, Red Astrachan	75	@ 1 10	Peppers, dry, lb	10	@	—
Do Gravenstein	1 00	@ 1 50	Do grn Chili, bx	40	@	50
Crabapples	75	@ 1 00	Do do Bells	50	@	75
Cant loupes, pr crate	2 00	@ 4 00	Turnips, ctl	75	@	—
Melons, pr 100	10 00	@16 00	Cabbage, 100 lbs	60	@	90
Grapes, pr bx—			Garlic, lb	1½	@	3
Do White	50	@ 75	Squash, Sum, bx	15	@	25
Do Black	75	@ 1 25	Tomatoes,	—	@	—
Prunes, Tragedy	50	@ 90	Do River lrg bx	75	@	1 25
Do German	50	@ 75	Peas, green, sk	50	@	1 75
Plums, Duane's Purple	50	@ 65	String Beans	2	@	4
Do Peach	65	@ 85	Cucumbers, box	15	@	30
Do Wash	50	@ 65	Mushrooms	30	@	50
Do Pedro	40	@ 50	Egg Plant, bx	75	@	1 25
Pears	50	@ 75	Green Corn, sk	—	@	—
Do Bartletts	75	@ 1 00	Do sat Bay pods	10	@	15
			Do Berkely box	40	@	65

Continued on next page.

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES.			
Sun-dried, 1's, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	6½	@	7
APRICOTS.			
Sun-dried, unbl. com.	4	@	5
Do do prime	6	@	7
Do do choice	8	@	9
Do bleached, prime	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap. choice, in boxes	13½	@	—
Do fancy, do	14	@	—
FIGS.			
Sun-dried, black	—	@	—
Do white	—	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES.			
Sun-dried, stemless	3½	@	
Do unstemmed	1½	@	2
NECTARINES.			
Red, sun-dried	—	@	—
Do Evap., in boxes	—	@	—
White, sun-dried	—	@	—
Do evaporated	—	@	—
PEACHES.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	11½	@	—
Do do fancy	12	@	—
Evap, unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Do do choice	14	@	—
Do do fancy	15	@	—
Sun-dr, pl'd, prime, bl.	—	@	—
Do do choice	—	@	—
Do do fancy	—	@	—
Evap, peeled, in boxes, choice	—	@	—
Do do fancy	—	@	—
PEARS.			
Sun-dried, quarters	—	@	—
Do sliced	—	@	—
Evap, sliced, in boxes	—	@	—
Do ring do	10½	@	—
PLUMS.			
Pitted, sun-dried	—	@	—
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	—	@	—
PRUNES.			
Cal. French, ungraded	8	@	—
Do graded, 60 to 100	—	@	—
Do do 40 to 60	—	@	—
Fancy sell for more money.			
RAISINS.			
London Layers, choice ₰ bx	—	@	—
Do fancy, do	—	@	—
Layers, ₰ bx	—	@	—
Loose Muscatels, common, ₰ bx	—	@	—
Do choice, do	—	@	—
Do fancy, do	—	@	—
Unstem'ed Muscatels, in sacks, ₰ lb	—	@	—
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ₰ 20-lb bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowe quotations.

WEDNESDAY, Aug. 3, 1892

BEANS AND PEAS.			
Bayo, ctl	2 75	@	3 00
Butter	2 50	@	2 85
Pea	2 30	@	2 60
Red	2 75	@	3 00
Pink	2 50	@	2 60
Small White	2 20	@	2 45
Large White	2 10	@	2 35
Lima	3 00	@	3 15
Fld Peas, blkeye	3 00	@	3 30
Do green	1 50	@	2 75
Do Nies	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	18	@	—
Do Giltedged	—	@	24
Do Creamery rolls	—	@	24
Do do Giltedge	—	@	25
Eastern	—	@	—
CHEESE			
Cal. choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Do skim	5	@	6½
Young America	—	@	11
EGGS.			
Cal. "as is," doz.	16	@	18
Do candled	19	@	23
Do choice	23	@	25
Do fresh laid	26	@	29
Do do selected	—	@	30
Eastern "as is"	14	@	16
Do candled	17	@	18
Do selected	19	@	22

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED.			
Bran, ton	17 00	@	18 50
Feedmeal	27 00	@	30 00
Gr'd Barley	21 00	@	22 50
Middlings	20 00	@	21 50
Oil Cake Meal	—	@	25 00
Manhattan Food ₰ cwt.	7	@	50
HAY.			
Wheat, per ton.	8 00	@	—
Do choice	—	@	12 50
Wheat and Oats	8 50	@	11 00
Wild Oats	8 00	@	11 00
Cultivated do	7 00	@	10 00
Barley	6 00	@	9 00
Alfalfa	7 00	@	9 00
Straw, bale	40	@	50
GRAIN, ETC.			
Barley, feed, ctl.	88½	@	92½
Do Choice	93½	@	—
Do Brewing	1 00	@	—
Do do Choice	1 05	@	—
Do do Giltedge	1 07½	@	—
Do Chevalier	—	@	—
Do do Giltedge	—	@	—
Buckwheat	—	@	—
Corn, White	1 40	@	—
Yellow, large	1 30	@	—
Do small	1 35	@	—
Oats, milling	1 52½	@	—
Feed, Choice	1 46½	@	—
Do good	1 42½	@	—
Do fair	1 37½	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	—	@	—
Gray	—	@	—
Rye	1 30	@	—
Wheat, milling. Gilt edged	1 48½	@	—
Do Choice	1 46½	@	—
Do fair to good	1 42½	@	—
Shipping, cho'ce	1 40	@	—
Do good	1 37½	@	—
Do fair	1 35	@	—
Common	1 30	@	—
Sonora	1 33½	@	1 45
HOPS.			
1891 Choice to Ex.	20	@	—
Fair to Good	18	@	—
1892 Bid	16	@	18
FLOUR.			
Extra, CityMills	4 65	@	4 75
DoCountryMills	4 50	@	4 75
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	6	@	—
Do Choice	8	@	—
Do paper shell	9	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	50
POTATOES.			
Early Rose, ctl.	40	@	55
Peerless	50	@	65
Garnet Chilies	60	@	85
Burbank Seedlings	50	@	80
POULTRY.			
Hens, doz	6 50	@	8 00
Roosters, old	6 00	@	7 50
Do young	5 00	@	7 50
Broilers, small	2 50	@	3 75
Do large	3 75	@	4 25
Fryers	4 50	@	5 50
Ducks	4 00	@	4 75
do, large	5 00	@	5 50
do, extra large	6 00	@	—
Geese, pair	1 25	@	1 75
Goslings	—	@	—
Turkeys, Gobl'r.	18	@	20
Turkeys, Hens	16	@	18

All kinds of Poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food ₰ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	10½	@	—
Medium	11½	@	—
Light	13	@	—
Lard	9½	@	12
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	11½	@	—
do Eastern	14½	@	—
SEEDS.			
Alfalfa	—	@	—
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	3	@	3½
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Oala'v & F'th'l.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (State).	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	9	@	12
do do 1-lb frame	11	@	14
White extract'd	6½	@	7½
Amber do	6	@	6½
Beeswax, lb	25	@	28

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	4½	@	—
Second quality	4	@	—
Third quality	3½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	4	@	—
Do light	5	@	—
Dairy	6	@	—
MUTTON.			
Wethers	7	@	8
Ewes	6½	@	7
Do Spring	9	@	—
HOGS.			
Light, ₰ lb, cents	5½	@	—
Medium	5½	@	—
Heavy	5	@	—
Soft	4½	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 and 4 yarns	9½	Pure Manila Hop, in balls, tarred	12
Do, 2 yarns, light	10	Do, Grape-Vine, in balls or coils	12½
Duplex, 3 yarns	9½	Do, Spring	16
Manila, mixed, 3 yarns, heavy	11	Duplex Hop, in balls, tar'd	10
Pure Manila, 3 and 4 yarns	12½	Do, Grape-Vine, in balls or coils	11
Do, 2 yarns, light	13		

Grain and Wool Bags.

Calcutta, spot	7	@	7½
Wool Bags	36	@	38

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal	10	@	15

Auction Sales of California Fruits.

At New York.

July 27.—Three carloads—German Prunes, $2.15; Tragedy Prunes, $2 70@2.75; Purple Duane Plums, $2.10@2 20; Peach Plums, $2@2.10; Japan Plums, $1.65; Early Crawford Peaches, $1@1.45; Hale's Early Peaches, 65@80c; Bartlett Pears, $1.70.

July 27.—Four carloads—Bartletts, $1.90@2.80; Crawford Peaches, $1@1.50; German Prunes $2.10@2.55; P. D. Plums, $1.80@2.75; Washington Plums, $2.45@3.25; Tragedy Prunes, $2.30@3.55; Magnum Bonum Plums, $1.95@2; Golden Drop Plums, $2.40; Bulgarian Prunes, $1.40; Japan Plums, $2.80; Bradshaw Plums, $2.

July 28.—Two carloads—Crawford Peaches, 65c@$2; Snowflake Peaches, 80c; Bartlett Pears, $1.70@2.95; Plums, $2.50; Washington Plums, $2.25@3; Bradshaw Plums, $1.30@2.20; Peach Plums, $3.10; Columbia Plums, $1.50; Purple Duane Plums, $1 70@2.65; Japan Plums, $1.50; Magnum Bonum, $3; German Prunes, $1 50@2.75; Tragedy Prunes, $2.23@2.35; French Prunes, $1 10@1.50; Bulgarian Prunes, $2.25.

July 28.—Two carloads—Peach Plums, $2.15; Purple Duane Plums, $1 70@2.10; Bradshaw Plums, $1 80@2.15; St John Peaches, 70c; Strawberry Peaches, 60@70c; Early Crawford Peaches, 65c@$1.15; Foster Peaches, $1@1.20; Bartlett Pears, $1.65@1.70; Figs, $1 95.

July 29.—Two carloads—Bartlett Pears averaged $2.15; Early Crawford Peaches, 70@95c; Foster Peaches 65c; Royal Native Plums, 60@85c; Washington Plums, $1.25; German Prunes, $1.50.

July 29.—Four carloads—Bartlett Pears, $2.25@2.75; Crawford Peaches, $1 20@2.15; Egg Plums, $2 50@2.75; Foster Peaches, $1.35@1.90; Hale's Early Peaches, $1.10@1.40; Susquehanna Peaches, $1.65; half-boxes Bartlett Pears, $1.10; Clapp's Favorite Pears, $2 30; Oregon Plums, $1 65@3.87; Bradshaw Plums, $1.35@2.30; Peach Plums, $1 55; Japan Plums, $4 05; Tragedy Prunes, $1.30@1.80; Nectarines, crates, 55c; boxes, $2.85; Apricots, 45@60c; Washington Plums, $1.90@2.55; P. D Plums, $1.40@1 90; Co umbia Plums, $1 30@2.15; German Prunes, $1.30@2 50; Gros Prunes, $3.60.

July 30.—Three carloads—Crawford Peaches, 90c@$1; Strawberry Peaches, 80@85c; Foster Peaches, $1.35@1.40; Decker Peaches, $1.35@1.60; White Peaches, $1.40; Bartlett Pears, $2 90@3 10; Purple Duane Plums, $1.65@1.85; Washington Plums, $1.85; Columbia Plums, $1.95; German Prunes, $2.15@2.25. Hot.

August 1.—Five carloads: Bartlett Pears, $2.10@3.15; Early Crawford Peaches, 90c@$1 40; Strawberry Peaches, 90c; St. John Peaches, $1.20; Foster Peaches, $1.25@1 35; Fontainebleau Grapes, half crates, 95c@$1 35; Washington Plums, $1.75@1.80; Columbia Plums, $1 95.

August 1.—Four carloads: Sales, $5852. Bartlett Pears $2.55@3.05; Crawford Peaches, $1 15@1.65; Hale's Early Peaches, $1; Foster Peaches, $1 25@1.55; Mangus Peaches, $1.35; half boxes Bartlett Pears, $1.43; Nectarines, 55c, P. D. Plums, $1 74@2 85; Japan Plums, $4.37; Oregon Plums, $1.50@3; Plums, $3.10; Prunes, $1.80@1.85; German Prunes, $2 70.

At Minneapolis.

July 28.—Three carloads—Bartlett Pears, $1.80@2; German Prunes, $2.10; Crawford Peaches, very ripe, 50c@80c;

July 28.—Two carloads—Bradshaw Plums, $2.10; Jefferson Plums, $1.75; Quackinboss Plums, $2.05; Washington Plums, $1.9 ; P. D. Plums, $1.90; Peach Plums, $2; German Prunes, $1.85@1.90; Hale's Early Peaches, 65c; Early Crawford Peaches, 65@85c; Strawberry Peaches, 90c; Foster Peaches, 90c; Bartlett Pears, $1.65@$1 80.

July 29.—Two carloads—Bartlett Pears, $1.75; Plums, $1.90@2.55; Nectarines, 95c; Peaches 75@90c.

July 30.—One carload—Peaches, $1@1.25; Pears, $2.25@2-50.

August 1.—Three carloads: Bartlett Pears, $2@2.10; Peaches, 65c@$1; Grapes, $1.85@2; Purple Duane Plums, $2.10; Peach Plums, $2.25.

At Boston.

July 28.—One carload—Bartlett Pears realizing for same $2@2.25.

July 30.—Two carloads—Bartlett Pears averaged $3.27; German Prunes, $3: Japan Plums, $4.25; Sweet Plums, $3.62; Jefferson Plums, $2.47; Early Crawford Peaches, $2.63.

August 1.—Two carloads: Bartlett Pears averaged $3.37@3 81; Crawford Peaches, $3.15; Washington Plums, $1; German Prunes, $3.45.

At Omaha.

July 27.—Two carloads—Peaches sold for $1@1.25₰ box; Bartlett Pears, $2@2.25 ₰ box.

July 30.—Two carloads—Pears at $1.75@2.25.

August 0.—One Carload: Crawford Peaches, 90c@$1.15.

At Chicago.

July 27.—Six carloads: Bartlett Pears, $1.60@2.20; Clapp's Favorite Peaches, $1 35; Figs, 75c; Crawford Peaches, 75c@$1; Peaches, 50c@$1.30; Washington Plums, $1.75@2; Purple Duane Plums, $1 60@2.65; German Prunes, $2.40@2.55; Pears, $1.35; Plums, $1.40@2.15; Nectarines, 40c@$1; Peach Plums, $2.60; Egg Plums, $1.85@2.05; Grapes, $1.50@1.65; Bradshaw Plums, $1.25. Extremely hot.

July 27.—Four carloads: Peach Plums, $2@2.20; Bradshaw Plums, $2.10@2.25; Columbia Plums, $2.05; Yellow Egg Plums, $2.25; Purple Duane Plums, $1 85@2; Bohemian Plums. $1 60; Tragedy Prunes, $2.40; Bulgarian Prunes, $1.55; German Prunes, $2.10; Bartlett ears, $1.65@2 25; Early Crawford Peaches, 70c@$1; Hale's Early Peaches, in bad order, 40c; Royal Apricots, $1@1.45.

July 28.—Five carloads: Bartlett Pears, $1.65@2.25; German Prunes, $2@2.15; Columbia Plums, $2.05; Royal Native Plums, $1.65; Washington Plums, $1.75; P. D. Plums, $1.85@2; Fontainebleau Grapes, $1.20@1.60; Early Crawford Peaches, 75c@$1; Strawberry Peaches, 70c; Foster Peaches, 75@85c. Some fruit overripe and bad sold for less.

July 28.—Six carloads: Bartletts, $1.50@2.40; Nectarines, 50c@$1; Crawford Peaches, 60c@$1.20; Peaches, 40c@$1.25; St. John Peaches, 55@90c; Foster Peaches, $1.20; Strawberry Peaches, 60c; Grapes, $1.30@1 65; Gages, 85c; Plums, $1 60@2.20; Washington Plums, $1.90@2.10; Bradshaw Plums, $1.20@2.60; P. D. Plums, $2.25; Prunes, $2.45; German Prunes, $1.70@2.40; Tragedy Prunes, $2.25@3 10.

July 29.—Eight carloads: Bartlett Pears, $1 35@2.05; Pears, 60c; Peaches, 45c@$1.05; Plums, 95c@$2 25; German Prunes, $1.80@2.45; Bradshaw Plums, $1.80@2.60; Japan Plums, $1 80@2; P. D. Plums, $1.25@2.30; Grapes, $1.20@$1.55; Crawford Peaches, 65@80c; Apricots, $1; Tragedy Prunes, $2.15@2.5 ; Nectarines, 50c@$1.20; Strawberry Peaches, 55c; Washington Plums, $1 90; Cling Peaches, $1 05@1.50; Bulgarian Prunes, $1.20@1 90; Prunes, $1 15.

July 29.—Three carloads: Bartlett Pears, $1.35@2; Columbia Plums, $1 90@1.95; Yellow Egg Plums, $2; Washington Plums, $1.20@2; Bradshaw Plums, $1.35@2.10; Japan Plums, $1.40@1.55; Purple Duane Plums $1.25@1.90; Jefferson Plums, $1.80; Early Crawford Peaches, 60@90c; some unsound, 40c; German Prunes, $160@1.65.

July 30.—Three carloads: Bartlett Pears averaged $1.90; Fontainebleau Grapes, $1.10@1.30; Early Crawford Peaches, 75c@$1; Centennial Peaches, $1 10; Foster Peaches, 85c; Strawberry Peaches, 90c; Red Nectarines $1; German Prunes, $1.70; Washington Plums, $1.25. Some fruit, small and unsound, sold for less.

July 30.—Six carloads, Bartlett Pears, $1.80@2 15; Peaches, 60c@$1; Apricots, 90c@$1.15; Grapes, $1.30@1.40; Nectarines, 90@1.45; Plums, $1.50@1.70; Columbia Plums, $1.75@2.10; German Prunes, $1.90@2.25; Magnum Bonum Plums, $2.30; Purple Duane Plums, $1 40@2 25; Washington Plums, $1 30@2; Egg Plums, $1.90; Gros Prunes, $1.85; Tragedy Prunes, $2.25.

August 1.—Thirteen carloads: Nectarines, crates, 70c@$1.15; Egg Plums, crates, $1 50@1 80; Plums, crates, $1.55@1.80; Columbia Plums, $1 75@2; Bulgarian Prunes, $1.50; German Prunes, $1 60@1.75; Green Gages, $1; Washington Plums, $1.40; Apricots, $1; Fontainebleau Grapes, $1@1.50, single crates; Bartlett Pears, $1.65@2 40; Howell Pears, $1.65@1 80; Bellflower Apples, $1 65; Clapp's Favorite Pears, $1.90; Peaches, 55c@$1.30 for Freestones; Clingstone Peaches, $1.30. Eighteen cars California fruit were sold in Chicago to-day.

August 1.—Five carloads: Bartlett Pears, $1.95@2.15; Early Crawford Peaches, 85c@$1.25; Foster Peaches, $1@1 30; Centennial Peaches, $1; Strawberry Peaches, 65@85c; Royal Apricots, $1 15; Red Nectarines, $1@1.05; French Prunes, $1 15@1.30; Hungarian Prunes, $1 35@1.40; German Prunes, $2.15; Italian Prunes, $1.75; Gros Prunes, $2.75; Columbia Plums, $1.80@2 20; Damson Plums, $1.50@1 90; Washington Plums, $1.40; Purple Duane Plums, $1 75; Bradshaw Plums, $1.75@1 85; Peach Plums, $1.45; Egg Plums, $1.20@1.40; half crates Fontainebleau Grapes, $1.10@1.30.

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Farmers perhaps more than any other class suffer from the charges and dishonesty of middlemen. If the farmer could sell his produce at best market rates and have honest returns made, his profits would be greatly increased. An agency or organization that would carefully supply the farmer with information in advance of his shipment, look out for his produce when it arrives, report to him as to the honesty of firms he may think of dealing with and do his purchasing at the best market rates, would be of almost incalculable benefit. To fill this want, lately a number of reputable San Francisco business men have organized a Farmers' Protective Bureau, with offices in the *Chronicle* building, San Francisco.

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Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon, Salem, J. T. Gregg		Sept. 12-17
California, Sacramento, Edwin F. Smith		Sept. 5-17
Washington, Spokane		Sept. 19-24
Nevada, Reno, C. H. Stoddard		
Western Washington Industrial Exposition, Tacoma		

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
1	Oakland	Aug. 8-13
2	Stockton	Sept. 19-Oct. 1
3	Chico, J. D. Sproul	Aug. 23 27
4	Petaluma, Dr. Thos. Macleay, Aug. 29-Sept. 3	
5	Santa Clara, George H. Bragg	Sept 26-Oct 5
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23-27
9	Rohnerville	
10	Yreka, C. S. Smith	Oct. 5-8
11	Sierraville, Fred Blinman	Oct, 3-7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28-Sept. 3
14	Santa Cruz, Oscar L. Gordon	Oct. 10-15
15	Bakersfield. J. J. Kelly	
16	San Luis Obispo, J. H. Barrett, Sept 27-Oct 1	
17	*....., I. J. Rolfe	Aug. 23-28
18	Independence, C. W. Craig	Sept. 27-30
19	Santa Barbara, H. B. Barstow	Aug. 23-27
20	Auburn, F. D. Adams	Aug. 30-Sept. 3
21	Fresno, J. M. Reuck	Sept. 26-Oct. 1
22	Escondido, G. M. Dannals	Sept. 21-24
23	Concord, F. L. Loucks	Aug. 29-Sept 3
25	Napa, D. L. Hackett	Aug. 22-27
26	Ione, C. T. La Grave	Sept. 27-30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, M. R. Hook	Aug. 16-20
31	Hueneme, T. H. Merry	Aug. 30-Sept. 3
32	Santa Ana, W. A. Beckett	Oct 3-7
33	Hollister, A. D. Shaw	Oct. 11-15
34	Susanville, C. E. Emerson	Sept. 3-7
35	Merced	
36	Vallejo	Aug. 27-30
37	Lompoc, W. I. Nichols	Sept. 20-23
38	Modesto	Sept. 28-Oct. 1
	—Glenn Co. Willows, W. V. Freeman	Aug. 9-13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

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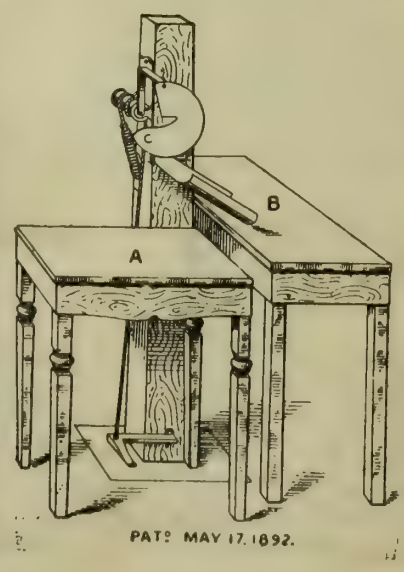
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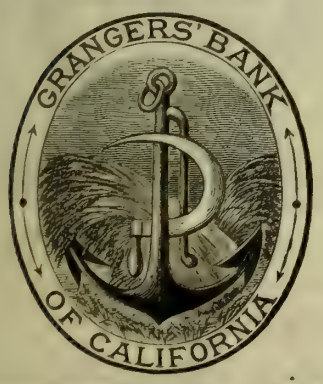
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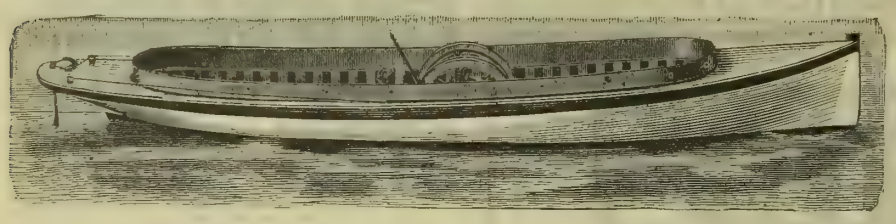
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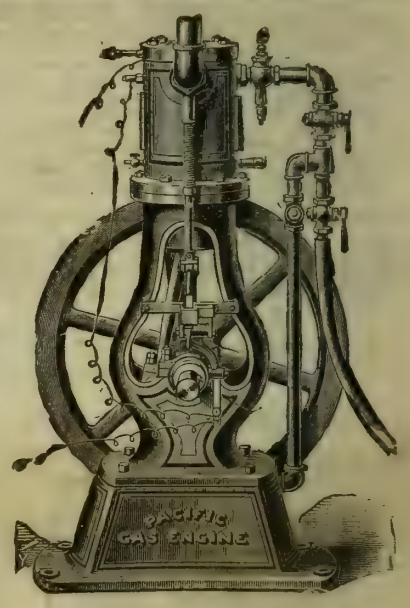
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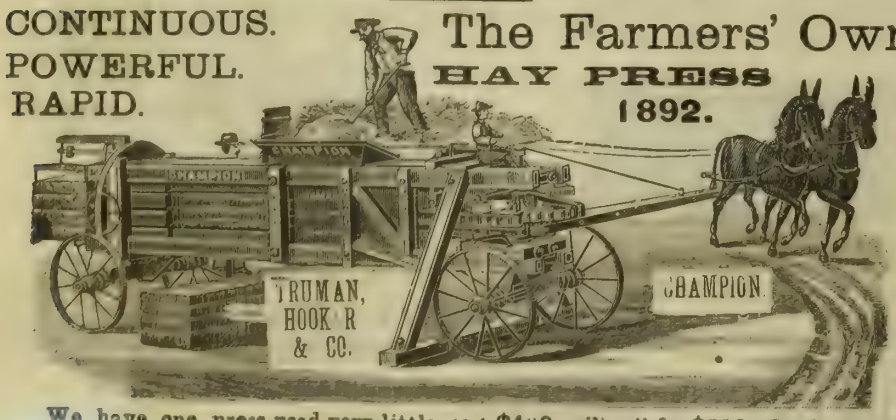
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PACIFIC RURAL PRESS

Vol. XLIV. No. 7. SAN FRANCISCO, SATURDAY, AUGUST 13, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Luther Burbank's New Plums.

Notable results are already accruing from the wonderfully extensive and devoted efforts which have been put forth for many years by Luther Burbank of Santa Rosa. He has produced during the last 25 years something like twenty million hybrid and crossbred seedling plants, and the endless labor and outlay bestowed in hybridizing selecting, testing, etc., is now being more generally recognized, and some of the fruits and flowers originated by his labors are becoming household words wherever fruits and flowers are admired. We have from time to time alluded to this important work in the RURAL, and we are pleased now to mention three new plums of which early borne samples are sent us.

The first is a seedling grown from seed of Kelsey Japan plum crossed with pollen from Satsuma. It is a wonderfully fine fruit in texture of skin and flesh, and in fact is free from coarseness of any kind. It carries the rich dark color of the Satsuma, and in its upper portions shows the symmetry of that variety. Its lower half discloses the influence of the Kelsey upon its outline, for it has inclination to draw to a point, though to a much less degree than in the Kelsey. The flesh has the dark red of the Satsuma, somewhat lightened with the yellow of the Kelsey. Its flavor is characteristic and delightful, and suggests watermelon, grape, plum and apricot as its presence invades the palate. The pit is smooth, shapely and of medium size. The fruit seems to us to reflect in a notable degree the good qualities of both its parents.

Mr. Burbank sends us also two other crossbred seedlings. One, designated as "J," is a very handsome yellow with slight reddish clouding on the sun side. It is also built upon the Kelsey crossed in this case with the Burbank. It has rather more of the Kelsey shape than the fruit cross with Satsuma above described, but it is not nearly so uneven as the Kelsey. It has clear yellow flesh and a flood of juice of very mild, agreeable flavor. It seems to be a persistent clingstone.

Another new variety is marked "2," and is a cross of Kelsey with Satsuma pollen. It gives no intimation of the Kelsey shape, but almost fully reflects the Satsuma form. It is a dark color, plentifully studded with light yellow dots. It has a most beautiful deep red and almost translucent flesh, suggesting a mass of currant jelly. It is juicy and has a distinctly vinous flavor. The variety has points which will command wide attention.

These fruits are all good medium size, but smaller than good samples of either of their parent varieties. It is altogether probable that they will run larger when better grown. Mr Burbank, of course, fruits his seedlings in close rows first to determine which are worthy of further trial, and these specimens came from plants grown almost as thick as a hedgerow. We shall watch with interest to see what they will do when budded into a good stock, as Mr. Burbank will undoubtedly proceed to do.

The production of a few such varieties as the above should prove full consolation and reward for the labor Mr. Burbank puts forth. Of course, to get one such fruiting variety, he has to fruit hundreds, all the rest of which are probably altogether worthless through reversion to the wild type. But this is the price which the devoted originator of new varieties has to pay for his victories.

The Advance in Hog Product.

Within the past 60 days there have been several advances in the market value of hog product, with still higher prices expected to rule. The advances have been made in the face of a pack of 5,085,000 hogs from March to August 1st, against a pack of 4,285,000 hogs during the like time in 1891. Notwithstanding the pack this year shows an increase of 800,000 hogs, yet the stock of hog product at the East is remarkably light, so heavy have been the home and export demand. The marketing of a larger number of hogs has been brought about by the certainty of a large falling off in the corn crop and prospective higher prices for the cereal. The opinion that higher prices will rule for hog product is grounded on the fact that farmers have marketed or else have provided for marketing all the hogs they intend to before the new corn crop season sets in, and with fewer available hogs and light stocks of the product, combined with an excellent home and export demand for the latter, it will be quite impossible for packers not to take advantage of the favorable situation and put prices as high as the market will justify.

TOBACCO.—Tobacco at the Culp plantation at San Felipe shows the fine condition and excellent quality of a true Havana leaf. There are 50 acres which will yield about 50,000 pounds. Cutting is now in progress.

A Coast Range Foothill Orchard.

We have had descriptions and illustrations of the Sierra foothill orchards. On the opposite or western side of the great valley of California lie the foothills of the Coast Range, which are to some extent being used for orchard and vineyard planting. These foothills are, on the whole, less picturesque than those of the Sierra Nevada; they generally carry less forest and jutting rock, and their soil is of a more somber hue. And yet they have here and there trees and rocks and falling water fit to entrance an artist. But their greater area is gentle slope and rolling hills and their expanse seems almost illimitable. Unfortunately, however, a great part of the foothills on the eastern side of the Coast Range is in a region of deficient rainfall, and they have not above them the natural reservoirs of the snow-crowned Sierra.



A FOOTHILL ORCHARD ON STONY CREEK, IN COLUSA COUNTY.

There is a portion of the region of Coast Range foothills on the west side of the Sacramento valley which has abundant rainfall and kind, loamy soil and is admirably fitted for fruit production. The precipitation of moisture is far greater than on the plains of the valley, and catching the sun rays as they first surmount the Sierra Nevada, and holding them during long days, conditions are present which favor the production of early fruits. The hillsides and small valleys on the west side of the lower Sacramento valley have been famous for years in this line of production. It is now something of a question how far northward these favoring conditions prevail. Recent experience has shown that the northern extension of this region is greater than was once thought, and we are not prepared to set a bound upon it.

The picture upon this page shows a small orchard in the northern extension of the region to which we have alluded. It is situated in the Stony creek region of Colusa county, and it well portrays the features of the foothills on the west side of the Sacramento valley. Lands which have been used since the settlement of the State for hay or grain or pasturage have of late become diversified as in the engraving by the insertion of areas of fruit trees. Marked is the contrast at this season between the foliage of the trees and vines and the sere expanses of stubble or dry pasturage. Marked also is the effect produced upon the value of these lands when thrifty and productive trees give demonstration of the adaptation of the soil and situation to fruit production. All owners of such lands should put them to the test of such employment. It does not cost much to plant and care for a small orchard, and yet its influence upon the beauty of the country, the comfort of the home, and in many cases upon the value of the holding, are almost beyond estimate.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

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Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

Saturday, August 13, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Buggies, Carts, Etc.—California Wagon and Carriage Co.
Hay Presses—Truman, Hooker & Co.
Trees and Plants—Phoenix Nursery Co., Bloomington, Ill.
New Plants—Reasoner Bros., Oneco, Fla.

☞ *See Advertising Columns.*

The Week.

We seem to have had rather a narrow escape from a rain in August this year. At central coast points and even in the interior at the north there was everything varying from a sprinkle to a light shower. Fortunately it did not invade the regions where fruit is largely laid out on trays, or where the tiers of grain sacks rise like fortifications on field or river-bank. California has too much value out of doors now to tolerate the thought of a rain, and fortunately there is very little danger of it at present.

The astronomers are knocking their heads together about Mars, which happens to be somewhat nearer the earth than usual. If Mars could hear all that is said about him, he would douse his glim. According to reports, land and water exchange places more rapidly on his surface than they do on a good, lively real estate map.

World's Fair matters seem to be reviving, and in southern California are especially active. Now they propose to send a whole acre of bearing orange trees, a date palm 100 feet high, and Egyptian pyramids of jelly, etc. It looks as though northern California might have to growl over another southern boom in 1894. The southern people seem to know how to do it.

Persian Fat-Tailed Sheep.

A very interesting band of immigrants has been captured for California. It seems that Gen. Truxton Beale, an old-time Californian, while U. S. Minister to Persia, became interested in a race of fat-tailed sheep which are highly esteemed in that country. They are large, mutton sheep, coarse-wooled and weigh about 175 pounds, live weight. A part of this avoirdupois is the fat tail, which in some cases reaches a weight of six to ten pounds. From this oily appendage comes the common name of the breed. As a result of Gen. Beale's admiration, a present of these Persian sheep was made to the United States, and Secretary Rusk, to whose hands all such agricultural donations come, decided that the climate of California would suit these distinguished foreigners. The next conclusion was that C. P. Bailey of San Jose, the well-known Angora goat king of the Pacific slope, would of course know best how to dispose of this new ovine acquisition from Asia, and so they are coming consigned to his care. There are 17 sheep in the band and they are expected to arrive in San Jose next week. Mr. Bailey proposes to place one pair in Golden Gate Park and another pair perhaps at one of the University Agricultural Experiment Stations. Another pair will go to one of W. B. Carr's farms in Kern county, and the balance, for the present, will go to Mr. Bailey's Angora farm in Monterey county. Mr. Bailey ought, if possible, to take the sheep to the State Fair, so the people can all see their present from the Shah. Then there should be careful provision made for handling the band, to determine their value both as pure breds and for crossing. We have no doubt Mr. Bailey will do this with his customary enterprise.

A Concentration of Milling Interests.

During the last week there has been announced a notable concentration of flour milling interests in the central and southern part of the State. A few years ago there was a combination formed to control the chief mills in San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey and San Luis Obispo counties, which seemed to work well for those inside, although it created hardships outside. The present combination includes a far greater group of milling interests, for it is stated that the mills owned by the new concern have an aggregate capacity of 6000 barrels of flour daily, and 12 of them are now running, giving daily employmment to an aggregate of 1000 men in different cities of the State. The combination cuts a considerable figure financially, for the corporation is capitalized at $10,000,000 in paid-up stock.

The ostensible reasons for the combination, as stated by a director of the concern to a reporter, are given as follows:

"The idea is that we want to do business on a cheaper basis and put our stock on the market under better advantages. As it now stands, each millman takes all his risks singly. Now, in this corporation, if my mill should burn down to-morrow my product would go on just the same.

"But competition is done away with," suggested the reporter. "How about that?"

"Oh, yes, so far as we in the company are concerned there will be no competition, but we will not put up prices—on that we are determined. Overproduction and limited markets have kept us in check and prevented us from making any great money in the business. We hope to do a little better in the future under the new arrangement."

Apparently, the creation of a combination of this kind has the chance of coming between the graingrower and the breadeater in a way to work hardship to both. To the extent of its membership it removes competition in the purchase of choice milling wheat, which has often been keen between rival millers, and local wheat values were thereby advanced. On the other hand it prevents competition between these same parties for custom for flour, and though the combination is "determined not to advance prices," prices will advance by their inaction, unless mills outside of the combination keep them down. Fortunately, perhaps, there are many strong milling firms outside of the new corral.

It is true that milling combinations have not yet done much on this coast, but they have been a source of serious trouble to graingrowers in the central west, and, to a certain extent, here also. They have necessitated the building of mills by graingrowers in some instances. This is uphill and dangerous work. It would be far better for the graingrower to find a market in which healthy competition established fair prices, but there have been cases in which farmers have had to fight the devil with fire, and cooperation has been successfully invoked to contend with combination.

But we trust that we shall be spared the issues between graingrowers and millowners which have vexed and hindered the prosperity of other producing regions. We hope we shall not see another lot of dismantled mills and locked-out workmen, with the attendant loss and inconvenience resulting from the cessation of local grinding facilities. If the combination can work to advantage in extending the flour trade between California and adjacent States and Territories and to points of distant shipment, it will cure overproduction in a legitimate way. By increasing the demand and broadening the avenues of disposition, its work will be generally beneficial. If it is to reduce production by closing up mills, by forcing weaker rivals into bankruptcy, and to increase its profits by crushing down the price of milling wheat and running up the price of flour, its birth will usher in a period of discomfort and trouble which will not be for the benefit of the State. What the future will be will depend upon the aims and policy of the combination which are not officially stated, and upon its actions which are yet to be taken.

Florida Irrigation.—Upon another page may be found an interesting account of a Florida pumping and sprinkling outfit. In addition to the absence of high, flowing water in that State, because of no mountain sources, it seems that the State has no bottom to it which will hold water, so that artificial rainfall is the only practicable way to distribute water. Some who have tried to carry water in ditch or furrows, speak feelingly of its speedy disappearance. One man says he ran 250,000 gallons in a trench before it reached 900 feet distance from the source. Another man poured 10,000 gallons out of a tank and it did not travel ten feet. Another used 300,000 gallons to wet two acres of trees. No wonder they have to sprinkle. What else can they do in a State with no top and no bottom—just a lot of sea-foam rocking on the tide.

The Situation of Wheat.

In the month of June the Rural Press claimed that the wheat crop of the world would be less in this year than it was in 1892, and intimated that California No. 1 white shipping wheat was a good investment at around $1.40 per cental. This latter opinion we have every reason to believe will be fully verified before the fall months pass. Already our statement that there would be a short crop is being proven correct, so far as the first estimates go to show. Beerbohm, a recognized authority, places the yield, in bushels, of the leading countries as follows: United States, 520,000,000 (this is 9,000,000 bushels more than our estimate); Russia, 208,000,000; France, 288,000,000; India, 208,000,000; Hungary, 132,000,000; Italy, 116,000,000; United Kingdom, 64,000,000: Germany, 104,000,000. Total, 1,640,000,000 bushels, against 1,700,000,000 in 1891, and 1,726,000,000 in 1890. From the smaller producing wheat countries, the yield will aggregate less in this year than it did in 1891, so that it is safe to place the total outturn of all countries at about 75,000,000 bushels less in 1892 than it was in 1891.

In estimating the probable requirements, several important factors must be considered. The root crop in the United Kingdom is unquestionably very much larger this year than it was in 1891, but on the Continent, so far as we can judge from the most reliable information received, there is no material difference in the yield, but the rye crop will be larger—how much it is hard to estimate. In the United Kingdom the root crop, particularly that of potatoes, plays an important part in relation to wheat requirements, while rye is equally important on the Continent. Even with increased crops of root vegetables and rye, the shortage in wheat, with a short crop of corn in this country, cannot be made good.

The corn crop in the United States cuts no small figure in estimates as to the probable market value of wheat. The crop is now placed at 1,600,000,000 bushels, against over 2,000,000,000 bushels in 1891, with the season from two to three weeks late. If a heavy frost should in next month visit the corn belt in the central States, then the estimated crop of 1,600,000,000 bushels will be cut down very materially, and the markets for wheat and corn make a rapid advance, for corn, as an article of food and of feed, cuts as important a figure in the United States as do the root crops in England and rye in Germany. When this country has a large corn crop, more wheat is available for export, and vice versa when the corn crop is poor to fair. Estimating on this basis the probable wheat surplus which will be available for export in the United States the present season, it is quite safe, even with a large increase in the carryover from the season of 1891–92, to estimate it at not to exceed 150,000,000 bushels, against 224,831,843 bushels in the season of 1891–92 out of a total crop of 611,780,000 bushels. That the estimated surplus of 150,000,000 bushels from the present crop is now too small, but may possibly be too high, we give the following: From the crop in 1882, which aggregated 504,185,000 bushels, there was exported 147,811,316 bushels, and from the 512,765,000 bushels yield in 1884, there was exported 132,570,366 bushels, and in both of these years the yield of corn was larger than is the estimated yield in this year.

Mr. Koebele's Return.—Albert Koebele, the Government entomologist, has returned from his search for beneficial insects in Australia, and is now at his home in Alameda. He brought additional supplies of the insects already named in the Rural, as previously sent by him, and he expects them to demonstrate their value here as he saw it demonstrated during his travels.

Rights in the Case.

Rural New Yorker.

Here is the reasoning of some newspapers and United States Senators on the strike at Homestead. 1. The tariff has enabled the Carnegies to make more money than they could have made without it. 2. This wealth was created by the labor of the workmen. 3. The workmen have a moral right, therefore, to seize a portion of that property and hold it. There is a tariff of five cents a dozen on eggs and just about that much difference between the prices obtained by American and Canadian farmers for this product, as quoted in the Toronto and Buffalo markets, According to this the farmer gets more for his eggs than he would were the Canadian product free. This, we say, is the theory. Now if some large poultryman had trouble with his hired man over wages, would that hired man be justified in claiming a share of the eggs? His labor has made the business possible and the tariff has helped the farmer make money out of his hens. If the Homestead men have a right to share Carnegie's property, the hired man has a right to take at least one egg of every dozen. What *are* the rights of the laborer? Where do they begin and end? The answer to this question will have much to do with the American future.

From an Independent Standpoint.

General Weaver arrived in California last week and is lending to our presidential campaign not only the interest of his presence, but the force of effective private and public speech. No affectations of dignity are allowed to limit his campaign activities. He goes up and down the State in the most Democratic spirit, talking freely and cordially with all who visit him, and addressing public meetings wherever he stops overnight. Mr. Weaver says nothing particularly new, but he says the old things exceptionally well, attracts large and attentive hearings everywhere and is unquestionably making votes for the People's party. The RURAL does not believe, with Mr. Weaver and his political school, that the country is going to the dogs. It sees plainly enough that times are hard and believes that a good many reforms are needed to establish uniform justice in the country; but it does not believe that all the evils of the time can be cured by changing the laws. Much less does it believe that such changes as Mr. Weaver proposes would do the country good. The sub-treasury scheme and the silver coinage scheme, if put into effect, would, we believe, plunge the country into such distress as it has never before suffered. Mr. Weaver and his associates stand chiefly for policies that have failed time and time again in other countries, and which the most intelligent judgment of our own country and times condemns as false and vicious. We believe with the People's party in an honest and economical government; in government ownership of railroads and telegraphs; in the policy of holding American lands for American settlement, and in many other lines of public policy; but we oppose with the earnestness of profound conviction those financial theories which we hold to be based upon false principles and which we believe would lead to widespread ruin. We speak thus plainly knowing well that other expressions would be more acceptible to many of our readers, but with a newspaper as with a man, there is no decent rule of conduct save the rule of honesty. To be fair with its readers, the RURAL must speak out its honest judgments of things, and believing as it does, it would be false to its duty if it did not warn the farming community of the Pacific coast against the financial heresies of Mr. Weaver and those who stand with him. We do not question their honesty, but we believe that they are wrong.

We cannot believe that these financial heresies have taken such hold upon the public mind as their promoters assert. Within the past few weeks we have talked with scores of farmers, men of repute for honesty, common-sense and public spirit, and in almost every case the opinions expressed have been in accord with our own. We are not, we hope, violating a confidence of social life in quoting the remarks of Hon. I. C. Steele of Pescadero in this connection. I believe, said Mr. Steele that the Government should issue all the money of the country, and that every dollar it issues should be the equal of any other dollar; that whether it be gold, silver or paper it shall be a full dollar in value. I believe in the use of silver, but I want a dollar's worth of it put into a dollar. We are not able to quote Mr. Steele exactly, but the above is substantially what he said. Another man, who never says in private what he] is not willing to say publicly, and whose expressions we therefore feel safe in quoting, is Hon. W. L. Overhiser, of San Joaquin county. I believe, said he, in the free coinage of silver, but I want the bullion in the silver dollar to be worth a dollar. We might quote scores of others, but they all come to the same thing. This, we believe, is the sentiment of those who have studied the question and whose business experience and general character entitle their judgments to credit. These men are not blind to the disadvantages of a single standard; they are not blind to the evils of the steadily enhancing value of gold; they see the danger as plainly as Mr. Weaver and his associates, but they have not lost their heads, and they know that old diseases are not cured by new ones—they are not willing to throw the country into fits in the hope of curing its ague. To such men, men of business sense and judgment whose motives are above question and whose intelligence enables them to study public questions fairly, and from the standpoint of the producing farmer, the public should listen rather than to glib talkers who find profit and public distinction in promoting "reforms." The judgment of one such solid man of common sense is worth that of a hundred professional agitators.

But it is not to be doubted that the People's party will command a large vote in California this year. Its chief promoters, in reckoning their strength, point to the 33,000 members of the Farmers' Alliance in California and to an equal or greater number of trades-unionists, and assume that all will vote the Weaver ticket. Of course this is an extravagant estimate. The greater number of farmers, as well in as out of the Alliance, will be guided by their old party affiliations, and the same is true, if we may credit the head of the American Federation, of the trades-unionists. Men are loth, in politics, to depart from old associations, and there is nothing in the present situation of the country to make them do it in anything like wholesale numbers. And yet, there are oftentimes great surprises in the election returns. Who would have supposed, for example, that the People's party would poll nearly 15,000 votes in the recent election in Oregon? True, it was only a minor election, a time when men are much less scrupulous as to their political action than in presidential elections, but the returns surprised the most acute political guessers, and there may be the same sort of surprise in store for California this fall. But assuming that the People's party support will be large, we do not believe that it will rest upon the positive quality in the Omaha platform. It rests not upon the silver and sub-treasury heresies, but upon the just discontent of the country with the old parties. The corruptions of politics—both Democratic and Republican—in this State, the shameful rule of the city rings in the legislature, the cowardice of both parties in allowing railroad and other corporations to fatten at the expense of the producers—these are the evils that have made political disgust widespread in California; these have driven into the new party thousands who feel they cannot remain in their old political relations without loss of self-respect. They love not the new so much as they despise and loathe the old.

In an article printed in the *North American Review* for July, Mr. Samuel Gompers, president of the American Federation of Labor, said:

> To support the People's party under the belief that it is a *labor* party is to act under misapprehension. It is not, in the nature of its make-up, a labor party, or even one in which the wage-workers will find their haven. Composed, as the People's party is, mainly of *employing* farmers, without any regard to the interest of the *employed* farmers of the country districts or the mechanics and laborers of the industrial centers, there must of necessity be a divergence of purposes, methods and interests.

In the following, which appeared last week in the telegraphic columns of the daily press, there is something like practical confirmation of Mr. Gompers' remark:

> ST. PAUL, Minn., Aug. 2.—General James R. Baker, the Alliance candidate for governor of Minnesota, this evening wrote a letter withdrawing his name from the field. This leaves it to the other wing of the party, headed by Ignatius Donnelly. It is stated that the Alliance wing, numbering approximately 20,000 votes, will join the Democrats. The Alliance faction will make its fight in the legislative districts.

Nothing is truer than that there is no basis for permanent political association upon class lines between the farmers of the country and the trades-unionists. The former, as Mr. Gompers truly says, stand for the interests of *employers*, the latter for the interests of the *employed*. The Homestead affair affords an illustration. The farmers of the country stand, almost to a man, with the mill-owner who claims protection for his property and for his right to employ whoever may be willing to engage in his mill upon terms mutually agreeable. They are outspoken in opposition to that spirit which would make the dictum of the trades-union the law of the land as between employer and employed. On the other hand, the trades-unionists, so far as they have spoken, are with the strikers heart and soul and support them to the last of their demands. Manifestly here are elements that will not mingle, and no amount of pressure can for any long time hold together. From the brief dispatch quoted above, it appears that in the wreck of the party in Minnesota the trades-unionists have gotten away with the organization, leaving the Alliance wing out in the cold and with no resource but to make itself as comfortable as possible with one or the other of the old parties.

If those who fondly imagine the United States to be the foremost country of the world in the work of political and industrial evolution will fix their attention upon the far-off continents in the south seas, they will find that we have fallen behind in the race. While we have been talking about the eight-hour day, Australia has established it; and while we are merely suggesting Government ownership of railways, there it is an accomplished fact. The *Review of Reviews* notes that the Victorian administration is about to introduce a bill for the establishment of boards of conciliation to prevent strikes and lockouts, and another to authorize the loan of public money at three per cent to farmers wishing to buy land and build homes. This last measure is certainly very radical, but an American critic, the *Christian Union*, points out that the loan it proposes is certainly less hazardous than the loan our own Government contemplates making to the Nicaragua Canal Company. The fact that the money is lent to the poor to be spent at home, instead of lent to the rich to be spent abroad, does not make the measure any more objectionably socialistic. Besides these innovations in Victoria, another quite as striking has been made in New Zealand. The Parliament there has enacted a law assessing land and improvements separately, and exempting improvements when valued at less than twenty-five hundred dollars. At this point, however, the legislators depart from the principle of the single tax, and accept that of progressive taxation. Improvements worth more than twenty-five hundred dollars are taxed at a gradually increasing rate, which is the same as that upon land when the improvements are valued above fifteen thousand dollars. For landed estates valued above twenty-five thousand dollars, still another progressive tax is established, which rises from the rate of five cents on the hundred dollars where the estate is worth less than fifty thousand dollars, to over a dollar on the hundred where the estate is worth more than a million. Altogether the property of the very rich is taxed at about double the rate imposed upon the property of the poor. New Zealand has for many years applied a similar principle in the taxation of inheritances. This earlier law, though it has not prevented the creation of greater and greater estates, has at least checked this process, and sensibly lightened the burden of the wage-earners and property-owners. The new law simply makes another great stride in the same direction.

Those English statesmen and journals who are fond of satirizing American political incidents might, if they would trouble themselves to look about them, find better amusement closer at home. It would perhaps be deemed uncivil to remind them of the Irish election scenes, but it was in an English town, we believe, that sand was thrown into Mr. Gladstone's eyes a few weeks ago. A more recent incident worthy of note was the entrance last week of Mr. Hardie, the champion of the "Labor interest," into the House of Commons. He drove up in a four-in-hand covered with flaming posters and loaded with a yelling crowd of his supporters. He was dressed, with studied affectation, in workingmen's clothes, greasy and dirty, and advanced, cap on head, to take the oath. In contrast with this sort of thing, "Sockless" Jerry Simpson's conduct is the pink of refinement. Our English friends would do well to look after their own "motes" before hunting for our "beams."

The British Medical Society has been looking into the so-called "gold cure" for drunkenness, now largely practiced in this State and elsewhere, and after full examination condemns it. The substance which is injected into the blood of the patients was found to contain no gold at all, but to be water so charged with poisonous drugs as to be more intoxicating than wine. Atropine, the well-known paralyzing agent, is the chief ingredient. The RURAL frankly confesses its satisfaction at this report because from the beginning it has held the so-called cure "under suspicion." It has seemed, as we have viewed it, to be instinct with quackery both in its pretentions and in its methods. It has seemed to us in opposition to the whole true principle of enduring temperance reform, in that it makes men sober through narcotic effects rather than by the development of their rational and moral powers of self-control. It affords for drunkenness the same sort of "cure" that chloroform affords for physical pain. The only thing to be said for it is that it holds the patient to an enforced sobriety for a time and thus affords opportunity for sober reflection upon his condition and for the making of new resolves. But this advantage must be obtained at dreadful cost to the constitution, and it would unquestionably be better to lock the patient up for a time, keep intoxicants away from his reach, and thus secure a respite of temporary sobriety in which his better nature may be worked upon in the legitimate ways of warning and persuasion. This is old-fashioned treatment, and it will probably remain in reputable practice when the Keely craze is forgotten. After a few more Keely "graduates" have died of heart failure, a few more suffered paralysis, and a few more gone insane, people will stop and call their common sense to judge if it be wise to enforce suicide upon the nervous system even for the sake of being sober for a few weeks or months.

The State Fair.

Preparations for the grandest State Fair ever held in the State are progressing satisfactorily. At a meeting of the State Board on Monday, applications for space both at the park and in the pavilion were in excess of supply. At the former the demand for stallroom is already so great that the directors do not yet see the way clear to accommodate all the applicants. The directors are greatly impressed by the magnitude of the historical exhibit, and will have to erect an immense temporary building near the pavilion to contain all the articles promised for that department. The exhibition promises to excite wider interest than ever before since State Fairs have been held in this State.

Weather and Crop Bulletin for Week Ending August 8th.

The crop conditions, as reported for the week ending Monday evening the 8th inst., show that the weather has been somewhat warmer than during the previous week, while the outlook is about the same, viz.: A good yield of barley and hay and a fair yield of wheat. The fruit crop will be short of the average. Bartlett pears, peaches, nectarines and other fruits are being shipped daily in carloads to the East. The weather has been generally cloudless throughout the agricultural districts of the State. A slight sprinkle of rain was reported from Tehama and Butte counties. The grain crops are all secured and fruit is being rapidly harvested. The well-known fact that the climatic conditions of California remain nearly the same from now until October leaves little of interest for correspondents to report; hence the failure of nearly half the regular number to send in reports.

SHASTA.—*Anderson*—The temperature for last seven days has been about normal, reaching 100 degrees. The lowest temperature was 58°. Fruit is ripening very fast. Three carloads of fruit were shipped from Anderson to Chicago during the week, and three carloads will be started for the same destination during the coming week. Reports from Fall River are good and wheat and grazing fine. Harvesting is about over here.

HUMBOLDT.— *Upper Mattole*—The highest temperature recorded during the past week was 94°. The lowest temperature recorded was 56°; mean temperature 64°. Harvesting progressing satisfactorily. Wheat is very plump, but not very full in the head and will be nearly an average crop. Corn and potatoes late, but doing well.

LAKE.—*Ma Tel Vineyard*—The weather continues very seasonable, though possibly a little cool. Threshing is well along and the crop is up to the expectations. Fruit is very scarce and commands ready sale. Grapes are doing well, but warmer weather would be better for them.

SONOMA.—*Healdsburg*—Average weather has prevailed during the past week, with some foggy mornings and some warm days. Fruit is ripening nicely and hops are doing well.

Santa Rosa—General conditions unchanged since last week. Fruit is ripening slowly, but fast enough to make it of a splendid quality. Canneries are running full blast and prices are firm. Hops are growing well and promise a fair yield. In some sections there will be a good crop of grapes.

SACRAMENTO.—*Sacramento*—The temperature during the past week has ranged from 10° below the normal to 8° above, the average for the week being 4° warmer than the normal. Fruit and vegetables are coming into market in fair quantities and commanding good prices. The sunshine has been normal, but has given an increased amount of heat. There has been no rainfall, which is normal, but very few clouds have been observed. The hop crop was but slightly injured by the high winds of Sunday.

Franklin.—The weather has been cool, with the exception of one or two hot days. Harvesting is very nearly finished and the crop has turned out very satisfactory, but the prices have ranged low.

NAPA.—*Napa City*—The carload of fruit that leaves here today for Helena, Montana, includes apples, pears, peaches and grapes. It has already been sold for the Napa valley fruitgrowers by L. R. Tull, at prices ranging from 90 cents to $1.25 per box delivered on the cars. The first part of the week the temperature was slightly above the normal, and ths latter part somewhat below the normal; weather has been foggy during the mornings, with warm afternoons. The fruit is doing well, as are also grapes, but the latter will be late.

SUTTER.—*Yuba City*—The weather has been cooler than the average. The first of the week a few light showers of rain was precipitated. Fruit is coming in lively, while shipping, canning and drying are being rapidly carried on. Corn, etc., is maturing well and hops ripening slowly.

YUBA COUNTY.—*Wheatland*—Weather very favorable for harvesting, which will last another three weeks, and the yield will be a good average. The peach crop is good. Hops are doing well and will be a fine crop.

SOLANO.—*Denverton*—The summer has been a remarkably cool one with but few warm days. Threshing is nearing an end, and the wheat yield is a little below the average expectations. Barley is up to the average.

AMADOR.—*Oleta*—Highest and lowest temperatures 98° and 64°. Nothing new. Warmer than usual and threshing in full blast.

STANISLAUS.—*Oakdale*—The farmers are generally better satisfied with the temperature for the past seven days, as it has enabled them to begin work earlier in the morning, still they are of the opinion that if it were a little warmer it would be more beneficial to them. The general opinion is that, with the exception of a few favored spots, crops will be light. The fruit crops in this vicinity are good. On Monday evening, August 1st, there was a meteoric display. Shortly afterward the sky became clouded, and at 10 P. M. a few drops of rain fell, the air being very sultry.

MONTEREY.—*San Ardo*—The weather for the past week has been very warm. Highest temperature 105°, lowest 47°. Fruit is about three weeks late, but is ripening rapidly. The grape crop will be light, owing to late spring frosts and the unusually light rainfall.

Salinas.—The grain and hay crop of this locality will be a full average or better. Hay better in quality than usual. Apple crop probably light. Potatoes a fair crop. Beans, etc., light.

TEHAMA.—*Red Bluff*—The temperature was below the normal, with a trace of rain here and at Oroville on the 2d. Fruit has ripened quite rapidly during the week.

LOS ANGELES.—*Los Angeles*—The warm weather during the past week has been beneficial for fruit-drying and ripening of crops. Figs, table-grapes, plums and nectarines are in market. Muscats late.

SAN LUIS OBISPO.—*San Luis Obispo*—We have had a warm week, and all crops have suffered excepting those on the river bottoms and moist land. On Saturday the heavy fog cooled us off a little. We may now expect cool weather. Highest temperature during the week was 95°. Our Arroyo Grande fruitgrowers have a new market at the Santa Maria cannery, and are shipping a goodly quantity of apricots.

ALAMEDA.—*Pleasanton*—Cool weather continues with brisk coast winds. Thrashing is nearly completed, the yield being a fair average in quality and quantity. Hops are looking well, but picking will be later than last year. Sugar beets promise a heavy yield, and are rapidly increasing in saccharine, recent tests showing 13 per cent sugar with 90 per cent coefficient purity.

SAN JOAQUIN.—*Lodi*—Highest temperature, 96° on the 5th; lowest, 54° on the 3d, with light westerly winds. Wheat harvest drawing to a close. The output generally speaking is below expectations, quality varying from fair to excellent. Watermelons are plentiful and of fine quality. Peach crop short, but quality good

COLUSA.—*Williams*—Temperature and sunshine about the average and conditions favorable.

FRUIT MARKETING.

Fruit Shipments to English Markets.

The second consignment of fresh fruit for London, which left this city two weeks ago to-night, will be due in London to-morrow morning, and better prices are looked for than were obtained for the first shipment, as the Londoners have had an opportunity to test the good quality of the fruit.

The third of the special London fruit trains, which left Sacramento a week ago last night, arrived in New York yesterday, and the fruit will leave there to day by steamer for London.

The fourth train will be started from here to-night by the California Fruit Transportation Company. The train will be loaded entirely by A. T. Hatch of Suisun, and will consist chiefly of pears.

In Agent Appel's opinion, the most important thing to be considered just now is the matter of the condition in which the fruit reaches its destination. If all the shipments should be as successful in this respect as the first, there is no doubt that good paying prices will be realized in a short time. The people of London will soon learn by experience that refrigerated fruits are just as good as any other.—*Record Union*, Aug. 8.

While the prices realized on the first shipment of California refrigerated fruit to England were not very satisfactory to the fruitgrower, A. T. Hatch declares to a reporter of the *Bulletin* that he is not discouraged. When spoken to on the subject, he said it was necessary to overcome the same feeling that existed when the first shipments were made to the domestic markets. In New York and Chicago they would not at first take the fruit out of refrigerator cars for fear it would not keep. They would not take it at a low rate even, until they found out by his persistence in shipping it that it was not only better, but would keep better than fruit that had not been kept in refrigerator cars.

Mr. Hatch, turning to his dispatches, quoted to the effect that the pears sent by him arrived on the Majestic in a green condititon. The trade wanted green pears, but no plums. That, he believed, would prevent anybody sending any more plums. He had a notion, however, to keep right on with his shipments. He lost money at the beginning of his domestic shipments, but made money by keeping them going. The fruit had been shipped to England in the same packages shipped to the East, and the fruit had been picked in the same condition as picked for New York; very nearly, if not quite as ripe as when sent to the packer.

The cost of sending the fruit was $4.25 per hundred and refrigeration cost $1.62½ more, 20,000 pounds forming a carload. His first shipment consisted of pears, peaches and plums.

"Instead of being discouraged," said Mr. Hatch, "I have spoken for three cars for to-morrow, and I have spoken for the next train if I can get it." The boxes of Bartlett pears averaged 40 to 50 pounds and there was nothing in them at 10s. That didn't pay expenses. Souvenirs brought 16s. Twenty shillings a box was about as low as they could afford to send them to England for, considering the price that could be realized in New York. The Columbia plums sold at 10s. The boxes were only half the size of those containing Bartlett pears. He didn't lose anything on them, but probably came out even on them, considering the sales in New York.

W. H. Mills Suggests a Plan.

At the meeting of the State Board of Trade on Tuesday afternoon an outline of a plan for the marketing of California fruit, suggested by W. H. Mills, met with considerable favor from the members present. He proposed that California fruit be marketed through the eastern and middle States substantially the same as oysters are sold by the oyster trains that leave Baltimore every day. These trains, Mr. Mills said, are loaded with oysters only, and the train travels all through the different States on a regular time schedule, distributing its contents at various places in proportion to the demand in each locality. At some places one sack is left, at others 50, at others more. In this way the train distributes its freight all over the country, reaching millions of people, and the whole load is gone before it has time to spoil.

The same method, Mr. Mills said, could and should be applied to the marketing of California fruit. It would then be possible to reach twice the number of people in half the time that it now does, and fruit would not be hauled to Chicago, past Iowa, only to be shipped back again to that State or possibly not to reach there at all.

Private companies run the oyster trains and it is deemed the best plan. A committee of three, consisting of E. J. Gregory, president of the board, E. W. Martin and L. C. McAfee were appointed to visit John J. Valentine, president of the Wells-Fargo Express Company, to see if that organization looked with favor on the matter and also to invite him to assist in the discussion of the matter at the next meeting.

Good for Shippers.

Through the efforts of Messrs. Wetmore Bros. and other commission merchants of this city, arrangements have been effected with the San Francisco and North Pacific Railroad Co. which will prove a great benefit to fruit and produce growers along this line. The accompanying letter explains itself:

OFFICE OF S. F. & N. PAC. RAILROAD CO.,
SAN FRANCISCO, July 29, 1892.

Lusk & Hughes and 30 other Commission Merchants.—GENTLEMEN: Replying to your communication of July 23d, I beg to state that commencing Monday, August 1st, and continuing until further notice, we will deliver fruit and other perishable produce from our freight sheds, corner Front and Vallejo Sts., at 5 o'clock A. M., as you request.

H. C. WHITNEY, Gen'l Manager.

How to Hoe.

PLYMOUTH, MICH., Aug 5, 1892.

TO THE EDITOR:—It may seem invidious and in bad taste for a layman to presume to criticise an editorial, such as appeared in the PRESS of 30th ult., entitled "The Man with the Hoe;" but the good nature of the editor emboldens me to venture a few thoughts on this seemingly simple operation. The one who wrote that article evidently understands handling the pen better than the hoe. Hoeing is an art, one of the fine arts of the husbandman. One definition of a hoe is, "A garden tool for weeds, to cut with a hoe;" and it is a very good one, too. It was originally used as a method to dig up the soil; but modern inventions of the cultivator has superseded this use of the hoe, and now it is used, or should be used, to cut up the weeds; and this can be done most effectually by having a sharp hoe, and drawing it in a slightly slanting direction over the surface of the ground, cutting off the weeds just below the crown of them, and not by digging into the soil with one corner of the hoe. Digging up the weeds in this way might answer in the dry, warm climate of California, but would not answer where there is irrigation or rainfall, as the bit of earth dug up with the weeds would be likely to cause them to grow again. The boys at the agricultural colleges where the writer has been employed used to remark, "Any fool ought to know how to hoe;" but they soon showed they were the fools, by their awkward motions with the hoe. It requires judgment and skill to hoe effectually and with ease, as in every other operation. "Every man to his trade." Hoeing, like every other art or trade, must be chiefly learned by practice, and we Easterners, of necessity, have more practice with the hoe than those living on the Pacific slope, where machinery is more generally used. J. S. TIBBITS.

Just so: now if our friend will read over again the article he criticises, he will see that the statements related especially to California conditions and to midsummer work. Special mention was made of February work in moist soil as different from that to which the writer refers. It was soil-stirring to prevent evaporation for which the writer used both the hoe and the pen. Of course, in orchard, vineyard and fieldwork, this is done with the cultivator, but in the house garden the hoe must be used both for vegetable and flower-growing. Wherever practicable, gardens should be arranged for horse cultivation, but this is not always practicable nor desirable. The writer knows about the style of hoeing which our correspondent speaks of; in fact, he was brought up on it. It was simply because this style of hoeing will not do for the summer season in this State that the subject was commented upon. We can hoe Eastern style from December to April, and gently lift off the weeds below their root crowns with all the grace which our correspondent taught his schoolboys, but weeds are not concerned in our midsummer hoeing. There is not one in sight. The question is simply that of soil-stirring to prevent crusting, and for this the airy, graceful hoe-touching is a delusion. A certain depth of pulverization must be had, and in much garden work it must be done with the hoe.

It was mainly for people who have come here recently with such notions of hoeing as our correspondent has that we wrote of summer work with the hoe. Eastern people may know more about weed-cutting in moist soil in summer than we do, and they often come here with the idea that because weeds do not grow in summer there is no use in continuing summer cultivation. A season or two of local experience usually teaches better.

Tin Collar for Cankerworms.

SAN JOSE, Aug. 6, 1892.

TO THE EDITOR:—I well remember when visiting The Willows fruit-growing district, near San Jose, Santa Clara county, in the early part of the spring, I noticed the farm hands shoveling dry earth up in the branches of fruit trees and, when done, hundreds of cankerworms would hang down on a thread-like fiber. This is a very expensive way to remove this pest, indeed.

While visiting San Jose Grange on Saturday last, a fruitgrower, Mr. M. Wingate, had to tell something that he had found out, which was told "for the good of the Order." He said that he had ordered 500 tin collars to be made, some of large size which would cost 3½ cents each, and smaller ones at 3 cents, and that his neighbor, Mr. Leigh, was going to get several thousand of the collars to prevent the cankerworm from going up the tree. His experiments were such as to convince him this was better than the old way of placing paper around the tree and then ink or tar to prevent the worm going up in the branches.

The collar must be placed snugly up to the bark. A small piece of bale rope is good to tie around the tree and then tack the collar around the rope to make a good fit, to prevent the worm from crawling up the tree. This will allow a place for them to go and lay the eggs. Take them off and burn them, and no more shoveling will be required.

The worm cannot get over the outer rim of the tin collar. A large number of fruitgrowers prefer printers' ink to any other thing used, as it keeps soft and does not get hard like the tar or oils.

October is the month the worm commences to travel. It may be well for the readers of the RURAL to see how this device succeeds. W. H. MURRAY.

PETALUMA'S new silk factory will be ready for work in a few days, the building having been completed.

HORTICULTURE.

Hints on Orange-Growing.

In our issue of July 16th we gave some paragraphs from an essay read by H. H. Wheeler of Riverside at a recent Farmers' Institute at Pomona. The following are other suggestive portions of the same essay:

As to location, all agree in recommending the high mesa lands and the interior valleys. For soil I would choose the warm, well-drained, chocolate-colored, sandy or gravelly loam. This is much more easily worked, and requires, I believe, considerably less water than any other. I have some reason for thinking that oranges grown on soil similar to the best of that in my neighborhood have better keeping and shipping qualities than those grown on the brown clayish sand of Riverside or the reddish-brown sandy clay of Redlands. If you choose some of these kinds, see to it that you do not select real estate with a cement-like subsoil nearly impervious to water, and quite so to the tap roots of your trees. (Since writing this, I have learned that some very fine oranges are raised in Riverside on this kind of soil, but it was hard work to subdue the ground and establish the trees, and it is well known how large an amount of water it requires.) Since the orange luxuriates in warmth, a southern exposure is best.

Avoid locations where damaging winds prevail, if you can.

The situations above described will probably be free from severe frosts. Do not attempt to grow oranges where, for several nights in succession, the mercury falls to or below the point marked 24° Fahr.

Now that we are ready to set out our orchard there are several ways and months in which it can be done. In localities practically free from frost I would plant almost any time from the first rains until July. If everything were ready, I would plant after a rain in November, and I have had equally as good results with planting in the middle of July as at any earlier date, but would not recommend it. February, May and June are favorite months for planting. One can set out the young plants he has raised and grow a seedling orchard; he can plant larger seedling trees and have them fruit sooner. Here comes the question whether an orchard of seedling orange trees will eventually be more profitable than an orchard of budded fruit of the same age. I do not see how this can be answered with any degree of satisfaction. The seedlings bear more, but cheaper fruit. More of the budded trees can be planted to the acre; they bear less, but much more valuable fruit. According to my arithmetic, if a seedling orchard is started from year-old plants and another of budded fruit, say Washington Navels, from two-year-old trees, at the end of 12 years, present prices prevailing, the budded trees would be of the greater value—under favorable circumstances and similar conditions. At the end of 15 years the value of the budded fruit will still lead; and at 20 years of age one could still afford to pay much more for the orchard of Navels than for the one of seedling trees. But such computation is utterly useless since no one knows what will be the relative values of the different kinds of oranges 20 years hence, or whether or not there will be any orange groves; and one might not be missing it far to think that possibly the question of profit may, in that year of grace, be settled by some communistic scheme of life.

To return to our planting. If one is to start an orchard of budded trees, there are, likewise, several courses to pursue. The young ptants can be set in orchard form and there budded, or one can plant larger seedling trees, say four to eight years old, and have them budded. If trees of uniform size can be had, and the budding is successful, one will get a fine large bud growth, and the orchard will soon be in bearing order. This method requires some skill, great care and attention just at the right time, but is an admirable way to start a budded orchard. In setting out budded trees, I prefer good, stocky, low-headed two-year-old trees. A large, thrifty year-old bud is nearly, if not equally, as good. Such trees will have less need of staking, better resist the attacks of rabbits, and not be so seriously damaged by frost. We might ask some who have lost many trees during the past winter, would it not have been economy to have paid a dollar, or two if necessary, for a large, stocky tree, and not fifty cents for a tree like a riding whip?

During the past three or four years a vexed question has been one about the merits of sweet stock and sour (or native Florida) stock. I already hear a hoarse murmur arising, and fearing that I shall be mobbed from this hall, will prolong my life by avoiding its discussion altogether, and simply say that anyone can easily ascertain the relative market values of orchards planted with one or the other variety.

In starting an orchard of seedling trees, I would certainly bud into seedling stock, and select buds from trees known to bear fruit marked by uniformity of size and excellence of quality. The arrangement of trees in the orchard according to the septuple or triangular plan is commendable because it allows of more trees to the acre, and cultivation in four different directions with equal convenience.

WINDBREAKS.

At this stage an important consideration is the planting of windbreaks—emphasized by the experience of last season. It would even be well to have one planted a year before the orchard is set out, if possible, but not many years sooner because it is very hard to make trees live which are set out near a windbreak three or four years after it is planted. The eucalyptus, pepper and cypress are the trees most used for this purpose, and some think olive trees will serve a good end in protecting our groves from windstorms. The eucalyptus, pepper and cypress will take moisture from your orchard to an alarming degree, and make necessary extra care of the adjacent row of orange trees. If your soil is quite free from large stones, it will probably pay, once in a few years, to dig a trench three or four feet deep between the windbreak and the row of orange trees next to it. Of these three, I prefer the stately but ugly gum tree. The pepper can't be planted close enough to make a protecting wall. The cypress has a mysterious way of dying in the prime of life; while the gum tree is of rapid growth, can be trimmed up high to let in the sunlight, and yet has a lofty top to arrest the force of winds, can be cut down in the vigor of its existence and yet quickly grow into usefulness again. If the olive shall prove to answer this purpose, it will make the most handsome and profitable windbreak.

It may be well now to stake the trees—certainly if they are small willowy affairs unable to hold up their heads alone. A stout, stocky tree does not need a stake to keep it erect; nor to train a central stem, for that is not the manner of growth of a Washington Navel, but only, so far as I can see, to keep the wind from moving it and loosening the earth around the base of the trunk, and so, possibly, doing harm by letting air in to the roots. Also, wrap them to keep off the festive rabbit and to protect the trunk from the sun. It may also save your tree in case of severe frosts.

CULTIVATION.

The next thing to attend to is cultivation. Cultivation of the soil, as we speak of it, is stirring it in some way by some implement. That may mean a plow, harrow, hoe, or one's fingers. The essentials of perfect orchard cultivation are, in my opinion, lifting the soil and pulverizing it as completely as possible, leaving it level or free from ridges and keeping down weeds. The acme of cultivation is to have the surface soil to a depth of two or three inches in the mechanical condition of road dust. The standards and teeth of a good cultivator should curve and slope forward; be narrow, so as to leave as low ridges as possible, and so close together as to practically stir all the ground. None of the cultivators quite suit me. But, you say, a cultivator with a low head or frame, and teeth very near together, will clog with weeds and trash. My dear friend, *don't grow weeds, grow oranges.* Furthermore, a cultivator with teeth very near together will thoroughly cultivate by going all over an orchard in two directions, while with the present styles cultivation in three different directions is necessary to completely pulverize the soil. I do not think a constant or frequent use of an ordinary harrow advisable; it tends to pack, and not raise, the soil.

Now I see many of you shake your heads as I say I do not approve of plowing my orchard. (Bear in mind that I refer to our gravelly loam.) One objection is, that it throws the land out of shape for irrigating; another, that it destroys too many fibrous roots; and a third is that it takes more time, and, as far as I know, does no more good than a thorough pulverization by a good cultivator. I have not put a plow into my orchard for five years, and do not intend to so long as I can raise oranges as good as are now grown there; nor do I deem deep cultivation necessary. I wish some one would disprove the statement that three or four inches of finely pulverized, dry surface soil will retain all the moisture that can be retained, as well as six, eight or twelve inch plowing or cultivating.

Plowing brings up the subject of turning under a large growth of weeds. A man recently said to me, "I know I am improving my soil by so doing." I admit that he may be improving his soil mechanically—making it more friable—bnt I greatly doubt if he is adding much plant food to his soil. Some plants derive much nourishment from the air, but I do not believe many of our common orchard weeds turned under will fertilize the soil to any appreciable degree. Prof. Wickson has told me that turning under a large growth of weeds does fertilize the soil considerably more than by the amount of food which the weeds have withdrawn from it; partly by what they have derived from the atr and partly by making available certain constituents in the soil which otherwise would not have been taken up by the roots. He thinks this may be more applicable to the northern part of the State than here. Still I prefer clean culture of the orchard, and to fertilize with just what I know my soil needs.

Cultivate after each rain if possible. Do it as soon as the ground will work kindly; it will save wear of man, beast and tools. Be sure and cultivate after the rain which you have reason to believe will be the last of the spring; it will save you two or three irrigations.

The use of the smoothing plank is desirable if your cultivator leaves ridges, and after the cultivation following irrigation as soon as the soil is friable and not very wet. Of course you understand that different places with various soils have local tools differing more or less.

IRRIGATION.

The importance of irrigation, and the help it would be to have all known information about it collected, demands a separate volume. There is no question that orange trees, and good orange trees at that, can be grown without irrigation. I mean on other than moist land, although I have eaten good oranges grown in Artesia on moist land, and excellent seedlings from an orchard in Live Oak canyon, about seven miles north of Pomona, where water is almost at the surface. These trees are also an exception to the rule that orange trees will not do well on soil where there is standing water within 20 feet of the surface. In my orchard near the foothills are some seven year old trees which have had no artificial watering for the past three years and have fruited each year. At the same place there are about 200 orange trees set out over two years ago which were not watered during the excessively hot and parching season of last year, yet they had new growth on them nearly every day. Some of them fruited.

While these examples prove the first proposition, any one would be called a crank who would set out to raise oranges for profit without a good water right for irrigating purposes. Formerly the amount of water used was very large, and its application frequent. Now we know that thorough cultivation will, in a great measure, reduce the necessity of artificial watering.

As to the amount of water needed, I am confident that on soils similar to mine, an inch to eight acres will always be enough if piped to the corner of the orchard and carried in flumes or cement ditches, particularly if stored in a reservoir of sufficient size. In fact, I believe that amount is more than enough if used in the most economical way. In Riverside, the amount is commonly one inch to four acres, and yet I should say that they used ten times as much water as we need. I am told that some of the growers in Riverside let the water run in their orchards for 36 and 48 hours, and not infrequently for three days; while I know it to be a good irrigation, lasting fully four and six weeks in my orchard, if the water runs from half an hour to an hour in the furrows.

The frequency of irrigation depends on circumstances. If one doesn't cultivate thoroughly after the last rain he may have to irrigate very early. Three years ago I raised oranges as fine as any with two irrigations—the first not until the middle of July, when some had irrigated four times previous to that date. I grant that I do not have as much wood-growth, and consequently not quite as large trees as do those who irrigate more; but all agree in saying I have as large crops. Neither do I have as large oranges. Last summer and fall I did not irrigate enough, and as a result had quite a number of very small oranges; but fortunately this year they are worth (in Eastern markets) within a few cents of the regular sizes. During a long hot and drying spell of weather you may have to irrigate in ten days again; when, if cool and cloudy weather prevailed, it might not be necessary in two months.

Undoubtedly the best way of irrigating is by furrows. Nearly every one in Riverside uses that method. In an orchard of thrifty, four-year-old buds all the ground should be irrigated. Should be, I said, and believe, but last year, being very hurried, I irrigated in the same direction every time, and in the line of some rows there was a strip six feet wide not wet all the season, and yet no serious harm came of it. When you irrigate do not give the best of your soil to your neighbor or the county road. Cultivate thoroughly, at the right time, after each irrigation. By the use of the smoothing plank I am sure moisture is retained longer. An advantage of irrigation in furrows is that the ground does not bake afterward. Do not let the water touch the trunk of the trees. I do not assert that this will always do harm, but have known of cases where it has injured the bark, and also, very likely, caused gum disease. I do not know of any system of subirrigation cheap enough to be in common use. If there were such, it would be the best possible way of irrigating. There would be a great saving of water, which, applied beneath the surface, would do the most good, and at the same time neither cause the weeds to start nor the soil to bake. Irrigation at night is best, if you can do it or hire it done.

The necessity of fertilizing has not been thought of much until within a few years. But the orange tree is a glutton; its thousands of fibrous roots are grasping in the soil for nourishment. Feed it and it will feed you. As I am not a chemist, I will touch lightly upon this subject, referring you to Prof. E. W. Hilgard's pamphlets and contributions to the horticultural press. Remember it is possible to fertilize too much. If you use commercial fertilizers have your soil analyzed, and a fertilizer made accordingly, thus paying for only what you need. Don't fertilize the trunks of the trees; the feeding roots occupy all the space between the trees. The fact that there are some fertilizing elements in nearly all of the irrigating waters of this country may, in some degree, account for what surprises many of us, viz:—that our orange trees produce fine fruit so many years with little or no fertilizing. I have put manure on my orchard only about once in the seven years it has been growing and can see absolutely no deterioration in the quality of the fruit, and the foliage is always healthy looking.

Now that your orchard is started bend all your energies toward keeping it complete, and have it come into bearing as soon as possible. If a tree is dead or looks stunted, replace it at once; every month's delay means loss. If a tree has been completely and badly girdled by gophers, it is the safest general rule not to let your feelings stand between that tree and a good sharp mattock, although by patience and care it may be saved by scions connecting the uninjured parts of the bark. If the tops of young or newly planted trees are nearly or quite killed by frost, and strong shoots are starting from the base of the bud, one can make a good tree by saving and training the best one of these. Probably a new tree would come into bearing a little sooner.

The possibility of preventing frost has been recently discussed with these conclusions: Irrigation will prevent injury if the mercury does not fall much below 24 degrees Fahrenheit. It is not a practical method, however, because we do not know just when frosts are coming, and again, we could not all irrigate at once. Smudges, or large fires, are a safeguard when it is perfectly calm and near sunrise, and the excessive cold lasts only an hour or two, and that not many degrees below 24.

As soon as you find trees not true to name, bud over as quickly as possible. I see no harm in planting nursery stock, small fruits, even growing hay between the orchard rows if carefully done, and whatever is taken from the soil be returned by fertilizing.

Pioneer Fruit Planters of Amador County.

Prepared at the request of W. B. WEST of the State Horticultural Society by JAMES MCCAULEY of Ione.

The writing of even a brief historical sketch of the pioneer cultivators of fruit in Amador county is attended with more difficulty than I at first anticipated. Having no recorded data to draw from, I necessarily must rely on my own memory and that of a few pioneer citizens still living in Ione valley, where the first fruit trees in the county were planted. Therefore I will confine this brief sketch principally to this valley.

In 1850 Mrs. A. C. Surface brought with her from Missouri about one pint of apple seeds, and in the following year planted them, but unfortunately obtained but one liv-

ing tree. This tree being a seedling was not valuable, but was allowed to stand by its owners as a pleasant reminder of former home scenes. In the course of time it received its death blow at the hands of strangers.

In the year 1852 or 1853 Col. Alex. Boileau planted a few peach trees on land adjoining the famous old Q ranch. The first yield, two years later, which was not large, was disposed of readily at 25 cents per pound, and it is said that one man paid for the first peach that ripened $1, stating that he desired to inform his wife in the East of the mild prices of luxuries in California. The fruit from this small orchard for the next two or three years was disposed of to the thousands of miners in the adjacent hills, at prices ranging from 20 to 25 cents per pound.

It may be here remarked that the first fruit trees planted in the county were confined to the rich loam lands of Ione valley, the planters believing it a hazardous undertaking to plant on the dry uplands, the general idea prevailing that nothing would grow in summer without rain or artificial aid. The growth of trees on these rich loam lands was very rapid and they soon attained an enormous growth. Whether the object of their owners in allowing them to attain such growth arose from the theory that the more tree the more fruit, or whether it arose from sheer carelessness or want of knowledge of trimming, is a matter of conjecture. Much fine fruit therefore was lost, because it grew out of reach.

MAJ. BARBER AND THE Q RANCH ORCHARD.

This gentleman comes next on the roll of early planters in this county. In 1854 he leased 20 acres of the Q farm from Mr. Charles Green, the owner, and immediately procured from Mr. Orchards of Kentucky a sufficient quantity of peach, plum and cherry pits, as well as other fruit seeds, to start a nursery. As any kind of fruit found ready sale in the neighboring mines, no time was lost in grafting; hence much of the fruit from these early orchards was of the seedling variety which, owing to the great fertility of the soil, grew both large and luscious. I am told that 25 cents per pound was realized for the peaches from this orchard for the first two years of its bearing. About 12 acres of this orchard were planted to peaches and the other eight acres were divided into apples, plums, cherries, pears, apricots, nectarines and the almond. Among the varieties of peaches we find the Tillotson and Early Ann, ripening sometimes as early as the 20th of June, but most frequently the first week in July the low, damp land retarding their earlier maturity. The Orange Cling, Royal George, George the Fourth, Blood or Indian peach, and a White Cling maturing in October, were found among the other varieties. The common blue plum and the small, sour Damson were the only varieties of plums, both prolific bearers. I have exhibited branches from the latter three feet long, covered completely with fruit. The apples comprised the old-fashioned varieties common to the Atlantic States in those years, such as the Rhode Island-Greening, Russet, Winesap, Bellefleur, Spitzenburg, Limbertwig, Pearmain, Genetting and a number of summer varieties. It is worthy of remark that the above-named varieties (except the summer) were counted good keepers in the Atlantic States, but here in this climate they perished by December or January.

At the age of four or five years the trees on the Q ranch became heavy bearers and the only means of marketing was by wagon, and as the miners were only buyers for the family table it became necessary to haul the fruit by wagon 40 miles to Sacramento. Soon prices dropped to three cents then two cents, and notwithstanding that a distillery was erected to utilize the perishable fruit, the venture of Maj. Barber, at the end of ten years, did not prove a large success.

About 200 of the peach trees planted by Maj. Barber in 1854 are still in fine condition, proving that by proper care and severe pruning the peach may be preserved for many, many years. The apple, pear, plum and cherry still maintain a healthy condition; in fact, their fruitfulness, under good management, seems to increase. The apricot, while succeeding in part, does not seen to find its true home in this valley. A few grapes only were planted in the orchard for table use. Before closing this paragraph on the Q Ranch orchard, I will say that while many of the peach trees planted by Maj. Barber in 1854 have disappeared, yet the remaining 200 or 300 under the management of Mr. George Woolsey, its present enterprising owner, they have been transformed into new life and new trees. This was accomplished by cutting off their tops and allowing new wood to take the place of the old. Mr. Woolsey has added 120 acres more to his orchard, making it now one of the finest in the State.

OTHER PIONEER EFFORTS.

Mr. James P. Martin comes among the pioneer planters of this valley. In 1855 he procured from Oregon, at heavy expense, about 600 apple and peach trees which were recommended as grafted trees, but most of them proved to be seedlings. In 1858 Mr. Martin added 30 acres more of apple trees to his orchard, procuring the young trees for that purpose from Mr. A. P. Smith's nursery of Sacramento. These trees consisted principally of Spitzenburg, and though much neglected by the present owner are still in good condition.

Lyon and Sexton in 1855 and 1856 planted about 14 acres of trees, consisting of apple, pear, plum, peach and apricot. Their farm was located about one mile from the Q ranch, the quality of the soil being the same. They set out the first vineyard of any magnitude, Mr. Sexton bringing the cuttings by wagon from Los Angeles.

Mr. Pardee is also found in the list of pioneer planters of fruit trees in Ione valley. It is impossible to obtain anything in regard to Mr. Pardee's enterprise, but it is known that in 1855 or 1856 he set out the fine apple orchard at present owned by Mr. J. W. Violette. This orchard is in fine condition to-day.

Judge H. A. Carter and others planted out small lots of trees in the valley as early as 1856–57.

Mr. A. P. Clough in 1856 planted a small apple nursery in Grass Valley near the old mining town of Volcano, Mrs. Clough bringing the seed with her from Illinois. This old orchard, though sadly neglected still produces some fine keepers and in good hands would be profitable, lying as it does somewhat above the present pest belt. Mr. Clough soon increased his orchard to 20 acres, and his was the first experiment of any magnitude in the foothills of the county. There were a few trees, however, near him, planted by some miner, which were a little in advance of Mr. Clough's.

LATER WORK.

This brings us to 1858–59. Actuated, perhaps, by the success obtained by prior planters, and observing the rapid growth of trees in the rich, virgin soil—we find such land owners as Charles Dosch and Pat Lannan of Ione valley and Messrs. Palmer & Woolsey, Foster, Lucas, Borden and De Boldt of the Mokelumne river, embarking in the business. Messrs. Palmer & Woolsey obtained their trees from A. P. Smith's nursery of Sacramento. The usual varieties of trees were planted by all these gentlemen. All these river orchards have been well cultivated and assiduously cared for, and to-day produce some of the very finest fruit in the State, taking premiums year after year. I have bottled and preserved peaches from some of these orchards measuring 13½ and 14 inches in circumference and weighing 16 ounces.

MISCELLANEOUS.

In addition to the foregoing there were found in the gardens and dooryards of the miners in the foothills, a few apple and peach trees planted prior to 1860. These few trees were planted by the miners or their wives, probably as much from love of the old familiar objects of their childhood homes as from any anticipated profit, for as a rule the miner did not remain long in one place, but was subject to the success or failure of his mine. I had quite forgotten the fig tree, though it did not cut much of a figure in the horticultural business. There were one or two or perhaps half a dozen planted in every orchard. Mr. Borden tells me he has a blue fig tree planted in 1856 on gravelly clay soil, near a spring, which is about 40 feet high and has 40 feet of spread, the trunk measuring 10 or 11 feet in circumference.

In close relationship to the cultivation of fruit on the famous Q Ranch farm was that of corn. The sight of 300 or 400 acres of corn in California in one body, the stalks averaging from 12 to 15 feet high and yielding 100 bushels per acre, was as startling to the immigrant as were the splendors of the Sierras or the immensity of the Sequoias. The story that corn would grow in this dry climate without rain or irrigation, found no credence with those who were not witnesses of the fact.

The writer of these lines succeeded Maj. Barber in the Q Ranch orchard in 1864, and continued occupying it until 1870. During this time I recognized no insect pests whatever, and no blight save mildew on grapes and curl-leaf on certain varieties of peaches, the curl occurring more frequently on wet, cold seasons than on dry ones. This disease seemed peculiar to certain varieties, for by grafting one side of a curled tree, with sound varieties, each would retain its original healthy or diseased condition.

AGRICULTURAL SCIENCE.

Origin and Functions of Humus or Decaying Vegetable Matter.

Translated from the German of JUSTUS VON LIEBIG by PROFESSOR GRANVILLE F. FOSTER.

ANTIOCH, CAL., July 23, 1892.

All plants or portions of plants after the termination of life undergo one or the other or both of two processes of decomposition, one of which is known as *fermentation*, the other as *putrefaction*, both similar processes, the latter, however, taking place only in materials containing albuminoids in some form.

Each of these so far as the changes are concerned is only a slow combustion, the portions having an affinity for oxygen entering into composition with that element during a course of days, months or years, which process is often completed in burning in as many minutes or seconds. (It is now known that each of these two processes are developed and carried on by appropriate microorganisms which cause the chemical changes for the purpose of appropriating elements necessary to their own existence.—Translator.)

The decomposition of the chief constituents of all vegetable and of all kinds of ligneous fiber presents a phenomenon of a peculiar kind. Surrounded with air and hence with oxygen in contact, the oxygen absorbed is converted into an equivalent volume of carbon dioxide (formerly called carbonic acid gas.) The process ceases whenever the oxygen is exhausted from the contiguous air, but is renewed whenever oxygen is again supplied. But in the case of humus, the process is not carried to the length it is in ordinary combustion, though as far as it goes it is of the nature of that combustion, for the time comes in any particular mass when the absorption of oxygen ceases even when surrounded with a plenteous supply of that gas, and the humus becomes, under ordinary circumstances, an unalterable brown or coal-black mass known in common parlance as mould. This then is the first and most important product in the decay of wood. It is the chief constituent of all sorts of peat and turf. By great pressure it can be reduced to bituminous coal and by heat and pressure to anthracite. But by contact, however, with alkalies, lime and the like, the decomposition of mould can be carried further, rendering much more carbon dioxide for growing plants.

In a soil which in its depths is accessible to the air, the action in the humus will be just like that which takes place when the mass is exposed to the air at the surface, and here as elsewhere oxygen is slowly exchanged for carbon dioxide.

Each little particle of decaying vegetable matter is surrounded with an atmosphere of carbon dioxide which it has obtained at the expense of the air on one hand, and of a part of its own weight of carbon on the other. Now, in the cultivation of the ground, *here is the philosophy* of constantly loosening up the soil for this process renders the access of air to the depths beneath free and unhindered and thus often promotes the production of carbon dioxide to an extraordinary degree

It is without doubt true that in the earliest development and growth of plants carbon dioxide is not needed. Before the development of the leaf with its cells of chlorophyll, the plant is unable to assimilate the carbon dioxide of the air. At the expense of the reserve material and the little plant germ, packed away in the seed grow the primitive organs of the new plant, the first roots and leaves (the radicle and plumule.) But once the leaves are formed then commences the assimilation of carbon dioxide.

Now remember that the matter stands thus, no plant growth can take place without either free carbon dioxide at hand or some material with this gas exhaling therefrom applied to the roots, hence, the great store of this gas in the soil from which the roots can draw a supply is a thing not to be undervalued. Humus promotes plant growth not then by being itself absorbed in a soluble form and thus becoming assimilated, but because it furnishes in solution carbon dioxide, and other indispensable plant-growth-promoting elements, all of which the roots can find at hand to absorb so long as the conditions of decay, moisture and oxygen are united together in their action upon the humus.

As the carbon dioxide is passing up in the sap from the roots, there is a considerable portion that passes to the outer air by diffusion, and hence it is readily understood that plants, which shade with their leaves the ground as with a thick ceiling or roof overhead and hence retard or prevent the air rich in carbon dioxide beneath from being driven away or interchanged with the outer or upper atmosphere, have a large supply of the gas to breathe in through their leaves to be here changed into carbon for the growth of the plant and into oxygen to be breathed out into the atmosphere. Let it be remembered here that the humus contains also as a residuum of the decaying vegetable matter, all the nitrogen the plant will need, but even this is supplied because of the decomposition that goes on that chiefly supplies carbon dioxide.

Notes by the Translator. When Liebig wrote the above, the grand discoveries made in the domain of microorganism were all matters of the future. Not only is it now known that fermentation and putrefaction are caused by appropriate microbes, but that numerous diseases now generally known as zymotic, are also so caused, hence the wonderful revelations of Dr. Koch, of Berlin, and Pasteur, of France, and others who have followed these leaders, but these discoveries in no way invalidate the description of the processes of decay or their relationship or result as stated by Liebig. It will make no difference as to process or result to say that the oxygen of the air has a very great affinity for the carbon and hydrogen in the materials of which vegetable and animal frames are composed, and, hence after death because the composition of these materials is very complex, the oxygen succeeds in easily oxygenating the carbon and hydrogen, thus upsetting the stability of the compounds which thus separates up into two or many divisions, a process known as fermentation or putrefaction as there should happen to be no albuminous material or the reverse in the compound, the old view, or to say that microorganisms or microbes in the course of their life history for the very necessity of their existence, demand certain elements in the compound which being appropriated upsets the stability of the compound which thus separates into two or more divisions, known as fermentation or putrefaction etc., the new view The cause has been discovered, that is all. The earlier chemists not knowing the cause, and needing one, endowed oxygen with a sort of life, a disposition to destroy all complex organic material and set it to work to restore to the air all the gases derived from it by the processes of plant growth.

Liebig in making humus the chief source of carbon dioxide did not mean to ignore the enormous source of this gas in animal breathing, in ordinary combustion and in many cases, in volcanic action, all of which is absorbed from the air by the leaf. What a wonderful little laboratory do we find in the chlorophyll cells, for with the sun's ray as a chemist, and carbon dioxide as the material, carbon is made for the growth of the plant and oxygen thrown out into the air. The human chemist by much labor can separate carbon from the oxygen in this compound, but he has only the carbon for his pains, for the oxygen goes off in affinity with some other element or if he get the oxygen, the carbon goes off with some other element. In other words, the human chemist cannot divorce carbon and oxygen without at the same time marrying one or the other to some other element, but the sun's ray does it perfectly and yet so silently that you hear not the sound and know not how it goes on.

In Liebig's day it was believed that plants could not assimilate free nitrogen from the air, but could get it only from ammonia or other compounds of nitrogen either in earth or air, but chiefly in the former. It is now known that nitrogen in small quantities can be assimilated by the plant directly from the air, and that various compounds of this gas, so very necessary to life of all kinds, vegetable and animal, are actually manufactured from the air. In Liebig's day it was believed that it was only possible to make the nitrogen of the air to unite chemically with the oxygen of the same, by passing through the air intense sparks of electricity which would thus produce minute portions of nitric acid which, brought down by the rain would be at hand for the use of plants, but this source is very meager and does not balance the decomposition of ammonia nitrates which keep supplying the atmosphere with more nitrogen, and if this destructive work was continued the time would come when the earth, with no change in climate, would not have a supply of compounds of nitrogen sufficient for an increase in either the animal or vegetable population of the world, but the balance is kept up, the cycle is perfect.

Poultry Yard.

Essentials of Success with Poultry.

LODI, SAN JOAQUIN CO., Aug. 8, 1892.

TO THE EDITOR:—I have read with much interest an article in the issue of RURAL for July 16th, contributed by W. H. Murray, largely statistical and conclusively showing that there is money in raising poultry if the business is properly conducted, and of course no business or occupation can be productive of profit that is not so conducted. It cannot be denied that the raising of poultry has been considered in the main as a "small business," good enough for farmers' wives to piece out the gains of their husbands in the more important occupation of grain-growing or general farming or to enable them to indulge their taste for many articles of dress or for luxury in a small way, but which would prove such a burden that the income of the farm proper would be unable to sustain it. Consequently the raising of a few "chickens" and eggs for sale is resorted to as a means by which to meet the demands of the outlay. If, however, every farmer's wife would keep a correct account of cost of keep and the product of the fowls in eggs and meat for the house and chickens marketed, it would be found, I think, beyond the possibility of contradiction or dispute, that the product of each ten fowls yearly would fully equal, if not exceed, the product of any two acres of grain grown on the same ranch. I consider this is putting it mildly, for if all the requirements to a successful keeping of poultry are fully met, as high as $2.50 per head may be netted, and where not kept in large quantities and allowed free range of the stubble and picking around the barns and granaries, not less than $1.50 per head may safely be counted on net profit.

Now, how much is realized clear profit, one year with another on an acre of grain? I don't think it will exceed $5 or $6. Thus it may be seen that the income from 100 hens will equal the product of 30 acres of the farm, which fact I think is fully sufficient to entitle it to take rank with any other interest.

If the national statistics are carefully considered, it will be found that the poultry interest ranks second to none and far ahead of most others in its product of dollars and cents, and yet it is largely considered as an occupation fit only to fill gaps in the main income, and for women and children to attend to. Where a business is made of it and fowls are kept in wholesale numbers, there is a great deal of hard work attending it, and complete and careful system needed, all of which women and children may be competent to, it is true, but it is nevertheless well worthy of man's attention as a legitimate business pursuit, and for the amount of money invested, no business can make a better showing of profit.

The failures in poultry enterprises have been and still are innumerable, from the fact principally that their originators fail to recognize the absolute necessity of attending closely to detail, either from lack of true interest in their business or because they think that the close attention to what they believe to be unnecessary and unimportant things is not needed. Where this view is held, failure, or at best only partial success, may be looked for with the final result, perhaps, that the business is given up in disgust because "there is nothing in it," and another is added to the list of those who believe that it is a business fitted only for women to realize a little something from wherewith to buy a few ribbons or something of that nature.

I do not know of a case where the person or parties have gone into the business with a liking for it and a determination to attend to it thoroughly, so far as they know or can learn, and have persisted in it on that line, where success in greater or less degree has not been attained. Of course in localities unfavorable to the raising and keeping of fowls, only partial success can be had with all care and attention; but when that is found to be the case, the proper course is very obviously to change one's base and obtain a more favorable location. Where it is only a "side" business, this is not always practicable or desirable; but where it is the main or sole business, and climate or surroundings are unfavorable, it is always advisable to change, as a little matter affects a fowl for good or ill, and seeming trifles may have the effect of changing the whole character of the business. It is this necessity for careful attention to little things that has brought the business into disrepute with many as being unfit for a man's consideration, and fit for only women or invalids. If a thing is worth doing at all, it seems to me that it is worth doing well and thoroughly; and if the profits from a business are respectable, and compare favorably with those from any other business, and perhaps make a better showing for the amount invested—as indeed it does—this fact should in itself, it seems to me, be sufficient to entitle it to consideration as a legitimate business for any one or for the investment of any capital. The idea that it does not require strength or brains to conduct it is wrong, for where fowls are kept in numbers, there is always cleaning and purifying of houses and yards or moving of houses where fowls are not yarded, alterations and additions to be made, ground to be dug up or ploughed and seeded for them that they may scratch out and eat the young grain, and a hundred and one things that require strength and skill in the doing.

A friend of mine remarked to me not long since: "I think I will get me three or four hundred hens and attend to them, as I am now so advanced in years and so feeble that I am unfit for anything else, and it will not be hard for me to supply them with water and throw them a little feed and gather the eggs." But he never made a worse mistake, as the result proved to him, for there were not many eggs to gather and his fowls "didn't do well."

A little matter either way will keep a fowl healthy and productive or in poor condition and consequently unproductive, and the business of poultry-keeping will "pay" or not according as it is conducted. This characteristic it possesses in common with any other pursuit, I imagine.

In your last issue, Aug. 6th, I see, Mr. Editor, that a correspondent at Chicago, Mr. Bernard, sets forth that in an article contributed by me, and entitled "Starting a Poultry Ranch," I did not give my full "experience"—did not in fact particularize quite enough or show whether I made a success of it or otherwise, and I believe that he is right and that perhaps I did not. I will say now, however, that I started eleven years since and am still in the business, with no desire or intention of giving it up, and in the near future will adopt his suggestion, as far as I may, and endeavor to supply the details lacking in the article referred to. I find his positions well taken and his article a thoroughly practical one, and hope to see more of them; think it would result in great benefit to all earnest poultrymen to interchange thoughts and experiences, and know of no better or more desirable medium than the columns of the RURAL.

T. B. GEFFROY.

Poultry Around Petaluma.

PETALUMA, August 1, 1892.

TO THE EDITOR:—I offer you a few lines relating to the poultry interests of Petaluma, which may give your readers some idea of the magnitude of that business in this vicinity. I will give a partial list of those keeping 500 or more laying hens: A. Ronsheimer, 500; Mr. Petersen, 500; Mr. Treat, 500; S. Q. Barlow, 500; L. Sales, 500; C. Springer, over 500; S. A. Nay, 500; H. Nay, 500; Mr. Church, 500; Mr. Zimmerman, 600; Mr. Bailey, 600; D. Houx, 600; Mr. Rievarts, 600; H. Frohlking, 600; Mr. Fuhlsom, 700; Mr. Harmes, 800; J. Ronsheimer, 800; Mr. Bunston, 800; Mr. Respine, 900; Petersen Bros, 1000; R. M. Hyatt, 1000; C. Nissen, 1100; E. A. Hoadly, 1200; W. A. Mills, 1400; T. Thorgensen, 1500.

Besides these, there are others whom I do not know who have over 500 hens. There are a great many orchardists and farmers who keep from 200 to 500 hens, and most of of them will tell you that hens pay better than any other branch of farming.

Some of those mentioned in the list above have kept more than the number given. Mr. Thorgensen had at one time about 5000 hens, roosters and chickens, and for a long time kept over 2000 laying hens. He has been called the Chicken King of Sonoma county. He arrived in Petaluma a few years ago a green Danish boy, unable to speak a word of English. After working out a while, he rented a place and started out with 100 hens to raise chickens. In three years, from this small beginning, he had over 1000 laying hens. Mr. Thorgensen has never used an incubator or brooder. When his hens get broody, he puts them in inclosures provided with one or two hundred nests and gives them a glass egg for trial. When there are enough hens to fill all the nests, they are given good eggs. Water and feed are in the inclosure and they come off the nests as they wish. When the eggs hatch, the chickens are placed with their mothers in a field apart from the laying hens, until large enough to care for themselves. Some of the poultry farmers use incubators and brooders; some set incubators and hens at same time and give all of the chickens to the hens; others set hens, and when hatched, put chickens in brooders.

These last rob the hen of the greatest pleasure she has in life—that is: leading her chicks through the wet grass, taking them to the garden, or going to roost when the chicks are a week old, leaving them under the roost or tree peeping, and when you go down in the morning you find them on the ground under the roost, dead. F. W. S.

The Apiary.

California Bee-keeping.

H. E. Brooks of Los Angeles prepares for the *Sunday Call* an article on the apiarian interests of California, from which we shall make extracts below. Although some of the facts stated are of course already known to many of our readers, the review is interesting and to some will be found to contain much that is new.

Southern California at present produces four-fifths of the total honey product of the State, the principal honey-producing counties being San Diego, Los Angeles, San Bernardino, Ventura, Orange and Santa Barbara. Honey could be successfully produced in most of the counties of the State. Climatic conditions control the honey business more than any other industry, the inland foothill regions being better than the neighborhood of the seacoast. There are stretches along the Sierra Nevada, in central and northern California, which are excellently adapted to bee-raising. At present the chief bee sections north of Tehachapi are around Placerville and Grizzly Flats. There are also a number of beemen in the neighborhood of Bakersfield and Merced.

Many of the old bee ranches in this part of the State have been sold and transformed into orchards, the beemen moving farther back into the mountains. Beekeepers now generally select a location near the mouth of a mountain canyon, with hill land in the rear, so that there will be no lack of feed should the level land be cultivated and planted to crops which do not yield nectar. A prime requisite is a good supply of water. The beekeeper need have no more level land than he requires for a garden patch or family orchard. Bees will go five miles for food, but will not work to good advantage at a distance of more than three miles from the hive. This gives an area of 36 square miles for a feeding ground, which is considered sufficient for a colony of 500 hives, the largest number that can be profitably kept on one range.

The happy California bee finds no trouble in its effort to "improve each shining hour," there being thousands of wild flowers, shrubs and trees to select from, some of which are in bloom during every month of the year. Perhaps after a time our bees will give up their inactive season from fall to spring and gather honey all the year round. At present, however, the California bee, like its brethren in other parts of the world, wisely believes in a season of comparative rest. Foremost among the nectar-producing trees of California are the oak, sycamore, water-alder, willow and manzanita. Among shrubs are the sumac, yerba santa, buckhorn, wild plum, wild buckwheat, black, white and silver sage. California white sage honey is noted throughout the world. All our honey is shipped under that name, although, as a fact, the white sage is an unreliable plant and sometimes blossoms very sparingly. Honey made from the white sage, when unmixed with any obtained from other plants, does not granulate with age or extreme cold, simply becoming thick and sticky. It is very white and of exquisite flavor. The citrus family—orange, lemon and lime—furnished unequaled nectar, but it is chiefly produced at a time when bees are rearing young, and most of it is consumed in the hive. The different varieties of acacia produce nectar. Alfalfa furnishes good pasturage, the mountain variety especially yielding a light, amber-colored honey of fine flavor. The flowers of deciduous fruit trees and berries all furnish a good quality of honey. The eucalyptus or blue gum blossom is very rich in nectar, and honey made from it has the name of containing valuable medicinal qualities. An Englishman in Queensland, Australia, is turning his attention to the raising of this honey for the market on a large scale. Finally, there are the myriad of wild flowers, to enumerate which would require a column of space. The California bee runs little danger of going hungry, except in some such exceptionally dry year as that of 1877, and that risk lessens every year, as orchards and alfalfa patches are extended toward the mountains.

In a bulletin issued last year by Director Hilgard of the University of California, mention is made of a waste land forage plant that is said to be a wonderful honey plant for bees. It is described as a green shrub or little bush which grows spontaneously to a height of 18 inches or two feet. Cattle and hogs are very fond of it, while horses and mules do not seem to like it. The plant has a long tap root, taking possession of waste places and wild lands, apparently preferring hard clay or rocky land. If the seed is merely scattered on the hills, in a few years it will cover the whole surface. In the meantime, pasturing will not hurt it. It requires no irrigation whatever, and certainly appears to be worthy of a trial by beemen and others.

In ordinary years about 200 pounds of extracted honey is a fair yield for a stand or hive, though there is a great difference in yields in some localities over others in the same year, under surroundings and climatic conditions that are apparently identical. Mr. Wilson informs me that he has produced from one hive as much as 1000 pounds of honey, worth, at five cents a pound, $50. Records of 300 and 400 pounds are not at all uncommon. It is, however, not safe to count on more than 200 pounds of extracted honey to the hive, while in poor years the yield will sometimes fall much below this figure.

Prices last year averaged from five to six cents a pound for extracted honey in large lots. This season opens at about the same rate. As long as beekeepers get five cents a pound for their honey they have no reason to complain. Prices are at present a little higher than they were ten years ago. More extensive markets are being worked up, and shipping facilities are better than they were then. Besides honey, the beeswax is a source of profit to the apiarist; it sells at 25 cents a pound. In a good year a stand will yield from three to five pounds of wax. In a bad year the hive is cleaned out by the beekeeper, and yields perhaps two pounds. Beeswax keeps indefinitely and is a merchantable commodity the world over.

California extracted honey is shipped to the market in five-gallon cans, similar to coal-oil cans, holding about 60 pounds each, two cans being packed in a case. This makes the product very compact and convenient for shipment. The commission men or other buyers put up the honey in glass jars of various attractive shapes. Much California honey now goes to Europe and other parts of the Old World. England and Germany are especially good customers. There is vast room for the extension of the market, as the people of almost every country are fond of honey. Even China imports large quantties.

As to varieties, all the bees now in the State are hybrids. The Italian bee was introduced and made a cross with those already here. The wild bees, of which there are so many in the State, will hybridize everything in the shape of new varieties that may be imported. Experiments are at present being made with a new variety called Carniolan. The Department of Agriculture has sent to India for certain giant bees, which are wild in that country. It is said that they are the largest species known in the world, and great producers of both honey and wax, large quantities of which are exported from India.

The business of raising queen bees is profitable for those that understand it. Well-bred queens of the Italian and Cyprian breed, sell at from $3 to $5 each, and the so-called Punic are valued at much higher prices. Many, however, believe the latter to be an old variety under a new name.

The beemen of this section would like to see the State University devote a little more attention to the bee business. There should be an experimental station for bee culture. Such an institution has been talked of, but nothing has yet been accomplished. In the University of Michigan there is a chair of bee culture, with a practical beekeeper in charge of the works.

A disease known as "foul brood" did much damage among the hives in 1877 and again last year. There is an inspector, who has been as a rule aided by the beekeepers, and there is little complaint of the disease this season, at least as far as Los Angeles county is concerned. Another evil with which the beemen have to contend is the occurrence of mountain fires. After such fires, sage seed should be planted at once to renew the feed and keep out other growths of a useless character. Beekeepers should also be careful not to cut down any trees that bear nectar-yielding bloom, such as the oak, sycamore, manzanita, willow and walnut. The pepper tree, so common in the cities and towns of southern California, is the bete noir of the bee keeper, honey made by bees which have access to it being unmarketable.

The southern California beekeepers have an organization

known as the Southern California Beekeepers' Association. Last March a State organization was formed in Los Angeles, known as the California State Beekeepers' Association. At a meeting of the local association, in January last, a resolution was presented to petition Congress for a bounty on honey, the object being to compete with the bounty on sugar.

Bee-keeping in California is an attractive industry, especially to those of small means or impaired health. Many invalids have found new life and hope on mountain bee-ranches. The capital and experience required are both very small, and the work light, covering only a few months of the year. Any one who possesses the inclination and a moderate amount of intelligence can, in a very short time, acquire the necessary amount of knowledge. There are many thousands of acres of Government land throughout the State, yet unoccupied, which are well adapted to the business. Of course, the beekeeper must be prepared to lead a more or less isolated life, but many will consider good health and the promise of a competence as more than a compensation for the pleasures of city life.

It is difficult to name any industry that offers such good returns for so small an investment of time and money. A friend of mine helped a man to take a swarm of bees from a crevice in a rock near Colton in 1886. That year a few pounds of honey were produced, and they had increased to five swarms. In 1887 they had increased to 17 swarms, and the honey yield sold for $100. At the end of the season of 1888 there were 65 swarms and the honey netted $380. Last year, which was a very poor year, the receipts for honey amounted to $1200, and this season, which is still worse than the previous one, the man has already sold five tons of honey from the increase of that single swarm taken from a cleft in the rock six years ago. What is more, the man knows nothing of the bee business. His wife has done all the necessary work, in addition to performing her other duties.

The Dairy.

The Making of Good Cheese.

In the making of good cheese the first thing necessary is good, clean milk, free from animal taint and barnyard odors. It is impossible to make a fine, clean-flavored cheese from impure, tainted milk. The first thing after the milk is placed in the vat is to gradually heat it up to a temperature of 80 degrees Fahrenheit. The heating is accompanied by careful stirring, in order that it may be uniform all through, and also to keep the fat evenly distributed through the mass. When this point is reached the milk should be carefully examined to determine its condition as to ripeness. This may be determined by the expert maker by the sense of smell, but very much the best way is by the use of what is termed the rennet test. For this, each person can fix a rule for himself, and note the time it takes a given quantity of milk to thicken with the use of a certain amount of rennet extract. The rule used by a large number of cheese makers is 11 ounces of milk in which is put one cubic centimeter of rennet extract. With this rule, when the milk is of a proper degree of ripeness it should begin to thicken in about two minutes. This test is founded on the well-known fact that with the beginning of the development of acidity in the milk the activity of the rennent is increased. The object of ripening the milk before adding the rennet is to have a sufficient amount of acidity developed so that the curd will work along in good time and make a good, solid-cutting, well-flavored cheese.

The general principal underlying the manufacture of cheese depends primarily upon the action of the rennet in coagulating the casein of the milk and in that way holding a larger porportion of the fat. The sugar and albumen of the milk are principally carried off in this way. The rennet is principally obtained from the mucous surface of the fourth stomach of a suckling cal. It is preserved for use by carefully cleansing without washing it, and it is then rubbed with salt and dried. When wanted for use it is soaked in weak brine and the liquor thus obtained is used to coagulate the milk.

When the latter is found to be in proper condition, sufficient of the rennet solution is added to cause the milk to begin to thicken in from 15 to 18 minutes. It is then allowed to stand until the curd is firm enough so that, by laying the back of the fingers and hand on it next to the side of the vat and gently bearing it away, it will cleave off. For cutting the curd, knives containing several blades, about half an inch apart, are used. When cut, the curd is left in small cubes, each not more than half an inch in diameter. It is necessary to use every care that the pieces of curd may be even in size, so that the heat and rennet will act together and on all alike, producing an even curd, without which it is impossible to make fine cheese. The main loss of fat takes place in the process of cutting and handling immediately following. The globules of fat on the exposed surfaces are easily detached, hence the necessity of carefully handling not to mangle and bruise the curd, and thus increase the amount of fat lost.

As soon as the curd is completely cut, it is stirred very gently for 10 or 15 minutes, until the outside of the pieces show the appearance of a slight film and the whey commences to separate freely from the curd. The latter is then gradually heated to a temperature of about 98 degrees Fahrenheit. During the process it is kept in constant but gentle agitation. The heating stimulates the action of the rennet, which shrinks the casein and expels the moisture from the kernels of curd. It is very important at this time that just the right amount of moisture should be separated from the curd. If too much is driven out, there will be a loss in yield and a coarse, hard-textured cheese. On the other hand, too much moisture makes a cheese that cures too fast and which will get off flavor quickly, for the reason that the retention of so much moisture causes the conditions that are the most favorable to the development of the bacteria of putrefaction. When the curd has become sufficiently firm and dry, it is allowed to settle on the bottom of the vat and stand until there is a sufficient development of acid. To tell exactly when it is the proper time to draw the whey from the curd, requires the best judgment of the maker, as it is one of the critical points in the manufacturing process. The most common test to determine the proper time to draw off the whey is known as the hot-iron test. A portion of curd is squeezed in the hand until partially dry, then placed against hot iron and carefully drawn away; if the curd sticks to the iron and is drawn out in fine threads one-fourth of an inch long, the whey is generally ready to be drawn; if the threads are shorter, it is allowed to stand until a satisfactory test is obtained. This test is supposed to indicate the amount of lactic acid present.

After the whey is drawn from the curd, the process of manufacture may be varied, one method of treatment making what is known as stirred curd cheese, the other method, a Cheddar cheese. In the stirred curd process the acid development is carried further in the whey before it is drawn off and afterward the curd is kept stirred and the kernels kept apart until salted and put to press, In the Cheddar process after the whey has been drained from the curd, the latter is packed on the sides of the vat, leaving a space in the center for the whey to drain off more readily. After a little time the curd is cut up in pieces convenient to handle, and turned over from time to time to allow the whey to drain off more perfectly. When the curd becomes pretty well freed from whey, the pieces are doubled and the process of doubling is continued at short intervals until the whole forms a compact pile. It is held there until the curd begins to feel mellow and has a stringy, fibrous texture, when it is put through the curd mill to tear it in pieces so that it can be salted, after which it is put to press. With good milk, fine cheese can be made by either plan, but taking into account all the changing conditions the cheese maker must meet, I have no doubt the Cheddar plan is the safer.

The average amount of milk required to make a pound of cheese is a little over ten pounds. The best apparatus for a small dairy is a small-self-heating vat, that is, a fire underneath the vat surrounded with water and connected with the water surrounding the vat. For the factory a boiler and steam pipes connected with the vat are used.—Geo. A. Smith, Cheese Instructor N. Y. Dairy Commission in Rural New Yorker.

The Irrigationist.

A Sprinkling Outfit in Florida.

There seems to be considerable agitation of the irrigation problem in Florida, but it proceeds by sprinkling rather than immersion. In Florida we understand water does not run down hill, because of the lack of hills or mountains. As the source of supplies is lower than the cultivated surface, the operation has to proceed by pumping; and rather than pump to tanks and distribute by gravity through furrows or ditches, they seem to prefer to pump to spray nozzles and shower the crops they desire to water.

We have had a few small enterprises in which limited areas were sprinkled from underground pipes, hydrants and hose, but the Florida plan is so novel that the account which we take from the Florida *Dispatch* will be read with interest:

Two miles east from Lane Park, looking down southward from a commanding hill upon Little Lake Harris, is "The Palms," a grove of citrus and deciduous fruits of 120 acres, owned by Mr. Andrew Muir of London, Eng., and managed by Messrs. H. M. and R. Frith. We shall in this letter write only of the irrigation plant, its workings and effect.

The Engine and Pump.—There are two boilers of 40-horse power each, side by side, and to subdue the heat in the engine-room they are jacketed with thick white magnesia packing. By sprinkling water copiously over the earth floor of the engine-room, the engineer keeps the heat down somewhat; it was 126°, which he considers reasonable.

The pump is a Worthington duplex-packed plunger pump, steam cylinders 18½ inches in diameter, water plungers 10¼, delivering 700 gallons per minute, though capable of being forced up to 900 or over if desired. The governor is so arranged, connecting between the great water pipe and the steam valves, that if at any time the hose holders in the field stop throwing water, it will set back and the increased pressure in the main will close the steam valves and slow the engine down, nearly or quite stopping it. This prevents the bursting of the mains, which would be apt to occur if the engine kept driving the water into them with no outlet.

The Piping.—There are 2700 feet of main leading up through the middle of the grove from the lake to the summit of the hill, 85 feet in elevation. It is 8, 7 and 6 inches in diameter, about one-third of each size; number 14 iron. The pipe is spiral-riveted, plain, but tarred inside and out, and the sections connected by a joint so simple that common laborers did all the fitting and laying. It consists of three iron rings or short sections of pipe and two rubber bands fitting over the main pipe and drawn tight by bolts lengthwise of the pipe, making a tight joint which still has considerable flexibility, whereas the ordinary joint screwed together is inflexible. The laterals are of number 18 iron, four inches in diameter, branching off at intervals of 200 feet and leading out to the farther sides of the grove. Both they and the mains are buried about a foot deep. At intervals of 200 feet are hydrants, and these slope from the laterals at an angle of 45°, in a direction outward from the fountain head, so that the water shall not be forced to turn a right angle in entering the hose.

To Relieve Pressure.—The reader can well understand that this large volume of water forced rapidly up a hill nearly 100 feet high, maintains a tremendous pressure upon the piping. It is very desirable to impart elasticity to these continuous large columns of water, which are practically unyielding in themselves, and which, if the delivery should suddenly be checked, would strain the pipes severely. To accomplish this purpose, Lieut. Franklin introduces air-chambers on the mains, which are perpendicular iron cylinders 15 inches in diameter and 10 feet high. Air is compressible, and if there should be a sudden rush of water at any time, some of it can be accommodated by crowding up into these air-chambers.

The Hose.—The sections of hose are about 35 feet long and 2½ inches in diameter. The ends are of ordinary rubber-lined cotton, while in the middle is a 25-foot section of three-inch spiral-riveted galvanized iron pipe. This middle section is the part most exposed to wear by being dragged about over the ground, and is found to be an improvement over the plan of having the entire length made of cotton. The nozzle is of brass, tapering down to a diameter of 1¼ inches. It is attached to a light wooden tripod like that of a surveyor, which can be closed together while the hoseman is playing on the trees, or opened and jabbed into the ground to support the nozzle while he goes to the hydrant to shut the water off. It is important to keep the nozzle off the ground while the water flows, else it will soon gouge an ugly hole.

Playing on the Trees.—As the reader has doubtless already observed, the grove is divided off by the laterals and hydrants into blocks 200 feet square. In the center of each of these is a hydrant which throws the water over 100 feet in every direction. The trees are set uniformly 24 feet square, and the hosemen gauge themselves by these, watering about five rows each way, making blocks 240 feet square. The outer edges of these blocks naturally receive a little less water than the middles, but this is made up by the lapping.

In the old groves at Citra the trees are tall and thick together, and it is the easiest thing imaginable for a careless man to let the powerful jet rip right through a tree, cutting out leaves and fruit in destructive fashion. But with the small and wide-set trees at The Palms, this can easily be avoided. The hoseman aims to throw the water high in the air in order to break it into rain, and a painstaking man will gently move the nozzle from side to side, giving the jet a wavy motion, which accomplishes the purpose still better.

In seeing the jet play among the tall, dense groves at Citra the writer was unfavorably impressed with the hose system of irrigation; but at The Palms it is a different matter. It will be years before these deep-grown, budded trees are tall enough to be exposed to much injury from the jet, if they ever are. If they continue to grow, however, as rapidly as they have done the last two years since the irrigation plant was put in, the time may possibly come when a system of automatic sprinklers, throwing up a gentle spray, umbrella-shaped, may be better.

Rate of Work.—Messrs. Frith Bros. state that a man will irrigate one of these 200 feet square blocks in an hour, or a little over nine acres in ten hours. Active, skillful men, with the engine running briskly, will cover 10 or 12 acres in a day. The pump delivers 700 gallons a minute, 42,000 gallons an hour, 420,000 gallons a day; but it is found in practice that, owing to time lost in changing hydrants, etc., about 300,000 gallons will be delivered in a day. This is divided between three hosemen, giving approximately 10,000 gallons per acre. In examining we found that this amount of water had wet the dry sand down about 2 or 2½ inches, and after an hour or so it soaked down about 3 inches, meeting the line of permanent moisture.

The Effects.—Judging from present appearances, these have been admirable. The trees have a rich, dark green color, and the greater part of them have as much fruit as could be expected at their age. In their inexperience the young men, upon advice, planted some trees of a shy-bearing variety; most of these are destitute of fruit. On the Mediterranean Sweets, the Tangerines, the Homosassa, the Jaffas, and some others, we observed much fine fruit; all the trees are clean and bright. The young men say they have grown as much in two years since the plant was put in as they did in the four years preceding. The trees on the summit are springing forward and gaining on those planted in the moist alluvium down on the level of the lake. Down here we saw some six years old, which will yield three boxes apiece. A small block of trees about 12 years old have several carrying from six to eight boxes apiece.

Cost, Etc.—The plant as it now stands cost about $16,000. The managers have figured very closely on the expense of irrigation (there are 120 acres in grove and 150 in all under irrigation), making it about 25 cents an acre each time. Lieut. Franklin thinks a grove on this dry soil ought to be irrigated 12 times in a year; this would bring the cost to about $3 per acre per year. This is practically the second year the grove has borne. The managers count on 1200 boxes this year, and they are confident they would not have gathered 400 without the irrigation plant.

It is evident from the yellow subsoil of this grove that it is good orange soil; the trees find what they want; but they needed water and they needed potash. After a succession of uncommonly dry seasons the young men were getting disheartened. But this beneficent rain, arching like white rainbows over the bright young trees, has given them new hope. It benefits everything even when poured down under the hottest sunshine. Its enormous drops, falling such a little distance compared with those from the clouds, do not harm the tenderest beans or tomatoes. There are missing places in the rows where the managers have cut off and rebudded sterile trees, but the thrifty stumps will soon fill up the gaps. The generous supply of water will bring them on more rapidly.

Florida owes much to Lieut. Franklin, the inventor of a system of irrigation different from anything else heretofore used; the only one which imitates rain; the true system for the light soils of this State. Florida also owes much to this English merchant, who had the courage to pour out his money here like water. It owes much to these young men, working here for years in loneliness and isolation, to build up what in a few years more will be a noble property.

The Home Circle.

A Chance Meeting.

Written for the Rural Press by Isabel Darling.

The long, hot hours one summer day
Had almost burned themselves away;
The air was thick with dust
If but a vagrant gust
Of shifting wind swept past the bend.
It seemed the road would never end—
That tiresome road that wound
In spirals round and round
And ever up.

On this side sank the canyon walls
Where, far beneath, the river calls
And murmurs of the sea:
Huge rock and clinging tree
Seemed fearful of the depths below,
And, wrapped in veils of gauzy woe,
Stood midway, crouching there
Like forms of shivering, dumb despair
Denied the fall.

On that side rose the mountain peak,
Where birds of prey in circles seek
Their food. So high it rose,
Ravine and forest seemed to close
In one dim mass of shaded gray
That in the glowing sunlight lay
And quivered, while we stood,
Our horses resting as they could
On bracing feet.

A distant sound drew nearer still,
In rattling echoes down the hill;
A dust-cloud and a gleam
Of wheels and weary team,
And as it stopped, when just abreast,
Beside the spring to drink and rest,
We saw a woman's face;
Then all the heated place
Grew softly cool.

She said, "The road is steep since noon;
We're glad it will be better soon."
We knew it all before,
And yet 'twas something more;
For patient strength was in her tone,
Her eyes held courage surely grown
From faith. We parted then
And never met again;
But all the after changing years
Of struggling life, of smiles and tears,
Have kept that look and tone
As gifts from one unknown
Who smiled and passed.

In a Miner's Cabin.

Written for the Rural Press by C P. Nettleton.

I was taking a walking trip through the more remote parts of California, and on the night when this story really commences had been obliged to do as I had often done before—camp out in the woods. I was in a wild and almost desolate part of Amador county. The road I had followed that day was evidently used but rarely, and my hopes of sleeping in a house had been disappointed.

After a supper of the canned provisions I always carried for just such emergencies, I lit my pipe and settled myself comfortably against a fallen tree for a quiet reverie before turning in. I had made my camp some distance from the road from habitual prudence, and the woods were so dense that I feared no disturbance from man, while my fire would protect me, for a time at least, from animals.

Suddenly I heard a crashing of twigs; some one was approaching my camp. I quietly slipped my revolver from my pocket to the ground where it would be handy but out of sight, and sat still. The tall form of a rough-looking German appeared in a moment, and after calmly surveying me the man rather bluntly demanded why I had not come to his house for shelter. His English was so broken that I replied in German, at which he seemed much pleased. Any thought of fear was dispelled in me by his frank, blunt cordiality, and I told him I would be only too glad of shelter. He took me at my word, waited till I had gathered up my traps, and then led the way to his house. How the fates mislead us! Had I walked on 50 yards farther before turning from the road I had seen it.

Once inside that miner's cabin up in the woods I was astonished. An organ, easy chairs of the style of 20 years before, a Brussels carpet, worn out in places but good when new—what kind of a place was this I had struck? The house was small and had the appearance of having been added to, and it was very dirty; but what I noticed more than all else was what I could least explain — the walls were covered with paintings, both oil and water! I almost forgot all civility in my haste to examine them. I have dabbled a little in almost everything, painting among the rest, and have been told that I could have been well-known in the art, and my judgment told me at once that some of those paintings, if not all, were very superior. I have been less impressed by some of the received masterpieces in Paris and Rome than I was by some of those paintings buried in that unknown miner's cabin. You think this excessive praise, or proof of ignorant judgment? Perhaps, but you have not seen them. One, in particular, attracted me and gave me the feeling of having seen the original place. It was a good-sized canvas, about five feet by three and a half, and represented a long, narrow beach stretching away from the spectator. On the right the sea was suggested by two or three thin waves rolling lazily up the sand, and on the left—and this was what partly aroused my memory—stood out boldly a peculiarly shaped formation of limestone, partly hidden by low shrubbery growing over and around it from the land side. I had seen that place, but where? Try as I would, I could not place it. I even thought that perhaps my memory was tricking me through the power of some artists to suggest that we are familiar with what we have never seen, but I was not satisfied with that explanation. After all, what did it matter? I turned away and sat down by my host, who evidently lived alone.

We talked awhile on the subjects strangers can always find common interest in, and I found him far more intelligent than his rough appearance would lead me to think. I tried to get him to talk about the pictures, but elicited no information about them except that he did not paint them himself. That there was a story book of it all I was sure, and I was as quietly determined to have it some time. We sat up late that night, and he seemed as much pleased to meet me as I certainly was to find such an unusual miner.

Next day he told me the story that I had been sure must be connected with those wonderful paintings. I had told him I was an amateur and had offered him a high price—three thousand dollars—for the one that most took my fancy, the one I have described. At first he absolutely refused to part with a single one, even the smallest, but my entreaties prevailed more than anything else, I think, because I promised in writing not to allow any one to see it for five years. His reason for that condition I could not fathom, and did not care to. I bought the picture, and then he told me the sad tale of the person—a woman—who had painted all those works of art. I think he was glad to find an intelligent listener, and sad as it was, I was not sorry to have the tale told me. I will repeat it in almost the words of my host.

The fall of '57 found me pretty nearly ill. I had worked hard, made little money, and probably not taken good care of myself. I was living alone in this cabin, as I am now. One day I suddenly found that I ought to go down to Plug Hat and get some provisions, but did not feel able to ride that far. Just what to do I did not know. Miners were passing the house every few days on their way up the valley, but only on Sunday did any come down the valley. This was Tuesday, and the more I thought, the more anxious I grew as to what I should do if I got worse. Toward night I crawled out to get some firewood and to feed my horse, when I saw, of all things in the world, a covered wagon coming up the narrow trail drawn by two horses. They were driven by a man on foot; and as he came up he stopped and spoke as a matter of course. He was young, not over twenty-four, but with as determined a face as I ever saw—not hard nor rough, but simply determined. He could not understand my broken German, and called to some one inside the wagon. A woman's head appeared, when the man told her to see what I wanted. What I most wanted, at sight of the first respectable woman I had seen for three years, was to shake hands with her, but I only made some little request—I have forgotten what. My face and manner must have shown her I was ill, for she looked at me long and keenly and then said, as she turned her head away, "*Kyrie Eleison.*"

They stayed with me that night, and in the morning I did my best to induce them to remain for a while. Perhaps I was selfish, but I was certainly ill and took no pains to conceal it. They stayed with me, though probably why they did so was chiefly because in three weeks the woman gave birth to a child. They already had one child, a beautiful little daughter of four.

All that winter they stayed in my cabin, and I was greatly pleased. It was a treat to be near a lady, as Mrs. Trowbridge indubitably was. I enlarged my tiny rooms, fitting up one on the north side so that she might have the regulation north light for her studio, and we got along together well. She painted and did most of the housework, while her husband and I used the "Long Tom."

But I was a little troubled. There was something wrong about the woman, young and beautiful and refined as she was. She was out of place in the woods, but seemed quite cheerful in spite of all the discomfort we had to undergo, so the cause of her trouble, whatever it was, must have originated before she came. It was a long time before I even allowed to myself that she was not quite sound in her mind, but I finally had to. She did not show it in any special, tangible way, so I could have given no good reason for my belief, but no less did I know positively that she was not wholly responsible.

She was passionately fond of painting. She had brought some canvas and articles she needed in her work, and sent for more as soon as settled. She would paint from dawn till dark if nothing prevented, and, as a matter of fact, her husband and I took most of the care of the children. Once in a while, all too seldom as I thought, she would use the organ which she insisted on having brought up from San Francisco. And her playing was rich, was glorious! I never more than half believed that not only the emotions of love and hate and anger and hope but also colors could be expressed with a musical instrument, until I heard her play. Then, I was convinced. The woman was a genius in music as in painting, and I wondered greatly that she could be content to suffer the limitations of a country life.

One day, when her husband and I were off as usual washing gold, he grew more confidential than usual, or perhaps I should say he thought it his duty to tell me something about themselves. I had said some rather pronounced truths about her obliviousness to all things but painting and music. He stopped working and sat down. I saw he had something to say, but for a few moments he was silent.

Her father, he said, was a poet, one well known and highly esteemed, but with the eccentricities of genius. He did not mention his name, but I learned that afterward. This daughter was the object of his special aversion; for what reason the young man did not say, but on that point I have my own opinion. We often hate those we have injured! At any rate, the man lost no opportunity to make his daughter's life miserable, and what she had suffered through no fault of her own had to some extent affected her mind. Her father had bitterly opposed her marriage to Mr. Trowbridge, and from the day that they thought themselves justified in eloping they had moved from place to place very often, to avoid the trouble that they had reason to think her father would visit on them if able. She loved her father with all a sensitive woman's devotion, and to know that he could harbor unkind sentiments toward her, to feel that he was wholly unworthy of her affection, had so burdened her that she was really a little unbalanced. This was about all the poor young husband told me.

I could say very little to comfort him, though I spoke of his two children, to whom he was devotedly attached. Even they, or at least the infant, were a source of anxiety to him, lest they should have inherited from their mother qualities which would sometime be a sorrow to themselves and others.

I think that the few months they stayed with me were the happiest they had known since their marriage. So far from the world as they were, so free from anxiety about the means of obtaining a living, and so unburdened of the fear of aught her father could do to them, surely, now, if ever, they could enjoy life, and I am sure they did. To me, I can assure you, their coming and staying had been a real blessing.

By spring, I was glad to see, their peaceful life had wrought a great change in their health. We had been very successful in washing gold, more so than I had ever dreamed of being, and there seemed to be no reason why we should not be just as happy for a long time to come. But the shock came and came suddenly.

Trowbridge and I were off mining, as usual, one day in April. We never felt any fear for the safety of the woman and children left at home, such a thing as danger from passing miners or any other source hardly entering our heads. As we neared home, Trowbridge noticed that though past five o'clock no smoke arose from the chimney, for, in spite of her passion for painting, Mrs. T. usually was preparing supper on our return. I made some commonplace remark and my companion seemed satisfied.

When we got to the door, we were astonished to see a stranger sitting in a chair close to it, with his head bowed in his hands. We were close to him before he heard us. When he did hear us, he started up and glared at us, or at least his gaze seemed so at first, but I saw at once that sorrow and despair were the emotions expressed in that gaze. His face was red from weeping, and almost appalling in its exhibition of agony. Trowbridge and he looked steadily at each other.

We stood so for some seconds. It takes longer than some think for deep passions to rise to the point of expression, and I remember that terrible silence made tragic by the man's ungovernable emotion, as more of a strain, almost, than the knowledge that soon came. The unknown is sometimes worse than the worst knowledge.

I thought Trowbridge was about to draw his pistol—he always carried one, but mine was somewhere in the house—when the stranger slowly reached out his hands like a blind man and said hoarsely, "Kill me, for God's sake, I did not mean to, I loved her, but, Oh—"

Trowbridge dashed through the door, pushing aside the man so roughly that he stumbled weakly backward. I, too, hastened in.

On the floor in the next room lay the body of Mrs. Trowbridge. A pistol near her head explained the manner of death.

Trowbridge knelt down by the side of his dead wife. I turned to the man who had in some way been the cause of this thing, or the murderer. He had sat down again in his former attitude, and when I put my hand on his shoulder he did not look up. He shuddered at my touch, and when he spoke I could but pity him, savage and murderous as I felt, so utterly stricken with grief he was.

"I came to take her home with me," he said, "I loved her and I was lonely. She did not know what I had come for. I must have been harsh at first, yes, I was. I reproached her more than I meant to. She was taken all by surprise. I intended only to say a few words about her leaving me as she did, and then surprise her by saying, 'Come home.' But she did not wait for that. She got excited, and before I divined her intention, she had got hold of a pistol. I tried to stop her—I swear before God Almighty that I tried to stop her—" he raised his head and looked at me fiercely—"I caught her arm and tried to tell her that we would live in peace evermore, all together, if she could forgive me, but she did not hear me, I think. She seemed wild, she acted like a phrenetic. O, my God, have mercy."

Poor old man! I did not tell him then, and never did, that his inhuman attitude toward her had indeed unbalanced her mind. The shock of seeing him had been too great.

I was trying to think what to do, when we were startled by hearing the ring of a pistol, and turned to see her husband sink down by the side of the dead. He died instantly. Whether or not he had heard what her father said I am not certain, but believe that he had.

I buried husband and wife in the same grave. The old man was too prostrated to be of any assistance to me, and I saw no use in complicating matters by calling in my nearest neighbors, while as for a clergyman, the nearest one was fifty miles away.

I took care of the infant and little girl as best I could till a woman I sent for came. In a few weeks, as soon as he was able, the old man gathered up a few treasures, some of her paintings among the rest, and took the children and the woman to the East. He refused to take all the pictures, and told me to burn what he left, but I could not.

Who was he? You must pardon me; he is dead, and it would serve no good end to tell you his name.

When I am at liberty to show the painting I bought, it will make a sensation. It is the one that most attracted my attention at first, though I have not yet been able to remember the place it must be a picture of.

How to Have Pretty Hands.—A lady should have beautiful white hands and no mistake. If the skin be naturally white, very little care is required to preserve it. A good soap, aided by a pinch or two of cracked oatmeal, may be used for a thorough cleansing twice a day, and if needful to still further cleanse them, warm water—not hot—will do the necessary work. Once a week they should be rubbed front and back, between the fingers and all, with a slice of lemon. If these exquisitely white hands are inclined to chap, camphor ice may be applied at night and white gloves worn to increase the softening effect. The best camphor ice is a homemade preparation of pure white wax melted and stirred to the consistency of cream, with the addition of several drops of spirits of camphor. Holes should always be cut in the palms of the gloves to allow ventilation. For distressingly red hands, equal parts of glycerine, lemon juice and rose water may be applied nightly under gloves. Daily applications of lemon juice are sure to produce a whitening effect. Tight sleeves and snugly fitting

finger rings are a frequent source of red hands, and the only remedy for this is to remove the irritating cause. Smooth, white hands may be difficult to acquire, but they are certainly within the reach of all who care for them sufficiently to make the effort required to secure them.—Drake's Magazine.

One Night in the Woods.

Written for the RURAL PRESS by SHERMAN L. WATKINS.

"Here is a capital place to stop?" suggested my friend Andrews, as we halted late one afternoon at a small mountain meadow in the upper Sierras.

"Yes, we could wish no better place than this," I answered as I gazed around.

A few rods from us was a small mountain stream of extraordinary clearness and beauty, which murmured with monotonous regularity until it reached a hidden ledge of rocks, where it alternately slipped, tumbled, and fell and afterward lost itself amid tangled depths of ferns.

We unhitched our horse and tethered him near the margin of this stream, where bunch grass was growing in luxurious abundance.

"It is now five o'clock," said Andrews, producing his watch, "and it will be quite a while until night yet; suppose we take our guns and fishing-rods and go up the creek a distance?"

"All right—but listen; do you hear that?"

An indistinct, muffled sound broke the dreamy stillness.

"A grouse, I'll bet," exclaimed Andrews.

"Yes, it is a grouse, and from the sound I infer that he is in that tall black fir yonder," and I pointed in the direction indicated.

Cautiously and slowly moving through the underbrush, we neared the tree; the muffled sound grew more distinct. Finally we reached as far as we dare go without being observed by the grouse. From behind the interposing bulk of a huge tree we observed the tree that the grouse was in—an old broken-topped fir, splintered by some forgotten midnight storm.

"I have heard," said Andrews in a low voice, "that these mountain grouse are exceedingly shy birds and very difficult to get a shot at."

"Yes, they are," I answered; "their color so much resembles the bark of the tree that it is very difficult to distinguish them; but let me have your telescope, possibly I can find him. Yes, I see him now; he is on the third limb from the bottom and about two feet from the tree."

"You don't mean to tell me that that spot is a grouse," exclaimed Andrews incredulously.

"It certainly is," I replied; "but take a shot and see."

A sharp report; some fragments of bark drop to the ground, but no bird.

"I told you it was no grouse," remarked Andrews disdainfully.

"Yes, that is a grouse; try another shot."

The spice of gunpowder again fills the air, and a bird drops to the earth.

"Well, that is nothing at all like an Eastern grouse," said Andrews, examining the bird; see the feathers on its legs."

"Yes, all the California grouse are that way," I replied. "We have got a bird, now let us see if we can catch some fish."

After emerging from a thicket of vine maple, hazel and ceanothus, tangled in with the imperishable fern, we came suddenly upon the brink of a beautiful transparent pool, giving forth emerald and silver flashes of light.

After half an hour's fishing a half dozen of rainbow-tinted beauties bade farewell to their native element.

We started back and soon reached the place where we intended camping.

We gathered together a pile of pine needles, fragments of limbs, etc., and built a fire which soon crackled and sparkled cheerfully.

You may be sure we ate our supper with a keen relish, for at these mountain heights a person's appetite is increased to a marvelous degree.

On all sides of our camp arose the colossal columns of the pines and firs, lithely graceful and exquisitely symmetrical in their wild beauty. The woods seemed crowded and stifled with their rank maturity of vegetation and the fanning breaths of wind that issued from these crowded aisles was charged with a spicy, nameless intoxicating perfume that seemed to fire the soul with countless noble thoughts and high ambitions.

Already the bloom of the day was dying in irised splendors; the sunset fires dazzled our eyes for a few moments, the colors paled, deepened, intensified, flamed and went utterly out; the ravines and canyons were soon filled with a reddish purple light, which rapidly changed into a violet blue atmosphere, and in turn merged into the growing darkness. The light no sooner paled than a few stars began to loom out in the dying crimson sunset trails. A weird twilight now began interfusing itself through the foraminiferous, bark-strewn aisles, and a deep, wide silence reigned supreme—a silence like the solitude of some forgotten past.

In this enchanted dusk happily everything in life is forgotten and imagination takes the throne.

Lying on a cushion of velvety softness, formed by pine needles and wood clover, my mind becomes impressed with the majesty and magnitude of the colossal pine that looms almost two hundred and fifty feet above my head, for I suppose it has withstood the storms and tempests of twenty centuries. Possibly, if it could speak, it would say something as follows: "I have been a silent witness to the passage of over twenty centuries of time. I was in my youth when the star in the east led the sages to the Savior's cradle. I was beginning to enter my old age when Columbus set sail from Spain to discover America; for twenty centuries I have watched the sun come and go. I have seen the

Children of men arise and pass
Out of this world like blades of grass.

Tempests, floods, fires and snows have tried to destroy my life, but I have withstood them all. I have fulfilled my mission on this earth, and am now dying; for do you not observe that the ends of my branches are dead, showing signs of defect within? Some midnight tempest will hurl me from my rotting base, and with a crashing, thundrous, splintery sound my life will end entirely, and in a few short years of time my decaying column will have entered the dust whence it came."

But now what was that light rising over the darkened ridge?—a light that kept increasing like a faint mystic aurora. Was it a forest fire? A lighter glow appeared—intensified—a rim of fire, and the full moon burst over the horizon ridge. But see, what a wildly beautiful picture—an old lightning-splintered pine on the distant ridge was clearly and boldly defined against the silvery background of the moon—every twig and branch standing out with sharp distinctness. For a few moments the moon held this glowing picture on the sky, then swiftly faded from view.

As the moon arose in the eastern heavens it glittered in silvery magnificence out of its setting of dark blue crystal and threw a flood of dazzling snowy fire over forest and mountain, clothing them in a frost-like drapery.

The ground in places near us was covered with the cast-off bark of the incense cedar, which, in this whitish, uncertain light, gave back a dull glow like dying embers.

We plied more fuel to our fire, and feeling sleepy we lay down upon the fragrant, needle strewn ground. The events of the day and the spicy, invigorating aroma of the woods helped to lead us to utter forgetfulness and we soon fell asleep.

Along in the early hours we were awakened by the cold; a heavy dew had congregated on all things. We remodeled our fire and ascertained the time. It was four o'clock in the morning; the stellar fires had already begun to pale, and in a short time the stars went out and the far-off aisles of the wood began to grow pale with advancing day—the stillness and purity of the night imperceptibly faded into the blaze of a daffodil dawn, and morning in her brilliant and gorgeous coloring ushered in the new-born day.

The frozen summits of the Sierra Nevadas soon blazed with intensest crimson splendor as the early fires of morning flashed and flamed around their crests.

As the sun gained in light and heat myriad insects filled the lower air with their monotonous hum, and the birds caroled vociferously, as if to welcome the great sun.

A light, flower-scented breeze was blowing as we started off through the woods, and the sky overhead was of a deep, glowing, golden blue, as if clouded with gold.

—"I don't feel right about going in there," said Chillson Feever in front of a physician's house.

"Pshaw! He's one of the best doctors in the city," replied Coffin Coles.

"I know; but look at his sign—'9 to 1.'"

"Well?"

"Well, I don't take any such chances as that."

IT is stated that Kate Castleton, whose death was announced recently, was badly burned while yachting, and the cosmetics she used permeated her flesh through the blisters raised by the intense rays of the sun, and this caused her death.

YOUNG FOLKS' COLUMN.

Youths at the World's Fair.

Provision has been made for holding, in Chicago at the time of the World's Fair, of a congress composed of youths of all nations of the world. Delegates will be sent, it is expected, from England, Japan, France, Germany, Norway, Sweden, Spain, Austria, Italy, Russia and countries of the Orient. These young men are to be selected from the high schools and grammar-school grades. Their ages are to range between 13 and 20 years. No World's Fair congress has been thus far arranged for, it is thought, which will excite more interest than this project.

The idea is to get from each country not more than from 15 to 40 or 50 students. All told, it is intended to have 5000 at the congress, and a special committee has been appointed to see that proper encouragement is lent to induce attendance. The preliminary address of the special committee has been issued by A. F. Nightingale, chairman, and F. F. Bliss, secretary.

President Bonney, of the World's Congress Auxiliary, says that the topics discussed will touch neither upon religion nor politics. His idea is to gather in Chicago next year a representative assembly of the educated youths of all countries. They are to be addressed by the leading educators of the age who may be in Chicago. The scheme originated with a committee of which Francis Bellamy is chairman. The pith of the argument for such a congress is embraced in the following paragraph from the preliminary address:

"It is felt that a carefully selected assembly of the young from all nations, under such remarkable conditions as will prevail during the Columbian Exposition, cannot fail to powerfully aid this high end. It is purposed to draw together the worthiest and most talented youth of all lands, the coming leaders of mankind, that they may be led to realize as could not otherwise be possible, the meaning and the worth of the fellowship of nations and the brotherhood of man. In a gathering so constituted there would certainly be some who will be called to deal decisively with the destinies of States and the serious concerns of millions of men. Brought thus together, and face to face with the larger relations of our independent humanity, those fresh minds would greatly gain in fitness for the important tasks decreed to their future. Among them would be many who will survive all who are now active on the stage of the world's affairs, and who would therefore stand before the generation to follow us as witnesses of the humanizing power of the World's Exposition of 1893, and be inspired by its influence to higher and more useful careers, making the fulfillment of its great promises their noblest claim to history."

Elfrida.

Elfrida was born in a great forest far away in Sweden. Her father and mother lived 200 miles from any town, and the village nearest to their little wooden cottage was six miles off. Elfie was very lonely, but she did not mind a bit, for in summer the bees and the birds and the butterflies made all the forest merry, and she played among the soft mossy roots of the trees all the day long. She was once in danger, for she saw a great brown creature eating berries from a bush, and she said: "Oh! what a funny cow. Let me pat you, dear cow, and I will kiss you, for you give me milk to eat with my cranberries." But Elfie's father rushed out, and the queer "cow" shuffled off into the deep wood. The beast that the little girl took for a cow was a brown bear. Bears feed on roots and fruit in the summertime.

In winter little Elfie had plenty of fun, though she could not go out much. In the long, dark evenings she sat by her father while he carved out lovely toys, and she learned to make funny little animals out of wood to go in the Noah's arks that English children play with.

When Elfie was seven years old, her father grew very ill one night, so her mother went off to the village for help. Late at night Elfie's father rose up and said: "Goodbye, little darling. I am going a long way off to leave you." Then he shivered and shook his head; and Elfie said: "Very well, dear father, only come soon to your little girl again."

Then the good man lay down, and Elfie thought, "Oh, he has gone to sleep," and she got into her little crib and slept as well. There was only a little daylight in that wild country, and Elfie's mother had to find her way through the dusk of the lonely woods.

Elfie grew very, very hungry, when she woke, so she got a piece of black bread and ate it. Then she played with her toys and made herself happy for a long while; then she went to look at her father. She said: "Father, dear, wake up," but he did not wake, and she thought, "Oh, he is so tired, poor man. He worked very long, and he wants sleep," and she played again.

But when her mother did not come Elfie was sorry, and at last she began to cry. She cried and cried for a great while, and she was quite tired out, when a big man came in and said: "Dear little one, why do you cry? I was passing, and I came in to see." Then Elfie sobbed, "My dear father won't wake up, and my mother has not come back." Then the big man looked, and he said: "Give me your hood and your cloak, my dear, and let me have your long boots, and I will carry you to see your mother after I have put them on."

So Elfie went, and she babbled in the good man's ears all the way as he walked. When he got home he said to his wife: "This little girl has neither mother nor father now. Poor Nils is dead in the house, and we must go and bury him; and poor Johanna died in the snow, and she is lying at the doctor's. What shall we do with the child?"

The woman answered: "Dear little thing, her uncle is far away in America, and some of our people are going. Let us send her."

And Elfie went with the people on board the great ship, and she cried, "Oh, father, come to me. Oh, mamma, dear, do not leave your own little girl!" But the people said, "Hush, sweet girl, your father and mother are gone away, and you must now go to your kind uncle; he will love you and give you nice clothes and nice food." And all the sailors in the ship were good to Elfie, and they nursed her in their arms and gave her sweets and taught her funny games, and she grew happy.

After many days on the sea and many days in a railway train, Elfie got out at a big station, and a kind man with a red beard met her and said: "You are my Johanna's little girl; I know by your eyes and your hair. Come with me, my little kitten, and kiss me, and we will go home."

So after traveling 5000 miles, the little orphan was once more safe; but she never forgot her father's cold, white face, and she often cried when she thought how her mother was caught in the cruel, cold snow.

She is now a big girl.—The Princess, London.

—Couldn't hear both sides: Miller—I wonder why Jones wasn't appointed on the jury.

Muller—He was rejected on the ground that he couldn't hear both sides.

Miller—How so?

Muller—Why, he is deaf in one ear.

—"Have you fixed up my will?" said the sick man to Lawyer Quillips.

"Yes."

"Everything as tight as you can make it?"

"Entirely so."

"Well, now, I want to ask you something—not professionally, but as a plain, every-day man. Who do you honestly think stands the best show for getting the property?"

ROYAL


BAKING POWDER
Absolutely Pure.

A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

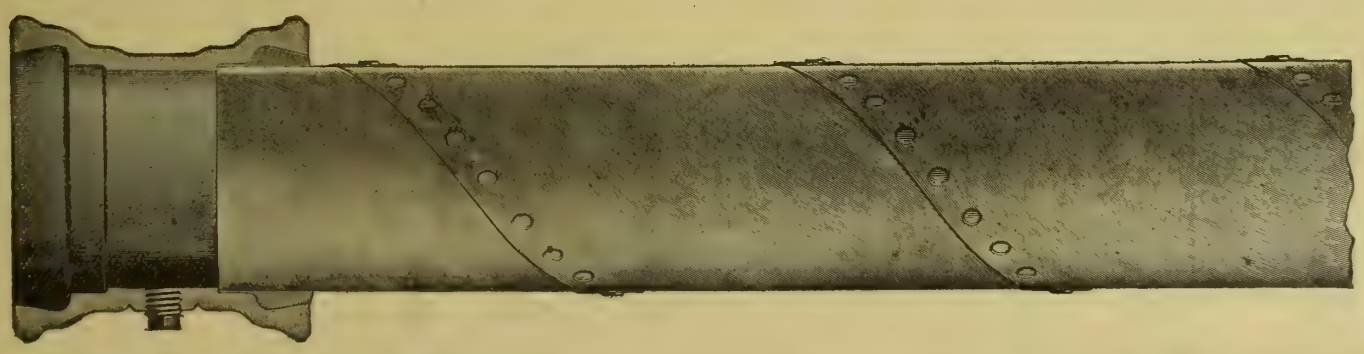
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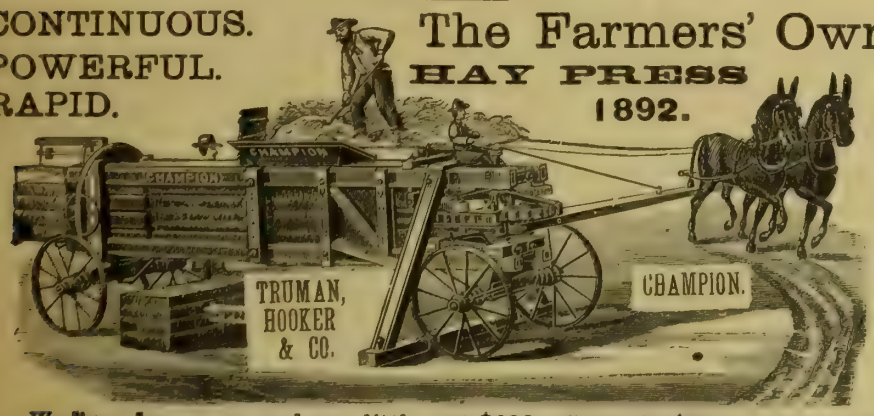
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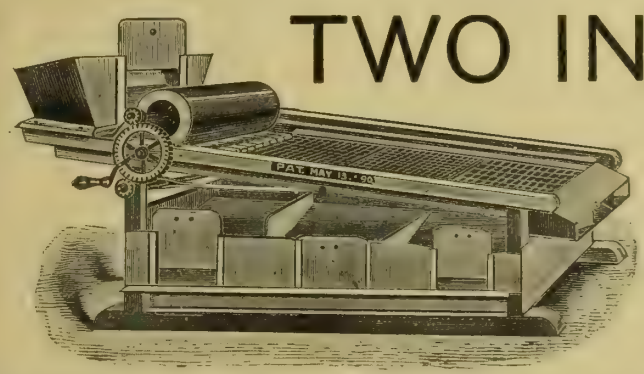
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HAY PRESS
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We have one press used very little, cost $400, will sell for $250, if ordered this month. Full circle, 10 to 20 tons per day, $425. Send for circular.

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1892.

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PRUNE GRADER

The only machine that will grade with equal facility both green and dried fruits. It is desirable to grade prunes both before they are dried and absolutely necessary after.

ECONOMICAL.

It is the best economy to have one machine which you can use for both green and dried fruit, saving time, money and valuable space. No complicated machinery to get out of order and do imperfect work.

VERY SPEEDY.

No machine compares with this in speed. Will grade apricots for drying, also walnuts and pecans.

W. C. HAMILTON, near Narrow Gauge R. R. SAN JOSE, CAL.

AGRICULTURAL NOTES.

CALIFORNIA.

Fresno.

ORCHARD DRAINAGE. — Fresno *Republican:* The condition of many orchards and vineyards in irrigated districts can, without doubt, be greatly improved by drainage. They may do fairly well without it, but in every instance where it has been tried, the results have fully justified the expenditure. On the Kimble orchard of 540 acres, near Grangeville, drain tile is being used to draw off the water from a portion of the orchard when it comes too near the surface. It drains into a well, and is then pumped into a flume, which carries it back into an irrigating ditch. This double use of the water is another feature of importance in districts where the supply of water is not greater than the demand.

Kern.

IRRIGATION NOTE.—Alila Cor. Visalia *Delta:* The prospects of the Kern and Tulare irrigation district are brightening, and there is now a feeling that before many years southern Tulare and northern Kern will be as well irrigated as any other section of the State. One by one the irrigation districts are "getting there," and Kern and Tulare will not be far behind.

Los Angeles.

FARM AND ORCHARD NOTES IN ANTELOPE VALLEY.—Lancaster Cor. L. A. *Express:* Although the wheat crop was light this year, the trees and vines are doing handsomely, and the three and four year olds are making a fine record. In addition to the immense acreage of trees put out last year by the Fairmount Land and Water Co., Edson, Arnold and Matt Glesser, amounting to over 500 acres, the same parties will put over 1000 acres to deciduous fruits, almonds, olives and vines. Gen. Beale has also given orders for the putting of two sections to olives, almonds and deciduous fruits. With the small farmers who will set five, ten and twenty acre orchards and vineyards, it is safe to say there will be over 5000 acres of trees set this year in Antelope valley, west of the Southern Pacific Railroad, and most of this will be in Los Angeles county. E. S. Waite has commenced an artesian well on his place near Rosamond, and has arranged for sinking a half dozen more for his neighbors. The bringing in of water from the Cottonwood and Oak creeks, together with the artesian well development and the extension of the Santa Fe for a distance of 70 miles through the most productive portion of this valley, makes the prospect pleasing and the outlook altogether lovely.

Modoc.

PRINCIPAL VALLEYS IN LASSEN AND MODOC. Adin *Argus:* We give below the areas of several of the principal valleys of Modoc and Lassen counties: Honey Lake and Long valleys, 250,000 acres; Eagle Lake and Susan River valleys, 100,000; Madeline plains, 150,000; Big valley, 260,000; Fall River and Little Hot Spring valley, 35,000; Big Hot Spring valley, 125,000; Surprise valley and Lake region, 300,000; Goose Lake valley north to Chewaucan, 250,000; Tule lake and marsh, 75,000. The above figures will be of particular interest to nearly everybody. They were collected a few weeks ago by a Mr. Pierce, to be reported to railroad officials as data relative to the trade that would be given a railroad if built from somewhere near Reno to tap southern Oregon. The figures show Big valley to have a larger area than any other locality taken separately; 260,000 acres of land is a large body, and of this amount only about one-third is estimated to be cultivated, and that only partially, the farmers raising only enough for home consumption, as they have no other market. We have rich lands that only need a market inducement to cause them to be cultivated and improved by the owners.

Orange.

ORGANIZED TO EXTERMINATE THE SCALE. Santa Ana *Blade:* A company has been formed recently in Tustin for the purpose of more thoroughly exterminating the scale by the process of fumigation. It is to be known as the Prospect Avenue Fumigating Co., and its members are S. W. Preble, A. Guy Smith, W. E. Jukes, Thos. Smith, J. S. Rice and A. E. Bennett. Mr. Bennett is to be superintendent of the work done. The new company has gone to work with energy and a determination to improve the process in any way possible, and to impress upon the minds of fruit growers the necessity of fumigating, as nearly as possible, at the same time, thus lessening the probability of one orchard infecting another—a thing so certain and so much to be deplored where one orchard is cared for and free from scale and the adjoining one is dying. Ten new Riverside sheet tents are to be built immediately, and improvements are being made on the derrick.

DRIED APRICOT CROP.—S. A. *Blade:* Apricot-drying and packing is about completed in this city. A very large amount of fruit has been handled, and a good deal of money has changed hands. Fully 2000 tons of apricots have been handled in this city alone. The Germain Fruit Co. has put up 185 tons of dried fruit, and 160 tons have been packed by the Collins Fruit Co. Prices for the dried product have ranged all the way from 8 to 13½ cents per pound. The majority of the shipments has been made per the Santa Fe. Most of the peaches raised hereabouts will be shipped to the Ontario and Colton canneries. Prices run from $17 to $22 per ton for the ripe fruit.

Placer.

FRUIT SHIPMENTS.—Auburn *Republican:* The fruit-shipping business at Penyrn will be greater than any previous season. Five carloads were shipped from that place last Saturday. During this week the shipments will reach six or seven cars per day. There are three wholesale shipping houses at Penryn this season. The California Fruit Company, with Charles Ludlow as manager, is doing a fine business. Porter Bros.' Company established a branch house at Penryn and are having a good run of business. The Penryn Fruit Company is doing by far the largest volume of business this season of any year since it was established. This company has shipped more fruit to date this season than any house in Placer county. The Cooperative Company at Newcastle comes in second for amount of fruit shipments, with the house of George D. Kellogg as a close third.

Sacramento.

HOP NOTES.—*Daily News:* There is very little change in the appearance of the hop yards, except that the warm weather has done a great deal toward showing up the condition of the vines. The hops are now coming on very fast, and all the growers are watching them closely so as to commence picking in plenty of time. It will be remembered that at about this time last year the extremely warm weather which came on rather unexpectedly, caused many of the hops to ripen suddenly and to turn red before they could be gathered. Johnson Sides and other Piute Indians have made arrangements to be here next week and they will be followed by plenty of other Indians, Chinese, Japanese and a sprinkling of white men, so there is not likely to be a scarcity of labor for the picking season. It has been suggested that before the season for picking has commenced the growers ought to come together at a convenient place and talk over the crop prospects and arrange the prices they intend to pay for picking, so that all will stand the chance of getting their crops housed in good season. There is a good reason for this movement, as it happened in previous years that different rates being paid by different people had a demoralizing effect upon the pickers. In looking over the hop yards a great many bastard vines are noticed. These vines make good growth and cannot be detected until they blossom out, when it is noticed that the bloom is part male and part female. It does not make good pollen nor good hops, so they are a dead loss and should be staked and grubbed out when pruning. The McGee Brothers, nine miles below town, have the promise of as good a yield as last season. The samples shown from their yards last year were the very best. J. J. Merkeley has commenced building a hop kiln after the style of Croley & Irvine's, a description of which was given in this paper of two weeks ago.

San Diego.

THE FRUIT CROP.—S. D. *Union:* R. H. Hewitt, who has been in the city for the past few days in the interest of the State Board of Horticulture, informs a *Union* reporter that the fruit crop throughout Southern California is unusually heavy; that in many instances trees and orchards are so heavily laden that it is impossible for the fruit to mature and ripen properly. Apricots are above the average in quality and quantity, but the low price offered for green fruit has induced the majority of producers to dry the greater part of their crop. Peaches, nectarines and melons are reported late, owing to the coolness of the season. The prune crop will be less than last year, as a great deal of the fruit has fallen from the trees.

PROLIFIC OLIVES.—S. D. *Sun:* The "Rubra" variety of olives, which E. Banard imported three years ago from Montpellier, France, is making a marvelous showing in his Mission Valley grounds, as a number of visitors discovered yesterday. The theory that olive trees must be 20 years old to yield large crops is disproved by these young trees, which are so weighted and crowded with berries that props will soon have to be used to save the branches from breaking down. The Uvaria is another French variety and is one of the best for oil. The Queen and Nevadillo are also imported olives of vigorous growth. The Prussian mulberry, now ripening luscious fruit, is in another part of the tract, near an avenue of Abyssinian bananas.

A DESERT DOOMED.—Madera *Mercury:* The wonderful results of irrigation have been shown in a most remarkable manner by a freak of the Colorado river. Last year the mystery of Salton lake attracted the attention and wonder of the State until its source was found in a break in the river bank. This year a phenomenon not less wonderful is to be seen in the same region. The desert has been transformed. The bare sands that have made the region terrible to travelers and stockmen have given place to verdure. Underbrush has covered the country in the line of the inundation, and where only the hardiest desert plants could before maintain a precarious struggle for existence, luxuriant vegetation now covers the land. The desert is doomed. Its disappearance may not be seen by this generation or the next, yet the time is coming when orchards and fields will cover the thousands of square miles now given over to desolation. The infrequent desert plant and the occasional buzzard will give way to all the products of the tropical and semitropical lands that its position is fit to raise. The day may come when the present Colorado desert will be reckoned among the most productive lands in California. There was a time when the plains of Kern and Tulare were held but little more in esteem than the desert of to-day. The magic power of irrigation has transformed the old alkali plains into a garden, and it will do as much for the dreaded Colorado desert.

Santa Clara.

FRUIT NOTES AROUND LOS GATOS.—Cor. *Mercury:* The returns from the orchards continue favorable. Fruit comes in such quantities that the driers and canneries have to run until midnight and sometimes until morning. It is quite true that a month ago numbers of men and women were seeking work, where now help is insufficient. Time will remedy these irregularities and bring in industries that will give permanent employment. Irregular as the work is, the year's income to the laborer will compare favorably with many old manufacturing places that run the year around.

Sonoma.

HOP GROWERS' MEETING.—Santa Rosa *Democrat:* The Sonoma County Hop Growers' Association met in regular session in the office of President Guy E. Grosse Saturday. There was a good attendance present. Concerning the price for picking, Mr. Ross said he did not see any reason to change the price from last year, $1 per hundred. He made a motion to that effect. Some discussion followed concerning the change made in the price after picking commenced last year. Many of the growers were compelled to give $1.10. The prevailing sentiment seemed to be in favor of $1, and Mr. Ross' motion to that effect was carried. There were present at the meeting three buyers from San Francisco, Messrs. Elliser, Britton and Ottenheimer, and President Grosse called upon them to say something. Mr. Elliser said that a few years ago Sonoma county hops were the best on the coast. It is not exactly so at this time. If the growers will ask themselves the reason, they will find the fault rests with the handling of the crop. Formerly the hops of Sonoma county were more cleanly picked than those of any other county in the Union, and perhaps in the world. Last year the crop was very dirty. He excused himself for such plain speaking, but asserted that the growers needed a talking to. He advised, in the first place, that baskets be used instead of sacks. It will prevent sweating and obviate the dirty picking. Greater care should be taken in the drying and curing of hops. Concerning the baling of hops, he said that the horse power press was much superior to the tramping system. As to the tare, he said that in selling hops to the brewers it was the rule to allow five pounds tare.

Sutter.

REDUCTION IN HAY FREIGHT.—Yuba City *Independent:* The Southern Pacific Company, in order to remove the surplus hay crop to a profitable market, has agreed to make a special rate of $2.40 per ton to San Francisco for this season. This is quite a material reduction from the regular rates and will encourage owners of hay to bale for the San Francisco market.

RAISIN GROWERS ORGANIZING.—*Independent:* The unsatisfactory prices heretofore obtained for their product by California raisin growers have resulted in the organization of an association which is to take in at least 75 per cent of the growers, the object of which is to fix and maintain a minimum price at which good raisins may be sold. A large meeting of growers was held at Fresno, at which the initial steps in the organization was taken. The price agreed upon as a minimum is 4½ cents a pound in the sweat-box. Agents were immediately put into the field to canvass for signatures to the compact, and the call was responded to with alacrity. Up to August 1st nearly or quite 1000 growers had signed the compact. The growers have made out a price-list at which they will sell packed goods. These range from ten cents a pound for the best to four cents for inferior grades. The packers who have signed the compact packed last year 30,000,000 pounds of raisins. Both the growers and packers are in excellent spirits, feeling that the critical stage has passed and that the organization is an assured success. On Monday Mr. Murdock of College City came over to Yuba City to canvass among the growers here, and we understand he met with complete success, all the growers whom he saw entering heartily into the agreement.

HARVESTING BY STEAM.—Y. C. *Farmer:* In company with George Ohleyer, a *Farmer* reporter visited the Stoker steam traction harvesting outfit: The machine was at work on the Elmer place near Yuba City, now rented by A. J. Spencer. These outfits are almost a marvel in their construction and have greatly revolutionized the work of harvesting. With the big traction engine to draw the harvester and a separate stationary engine on the harvester to furnish power to run the machinery, any kind of grain can be headed, threshed and cleaned in first-class manner and very rapidly. The header cuts 25 feet, and on good grain about 70 acres per day is the average. The grain was turning out fairly on the place, and the quality was above the average. Several of these big machines are in operation in this county and doing excellent work.

Tulare.

THE EMPIRE STATE, A BOSS ARBOR GRAPE.—Tulare *Register:* Josh Woswick hauled a reporter out to his place last Saturday to gaze on a grape vine that is a wonder. The vine was set out a year ago and the present summer it has made a growth of 75 feet. It is growing on a six-foot lath fence and has completely hidden the fence from view, and there are over 500 pounds of white grapes on it. They are just getting ripe. In flavor they are between the Sweetwater and the Muscat, and about the same size. They are called the Empire State, and are certainly the "boss" arbor grape, as they would make a complete arbor in one season. Moore's Early is another grape we were permitted to taste. The Moore is a black grape of good size and about the same flavor as the Concord that the Eastern people harp on so much. It has been ripe for over a week. It does not seem to bear as heavily as the Empire State or make such a growth, but it comes in earlier.

VARIETIES OF FRUIT TO PLANT.—C. J. Berry in Visalia *Times:* My observation has been that the early varieties of peaches, such as Briggs' Red May, Alexander, Hale's Early and other early varieties, do not produce, with us, a good variety of fruit, not near as good as the same varieties give the grower of Vaca valley and other valleys of the Sacramento river. These early kinds of peaches are used principally for shipping to the Eastern markets, and our position is such that, being handicapped by freights as we are, and the quality of these early peaches with us being not of the best for shipping, and knowing that they are quite poor driers, it is best for us not to plant them. The first best variety of peach we should plant here for drying is the Foster and then the Crawford, both early and late, Susquehanna, Muir, Orange Clings, Phillips' Clings, McDevitt's Clings, and any other yellow cling known to be good. The Elberta is a tiptop freestone to plant and ripens about the time of the Muir. The Solway is a first-class yellow freestone, ripens late and is a very heavy producer with us. I would suggest to the orchardist to avoid the new varieties that are continually being offered by nurserymen, unless they are undoubtedly backed up by the strongest kind of recommendations. The best prune to plant is the Petite or French on peach roots principally, but when your ground is very wet and somewhat "soggy," it is best then to use the plum root. This latter root does not give you as large a tree as the peach root, and for that reason you will not have as big a crop, because your trees won't grow big enough to hold as much fruit as they will if on peach roots. In regard to early plums, such as Peach, Tragedy, Clymer and others, I would suggest that a few trees of them will pay you better than a large number. Most of these early varieties of plums are "shy bearers," and, as they are only fit to ship, our excessive freight places us in the position of being at a disadvantage when compared to the producer near Sacramento, the starting point for Eastern shipment. The Bartlett pear grows here to perfection. Nowhere in these United States do they grow any better, and many places not as good. They bear at an early age and yield good returns. The Winter Nelis pear is also a good fruit with us—yields first class and is always salable. The tree is a vigorous grower and will give you a big crop. These varieties of fruit mentioned, in my opinion, are the ones to plant in our district.

ARIZONA.

LARGE IRRIGATION SYSTEM.—Tucson Cor. Los Angeles *Times:* Arizona is at present undergoing a grand transformation similar to that which took place in California 30 years ago. Tha era of agriculture is treading close upon the heels of the era of mining. Here, as in California in early days, there were many, a few years ago, who believed that nothing could ever be grown upon the mesas of the Territory. Today, around Phœnix, there are 250,000 acres under the various canals, over 5000 acres of which are in fruit. To merely enumerate the many irrigation enterprises of Arizona, completed, under way, and under consideration, would need half a column of your space. Maneopa county being the first to start in this direction, has done the most, but other counties are rapidly coming to the front. The Wolfley canal, from the Gila river, at Gila Bend, covers a big tract of land. The Florence canal is changing the arid mesa around Casa Grande to a smiling garden. In Yuma county there is a great project to take water out of the Colorado, north of Yuma, and run canals on both sides of the river, crossing the Gila by an inverted syphon. Land around and south of Yuma is adapted to the culture of bananas, sugar-cane and other tropical products. As the Colorado is a navigable river, this work would probably need an Act of Congress to authorize it. Surveys have been made for another canal from the Gila river, seven miles above Solomonville, which would cover 100,000 acres in the San Simon valley, in Cochise county, one of the finest valleys in Arizona, the scene of many a bloody tussle with the Apache in bygone days. There are other irrigation enterprises too numerous for mention. Even Harqua Hala, the new mining camp, has an irrigation enterprise on foot. European capital is seeking such enterprises. Many southern Californians are investing in canal schemes in the southwestern part of the territory. Some Riversiders will plant oranges around Yuma. It is found that less water is needed on our agricultural land every year, the land getting well soaked. Everything can be raised that is raised in southern California, except oranges and lemons. These are being planted on a considerable scale around Phœnix, but I think the business is a risky one outside of Yuma county. Our fruit is all from four to six weeks earlier than yours.

NEVADA.

CURRANT CULTURE.—Virginia *Enterprise:* It cannot be truly said that the Comstock is entirely without agriculture. At the foot of Washington street there is a ranch, the property of Albert Mann, which provides the Virginia market with nearly all the currants consumed here. The currants grown on Mr. Mann's ranch are much superior to those raised in Washoe or Carson valleys, and command a much higher price from local dealers. They are large and finely flavored and form a testimonial to certain virtues of the Comstock soil which few people have any idea it possesses. Sample branches of the bushes with fruit, which may be seen at Hatch Bros., the City bakery, the Arcade saloon, and various other places, speak for themselves. Mr. Mann raises a small variety of other fruits, but the ranch is dedicated chiefly to currants, which form its profitable and practicable feature. There is about an acre of bushes on the ranch, which vary in age from one to eight years. This season's crop of berries is very heavy, and the proprietor of the ranch is so encouraged by his success in their culture that he proposes to put out two acres more of them next spring.

Seeds, Plants, Etc.

IMPERIAL PEACH.

The Earliest Yellow Freestone Known

CURL LEAF PROOF.

TWO WEEKS EARLIER THAN FOSTER OR EARLY CRAWFORD.

The Best Peach Known for Early Shipment East.

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W. W. SMITH, Vacaville,
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Or, I. H. THOMAS & SON, Visalia.

NAPA VALLEY NURSERIES.

—AN EXCEPTIONALLY FINE—

GENERAL NURSERY STOCK

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100,000 EXTRA FINE

BARTLETT PEAR TREES.

Apple, Pear, Plum, Cherry, Peach, Apricot, Nectarine, Quince, Grape Vines and Small Fruits.

500,000 FRUIT TREES!

Orange, Lemon, Lime, Olive, Japan Persimmon, and all kinds of Nut-Bearing Trees Shade and Ornamental Trees, Shrubs, Etc.

IMPORTED FRUIT TREE SEEDLINGS

Ask for Prices.

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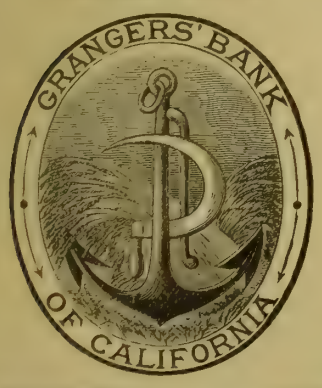
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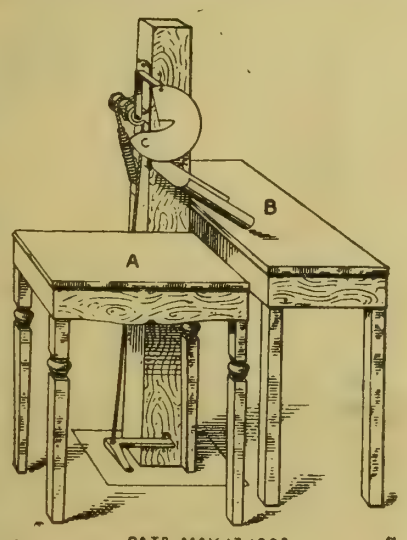
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Y. M. C. A. Excursion, Bunker Hill Day	June 17	Midsummer Reunion	August 2–6
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California Annual Conference M. E. Church	Sept. 7–13.		



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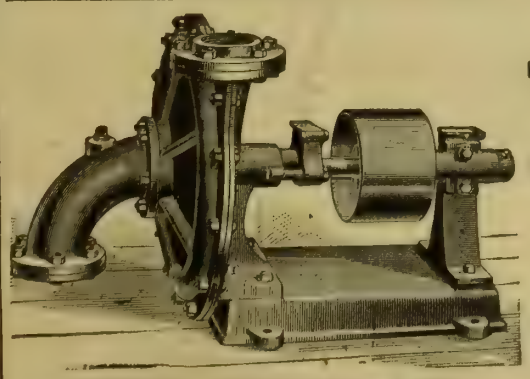
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Losses Paid Since Organization	$3,17[illegible]
Assets, January 1, 1891	[illegible]
Capital Paid Up in Gold	300,000 00
NET SURPLUS over everything	278 09[illegible]

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

TEMESCAL GRANGE had an interesting meeting last Saturday evening. Overseer Woodhams read an interesting article on the desirability of more practical education. Remarks on the above and other subjects were made by a number of members. W. Renwick, W. M., was congratulated on his entire recovery from a painful surgical operation. Sister Kinney of this Grange is now fortunately recovering from a dangerous illness. The next meeting occurs at 2 P. M., Aug. 20th.

THE "BIG SIX."—The six largest Granges in California reported their membership for the last quarter as follows: Sacramento, 128; San Jose, 128; Waterloo, 120; Yuba City, 119; Santa Rosa, 107; Watsonville, 104. How many of the above will increase their numbers before the State Grange meets? Which will reach the 150 mark first? How many other Granges will work up a large list in the meantime? Let us see if several more cannot count 100 and over by Oct. 4th.

KEEP your brain cool, your head level and your heart right in the coming presidential campaign. Don't swing your hat and whoop it up for any candidate until he has given you good reason to believe that, if elected, he will stand by your interests sure and steadfast. Don't be caught by claptrap talk about sticking to your party. Vote for the man whom you believe to be the best qualified for the position, no matter by which party nominated. That is the only way to secure good, honest government.—Farmer's Friend.

THERE is a general misapprehension that the leaders are the party and that its office-holders constitute its strength. That is a mistake. The leaders are public servants, whose abilities or adaptations for leadership make them occupy that position; but their only power is to do the will of the majority of the members of the party. The party membership is the rank and file, the voters who support it. The leaders have no legitimate purpose or power except to enforce and carry out the will of the members of the party, and when, for the sake of being continued in office, they misrepresent the wishes of the rank and file, the party generally goes to the wall.—Farmer's Friend.

SAN JOSE GRANGE.—The *Mercury* of July 23d reports that Mrs. Maggie Downing Brainard (editress of "Tree and Vine") read an able article entitled "Political Possibilities of the Farmer." The closing paragraphs we quote as follows:

"The most cultured minds, refined manners and brightest intellects are found on our mountain tops in rich vineyards, or in our valleys amid fruit-laden orchards. Tell me, will you, these men are not able to legislate, to grace every hall of learning, or stand in pitched battle with any Congressman? Never, no never.

"Then let the farmer assert the manhood that is in him, take the hammers of worth, integrity and freedom into his own hand and crush beneath their sledging weight monopoly and aggrandisement. He alone, being the founder of prosperity, can accomplish this, but—only through union and determination.

"When the planters of trees, of vineyards, of cotton, of corn, of grains, of all vegetable commodities, make their resolution to assert their proper influence and form their decisions on practical technicalities, making, I say, their votes to stand by them and by each other as strong and binding as the Mason's tie, teaching them to the babe in cradle, the boy at his knee, the man as he becomes a voter, the maiden who weds and the mother who rears her offspring. Educate the children on instead of off the farm. When they have systematized such a course, every political and economic possibility will be their's. It stands at present in their grasp; the halo of success is just above each head—there is nothing lacking but organization and a firm resolve to stick to each other or die. Then Prosperity, folding her wings, will rest here among us, and the farmer, covered with honor, will live in his just and hereditary rights."

The appeal made by the National Grange Committee on Woman's Work, published in in part in the Secretary's Column some time since, was discussed by the members.

EUREKA.—Bro. B. A. Giantvalley, P. M., reports this Grange is still thriving. Bro. Giantvalley intends going to Napa county soon. We hope he may be induced to try to revive the Order in that pioneer Grange county, which formerly had several most excellent Granges.

THE ANTI-OPTION BILL LAID OVER.—The following correspondence is self-explanatory:

"UNITED STATES SENATE,
WASHINGTON, D. C., Aug. 2, 1892.

A. T. Dewey, Esq., Sec. S. G.—DEAR SIR: Your favor of the 25th ult. with enclosures relative to the Anti-option bill is at hand and contents attentively noted.

I supported the measure, believing it was the desire of the farmers of California.

You have doubtless been apprised of the fact that the bill was deferred for final consideration and action until the assembling of Congress in December.

This result, in view of the circumstances, appeared to be unavoidable. Sincerely yours,

C. N. FELTON."

BRO. H. T. FRENCH, Professor of Agriculture of the Experiment Station of the Agricultural College of Oregon at Corvallis, recently called at our office. After a week or two spent in examining the leading dairies in Marin and Santa Clara counties, he was hurried home by a dispatch demanding his attention to Farmers' Institute meetings in Oregon. A severe cold and his early departure prevented his paying San Jose and Yuba City Granges what, we believe, would have proved a mutually interesting visit.

BRO. WILLIAMS, P. M. of Yuba City Grange, called on us last week.

PAST MASTER DANIEL FLINT has for several days been enjoying the rough bay weather in San Francisco. He reports enjoying the recent lecture canvass with Bros. Walton, McConnell and Caples, and is already anticipating the pleasures of the State Grange session at San Jose.

SISTER A. ADAMS, Chairman of the Literary Committee, we learn, invites original contributions for the coming State Grange session. We hope our many talented sisters, whether they have heretofore contributed or not, will send early notice of their intended contributions to Sister Adams at San Jose. We have no doubt the literary exercises will prove equal to the best we have ever had.

WE learn from the *Mercury* that San Jose Grange last Saturday held a very enthusiastic meeting. Brother Adams brought up the question of ramie culture. Mrs. Snow reported that plants contributed by the State Ramie Commissioner, W. H. Murray, were growing rapidly. Sister N. A. Sanders mentioned an effort being made by the Women's Industrial Organization. Its object is to put up a building for the accommodation of industrial women at the World's Fair. The expense of joining will be $10, and it is expected to furnish rooms in the building at 35 cents per day.

The Grange attended a Fruit and Flower Mission entertainment at which an original poem by Sister Brainard, entitled "The Flower Mission," was one of the special features of the occasion. It was decided to have it dramatized and presented at the State Grange meeting in October.

GOOD GRANGE RULES.

The following from the *Farmer's Friend* is worth pasting up in every Grange Hall:

"Worthy Lecturer," inquired the Master, "have you placed in the hands of the Worthy Overseer the rules or system of work you indicate?"

"No, Worthy Master," he replied, "they concern the workers no less than the officers. It is proposed that this Grange accept, abide by and maintain the following agreement:

1. That the Grange shall open promptly at the hour designated, and that each one shall, in the absence of a reasonable excuse in his own mind, be present, and if possible on time.
2. The presiding officer shall not permit unnecessary delay in the routine work.
3. Each one to whom a work may be specially assigned, to accept the same, and, if possible, be ready to respond at the time appointed.
4. In the discussion of questions after the opening proposition and argument are made, the succeeding remarks of each speaker to be limited to five minutes, unless otherwise ordered.
5. When needed, the Lecturer to be prepared to furnish new work of interest or profit.
6. "For the Good of the Order," each one, as there may be opportunity, to make a suggestion, give an experience, ask a question or read an article or item from an agricultural paper, or propose a subject for investigation and discussion at a future time.
7. The Worthy Master to limit the time under the 5th and 6th rules, and close the Grange at an hour that all may reach their homes at a seasonable hour.

TOBACCO AND GUM DISCUSSION.

The *Leader* of Centerville, Wash., reports a recent discussion by the Grangers' Business Council of two resolutions on the use of tobacco, cigarettes and gum. The *Leader* says: "One resolution was particularly directed against school teachers for using it in or near schools. We must admit that it is a bad example to the school children, and agree with the resolution in theory, for we are aware that a number of teachers use it in the schools to excess, fumigating the schoolroom with its unsavory odors, while they, the teachers themselves, become distasteful to the scholars through being brought into such close contact with them. Though we agree with the resolution in theory, it is imposible for us to coincide with it altogether, for the action of the Grange Council falls far too short of what a resolution of that description should aim at. If it is necessary to condemn the use of tobacco, then make it more sweeping in its character. We do not feel like restricting school teachers from using it, providing they do not make themselves obnoxious by it, while it is allowed to hundreds of others who come in contact with children. We have no business to interfere with the rights of any class of people, and until the restriction affects all classes, no one should single out the school teacher from refraining from that which they themselves indulge in. But it affects ladies as well as gentlemen, for it is just as bad to have a "quid" of gum in the mouth as tobacco. The use of cigarettes was also discussed. There is a crusade all over the land against the production of them, but the manufacture is still on the increase. The fiscal year ending June 30, 1891, affords an interesting study of the growth of the cigarette habit in this country. During 1891 the local production of cigarettes amounted to 2,976,270,885, while 2,802,125 were imported, thus making a total of 2,979,073,101 cigarettes in the United States. During the same year 298,139,700 were exported, leaving a balance on hand for home consumption of 2,680,934,660. Assuming that there are 62 500,000 people in this country, the consumption would average 47 for every man, woman and child in the United States for the year. The increase of 1891 over 1890 was nearly 500,000,000. The commissioners' report for the present fiscal year, ending June 30, is not yet published, but when it is out the result will be read with interest."

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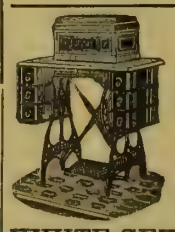
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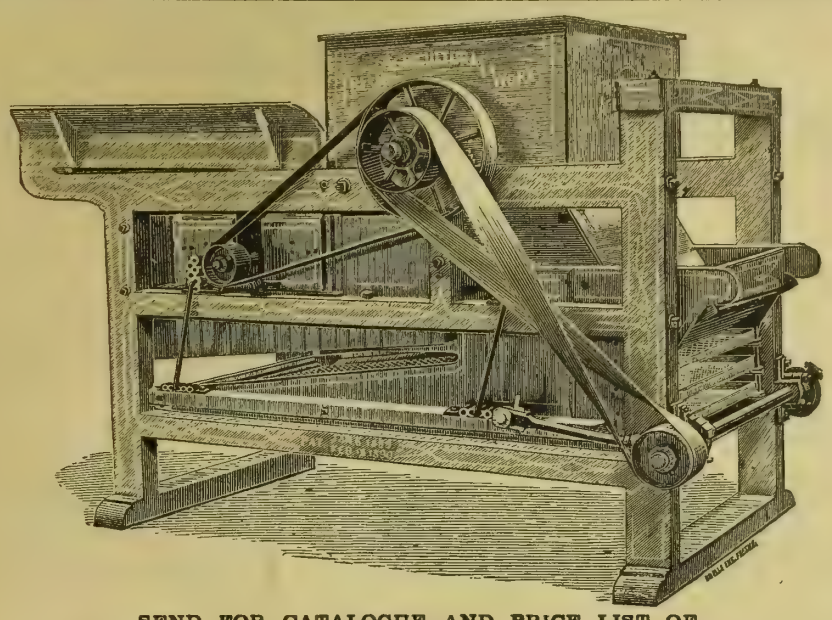
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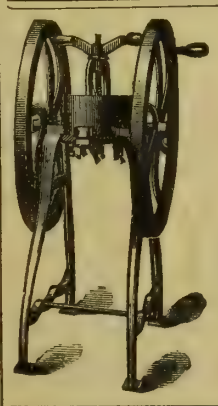
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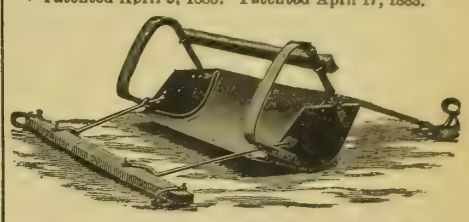
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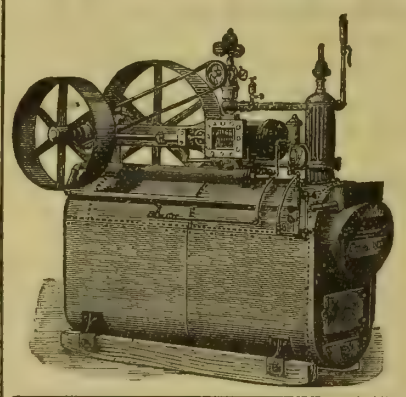
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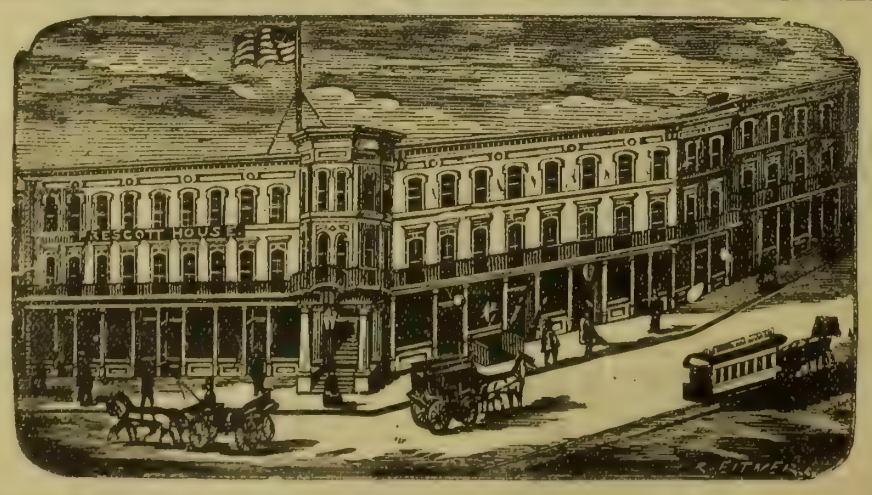
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S. F. Market Report

Market Review.

San Francisco, Aug. 10, 1892.

During the past week under review, farm products have held to remarkably steady prices, with a firm undertone in several lines notwithstanding a persistent bear pressure brought to bear on them. The persistency with which farmers, as a rule, hold their wheat is making itself felt in the freight markets, for we notice that ships are reluctantly accepting slightly lower (say 25s iron to U. K. f. o.) charters so as to secure outward cargoes, and as there is a large list of disengaged vessels in port, it may possibly be necessary to accept still lower rates, and every decline favors the wheat interest. While farmers are being benefited by a decline in outward charters, the decline is more than offset by a decline in the market value of silver. The lower that the price of silver is forced, the cheaper England and the Continent can import wheat from India, Russia, Chili and other countries which use silver either wholly or largely for a metallic currency. Cheap wheat from the silver-using countries lessens the value of wheat from the United States and other gold-standard countries. This is an important factor which operators in wheat keep in view, and it is well for farmers to do the same. Barley made a slight advance under more active trading but at the close the bears are trying to get prices down. The buying has been for both home and export and confined largely to the better grades. Oats, under limited supplies and a good demand, have held strong. Corn, after selling at lower prices, is again showing signs of advancing under stronger markets at the East, a good demand from Mexico and a certainty that the crop in this State will be short. Rye was easier at lower prices; at the decline, exporters will be able to enter the market. Ground feed has met with a continued large demand. The consumption so far this summer has been the largest on record, with the future holding out the promise of a continued free demand. Hay has ruled weak for the poorer grades under heavy receipts, but fairly steady for the better grades. An effort was made to advance creamery butter, but it looks as if it will prove a failure owing to liberal supplies of choice to gilt-edged dairy or roll butter being available. Cheese has held steady, while eggs have been irregular. Garden stuff has met with a good demand, but heavy receipts of egg plants, cucumbers, etc., held prices down; the only vegetable which kept up was tomatoes. There is a shortage in the tomato crop, both on this coast and at the East. Onions did not change. Choice, good-keeping potatoes held strong, but poor to fair were in buyers' favor. Poultry was scarce and strong throughout the week, particularly large-sized and fat fowls. Honey was quiet but strong. Mustard seed was offered for less money. Buyers and sellers are apart on new crop hops; old hops are out of market. Wool continues to rule very low, with considerable difficulty said to be met in placing consignments. The low freights by sail to Atlantic seaports are in favor of shippers of wool, canned fruits, beans and similar produce. The rate of freight ranges from $3 to $4 per ton, which is a heavy cut on rates heretofore ruling. The Pacific Mail Steamship Co. is making lower rates on shipments via Panama, and it is claimed that lower freights overland will rule as soon as the Transcontinental Association meets. The fruit market has been buoyant for the more choice tree fruits suitable for canners and strong for choice, good-keeping fruits for shipment to the East. The average daily sales by auction, through two agencies, of California fruit at New York, Boston Chicago and Minneapolis, are over 20 carloads. The sales of other agencies as also the consignments to other cities are not reported by telegraph, so we are unable to include them. These large consignments have been sold at good prices. It is claimed that the Eastern markets would take still larger consignments without breaking prices. The shipments of green fruit to England promise to be successful, but it will take time to disabuse the English of the many erroneous ideas which they now entertain. The local or San Francisco market is being glutted with poor-keeping and also trashy fruit, which works an injury to the more choice. The auction sales in this city are proving an injury rather than a benefit to the industry. Berries have met with a fair demand. Grapes continue to come in more or less sour and poor; probably the cool weather is against their maturing properly. Melons under free receipts and cool weather have declined. Black figs are very scarce. A consignment of navel oranges came to hand the past week from Australia. The quality is said to have been good. They sold at $3 per box. The consignee cabled for heavier shipments. Efforts are being made to break the dried fruit market, but so far as we are able to learn it is not proving a success. The quantity that will be cured this year will be very considerably less than it was last year, while the quality, as a whole, will be much better. The fact must not be lost sight of that next spring there will be a larger Eastern demand than ever before known. This opinion is based on the small crop of fruit at the East and also abroad, and the very small stock of the 1891 curing on hand at the commencement of the season, and also that the consumption will be very heavy owing to the throngs that will visit the World's Fair.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	6s07¼d	6s06¾d	6s07d	6s07½d	6s07¼d
Friday	6s06¾d	6s07d	6s07¼d	6s07¾d	6s08¼d
Saturday	6s07¼d	6s06¾d	6s07d	6s07¼d	6s07¼d
Monday	6s06¾d	6s06¾d	6s07¼d	6s07¼d	6s07¾d
Tuesday	6s06d	6s06d	6s05¾d	6s07d	6s07¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. O.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s3d	34s3d	34s0d	Firm.	Firm.
Friday	34s3d	34s3d	34s6d	Firm.	Firm.
Saturday	34s6d	34s6d	34s6d	Qu et.	.....
Monday	34s9d	34s9d	34s9d	Firm.	.....
Tuesday	35s0d	35s0d	35s0d	Firm.	Local rains.

To-day s cablegram is as follows:

Liverpool, Aug. 10.—Wheat—Weaker. California spot lots, 7s; off coast, 34s 9d; just shipped, 34s 9d; nearly due, 34s 9d; cargoes off coast, slow and probably cheaper; on passage, 3d lower; Mark Lane wheat, slower; French country markets, slow.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Aug.	Sept.	Oct.	Dec.
Thursday	139½	141	....	147¾
Friday	138¾	140½	....	147
Saturday	139	140	....	146⅝
Monday	141½	141½	....	148⅛
Tuesday	139¼	140½	143	147

The following are to-days' telegram:

New York, Aug. 10. Wheat - 83½c for August, 81½c for September, and 88¼ for December.

Chicago, Aug. 10.—Wheat—78½c for September, 81½c for December, and 70⅝c for October.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, high st	136⅝	....	....	....	142¾
" lowest	135⅝	....	....	....	14 ¾
Friday, highest	136½	....	138½	....	142⅝
" lowest	136½	....	138½	....	142⅝
Saturday, highest	136⅝	137½	....	....	143
" lowest	136⅝	137½	....	....	142⅝
Monday, highest	137½	....	....	....	144
" lowest	137½	....	....	....	143½
Tuesday, highest	137	....	....	....	143½
" lowest	136⅝	....	....	....	143

The following are to-day's recorded sales on Call:

Wheat—Morning Informal—Buyer December—200 tons, $1.43; 100, $1.42⅞ Regular session. Seller 1892—100 tons, $1.36⅜ ₩ ctl. Afternoon Buyer December—100 tons, $1.42½; Seller 1892—100 tons, $1.36¾ ₩ ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	94⅝	....	....	....	97½
" lowest	94¼	....	....	....	99⅜
Friday, highest	94⅛	....	....	....	100
" lowest	94⅛	....	....	....	99⅜
Saturday, highest	93⅝	....	....	....	98⅜
" lowest	93⅜	....	....	....	98⅛
Monday, highest	93⅜	....	....	....	....
" lowest	93	....	....	....	....
Tuesday, highest	9 ⅜	....	....	....	98⅜
" lowest	93⅜	....	....	....	98¼

The following are to-day's recorded sales on Call:

Barley—Informal—Buyer December—100 tons, 98¼c; 100, 98⅝c. Seller 1892 new—100 tons, 93c ₩ ctl. Regular session: Seller 1892—800 tons, 92¼c; 100, 92½c. December—1500 tons, 98c; 500, 98¼c ₩ ctl.

Markets by Telegraph.

Foreign Grain Review.

London, August 8.—The Mark Lane *Express* says: English wheats were weaker; there was an average fall in the London market of 6d. The crops of wheat are barely good; beans and peas promise badly. Potatoes promise a yield of 6,500,000 tons; this is likely to somewhat limit the demand for wheat. Foreign wheats are heavy; American winter cargoes have fallen 6d. Corn is steady; barley quiet. Beans and peas firm. To-day English wheats were unimproved; foreign firmer; Californian, Indian and Australian, 6d better; oats 3d higher; beans, owing to spread of blight, rose 1s. There was a good sale of corn at 6d advance. Flour was steady and peas firm.

Eastern Canned Fruit Markets.

New York, August 7,—There is no abatement in the strong sentiment last noted. The best bid for four-size prunes was 8½c; offered at 9c. Peaches are firm at 12½c free on board; Georgia are in the market to a moderate extent at 11@12c.

Eastern Raisin Market.

New York, August 7.—The reported raisin combine on the coast has suddenly unsettled trading inclination here, and sellers seem unable to name useful quotations for new business. This check is unfortunate at this tender period of the market, especially as trade really started off with a good confident feeling. It is, of course, conceded that producers and packers should accomplish reasonable terms for supplies, particularly for a season which follows the last low-priced, glutted one; but some of our prominent sellers contend that dictation of prices for an article that is liable to sectional dissimilarity of quality is sure to create confusion. Raisins ought to be assured of a safe run this season, even with the Valencias in view, as there is no old stock in the way, and the Columbian Exposition will bring forward an extra flow of consumers that will help raisins as well as other semiluxurious goods. Nominal prices are $1.40@1.60 for loose boxes; $1 60@1 70 for layers, and $5.50 for bags, free on board. Spots are worth 5¼@6c for bags. New Valencia are quoted at 7½c.

Miscellaneous.

New York, Aug 7.—Honey buyers seem willing to support strong prices; recent sales of light amber, 6½ cents.

Lima Beans—The spot demand has somewhat subsided; parcels to arrive are firm and wanted at $2.10 per bushel, delivered.

Hops—Good nursing hold the best state at 26c; but the light business is directed to the good quality of under grades. For choice Pacifics, 25c is the extreme.

Eastern Wool Markets.

New York, August 5.—The great bulk of new wool has gone East out of the hands of the growers. The supply now upon the Boston, New York and Philadelphia markets is said to be larger than it ever has been at this time of the year. Manufacturers have therefore considerable wool to choose from, and they are buying freely nearly all grades. Prices, while unchanged, are held firm. Fleeces have the call, being relatively cheaper than any other grade in the market. The sales of these wools are very large and some choice lots have sold at a slight advance over the market quotations. Clothing and Delaine wools are active and steady. A good demand is reported for unwashed Ohio and Michigan wool, but they are not as active as some weeks ago. Other wools which are more desirable and cheaper have taken attention. The buyers of California and Oregon wools are only moderately active. Considerable territory wool is being taken, especially Montana, which has come forward quite freely of late, and is in splendid condition. Pulled wools are quiet. Stocks are light and manufacturers are giving their attention almost exclusively to clipped wools. Skins are as high as they were a year ago. While wool has suffered considerably in the decline in price, this necessarily retards the movement from the pullers to the dealers. A good demand is reported for Australian wools. Prices hold steady and dealers are very firm in their demands. Most of the wool taken at the London sales has been received, yet stocks are not heavy. A little firmer feeling and better demand is noted for carpet wools.

New York, August 7.—Wool is active and there is some buoyancy in prices for choice unwashed; other styles are steady. Manufacturers are heavy owners to county bought wool and for a time can resist any material spot advances. The sales at New York were 412,000 pounds of domestic. Sales at Boston, 4,043,000 pounds and 862,000 foreign, largely Australian, which is somewhat firmer. At Philadelphia the current rate is supported.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Aug. 9, '92, were as follows:

Flour, qr. sks	133,667	Bran, sks	10,521
Wheat, ctls	286,787	Buckwheat "	....
Barley, "	82, 87	Middlings "	2,479
Rye, "	1,373	Chicory, bbls	228
Oats, "	4 94	Hops, "	....
Corn, "	4,162	Wool, "	743
*Butter, "	626	Hay, ton	3,631
do bxs	646	Straw, "	160
do bbls	44	Wine, gals	163,700
do kegs	15	Brandy, "	5,120
do tubs	1	Raisins, bxs	....
do ½ bxs	...	Honey, cs	122
†Cheese, ctls	667	Peanuts, sks	....
do bxs	91	Walnuts "	....
Eggs, doz	24,590	Almonds "	....
do " Eastern	21,090	Mustard "	....
Beans, sks	1 273	Flax "	613
Potatoes, sks	17,69	Popcorn "	....
Onions, "	3,917	Broom corn, bbls	....

*Overl'd, 126 ctls. †Overland, 225 ctls.

Exports by Sea from San Francisco from July 1 to Aug. 3.

	1892-93	1891-92
Wheat, ctls	578,262	1,441,484
Flour, bbls	82,979	143,484
Barley, ctls	83,168	104,799

Cereals.

On August 3d the Iowa State report came out, reducing the condition of oats to 60 per cent and corn to two-thirds of a crop. The production of corn in Iowa last year was 350,000,000 bushels, while this estimate would reduce it to 230,000,000 bushels. The crop of oats was 102,000,000, and this estimate would make it 61,000,000. In Nebraska the conditions are fully as bad, and the reports now indicate that the crop will be 125,000,000 bushels of corn, against 167,000,000 last year, and oats 36,000,000, against 48,000,000 last year. Thus, in two States the production of oats is reduced 53,000,000 bushels, and corn 159,000,000 bushels.

New York mail advices of August 1st state that Prime reports the prospects for the movement of new wheat are not good, as the rush of wheat from the fields is over. Winter wheat is now going into shock, to remain four to six weeks. He estimates 18,000,000 bushels less in Ohio, 12 000,000 bushels less in Indiana, 7,500,000 bushels less in Michigan and about 3,000,000 less in Missouri, making approximately 40,000,000 bushels less than in those States last year. He says that corn was apparently not much hurt by the weather the past week, while spring wheat was not in as good shape as two weeks ago. The yield of oats was very irregular.

Now that Congress adjourned without passing the antioption bill, the promised boom in wheat if it was defeated has not put in an appearance.

The local wheat market has held strong throughout the week, with a higher range of values paid in the country than is bid in this city. It is claimed by many that large operators get a rebate on all shipments made to this city or Port Costa. A decline in the outward charters on wheat has gone to wheat holders, while the decline in silver has caused heavier offerings on the European markets of Indian and Russian wheat at lower prices, which have lowered prices abroad. Farmers on this coast are not offering freely, being inclined to hold.

The receipts of barley have been heavy, but the market for the more choice grades has had a good support from shippers and maltsters. The consumption of both ground and rolled barley continues to enlarge. It is claimed that the increased feeding on this coast is fully 20 per cent greater than it was in 1891. The low rates of freight by rail to New York are greatly in favor of free shipments of choice gilt-edged from this port.

The supply of old oats is about exhausted, and as the receipts of new are light, the market shows increased strength owing to a good demand ruling for feed.

Corn continues to have good support, with, at the close, indications pointing to better prices for white and small yellow. The supply on this coast is light and well in hand, while the crop promises to be short. The Mexican demand is an important factor in the market.

Rye is lower and easy at the decline. It is said that exporters are quietly picking up the more choice grades.

In a leading editorial under the caption "Errors in Estimating Wheat Supplies" the New York *Commercial Bulletin* says: There were two countries from which Great Britain drew increased supplies last year besides America. One, India, was not counted upon to furnish nearly as much as it did the previous year; the other, Chili, was ignored in all estimates, presumably because in 1890-91 it had furnished so little, and the civil war was expected to knock off even that little in 1891–2. The wheat crop in India was reported short, and from the final Government returns just issued, it is seen that these reports were well founded, and yet the exports from India increased materially, while Chili furnished a considerable quantity of wheat. The following table shows the imports from these two sources, as well as from Russia and America:

	1890–1 Cwts.	1891–2. Cwts.
Russia	19,327,751	6,980,079
America (Atlantic & Pacific)	15,263,130	32,054,843
India	10,039,316	14,651,155
Chili	492,677	2,664,342

This table does not give the imports by the continental countries which also show a large gain, but more particularly from Russia.

The fact that India with a short crop should increase its exports over 40 per cent during the 12 months is remarkable in itself; but more remarkable when a comparison of prices shows that, although there was an average *advance* of four annas per maund (say $1.50 per quarter) in the price of wheat in the Indian home markets, there was an average *decline* of nearly $1.50 per quarter in the price of Indian wheat in London when compared with the preceding year.

This at once suggests that in calculating wheat supplies available for use in importing countries, something more must be taken into account than the probable yield of certain countries, difficult as this in itself is to ascertain. With India and other silver standard countries, for instance, currency conditions are so powerful that they put all ordinary calculations out of court, and have during the year just closed been sufficiently powerful to drain wheat for export from a rising market to a market of falling values, the anomaly being explained by the fall in exchange and the increased purchasing power of gold.

Feedstuff.

Both bran and middlings are lower, owing to heavy receipts and freer selling competition. Oregon is sending us considerable. The consumption is very large of all kinds of ground feed, particularly of ground and rolled barley.

Poor hay continues in oversupply, which necessitates more or less concessions to induce buying. This of necessity affects the better grades. The market ranges lower than it did at this time in last year. The feeding is not only heavy, but is steadily enlarging.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in July were as follows:

Source—	Butter. Lbs.	Cheese. Lbs.	Eggs. D zen.
California	1,126,800	478,200	119,901
Oregon	63,900	8,500	253,800
Eastern	147,000	302,400	510
Totals	1,137,700	789,100	374.211
January	507,200	476,900	420,345
February	622,550	313,500	249,745
March	1,188,700	574,200	358,756
April	1,793,050	892,900	59 ,468
May	1,713,100	715,900	534,170
June	1,811,200	634,100	603,735
Seven months	8,968,500	4,306,600	3,134,050

Butter has been irregular. An effort is being made by two or more dealers to force creamery to higher figures, with the usual result—that of sending the retail trade largely to choice or gilt-edged dairy in rolls. The supply of dairy is in excess of requirements. Receipts of butter from the northern coast are very heavy.

Cheese has held strong for choice to gilt-edged new mild, barely steady for good, and weak for poor to fair.

Eggs have been irregular. Some dealers claim that eggs extra in size, of white color and strictly fresh, sent in from nearby points, sell at a slight advance on outside quotations. The supply is fair to middling. It is claimed that free shipments are on the way from the East. A large quantity of Eastern is retailed in this city as California ranch.

Vegetables.

Garden stuff has moved off fairly well throughout the week, but at times concessions were in order to induce free buying. Tomatoes held up well to yesterday, when lower prices ruled, with still lower prices to-day.

Onions held to steady prices throughout the week. Choice, good keepers are the only kind which have ready sales.

There has been a better shipping demand. The market has cleaned up fairly well each day, but of course concessions had, at times, to be offered so as to induce free purchasing. For potatoes grown on sandy, loamy soil and choice in every respect, higher prices have been secured than we quote for outside prices, our quotations being for fair to good.

Fruit.

Strawberries and blackberries have ruled weak, but raspberries have held strong at an advance. Apricots are in light receipt. Black figs continue scarce and high. Peaches have a wide range. They have held strong up to to-day, when there was an easier feeling, owing to a lessened call from canners. Pears, which have been more or less easy, were in good demand to-day for the more choice for canning, with $1.25 quickly paid. Plums were in better demand to-day from canners. Canners in this city, and, as for that, throughout the State, are running to full capacity. The grapes that are coming in are poor and more or less sour. Melons are lower, owing to a poor demand and few receipts, cool weather being against consumption.

New-crop raisins are having a free inquiry. It looks very much as if all the better grades will be placed early this year.

New-crop dried grapes are wanted at around our quotations.

A strong effort is being made to get dried fruit down, but so far as we can learn, it has not been a success. The market has strong support in short crops of fruits at the East and abroad, a much less quantity to be cured, owing to more marketed fresh, and the stock of 1891 cleaned up. Our quotations cover the range of prices at which producers or driers in the country can sell at in this market.

Live Stock.

The market for bullocks and mutton sheep has held barely steady, with concessions made on consignments a little off. Hogs have held up, as have dairy calves.

Miscellaneous.

Poultry came in slowly, which allowed the market to clean up. Toward the last there have been freer receipts, but prices kept up. A carload of Eastern came. They were sold to arrive.

Buyers are inquiring more for hops, but their views are below those of growers.

Wool is essentially unchanged. The market has ruled weak and unsatisfactory, owing to poor assortments and few buyers. The fall wools that have come in so far are said to be poor.

Honey is strong and in demand for shipping.

Beans have held firm throughout the week. Mexico is again in the market for colored. The low freights by rail to New York favor sellers.

Hog product has made another advance. The market closed strong.

New-crop mustard seed is offering more freely.

From reliable advices up to Aug. 10, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	266,778	363,339	*176,734	81,610
San Diego	19,741	28,124	8,115	.....
San Pedro	6,602	4,635	1,338	12,513
Oregon	50,094	47,367	22,305	
Puget Sound	24,326	33,828	.....	
Totals	367,541	476,353	208,492	94,123

*Engaged for wheat, 1892, 67,079; 1891, 71,549

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

Wednesday, Aug. 3, 1892.

Limes, Mex	2 00	@	3 50	Fruit in bulk to canners:		
Do Cal	—	@	—	Apricots, ₩ lb	1½	@3;
Lemons, box	1 50	@	3 50	@2; Plums, white,	2	@3c;
Do Sicily	—	@	—	Peaches, freestone,	1½	@2½;
Strawberries, per chest—				clings, 2@3. Extra choice fruit for special purposes sells at a slight advance on outside quotations.		
Longworth	6 50	@	8 50			
Sharpless	4 50	@	6 00			
Raspberries, ch.	7 00	@	10 00	Beets, sk	—	@ 75
Peaches, box	35	@	75	Carrots, sk	40	@ —
Bl'kberries ₩ ch	3 50	@	4 50	Okra, dry, lb	15	@ —
Figs, blk box	1 00	@	1 25	Do green	6	@ 10
Do White do	—	@	—	Parsnips, ctl	—	@ 1 25
Apples, Red Astrachan	75	@	1 10	Peppers, dry, lb	10	@ —
Do Gravenstein	1 00	@	1 50	Do grn Chili, bx	40	@ 50
Crabapples	50	@	75	Do do Bells	50	@ 75
Cant loupes, pr crate	1 00	@	2 50	Turnips, ctl	75	@ —
Melons, pr 100	5 00	@	10 00	Cabbage, 100 lbs	60	@ 90
Grapes, pr bx—				Garlic, lb	1¼	@ 3
Do White	50	@	75	Squash, Sum, bx	15	@ 25
Do Black	60	@	1 00	Tomatoes,	—	@ —
Do Muscats	60	@	1 00	Do River lrg bx	75	@ 1 25
Prunes, Tragedy	50	@	90	String Beans	2	@ 4
Do German	50	@	75	Cucumbers, box	15	@ 30
Plums, ₩ box	40	@	75	Mushrooms	30	@ 50
Pears	50	@	1 50	Egg Plant, bx	50	@ 75
Do Bartlett	75	@	1 25	Green Corn, sk	—	@
Apricots, pr box	50	@	75	Do swt Bay prdz	10	@ 15
				Do Berkely box	40	@ 65

Grain and Wool Bags.

Calcutta, spot	7 @ 7¾
Wool Bags	36 @ 38

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 10, 1892

BEANS AND PEAS.			
Bayo, ctl	2 75	@	3 00
Butter	2 50	@	3 00
Pea	2 50	@	2 60
Red	2 65	@	2 85
Pink	2 35	@	2 50
Small White	2 35	@	2 50
Large White	2 20	@	—
Lima	3 00	@	3 20
Fld Peas, blk eye	1 50	@	1 70
Do green	1 50	@	2 75
Do Niles	1 30	@	1 40
Split	4 50	@	5 00
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	19	@	—
Do Giltedged	—	@	25
Do Creamery rolls	—	@	25
Do do Giltedge	—	@	27
Eastern	16	@	17
CHEESE			
Cal. choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Do skim	5	@	6½
Young America	—	@	11
EGGS.			
Cal. "as is," doz	16	@	18
Do shaky	12½	@	14
Do candled	19	@	23
Do choice	23	@	25
Do fresh laid	26	@	29
Do do selected	—	@	30
Eastern "as is"	14	@	16
Do candled	17	@	18
Do selected	19	@	22

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED			
Bran, ton	16 50	@17	50
Feedmeal	27 00	@30	00
Gr'd Barley	20 50	@22	00
Middlings	20 00	@21	00
Oil Cake Meal	—	@25	00
Manhattan Food ₩ cwt.	7 50		
HAY.			
Wheat, per ton.	8 00	@	—
Do choice	—	@12	50
Wheat and Oats	8 50	@11	00
Wild Oats	8 00	@11	00
Cultivated do	7 00	@10	00
Barley	6 00	@ 9	00
Alfalfa	7 00	@ 9	00
Straw, bale	40	@	50
GRAIN, ETC			
Barley, feed, ctl.	85	@	92½
Do Choice	93½	@	—
Do Brewing	1 00	@	—
Do do Choice	1 05	@	—
Do do Giltedge	1 07½	@	—
Do Chevalier	—	@	—
Do do Giltedge	—	@	—
Buckwheat	—	@	—
Corn, White	1 37½	@	—
Yellow, large	1 30	@	—
Do small	1 35	@	—
Oats, milling	1 52½	@	—
Feed, Choice	1 46½	@	—
Do good	1 42½	@	—
Do fair	1 37½	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	—	@	—
Gray	—	@	—
Rye	1 30	@	—
Wheat, milling.			
Gilt edged	1 48½	@	—
Do Choice	1 46½	@	—
Do fair to good	1 42½	@	—
Shipping, cho'ce	1 40	@	—
Do good	1 37½	@	—
Do fair	1 35	@	—
Common	1 30	@	—
Sonora	1 33½	@	1 45
HOPS.			
1892 Bid	16	@	18
FLOUR.			
Extra, City Mills	4 40	@	4 65
Do Country Mills	4 30	@	4 65
Superfine	2 75	@	3 10
NUTS—JOBBING.			
Walnuts, Cal. lb	6	@	—
Do Choice	8	@	—
Do paper shell	9	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil,	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	50
POTATOES.			
Early Rose, ctl.	45	@	65
Peerless	50	@	75
Garnet Chilies	60	@	75
Burbank Seedlings	55	@	1 00

Extra choice sell for more money.

POULTRY.			
Hens, doz	6 50	@	8 00
Roosters, old	6 00	@	7 50
Do young	5 00	@	8 00
Broilers, small	2 50	@	3 75
Do large	3 75	@	4 50
Fryers	4 50	@	5 50
Ducks	4 00	@	4 75
do, large	5 00	@	5 50
do, extra large	6 00	@	—
Geese, pair	1 25	@	2 00
Goslings	—	@	—
Turkeys, Gobb'r.	19	@	21
Turkeys, Hens	16	@	18

All kinds of Poultry if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food ₩ cwt	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	11	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	12½	@	14
do Eastern	15	@	16
SEEDS.			
Alfalfa	—	@	—
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	2½	@	—
WOOL.			
SPRING, 1892			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (State).	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	9	@	12
do do 1-lb frame	11	@	14
White extract'd	6½	@	7½
Amber do	6	@	6½
Beeswax, lb	25	@	28

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	6½	@	7
APRICOTS—1892.			
Sun-dried, unbl. com.	4	@	5
Do do prime	6	@	7
Do do choice	8	@	9
Do bleached, prime	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap. choice, in boxes	13½	@	—
Do fancy, do	14	@	—
FIGS—1892.			
Sun-dried, black	4½	@	5
Do white	—	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	—	@	—
Do Evap., in boxes	—	@	—
White, sun-dried	—	@	—
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	11½	@	—
Do do fancy	12	@	—
Evap, unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Sun-dr, pl'd, prime, bl.	—	@	—
Do do choice	—	@	—
Do do fancy	—	@	—
Evap, peeled, in boxes, choice	—	@	17½
Do do fancy	—	@	20
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap, sliced, in boxes.	7	@	8
Do ring do	9	@	10
PLUMS—1892.			
Pitted, sun-dried	7	@	8
Do evap. boxes, choice.	—	@	—
Do do do fancy	—	@	—
Unpitted	—	@	—
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster, ₩ bx	1 90	@	2 00
Do ch icest do	1 60	@	1 70
Do prime, ₩ bx	1 40	@	1 45
Loose Muscatels, common, ₩ bx	—	@	—
Do choice, do	1 25	@	1 30
Do fancy, do	—	@	—
Unstem'ed Muscatels, in sacks, ₩ lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ₩ 20-lb bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	4½	@	—
Second quality	4	@	—
Third quality	3½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	4	@	—
Do light	5	@	—
Dairy	6	@	—
MUTTON.			
Wethers	7	@	—
Ewes	6½	@	—
Do Spring	8	@	—
HOGS.			
Light, ₩ lb, cents	5½	@	—
Medium	5½	@	—
Heavy	5	@	—
Soft	4½	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manila Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grape-Vine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manila, 3 yarns, heavy	10½	Duplex Hop, in balls, tar'd	9½
Pure Manila, 3 and 4 yarns	12	Do, Grape-Vine, in balls or coils	10½
Do, 2 yarns, light	12½		

Wine.

Red and White Wine from bay counties, vintage 1891, per gal. 10 @ 15

Auction Sales of California Fruits.

At New York.

Aug. 3.—Three carloads: Washington Plums, $2.85@2.95; Purple Duane Plums, $1.85; Egg Plums, $2 90; Fontainebleau Grapes, $1.30@1.55; Early Crawford Peaches, $1.05@1.40; Strawberry Peaches, $1.05@1.15; Centennial Peaches, $1.55; Cling Peaches, $2; Foster Peaches, $1.15@1.20; Tuscan Cling Peaches, $1.30; French Prunes, $1 60; Bartlett Pears, $2.50@2.80.

Aug 3.—Three carloads: Crawford Peaches, $1.15@1 75; Hale's Early Peaches, $1; Cling Peaches, $1@1 65; Peaches, 80@90c; Foster Peaches, 90c@$1.55; Washington Plums, $2.87; Egg Plums, $3; Columbia Plums, $1.80; Kelsey Japan Plums, $3@7.50; Bradshaw Plums, $1.85@3 05; White Nectarines, $1.15; Yellow Nectarines, 90c; Purple Duane Plums, $1.75@2.87; McLaughlin Plums, $1.45; Bulgarian Prunes, $1.45; German Prunes, $3; Bartlett Pears, $2.55@2.90; Sweetwater Grapes, $1.70.

Aug. 5.—Four carloads: Comedy Plums, $2.65; Washington Plums, $2.25; Yellow Egg Plums, $3; French Prunes, $1.65; Fontainebleau Grapes, $1.50@1.55; Early Crawford Peaches, $1@1.30; Tustin Cling Peaches, $1.25; Strawberry Peaches, 95c@$1; Foster Peaches, $1.20; Susquehanna Peaches, $1.25; Red Nectarines, $1 25; Bartlett Pears. $2.50@2.85; Congress Pears, $2.65.

Aug. 4.—Four carloads: St. John Peaches, $1.30; Crawford Peaches, $1.10@1.55; Decker Peaches, $1 15@1.30; Cling Peaches, $1.25@2.85; Foster Peaches, $1.25@1.50; Strawberry Peaches, $1.40; Bartlett Pears, $2.05@3.10; Egg Plums, $3.10@3 80; Purple Duane Plums, $1 85@2 25; Columbia Plums, $2 35; Bradshaw Plums, $2.75; Quackenbos Plums, $2.75; Plums, $2.15@3; German Prunes, $2.70; Japan Plums, $3 65@3 85; Nectarines, $1.15@1.35; Fontainebleau Grapes, $1.40@1.60.

Aug. 5.—Six carloads: Crawford Peaches, $1.15@1.50; Foster Peaches, 90c@$1.25; Red Peaches, $1.43; Clings. $1.25; Decker Peaches, $1@1.65; Bartlett Pears, $2 35@3..0; Beurre Hardy Pears, $2 80; Bradshaw Plums, $2.35@3.20; Peach Plums, $1.85@3.70; Egg Plums, $2 22@3.15; Purple Duane Plums, $2 35; Plums, $1.90@2.65; Barry Prunes, $2.40; German Prunes, $2.25@3.15; Prunes, $1.75; Nectarines, $1.85

Aug. 5.—One carload Early Crawford Peaches at an average of $1.35 per box.

Aug. 6.—Five carloads: Decker Peaches, $1 45; Crawford Peaches, $1 05@1.70; Foster Peaches, $1.10@1.55; Cling Peaches $1.19; Red Peaches, $1.30@1.40; Bartlett Pears, $2.45@3; half boxes Bartletts, $1.40; Peach Plums, $2.37@2 75; Bradshaw Plums, $2.10@3; P. D. Plums, $1.50@2.12; Grapes, $1.60@2.37; Tuscan Cling Peaches, $1.20@1 30; German Prunes, $2.20@2.65; Red Nectarines, $1.10@1.55; White Nectarines, 80c; Gros Prunes, $3@4; Barry Prunes, $2.40; Plums, $2.42@2.50; Egg Plums, $2.50@2.75; Quackenboss Plums, $2.60.

At Chicago.

Aug. 3.—Seven carloads: Bartlett Pears, overripe, $1.80@2 55; Howell Pears, $1 60; Crawford Peaches, $1.10@1.20; Grapes, $1.15@1.70; Plums, $1.20@2.05; German Prunes, $1.20@2.10; Peaches, 70c@$1.30; Clapp's Favorite Pears, $2.25; Nectarines, 70c@$2.10; Japan Plums, $2.10@2 60; Purple Duane Plums, $1.30@2.10; Egg Plums, $1.45; Bulgarian Prunes, $1.35; Columbia Plums, $1.25@1.60; Prunes, $1.20@1.85; Bradshaw Plums, $2.10.

Aug. 3.—Seven carloads: Bartlett Pears, $2.25@2.45; Clapp's Favorite Pears, $1.95; Crawford Peaches, $1@1.30; Centennial Peaches, $1.15@1.25; Susquehanna Peaches, $1.15; Tustin Peaches, $1.10; Strawberry Peaches, 80@90c; Stephen's Cling, $1.40; German Prunes, $1 60@1.75; Fontainebleau Grapes, $1 35@1 55; Peach Plums, $1.35@1.45; Purple Duane Plums. $1.35@1.45; Bradshaw Plums, $1.20@1.40; Columbia Plums, $1.45@1.50. Some fruit in an unsound condition sold for less.

Aug. 4.—Five carloads: Bartlett Pears averaged $2.35 ₩ box; Early Crawford Peaches, 90c@$1.40; Centennial Peaches, $1.40; Golden Cling Peaches, $1.25; Strawberry Peaches, 90@95c; Susquehanna Peaches, $1.25; Red Nectarines, $1.20; Fontainebleau Grapes, $1.05@1.50; Gros Prunes, $1.60@1 90; Fellenburg Prunes, $1.50@1.55; Italian Prunes, $1 45@1.75; Bradshaw Plums, $1@1.35; Egg Plums, $1.05@1.40; Columbia Plums, $1.35@1.55; Washington Plums, $1@1.05; Damson Plums, $1.45.

Aug. 4.—Seven carloads: Bartlett Pears, $1.95@2.40; Howell Pears, $1.90; Duchess Pears, $1.65; Hale's Early Peaches, 65c; Peaches $1 05@1.40; P. D. Plums, $1.40@1.65; Egg Plums, $1.50; Plums. $1 15@2.30; Prunes, $1 20@1.75; German Prunes, $2.10; Columbia Plums, $1.85; Bulgarian Prunes, $1.10@1.50; Grapes, $1.35@1.50; Nectarines, $1.15.

Aug. 5.—Five carloads: Bartlett Pears, $2.20@2 40; Pears, $2 15@2.30; Plums, $1.10@1.90; Egg Plums, $1.15@1.50; Purple Duane Plums. $1.80; Gros Prunes, $2.40; Nectarines, $1.20@1.55; Peaches, $1@1.45; Grapes, $1.60.

Aug. 5.—Four carloads: Fontainebleau Grapes, $1.20@1.60; Susquehanna Peaches, $1.20; Orange Cling Peaches, $1.25@1.45; Foster Peaches, $1.10; Stevens Cling Peaches, $1 40@1.45; Early Crawford Peaches, $1.10@1.35; same, No. 2, 90c; Yellow Egg Plums, $1.35; Bradshaw Plums, $1.40@1.75; Columbia Plums, $1.30@1.55; Washington Plums, $1.20@1.30; Imperial Plums, $1.30; Purple Duane Plums, $1 70; Japan Plums, $1.50; German Prunes, $1.30@2.15; Bartlett Pears, $1.90@2.45; half boxes, $1.25.

Aug. 6.—Eight carloads: Bartlett Pears, $1.65@2.40; Egg Plums, $1.50; Purple Duane Plums $1 35; German Prunes. $1.55@2.20; Gros Prunes, $2 20; Quackenboss Plums, $1.65; Fellenberg Plums, $1.80; Decker Peaches, $1; Hardy Pears, $1.65@1.70; Peaches, 90c@$1 45; Muscat Grapes, $1.40@2 25; Nectarines, $1@1.10; Plums, $1 25@2.35; Prunes, $1.20@1.60; Apples, $1.45; Tuscan Peaches, 85c@$1 45; Crawford Peaches, $1@1.25; Japan Plums, $2; Grapes, $1.35@1.50.

Aug. 6.—Three carloads: Bartlett Pears, $2.30@2.40; Fontainebleau Grapes, half crates, $1 05@1.65; Tokay Grapes, half crates, $2.05; Red Nectarines, $1.10; Crawford Peaches, 90c@$1.15; Centennial Peaches, $1.35; Tuscan Cling Peaches, $1.25; Petite Plums, $1.30; German Prunes, $1.40@1.60; Hungarian Prunes, $1.55@1.65; Yellow Egg Plums, $1 25@1.35.

Aug. 8.—Two carloads: Bartlett Pears, $1.70@2.40; Gros Prunes, $1.15@2; Beurre Hardy Pears, $1.90; Fellenberg Prunes, $1.60; Bulgarian, $1.20@1.60; Hungarian Prunes, $1.65@1.75; Egg Plums, $1.50; Gages (rotten) 45c; German Prunes, $2@2.20; Columbia Plums, 70c@$1.60; Victorians, $1.75; McLaughlin Plums, $1.30; Plums, $1.25@2; Grapes $1.65@2; Prunes, $1.05@1.30; Golden Drop Plums. 60c; Washington Plums, $1.50; Bradshaw Plums, $1.05@1.65; Diamonds $1.30, Peaches, $1.15@1.40; Comedy Plums, $1.10@1.65; Nectarines, $1; Tuscan Cling Peaches, $1.05@1.35; Foster Peaches, $1.10; Crawford Peaches, $1.10@1 40.

Aug. 8.—Four carloads; Bartlett Pears, $2 15@2.45; Gros Prunes, $1.50@1.75; German Prunes, $1 75@2.10; Italian Prunes. $1.35; Columbian Plums, 95c@$1.45; Black Diamond Plums, $1.05; Bradshaw Plums, $1.35@1.55; Egg Plums, $1.05@1.55; Imperial Plums, 75c@80c; Purple Duane Plums, $1.55; Magnum Bonum Plums, $1.55; Muir Peaches, $1.15@1.20; Susquehanna Peaches, $1 35; Crawford Peaches, $1@1.40; 50 boxes bad averaged 80c; Stephens' Cling Peaches, $1.25.

add New York

Aug. 8.—Four carloads: Bartlett Pears, $2.60@3 05; Congress Pears, $2.65@2.70; Crawford Peaches, $1.05@1.45; Susquehanna Peaches, 80c@$1.30; Foster Peaches $1.20@1.35; Washington Plums, $1.70@2.10; Yellow Egg Plums, $2; Plums, $1 70; Purple Prunes, $2.15; French Prunes, $1 65@1.75; Fontainebleau Grapes, $1.55; Red Nectarines, $1.30.

Aug. 8.—Six carloads: Gross sales $9446. Tuscan Cling Peaches, $1.25@1.35; Egg Plums, $1 50@2.62; Green Gages, $1.25; Foster Peaches, $1.35; half crates Malaga Grapes, $1.85; Bartlett Pears, $2,55@3; Crawford Peaches, $1.10@155; Columbia Plums, $1.80@2.30; Bradshaw Plums, $1.80@2.40; Quackenboss Plums, $2.62; Barry Prunes, $2.30 German Prunes, $2 10@2.30; French Prunes, $1.90; Gros Prunes, $1.35@2.12; Plums $1.65@2 30; Nectarines, $1.55@1 85; boxes, 95c; P. D. Plums, $1.40@2.50; half crates Muscats, $1.50; Thompson Seedless Grapes, $2.05.

At Boston.

Aug 3.—Two carloads: Crawford Peaches, $1.36; Bartlett Pears, $3 26; German Prunes, $3.50.

Aug. 3.—One carload: Bartlett Pears averaged $3.65; Early Crawford Peaches, $1.25@1 75.

Aug. 6.—Two carloads: Bartlett Pears averaged $3.50; Bradshaw Plums. $1; Magnum Bonum Plums, $1.10; Peach Plums, $3.60; Columbia Plums, $3.60; Jefferson Plums, $3.25, Washington Plums, $3.10@3.40; P. D. Plums, $2.10@3; German Prunes, $2.50@2.75; Italian Prunes, $2; French Prunes, $2.35; Bohemian Prunes, $1.75@2 25; Early Crawford Peaches, $1.10@1.65; Strawberry Peaches, $1.10; Susquehanna Peaches, $1; Red Nectarines, $1.10.

Aug, 8.—Two carloads: Washington Plums, $3 60; French Prunes, $2.80; Bartlett Pears, $3.15@3.50; Crawford Peaches, $1.25@1.40; White Freestone Peaches, $1.50, Stephens' Cling Peaches, $1.45.

Aug. 8 —Two carloads: Gross sales $3222. Crawford Peaches, $1.33@1.40: St. John Peaches, $1.36; Decker Peaches, $1.44; Foster Peaches, $1.40; Washington Plums, $3.37; Egg Plums, $3.25; Bartlett Pears, $3.32.

At Omaha.

Aug. 8.—One carload: Peaches, $1 20@1.40.

At Minneapolis.

Aug. 3.—Two carloads: Peaches, 55c@$1.10; Pears, $2.30@2.45.

Aug. 4.—Two carloads: Bartlett Pears, $2.25@2.40; Plums, $2.

Aug. 5.—Two carloads: Peaches, $1.15@1.30; Pears, $2.10@2.40; Plums, $1 90@2.40.

Aug. 8.—One carload: Peaches $1.40@1.55; Pears, $2.60@2.85; Plums, $2.30.

Auction Sales at San Francisco.

August 4.—1900 baskets Crawford Peaches, good quality, 45@67½c. inferior, 35@40c ₩ basket: 76 boxes wrapped Peaches, 70c ₩ box; 250 baskets Cling Peaches, 60@75c ₩ basket; 30 baskets Nectarines, 30@32½c; 50 baskets Plums, 35@50c; 75 baskets Prunes, 62½@65c; 25 boxes Nutmeg Melons, 75c@$1; 150 boxes Pears, No. 1, $1@1.10; 300 boxes, No. 2 do, 5 @80c.

August 5 —1500 baskets Crawford Peaches, good quality, 50@70c, inferior, 32½@45c ₩ basket; 400 baskets Clings. 60@77½c; 50 boxes Nutmeg Melons, 75c@$1.35; 25 crates Cantaloupes, $2.50@3.50; 200 baskets Plums, 32½@50c: 75 baskets Prunes, 57½c@$1.05; 60 baskets Nectarines, 25@40c ₩ basket.

August 6.—1500 baskets Peaches, good quality, 45@77½c, inferior, 25@40c; 30 crates Cantaloupes, $2@3; 20 crates Watermelons, $1: 40 boxes, Nutmeg Melons, 75c@$1; 75 baskets Plums, 40c.

August 8.—1500 baskets Peaches, 30@77½; 50 crates Cantaloupes. $1.50@2.50; 300 boxes Bartlett Pears, No. 1, $1@1.10; 500 boxes do, No.2; 65@90c; 250 baskets Plums and Prunes, 30@75c.

Aug. 9.—1600 baskets peaches, good quality, 50@75c ₩ basket; inferior, 27½@45c ₩ basket: 150 baskets plums, 50@85c ₩ basket; 150 boxes pears, No. 1, $1@1.10: 30 baskets crabapples, 75c; 50 crates cantaloupes, $2@2 25; 40 boxes, nutmeg melons, 75c@$1.15; 15 crates watermelons, 70c

Aug. 10.—1207 baskets peaches, 25@70c; 58 baskets Plums, 32½@70c; 5 boxes nectarines, 50c; 4 boxes pears, 45c; 6 crates cantaloupes, $2.

A Large Agricultural Implement House Increasing Its Business.

The well-known firm of Frank Bros., dealers in agricultural implements, this city, has recently absorbed the Pacific coast business of P. P. Mast & Co., whose former agency, at 31 Market street, has been discontinued. With a healthy business record of nearly 20 years among the farmers of California, Oregon and Washington, and an intimate knowledge of their requirements in these lines, this firm is now better equipped than ever to meet all the demands of trade. The business will be conducted, as usual, at the old headquarters, 33 and 35 Main street. The accompanying letter gives some idea of the items covered by the new agency:

"TO OUR PATRONS:—We are now the agents for P. P. Mast & Co.'s well-known line of Implements, Wind Mills and Pumps. This line includes the Buckeye Low Down Drills, Buckeye Shoe Drills, Buckeye Cultivators, Buckeye Broadcast Seeders, Buckeye Hay Rakes, Buckeye Spring-Tooth Harrows and Seeders, Iron Turbine Wind Mills, New Columbia Steel Mills, Buckeye Force and Lift Pumps, Buckeye Cider Mills, Lawn Mowers, Iron Fencing, Etc. Our trade, generally, is so well advised of the merit of these goods, and the large demand for them, that we hope to hear from you at an early date. Yours truly, FRANK BROS."

LIMITS OF TREE-VEGETATION. — The latest researches of the Finnish expedition to the Kola peninsula will modify, as we learn from *Nature*, the position of the line which now represents on our maps the northern limits of tree-vegetation in that part of Northern Europe. The northern limit of coniferous forests follows a sinuous line which crosses the peninsula from the northwest to the southeast. But it now appears that birch penetrates much farther north than the coniferous trees, and that birch forests or groves may be considered as constituting a separate outer zone which fringes the former. The northern limits of birch groves are represented by a very broken line, as they penetrate most of the valleys almost down to the seashore; so that the tundras not only occupy but a narrow space along the seacoast, but they are also broken by the extensions of birch forests down the valleys. As to the tundras which have been shown of late in the interior of the peninsula, and have been marked on Drude's map in Berghaus' atlas, the Finnish explorers remark that the treeless spaces on the Ponoi are not tundras but extensive marshes, the vegetation of which belongs to the forest region. The Arctic or tundra vegetation is thus limited to a narrow and irregular zone along the coast, and to a few elevated points in the interior of the peninsula, like the Khibin tundras, or the Luyavrurt (1120 metres high). The conifer forests, whose northern limit offers much fewer sinuosities than the northern limit of birch-growths, consist of fir and Scotch fir; sometimes the former and sometimes the latter extending up to the northern border of the coniferous zone.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon	Salem, J. T. Gregg	Sept. 12–17
California	Sacramento, Edwin F. Smith	Sept. 5–17
Washington	Spokane	Sept. 19–24
Nevada	Reno, C. H. Stoddard	
Western Washington Industrial Exposition	Tacoma,	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
1	Oakland	Aug. 8–13
2	Stockton	Sept. 19–Oct. 1
3	Chico, J. D. Sproul	Aug. 23 27
4	Petaluma, Dr. Thos. Macleay,	Aug. 29–Sept. 3
5	Santa Clara, George H. Bragg	Sept 26–Oct 5
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23–27
9	Rohnerville	
10	Yreka, C. S. Smith	Oct. 5–8
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28–Sept. 3
14	Santa Cruz, Oscar L. Gordon	Oct. 10–15
15	Bakersfield. J. J. Kelly	
16	San Luis Obispo, J. H. Barrett,	Sept 27–Oct 1
17	*, I. J. Rolfe	Aug. 23–28
18	Independence, C. W. Craig	Sept. 27–30
19	Santa Barbara, H. B. Barstow	Aug. 23–27
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	Sept. 26–Oct. 1
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	Aug. 29–Sept 3
25	Napa, D. L. Hackett	Aug. 22–27
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, M. R. Hook	Aug. 16–20
31	Hueneme, T. H. Merry	Aug. 30–Sept. 3
32	Santa Ana, W. A. Beckett	Oct 3–7
33	Hollister, A. D. Shaw	Oct. 11–15
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Aug. 27–30
37	Lompoc, W. I. Nichols	Sept. 20–23
38	Modesto	Sept. 28–Oct. 1
	—Glenn Co. Willows, W. V. Freeman	Aug. 9–13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

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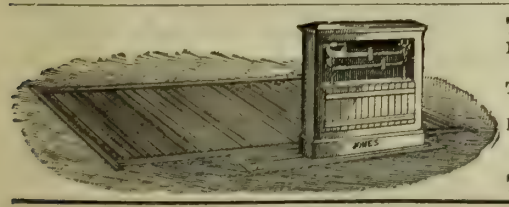
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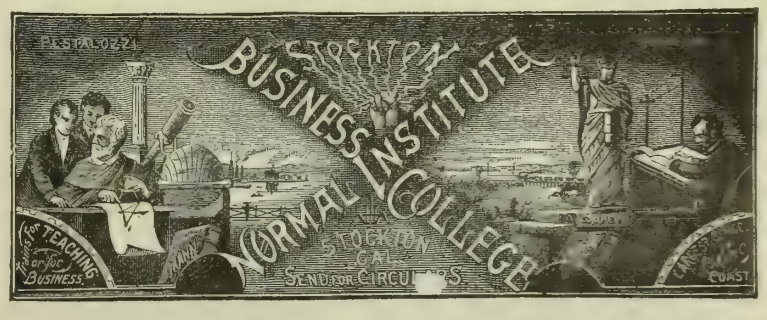
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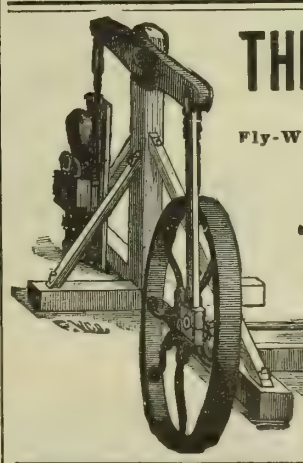
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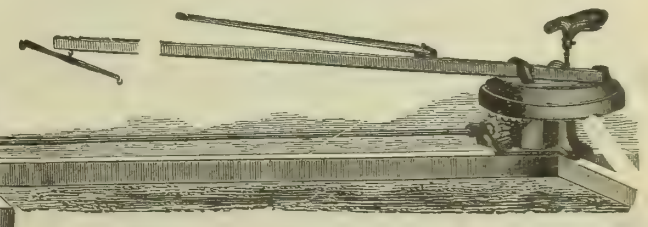
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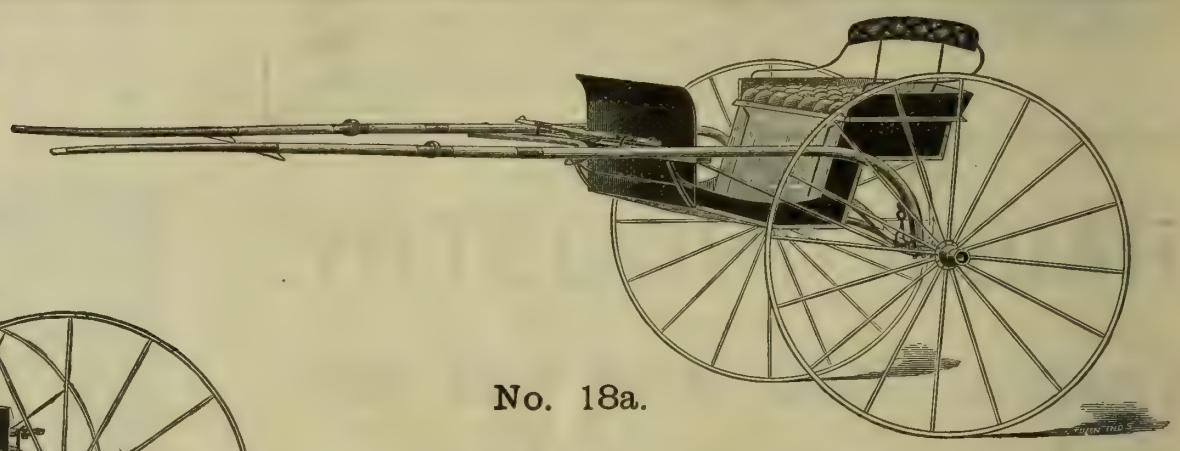
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E. C. CLOWES, STOCKTON, CAL.

PACIFIC RURAL PRESS

Vol. XLIV. No. 8. SAN FRANCISCO, SATURDAY, AUGUST 20, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

A Disease of Almond Trees in California.

Upon another page we publish a very interesting account of almond-growing by a writer resident in the lower part of Alameda county. Judging from his own experience, the writer pronounces the almond tree free from parasitic insects or fungus. This is unfortunately not true in the experience of others, although it is true that the almond is free from many troubles which beset other trees. We do not desire to promote the impression that the almond can be given a clean bill of health. There is nothing gained in the long run by such impression.

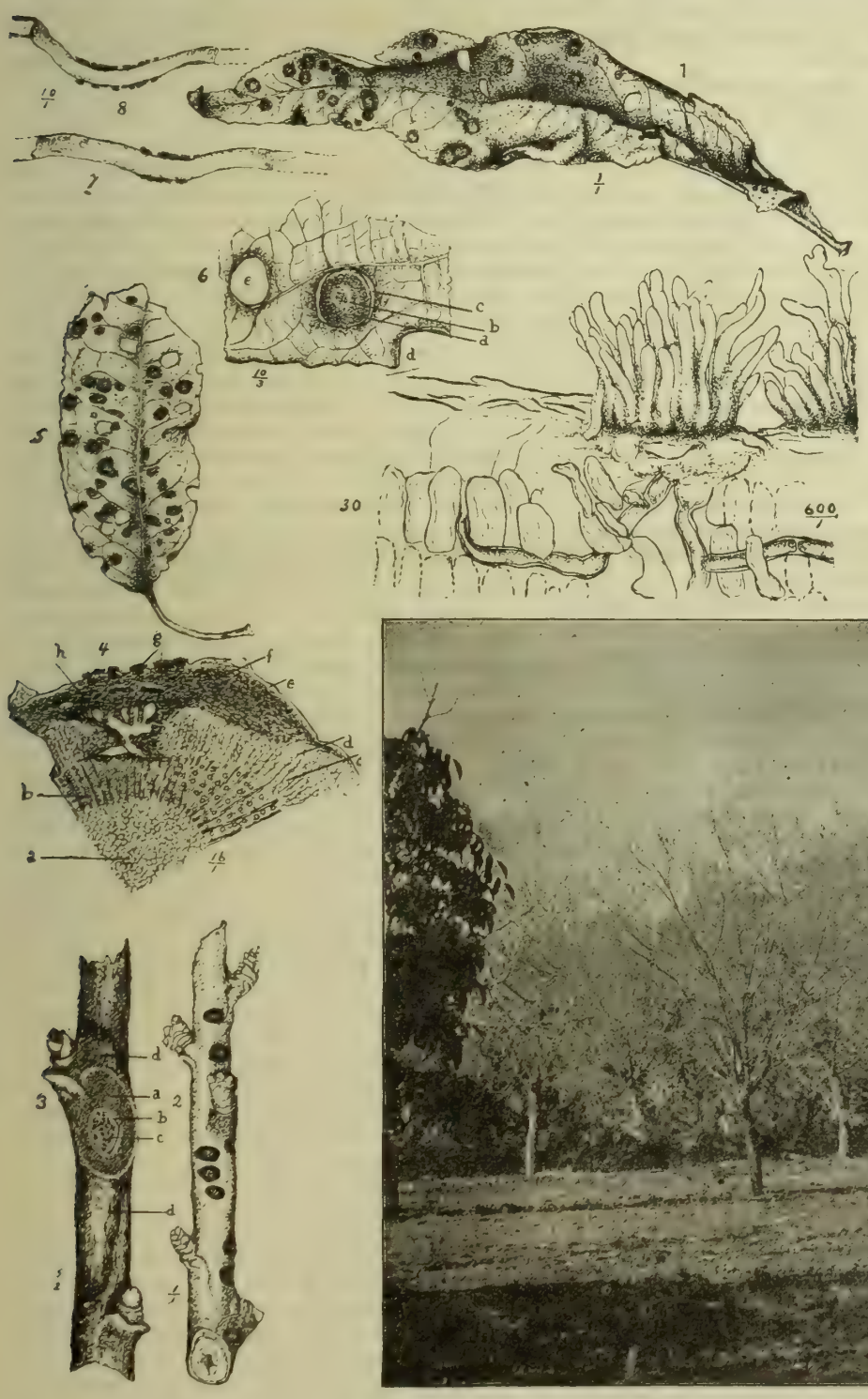
It has been recently noticed that a somewhat serious leaf disease has been observed on the almond in thisState. We call it a leaf disease for upon the leaves its most noticeable effects are produced, although in this, as in many other fungi, injury is visited also upon the woody tissue of the twigs and branches. The trouble is analogous to the shot-hole fungus of the apricot, plum and cherry and other leaf-riddling fungi on other plants. The nature of the disease and its ill-effects are represented in the engravings upon this page.

During the present yeor the *Journal of Mycology*, which is the official journal of the Division of Vegetable Pathology of the U. S. Department of Agriculture, has published a very interesting paper on "A Disease of Almond Trees" by Newton B. Pierce. Mr. Pierce, many of our readers will remember, has been engaged in this State for some time in special investigation of the mysterious vine disease in southern California. In pursuit of this investigation, he came upon this disease of the almond to which we refer, and published his investigations in the journal aforesaid. Our engravings are reproduced from Mr. Pierce's report, and the descriptive notes are condensed from the same source.

Fig. 1 shows the natural size of the diseased almond leaf. Fig. 2 is a young twig showing the disease spots. Fig 3 is a twig of old wood showing at *a* an oval disc of tissue killed by the fungus, while the central portion *b* is still living and furnishing sap to the fungus upon it. The parts *d d*, the larger portions of the twig, have apparently been indirectly killed by the fungus. Fig. 4 shows a cross-section of a partly killed twig, the rupture of the tissue by the fungus being clearly distinguishable. Fig. 5 is another leaf; natural size, showing the fungus injury, and Fig. 6 is an enlarged view of the leaf injury, showing how the fungus destroys a circular part, which, by subsequent shrinking, separates itself from the body of the leaf, and, falling out, leaves the familiar "shot hole," as shown at *e*, after the center has dropped out. Figs. 7 and 8 are crosscuts through the affected parts of a leaf, showing how the disease is thrown out of its natural alignment by the fungus. The other portion of the engraving, marked 30, gives the growth of the fungus as seen with high magnification, the fungus sending its fruiting stems above the surface of the leaf, while the feeding stems or mycelia invade the leaf substance below.

The orchard view shows an almond grove near Orange, prematurely stripped of leaves during July, 1891, through the action of this fungus, which is known botanically as *Cercospora circumscissa*, combined with lack of sufficient moisture. Many terminal twigs of last year's growth are dead and dry,

Accompanying the report to which we have alluded are some practical suggestions by Dr. B. T. Galloway, chief of the Division of Vegetable Pathology. He commends spraying with the ammoniacal solution of copper carbonate. The formula is, copper carbonate 5 ounces; aqua ammonia (26°), 3 pints; water, 45 gallons. The copper carbonate should be placed in an ordinary wooden pail, and just enough water added to make a thick paste; then pour in the ammonia and stir until all the copper is dissolved. If three pints of ammonia is not enough to thoroughly dissolve all the copper, add a sufficient quantity to bring about this result. When completely dissolved, pour the copper solution into a barrel holding 40 or 45 gallons; then fill the barrel with water. Where there are a large number of trees to treat, we find it very convenient to prepare the concentrated ammoniacal solution in advance. This can be done at leisure, taking care always to put the liquid into a tightly corked jug or demijohn as soon as it is made. When ready to spray, take the concentrated fluid into the field, and for every three pints add 45 gallons of water.





A FUNGOID DISEASE OF ALMOND TREES—ITS NATURE AND EFFECTS.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN..... .....General Manager

Saturday, August 20, 1892.

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[NEW THIS ISSUE.]

Plows.—Deer Implement Company.
Carriages.—Baker & Hamilton.
Windmills and Pumps—Woodin & Little.
Almond Hullers.—A. O. Rix, Irvington.
American Correspondence School, Chicago.
English Shire Horses—Parsons & Griffith, Geyserville.

☞ *See Advertising Columns.*

The Week.

The warm wave which is on as we go to press on Wednesday, should give relief from the abnormally low temperature, fogs and dews of last week. The weather has delayed fruit-drying somewhat, and has not favored the development of adequate sugar contents in the grapes, but this change should cure all that. Fortunately the evil has not been great, but with the world empty of fruit and crying out for it, California producers look dark at every cloud or dew-sparkle or downward degree in the mercury. Every pound of fruit should count this year, and we expect it will do so, not only by its large value in the producer's purse, but by the still greater confidence in fruit industries and the development of the State in these directions. Even the most conservative, who have anticipated overproduction, do not have anything to say of such a thing now.

The season of rest with farmers not in fruit lines is now at hand. The grain harvest is well out of the way, the cows are reaching the ends of their courses; even the hens are giving most attention to fall fashions in plumage. As homework thus lightens a little, let all who can seek rest and a change of scene. The fashionable patronage of resorts is lessening; there is plenty of room at springs and seashore and mountain tops. The season of the fairs has been ushered in. The opportunity to enjoy nature, art and artisanship is open to all. Rest and recreation bring a firmer grip to the plow-handle, a lighter heart to domestic duties, a keener appreciation of the blessing of a quiet home and home-companionship.

Our Fruit Abroad.—Last week we alluded to the continued shipments of California fruits to Liverpool. It has since been learned by cable that the second consignment by the steamer Germania had arrived there in fine condition and was sold at a big advance over the first shipment. By September all French pears are out of the market and the California pears will have big sales. The fifth special train left Sacramento on Tuesday evening, and was composed of five cars all loaded by A. T. Hatch.

The heat from the sun is said to have lately hatched five chickens near Muncie, Ind.

Prize Letters on Dairying.

Our experience this summer shows that we cannot expect wide competition for our prize letter awards during months in which those who can write on the subjects are too busy with practical operations to allow them to indulge in writing. For this reason the competition in the subjects of fruit-harvesting and fruit-drying has not been as general as we desired. Still we have secured good letters and hope next week to present those on fruit-drying.

The subject for September is dairying, and as the light season in dairying is now beginning, our dairy readers will be able to give attention to our offering which is as follows:

SEPTEMBER.—Dairying: The best practice in every productive step from the pasture and the cow, through the feed barn and silo into the dairyhouse or creamery and on to the market. A full discussion of results with improved practices and implements.

For letters on this subject we offer three prizes: first, cash $10; second, cash $5; third, Rural Press one year.

Of course, we do not mean that each writer shall prepare a full treatise on dairying in all the lines suggested. We merely desire each to write of his or her own experience in dairying, and describe the results reached by such experience which favor certain methods and materials. If each letter-writer tells how he succeeds best and what improvements he has proved to be of advantage, the letters all taken together will form a valuable review from which all may draw useful suggestions.

As we are a little late in making this offer explicitly, we will extend the time a little and allow letters to be mailed to us as late as September 10. This will give plenty of time for a good bunch of letters. Whether you keep one cow or hundreds of them, write out your experience and describe your practices. The writer may make his letter as long as he or she pleases; the competition is open to all. The reader of a good letter does not care whether the writer is a regular subscriber or not, nor do we. We want the facts and the successful experience from all trustworthy sources. We will therefore thank any subscriber who may call the attention of anyone, qualified to write a valuable letter, to our prize offer.

The 1892 Vintage.

The estimated shortage in the wine-grape crop of this State, made several weeks ago by the Rural Press, is fully substantiated. Clarence J. Wetmore places the crop this year as follows: Santa Clara county, 50 per cent of the crop in 1891; Napa, 40 per cent; Sonoma and Alameda, 70 per cent, and Fresno a full yield. The short crop of wine-grapes makes it quite certain that the vintage this year will be the smallest in any year within at least half of a decade. But if there is any doubt regarding the small vintage, it would be removed by the knowledge that about all the wine-grapes in Fresno and a part in Sonoma have been sold, dried, for delivery in September and October. The contract price at which 400 carloads out of the 500 carloads, which it is estimated will be dried, was placed, ranges from 3¼ to 3⅝ cents per pound. The taking of such a large quantity of dried wine-grapes, together with a shortage in the crop, ought to create better prices for California wine, and doubtless will as soon as the present forced selling of the 1891 vintage is over. These forced sales are not confined to this year, for every year preceding the new vintage many winegrowers are forced to sell for the lack of cooper-room to accommodate the incoming vintage. Growers having ample accommodations do not sacrifice their wine, but hold until there is a better market, which usually follows the forced sales. Wine dealers are now holding off to get as cheap as possible all the wine which will be forced on the market within the next thirty days.

Increasing Demand for Wine Grapes.—The increase in consumption of dried wine-grapes is well-illustrated in the steadily growing shipments. This year, C. J. Wetmore estimates that fully 500 carloads (5000 tons) will be dried for market, and that out of this large quantity, 400 carloads (4000 tons) have been contracted for future delivery at from $62.50 to $72 50 per ton. The demand comes largely from restaurants, hotels and the middle class. It is claimed that dried wine-grapes are given preference in certain cooking over dried raisin-grapes, owing to their having more acid and therefore imparting a finer flavor.

A Fall in Hops.—It is reported from Wheatland that last week 70 acres of hops on a trellis fell in John Doddah's yard. The trellis was new, and the anchors were too weak to hold the immense weight of the vines. The sound of the falling trellis was heard several miles. As the hops are nearly ripe a few hundred dollars will temporarily repair the damage and the loss of hops will not be great.

The Dried-Fruit Industry.

Effort is being made to force the market for new crop dried fruits to lower prices. As yet the movement has not met with success, and it looks very much as if it will not, for the general situation not only warrants present values, but justifies the belief that prices will be higher before the month of May in next year. The claim made by the Rural Press of short fruit crops east of the Rocky mountains, and also in Europe, has been fully confirmed. The short crops advanced prices for green fruit to such figures that the small quantity of fruit at the East was marketed fresh, and as a result the supply of dried from the large fruit-growing States east of the Rocky mountains has been cut off, and to this coast consumers must look for supplies.

At one time it was claimed by the better informed that large quantities of apples would be evaporated in the States of New York and Michigan, and that this would, to a certain extent, meet the demand for other dried fruits. Even this seems doomed to disappointment. In confirmation of this, we give the following letter written to Baker & Hamilton of this city by D. H. Goodell, president of the Goodell Company, manufacturers of cutlery, apple and potato parers, etc., under date of Antrim, N. H., August 6, 1892:

> The apple crop in New York and Michigan, where most of the evaporators are located, is almost a complete failure. There will be a scarcity of evaporated apples in the near future or early in the coming year. The peach crop is probably the smallest the country has known for years. It will be wise for people who have apples to evaporate them in large quantities this fall.

Besides the above a leading manufacturing firm at Baltimore, Maryland, also in a letter to Baker & Hamilton, says: "There is no fruit in this section east of the Rocky mountains."

This information makes it certain that this coast will have to furnish the bulk of dried and canned fruit for consumption in the United States, and as the crop of fresh fruit in Oregon and Washington is short, California will be looked to for more liberal supplies. In this State the quantity of fruit that has been and will be canned this season, will break all former records. It now looks as if it will aggregate fully 20 per cent more than the largest pack, while the grade will average better. The dried fruit crop will not be much if any more than 65 per cent of the quantity that was cured in 1891. While the quantity will be less the quality will average better. The falling off in the quantity that will be dried is not so much due to a shortage in the crop of fruit as to the exceptionally large demand for green fruit at the East and the improved railroad facilities for moving it on quicker time, and with much less loss than ever before. The shipments eastward aggregate fully 50 per cent more than they did in the year of heaviest shipments.

The short fruit crop abroad, particularly of pears in France and tree fruit in Great Britain, will create a large demand on this country for canned and dried fruit, and as the crop of canning fruit and also of apples and other fruit for drying is short, the East will not be able to meet its own wants, let alone supply any of the requirements from foreign countries, and consequently California fruit will have to be taken. To show the foreign demand, we will state that for the fiscal year ending June 30, 1892, there was exported by the United States, of dried apples, 26,042,063 lbs, and green or ripe apples 938 743 bbls. There was also exported, of canned fruit, $1,558,825, and other green, ripe or dried fruit, $131,682. These statistics show that European and other foreign countries draw heavily from us, even when the crop abroad is an average, and with a shortage abroad, what would they take, provided it could be had?

Sales of Fruit by Auction Discontinued.—After a trial of three weeks, the sale of fruit by auction has been discontinued. That the venture commenced under favorable auspices cannot be denied, for there was quite a number of large fruitgrowers who consigned fruit for sale, and the market was, for the first two weeks, active and strong under moderate receipts and a free buying by canners and the trade. With heavy supplies of fruit, buyers left the auction system severely alone unless they secured bargains, and followed in the well-beaten trade tracks of former years. Whether the auction system can be made a success in this city is problematic. At the East, sales of fruit are confined largely, if not entirely, to extra choice selected fruit grown elsewhere, and which is furnished direct to local consumptive points, and therefore it is that success has crowned the auction sales of foreign fruits, Florida oranges and California fruit. Auction sales of deciduous fruit from this State meet with the best and often the only success when it comes on the Eastern markets ahead of the fruit crop at the East or before consumptive points are supplied locally.

From an Independent Standpoint.

Many readers of the RURAL PRESS will not, we imagine, need to be told that the political managers are now drumming the country in the interest of the campaign funds. They are all at it—Republicans, Democrats and People's party men—so one cannot be condemned without condemning all. The truth is that successful politics in these days calls for money and a good deal of it. Formerly, the chief expense was for oratory, but that is now one of the minor items. Band-hire, hall-rent, torches, bill-posting and ten thousand other things call for an expenditure that is at least quasi-legitimate; but beyond this there are large outlays more or less direct in the way of corruption. It is perfectly well known to everybody who has given any attention to practical politics that at least one half of the money spent in political campaigns is given directly to persons of questionable character to employ in secret ways and that no accounting is either asked or desired. Neither the men who give the money nor the party officials through whom it is disbursed, want to burden their consciences with detailed knowledge of the ways in which the money is spent. They want to place it where it will "do the most good," and they want to be able to say that they have done no wrong. They do not, indeed, go down into the cellars, but they do the same thing in effect. In every city ward there is always some brutally forcible man, some "blooded" hoodlum—usually a saloonkeeper—who "runs," or assumes to "run," the worst element in its political conduct. The usual method of the party manager is to turn over to the local boss a lump sum to "pull things the right way." This local boss, who is of course an unscrupulous scoundrel, does the buying, or the bulldozing. He is the final agent in the application to disreputable ends of money given by respectable men. Now, it is a plain proposition that if somebody did not provide the money for buying votes, no votes would be bought. To us it seems equally plain that the man who supplies the money is as much a public enemy and as much a criminal, in a moral sense, as the man who is bribed. The responsibility cannot be dodged by shifting it to agents and blinding yourself to their acts. If the money which you give for campaign purposes is used for corruption, you are a party to that corruption. Since it is an admitted fact that large sums are spent corruptly, it behooves every man who values his own character and who does not wish to become a public enemy, to require an accounting for every dollar he gives for political purposes.

The presidential campaign is fairly well in progress in the Eastern States. McKinley, Mills, Foster, Watterson, Manley of Maine, Fessenden, Payne of Wisconsin, Campbell of Illinois, and a host of other well-known men have already taken the stump and are making a fairly active campaign. They deal almost exclusively with the tariff, since the two platforms give scarcely any ground for controversy on the other great questions involved in them, namely, that of the currency; while the infinitely greater and more vital question involved in the labor riots at Homestead, Pennsylvania, and elsewhere, is studiously avoided. Neither party dares treat of it. We therefore have the curious spectacle of a national campaign fought out between the speakers and the party journals on a question which the country at large considers only secondary. It would seem that the "business of politics" has reached that stage in the United States when neither of the great political parties dares take up and honestly discuss the principal question presently before the country.

The country has not forgotten the unmeasured condemnation heaped by the Democrats upon the last Republican Congress. In the campaign of 1890 the very air was full of the "Billion Dollar Congress," and it was very largely in response to this cry that the next (present) Congress was given to the Democrats. One session of this Democratic Congress has passed, and it must be admitted that it has not covered itself with economic glory. Its appropriations of public money aggregate $507,708,330—a saving of only ten millions out of upward of five hundred as compared with the first session of the "infamous" and much abused "billion dollar" session. The fact shows chiefly the insincerity of partisan criticism; but incidentally it puts in bold relief the prodigious advance our Government is making in money-spending. Here we see a Congress elected upon the impulse of a revolt against extravagance, pledged to economy and under every motive of financial restraint and prudence, and yet unable to hold the charges of the Government below five hundred million dollars per year. The truth is, as Ex-Speaker Reed bluntly puts it, that this is a "billion dollar country." But we must not forget that a good half of our annual outlay goes for pensions; and it is well to bear in mind further that this pension charge takes more money than it costs to maintain the combined standing armies of Europe.

Gen. Field, the Vice-Presidential candidate on the People's party ticket, was interviewed at Memphis last week, and spoke enthusiastically about the chances of his party in the coming election. He thinks the People's party will break up the solid North, the solid South, the Grand Army of the Republic, and the solid negro vote. "We will," he said, "carry every State west of the Missouri river, Colorado, Nebraska, Kansas, Nevada, Wyoming, California, Washington, Montana, North and South Dakota. In the South, we will have North and South Carolina, Georgia, Alabama, Texas, and probably Tennessee and Arkansas." General Weaver, when in San Francisco last week, was equally enthusiastic, but less definite in his view. The People's party, he said, would carry all the "silver States," whatever that may mean, and said that its principal fight was with the Democratic party. These views are given simply as matters of news. It is still early for prediction as to the results of the campaign, but it looks to the RURAL as if there was something more than a likelihood of such a disturbance of the old lines as to prevent a majority for any party in the Electoral College. In that event, the election would go into the House of Representatives, and Cleveland would be President; and the Senate, which, under the Constitution, would be given the power to elect the Vice-President, would of course choose Reid. This is a possibility which the public may just as well bear in mind.

The time is prolific of labor troubles. Besides the two great strikes already on at Homestead, Pa., and Cœur d'Alene, Idaho, three others have developed during the past week. At Buffalo, New York, nine hundred railroad yardmen are striking over a question of wages. They have resorted to violent methods, and besides dealing roughly with non-union men put at their abandoned work, have damaged the property in their charge and have burned nearly three hundred freight cars loaded with goods worth half a million dollars State troops are on duty to protect property, but they have not been able to stop rioting or to prevent the abuse of non-union workmen. In Tennessee there is another labor riot. Here the iron and coal miners are preventing by violence the Tennessee Iron, Coal & Railroad Company from employing convicts in their mines and timber camps. In three instances the guards have been overpowered, the camps destroyed, and the convicts returned to the State penitentiary near Nashville. All this has not been accomplished without a good deal of brutal violence, of which both the guards and the convicts have been the victims. Nearer home, at Port Gamble, on Puget Sound, there was a riot on Friday last of a very different kind. Three vessels lying at anchor were boarded by gangs of union seamen and their crews dragged or driven ashore and warned not to return. The men thus forced from their work belonged to a union, but not to the particular fraternity which dominates the shipping of Puget Sound. Here, therefore, we have warfare carried on with the fierce methods of piracy, not against non-union men, but against the members of a non-affiliating and less powerful organization. If there be among the champions of the rights and interests of workingmen anybody bold enough to claim that there is any sort of justice in these proceedings, he is no friend but an enemy of labor. Organization of workmen into unions is as legitimate as the organization of capital into companies and corporations. Organization is labor's legitimate weapon of defense, but the right to organize no more carries with it the right to violent enforcement of demands, just or otherwise, than the right to bear arms carries with it license to murder. The right to strike is a legitimate one, as sacred as the right to labor, but it does not carry with it the right to prevent others from making such engagements as they choose. The labor unions are going to treasonable lengths in assuming the right to enforce their own rules, and it is the duty of the Government to employ its whole power, if necessary, to defend the constitutional rights not only of property-holders, but of non-union workmen. This country cannot allow the trades-unions to usurp the functions of Congress; it cannot allow the rights of its citizens, either capitalists or non-union workmen, to be trampled upon. If it should fail in this duty, it would not be worthy to live, and could not live. It must assert, definitely and positively, that the right of the property-owner to his mill, his farm, his railroad or his ship, and that the right of the humblest citizen to labor, are as sacred as the right of the trades-unionist to strike.

Rumors of internal dissensions in the Transcontinental Traffic Association call freshly to mind the complex system of injustice by which freight rates between California and the Eastern States are maintained. First, there is an agreement between the several transcontinental railroads for mutual advantage to maintain uniform rates; and, second, the maintenance of these rates by the Pacific Mail Steamship Co. is secured by the payment of an annual subsidy of $850,000. This enormous bribe has been paid from the funds of the Trancontinental Association, to which all the railroad companies contribute equally, while its benefits have chiefly accrued to the Southern Pacific. It is now given out that the other companies are tired of being assessed for the benefit of the S. P., and that they will withdraw the subsidy, leaving that company to pay the whole sum or submit to steamship competition by way of the Isthmus. It is the condition of things exposed in this controversy that forces the RURAL, with thousands of others, to the judgment that there can be no sure relief from oppression in transportation, except in Government ownership or control of all transportation systems. The infamy of an arrangement by which the people of a State are taxed $850,000 a year, to be applied to the suppression of what is good for their interests, is beyond words. The power to do this is too great and dangerous a power to be left safely in the hands of individuals. For the protection of the public the Government will, in the end, be compelled to destroy it.

The RURAL departs from its practice of dealing only with American topics to note the political revolution which the past week has brought about in England. The late parliamentary elections have gone against the Conservative government, whose head is Lord Salisbury, and the consequence is the reseating of Mr. Gladstone—the "Grand Old Man"—in the Prime Minister's office. The interest of this event is chiefly connected with the Irish policy. Mr. Gladstone, as is well known, is the champion of Irish Home Rule and it will be the main effort of his Ministry to establish this principle in the government of the Green Isle. Americans, almost without exception, regard this policy with favor, and their satisfaction in Mr. Gladstone's success is colored largely by sympathy with his purposes. But it is a difficult task to which Mr. Gladstone has set himself. He has, amid a tangle of inherent perplexities, to create a new system for Ireland; and, furthermore, he must do it in the face of a hostile and powerful opposition and with the aid of only a slender and ill-organized majority. Besides the difficulties of this situation, Mr. Gladstone labors under the burden of advanced age (he is 83), and if he were not what he is, the most resourceful and gifted man of his time, the undertaking would seem hopeless. It is generally believed on both sides of the water that the Ministry will be a short one and that the complete success of Mr. Gladstone's plans is hardly to be looked for.

Look Here.

Presentation of Corre ative Propositions.

New York Sun, Dem.

We invite all wage-workers, and particularly those who, when Senator Palmer made his extraordinary speech on Homestead in the Federal Senate, felt that they had found a friend whose support would be useful and welcome, to look at the other half of the industrial scheme which this socialist Senator proposed. We will put them together, and here is a section:

SENATOR PALMER'S SCHEME.	THE OTHER SIDE.
These large manufacturing establishments must be understood to be public establishments in a modified sense, and the owners of these properties must hereafter be regarded as holding their property subject to the correlative right of those without whose services their property would be utterly valueless.	These establishments must be regarded as public, and the owners of labor engaged in them the employes, must be regarded as holding their labor subject to the correlative right of those without whose machinery their labor would be valueless.

If Palmerism, as the Senator formulated it, is to be established, the supplementary regulations given above must go with it as a necessary consequence of justice.

It would be slavery. There wouldn't be a free laborer where such a system prevailed. They would all be subject personally to the "correlative rights" of property owners with whom they worked. The lash would be a necessary adjunct of such a system. A rebellious laborer who desired not to work would have to be knouted as the only means of making him work against his will. Prison or starvation would be ineffectual, of course.

Another point in Palmerism will suggest some interesting reflections:

SENATOR PALMER'S SCHEME.	THE OTHER SIDE
I maintain that these laborers, having spent their lives in this peculiar service, have the right to permanent employment.	These companies having made machinery for special purposes, have a right to the permanent service of their employes.

No strikes. No leaving work. No leaving the country. The wretched serfs must stick to their tasks. No hope of change or of other and better business for the slaves of Palmerism.

How do workingmen of this time and place like the scheme? Out with it! Down with the cranky and foolish demagogues, who think they can catch the fancy of intelligent Americans with such vicious, such intolerant nonsense!

To the workingmen we say that there is only one thing to be done in such a situation, and it must be done emphatically, if the good name of labor organization is to be preserved! Down with anarchy at Homestead and everywhere else!

DOYLE FRUITGROWERS' ASSOCIATION.—We received just too late for insertion in this issue a report of the last meeting of this Association, which is doing a work of much local interest and value. We hope to publish the report next week.

Weather and Crop Bulletin for Week Ending August 15th.

The following crop report for the week ending August 15th, is compiled from the reports of 20 correspondents at places in 19 counties, and covers, in a general way, the principal agricultural and fruit-growing districts of the State.

It is a source of exceeding regret to the acting director, William Burrows of the State Weather Bureau, that so many regular correspondents failed to report this week, and it is hoped and earnestly requested that next week may see a marked improvement in this respect.

The only rainfall reported was from Santa Rosa, where a light but beneficial fall occurred on the 11th.

Grasshoppers are reported to be damaging crops to a considerable extent in the southern part of Humboldt county.

There has been very little foggy or cloudy weather, and the temperature has generally been below the normal in all districts, though the latter does not seem to have produced any more serious result than that of retarding slightly the ripening of certain kinds of fruit.

At Sacramento the weather has been virtually cloudless, there being but two days which were partly cloudy during the forenoon.

The mean daily temperature at the Weather Bureau office has ranged from 10° below the normal during the first part of the week to 4° above on Sunday and Monday. The highest temperature of the week was 95°, which occurred on Sunday, the 14th.

The prevailing winds have been from the southwest, with a maximum velocity of 18 miles per hour from that quarter on the 10th, doing some slight damage to hops in this vicinity.

Local reports and those of correspondents indicate that the hop crop is generally in fair condition throughout the State.

Taken as a whole, the weather seems to have greatly favored the ripening and harvesting of all fruit and grain crops, and from nearly all sections of the State from which reports have been received, the conditions generally seem decidedly gratifying.

HUMBOLDT.—*Eureka*—Precipitation to the amount of .09 of an inch fell during the week. Excepting the last two days, which have been warm and clear, the weather has been foggy. Wheat and oats are now being harvested and the crops are good. Grasshoppers are doing much damage to all crops in the southern part of the county.

LAKE—*Upper Lake*—The past week has been cold, with a good deal of wind, and fruit is ripening very slowly, in addition to being later than usual. Threshing is nearly over, and the crops are up to expectations. Grapes look well but need warmer weather.

SOLANO.—*Vacaville*—The weather the past week has been unusually mild, which has been a great help to fruitgrowers in shipping green fruit. The quantity of fruit dried will be comparatively small this season.

SONOMA.—*Santa Rosa*—A gentle rain fell on Wednesday morning which did much good. Temperature for the week rather below the normal: Sunday was the hottest day of the week. Hops are growing and filling out well. Fruit is ripening rapidly, and the canneries and driers are using most of it.

SACRAMENTO.—*Franklin*—The weather for the past week has been windy and warm. Harvesting is nearly finished, and farmers are hauling to the warehouses on the river. The grain is of fair quality, but contains a great deal of smut.

Sacramento—The weather has favored the harvesting and shipping of fruit and the growth and ripening of hops.

SAN JOAQUIN.—*Stockton*—The wheat crop is falling short of anticipations. We had hoped to realize a much larger yield.

Lodi—Highest temperature, 92°, on the 13th; lowest, 51°, on the 8th; for the week it was below the average; prevailing winds, west to southwest. Some fields of wheat are yet to harvest. No change to report as to the yield or quality. Early grapes are being gathered and put upon the market, and the quality is fair. The crop is short owing to the cool weather. The demand for watermelons has not been urgent.

AMADOR—*Oleta*—Weather unusually cool and fruit ripens slowly, especially grapes.

PLACER.—*Newcastle*—Highest temperature 95°, lowest 50°. All climatic conditions were favorable for the ripening of the fruit crop, which is fully up to the average in all respects and prices are good.

SANTA CLARA.—*Gilroy*—Prunes and other fruits are being gathered; fair crops and good prices.

TULARE—*Visalia*—Temperature below the normal. Fruit hardly ripens fast enough, still we will have a very good crop and fair prices for everything.

TEHAMA.—*Red Bluff*—Temperature unusually low; dews have delayed threshing; the grape crop is late. The cool weather is retarding the ripening of fruits throughout northern California.

FRESNO.—*Fresno* Early peaches and pears are about done. Malaga grapes are coming in. Weather cloudless, with early dews. Temperature below the normal. Muscats are several weeks late in ripening.

LOS ANGELES—Cool, cloudy weather has somewhat retarded fruit-drying. Grapes need hot weather to hasten ripening, as they are late. Peaches are ripening and drying is in full operation.

SANTA BARBARA—*Santa Maria*—Cool weather still prevails. Grain is all threshed, and the total output is rather light. Beans, corn and potatoes will be lighter than an average. The cannery has finished its run on apricots and will begin on pears and peaches next weeks. Maximum temperature 78° minimum 50°.

COLUSA.—*Williams*—Average temperature and sunshine have prevailed. The conditions continue favorable.

Willows—Temperature apparently below the normal, with about normal sunshine. Grapes and peaches are ripening fast and the crops will be good.

THE BEST PAYING BUSINESS IN WASHOE COUNTY.—Ten carloads of mutton left Reno last night for San Francisco from the fat herds of P. L. Flannigan. Very few people realize the importance of this industry to our town and county. There is an estimate by competent authority that as many as 200,000 head of sheep are owned in Reno and that nearly another 100,000 are bought in Oregon and other States and driven here to fatten for market. Fully 100,000 sheep and lambs are sold to the California butchers every summer. The heavy owners are: P. L. Flannigan, 30,000; W. M. Van Buren, 4500; D. C. Wheeler and associates, 30,000 here and 30,000 in Humboldt; James Dunn, 4000; J. B. Talbot, 12 000; Owen Murphy & Bro., [illegible] Henry Anderson, 25,000; Fraudsen & Ross, 15,000; Salvaton & Matsot, 8000; W. A Scott, 8000; Theodore Winters, 30 000; G. W. Mills, 6000; Reed, Douglas, Holcomb and others, 70,000.—Reno Evening Gazette.

Preserving Fruit for Exhibition.

In the last official publication by the California World's Fair Commission we find the following:

Wm. C. Watkins of Santa Ana, who is employed by the Orange County World's Fair Association as an expert for putting up fruit, writes as follows with regard to the formula in use and also other items of interest: "The most reliable preservative I have is the Baker compound, as per Prof. Hilgard's formula, and though it takes the color out of very highly colored fruits, it is a splendid preservative and is easily prepared. I have already put up between 50 and 60 large jars of fruit of different varieties for the county, and the majority of it is preserved as above." [What is known as the "Baker compound" is water charged with the fumes of burning sulphur, as described by Prof. Hilgard in a university circular published in the RURAL PRESS May 21, 1892.—EDS PRESS]

George Ludewig, a druggist, writing from Santa Maria, Santa Barbara county, states that the following compound for the preservation of fruit worked admirably when he was preparing fruit in Germany for exhibition purposes a year or two since: Dissolve from 100 to 500 grams of sugar, according to density, in one litre of water, then add from two and a half to three grams of salicylic acid. An addition of a very little glycerin is desirable. He states that fruits preserved in this liquid keep for at least two years, preserving their aroma, color and shape admirably. Apples, pears, etc., can be preserved in a storageroom perfectly fresh, without preparing them in any form, by dropping once or twice a week a few drops of pure phenol on the floor of the room. This will keep the fruit fresh until July of the following year. In preparing the above preserving fluid, the use of iron vessels, spatulas and also water that contains iron, must be avoided. Only the best salicylic acid should be used.

Mrs. Flora M. Kimball writes from her home in National City, saying that on her return trip from San Francisco she called at Fresno, where she made a careful examination of the World's Fair exhibit and the work of preparation now in progress. She states that the secretary of the association, Mrs. M. B. Stuart, is personally visiting the orchards, gathering the fruit and carefully placing it in preservative liquids. Many recipes have been experimented with, but that giving the best results is one prepared by a local resident of the town. So far the fruit put up by this method retains its color to perfection and is very attractive in appearance. The final results are looked forward to with interest, and if successful, the entire State will be benefited by the recipe. A number of boxes of dried fruit have been carefully packed, and in order to obviate the possibility of insect-breeding in the fruit after it is packed, Mrs. Stuart dips the dried fruit in hot water, then carefully dries it. By this method the color is not only preserved, but improved.

It is to be regretted that the commission did not publish this Fresno recipe, or if it is a secret, publish the owner and the price at which it can be had. A thoroughly satisfactory fluid is still a desideratum.—EDS. PRESS.

Special Berkshire Premiums.

SPRINGFIELD, ILL., Aug. 6, 1892.

TO THE EDITOR:—The American Berkshire Association will, in accordance with the resolution below, offer the following special premium at all State and Provincial Fairs for 1892:

Resolved, That exhibits of Berkshire swine at all State and Provincial Fairs where separate classes are provided in 1892 for recorded Berkshires, be encouraged by the American Berkshire Association, by the offer of a special prize of the first ten volumes of the American Berkshire Record, valued at $50. Said prize to be offered for the best recorded sow and litter of not less than five recorded pigs under six months of age, bred and exhibited by a resident of the State in which the fair is held.

The conditions of the competition for this premium to be as follows:

1st. That there shall be not less than three competitors for the prize of $50 offered above.

2d. That the competing animals be recorded in the American Berkshire Record prior to date of entry at the fairs, and that lists of such entries be furnished the secretary of this association at the close of the fair.

3rd. That a copy of these resolutions be printed in the premium list of the fairs in connection with the classification of swine, or that reference be made at the close of the classification of swine, to the publication of this announcement elsewhere in the premium list. For further particulars, address JNO G. SPRINGER,
Secy. American Berkshire Assn.

This premium will be offered at the California State Fair at Sacramento, September 5th to 17th.

Entomological Fashions.

OAKLAND, August 13, 1892.

TO THE EDITOR:—In the last RURAL PRESS was a fashion article—"Tin Collars for Cankerworms," that interested me very much. It was quite a new idea to me. I have often noticed the forsaken look the poor worms have, and am glad that at last someone has taken pity on them. I see by the article that "October is the month that the worm begins to travel." With so many weeks to prepare it, it would be a shame if any farmer let the cankerworms on his place start out without being suitably attired for the occasion. By rising up a little earlier in the morning and giving up a few evenings to it, he could easily make collars enough, and I am sure it would gladden his heart next winter, as he sits by his cosy fire and the wind and the rain are dashing against the window to think that somewhere are numbers of cankerworms whose hearts turn in grateful remembrance to their benefactor, for you know "the worm will turn." L. C.

A Sale of Dried Fruit by Private Bids.

CAMPBELL, Santa Clara Co., Aug. 9, 1892.

TO THE EDITOR:—I inclose some printed matter that I believe will be of interest not only to fruitbuyers, but to many of your other subscribers.

Producers, knowing that there is a short fruit-crop, both domestic and foreign, are not disposed to do more than smile at the effort to "bear the market."

Canners and greenfruit-shippers have left but little to dry, and, for that little, top prices will be paid.

As far as we are able to learn, nearly all the dried fruit of the State, except the small quantity in this valley, has been sold. READER.

THE CIRCULAR INVITING BIDS.

The following are the chief parts of the circular to which our correspondent alludes:

Bids through the Santa Clara County Fruit Exchange will be received for the "Camel Brand" of fruits until August 22d, at which time doubtless, most, if not all of this brand, together with such other fruit as the stockholders of this Exchange may offer, will be sold. Should a later sale occur, notice will be given.

The "Camel Brand" of fruit is all graded before being dried. The objects in thus grading it are two:

First—To produce the best possible brand of dried fruits. This is accomplished by keeping fruit of the same kind together, both while drying it and afterward.

By this method small fruit is not dried as hard as a bone, nor is large fruit insufficiently dried, but each size is properly cured. This could be done otherwise, but the expense of doing it prevents its being done. Thus grading and curing the fruit gives it a more attractive appearance, and hence makes it more salable.

Second—To make it possible to accurately describe this fruit to the trade. A buyer can buy this brand without seeing the fruit and yet definitely know what he is buying. All of this fruit is gathered uniformly ripe and such fruit as apricots, peaches, etc., are well-bleached.

The apricots of this brand are graded into four sizes and designated as follows, namely:

Those 1¾ to 2½ inches in diameter and up are termed Extras.
Those 1½ to 1¾ inches in diameter are termed First Grade.
Those 1¼ to 1½ inches in diameter are termed Second Grade.
Those 1 to 1¼ inches in diameter are termed Third Grade.

In all except the Third Grade there is no perceptible difference, except in size. That grade is inferior to the others in quality as well as size.

Peaches of this brand are graded in three grades, each designated as follows, namely:

Those from 2¼ inches in diameter and up are termed Extras.
Those 1¾ to 2¼ inches in diameter are termed First Grade.
Those 1½ to 1¾ inches in diameter are termed Second Grade.

Prunes (Cal. French) will be sold as usually graded, as will all other fruits not otherwise designated.

All goods will be sold for spot cash f. o. b. Campbell, Cal. Those wishing to see the goods before buying can have samples sent on application. Buyers will not be charged an admission fee. They may be represented by agent or broker. Those not present will be notified by wire if their bids are accepted.

SANTA CLARA COUNTY FRUIT EXCHANGE.
Address all communications to assistant manager, Campbell, Cal.

A Well-Known Fruitgrower's Observations.

SAN JOSE, Aug. 16, 1892.

TO THE EDITOR:—I. A. Wilcox, fruitgrower, located near Santa Clara, has 60 acres of the very best varieties of fruit trees adapted to his locality, chiefly of pears and prunes. Nothing has prevented a full crop this year. His pears are being shipped by A. Block to the Eastern markets. The prunes are being delivered, as the fruit ripens, to the fruit drier at Santa Clara, at the contract price of $57.50 per ton, and a bountiful crop is assured.

In an interview and ride over his farm, Mr. Wilcox remarked that he had just returned from an extended trip East, returning by the way of the Canadian Pacific and Oregon. Mr. Wilcox informed me that the fruit crops have not only been short in the best districts East, but says the same may be said of Oregon, where only a half crop is estimated. Next year Chicago will be hungry for fruit supplies, as everything will be cleared up this year, and the millions to visit the Fair will require an extra supply.

Mr. Wilcox visited the salesrooms for California fruit in several cities and was pleased with the way the fruit is handled by the auction houses. While the fruit brought good prices, some of it would have realized better for the packers if none of it had been too ripe to keep well. Some brands of cherries retailed as high as 50 cents per pound, and from that all the way down to $1 50 for ten-pound boxes not in fair condition. The packing was generally good, but some of the cherries were moldy when the packages were opened.

Invitations have been sent out by the West Side Fruitgrowers' Association to have a meeting at their rooms on Monday evening, this week, to consider the advisability of having a law passed to protect the blackbirds, which are said to be of much value in destroying the moths in the orchards. Mr. Wilcox informs me that many of his prunes are injured by the wild canary birds, linnets and small greybirds along the borders of Campbell's creek, which runs through his farm, the border of the stream being covered with willows, which he is cutting down to destroy the resorts of these birds. He believes that all these birds are of special value to the general farmer and fruitgrower; but experience only will determine where they are of more injury than benefit. Mr. Wilcox has not noticed any injury to his fruit by the blackbirds till it has dropped from the tree and been perforated by the other birds above-named.

W. H. M.

CANADIAN EGG EXPORTS.—We learn from an exchange that Canadians have sought a market for their eggs in England, since the United States levied an import duty of five cents per dozen on them. The result has not been satisfactory. Cases were broken, waste was enormous, and though the eggs looked bright and fresh, they were reported musty by consumers. A shipment of 3600 dozen cost, at 11 cents per dozen, $396; boxing, insurance, collecting eggs, and other expenses came to $35.25, making total expenses $431.25. The shipper received cash, less exchange, $432, making his net profit 75 cents on the shipment.

HORTICULTURE.

Cultivating the Almond in California.

The estimation in which the almond is held in America, says the *Garden and Forest*, is seen from the fact that nearly six million pounds of these nuts were imported in the fiscal year ending June 30, 1890. They were valued, too, at $813,000, or considerably more than all other imported nuts put together, and this, not because they are the cheapest, for they are the most expensive of imported nuts. There are no reliable statistics of the home production, but the area suited for almond cultivation is confined to a few spots distributed throughout the whole length of California, and it is doubtful if there is enough of it, all told, to supply the American market. In the last number of the *Popular Science Monthly*, Mr. Henry J. Philpott gives a description of the processes by which this favorite nut is produced and made ready for holiday tables, from which we condense the following statements:

The trees are all budded or grafted, for although a seedling almond may be an improvement on the parent tree, it is apt to be worthless, and may be deadly poison. This inclination to sport is seen even in grafted trees, for in Mr. Philpott's orchard, in which the cions were all taken from the most prolific bearers of the best nuts among tested trees, some of them never bear at all, others bear worthless nuts, one yields a nearly perfect peach-pit enclosed in a nearly perfect almond-drupe. The variety known as the California paper shell, originated near Mr. Philpott's ranch, is very distinct, although a purely accidental seedling. Its good size, plump kernel, thin shell, sweet flavor and agreeable appearance enable it to command two or three cents more a pound that any other nut in the market. It is truest of all to the type and most distinct in the form of the tree. Some growers claim that it is less prolific than many other varieties, but others say that it is the most hardy and most prolific, as well as the most salable almond grown, and it is predicted that it will drive the foreign nuts out of the market.

The almond tree resembles in size and shape, as well as in smoothness and color of the bark, an unpruned apple tree, while it is the image of a peach tree in foliage and green fruit. The leaf is so exactly like that of a peach, to which it is nearly related, that a casual visitor can scarcely distinguish them. The same is true of the fruit in a green state, which is a peach in taste and smell. The almond is commonly grafted on peach stock, and an orchard of these trees in bloom is a thing of beauty.

The cultivation of the almond is very easy. The orchard is plowed and harrowed once or twice a year, and then the weeds are kept down in the easiest manner possible, but the tree is never pruned, and the fruit is never thinned, both of which operations cause great expense in the cultivation of other orchard fruits, while so far it is infested with no parasites, and the grower is not at the expense of buying and applying insecticides or fungicides. First to bloom in the spring, the almond is the last to mature in the autumn. All summer long the fruit hangs, the image of a green peach, and after the first few weeks never increasing or changing in appearance. Late in August the seam, which is rather deeper than in most peaches, will open in a few of the earliest, and then the growers are anxious to know whether the almonds will open and remain open, or whether the drupe will remain closed, or will open partially and then close tight, for the whole profit of the crop may depend on the behavior of the fruit in this respect. It may cost half of what the crop is worth to pick and husk it.

The nuts are knocked off of the tree with long poles, and if they are well open they are allowed to drop on the bare ground and are husked as they are picked up. Those which do not open are husked with the fingers. The variety mentioned above is one of the freest, and its drupe often falls off spontaneously and leaves the naked nut hanging to the tree. But the nut so freed from the drupe clings tightest of all to the stem and is often hard to knock down without injury to the branches. In the best of seasons a large part of the crop is so badly opened that a canvas is spread under the tree for the nuts to fall on. When all are knocked down the canvas is rolled up and carried to a place where there is a simple table of boards. One picker rubs the nuts to loosen the drupes, and the others husk. The rubber is practically two old-fashioned washboards which slide over each other. The machine is a flat-bottomed trough, six or eight feet long, and open at one end, across the bottom of which pieces of lath are tacked an inch apart. The nuts are scooped in, a few pounds at a time, and a shorter board, also ribbed crosswise with lath and handled like a flat-iron, is rubbed over them, loosening their husks and pushing them toward the open end of the trough, where they fall into a box to be husked. In larger orchards more complicated machinery is operated by horse or steam power, but the drupes and nuts are still separated by hand. The drupes are generally only loosened by the machine; few of them are rubbed completely off, because, if force enough were employed to remove the drupe, it would break the shell; therefore, in many orchards this year, the only way to market the almond was to crack it with the drupe on and sell the kernel.

Picking and husking almonds costs from $50 to $100 a ton, after which the nuts are sent to be dried and bleached with the fumes of sulphur, a process which requires care and experience. If this is done well and the nuts come out bright and evenly bleached, the grower is satisfied, for he knows that it is the color which sells his almonds. It is claimed that fruit, such as apricots and apples, which is sulphured is poison, and yet unbleached fruit will not bring living prices. It is not probable, however, that sulphuring, as it is conducted, is of any real injury even to evaporated fruit, but in the case of the almond it is only the shells that are colored. As a rule, the harder the shell the whiter the almond will bleach, although this new paper shell of California will bleach the whitest of all.

When cured for market, the nuts are stored and shipped like barley, in coarse gunny sacks, and although a single sack costs but seven or ten cents, the whole expense is a burden on California producers to the amount of $2,000,000. Where grain has to be handled from five to ten times before it reaches the consumer, and all grain is shipped from the Pacific ports in this manner, the sack is a still more expensive crudity, and the graingrower loses by it ten per cent of his gross proceeds. But the burden on the almondgrower is trifling, one per cent perhaps of the gross product, and the sack is altogether an advantage, for it saves the delicate shell and furnishes a place for the brand of the orchardist, who is proud of his product and wishes to work up a reputation for it, and it also gives an opportunity for naming the variety contained in each sack.

The practical question confronting each prospective orchardist is, how soon will trees come into bearing and pay expenses and interest on the investment? Some old men who have tried it, conclude that too much planting for posterity is mistaken kindness, for which posterity, lying in the shade, kicking up its heels and letting its faculties rust for want of some planting to do, returns no thanks. But the almond is an early bearer. At four years from seed, Mr. Philpott's orchard yielded $80 per acre gross, say $60 net. This year, at six years old, with prices considerably below the average, the proceeds will be $125 an acre. Few orchards have yielded so much per tree of the same size, but these trees are so wide apart that there are only half the usual number to the acre. While the trees are small, this tells against the yield per acre. In a general way, it may be said that an almond orchard yields as quick a return as a herd of beef steers, and at the same time the planter does not lose the use of his land. He plants other crops between the rows, but, of course, no ordinary annual crop will yield a profitable return from the price he must pay for land known to be adapted to almonds. The almond, most precious by weight of all orchard products, involves less labor, care, anxiety, expense and skill than any other, excepting, perhaps, the prune. In recent years it has never yielded the fabulous returns realized by the growers of some other fruit or nut. It never yields, as an orange orchard has, a competence for life in a single year from ten acres. Its reasonable expectations are about $100 net per acre.

The above statement is of general interest, and its wide publication in eastern journals of high standing will not do California any harm, to say the least. The writer, or his condenser, do, however, create a few wrong impressions by making as general statements facts which are no doubt true as individual experiences. For instance, it is not true that the almond is infested with no parasites. It is very subject to red spider, and in large interior orchards a summer treatment, consisting in spraying with cold water, followed immediately by blowing dry sublimed sulphur through the tree with a bellows, is found necessary. Fortunately, it is very cheap and very effective.

Sulphuring, the writer says, *if done well*, only bleaches the shell. That is true, but it would have been just as well to add that careless or excessive sulphuring attacks the kernel to such an extent that it becomes unmarketable.

The article would have more truly covered the case if recognition had been given to other almond varieties of local origin which now constitute perhaps nine-tenths of the almond plantations of the State. The variety mentioned is hardly a leading variety, taking the whole State into account.

The writer in *Garden and Forest* seems to emphasize a statement that only a few spots in California can successfully produce the almond. That was the impression ten or twelve years ago, but since the value of the Hatch seedlings and other good local varieties have been demonstrated the almond area has been notably extended.—ED. PRESS.

Our Fruit Products at the Pure Food Exhibition.

The California State Horticultural Society, at its last meeting, decided to make an exhibition of dried fruits, etc., at the Manufacturers', Dealers' and Consumers' Food Exposition, to be held at Madison Square Garden, New York, which opens in October next.

The objects of the exposition are to promote the manufacture, sale and consumption of pure food products; to establish close cordial and confidential relations between the manufacturer, distributer and consumer, and to enlighten and educate the public as to the importance of using the best quality of food. It is not intended to establish a food inspection or analysis, but simply to stimulate the production of higher grades of food products by appeals to the public, who, we believe, are judge and jury in such matters.

Madison Square Garden is the largest and handsomest structure of the kind on the American continent, occupying the entire block fronting on Madison Square Avenue and in the center of the fashionable and populous section of New York.

The advantage to be derived by an exhibition of our fruit products is, to establish in the largest consuming market and distributing center of the continent, the fact of the absolute purity and superiority of California products. The suspicion of adulteration attaches, unfortunately, to our food products. Adulteration is not practiced in California, but that fact must become known, and once known, the market for all that we may produce will be permanently established. The exposition at Madison Square offers us this opportunity. It is the sheerest folly not to take advantage of it.

Those desiring to be represented are requested at once to let us know what they wish to exhibit and in what manner put up. The expense to be incurred will be the cost of space and care of the exhibit while on exhibition, which will be nominal, this expense to be met by assessment, each exhibitor paying his pro rata. Freight charges to be paid by the exhibitor. B. M. LELONG, Chairman, E. W. MASLIN, Secretary, Committee, 220 Sutter Street, San Francisco.

A Pomona Man on Prunes.

E. C. Thurman of Pomona gives the *Progress* his experience in prune-growing and curing as follows:

First, the trees must be grafted or budded on plum stock, and be one or two years old—I prefer one-year-old trees. They must be planted about 25 feet apart, so it will take 100 trees per acre. Good trees ought to be had for 20 cents apiece, or by the thousand for 15 cents. The holes must be dug from two to three feet square, according to quality of the soil.

The fourth season after planting, and even the third if your trees have been well taken care of, you will obtain about ten pounds of prunes to each tree, enough to initiate yourself in the drying business. The fifth year you will get about 60 pounds to each tree; the sixth year 120 pounds or more to the tree. After that, your trees are in full-bearing, producing, according to location and care, from 150 to 300 pounds to the tree.

Do not pick the prunes by hand, as they do not ripen all at the same time, but in about three weeks. Begin to shake your trees toward the first of August, then every week after, and on the fourth time pick them clean.

Now for the drying. The only apparatus needed is an iron kettle holding from 25 to 50 gallons of water. To each 20 gallons of water add one pound of the best American concentrated lye; have the water boiling, then take a wire basket of some kind—the home-made one will do best—put 20 pounds of green prunes in your basket, dip them in the boiling kettle, let them remain there about one minute, or till you perceive that the skin of your prunes are cracked all over. Then take them out and lay them on a tray, and in a week or ten days, according to the heat of the sun, your prunes will be dried enough to put them loose in any kind of boxes holding 50 to 75 pounds. The trays can be made very cheaply (about ten cents each) with four sawed redwood shakes three feet long, nailed on a very primitive frame by anybody who ever used a saw and hammer.

Now, when your prunes are all dried and you want to give them the finishing gloss for market, do as follows: Fill your kettle again with water, but this time no lye is wanted, and when the water is boiling steep your prunes in it for about a minute, till every prune is quite hot, then expose them to the sun for that day, and the next morning you can pack them in boxes or sacks as you prefer. This last steeping will make your prunes very clear and glossy, and will kill every insect and destroy their eggs effectually.

If you follow the above directions you will turn out an article equal to the best in the market, and will obtain the best price. Let us now figure the cost and profit:

COST.

Ten acres of land at $150 per acre	$1,500
One thousand trees at 20 cents each	200
Plowing the land	25
Digging the holes	50
Planting the trees	25
Cultivating	25
Second, third and fourth years, $50 each for plowing and cultivating	150
Taxes for four years	75
Four years' interest, compound at 10 per cent	830
Total at end of four years	$2,880

PROFIT.

The fifth year you will have 1,000 trees, bearing at least 60 pounds each—or 30 tons—equal to 10 pounds of dried prunes, worth 10 cents per pound or $200 per ton	$2,000
If you deduct 10 per cent for labor, you will have a balance of $1,800 net, paying for the whole of the investment and $300 profit left.	
The sixth year you will have 60 tons of green fruit, or 20 tons of dried prunes worth	4,000
On the seventh year your trees will be in full-bearing condition, and will bear each year from 150 to 200 or even 300 pounds to the tree, and I believe I am on the safe side when I say that each tree will bring you $5 net each year or	$5,000

It does not take much perception to see that thus, on an outlay of not a dollar more than $2880, a person can have an easy income of $5000 in ten years' time. I don't know of any better and easier way of insuring a large income than this. I have made these figures with care and prudence on the basis of financial results from the profits of my own seven-acre prune orchard and from the figures given me by four of the most careful fruit growers in Pomona valley.

THE VINEYARD.

The Proposition to Distill Second-Crop Muscatels.

At the recent meeting of the State Board of Trade in San Francisco, L. C. McAfee, a member of the board, was instructed to investigate into the matter of the best method of disposing of the second and third crops of Muscatel and other raisin grapes. On the 12th inst. Mr. McAfee made the following report, which has been sent out to the different county Boards of Trade, and which will be of interest to the general public:

I wrote to different raisingrowers inquiring into the way of getting profitable prices for their raisins, and I found that they have already attempted to organize distilleries to make sweet wine, and one gentleman has already offered a building site in his vineyard for a distillery, should the distillery be located there.

I wrote to S. H. Cole of Fresno and he replied that a committee had been appointed to consider the matter and to

inquire further into the same. A convention was held at Selma for the purpose of conferring with Williams, Brown & Co. on a proposition to erect a distillery at that place, capable of handling from 5000 to 10,000 tons of second and third crop grapes. There were about 150 raisingrowers present at this convention and they agreed to furnish about 2842 tons at a cost of about $7 per ton, which would enable the distillery to go ahead.

I have consulted with two persons engaged in the wine industry, Mr. Landsberger and Mr. C. J. Wetmore. Mr. Landsberger writes me the following letter:

SAN FRANCISCO, CAL., July 12, 1892.

MR. L. C. MCAFEE:—In answer to your question, as to what use could be made of the second crop of Muscatel grapes, other than for drying purposes, allow me to say:

First—If said grapes attain sufficient sugar, say from 28 per cent to 30 per cent, as shown by Balling's Must Scale, a good, sweet Muscatel wine can therefrom be made. It is to be remembered, however, that the trade demands a wine that should be 10 to 20 per cent in alcoholic strength, showing, after alcoholization, not less than 10 per cent (but 12 per cent preferable) of sugar by aforesaid Balling's Scale. As our present laws allow only the addition of 14 per cent of alcohol free of tax, and the 5 per cent or 6 per cent more needed would have to pay the tax, thus increasing the cost of production, the profitability of making sweet Muscatel wine is doubtful.

In my estimation only a very limited amount of such wine would find a ready market. The next use that can be made of these grapes, and independent of their saccharine strength, would be for distillation into brandy. But here I must remark that only a very limited amount of such brandy could at present find a market. The only few houses that buy the article have already contracted for next year's supply. It is only very lately that the demand for Muscat brandy has sprung up. Until about one year ago it could not be sold at all. The German and English markets absolutely refused it.

A third article that could be made of it is a grape syrup. Only a very limited demand for this article is found in this market; but I verily believe that, if properly made and handled, it could be effectually introduced, not only in the eastern and western States, but also in European markets, where probably an unlimited sale could be established.

A friend of mine, Mr. Heyse, says that the Peruvians make pisco (a liquor) from these grapes, and that Leland Stanford has succeeded in making an article at his Vina vineyard in every respect equal to the best Peruvian pisco. Yours respectfully, I. L. LANDSBERGER.

The figures that I received from Mr. Landsberger were identically the same as those received from Mr. Wetmore, which are as follows: The brandy that could be disposed of at present price would be 100,000 gallons, which, at 35 gallons to the ton, is the product of 3000 tons of fresh grapes; 200,000 gallons sweet Muscat wine at 60 to 65 gallons of wine to the ton of grapes equals about 3000 tons of grapes. At 40 cents per gallon for the brandy the yield is equal to $14 per ton for fresh grapes. Distillers buying grapes, based upon the price for brandy, could not pay over $8 per ton for fresh grapes. At 30 cents per gallon for sweet wine the winemaker can afford to pay $12 per ton for fresh grapes. This would reduce the fresh-grape product 6000 tons.

Further, if the grapegrowers would cooperate they would give the distillers a profit.

So I think, as an experiment in the industry, we could get very little relief in the raisin market by manufacturing the second and third crops of grapes into wine and brandy. It is in the line of developing a new industry to the people, and the matter might be further investigated, and this board could not do better than attempt, in every way possible, to favor, as much as possible, diversified interests; though I confess that the outlook for the second and third crops does not look encouraging.

W. Pfeffer continues his notes on training the vine in the *Wine and Spirit Review* as follows:

One of the systems of training the vine, still more or less in the experimental stage, is one I saw several years ago in the vineyard of Dr. John A. Stewart, of Santa Cruz. He plants two rows of vines close together, some twenty inches apart, or thereabout. He uses wire for support of the bearing canes. The distance the vines are planted apart in rows I do not recollect, nor do I know at present what he thinks of the plan after several years of trial, but as he is a progressive public-spirited gentleman, I trust he will some day in the near future add to our general stock of knowledge whatsoever good he derives from his way of training the vine.

The Wm. Wehner method of training the vine consists of planting the vines in such a way that four vines will always form an independent square, or, in other words, on a rectangular plot of land containing nine square feet he plants on each corner one vine. The distance between two such rectangular plots can be eight or seven feet or even six feet according to the planters' fancy, and whether he wishes to do the plowing and cultivating of the vineyard with one horse, or, in a more expeditious way, with two horses abreast. To further explain the very ingenious idea of Mr. Wehner, I will state while he thus plants the vines three feet apart, each vine, when of a long pruning variety, is intended to serve as a support of the long bearing cane from the neighboring vine, and thus do away with wire, slats, stakes or whatever is used for support of the vines. More than this, a vineyard planted in this way on low land presents no obstacle for one horse to pass crossways even through the rectangular plots shortly after the pruning of the vines, and we thus have a system that combines all the principal advantages, and in the words of Mr. Wehner "the vines can be plowed all around; vines close together give all the shade needed and no extra expense for stakes, wires, etc.

But to those growers whose lot is cast in the mountains, either by accident or design, for the working out of viticultural problems, no system however advantageous it may be for level land vineyards, will be of any avail to them, and they must, by force of neccesity, work out a system suitable to their surroundings.

THE shipments from San Diego to Mazatlan are increasing. The last steamer took down the largest consignment yet made, consisting of fruits, cheese, pickles, canned goods, potatoes and vegetables. The fruits embrace peaches, apricots, apples and other fruits produced in the vicinity. The returning cargo will consist of tropical fruits for the San Diego market.

THE STOCK YARD.

American Short-Horn Herd Book.

We have to thank the Short-Horn Breeder's Association for the receipt of the 37th volume, a book of 1116 pages, containing the pedigrees of 4644 bulls and 8951 cows, with the request from Secretary Pickrell that we give such notice of the book through this paper, as we may feel justified in doing; also of the circular, hereafter referred to.

This is the first volume of the work that we have received at this office direct from the Association; whether it has been sent us on account of the correspondence that has appeared in our columns at different times in regard to the premiums offered for milking Shorthorns at the State Fair, or from the supposition that the interests in the breed are being considerably extended in this State, we cannot say.

We are sorry to say, however, that the record does not confirm the correctness of the latter view, as there are only 11 owners of cows having entries, residents of this State, as compared with 25 in Oregon and seven in Washington. Besides these, there are several owners of one or more bulls in each of the three States, which is an all important factor in the general improvement of the cattle of the country in which they are used.

The American Short-Horn Herd Book was first started under very discouraging circumstances by the late Lewis F. Allen of Buffalo, N. Y., who published the first volume in 1846, at his own private expense, not being able to induce any breeder to join him in the enterprise. It contains the pedigrees of about 600 Shorthorns, 190 of which are bulls.

The second volume, containing about 3000 pedigrees, was not published till September, 1855, or nine years after the first volume appeared, so tardy were the breeders of this country in appreciating the value of such a record.

The third volume was published in 1857 and the fourth in 1859. In the third volume we find recorded some of the first Shorthorns that came to California.

It was about this time that the enterprise began to pay. The cattle trade having recovered from a long period of depression, the entries were much more numerous, the bull numbers in the fourth volume running up to 3622.

Mr. Strafford, the editor and owner of the English Herd Book, had by this time closed that work against the pedigrees of American cattle, unless they were imported into England. This fact, in a measure, undoubtedly helped on with the publication of the American Herd Book, the only one in which from that time forward, the breeders of this country could record the pedigrees of their Shorthorns.

Too much credit cannot be given to Mr. Allen for his perseverance in continuing the work under pecuniary losses and most discouraging circumstances, and we often wonder where would have been the man who would have done likewise and taken up the laborious task if he had laid it down on the completion of the first volume.

The circumstance, had it taken place, might have hastened the formation of an association such as eventually purchased the work from him whose last work was done on the 24th volume, published in 1883.

The American Short-Horn Breeders' Association was incorporated under the laws of the State of Illinois, April 26, 1882, since which time it has published 13 large volumes, the 25th to 37th volumes, inclusive, with generally good satisfaction to breeders. As a matter of course where there is a Board of Directors there will be differences of opinion in regard to the management and rules of entry.

The pedigrees of heifers have always been admitted to record in the American Herd Book, differing in this respect from the English H. B., which admits no females till they have produced a living calf, excepting as produce under the pedigree of its dam.

Many breeders advocate the adoption of that rule for the A. H. B., but as yet they appear to be in the minority. With this minority we agree and cannot see the use of entering several thousand pedigrees in each volume before knowing whether the animals to which they belong will be useful as breeders of pedigree cattle or not.

Another thing on which there is difference of opinion is the abbreviation of all pedigrees, as they have been for the last seven volumes, merely giving sire and dam, with reference to volume in which she is entered, with the addition—tracing to imported—(for example) *Goodness*, by Orontes (4623). Or take an imported cow, calved in 1891, after the gr. d. and her sire, we have, "etc, as in Lavender 33d, vol. 26, p. 792." In another pedigree we find reference to a dam recorded in the 12th volume.

We are fully aware that it is necessary to have all the volumes of the Herd Book in order to make a proper study and get a fair understanding of pedigrees in general, but there are many breeders who have not got them and for various reasons have no intention of being possessed of them all. These should be considered and be given the privilege of being able to trace the pedigrees of their cattle to the foundation by referring to some full pedigree in the same volume, this principally with reference to beginners, who sometimes buy the volumes in which their own cattle are recorded, and no other.

With old breeders who have made a life long study of pedigrees and the principles of breeding involved therein, it is different, yet we hold that the manner of abbreviation is unfair to them, chiefly in making more trouble in searching out full pedigrees.

A breeder who is acquainted with the breeding of his own cattle, as every breeder ought to be, does not care for a full reference in the same volume for his own sake, as he has no need to go to the herd book for a full pedigree; he will have that in his own private record, if nowhere else.

It is in wanting to find out how others, some of the most successful breeders perhaps, have bred and succeeded that one wants to search the herd books, and in so doing it is unnecessary trouble to have to refer to several volumes to get at the body of the pedigree, as it were, when one ought to be able to refer to all, on the cow's side, in one volume. Not to be able to do this is bad enough, and if the system is continued for several more volumes, there will be few who will face the task of what is called analyzing a pedigree, and search out the breeding of every bull in the pedigree of every other bull to the foundation.

That is what one has to do when he wants to introduce new blood into his herd by the purchase of a bull. He should know the pedigree from top to bottom, and breeders who pay for having the pedigrees of their cattle recorded are entitled to every reasonable facility that can be given to aid them in acquiring that knowledge.

By abbreviating the pedigrees, many more can be got into a volume, consequently making it much more profitable, in a money point of view, to the association, enabling it to give away some thousands of dollars yearly in premiums for the benefit and encouragement of Shorthorn breeders to improve the breed for the various purposes for which it is used.

Regarding all that pertains to the management of the work, we consider it well and expeditiously done, with very few mistakes for so large a volume. There is an index of breeders and owners, covering about 40 pages, at the beginning of the book; then follows 996 pages of pedigrees, the bulls being placed in alphabetical order and all of each owner's cows under his own name. The females are indexed at the end of the volume, with the name of the sire added—thus, Dora by Grover—the addition being a great help in finding the pedigree of a cow through reference to the index.

THE CIRCULAR

Above mentioned contains a list of the herd books for sale, the price of which has been reduced 50 per cent on all volumes up to volume 30, excepting that volumes 1, 9, 10, 11 and 12 are out of print.

The reduction puts the price of all the volumes (excepting the five out of print) and the E. H. B. Reprint of Bulls, to $60 for the lot, less than $2 per volume all round. This offer is extended to December 31, 1892, and all who wish to become owners of as complete a set as can now be got should avail themselves of this opportunity and write J. H. Pickrell, secretary, Montauk block, Chicago, for particulars.

The association has agreed to make an entry of 25 Shorthorn cows for the dairy school at the Columbian Exposition, and offers very liberal additions to the published list of premiums in both dairy and beef classes. The amount offered is more than $5000, which includes four premiums added in the Grand Sweepstakes class, if won by a Shorthorn, of $500, $300. $200 and $100.

At the Chicago Fat Stock Show, to be held in November next, there are about $1000 offered in additional premiums by the association for competing Shorthorns, so that there is every inducement for those to exhibit who feel inclined to do so.

THE DAIRY.

Dairying in Kern County.

One of the most important and at the same time least noted industries of Kern county, says the Kern County *Echo*, is the dairy business. From the fact that the business is not run upon any systematic plan, and that it is generally carried on in connection with general farming or stock raising, it is difficult to give many exact figures as to the profits of the business. All estimates of the exact, direct proceeds must fall short because of the many indirect items of profit through other lines of farming with which it is connected.

Until a few years ago, the dairy business of the county was almost entirely in the hands of a corporation which with the proverbial soullessness of corporations effectually squelched the small dairies. Since the breaking up of the large dairy ranches into small holdings, the dairy business here has improved rapidly and in its present condition, and future outlook is one of the most promising industries of the county. In the past, the large ranges and the demand for stock cattle induced the dairies to make the calves a primary object in their work. Instead of the calf getting what was left after the dairyman was done, the order was reversed, and the dairyman took the leavings. The inevitable tendency of such a policy was toward beef rather than milk, and the equally inevitable result of such a tendency was a disaster to the dairy products.

Some of the men who we still count as dairymen are in reality only breeding fine bulls for the stockmen and count their dairy produce simply as an item of that business. So much is the dairy, as a distinct feature, in its infancy here that, we regret to note, there are scarcely any of the economical, modern devices for dairying here. Neither has the beef tendency in the cow been overcome. In every dairy in the county there are so many beef cows that the milk producer has scarcely a ghost of a chance. But in spite of all this the fine opportunities for green feed almost the entire year, the remarkably equable temperature and the large and constantly increasing home demand for dairy products all combine to make the business profitable to those already engaged in it, and to offer good inducements to others to embark in it.

During the year ending Dec. 30 1891 there was exported from Kern county, 149,615 pounds of cheese. Much of the whey and milk went into hogs, of which were shipped 27 car loads or 1,960 head. The butter, of which a very large amount was made, was almost entirely consumed by the home trade at an average price of 30 cents per pound while the home consumption of cheese was fully equal to half of the exports of that product, and of hogs, was equal to, or exceeded the exports.

Among the most prominent of Kern county butter and

cheese producers, is Frank Corsett, of the Old river district. He has a better class of dairy cows than the average and being a progressive man, is selecting and breeding with a view to improving the dairy qualities of his stock. J. S. Ellis makes considerable cheese and butter, but his cattle bear a wide reputation for their beef qualities, so that the raising of fine bulls for stock breeders is his principal object. Both of these men find hogs a very important adjunct of their dairy work and have some thoroughbred stock in that line.

W. Canfield has been in the dairy business here for years, and is a heavy producer, especially of cheese. His chief difficulty has been the lack of a convenient shipping point. The station of Canfield to be established near him on the new S. P. branch railroad will be a great convenience to him as well as to many of his neighbors who are in the same business. Chris Mattley is one of the best informed men in the dairy work in the county and everything that he has to say on the subject may be considered authoritative. He keeps a careful record of everything produced, the average of his cows, the prices received, and, in fact, everything pertaining to his work is carefully noted in true business style. He milks on an average 60 cows. During 1891 he made both butter and cheese, but this year has made butter alone. His sales of butter during the first six months of the year were over $2000. His cows, on alfalfa and hay alone, no other feed being used, average $50 per year apiece. This is a better average than many dairies can show with a liberal use of mill or other feed. Mr. Mattley has recently ordered a cream separator, which will greatly facilitate the labor of handling the milk as well as increase the average yield of butter. He is well pleased with the prospects for the dairy interests and thinks that there is room for a great increase in production. P. Corti, Herman Piper and John Batiste are men bred to the work and are constantly increasing their stock both in quantity and quality. There are two milk dairies that supply Bakersfield with milk. Mr. Klipstine milks from 100 to 150 cows, and besides his sales of milk, produces a large quantity of butter by the cream separator process.

The milk dairy of Mrs. Mastellar is a fine illustration of what can be done by strict attention to work. Starting less than two years ago with two or three cows and a can carried around among her neighbors she has built up a good business employing considerable labor and paying a good income.

An Instance of Successful Dairying.

Frank S. Chapin writes as follows for the *Record-Union;* After having seen so many who think there are no chances left in California for a poor man, the writer was greatly pleased the other day in Sierra valley to notice a marked instance of successful accumulation at farming.

Ten years since a young man came to the valley without means and began work on a farm. It was soon discovered that he had no time for anything else and his services commanded an extra price. As fast as he earned a hundred dollars he loaned it out, and at the end of four years his wages and the interest they had earned amounted to $2000. In the meantime he had established so good a name that he was able to take advantage of an excellent opportunity to buy a fine dairy ranch on reasonable terms. His mother had taught him the secret of making fine butter of good keeping qualities, and he was able to get favorable contracts from large consumers. When his own supply was short he filled some of these with butter bought of his neighbors, whose make was not so uniformly good as to enable them to secure contracts on their own account.

Some time since he has put in an engine and separator, and says that he now makes ten pounds of butter from the milk that formerly made seven. As he was always careful in his methods, I do not think this statement was made from a careful comparison of results, but was intended to convey the idea that there was a great gain. His next move will be to purchase a foundation herd from some family of Shorthorns noted as producers of butter. As he already has more personal property than enough to pay off all the indebtedness on a ranch worth easily $15,000, the young man is in a good position to make a wise investment of that kind.

His success was not because he had a better chance than others or more natural capacity. I saw one ranch of 920 acres, with fair buildings and fences, offered at $5000. It was less than Government price for the land, with value of improvements added. It needed someone with the health and capital to bring more of the land under cultivation, and to bring in a ditch of water to irrigate alfalfa. It is easily capable of being made to pay a good interest on $25,000. Nor is this the only similar chance. Again there are hundreds of just as capable men as our friend who has succeeded so well, who have worked hard most of the time for the past ten years, earned a great deal of money and are no better off than they were then. This man had self-respect and a desire for the esteem of others, and had neither time nor money to waste.

With accumulated capital, established credit and business experience, he is in position to make the next $50,000 easier than he has made the first $15,000.

The Field.

Mountain Hay Handling.

Frank S. Chapin writes to the *Record-Union* concerning his observations in the mountain counties of northeastern California as follows: Traveling through the mountains for some weeks, where hay is the principal crop, my attention has been called to the many devices for stacking and storing away in the barns. Many styles of net are used. Some roll the load from the wagons, making a stack a little wider than the length of the wagon and rolling it by means of a long rope and windlass to the end of the stack farthest from the wagon, another rolls the load up the side of the stack. Others are used to roll the load upon a car resting on a track that carries it, as nearly as possible, to the angle of the roof. Other nets are arranged to raise the whole or a part of the load to the stack by a derrick. All these devices handle hay rapidly when everything is just right, but it is considerable trouble to prepare fixtures and sometimes hard to get and keep such men as can work them to good advantage.

To unload by one net takes a very heavy derrick and considerable tackle, while the small nets take more time to unload and to arrange for loading.

The horse fork is more generally used than any other device, and when it has six tines that are long enough to reach half way to the bottom of the load, and derrick and horse are arranged and trained to work it well, there seems to be no better way. For stacking, a very popular derrick is built like a windmill frame, mounted on runners so as to be easily moved, and having a heavy pole whose center works on a joint on top of the derrick.

Ward Bros. of Modoc have a full-grown Percheron stallion that is spending his vacation pitching hay. He starts the fork steadily, then takes a brisk trot as soon as it is free from the load. If the men will do their part as well, he puts a forkful to the top of the stack about as quick as a man would, and easily disposes of a load in five minutes.

Those who build the wagon sheds and stables at the sides of their barns high enough to take a load of hay and arrange for forking into the barn from the side of the mow, can unload in about the same time. When they elevate to the ridge and run it along a track it takes more time, in proportion to length of barn—generally 10 to 15 minutes.

Those who put up hay for least labor do not load wagons at all, but come to the stack with 1000 to 1500 pounds upon a heavy rake, called a buck, and either elevate it by machinery from the side of the stack or slide it up the end upon an incline.

Farmers are using more care every year to guard against the great loss all around the outside of the stack, caused by rain and sunshine. With derricks they are building stacks as high as 40 feet, and one often sees stacks upward of 100 feet long. In Honey Lake valley the best farmers cover with lumber, generally fencing, which is used for several years and finally made into fence.

I can see no good reason why heavy paper treated with paraffine, matthine, or some similar preparation, and kept in place by cleats, to cover a stack in sections, would not be a very cheap and efficient way of protecting hay from loss. Good barns pay a large interest on cost in saving on quality of the hay they store, but in this new country, with its many uses for money, not many feel that they can spare the means to build.

Labor-Saving Devices for Beetgrowers.

The exigencies of the sugar beet product at Chino are stimulating local inventive genius, and the *Champion* thus alludes to it:

Since the beet harvest of last year, the subject of pulling and topping beets economically by machine has occupied a number of persons in Chino. It has been believed that some implement could be constructed by which the work could be done much more rapidly, easily and economically than by the old method of plowing with a plowshare, pulling and topping by hand. Among very large beets, this method left a large percentage of the beets in the ground, as all below the depth at which the plow is run cannot be gathered.

W. K. Gird has invented and made a machine designed to plow out, elevate and top the beets. Its mechanism is very ingenious and calculated to deliver the beets in prime shape. It is now awaiting some corrections and improvements.

H. B. Martin has made an implement to pull beets, the simplicity of the construction of which is a big item in its favor. It will undoubtedly be a success, when Mr. Martin's idea is completely wrought out in it. He is also working upon a topping machine.

But Mr. T. F. White has, we believe, the honor of inventing, manufacturing and first successfully operating a machine which pulls the beets and lays them regularly and in good condition on the top of the ground. We had the pleasure a few days ago of observing this machine making a trial in the fields, and it certainly appeared to be capable of doing all that was claimed for it. It consists of cultivator trucks with beams extending forward to a gauge wheel. To this beam is attached a series of three pairs of rods or prongs, pointed at the lower or anterior end, and retreating on an incline. The points of the first pair are about four inches apart, or wide enough to admit of the larger beets passing between them. As they recede they approach each other. The second pair is closer together, designed to pick up the smaller beets which pass entirely through the first pair. The whole set can be raised or lowered in the ground at will by a pair of levers. When working, the beets are caught between the prongs, and by the approach of the rods together and the resistance of the soil, are raised up the incline until they are dropped on the surface of the ground. The implement picks up the very smallest beets, as well as the large ones, and lays them in a row with the tops in the direction in which the machine is going. This leaves them in a very convenient position for the toppers to pick up and top. We venture to say that a man can top at least 75 per cent a day more after this machine than after a plow. Then a great utility of the machine is that it saves the entire beet, some having been pulled that were fully 25 inches long. Mr. White has filed a caveat on the implement, and will apply for a patent as soon as he gets the details all arranged satisfactorily. The first trials were so satisfactory to Mr. Gird and Mr. Shone that Mr. Gird at once ordered two of them for his use. We hope Mr. White will realize well from this valuable invention. It will save thousands of dollars on the Chino ranch alone, and will undoubtedly be introduced wherever beets are raised. Mr. White has also under way a topping machine.

Fruit Preservation.

Large Scale Apricot Drying.

A communication from Newhall was received by the Los Angeles *Times*, embodying a complaint against Los Angeles employment agents, charging them with resorting to misrepresentation in inducing people to go thither to engage in the work of cutting apricots. The letter stated that the agents promised that apricot cutters could make $2.50 a day at the Newhall drying yards, assuring applicants that they would be paid at the rate of 25 cents per 100 pounds, while the fact is that the price is 8 and 10 cents a box, weighing 40, 50 and 60 and even 70 pounds. The correspondent in addition complained of long hours, poor accomodations and other unpleasant experiences for which he and many others hold the employment agents responsible.

A *Times* reporter was detailed to visit Newhall, which is 28 miles north of Los Angeles, to investigate the complaint and look into the real facts. He found the little village, usually so quiet, transformed into an extremely lively place, the two large apricot-drying establishments running at full blast, employing upward of 1000 persons, all told, American, Spanish, Chinese, Italian, French and other nationalities being represented in characteristic groups in the long, low sheds which shelter from the sun's rays, the hundreds who are busily, and more or less deftly cutting the apricots and spreading them upon the great drying trays.

Three or four carloads of fruit are daily handled by each of the two establishments, the apricots being unloaded in their shipping boxes upon a tramcar which travels the length of the sheds, distributing them to the cutters, who are seated about the frames upon which rest large, shallow wooden trays. On these trays the halved apricots are spread with the inner sides upward. The trays, when filled, are stacked upon another tramcar to be hauled to the sulphuring rooms where the fruit is subjected to the strong fumes of burning brimstone, after which the trays, still in stacks upon the cars, are wheeled away, out into the drying-yard, and laid upon the smooth ground to undergo the desiccating effect of hot sunshine for two succeeding days. Acres of ground are thus covered by the trays of apricots, which, as a result of the bleaching sulphur bath, retain their bright color despite the hotness of the sun. When dried sufficiently the fruit is collected again in boxes, hauled to a warehouse and there placed in sacks for shipment to Eastern markets.

To those whose transactions in apricots have never exceeded an occasional purchase by the dozen or pound at a city fruitstand, the reckless abandon shown in handling the vast quantities at the drying works appears almost sinful. Some fruit is wasted, a great deal is eaten by the cutters and some of it is condemned. Then, when the dried fruit is heaped in great piles preparatory to the bagging, the way the men walk roughshod upon the heaps and playfully pelt each other with the succulent handfuls, convinces one that the housewife's penchant for washing dried fruit before stewing, is not out of place.

The reporter interviewed the superintendent, several men hired by the day and a number of cutters, verifying the truth of the charges made by the correspondent. To a query regarding the price paid to the latter, the superintendent said:

"We pay 8 and 10 cents per box for cutting—8 cents for 40-pound and 10 cents for 50 pound boxes. Yes, the boxes frequently run over weight, 10 pounds or so, but we aim to average them up. Each cutter, as you see, has a large tag attached to him or her, and as fast as one empties a box, a man takes it up and makes a punch mark in the tag. Each of these punch holes represents either 8 or 10 cents, and the wages are paid on presentation of these tags."

"How much can these cutters make in a day?" the reporter asked of another of these "bosses."

"That all depends," was the reply. "Some of them make $1, some $1.50 and some who are quite expert can make $2 or $2.50. There is a man," pointing to an idler near by, "who can make his $3 or more every day; but he is an exceptionally good cutter."

"Yes, we can make from $1 to $2 a day—sometimes," said a cutter; "but it is only when we work all day and all night. You see, while there is fruit on hand we must not stop work until it is all cleared up. Yesterday, for instance, everybody went on at 6 o'clock in the morning, and some of them worked until 4 o'clock this morning, slept an hour or two and went to work again at 6."

"How long could you keep that up?" was asked.

"Well, that was a little longer day than usual, but we work nearly every night to 10 or 11 o'clock."

"What kind of board do you get?"

"Awful. The 15-cent meals the employment agent promised us hardly fill a hollow tooth. We have to pay $5.50 a week for board and lodging, and some of the cutters are lucky if they make enough to pay expenses."

Judging from the large crowd of people who came away from Newhall on the same train that bore the reporter to Los Angeles, and their loudly expressed sentiments of disgust, more than a few cutters had given up trying to keep even with expenses. Practically all of those who went from Los Angeles complained about misrepresentations of the employment agents, and the poor inducements for labor to engage in this kind of work. They do not say anything against the fruit companies, who pay as they promise, though the wages are meager, but they bitterly denounce the agencies that induced them to go to Newhall to make money at "cutting cots."

The Home Circle.

California.

There is a land of every land of the pride,
Beloved by heaven o'er all the world beside;
—*James Montgomery.*

Where smiling spring its earliest visit paid,
And parting summer's lingering bloom delay'd.
—*Oliver Goldsmith.*

Blossoms and fruits at once the trees adorn,
With glowing blushes like the rosy morn.
—*James Thompson.*

Now golden fruits on loaded branches shine,
And grateful clusters swell with floods of wine.
—*Alexander Pope.*

A soothing calm on every breeze is borne,
And softer sings the linnet from the thorn;
—*John Leyden.*

And caught the fragrance which the sundry flowers,
Fed by the streams with soft perpetual showers.
—*William Wordsworth.*

The waving verdure rolls along the plain,
To welcome back its playful mates again.
—*James G. Percival.*

By these fair plains the mountain circle screens,
And feed the streamlets from its dark ravines.
—*Oliver W. Holmes.*

And when the moon with softer radiance gleams,
And lovelier heave the billows in her beams,
—*Robert Southey.*

Is it not lovely?—tell me where doth dwell
The power that wrought so beautiful a spell.
—*Richard H. Dana.*

J. W.

The Lilac Witch.

"It can't be as bad as that, Sophie. Must your father have 20,000 francs by the first of January?"

"Yes, Henri, or else—" her lip quivered a little—"or else the mortgage will be foreclosed, and father will lose all his land, and we shall be homeless."

"Not if I am around!" said Henri, stoutly.

Sophie looked proudly at him, and then around at the wall of the studio. What an artist Henri was!

She came to him and laying her hand gently on his shoulder, gazed sadly into his eyes and said:

"I know, Henri, I know. But then you are poor now."

"I will rise—get a picture into the Salon, make money—"

"Yes, dear, but if papa loses all his property, and besides—" and her gray eyes grew moist and she looked wistfully away.

"And besides?" repeated Henri, with anxious inquiry.

"And, besides, papa has been hinting at the marriage proposals of Jean Bertrand, an old playmate of mine, who offers to pay off all the mortgage on the day of his betrothal to me."

"To you, Sophie! You don't mean that you—that your father—"

Sophie looked down sadly at a pair of neat little feet.

"Henri, you know I love you, and that I have promised faithfully to be your wife; but think of poor papa, and think of all I owe him. Oughtn't I to be ready to make any sacrifice to save him from ruin?"

Then they both looked sadly away in silence. Suddenly Henri squeezed Sophie's hand so hard that she started violently.

"Wait, Sophie!" he exclaimed. "I've got a plan! We—you and I—can earn that twenty thousand."

"Yes, yes; how?"

"Why, you be my model, and I'll paint you."

"Oh, will you? But—but you couldn't sell a picture of *me* for twenty thousand francs."

In answer, Henri drew her before a little square mirror, hung between the two windows, and made her look at her own reflection.

"See there, Sophie! Just look at your eyes. Are they not the deepest gray, with golden lights in them? and are not your lips as red as this carmine? and just see that little pointed chin! How I could paint that! And those pink cheeks—fresh as a baby's!"

Sophie began to blush at Henri's enthusiasm, and turning from the glass, looked into his dark face, which was lit up with the glow of an almost poetic inspiration.

"And, you know," he went on, "something tells me that I shall paint you better than I ever painted anything before—that you will be my muse, my inspiration. You must wear a loosely fitting lilac—very soft lilac—robe, and you will have your hair down, hanging over your left shoulder, which will peep through your curls like a white dove in a golden cage. And you must hold a spray of lilacs in your hand and be reclining under a lilac bush, and I'll call you the Lilac Witch. Didn't you ever hear of the legend of the Lilac Witch? Grandma used to love to tell me about her. She was a very beautiful fairy, and men came around her to catch a smile from her red lips, and the man she smiled on was made bold to do high deeds; but if his heart was drawn away to another woman, in a moment she spoiled all he had done, and made a beggarly wretch of him. Besides, you know, the lilac will go so well with your complexion and hair and eyes."

And so it was planned. The sittings were daily. Sophie was a very patient model, and Henri was full of inspiration and worked with a certainty of success. He made studies of her face in all possible moods and expressions, till by culling what was most entrancing in each, he began to create an ideal. He threw the whole vigor of his poetic soul into his work, striving to get that longing, inspiring look in the large gray eyes which, mingled with an expression half of pity, half of triumph, in the rest of the face, was to make up the ideal of the Lilac Witch. He found the look of longing and inspiration in Sophie's eyes, but the pity and triumph—that divine mixture of pride in victory and sorrow for the conquered—were wanting. By his own talent, Henri created them, inspired by his love and the prize set before him.

One day in December he was working away with his brush while Sophie reclined on the model's platform. He could see how tired she was. His own face showed that but for the indomitable fire in his black eyes, he would have given out long ago. But the day of foreclosing the mortgage drew on apace. Still, to-day was a happy day—Henri had a surprise for Sophie, and as he occasionally searched his palette for colors, the corners of his mouth twitched with his suppressed secret.

Sophie was just saying how Jean Bertrand kept repeating his offer to her father, and how, as the days went by and the first of January approached, her father seemed more and more inclined to accept. Henri smiled sweetly.

"Very good for M. Bertrand," he said. "But I have something to tell you—something splendid, superb," and he kissed his hand with a theatrical gesture.

"O, what is it?" exclaimed Sophie, jumping up and spoiling the folds of her carefully arranged drapery.

Henri forgave her that for the sake of the news. Then he told her how the agent of an oil magnate, just over from America, was looking all over Paris for paintings of beautiful women; how he had seen the "Lilac Witch," now nearly finished, and how he had, with an American's extravagance, offered the fabulous sum of 30,000 francs. That ended the sitting for that day, for Sophie insisted on taking Henri at once to her father, telling him the news, and making him break off all further negotiations with Jean Bertrand.

And so it was arranged. Henri was to pay off the mortgage as soon as the picture was transferred, keeping the surplus of 10,000 francs to start life with Sophie, while her father dismissed Jean Bertrand with the precautionary hint that, in case the American should fail, then he would immediately accept Bertrand's offer.

It was the evening before the great day when the picture was to be formally sold, the 30,000 francs handed over, and Henri and Sophie married. Henri was in the studio, standing before the picture. In one hand he held a lighted cigarette; in the other an acutely pointed paint brush. He was scrutinizing the face of his beloved "Lilac Witch" with a look of intense exultation. Every now and then he would make an infinitesimal stroke with the brush, after which he would take a long pull at the cigarette, letting the smoke slowly exude from his mouth and nose in a manner that bespoke keen satisfaction. He was putting on what he called the last touches before he said good-night to the picture and went to call on Sophie. He looked at his watch. It was already past 9, and he had promised to be there at 8. Still, there were only a few more tiny touches needed and then he would go. He lit cigarette after cigarette, he walked up and down the room, changed the lamps and surveyed the painting from twenty different points of view. Finally, he seemed satisfied, threw down the brush, drew a sofa up in front of the easel and lay there, watching the Witch's face with a lover's rapture. His chest heaved, his eyes grew bright, the muscles round his mouth softened into an expression of supreme delight.

Suddenly he started and looked at his watch. It was 12 o'clock and he had forgotten, and Sophie had probably gone to bed, wondering why he never came. He blamed himself for being so thoughtless.

This changed the current of his thoughts, reminding him that to-morrow he married Sophie and they would always live together. A bright smile lit up his face, but it was a commonplace smile compared to his look of a few seconds ago. Yes, to-morrow Sophie would be his, and they would come and pay him 30,000 francs and take away the "Lilac Witch." Take away the "Lilac Witch?" Why, of course; he had only painted it for the sake of marrying Sophie.

Henri looked away from the picture with a dull ache at his heart. Somehow, life with Sophie, when the "Lilac Witch" was gone, did not seem so sweet as it used to in the old days when they had the first sittings. Then the picture only meant to him the portrait of his dear Sophie. Now, when he was gazing into that fair, arch face on the canvas, so triumphant and yet so pitying and tender, he never thought of its being Sophie's face at all. He seemed to see there something that was all his own and had come out of his own soul. How could he bear to part with it? But he was winning Sophie by giving it up. A horrible doubt came to him. What if after all he should love the picture better than the model? He shook his head resolutely and went to bed. All that night in his dreams that awful doubt tormented him.

On the morrow Sophie appeared before the hour of the business transaction, so as to tidy up the studio and make it look more festive. She found Henri there before the picture as usual. He had wheeled the easel up near the window and was devouring the painting with his eyes. He never so much as turned his head to greet her. He saw there, on a bank of moss, half sitting, half reclining, a beautiful woman, the image of his sweetheart, yet wearing an intangible something about the eyes and mouth—something that Henri, with feelings of misgiving, felt that Sophie had not. The wavy, light brown hair, hanging in ringlets over the bare shoulder, and the vermeil tint of the pure cheek, were simply a clever copy of Sophie's charms. But in the gray eyes was a look that seemed to tell of a great, unsatisfied longing for love—or, perhaps, victory—while the delicate, slightly curving lips had a tender, pitying expression that was strangely contradicted by the pointed chin, which bodied forth a scornful joy of triumph—perhaps the very triumph which the eyes were longing for, and whose victim the mouth pitied. The very compositeness of the face, full of contradictions, was the origin of its charm.

Henri looked long at the face, and then turned and glanced half timidly, half hopefully, at Sophie. She thought she caught his meaning and smiled back at him.

"Is it like?" she laughed.

Henri's face lost the look of hope. He turned eagerly back to the picture, looked at it a minute, then turned away with a sigh. Sophie came to him, and looking over his shoulder at the lovely reflection of herself, asked him why he sighed. He answered:

"Ah, Sophie, you cannot understand, you cannot know the feeling of adoration which an artist has for something into which he has poured his whole soul. This is my masterpiece. I shall never do anything as good, as rich, as expansive again—no, never! All the strength, all the purity, all the poetry, of my inmost soul are embodied in that one painting, and now—now I must part with it—must say good-by forever to what has been meat and drink to me for months past. You cannot know what it has come to mean to me—how, like Pygmalion, I have worshipped it as I created it. It is more than a portrait. It is an ideal in which I have lived for months. O, where—where shall I find anything to take its place?"

And Henri, kneeling before the picture, spread out his hands in supplication. Sophie knelt beside him, and gently passing one arm over his shoulder, whispered softly to him, as if they already knelt before the altar:

"Here, Henri, here I am! Have you not me? Did you not paint that picture to marry me, and now it's done, are we not to be married, and you are to have me always?"

She paused. Henri slowly looked around and gazed long and steadily, with a blank, searching look, into her sweet, pale face. Then he turned toward the "Lilac Witch," shuddered and sorrowfully shook his head. He noticed that in a spot near the edge of the canvas the varnish had worn a little rough. He got up from his knees, and pushing aside a curtain, went into a side room to get a pot of varnish.

Sophie remained motionless, kneeling before the picture, her bosom heaving, her eyes flashing, her hands clutching convulsively at her dress. She repeated his last words—"Where shall I find anything to take its place?"

Jealousy, cruel as the grave, jealousy of her own idealized self, jealousy of the image of her own person reflected in the artist's imagination, was taking hold of her. O, how she hated the picture that had stolen her only possession, had cheated her of Henri's love! She arose and looked savagely at the lovely "Lilac Witch." Then, glancing wildly around the room for a weapon, she spied on a little table Henri's mixing-knife. It was of steel and quite sharp. She ran to it, seized it, and then coming up so close that her hot breath made the canvas moist, she hissed:

"There, you thief, you," and with a few strokes of the knife, she cut and slashed the lovely face and tore out the gray eyes, and hacked the poor head and bosom into shreds. Then, throwing back her head, she stood upright, panting and trembling, before her disfigured rival.

At that second it seemed as if the scornful, pitying, triumphant look of the Lilac Witch had passed to her own face.

Just then came a rustle at the curtain and a rattle at the door. Henri slipped in quietly from the inner room, and Sophie's father came bustling in from the hall. The two men came forward and greeted one another cordially; then they turned toward Sophie and the picture.

With a sharp cry Henri bounded forward, and pressing his forehead against the mutilated painting, cried like a child.

Sophie looked wildly about, and staggered toward her father. He roughly led her to a chair. Then, pulling his hat down over his ears, he said hoarsely, half aloud:

"I must go and find Jean Bertrand."

Charles W. Shope in the Harvard Advocate.

That Old Parasol.

Don't throw it away, the frame is just as good as new, and a little ingenuity and a small amount of material will do wonders in making something charming out of it. Get two squares of silk mull, or, if you can't find that, a fine hernani, or almost any other really fine, handsome, thin material. There are eight ribs to the average parasol; and two squares exactly in handkerchief shape, so placed that one point comes midway of the side of the other, will just cover the parasol. Lay these squares over the frame and attach the points very lightly. If carefully done, a pin will hold them until properly arranged. Then cut a small hole in the middle of each section; through this the tip of the stick is to be passed, the circle or rim around it having been previously removed, which is easily done by taking out the little rivet that holds it to the wood. Out of the material that comes off at the sides when the squares are cut make a tiny puff. Put this around the tip and put the little rim back in place. The edges of the material may be hemmed or turned in and covered by a ruffle of lace. If desired, a lining may be put in. To do this, it is well to have a pattern taken from the cover as it originally was on the parasol.

While it is considered quite an undertaking to cover a parasol nicely, it is by no means the formidable task that many people seem to think. What is required is exceeding care and neatness and a very close attention to the minor details of the job. Once having tried the experiment, the careful needlewoman will experience little difficulty in doing a good piece of work. A bit of crepe de Chine, crepe lisse or other material costs but little, and will make a very handsome finish to any one of the score of old frames, many of them with really elegant handles, which may be found in almost any of the store-closets or wardrobes in the country, and which are, as a general thing, thrown aside as absolutely worthless.

Fine work is by no means a monopoly; and, while there is a certain handling, which may be called "style," in the putting up of these goods, the neatness which is required to do a first-class job may be acquired by almost anybody. A trimming of lace, plaiting, ruching and puffing, indeed, garniture of any sort which is made of material, can readily be arranged by any lady of ingenuity; and as there is in many families a greater amount of good taste and wit than money, it is well for the wives and daughters to realize that they can, with but trifling cost, supply themselves, not only with parasols, but with many other beautiful things.

EDITOR—See here! In this story you make one of the characters ask another how the thermometer stands.

Contributor—Yes.

Editor—And then you write: "At 96 degrees," she replied in frigid tones.

THE girls are dressing more like the men every season, but we have not noticed any any of those suspenders the dear things are wearing this summer fastened with a tenpenny nail.

Beach Life at Santa Monica.

Written for the RURAL PRESS by CLARA S. BROWN.

There are several attractive seaside resorts near Los Angeles which are largely frequented during the summer season. Santa Monica has been the most prominent of these for some years, but now has a rival in the rapidly growing port of Redondo. Any one viewing the Sunday crowd at either of these places would think there could not be many people left for the other watering places, unless observation had previously shown him that crowded cars are the rule on all the seaside trains.

Santa Monica is 18 miles from Los Angeles and is connected with the city by two lines of railway, the Southern Pacific and the recently completed Santa Fe.

The S. P. line runs through the best of farming land, much of it perennially moist and green, affording pasturage for large herds of cattle and horses. It is still in large holdings and will afford many opportunities for settlement when it is divided into small portions, as the princely estates of California will be divided some day There is only one town on the Southern Pacific route; this was created by the railway company five years ago, and is called "The Palms," from the fact that the streets are bordered with palm trees. Eucalyptus and evergreen groves were planted, parks were ornamented with tropical trees and plants, handsome villas were erected, and already the valley is transformed into a sylvan dale, making a beautiful suburban residence. Midway between The Palms and the Santa Monica range of mountains, which extends at right angles from the sea, is a National Soldiers' Home, established three years ago and occupied by about 700 veterans. The large, dark-red buildings are beautifully situated, and the extensive grounds may be made to excel in loveliness those of any other similar institution in the Union, for, added to the liberal appropriation from the Government, is the most favorable climate for vegetation. The old soldiers enjoy their proximity to the ocean, and are seen on the streets of Santa Monica every day.

The breeze freshens and has a salty flavor, the long train quickens its speed after surmounting the steep grade near The Palms, and there, stretching illimitably before us, is the azure Pacific. Just as we question whether we are going to plunge into the sparkling water, the engine stops on a bluff 50 feet above the beach, the Hotel Arcadia close at our left and the town nestling amid its foliage on our right. Following the crowd, we are quickly on the beach, and here the fun begins. Some go out on the wharf to fish, others rush to the bathhouses eager for a dip in the surf, the perpetually hungry retreat to the pavilions and spread out the contents of their generous lunch baskets, children dig in the sand, and old and young establish themselves close by the restless waves and listen to their never-ending song. All along the beach are tents and rustic cottages occupied by campers, who lease the ground with water and other conveniences. The heterogeneous structures are unsightly, but they condense within their close compass a freedom of enjoyment that is more highly prized by many persons than the most luxurious quarters would be with their attendant limitations. During the months of June, July, August and September, the beach is lively with this resident population, aside from the numerous daily visitors, and many amusing incidents occur. Santa Monica has two distinct phases of life—the fashionable and unconventional—and the latter séems a part of the very sands of the beach. One longs for a kodak as the impossibility of describing the many ludicrous scenes with a pen is apparent. There is no lawlessness, only an abandonment to innocent and healthful sport which attacks paterfamilias as well as his young hopefuls, the worthy matrons and gay young girls. The rollers dash in with considerable force, except at low tide, and bathing is exhilarating. There are strong ropes for the timid and weak, but swimmers fearlessly breast the advancing waves as they rear themselves preparatory to their plunge upon the beach, breaking into a sea of foam. Hot salt water baths may be had, and there are still-water tanks provided with trapezes and springboards for those who do not enjoy the surf. Besides the beach sports, there are free concerts on the shady esplanade which is the pride of Santa Monica. The Sunday throng attendant upon them is thoroughly cosmopolitan. Good-natured Germans talk volubly beside dark-skinned Mexicans or Italians; the lively French elbow England's complacent sons and daughters; Swedes and Norwegians mix with natives of Southern climes; the rubicund Irishman and the "colored gemman" are there; representatives from every State and Territory in the Union may be seen; gray-haired men and little children, hard workers, sporting men, music lovers, fun lovers, and a goodly sprinkling of blue-coated, crippled inmates of the Soldiers' Home. It is Sunday; these people have forsaken the customs that send men churchward; the scene is to some minds a desecration of the day, yet this motley crowd is an orderly one; there is no hint of indecency within it. Very little drunkenness is seen, and a woman without escort is perfectly free from annoyance. Often there are balloon ascensions and parachute descents. In the days of "the boom," when lawless characters from all quarters were attracted to southern California, "sure thing" gamblers infested Santa Monica, but nothing of the kind is visible now. Standing on the bluff and looking seaward, one is struck with the beauty of the curving shore line as it runs out to the extremity of Point Dunie on one hand and beyond Redondo to Point Vincent on the other. The Sierra Santa Monica jut boldly into the sea on Point Dunie, and when the sun sets behind their rugged outlines, a picture is formed worthy of the most noted artist's brush. I once heard a famous writer say that it was the finest view of the kind that he had ever beheld, yet he had traveled in many lands. Fashion also has many devotees here. At the hotel on the verge of the bluff, or at the Casino on the outskirts of the town, one may lead a very different life from that of the beach campers and picnickers. Brilliant balls are given, tennis, polo and horseback riding are practiced. The annual tennis tournaments of southern California take place at the Casino, and the State National Guard has more than once held its encampment at this resort. There are beautiful shaded canyons in the mountains, two miles distant, which attract many visitors; so also does the flourishing ostrich farm near by. The town is situated on a plateau above the bluff, which is in some places 100 feet high. Numerous pretty flower gardens, green lawns and spreading shade trees show that the ocean breezes are not too severe for abundant plant growth, while they temper the atmosphere to a delightfully equable degree summer and winter. During the remarkably long hot spell of last year, the mercury never went higher than 78° at Santa Monica. The place is well patronized during the winter, as it is never too cold for comfort, and there is more or less sea-bathing the year round. The permanent population of the town is about 1500. U. S. Senator John P. Jones of Nevada has an elegant residence on Ocean avenue, which is occupied much of the time by his family. Fanny Davenport, the well-known actress, has a pretty cottage overlooking the sea. The Southern Pacific Railway Company is now building one of the longest wharves in the world near Point Dunie, intending to create a deep-sea harbor that will be protected from storms. The wharf is to extend diagonally across the bay, forming a breakwater, and will be about a mile and a quarter long. It is expected that Santa Monica will become a place of commercial importance after this enterprise is completed; but, independent of shipping business, the town will always have its beach and climate and be one of the most famous watering places of the Pacific coast.

A LITTLE eight-year-old Irish boy in one of our public schools was reproved by his teacher for some mischief. He was about to deny his fault, when she said:

"I saw you, Jerry."

"Yes," he replied, as quick as a flash. "I tells them there an't much yous don't see wid them purty black eyes of yourn."

That was the soft answer that turned away wrath.

"BILLINGS got his pension yet?"

"I didn't know Billings was entitled to a pension."

"He thinks he is, any way. He claims to have contracted a chronic case of that tired feeling from reading war articles in the magazines."

A CORRESPONDENT writes:

Your joke on the summer girl going for the rain beau is good, but as usual in such cases, isn't she looking for a pot of money?

For further particulars, inquire of the summer girl.

"YOU ortn't to put them pieces o' money in yer mouth, Swipsey," said the newsboy.

"Why not," demanded the bootblack.

"Coz it ain't manly. It makes yer look like a woman ridin' on a street car."

BILLY the beau—Anything new in engagement rings?

Jeweler—Yes; our new "Seaside" plated goods are cheap, and are warranted to outwear any summer-resort engagement.

YOUNG FOLKS' COLUMN.

Pittypat and Tippytoe.

All day long they come and go,
Pittypat and Tippytoe;
Footprints up and down the hall,
Playthings scattered on the floor,
Finger marks along the wall,
Telltale streaks upon the door—
By these presents you shall know
Pittypat and Tippytoe.

How they riot at their play!
And a dozen times a day
In they troop, demanding bread,
Only buttered bread will do,
And that butter must be spread
Inches thick with sugar, too!
Never yet have I said "No,
Pittypat and Tippytoe."

Sometimes there are griefs to soothe
Sometimes ruffled brows to smooth;
For I much regret to say,
Tippytoe and Pittypat
Sometimes interrupt their play
With an internecine spat.
Fie! oh, fie! to quarrel so
Pittypat and Tippytoe!

Oh, the thousand wearying things
Every day recurrent brings!
Hands to scrub and hair to brush,
Search for playthings gone amiss,
Many a murmuring to hush,
Many a little bump to kiss!
Life's indeed a fleeting show,
Pittypat and Tippytoe!

And when day is at an end
There are little duds to mend;
Little frocks are strangely torn,
Little shoes great holes reveal,
Little hose, but one day worn,
Rudely yawn at toe or heel!
Who but you can work such woe,
Pittypat and Tippytoe!

But when comes this thought to me—
"Some there are that childless be!"
Stealing to their little beds,
With a love I cannot speak,
Tenderly I stroke their heads,
Fondly kiss each velvet cheek.
God help those who do not know
A Pittypat or Tippytoe!

On the floor, along the hall,
Rudely traced upon the wall,
There are proofs in every kind
Of the havoc they have wrought,
And upon my heart you'll find
Just such trade marks if you sought;
Oh, how glad I am 'tis so
Pittypat and Tippytoe!

—*Eugene Field in Mail and Express.*

The Little White Cat.

The little white cat was quite glad to see the bright sunshine; it seemed to her as though the rain had been falling for nearly a lifetime, though really it had been falling for only two weeks, such a pleasant spring rain it was.

The kitty stood in the open hall door and thought, "How sweet the air is! I will go out and have a good taste of it." So she went on to the porch and looked about.

"How the world has changed in looks since I saw it!" thought she. "The green fringe that covers the ground is much longer than it was; but why does it wiggle so? Does it wish me to play with it?"

She ran down the stone walk and patted some of the longest grass; then, half scared, she jumped on to the gate post.

"Dear, dear!" she thought, "what has happened to the trees? I never saw green frost! No, that isn't it. Are they covered with tiny green birds? How they keep moving, and never go anywhere! There's one now," and the little cat jumped from her post to catch a yellow butterfly!

The little white cat chased the butterfly for quite a distance. Then, as the pretty winged creature lighted in a tree, kitty thought, "There, it has fastened itself on a tree again."

Kitty walked on. She never had been walking alone before, and she thought it quite fine.

"Bow, wow, wow!"

Kitty looked around and there was a great black dog coming.

The little white cat ran.

The big black dog ran.

Kitty ran as fast as she could.

The big black dog ran faster than kitty. Kitty turned suddenly, and ran up a tree. When she reached the lowest branches, she stopped and clung there—such a tired, frightened little thing!

The great black dog sprang at the tree, and put his big forepaws as high as he could reach on the trunk of it. Then he barked, Bow, wow, wow! Bow, wow, wow!"

The little cat trembled. She thought that such a terrible noise might shake her down from the tree, and the dog's mouth was so large she was sure it would swallow her if she should fall.

"Hippity-hop to the barber's shop!" sang two little girls, dancing along the walk together.

Ruby had red cheeks, brown eyes and short black hair.

Alice had pale cheeks, blue eyes and long, golden curls.

"Why, Ruby," said Alice, "see that great dog! Aren't you scared? Let's run!"

"Oh, Alice, that dog wouldn't hurt us," Ruby answered.

"But see how big he is."

"Well, the larger he is the better," said Ruby. "Large dogs take care of children!"

"What's he barking at?" wondered Alice.

"There's something white in the tree," answered Ruby. "Maybe it's a rabbit."

"I do believe it's a kitty," said Alice, stepping behind a tree.

"Well," said Ruby, "I'll go and see about it, anyway."

She ran up to the dog and said: "Stop, sir, stop! You musn't bark at that little kitty, a great dog like you! I don't b'lieve you thought 'fore you did it. Go home, sir, go home!"

The dog looked at Ruby while she talked to him. Then he turned and ran off.

"Come, Alice!" said Ruby.

The girls then tried to coax the little white cat from the tree.

"Come, kitty, kitty, kitty! Come, you sweet little thing!" they called.

Suddenly Alice exclaimed: "That's Rose Hall's kitten! Don't you see the pink ribbon around its neck? Come, Daisy, nice Daisy!"

The little cat came out of the tree, down into the girl's arms when it heard its name called. How it purred! "That's to thank us," said Alice.

"Don't you think we would better take it home?" asked Ruby.

"Yes; and I'll carry it the first half of the way home, and you carry it the other half," said Alice.

"Does it always wear a pink ribbon?" inquired Ruby.

"It's this way about the ribbons," said Alice: "One day she wears a pink ribbon, and the next day Rose puts a blue one on her; then pink, then blue, you know. Well, the day she has on a pink ribbon she has the pink side of her cushion up, and when she wears her blue ribbon the blue side of her cushion is up Pink and blue sateen the cushion is. Pretty, um-m-m!"

"My!" said Ruby.

"Yes," added Alice, "and her saucer is blue and pink. Here we are, and Rose is at the gate."

"O girls, where did you find Daisy?" called Rose, running to meet them.

The girls told her all they knew of Daisy's adventures, then said, "Good-bye," and went on

Rose took kitty into the house, where she drank milk from a pink and blue saucer. Then she lay down on the pink side of her cushion, and, as she closed her eyes for a nap, she thought: "There! I have been up in one of those trees, and I didn't find out what those little green things were after all.—Carrie B. Sanborn, in Christian Register.

ELSIE, who is the youngest of the family, was entertaining me the other day. During the conversation she said: "All the folks who come to our house are so much older than I am." Giving a little sigh she continued: "There seems to be awfully few people seven years old nowadays."

ROYAL



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A cream of tartar baking powder Highest of all in leavening strength.—*Latest U S. Government Food Report.*

Good Health.

Exercise.

Much of the food actually digested and assimilated is not used to the fullest extent, for want of sufficient oxidization to make it yield the greatest amount of vitalizing power to the tissues of the body. Such partially unoxidized products have an irritating effect on the organs and tissues, and predispose them to disease, if they do not directly affect them with it.

Exercise has a stimulating effect on all parts of the body by inducing further oxidation in all the tissues and organs. This increased oxidation is attended by a greater demand upon the part of the system for oxygen, as indicated by the greater number, force and frequency of the respirations.

During exercise the heart beats faster, and forces more blood through the lungs to all parts of the body, bearing in its little blood cells the precious life-giving factor, oxygen. These little cells, one constituent of which, *hæmoglobin*, has the wonderful faculty of quickly loading and unloading itself with oxygen—thus act as direct aids to the process of oxidation in the tissues and organs.

It is the combining of oxygen with unoxidized products in the blood that gives to each individual cell its possibility of sustaining life. Any process which increases the oxygen supplied to all parts of the body tends to strengthen the life in each individual cell, and to give it more power to resist disease.

Exercise, of all factors, does this most effectively; and besides actually producing in each individual cell a greater vitality, it gives a favorable opportunity for the waste products of the tissue to be thrown off rapidly. But thus causing a further oxidizing of certain matter in the blood, it conduces in a double sense to life and health.

Habitual outdoor exercise, with suitable protection from extremes of weather, is the most effectual means of prolonging life to old age.

In this age of rush and hurry, when time is too precious to use for systematic exercise, and when the cultivation of the brain too often debars the remainder of the body from a complete development, it is not to be wondered at that the body succumbs to diseases which overtake it in its prime, because it has not the vitality to resist their inroads.

Our legal authorities would confer countless blessings upon "millions yet unborn" if they would pay more attention to increasing the number of public parks and places conducive to indulgence in outdoor sports.—Youths' Companion.

Tooth Culture.

In a capital address on "tooth culture," delivered at the annual meeting of the Eastern Counties Branch of the British Dental Association, and printed in *Lancet*, Sir James Crichton-Browne referred to a change which has taken place in bread, as one of the causes of the increase of dental caries. So far as England is concerned, this is essentially an age of white bread and fine flour, and it is an age therefore in which we are no longer partaking, to anything like the same amount that our ancestors did, of the bran or husky parts of wheat, and so are deprived to a large degree of a chemical element which they contain—namely, fluorine. The late Dr. George Wilson showed that fluorine is more widely distributed in nature than was before his time supposed, but still, as he pointed out, it is but sparingly present where it does occur and the only channels by which it can apparently find its way into the animal economy are through the siliceous stems of grasses and outer husks of grain, in which it exists in comparative abundance. Analysis has proved that the enamel of the teeth contains more fluorine, in the form of fluoride of calcium, than any other part of the body, and fluorine might, indeed, be regarded as the characteristic chemical constituent of this structure, the hardest of all animal tissue, and containing 95.5 per cent of salts, against 75 per cent in the dentine. As this is so, it is clear that a supply of fluorine, while the development of the teeth is progressing, is essential to the proper formation of the enamel, and that any deficiency in this respect must result in thin and inferior enamel. Sir James Crichton-Browne thinks it well worthy of consideration whether the reintroduction into our diet of a supply of fluorine in some suitable natural form—and what form, he asks, can be more suitable than that in which it exists in the pellicles of our grain stuffs?—might not do something to fortify the teeth of the next generation.

Golden Trout.

Three specimens of trout caught in Mount Whitney creek, on Mount Whitney, by Mr. Harvey of Lone Pine, Inyo county, Cal., and by him given to Hon. Geo. S. Mills, Fish Commissioner of Nevada, who in turn sent them to William H. Sharkley, were sent to Dr. David S. Jordan, President of Leland Stanford Jr. University, with the request that he classify them. The following is what Mr. Jordan has to say of them:

"They are the famous golden trout of Mt. Whitney and the Upper Kern river, which has attracted the attention of anglers for some little time, but which has not yet, so far as I know, received any adequate notice in print.

"The trout were first brought to my notice by Lieutenant Wheeler's geological survey, which brought me specimens in 1877. These were not in very good condition. I regarded them as of the same kind as the the trout in the headwaters of the Colorado, at the same time calling attention to the remarkable distribution of species on both sides of the desert and the mountains. Later on I received other small specimens, but still in such poor condition that I could do nothing more with them. The three received were in perfect condition, and I have had a colored painting made of them. The fish is really a distinct species of trout, entirely different from any found elsewhere either in the Rocky mountains or Sierra Nevadas. The very small size of its scales, the lack of teeth on the hyoid bones, and the peculiar color markings, are all distinctive of this trout, which will in time receive a name of its own.

"It seems evident, so far as one can judge of such matters, that this trout is descended from the trout of Western Colorado, which abound in the tributaries of Clear river, the Green river and the Grand river and in the Gunnison district. But in being separated from these trout it has undergone a considerable change, and one would think this separation must have occurred before the Sierra Nevadas were elevated. It has already been claimed by geologists that the Kern valley, although on the California side of the Sierra, is geologically a part of the Great Basin. Its trout, at any rate, are wholly different from the rainbow trout of California."

How to File a Saw.

Every person should have a crosscut saw and a ripsaw, and should know how to file both. He will need a three-cornered file and a couple of straight-edged boards, two or three inches wide and about the length of the saw, between which to clamp the saw in position firmly while being sharpened. The principle of sawing is the same as cutting. In ripping, the teeth act like a series of chisels, and should conform to a chisel shape as nearly as is consistent with the proper strength at the base of the tooth. The teeth of ripsaws are filed straight across the blade from every way, thus giving an entirely level and straight front to the tooth

The filing of crosscut saws is more difficult than ripsaws, at least to the amateur, as they are filed at an angle both horizontally and perpendicularly, and the set, or pitch, of the tooth must be governed by the hardness of the wood to be sawed. The softer the wood, the steeper the forward pitch of the tooth may be. In this form, the sides and base of the tooth are equally long. This gives the base of the tooth the strength to resist the pressure of the hardest woods. The hardness of the wood has also to do with the size of the teeth, as the harder the wood, the smaller the teeth must be in the same style of saw. The set of the tooth may be given fairly well, by a careful hand, by tapping each tooth with a hammer and punch as it lies flat on the end of a hard wood block, but it is best administered by one of the many good saw-sets in use. The width of the set is governed by the softness or sponginess of the wood. Elastic wood, such as willow, requires a very wide set. Give in no instance more set than is required to make the saw run easily, as all beyond this demands extra and useless effort, besides wasting the timber.—Farm and Home.

It is not generally known that the light of the sun and the moon exercise a deleterious effect on edge tools. Knives, drills, scythes and sickles assume a blue color if they are exposed for some length of time to the light and heat of the sun; the sharp edge disappears and the tool is rendered absolutely useless until it is retempered. Purchasers should therefore be on their guard against buying tools from retail dealers and peddlers, which for show purposes have probably been exposed for days together to the glare of the sun. The unserviceableness of tools acquired under these conditions is generally wrongly attributed to bad material or to interior workmanship. A similar prejudicial effect has been exercised by moonlight. An ordinary crosscut saw is asserted to have been put out of shape in a single night by exposure to the moon.

The Ancient Blacksmith.—The blacksmith occupied an important position among the craftsmen of the Middle Ages. The insecurity of life and property, which was one of the chief grievances of the times, made strength of material indispensable, whether to guard the shrine of a saint or to protect, after a more homely fashion, the family chest or coffer. The strength and durability of iron led to its use for these defensive purposes from early times. Until coal came into general use, malleable iron was produced direct from the ore with charcoal fuel by continuous working. Sussex was from early times the chief seat of the iron industry. The earliest positive record of the trade there is contained in a grant made by King Henry III to the town of Lewes in 1266, by which the inhabitants were empowered to raise toll for the repair of the town walls after the battle. Every cart load of iron destined for sale, which came from the neighboring "weald," was to pay one penny toll, and every horse load of iron half that sum. In 1290 a sum of money was paid to a certain Master Henry of Lewes for the ironwork to the monument of Henry III in Westminster Abbey, which reminds us that talented smiths were brought often from long distances for important works.—Chambers Journal.

Rust from Plows.—An exchange gives a good recipe for removing rust from plows, Purchase a small quantity of sulphuric acid. which may be had from any drug store for a small sum. Pour five ounces of it into a pint of water, slowly and carefully so as not to come in contact with the hands or clothing, as it will eat into the flesh worse than fire. Apply this to the plow, or any other iron or steel implement to be cleaned, with a paint brush. As soon as one application of the acid is dry, apply another; usually three or four coats will be enough. Then wash off with clear water. If any spots remain, paint over these spots again and rub with brick dust. After the iron work is cleaned, paint it over with a little coal oil or linseed oil; this will keep it free from rust. Set the implement in a dry place and on a wooden floor. All implements, when kept free from rust and bright, will scour readily in the soil, will do better work, and with little extra force. A badly rusted plow is very worrying to work with, both to the team and plowman. The plow cannot be made to clean, causing frequent stoppages, and the furrow cannot be turned completely over, making very poor work.

Houses of Glass.—While transparent glass brick have been employed for some time in walls of buildings to afford light at places where a window would interfere with the architectnral plan, this material has not been used to any extent for general construction purposes. It is now proposed to cast the glass, not necessarily transparent, into large blocks for buildings. As it is practically indestructible, nonabsorbent, and therefore damp-proof, it is expected by this means to furnish coarse glass in suitable shape as cheaply as concrete or stone. A plan has also been put into practice by which broken glass of various colors is mixed up, placed in molds lined with silica, talc, or other resisting material, and fired. The result is a firmly coherent mass, which can be dressed and cut into blocks. These are, of course, irregularly colored and may be employed in place of artificial marble. If decorative effects are desired, designs in relief can be obtained by pressure while the block or slab is still plastic.—Boston Journal of Commerce.

Boston maid—In Boston even the bootblacks, some of them, have studied Latin.

New Yorker—In New York nearly all the bootblacks are proficient in Italian.

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The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

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Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

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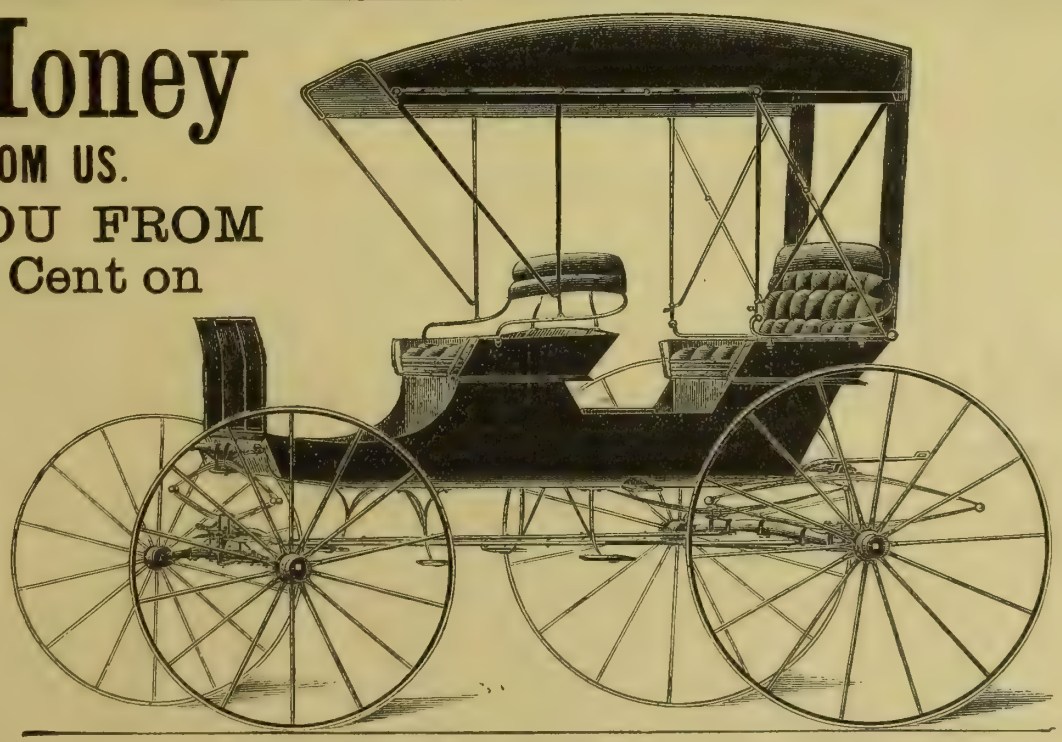
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AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

MONEY IN CHERIES.—Livermore *Herald:* Crellin & Sons netted $12 on each of their cherry trees this season. They were of the Queen Anne variety. It is estimated that 100 trees can be set out on an acre of ground. Twelve hundred dollars an acre is not bad by any means. We wonder that more in this vicinity do not set out cherry orchards. There must be several other localities that are equally as productive as that of Messrs. Crellin & Sons.

Fresno.

DRIED GRAPES.—Fresno *Republican:* Dried wine grapes are selling at 3⅜ cents per pound, and the crop of Zinfandels, the preferred grape for this purpose, averages two and a half tons to the acre. This indicates a gross income to the Fresno grower of $168 per acre. That is why the wine-grape men are smiling. The cause of the good price is said to be the failure of the fruit crops in the east and a 40 or 50 per cent shortage in the Zante currant crop. When fruit is short in the east, raisins and dried grapes are always in great demand.

Inyo.

THE CREAMERY IN RUNNING ORDER.—Bishop *Register:* This institution is running splendidly, and is proving more of a success than the most sanguine anticipated, seeing that its starting was delayed so late in the season. It has a capacity of about 10,000 pounds of milk per day. As yet it is running to only about one-third that capacity, but is gaining every day. About one-half the milk is made into cheese, the remainder into butter, which truly seems to be "gilt-edged."

Kern.

THOROUGHBRED HOGS.—Hunter Brothers, of Horn Ridge farm, in Bakersfield *Californian:* At Frank Corsett's dairy at Old River is a herd of Poland Chinas containing some of the best blood in this or any Eastern State. J. S. Ellis and Van Stoner, in the same neighborhood, have 200 high-grade sows, and now use none but thoroughbred boars. Peters and Simmons, in the Panama district, have nearly 1000 head and are introducing thoroughbred Poland China boars into their herds all the time. Fred Langdon, on the old Troy place, has 400 head of Berkshires, many of which it would puzzle an expert to tell from pure-bred stock. Mr. Langdon raises three litters a year from his sows, and at the spring farrowing his highest grade Berkshires averaged 13 pigs to the litter. On our own place we have a herd of as highly bred Berkshires as money can buy. The boar Victor, which stands at the head of our herd, bred by the late Andrew Smith, was sired by Model Duke, who cost Mr. Smith $850, the highest price ever paid for a hog on this coast. Our registered sows are all of the best strains of blood to be found in California and the Central States.

Los Angeles.

FRUIT SHIPMENT A SUCCESS.—J. C. Beekman, general manager Southern Cal. R. R. writes: "We have demonstrated the fact that fruits from southern California will stand the long haul as well as the northern fruit, and the reports I have thus far received indicate that it is equally as good and sells in competitive markets at equal prices. During the season we have shipped about 15 carloads of apricots from various localities, and I take pleasure in enclosing a few clippings which will give you an idea of the results. Some of the later sales netted the grower as high as $45 per ton. The growers and buyers are taking a great deal of interest, and quite a large tonnage of peaches, pears, grapes, etc., has already been contracted. A number of cars of peaches is now en route. The outlook is much more favorable than we had any reason to expect for the first year's business."

THE WALNUT CROP.—L. A. *Express:* C. A. Coffman of Rivera reports the walnut crop the best on record. It is estimated that 75 carloads of walnuts will be shipped during the months of October and November. The entire crop has been sold at 7½ cents for hard-shell, and 8½ for soft-shell, by the Los Nietos and Ranchito Walnut-Growers' Fruit Association.

Merced.

GRAPE NOTES.—Merced *Star*: There will not be the usual quantity of wine made on the Merced river this season, as most of the grapes will be dried and shipped East and there made into wine. The vineyardists are to receive $60 per ton for their dried grapes delivered in Merced in bulk. The grapes will be stemmed, then packed in sacks and boxes and shipped. As it takes about three pounds of grapes to make one pound of dried fruit the profit to the vineyardist will be very satisfactory.

Napa.

GRAPE CROP LATE. — Calistoga *Calistogian:* Grape-picking and wine-making will begin unusually late this year, as may be quickly noticed by looking at the size and condition of grapes. A long spell of steady warm weather, beginning without delay, is all that will put them in condition for picking within a reasonable length of time. Of work in past seasons at a large winery in Napa, the *Register* says: "Last season wine-making was commenced at Carpy & Co.'s on the 22d of September, five days later than the previous season. Four years ago, at the same cellar, crushing was begun on the 16th of August, but the grapes came from Vina and Yolo, where crops ripen earlier than they do here. It will probably be late in September [illegible] before grape juice begins to flow at [illegible] wineries."

FRUIT NOTES.—Napa *Register*: F. W. Bush, whose thrifty orchard is seen from the Trancas road, and is bounded on the east by Milliken creek, has 1100 prune trees which he expects to yield him 50 tons of fruit—a greater crop than he gathered last year. When the season first opened, bidders for fruit were shy and canners failed, as in other years, to visit growers with a view to making contracts. But as the season advanced, and trainload after trainload of fruit left the State for eastern markets, buyers appeared on the scene and orchardists were in many cases allowed to fix their own prices. As a result, Mr. Bush gets from $30 to $50 a ton (against $25 last year) for his prunes delivered at Tool's drying and packing house, a mile away. Mr. Hunter, whose orchard is adjoining that of Leonard Coates off the Big Ranch road, has some 1500 prune trees. He has sold the product of these to Webber & Co. of San Francisco for $55 per ton. The rest of his fruit he has disposed of at satisfactory rates to the Oakland Preserving Co. J. H. Wilcox is sending his apples to San Francisco, getting $1.25 per box of 50 pounds for his early Junes. A. D. Butler has sold his peach crop, some 15 tons, for $30 per ton f. o. b. He will dry his prunes, the yield of which is with him lighter than last year, but the quality is better.

Placer.

PROSPEROUS FRUIT GROWERS.—Auburn *Republican:* The fruit-raisers of Placer county are reaping a rich harvest this season. There is a fair crop of nearly every variety of fruit, while the crop of peaches is nearly as large as last season, which was far above the average. Prices have ranged high thus far during the season, and there are prospects of even a greater advance on many varieties of choice late fruit. The large amount of money now pouring into Placer county will encourage new investment, increase planting and greatly add to the prosperity of the county.

San Bernardino.

FRUIT NOTES.—Los Angeles *Times:* The following is a summary of the orange and lemon shipments from Ontario for the present season, which may now be considered as closed:

	Oranges boxes.	Lemons boxes.
December	400	80
January	438	268
February	305	80
March	4,780	133
April	1,957	176
May	1,580	165
June	560	96
July	70	147
Total	10,090	1,145

This is a trifle short of 42 cars. The shipments the coming winter should exceed 50 cars. There were 38,380 pounds of green fruit and 74,420 pounds of dried fruit shipped from Ontario during July. Over the Santa Fe alone over ten tons of berries were shipped by express. Capt. Garcia will realize the nice little sum of $2000 from his five acres in prunes. He has sold the crop at $50 per ton. Several other prune orchards will pay from $300 to $400 an acre this season. Mr. Fassett of the north Ontario evaporator says that he knows of one fruitgrower who received from $1000 to $1100 for the crop of Royal apricots on three acres, and he sold for a cent a pound. That is the best yet on apricots, nearly $400 an acre.

San Diego.

ABOUT ALMONDS.—E. E. Pierson of Banning in Escondido *Times:* People who are making the almond pay and produce good regular crops plant different varieties together on account of the cives fertilization of the bloon. The Lunquedec, one of the early soft-shell nuts, never has done well in this State unless other kinds have been planted near it, when it has been made to produce a large crop. The almond prefers a loose, light, warm soil, and will make a failure on poorly drained, heavy land, but will make a good growth of wood. I have a young orchard here of almonds, only two years old, that will have more than enough fruit to pay for all care and cultivation this year.

San Luis Obispo.

GRADE UP YOUR FRUIT.—Arroyo Grande *Herald*: During the past week we have visited almost every orchard in the valley. The fruit crop is not as heavy as usual, but generally it is of excellent quality. Many of the orchards have been planted for home supply and have answered admirably that purpose, but a new order of things has commenced and it is possible now to sell fruit in 20-ton lots. The orchards of two or three trees of each variety cannot sell fruit to the driers nor to canneries. Fewer varieties and more trees of each kind is what is needed. Cut off every pear tree and graft them to the Bartletts. If we were called on to give advice we should say, plant nothing that cannot be sold to the canneries, and this would be the list: Apricots—Moorparks and Royals; pears—Bartletts; peaches—Crawfords and clings; plums—Eggs, Gages and Washingtons. These are all staples with the canneries and bring top prices in carload lots or by the basket. A revolution in the fruit business is beginning and those who bring their orchards up to standard varieties will reap the benefits.

Santa Barbara.

PRUNING FROM EXPERIENCE.—Santa Maria *Times:* N. H. Woods of Cat canyon has one of the oldest and most profitable apple orchards in this end of the county. He has a first-class location and his trees have always received care and cultivation to the full extent of his knowledge. Several years ago he noticed that some of his hitherto healthiest trees were decaying in certain portions of the top where a limb had been cut off some time before. He made inquiries of his neighbors who told of similar troubles, but gave him no satisfactory reason. Mr. W. had a large orchard in bearing, and was dependent upon it, in a measure, for his subsistence. He was naturally somewhat alarmed at the disastrous showing made by some of his best trees, and resolved to solve the mystery, if possible. After a few years of experimenting, he found that by pruning his apple trees directly after the fruit is off, or when the leaves are falling, he could cut all the wood he wished to take off without injury to the tree. The wounds would heal up and no signs of decay would ever appear. He also found that by cutting off limbs, especially large ones, in February and March, the stub would frequently die back the first year to the main limb or to the trunk of the tree, and the next year the decay would extend to the heart of the tree so that where the limb grew originally there would be a hole from which decayed wood could be gouged out with a stick. This decaying process would extend to the roots of the tree by the third year and result either in the death of the tree or leave an unsightly snag struggling for existence, instead of the thrifty, profitable tree of old.

POOR HORSES A DRUG.—Santa Maria *Times:* The one kind of stock which is at present a drug on the market is the ordinary breed of horses. The whole country is overstocked and there is absolutely no market for inferior animals. Those who have well-bred horses, either draft or roadsters, find no difficulty in disposing of them at good figures. This should be an object lesson to those concerned.

Santa Clara.

SPLENDID TOBACCO CROP.—Gilroy *Gazette*: A visit to the Culp place at San Felipe enables us to state that the 50 acres of tobacco planted there this year promises a very superior quality. Many of the plants are over seven feet high, the leaves large, perfect and of very delicate texture. The gathering will commence this week.

A MODEL FARM.—Gilroy *Advocate*: A place where refreshing breezes come from the coast to give new life to pleasure seekers is Sargent's Camp, six miles south of Gilroy. The Camp is about the center of Sargent's ranch of 8000 acres, more or less, where its owner, the Hon. J. P. Sargent, enjoys agricultural life. Some of the land is as rich as any in the State, and the fertility of the bottoms is unsurpassed. The mountainous pasture is covered with nourishing feed for the sires blood colts and bulls ad infinitum. Mr. Sargent is a lover of thoroughbreds. Lately a span of horses was sold by Mr. Sargent to a prominent physician of San Francisco for $5000. There are at present about 150 cows in use at the dairy, pure Durham stock. The bulls are all imported. The corral where the milkers ply their fingers twice daily over the milk-bags is an attractive sight at milking time. The dairy is equipped with modern machinery, and under direction of Romain Currey, the man in charge, from 8 to 14 solid, well-compressed 35-pound cheese are produced daily. Elevated on a high bench is an orchard of olives. The trees are two years old, but their rapid growth tells that the soil and the temperature are favorable to the growth of this old Mission fruit. Down below the road, in the moist land, is an old orchard of varied fruits, where healthy trees bear prolific crops, and away beyond is the meadow land where the rank grasses grow, and where everything in God's world of value in fruit and vegetables can be readily propagated and brought to perfection.

Solano.

SCARCITY OF FRUIT CARS.—Vacaville *Reporter:* The fruitshippers for the first time in many years are suffering from a famine of refrigerator cars. There has been a large number of new refrigerator cars built this year, but the demand for California fruit is so great that all the cars are constantly in use. This condition speaks volumes for the fruit business.

Sonoma.

THE HOP CROP.—Santa Rosa *Democrat:* The hop crop of Sonoma will be two weeks late in ripening. The yield will be short of an average, but the bloom indicates that there will be a better yield than was supposed three or four weeks ago. There will be no hops picked earlier than the 10th of September. They usually ripen at least ten days earlier. The growth has been uneven and there are a good many missing hills. The spring was backward, the bloom is late, and looks promising, but no one can tell what the outcome will be on account of the unusual conditions of the season. If the moisture holds out the yield will probably be good. The growers are anticipating good prices on account of unfavorable reports from other sections. No transactions of of any kind are reported lately, and at present the views of producers and sellers are quite far apart.

Sutter.

FRUIT NOTES. — Yuba City *Farmer:* From every direction can be seen the large fruit wagons bringing in the products of the orchard to the cannery. When one considers the amount of fruit that can be packed by about 500 hands the magnitude of the work is realized. The largest run in one day was 22,000 cans, and the employes did the work in ten hours' time. Peaches are the principal kind of fruit and the varieties are the Muir, Orange and Susquehanna Cling, Wheatland and others. Another carload of pears was recently received from P. V. Veeder and a small pack has already been made of Egg plums. The drying department is running briskly. A carload of canned goods was shipped from the warehouse on the grounds Tuesday to St. Louis. Some of the peaches being received at the cannery this season are very large. We noticed some varieties there recently from the orchards of Robert Davis, J. C. Gray, R. C. Kells, B. F. Walton and Rancho Sutter that weighed from 14 to 18 ounces each.

Tehama.

TRAINING THE COLTS.—Nevada City *Telegraph:* About a year ago Senator Stanford sent word to his manager at Vina ranch to train all the most promising two and three-year-old colts, and in consequence there has been a number of them worked and they are showing up in great form. Mr. George Fletcher, of the 17th Agricultural Association, tells us that there will be seven or nine of Senator Stanford's best colts here sometime during this or next week, and all of them are entered in the principal events on the program.

Tulare.

REVIEW OF THE GRAIN CROPS IN THE COUNTY. Tulare *Times:* From J. W. Fewell, head bookkeeper for A. Showers, manager of the Grangers' bank in Visalia, we obtain the following facts regarding the present grain crop of Tulare county. There is a great deal of grain being stored this season and the farmers show a willingness to hold their grain. The warehouses at Lindsay, Roth Spur and Tarusa will be filled this summer. There will be 2500 tons at Lindsay, 3500 tons at Roth Spur and 2500 tons at Tarusa. The wheat crop around Goshen is light, owing to the blight in that section this spring. The Grangers' bank estimates that the blight shortened their receipts at Goshen 1000 tons. There will yet be 2000 tons of grain received at Goshen. There will be 100,000 sacks shipped from Terrabella this season, or about 8000 tons. At Munson there will be 1500 tons stored and 2500 tons at Exeter. Comparing the crop this year with last, Mr. Fewell says the crop this season is 25 per cent larger than last year, and the storage will be 40 per cent more. The quality of wheat this year is not so good as it was last; this is owing in part to the smut and part to the oats found in the wheat. Barley is of a better quality this year and there is more of it by 50 per cent. It is better filled out this year than last. Mr. Showers has sold a third more sacks this year than last. The losses by fire this year have been very small. The only loss of any note occurred at Hanford, where a fine setting of wheat was burned, as is supposed, by an incendiary. Mr. Showers has sold 400,000 sacks of grain this year to 320 000 at this time last year. As a rule, the farmers are drawing considerable money on the grain that is stored.

ORCHARD AND FARM NOTES.—Grangeville Cor. Visalia *Delta:* John Russell hauled 20 sweatboxes of second crop last year raisins to Hanford and got $20 for them, or one cent per pound. He had one box of dried peaches for which he received $15. John said that it was like finding the $15, for the peaches were seedlings and he had nothing to do for a few days, so he put in the greater part of three days cutting and drying the fruit. No water in the People's ditch at this season of the year is causing considerable complaint among the vineyardists and those lawns in need of water. Raisins are going to bring a big price this year. We hear of contracts being made in Fresno at 5¼ cents per pound. Lucerne raisins ought to bring six cents. Alfalfa-hay is selling at $4 and $5 in the field.

PROFIT IN NECTARINES.—Hanford *Journal:* H. W. Byron has 7½ acres of white and red nectarine trees, about an even number of each variety, from which he has harvested this year 20 tons of dried fruit. He contracted it all for ten cents per pound, and the 7½ acres will bring him $1600, or $213.25 to the acre. The trees are only four years old. He expected to finish his apricots on the 30th ult. and commence work on his peach crop on the 1st inst. He hires white labor exclusively for cutting fruit, and says he has no trouble getting all the help he needs.

Yuba.

PREMIUMS ON DRIED FRUIT.—Marysville *Democrat*: The amount offered in premiums for dried fruit at the coming fair to be held in Marysville is the largest ever offered in the State, being fully a quarter more than offered at the State Fair. Every fruitgrower should place an exhibit in the pavilion, even though small, as this is the fruitgrowers' year. For the best general display of dried fruit, $75; second best, $50; third, $25; and on each variety in ten-pound lots there is $5 for first premium and $3 for second, which includes apples, peaches, plums, apricots, nectarines, figs, pears, raspberries, blackberries and cherries.

PREMIUMS ON GRAPES.—*Democrat*: The largest premiums ever offered in the State on grapes by any agricultural society are the awards to be given exhibitors at the Marysville fair this season. On the most artistic exhibit, the first premium is $75; on second. $50; third, $25. Then for best and largest display of all varieties, first premium of $50; second, $25. Also for each variety, as follows: Table grapes, $10; raisin grapes, $10; wine grapes, $10; and for second best of each, $5. On seedless grapes, $5; second, $3; and on best bunch of grapes, $3; second best, $2.

NEVADA.

SHORT POTATO CROP.—Pioche *Record*: Farmers from surrounding valleys report an almost total failure of the early potato crop. This also seems to be the case in other places around us. Orders for the vegetable are now being sent to Salt Lake from here. A teamster from Parowan yesterday disposed of a load of old potatoes at ten cents a pound, which is the highest price paid here for 15 years or more.

OREGON.

SHEEP IN HOPFIELDS.—Eugene *Register:* We are told that some of our hopgrowers are trying something new this summer, that of turning sheep into the yards. It is claimed that in a couple of weeks they eat off all the little shoots or suckers growing about the base of the vines. In this way the vines get all the nourishment the roots have to give, instead of part of it going to these suckers, and it is also claimed it deprives the hop lice of a favorite resort, as they gather in these sucker sprouts. Sheep may be seen in a number of yards about the country.

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DOWN

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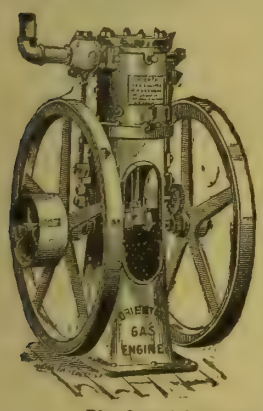
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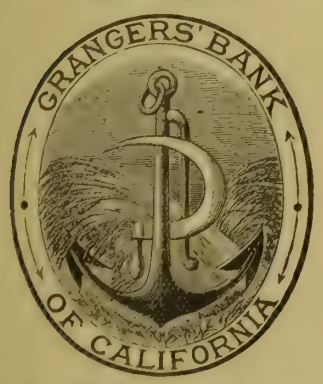
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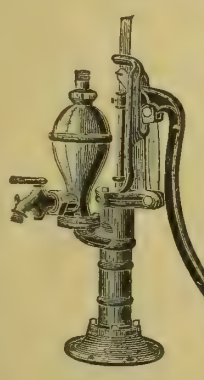
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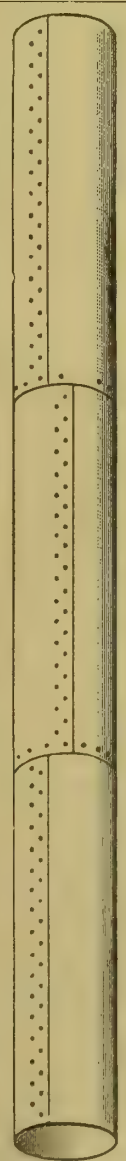
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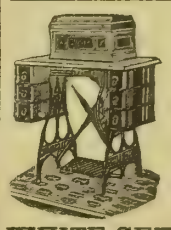
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Patrons of Husbandry.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

ELECTING ALTERNATES.

An active Patron sends this suggestion, which we insert for what it is worth, the writer evidently having in mind that alternates sometimes elected do not attend the State Grange and remain during the session, while the officers are quite sure to stay until the end:

To wit: In all the subordinate Granges where an officer of the State Grange is a member thereof, that they be elected alternates, if agreeable to the members of such Granges; for this reason, that there may be a quorum present at all times during the session of the State Grange.

One of the leading workers of San Jose Grange writes in a private letter to his sister, the following paragraphs, which we think our readers should have the benefit of:

"We are busy at work in our Grange preparing for the State session. We hope to have everything in such good shape that the se sion will be one that will always be looked back upon with pleasure. We have been most fortunate in getting halls, and I am sure that you will all say that we could not have done better. We find Mrs. Adams just the right woman in the right place on the Literary Committee. She is doing splendid work, and I wish to emphasize her desire to have something original from your pen.

"We hope and expect to have a large meeting and we shall do all in our power to make it a pleasant one. We have engaged some of our best local talent to come in during the sessions, and the Board of Trade and Chamber of Commerce will tender the State Grange a welcome on Tuesday evening. Hon. W. V. Morehouse will make the address; he is considered the most eloquent speaker we have here. Be sure and be on hand the first day, as we are planning something pleasant for that day. What with the State Grange, the World's Fair work with which I am engaged, and my home and social duties, I find this summer full of pleasant work, and if my part is only one small atom, we have just to remember that the aggregate is made up of atoms, and though our work is lost in the whole, the whole would not be perfect without it, and with that thought in view we can go on cheerfully adding our small doing, our jars of fruit and glasses of jelly, and so help make up Santa Clara county's exhibit, and in that there is a thought good to keep by us, and when things go awry, and life seems a failure, remember that these all go to make up the sum total of our life here. Somebody has got to do the small things and I would rather be counted in on small things than not counted at all."

Secretary Noble has appointed Reuben P. Boise, Master of Oregon State Grange, and William H. Odell, of Salem, Oregon, and H. H. Harding, of Carthage, Mo., as a commission to negotiate with the Indians of the Siletz reservation, in Oregon, for the cession to the United States of lands not needed for allotments.

LODI GRANGE AND RAMIE CULTURE.

W. H. Murray, superintendent of ramie culture, attended a meeting (at recess) of Lodi Grange, Aug. 20th, and gave a lecture on fiber culture, viz.: ramie, flax and cotton. He remarked that all fiber plants could be grown successfully in San Joaquin county. The ladies present were delighted with the appearance of the texture of fabrics made of ramie, and silk and ramie. Mr. Murray, reports the *Sentinel*, said:

"It stands to reason that the building up of an industry based upon the cultivation of fiber plants opens up vast possibilities. The world has to be clothed, and that article which will accomplish the object in the best manner and for the least money must lead in supplying the market. That article is ramie, and its general introduction will start up numbers of factories to give employment to our people. Let the United States pay such attention to this matter as its importance demands, and America, instead of paying tribute to the skilled labor of the old world, will manufacture a cheaper material than can be produced from either cotton or silk.

"No part of the United States is better adapted to the cultivation of this plant than California. Reviewing the experience of California in the matter of silk culture, cotton and other textile plants, ramie culture is free from the objections and difficulties that beset the other textiles. The value of raw silk that annually passes through California to the East is $19,000,000 and silks imported manufactured, $37,880,143. Ramie could be used as a substitute for about half of this, as goods made from silk and ramie in equal parts rival the pure silk in appearance, texture and durability. As to the marketing of the staple, the California Cotton Mills at East Oakland will buy this fiber. This company is paying $40,000 a year in freight to the railroad for raw cotton material; the farmer also pays for grain twine $250,000 yearly, made from flax. Referring to the value of the various fibers, wool, silk, cotton, flax, Angora goat hair, etc., ramie is more valuable than any of these for Californians to cultivate. It would add another to the agricultural industries, the great need of which is diversity."

AT STOCKTON GRANGE.

July 30th, N. T. Root, Sec'y, informs us that Stockton Grange adopted the following:

Resolved, That the revival of the question of ramie culture is being brought forward by prominent parties in California; that they have demonstrated that the experimental stage has passed; that we in California can show that ramie can be grown and worked successfully. All fiber culture should be fostered, and diversified farming should be encouraged by the State to its fullest extent.

Officers' Reports.—The following governs the advance publication of officers' reports: "Resolved, that hereafter all the officers' reports, and reports of District and County Lecturers, be handed to the Secretary of the State Grange not later than Sept. 15th, and the above named reports be printed in pamphlet form for the use of members of the State Grange at the commencement of the session."

The Fifth and Sixth Degrees will be conferred on Thursday evening at the coming State Grange session, instead of Friday, as has generally been the custom.

The Twenty-Second Anniversary of the founding of the Order of the Patrons of Husbandry occurs on Sunday, Dec. 4th. Let us celebrate the important event on Saturday, the 3d, universally and joyously.

Penn's Grove has prospects for a new Grange.

Bennett Valley Grange.—The *Orchard and Farm*, Aug. 1st, contains life-like portraits of Hannah C. Carr and Jos. N. Talbot of this Grange. Bro. Talbot is present Master. Sister Carr, with her husband, Nelson Carr, is well and kindly known among the oldest and most faithful Grange workers in the State.

A Day Off.—Thanks of the Secretary are due Past Master Daniel Flint for "joint expenses" on a round-trip to Leland Stanford Jr. University. Neither of us had seen Palo Alto since the visit of the National Grange to the University site, when a few buildings only were partly erected. No one who has failed to visit the place lately can begin to realize the extent and beauty of the fine grounds and the substantial buildings already constructed. Although it is now "vacation," we saw much to interest. We were received courteously by president Jordan and others met during our brief stay. We have not space to report, but believe it would be well for all who can to see for themselves what has and is being done at this, the youngest and one of the most remarkable educational institutions of the world.

Past Master Coulter gave us the pleasure of a visit last week; also State Lecturer Huffman. Bro. Loucks called in on Wednesday, active as ever.

The State Grange will not make any formal exhibit in the Historical Exposition at the State Fair.

Paper Manufacture.

The United States Consul-General at Seoul, in his last report, says that paper manufacture is one of the leading industries of Corea. This paper is highly esteemed, and always forms part of royal presents, and of the tribute paid to China. Besides its use for writing and for books, it is employed in a great diversity of ways. It serves as string and in the manufacture of lanterns, fans, umbrellas, shoe soles, hats, boxes, and coats. It is also used for covering floors, walls, and ceilings, and, stretched on frames, supplies windows and doors. It is highly prized in China and Japan, and is especially sought after for the manufacture of umbrellas. It is made from the bush of the mulberry order (*Broussonetia papyrijera*), which is indigenous, growing in many parts of the kingdom, but thriving best in the moist, warm climate of the south. It is chiefly grown from cuttings for this especial purpose, and the wild and cultivated plants are said to be of equal value. The bark, which alone is used, is generally gathered in the spring, and it is boiled for a long time in water, in which a quantity of wood ashes has been mixed, until it becomes a pulp, the mass having been beaten during the whole time of the boiling. Fine bamboo screens are then placed in shallow wooden vats, and a ladleful of the pulp is evenly spread over the screen by a dexterous circular motion of the hand. This operation is repeated once or twice, or as often as may be necessary—the more frequent the operation, the finer the paper—and the screen allowed to drain into the vats, until a proper consistency is reached, the drippings being thus saved. They are placed on a hot *kang* floor to dry. After the drying has proceeded far enough, the paper is laid on a hot floor, and ironed by hand. The long lines in the paper show strands of the bamboo screens, and their nearness, distinctness or absence indicate the fineness or otherwise of the paper. They are almost imperceptible in some grades of paper, while in others they are distinct and far apart. Paper is made by the Paper Guild, a numerous and prosperous association. The province of Chulla is the chief seat ofmanufacture.—Science.

A Kind of seaweed which is plentiful on the coast of China furnishes an admirable glue and varnish. When dried it is waterproof and it is employed to fill up the interstices in bamboo network, of which windows are frequently constructed in that country. It is also utilized to strengthen and varnish paper lanterns.

Domestic Economy.

How to Make French Rolls.

Boil four potatoes of ordinary size, having peeled them first, and mash them up fine in the water in which they were boiled. Stir the potatoes in a quart of flour, adding the usual quantity of yeast. Make the dough thick, as hard as it will hold together. In rising it softens so much that it can just be kneaded without sticking.

The kneading is an important part of the operation. A quarter of an hour's kneading ought to suffice for a small recipe like the one here given. Knead by drawing out one end like a rope and rolling the other portion over and over. The object of making dough thick and stiff to begin with is to avoid putting in flour after the dough is light, for the mass softens so much by putting potatoes in that it will be just right when fermented.

After the kneading put the dough away to ferment again, and, when light, knead as before. A third kneading still improves it, but it is not necessary. No butter should be put in these rolls or in bread either, as it makes it like a short cake in grain, which is precisely what one desires to avoid.

Good rolls ought to be puffs of wheat flour baked; they ought to tear in shreds or stripes, have a fibre or grain like the husk of a cocoanut and a fragrant wheat smell, and lastly have a rather tough spring or tear to them and a crackly crust. In form they are round at the sides and bottom, and this is attained not by rolling them up between the hands, as many suppose, but from the potatoes and the way in which they are kneaded.

Each roll must be cut off the mass of the dough; that is to say, the dough must not be kneaded and then shaped into rolls, but must be kneaded and put back in the pan again to rise in a lump. When raised and kneaded the last time, turn it all out on the board, cut off each roll from the mass without tearing or disturbing it, or even touching it with the hands, (a little practice will enable one to do it,) and place them gently in the baking pan about an inch apart. After standing a few minutes—say five or six—they will be ready to go into the oven, and ten minutes ought to bake them if they are light.

Before they are put into the oven they should be cut down the middle with a knife dripping with melted butter. This prevents the cut sides from coming together, and makes the cleft clear and well defined.

As to the trouble involved in the process, I leave that to the judgement of housekeepers. At six in the evening we set our rolls, at nine they are ready to knead. They are left all night to rise again, and the first thing in the morning, before the fire is made, are kneaded again. When they are light, which will be in an hour, they are ready to bake.—*Harper's Bazar.*

Chicken Soup.—Take about a quarter of a good-sized chicken uncooked, cut it in pieces and fry it for ten minutes with half an onion. Add three pints of white stock, a quarter of a cup of rice, a spray of parsley, half a bay leaf and one clove. Let the soup boil for 30 minutes. Remove the clove, bay leaf, parsley and celery, which should have been tied together in a bouquet. This chicken may be improved by adding 12 okras cut in fine pieces or half a cup of tomatoes, stewed and strained, when it is put over to boil. The addition of a tablespoonful of boiled tongue or boiled ham, cut in dice just before the soup is taken up, gives a pleasant variety. In August, when Lima beans and fresh corn are in season, add a tablespoonful of the beans and two of the corn, with six okras cut in slices.

Strawberry Sauce.—Beat two ounces of butter to a cream, add, gradually, one cup of powdered sugar, then add one mashed strawberry, beat it well, add another, and so continue until the sauce is a beauti ul pink. If the strawberries seem to give the sauce a curled appearance, add just a little more sugar; stand on ice to harden.

Banana and Lemon-Jelly Cream.—One-half box gelatine, one cup cold water, one pint boiling water, one cup of sugar, three-fourths cup lemon juice, one square inch stick cinnamon. Soak the gelatine in the cold water. Shave the lemon rind, using none of the white. Steep it with the cinnamon in the boiling water ten minutes; add the soaked gelatine, sugar and lemon juice, and when dissolved, strain into shallow dishes. When cold, cut in dice or break it up with a fork, put it in a glass dish in layers with sliced bananas. Pour a cold boiled custard over them, and cover with a meringue. Brown the meringue on a plate, and slip it off over the custard.

Chicken Pie.—Cut your chickens in pieces, wash them, and put them in a stew-pan with salt and pepper, and water enough to nearly cover them. To each one, rub one ounce of butter in flour, and add it to the gravy when the chickens are done; let it boil a few minutes. Make a rich paste, line the sides of your pie dish, put in the chickens and half the gravy, cover the pie with the paste; leave an opening in the center, and ornament the top with paste cut in flowers, or bars twisted and laid across the center. When the crust is done take out the pie, pour in the remainder of the gravy, and send it to the table in the dish it is baked in. If all the gravy is put in at once it will be apt to boil over the top and disfigure the lid of the pie.

Sponges.

Whether a sponge is to be classed as an animal or a vegetable is still a much disputed question. The sponges which you use do not seem to have much life in them, do they? And they certainly do not look much like any animal with which you are familiar. Yet these sponges are hatched from tiny eggs thrown off every spring by the parent sponge, and these atoms grow by and by to be big sponges like their mother. And although wise men have not quite agreed upon the subject, most of them have decided that sponges do belong to the lowest form of animal life, just one small step above the vegetable.

And these sponges are found of all sizes, from the small specks—the baby ones, you know—up to the huge fellows of three or four feet high. When the sponges are first hatched, they spend a couple of days floating about in the water. Then they proceed to attach themselves to rock or shells, or any convenient place, where they hold on fast and grow bigger and bigger all the rest of their lives, or until some sponge fisher comes along with a big knife or a long fork and cuts or tears them from their resting-place.

Sponges are obtained in various ways, and in many different places in the world. Large quantities are found in the Mediterranean and the Red seas. Many are got in the Gulf of Mexico, and a long paper has been furnished lately to the State Department showing the great extent and value of the sponge trade of the Bahama islands.

In the Bahamas the sponge trade is an important industry. Very large numbers of people are employed in these islands in the work of gathering the sponges, handling them, clipping, washing and preparing them for market. From 5000 to 6000 persons are usually engaged, most of them, excepting the ship owners, brokers and shippers, being natives—black men.

Sponges are found either in shallow or deep water. In shallow water they are dragged off the rocks by a three-pronged fork with a long handle. The finest and most valuable sponges are found in deeper water, and divers go down to obtain them. The diver cuts them off from the rock carefully, being particular not to tear them. These are the most expensive sponges.

The amount of money made by the men who gather the sponges depends entirely upon the number they get. The work is very laborious, the prices paid are low, and the sponge gatherer who makes over $300 a year is a rare exception. The men who do the work on land of getting the sponges ready for market are paid about 50 to 75 cents per day, so it is not likely they amass a large fortune at the business.

Around these islands about 500 small vessels are employed in the trade. These vessels, being filled with the men who do the work, cruise about until they have gathered and prepared a good cargo of spon ges

The usual method employed in the Bahamas is by the fork or hook, such as is used in the East. At one time dredges were introduced, but their use has lately been discontinued. The dredge was found to break off and destroy the young and unsalable sponges, killing the spawn and working great mischief. These smaller sponges are never taken, but are allowed to remain and grow to a large size. An act was passed forbidding the use of dredges.

Great care is taken to protect the cultivation of sponges. The industry is of great value to the natives.

A sponge seems a little thing. It is like many another trifle, to which we have become so used that we no longer think of them as luxuries—more as necessities.

Yet their service to us involves the labor of thousands of people in far-away countries—people who supply their own needs and those of their families from their labor on these little things.—N. Y. World.

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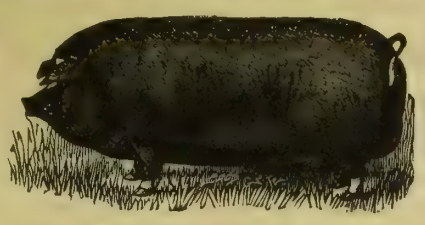
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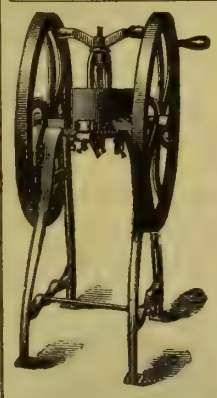
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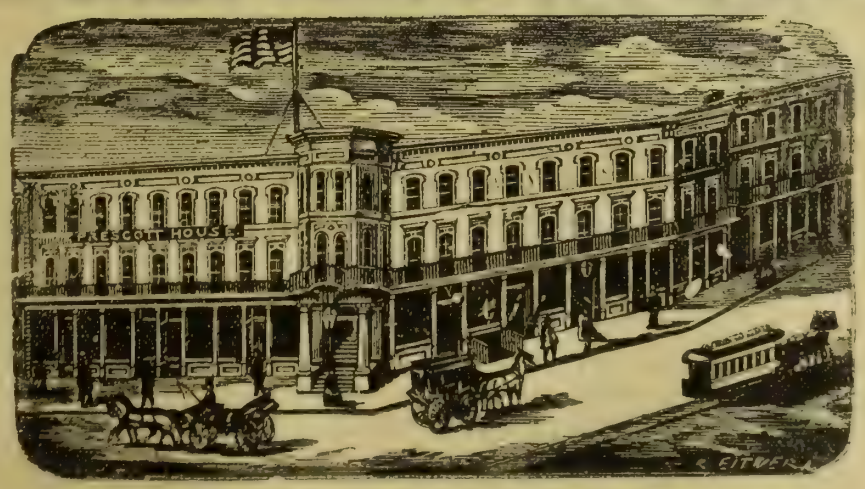
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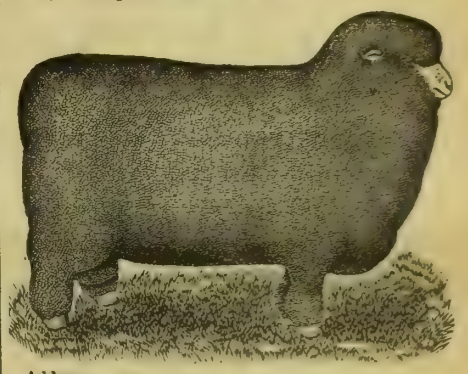
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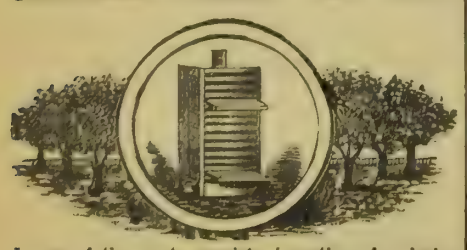
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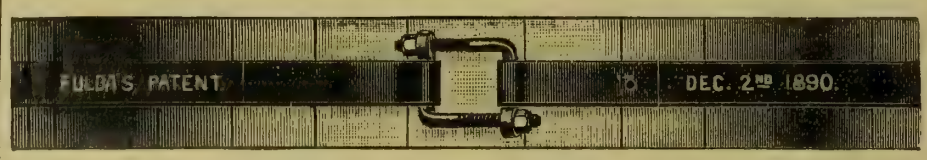
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S. F. Market Report

Market Review.

SAN FRANCISCO, Aug. 17, 1892.

The local money market continues fairly easy, notwithstanding an increasing call for funds to meet advances on warehoused grain. From all we can learn, there will be no friction in the money market even if the demand for funds from the interior should be 50 per cent greater, and which it is likely to be, than it was in last season. Interior banks have been accumulating considerable surplus coin, which will aid very materially in meeting the largely increased requirements due to farmers holding grain rather than sell at present low range of values. The holding back of grain will be among the largest on record. Farmers feel justified in pursuing this course by reason of the large engaged and disengaged tonnage in port, a shortage in the world's crop, and last, but by no means least, a short crop in Oregon and Washington and a larger percentage in this State of poor to fair wheat than has obtained for several years past. Barley has held very strong for the more choice grades of bright, owing to the outlook being favorable for better prices. This opinion is based on a ten per cent shortage in the crop of the United States, only a fair crop abroad, and a decided falling off in the outturn in eastern Oregon and eastern Washington. Oats have ruled firm under moderate receipts and a good demand. Corn has been lifeless at around our quotations. Rye has been dull, but fairly steady. Heavy receipts of bran from up north caused lower prices in this market. For other groundfeed the market was unchanged. In garden-truck there was a decided falling off in the price of tomatoes, owing to heavy receipts and canners not buying. Summer squash strengthened slightly, owing to light receipts and a better demand. The market for other garden-truck was essentially unchanged. Onions have been in heavy supply. Increasing receipts of poor to fair potatoes caused a lower range of values for off qualities, but choice held fairly strong under a good shipping and home inquiry. The attempt to advance the price of gilt-edged butter has failed, as we stated it would. The higher ranges at which the market was quoted brought in more liberal supplies, and a so caused many dealers to turn to fair to good grades and let gilt-edged severely alone. The receipts of pickled butter are increasing, but as yet the trade does not take hold of it. Considerable quantities of keg butter have been sent out on orders from many mountainous mining districts. Cheese has held steady. The receipts of Eastern have increased. The Eastern market, it is claimed, will do better before long. With heavy receipts of Eastern eggs the market for Californian eased off slightly. Many dealers take the former in preference to the latter. Warm weather combined with liberal supplies, at lower prices, of fresh vegetables and fruit, have created a light demand for fresh meat, and, under free offerings, the market for livestock, except for hogs, is offish. Hog product holds strong at the recent advance. The corner which is being run at Chicago bids fair to send prices still higher. Honey is coming in more freely, but buyers stand ready to take all received at full prices. For new crop hops, buyers have advanced their bids. It is claimed that from 18@20c is the range now bid by them. The short crop at the East and abroad favors growers. Mustard-seed is coming in more freely, and, as usual, buyers are trying to force the market to lower prices, notwithstanding the situation warrants the expecting of an active demand, owing to reports of a light crop abroad. Wool is reported essentially unchanged, although judging from Eastern advices, the market is shaping itself toward the interest of holders. The cholera scare in Russia has cut off a source of liberal supplies for manufacturers, and, consequently, the coarser grades of wool are strong and slightly higher at the East. In the past week the poultry market made another of its erratic movements. On Thursday, Friday and Saturday choice old hens and roosters were forced to higher prices under strong competitive buying, but on Monday, although the receipts were light, the market was heavy, owing to buyers holding off. Yesterday, with freer receipts, prices fell back. Beans have held to strong prices under heavy shipments to the East and fair shipments to Mexico and Central American ports. The market for fresh fruit was overstocked with culls and rejects by eastern shippers. The bulk received being poor keepers, had to be forced on the market, and with the usual results—low prices and a general demoralization. At the lower prices, and with warmer weather, peddlers and dealers in second and third grade fruit have had a feast. They report heavier sales than at any time in this season. Canners were largely supplied with contract fruit, and only came in the market for something very choice, which, it is needless to say, is as scarce as hens' teeth, owing to the eastern demand. The market for new-crop dried fruit has ruled quiet but strong to buy and weaker to force sales. The general tone is healthy and in dryers' favor provided the curing and packing are A 1. Raisins are meeting with a good inquiry, and considerable quantities are being placed for October and November shipping. The market for nuts is strong, with the general tendency apparently to better prices, owing to short crops abroad. New-crop walnuts have been contracted at an advance on prices ruling at this time in 1891.

Markets by Telegraph.

Eastern Wool Markets.

NEW YORK, August 12.—Manufacturers are liberal buyers of wool at the present quotations. It is now the general belief that the market is as low as it is to be for some time. Dealers believe the future will be higher, but manufacturers think prices will not advance. Stocks are large and a mit of good selections. The outlook for the goods market is very favorable, although the imports have been increasing of late. This is the time to stock up, and many are availing themselves of the unusual opportunities the market offers in the way of large assortments. Fleeces are particularly active. They are much lower relatively than either Australian or Territory wools. In quality they are much better than those offered last year. Delaine wools are quiet. A fair demand is noted for combing wools. Territories are moving well, but the demand is not active. Little is being done in either California or Oregon wools. Australians are rather quiet but prices hold very firm. Stocks, while light, are ample for all present requirements. They will be warmed before the new wools come forward. While quotations on carpet wools are unchanged, they are much firmer than last week.

NEW YORK, August 15.—Heavy supplies favor buyers; the offerings were never finer and the consideration prices were never so low. Manufacturers have large cloth orders to fill on a basis of recent rates, and they squelch all suggestions of advance, so sellers yield, solacing themselves with the enlarging possibility of "a good time comin' by and by." Foreign wools are held rather stiffer, as the cholera advent abroad may check the landing of receipts. The sales at New York were 656,000 pounds of domestic, and 300,000 of foreign; sales at Boston, 3 643 000 pounds of domestic, and 582,000 pounds of foreign. The Philadelphia market is steady.

Foreign Grain Review.

LONDON, Aug 15.—The Mark Lane *Express* says: English wheats were in large supply at an average of 6d lower. The wheat crop is expected to reach 8 250,000 quarters, about 500,000 under 1891. Barley promises an average yield, but of better quality than usual. The oat yield is 10 per cent below the average. The market for foreign wheats has varied. Indian advanced 3d; American was 3d higher and Russian 6d lower. An official estimate of the wheat crop of Russia places the yield at 35 000 000 quarters, 3,000,000 over the trade estimates and the report has shaken wheat prices in eastern Europe. The total yield of France is calculated at 36,000 000 quarters of fine milling wheat. Corn is a turn dearer; barley, beans and oats quiet. At to-day's market English and foreign wheats were 6d lower; barley and oats 3d lower; English and American flours 6d lower; corn firm.

California Wines.

NEW YORK, Aug. 15.—The season has greatly favored the use of California red wines, and the improved quality has regained much of the trade that fell away when poor stock was so indiscriminately pushed upon the market.

Eastern Dried Fruit Markets.

NEW YORK, Aug. 15.—Prunes and dried peaches, nominal. The confidence in raisins has not been restored, and the closing tendency is lower; bags, 4¾c free on board. The range for boxes is wide and uninstructive. Apricots are firm for prime. Several rejection cases have occurred. Moorparks are quoted at 14½c; Roy 11 1c for spot. Leading dealers evince no anxiety about the situation. The market is young and the assured outlet for all portable table goods promises an eventful wholesale trade.

NEW YORK, Aug. 17.—California dried fruits are more active and show better tone. Prunes at 9c, 60s to 90s, in sacks, sold fairly. Choice bleached apricots sold at 14½@14¾c spot. Some fair sized parcels of raisins moved out at last week's prices.

Miscellaneous.

NEW YORK Aug. 15.—Honey—With a known light crop the feeling here is sympathetic with coast rates for strained.

Hops—Sales of several hundred bales made a better show of trade than for some time past. Last prices rule strong, with some gain in second grades. Seventy-five bales went for export. Three bales of new Palmer's seedling brought 28c. Futures disclose more interest.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	6s0 ¼d	6s0½d	6s0¾d	6s0¾d	6s 7¼d
Friday	6s0 ¼d	6s0 ¼d	6s0 ¼d	6s 5½d	6s0¾d
Saturday	6s 5½d	6s 5 d	6s 5½d	6s6 d	6s 6¾d
Monday	6s05¾d	6s0 ¼d	6s06 d	6s06	6s 6¾d
Tuesday	6s04¾d	6s 4½d	6s05 d	6s05¼d	6s06¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P S.	Weather.
Thursday	34s9d	34s9 l	34s9 l	Quiet.	.....
Friday	3 s d	34s6d	34s6d	Weak	Brilliant.
Saturday	34s6d	34s6d	34s6d	Obeaper.	.....
Monday	34s6d	34s d	34s d	Quiet	.....
Tuesday	34s6d	34s6d	34s6d	Quiet.	Some rain.

To-day's cablegram is as follows:

LIVERPOOL, Aug 17. Wheat—Cheaper to sell. California spot lots, 6s 10 ; off coast, 34s; just shipped, 34s 3d; nearly due, 34s; cargoes off coast, quiet; on passage, rather easier; Mark Lane wheat quiet; French country markets, mostly turn cheaper; weather in England, hot.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Aug	Sept.	Oct.	Dec.
Thursday	138⅞	139½	....	146¼
Friday	....	138⅞	14 ⅜	14 ⅜
Saturday	....	139	141	14 ⅜
Monday	....	138¼	140⅜	145¼
Tuesday	....	137⅞	139½	144½

The following are to-days' telegram:

NEW YORK, Aug 17.—West—82¼c for August, 83⅜c for September, and 8 ⅜c for December.

CHICAGO, Aug. 17.—Wheat—86c for September and 86¼c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	136½	137	138	....	14 ⅜
" lowest	136⅜	137	137⅞	....	142¼
Friday, highest	....	....	136½	....	141¼
" lowest	....	....	136¾	....	141⅜
Saturday, highest	136½	....	137	....	142⅜
" lowest	13 ⅜	....	136½	....	142
Monday, highest	136½	....	....	....	142
" lowest	136¼	....	....	....	141⅞
Tuesday, highest	13 ¼	....	....	....	142
" lowest	136¼	....	....	....	141⅜

The following are to-day's recorded sales on Call:

Wheat—Morning Informal—Buyer December 500 tons, $1 40¾. Seller 1892 5 0 tons $1 3 ¾ ctl. Regular session—300 tons, $1.40 ¾; 3 0, $1.40 ¾; 40 , $1 40¾. Seller 1892, new 200 tons $1.35½; 700, $1 3 ⅜ ctl. Afternoon Buyer December—200 tons, $1.40 ¾. Seller 1892—5.0 tons, $1.3 ⅜ ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	93½	....	....	....	98⅜
" low-st	93	....	....	....	98⅛
Friday, highest	9 ⅜	....	....	....	99⅛
" lowest	93⅛	....	....	....	9 ¼
Saturday, highest	93⅛	....	....	....	99⅛
" lowest	93⅛	....	....	....	99
Monday, highest	94	....	....	....	99
" lowest	94	....	....	....	9 ¼
Tuesday, highest	9 ⅜	....	....	....	98⅞
" lowest	93⅛	....	....	....	98¼

The following are to-day's recorded sales on Call:

Barley—Informal—December—9 0 tons, 9 ⅛c. Buyer December 100 tons, 9 ⅛c; 1 0, 9 ⅜ ctl. Regular session—Seller 1892, new—100 tons, 93c; 100, 92½c; 10, 92¼c; 100, 92⅜ . December—400 tons, 91¾c; 700, 91⅞c ctl. Afternoon—Seller 1892, new—200 tons, 92½c; 100, 92⅛c; 200, 92¼c ctl.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Aug. 16, '92, were as follows:

Flour, qr. sks	110,135	Bran, sks	13,392
Wheat, ctls	21,98	Buckwheat "	....
Barley, "	84,266	Mid lings "	2,76
Rye, "	2,59	Chicory, bbls	11
Oats, "	7,780	Hops, "	....
Corn, "	1,739	Wool, "	1,79
*Butter, "	50	Hay, ton	4,814
do bxs	1,38	Straw, "	232
do bbls	64	Wine, gals	170,49
do kgs	126	Brandy, "	9,50
do tubs	2	Raisins, bxs	3 5
do ½ bxs	20	Honey, cs	20
†Cheese, ctls	846	Peanuts, sks	....
do bxs	18	Walnuts "	168
Eggs, doz	21,8 0	Almonds "	....
do " Eastern	112 810	Mustard "	671
Beans, sks	10 726	Flax "	....
Potatoes, sks	24,27	Popcorn "	....
Onions, "	3, 38	Broom corn, bbls	....

*Over'd, 356 ctls. †Overland, 718 ctls.

Exports by Sea from San Francisco from July 1 to Aug. 10

	1892-93	1891-92
Wheat, ctls	901,050	1,81,332
Flour, bbls	7,403	1 2,336
Barley, ctls	125,754	120,17

Tonnage Movement.

The arrival of deep sea vessels has been free. Several charters were made the past week at around 25s iron f. o. Vessels are receiving fair dispatch.

From reliable advices up to Aug. 10, the following summary tonnage movement is compiled:

	On the way 1892	On the way 1891.	In port 1892.	In port 1891.
San Francisco	249,246	378,139	*179, 15	80,310
San Diego	20,'31	24,677	8,748	.....
San Pedro	5,3 8	6,848	1,3 8	} 14,217
Oregon	51, 10	46,045	26,632	
Puget Sound	25,980	22,992	.....	
Totals	352,'75	478,701	215,733	94,517

*Engaged for wheat, 1892, 67,559; 1891, 68,604.

Cereals.

London mail advices to August 1st report that there are no material differences in the advices just received from France and those which were placed before our readers last week. The total wheat yield is reckoned by a very good authority at 36,000 000 qrs. and the rye crop at 8,000,000 qrs. Of barley and oats we have no estimate at present, but both crops were of rather over average promise just before reaping. Thrashings of the new wheat crop are going on in Spain and Italy, and are said to be giving less even results than at first anticipated. The production in Hungary is only a trifle larger than last year; in Portugal the indications are that imports will have to be nearly 4 000 0 0 bushels this year. In France the outturn is decidedly irregular, and in the United Kingdom very little to be bragged of. The production in the principal grain districts of Germany is understood to be irregular. India is 60 000 000 short of last year. The United States is at least 1e0,000 bushels short of last year, and recent advices have indicated even a smaller outturn. The crop of corn and oats will be much short of last year, although large stocks of all will be carried over.

In regard to the condition of the crops in Russia, it is stated that autumn-sown grain will, on 60 per cent of the area, give a medium, and on 40 per cent a decidedly bad outturn. The production of wheat last year in Russia was abou 176 0 0,000 bushels On the above estimate of condition it is thought the yield this year will be 184,000 000 to 192 000 000 bushels The outturn of rye last year was about 520 000,000 bushels, and at the best this year it is thought that the outturn will be only 40,000 000 bushels more. If these statements are correct, it is difficult to see how Russia can be a free exporter of grain this year, as stocks are materially reduced in Russia and they begin the year on the famine basis.

The United States Agricultural Department returns for the month of July show the following acreage: Spring wheat 13,375,000 acres; winter wheat 26,315 000; corn, 72 851 000; oats, 25,351.000 and cotton, 17. 350 0 0 The acreage in 1891 was: Spring wheat 13 395,000 acres; winter wheat, 26 581 000; corn, 76 204 000; oats, 25,581 000 and cotton, 2 779,000. The July report indicated the following yields, compared with the actual in previous years:

	1892.	1891.	1890
Winter wheat	345,000,000	392 49 ,000	255,374.000
Spring wheat	180, 00.000	219,285,000	143,888 000
Total	525 000 0 0	611 7 0,0 0	399,262 00
Oats	6 4 0 0 000	738,000,000	523 621 000
Rye	31 0 0 000	33,000 000	28 000 0 0
Barley	70 000 0 0	75,000 000	63 000 000
Corn	1,690,000,000	2,060,154,000	1,489 970,000

If the condition of corn is reduced as popularly expected, the yield per acre, which by the last report of 81 1 was equal to 23.3 bushels per acre, will be correspondingly reduced. A condition of 79 would mean 22 7 bushels, a condition of 77 a yield of 22 2 and a condition of 75 a yield of 21.5. The yield of oats by the last report of 87.2 was equal to 25 8 bushels per acre. A reduction to a yield of 85 would indicate a yield of 25.2 and a condition of 80, 23 9. The condition of spring wheat was 9 9 and the promised yield 13.4 bushels. A condition of 93 would indicate a yield of 13.8 and a condition of 89 would indicate a yield of 13 2.

The local market was subjected the past week to a strong bear pressure and still lower prices for silver abroad, but with a large engaged tonnage in port and exporters wants at times both urgent, gave strong support to the better grades of wheat. Farmers' deliveries at the various warehouses in the interior are very large, but against this a larger proportion advances are asked, which shows that holders are not prepared to sell. New York and Chicago mail advices to August 12th report that threshing in several of the States is disappointing. The light yield has caused lower estimates of the total outturn The majority of well-informed writers on crop outturns now place the total yield this year at about 50,000,000 bushels.

Barley has met with a continued active demand for shipping to New York and Liverpool. The low freight rates by rail to New York favor shippers. All present information points to a very large increase in the exports this season owing to a short crop in the central and eastern States of both barley and oats. The foreign crop, while larger than in last year, is not a full average. The crop in both Oregon and Washington is short, so that but little can be expected from up north.

Oats have had strong support, and unless receipts should increase very materially, the market ought to do better. The consumption is larger and steadily increasing, but this usually obtains during fair times.

Corn has fairly held its own. There are indications that supplies are being concentrated The demand from Mexico and Central America is light

Rye holds steady at the decline. Export buyers are in the market for choice grades, but they do not appear disposed to pay present asking prices.

Since writing the above we are informed that export buyers are in receipt of advices that the decline in wheat abroad is due to the low and falling market for silver which allows importers of Indian and Russian wheat to sell lower and then make money. It is also claimed that exporters are after a higher grade of wheat in our market so as to bring their shipments up to a higher standard. In other words, they are loaded up with poor wheat and want something better than No. 1 shipping, and by bidding lower for the latter they expect to get choice to gilt-edged for less money. Farmers are not offering their better grades.

The market to-day was weak and lower for wheat and barley, under freer offerings and buyers bidding down The offers of wheat are nearly entirely off grades, and for which there are no buyers except at lower prices.

Ground Feed.

The demand for groundfeed is enlarging as natural pasture falls away. The feeding of rolled barley shows a large gain, which is accepted that it is growing in favor Heavy receipts of bran and mill-stuff from Oregon is against the market for both bran and middlings.

The receipts of hay are larger than at any time in this year, but the quality is mostly poor to fair. Low freight rates offered by the railroad to farmers in the upper Sacramento valley cause heavier shipments to this city than usually obtain at this season of the year. These, of necessity, create a weak and irregular market for all grades not coming up to strictly choice.

Live Stock.

The offerings have been in excess of the demand for bullocks and mutton sheep. The hot weather and liberal supplies of vegetables and fruit at low prices are against the consumption of fresh meats. Hogs, if grain fed are wanted, and for which a slight advance is paid. Soft hogs are slow.

Dairy Produce.

Receipts of butter from up-coast ports have been quite heavy, and as the grade was generally choice to gilt-edged, the market suffered when it was offered for sale. The late advance in the market was ill-advised and, as is usual in such cases, has resulted against the dairy interest. Fair grades of butter are scarce. Keg butter is moving off fairly free but pickled is neglected.

Poor to fair cheese is heavy and easy, but choice to gilt-edged has fair support in the obtainable supplies being only moderate.

Eggs have ruled fairly steady notwithstanding heavy receipts from the East. The increase in the latter has been offset by lighter supplies of Californian.

The weather to-day is very hot, which if continued for a few days, will cause gilt-edged firm butter to sell higher, for the bulk of receipts will be soft. Fresh-laid eggs from near-by points will also do better.

Fruit.

Canners were in the market to-day, and while prices were no better receipts cleaned up better on the wharf At the stores there was an over supply of culls and rejects Very choice fruit cannot be found and for which buyers pay more money Good keepers for shipping were wanted to-day. The hot weather will force the ripening of fruit

There was a firmer feeling in dried fruit to-day.

Vegetables.

Very few bay tomatoes are coming in, but receipts of river have been very heavy, which, in the absence of large buying, broke the market Green peppers and green corn have ruled weak and lower, but summer squash did better under light receipts The market for other garden truck was essentially unchanged.

Onions have had poor support. Receipts have been heavy while the demand has been light. The Oregon crop is short.

Potatoes shaded off slightly the past week, with the closing barely steady. The receipts were composed largely of poor to fair grades, which met with a slow demand and caused concessions to induce buying. This naturally had its effect on the better grades in the absence of an active shipping demand. The crop of choice potatoes is light.

Miscellaneous.

Large and fat hens and roosters are scarce and wanted The market on last Thursday moved up under light receipts and a good demand. It held strong on Friday and Saturday and barely steady since, with trashy stock selling lower. Young poultry was barely steady with, toward the close, lower prices quoted. A carload of Eastern poultry is due to day and another is about due. This is against the market.

The supply of beans is light owing to continued heavy shipments out of the State. The market is firm for all kinds.

Buyers advanced their bids on hops. It is claimed that 20 cents is bid for some. The Eastern market is strong and higher in sympathy with European advices.

Fall wool comes in sparingly. The market, while reported unchanged, appears to be shaping in the interest of sellers.

There is a quiet demand for honey It is said that for something extra better prices are bid.

Mustard seed is offering more freely.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Aug. 17, 1892

Limes, Mex	3 00 @ 4 50		
Do Cal	— @ —		
Lemons, box	1 00 @ —		
Do Sicily choice	5 50 @ 6 50		
Strawberries, per chest—			
Longworth	5 00 @ 7 00		
Sharpless	3 50 @ 5 00		
Raspberries, ch.	6 00 @ 8 00		
Peaches, box	25 @ 50		
Blkbe ries ⅌ ch	2 50 @ 4 00		
Figs, blk box	1 00 @ 1 25		
Do White do	50 @ 75		
Apples, Red Astrachan	50 @ 85		
Do Gravenstein	75 @ 1 25		
Crabapples	50 @ 75		
Canteloupes, pr crate	1 00 @ 2 00		
Melons pr 100	5 00 @10 00		
Grapes, pr box			
Do White	40 @ 60		
Do Black	50 @ 75		
Do Muscats	50 @ 75		
Do Tokays	65 @ 1 00		
Prunes, Hung'n	40 @ 60		
Do German	50 @ 65		
Plums, ⅌ box	25 @ 5		
Pears	— @ —		

Fruit in bulk to canners:

Apricots, ⅌ lb	1½ 3; Pears, ½ 2; Plums, white, 2@3 ;
Peaches, freestone	1½ 2½; clings, 2@3. Extra choice fruit for special purposes sells at an advance on outside quotations.
Beets, sk	— @ 75
Carrots, sk	40 @ —
Extra dry ⅌	15 @ —
Do green box	40 @ 65
Parsnips, ctl	— @ 1 25
Peppers, dry ⅌	10 @ —
Do grn Chili, bx	40 @ 60
Do do Bells	50 @ 75
Turnips, ctl	75 @ —
Cabbage, 100 lbs	60 @ 90
Garlic, ⅌	1½ @ 3
Squash, Sum, bx	15 @ 25
Tomatoes,	— @ —
Do River grn bx	15 @ 35
String Beans, per sack	50 @ 75
Cucumbers, box	15 @ 30
Mushrooms	— @ —
Egg Plant, bx	45 @ 65
Green Corn, sk	— @ —
Do Bartlett culls	35 @ 65
Do do choice	90 @ 1 25
Do Bergeley box	25 @ 50

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½@ —	Wethers	7 @—
Grass fed, extra	5½ @ —	Ewes	6½@—
First quality	4½ @ —	Do Spring	8 @—
Second quality	4 @ —	HOGS.	
Third quality	3½ @ —	Light, ⅌ lb. cents	5½@ —
Bulls and thin Cows	2 @ —	Medium	5½@—
VEAL.		Heavy	5 @—
Range, heavy	4 @—	Soft	4½@—
Do light	5 @ —	Feeders	3½@—
Dairy	6 @ —	Stock Hogs	3½@—

Grain and Wool Bags.

Calcutta, spot	6
Wool Bags	36 @ 38

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowe

WEDNESDAY, Aug. 17, 1892

BEANS AND PEAS			
Bayo, ctl	2 85	@	3 15
Butter	2 50	@	3 00
Pea	2 40	@	2 65
Red	2 65	@	2 85
Pink	2 35	@	2 50
Small White	2 35	@	2 50
Large White	2 20	@	—
Lima	3 00	@	3 20
Fld Peas, blkeye	1 50	@	1 70
Do green	1 50	@	2 75
Do Nlies	1 30	@	1 40
Split	4 50	@	5 00
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	18	@	—
Do Giltedged	—	@	23
Do Creamery rolls	—	@	24
Do do Giltedge	—	@	25
Eastern	16	@	17
CHEESE			
Cal. choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	10
Do skim	5	@	6½
Young America	—	@	11
EGGS.			
Cal. "as is," doz.	16	@	18
Do shaky	12½	@	14
Do ca died	19	@	23
Do c oic	23	@	25
Do fresh laid	26	@	29
Do do selected	—	@	30
Eastern "as is"	15	@	17
Do candled	18	@	20
Do selected	22	@	24

Outside prices for selected large e gs and inside prices for mixed sizes—small eggs and hard to sell.

FEED			
Bran, ton	16 00	@17	00
Feedmeal	27 00	@3	00
Gr'd Barley	20 50	@22	00
Middlings	20 00	@21	00
Oil Cake Meal	—	@25	00
Manhattan Food ₰ cwt.	7 50		
HAY			
Wheat, per ton	8 00	@	—
Do choice	—	@12	50
Wheat and Oats	8 50	@11	00
Wild Oats	8 00	@11	00
Cultivated do	7 00	@10	00
Barley	5 00	@ 9	00
Alfalfa	7 00	@ 9	00
Straw, bale	40	@	55
GRAIN, ETC.			
Barley, feed, ctl	87½	@	92½
Do Choice	93½	@	—
Do Brewing	1 00	@	—
Do do Choice	1 05	@	—
Do do Giltedge	1 07½	@	—
Do Chevalier	—	@	—
Do do Giltedge	—	@	—
Buckwheat	—	@	—
Corn, White	1 35	@	1 37½
Yellow, large	1 27½	@	1 30
Do small	1 32½	@	1 35
Oats, milling	1 52½	@	—
Feed, Choice	1 46½	@	—
Do good	1 44½	@	—
Do fair	1 37½	@	—
Surprise	1 55	@	—
Black Cal	—	@	—
Do Oregon	—	@	—
Gray	—	@	—
Rye	1 30	@	—
Wheat, milling, Gilt edged	1 46½	@	—
Do Choice	1 42½	@	—
Do fair to good	1 40	@	—
Shipping, cho'ce	1 38½	@	—
Do good	1 35	@	—
Do fair	1 31½	@	—
Common	1 27½	@	—
Sonora	1 30	@ 1	41½
HOPS.			
'892 Bid	18	@	20
FLOUR.			
Extra, City Mills	4 40	@ 4	65
Do Country Mills	4 30	@ 4	65
Superfine	2 75	@ 3	10
NUTS—JOBBING.			
Walnuts, Cal. lb	6½	@	—
Do Choice	8½	@	—
Do paper shell	9½	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	30	@	50
POTATOES.			
Early Rose, ctl	40	@	55
Peerless	45	@	65
Garnet Chilies	50	@	70
Burbank Seedlings	45	@	65
Do do Salinas	75	@ 1	00

Extra choice sell for more money.

POULTRY.			
Hens, doz	6 50	@ 8	00
Roosters, old	6 00	@ 7	50
Do young	5 00	@ 7	00
Broilers, small	2 00	@ 3	00
Do large	3 00	@ 4	00
Fryers	4 00	@ 5	00
Ducks	4 00	@ 4	75
do, large	5 00	@ 5	50
do, extra large	6 00	@	—
Geese, pair	1 25	@ 2	00
Goslings	—	@	—
Turkeys, Gob'r	19	@	21
Turkeys, Hens	16	@	18

All kinds of Poultry if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Beg ₰ cwt.	11 50	@	—
PROVISIONS.			
Cal. Bacon, he'vy, lb	11	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal. Sm'k'd Beef	11	@	—
Hams, Cal salt'd	12½	@	14
do Eastern	15	@	16
SEEDS.			
Alfalfa	—	@	—
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@ 2	25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	2½	@	—
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll	16	@	21
Oregon Eastern	12½	@	19
do valley	18	@	23
So'n Coast, def	10	@	12
Nevada (S ate)	15	@	19
HONEY.—1892 CROP.			
WhiteComb, 2-lb	9	@	12
do do 1-lb frame	11	@	14
White extract'd	6½	@	7½
Amber do	6	@	6½
Beeswax, lb	25	@	28

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3¾	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	6½	@	7
APRICOTS—1892.			
Sun-dried, unbl. com.	4	@	5
Do do prime	6	@	7
Do do choice	8	@	9
Do bleached, prime	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap. choice, in boxes	13½	@	—
Do fancy, do	14	@	—
FIGS—1892.			
Sun-dried, black	4½	@	5
Do white	—	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	—	@	—
Do Evap., in boxes	—	@	—
White, sun-dried	—	@	—
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	11½	@	—
Do do fancy	12	@	—
Evap, unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Evap, peeled, in boxes, choice	—	@	17½
Do do fancy	—	@	20
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	—	@	5
Evap, sliced, in boxes.	7	@	8
Do ring do	9	@	10
PLUMS 1892.			
Pitted, sun-dried	7	@	8
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	—	@	—
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster, ₰ bx	1 90	@	2 00
Do ch icest do	1 60	@	1 70
Do p ime, ₰ bx	1 40	@	1 45
Loose Muscatels, common, ₰ bx	—	@	—
Do choice, do	1 25	@	1 30
Do fancy, do	—	@	—
Unstem'ed Muscatels, in sacks, ₰ lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ₰ 20-lb bx	—	@	—
Sultanas, unbl. bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manila Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grape-Vine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spinning	15
Manilla, 3 yarns, heavy	10½	Duplex Hop, in balls, tar'd	9½
Pure Manila, 3 and 4 yarns	12	Do, Grape Vine, in balls or coils	10½
Do, 2 yarns, light	12½		

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal. 10 @ 15

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos, $1; 10 mos, $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Auction Sales of California Fruits.

At New York.

Aug. 11.—Three carloads: Bartlett Pears, $2.30@3; Congress Pears, $2.45; Tu can Cling Peaches, $1.25; Mary's Choice P aches, $1 30; Crawford Peaches, $1.10 @1.30; Susquehanna Peaches, $1.10@1.40; Centennial Peaches, $1.90; Orange Cling Peaches, $1.35; Burton Cling Peaches, $1.60; Victoria Plums, $1@1.3 ; Yellow Egg Plums $1.25@1 70; Columbia Plums, $1 40@1 50; petit Plums, $1.2 ; Kelsy Japan Plums, $1 6 ; P. D. Plums, $1.40; Washington Plums $1.25; Bohemian Plums, $1 40@1 50; Fontainebleau Grapes, half cra es, $1.40 a1.65; Tokay Grap s, half crates, $2; Muscat Grapes, half crates, $1 90; Red Nectarines, $1.60; French Prunes, $1 6 ; Gros Pru es, $1.45; German Prunes, $1 50; Purple Prunes, $1 20.

Aug 12.—Eight carloads: Bartlett Pears, $1 80@ 2.90; half boxes. $1 22; Clapp's Favorite Pears. $2 10; Peaches, $1 10@1 35; Crawford Peaches, 90c@$1.80; Late Crawford peaches, $1.25@2 40; Cling Peaches 40c @$1.35; Muir Peaches, $1.10; Susquehanna Peaches, $ .75@1.90; Foster Peaches, $1.16@1.25; Grapes, $1.20@ 1 60; Fontainebleau Grapes, 60c@$1.50; Nectarines $1.15@1 3 ; Red Nectarines, $1.50; P. D. Plums, 90c@ $1.40. Columbia Plums, 40c@$1 55; Japan Plums, $1.75 @5; Egg Plums, 80c@$1.80; Plums, $1.06@1.40; Golden Drop Plums, $1@1.75; Washington Plums, 60c@$1.15; Diamond Plums, $1 15; Bradshaw Plums, $1.05@1 60; Gros Prunes, $1.10@2.65; German Prunes, $1 60@2; French Prunes, $1 30; Bulgarian Prunes, $1.55; Italian Prunes, $1.15; Fellenberg Plums, $ .25@1.35.

Four carloads: Sacramento River Bartlett Pears (overripe) $1.90@3 40; Crawford Peaches $1@1.65; Susquehanna Peaches, $1.15@2.55; Foster Peaches $1.15 @1.50; Tu can Cling Peaches, $1.10@1 65; Japan Plums, $1 50@3 50; Plums, 65c@$1.55. Weather very hot. Fruit in ventilator cars arriving overripe.

Aug. 12—Four carloads: Black Malvoise Grapes, half crates, $1 70; Fontainebleau Grapes, $1.10@1.40; Bartlett Pears, $2 20@3.15 half boxes, $1.25@1 60 Susquehanna Peaches, $1.10@1 35; Crawford Peaches, $1 @1.40; Orange Cling Peaches, $1.20@1 25; Centennial Peaches, $1.70; Muir Peaches, $1 15; Yellow Egg Plums $1 05@1.60; Columbia Plums, $1 05; Bradshaw Plums, $1.05, Gros Prunes, $1.35.

Aug. 13.—Four carloads: Tuscan Cling Peaches, $1.20; Crawford Peaches, 95c@$1 75; Late Crawford, $1.30@1.65; Peaches, 35c@$1.90; Foster Peaches $1.15 @1.90; Susquehanna Peaches, $1.15@2 55; Cling Peaches, $1 05@2 30; Nectarines, 65c@$1.35; Bartlett Pears, $1 90@2.40; Bradshaw Plums, 90 @$1 35; Peach Plums, $1.05; Japan Plums, $1.50@3.50; Hungarian Prunes, $1 55; Red Grapes, $1.30; Grapes. 55c@$1.30. Plums, $1@1 50; Comedy Plums $1.05; German Prunes, $1 30; Wheatland Peaches, $2 23; Gros P unes, $1.10@ 1.70; P. D. Plums, 75c@90c; Egg Plums. 80 @$1 65.

Four carloads: Bartlett Pears. $2.5 @3; Peaches, $1 50@1.55; Crawford Peaches $1.45@1 80; Susquehanna, $1.80: Orange Cling Peaches $1 50@1.55; Muir Peaches, $1 60; Col mbia Plums, $1.15; Red Nectarines, $1.35; Grapes, $1 65

Aug. 15.—Seven carloads: Crawford Peaches, $1.05 @1.70; Susquehanna Peaches, $1.15@1 30; Orange Cling Peaches, $1.10@1 25; Wheatland Peaches, $1 35; Centennial Peaches, $1 50; Muir Peaches $1.10@1 20 Foster Peaches, $1.15; Tuscan Cling Peaches, $1.10@ 1 30; Yellow Egg Plums, $1.10@1 95. Bradshaw Plums, $1@1 40; German Prunes, $1 15@1 75; Gros Prunes, $1.50@1.70; French Prunes, 95c@$1 30; Italian Prunes, $1.50, Fellenburg Prunes, $1.50; Fontainebleau Grapes, half crates, $1.15@1.50; Black Malvoise Grapes, half crates, $1 40; Tokay Grapes, half crates, $1.80; Muscat Grapes, half crates $1.10@1.80; Brunswick Figs $1.40; Bartlett Pears, $2.20@3 35; Congress Pears, $2 65.

Aug 15 —Ten carloads: Bartlett Pears, $2 30@3 35; Beurre Hardy Pears, $2 25; Cling Peaches, $1 25@1.70; Susquehanna Peaches. $1.35@1.70; Early Crawford Peaches. 95c@$2 20; Late Crawford Peaches, $1.25@ 1 60; Peaches, $1.70@1 90; White Peaches, $1 40; Foster Peaches, $1.10@1.35; Decker Peaches, $1.52; Muir Peaches, $1 20@1 45; Orange Cling Peaches, $1.3 ; Nectarines. $1.1 @1 20; Bradshaw Plums, $1.05; Japan Plums. $1 65@1 95; Gages, $1.10; P. D. Plums. $1 10; Comedy Plums, $1@1.05; Columbia Plums, $ @1.20; Gros Prunes, $1.65@2.15; Egg Plums, $1.45@1 75; German Prunes, $2@2 40; Golden Drop Plums, $1.35; Fellenburg Prunes, $1.75; Muscat Grapes, single crates, $1 05@1 35; Rose de Peru Grapes, $1 35; Fontainebleau Grapes, $1.35; half boxes Bartlett Pears, $1.25@1.35; one ventilated slow f eight car Bartlett Pears heated, 65c@$1 35; Beurre Clairgeau Pears, heated $1 35@1.45. Gross sal ten cars, $13,607. Twenty-one cars of California fruit on New York market to-day.

At Chicago.

Aug. 11.—Two carloads: Bartlett Pears, $2.70@3.10; Susquehanna Peaches, $1 3 @1 60; Crawford Peaches, $1.20@1.50; Muscat Grapes, half crates, $2.30.

Aug. 11 —Nine carloads: Gros Prunes, $1.75@1.95; Bartl tt Pears. 2 30@3; Beurre Hardy Pears, $2.40@ 2.45; Egg Plums $1.55@1.60; Grapes, $1 35@2 10; Bulgarian Prunes, $1 05; Silver Prunes, $1 30; Peaches, 80c@$1.75; Prunes. $1 1 @1.30; Clap's Favorite Pears. $2.15; Crawford Peaches, 95c@$ .50: Japan Plums, $2.25; Beauty Peaches, $2 20.

Aug 12.—Three carloads: Bartlett Pears, $3@3.30; Early Crawfo d Peaches, $1.05@1 40; Tuscan Cling Peaches, $1.05@1.10; Yellow Egg Plums, $1.30@1 65; Columbia Plums, $1 25@1.55; Bohemian Plums. $1.35; Washington Plums, $1.15@1 40; Quackenboss Plums $1.95; Brad haw Plums. $1.15; Gros Prunes, $2@2 10; Fellenburg Prunes, $1.55.

Aug. 12.—Seven carloads: Bartlett Pears, $1.75@ 3.20; Busock Pears. $2 75; Peaches, $1.05@1.70; Grapes, $3; Egg Plums, $1.25@1.50; Gros Prunes, $1.70@2. Damson Plums, 70c; Prunes, $1.40; Golden Drop Plums, $1.05@1 40. German Prunes, $1.25@2.40; B adshaw Plums, $1.30; Hungarian Prunes, $2; French Prunes, $1 10; Purple Duane Plums, $1 05; Comedy Plums, 95c; Beurre Hardy Pears, $ .70; Columbia Plums, $1 35; Susquehanna Peaches. 65c@$1.50.

Aug. 13.—Four carloads: Bartlett Pears averaged $3 per box; Crawford Peaches, $1@1 35; Muir Peaches, $1 05@1.25; Orange Cli g Peaches, $1.25@1.35; S squehanna Peaches, $1.25@1.35; Centennial Peaches, $1 25@1.45; Foster Peaches, $1 20@1 25; Morocco Peaches, $1.30; Elberta Peaches, $1.25; Tuscan Cling Peaches, $1.30; Yellow Egg Plums, $1.35@1.55; Kelsy Japan Plums, $1.50; Columbia Plums, $1 45; Purple Prunes, $1.45; French Prunes, $1.10; German Prunes, $1.10; Fontainebleau Grapes, $1 5 @1.80.

Aug. 13.—Ten carloads: Bartlett Pears, $ @2.30; Beurre Clairgeau Pears, $2 10@2 30. Seckel Pears, $1.95 @2 15; Plums, 50c@$2; Gros Prunes. $1.20@1.70; Bulgarian Prunes, $1; Egg Plums, $1.15@1 40; Prunes, $1.05@2; Nectarines, $1.25; Peaches. 95c@$1 95; Cling Peaches, 65c@$ 50; Crawford Peaches, 90 @$1 50; Susquehanna Peaches, $1.15@1.50; Tuscan Cling Peaches. $1 05@1.35; Foster Peaches, 65c@$1.25 Grapes, $1.55@2 15; Tokay Grapes, $2 3 @4 05; Muscat Grapes. $1.55@2.15; Decker Peaches, 80c; Dutchess Pears, $1.85@2.35.

Aug. 15 —Five carloads: Bartlett Pears, $2.5 @3.05; Howell Pears $2 30; Beurre Hardy Pears, $2.25; Gros Prunes, $1.50@1.80; Hungarian Prunes, $1.55; Fellenburg Prunes, $1 65; Italian Prunes, $1.50; German Prunes, $2 Yellow Egg Plums, $1.30@1.65; Washington Plums, $1.10@1 15; Quackenboss Plums. $1 50; Red Egg Plums, $1.25; Columbia Plums, 95c@$ 45. Magnum Bonum Plums, $1.10; Crawford Peaches, $1@ 1 40; Centennial Peaches $1.50; Morocco Peaches, $1.25@1.40; Orange Cling Peaches $1.15@1.50; Stephens' Cling Peaches, $1.20; Fontainebleau Grapes, $1.45 @1.75; Muscat Grapes, half crates. $1 70@1.85.

Aug. 15.—Twelve carloads: Bartlett Pears, $2.05@ 3.15; Bartlett Pears, heated, 60 @$1 90; Hardy Pears, $2@2.30; Gros Prunes, 75 @$1.50; Plums, $1 05@1.25; Plums, heated, 30c; Seckel Pears, heated, 60c; Crawford Peaches, 60c@$1.20; Foster Peaches, $1.15@1.40; Egg Plums, $1 10@1 45; Egg Plums heated, 65c; Silver Prunes, $1 25; Fellenburg Prunes 75c@$1.20; Peaches, $1.15@1.50; Peaches, heated, 65 ; Nectarines, $1@1.10; Muscat Grapes, $1.75; Seedless Grapes, $1 30; Prunes, 75 @$1.45; Golden Drop Plums, 95c@$1.35; Japan Plums, $1@1.70; Grapes, 30c@$2 15.

At Boston.

Aug. 11 —Two carloads: Bartlett Pears, $2.20 @3.00; Yellow Egg Plums, $2@2.15; Bohemian Plums, $1 75@2; Bradshaw Plums, $1 90@2 40; Columbia Plums, $2; Crawford Peaches, 90c@$1.30; Red Nectarines, 95c; Fontainebleau Grapes, $1.10@1.65.

Aug. 12.—Two carloads: Bartlett Pears, $2.35@3; Yellow Egg Plums, $1.35@1 70; Crawford Peaches, $1.10@1.35. Some fruit overripe sold for less.

Aug. 13.—Two carloads: Bar lett Pears, $2 35; Gros Prunes, $1 70; French Prunes, $1.20; German Prunes, $1 40; Washington Plums, $1 40; Egg Plums, $1.65; Columbia Plums, $1.45; Green Gage Plums, $1 50; Victoria Plums, $1.20; Early Crawford Peaches, $1.10 @1 60; Tuscan Cling Peaches, $1.35; Stephens Cling, $1.30.

Aug. 15.—Three carloads: Early Crawford Peaches, $1.30@1.60; Late Crawford Peaches, $1.25@2 15; Lemon Cling Peaches, $1 45; Foster Peaches, $1.25; Orange Cling Peaches, $1 50; Yellow Egg Plums, $1.75; Petit Plums, $1 45; Columbia Plums, $1 40; French Prunes, $1.40; Bartlett Pears, overripe, $1 60@2 05; Fontainebleau Grapes, half crates, $1.35.

At Omaha.

Aug. 12.—One carload: Pears, $2 50@2.65; Peaches, $1.25@1.40; Foster Peaches, small, $1.

Aug. 13.—One carload: Pears, $2@2 75; Peaches, $1.25.

Aug. 13 —One carload: Peaches, $1.25@1.50; Pears, $2.50@2.75. Good demand.

Aug. 15.—Three carloads: Pears, $1.75@2.50; Plums, $1.50@1.75; Peaches, $1 10@1 40.

At Montreal.

Aug. 15 —Two carloads: Bartlett Pears, $3 60@4; Crawford Peaches, $2.10; Susquehanna, $1.30@1.40.

At Minneapolis.

Aug. 11.—Two carloads: Bartlett Pears, $2 50@2.65; Egg Plums, $2.45.

Aug. 1 .—Three carloads: Pears, $2 30@2 60; Gros Prunes $2.40@2.50; Quackenbo s Plums, $2.25; Peaches, $1.35@1.70; Plums, $2@2.55.

Aug. 15 — Three carloads: Peaches, $1.35@1.60; Muscat Grapes, single crates. $1 55@1.90; Plums, $1 25 @2.10; Beurre Hardy Pears, $2.40@2.45; Beurre Clairgeau Pears, $2.40@2 45; one car Bartlett Pears shipped ventilated cars, slow freight, bad order, Pears, $1@ 2 25.

Parental Responsibility.

The parent whose sole answer to criticism or remonstrance is, "I have a right to do what I like with my own child!" is the only impossible parent. His moral integument is too thick to be pierced with any shaft, however keen. To him we can only say, as Jacques did to Orlando, "God be with you; let's meet as little as we can."

But most of us dare not take this ground. We may not philosophize or formulate, we may not live up to our theories, but we feel in greater or less degree the responsibility of calling a human being hither, and the necessity of guarding and guiding, in one way or another, that which owes its being to us.

We should all agree if put to the vote that a child has a right to be well-born. That was a trenchant speech of Henry Ward Beecher on the subject of being born again; that if he could be born right the first time he'd take his chances on the second. "Hereditary rank," says Washington Irving, "may be a snare and a delusion, but hereditary virtue is a patent of innate nobility which far outshines the blazonry of heraldry."

Over the unborn our power is almost that of God, and our responsibility, like His toward us; as we acquit ourselves toward them, so let Him deal with us.

Why should we be astonished at the warped, cold, unhappy, suspicious natures we see about us, when we reflect upon the number of unwished-for, unwelcomed children in the world; children who at best were never loved until they were seen and known, and often grudged their being from the moment they began to be. I wonder if sometimes a starved, crippled, agonized human body and soul does not cry out: "Why, O man, O woman, why, being what I am, have you suffered me to be!"—Mrs. Kate Douglas Wiggin in Scribners.

PHOTOGRAPHING RIFLE BULLETS.—An interesting deduction drawn from Prof. Boy's successful experiments on the photography of rifle bullets in motion is that the blurring of photographic images, due to atmospheric disturbance, can in many cases be wholly eliminated. The bullets, which were photographed quite sharply, had an appreciably greater velocity of motion than that (upon the average) of the molecules of air. Therefore, with equally short exposure in the case, let us say, of solar photography, the image-forming light is received through a virtually motionless, although, of course, not absolutely homogeneous, atmosphere.

—Hicks—We've got something new at our house—a machine to wash dishes.

Wicks—And how does it work?

Hicks—Beautifully. It breaks on an average five dishes a day. Fact; you would hardly know it from a hired girl.—Transcript.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon	Salem, J. T. Gregg	Sept. 12-17
California	Sacramento, Edwin F. Smith	Sept. 5-17
Washington	Spokane	Sept. 19-24
Nevada	Reno, C. H. Stoddard	
Western Washington Industrial Exposition	Tacoma	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
1	Oakland	Aug. 15-20
2	Stockton	Sept. 19-Oct. 1
3	Chico, J. D. Sproul	Aug 23 27
4	Petaluma, Dr. Thos. Macleay	Aug. 29-Sept. 3
5	Santa Clara, George H. Bragg	Sept 26-Oct 5
6	Los Angeles	
7	Salinas City, J. J. Kelley	
8	Placerville, Thos. Fraser	Aug. 23-27
9	Rohnerville, G. Uuderwood	Sept. 19-23
10	Yreka, C. S. Smith	Oct. 5-8
11	Sierraville, Fred Blinman	Oct. 3-7
12	Lakeport, H. A McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28-Sept. 3
14	Santa Cruz, O. car L. Gordon	Oct. 10-15
15	Bakersfield, J. J. Kelly	Oct. 11-16
16	San Luis Obispo, J. H. Barrett, Sept 27-Oct 1	
17	*, I. J. Rolfe	Aug. 23-28
18	Independence, C. W. Craig	Sept. 27-30
19	Santa Barbara, H. B. Barstow	Aug. 23-27
20	Auburn, F. D. Adams	Aug. 30-Sept. 3
21	Fresno, J. M. Reuck	Sept. 26-Oct. 1
22	Escondido, G. M. Dannals	Sept. 21-24
23	Concord, F. L. Loucks	Aug. 29-Sept 3
25	Napa, D. L. Hackett	Aug. 22-27
26	Ione, C. T. La Grave	Sept. 27-30
27	Redding, H. R. Hodson	
28	San Bernardino	
30	Red Bluff, M. R. Hook	Aug 16-20
31	Hueneme, T. H. Merry	Aug. 30-Sept. 3
32	Santa Ana, W. A. Beckett	Oct 3-7
33	Hollister, A. D. Shaw	Oct. 11-15
34	Susanville, C. E. Emerson	Sept. 3-7
35	Merced	
36	Vallejo	Aug. 27-30
37	Lompoc, W. I. Nichols	Sept. 20-23
38	Modesto	Sept. 28-Oct. 1
	—Glenn Co. Willows, W. V. Freeman	Aug. 9-13

*Stock exhibit and races will be at Glenbrook, and pavilion exhibit at Nevada City.

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The Efficient Left Hand.

Left-handers are notably of more than the average strength and much more than the average accuracy of the eye. Leonardo da Vinci and Hans Holbein were left-handed. Left-handed batsmen are noted for hitting, left-handed fielders for smartness, and left-handed bowlers are generally fast. We know a gentleman, not a straight bat, whose back play is a perpetual source of astonishment to the spectators. But now comes in a factor of unknown quantity. One would think that where conventional usage has obtained from the left-handed one particular set of motions for the right hand, it would be one requiring but average skill. But is this so? The three arts of cricket are distributed among left-handed people in the most arbitrary and apparently inconsistent manner; most of them bat left-handed, but many bowl with the right, and some bat with the right and bowl with the left. No doubt it would be found that, on the whole, those actions requiring the utmost nicety and the greatest accord between eye and limb are allotted to the superior hand; again, spontaneous gestures and unstudied actions would also be performed by the same hand.

It is a remarkable fact that with the majority of people the neglected left hand is not in mere strength inferior to the right. We have heard truly right-handed people actually declare that their left hand is the stronger, and from the present writer's own experience he knows this to be the case. This may be from the mechanical advantage and better balance of the body, the right side being heavier, or it may be due to the large muscles of the unused arm being less hampered by the development of other muscles. It is difficult in these cases to say which is the "right" hand, for the fact that the unused arm is the stronger does not imply ambidexterity, nor can we justly give the precedence to strength over dexterity.—Boston Transcript.

How Spectacle Lenses Are Made.—In the manufacture of spectacle lenses, says the *American Manufacturer*, the bit of glass to be formed into a lens is fastened by means of pitch to a small block of hard rubber, so that it may be held. It is ground by being pressed against a rapidly revolving cast-iron disc on a vertical spindle, and with curvature equal and opposite to that desired in the lens. This is the "rough tool," and is kept moistened with emery and water. Several grades of emery are used in succession, changing from coarse to fine as the grinding proceeds. The glass is then transferred to the "fine tool," made of brass, and compared from time to time to a standard curve to insure accuracy. In this second grinding the abrading material is rouge. Finally, the lens is polished by being pressed against a piece of cloth powdered with rouge and fastened to a rotating tool. The glass is now loosened from its block, turned over, and the reverse side of the lens ground. When this has been accomplished, the lens is placed on a leather cushion, and held firmly in position by a rubber-tipped arm, while a diamond glasscutter passing round an oval guide traces a similar oval on the glass below. The superfluous glass is removed by steel pincers and the rough edges are ground smooth on scotch wheels.

The Moon and the Barometer.—The influence of the moon on the barometer is dealt with by Mr. Bornstein in a recent article in the *Meteorologische Zeitschrift*. He refers to the question as to whether there exists any relation between the pressure of the atmosphere and the altitude of the moon. This study is based upon observations made at four different stations in Germany and Austria, and does not take into account the phases of the moon, or her distance from the earth, but considers merely the lunar day. The results obtained are: 1st, that the variations of pressure do not indicate any atmospheric tides, and 2d, that at three of the stations the pressure shows but one oscillation during the lunar day. At Berlin and at Hamburg the maximum takes place a little before the moon sets, and at Vienna, at the moment of least culmination, whereas the minimum takes place, at all the stations, at the moment of the moon's rising.

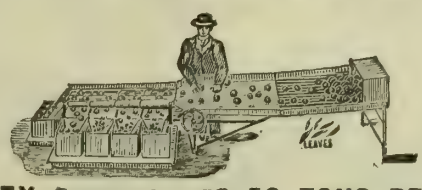
—The barber was addicted to habits of intemperance, so that on this occasion his hand was very unsteady at his work. In shaving the minister he inflicted a cut sufficiently deep to cover the lower part of the face with blood. The minister turned to the barber and said, in a tone of solemn severity:

"You see, Thomas, what comes of taking too much drink."

"Yes, sir," replied Thomas, "it do make the skin very tender."

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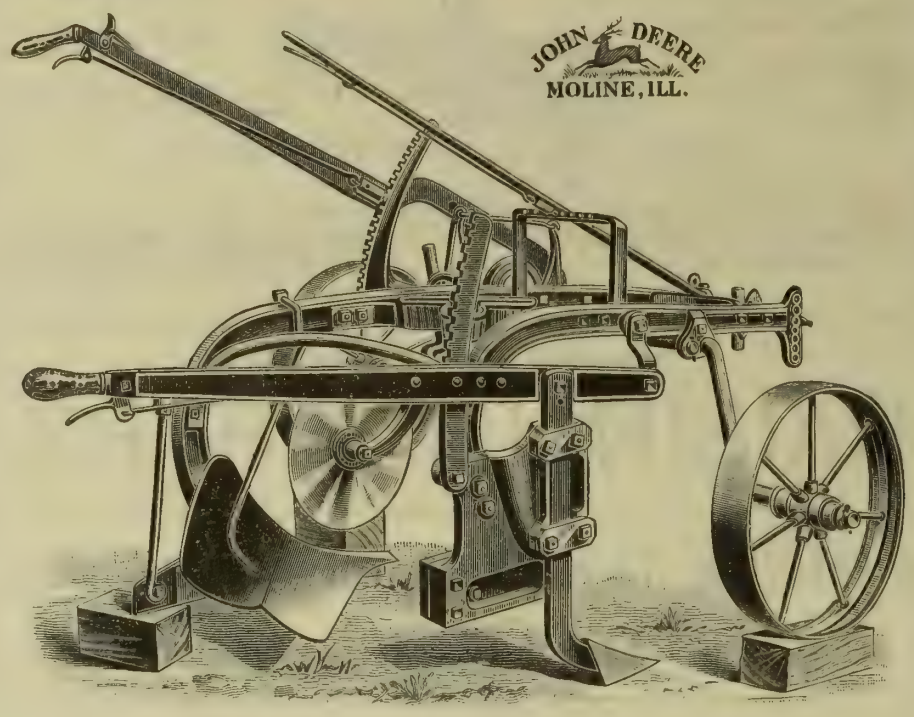
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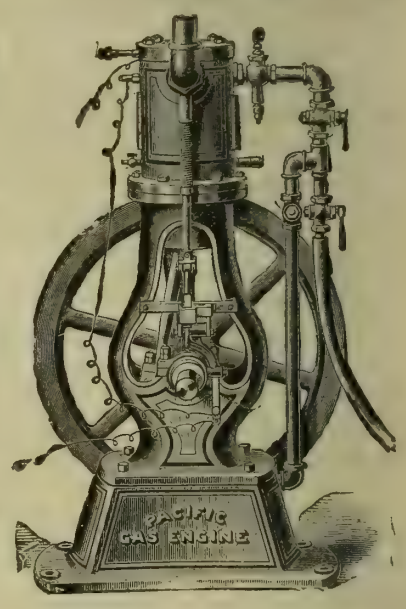
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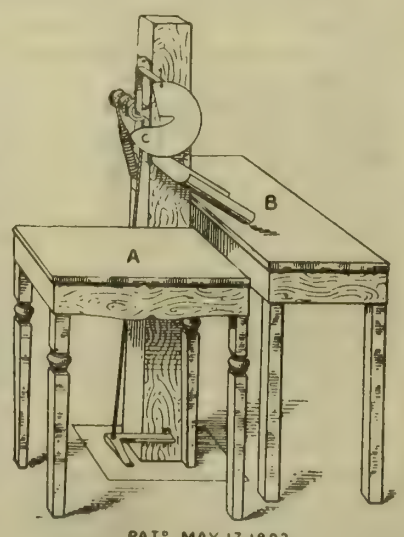
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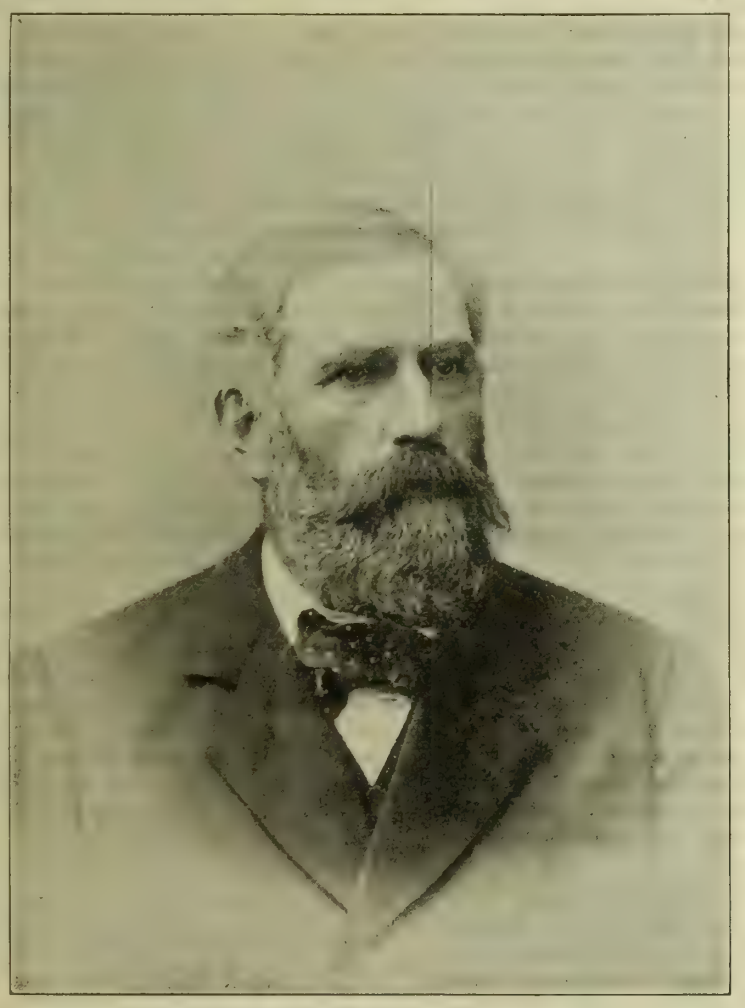
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Vol. XLIV. No. 9. SAN FRANCISCO, SATURDAY, AUGUST 27, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

California Viticulture at the World's Fair.

Our exhibit of viticulture at the World's Fair will be a success if the efforts of energetic, well-informed and withal popular representatives can make it so. Referring to the portraits upon this page we are disposed to add that our representatives are handsome as well as capable and devoted, and it is just as well, after all, to place in the eyes of the world, at Chicago, men of commanding and winning presence when these points can be combined with energy and ability.



HON. H. M. LA RUE, CHIEF OF VITICULTURE AT THE WORLD'S FAIR.

But one of the gentlemen shown on this page is more than a representative of California, he is chief of the viticultural division of the department of horticulture at the World's Fair. Thus he will have direct charge of grapes and grape products from all parts of the world, and will then have opportunity to show that a Californian can be upright and fair and appreciative of the efforts of others as well as of his own people. This too will be a good point to make for California, and the right man has been chosen to make it.

We are indebted to the *Pacific Wine and Spirit Review* for the portraits which we present on this page, and we shall draw from the same source some of the biographical notes which we shall introduce in connection with our own observations.

Hon. H. M. La Rue is almost too well-known to readers of the RURAL to need introduction. Our columns have frequently borne witness to his enterprise and public work. The State Fairs have for years shown his talent in organization and arrangement. His popularity is shown by the fact that every horticultural and viticultural assemblage to which his candidacy was announced adopted resolutions approving his choice as chief of viticulture at Chicago. He is an old Californian, a successful agriculturist and a man who has always been prominent in public agricultural affairs, and has faithfully discharged several important political trusts.

Mr. La Rue is a native of Elizabethtown, Ky., and when barely a youth he came to California in 1849. That year and in 1850 he engaged in mining and teaming in the mining districts. In July, 1850, he located in Sacramento county, and has resided there ever since. His first crop was planted on what is now the Rancho del Paso, in Sacramento county, in 1851, and he resided there for some 20 years, engaging in farming and stock-raising. An orchard of 75 acres, principally in peaches, was set out in 1857 and 1858, and for years it was the largest and finest in the State. As may be imagined, it was very profitable, and it continued so until 1868, when it was totally destroyed by high water in the American river. Having previously purchased 840 acres of land in Yolo county, near the town of Davisville, he abandoned his orchard and moved his family to Sacramento city, where they have since resided. He transferred his farming operations to Yolo county, where he is now engaged in general farming and stock-raising. He has also 90 acres in wine grapes, 100 acres in almonds and some other fruits. He has now 2050 acres in this farm. His principal vineyard is of 120 acres, located in Napa valley, near Yountville, nearly 100 acres of which are in resistant vines and grafted to choice varieties.

The other gentleman whose portrait appears is W. H. McNeil, who was selected by the California World's Fair Commission to take charge of the viticultural features of the California display, and this includes both the producers' exhibits which are regularly entered in the horticultural department, as well as those which will occupy prominent place in the California building. Mr. McNeil has been specially qualified for such work by long service in charge of the display which the Viticultural Commissioners have maintained in their rooms in this city. He has a wide acquaintance with the wine-producers, and is specially favored by them. Mr. McNeil was born Feb. 10, 1842, at Schuylerville, Saratoga county, New York, and is connected with one of the most noted Scottish Clans. He first came to California in 1852 when a lad of ten, and two years later he returned East and entered the Allen School at Newton, Mass. He returned again to California in 1858, and lived for a time in the Napa valley, his father having been one of the old-time land-owners in that section. He served honorably during the war, then in the customs service, and was afterward engaged in general business until his engagement by the Viticultural Commission in 1888.



W. H. M'NEIL, SUPERINTENDENT OF CALIFORNIA VITICULTURAL DISPLAYS.

California vs. Foreign Fruit.

An indirect indication of the way in which California fruit is affecting the foreign product in the great marts of the Atlantic seaboard is given by a New York journal. Mention is made of the failure of a local firm of dealers in foreign fruits, and it is further stated that they attribute their failure to the great shrinkage in values in foreign dried fruits, which they dealt in, especially raisins and currants, the depreciation being at least 35 per cent. California fruits had revolutionized the business; the firm had to put down prices, and even then they could hardly sell their goods, as California brands were now the "fad;" then again, they had to sell on six months' credit, and in that way made bad debts.

We are aware that many inferences are made to account for commercial failures, and statements in that line often contain a low percentage of truth, and yet the claim which this firm makes as to the influence of California supplies upon the demand for foreign fruits is one which is approved by much more substantial evidence. The result is in fact only what might be expected, and in harmony with the purpose of American fruit producers. American fruit for Americans is clearly indicated by the vast and varied resources of the country. A people with such a heritage should have little need of foreign supplies, and it really has little.

LAST Saturday it was announced that, owing to the spread of cholera in Europe, consular certificates would be required after September 18th. Now the cholera is fully developed at two principal points of departure—Hamburg and Havre.

FRUIT FOR THE FRUITLESS.—Near Medill, Mo., nine cars of California pears and peaches were wrecked Tuesday, on the Santa Fe road. A telegram says the fruit is being carted away in wagons by the farmers living in that vicinity.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

Saturday, August 27, 1892.

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Hay Press for Sale—Truman, Hooker & Co.
Pigs—Sessions & Co., Los Angeles.
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Fruit and Nut Trees—Baldwin & Stone, Danville.
Bargains in Land—John F. Byxbee.

☞ *See Advertising Columns.*

The Week.

The peace of California, atmospherically, sanitarily and industrially, presses itself upon the thought of the resident as he turns with a sigh from the plague reports from Europe, the labor commotions and cyclonic storms of the eastern and central States. It is true that we have stirring issues to meet and oppressive conditions to overcome, but after fuming all day about them, even the most ardent reformer can seek the quiet of his home, garden or his field at evening and be assured that cholera specters and cyclone fiends do not infest the air above him, nor mobs nor militia infest the highways around his premises. If this should be the only reward for being far from the madding crowd away upon the outmost run of civilization, it is enough.

But it is worth thinking that the peace we enjoy is not the peace of isolation and idleness. The islander of the South Pacific and the Eskimo of the polar world have that. Ours is the quiet and peace of effort in a land where industry is fostered by nature and where activity is full of pleasure and reward; where the stimulus to mind and soul culture is keen and the impulse to greatness strong. Such is California, and fortunate are those who know and feel it.

Personal.—Prof. W. A. Henry of the Wisconsin State University is in the city this week. He has been putting in his summer vacation on his lemon ranch in San Diego county, and is now making a study of agriculture in the upper part of the State before returning to his important work in Madison. Prof. Henry is a leading expounder of the science of animal nutrition and the practical ways of proceeding under this science. He is doing a vast amount of good to the livestock industries by his enthusiastic pursuit of this line of effort. He hopes to study feeding as practiced at Palo Alto stables and in such other establishments as he has time to visit.

A Valuable Late Orange.—It is reported from Los Angeles that J. R. Dobbins of Alhambra has delivered his crop of Valencia oranges free on board the cars at that place at $4 a box. From 130 trees eight years old he realizes $2400 gross, or $2000 after paying all expenses. The Valencia (sometimes called Du Roi, but of which we suppose the coming name will be "Hart's Tardif") is the latest orange to come into the market, and generally is at its best in July. This year the crop is later than usual. Within the past two years a great many trees in the nursery have been budded to this variety, and a few years hence there will be a considerable production of late oranges.

At the State University.

The widespread interest of Californians in higher education may be learned from many plain indications. The disposition toward the improvement of existing high schools and the establishment of new ones under the law passed by the last legislature is significant. The success of the University Extension courses which have been given also shows the drift of public opinion. Perhaps, however, the most unequivocal testimony is given by the record of admission of new students at the State University. At the Regents meeting on Tuesday of this week, Acting President Kellogg reported the admission of 206 students in 1890, 235 in 1891 and 265 in 1892 up to date. This is a gratifying increase when the fact is remembered that while the Stanford University secures a good complement of students the State institution is not depleted, but, on the other hand, advances steadily. No better indication could be had that Californians believe that higher education is a good thing to have, and propose to have it.

Another phase of the matter which is also apparent to any one within observing distance is that the institutions improve as their popularity increases. It may be argued that popularity follows awakening and improvement of the University itself; that the two great institutions have been so worked upon by each other that they have put forth efforts calculated to command popularity, and that thus the demand for higher education has been stimulated. We will not quarrel with either view of the case. We are content to rejoice over the fact that California never had such Universities as she now possesses, and she proposes to enjoy their benefits. The results of this state of mind will be advance in enlightenment, the dissemination of knowledge, the elevation of the citizen, the progress of the State.

We are glad to state, also, that in this general awakening on the desirability of education the higher lines of agricultural education are not overlooked. It is significant that the newly-established High School at Haywards announces an agricultural course among its scientific branches. This is an excellent provision. It will be the means of instilling the rudiments of the sciences underlying agriculture in the minds of those who must go directly from the high school to their life-work on the farm, and it will induce others to pursue the higher agricultural education at the State University.

Among this year's admissions of new students to the university, there are more applying for the agricultural course than usual. These include both those who enter for a full four years' course, which leads to a degree, and those who enter for a shorter period as special students. And it may interest some of our readers to know that two young ladies, graduates of popular ladies' seminaries, are this year at the State University as special students in agriculture, fitting themselves for actual enlistment in horticultural work, to which their tastes incline and for which opportunity favors them.

The State University is continually improving its facilities for public service. A new professor of pedagogics has begun his most important work for the inculcation of the art of teaching. The College of Mechanics will at once be provided with a new building for its work, and will extend into the new and pressing branch of electrical engineering. The College of Agriculture has promise next year of a new conservatory in which the botanist and the horticulturist may both be better equipped, and a botanic garden is now being planted in addition to the old garden of economic plants, the growths in which are now attaining age and size and increasing interest. These are only a few of many indications that the institution is moving along right lines, and the gratifying feature of it is that it is fostered by public interest and support as never before.

Our Fruit Essays.

We print in this issue the two essays upon fruit-drying which we deem entitled to the premiums which we have offered for this subject. As we stated last week, the press of work in actual drying has prevented many from writing of their work as they might do in a more leisure time. We are gratified with the character of the letters we publish and the amount of straightforward, practical information which they embody, but we hope, by a renewal of the prize offer at some future time to educe statements concerning different aspects of the subject. The awards we make this month are as follows:

First prize, $10, to C. E. Williams of Yuba City.

Second prize, $5, to A. J. Towner of Santa Ana.

Let all in the dairy line remember the competition which is open to them, as stated in last week's Rural. Three prizes for letters on dairy experience and practice—letters of any length the writer chooses, to be mailed to us on September 10, 1892.

From an Independent Standpoint.

In this issue of the Rural the editor gives up a large share of his space to writers whose opinions on the currency question are directly opposed to his own. He gives it cheerfully because he does not assume to possess a monopoly of wisdom on this or any other stbject, and is willing, now and always, to deal justly, to give both sides of every public question fair hearing in the columns of the paper. If opinions differ as to silver, we are at least all together in our desires to get at the truth of the question and to find a way to relieve the country from its financial perplexities. If our correspondents, Messrs. Webster, Smith and Bard, are right, if free silver coinage will be a good thing for the country, the Rural wants to know it; it is open to conviction on this and every other subject. And if, on the other hand, the Rural is right in its judgment that free silver coinage would do more harm than good, then most certainly our correspondents want to know it. The best way to reach wise judgments is to reason together calmly in good feeling and friendship, free from that partisan and controversial spirit which is the evil genius of ordinary political discussion. We cannot undertake to review in detail the full and able letters given in this number—space will not allow extended comment—but it seems to us that they hold in common one fatal error. The idea seems to be—and it is the central principle of the whole free silver movement—that if the Government would permit free coinage, silver would as a consequence rise to a parity with gold at the old ratio. With this judgment the Rural cannot coincide. We believe it to be a positive truth, incapable of variation, that the worth of a coin is no more and no less than the value of the metal contained in it. Free coinage of silver as now proposed would permit about sixty-six cents worth of silver to be coined into a dollar, and the effect, in our judgment, would be to send gold to a premium and to establish a sixty-six-cent dollar as the standard dollar of the country. Whoever doubts that universal loss and disaster would follow such a change needs only to study the history of similar transactions wherever they have been tried. It would, we believe, reduce the value of every acre of land, of every head of stock, cut down the purchasing power of every wageman's earnings, and put new and painful burdens upon the poor. We are confirmed in these judgments by the almost unanimous opinion of those who have made finance a special and exhaustive study. Believing as we do, that free silver coinage would involve the country in a distress unparalleled in its history, we have thought it right to speak in plain terms of warning. But the Rural has no bigotry in its opinions; it is open always to conviction. It sees plainly the evils of the times, and it would gladly see those evils corrected. It cheerfully gives its space to those whose views are different from its own, but whose desires and purposes, like its own, are for the best interests of the producers of the country.

The labor troubles at Buffalo, N. Y. and at Coal Creek, Tennessee, have continued to hold public attention during the past week. As we write (on Tuesday) the situation is more serious than at any previous time. The whole force of the New York militia is massed at Buffalo—8000 men—but they seem powerless to maintain order. Destruction of property by the strikers continues, and collisions between the troops and the rioters are of hourly occurrence. On Monday there were several fatal encounters, the death roll for the day including four strikers and three members of the militia. No man can tell what the end will be. It is feared that the strike will become general on the western roads and that order can only be restored through the employment of United States troops in large force. At Coal Creek the strikers have been awed but they have not succumbed. On Saturday there was a pitched battle between the militia and the strikers with several fatalities on each side. The strikers finally offered to treat and the commander of the militia went out on neutral ground to meet them. The rage of the strikers was so great that the leaders could not restrain them, and the officer (Capt. Anderson) was roughly handled. The more moderate men finally got possession of him and the day following he was released and returned to his command. One by one the men known to be guilty of specific acts of criminality are being arrested, but many cannot be found and it is supposed that they are in hiding in the mining shafts and drifts with which the region abounds. It is proposed, if all other efforts fail, to smoke them out, arrest them when they appear and turn them over to the civil authorities for trial. Thus the matter rests at Coal Creek. At Homestead, apparently no progress has been made toward a settlement. The works are in half-operation by nonunion workmen who do not venture outside the enclosures, though there are 4000 soldiers on guard in and about the town. The strikers are being

maintained by their fellow-workmen in other mills and they declare that they can and will hold indefinitely.

The causes of these troubles have been lost sight of in the attention given to the indefensible acts of lawlessness on the part of the strikers. The men have lost public sympathy and support because they have gone to unjustifiable lengths. If they had been content to exercise their admitted right to strike and had submitted the differences between them and their employers to the adjudication of public opinion, they would have stood a fair chance of success, but they have so identified their cause with revolutionary and criminal acts that it is impossible for their real friends to support them. The RURAL sympathizes with the oppressed at Buffalo, Coal Creek, Homestead and elsewhere, and it believes that the State ought to compel public corporations to deal justly with their employes but it cannot sympathize with the insane forces of riot and crime. We hold that in the present emergency there is but one thing to be done, and that is to put an end to the disorder by armed force. The Government is bound to protect property from destruction, to protect nonunion men in their right to work unmolested and to punish with severe hand those who have violated the law. The original questions involved in the strikes must wait for settlement until criminality is suppressed and order restored.

English judgment of American affairs is not always kindly, but it is perhaps the more valuable because it is plain-spoken. The journalistic comments on the labor troubles are especially notable. Says the London *Chronicle:* "The American people had the most splendid inheritance ever conferred on a nation, and they have grossly misused it. Hordes of vulgar office-seekers have been permitted to fatten on the public body; great cities are given over to men who ought to be in prison, and millions on millions of acres of public lands are given with a light heart to railway corporations which now threaten to strangle the republic in their octopus-like grasp. This is the real, practical anarchism which ruins States, compared with which the anarchism of a handful of desperate fanatics is almost innocuous. That is the general moral of the labor war; but there are special questions relating to railway and convict labor. It is simply monstrous that capitalists are allowed to use convict labor; so monstrous that no self-respecting community could possibly tolerate it." The *Standard* says: "Men do not fight like tigers and wreck property with savage fury unless driven desperate by want. Evidently a point is reached when the men feel that life is not worth living." The *Times* says: "The labor troubles in the United States have taken a form not easily to be distinguished from civil war. We cannot yet venture to think the danger ended. It is small wonder that the course of affairs is watched with alarm by those in whose memory the events of 1877 are still fresh." The *Daily News* says: "This labor war, in a literal sense of the word, justifies the prediction of many diligent students of American politics and society—that so-called troubles come earlier and prove infinitely more bitter in a republic than in the old-fashioned monarchies of Europe."

The Silver Question.

From a Friend of Silver.

KERN COUNTY, Aug. 18, 1892.

TO THE EDITOR:—Coinciding as you do with nearly all the reforms proposed by the People's party, makes us only regret the more that you have not been able to see from our standpoint the necessity for a full and unrestricted coinage and circulation of silver in order to bring it to parity with gold coin.

While differing with you on that point, it must be confessed, however, that the candor and courage with which you announce both your agreement and dissent, is the best evidence that they are the conclusions of an honest, fearless thinker, and of one who holds his opinions subject to correction whenever shown to be in error. Furthermore, the fact that the columns of the RURAL PRESS are at the service of those who differ with it and who desire to controvert respectfully the views of public questions taken by it, commands the regard of those least inclined to brook opposition to their cherished ideas, and is in pleasant contrast with the editor who speaks merely *ex cathedra.*

The money question, which both the Democratic and Republican parties have endeavored to avoid the discussion of, for fear of exciting the hostility of the money power, is to-day, and will be until it is settled in accordance with the power delegated to Congress by the constitution, the most vital, pressing and important issue which the present generation will have to settle. For thirty years the bankers and bondholders of Europe and the United States have dictated the financial policy of the Federal Government to their own enrichment and to the spoilation of the people. Every measure passed by Congress during that period, touching the currency, has had for its object the establishment of the single gold standard, and, consequently, the diminution of the profits of the farmer, the decrease in purchase value of the wages of the workingman, and the impoverishment of unfortunate debtors. During all that time the plutocrats, through their selected and instructed agents, have retained unrestricted control of the treasury of the United States, and there is no hope of ejecting them from that intrenchment, except by the defeat, and disintegration if possible, of the corrupt and cowardly old parties which exist merely for the spoils of office. To accomplish this there must be manifested an unalterable determination to have again the money of the constitution; to repeal all laws designed to part gold and silver coin, thus making different and fluctuating values in the only constitutional tender for the payment of debts—the coined money of the United States.

To give effect to this most important of all the political reforms advocated, it would be the part of wisdom for the People's party, during the remainder of the campaign, to make the restoration of constitutional money the paramount issue.

EDWARD FARD.

"An Honest Dollar."

NAPA, Aug. 16th, 1892.

TO THE EDITOR:—It is evident from the diversity of opinion that prevails on the financial question, as it relates to silver coinage, that it should be discussed fairly and independently, I think, of partisan politics.

Your editorial in last week's PRESS—From an Independent Standpoint—has many good points, but I cannot agree with your apparent conclusion that the free coinage, as advocated by the People's party, is a "financial heresy," nor with the implied idea that, if adopted, about 645 grains of silver instead of 412½ grains should be put into the dollar.

There is error in such a view. I believe in an honest dollar, and think it is clear that neither the gold nor the silver dollar, under present coinage, is as honest as both would be under free coinage with the established ratio of 1 to 16. The value of the gold dollar is not honest, because its value has been inflated, forced up by the same vicious legislation that forced silver down by demonetizing it, or, what was equivalent thereto, denying free coinage under the Congressional Act of 1873. I need not do more than state this proposition, for you grant the argument when you say, "These men (Mr. Steele and Mr. Overhiser) are not blind to the disadvantages of a single standard; they are not blind to the evils of *the steadily enhancing value of gold, etc.*" I put the last phrase in italics to emphasize the point I make, viz., that the present value of the gold dollar is above par, and therefore dishonest as a measuring unit in buying my corn and fruit.

On the other hand, there is some force, it must be admitted, in calling the Bland coinge of silver dollars, and what has followed under the Sherman bill, dishonest, because, as measured by inflated gold, we have a varying intrinsic value much below par. The reason is plain. Silver, as a mere commodity, can never be made into an honest dollar. It will fluctuate in value on the market as wheat or corn, only worse, because it is more in the keeping of the "bulls and bears" of Wall street. Under free coinage, when the holder of silver can have it coined into silver dollars he will not sell it on the market under par. Conceding that since the value of a gold dollar is inflated, the effect of free coinage of silver might, and probably would, retire gold from circulation for a short time, yet it would seem a less calamity, and probably have less effect on foreign securities, than the present unsettled and threatening aspect of financial questions. Evidently, with resumption of free coinage, as with resumption of specie payments, "The way to resume is to resume."

As to the relative value of gold and silver, under the free coinage of both, past experience indicates that the old law of ratio between them would reassert itself, and that the gold and the silver dollar would again go hand in hand as equals, intrinsically as well as commercially. I do not believe that overproduction of silver has anything to do with the adjustment of this question. It is legislation, pure, simple and vicious, that has made the silver dollar what it is; and political jugglery is all that prevented the last two sessions of Congress from passing a free coinage Act.

As an indication of the effect of legislation, let it be noted that under the first impulse of the Sherman bill, about a year ago, silver advanced to $1.20 per ounce. Then the "bears," seeing it was only a commodity still, got their grip on it again. No one will claim that this advance was caused by a reduction in the output of silver bullion. Again, let it be noted that the output of gold, when at high tide by reason of the new discoveries in California and Australia, did not affect its coin value to its discredit. Why not? The disproportion of the production was much more against gold then than it is against silver now. But, steadied by the anchor of free coinage, the standard ratio of 1 to 16 was not disturbed.

These facts point to the conclusion that there is no sufficient reason for increasing the bullion in the silver dollar in order to make it honest. The old historical ratio of 1 to 15½, or the American ratio of 1 to 16, is, in all probability, correct for the long run.

It may honestly be said that fluctuations in the output of neither metal have been the cause of the divergences in their values in recent times. United under this yoke by free coinage they always made a steady and a reliable team. Modern legislation has parted them, much to the sorrow of the debtor classes. First, Great Britain, seeing her opportunity as a money-loaning and wheat-buying nation, demonetized silver. Germany followed, and then, unhappily, our country fell into the cunning trap of the money-loaners. Legislation caused the downfall of silver as money—legislation can restore it.

In conclusion, I desire to say I am not advocating Weaver's candidacy. A vote for Weaver will count only in the House of Representatives for Cleveland, and he is antifree coinage personified.

W. EGBERT SMITH.

From Hon. J. V. Webster.

CRESTON, Aug. 18, 1892.

TO THE EDITOR:—In the issue of your valuable paper, under date of the 13th inst., there appears a leading editorial under the caption, "Erom an Independent Standpoint."

Your candor and independence as therein expressed are commendable, and your affinity for the People's party is so manifest that I have barely the heart to contravene any of your statements, and would decline to do so if it were not that you have dovetailed and tucked into the same truckle bed, so many adverse elements.

Hence, the chief object I have in replying is, that the seeming incongruities in your article may be explained away.

It appears that you substantially agree with the declarations of the People's party platform, other than on the question of finance. You admit that times are hard, and believe that a good many reforms are needed to establish uniform justice in the country; you say: "We believe with the People's party, in an honest and economical Government; in Government ownership of railroads and telegraphs; in the policy of holding American lands for American settlements, and in many other lines of public policy." The People's party support, you declare, "rests not upon the silver and subtreasury heresies, but upon the just discontent of the country with the old parties; the corruption in politics, both Democratic and Republican, in this State; the shameful rule of the city rings in the Legislature; the cowardice of both parties in allowing railroad and other corporations to fatten at the expense of the producer."

Well said, Mr. Editor. Manifestly you are more than half over the fence already. You substantially subscribe, it appears, to every plank in the new party platform, save and except its financial heresies. We are pleased to have you with us thus far, and console ourselves for the future with the reflection that great conversions are evolutions of slow process. Now let us critically examine the subtreasury scheme and the silver coinage scheme.

The People's party platform under the head of "Finance" reads: "We demand a national currency, safe, sound and flexible, issued by the general Government, and a full legal tender for all debts, public and private as set forth in the subtreasury plan of the Farmers' Alliance, or a better system." Is there any objection to the wording? "A national currency, safe, sound and flexible." Who can improve on it? But fearing that there might be some mistake or embarraassment in the practical application of this proposition, it is qualified by the words "or a better system," showing clearly that the People's party is not wedded to this plan, and is in doubt as to its expediency, therefore, inserts said qualifying clause. Now I am sure that if we could have the cooperation and council of the editor of the RURAL and a few other minds like his, some plan for "a better system would be devised. So here we are again all together and substantially agreed to any plank in the new party platform save and except that favoring "the free and unlimited coinage of silver and gold at the present ratio of 16 to 1."

As quoted, Bro. I. C. Steele says: "I believe that the Government should issue all the money of the country, and that every dollar it issues should be the equal of any other dollar." Bro. W. L. Overhiser says he "believes in the free coinage of silver, but wants the bullion in the silver dollar to be worth a dollar." The inference is that the editor of the RURAL is likewise impressed.

The People's party platform says: "We demand a national currency, safe, sound and flexible, issued by the general Government." Is there any substantial difference in these declarations? All want a safe, sound, flexible currency for the country—"a just, equitable and efficient means of distribution direct to the people, at a tax not exceeding 2 per cent per annum." This language also recurs in the financial plank quoted from. Here, again, we will not seriously disagree, for certainly it would be very comfortable and desirable for farmers to get all the money wanted direct from the Federal treasury at 2 per cent per annum. Nevertheless, I do not think the plan practicable or feasible, and I fear that it is fraught with much danger to our financial system.

The framers of the People's party platform appear to have realized this difficulty, and therefore, as above stated, qualified the whole undertaking by inserting the words, "*or a better system*" which brings us all together again, for the concession favoring free coinage of silver on any terms is equivalent to admitting that the legal tender circulation of the country is entirely too small. Now, when we sift the controversy down into a nutshell, it seems that the only difference among us is regarding the amount of silver that should be put into a silver dollar.

To arrive at a just and rational conclusion in this matter, we will have to concisely review the present and antecedent status of silver. For the last two thousand years, gold and silver have stood as the standard coin metals of the world, and in all that time the coinage rate of silver to gold has never been less than 13 957 to 1, nor more than 16½ to 1. On the 2d day of April, 1792, over one hundred years ago, this country adopted the double standard at the ratio of 15 of silver to 1 of gold. The coins remained at this ratio until 1834, supplemented by an Act in 1837, when the ratio was changed from 15 to 1 to 16 to 1, by reducing the weight of the gold dollar. So the amount of silver in our standard dollars has never changed since the foundation of this Government, the basis of value being taken from the Spanish milled dollar largely circulating in the colonies at the date of adopting our national constitution. The present ratio of silver to gold in Germany is 13.957 to 1; in England, 14.28; in India, 15 to 1; in the Latin Union, 15½ to 1; in the United States, 16 to 1; in Japan, 16.16 to 1, and in Mexico, 16½. The ratio of gold and silver production in the world for the last nineteen hundred years has been about 15½ to 1.

In a recent report, the Director of the Mint estimates that the amount of gold in the world is equivalent to $3,711,848,000, and of silver $3,939,578,000, calculated from the different standards of the several nations concerned, which, when the average value of the several coins thereof is taken, the result obtained is very nearly 15½ of silver to 1 of gold. Even within the last 20 years, which covers the greatest silver-producing era ever known, the proportion of the white metal to gold has been substantially 15½ ounces to 1. Then what is the matter with silver? What is the reason for its curtailment in coinage? What is the cause of this bitter fight against its increased circulation?

It has been shown, from statistics undeniable, that the ratio in production of the two metals — taking any considerable series of years, at any time since the Christian era—has been substantially 15½ ounces of silver to 1 of gold; hence it becomes painfully manifest that there is some other reason for this savage raid against silver. Now let us discover, if we can, the cause. The first raider against silver was England, She adopted the single gold standard in 1816. Then Great Britain was, and has ever since been, the greatest commercial nation on the globe. Her white-winged fleets sail every sea, from Behring down to the frozen serpent of the south, and in them are carried to her shores—

> "The wealth of Ormus and of Ind,
> Or where the gorgeous East, with richest hand,
> Showered on her kings barbaric pearls and gold."

And so her riches grew and overflowed her coffers. For investments cent per cent far and wide she sought, until every nation on the earth at present pays tribute to her, save and except, possibly, the French.

> She has a string in every whining nose
> And jerks it when her neck's exposed.

Within the 30 months next preceding the first of July last past, there was due this country, in trade balances, $320,000,000. That is our exports, chiefly to England, exceeded our imports to that extent. In addition to this amount, there was $75.000,000 in gold sent out of the country, aggregating, in two and a half years, $375,000,000 or at the rate of $158,000,000 per annum, for which enormous trade balance it is difficult to discover any return. What became of it? It went chiefly to pay the interest on the bonds and mortgages held in England against this country, of which it is estimated she holds $9 000,000,000, equal to one seventh part of the assessed value of all the property in the United States. Other nations are probably in debt to her in like or greater proportion to the aggregate of their wealth. Then is there any wonder that the bondholders, bankers and brokers of Lombard street are opposed to the double standard England is the creditor nation of all the world, and, since "self-preservation is the first law of nature," it is but natural that every nation, corporation or individual holding any considerable amount of solvent credits, is strenuously opposed to the double standard, or any other method proposed to increase the circulating medium, for the reason that any material increase in money reduces in like ratio the purchasing of their hoarded gold, and consequent value of their solvent securities.

For the last 30 years at least, Wall street operators have been controlled and directed in their operations by those of Lombard street; and Wall street has, in turn, directed and controlled the financial policy of this Government, under every President and Secretary for the last 20 years.

Who can then wonder whence comes this bitter raid against the increase of silver coinage?

In all the advocates of this onslaught on silver and on every other species of money not controlled by the National Banks and bondholders, not one of the number has been more unscrupulous and uncompromising than the present Secretary of the Treasury; so much so, in fact, that he will not redeem a single silver certificate with silver, as intended and declared in the act authorizing their issue. As indicating clearly his disposition in this direction, it may be stated that at a banquet given in his honor by the bankers of New York on the 17th of November last, Secretary Foster, in speaking of the gold reserve and the redemption of silver certificates, said:

"It has always been the custom of this country to pay its obligations in gold. (Applause.) Therefore, should there be any trouble about this, and the present hundred millions of gold reserve fund, as we call it, be entrenched upon, it is in the power of the Secretary, under the law, to issue bonds for gold paying five per cent, and replace or increase the reserve fund."

In other words, rather than redeem silver certificates with silver, as the law provides, he would issue gold bonds bearing five per cent interest, sell them for gold and redeem them therewith, when the ac

of the certificates show that they are redeemable in silver or gold *at the option of the Government.* In further verification of this disposition and practice of the Secretary of the Treasury, an Associated Press dispatch from New York, under date of the 15th inst., reads:

GOT THEIR GOLD

BANKERS GOT $1,000,000 IN YELLOW COIN FOR SILVER NOTES.

NEW YORK, August 15.—A crucial test in the policy of the Government was made to-day, when Heidelsach, Yokelheimer & Co. tendered $1,000,000 in Treasury notes, issued on account of silver purchases, and demanded $1,000,000 gold for shipment to Germany by to-morrow's steamer. The Treasury officials made no demur but paid out the money.

This antagonism to silver (inspired by Wall and Lombard streets), having been engrafted on and made a part of the policy of every administration since Lincoln, is there any wonder that silver is at a discount? In the perpetration of this outrage, so many tons of sawdust in the vaults of the Government would be of equal value and utility, so long as the present method of redemption is persisted in, for the certificates drawn against the sawdust, being all redeemed in gold, would have no dependence on the sawdust for their value.

In 1873 the Congress of the United States set the example in demonitizing silver. Up to that time every 412½ grains of standard silver, anywhere in the world, was worth more than 25 8-10 grains of standard gold (the present weight of our gold dollar). The legislation demonetizing silver in this country frightened France and the other members of the Latin Union into the discontinuance of silver coinage, who for 72 years had absolutely maintained the parity of the two metals in Europe at the ratio of 15½ of silver to 1 of gold. And had not Congress, through the manipulations of Senator Sherman and one or two other members, clandestinely and fraudulently secured the passage of the act, free coinage would never have been interfered with by the members of the Latin Union, and silver would to-day have been current the world over, save and except in "perfidious Albion."

France at the present time has $650,000,000 of silver in circulation at the rate of 15½ to 1, which passes current everywhere, and is a full legal tender for all debts, public and private. In the United States we have in circulation, including its representative certificates, $492,901,735 in silver.

And under the law, every dollar of it is a legal tender for every dollar due to or from the Government. Every dollar of Government bonds outstanding, principal and interest, is payable in gold or silver coin at the option of the Secretary of the Treasury. Yet while the Government vaults are filled to bursting with silver, he will not use a dollar of it for any purpose whatever, but pays all obligations presented in gold, and furthermore threatens that, should the gold reserves in the treasury be reduced, he will issue and sell five per cent interest-bearing bonds to replenish the absorption.

That there may be no doubt of the correctness of the statements herein made, I will incorporate a joint resolution which was adopted by Congress immediately after the great debate and action on the Bland act in 1878. Said resolution, after reciting the several acts of Congress relating to this subject, declared "that all the bonds of the United States issued, or authorized to be issued, under the said acts of Congress hereinbefore recited are payable, principal and interest, at the option of the Government of the United States, in silver dollars of the coinage of the United States, containing 412½ grains each of standard silver, and that to restore to its coinage such silver coins as a legal tender in payment of said bonds, principal and interest, is not in violation of the public faith, nor in derogation of the rights of the public credit." (Congressional Record Forty-fifth Congress, second session, Vol. 7, page 627.)

Then why is not silver paid out in cancellation of the obligations of the Government when the gold reserve is not sufficient to meet the demand without issuing and selling new five per cent gold bonds, as the Secretary says he proposes to do to meet the requirement?

If this legal and equitable privilege of paying off its obligations, by using gold or silver as convenience requires, was enforced by the Secretary of the Treasury, there would be no more trouble about the depreciation of silver. Free and unlimited coinage could be inaugurated without embarrassment. The Latin Union would follow suit. Austria and Russia being creditor nations, would be greatly relieved from the embarrassments in which the single standard has involved them. Germany—half creditor, half debtor—might possibly, for a time at least, stand by the old Octopus islander, who, in her dominating role as the world's great creditor, will strenuously oppose all approaches toward the double standard, which would greatly reduce the demand for, and curtail the immense purchasing value of her gold.

The proposition to increase the weight of the silver dollar until the value of the metal therein shall be equal to the present inflated value of our gold dollar, is not worth considering, for the reason it is unutilitarian and impracticable. An International Convention is called, and representatives appointed by the chief nations of the globe, to consider the practicability of generally adopting the double standard. There are at the present time $1,100,000,000 of silver in circulation in Europe—15½ to 1 of gold; $900,000,000 in India—15 to 1 in gold—together constituting more than half the silver in the world. Three-fourths of the representatives to said conference live on the other side of the "pond." Self-interest will prevent them from sanctioning any proposition tending to seriously disturb the present ratio of coinage, so the chances are that if any agreement whatever shall be reached by the conference, relating to this matter, it will be to adopt the European standard of 15½ ounces of silver to 1 of gold.

Now, Mr. Editor, you can to your heart's content "warn the farming community of the Pacific coast against the financial heresies of Mr. Weaver and those who stand with him," but you can hardly expect to satisfy the demand "for bread by giving a stone." You admit the corruptions in politics, both Democratic and Republican; the cowardice of both parties in allowing railroads and other corporations to fatten at the expense of the producer." Well, what are we going to do about it? Taking your own statement of their antecedents, have we any encouragement for better things should we support the nominees of the old parties? Is there any hope of material reform of the abuses, to which you refer, in doing so? "The cowardice of both parties" is in ignoring the living issues of the day for the old hobby of "tariff reform," which means nothing more nor less than an adjustment of the subjects on which the revenues shall be laid sufficient to support the Government. The Democrats are in favor of "tariff for revenue with incidental protection," while the Republicans are in favor of "tariff for protection with incidental revenue." This is all, and nothing more. It is simply a contest between "Tweedledee" and "Tweedledum" for the spoils of office. You know this. Why, then, urge us to help the foul brood to other robberies? By looking round a little, you will discover that there is universal unrest among the common people of every class. There must be serious cause for it somewhere. The chief embarrassments appear to be manifest to the people, and their disposition is to correct them. The undertaking is a great one, and it will take at least a score of years to accomplish the end in view. Nevertheless, it would be as reasonable to expect the millennium as that this controversy will end short of a consummation on or near the times indicated in the people's platform. We know we have many cranks in our ranks, and, to some degree, as leaders. We are encouraged by this knowledge for the reason that no considerable reform has ever been started by any other class of people. But all antecedent history clearly demonstrates that when great masses of people move in any given direction, though visionary and to some extent fanatical, the current hardly reaches serious proportions before conservative, sensible men take the lead, usually in the greatest good to the greatest number, and be assured that this controversy can never cease until this condition is substantially gained. Defeat this year will only add volume to the current, which will eventually sweep everything before it.

J. V. WEBSTER.

A new series of postage stamps, in commemoration of the discovery of America, will soon be issued. They will bear various designs, all, however, representing a historic character or some incident in the life of Christopher Columbus.

Weather and Crop Bulletin for Week Ending August 22th.

[By W. BURROWS, Acting Director of State Weather Bureau.]

The hot spell of the past week seems to have been very general throughout the State, though causing no serious injury to crops of any kind, except in a few cases slight damage to growing corn and beans and to overripe fruit. There has been no rainfall reported from any part of the State, and there has been practically uninterrupted sunshine.

In fact, all the climatic conditions seem to have averaged about the normal, and have been attended with favorable effects on crops, and, with few exceptions, the very encouraging prospects indicated in the bulletins of the last few weeks seem to be in process of full realization.

With hardly an exception, farmers and orchardists express themselves as being satisfied with both yield and prices. As will be seen by the reports of correspondents, the activity in disposing of the enormous fruit crop is only limited by the capacity of the railroads to carry it to the eastern markets, and of the local establishments to pack and dry it.

The hop crop seems assured; all reports on the subject are very satisfactory. Picking has begun in some sections, and will shortly be in full progress throughout the hop-growing districts.

The temperature has been abnormally high here, the average daily departure being four degrees above the normal.

The highest temperature for the week was 106° on the 18th; the lowest was 52° on the 22d. The highest and lowest temperatures for the corresponding period one year ago were 106° and 60°. Light to gentle southerly winds have prevailed. The hot spell was, however, limited to a few days, the maximum temperature having again fallen to below 80°.

HUMBOLDT.—We are having very warm days for this section and rather cool nights—90° in the shade, and on one day the thermometer showed 96°, being the warmest of the season. Fruit is ripening fast. Potatoes are smaller than usual, and vegetables generally of a poorer quality, on account of the drought.

Eureka—The past week has been very favorable for harvesting and for ripening fruit. Oats, wheat and barley are looking well, and will yield more than an average crop. The outlook is more favorable for a good potato crop. The fruit crop is not worth mentioning.

Upper Mattole—The temperature for the past seven days was apparently above the normal, with an average amount of sunshine, benefiting the corn crop. Thrashing is in progress, with about or nearly an average yield. The hot weather is bringing the corn crop on fast, and with a late fall, corn and potatoes will be fair. Highest temperature, 90°; lowest, 48°; mean for the week, 66°.

SHASTA.—The past week has been very warm, the temperature rising above 100°. Fruit is ripening very fast; four carloads left for Chicago this week. A great deal of the fruit will have to be dried, for want of cars to ship in. Prune-drying will commence in ten days, with a fair crop, both in quality and quantity. Very little wind this week, and mostly from the north. Highest temperature 106°, lowest 67°.

YUBA.—*Wheatland*—Harvest is about completed. The yield is above the average and of fine quality. Hop-picking has commenced in earnest, and the yield will be large and a valuable crop. No damage resulted from excessive hot weather the past week.

LAKE.—*Upper Lake*—Cold, cloudy weather, with indications of rain the first part of the week, retarded the ripening of fruit. It is now hot, but this is reasonable. Threshing is nearly over, and the crop is up to expectations, but prices are low. Hops will soon be ripe enough to pick. Highest temperature 101°, lowest 48°.

SONOMA.—*Santa Rosa*—Sunday, Monday, Tuesday and Wednesday were extremely hot, the highest temperature for the week being 102°. Hops are coming on rapidly, but no picking will be done before the 26th of August or September 1st. Growers report at least two-thirds of a crop, and some say they will have an average crop. Fruit is coming in by the ton, and the canneries are running night and day to pack it.

Forestville—On the 17th, 18th and 19th the maximum was 103°, minimum 49°. Conditions are the same as in former reports. Hops will be ready for picking about September 5th. The crop is generally late this season.

NAPA.—*Napa*—The excessive heat during the week did a good deal of damage to the grape crops; other fruits are doing well, and the weather is now quite cool. More and better fruit is going from Napa to Eastern markets than in any preceding year. One carload to Kansas City and two to Minneapolis, mostly plums and pears, were shipped by the Napa Valley Fruit Company during the week.

SACRAMENTO.—*Franklin*—The weather for the past week was extremely hot, reaching 105°. The crop has turned out very fair. Farmers are needing more sacks than they expected. The barley is very light, and the wheat in spots is shrunken. Everything is going on about the same as last week.

PLACER.—*Newcastle*—Highest temperature 105°, lowest 66°. From the beginning of July to the end of October there can scarcely be any other report than favorable to the fruit crops in this and other portions of California. If the weather be cool for a few days, or at 100° or more for a short time, all the same fruit comes along in all its perfection and loveliness, and in either case the weather is favorable.

AMADOR.—*Oleta*—The whistle of the thresher is fading in the distance, and the song of the hay-baler is heard in the early morn.

STANISLAUS.—*Oakdale*—The hot wave experienced the last week has been what farmers call good for getting out early to work and enabling them to get through a good day's work. At the same time it has been hard on man and beast. The wind is getting very light and steady.

SANTA CLARA.—*Gilroy*—The warm wave prevailing the past few days has tended to make grapes drop, and has been rather damaging to very mature fruit, but on the whole it is beneficial.

TULARE.—*Visalia*—The past few days have been hot and dry. Fruit is ripening fast and in large quantities. The hot days are just what we want.

TEHAMA.—*Red Bluff*—Temperature above the normal; harvesting nearly completed. Grapes doing well. Early ones in market. Fine for fruit-drying. Peaches ripening well.

FRESNO.—Sky cloudless; temperature above normal. Grapes are ripening slowly. Many vines are dying, and the cause is being investigated by an expert of the Agricultural Department.

LOS ANGELES.—The past week was warm and favorable for fruit-ripening and drying. Pears are a good crop. Prunes are generally light and walnuts large. Honey is about an average crop. Carloads of fresh fruit going East weekly.

SAN LUIS OBISPO.—*Santa Maria*—For the week ending at date, we have just passed through a hot spell detrimental to beans and corn. Fog is again slightly improving the conditions. Beans, corn and potatoes will be light. General fruit harvest also. New cannery is working on pears and peaches. Maximum temperature, 90°; minimum, 53°. It is now too late in the season for any great change in crop prospects.

The Coyote Curse.

ATWATER, MERCED CO., Aug. 18, 1892.

TO THE EDITOR:—I have been requested by one of your subscribers to write my experience about coyotes, as they affect poultry-raising.

I am grain-raising on a small scale, so small that I found my income some seasons was inadequate to meet my current expenses. I therefore concluded to endeavor to add to my income by raising poultry. I procured two incubators; the combined egg capacity of both was about 800 eggs. I procured and constructed brooders and wire-netting pens, and, together with my wife's former experience in working incubators, we made successful hatches, and successfully reared 1000 chicks ready for the range. My plan was to range them on the wheat stubble. Everything worked according to our plans and they were doing splendidly, beating any kind of hen process.

The Huffman & Crocker Company farms land adjoining me. It is their custom after harvest to put sheep on the stubble. Coyotes naturally follow bands of sheep, and in that year they were unusually plenty; several times eight or nine coyotes came on to my poultry range in one flock or herd, and in spite of the eternal vigilance of the whole family, they reduced my 1000 chicks to less than 300. Out of 200 turkeys hatched in the spring (and this was September), they left us but 90, which we sold for $1.50 apiece. I became so discouraged that I abandoned the poultry business.

I believe there is so much opposition to the bounty law that it is likely to be abolished sooner or later. It is argued by some that the coyote is the farmer's friend as an exterminator of jackrabbits. Any person of common sense who is acquainted with the peculiar habits and idiosyncracies of the coyote, would not for a moment believe that a discriminating one would prefer a scabby, measly jackrabbit to a nice young lamb or a spring pullet, and have a harder job to catch the jack to boot.

J. C. J.

Sheep-Dog Contest at the State Fair.

SACRAMENTO, Aug. 18, 1892.

TO THE EDITOR:—Thinking probably you might desire some information regarding special features at the State Fair in which your readers are interested, would say that in addition to those already published, we have arranged for a sheep dog trial, so that owners of trained collies, etc., may have an opportunity to try them in public. We have offered three premiums:

For the best sheep dog trial in work with band of sheep	$40
Second best	25
Third best	15

In years past there has been considerable competition in the breeding and training of this character of dogs, and of recent years they have been used to some extent in handling all kinds of livestock.

It is our purpose to give breeders and trainers an opportunity to show their dogs.

The date for the contest has not been fixed, but it will take place one of the mornings during the State Fair.

EDWIN F. SMITH, Sec'y.

This is an excellent idea. Let all call attention of dog-owners to the contest.—ED. PRESS.

State Fair Special Hog Premiums.

SACRAMENTO, Aug. 28, 1892.

TO THE EDITOR:—The special premiums offered by the Union Stock Yard Company, at the State Fair, are as follows:

For the best pen of pigs, not less than six, for packing-house purposes	$25
Second best	15
Third best	10

Kindly give it as much publication as possible, that the hog industry shall reap the benefit of this liberal offer.

EDWIN F. SMITH, Sec'y.

Ramie at the Fairs.

W. H. Murray, State Supt. of Ramie Culture, will have samples of ramie goods and the plant to exhibit at the fairs, and will be at the exhibition halls on the days named: Chico, Aug. 22d, 23d and 24th; Napa, Aug. 25th, 26th and 27th; Marysville, Aug. 29th, 30th and 31st; Auburn, Sept. 1st, 2d and 3d; State Fair, Sept. 5th to 17th; Stockton, Sept. 19th to 24th; Fresno, Sept. 26th to Oct. 1st.

THIRD FRUIT SALE IN LIVERPOOL.—On Aug. 19th the third sale of California fruit occurred in Liverpool. The sale was largely attended. It was raining hard during the time of the sale and the atmosphere was very humid which had some effect on prices. These, however, were quite good under the circumstances. Pears brought from $3 to $3.75 per box. Peaches, from $1.75 to $2.25. Plums, $1.50 to $2.50. The fruit was in splendid condition. Increased prices are looked for with each shipment.

DURING service in a Westminster, Conn., church, a steer dashed against the green baize door and ran up the aisle with the door on his horns.

PETALUMA people expect shortly to have a starch factory wtih a capacity of working up 20 tons of potatoes every 12 hours.

FRUIT PICKING AND DRYING.

Methods of Taking Ripe Fruit from the Tree Discussed.

BUSINESS VIEW OF SULPHURING AND BLEACHING FRUIT.

PACKING IN BULK AND PACKING IN CASES, ETC., CONTRASTED.

A Practical Essay by a Successful Fruitgrower on the Treatment of Apricots in all Stages From the Tree to the Market - Rural Prize Letters for Month of August.

YUBA CITY, CAL.

TO THE EDITOR:—Before fruit can be dried it must be gathered. In gathering fruit when the whole crop is to be dried, it is many times advisable to shake the fruit off the tree instead of picking it. On the average it costs about one-half as much to shake the fruit off as to pick it. One advantage in shaking fruit lies in the fact that only that which is ripe will, as a rule, fall to the ground; and, above all things, in drying fruit of all kinds be sure that it is thoroughly ripe. Green fruit will only dry into chips, hard and badly-colored, while even overripe fruit will much of it make a good dried article. If it will hold its shape when cut and not run on the tray, it is not too ripe. Of course it is not necessary, and no one should leave fruit on the tree until it will not handle nicely or the skin will break too easily.

If it is decided to shake the fruit from the tree, a canvass should be prepared, from 16 to 20 feet square, according to the size of the tree, and one seam in the middle sewed only half way so as to allow to be spread on each side of the tree. The trees must not be shaken too hard for fear of getting some that is not entirely ripe. I have known orchardists to gather fruit in this manner for 75 cents a ton, while the average cost of picking is a little more than $2. The only objection to shaking the fruit off the tree, and that is slight, is that it necessitates more prompt handling by the cutters. It cannot stand stacked up in boxes for two or three days, as each bruise will then develop into a black spot which will show when the fruit is dried.

CULLING FRUIT FOR THE DRIER.—There is a tendency among growers to try to gather and dry everything, no matter how small or inferior it may be. If growers would only learn that fruit is excellent food for hogs and would thus dispose of some of their inferior stuff, it would be much better. The writer has frequently bought fruit at prices which did not pay wages to the grower for cutting and handling it, to say nothing about anything for the fresh product, besides injuring the reputation of the producer, the section in which it was grown, and the State as well as every dealer who touched it. Cull out the little, hard, poor stuff and do not cut it. Stop the expense at once. It is worthless, do not spend any good money on it. It dries up into almost nothing and the weight will never be missed if you leave it out. If you cut it and put it with your good fruit, the buyer will see it and will always imagine when he sees one piece that there is ten times as much poor as there really is and then the price goes off. This grading can best be done when the fruit is picked or shaken from the tree. Instruct your men what to take and see that the other is thrown out. If it is not the worth while to try to feed it to hogs the best place for it is on the grouud under the trees.

CUTTING.—This is a very simple process and requires but little watching. The grower must watch that all the fruit is cut clean around, and each half separated before it is put on the tray. In this way the fruit will have a clean, neat appearance that will be lost if the fruit is cut part way and pulled apart the remainder. The cost of cutting varies with the size of the fruit. It varies from $5 for smaller fruits, such as apricots and plums, down to $3 for large peaches. In large orchards it may be best to grade fruit before cutting, but this is hardly practical in small orchards and had best not be attempted. In spreading fruit on the tray, of course everyone knows it should be placed with the cut side up and as close together as possible without getting one piece on top of another.

TRAYS.—The standard tray used throughout the State is made 2x3 feet in size. The best trays are made of thoroughly seasoned pine sawed one-half inch thick and surfaced on one side. I think those made of three eight-inch boards are best. The boards are nailed on a cleat, 1x1½ inch, two feet long. Use wire nails long enough to clinch on the bottom of the cleat. Put three nails in the end of each board. Don't try to clinch the nails when you drive them by putting an iron under the cleat, but turn the tray over and clinch carefully. Remember that your trays will see lots of hard usage and will need to be as strong as possible. Don't buy trays that are not standard size. You may want to loan them to your neighbor and then they probably would not fit his bleacher. In making trays, if the lumber is quite well-seasoned, don't crowd the boards too close. There wants to be a crack between each board. This crack will soon develop of itself, unless the lumber is unusually well-seasoned.

SULPHURING OR BLEACHING.—In regard to this question there has been much discussion. Some able writers on the subject condemn it. One of the best known and most respected scientists says it should not be done. However, with all due respect to these persons, we must say that the growers of California fruits are not in the business for pleasure. As business men they must conduct their affairs so as to be successful. If they offer goods in the market for sale they must have what the buyers want and are willing to pay for. The buyer says that the goods must be bright, and every year he seems to want them a little brighter than the year before. If they want our fruit light-colored and we can make it so by such a simple method as sulphuring, we have no reason to complain. If they want it black, why we can develop some easy, simple, harmless method of making it black. This may not be "educating people to know and enjoy the rich, fruity flavor of natural fruit," but it is comon sense and good business. We can afford to let scientists discuss the effect of the sulphur fumes as being deleterious to health, but we cannot afford to sell dried peaches for five cents a pound that we might by bleaching get ten cents for. The best bleachers are now made so that they will hold a truckload of fruit, truck and all. They are made about four feet wide by six long and seven high. Each end is made to open out, usually hinged on the top and raised by a weight on a rope passing over a pulley. If the bleacher is thus made, the handling of trays in and out of the bleacher is avoided and there is some saving in labor. Any kind of a four-wheeled truck or car can be used, so that it is wide enough to hold a tray, i. e., three feet, and long enough for two piles, or four feet. From 30 to 40 trays can be put on a car. The car or truck is run into the bleacher, sulphured, then run to the drying ground and the trays scattered out. If much fruit is being handled, it will be necessary to have several cars. For small orchards it is less expensive and almost as good to use the old-fashioned bleacher, which is made so as to receive and hold the trays in place. They are three feet one-half inch wide, four feet eight inches long and six or seven feet high, measurement clear on the inside. The frame is made on the outside and it is then covered with flooring on the inside, so as to have a smooth, light surface on three sides and the top, one end being left for the door, which can be arranged in any way to suit. The bottom may as well be left open. Strips an inch square and four feet eight inches long are then nailed on the sides of the bleacher, making slides or cleats on which to put the trays. These should be three and one-half inches apart, so as to allow the fumes of the sulphur to circulate throughout the whole of the fruit. These cleats should not be run closer to the ground than about 18 inches, which will give room for about 30 trays in a bleacher six feet high.

In putting the trays on the cleats care should be taken that a space is left between the two trays that are on the same cleat, and also between the end of the bleacher and the tray. If the bleacher is made as above stated, four feet eight inches long, there will be nearly three inches space. The fumes of the sulphur are obtained by burning it in any convenient way in an old iron dish, which is sunk slightly in the ground inside but near one edge of the bottom of the bleacher. A very slight draft may be allowed.

The length of time which fruit is to be sulphured is usually stated at 30 minutes. Many growers, however, leave the fruit in the fumes a longer time. There appears to be a difference in the different varieties of fruit, and perhaps a difference also in the soil or amount of moisture in the fruit, that has something to do with the effect of the sulphur on the fruit. Peaches like Susquehanna or Muir, that are naturally bright yellow in color, do not need as much as others which are darker and thicker in their appearance. All these minor points can best be learned by experience. It will pay every one to try a little longer time than 30 minutes, and if better results are obtained by one hour than less, why use more time. As to the kind of sulphur to be used, only the pure, sublimed article should be tolerated. Sublimed sulphur is at least supposed to contain nothing but sulphur, while ordinary ground sulphur contains much foreign matter, in fact, everything that comes with it as it is scraped up naturally where deposited, the process of manufacturing being nothing more than pulverizing, and the clays and other minerals may produce something in their fumes that would be injurious. We would caution growers strongly against the use of common kinds of cheap ground sulphur. The cost of a good article is so slight that no one need think of that. The amount to be used is about one and one-half pounds for a bleacher full of fruit. See that the bleacher is entirely filled with good strong fumes.

TAKING UP FRUIT.—No time can be stated for drying, as it depends entirely on the weather. It is dry enough to take from the tray when the juice cannot easily be squeezed out of it. Never allow fruit to get dry so that it will rattle. It must be leathery and tough. A mass of it in a sack should feel soft and pliable. It should always be taken up in the middle of the day—the hottest part. Eggs of insects, if any have been laid during preceding evening or morning, will then have been killed by the heat.

When emptying the fruit from the trays it is best to cull out all pieces that have not made good dried fruit. All that is too dark, or any small or green fruit, should then be thrown out. The fruit is all spread out before you and it is a very easy matter to take out a few poor pieces.

As soon as the fruit is taken from the tray it should be put at once in a close, tight room, merely dumping it on the floor. This room should have no ventilation, as by this means the rich, fruity flavor is much better retained. It is better also if the room can be kept dark. It goes without saying that no insect life must be allowed in this room. This fruit on the floor should now be shoveled over once in two days, so as to allow fresh air to strike it, else some pieces that were rather green and soft may mold. As it is put in fresh that part may be kept somewhat back from the rest, and as it cures it is piled deeper and deeper and requires less and less frequent shoveling.

This after process of curing fruit is very important, and the grower's success depends very much on how he manipulates his fruit after it comes from the tray. It is owing to the difference in this respect that makes so much difference in estimates of the number of pounds of green fruit required for a pound of dried fruit. One man who understands his business can take 5½ pounds of Muir peaches and make a pound of extra choice dried, while another takes 8 pounds to make a pound of common dried fruit. If you will ponder on these figures you will find a vast difference in the results in dollars.

If fruit once gets too dry it is a rather risky thing to try wetting it. You may make it work successfully, but it is doubtful. The best way is to keep the natural juice in the fruit, all that you can, and have your fruit safe to keep.

PACKING.—There is little call at present for fruit packed in boxes, except for direct trade with the Rocky mountain States and some fancy trade East. The standard boxes are 25 and 50 pounds. In packing, line the box with white paper and face on a sheet of oiled paper. Face the box with nice, bright, average-sized pieces, packed in rows face or pit side down. This, the top of the box, will be filled first, and then the box filled and pressed down and the bottom nailed on. There are various kinds of screw and lever presses, any of which are good.

The package in which the bulk of the crop of California fruit will go to market is the white cotton sack. Use sacks that are heavy enough. There was much complaint last season in regard to light-weight sacks; many receivers say that they arrived torn and damaged. The difference in price is only one cent, and claims for loss will frequently amount to much more than that.

MARKETING.—In marketing dried fruit, as in all other products, each one must be his own judge of what is most advisable. We will only observe that, judging by the past, in seasons of high prices the freesellers have been the lucky ones; that sales previous to or about the time when the goods were ready to deliver, made most money. In seasons of low prices, those who were able to and did hold until very late in the season, until almost the next year, got the best returns. Selling is something, however, that each one knows best about for himself, at least he thinks so.

C. E. WILLIAMS.

DRYING APRICOTS IN SOUTHERN CALIFORNIA.

SANTA ANA, ORANGE CO.

TO THE EDITOR :—The apricot crop is harvested. The rush is over. Now, while all the wisdom of experience is fresh in our minds, we will note thereon for future use; perhaps for the use of others also.

"Shall I dry or sell green?"

Yearly this is the question which presents itself to the mind of the farmer. To dry, there is all the extra work, the responsibility, the extra investment of capital and the risk, and the waiting for returns. So the buyers of the apricot green tempt those who could well dry themselves, as well as those who bought their orchards ready made, and are not really in the fruit-growing business for what there is in it. Pity there are any such. They "rattle" the market and hurt those who look to the return given their fruit for all they have.

But let's look at this matter of selling apricots green. If you do not dry at all, you lose a decided percentage of your crop. You have to pick before they are full weight. The overripe drops and rots. There is no fruit where the waste comes so insidiously. It drops and seems to melt away. But we who have observed the matter closely for years, consider that the saving of the dropped fruit pays for the harvesting of the crop.

When the apricot is sold for shipment green, *i. e.*, not to go to a big drying firm, but to go to Chicago, say, to be sold green, there is still more waste. It is a question, unless a whole orchard is engaged and the dropped fruit saved, whether at $40 per ton, even, it pays as well to sell green as it does to dry. Forty dollars was paid for select fruit to ship as just stated. Fifteen to twenty-five dollars was paid this year for apricots by the drier, but at the average price dried fruit is selling, it is worth to the farmer at least 1¾ cents on the trees. But, to make his profits and interest on capital invested, the big drier cannot afford to pay beyond a certain sum.

I estimate that it costs 2¼ cents to dry the apricot. This counts in current wages for all employed (family and all), cost of everything and interest on plant, such as trays, boxes, etc. Add to this the worth of the fruit green, say at one cent per pound, average price here—we calculate five pounds of green to one of dry. That is the way our fruit runs. This makes 7¼ cents cost to the farmer, staying at home and making good wages. Take 9½ cents per pound, average price paid in July this year, probably, for dried apricots, there is 2¼ cents per pound net profit to the grower. It seems to us that that is good return financially, to say nothing of the peculiar privileges and independence of the farmer's life.

Do you decide to dry, then? We do every year. Even on poor wages; wages, money earned at home, is every way desirable. And the little children can do so much. Our youngest are earning quite a little pile of money picking up and cutting and spreading on trays the dropped fruit from our "white" trees (Large Early); often they were so much picked it did not pay the picker to go over them because the "red" apricots (Early Moorpark) crowded so. We give the children tickets marked "One Tray," and when the crop is sold they cash the tickets.

Having decided to dry, get a good picker. Get good help at anything—be ready to pay what it is worth. A good picker will pick over a ton a day the height of the season, and not throw or tumble his fruit about roughly. He will be patient, too, early and late in the season when it is necessary to go over the trees for small returns—say four or five hundred pounds a day. Of course he will want a good substantial stepladder and a basket with a wide, thick strap attached by which he can sling the basket over one shoulder, where it hangs in front of him and he picks with both hands. He will not knock off a great deal of green fruit at the first picking, but this cannot be altogether

helped. If it is saved out by the "cutters" into a pail kept for the purpose, it can be made into jelly and not wasted.

Shall I hire "cutters" or have a machine? It may sound retrogressive, but we do not believe in any kind of apricot-cutting machine but the human hand. The machines muss the fruit, will not cut the fully ripe, which is best of all for making good dried fruit, and all machines are slower in the long run than expert "cutters," who "lay" as they cut. We pay 15 cents per 75-pound box. It is a good price, but we can always get good help. There are secrets in this hand-cutting of apricots; we teach our help how to make no false motions. One who does not, makes good wages.

Next to pickers and cutters, trays are to be considered. A tray 2x3 feet of "shakes" (split are best, but they are hardly to be had of late, so sawed smooth side up must be used), with "inch-stuff" for the sides and "half-inch" for the ends and crosspiece underneath. This is an important point. Some make "inch-stuff" for ends and "half-inch" for sides. The consequence is that the sides "spring" when weighted and piled high, and in one season's use many will pry off. Besides, the crosspiece at bottom will work loose. But with "inch" sides, the endpiece lapping on can have two nails in each corner, preventing the prying, while the thick sides prevent the springing. As for the staypiece underneath, at each end a larger nail can be used, making the tray much stiffer for handling. Besides, thus made, the different parts are tied together.

Next, stretchers strongly made, of size to hold two piles of trays; as many as you find, you need to handle all the trays. A stone boat and a steady old farm horse to draw the fruit from the orchard is another desideratum. Here we are—the fruit picked, brought up, cut, laid on trays, and—next, there is the sulphur-box and drying-ground.

There is no time in such a brief practical article to discuss the pros and cons of driers and sulphuring. We have studied the matter and discussed it at length in the papers these years back; were, in fact, pioneers in fighting the modes and principles of the reckless sulphurers. But to come down to hard, cold facts—business, in short:

First, as to driers: To make a wide market for our dried apricots, they must compete with dried peaches and apples in the eastern markets. To compete, they must be reasonable in price. To be reasonable in price, all the processes for producing a first-class product that will sell must be made as cheap, simple and effective as possible. Thus only can the producer and those who handle and market the fruit get a fair per cent of profit on the time and capital used for harvesting the crop. We are convinced this cannot be done if driers are used; and in the regions where apricots grow in commercial quantities, not only is fuel too high to make driers profitable, but the climate is such that they are not needed. The best sun-dried product is sold as "evaporated," and is equal to it, if not better. We contend it is better, the chemical action of the sun's rays in drying giving a richer, finer flavor to the fruit. But, and here we come to the much-discussed sulphuring process:

There is no use talking; our dried apricots will not sell in the Chicago market, unsulphured. And, if not sulphured some, moths, the pest of the fruitgrower, will lay their eggs on the fruit. Then to the intelligent fruitgrower, who is also conscientious and would not produce an article containing elements unhealthy to the consumer, comes the question of how much to sulphur to make a fruit that will sell and not be hurtful. We have, to our satisfaction, reached the golden mean at this point: One-half coffeecupful of the best California sulphur to 20 trays in an air-tight sulphur-box; time of process, one hour only.

If you were here, as I write, I would practically show you the importance of the little points in this last sentence. Here are two handfuls of fruit. One is a rich, dark amber hue, shiny, a clear, slightly translucent look to the skin. The other is of a lighter amber hue, more shiny, more translucent. "Yes, I know," you will say. The first is Early Moorpark, the red fruit; the last is Large Early, the white apricot.

You are wrong. They are both Early Moorpark. And the *last* has had twice as much sulphur used, and was twice as long in the sulphur-bath as the first. Eat the first; it is a pleasant, fruity sweetmeat, so to speak. Eat the second, and it stings your mouth; you taste the *sour* for sometime after. The first when cooked, previously slightly parboiled in sodawater, retains all its fruity flavor and loses *all* the little extra acid the surface has taken on in the sulphur-box.

We have come to the sulphur-box. We use a stationary box, holding 20 trays, a small cellar underneath, an opening in the floor of the box, and an outside opening, below the door, to the cellarway.

Your fruit is in. The big door is shut. We take a handful of newspaper, wrinkled so as to make several pockets on top, wrap a smooth piece around and under so no sulphur can fall through. We sprinkle our quantum of sulphur in this bunch of paper, light it and insert it through the outside opening to the pit beneath the box. Then shut all tightly. This paper method gives the sulphur a good start, hastening the process.

There is an empty stretcher resting on horses by the box. A full one of cut fruit in the cutting-room. A man and a stout boy make the change quickly. Out comes the full stretcher and is set on a rest near-by. Out in a trice come the trays from the box and are carried and spread on the drying-ground, protected from all intrusion by a high, wire-netting fence. In goes the freshly cut fruit. It is a short process to those who know how to make every motion tell.

The next step is the *drying*. Let the sun do that. It is unnecessary to cover at night. Neither is it necessary to look over your fruit and select out that which is dry. Let the tray stand till all are dry. Then leave them out one night to gather enough moisture to soften them. Then go out early the next morning and examine the 'cots. If the dry ones of the night before are in the right condition, stack the trays immediately. If too soft, let them lie till the sun [illegible] them sufficiently, so they will not stick together when put into the sweat-boxes. Then stack, and have the fruit put into the boxes the same day.

Then the scraper, with his 2x4-inch piece of steel (cabinetmaker's woodscraper), scrapes the 'cots from the trays into the "sweat-boxes." There they stand 24 hours or more. The moisture on them from the last night's exposure causes them to *sweat* even—they lose their chippiness, are waxy and pliable, but they must have been perfectly cured the day before. No matter if some are overdry, all *must* be dry or they will not keep. And in the sweat-box they must be covered tightly from the moths.

With average drying weather, the apricot will sun-dry in four days. Excessively hot weather is not the best for drying; it scalds the fruit. This year has been the perfection of drying weather—breezy, and of moderate temperature. The "cutters" have needed wraps nearly every forenoon and sometimes late in the evening.

Dried and sweated, the fruit is ready to sack. Buyers have been particular about sacks this year. No second-hand sacks allowed—no flour-sacks, as last year. The regulation size, 36x20 inches. Price of sacks to be bought, 8½ to 10 cents. We made our own. Bought of the local dry-goods merchant, Lawrence Mills, LL., for 6½ cents a yard per bolt. Each bolt made about 43 sacks. Cost about 7½ cents per sack. Takes one spool of thread, No. 30, per bolt. We cut off 41 inches for a sack. Cloth 36 inches wide. We use soft-laid twine, No. 6, and a big darning needle for sewing up the sacks.

While sacking, we use a stationary box, fashioned to act as a funnel, about 36 inches from the floor. It has hooks on which to hang the bags. The fruit is dumped, not in very large quantities at a time, into the bag through the wooden funnel. The bag must be "jumped" or "jounced" when most full to make it solid. Well-shaken, they will average 85 pounds in weight when filled and sewed.

As to varieties of fruit to dry, we think the Early Moorpark or Early Royal the finest. The trees, managed rightly in the growing, can be relied on for a good crop. They are not so juicy as the Large Early and dry quicker. This last makes a very fancy brand of fruit, but is not so sweet and rich. The Early Moorpark, dead ripe, ever so "mussy" to cut and handle, makes lovely dried fruit, sweet and waxy. By the way, this soft fruit, if not slightly sulphured, would turn black, sun-dried, and cannot be handled in a cutting machine at all, and does not dry very well in a closed room. But it is on such fruit as this that the rancher who dries his own fruit makes much of his profit and his good wages working at home.

NOTES.

We have about 200 bearing apricot trees. As near as we can calculate now, we shall net $500 from these trees. This is a good investment on capital, even calling the land worth $100 per acre. An Easterner, who is passing his first summer in California, admits this, though he thought land ridiculously high when he came here nearly a year ago.

About five pounds of sulphur is what we allow for a ton of green fruit.

The "cutters" must be watched that they lay the fruit well. It must be cut evenly in two—not one shred of attachment between the two halves—or they will not dry in good shape. Very soft fruit must be shaped a little when laid down. Your cutters must cut all the way around the fruit, not cut pushing the stone ahead of the knife. This leaves a bad, jagged edge. The fruit must, of course, be laid skin-side down. It may be pretty well crowded on the tray.

Soft-laid twine generally sells for 35 cents per pound. One-half pound is ample to sew up 100 sacks.

Allowing four to five days to dry the apricot, 50 trays per ton of green fruit are enough to allow for handling.

Every farmer ought to take some big daily with its weekly report of the eastern markets. It will keep him posted as to fair prices. If he reads and thinks, he will know enough not to ask too high a price for his products, nor sell out at too low a price. ARTHUR J. TOWNER.

EVAPORATING PRUNES IN OREGON.

At a recent meeting of the Oregon State Horticultural Society, Mr. A. H. Carson read a paper on prune-culture, from which we republish the following upon the use of an evaporator for prunes:

The prune orchard is now five years old—the age when we expect it to become profitable, the age, too, when we must learn the best methods of gathering, evaporating and marketing the crop. Much depends as to the value of the crop on its proper management in evaporating. By reason of our moist climate we must use the evaporator. To begin with, let us understand that no one can cure a first-class prune unless the fruit is ripe, consequently the prunes should be ripe before gathering. The French and Italian are usually shaken from the tree into canvass. The Silver is generally picked by hand, owing to its large size. Where trees are shaken, it should be done gently, so that only the ripe fruit will fall. Before the prunes are scalded they should be graded. It greatly facilitates the handling of a large crop of prunes to grade before evaporating. Prunes of different grades should not be dried on the same tray, as the smaller prunes are liable to overdry unless they are hand-picked, which is a loss of time and labor. After the prunes are graded, the next detail is to scald, or dip, the fruit. Now, the scalding or dipping process is an important detail and should be understood. We use a weak lye of one pound concentrated to 16 gallons of water, and, while scalding, the lye should be kept at a boiling point. The object of scalding is to cure the prune of its bloom and cut the skin to facilitate evaporation. The prunes are put in a wire basket, large enough to hold half a bushel, and are plunged into the boiling lye long enough so that the skin of the prune shows minute cracks, then it is taken out and washed in clean, cold water to remove any lye that may adhere to the fruit. It is then placed on trays and carried to the evaporator. I know there is some prejudice against the use of lye for dipping the prune, but there is no foundation for it, for, if immediately after the prunes are dipped they are thoroughly washed in clean water, no trace of lye can be found, and an analysis will verify this assertion.

Let me impress on your minds that this dipping process is a very important operation that enters into the curing of a first-class prune. When the skin of the prune shows small minute cracks it is done right. The operator should watch the dipping with care, and not scald too little or too much, as it means a superior prune if properly done with a proper evaporation which should follow. For the purpose of this paper we may assume that we have a perfect evaporator, one that dries the prunes properly, quickly and cheaply. It would be a proper question to ask what degree of heat should be used when we first put the prunes into the evaporator. My answer would be 150 degrees, provided your evaporator has a perfect circulation, and without air circulation you will cook the fruit, not evaporate it. This degree of heat expels the moisture and the circulation carries it off. When the prunes are nearly cured, I then increase the heat to 180 or 200 degrees. Finishing the fruit at a high degree of heat brings the pectine, or fruit jelly, to the surface, where it remains, giving the rich amber color which so much enhances its value. The high heat also cures the prune at the pit or, properly speaking, changes the juices of the prune into thick jelly, a condition in which they will keep for an indefinite time, if properly boxed and kept from the moth. In coloring the prunes with high heat, too much care cannot be used by the operator, so as not to burn the fruit. Then, again, do not overdry; a prune does not need to be so dry as to rattle, to keep; a soft, spongy prune is the prune that the market demands. There are many ways of "finishing" the prune after drying, one of which I have used to advantage when they did not present the bright appearance that they should. If over-dried, they can be improved by dipping in boiling hot water for 30 seconds, using one pound of glycerine to 16 gallons of water. This gives the prunes the glossy appearance besides the soft feel.

In regard to packing. For all first and second-grade prunes, I would use 25-pound boxes; for other grades use sacks. Then, invariably stamp the brand on your boxes, if your prunes merit it; let the purchaser know who evaporated them and what State they are from. To prunegrowers of Oregon, I wish to call your attention to a few statistics on prune importation. In 1889 there was imported into the United States 43,717,353 pounds of prunes. Nevertheless, although the prune crop of 1890 had nearly doubled over the year 1889, in that year there was imported 61,905,782 pounds. These figures are all the thoughtful man requires. If they fail to teach a lesson, anything I can say as to the necessity of looking carefully after his prune orchard would be in vain.

FRUIT MARKETING.

The Raisin-Growers' and Packers' Combination.

On Wednesday, August 17, another meeting of those in the raisin interest was held in Fresno, and the proceedings are fully reported in the *Expositor* of that date. Capt. C. H. Norris of Fowler presided and called for the report of the Executive Committee, stating that the committee had met a good many times since the last meeting of the association. The chairman of the committee, D. T. Fowler, then read the following report:

Your committee would desire to preface this report by expressing the great satisfaction they have in reporting that 95 per cent of the growers of the State have responded to the invitation of the association and signed the agreement, which, so far as we know, has been honestly kept, that they, the growers, will only do business with those packers and commission merchants who have contracted not to sell raisins at any price that will pay the grower less than 4½ cents per pound, the minimum price in the sweat box, and also that the packers representing a pack of last season of more than 1,500,000 boxes, have contracted with each other and with the growers to maintain this price conditionally, that the assent of 95 per cent of the packers is obtained to the contract.

In order that the situation may be fully understood by growers who have not attended the meetings of the growers, which have been held from time to time, we would state: First, that at a meeting of the growers held in Fresno on June 22d, a resolution was passed authorizing an agreement, "sometimes called a petition," between growers and packers, agreeing to maintain a price, thereafter to be agreed upon, for raisins as the minimum price in the sweat box.

In pursuance of that resolution, these agreements were forwarded by your secretary to every raisin-grower in the State, and we are happy to report that they have been signed by owners representing more than 95 per cent of the entire raisin acreage of the State.

On July 15th your committee met the raisin-packers at the Hughes hotel in this city, and the result was an agreement, satisfactory alike to your committee, the "grower and the packer." It was reduced to writing and signed by 22 packers in words as follows:

"We, the undersigned, hereby agree to bind ourselves together as a corporation for the purpose of fixing the minimum prices on various grades of raisins, netting the grower 4½ cents per pound in the sweat box, on the average, for good raisins, or as much higher as the market will justify, provided that 95 per cent of all the raisins produced be covered by the agreement now being circulated by the growers, and provided that 95 per cent of the pack of the State be represented by said corporation."

We are informed by Mr. Noble, of Noble Bros., chairman of the packers' committee, that the packers met and agreed upon a schedule of selling prices, based upon a minimum price of 4½ cents per pound for good raisins in

the sweat box. He writes: "We have now the signatures of 22 packers, aggregating about 1,500,000 boxes, and we have promises of several others, who will sign the agreement adopted at the last State convention of raisin-growers. There are some who have declined to sign it at all."

We are informed that as soon as the prices agreed upon by the majority of packers, with the result of the conference, were telegraphed East, several orders were taken for carloads of raisins to be delivered in September and October, at and above the agreed minimum price, but a few days after, some of those packers who had refused to sign the agreement, and others who had signed it, began cutting prices in the Eastern market, and competing one with another. This immediately broke the market to a slight extent, and now the buyers are waiting in expectation of a further drop.

The party who is the greatest enemy to the raisin industry of this State is the packer who does not join this association,but who takes our raisins to sell on commission or who buys at low prices from the wagon, and places them (the raisins) in competition with the raisins belonging to the members of the asssociation.

We, your committee, remembering we all have signed the agreement, demand that we all use every lawful means within our power not to give raisins to such packers to handle in any shape or manner, for if we do, it means ruin to our great industry.

As we have referred to a class of packers who have not joined the association, you may justly ask who they are, and in order to give you what we consider direct information, we give you a copy of the telegram sent to Mr. George Noble, chairman of the Raisin-Packers' Association, by Mr. Frank H. Ball, who was sent to San Francisco to get packers' signatures. It reads as follows:

SAN FRANCISCO, August 11, 1892.

To George B. Noble, Chairman Raisin-Packers' Association:—Notify executive committee of growers and packers that Williams, Brown & Co., Cook & Langley, Schacht, Lemcke & Steiner positively refuse to sign agreement establishing minimum prices.

Now, therefore, your committee feel justified in stating to the California Raisin-Growers' Association that they must avoid the firms named in the foregoing telegram. While they remain outside of the association and are cutting prices we regard them as leeches on the whole community.

From information received we have every reason to believe that large orders have been taken by packers who are not in the agreement. They must have raisins to fill their orders, and if the 95 per cent of the growers hold together in the future as they have in the past, those outside packers will be unable to fill their orders, and will have to come into the compact for relief.

Already the firm attitude taken by the growers has resulted in raising the prices. We recommend that you in your general meeting reaffirm your determination to stand together, and if this is done we will receive more than the minimum price agreed for good raisins, namely, 4½ cents per pound.

When the raisins are in the sweat box, all the cooperative companies and the packers in the association are prepared to advance to the grower 50 per cent of the graded price, that is, not less than 2¼ cents on all good raisins in the sweat box. All the cooperative societies in the State have joined the association. Respectfully submitted,

WILLIAM HARVEY, Secretary.

CHARLES H. NORRIS, Chairman pro tem.

During the reading of the report a good many passages of it received hearty applause. On the completion of the reading of it the report was accepted with much enthusiasm by the meeting.

Mr. Williams, of the packing firm of Williams, Brown & Co., one of the firms that refused to sign the packers' agreement, then addressed the meeting at considerable length, and answered questions asked him by various persons.

Mr. Williams stated that his firm has already bought a large quantity of raisins outside of the compact. He did not think that anywhere near 95 per cent of the growers have signed the agreement. He thought that only about 60 per cent of the acreage is represented by the growers' combine. When asked, later on, for the proof of this assertion, he said that he had no proof other than that he had met a great many growers who have not signed the agreement.

Mr. Dore asked the speaker why his firm didn't sign the agreement. Mr. Williams replied that his firm has never cut prices. He thought that there is danger of fixing prices too high, and then the Spanish raisins can come in and supply the market, thus crowding out the California product. Mr. Williams said that the firm has placed prices at such figures as to be able to keep out foreign products.

Mr. Lemcke, of the packing firm of Schacht, Lemcke & Steiner, addressed the meeting and gave as his reason for not entering the combine that he has never yet seen a combination that was satisfactory. There will always be some black sheep in it who will get the best of the honest men. He felt confident that he would get left if he entered into the combine.

The arguments at times grew exciting, and the audience listened with close attention.

Chairman Norris made a short speech, in which he stated that a great storm is brewing and that it is about to burst over the raisin industry, and that these outside packers could help to avert it if they only had a mind to do so.

Mr. Dore then addressed the meeting and said that he believed, from careful observation, that this association, by its action, has raised prices one cent on every pound of of raisins, thereby saving the raisin growers at least $300,000. Had the organization been effected six months ago, Mr. Dore thinks that no less than $500,000 might have been saved.

Geo. A. Noble, of the packers' committee, then reported that the packers had held a meeting all the afternoon, and adopted as the minimum prices for selling raisins the schedule agreed upon by the packers in San Francisco the day before. The prices, as a general thing, were a little lower than those agreed upon a few weeks ago, but the packers outside of the combine had agreed not to cut prices below those agreed upon in San Francisco on August 16th.

Mr. Noble stated further that the firms of Williams, Brown & Co., Schacht, Lemcke & Steiner and Cook & Langley had refused to sign the packers' agreement, but that Mr. Williams had stated to him that he would be willing to enter the packers' association if he could be guaranteed a pack of 100 carloads to be put up on the commission plan.

Mr. Norris stated that he was very sorry to hear that those three firms had refused to join in the movement. "The storm," he added, "of which I spoke this morning, is upon us; but if we growers stand together like men and stay with our agreement, we can weather it through. These packers will have to take the consequences."

Mr. Noble read the prices agreed upon by the packers, and they are as follows: Clusters, $2 per box; three-crown layers, $1 65; four-crown loose Muscatels, faced, $1.45; ditto, unfaced, $1.40; two-crown London layers, $1.40; two-crown loose Muscatels, $1.30; four-crown loose, in sacks, 5½ cents; three-crown ditto, 5 cents; two-crown ditto, 4 cents; third grape, 3¼ cents; seedless Muscatels, 5 cents.

Mr. Williams, of the packing firm of Williams, Brown & Co., then told the meeting that he and Mr. Lemcke had agreed to join with the other packers provided that their firms could be guaranteed 100 carloads of raisins to be packed on commission.

The argument was produced by Mr. Hudson, in behalf of the three independent packing firms, that they buy for cash while the other packers do not. And since they buy for cash they should not be expected to try to compete with those packers who work on a commission basis and have very little money invested.

E. G. Chaddock, of the packers' association, said that he felt confident that if the prices agreed upon by the packers could be sustained, the growers could realize an all-round price of 4½ cents in the sweat box. Old vineyards and first crops might realize as high as 5 cents, while young vineyards would fall below 4½ cents, perhaps.

Mr. Williams and Mr. Curtis both said that they had been informed that some of the commission-packers have guaranteed 5 cents in the sweat box. They asked whether or not this was true. The chairman and several others said they had heard of no such agreement by any packer.

Mr. Kittle asked the convention why the firms that were buying for cash were required to guarantee 4½ cents when the other packers were not even guaranteeing the growers 2 cents?

Mr. Chaddock replied that he believed that the firm he represented would secure for its customers an average of 4½ cents. Mr. Kittle then replied that Mr. Chaddock "believed" 4½ cents would be secured but he guaranted nothing.

The debate grew warmer than the warm evening, and finally Messrs. Lemcke, Williams and Kittle left the room. When the convention saw them going it grew wild with excitement. The chairman asked them to remain, but they refused to do so.

After the convention became quiet again, W. D. Grady made a lengthy speech in which he urged the growers to stand together, for that was the only way to maintain prices. He stated further that any contracts entered into by the outside packers with any growers were not binding, and if there were any growers present who had made such a contract, he would agree to break it free of charge if they desired him to do so.

A resolution was offered by M. J. Lindrose, and read as follows:

WHEREAS, Cook & Langley, Williams, Brown & Co. and Schacht, Lemcke & Steiner have refused to sign the compact.

Resolved, That this convention recommend that every grower in the State refuse to sell to the above-named firms their raisins at any price, but on the other hand patronize such packers as have signed the petition.

J. S. Dore then offered a substitute for Mr. Lindrose's resolution. The following is the substitute:

WHEREAS, 1135 growers of raisin-grapes, representing 41,796¼ acres of bearing vines have signed the growers' agreement and joined this State Raisin-Growers' Association, and are pledged upon the honor of each to stand together to protect the mutual interests of all growers; and

Whereas, We, the California State Raisin-Growers' Association, in general meeting assembled, representing over 95 per cent of the raisin acreage of the State, have listened to the remarks before the convention of Mr. Williams of Williams. Brown & Co., who also claimed to represent the firm of Cook & Langley, and the remarks of Mr. Lemcke of the firm of Schacht, Lemcke & Steiner; therefore be it

Resolved, That in our opinion the matter of conducting the raisin business as expounded by the above-named packers is prejudicial to the best interests of the raisin-growers, and tends to reduce the price of raisins; further

Resolved, That as long as these firms remain outside of the packers' organization, and refuse to sign the agreement of the other packers of the State to maintain minimum prices, that we, the State Growers' Association, further bind ourselves not to do business with them in any way; and be it further

Resolved, That we express our thorough disapprobation and contempt of those firms who are operating in a way that will bring ruin to the raisin industry of the State.

Mr. Lindrose withdrew his resolution, and, on motion of Mr. Grady, Mr. Dore's substitute was unanimously accepted with a deafening "aye."

Mr. Dore then moved that the prices submitted by the packers be accepted by the convention, and the motion was carried.

D. T. Fowler addressed the meeting in a short speech, in which he stated that the organization is stronger than ever before, and he felt confident that the movement will continue to be a success.

One grower stated that he had been offered 4¾ cents by an outside firm, but he refused to accept the offer. He wanted to know whether he or any other grower is bound by the growers' agreement not to sell to an outside packer, if that packer offers him more than 4½ cents? The chairman replied that all growers are in honor bound not to sell to any outside packers. "I would not sell my grapes," continued Mr. Norris, "to an outside packer if he were to offer me 10 cents a pound. I wouldn't sell to him at any price."

The following agreement was entered into some time ago by the packers, and was unchanged by yesterday's meeting except the prices:

The undersigned raisin-packers, in consideration of the sum of one dollar, each to the other paid, the receipt whereof is hereby acknowledged, and of other good and and sufficient considerations, do hereby mutually covenant and agree each with the others that they will not during the year ending June 1, 1893, unless authorized so to do by an executive committee to be hereafter elected at a regular meeting of the undersigned, or at a special meeting called for the said purpose, sell or agree to sell at less than the minimum price hereinafter specified, any of the following packs of raisins, viz:

Clusters, 20 pounds, $2.00 per box, minimum price.

Three-crown London layers, $1.70 per box, minimum price.

Two-crown London layers, $1.50 per box, minimum price.

Four-crown loose unfaced, $1.45 per box, minimum price.

Four-crown loose faced, $1.50 per box, minimum price.

Four-crown loose sacked, 6½ cents per pound, minimum price.

Three-crown loose sacked, 5½ cents per pound, minimum price.

Two-crown loose sacked, 4 cents per pound, minimum price.

Three-crown loose boxed, $1.30 per box, minimum price.

Seedless Muscats, 4½ cents per pound, minimum price.

It is further mutually covenanted and agreed to by and between the undersigned, that in the event any of the undersigned shall, during that period, violate any of the covenants of this agreement, it shall forfeit as liquidated damages to the undersigned the sum of two hundred and fifty ($250) dollars on each carload sold below said prices, and said sum shall become immediately due and payable to the remainder of the undersigned upon proof of such violation, and may be collected by an action of debt in any court having jurisdiction, by either of the remainder of the undersigned in a suit brought in its own name for its benefit, and that of the remainder of the parties to this agreement; and it is further mutually understood and agreed that no defense to such action shall be pleaded or proved except denial of the violation of this agreement, or by any covenant thereof.

This agreement shall be in full force from and after the 15th day of August, 1892, until June 1, 1893, provided signatures representing 95 per cent of the raisin pack of the State of California be secured, based on output of last season.

A written notice from the committee, consisting of G. B. Noble, O. B. Olufs and F. Romaine, in regard to the percentage of signatures, shall be official and binding.

Signed this 9th day of August, 1892. Fresno Raisin Packing Co., Fresno Home Packing Co., The Producers' Raisin Packing Co., Noble Brothers, Griffin & Skelley Co., Olivet Packing Co., Fresno Canning Co.

The following have assented and will sign as soon as the agreement can be gotten to them: N. View, E. P. Cook, Curtis Fruit Company, A. G. Bergin, D. D. Hudson, College City Packing Association, T. C. Russell, F. S. Devine of Riverside, A. D. Barling.

On motion of Mr. Gordon, the convention adjourned to meet on Saturday, August 27th, at 1 o'clock.

At a Meeting of the Doyle Fruitgrowers.

SAN JOSE, Aug. 18, 1892.

TO THE EDITOR:—By special invitation, your correspondent was present at the regular meeting of the Doyle Fruitgrowers' Association. The meeting was held in the schoolhouse on the Stevens Creek road, some five miles from San Jose.

The meeting was called to order and the secretary named the subjects for discussion.

"That the Blackbird was the Fruitgrowers' Friend," was considered. A committee had been appointed to consult the farmers, but had requested more time for the subject. They had agreed, as far as the fruitgrowers' interests were concerned, the blackbird was a good bird to eat grubs, the insects on the trees, and attacked the smaller birds that eat a great deal of fruit. It was strongly recommended that some protection be given this bird by the county or State.

It was said that Santa Clara county had a local law that gave protection to the pheasants in that county from being killed.

Considerable talk was given to the fruit question, the prune being principally discussed. Overproduction was thought to be a great question to be looked into, and that all should not go into the growing of the prune, as millions of trees were to be set out in the near future.

One grower remarked that he was surprised that so many of the fruitgrowers did not allow the prune to get fully ripe on the tree; that they rushed them into the market before they had time to acquire the amount of sugar they could have if allowed to remain in the sun longer.

The reports given by members regarding the scales on the trees were a matter of great importance to fruitgrowers.

Mr. Hall, chairman on the committee to investigate Prof. Brown's wonderful tree-wash, reported that experiments had been conducted in Colonel Hersey's orchard, and as that gentleman was present he was requested to state to the society his observations regarding the wash. Mr. Hersey spoke for some time, giving minute details of the tests made, and admitted that the wash, as applied by the agent, possessed some merit as an insect exterminator, but would not recommend it until he had made further tests by material bought in the open market.

The report from Mr. A. Block was about the same, he

also refusing to give it any unqualified recommendation until after at least a year's trial.

In reply to a question, as to the most effective wash against apricot scale, Mr. Lydiard stated that the rosin-wash had killed all scale and greatly benefited his trees, and gives January or February as the proper time to spray.

Fiber culture was at length brought up and was considered favorably by all. It was suggested that an experimental station, to grow ramie roots for the farmers, would be of great value. COR.

TRACK AND FARM.

The Trotting Record Notably Reduced.

Nancy Hanks the New Queen of the Turf.

CHICAGO, Aug. 17.—Maud S. is no longer queen of the trotting turf. The proud position which she has held so long has been wrested from her, and Nancy Hanks reigns supreme. This afternoon, at Washington Park, in the presence of 10,000 spectators, Budd Doble drove the beautiful mare to beat her record of 2:09. She not only beat her own record, but she lowered the world's trotting record from 2:08¾ (Maud S's time) to 2:07¼. The day was an ideal one for trotting. The track was a trifle dusty, but it was as fast as it well could be. The mare was in excellent condition, and before she made the trial the general opinion was that if Nancy Hanks was ever to equal her record of 2:09 this was the occasion.

It was about 3 o'clock when Nancy Hanks first came upon the track. She passed the grandstand while the other horses were scoring, and received but little recognition.

An hour later she went along portions of the track at a 2:20 clip. She was warmly greeted, and after jogging a mile went to her stable and was rubbed down preparatory to the trial heat, which was scheduled for 5 o'clock.

Punctually to the minute the gate at the east end of the track was opened, and Doble drove her out. She was without boots or trappings of any sort, and was hitched to one of the new sulkies with ball gearings and pneumatic tires. Doble walked her slowly to the head of the lower turn and then came back to the wire at a gentle pace.

After waiting until the drag left the track, Doble drove back to the sixteenth pole, and then came down at a smashing gait. Frank Starr, behind the pacemaker, Abe Lincoln, was waiting for him. Starter Walker watched Doble's face intently to see if he wanted the word, but as the mare passed beneath the wire Doble shook his head, and Abe pulled up to await a second trial.

Back to the distance flag went the mare this time and came down at a gentle trot, increasing as she approached the wire. There was a nod from Doble and "go" flashed from Walker's lips as the mare shot like an arrow toward the turn. For the first sixteenth of a mile Abe lost ground steadily. Then Starr urged him on, and at the quarter he was at Nancy's wheel.

There was not a sound in the densely-packed grandstand as the mare flew past the quarter pole in 31½, a 2:06 gait.

As Nancy started along the backstretch, trotting as true as a die, her head well up and her feet striking the ground with the regularity of a pendulum, the crowd began to murmur, "She'll never do it—never in the world." But the old-timers outlined Doble's gray jacket against the picket fence beyond him, and as he passed along so rapidly that the pickets seemed to be going backward, they knew the record was going.

As the mare, still keeping up her beautiful gait, went by the half-mile in 1:03¾, a man in the grandstand called out, "1:04 at the half," and a mighty yell went up from the crowd.

"Keep quiet as she finishes," shouted starter Walker, but the warning was not needed, as the crowd subsided of its own accord. Its own breathless interest in the event kept it quiet.

Not a sound was heard as the mare passed the three-quarter and turned into the homestretch.

Abe Lincoln, under the whip, moved up to Nancy's throatlatch, and Doble spoke gently to her and her feet flew faster than the eye could distinguish them.

"She'll do it; she'll do it!" yelled an irrepressible spectator, and there was a faint yell as the fastest quartet of clattering hoofs ever heard on a trotting-track swept under the wire.

There was a moment's pause, a hasty consulting of watches, and then umbrellas went sailing into the air, accompanied by a loud-lunged howl and Bedlam broke loose. Hats, canes and coats were tossed wildly into the air, and men slapped each other on the back, while others shook hands in sheer delight. Incidentally, they kept on yelling. The loud cheers which kept up told Doble even before he slowed up that the record had been broken, and as he returned to the judges' stand his face was wreathed in smiles.

When he dismounted, he was surrounded by men who wrung his hand; but when he had a chance, he lifted his cap in acknowledgement of the cheers, and there were loud cries for "Doble, Doble!" The veteran reinsman, climbing into the grandstand, again removed his cap in acknowledgement of the wild applause that greeted him.

"Three cheers for Nancy Hanks!" shouted starter Walker, and they came from ten thousand throats with unrestrained enthusiasm.

"Now, three cheers for the man who drove her!" and again the air shivered and everything that was available went skyward. It was fully ten minutes before the tumult subsided.

The official time for the mile, which was as honest a mile as ever trotted, was: First quarter, :31½; half mile, 1:03¾; three-quarters, 1:36½; the mile; 2:07¼. The last quarter was trotted in :30¾.

The exhibition was given for a certain sum, to be paid by the Northwestern Breeders' Association, under whose direction the trotting meeting is being held. An additional sum, the amount of which Doble declines to disclose, to be paid if the record was beaten.

After the excitement had subsided Doble waxed enthusiastic in speaking of the mare and said: "In my opinion she is without a peer on the trotting turf. She was not distressed in the slightest degree at the end of the mile, and finished fresh and strong. Within 20 minutes after trotting a mile in 2:07¼ she could have gone out and trotted very close to it. She trotted true from wire to wire, never lost her head, and did not show the slightest inclination to leave her feet. I did not touch her once with the whip, and only swished it through the air and spoke quietly to her as she entered the homestretch. I will not start her here again, but I have every reason to believe that she will make her present record a back number by the time snow flies. She did the trick so comfortably to-day that I'm sure she can beat it in the future."

Asked if he was aware that he was breaking the record, Doble said: "I knew at the half that Nancy was going to come very close to it. I looked at my watch and saw that she had done it in 1:04, and knew she could at least keep up that gait."

The mare weighed 870 pounds to-day and pulled Doble, who weighed 150, and a sulky of 62½ pounds weight.

Nancy Hanks, the queen of the trotting turf, is a bay mare, 6 years old, 15¾ hands high, and was sired by Happy Medium, out of a Dictator mare.

Abe Lincoln is a bay horse, and was formerly with Forepaugh's circus. Because of his level head, obedience and through reliability he has been taken by Doble as a pacemaker for Nancy Hanks.

NANCY HANKS' PEDIGREE.—BRIEF REVIEW OF HER PERFORMANCES DURING LAST YEAR'S CAMPAIGN.

Nancy Hanks is a brown mare, foaled 1886 by Happy Medium, 400, dam Nancy Lee by Dictator, 113, grandam Sophie (grandam of Mike Wilkes, 2:15¾, etc.) by Edwin Forrest, 49. She was bred by H. Boswell of Lexington, Ky., and is consequently six years old.

Her best time up to yesterday was 2:09, made on the regulation track, at Richmond, Ind., on September 30th, last year. The first time she started last year was at Detroit, on July 23rd, when she trotted to beat 2:14 and lost, only equaling that record. She trotted at Washington Park, Chicago, on August 21st in 2:12¾, having beaten Margaret S on the previous day in two straight heats in 2:20¼ and 2:19, when the latter was withdrawn.

Her next appearance was at Buffalo, N. Y., when she beat Belle Hamlin in a match race in 2:16½. She made 2:12¼ at Rochester on August 13. On August 27 she won that marvelous race, beating Allerton and Margaret S in three straight heats 2:12, 2:12¾ and 2:12. Then she made the record at Richmond, Ind, (2:09) which, however, she has hitherto failed to lower until yesterday. Budd Doble, her driver, is accounted among the best in America.

The Washington Park officials claim that the time—2:08¾—made by Maud S at Cleveland in 1885 is second to the record of Nancy Hanks made to-day. Sunol trotted in 2:08¼ on a kite-shaped track at Stockton, Cal., in 1891, but this performance they declare to be inferior to that of Maud S on a regulation track, which is conceded to be from one to three seconds slower than a kite shaped track.

Nancy Hanks is owned by J. Malcolm Forbes of Boston, who purchased her last year for $45,000.

Sportsmen at Cincinnati claim the the rubber tire is three seconds faster than the kind Maud S used, and that Nancy Hanks must therefore go three seconds better than Maud S to equal her time.

There are now 13 trotters with a record of 2:12 or better, Of this number four were bred in California, viz.: Sunol. Palo Alto, Arion and Stamboul. The following is the roll of honor:

Nancy Hanks	2:07¼
Sunol	2:08¼
Maud S.	2:08¼
Palo Alto	2:08¾
Allerton	2:09¼
Jay Eye See	2:10
Nelson	2:10
Arion	2:10¾
Guy	2:10¾
Stamboul	2:11
St. Julien	2:11¼
Delmarch	2:11½
Axtell	2:12

ORANGE-HONEY.—The chief interest a beekeeper has in an orange grove is the honey it produces. In March and April the blossoms come out in profusion, and the air is burdened with their fragrance. The odor is not unlike our old-fashioned lilac of the East. The blossom is slow to open, and not in a hurry to fall; it therefore gives the bee three or more weeks in which to collect the nectar. At present the orange area is not great as compared to sage and other flora; but in a few years, where there are now 1000 orange trees within easy range of an apiary, there will be tens of thousands, for the level sage lands are being reclaimed by irrigation, and planted to orange and other fruits. The bee works all day long on the orange blossoms, and its busy hum rises so loud and earnest as to attract the attention of the most indifferent pedestrian and, although there is an abundance of honey obtained from the orange, there is much more sold in the markets than is obtained. Orange-honey is considered rare and pure orange-blossom honey is rare from the small area in which it is gathered; but, rarities are always sought after, and, of course, the average groceryman has not cultivated his conscience to that superlative degree that will prevent him from calling any nice honey "orange;" and I am somewhat skeptical about there being much purely orange-honey shipped from this State, though there are tons of honey sold as such.—Riverside Cor. Bee Culture Gleanings.

ENTOMOLOGICAL.

Cold Water Treatment for Orange Scale.

MARYSVILLE, Aug. 17, 1892.

TO THE EDITOR:—For more than a year past I have been carrying on a series of experiments with washes on orange trees, with a view of discovering some cheap and effective remedy for the eradication of the yellow scale. I am now ready to announce that the remedy has been discovered. It is the cheapest and simplest in the world, and consists of nothing more than pure cold water.

Orange trees sprayed with cold water under pressure 20 or 30 times during the summer remain absolutely free from scale. I consider the cold water treatment preferable to the gas or rosin-wash treatment. Of course, in the case of a very badly-infested tree, where it is desired to rid it quickly of the scale, some such radical treatment as the gas or rosin-wash would have to be used; cold water would do the work, however, even in the case of a very badly-infested tree, but time would be required.

I began my experiments with a large seedling-orange tree that had been infested with the yellow scale for at least seven years; every leaf had more or less scale on it. The tree was situated in a garden where the city water was convenient. I washed the tree every day with the cold water, piped through the garden hose, for two weeks, then, during the balance of the three months that followed, I washed it about three times a week. At the end of three months nearly every scale had disappeared and the tree had taken on a thick, glossy foliage. The cold water had not only rid the tree of the scale, but it gave to it a new vigorous growth. The next experiment I tried was on three six-year-old orange seedlings. They had been infested with yellow scale for about a year, and a large clump of the foliage about midway on each tree was so badly-infested that the leaves had turned yellow. I first sprayed the trees with weak rosin-wash; then, after waiting two days, I commenced to wash them with cold water; this treatment I kept up for a week. During the following two months I washed them occasionally, and at the end of that time there was not a scale to be found on them. The yellow clump of foliage had become transformed, the old yellow leaves had fallen off and new, green, glossy foliage covered the limbs where the scale had once ravaged the tree.

The philosophy of the cold water treatment is, that it washes the scale bodily off the tree, and where it is kept up it prevents them from securing a new foothold. I do not mean to be understood as saying that one, two, or even three washings will rid an old infested tree of the scale, but 15 or 20 good washings will, and then, if the tree is washed occasionally, there will be no trouble from scale.

From the experience that I have gained in the experiments that I have been telling about, I would go about the work of clearing the scale out of a badly infested orange tree in this wise:

I would first spray the tree with a fairly strong rosin-wash; this, if properly done, would kill and injure at least 75 per cent of the scale. I would then prune out those parts of the tree where the scale was the thickest. After waiting three days or so, I would direct a stream of cold water into the tree, and wash every part very carefully. After this treatment, it would be found that most of the scale had been washed bodily off the tree. I would wash the tree with the cold water every day, or twice a day, for the next two weeks; after that, I would wash it two or three times a week until the rains came. If the tree had been very badly infested, I would give it some rich fertilizer, which would make the leaves come out rich and vigorous-looking.

The cold water remedy is surely the cheapest and simplest that could be devised, and there is no excuse for allowing a tree that is situated close to a hydrant, from which water under pressure can be drawn, to harbor the destructive yellow scale.

Where infested orange trees are situated in an orchard, it would pay to pipe water to each tree to be used for spraying and irrigation purposes. The whole system of irrigation as now practiced could thus be changed. Instead of allowing the water to run in ditches to each tree, it could be piped and first sprayed over the trees. A series of experiments now being carried on in Florida makes it seem probable that this system of spraying the irrigation water over the tops of trees will soon be in vogue.

G. W. HARNEY,
County Horticultural Commissioner.

Honeydew and Ladybird.

SANTA CLARA, Aug. 15. 1892.

TO THE EDITOR:—Will you please explain the cause of so much gum on the leaves of the prune at this time, when the trees are bearing fruit. Please find sample enclosed.

I send also a ladybug that seems to be very industrious on my trees, looking for the scale. Please advise me if this is the true species introduced by the State or not, so that I may inform our "Farmers' Club." By giving an answer to the above you will oblige an old reader of the RURAL.

A. R. W.

[The gum on the leaves is "honeydew." It is an excretion from the scale insects which are very abundant on the specimens sent. This honeydew appears on the leaves of trees effected either with leaf-aphis or scale insect. After a time a black fungus grows upon this honeydew and the leaves and fruit become "smutty." Kill the insects and the smut does not appear.

The ladybird sent is *Chilocorus bivulnerus*—"the twice-stabbed ladybird." It is a native insect and, of course, not one of those imported from Australia. It is a good scale-eater, and in some parts of the State is credited with greatly reducing the scale.—ED]

MISCELLANEOUS.

There are 110 men belonging to the Brewers' Union of this city now out on strike.

THE horseshoers of this city are all busy. There are very few idle men belonging to the the union.

THE engineers of the San Francisco and Great Salt Lake railway are now surveying just east of Reno.

CLAUS SPRECKLES has got two agents in Kern county looking for a suitable location for a beetsugar refinery.

THERE were 238 banks doing business in California on July first last, with resources amounting to $301,046,944.

THE North Pacific Coast railway has contracted for a new ferry steamer, and will soon enlarge its slip at Sausalito.

STEPS are being taken for the development of the artesian belt of Alvarado with a view of supplying the town of Haywards.

A SIXTY-FIVE THOUSAND DOLLAR high school is to be erected at Redding this year; also a $25,000 Y. M. C. A. building.

THE big lumber raft at Fort Bragg, Mendocino county, will be ready for launching this Saturday, and will then be towed to this port.

THE electric road from Ventura into the Ojai valley has been graded for four miles from Ventura and the track is down for two miles.

THE Marin County Water Company is building another large distributing reservoir on the top of one of the hills behind San Rafael.

WORK is to be resumed on the new Bear valley dam at once. The dam was to be begun last season and built up a distance of 15 feet.

The Ladies' World's Fair Society of Fresno county will distribute free at Chicago 2500 pounds of raisins, put up in small souvenir boxes.

LABOR COMMISSIONER WALTS has started an inquiry in the matter of unemployed workingmen, with a view to ascertain, if possible, the cause.

ON the 1st of September the California State Board of Trade will move their exhibit into and occupy the entire basement of the Crocker building.

BUILDINGS for the Carlson-Currier silk factory in Petaluma, are nearly ready for the machinery, which will be all in place and in running order by the 1st of October.

NEARLY all the buildings at Vacaville injured by the earthquake of last April have been repaired, and in every case the buildings erected have been improvements on the old ones.

D. W. EARL & CO. has been kept busy during the past two weeks putting the big freight wagons in repair in anticipation of an increase of business between Hawthorne and Bodie.

CONTRA COSTA COUNTY is becoming quite an object of interest for capitalists of late, owing to the many projected railroad schemes and the fact that most of the lines enter and cross the county.

THE Palermo Land and Water Company and the Pacific Improvement Company have jointly contracted to build a $50,000 hotel at Palermo. A. Page Brown is the architect, and the structure will be a picturesque summer hotel.

IT is reported that the Ducey Timber Co. of Michigan has purchased the mills, flume, timber, track, logging railway, etc., of the Kings River Timber Co., on Kings river, Fresno county. This is the plant of Moore & Smith.

OVER 100 people from Santa Rosa are employed by the Sebastopol Packing Company, and a special train is run between the two towns for their accommodation. The company is shipping from one to three carloads of fruit daily.

A SATISFACTORY understanding has been reached by the parties interested in the proposed starch factory at Petaluma, and the necessary buildings and machinery will be in readiness to commence work as soon as the potato crop is ripe.

THE Sante Fe company is arranging with San Diego citizens to send out another "California on Wheels." A special car will be fitted up with an exhibition of southern California products and hauled through the East. It will start eastward on the 22d inst.

A. LUSK & CO. have increased the working force at their fruit-canning establishment at Brannan and First streets. Business was so rushing that the addition of 500 women and girls was necessary to take care of the immense supplies of stock shipped in from all directions.

THE beet sugar factories of Watsonville and Alvarado will start up on the 20th inst., with double the capacity of last year. The Chino factory has been running for about a month, and is turning out 1000 sacks of sugar a day, which is three times the amount produced last year.

DR. MAHONEY and his partners have let the contract for building their dam on the Agua Fria, Arizona. It will be one of the largest in that section and will place the Harqua Hala country in a position that both its mines and farms will have sufficient water. A large number of people are now locating land under the canal that will be taken out at the dam.

A TUNNEL 1140 feet long on the Fort Bragg Logging Railroad, Mendocino county, was completed on Tuesday, connecting Pudding creek with the Noyo river, where the Fort Bragg Redwood Company will carry on logging operations this season. The tunnel opens up a fine body of timber, miles in extent, where an ax has never been struck except for ties.

PARTIES have leased 1000 acres of land, lying partly on the Briones Ranch and partly on the Sobrante Rancho, Contra Costa Co., from Simon Blum and G. O. Miner, and will proceed immediately to erect machinery for the purpose of boring for oil or petroleum. The parties referred to are experts in the business, and have bored many wells in the southern part of the State.

WORK has begun at Fresno on the Pine Ridge flume and several hundred laborers are on the ground. It is expected to build one mile per week. The flume will be the largest in California, although not the longest. It will be double; one part for floating lumber and the other part for carrying water for irrigation. By means of the flume it is expected to irrigate 40,000 acres of land northeast of Fresno.

THE San Luis and San Joaquin Railroad Company has been incorporated with a capital stock of $1,000,000 to construct a railroad northward from San Luis Obispo to El Moro, a distance of about 10 miles. There is a good bay at El Moro, but its entrance is obstructed by a rock, which could be removed without any very great expense. Vessels of deep draught cannot now enter the bay, though coasting schooners do so.

THE Tolmans Landing and Vallecitos Railroad Company has filed with the county clerk a certificate of the creation of a bonded indebtedness to the amount of $500,000, as determined upon at a meeting at which 153,000 of the 225,000 shares were represented, being 3000 more than two-thirds of the capital stock issued. George B. Tolman is president, B. Austin secretary, and with L. B. Hopkins, Marian Tolman and Robert Gilbert constitute the directors.

AT the State Prison, at San Quentin, work on the new jute mill is progressing as rapidly as can be expected. The walls are nearly completed. The full force of prison carpenters will be put to work on it and no difficulty is anticipated in getting the entire building under cover before the first rains set in. A portion of the looms have been received from Oakland and properly stored, and the Warden is in receipt of bills of lading from England for the spinning machinery of the mill, ordered through the Union Iron Works.

THE work of closing the gap on the coast line railroad of the S. P. Co. between Santa Margarita and San Luis Obispo is being pushed rapidly. A large gang of workmen is at present building stone culverts on the extension, and they are getting ready to commence tunelling the mountains. When the line is completed, overland trains will be put on to run between San Francisco and New York. The southern overland trains will no longer have to come over the Tehachapai and valley route. San Jose will then be on an overland line. Some very extensive tunnel work is to be done on the new line this side of Santa Barbara.

CONTRACTS were signed this week at Bakersfield, Kern Co., guaranteeing the construction of the East Branch Canal. This canal company has purchased water from the Kern Island Canal and Irrigation Company, and the new canal will divert water from the Kern Island Canal immediately northwest of east Bakersfield. The new waterway will run through the streets of Bakersfield and to the southeast for 25 miles. It will bring under irrigation 30,000 acres of choice fruit lands, which have previously been idle for lack of water. The new canal is under contract to be completed by January 1, 1893, and the charges will be $1.50 per acre per year.

AN overstocked market has placed on foot a scheme to control the lumber interests of the Pacific coast, with a view to bracing up the trade. No definite plan has been adopted yet, but propositions have been submitted to millowners from Alaska to southern California. The combine proposes to run the lumber business of the coast in the matter of limiting the output which has been such as to drug the market and bring about the present dull condition of trade. Puget Sound mills have swamped the yards here and elsewhere, and something must be done to revive trade. If the scheme goes through it will be the largest trust of the kind on record. The plan is to bring the mills of British Columbia, Puget Sound and Gray's Harbor into the combine and subsidize the smaller concerns on the coast.

SOME important improvements, which will greatly increase the traveling facilities in the Yosemite valley and enhance its beauty, are being considered by the Yosemite Valley Commission. At the last meeting of the executive committee, Professor Lowe of Pasadena was appointed to investigate the practicability of building an electric road through the mountains for the transportation of tourists. Secretary Irish states that there is abundant waterpower to run a sufficient number of dynamos to light the entire valley. It is proposed to utilize part of the current for electric light purposes, and the larger and more picturesque falls are to be lit up at night in a similar manner as are the great Niagara Falls, introducing a novel feature which will prove a great attraction to travelers coming to the State.

EXTENSIVE improvements at the Benicia tannery, made under the supervision of the manager, Mr. J. Kullman, double the capacity of the institution and make it the most complete tannery on the coast. A new two-story building 150 by 30 feet has been put up to contain the bark leeches or vats, and a new appliance after the manner of conveyors has been constructed to deliver the ground bark to the vats, and to also remove it therefrom, after its strength is spent, to the furnaces, where it is used for fuel. The conveyors deliver the bark from the mill to the vats by an overhead route, and remove it from underneath by means of trap doors in the bottom of the vats. Two new barkmills and a cutter have been put in. A new two-story engine-house has also been erected, and in it has been placed a fine, large, powerful engine of 125-horsepower with a 14-foot wheel. The new engine will supplant the two small ones which formerly did the work of the institution. A short time ago a new or duplicate set of furnaces was put in and also an additional boiler.

Care of Tools.

The wooden parts of tools, such as the stocks of planes and handles of chisels, are often made to have a nice appearance by French polishing, but this adds nothing to their durability. A much better plan is to let them soak in linseed oil for a week, and rub them with a cloth for a few minutes every day for a week or two. This produces a beautiful surface, and at the same time exerts a solidifying and preserving action on the wood.

The following recipes complied by *The Tradesman*, are recommended for preventing rust on iron and steel surfaces.

1. Caoutchouc oil is said to have proved efficient in preventing rust, and to have been adopted by the German army. It only requires to be spread with a piece of flannel in a very thin layer over the metallic surface, and allowed to dry up. Such a coating will afford security against all atmospheric influences, and will not show any cracks under the microscope after a year's standing. To remove it the article has simply to be treated with caoutchouc oil again and washed again after 12 to 24 hours.

2. A solution of indianrubber in benzine has been used for years as a coating for steel, iron and lead, and has been found a simple means of keeping them from oxidizing. It can be easily applied with a brush, and is easily rubbed off. It should be made about the consistency of cream.

3. All steel articles can be perfectly preserved from rust by putting a lump of freshly burnt lime in the drawer or case in which they are kept. If the things are to be moved—as a gun in its case, for instance—put the lime in a muslin bag. This is especially valuable for specimens of iron when fractured, for in a moderately dry place the lime will not want renewing for many years, as it is capable of absorbing a large amount of moisture. Articles in use should be placed in a box nearly filled with thoroughly slacked lime. Before using them rub well with a woolen cloth.

The following mixture forms an excellent brown coating for preventing iron and steel from rust: Dissolve two parts crystallized iron chloride, two antimony chloride, and one tannin in four of water, and apply with sponge or rag and let dry. Then another coat of paint is appled, and again another if necessary, until the color becomes dark as desired. When dry it is washed with water, allowed to dry again, and the surface polished with boiled linseed oil. The antimony chloride must be as nearly neutral as possible.

5. To keep tools from rusting, take half an ounce of camphor, dissolve in one pound melted lard; take off the scum, and mix in as much fine black lead(graphite) as will give it an iron color. Clean the tools and smear with this mixture. After 24 hours rub clean with a soft linen cloth. The tools will keep clean for months under ordinary circumstances.

6. Put one quart freshly slacked lime, half pound of washing soda, half pound of soft soap in a bucket and sufficient water to cover the articles; put on the tools as soon as possible after use, and wipe them up next morning, or let them remain until wanted.

7. Soft soap, with half its weight in pearlash, one ounce of mixture in about one gallon boiling water, is in every day use in most engineer's shops in the drip-cans used for turning long articles brought in wrought iron and steel. The work, though constantly moist, does not rust, and bright nuts are immersed in it for days until wanted, and retain their polish.

8. Mix slowly together six ounces or eight ounces lard to one ounce resin, stirring till cool; when it is semi-fluid it is ready for use. If too thick it may be further let down by coal oil or benzine. Rubbed on bright surfaces ever so thinly, it preserves the polish effectually, and may be readily rubbed off.

9. To protect metal from oxidation, polished iron or steel, for instance, the requisite is to exclude air and moisture from the actual metallic surface; therefore, polished tools are usually kept in wrappings of oil cloth and brown paper, and thus protected they will preserve a spotless face for an unlimited time. When these metals come to be of necessity exposed in being converted to use, it is necessary to protect them by means of some permanent dressing, and boiled linseed, which proves a lasting covering, as it dries on, is one of the best preservatives, if not the best. But in order to give it body it should be thickened by the addition of some pigment, and the very best, because the most congenial of pigments is the ground oxide of the same metal, or, in plain words, rusted iron, reduced to an impalpable powder, for the dressing of iron and steel, which thus forms the pigment or oxide paint.

10. Slack a piece of quicklime with just enough water to cause it to crumble in a covered pot, and while hot add tallow to it and work into paste, and use this to cover over bright work. It can be easily wiped off.

11. Olmstead's varnish is made by melting two ounces resin in one pound fresh, sweet lard, melting the resin first, and then adding the lard and mixing thoroughly. This is applied to the metal, which should be warm, if possible, and perfectly cleaned; it is afterward rubbed off. This has been well proved and tested for many years, and is particularly well suited for planished and Russian iron surfaces, which a slight rust is apt to injure very seriously.

RUST REMOVERS.

1. Cover the metal with sweet oil, well rubbed in, and allow to stand for 48 hours; smear with oil applied freely with a feather or piece of cotton wool after rubbing the steel. Then rub with unslacked lime reduced to as fine a powder as possible.

2. Immerse the article to be cleaned for a few minutes, until all the dirt and rust is taken off, in a strong solution of potassium cyanide, say about one-half ounce in a wine glassful of water; take it out and clean it with a toothbrush with some paste composed of potassium cyanide, castile soap, whiting and water mixed into a paste of about a consistency of thick cream.

The Home Circle.

The Reward.

Who looking backward from his manhood's prime
Sees not the spectre of his misspent time?
And through the shade
Of funeral cypress planted thick behind,
Hears no reproachful whispers on the wind
From his loved dead?

Who bears no trace of passion's evil force,
Who shuns thy sting, O terrible Remorse?
Who does not cast
On the thronged pages of his memory's book
At times a sad and half-reluctant look,
Regretful of the past?

Alas! The evil which we fain would shun
We do, and leave the wished-for good undone.
Our strength to-day
Is but to-morrow's weakness, prone to fall,
Poor, blind, unprofitable servants all
Are we alway.

Yet, who thus looking backward o'er his years
Feels not his eyelids wet with grateful tears
If he hath been
Permitted, weak and sinful as he was,
To cheer and aid in some ennobling cause
His fellowmen?

If he hath hidden the outcast, or let in
A ray of sunshine in the cell of sin;
If he hath lent
Strength to the weak, or in his hour of need,
Over the suffering, mindless of his creed
Or home, hath bent,

He hath not lived in vain. And while he gives
The praise to Him in whom he moves and lives
With thankful heart,
He gazes backward, and with hope before,
Knowing that from his works he nevermore
Can thenceforth part.

—John G. Whittier.

An Adventure With a Skull.

"I presume that a man of your skeptical mind and iron nerve has a great contempt for people who believe in ghosts or in other supernatural terrors?"

"I had such a contempt once, but I was completely cured of it years ago."

"You surprise me. May I ask whether you healed yourself or employed the services of some other physician?"

Dr. Weymouth caught the humor in the remark of the young medical student who was questioning him, and laughed.

"I was cured by something worse than a physician," he replied.

"What was it?"

"A human skull."

"Your story must be a strange one."

"It is; but I will not tell it to you unless you will solemnly promise not to repeat it."

"Why so much secrecy?"

"It is not necessary to satisfy your curiosity now. My reason will be plain to you when my narrative is ended."

"Very well; I promise."

"To give you a thorough understanding of my singular experience, it is necessary for me to recall a series of events which preceded the supernatural horror which I shall describe.

"When I began to practice medicine in a small inland city, I became acquainted with a beautiful girl, who so charmed me that I sought her society frequently. I have since learned that she regarded me with favor, and no doubt I would have conducted a regular courtship which would have ended in a happy marriage had it not been that entirely unexpected circumstances suddenly separated us. My father was stricken with a fatal illness, and my presence was required at his home in Massachusetts until his death, which took place after I had been with him six months. When I returned to the West and resumed my medical practice, I learned to my great chagrin that Miss Wilkins, the girl to whom I had been so attentive, was engaged to be married to a young lawyer named Godwin. He had been as rapid in his love affair as I had been slow in mine, and I then learned the bitter lesson which many other young men who have been dilatory in courtship have also learned, that if a prompt and zealous rival appears, and he is pretty sure to do so if the girl is highly attractive, he will win the prize during the absence of even a few months on the part of the dilatory suitor.

"Of course there was nothing for me to do except to accept the inevitable. I bore my disappointment as best I could and gave assiduous attention to the duties of my profession. Meanwhile, I learned that I was not the only disappointed suitor. Mr. Callahan, a handsome photographer, had tried to win the hand of Miss Wilkins during my absence in Massachusetts, but he soon found that Godwin was preferred to himself. Callahan was a moody and disagreeable fellow in spite of his good looks, and I was decidedly glad that he had been unsuccessful. Knowing what his disposition was, I was surprised to observe that after Miss Wilkins had become Mrs. Godwin, he cultivated the the husband's acquaintance, and within a few months became his intimate friend. I often saw them together and used to wonder whether Callahan was sincere in his friendship. Several years passed away and brought about interesting changes. Godwin, who was a pleasant fellow, but was not a man to heed the claims of morality when they strongly conflicted with his inclinations, fell an easy victim to the wiles of a fair adventuress. He kept his infatuation well concealed from his wife, however, and she was entirely unsuspicious until she finally discovered his unfaithfulness in a most singular manner. One night, when Mr. Godwin was absent on a long journey, his house was entered by a burglar who went to the library and broke open a desk in which Mr. Godwin kept private papers and letters, and which was never left by the owner unlocked. In the morning Mrs. Godwin found the contents of the desk scattered on the floor, and among them a package of love letters from the adventuress. The cat was now out of the bag, and the wronged wife instituted proceedings for a divorce, which was granted. Soon after she had accomplished her object, the community was startled by the news that Callahan had been arrested on the charge of having committed the burglary. At the trial, during which the courtroom was crowded, on account of the high social standing of the prisoner, his guilt was skillfully proved by a chain of circumstantial evidence. It was shown that the photographer after breaking into the house had committed but one offense. He had opened the desk and scattered the papers that he had found in it, but he had stolen nothing. The mystery was great until the prisoner confessed that he had entered the house for the sole purpose of furnishing Mrs. Godwin with evidence that her husband was untrue to her. His intimacy with Godwin had enabled him to discover where his friend kept the disreputable love letters, and then he thought out his mean plot by which he effected the scattering of the letters, so that Mrs. Godwin, for Mr. Godwin he knew was was away, would be certain to discover them the next morning. Of course the natural supposition would be that the house had been entered by a common burglar, and that before he had had time to steal anything he had been frightened away by some noise. But, in spite of his precautions, the photographer failed to conceal his guilt, and only a part of what he desired happened. The divorce was brought about, but Callahan's hope that he might subsequently marry Mrs. Godwin, and derive benefit from the large fortune which she held in her own right, was blasted. He had cultivated her husband's acquaintance for years, for the purpose of finding an opportunity for the gratification of his evil desires. The opportunity had at last come, but in his attempt to use it, he had been thoroughly thwarted.

"Although he had stolen nothing, the act of breaking into the house constituted burglary, and he was sent to prison for a few years. It is here interesting to note that the manœuvres which brought ill-luck to Callahan brought good luck to me. Soon after he went to prison, I married Mrs. Godwin and have since lived happily with her. During his imprisonment, the photographer brooded over his troubles, and when he was released, he was in a murderous mood. One evening, while my wife and I were walking in a thinly-settled district of the city, we were startled by two pistol shots fired in rapid succession by some one behind us. I turned around and, running a few feet back, grappled with our assailant. I threw him upon the ground, and succeeded in holding him there until two men who happened to be in the vicinity hurried to my assistance. The villain was Callahan, who had secretly followed me and my wife until there was a favorable opportunity for him to attempt murder. He cursed me in a frightful manner when he found that he was a prisoner. A second time he was punished by being incarcerated. Three years later, knowing that he had a disease that would soon end his life, he bequeathed his remains for anatomical purposes to the physician of the prison, to whom he had taken a great liking. I was well acquainted with this doctor, and as a token of his esteem he presented me with Callahan's skull, he being well aware that I was at that time engaged in making a choice collection of skulls of all sizes.

"The skull was placed in my collection, which was kept in a closet connected with my office, and I thought no more about it until one day I was seized with the desire to see how the skulls would look when arranged so that they could all be seen at once. Accordingly, I placed them in three rows on a broad table in my office, Callahan's being in the center of the front row, being accorded, as it were, the place of honor. I had just seated myself in a chair for the purpose of gazing at the array in an admiring manner when a messenger arrived and asked me to visit a patient whose symptoms had suddenly become alarming.

"It was late at night when I returned to my office. I lighted a gas jet, but turned on so little gas that the flame was small. I seated myself in the chair which I had left when disturbed by the visitor, and gazed at the skulls which were about ten feet distant. They looked uncanny, unearthly, perhaps, is a better word, in the dim light. I had always prided myself on not being superstitious, and had frequently laughed at friends who stood in awe of the supernatural. But somehow as I gazed at that ghastly array of grinning skulls, listened to the solemn tick of a great clock that rested on top of a desk, felt that I was alone and that all of the people in the city except a few watchmen were sleeping, I felt a chill run down my back, and my heart began to thump as the thought came to me that those skulls might move against me. Might not Callahan, who had tried to kill me, who had hated me intensely during his second term of imprisonment, be able to introduce his troubled spirit into his skull, marshal the spirits belonging to the other skulls, each spirit in its appropriate receptacle, and as a horrid death's army, so to speak, swoop upon me and quickly batter out my brains. It was a fantastic, an utterly absurd idea, but it was nevertheless the kind of idea that disturbs a person when the nerves are shaky.

I soon recovered myself, however, and smiled with contempt for my momentary weakness. But the next instant a frightful fascination compelled me to stare at the skull of Callahan. There was a slight noise in it and it actually moved a little. The lidless eyes appeared to glare and the jaws about the gaping mouth to move up and down. I sprang to my feet and grasping the back of the chair with both hands, raised it in readiness for an attack. The skull moved again, more decidedly than before, and I trembled all over. There was a loud rattle, a big movement of the skull, it crashed to the floor and bounded to my feet. I jumped so high that my head grazed the ceiling, and as I came down, the skull shook violently, turned over, and out sprang a big rat that scampered across the floor and disappeared.

I felt sheepish enough. I had been frightened like a child by something that was as far removed from the supernatural as anything that could well be imagined. I never dared speak of the occurrence to my friends lest the story should reach the ears of the doctors at the city hospital, and cause them to overwhelm me with ridicule. Remember your promise, for if you should reveal what I have told you, my reputation as a doctor who has an iron nerve would be lost forever."—J. A. Bolles in American Cultivator.

THE HEIGHT OF THE TALLEST MAN. Turner, the naturalist, declared that he once saw, upon the coast of Brazil, a race of gigantic savages, one of whom was 12 feet in height. M. Thevet of France, in his description of America, published at Paris in 1575, asserted that he saw and measured the skeleton of a South American which was 11 feet 5 inches in length. The Chinese are said to claim that in the last century there were men in their country who measured 15 feet in height. Josephus mentioned the case of a Jew who was 10 feet 2 inches in height. Pliny tells of an Arabian giant, Gabara, nine feet nine inches—the tallest man in the days of Claudius. John Middleton, born at Hale, in Lancashire, in the time of James I, was nine feet three inches in height; his hand was 17 inches long and 8½ inches broad, says Dr. Plott in his "History of Staffordshire." The Irish giant Murphy, contemporary with O'Brien, was eight feet ten inches. A skeleton in the Museum of Trinity College, Dublin, is eight feet six inches in height, and that of Charles Byrne in the Museum of the College of Surgeons, London, is eight feet four inches. The tallest living man is Chang-tu-Sing, the Chinese giant. His height is eight feet three inches. Tid-Bits.

"YOU look awfully blue. What is the matter with you?"

"That editor has sent back my last batch of poems. I wish I knew how to get his good-will."

"That's easy enough done."

"How am I to do it to put him in good humor?"

"Don't send him any more of your poetry."

OLD MARTEL—Whiskey has very different effects in different parts of the city.

Rowne de Bout—You don't say so?

Old Martel—On the Bowery it causes drunkenness, on Wall street alcoholism and on Fifth avenue heart failure.

Unguarded Gates.

Wide open and unguarded stand our gates,
Named of the four winds—North, South, East and West;
Portals that lead to an enchanted land
Of cities, forests, fields of living gold;
Vast prairies, lordly summits touched with snow;
Majestic rivers sweeping proudly past
The Arab's date-palm and the Norseman's pine—
A realm wherein are fruits of every zone,
Airs of all climes, for lo! throughout the year
The red rose blossoms somewhere—a rich land,
A later Eden planted in the wilds,
With not an inch of earth within its bound
But if a slave's foot press it sets him free!
Here it is written Toil shall have its wage
And Honor, honor, and the humblest man
Stand level with the highest in the law.
Of such a land have men in dungeons dreamed,
And with the vision brightening in their eyes
Gone smiling to the fagot and the sword.

Wide open and unguarded stand our gates,
And through them presses a wild, motley throng—
Men from the Volga and the Tartar steppes,
Featureless figures of the Hoang-Ho,
Malayan, Scythian, Teuton, Kelt and Slav,
Flying the Old World's poverty and scorn.
These bringing with them unknown gods and rites,
Those tiger passions, here to stretch their claws.
In street and alley what strange tongues are these,
Accents of menace alien to our air,
Voices that once the tower of Babel knew?
O, Liberty! White Goddess! Is it well
To leave the gates unguarded? On thy breast
Fold Sorrow's children, soothe the hurts of fate,
Lift the down-trodden, but with the hand of steel
Stay those who to thy sacred portals come
To waste the gifts of freedom. Have a care
Lest from thy brow the clustered stars be torn
And trampled in the dust. For so of old
The thronging Goth and Vandal trampled Rome,
And where the temple of the Cæsars stood,
The lean wolf unmolested made her lair.

—Thomas Bailey Aldrich in the Atlantic.

Sunburn.

Persons with sensitive complexions often experience considerable suffering from simple sunburn. The remedy in such cases is care in protecting the complexion in midday, and the use of some simple lotion to heal the blistered and irritated skin. One of the best unguents for this purpose is a cold cream made of almond oil or of sweet olive oil. A simple camphor-ice rubbed over the flesh is also efficacious, and a single application will often bring relief in a night.

Where one is certain to be exposed to a strong sun in riding or rowing, it does no harm to make some preparation for it. Do this in exactly the same way that you protect your face from the wind in winter. Rub the skin with a simple, soft cream and, if you wish, powder it well. Wipe off any surplus powder or oil, and when you come in, cleanse the complexion thoroughly with warm water and a little pure Castile soap, if it does not irritate your skin.

It is impossible to give advice in a case like this to all, as certain complexions are especially sensitive to some one ingredient which is soothing to others. Glycerine is extremely irritating to many complexions because of the tendency it has to dry the skin. This may be partly overcome by mixing it with a certain amount of rose water. But a simple cold cream is one of the most suitable and harmless things that can be put upon the skin, furnishing the pores as it does with needed nourishment; and there are very few complexions, except oily ones, with which it does not agree. Oily complexions need no lotion of any kind, but they should be wiped with cologne and dusted with some simple powder to remedy this defect, which becomes a painful disfigurement in warm weather.

It is a great mistake to expose the complexion unnecessarily in summer. All the tonic effects of country air and life may be enjoyed without parching the skin or turning it brown with tan. The positive injury done to the skin in a single season by carelessness does more to increase wrinkles and turn the individual old before her time than all the harmless lotions in the world will remedy. The rule in all cases is care. An ample hat or sunshade which protects the face is an essential part of the summer outfit.

Our ancestors laid great stress on this point, but they stayed indoors too much. They knew few of the present joys of outdoor athletics. In the reaction of the present time, which demands greater outdoor freedom for women, we may have gone too far in mistaking the bronze cheeks for the certain signs of health. A complexion soft and pure as the lily may accompany as robust a physique as one tanned in the winds of March or bronzed in the sun of August. N. Y. Tribune.

A COOL HEAD.—There is nothing that conduces to such a successful meeting of emergencies better than a cool head, with a perfect confidence that everything is going to come out all right. Whether things are "coming out all right" or not, at least the

feeling of quiet self-control makes one better able to work toward the good result. To a mother this self-possession is invaluable. In a large family, small events calculated to upset the domestic machinery are constantly occurring. It seems to be a law of nature that children should continually have hair-breadth escapes, and come within an inch of losing their lives, but it is equally a law of nature that they should escape; and whenever the critical moment arrives in her own life or in the life of another, it is important for a woman to remember that the very worst thing she can do at that moment is to lose her head. To do that means to be helpless instead of helpful, to be a drag instead of an assistance. In an emergency, one should rather seem heartless than inefficient. There are always ten people ready to cry or faint or shed tears over the sufferer where there is one who stands coolly by and sees the way to help him. Affection and sympathy are often best proved by ignoring them, particularly when the moment arrives that calls for action and not tears.—Harper's Bazar.

Women Fellows.

The Royal Geographical Society has decided to admit women as Fellows. For many years the society has accepted papers from women, and on two occasions has singled them out for special honor, as when in in 1860 Lady Franklin received the gold medal in commemoration of her husband's discoveries, and when in 1869—a case more to the point—Mary Somerville received the Patron's medal for her publication furthering geographical science. The *Manchester Guardian* for July 7th has the following excellent comment on the decision:—"Papers by lady travelers have frequently been read before the society, and it has for some time been felt to be an anomaly that travelers of the standing, say, of Mrs. Bishop (Miss Isabella Bird) should be excluded from the ranks of a society for which they have done so much good."

While endorsing all this it must be admitted, says *Natural Science*, that there is the strongest objection to the admission of women to scientific meetings as casual visitors; it would probably be advisable to allow only the lady Fellows to introduce ladies, as meetings of a society held for scientific business are very different from Royal Institution lectures.

We do not remember that any society has refused to accept a paper from a woman because she has the misfortune to be a woman, but while accepting her work, most societies refuse to allow her to be present to hear it read. The Zoological Society's principle and practice on the subject are inconsistent: the former admits women as Fellows, "with the same privileges, and under the same regulations in all respects as gentlemen," but while the rules admit women the doorkeeper excludes them from the meetings! The Geologists' Association still maintains its lead in this matter, for it has this year elected a woman whose work ranks high, a vice-president. The Geological Society, however, stiil refuses women the Fellowship, though it is reported by *Research* (vol. i., 1889, p. 216) that when the subject was last discussed, the reform was only lost by four votes; and, but for the over-confident zeal of the women's advocates, who refused any compromise on the lines suggested above, it would, doubtless, have been carried.

How She Managed It.

A young couple in a Lancashire village had been courting for several years. The young man one day said to the young woman, "Sal, I canna marry thee."

"How's that?" said she.

"I've changed my mind," said he.

"Well, I'll tell you what we'll do," said she. "If folk know that it's thee as has given me up, I shanna be able to get another chap, but if they think I have given thee up, then I can easy get another chap. So we'll have the banns published, and when the wedding day comes the parson will say to thee: 'Wilt thou have this woman to be thy wedded wife?' and thou must say, 'I will'; and when he says to me, 'Wilt thou have this man to be thy wedded hasband,' I shall say, 'I winna.'"

The day came, and when the minister said "Wilt thou have this woman to be thy wedded wife?" the man answered, "I will."

Then the parson said to the woman, "Wilt thou have this man to be thy wedded husband?' and she said, "I will."

"Why," said the young man, furiously, "you said you would say, 'I winna.'"

"I know that," said the young woman, but I've changed my mind since."—Wade's Fibre and Fabric.

Young Folks' Column.

A Little Heroine.

Written for the RURAL PRESS by CAROLINE E. SANDERS.

Florence Montfort was a happy girl when it was decided that she should visit her Uncle Robert, who lived on a farm out in Kansas. Having spent all her life in a city, she looked forward to this as to a new kind of an existence, and so it really was, and she was not disappointed in thoroughly enjoying its novelty.

She liked to enter into all that was going on, especially, at first, to get up early in the mornings and go out in the barnyard to watch them milk the cows, and soon begged to be allowed to learn to do so herself; so Susan, the girl who attended to that business, gave her permission to try to milk gentle old Sukey.

"But she has a dreadful way of moving around, Miss Floy, so you must watch her," said Susan. Florence agreed to do so, and was getting on famously with her pail nearly half filled when Sukey took a notion to change her position. The new milkmaid was off her guard, and in attempting to snatch the pail, lost her balance from the stool she was sitting on and the next minute found herself with the pail and stool on the ground in a pool of new milk.

"So well splashed," said her cousin Rob, "you couldn't tell which was which."

Her cousins who had been watching her set up a shout of laughter, in which Florence was ready to join as soon as she could realize her ridiculous position.

The day after her arrival on the farm, Rob, who was the oldest boy and about her own age—which was thirteen—said to Louis, his brother, two years younger:

"I say, Lou, what a pity she isn't a boy! We might have some fun with her, but I don't see how we are going to get along with a girl, and dressed up in good clothes all the time, too!"

Only a few days later Louis expressed himself in equally confidential terms.

"I cannot see what's the matter with you, Rob. I think she is just as good as any boy, and a good deal nicer."

"O, of course she is. Since we have got acquainted, she will do very well, for she can tell the best kind of stories," was the reply, with an air of superiority.

Florence had kept up the character of "Princess Scheherazade of the Thousand and One Nights," which she bore at home, and that charm, united to her willingness to join in all that went on—work or play—soon won her cousins' hearts. She frequently met with such mishaps as she did when learning to milk, such as being chased by the old gobbler out of the barnyard when she went out to feed the chickens one cool morning with a red shawl around her, and another time slipping off the pony into a mudpuddle when she was riding on a man's saddle. But though the sweetness of her disposition was shown in all these little things, it was an occurrence which happened some weeks later which came near having a terrible and tragical ending, only averted by her bravery and self-sacrifice, that proved her possessing the noble traits of a true heroine.

It was a pleasant, bright, starlight Sunday evening when uncle Robert came in saying briskly:

"Well, the omnibus is waiting—room for a few more. Who is going to church this evening?"

The omnibus was really a nice spring wagon, and the drive to the village was only a couple of miles over a good, smooth road, yet no one answered but Aunt Charlotte.

"I knew I should be crowded, yet there is still room for one or two more, so you might as well get your hats, boys," continued uncle Robert, with a sly twinkle in his eyes.

"I would just as lief let Louis and Floy go, as I went last Sunday evening", replied Rob.

"O no, Rob," said Louis, "you may have my seat and I will stay at home and take care of Bertie."

To which Bertie spoke for himself: "No, cousin Floy is going to stay with me; she promised me she would, and tell me a story about how the prairie caught fire and nearly burned up some children, if I wouldn't tell the boys she got scared at a cow and fell down in the mud."

"O Bertie! and you said you would not."

"O cousin Floy, I didn't mean to, indeed I didn't; it just told itself," exclaimed the child, bursting into tears, as he realized what he had done.

The boys shouted with laughter at Florence's expense, in which the grown people could not help joining. Bertie's tears were dried with a kiss of forgiveness from Florence, and then his papa went on making his arrangements for church.

"You boys are very kind to each other," said he; "your self-sacrificing spirit is certainly commendable, but I think you may both come with us. As Florence went to church this morning she perhaps prefers staying at home to-night. Bertie will be company for her, and Susan and Jerry are both here for protection."

The fact was the boys knew that the sermon would be long and that they would get sleepy, but they were too well accustomed to yielding obedience to their father's wishes, even when he joked with them, to make any further reply.

As soon as they were fairly off, Florence seated herself for the business of entertaining her little cousin, when Susan's voice was heard from the kitchen: "O please, Miss Floy, wait just a few minutes till I finish up my dishes, I want to hear it all so bad."

"Yes, we'll wait for you, Susie, but you'll have to hurry up," answered Bertie, as he arranged himself in a comfortable position for listening, with his curly head down in the middle of the old-fashioned settee and his feet over the arm.

Susan did her best to "hurry up," but church was probably more than half out before Florence was fairly started in her story. It was something she had read in a book, but told in her own language. Her audience was small, but so deeply attentive she spared no pains to please, and it was in vivid language, though suited to the comprehension of her listeners, that she portrayed the hard and lonely life of a settler and his family in the heart of a prairie, where he had at last succeeded in getting a comfortable home built and some of the conveniences of living around him, when one day they discovered that the prairie was on fire. There was no way to escape, for should they attempt to flee the fire could travel faster than they. It was at the end of a long, dry summer, so they were surrounded with combustible material. Their only hope was to clear a circle around the house; then O how they worked, to the very smallest child, and it was still burning, burning; and then how they stopped in despair, and it was still burning, burning.

"Miss Floy," interrupted Susan from her seat on the doorstep, "every time you say 'burning, burning,' it seems to me I smell something burning."

Florence was a little startled and got up and walked to the open door. As she did so she saw distinctly a light shining through the crevices of a small, two-story building across the yard which they called the "toolhouse."

"Could Jerry have taken a candle into the toolhouse?" asked Florence, as she knew this was contrary to her uncle's orders.

"O no, Miss; Jerry has gone to a neighbor's," was Susan's reply.

"Then get me the key, quick, something is wrong," she said in a breathless tone as she started to run toward the building.

Even before the door was opened she saw that it was on fire inside. It was too far from the house or barn to injure them unless the wind was blowing, but they pumped, carried water and were doing their best to subdue the flames, which were rapidly getting ahead of them as Jerry came running across the lawn screaming something in a voice that was hoarse from the effort made to make them hear.

Florence stopped for an instant, saying: "What is it you are saying, Jerry?"

"The powder, Miss, the powder! Run for your lives; there's enough to blow up half the farm!"

For one moment she felt as if her blood was turning to ice. She remembered instantly the tin can of powder and just where it stood at the top of the ladder by which you reached the second story of the building. The thought of her uncle, whom she loved so dearly, how long and how hard he had toiled for this comfortable home for himself and family that in a few moments would be in ruins. Then she thought of her own dear parents, her loved home and her darling brother Tom.

"Yes, Tom would do it," she said to herself, "he would not hesitate, and with God's help I'll try," and drawing her skirts tightly around her, she darted across the intervening space and into the door, apparently throwing herself into a sea of flames.

Both Jerry and Susan rushed after her to drag her back as they saw her running toward the building, and reached the door just in time to see her almost flying up the ladder, and then to see the flames had reached the foot, rendering her return impossible. Seizing Bertie in his arms, Jerry ran at the top of his speed across the lawn and out of the gate, meeting a vehicle coming in at a furious gallop. Its inmates were too bent upon reaching the burning house to notice his frantic efforts to stop them.

Uncle Robert, too, remembered the powder, and from the instant they had noticed the fire until they reached the spot his thoughts were divided between heaping bitter reproaches upon himself for not having been more prudent and in supplications to the Almighty to avert the dreadful catastrophe which was threatened. Harder to bear than aught else appeared the thought of injury to his loved niece, for whom he had begged so hard to have with them this summer to fill the place of an only daughter who had died. Almost as if in answer to his prayer, the first object his eyes rested upon as he sprang from the wagon was Florence standing upon the limb of a tree that extended to the window of the burning house.

It bent and swayed beneath the little form, though she lightened her weight by clasping one arm around the bough above her, but in the other she held tightly clasped the can of powder.

"Catch it, Uncle Robert," she cried, as he came under the tree, "catch it, and then I can get down easily.

Uncle Robert did not afterward often speak of the fire, or of anything relating to it, but when he told Florence's father about it, some years later, he said: "Never, if I live to be a hundred years old, can the picture be dim in my memory of how I saw Floy that night, standing out as it did in the bright light from the flames. On that slim bough she looked as though floating in the air, and I felt that she had indeed been an angel in our household."

"How did you happen to think you could step out on that limb, Floy?" asked Louis.

"I did not think of it. I only thought I might be able to throw the powder out to Jerry, or beyond the reach of harm."

"And then, just think, you would have got burned up like those poor people on the prairie," said Bertie.

"Why, I never said they got burned up, Bertie; the good Lord was just as kind to them as he was to us, and they were saved by using the very thing that might have destroyed us, for it was by strewing powder around that they destroyed the dry grass in a circle about their house and saved it and themselves.

"JOHNNY," said his mother, "if you don't quit smoking cigarettes you won't grow a bit."

"Don't care if I don't," responded Johnny, sullenly.

"And, of course," continued the good woman, "if you don't get any bigger you will still have to wear clothes made from your father's old ones."

"I guess I'll quit, ma."

IT'S singular that the man who can't sleep nights in a bed, with every window up and no superfluous attire, can drop into a chair after dinner in a back office, where the temperature is 105° and where flies do battle, and can sleep so sound that he can't see the man with the bill for pew rent or hear the jingle of the telephone.

TOM (of Pittsburg)—Did you see the aurora borealis while you were East?

Laura (of Oshkosh)—No. You know there are very few theatres open at this season of the year.

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Patrons of Husbandry.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

Pescadero Grange did not meet in July because the hall we meet in was being enlarged and improved. It is completed and furnished nicely. We held our regular meeting in it the first Saturday in August, and are pleased with the change. Have a class of two on the way and expect more applications soon. It is a very busy time with us just now, getting in hay and grain to thrash.—I. C. Steele.

Watsonville.—We hear from a tried and true soldier of the cause that a class of seven is to receive the 3rd and 4th degrees at the next meeting of Watsonville Grange.

INFLUENCE OF THE GRANGE.

Hiram Hawkins, Master of the Alabama State Grange, gave the following paragraphs in his late annual address:

I see some before me now, who, ten years ago, and before they joined the Grange, were living in log cabins and running a one-mule farm. Under the teachings of the Grange and its cooperative advantages, they have added to their acres, widened their fields, adorned their homes and now enjoy the comforts of two-story frame dwellings, painted, and ornamented with orchards, fruits and flowers; with lovely children, who are being educated as they grow up, presenting a happy family, who sing the beautiful songs of the Grange and thank God for its blessings to them and to their community. If one family in a community, one community in the county, could be thus blessed by the Grange, what a blessing it would be if its overshadowing influences should hover over every household in the land! There are hundreds of farmers whose examples are living attestations of the truth of what I say.

STATE GRANGE ACCOMMODATIONS.

We learn that an audience-room in the new Unitarian Church at San Jose has been secured for holding the State Grange meetings. The Pomona Feast will be given in Turn Verein hall. Reduced rates have been secured for hotel and boarding accommodations. Worthy Master E. W. Davis, Past Master Webster and the Secretary of the State Grange, and their families, are among those who have engaged rooms at the St. James Hotel, opposite St. James Park. This hotel is conveniently located to the place of meeting and has 225 rooms, single and in suits.

Brother Cyrus Jones has been appointed a committee to assist visitors in securing good and satisfactory accommodations. San Jose Grange is evidently wide-awake in advance preparations for the entertainment of members and insuring a pleasant and profitable meeting.

GRANGE COOPERATION.

Two Rock Grange has had prepared a circular showing the benefits reaped by that Grange in its cooperative efforts during the part year, which will be quite interesting to other Patrons. It has also passed resolutions which will be submitted in the circular for the consideration of each Grange, with the hope that efforts will be made for more extensive and profitable cooperation under the trade-card and other plans. Let the matter be well considered in both subordinate and the State Grange. We hope other Granges will be well prepared to report, upon this and other subjects which interest them most, during the coming season. Two Rock Grange is the most forward in the State in its cooperative action, and it will be decidedly interesting for other Granges to learn about their successful experience.

Circulars will soon be sent to each subordinate Grange with blanks for making out the annual statistical report by the Secretary. Every Patron should attend Grange between now and the first of October as important matters will continually be brought up for consideration before the coming State Grange meeting.

Another Grange Burned Out.—Wm. Taylor, Secretary, writes from Kibesillah, August 16th, that the place of meeting of the Grange was recently destroyed by fire, together with the charter and some of the other articles. The Grange has now no place of meeting except at some private house, and there is no member's house well situated for that purpose. The Grange is thus discouraged and may not resume meetings. Kibesillah has always had some warm-hearted, zealous Patrons to advocate its cause and no doubt has done much good during its existence. We hope it may again be restored to active usefulness.

Williams' Grove Picnic.—We have received from General Manager R. H. Thomas a handsomely printed invitation to attend the 19th Annual Interstate Exhibition Picnic at Williams' Grove, Pa., from August 29th to Sept. 3d. We have no doubt that this will be, like former meetings at the Grove, the largest gathering of the year of farmers and others interested in Grange and agricultural matters.

By request of State Lecturer Huffman, a proposed amendment of the Constitution of the State Grange will be submitted, relating to the forfeiture of membership fees paid by applicants who fail to present themselves for initiation.

Honored Dead.—Among the honorary members of the Grange who have died during the past year are Bro. T. T. Hooper, of Montezuma; Mrs. P. Peterson, of Antelope; Mrs. A. J. Woods, of Tulare; Mrs. Mary Alling, of Stockton; and Mrs. J. Chester of Eden Grange. Bro. R. Davenport, for many years the venerable Chaplain of Sacramento Grange, died at the advanced age of over 90 years. If any readers are aware of the death of any other member of the State Grange since last session, they are kindly requested to inform this office.

Worthy Master Davis has the preparation of his annual address well under way, and we are promised a copy for printing before the 5th of September. Bro. Davis is anxious that all officers of the State Grange should have their reports well and promptly prepared.

STATE GRANGE EXCURSION RATES.

Arrangements have been made with the Southern Pacific Company, over all its lines, to give the same reduced rates as granted at the late sessions of the State Grange. Members and visiting Patrons attending the session will, on going, pay full, unlimited rates, taking a receipt for the same and be furnished tickets on returning at one-third price, making a two-thirds rate for the round trip. Members can go at any time, taking a receipt for their fare and obtain the reduction, as above stated, on returning.

Write out some views, or questions, important to be discussed at the State Grange.

Grange Blessings. — The history of farmers' organizations and their objects and aims, both new and old, when viewed in the light of what has been accomplished, teaches conclusively that the farmers of this country need the Grange and that the whole class are under lasting obligations to that organization for many of their present blessings and privileges. And it is certain that the Grange has done more to elevate the farmer and his calling than all other forces combined. In view of these facts, and as a debt of gratitude, we should make an extra effort to build up the Order. The Grange is a manly, conservative institution and will not interfere with your politics or religion.

Determine for Yourself.—A writer gives the following advice, which may be safely followed just now: "Read, reflect and act, regardless of external conditions and the political environments which characterize your political status, and you need not forget there is a reasonable amount of personal independence, in this respect, which each one may adjust to suit himself We do not undertake to say exactly what you should do as to political relations and partisan affiliation; that you can determine for yourself. But we want to set all 'the facts and circumstances,' as the lawyers say, before you, and then we will trust to your own good sense, intelligence and appreciation for whatever kind of action you may choose to adopt. As yet, you may not be prepared, but anon, things will become more fully developed, and when the crucial hour comes—when all parties and platforms come to the front and distinctly declare the principles and policies upon which they will go before the people—then you may be prepared to define your exact position and to range yourself with whatever element, or party, corresponds the nearest to your own deliberate beliefs and sense of right. In the meantime, let the educational process go on. Study the issues that challenge attention without fear or favor. Accept the truth as you find it, and do not be turned aside by any manner of assumption, pretense, sophistry or dogma. Do this, and you may rest assured you will come out right."

Tests for Water.

When you wish to ascertain whether water is hard or soft take a clean tube, pour about an inch of soap solution into it, then add a few drops of water, which, if hard, will turn it milky or curdy.

If you wish to see if the water is acid or alkaline, fill a tube half full of water and dip a piece of red litimus paper into it; if the paper does not turn blue it is not alkaline. Now, dip a piece of blue litimus paper in, and if the paper does not turn red the water is not acid.

If you are looking for carbonic acid, pour into the tube about an inch of water and the same quantity of lime water; if there is carbonic acid the water becomes milky, and on adding a little hydrochloric acid will become clear again.

To see if sulphate of lime, which is known as gypsum, is present, fill a test tube with about 1½ inches of water, and a little chloride of barium; if a white precipitate is formed which will not dissolve when you add a little nitric acid, the water contains gypsum.

A test for magnesia is made as follows: Fill a test tube one-third full with the water, bring it to a boil over a spirit lamp, then add a very little carbonate of ammonia and the same amount of phosphate of soda; set it aside for some moments, and if magnesia is present it will form a white precipitate.

If the test tube is one-fourth full of water, and two drops of cochineal is added, and the water turns blue instead of pink, it will denote the presence of lead.

Copper will be shown by adding a few drops of chloride of ammonium to some water in which have been placed a few filings of soft iron. If it turns blue it is an evidence of copper. Adding one drop of ferro-cyanide of potassium to a little water in a test tube will color it blue if iron is present.

A large number of other tests, of course, are made in a thorough analysis, but these are the ones which will most interest the ordinary engineer, and can be made with the least trouble or expense.—Textile World.

The Gospel of Good Health.

When the day is over, the shadows are falling and you seek your home, how do you greet the table? Do you lean back in weary exhaustion and press your hand over and over your head? Does the music of laughter jar upon your overstrained nerves, and slight noises cause you to start in fretful impatience?

If so, you are a brain-tired man, and you need physical culture to give vigor and tone to that part of your system which is so all-important as to either make or mar you. Take plenty of exercise.

The only cure for insomnia, that deadly foe of health and beauty, is physical culture. Ask Paddy the stonemason if he is troubled with a sleepless couch after running up a 40-foot ladder for ten hours, and he will stare in astonishment at the inquiry. Then, if so, imitate Paddy and walk four miles a day, or eight, if need be, until sleep will literally haunt your pillow and refuse to be driven away.

Or, on the other hand, is your manly form becoming suspiciously stout, and you yourself plethoric, short of breath—a sort of "Pickwickian" resemblance in your face and figure? Again we emphasize "physical culture" as a certain preventive against unnecessary burdens of flesh.

Should you be called upon by some emergency to endure an unusual strain, whether of body or mind, this attention to your physical needs will then prove itself an ample compensation for any little trouble or fatigue it may have entailed upon you.

Yes, physical culture is closely connected with good health, good morals and longevity. It is the best improvement of our leisure, if we are following sedentary occupations.

At any rate, William Cullen Bryant practiced it until he was past 80. Gladstone today, takes his never-failing bath and sallies out to fell trees. John Ericsson, though working 15 hours a day, walked New York streets from ten o'clock P. M. until midnight for exercise.

And since God has given us bodies which demand development, lungs which cannot live without oxygen, and minds connected with both of them by subtle and manifold ties, it is our plain duty to take the necessary steps to apply these needs of our well-being.—New York Ledger.

An individual who aspires to the particular seat in the House of Representatives which belongs to the Bloody Seventh was talking to a crowd of voters in a neighboring village. One of the party said to him:

"Colonel, I understand you are projecting for a seat in Congress?"

The Colonel nodded.

"Well, we would like to know how you stand on the Mills bill and the McKinley bill?"

"Wall," said the Colonel, "I ain't thought much about it, but I am inclined to think the Mills bill ought to be paid first, as it is the oldest of the two.

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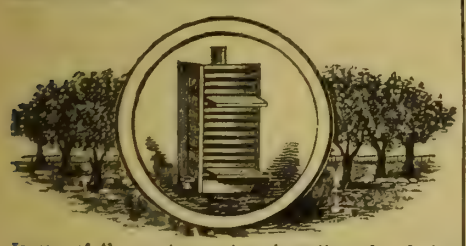
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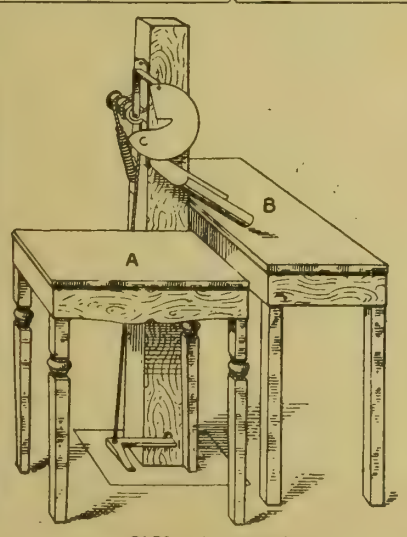
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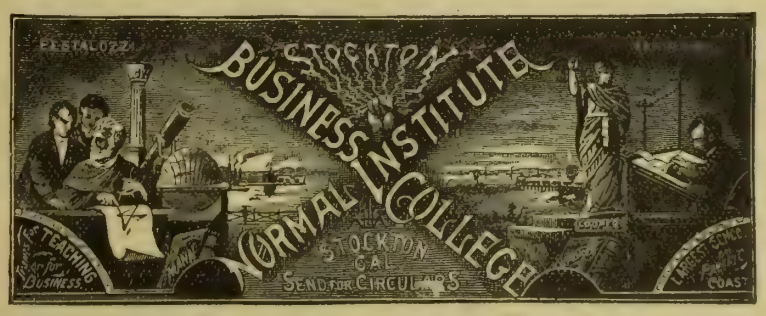
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

HORSES FOUNDERED.—Chico *Enterprise:* Sixteen fine horses were foundered yesterday on what is known as the "river ranch" on the Rancho Chico. There was a band of horses pastured in a stubble field, the wheat of which had just been threshed. A pile of about 40 sacks of wheat were also in the field, but pannels had been put around it to protect the grain from the stock. The horses broke one of these panels down and proceeded to fill themselves up on new wheat, and immediately repaired to a creek to drink, the result of which was that 16 of them are dead and others very sick. Most of the animals belonged to Rancho Chico, and the wheat was the property of P. M. Guynn, who has the "river ranch" rented. The total loss will amount to between $1500 and $2000.

Inyo.

EAST SIDE CROPS.—Independence *Index:* A visit to the farm of Finley McIver on the East Side of Owens valley would be a revelation to many people who have lived within sight of that tract for many years, but who have never visited it or formed any reasonable idea of its possibilities and value. About 40 acres are now under cultivation, this being the third year, and the showing made establishes beyond cavil the excellence of that section for the growing of all ordinary crops. Alfalfa excels. Fruit trees and vines are thrifty and healthy. Vegetables of all kinds are of first quality and the yield enormous.

Kern.

LIVE-STOCK NOTES.—Bakersfield *Echo:* A representative of the *Echo* recently paid a brief visit to a number of points in the mountains of this county, and the information he gained gave him further proof that our upland neighbors are not the least prosperous part of our population. The cattlemen complain some of short feed and low prices—sales during the past fortnight have been for 4 and 4½ cents for range beef—but those who have sheep are more than happy, and neither the cattlemen nor the American sheepmen are depending exclusively on their live-stock interests for their income. Some grain, hay and other crops are being produced, and a pretty good market is found for it all. Five years ago sheepmen enjoyed the enmity of all the cattlemen; but since the former have become such good customers for all the surplus feed and hay, they are not held in quite such bad esteem. One man on South Fork declared that but for these people, times would be much harder than they are. He declared that he could make more money selling sheep feed than by raising cattle. More than one old-timer said that the mountains of this part of the State are better adapted to sheep-raising than cattle. It is not improbable that a contrary view is held by others. Since grain-raising has received such an impetus, the growth of well-bred hogs is on the increase. The acorns and other mast will fatten them some years, but not a few farmers are putting their hogs on grain. S. S. Hill of Linn's valley recently sold a bunch of 15-months-old hogs for something over $7 per head.

FARM NOTES.—Martin Levering in Los Angeles *Express:* In company with a small outing party bound for the heavily timbered districts farther north, the writer passed through Tehachapi valley, and, wherever inquiry was made, the ranchers stated that the hay and grain crops of this valley were fully up to the standard, both in quality and quantity. In Bright's, Cummings' and Bear valleys, the same satisfactory conditions were found to exist. Combined harvesting machines, requiring from 24 to 30 horses and five men to operate them, are used almost exclusively, in preference to steam threshers, and turn out from 200 to 250 sacks per day. Much dissatisfaction exists over the low price of wheat and barley, and quite a number of the largest ranchers intend storing their crops in anticipation of better prices a few months hence. Hay, however, brings a very fair price, several hundred tons being sold at Tehachapi last week for shipment at $12 per ton. In the great San Joaquin valley harvesting is fairly over, and the valley looks brown and bare. Many of the ranchers are growing rich raising grain. One man, who owns a 2500-acre ranch, put out $10,000 at interest last year, which was the net proceeds of last season's crop. He is but one of many. Good grain land may be had in any amount for from $15 to $25 per acre. Although Kern county is sparsely settled in most parts, it is rapidly filling up with an industrious and desirable class of people. All the tillable government land has been taken up, but a great deal of timber land remains. In the northern part of the county several irrigation districts have been formed, and will bring water from the Kern river and other sources. In this way it is intended to reclaim thousands of acres of at present comparatively worthless land.

Mendocino.

THE HOP CROP.—Ukiah *Dispatch and Democrat:* The condition of the hop crop in Ukiah valley has materially improved of late, and the shortage will not be as great as was anticipated. In some of the yards the yield will be equal to last year. Picking will commence about September 1st. There is no contracting being done, the growers feeling confident that prices will improve as the season advances.

Monterey.

SAN LUCAS GRAIN CROP.—Salinas City *Democrat:* The grain crop has now been so far harvested and warehoused that a reliable estimate of the yield can now be made. E. C. Griswold, manager of the San Lucas warehouse, computes that there have been already hauled and stored 23,000 bags, or 1600 tons, and there is yet to come in about 12,000 bags, or 800 tons, making a total of 35,000 bags, or about 2400 tons. For 1891 the yield was approximately 5000 tons, and for 1890, 8000 tons. Taking 1890 as a fair average, this year's yield is about a quarter one. The quality is a shade below standard; color slightly darker; pods not well-rounded out and kernels inclined to be starchy; grains heavier than usual. The grain is yet held almost entirely by the producers, but few small lots having been sold. Besides this year's crop the warehouse contains 1200 tons of old wheat, owned by Trescony, Cook, Earle and others.

Napa.

A NEW ORCHARD DISTRICT.—Napa *Register:* That portion of Napa valley lying between Oak Knoll and the city of Napa is the principal fruit-growing section of the county, and yet the industry here is still in its infancy. Some 500 acres are now planted to trees that bear well and bring profit to thrifty orchardists. A few years hence this section will undoubtedly be one vast orchard, as the soil, climate and location are splendidly adapted to fruit-growing. The shipping point is Union station. In the immediate neighborhood are several orchards in full bearing. The largest are those of S. M. Tool, W. A. and W. M. Fisher, L. M. Turner and Mr. Goldstein.

Nevada.

FIRST EXHIBIT OF ORANGES.—Grass Valley *Union:* There will be an exhibit of Nevada county raised oranges and lemons at the District Fair for the first time. This culture has not made much headway in this county, but it is making gradual progress.

Orange.

WALNUTS.—Santa Ana *Blade:* The walnut crop will be an important factor in the production of wealth in this county this year. Conservative estimates place the crop at about 1,500,000 pounds. The acreage of nonbearing trees is very large—nearly that of bearing orchards, and is constantly increasing. Between Garden Grove and Anaheim has been set out one of the largest walnut orchards in the State, which will come into bearing in another year. The young trees are everywhere doing well, and the walnut industry bids fair to become the leading one of Orange county.

VALUABLE ORANGES.—*Blade:* The Valencia oranges are the most profitable known. One man near Alhambra sold over $2000 worth from 130 trees this year. The Valencia, or Du Rios orange, as it is sometimes called, is a prolific bearer and comes to market in July, although they were a little late this year. Coming in at this season of the year, you see, makes them very valuable. They are worth now $4 a box wholesale, and the man who has a Valencia orange orchard has a veritable bonanza.

San Diego.

FARM NOTES.—Otay *Press:* The hay crop at Campo has been unusually large, and the corn crop promises good. Farmers in this section are now busy threshing their barley, wheat and oats, which are turning out well. The Campo flouring mills are preparing to commence operations soon, and grind out the products of home industry and save freightage.

Santa Barbara.

AMONG THE DAIRIES.—Santa Maria *Times:* A trip through the dairy region discloses the fact that the flush green-feed season is over and that dry-feed butter is all that is being shipped from this valley. To be sure, there is a number feeding green corn, but the majority is still depending on the ranges and picking, as a rule, is exceedingly short for this time of year. Nearly all dairymen have laid in an unusual supply of hay. Hay is excellent food for fattening cattle, but it is not recognized as first-class for milch cows, especially barley hay. It cannot compete with the green natural grasses of the ranges, the want of which is already telling on the output of our dairies. At J. C. Bonetti's dairy they are milking about 130 cows, with an output of 90 rolls at a churning, every two days. The cows are fat, but the feed is not making the butter that it usually does at this season. Mr. Bonetti has a well equipped dairy in all departments and knows how to run it. Our representative also called at the dairy of J. B. Bonetti, who is one of the principal tenants of the Leroy estate. He sublets several hundred acres of choice bean land to Portuguese and has found it a very profitable business. He is one of the leading dairymen of our valley and has between two and three hundred cows, but at present he is milking but 140. All dry stock is taken away to pasture or otherwise disposed of and the milch cows given full benefit of the remaining feed. He is making at present six boxes of butter per week. He is well supplied with hay, and pumpkins will be in soon, so that he hopes to at least keep up the present rate throughout the season. He has 500 acres in beans, which are reported as looking the best of any beans in the valley.

Santa Clara.

A TOBACCO COLONY.—Gilroy *Advocate:* H. W. Briggs, the well-known tobacco expert of San Francisco, is very enthusiastic over the future of of California as a tobacco-growing country, and says that within a very few years the crop raised will be an important factor in the output of the world. Mr. Briggs pronounces the Culp tobacco to be as fine as any in the world, but this he says is an old story to him. As far back as 1876, the Culp tobacco received the highest award at the Philadelphia Centennial Exhibition in competition with all other American-grown tobacco. Mr. Briggs says that every county in the State can grow very fine tobacco, but at present San Felipe has advantages in addition to its climatic conditions which will make the tobacco grown there of a very superior quality. It is a fact, Mr. Briggs says, that tobacco can be grown all around here which at seven cents a pound will net the planter a very handsome profit, but that figure would be a very low one, for it would be superior to the Eastern product which yields easily 12 to 20 cents.

FRUIT SHIPMENTS.—San Jose *Mercury:* The Eastern green-fruit shipments for the week ending August 22d, from the broad-gauge freight depot, were the largest ever recorded from San Jose in one week, the amount being 1,433,230 pounds against 1,109,670 pounds for the previous week ending August 13th. The green-fruit shipments started off at a lively rate last Monday with an average of 15 cars daily. Every available fruit car was pressed into service, and had there been more cars on hand, the freight shipment in regard to green fruit would probably have touched the 2,000,000-pound mark. Fruit shipments this year are far ahead of the shipments made during the same month last year. For the corresponding week ending August 18, 1891, the green-fruit shipment amounted to 355,920 pounds; dried fruit, 155,065 pounds; week ending August 25th, green fruit, 613,395 pounds; canned fruit, 551,565 pounds. On Sept. 1, 1891, the shipment of green fruit amounted to 355,920 pounds; dried fruit 115,065 pounds. The shipments of canned, dried and green fruit this year are noticed to be far in excess of the consignments made last year. While total overland shipments last week were 2,128,920 pounds, the shipments next week will probably exceed them considerably. For the corresponding week last year 1,467,650 pounds went forward. Over 127,000 pounds of this year's crop of dried apricots went forward, and the canned-goods shipment amounted to 435,800 pounds, against 155,065 pounds for the corresponding week last year. On the narrow-gauge route, the local shipments amounted to 1,642,325 pounds. A large amount of fruit was transferred from this route last week for shipment overland.

Santa Cruz.

FRUIT ITEMS.—Watsonville *Pajaronian:* It is estimated that the apple crop of this valley will reach 250,000 boxes this year. It will take about 400 cars to take that amount of fruit to market. It is also estimated that the entire fruit output of the valley, including berries, for the season—say up to the opening of the berry shipments of 1893—will be over 1000 cars, and yet the fruit business is but in its infancy in this valley. Agents of San Jose packers have been plentiful in this valley for several weeks, and they have been ready to contract for prunes in large and small quantities. Even the man with a few trees has been sought out and offered inducements to let go of his fruit. For some reason the price has taken a drop during the past week, and quotations are now down to $35 per ton. Some good sales have been made as high as $40 per ton. Early in the month, agents of Los Gatos and San Jose driers were offering up to $50 per ton. This year the peach crop of the Pajaro is of a quality that would satisfy the demands of the most ardent lover of the peaches of the Sierra foothills. From the vicinity of Corralitos and Green valley carloads of choice and beautiful peaches have been shipped this season, but not all of the good stone fruit comes from that section. The other day Gus Sanborn brought in a lot of Hale's Early and Crawford peaches that for size, beauty of coloring and excellence of flavoring were equal to anything in that line from the Coralitos district. No part of the Pajaro valley has a monopoly of excellence in fruit production.

Sonoma.

DRIED GRAPES.—Sebastopol *Times:* A gentleman well-informed on the subject informs us that there is likely to be an active demand for grapes for drying. One vineyard south of San Francisco, producing 2000 tons, has been contracted for at $70 for the dried fruit, which is equal to $15 a ton for the green grapes. This price will satisfy our producers. There will be an unusually large amount of grapes dried in this county, especially in the more northerly vineyards. There is every indication that the yield will be light in the wine-making sections, and from all we can hear there is plenty of cooperage for the crop in Sonoma township, and little or no embarrassment is felt on that account in other sections. Growers are confident of better prices for wine in the future.

FRUIT AT COZZENS.—Cor. Santa Rosa *Farmer:* The grape crop in this district will not be more than three fourths of a crop. F. F. Patronach is enlarging his winery. He intends to use nearly double the amount of grapes that he did last year, as his cellar is now empty. A San Francisco firm has been here buying dried grapes, offering $70 per ton for them. Very few, however, have been sold. Mr. Fairbanks, of Geyserville, has bought nearly all of the peaches, plums and apples raised in this valley; $20 to $30 per ton was the price paid for peaches. The prune crop is light in this section. The French prunes—what there is of them—are bursting open in some orchards and in others they do not seem to be hurt.

HOP CROP.—S. R. *Farmer:* H. Ludolph has 13 acres, which look as well as last year. He expects about the usual crop. Mr. Zweifel has 20 acres, which look as well as last year. He expects to get 100 bales. S. Purrington has 60 acres, outlook for crop nothing extra. His yield will be 400 bales. R. Denner has 20 acres, new. Yield will be 75 bales. Otis Allen, the pioneer hopgrower in the State, said he had 20 acres, as good as last year. Would yield 122 bales. E. E. Granger has 13 acres, not very good; crop short, 70 bales. P. Rafferty has 31 acres, looking well, about 130 bales. F. Hanzel, 32 acres, outlook for crop fair. Had 280 bales last year, and expects 250 this year. W. J. Hall reported 30 acres; prospect, light yield, perhaps six tons to the acre, 180 bales. Chas. Farmer, 35 acres, not as good as last year, but will probably have 220 bales. The red hops were better than the white. R. Peterson reported his crop as 75 acres near Santa Rosa, which produced 520 bales last year, and will yield 475 bales this year. He has also 75 acres on Russian river, which will yield between 600 and 700 bales. John McMinn reported 37 acres, which look better than last year. He expects 220 bales.

Tulare.

LARGE PEACHES.—Traver *Advocate:* J. A. Boyd, who owns a ranch about three miles north of Traver, has broken the record for fine fruit this season. He left at this office, this week, some of the largest peaches that ever grew. One of the lot weighed just 18½ ounces and measured 13 inches in circumference around anyway. Seven of the peaches weighed just even seven pounds, and 12 of the lot weighed just 11 pounds, and we doubt very much if there is another section in the State that can find anything to compare with this.

Yolo.

SULPHUR-BOX.—Winters *Express:* Elias Ireland has invented a fruit-sulphuring contrivance. The trays of fruit are piled on a car which, when full, is run on a track to the sulphur-box. The door is hung on hinges from the end and is lifted by means of a rope and pulleys; a lever which has a fulcrum of six feet against six inches is then pulled down, which raises the cartrack and all on a level with a slide in the sulphur-box, the car is then run in, the lever lowered and the car run out. When the fruit has been in the sulphur fumes long enough, the car is run under the trays again and the fruit is then run on to the drying-ground for spreading. The contrivance is simple, easily applied to any box and can be handled by a boy.

Yuba.

HOP NOTES.—Wheatland *Four Corners:* Wheatland has been swarming with people of all sizes, dispositions and nationalities for the past week, anxious to pick hops. Tuesday last John Roddan commenced picking his fallen hops. His new hopper kilns work fairly well, the only defect being in the draft. This they hope to remedy in a few days. J. H. Durst started Thursday to picking. Although but one day's notice was given the public, about 200 pickers applied for boxes. Many had to be turned away to await the picking in the other yards. The hops are in a fine condition, both for the picker and grower. Special care will be given to drying by all the Bear river growers, and, with their extra kiln room, a uniform grade of hops, which cannot be excelled, will be put on the market.

OREGON.

HOP NOTES.—Eugene (Lane Co.) *Register:* The exodus from the city to the hop fields has already begun, and by another week hundreds of pickers will be at work gathering the crop in this county. Mr. J. Yarnell, one of the leading hopgrowers in the Mohawk valley, informs us that there are but few lice in his yard this year, and he has no fear of their doing any damage to the crop. He says he stripped the vines of their foliage to a height of about six feet from the ground early in the season and destroyed the leaves and sprouts picked off. In this way the lice were caught in their nesting place and destroyed. But few lice are left in the yard, and he says they do not appear to increase in numbers. He also reports a light growth of vine and does not expect to obtain more than three-fourths of an average crop.

WASHINGTON.

CROPS IN EASTERN WASHINGTON.—Colfax *Gazette:* While the grain is too far along to be damaged seriously by this week's high temperature, the berry has been more or less shrunken by the hot, dry weather. In Walla Walla, Columbia and Garfield counties, the grain was too near ripe for this to amount to much. The effect was more perceptible in the Palouse country and in the northern counties east of Kittitas. In Stevens and Spokane counties grain has matured too rapidly and harvest is in full progress, and threshing will begin the present week. In Douglas Co. heading is about done and threshing begun. About half a crop is secured, except in the western part, where a better yield is assured. In Kittitas and Yakima grain has ripened well, and is being harvested rapidly, with good results. The water supply is getting very low in many sections of the eastern counties. Pastures are becoming very short and there is no feed for stock, except in hay fields where the hay has been cut. Fruit and potatoes are doing fairly well, though there is too little moisture for the latter, and the aphis is damaging apples to some extent, especially in Spokane county.

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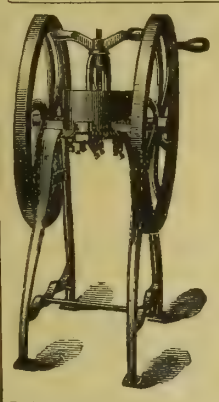
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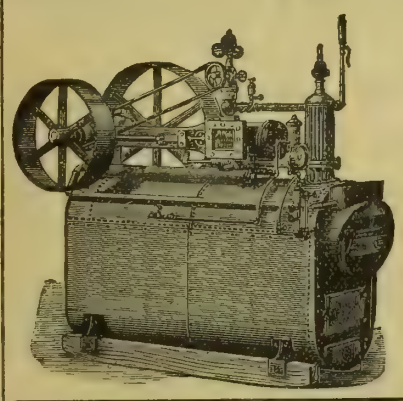
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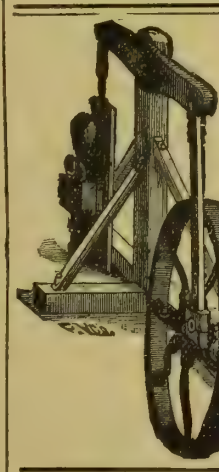
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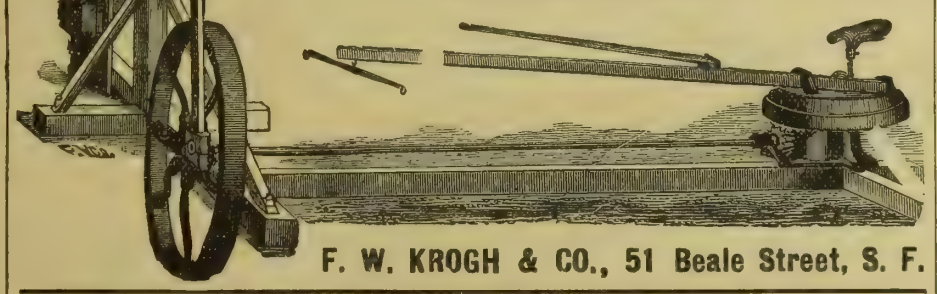


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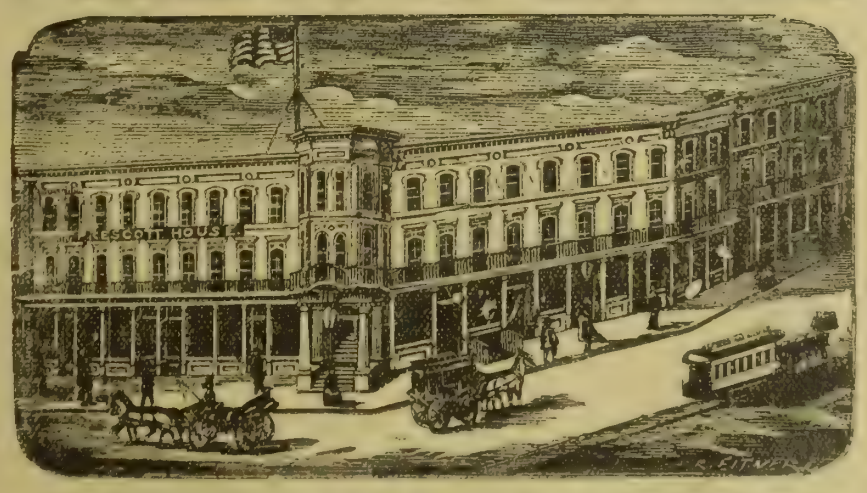
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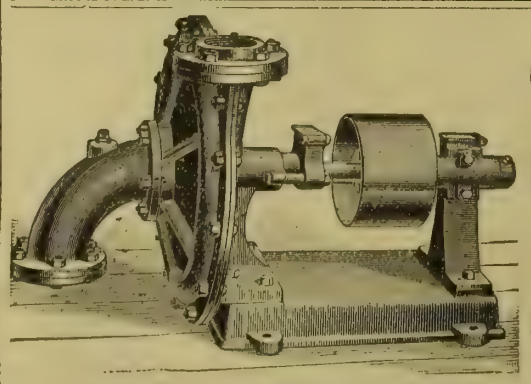
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DEEP WELL PUMPS

S. F. Market Report

Market Review.

San Francisco, August 24, 1892.

There has been a fairly free call for funds to make advances against grain which is going into the warehouses. The continued depression in the wheat and barley market, largely through manipulation at home and abroad, causes farmers not to offer much on the market but hold for an advance later on. The continued heavy shipments of fruit to the distribution markets east of the Rocky mountains brings in large sums of money, which contribute largely in supplying the wants of those farmers who are holding grain. For the week under review, trading in grain has been quite light, particularly in wheat. The continued dropping of the markets at home and abroad makes farmers indifferent sellers, and it is claimed by those in position to take a conservative view of the general situation that they are fully justified in storing. The low price of silver allows English and Continental importers of wheat to import wheat from Russia and India at very low figures, while paying an advance in those two countries. This cannot continue much longer, for the surplus Russian and Indian wheat will go into consumption quite early; besides, the European manipulators of silver will before long probably find it to their interest to advance its market value, so as to unload all commodities and securities having a market value largely, if not entirely, based on that of silver. The ship ring in this city is unquestionably doing all in its power to send the local wheat market down and keep charters up. Their efforts, it is claimed, are largely assisted by some so-called commission firms in this city. The market for feed barley has been depressed and quotations made lower to help exporters and malsters in securing choice to gilt-edged bright gaades. The supply of off-colored is very heavy which assists the bears in forcing the market on Call to lower prices; but the supply of bright, choice to gilt-edged, is light, not only in this State but also up north. The oat market has held firm particularly for more choice grades. Corn has been quite sensitive by reason of the light supply in this State and an undoubted shortage in the crop. At the East the corn crop will be fully 20 per cent below that harvested last year. Rye has shaded off under fair receipts and a light inquiry. Bran has come in quite heavily which caused the market to sell lower; middlings and screenings also sold lower. Roll barley has met with a strong demand, but with liberal supplies the market did not advance. The receipts of hay have been very heavy, but the bulk received was largely of the poorer grades and in consequence the more choice has had good support. Weather prophets look for an early rainy season, which, if it should prove to be correct, will have a depressing influence on the market, but at present the demand is very large and steadily enlarging owing to poor pasture. Another combination has been effected to put up the price of choice to gilt-edged butter, but whether it will prove a success remains to be seen. The supply in cold-storage is said to be the largest on record while the receipts from northern ports are very heavy, besides which it will soon be the season of year when dealers commence running on pickle butter. There is a free demand for keg butter. Eastern mail advices report strong markets, with indications for still higher prices. Cheese has held steady. At the East the market has strong support from an active home and foreign demand. Eggs appear to be working into a better position for higher prices for the more choice. The eastern markets are higher. In garden truck the market has been fairly steady. Tomatoes advanced under light receipts while summer squash sold lower under a light demand and heavier receipts. Green corn toward the close, shows a firmer tone.

Onions have held steady, while potatoes were irregular, and poor sold at lower figures. The more choice was fairly steady under a fair shipping and home demand. The bulk of the crop of Burbank seedlings on the river is said to be diseased, which is against the market for river Burbanks. It is also claimed that the Salinas Burbanks are not up to an average in quality. Poultry has held steady. There is a continued scarcity of large-sized and in good condition. The general run is poor. Live pigeons sold at around $3.50 per dozen for old and and $2.25 per dozen for young. Bullocks and mutton sheep have sold lower, while hogs have barely held their own. Honey is very scarce and wanted. The crop is short on this coast and also at the East. Hop-picking has commenced in this State, and also up north. The yield, it is claimed, will be below an average. Mail advices report that the crop will be short both at the East and in Europe. Fall wool is coming in, but the grade is said to be poor, which makes it difficult to sell. The market for spring wools was unchanged. Beans are very strong, with the supply well-cleaned up. There have been liberal sales of new-season Limas at around 3 cents for shipment to the East. Mustard seed is coming in quite freely. There is a fair shipping and home demand. The fruit market was overstocked with trashy stuff up to Saturday, but since then it has been getting into better shape for sellers. The sending of large quantities of rejected and trashy fruit to this city does far more injury than good and cannot be too severely condemned. It not only creates, as a rule, a loss to shippers, but reduces the price for good to choice fruit. There was another factor which assisted in demoralizing the market, viz., very hot weather forcing fruit to ripen so quickly that canners, driers and dealers were not able to handle it advantageously. One cannery at Oakland gave away three carloads of pears which they were not able to handle, so fast had they ripened. Dealers in this city sold largely at 20 to 40 cts. A large drier at Davisville bought. Peaches suffered with pears. Choice, firm, good-keeping pears held up fairly well, as did mountain peaches, which latter sold to the trade at from 75 to 85 cents per box, while overripe and poor were hard to sell. This week considerable sun-burnt fruit came in; it is worthless. Grapes coming in from Sonoma, Napa and Yolo show the effects of the hot spell, and consequently buyers fight shy of them. Grapes from Tulare and Fresno sold well. Muscats from around Hanford sold at from $1 to $1 25 per box, while it was hard to sell consignments from many other localities. The late hot spell did considerable damage. Cables from Europe report large damage to grape crops by excessive hot weather. With a short crop at home and a short crop abroad, raisins and wine ought to do better. The market for dried fruit has held very strong, with an advance established in apricots. For raisins and prunes the market has been sluggish, but the tone was strong. Buyers appear to be fighting to get the market into shape to buy and not advance prices.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	6s03½d	6s03¼d	6s03⅜d	6s04½d	6s05½d
Friday	6s03 d	6s02⅝d	6s03⅜d	6s03⅜d	6s04⅜d
Saturday	6s02⅝d	6s 2 d	6s 2½d	6s03½d	6s03⅝d
Monday	6s01½d	6s01½d	6s01⅝d	6s02⅛ d	6s 3½d
Tuesday	6s02 d	6s01½d	6s01½d	6s02⅝d	6s03¼d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. O.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	34s d	34s31	34s d	Neglected.	Warm.
Friday	34s d	34s3d	34s d	Steadier.	Stormy.
Saturday	34s d	34s d	34s d	Weaker.	Fine.
Monday	33s9d	33s d	33s9d	Weak.	Brilliant.
Tuesday	33s9d	33s9d	33s9d	Weak.	Fine.

To-day's cablegram is as follows:

Liverpool, Aug. 24.—Wheat quiet but steady. California spot lots, 6s 9d: off coast, 33s 6d; just shipped, 33s 6d; nearly due, 33s 6d; cargoes off coast, very inactive; on passage, neglected and no business doing; Mark Lane wheat, turn easier; weather in England, local thunderstorms prevalent.

New York.

The following shows the closing prices of wheat for the past week:

Day.	Sept.	Oct.	Dec.
Thursday	138⅛	140½	148⅛
Friday	136⅛	138⅝	143
Saturday	135⅝	137¼	142
Monday	13[illegible]¼	138	142⅝
Tuesday	136¼	138⅛	14[illegible]⅛

The following are to-days' telegram:

New York, Aug. 24.—Wheat, 81½c for September, 82½c for October and 85½c for December.

Chicago, Aug. 24.—Wheat, 75¼c for September and 78⅜c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, high st.	....	....	137	....	140⅜
" lowest	....	....	137	....	14[illegible]⅜
Friday, highest	135½	....	....	....	140½
" lowest	134½	....	....	....	139½
Saturday, highest	134	133⅜	134	....	138⅜
" lowest	133⅛	133¾	134	....	138⅛
Monday, highest	133½	....	134⅜	....	138⅜
" lowest	133⅛	....	134½	....	138⅝
Tuesday, highest	133⅜	....	134⅛	....	*139
" lowest	133⅛	....	134½	....	139

*Stockton delivery.

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal—Buyer December—200 tons, $1.37½; 500, $1.37½ ₩ ctl. Regular session.—Buyer December—100 tons, $1.37½; 1100, $1.37; 200, $1 36⅝; 1100, $1.36⅜; 900, $1.36⅜. Seller 1892—8.0 tons $1 32 ₩ ctl. Afternoon Buyer December—200 tons, $1.36⅜; 900, $1.36½. Seller 1892—100 tons, $1.32; 100, $1 31⅞ ₩ ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, highest	92½	....	....	....	98½
" lowest	92⅜	....	....	....	98¼
Friday, highest	91½	....	....	....	97¼
" lowest	91⅜	....	....	....	97
Saturday, highest	92⅜	....	....	....	96⅛
" lowest	91⅜	....	....	....	96⅜
Monday, highest	91½	....	....	....	96½
" lowest	90⅛	....	....	....	96⅜
Tuesday, highest	90½	....	....	93	96⅝
" lowest	90⅛	....	....	93	96¼

The following are to-day's recorded sales on Call:

Barley—Informal—Seller 1892, new—200 tons, 90½c. Regular session.—Seller 1892, new—400 tons, 90c; 100, 89½c; 100, 89½c; 500, 89½c. December—100 tons, 95½c; 500, 95½c; 1300, 95½c; 300, 95c. Buyer December—100 tons, 95½c ₩ ctl. Afternoon December 100 tons, 94½c; 100, 94½c; 300, 94½c. Seller 1892, new—100 tons, 88½c ₩ ctl.

Markets by Telegraph.

Foreign Grain Review.

London, August 22.—Mark Lane *Express*: Crops have been benefited by rain the past week, especially oats, in middle and north of England. The new wheat crop commenced selling at 32s per quarter, 8s below the first sales of 1891. Foreign wheat has dropped 1s; except Indian, which is steadier. The total supply of wheat held in Great Britain is 6,821,000 quarters, against 3 906,000 for the corresponding period of 1891. Barley, oats and beans are firm, corn 3d cheaper. To-day new and old English wheat sold at an average of 30s 11d; foreign was neglected and 6d lower. Flour declined 6d. Peas 6d lower. Beans advanced 1s. Barley strong.

Canned Fruit.

New York, August 21.—Canned fruits—The list is nominally firm. With no substitutes for Coast apricots, holders ask $1.70 from the trade.

Dried Fruit.

New York. August 21.—Peaches hold 12½c, free on board. Seven loads of 60 to 90 prunes in bags, September delivery, are quoted at 9c, free on board; that is now October's rate for boxes, but further trade for prunes is not in treaty; your growers' reports have allayed much anxiety about the previously intimated possible lack of good-sized stock. Raisins are still neglected: a few best-faced loose made $1 45, free on board, but $1.35 is the more general rate; choice layers, $1.65, most marks ranging from $1.35 to $1.50. It must be understood that northern growths will not realize the full figures; $1.20 is the most we hear for such. Loose bag raisins, 43¼c. Apricots have a fair demand at 14@14½c for straight prime spot and 15@15½c for choice. [Later telegrams received by firms in this city report a strong and active demand for dried fruits, with apricots fetching more money. —Ed. Rural Press.]

Fresh Fruit.

New York, August 21.—Fresh fruit sold well, but at a somewhat easier rate, as there is now some Eastern-crop competition. Sellers, however, invite consignments, as the coast quality will be above ours for some little time yet In plums and peaches the wholesale trade has fallen off. The trouble is greatly due to the venders, who strive to obtain opening high prices after the supplies from the regular stocks. Shippers should avoid mismarking varieties.

Wool.

New York, August 21.—Activity prevails at all seaboard ports, with former prices ruling. The clip has mainly come forward and there has rarely been so fine an offering. Some consigned lots have been put aside for better limits, but manufacturers have a full sweep for the grade they want, and with the conditions of abundant supplies and ready sellers no immediate improvement in quotations is apparent. This season is regarded as showing the heaviest mill production ever known here. Some prominent mills are so busy with settled contracts that they cannot undertake to duplicate orders that are proffered for several of the clothing fabrics that have obtained popularity throughout the trade. The sales at New York were 508 000 pounds of domestic and 42,300 of foreign. Boston sold 3,043,000 pounds of domestic, including 160,000 of spring California at 15@21c, and 812,000 of foreign, including 562,000 of Australian.

Miscellaneous.

New York, August 21.—Honey—Recent arrivals are held for better prices. Lima beans—$2.10 per spot bushel is the figure generally quoted. Hops—There is new interest. Quotations are something softer with light demand, 25c being the extreme figure, with 24½c for State.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Aug. 23, '92, were as follows:

Flour, qr. sks	165,359	Bran, sks	20,295
Wheat, ctls	42,688	Buckwheat "	....
Barley, "	19,181	Middlings "	4,352
Rye, "	2,477	Chicory, bbls	113
Oats, "	7,532	Hops, "	1
Corn, "	2,779	Wool, "	1,171
*Butter, "	881	Hay, ton	3,708
do bxs	923	Straw, "	144
do bbls	6	Wine, gals	156,490
do kgs	352	Brandy, "	3,570
do tubs	1	Raisins, bxs	324
do ½ bxs	151	Honey, cs	258
†Cheese, ctls	1,247	Peanuts, sks	....
do bxs	29	Walnuts "	28
Eggs, doz	30,434	Almonds "	....
do " Eastern	83,100	Mustard "	4380
Beans, sks	4,782	Flax "	....
Potatoes, sks	29,447	Popcorn "	....
Onions, "	3,289	Broom corn, bbls	38

*Overl'd, 420 ctls. †Overland, 716 ctls.

Exports by Sea from San Francisco from July 1 to Aug. 18

	1892-93	1891-92
Wheat, ctls	1,204,057	1,668,849
Flour, bbls	138,717	157,496
Barley, ctls	239,940	127,292

Tonnage Movement.

From reliable advices up to Aug. 24, the following summar tonnage movement is compiled:

	On the way 1892	On the way 1891.	In port 1892.	In port 1891.
San Francisco	278,259	388,882	*168,685	74,323
San Diego	20,031	25,[illegible]24	7,466	.....
San Pedro	3,512	5,8.8	1,308	} 13,159
Oregon	49,189	48,050	29,236	
Puget Sound	34,042	22,806	.....	
Totals	385,033	489,070	276,725	87,482

*Engaged for wheat, 1892, 61,122; 1891, 66,986.

Cereals.

The Mark Lane statement of the crop abroad shows that the crop of Russia will be 280,000,000 bushels, including Poland and the Caucasus. It states that this is 64 000,000 bushels more than the trade estimated. When this report is analyzed it does not show that it is so extremely bearish as at first thought. Last year the crop of Russia, including Poland, was 181,000,000 and the crop of the Caucasus 72,000,000, making a total of 253,000,000 bushels, showing that the total crop this year is only 27 000,000 bushels more than last year. The crop of rye in Russia is about 80,000,000 bushels more than last year, when it was so very short as to prostrate all trade and cause a famine. The Russian crop of rye this year is estimated at 570,000,000 bushels. Last year it was 539 000,000 bushels and the previous year 721,000 000, and the total in 1889 610,000,000 bushels. The entire crop of all cereals and potatoes in 1891 was given as 1,876,000,000 bushels, against 2,365,000 000 bushels in 1890. The amount of wheat on passage for the United Kingdom showed a decrease of 784,000 bushels, and the amount of corn a decrease of 44 000 bushels. On the other hand there was an increase of 978,000 bushels in the English visible, which was somewhat of a surprise, but due to large imports in the United Kingdom during the past week

The local wheat market was firmer to-day with buyers showing more disposition to operate. The offerings are very light, and it is claimed that there will not be any material increase in the offerings as long as the present unwarrantable depression continues. The large engaged and disengaged tonnage in port is in wheatholders' favor. The carrying capacity of the tonnage in port aggregates about 275,000 tons of wheat. It is said that ships are easier. In the country, buyers pay from 1¼@2½ cents per cental above the parity of this market. By depressing the San Francisco market, exporters think they can buy more readily in the country by offering an advance.

In the local market, gilt-edged barley is scarce, but poor is in liberal supply. While quoting the market weak, buyers pay an advance on outside prices for choice to gilt-edged. It is claimed that owing to a shortage in oats and barley in the central States there will be an exceptionally good demand from the East for our more choice grades Feed barley is weak at quotations. The consumption of roll barley is steadily increasing.

Corn has shown more strength the past week owing to light visible supplies and a fair demand.

Rye has had poor support, which caused a shading in prices under freer receipts.

The Minneapolis *Journal*, estimating the spring-wheat crop in Minnesota and the Dakotas, says:

After a careful personal inspection of the field, it places the crop for the three States at 103,000,000 bushels against 160,000,000 bushels last year. This is little below an average crop. Minnesota will produce 31,709,000 bushels, North Dakota 29,500,000 and South Dakota 43,000,000 bushels. South Dakota increases over last year, while the other two fall off, on account of heavy storm damage and late seeding in the Red River valley, where the yield is reduced one-half. C. A. Pillsbury, in an estimate, puts the yield at 110,000 000 bushels.

The requirements of Europe this year are uncertain as yet, but it is probable that they are in the neighborhood of 5,500 000 to 6,000 000 bushels per week. The crop of the United Kingdom indicates that the requirements there will be 3,250 000 per week. In France the requirements will be 1,250,000 bushels per week, making the total of 4,500,000 for the two countries. The needs outside of these two countries are indefinite, but will amount to considerable, probably 1,000,000 a week, if not 1,250,000, making a total of 5 500,000 to 6,000,000 to be shipped. The United States has 3,000,000 a week, Southwestern Europe 500 000 a week, Australasia and South America 500,000 a week, leaving 1,500,000 to 2,000 000 bushels per week to be supplied by Russia, India and the minor exporting countries.

The *Mercuriale des Halles et Marches* estimates the French wheat crop at 274,400,000 bushels, which will necessitate imports of about 67,000,000 bushels. A firm of French importers estimates that the amount of surplus to be carried over in addition to the normal reserve will be about 16,000.000 bushels.

The final official report on the Indian wheat crop states that in the Punjab the crop turned out an exceptionally poor one. In the northwest provinces, serious damage occurred to the crop, bringing it below the average. In Bengal the season was altogether unfavorable. In the central provinces and Berah the weather was decidedly unfavorable. In Bombay the result was irregular. In Guzurat the crop was fair; in Sindh indifferent. In South Deccan there was almost a famine. Taken as a whole, the crop was a poor one. The area sown showed a decrease of 2,456,000 below the average, and the outturn showed a decrease, on the average, of 650,000 tons.

Beerbohm says the result of the winter-wheat crop in Russia will be below the average, excepting in the Caucasus, where the outturn will be good. The rye and wheat harvest will be bad in an immense tract of country, embracing eight Governments, and will be various in several other Governments. In some districts, farmers do not expect to get enough grain for seed.

The stock of what at Odessa on August 1st was 3,440,000 bushels, against 3,200,000 bushels July 1st; Paris, 2,712,000 against 3,240,000, and Dunkirk 2,024,000 bushels, against 2,760,000 bushels.

In the local market the more choice grades of oats are scarce and command full figures, but there are liberal supplies of the poor grades, on which the market drags.

Feedstuff.

The market for ground feed has been fairly active. Both bran and middlings sold lower, but rolled barley and feed meal were steady. The market to-day was fairly steady.

Poor to fair hay continues in excessive supply with prices favoring buyers, but choice to gilt-edged has been fairly steady. The impression is gaining ground that the crop of the more choice grades of wheat hay was light, owing to more being harvested for grain than has been the case for years. The receipts of hay are heavy, but the demand appears to be enlarging.

Dairy Produce.

The butter market is quoted firm at a slight advance for gilt-edged. It is claimed that there is an oversupply of poor to good grades, particularly in squares. To-day the market did not appear to show as much strength as it did on yesterday, yet this is always the case after an advance

Cheese has held fairly firm for choice to gilt-edged new mild, but easy for poor to fair. The demand is fair. Considerable Eastern is arriving.

Eggs are still irregular and hard to quote satisfactorily. Strictly fresh-laid eggs from near-by points are wanted, but when it gets to good to choice they sell slowly, owing to dealers preferring choice Eastern, which sell for less money.

Fruit.

Under date of August 6th the following is reported from London: "In California canned fruits a large business has been transacted, and an advance of 1s per dozen has been established since the lowest point at Easter, all 'second' standards having lately been swept off the market. Firsts for peaches are quoted at 8s to 9s, pears 3d more at 8s 3d to 9s 3d, and apricots at 7s 6d to 8s; besides extras of the last named at 11s to 12s, with peaches at 11s 6d to 12s 6d, and pears at 12s 6d to 13s 6d per dozen tins. Canadian 'gallon' apples of the new crop have been sold to arrive at 8s per dozen.

New York mail advices just to hand report as follows: Some few Valencia raisins are selling for August steamer shipment at 15s 6d c. and f. for off-stalk, and 20s 6d for layer, and first half September shipment 14s 6d and 19s 6d. New currants for first steamer are cabled at 17s 6d for Calamata goods c. and f., but this price is above the limits of our importers; hence we learn of no important orders going out. New French prunes at 42 francs are too high for importers, though this price is not accepted here as an opening figure. Recent mail advices stated the market in France would not fairly start before the 20th inst. Extreme prices and limited offerings hold trade in Turkish and Bohemian prunes in check.

The peach crop in many places in Michigan is extremely light. The grapevines have been attacked in numerous cases by disease, and the yield of good fruit will be materially reduced. Cranberries are a fair yield in quality and quantity. Winter apples throughout the fruit region of that State are almost a total failure. The pear crop of one of the orchards of the Comings Brothers at St. Joseph was last year 2000 bushels, but this year on the same ground it will not exceed 400 bushels Pennsylvania reports less fruit than usual. Tennessee reports grapes and peaches rotting. Kentucky, fruit of all kinds poor. Wisconsin, apples, the chief fruit crop of the State, poor. New York reports grapes doing well.

The market, under hot weather and heavy receipts of rejects and trashy stuff, went from bad to worse up to Monday, when, with not so much coming in and canners again in the market, the more choice for canning sold at a slight advance. Large quantities of overripe, and also second and third grade, fruit had to be sold at the best obtainable bids, and even then large quantities had to be dumped. At Oakland a cannery gave away three carloads of overripe pears To-day peaches suitable for canning fetched an advance. Santa Cruz mountain peaches sold to the trade as high as $1, while the highest from any other locality was 85 cts. Valley peaches sold at 75 cts. Pears were unchanged, as were plums, prunes, berries, etc. Grapes were lower under heavier receipts. The highest paid for Muscats from Tulare and Fresno was $1. Tokays were not as plentiful. Cantaloupes, nutmegs and watermelons were weak.

The dried fruit market is very strong, but no advance is reported outside of apricots. It looks as if the bulk of dried apricots and prunes has been sold, as has considerable of new crop raisins and peaches. The market for new crop raisins is said to have a firmer tone. If the news is confirmed of injury by heat in Europe to the grape, a better market for Californian may be reasonably expected.

Vegetables.

The market for garden truck appears to be shaping more in sellers' favor. This is due to lessening receipts and more inquiry, owing to cooler weather and also to fruits doing better. To-day tomatoes and cucumbers did better, but other kinds were unchanged. Marrowfat squash sold at from ½@1c ₩ lb., according to quality. Green corn is in lighter supply.

Onions are slow at 30@40c per cental on the wharf.

The potato market was strong and fairly active to-day. Receipts are lighter while there is a good home and shipping demand.

Live Stock.

In bullocks and mutton sheep there has been a stronger selling pressure, owing to a growing scarcity of natural feed. The falling off in the consumption of meat, causes slaughterers not to buy freely except at concessions. Hogs have held steady.

Miscellaneous.

Poultry has held steady. To-day there was a fair inquiry, notwithstanding the arrival of a carload of Eastern, mostly hens. Choice stock is very scarce.

Colored beans are about cleaned up, but whites and Limas are in liberal supply.

Hops are inactive. Buyers are awaiting further news from the European crops. They claim that the hot weather in Germany benefited the crop.

Fall wool is coming in, but so far the quality is poor.

Honey is scarce and higher.

New crop nuts are reported firm.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 24, 1892.

BEANS AND PEAS.			
Bayo, ctl.	—	@	—
Butter	2 50	@	3 00
Pea	2 40	@	2 65
Red	—	@	—
Pink	—	@	—
Small White	2 35	@	2 50
Large White	2 20	@	—
Lima	3 00	@	3 20
Fld Peas, blk eye	1 50	@	1 70
Do green	1 50	@	2 75
Do Nlles	1 30	@	1 40
Split	4 50	@	5 00
BUTTER.			
Cal. Poor to fair, lb	15	@	—
Do good to choice	18	@	—
Do Giltedged	24	@	25
Do Creamery rolls	23	@	25
Do do Giltedge	—	@	26½
Eastern	16	@	17
CHEESE			
Cal. choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	11
Do skim	5	@	6½
Young America	—	@	11½
EGGS.			
Cal. "as is," doz.	16	@	18
Do shaky	12½	@	14
Do candled	19	@	23
Do choice	23	@	25
Do fresh laid	26	@	29
Do do selected	—	@	30
Eastern "as is"	15	@	17
Do candled	18	@	20
Do selected	22	@	24

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED			
Bran, ton	16 00	@	17 00
Feedmeal	27 00	@	30 00
Gr'd Barley	20 50	@	22 00
Middlings	20 00	@	21 00
Oil Cake Meal	—	@	25 00
Manhattan Food ₩ cwt.	7	50	
HAY.			
Wheat, per ton	8 00	@	—
Do choice	—	@	12 50
Wheat and Oats	8 50	@	11 00
Wild Oats	8 00	@	11 00
Cultivated do	7 00	@	10 00
Barley	5 00	@	9 00
Alfalfa	7 00	@	9 00
Straw, bale	40	@	55
GRAIN, ETC.			
Barley, feed, ctl.	86½	@	—
Do Choice	92½	@	—
Do Brewing	95	@	—
Do do Choice	98½	@	—
Do do Giltedge	1 00	@	—
Do Chevalier	—	@	—
Do do Giltedge	—	@	—
Buckwheat	—	@	—
Corn, White	1 37½	@	1 42½
Yellow, large	1 30	@	1 32½
Do small	1 35	@	1 37½
Oats, milling	1 50	@	—
Feed, Choice	1 40	@	—
Do good	1 37½	@	—
Do fair	1 30	@	—
Do Common	1 15	@	1 25
Surprise	1 55	@	—
Black Cal	1 17½	@	1 25
Do Oregon	—	@	—
Gray	—	@	—
Rye	1 17½	@	1 22½
Wheat, milling.			
Gilt edged	1 42½	@	—
Do Choice	1 40	@	—
Do fair to good	1 37½	@	—
Shipping, cho'ce	1 35	@	—
Do good	1 33½	@	—
Do fair	1 28½	@	—
Common	1 25	@	—
Sonora	1 25	@	1 40
HOPS.			
1892 Bid	18	@	20
FLOUR.			
Extra, City Mills	4 15	@	4 40
Do Country Mills	4 35	@	4 40
Superfine	2 60	@	3 00
NUTS—JOBBING.			
Walnuts, Cal. lb	6½	@	—
Do Choice	8½	@	—
Do paper shell	9½	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	30	@	40
POTATOES.			
Early Rose, ctl.	40	@	55
Peerless	45	@	65
Garnet Chilies	50	@	70
Burbank Seedlings	45	@	65
Do do Salinas	75	@	1 00

Extra choice sell for more money,

POULTRY.			
Hens, doz	6 50	@	7 50
Roosters, old	6 00	@	7 50
Do young	5 50	@	7 50
Broilers, small	2 50	@	3 50
Do large	3 50	@	4 50
Fryers	4 50	@	5 50
Ducks	4 00	@	4 75
do, large	5 00	@	5 50
do, extra large	6 00	@	—
Geese, pair	1 50	@	2 25
Goslings	—	@	—
Turkeys, Gobl'r.	18	@	19
Turkeys, Hens	16	@	18

All kinds of Poultry if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food			
₩ 100-lb. cabinet	8	00	
PROVISIONS.			
Cal. Bacon, he'vy, lb	12	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	12½	@	14
do Eastern	15	@	16
SEEDS.			
Alfalfa	—	@	—
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	3½	@	4
do Brown	2½	@	—
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (State)	15	@	19
HONEY.—1892 CROP.			
White Comb, 2-lb	9½	@	12½
do do 1-lb frame	11½	@	14½
White extract'd	7	@	—
Amber do	6½	@	7
Beeswax, lb	25	@	28

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb.

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bleached, ring. 50-lb boxes	6½	@	7
APRICOTS—1892.			
Sun-dried, unbl. com.	4	@	5
Do do prime	6	@	7
Do do choice	8	@	9
Do bleached, prime	11	@	—
Do do choice	12	@	—
Do do fancy	13	@	—
Evap. choice, in boxes	13½	@	—
Do fancy, do	14	@	—
FIGS—1892.			
Sun-dried, black	4½	@	5
Do white	—	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	8	@	9
Do Evap., in boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	11½	@	—
Do do fancy	12	@	—
Evap, unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Do do fancy	14	@	—
Evap, peeled, in boxes, choice	17½	@	—
Do do fancy	20	@	—
PEARS—1892.			
Sun-dried, quarters	3	@	—
Do sliced	4	@	5
Evap, sliced, in boxes	7	@	8
Do ring do	9	@	10
PLUMS—1892.			
Pitted, sun-dried	7	@	8
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	—	@	—
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster, ₩ bx	1 90	@	2 00
Do ch icest do	1 60	@	1 70
Do prime, ₩ bx	1 40	@	1 45
Loose Muscatels, common, ₩ bx	—	@	—
Do choice, do	1 25	@	1 30
Do fancy, do	—	@	—
Unstem'ed Muscatels, in sacks, ₩ lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ₩ 20-lb bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 35, 50 and 75 cents higher respectively than whole boxes

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manila Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grape-Vine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manila, 3 yarns, heavy	10½	Duplex Hop, in balls, tar'd	9½
Pure Manila, 3 and 4 yarns	12	Do, Grape-Vine, in balls or coils	10½
Do, 2 yarns, light	12½		

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5	@	—
First quality	4½	@	—
Second quality	4	@	—
Third quality	3½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	4½	@	—
Do light	5½	@	—
Dairy	6	@	—
MUTTON.			
Wethers	7	@	—
Ewes	6½	@	—
Do Spring	8	@	—
HOGS.			
Light, ₩ lb, cents	5½	@	—
Medium	5½	@	—
Heavy	5	@	—
Soft	4½	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Grain and Wool Bags.

Calcutta, spot	5½	@	5½
Wool Bags	36	@	38

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

WEDNESDAY, Aug. 24, 1892.

Limes, Mex	5 00	@	7 00
Do Cal	—	@	—
Lemons, box	1 00	@	—
Do Sicily choice	6 50	@	8 00
Strawberries, per chest—			
Longworth	6 00	@	8 00
Sharpless	3 50	@	7 00
Raspberries, ch.	6 00	@	9 00
Peaches, box	30	@	75
Do Mountain	75	@	1 00
Bl'kberries ₩ ch	2 50	@	4 00
Figs, blk box	50	@	85
Apples	50	@	1 00
Do Gravenstein	75	@	1 25
Crabapples	50	@	75
Canteloupes, pr crate	25	@	75
Melons, pr 100	6 00	@	11 00
Nutmegs, ₩ box	10	@	35
Grapes, pr bx—			
Do White	40	@	60
Do Black	40	@	75
Do Muscats	45	@	1 00
Do Tokays	65	@	1 00
Prunes, Hung'n	40	@	50
Do German	45	@	60
Plums, ₩ box	25	@	50
Pears	—	@	—
Do Bartlett culls	25	@	75
Do do choice	70	@	1 10

Fruit in bulk to canners:

Pears, 1½ a 2; Plums, white, 1½ @2c; Peaches, freestone, colored, 1@1½c; clings, 2@3. Extra choice fruit for special purposes sells at an advance on outsi.e quotations.			
Beets, sk	—	@	75
Carrots, sk	40	@	—
Okra, dry, lb	15	@	—
Do green box	40	@	65
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do grn Chili, bx	20	@	35
Do do Bells	20	@	40
Turnips, ctl	75	@	—
Cabbage, 100 lbs	45	@	55
Garlic, lb	—	@	—
Squash, Sum, bx	25	@	35
Tomatoes	—	@	—
Do River lrg bx	35	@	50
String Beans, sk	50	@	75
Cucumbers, box	25	@	40
Mushrooms	—	@	—
Egg Plant, bx	40	@	50
Green Corn, box	30	@	50
Marfat Squash, ₩ ton	10 00	@	20 00

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal	10	@	15

Auction Sales of California Fruits.

At New York.

Aug. 17.—Five carloads: Bartlett Pears, $2.30@2.90; Yellow Free Peaches, $1.25; Mary's Choice Peaches, $1 10; White Peaches, $1.55; Foster Peaches, $1.35; Susquehanna Peaches, $1.20@1.45; Crawford Peaches, $1.20@1.35; Muir Peaches, $1 15@1 25; Centennial Peaches, $1.60; Morocco Peaches, $1.60; Orange Cling Peaches, $1.20; Yellow Egg Plums, $1.05@1.40; French Prunes, $1.10; German Prunes, $1.25; Petit Prunes, $1.35; Fontainebleau Grapes, half crates, $1.10.

Aug. 17.—Seven carloads: Bartlett Pears, $2.40@3.15; Beurre Clairgeau Pears, $1.40@1.60; Crawford Peaches, $1 10@1.90; Susquehanna Peaches, $1.25@1.75; Cling Peaches, $1.20@2; Muir Peaches, $1.10@1.25; Foster Peaches, $1 15@1.50; Bradshaw Plums, $1 10@1.55; Egg Plums; $1@1.45; Japanese Plums, $1@2 35; Columbia Plums, $1.10@1.85; German Prunes, $1 15@2; Gros Prunes, $1.05@1.85; Fellenberg Prunes, $1.35; Italian Prunes, $1.60; Tokay Grapes, single crates, $2.85; Muscat Grapes, single crates, 90c@$1.40; Rose de Peru, 95c@$1 15; Fontainebleau Grapes, 80c @$1.55. Gross sales for seven cars, $9428. Weather very hot, and in consequence fruit in ventilated cars is arriving overripe.

Aug. 18.—Four carloads: Gross sales, $5358. Early Crawford Peaches, $1@1.40; Late Crawford Peaches, $1.15@1.55; Foster Peaches, $1.10@1.15; Susquehanna Peaches, $1.20@1.35; Bartlett Pears, $1 75@2.65; German Prunes, $2.10@2.15; Beurre Hardy Pears, $2.30@2.35; Gros Prunes, $1.20@2.20; Fellenberg Prunes. $1.20 @1.50; Silver Prunes, $1.50; Egg Plums, $1@1 25; Japan Plums, $1.75; Orange Cling Peaches, $1.50; Nectarines, $1.25@1.35; Grapes, $1.50.

Aug. 18.—Five carloads: Yellow Egg Plums, 85@90c; French Prunes, $1; German Prunes, $1.30; Gros Prunes, $1.65; Bartlett Pears, $1.80@2.85; Susquehanna Peaches, $1.10@1.40; Orange Cling Peaches, $1.20@1.35; Muir Peaches, $1.05; Lemon Cling Peaches, $1; Crawford Peaches, $1.35; Fontainebleau Grapes, 80c@$1.45.

Aug. 19.—Three carloads: Golden Cling Peaches, $1.75; Centennial Peaches, $1.55; Susquehanna Peaches, $1 25@1.45; Orange Cling Peaches, $1.25@1.45; Crawford Peaches, $1.45; Wheatland Peaches, $1.45; Reeves' Favorite Peaches, $1.45; Foster Peaches, $1.40@1.65; Yellow Egg Plums, $1.15@1.30; Kelsey Japan Plums, $2.75; Fontainebleau Grapes, half-crates, 95c@$1.30; Black Malvoisie Grapes, half-crates, $1.35; Muscat Grapes, half-crates, 95c@$1.65; Rose de Peru Grapes, half-crates, $1.15.

Aug. 19.—Four carloads: Gross sales, $5219. Early Crawford Peaches, $1@1.33; Late Crawford Peaches, $1.40@1.50; Susquehanna Peaches. $1.25@1.40; Cling Peaches, $1 30@1.50; Peaches, 40c@$1.50; Bartlett Pears, $2.50@3.75; Egg Plums, $1.05@1.62; P. D. Plums, $1.32; Japan Plums, $1 30@4.25; Nectarines, $1.30; Gros Prunes, $1.35@2.05; Silver Prunes, $1.15@1.30; Fellenberg Prunes, $1.30; Bulgarian Prunes, $1@1.05; Columbia Plums, $1@1.05.

Aug. 20.—Four carloads: Gross sales, $5773. Early Crawford Peaches, $1.05@1.30; Late Crawford Peaches, $1.15@1.80; Cling Peaches, $1.35@1.75; Susquehanna Peaches, $1.21@2.15; Bartlett Pears, $1 85@3.25; Bradshaw Plums, $1.05@1.40; Japan Plums. $3.35; Gros Prunes, $1.3.@1.60; Grapes, 65c@$2.10; De Congress Pears, $2.65; Fellenberg Prunes, $1; Washington Plums, 90c@$1.25; Egg Plums, 90c@$1.55; Plums, $1@1.45: Nectarines, 35@55c; Yellow Peaches, $1.30@1.70; French Prunes, $1.05; Hungarian Prunes, $1.60; Prunes. $1.50; Bulgarian Prunes, $1 10.

Aug. 22.—Six carloads: Crawford Peaches, $1.20@1.35; Susquehanna Peaches, $1.35@1.45; Yellow Free Peaches, $1.30; Orange Cling Peaches, $1.35@1.60; Golden Cling Peaches, $1.80; Centennial Peaches, $1.70; Muir Peaches, $1.15; Bartlett Pears, $2.40@3; some overripe, $1.30@1.80; Beurre Hardy Pears, $2 35 ₩2.45; Tokay Grapes, half crates, $2.10; Rose de Peru, half crates, 75c. Quackenboss Plums, $1.25; Bradshaw Plums, $1; Yellow Egg Plums, 85c.

Aug. 22.—Nine carloads: Bartlett Pears, $1.65@3.35; Souvenir Congress Pears, $2.35@2.85; Crawford Peaches, $1.10 @ 1.75; Yellow Peaches, $1 35@2 10; Orange Cling Peaches, $1.10@1 75; Susquehanna Peaches, $1@1.70; Japan Plums, $1.65@2.55; Quackenboss Plums, $1.30; Bradshaw Plums, $1.55; Egg Plums, 90c@$1.70; Columbia Plums, $1 05@1.35; Gros Prunes, $1.20@2.05; Muscat Grapes, single crates, $1@1.50; Tokay Grapes, single crates, $2.05.

At Chicago.

Aug. 17.—Seven carloads: Bartlett Pears, $2 45@3.05; Flemish Beauty, $1.65; Fellenberg Plums, $1.45; Egg Plums, $1.10@2.20; Columbia Plums, $1.10@1.15; Bradshaw Plums, $1@1 20; Gross Prunes, $1.05@1.45; German Prunes, $1.90; French Prunes, $1.05; Crawford Peaches, 80c@$1.10; Orange Cling Peaches, $1.30; Chassellas Grapes, half-crates, $1.75.

Aug. 17.—Eight carloads: Nectarines, $1.05@1.10; Egg Plums, $1 25@1.30; Peaches, 75c@1 50; half-boxes Peaches, 75@95c; Japan Plums, 80c@1.75; Bartlett Pears, $1.45@3.20; Souvenir de Congress Pears, $2.30; Cling Peaches, $1@1.65; Bradshaw Plums, 95c@1.05; Columbia Plums, 95c@1.25; Prunes, $1.25; Silver Prunes, 95c@1.05; Grapes, $1.35@1.65; Duchess Pears, $1.85; Gross Prunes, $1@1.50; French Prunes, $1.10; Hardy Pears, $1.55; Clapp's Favorite Pears, $1.45; Vicar Pears, $1; Louis Bonne, St. Michael's Doyenne Pears, $1.45; Hungarian Prunes, $1.05; Golden Drop Plums, 75c@$1.10; Fellenberg Prunes, $1; Plums, $1.20@1.50; Rose de Peru Grapes $1.30@1.50; Muscat Grapes, $1.80@2; Tokay Grapes, $2.50@3.25; Crawford Peaches, 75c@1 20; Muir Peaches' $1.20; overripe Bartlett Pears, 70c$1.50.

Aug. 18.—Eleven carloads: Malaga Grapes, $1.70@1.85; Muscat Grapes, $1.15@1 65, single crates; overripe, 90c; Bartlett Pears, $1 75@3; Bartlett Pears, overripe, $1.40@1 60. Susquehannah Peaches, $1.15@1 25; Cling Peaches, $1.15@1.25; overripe, 60@85c; Muir Peaches, 95c@$1; Crawford Peaches, 90c@1.10; Nectarines, $1.10; Beurre Hardy Pears, $2.15; Bernard Peaches, 75c; Beurre Clairgeau Pears, $1 90@2.05; overripe, 90@1.40, Vicar Pears, 1.40; Gros Prunes, $1.05@1.55; Peaches, 80c@1.65'; overripe, 25@65c; Plums 65c@$1.20; Seckel Pears, $1 65; Mixon Peaches, 80c; Tokay Grapes, $1.60@3 60; Prunes, 65c@1.20; Silver Prunes, 70c; Grapes, $1.30@1.70; overripe, 80c; Pears, $1.90@3 Howell Pears, $2.15. Weather very hot.

Aug. 18.—Seven carloads: Fontainebleau Grapes, half-crates. $1.50; Muscat Grapes, half-crates, $1.75; Rose de Peru Grapes, half-crates, $1.20@1 25; Black Malvoise Grapes, half-crates, $1.25; Tokay Grapes, half-crates, $$1 90@2.50; Bartlett Pears, $2.25 $3.10; Red Nectarines, $1 10; Golden Drop Plums, 90c@$1.05; Bradshaw Plums, 90c@$1; Yellow Egg Plums, 85c@ $1.20; Washington Plums, 80@$1 10; Quackenboss Plums, 90c@1.10; Hungarian Prunes, $1.10; Gross Prunes, $1.10@1.20; Italian Prunes, $1 40; Silver Prunes, $1; Bulgarian Prunes, $1.20@1 25; German Prunes, $1@1.20; Orange Cling Peaches, $1@1 20; Muir Peaches, $1@1.05; Foster Peaches, $1.10; Centennial Peaches, $1.35; Golden Cling Peaches, $1.15@1.30; Early Crawford Peaches, $1.05@1.10; Columbia Plums, 90c@$1.10.

Aug. 19.—Six carloads: Crawford Peaches, $1.10@ 1.15; Susquehanna Peaches, $1@$1.10; Yellow Cling Peaches, $1.10; Muir Peaches, 90c@1.05; Orange Cling Peaches, $1.@1.20; Golden Cling Peaches, $1.25; Centennial Peaches, $1 25; Taylor Peaches, $1.25; Bartlett Pears, $2.25@3; Beurre Hardy Pears, $2.20; Fontainebleau Grapes, half-crates, $1.15@1 30; Yellow Egg Plums, $1@1.15; Columbia Plums, 9 c@1.15; Bradshaw Plums, $1.05; Kelsey Japan Plums, $1.75; Magnum Bonum Plums, 70c; Petit Prunes, $1.15; Gros Prunes, $1.05@1.25; Bulgarian Prunes, $1.25; Silver Prunes, 95c; German Prunes, $1.65. Some fruit overripe and in bad order sold for less.

Aug. 19.—Eight carloads: Bartlett Pears, $1.50@3; overripe, 65c@$1.25; Peaches 60c@$1.50; Silver Prunes, 60@75c; Gros Prunes, $1@1.30; Plums, 25c@1.30; Grapes, 55c@$1.75; Seckel Pears, $1.60; Beurre Hardy Pears, $1.90; Cling Peaches, $1@1.10; Susquehanna Peaches, $1.10@1.15; half-boxes Susquehanna Peaches, 65c; Swan's Orange Pear, $2.35.

Aug. 20.—Nine carloads: Bartlett Pears, $2 50@ 2.85; Bartlett Pears (heated), $1 30@2.05; Peaches, $1@ 1 15; overripe, 40@95c; Grapes, 75c@$1.65; Cling Peaches, 50@70c: Prunes, 65c@1.20; Muscat Grapes, 80c@1.80; Pears, $1.80@2.05; Japan Plums, $1.50@1.55; Egg Plums, $1.25; Plums, 75c@$1.40; Tokay Grapes, $2.50; Rose de Peru Grapes. 75c; Keifer Pears, $1.25; Diels Pears, $1.40; Hamburg Grapes, $1.30; Gros Prunes, 85c@$1; Beurre Clairgeau Pears, $1 40; Duchess Pears, $1.50; Louis Bonne Pears, $1.50

Aug. 20.—Four carloads. Bartlett Pea s, $2 25@ 2.50; some overripe, $1@1.75; Howell Pears, $2; German Prunes, $1.25; Gros Prunes, $1.10; Susquehanna Peaches, $1.05; Egg Plums, 65c@$1.

Aug. 22.—Six carloads: Bartlett Pears, $1.75@2 75; Congress Pears, $2; Early Crawford Peaches, $1 10; Late Crawford Peaches, $1@1 10; Orange Cling Peaches, $1@1.10; Susquehanna Peaches, 85c@$1.05; Taylor Cling Peaches, $1; Lemon Cling Peaches, $1; Muir Peaches, 80c@$1; German Prunes, $1.15@1.25; French Prunes, $1; Silver Prunes, 85@95c; Gros Prunes, $1@1.50; Egg Plums, 85c@$1.05; Kelsey Japan Plums, $1.70; Columbia Plums, 90c@$1; Quackenboss Plums, $1.25; Washington Plums, $1.05; Yellow Egg Plums, 90c@$1.10: Bradshaw Plums, 85@95c. Some fruit overripe sold for less.

Aug. 22.—Twelve carloads: Peaches, 55c @ $1 20; Crawford Peaches, 90c; Cling Peaches, 70c@ 1.10; Muir Peaches, 80c; Bartlett Pears, good condition, $1.50@2.40; overripe, 60c@$1 40; Muscat Grapes, 95c@ $1.50 for single crates and $2.70 for full crates; Tokay Grapes, $1.1f@2.40; Gros Prunes. 70c@$1 50; Grapes, 50c@$1 30; Nectarines, 85c; Howell Pears, $1.20; Beurre Clairgeau Pears, $1.05@2; Seckel Pears, $1.30; Prunes, 65c@$1.15; German Prunes, 80c; Egg Plums, 50@80c; Plums, 60c@$1.05; Japan Plums, $1.20; Beurre Hardy Pears, $1.80. All fruit in ventilated cars arriving in bad condition.

At Boston.

Aug. 17.—Two carloads: Early Crawford Peaches, $1.35@1.80; Mary's Choice Peaches, $1.25; Columbia Plums $1.40; Egg Plums, $1.40@1.80; Bartlett Pears, $2@3.15.

Aug. 18.—Three carloads: Early Crawford Peaches, $1.75@1.90; Late Crawford Peaches, $2@2.10; Orange Cling Peaches, $1.60@1.70; Lemon Cling Peaches, $1.75@2.05; Tuscan Cling, $1.75; Gros Prunes, $1 60; Italian Prunes, $1.30; Columbia Plums, $1.25; Egg Plums, $1.50.

Aug. 19.—Three carloads: Early Crawford Peaches, $1.85@2.25; Stephen's Cling Peaches. $2; Susquehanna Peaches, $1.70; Muir Peaches, $1 65; Quackenboss Plums, $1.25; Egg Plums, $1.55; Bradshaw Plums. $1.15; Victoria Plums, 85c; Columbia Plums, $1 05@ 1.15; Washington Plums, $1.15; Purple Duane Plums, $1.30; Gros Prunes, $1.35@1.75.

Aug. 20.—Two carloads: Early Crawford Peaches, $1.40@1.80; Late Crawford Peaches, $1 85@1 90; Madeline Grapes, half-crates. $1.35: Bartlett Pears, $1.75@ 2.25; Egg Plums, $1 10@1.20; Columbia Plums, $1.05; Magnum Bonum Plums, 95c@$1.05; German Prunes, $1.10@1.15.

Aug. 22.—Three carloads: Crawford Peaches, $2 05; Foster Peaches, $1.65@2; Orange Cling Peaches, $1.90 @2; Muir Peaches, $1.40; Golden Cling Peaches, $2.50; Centennial Peaches, $1 75; Susquehanna Peaches, $1 65@2; Bartlett Pears, $1 35@2.30; Congress Pears, $1.90; Clapp's Favorite Pears, $1 70; Muscat Grapes, half crates, $1.20; Bradshaw Plums. 85c@$1.60; Columbia Plums, 85c; Yellow Egg Plums, 75c@$1.25; Gros Prunes, $1.35; German Prunes, $1.15; Petit Prunes, $1.35.

At Minneapolis.

Aug. 17—Three carloads: Peaches, $1 10@1.35; Pears, $1.10@3 15; Grapes, $1.05@1.15; Plums. $2.10.

Aug. 18.—Three carloads: Peaches. 95c@$1.10; Tokay Grapes, $3.80; Muscat Grapes, $1 50; Pears, $2.05@ 3 25: Plums, $1.20@2.35; Beurre Clairgeau Pears, $2@2.10.

Aug. 19—Four carloads: Muscat Grapes, half-crates, $1.20@1.60; Tokay Grapes, half-crates, $2.95; Rose de Peru Grapes, $1.05; Fontainebleau Grapes, half-crates, $1.05; Yellow Egg Plums, $1 55; Susquehanna Peaches, 95c@$1.10; Yellow Cling, 95c; Orange Cling Peaches, 95c@$1; Crawford Peaches, 85c; McDevitt Peaches, 90c; Foster Peaches, 95c; Hungarian Prunes. $1 85; Bartlett Pears, $3.35.

Aug. 19.—One carload: Pears, $1.25@1.70; Plums, $1.50@2; Peaches, 60@95c.

Aug. 20.—One carload: Bartlett Pears at an average of $2 per box.

Aug. 20.—Two carloads: Peaches, 45c@$1.05; Pears, $1.35@2.45; Fellenberg Prunes, $1.80; Gros Prunes, $2.10; Bartlett Pears, $1.25@2 30.

Aug. 22. — Three carloads: Peaches, 55c @ $1.05; Pears, $1 55@2.10; Muscat Grapes, $1 35. All fruit in ventilated cars is arriving in bad condition.

At Omaha.

Aug. 17.—One carload: Peaches, $1@1.30; Pears, $1.50@2.50.

Aug. 19.—One carload: Pears, $1.50@2,25; Peaches, $1@1 25.

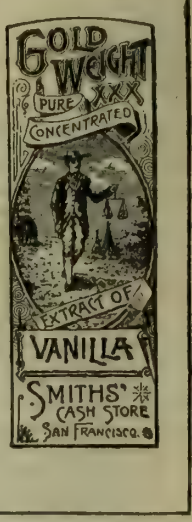
Aug. 22 —Four carloads: Peaches, good condition, $1@1.20; bad order, 50@60c; Pears, $1.75@2.25 All fruit in ventilated cars is arriving in bad condition.

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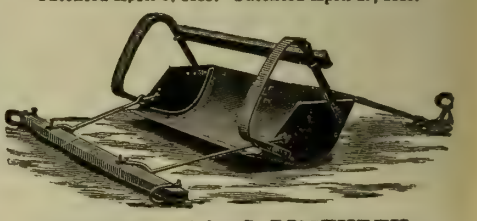
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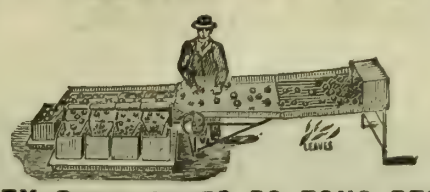
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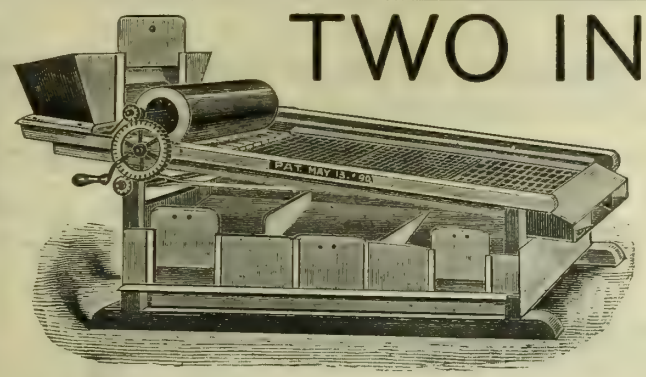
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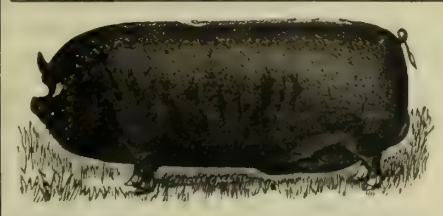

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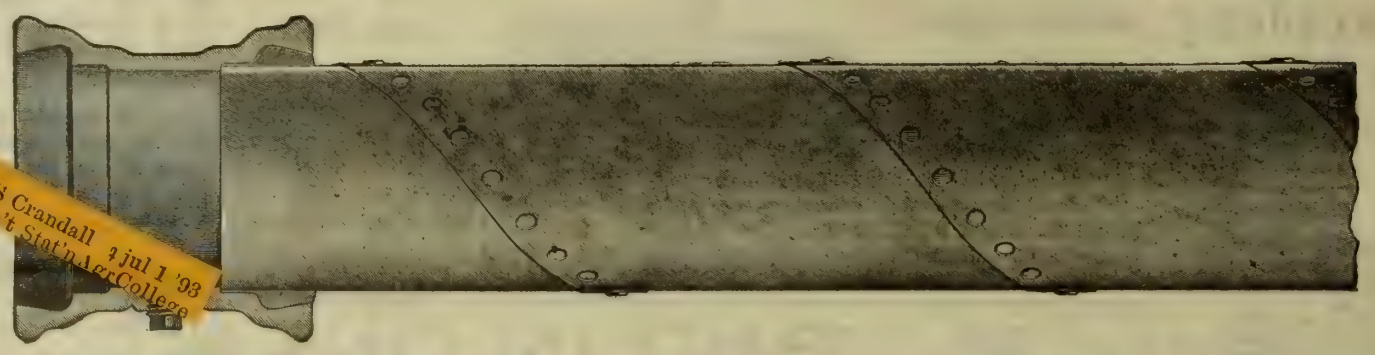
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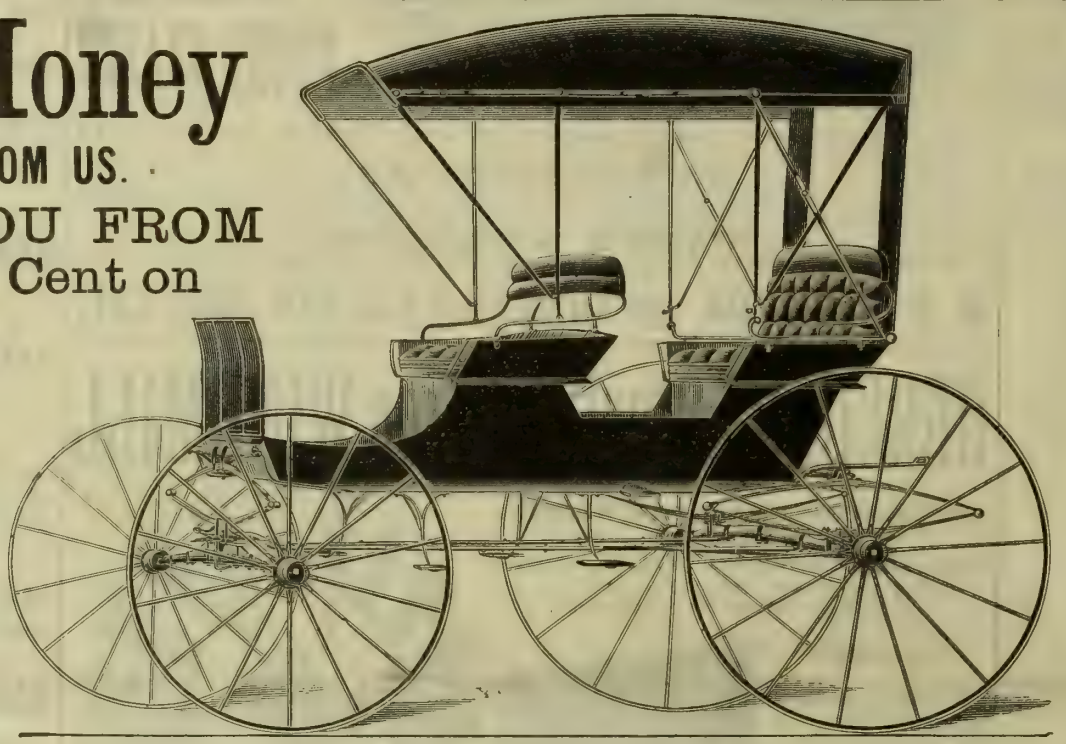
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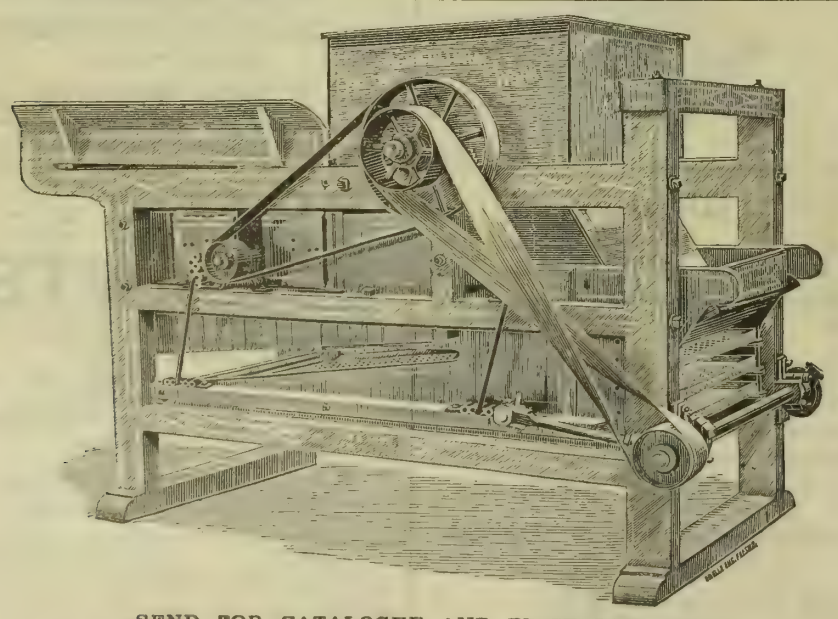
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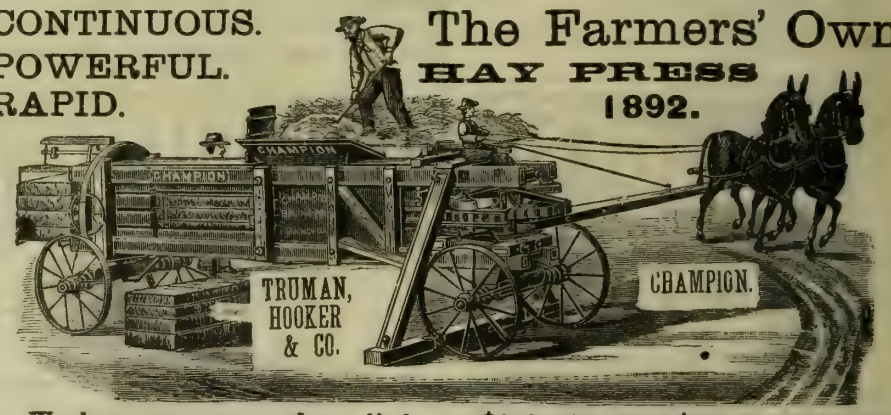
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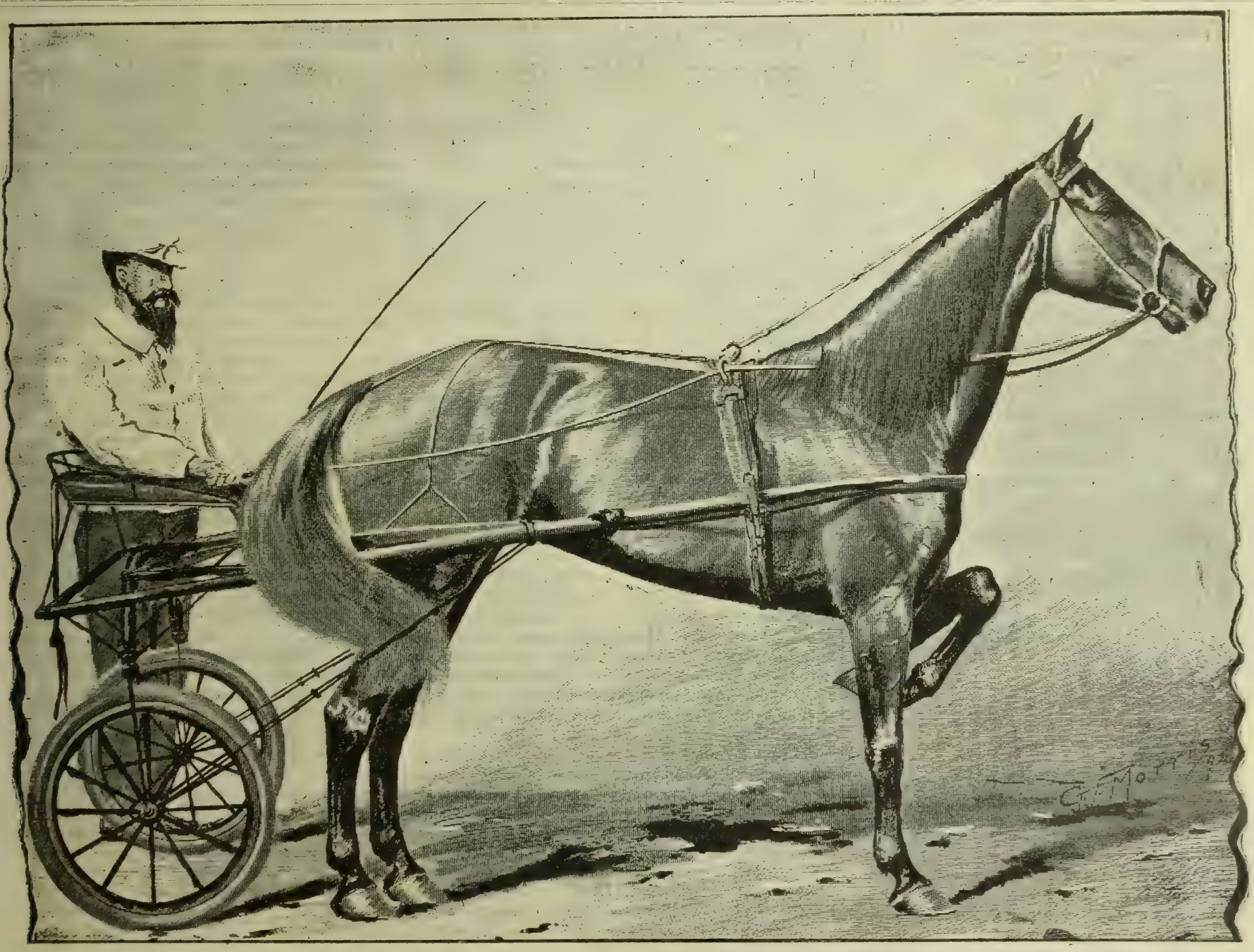
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PACIFIC RURAL PRESS

Vol. XLIV. No. 10. SAN FRANCISCO, SATURDAY, SEPTEMBER 3, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.



NANCY HANKS (2:05¼), QUEEN OF THE TROTTING TURF, AND HER PNEUMATIC-TIRE SULKY.

The State Fair Next Week.

Next Monday, Sept. 5th, the annual fair of the State Board of Agriculture will open in Sacramento. Unusual preparations have been made for the exhibitions. Exceptionally attractive inducements are offered to visitors and most liberal awards have been hung up for competition in all the lines of productive enterprise. The society, too, has succeeded in arousing greater popular interest in its efforts this year than ever before. All these facts indicate the entertainment and profitable instruction of visitors, and should assure exhibitors that their best efforts will be appreciated and rewarded by public favor.

Our columns have from time to time indicated some of the special features and unusual preparations for this year's fair. It may, however, be repeated in a general way that there have been notable improvements made at the park to better accommodate the display of livestock.

This includes both the speed contests and the exhibition of the finest specimens attained in the art of breeding all kinds of domestic stock. At the pavilion there has been found the necessity of adding to the already vast capacity of the building. We expect to see this year also a greater proportion of agricultural and horticultural produce, as compared with merchandise. There will also be the intensely interesting and important loan display of historic material, secured through the devoted efforts of Mr. David Lubin. This alone will be worth going the length of the State to see and to carefully study.

There is special significance in this year's fair in its bearings upon the California display at the World's Fair next year. There should be a grand rally of all those who expect to participate in the Chicago affair, either as local commissioners or as private exhibitors. There is no way in which so many valuable hints can be obtained as to what sort of material is best to show and how it can best be displayed. The State Fair this year will be a school of practical instruction to that end.

The Sacramento people seem to be cooperating with the State Board and Secretary Smith this year as never before. A large concourse of people is expected, and we understand that a committee will have headquarters at the railway station for the purpose of directing visitors to such accommodations as they desire.

The Queen of the Turf.

We are glad to be able to gratify the general desire to see the new queen of the turf, by reproducing from the *Breeders' Gazette* of August 24, a striking portrait of Nancy Hanks, and a picture of the new racing outfit with which she made her wonderful speed. Interest will perhaps be divided between the horse and the novel sulky, and it is in fact a good deal of a question how much of the second of time is to be credited to the horse and how much to the sulky, with its so-called pneumatic rubber tire. On this point the *Gazette* says: "Nancy Hanks had the advantage of a pneumatic-tire sulky, the latest accessory to the outfit of a modern trotter, and it is not to be doubted that this made a difference of possibly half a second in her speed to the mile. But by trotting in 2:07¼ she wiped out all existing records on both oval and kite tracks.

LATER—Just as we go to press comes the news that this wonderful mare has again lowered the record. On a kite-shaped track, at Independence, Ia., Wednesdey afternoon, she trotted a mile in 2:05¼.

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Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

SATURDAY, SEPTEMBER 3, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Harrows, Seeders, Plows, Etc.—H. C. Shaw Plow Works, Stockton.
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See Advertising Columns.

The Week.

The coming event casts its shadow before. This week's RURAL has to a certain extent been planned with reference to the State Fair which opens in Sacramento next Monday. We have endeavored to make some general statements about the conditions attending life in California which though already known to residents may not fail of interest as restatements.

There is also a very full review of California's leading agricultural products which will give even the resident new ideas, perhaps, of the industrial greatness of the State.

We incline toward these statements because the event of the State Fair seems naturally to suggest them, and because of the extra circulation of our paper there, copies will naturally come into the hands of those new to the State and may furnish them acceptable information. This copy will also serve well as a souvenir copy to send to friends in distant parts.

The RURAL is constantly gaining in public favor. The changes made in style and material seem to meet wide commendation. If you like the RURAL don't forget to speak a good word for it to the new comers, or to old residents who would be interested in our work.

THE ELBERTA PEACH.—Samples of California grown specimens of this famous eastern peach were shown at the Horticultural Society meeting last week by Leonard Coates of Napa. It is a very handsome yellow freestone, somewhat oval in form. How its value compared with popular California varieties is still to be determined. The Elberta originated with Mr. S. H. Rumph of Marshallville, Ga., and the original tree is 21 years old. It is a seedling of Chinese Cling, supposed to have been fertilized by Crawford's Late. Its hardiness seems to be well established at the East, and this may make it valuable in some parts of this coast.

Does Stirring the Soil Prevent Evaporation?

PLYMOUTH, MICH., Aug. 20, 1892.

TO THE EDITOR:—The theory prevails quite generally that stirring up the soil is a preventive of the escape of moisture by breaking off the small capillary tubes, through which moisture descends in rains and dews, and from which it escapes in dry times.

This is the notion or theory of many tillers of the soil, and during a drouth the cultivator is kept in motion, or the hoe, to loosen up the soil.

But do facts prove this to be a good practice? On the contrary, is it not a fact that stirring up the soil exposes it still more to the drying influence of the sun and the winds? Is it not true that land that is rolled or smoothed over, as is the custom with many, will retain moisture longer than where it is stirred up?

On a small plot of ground in California I raised a fine lot of vegetables that took first prize at the fair in Salinas, Monterey county. No cultivator was used and no water irrigation, but the hoe was kept busy, not digging up the soil but just scarifying the ground so as to cut off every weed just below its crown as soon as it made its appearance. A neighbor having crops in an adjoining field, not liking to hoe, kept the cultivator going, stirring up the soil, but his crops suffered much more than mine from the drouth.

For two years I had an excellent garden here in Michigan on the yellow pine lands of Muskegon county, with no plowing and no cultivating, but by simply raking the garden before planting with a steel-toothed rake; but no weeds were suffered to grow. One year, a family living in the house with me wanted to use part of the garden. A division was made, and their part thoroughly spaded up, so as to "beat me." As the weeds appeared they were dug up, boy fashion, with the corner of the hoe, instead of cutting them off at the surface or just below it. The result was, they had to depend on me for vegetables, as theirs was nearly a failure. There was growing on this farm last year a crop of corn where there were no weeds. A dry spell came, and the owner went to cultivating, turning up the soil so as to 'draw moisture," he said. In a day or two the corn began to wilt, and he had a poor crop.

While living on the sandy plains a few years ago, my crops suffered with others from the drouth, and I kept the cultivator going, stirring up the soil, but my crops wilted. Going into the road where the dirt had not been disturbed, the surface was scraped away, and just below, the ground was moist. Since then I have let my ground severely alone when there were no weeds. These, more than anything else, take moisture and nutriment from the ground.

My father always had an excellent garden, but he would not have a cultivator in his garden nor allow a weed to grow, but cut them off as soon as they appeared. If a cultivator were invented that would shave off the weeds at the surface instead of stirring up the soil to be exposed to the drying effects of the sun and the winds, the result, I think, would be better. The only advantage of stirring up the soil to any depth is to do it just at night, so that there may be a deposit of moisture from the air on the cool soil, but if stirred up early in the day and exposed to the sun and winds, it will be liable to become as dry as ashes.

J. S. TIBBITS.

The subject which our correspondent broaches is an exceedingly important and practical one, and we are disposed to indulge in a few comments.

Does stirring of the soil prevent evaporation? As a general proposition, yes. For proof of the general proposition, go into a well-cultivated orchard and vineyard and scrape aside the loose surface soil with your foot. You will find moist soil quite near the surface. Then go over the fence into the grain stubble and try your foot upon ground which has not been loosened since impacted by last winter's rains. You may dislodge a little little loose dirt. Then send for a pick and shovel (and another man, too, would be comfortable) and dig a hole. You may go three or four feet, or farther, and hardly find the color of moisture in the soil.

Take another proof of the general proposition. Many people know of young orchards or vineyards which have been allowed to go uncultivated, or have been carelessly and imperfectly cultivated. Right alongside of them have been well-kept trees and vines of the same age. The uncultivated trees have made poor growth, have a sickly appearance, and a part of them have actually perished. Those adjoining, well cultivated, have grown well, have a fresh, thrifty look, and will average twice the size of the best survivor of neglect. There is no clearer proposition in California horticulture than that proper stirring of the soil prevents evaporation, and therefore conserves moisture for the use of the plant.

This is the general proposition: how then can our correspondent's statements be true? We can conceive of such results under several conditions.

First.—In very loose, sandy land the deeper it is stirred by cultivation in a dry time the worse for the plant, for two reasons. Sandy land by its coarse materials is weak in capillarity. Water rises in a tube inversely as the size of the tube; that is, the larger the tube the shorter distance it will rise and vice versa. Soils have capillarity because the minute interstices between their particles act as tubes. The coarser the particles the larger the interstices or tubes. If the sandy soil be compacted, capillary action may increase so as to draw up moisture enough to sustain the plant. If it be disturbed by cultivation, not only may this be arrested but the loosening of the surface of coarse material will give the atmosphere freer access to a lower stratum of soil and the plant will be robbed in another way. These statements apply with special force to all the growths mentioned by our correspondent; garden vegetables and grains are usually rather shallow-rooting plants.

Second.—Waiting until drouth is imminent and then starting in to loosen up the soil is like hurrying off after preventive medicine when the disease has you in its grip. If cultivation is neglected as long as that, the soil is in such condition that its surface cannot be thoroughly pulverized. Probably the result in such work is generally to open the soil to more rapid evaporation. In time of peace prepare for war, so in time of moisture, while the soil pulverizes easily and completely, prepare for drouth by preparing a surface which has no capillarity, because the interstices in the loosened soil are too large to draw moisture. This shallow layer of finely pulverized soil also acts as a mulch in preventing free access of the air to the evaporating stratum beneath it. Moisture rises by the capillarity of the soil beneath for the use of the plant roots; it does not go farther, consequently evaporation is reduced to a minimum.

Third.—We are tempted to make a point on the phrase "stirring up" the soil which our correspondent uses. "S irring up" is not good summer cultivation. It may be quite different from stirring the soil, which is the true summer practice. Disturb the soil frequently, but do not throw up moist layers to the air and cover up dust and clods to rob the moist layers into which they are thrown. Disturb it frequently in summer, because in many soils there is a disposition to compact even without rain. It may not be immediately at the surface, but in a layer just below it. From this layer evaporation will then be rapid. The finer the particles of the soil—that is, the farther it departs from sand and the nearer it approaches clay—the greater the necessity for frequent summer cultivation even where neither rain falls nor irrigation water is used. When we advocated deep hoeing in garden-work, it was not to "stir up" the soil nor disturb the relative positions of the layers. It was merely to stir without exposing the moist soil.

Fourth.—On loose soils which need compacting and will, for the reasons stated above, retain moisture better for it, the roller is a good tool. A "rubber" or "smoother" or "clod-crusher" is the better implement where the compacting effect of the roller upon the moist layer of the soil is not desirable. We heard a man tell a roller agent at the State Fair once that he would not let him run his roller once across his orchard for the price of it. He was probably right in the kind, if he did exaggerate the money value of the effect which the roller would produce. And yet the roller on some soils might be worth its weight in eighty-cent dollars.

Fifth.—There are loose soils on which the shallowest kind of cultivation is best. Much of the cursing of California wheat growers for not plowing deep should return upon the curser for his ignorance. The man who gets an idea that virtue rests in a method irrespective of its applicability to conditions, does not know much of agriculture.

Sixth.—We trust our correspondent sees the explanation of his moist roadway and dry cultivated ground on those Michigan sand plains in what has been said.

Seventh.—Weeds are terrible thieves of moisture; there is no doubt about that. We cut them whenever they grow, and we have plenty of just such weedcutters as our correspondent describes now in use in California orchards. They have come into use since he returned to the East. But weed-cutting alone will not do in California. The surface will be ashey, but just below there is a hard layer which evaporates all that is brought up to it by capillary action almost as rapidly as it would go from the immediate surface. A slender-toothed cultivator, a narrow chisel tooth, or a duck-foot with a long, slim standard, which stirs, but does not "stir up," is needed as well as a weed-cutter. Some of the newer cultivators have the two combined.

Eighth.—Atmospheric moisture is best absorbed by a loose, finely-pulverized soil surface. In this country evaporation outdoes absorption over and over again during the season of driest air. No one would think of "stirring up" soil to get anything out of the air, unless it might be in the fog belt of the coast. Better keep what moisture you have in the soil so the plant can have the full benefit of it.

And now a modern preacher who gets to eighthly should have a contribution box shied at him. We desist with the subject only fairly introduced. Perhaps what we have omitted is more important than what we have said.

PHILLIPS' CLING.—J. T. Bogue of Marysville sends us the finest sample of Phillips' Cling peach we have yet seen. They are large and of most beautiful coloring. The canning excellence of this variety has been frequently mentioned in the RURAL.

A TULIP SHOW has been held annually at the Orange Tree Inn, Butley, a small village near Macclesfield, England, for the past 67 years.

THE Government of Portugal has sanctioned the importation of 12,000 kilos of wheat monthly for ten months.

From an Independent Standpoint.

Just before daylight on Monday of the current week, Louis B. McWhirter, a lawyer and editor of Fresno, was called from his bed into his yard by parties unknown and there murdered. His dead body was found shortly after by members of his family, but there was nothing to indicate the identity of the assassins. The explanations given of this foul murder are even more extraordinary than the murder itself. McWhirter, it is said, was one of the leaders in an effort to purify the local politics, and his death was partly in revenge and partly to get him out of the way. McWhirter, it is stated further, had for some weeks past realized that his efforts for political reform were putting his life in peril, and in anticipation of assassination had placed a large insurance upon his life for the benefit of his young wife and child. It is hard to believe that there can exist in a California city a "political situation" so rotten and criminal that assassination is one of its natural and expected methods. We should, indeed, be incredulous if the testimony were not both positive and of unquestioned respectability. That it is a fact, is terrible evidence of the degradation to which our politics has fallen. The people of Fresno, who have suffered this condition of political affairs to grow up, are by this tragedy profoundly moved, and it is reported that a vigilance committee has been organized among its "best citizens" to avenge McWhirter's murder, and to drive out the disreputable and criminal element. Here again is a mistake comparable with the previous wrong of too long toleration. The way to restore respect for law is to stand by the law—not to organize against it. A vigilance committee of respectable people will make lawlessness respectable. If the "best citizens" of Fresno will organize into a society to assist in the enforcement of the law, they will soon rid their city of its criminals; but if they act independent of the law, their violent reform will be but a spasm which, when the times have settled again into quiet, will leave the law less efficient and less respected than before. The only way to make the law respected is to obey it and to enforce its authority. A sure way to put it in contempt and to destroy its usefulness is for the "best citizens" to disregard and trample upon it.

The rioters at Buffalo, N. Y.. and in the coal districts of Tennessee, who appealed to brute force for the settlement of the difficulties between themselves and their employers, have been forced to the wall. Fortunately, in this country whoever assumes to be superior to the law always gets convinced before the enterprise is through that there are more law-abiding than lawless people. Perhaps after awhile the trades unions will learn that it is not the policy of this country to allow any organization to override the law of the land and the rights of all the people of the country to liberty and the pursuit of their own interests in their own way. The lesson has been a stern one. Something like twenty of the rioters at Buffalo were killed and considerably more than that number have been killed in Tennessee. At Homestead, Pa., a score of men are under indictment for murder, and thus matters now stand. Hereafter let it be hoped that those who have grievances will be content to rely for their correction upon moral forces and legitimate and lawful methods. It is a natural presumption that whoever resorts to violence in matters of personal difference is in the wrong, and public sympathy and all the force of organized society are now, and always will be so long as civilization lasts, exercised firmly and with vigor and determination in opposition to them. It is to be hoped that trade unionists have learned their lesson.

A press dispatch from St. Paul, Minn., states that the Great Northern Railroad Company has given notice of its withdrawal from the Transcontinental Association, to take effect Jan. 1, 1893. The president of the Great Northern, Mr. J. J. Hill, in explanation of this announcement said to the reporter that the withdrawal of his company is to place it in a position upon the completion of its through line to the Pacific Coast, where it may adopt a policy with respect to rates which will promote the interest of the cities which it reaches, and which have heretofore suffered from discrimination. The Great Northern will have its line completed to Puget Sound by the first of January. Its entire line is controlled upon the basis of stock less than half that of any other transcontinental line, and it can therefore pay dividends on receipts that would be merely fixed charges for any other line. The Great Northern has this advantage over every other transcontinental line, namely, that it has been built on business principles, and that its capitalization represents only the value of the road. No "water" has been forced into its organization, therefore it does not have to earn dividends on an enormous, inflated value. Here is a point where the railroad companies, while dealing grossly with the public, are enabled to make a specious showing. Nearly every railroad in the country is capitalized at two or three times its actual value, as measured by what it would cost to duplicate their roadbeds and rolling stock, and it is the effort to make interest upon this enormous bogus capitalization that enforces excessive charges for freights. Mr. Hill of the Great Northern is quoted as saying that his road, built upon business principles and operated upon business principles, can carry freight from Chicago to the Pacific Ocean cheaper than the same freight can be carried from New York by steamer through the Isthmus Canal. We see no reason to doubt this statement. Possibly after all, if the canal were actually built, the railroads, if reorganized and operated on business principles, would be able to successfully compete with it with freight charges less than one half what they are at the present time. If the Great Northern will stick to its plan and will carry freight for what the service is actually worth, it will result in great benefit, not only to its immediate termini at Puget Sound, but to California, for the water freights down the coast can be made so cheap as to add little to the charge for transcontinental transportation. It would be a curious reversal of the order of things which prevailed ten years ago if, in 1893, San Francisco should get a large share of its heavy freights by way of the northern route and Puget Sound.

The United States is in imminent danger of a visitation of cholera. For several weeks this most dreadful disease has been epidemic in Russia, and the peasants, poorly housed and weakened by a season of famine, are dying at the frightful rate of from five to eight thousand per day. Two weeks ago the plague appeared in Germany, and in Hamburg it has already become epidemic. There, in spite of heroic efforts on the part of the municipality and the most skillful physicians of the empire, the death-rate averages over 30 per day. A report to our Government on the 24th inst., last Wednesday, says: "There have been 300 cases and 120 deaths, 65 deaths occurring to-day. The patients, as soon as reported, are quickly taken by special conveyance to the hospital cholera wards. People living in the streets through which the conveyance passes, shut the doors and windows of their houses until they think the danger of contagion is passed. The dead are taken to public mortuaries, and houses in which patients are found are carefully disinfected. Regulations and instructions for the people are publicly placarded throughout the city." From Amsterdam, Antwerp, Bremen, Paris, Havre, and nearly every other European city of importance north of Italy, reports come of the presence and rapid spread of the plague, and it is not to be doubted that in another month it will have overspread the whole of continental Europe. The English Government has taken energetic measures to protect Great Britain, but the blockade has not been entirely successful. It has been impossible to protect the seaport cities, and there have been several deaths at Glasgow, London and Swansea. A London dispatch of the 29th (Monday) says: "There is no doubt that Great Britain is to have a visitation of the cholera scourge. From Gravesend, Swansea, Glasgow and Dundee, towns in England, Scotland and Wales, reports come of deaths from the disease, showing that the efforts of health officials to keep it out of the country have proved fruitless. This afternoon comes a report that a person has died from Asiatic cholera at Bolton, a large manufacturing town 12 miles northwest of Manchester. The place is one of the principal seats of English cotton manufactures, and thousands of mill operatives live there.

For the past three days (we write on Tuesday) the larger cities of the country have been preparing for the expected plague by energetic efforts at cleansing. San Francisco has already taken the alarm. At the suggestion of the city health officer, the mayor has ordered a general clean-up of the streets and a thorough flushing of the sewers. A commission has been issued for the inspection and purification of Chinatown, and the work has already begun. California has a great advantage in being on the further side of the continent, but it is remembered that when cholera was last prevalent in the United States, we did not escape. What once happened may easily happen again, and it is the part of wisdom to make preparation by establishing the best attainable sanitary conditions. From its situation directly upon the ocean and in the very teeth of the daily ocean breeze, San Francisco has less to fear than the interior where it is hotter and where general sanitary conditions are not so good. It was in the Sacramento valley, notably in the cities of Sacramento and Marysville, that the plague raged most fiercely at the time of its former visit. It was in 1850, the second year of the cholera invasion in the United States, that the plague followed up the army of immigrants which on the 1st of July was scattered for 2000 miles along the route from St. Joseph, Missouri, to Sacramento. It reached the latter city about September 1st, and remained with it until November. Hundreds died uncared for under trees and in out-of-the-way places until the Howard Benevolent Society was organized to care for the victims. Men died in the streets of Sacramento like sheep with the rot. At Marysville the same conditions prevailed. At San Francisco there were a few cases, but the disease did not become epidemic, while in the higher regions east and north of the Sacramento there were no cases at all.

With cholera epidemic at every seaport on the Continent and all but epidemic in the English ports, there is naturally general and profound alarm in the United States. This feeling was increased yesterday (the 29th) by the receipt at Washington of cablegrams from the American consuls at Glasgow, London and Liverpool, warning the Government to quarantine all steamers from Europe and to put the Atlantic cities in a state of defense. The feeling at Washington is illustrated in the following, taken from the dispatches published Tuesday of the current week:

WASHINGTON, August 29.—The treasury officials no longer try to conceal their fears that cholera may be introduced into this country at any moment. Acting Secretary Spaulding admitted as much to-day after receiving a cablegram from Hamburg, via the Department of State, to the effect that the disease is still on the increase. His anxiety was apparent when he read the cable news from the infected districts.

"It is possible," said he, "that cholera may make its way into this country in spite of every effort we are making to prevent it. The Government officials will exercise the utmost vigilance, as far as their jurisdiction extends, but the local and municipal authorities also have an import duty to perform.

"Local authorities in New York and in other cities where immigrants are landed should at once set to work to clean up the city and wipe out those resting places where cholera would first seek if it once obtained admission to our shores. It seems as if the dread disease was making direct for this country, and it becomes a matter of self-preservation for us to remove every pretext for it to linger with us should it come."

Surgeon-General Wyman was an early caller at the Treasury Department and he had a long and earnest conversation with Mr. Spaulding on the subject. The doctor said the situation is becoming more serious as the disease spreads. He had hoped that to-day's reports from abroad would show a decrease in the number of cases.

He said that New York had a first-class quarantine plant in charge of a capable physician, Dr. Jenkins. Boston, Philadelphia and Baltimore also have well-equipped quarantine stations. Charleston, S. C., probably has the best plant of any of the quarantine stations along the Atlantic coast, because of the fear of yellow fever coming from the South.

While there is no disposition at this time on the part of the Treasury to criticise the quarantine system provided by the several States, there is nevertheless a general feeling that the national quarantine system probably will be more effective in the emergency like that now threatened. Local quarantine officers are frequently selected as a reward for political service rendered, and it is said that immigrants are sometimes passed through quarantine at the instance of influential politicians.

Santa Clara Valley Fruit Sales.

CAMPBELL, Aug. 29, 1892.

TO THE EDITOR:—The Santa Clara County Fruit Exchange sold all the Camel brand of apricots, except one carload of fancy goods, at 16c for extra; 15c, first-grade; 14c, second-grade, in boxes. For the fancy lot, 16c in bags has been bid, but not less than 17c will buy them. Nearly all the apricots in the valley have been sold.

The same day the Camel brand of apricots was sold, they were selling in New York at "13 to 13½ in sacks, f. o. b. California, three-quarters sight draft, balance on arrival."

The Fruit Exchange sold for spot cash as above. These figures are worthy of study.

The difference in the price the fruit was bringing in New York and in the price paid to the Fruit Exchange on the same day is shown above. I can hear of no prunes for sale at less than ten cents for the four sizes.

The business of the Santa Clara County Fruit Exchange is being wholly done at Campbell, Cal., where samples of fruit, nuts, etc., may be left by the stockholders for sale, stating the quantity and price asked. They will be sold if the price asked can be obtained, otherwise they will be held subject to the order of the owners. F. M. RIGHTER,
Ass't Manager Santa Clara County Fruit Exchange.

THE PURE FOOD SHOW.—At its meeting last Friday the State Horticultural Society decided to make an exhibit of California dried and canned fruits in the Pure Food Exhibition which will be held in Madison Garden, New York city, in October. A committee has been appointed who will have the matter in charge. The exhibit is not to be large, but of peerless quality. The society desires contributions of this kind of fruit products, and correspondence can be had with the chairman of the committee, B. M. Lelong, 220 Sutter St., S. F.

NANCY HANKS, in going a mile in 2:07¼, covered a distance of 41½ feet per second. It is good, moderate, ordinary railroad speed.—*Cincinnati Commercial.* That is about one-half faster than California railroad time.

Weather and Crop Bulletin for Week Ending August 29th.

[By W. BURROWS, Acting Director of State Weather Bureau.]

The weekly report of William Burrows, acting director of the State Weather Bureau, shows that there has been no material change in any feature of the crop situation since the issue of last week's bulletin, there having been a continuation of the same favorable conditions prevailing for the last several weeks. No rainfall has been reported from any part of the State.

The temperature has apparently been very nearly normal (perhaps slightly below) in all districts.

The seasonable temperatures for the past week have, to a considerable extent, offset such slightly injurious effects as may have resulted from the hot wave of the preceding week, and all agricultural operations have apparently gone forward with the most satisfactory results.

Late peaches and prunes are generally reported to be ripening on time and satisfactorily.

Harvesting and threshing are practically finished.

Hops appear to be ripening somewhat slowly, although picking has begun in some sections; and, while specific information on the subject is meager, it is fair to assume, in the absence ot adverse reports, that the outlook has undergone no considerable change, and that the prospect remains good.

The following are reports selected with reference to counties:

HUMBOLDT.—*Eureka*—Week has been very favorable for harvesting, and for all other farm work. No change in the crop outlook since last report, except in the potato crop, which promises to be larger than it did a few weeks ago.

Blocksburg.—The hot spell lasted three days. Grasshoppers are plentiful in spots and have destroyed three or four gardens and this year's growth of some young orchards. Threshing begins next week. The grain is good in quality and quantity. Fruit is scarce, but orchards are making fine growth and are healthy.

BUTTE.—*Palermo* — Temperature about the normal. The peach crop is all gathered, except a few late varieties. The grape crop is ripening fast, and there is a large crop of both table and raisin grapes.

LAKE.—*Upper Lake*—Threshing and hay-baling are in progress. There is rather a short crop of hay, late peaches and prunes being only one-third of a crop. Grapes promise to ripen about on time; the latter look well, but will be late.

COLUSA — *Williams*—The conditions have continued favorable during the past week.

Willows.—Wheat is about all harvested, and the crop is about 85 per cent. Barley is all harvested, and will turn out about three-fourths of an average crop. There is a full crop of peaches and pears and about one-fourth of a crop of prunes.

SONOMA.—*Forestville*—Weather cooler and hops ripening slowly. Picking will probably begin soon after September 1st. The peach crop is nearly all gathered. Prunes are light.

Healdsburg—The three hot days ten days ago burned the grapes up badly, and we will have about half a crop. Prune-drying is in progress, and the packing and shipping of Bartlett pears.

NAPA.—*Napa*—Cold mornings, with high fog, have prevailed during the week, with warm sunshine in the afternoons. All fruits are doing well. The fair of the past week was a great success.

SOLANO.—*Vacaville*—The weather for the past week has been unusually hot, and in many sections has injured the grape crop. The hot wind has caused pears and peaches to drop considerably.

SACRAMENTO.—*Franklin*—The weather for the past week was very pleasant, and the sunshine about normal. Hop-picking has begun. Grapes are of good quality, and the crop about average. The grain harvest will be finished within a few days, otherwise nothing doing.

SANTA CLARA.—*Gilroy*—There has been the average amount of sunshine during the past week, which was beneficial. The heat last week did less damage than it was at first feared had been done. The cool weather of this week has been beneficial. Grain is nearly all threshed, and has yielded well.

MONTEREY.—*San Ardo*—After the great hot wave of last week the weather has moderated, and is now quite agreeable. Highest temperature 93°, lowest 46°. All harvesting is over, with very light crops. Fruit is very small, particularly peaches.

SAN LUIS OBISPO.—We have had a cool week to offset last week's very warm weather. The bean crop has recuperated and promises well. Threshing is coming to a close. Prunes are coming on.

TEHAMA.—*Red Bluff*—Temperature above the normal, except on Tuesday last. The northerly winds have materially hastened the drying of fruit. Weather favorable to all fruits.

FRESNO.—Weather cloudless, and temperature 2° below normal. Raisin grapes show from 20 to 25 per cent. sugar. Packing begins this week.

LOS ANGELES.—Peach and prune drying continues. Raisin grapes are generally late, and curing will not begin for some time.

Santa Barbara County Notes.

CARPINTERIA, Aug. 20, 1892.

TO THE EDITOR:—The shortage of rainfall during the past winter and spring is now being felt by fall crops very severely. The walnut crop which gave promise of being heavy, has been shortened in very much. Whole orchards will have nuts that will scarcely pay for gathering. The crop of merchantable walnuts will, therefore, be very short. Beans are ripening prematurely with but few beans to the vine. This fact, together with the unusually small acreage planted this season, should stimulate prices to a high basis. Corn is another staple crop that will not average more than half a crop. Barley, for the amount of acreage, turned out very well, also some wheat in the eastern portion of the county.

Considerable preparations are going on toward gettting up a good exhibit of the productions of the county for the World's Fair.

The lemon-growing industry is bound to become a prominent business here. In Montecito valley the immense lemon packinghouse being built on the Crocker ranch is nearing completion. This fine building is made mostly of stone and glass and is, doubtless, the finest building of the kind in the world. The large orchard set out by Colonel Crocker is doing well. In Carpinteria valley, also, the industry is being pushed. Mr. P. C. Higgins has about 20 acres set out and irrigates them by pumping water from an immense open well, which well is in turn filled by several artesian wells bored for that purpose by Mr. Higgins. Hon. Russel Heath is building a large reservoir in which to store water to use on his lemon trees of which he has this season put out a good many. Major Frithian of New Jersey, has bought the Hall ranch and is cleaning it up preparatory to setting out lemon and olive trees. There are also many smaller lemon orchards being put in throughout this vicinity.

More expensive machinery and buildings are being added continually to the asphaltum works at Carpinteria, and the business is becoming an important one.

The Boulevard work at Santa Barbara is progressing slowly. It will be a grand drive by the ocean when finished. Several franchises are being petitioned for. Quite a flow of gas and artesian water has been struck by the the Santa Monica Oil Co. in their well at Carpinteria.

L. B. CADWELL.

Another Week in the Beet Fields.

The week just past has been by far the most successful one we have yet seen in Chino, and we feel entirely safe in saying the most successful, everything considered, that has ever been experienced at any factory in America. In the six working days ending Wednesday night there were delivered, in round numbers, beets, as follows: Thursday, 325 tons; Friday, 366; Saturday, 417; Monday, 421; Tuesday, 425; Wednesday, 456. The total for the six days was 2411 tons, or an average of 401 tons per day. Anyone who has had experience in delivering and weighing produce will understand that this requires some lively work.

The past few days have been somewhat cool and not favorable to the development of a high percentage of sugar in the beets, yet the analyses have been very satisfactory, showing a good quality throughout. The following are the results of a few analyes made this week:

	Sugar.	Purity.
J. M. Craw	14.4	79.2
A. J. Young	14.3	79.9
E. R. Robertson	13.5	82 7
W. A. Lyell	13.9	80.8
M. D. Herring	14.0	81 2
R. Gird	16.6	84.9
R. Gird	15.6	82.4
R. Gird	15.8	82.4
R. Gird	15 9	83 9
—— Scott	15.3	84.7
E. R. Robertson	14.3	81.9
B. L. Musseter	15.9	84.4
W. A. Lyell	14.3	82.5
L. H. Young	14.6	81.1
T. Lawson	14.4	84.0
E. R. Robertson	13.8	82.9
R. Gird	16.1	84.5
R. Gird	15.1	83.7
R. Gird	15.5	84.9
R. Gird	17.5	85.2

Some remarkably good yields are reported, a number of fields going from 20 to 25 tons to the acre. Jacob Schaffer reports that from 4¾ acres he harvested 104 tons, or 22 tons per acre. The average percentage of sugar was 15, making $4.25 the price paid. This makes $93.50 per acre as the returns from that field. Mr. Schaffer is now at work on the remainder of his beets, and he will realize a splendid profit throughout. We hope in a week or two to publish itemized accounts of expenses and returns from a number of farmers.

On Saturday and Monday Mr. Gird paid his labor accounts for July, amounting to $4400.21 on the beet fields alone. This is not as large an amount as was paid during some previous months, as harvesting did not commence until the 11th of the month, when the force was largely increased. There are now 200 men on the pay roll. The stimulating effect of this industry is being felt far and wide. Between 300 and 350 men are employed altogether, and several hundred families are building for themselves homes where the foundation for lasting prosperity is well-established.—Chino Champion.

Shorthorns in England.

Our English exchanges give accounts of four remarkably good sales that took place in the months of June and July last, when several animals were bought for exportation to France and South Africa.

At Mr. Holford's sale, held during the week of the Royal Show, 23 animals averaged $317, the highest-priced animal being Duke of Leicester 18th sold to Earl Bective for $1050. He also bought the next highest-priced animal, Duchess of Leicester 19th, for $970. There were eight Airdrie Duchess cows and heifers and one bull that sold for an average of $565 each.

Earl Bective and Mr. Holford were purchasers of some of the highest-priced females at the New York Mills sale in 1873, and both have been steadily breeding cattle of Bates blood ever since. The above sale was preceded by a few days by that of 39 animals belonging to Mr. A. H. Lloyd and all of the so-called Bates tribes, which sold for an average of $237. The highest-priced cow in this sale was also of the "Duchess" tribe—Duchess of Surrey 3d—that sold for $1000.

At the close of the sale, Mr. Thornton, the auctioneer, "impressed upon his friends around the ring that this sale must be taken as a turn in the tide, because it shows clearly enough that there are buyers of good Shorthorns at reasonable prices, and that the trade will again come round when there will be 'money in them.' All things considered, the sale must be deemed a good one."

The next sale was that of 53 head belonging to Mr. Hugh Aylmer of West Dereham Abbey, who has long been known as one of the most successful breeders of Shorthorns in England. These cattle differed from those of the two preceding sales in that they were of Booth blood. The 53 head sold for an average of $179 each. Among them were 15 bulls whose average price exceeded that of the females by $61 each, which is always a sure and certain sign of good and useful cattle—that is, when the bulls make a higher average price than the cows at public auction, it shows that that particular blood is wanted.

That was the case at Mr. Holford's sale, where the five bulls sold averaged $71 per head more than the 18 females.

The next sale to be noticed was that of Mr. Trethewey, in the county of Cornwall. One peculiarity of this sale was that the 38 females were all of one family, known by the name of Ruth, with numbers attached to each female, which, in the hands of Mr. Trethewey, have reached up to Ruth 250th. The family has been persistently bred for usefulness, regardless of fashion, and has attained some notoriety on these grounds, as shown by the results of the sale.

Forty-five animals sold for an average of $184, being lower than the average of the two sales of Bates-bred herds and a little higher than that of the one sale of Booth-bred cattle. However, the highest price paid for a "fashionably" bred Duchess cow did not exceed that of 200 guineas paid for the useful and no doubt beautiful Ruth 214th, bought by the Queen. While the highest prices, as a whole, have been made by the Bates-bred Shorthorns, being given chiefly by persons partial to that blood, the popular verdict is for utility, as confirmed by the results of several sales that have recently taken place both in America and England.

The New Beneficial Insect Not Multiplying Satisfactorily.

Recent observations at the south seem to indicate that the new predaceous insects sent by Mr. Kœbele from Australia are not multiplying as fast as desired at the south. From what we have seen in the breeding cages at the headquarters of the Board ot Horticulture in this city, we considered their increase rapid, but this does not seem to be so thus far in southern California. We find the following article on the subject in the Los Angeles *Times* of August 13th:

Much has been said touching the efficacy of the new Australian ladybugs (*Orcus Chalybeus*, *O. Australiasæ*, and *Leis Conformies*), in feeding upon the injurious insects affecting citrus and deciduous fruit orchards. The growers have been given to understand that this group of predaceous insects would prove as effectual in keeping the red scale of the orange and woolly aphis of the apple and peach in subjection as the *Vedalia Cardinalis* did with the white cottony cushion scale. Since these new parasites have been "planted" in our orchards, now some six months, it is interesting to know just what they have accomplished. Yesterday Horticultural Commissioner John Scott of Los Angeles county, Prof. D. W. Coquillette of the Department of Agriculture (Division of Entomology), a number of prominent orchardists and a coterie of newspaper, men made a tour of all orchards in which these parasites had been put, and made minute and critical observations of their movements.

The first place visited was the orange grove of Albert Kercheval on Lemon street. Here were found all conditions calculated to be favorable to the ladybirds. The orchard is well protected, and the supply of red and yellow scale ample to support great numbers of the parasites. What are the facts and actual results in the case? On Nov. 28, 1891, Prof. Coquillette had constructed a tent over an orange tree badly infested with scale, in which, between that date and January 23, he liberated 82 beetles. On the latter day, in addition to this number, he liberated 325 beetles in the open orchard, eight on February 20th and 27 on April 15th, in all 442 beetles of *Orcus Chalybeus*. And what is the result? Simply this: The bugs have not multiplied at all; indeed, of the entire 442 it was with difficulty that a dozen of the beetles were to be found, while but few of the eggs and larvæ were to be seen.

The parasite of the woolly aphis (*Leis Conformies*) to the number of 170 were liberated in the apple orchard of Samuel McKinley on May 14th, but a careful inspection failed to reveal a single specimen.

The next orchard visited was that of William Niles, on Washington street, where 540 of the ladybirds were liberated on May 14th. Here the conditions for their breeding are exceptionally favorable; the orchard is well protected frem prevailing winds, while the trees are quite badly infested with yellow, red and black scale. On the tree on which they were liberated only a few beetles were to be found; there was no evidence that they had multiplied at all.

Similar results were observed at other points, and the consensus of opinion among the investigators was, that as effectual parasites of the red-scale and woolly-aphis our new Australian ladybirds have proven a failure.

Allowing for the fact that, in six month's time, the *Vedalia Cardinalis*—of blessed memory—had practically cleaned out the white-scale in whole sections and that it had multiplied until there were literally millions throughout the orange-growing sections, it would certainly seem that the failure of the new bugs to breed was not the result of improper care. Possibly the climate is at fault, but allowing again for the fact that the Australian climate closely resembles this, that can hardly be the cause. Orchardists who are most familiar with the subject have no faith in the bugs as effectual parasites, and place no hope of their ever proving effectual. The horticultural authorities think it is to be regretted that so much has been printed in relation to their wonderful cannibalism, which actual experience has taught is at variance with the facts.

ONE HUNDRED AND TWENTY THOUSAND acres of land will be sold next month in Michigan, and the proceeds will go to the college fund.

CALIFORNIA THE PEERLESS.

A Glance at the Conditions of Her Rural Industries.

PRODIGIOUS DEVELOPMENT OF THE FRUIT INTEREST.

STEADY GROWTH OF DAIRYING AND MISCELLANEOUS AGRICULTURE.

Review of the Situation as to Grain-Growing, Horticulture, Viticulture, Hay Production, General Gardening, Etc., with Statistics Showing the Present in Relationship with the Past.

An Attempt at Applied Literature.*

There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy.
—Hamlet.

There is a land, of every land the pride,
Beloved by Heaven o'er all the World beside.
—James Montgomery.

The name California has always shone in the eyes of the world with peculiar luster. The first mention of it to many ears was coupled with a promise to satisfy the most absorbing desire of mankind. A land of gold; not a grain of gold at the bottom of a crucible of toil and self-denial, but gold in stones, in running brooks, in everything. Even dreams of gold have led mankind through vales of poetry, across border lands of romance and out upon fields of conquest. California gave not a dream but a reality, and at less price than the race has paid for dreams. Ophir and El Dorado were plucked from the haze of fable and located upon the map of California. Out of obscurity profound the land became immediately famous throughout the world. From every sea came the Argonauts. Their deeds and experiences were of absorbing interest everywhere. The results of their venture and enterprise were unique and varied, and wide-reaching too, for in exalting their own fortunes they depressed the standard of values of a world.

The glamour of the gold days gave California world-wide fame. The announcement of other unique and grand possessions soon added to her repute. No region of the earth has ever been so kindly thought of or so earnestly yearned for. None has ever answered so fully the greatest anticipations. None has been able in four decades to develop four distinct lines of wealth, each seeming greater than its predecessor, and to retain them all in its fifth decade as cofactors in its prosperity. Gold, animal products, wheat, fruit—each in turn has made California great in the eyes of the world. Such a land is the pride of the world; a land thus endowed is exceptionally blessed by the Creator.

Where smiling spring its earliest visit paid,
And parting summer's lingering bloom delayed.
—Oliver Goldsmith.

The climate of California is more precious to the Californian than his wealth. Most residents have a consciousness of this which is axiomatic. If others need proof it is found in the experience of those who have gone forth to seek greater success in more populous centers. All the world may be the place for business, but California's the place to live. The thousands who have here exchanged strength for weakness, and twisted into strong cords life threads which had well nigh broken, are also living witnesses of the boon of California residence. A year where all days, except a few of actual rainfall, are suited to outdoor work; where, except at great altitudes, the ground is never frozen nor snow-clad beyond the reach of an hour of sunshine, and even this but seldom; where all save the most tender plants are untouched of frost; where some deciduous trees become evergreen and some annuals perennial; where every month of the year has its own fruits and vegetables in the house-garden—such are some of the joys of California life. This is indeed the land where spring does not linger in the lap of winter, for a California winter is too weak to hold so buxom a lass. It is difficult to tell where California autumn ends and spring begins. The orchard fruits are still red and golden while the new grass shoots up beneath the trees, and the winter pruner regales himself upon the rich clusters of grapes which are still clinging to the vines. These fruits, too, may still be in the air while the orange, the great spring fruit, ripens for the Christmas table. The last rose of summer loses her melancholy in the company of the gorgeous chrysanthemums, and the late chrysanthemums get the first kiss from the spring roses. Surely if the poet seek a land where autumn and spring join hands to banish winter that land is California.

But this fact is not merely of sanitary and sentimental account. The length of the California growing season is the secret of the early and great productiveness of our trees, the precocity of our animals and the weight of their products. The plant has three quarters of the year for active growth. The animal gives but a minimum requirement of nutritive material for maintaining its bodily heat. The enterprising man passes no time in enforced idleness, and but little in labors which are protective and not productive. In wintry climates it takes all summer to get enough food to exist through winter, and winter is but weary watching and waiting for the springtime. The great growth and productiveness of California's animal and vegetable life is but the natural result of embracing a great opportunity.

Blossoms and fruits at once the trees adorn
With glowing blushes like the rosy morn.
—James Thompson.

There could hardly be a more pointed allusion to another phenomenon which attests the fostering effect of the California climate upon the life processes of the plant. Of course, the citrus fruit trees are blossom-clad and fruit-laden at the same time, a sight familiar to sojourners in semi-tropical lands, but the poet alludes to deciduous fruit growth. It is not unusual here for rosy apple bloom to appear while the apple is itself ruddying. The second and even the third setting of apples is frequently noted in the milder parts of the State. The second crop of pears is often of considerable value. The second crop of grapes furnishes the largest specimens, but for economic considerations on the part of the grower, it would usually be better for the vine to throw all its energy into one crop. The fig has a continuous succession of fruit, with two or three periods of greatest abundance. The almond often carries its somber-hued nuts among the gorgeous blossoms of the following year, and, in some localities, the pecan nut, missing the frost to sever its hold, clings to its parent tree while it dons its new suit of leaves. Many similar phenomena could be cited. The significance of them all lies in their testimony to the mildness of the clime and the length of the growing season, the industrial value of which is greater in its other manifestations. The climate of California deals very gently with unseasonable things; perhaps it invites them, but fortunately they are either of some value or of little harm. Continental climates invite activity in the plant in midwinter by a false spring and then besiege the confiding action with hail and sleet and crush it with low temperature. California is not so cruel. The kindly lady usually cherishes all confidences which she invites.

Now golden fruits on loaded branches shine,
And grateful clusters swell with floods of wine.
—Alexander Pope.

The orange and the grape; two great fruits of California. Together they vied in the refreshment of the devoted *padres* more than a century ago, and they were the first fruits to regale the Argonauts after their long courses by sea or plain. They were the first fruits to show commercial importance and they too won for us our first honors at distant expositions. California should always remember with gratitude the early welcome and the early encouragement which the orange and the grape bestowed upon her in pioneer days. But fortunately California is still the land of these fruits and they have multiplied and advanced in commercial importance beyond the lines of early prophets. That over 4000 carloads of oranges have been sent overland in a year, and that raisins enough to practically displace the Spanish product in the United States, have been produced in California, could hardly have been foreseen by those who first took up these lines in a business-like way about fifteen years ago. And yet these old fruits are but at the beginning of their career in California. Great areas have been found well-fitted for them, while but a short time ago a few narrow localities were held to monopolize the needed conditions. Citrus fruits, raisins, wines, table grapes, California will fill the country with them.

A soothing calm on every breeze is borne,
And softer sings the linnet from the thorn.
—John Leyden.

The tranquillity of California is one of her greatest charms. Thus far no great atmospheric, social or industrial disturbances have caused her hardship or mourning. There have been periods of apparent disorder, but it has been the evil doers who suffered for their crimes; there have been times of foolish ventures, but their victims were silly speculators who sought a competence without labor; there have been hardship and oppression by monopolies which thought themselves greater than the people, but the way of these transgressors is daily becoming harder. All these obstructions to progress and prosperity have existed elsewhere, but the more serious dangers of anarchy and riot and appalling disaster through natural phenomena have not threatened us.

A soothing calm is also borne upon every breeze of public opinion. There is perhaps no State in which the law is held in higher esteem. The most stirring local issues have been quietly adjusted. We have no doubt been fortunate in obtaining from the outside world the best elements which immigration carries. Distance has favored us. In early days only the fittest in strength and spirit survived the long journey. More recently the cost of transit has quarantined us from the pauper hordes which Europe has poured upon the Atlantic coast.

Our peace comes both from what we have acquired and from what we have been spared. Though we are but a small people, there is no State where the average of intelligence is higher, the provisions for education better planned or more liberal, nor where the productive industries, which enlist and repay the highest skill and research, havee produced greater value per capita of population. In short, in every way we enjoy the peace of well-requited industrial activity, and are laying the foundations for a future growth and development which we trust will be like those now present, but more abundant.

And caught the fragrance which the sundry flowers
Fed by the streams with soft, perpetual showers.
—W. Wordsworth.

The profusion of flowers is one of the charms of California. Nowhere, probably, is the flower-grower so richly recompensed for his care and labor, and nowhere is floral taste so richly gratified. The well-kept garden is, in fact, a perpetual delight, and the sky of California is sufficient covering for many growths which in other parts of the country are closely housed. But it is the wild flower which pleases the poet, and in her wild flowers California can rest her claim for eminence. There are few spots where "soft, perpetual showers" can be provided, but the wealth of the California flora and its marvelous adaptation to local conditions are common but very interesting facts. Judge, if you please, by the splendor of individual growths or by profusion, or by expanse of floral carpeting upon the plains or hillsides, or by the perfumes which fill the air, and the verdict, upon the testimony of disinterested travelers, will be a tribute to the grandeur, beauty and variety of this most entrancing resource of California.

The waving verdure rolls along the plain
To welcome back its playful mates again.
—J. G. Percival.

Akin to the profusion of flowers, and like it a winter and spring product of the State, is the richness of the natural verdure. The gift of the early rains, its growth advanced as the penetration of moisture deepened until the mounted vacquero was forced to seek an eminence to locate his cattle in the sea of green, the billows of which he could not otherwise see over. Those were the days of great herds in the beginning of our agriculture. We doubt if greater seas of waving verdure were ever spread upon this continent than on the great valleys of California. Overpasturing and the transformation of wild fields into cultivated areas have made serious inroads upon the natural pastures, and the waving verdure which now most frequently greets the eye is that of cereal grains, alfalfa, and orchard and vineyard foliage. Never again will the pristine richness of California's wild pasture return; never again will they welcome back the immense herds and their picturesque attendants. Let the old regime rest, then, embalmed in poetry and tradition. The new regime is better. Homes, with implied civilization, prosperity and happiness, are infinitely more desirable.

By these fair plains the mountain circle screens,
And feed the streamlets from its dark ravines.
—Oliver Wendell Holmes.

There could hardly be a more apt allusion to the natural advantages of California valleys. By the grand mountain environment on the east and north, the rush of winds from northern latitudes toward the tropics is averted from a great portion of the area of California. In this way are not only great atmospheric disturbances precluded, but the general temperature is raised and we are rescued from such a winter as visits other regions on the same parallels of latitude. This, coupled with the warm currents of air and water which move the gentle ocean on our western border, gives us our climate so grateful to plant and animal life. Through such agencies the lightest habitation, of which the genial climate invites construction, is safe from destroying blasts because there are none, and by its very elasticity laughs at the earthquake. Of late years, too, even the Atlantic coast has surpassed us in earthquake phenomena. Grand, too, is the service which our mountain screen renders in making captive the atmospheric moisture and storing it upon snow-capped peaks and in deep canyons until the summer sun releases it to fill the water courses which refresh the foothill and valley lands below. It has been frequently shown that California has running water

*The arrangement of the poet's lines in a tribute to California is credited to Mr. John Wallace.

enough to render fruitful all her valley lands over which rain clouds are scant and fleeting. The triumph of irrigation enterprises is the secret of much of our recent horticultural advancement, and future progress must largely proceed upon the same basis. California has learned lessons in this line which will not only multiply her own prosperity, but point out the way to expunge the "Great American Desert" from the map of the United States. California's achievements in the development, storage and distribution of irrigation waters are among her greatest deeds.

And when the moon with softer radiance gleams,
And lovelier heave the billows in her beams.
—*Robert Southey.*

The peerlessly clear air of an arid region is one of the first observations of the new comer. It is marvelous that the decrease of aqueous vapor (a material so tenuous that, like the wind, its presence is only discernible by its effects) should so increase the power of human vision that remote objects seem near at hand. Plenty are the yarns of tenderfeet who have undertaken seemingly short walks to landscape points and have returned exhausted, crying that the farther they walked the farther away the object sped. It is this clear air which gives the sunshine greater power in the perfection of our fruits, and in other services it renders vegetation. It is this clear dry air which enables mankind to withstand the upper stories of the thermometer, because dry heat does not prostrate or depress the animal organism as does a heated, moist atmosphere. For this reason sunstrokes even in an interior valley temperature of 110° and over, are almost unknown, for the heat does not render fieldwork particularly exhausting. Most of the few cases of prostration are traceable to defect or weakness, either physical or moral in the individual, rather than to the weather conditions.

The same air which gives us safety in outdoor work in a glorious sunshine also gives to the light of the moon peculiar brilliance. The moonlight landscape in the interior of California, in valley and upon mountain, is entrancing. Seas of light flooding everything, so clear and yet so soft and generous, bestowing beauties upon all objects and kindly concealing defects, it is little wonder that mankind always partial to moonlight, should go into ecstacies over the silvery nights as well as the golden days of California.

Is it not lovely?—Tell me where doth dwell,
The power that wrought so beautiful a spell!
—*Richard H. Dana.*

What power could conceive and produce so magnificent a piece of world-building save the omnipresent Creator? The power then which wrought our land dwells in it. And as California is one of the latest lands to rise from the embrace of old ocean, why should not the Creator be most partial to his newest work? Apparently the land holds the combination of the best in two zones and escapes the ills of both. It boasts the fittest natural conditions for human life and happiness. It rests with man whether so rich a heritage shall be fitly appreciated and regarded. Our people should be the most intelligent, the most moral, the most religious in the world. With each individual rests the responsibility of securing this result. Upon the free agency of the individual depends the nobility of the land.

GENERAL REVIEW.

From a pasture and mining State California forged ahead as a large wheat producer, and now it is rightfully conceded the largest fruit-growing State in this country. Not only is this position conceded, but it is supplemented by the assertion that for variety of crops the State has no equal. The long line of seacoast to the west, and a range of mountains to the east are, within themselves, large contributors to a diversified climate, while the varieties of soil, combined with the climate, offer a rare opportunity to the successful cultivation of fruit and vegetables peculiarly adapted to both the temperate and tropical zones. This was not fully demonstrated until better inland transportation facilities and cheaper and largely improved overland railroad transportation were afforded. Under the magnetic influence of railroad facilities, the waste lands of California were made to produce those varieties of crops which have given us a wonderful name at home and abroad, and, at the same time, have enriched those farmers and orchadists who, to a greater or less extent, forsook the well beaten track of experience derived elsewhere, and sought by experiment and broader scientific farming to find out what kind of crop and variety certain localities were best adapted to. That their efforts have been preeminently successful the present results fully testify. Although much has been accomplished, there can be no doubt but the future holds in store far greater results to those who not only call in science as an assistant, but also study the wants and requirements of trade as developed by and through the consumptive demand at home and abroad. The days of slipshod farming and haphazard horticulture are happily numbered with the past, and the person who does not try to attain as near perfection as it is possible to secure in his or her special line of farming will be forced to the wall. Under a strong and growing competition experiments are in constant course of preparation to improve on the product of the farm and orchard, and, therefore, only those will survive financially who give attention to the best, and as far as possible, those latest improved varieties which meet with most generous support from consumers. It is these who carve out a reputation; whose names alone inspire confidence and contribute no little in selling their produce at the highest market prices. There is not a day which passes but what this assertion is fully confirmed. We have known buyers to take fruit, vegetables or cereals, as the case may be, without examining, and pay the highest market prices on the reputation the producer has for cultivating the best products and also for straightforward, honest methods in marketing the same.

Wheat.

In the production of wheat, California has not made great progress within the past decade. The acreage devoted to wheat does not show material change, while the outturn to the acre in the older-settled counties is disappointingly small. This condition should inspire farmers in these particular counties to ferret out the whys and wherefores for the falling off in the yield. The acreage devoted to wheat this year compares as follows with the three preceding:

COUNTIES.	1889	1890.	1891.	1892.
	Acres.	Acres.	Acres.	Acres.
Alameda	21,265	16,429	30,685	35,785
Alpine	450	400	400	350
Amador	4,560	3,575	3,800	*4,000
Butte	92,208	73,767	91,117	*96,000
Calaveras	8,509	6,500	6,50	5,400
Colusa	403 008	386 477	203,128	*210 000
Contra Costa	77,915	50,256	44 502	43,365
Del Norte	60	36	.....	19
El Dorado	2,597	973	4,134	4,700
Fresno	169,512	196 904	295,150	324,000
Glenn	.....	.....	150,425	185,000
Humboldt	20,564	1,526	2,517	2,010
Inyo	399	2,316	1,379	1,797
Kern	12,000	17,000	20,000	23,000
Lake	6,220	4,200	7,950	6,650
Los Angeles	50,760	75,150	63,242	48,765
Marin	343	.....	644	543
Mariposa	639	527	4:9	408
Merced	240 000	177,500	230,5 0	*230,000
Modoc	45,800	35,200	43,500	32,200
Monterey	120,000	135,000	145,000	130,000
Napa	8 653	7,462	8,385	*7,500
Placer	16,249	11 147	16,037	16,120
Sacramento	78.100	55,000	81,150	*80,000
San Benito	46,600	35,800	51,202	*50,000
San Bernardino	3,551	4,651	4,302	*4,500
San Diego	14,026	25,145	26,038	24,476
San Joaquin	290,805	199,579	301,150	275,018
San Luis Obispo	98,385	95 617	101,650	125,750
San Mateo	1,825	1,500	2,000	2,000
Santa Barbara	71,427	54,720	55,725	38,240
Santa Clara	17,24(	15,950	16 300	15,312
Santa Cruz	5,126	5,248	5 517	5,312
Shasta	14,051	2,154	13,620	16,400
Sierra	151	300	200	300
Siskiyou	9,554	13,125	16 215	*18,000
Solano	57,624	48,210	83,616	83,866
Sonoma	15,820	12,250	13 460	*12,000
Stanislaus	283,182	211,342	291,431	260,339
Sutter	123,920	43,412	66,414	78,889
Tehama	91,410	82,312	83,678	60,841
Trinity	10,00	100	1,200	1,500
Tulare	349,000	350,865	415.585	358,000
Tuolumne	4,000	3,500	3 600	3,900
Ventura	2,637	3,671	5 810	*6000
Yolo	155,000	103,500	149,43	198,043
Yuba	28,375	15,760	30 000	21 247
Totals	3,073,527	2,586,950	3,190,716	3,147,245

*Estimated.

According to our returns, based largely on thrashers' returns, the yield averages this year about nine centals to the acre. This is corroborated by the U. S. Department of Agriculture. The total yield of the State is placed at about 1,300,000 tons this year against nearly 1,200,000 tons in 1891. This places the State second in the rank of wheat-producers, as the following estimated acreage and prospective yield, as returned by the U. S. Agricultural Department, in the different States shows. (A comparison of the estimated yield this year is made with the outturn in 1891, so as to better judge the present situation.)

STATES.	1892.		1891.
WINTER.	Est'mat'd Acreage.	Estimated Yield, bu.	Yield, Bushels.
Ohio	2,715,800	34,984,000	45,531,000
Michigan	1,590,600	22,268,000	30,205,000
Indiana	2,888,300	37,259,000	52,877,000
Illinois	1,906,9 0	27,459,000	35,025,000
Missouri	1,645,10	23,492,000	25,732,000
Kansas	3,409,000	56,822 0 0	54,86 ,000
Kentucky	1,048,200	11,635,600	13,181,000
Tennessee	1,22 ,50	9,780,000	11,626,000
Connecticut	1,8 0	27,000	31,000
New York	626,9 0	10,044,000	10,683,000
New Jersey	138,80	1,885,000	2,124,000
Pennsylvania	1,324,00	17,053,000	20,864,000
Delaware	100,500	1,182,000	1 250,000
Maryland	535,100	6,891,000	8,107,000
Virginia	841,'00	7,490,000	7,651,000
North Carolina	775,50	6,017,000	4,975,000
South Carolina	198 400	1,57 ,000	992,000
Georgia	331,400	2,297,000	2,3 3,000
Alabama	292,50	1,801,00	2,251 000
Mississippi	63,700	537,000	483,000
Texas	573,800	6,197,00	6,435,000
Arkansas	239 80	2,2 4,000	2,236,0 0
West Virginia	332,300	3,1 9,000	3 423 000
California	3,012,0 0	42,168,000	36,595,000
Oregon	690,000	11,061,000	13,149,000
Total	26,564,000	345,333,00	392,495,000
SPRING.			
Minnesota	3,206,800	39,059,000	55,332,000
Wisconsin	898,000	10,560,00	14,043,000
Iowa	1,730,900	21,082,000	27,586,0 0
Nebraska	1,299,70	15 916,00	18,080,000
North Dakota	2,488,200	29,61 ,000	52,105,000
South Dakota	2,30 ,700	30,942,000	29 714,00
Colorado	112,1 0	2,464,000	2,037,0 0
Washington	788,800	10,781,000	12,216,000
Nevada	2 ,300	340,00	372,000
Idaho	91 400	1 598,000	1,811,00
Montana	97,400	1,721,000	1,856 00
Wyoming	3,5 0	90,000	110,000
New Mexico	94,200	1,319,00	1,037,000
Utah	142,20	2,658,000	2,393,000
Arizona	27,8 0	440,000	395,00
Maine	41,000	636 00	669,000
New Hampshire	8 800	132, 00	148,000
Vermont	19,400	330,000	344,000
Total	13,369,100	169,668,00	219,185,000
Grand total	39,933,100	515,004,000	611,780,000

While the outturn in this State is larger this year than it was in 1891, that of Nevada, Oregon and Washington is smaller. Taking the total crop of the United States at the U. S. Agricultural Department estimate of 515,000,000 bushels, and it is a full average; but then later estimates of recognized authorities at the East placed the aggregate outturn on August 20th at about 495,000,000 bushels.

So that our readers can better estimate, as crop returns come to hand, the wheat crop this year in comparison with the yield the three preceding years, we give the following tabulated statement in bushels:

	1891.	1890.	1889.
North America:			
United States*	611,780,000	399,262,000	490,560,000
Canada:			
Ontario*	33,611,074	25,262,000	19 288,983
Manitoba*	23,922,598	14,000,000	11,928,511
Total	660,313,672	438,493,412	521,777,494
South America:			
Argentine Republic	33,069,000	41,703,683	11,350,000
Chili	14,187,500	18,567,360	12,768,750
Total	47,2 6,500	60,271,043	24,118,750
Europe:			
Austria	41,143,75	51,440,667	42,000,000
Hungary*	126,268,750	165,345,000	94,020,333
Belgium	14,187,500	19,573,075	19,000,000
Denmark	3,713,472	5,776,512	5,000,000
France*	232,360,236	338,902,124	316,268,369
Germany*	126,253,563	94,899,840	82,000,000
Great Britain*	74,400,714	75,656,617	75,676,383
Ireland*	2,615,437	2,639,399	2,680,838
Greece	5,675,000	12,378,240	5,000,000
Italy*	126,254,563	126,610,746	103,832,354
Netherlands	3,713,472	6,189,120	5,675,000
Portugal	8,252,160	8,252,160	8,512,500
Roumania	53,073,684	63 954,240	44,784,853
Russia*	169,108,708	197,739,200	188,535,989
Poland*	12,680,920	22,313,125	
Servia	7,945,000	10,315,200	5,000,000
Spain	71,349,194	70,143,360	75,622,213
Sweden*	4,551,35	3,956,043	3,708,045
Norway	412,698	412,608	283,750
Switzerland*	4,041,766	2,475,648	2,270,000
Turkey	33,008,640	*37, 35,720	39,725,000
Total	1,121,558,740	1,316,177,644	1,119,495,627
Asia:			
India*	255,434,667	235,345,600	243,076,549
Asia Minor	37,629,375	37,134,720	38,887,500
Persia	20,63 ,400	22 693,440	22,500,000
Syria	12,343,125	12,378,240	12,768,750
Total	325,437,567	307,552,000	315,232,799
Africa:			
Algeria	21,281,250	22,693,440	22,500,000
Cape Colony	4,126,081	3,713,472	3,800,000
Egypt	11,140,416	8,252,160	7,945,000
Tunis	4,256,250	4,256,250	
Total	40,803,996	38,915,322	34,245,000
Australasia:	33,874,606	42,480,131	26,205,957
Grand Total	2,238,245,081	2,203,889 552	2,041,075,627

* Official.

The latest returns from the leading grain-growing countries indicate that the crop this year will be about 90,000,000 bushels less than it was last year. The crop of rye will be larger in this year than it was in 1891, but the crop of corn, and also of oats, will be less, while that of barley will be about the same.

In California several varieties of wheat are grown. This is necessitated by the diversity of our climate and soil. In that part of the State subjected to hot north winds, the Chili club is given most attention, owing to its being a close fitter, which prevents it from shelling out so badly as do other varieties.

But the market price of the club generally ranges at from 1¼ to 2½ cents per cental below that of Australian, Proper and similar kinds. The Australian variety of white wheat is held in highest favor by shippers and millers, and therefore is largely grown. Next to Australian comes the Proper. Sonora wheat is grown chiefly on light soil, where a speedy growth and comparatively well-matured grain is wanted. For roll wheat and for shipping to France, the Sonora, it is claimed, is given preference, but in England and in this State the Australian and Proper are preferred. The French want a wheat which, when made into flour, will make the largest number of loaves of bread.

On the coast the wheat chiefly wanted is a fog and rust-resister, and the Odessa varieties are therefore given preference by many. It is claimed by dealers in this city that the wheat marketed here is becoming each year more foul, but so far as the writer's observation extends, this claim is largely exaggerated, for the degree of foulness in wheat depends largely if not entirely on the season.

PRICE OF NO. 1 WHITE WHEAT IN THE SAN FRANCISCO MARKET FOR 27 YEARS FROM JUNE, 1864, TO JULY 1, 1892.

Year.	Highest.	Lowest.	Difference.	Average.
1864–65	$3.30	$2 30	$3.00	$4.15
1865–66	2.15	1.60	.45	1.97
1866–67	2.22	1.25	.97	1.76
1867–68	3.10	1.50	1.60	2.31
1868–69	2.50	1.17½	1.32½	1.71
1869–70	1.95	1.05	.90	1.70
1870–71	3.15	1.55	1.60	2.25
1871–72	2.85	1.52½	1.32½	2.29
1872–73	2.16	1.25	.91	1.95
1873–74	2.37½	1.60	.77½	2.02
1874–75	1.85	1.30	.55	1.60
1875–76	2.32½	1.65	.67½	1.96
1876–77	3.00	1.45	1.55	1.93
1877–78	2.45	1.82½	.62½	2.10
1878–79	1.77½	1.57½	.20	1.63
1879–80	2.15	1.45	.70	1.81
1880–81	1.57½	1.25	.32½	1.40
1881–82	1.75	1.30	.45	1.62
1882–83	2.05	1.60	.45	1.73½
1883–84	1.87½	1.42½	.45	1.64½
1884–85	1.50	1.17½	.35	1.32½
1885–86	1.50	1.25	.25	1.36
1886–87	2.10	1.22½	.87½	1.62
1887–88	*2.12½	*1.22½	.90	1.37½
1888–89	1.68¾	1.25	.88¾	1.43
1889–90	1.36¼	1.25	.1 ¼	1.29½
1890–91	1.76¼	1.31¼	.45	1.53¾
1891–92	1.82½	1.35	.47½	1.58⅛

*Wheat collap e.

Barley.

The acreage seeded to barley the past four years in California compares as follows:

COUNTIES.	1889. Acres.	1890. Acres.	1891. Acres	1892. Acres.
Alameda	20,967	20,415	63,432	67,932
Alpine	460	400	400	50
Amador	12,515	10,980	19,000	*12,000
Butte	24 619	19,721	25 806	*26,000
Calaveras	1,100	250	3.000	3,300
Colusa	48,683	23,0 2	26,925	*26,000
Contra Costa	42,270	30,540	28,400	27,375
Del Norte	300	164	320	43
El Dorado	2,002	560	1,506	1,640
Fresno	36,242	34,471	40,250	*40,000
Glenn			12,560	29,109
Humboldt	19,450	1,513	2,089	1,970
Inyo	571	455	397	444
Kern	25.000	8,000	4,500	*4,505
Lake	3,870	2,600	3,100	4 025
Los Angeles	35,290	34,170	38,124	36,203
Marin	417		225	257
Mariposa	5,078	1,802	1,6 2	4,080
Merced	52,000	25,000	36,650	36,000
Modoc	33,000	32 100	31,600	30,300
Monterey	75,000	60,000	80.000	75,000
Napa	5,847	6,374	5,985	*6,000
Nevada	587			150
Orange		19,760	50,000	30 000
Placer	9 670	1,718	10,386	11,662
Sacramento	33,460	26,725	34,215	*34,000
San Benito	16,915	13,680	15,140	*15,000
San Bernardino	103,58	93,450	91,260	*91,000
San Diego	30,447	27,350	41,086	48 719
San Joaquin	108.920	53,049	58,120	74,142
San Luis Obispo	48,360	51,429	75,360	89,000
San Mateo	3,720	3,000	3,500	
Santa Barbara	38 149	32,865	38,840	31,690
Santa Clara	20,370	18,560	17,820	16,195
Santa Cruz	3,110	3,226	3,292	2,117
Shasta	6,215	545	7,116	8 9 0
Sierra	1,850	1,600	4,000	3,000
Siskiyou	5,360	2,588	4.065	4.000
Solano	35,720	22,510	31 059	31,359
Sonoma	13,159		8,352	*3 000
Stanislaus	33,149	28 150	33,163	35,163
Sutter	21,840	4,899	14,174	19,887
Tehama	27,840	21,760	16,659	15,594
Trinity	200	200	200	160
Tulare	63,425	65,346	71,250	75,000
Tuolumne	2,000	1,800	1,500	2,000
Ventura	58,738	33,625	45,150	*45,000
Yolo	20,000	12,700	13,550	17,890
Yuba	11,060	4,850	8,500	8,414
Totals	1,167,627	852,902	1,118,867	1,257 710

*Estimated—returns not in.

The small acreage seeded in 1890 was due to unfavorable weather for seeding, and also to the very low range of values in 1888, 1889 and a part of 1890 having discouraged farmers. The price at one time fell to very near 50 cents per cental, which caused the unloading of large quantities on which advances had been made. With the cleaning up of all old stocks, a light crop in 1890 and a large increase in the consumption, the market improved, and during the season of 1890–91 much higher prices were realized, which induced more attention to be given to its cultivation. The consumption of feed in this State has made a steady gain the past five years under increasing attention given to fruit culture and also to dairying, so that, while the quantity fed out in the large cities has, owing to the more general introduction of cable and electric streetcars barely held its own, that fed out in the country has been on a large and steadily increasing scale. Up to within four years it was estimated that for every sack of barley received in San Francisco and neighboring cities, fully five were consumed in the remainder of the State, but now the ratio is fully 8½ sacks in the remainder of the State to one received here, and this ratio promises to steadily increase in the future. The consumption of malting barley does not show any material increase; probably 20 per cent more will cover it. The market for bright grades of brewing barley is sought at the East and abroad, with England taking all the choice to gilt-edged Chevalier. Chevalier barley, taken at good round prices, is cultivated largely, and we might say almost entirely in Livermore valley, Alameda county, where there is a deep, rich soil and warm weather, with an absence of fog. Chevalier is successfully grown in a few other favored valleys. In the coast counties the yield is large, but it is seldom that the grain is bright colored, owing to the prevalence of fog. In growing barley for market, it is essential to secure plump and bright-colored grain to get the best results. With bright-colored, plump grain weighing from 48 pounds and up, there is always active buying competition, and the highest market prices are assured, with quick sales; but for off-colored grain the buying is confined largely to feeders, and they never, except when there is a scarcity, run prices up through competition. With the mills turning out roll barley, the consumption of dark-colored barley and other feed barley has increased at a most remarkable rate. It is taken more largely than is either the whole grain or ground barley by farmers, orchardists and dairymen, owing to its giving much better satisfaction.

The exports from this port aggregate in centals as follows by months:

Months.	1889. By Sea.	1889. By Rail.	1890. By Sea	1890. By Rail	1891. By *Sea	1892. By *Sea.
January	28,805	20,239	33,319	10 960	31,634	10 646
February	34,918	10,833	11,659	1 684	14 751	16 972
March	13 812	2,873	18,023	308	13,006	108,678
April	14,109	4,004	19,916	.....	32,147	93,170
May	14,319	.....	17,006	.....	23,198	12 317
June	20,572	3.374	15,108	.....	10,179	26,871
July	41,585	17,335	27,735	.....	137,319	79,242
August	135,993	7,127	40,523	.....	23,667	141,573
September	234,880	26,077	18,516	.....	160,997	.....
October	201,628	51 600	96,301	.....	271,767	.....
November	93,978	14.739	18,036	.....	146,664	.....
December	15,244	4,675	23,084	.....	70,764	.....
Totals	832,843	162,876	339,174	12,952	936,793	.....

*No overland shipments.

Low freights to the Atlantic ports, a shortage in the crops at the East and only a fair crop abroad are favorable to heavy shipments from here in this season. The crop in Oregon and Washington is short, while the crop in California is larger than in any year for four years past.

Corn.

The acreage seeded to corn the past four years compares as follows:

COUNTIES.	1889.	1890.	1891.	1892.
Alameda	318	300	280	310
Alpin	25	25	30	35
Amador	650	675	700	720
Butte	.....	.....	.....	10
Calaveras	2 0	260	210	190
Colusa	512	242	250	315
Contra Costa	1,900	1,800	1,700	1,800
D l N rte	110	71	100	90
El Dorado	.....	.....	.....	.....
Fresno	570	215	3.0	610
Glenn	.....	.....	.....	.....
Humboldt	200	157	200	150
Inyo	1,100	1,462	1,500	1,050
Kern	12,000	10 000	11,000	10,520
Lake	360	600	610	380
Los Angeles	17 400	12,700	11,200	10 500
Marin	.....	.....	.....	.....
Mariposa	.....	.....	.....	.....
Merced	1,500	1,200	1,200	1,450
Modoc	.....	.....	.....	.....
Monterey	1,600	2,000	1,900	1,590
Napa	1,168	1,275	1,180	1,260
Orange	.....	5,625	6,000	5,570
Placer	.....	.....	.....	.....
Sacramento	5 375	5,490	5,360	5,170
San Benito	25	75	100	80
San Bernardino	893	941	910	1,000
San Diego	2 084	2 473	2,500	2,180
San Joaquin	915	413	750	850
San Luis Obispo	765	780	680	620
San Mateo	530	600	500	530
Santa Barbara	1,268	1,324	1 120	1,220
Santa Clara	185	328	280	190
Santa Cruz	2,025	2,040	2,100	2,120
Shasta	18	.....	25	20
Sierra	.....	.....	10	15
Siskiyou	270	30	220	290
Solano	670	710	650	680
Sonoma	11,317	10,000	10,500	11,410
Stanislaus	127	90	120	140
Sutter	765	106	510	620
Tehama	49	40	50	60
Trinity	500	100	200	410
Tulare	1,620	2,000	2 150	2,020
Tuolumne	.....	.....	.....	.....
Ventura	5,843	7,301	7,100	5,900
Yolo	800	600	600	750
Yuba	65	60	65	70
Totals	75,382	73,452	75,015	72,905

California cannot, in any sense, be called a corn-growing State, owing to but few localities being adapted to its cultivation, and even that which is grown is of indifferent quality. Col. Cutter, president of the Cutting Packing Co., says that his company has tried, time and again, to find corn suitable for canning, but was not successful. For milling, the corn is not so well adapted as is that grown in the corn belt at the East. This is due to the grain being softer and not generally so sweet. In being soft, it requires kiln-drying before grinding. The past two years California found a good market in Mexico and the central States—owing to short crops—for the surplus crop, but this year heavy rains have fallen in Mexico and good crops are assured, so that outlet will be cut off; besides this, Texas has an exceedingly large crop which is now being marketed at low figures. The crop in the corn-growing belt in the central States is short, but yet it is sufficiently large to supply the home demand and thus give a fair amount for export. The corn preferred for home use is generally the yellow, but for export the white is given preference.

Oats.

The acreage seeded to oats compares as follows:

COUNTIES.	1889.	1890.	1891.	1892.
Alameda	175	210	196	220
Al ine	630	650	600	710
Amador	75	50	160	110
Colusa	215	66	143	120
Contra Costa	.....	1,600	1,600	1,550
Del Norte	1,500	9 7	990	1 200
El Dorado	.....	2 4	109	210
Fresno	526	81	450	515
Glenn	.....	.....	.....	150
Humboldt	25,792	3,749	13,260	19,870
Inyo	681	836	841	980
Lake	720	450	890	785
Los Angeles	.....	.....	2,232	2,310
Marin	522	320	814	700
Mariposa	634	.....	.....	510
Merced	.....	7,500	8,350	6,100
Modoc	3,840	11,350	12,060	13,000
Mono	.....	24	.....	28
Monterey	7,500	6,000	5,000	7,000
Napa	1 976	1,645	1,865	1,800
Nevada	1 235	.....	1,050	1,300
Orange	.....	100	.....	160
Placer	2,865	1,715	1,930	2 200
Sacramento	415	215	510	600
San Benito	510	50	440	475
San Diego	1,550	1,582	2,109	1 600
San Joaquin	417	309	810	750
San Luis Obispo	4 246	4,341	5,200	5,500
San Mateo	2,916	1 900	2,500	2,600
Santa Clara	115	174	14	150
Santa Cruz	4.920	5 060	4,760	5,100
Shasta	1,121	409	930	1,050
Sierra	1,000	1 200	1,008	1,100
Siskiyou	3,646	1 706	2,455	3,500
Solano	191	.....	.....	100
Sonoma	4,725	.....	4,327	4 200
Stanislaus	425	343	261	510
Sutter	368	380	886	600
Tehama	3,300	2,350	2,612	3,000
Trinity	500	500	350	550
Tulare	375	560	750	700
Tuolumne	800	700	750	800
Ventura	.....	93	110	100
Yuba	1,271	805	3,000	1,300
Totals	115,601	60,197	96,620	95 806

Only about one-quarter of the oats grown in California can be classed choice to gilt-edged, the remainder being poor to good and more or less foul. We have to look to Oregon to supply the bulk of our requirements, which are steadily increasing owing to more being fed to family and speed horses. The receipts of oats at this port in last year aggregated 111,699 centals of California, while from Oregon and Washington we drew 470,935 centals. Surprise oats have a well-deserved high reputation and command considerably higher prices than do other kinds. The oats grown in this State are not as well adapted for milling purposes as are those grown in the Central States. This, it is claimed, is due to the humidity of the air, which necessitates the most, if not all, being kiln-dried before use. The outlook for the market the present season favors the expectation that fairly high prices will obtain. This opinion is based on only an average crop in this State and a shortage in Oregon and Washington, while the demand will be fully up to and perhaps larger than it was in the last season. The crop in the Central States is considerably below an average, while the grade is not up to the usual standard.

Rye.

We are not able to secure the acreage seeded to rye. Probably the small attention given to the industry caused county assessors to overlook it, but if we should continue to enjoy a fair export trade the industry will become quite important. The short crop last year in Europe caused free buying in our market, which ran up prices fully 20 to 30 per cent; but this season the European crop is nearly an average, and therefore the export demand will be light and only low prices will induce free buying. The consumption in this State is steadily enlarging, owing to increasing population of that class of foreigners who give it preference.

Hay.

With more attention to fruit culture, comes a larger demand for hay, owing to the large increase in the number of workhorses used by orchardists. A few years ago it was claimed by those in position to know that for every ton of hay fed out in this city, Oakland and Alameda, fully three tons were fed in the remainder of the State. Now it is estimated that for each ton fed out in the above-named cities, at least seven tons are fed out in the rest of the State. In this estimate, no reckoning is made of pasture-feeding, only of hay that is cut and cured. A fair idea of the importance of the hay industry can be had by studying the returns by counties of the acreage devoted to it the past two years.

COUNTIES.	1891 Acres.	1892. Acres.
Alameda	92,344	95,150
Alpine	250	310
Amador	7,00	7,150
Butte	11,000	9 500
Calaveras	9,500	10,100
Colusa	3,696	2,200
Contra Costa	48,40	49,200
Del Norte	135	250
El Dorado	4,927	5,210
Glenn	.....	2,100
Humboldt	25,257	26,180
Inyo	6,272	7,150
Los Angeles	13 300	10,800
Marin	10,120	9,100
Mariposa	6 330	5,850
Merced	11,300	10.150
Modoc	107,000	110,110
Monterey	20 000	18,000
Napa	16,765	15,500
Nevada	4 289	4,150
Placer	9,845	9,910
San Bernardino	33,205	35.000
San Diego	18,762	16,700
San Luis Obis o	38,62	30,250
San Mateo	10,500	11,100
Santa Barbara	13,500	12 250
Santa Clara	35,178	33 470
Santa Cruz	5 285	5,500
Shasta	11 496	12,100
Siskiyou	52 686	53,500
Sonoma	8 470	9 100
Stanislaus	1 500	1,470
Sutter	4,555	3,800
Tehama	15,466	16 100
Trinity	3,500	4,500
Yolo	11,500	9 500
Yuba	10,000	9,100
Totals	680 851	662 210

The remaining counties, from which no returns were received, it is estimated brought the acreage up to fully 800,000 acres in 1891, and 750,000 acres in 1892. There was a large falling off this year in the acreage of wheat, which is usually cut for hay; there was also less oat-hay cut, but there was a full average of barley. The amount of alfalfa seed sold the past winter is about 30 per cent more than ever before, and that of clover about 20 per cent greater. The increased acreage seeded to alfalfa and clover is due largely to more attention given to dairying, owing to creameries growing into favor. Alfalfa is also growing in favor for hog-feeding.

From George Morrow and other large handlers of hay in this city, we learn that the principal demand is for wheat-hay, which is chiefly fed out to work-animals and private teams. The next in demand is oat-hay, which is princpally fed out by owners of driving-horses, roadsters and fast-horses. Chevalier barley-hay is growing in favor, and bids fair to soon take rank with that of wheat-hay. Bald-barley hay is considered very choice for feeding, but it is hard to raise, owing to very few localities being adapted to its cultivation. Timothy-hay is unsalable. Of clover-hay, the blue and red-tops are favorites with dairymen, with burr-clover hay a good second. Alfalfa-hay is used quite largely by dairymen in cold weather. Many of them claim that

in warm weather the milk from cows feeding on it has an unpleasant flavor. Considerable stock-hay is fed out here by butchers and stockmen. Experienced horsemen in this city claim that wheat and wild-oat hay is the best all-around feed for horses. They claim that new wheat-hay is too laxative and when it is old it is too binding, both of which are neutralized by wild oats.

Dealers in hay claim that the best prices are obtained for hay when it is cut just as the milk begins to harden, and after being cut and properly cured, then stacked, and in stacking slightly sprinkled with salt. The salt is said to sweeten the hay and make it more palatable. The hay, they claim, should remain in the stack a certain length of time before baling, the length of time being due to the kind of hay, when cut, and also the locality where grown.

The receipts of hay at San Francisco in 1891 aggregate 43,694 tons the first six months and 78,853 the last half of the year, making a total of 122,547 tons for the year. This includes all kinds, for it is nearly impossible to segregate the varieties. Nevada farmers sent large quantities into this State in 1891. This was due to heavy losses of stock by the hard winter of 1889–90, and the hay crop being largely in excess of the home requirements. They were also able to market their hay in this State owing to the railroad giving them special freight rates, and also to the high prices that ruled for hay throughout California.

Fruit.

The number of deciduous and citrus fruit trees in this State is as follows:

COUNTIES.	Fruit Trees	Oranges.	Lemons.
Alameda	1,746,530	2,599	1,147
Alpine	58,510	.....	.....
Amador	1,500	116	52
Butte	120,250	119,012	1,762
Calaveras	770,000	230	218
Colusa	.....	6,923	99
Contra Costa	171,065	398	258
Del Norte	264,770	.....	.....
El Dorado	1,821	284	295
Fresno	148,958	5,941	1,380
Humboldt	265,141	.....	.....
Inyo	109,705	.....	.....
Kern	40,308	1,277	640
Lake	215,000	361	.....
Los Angeles	6[illegible],008	987,102	76,927
Marin	57,600	248	18
Mariposa	45,050	173	133
Merced	163 700	950	635
Mo[illegible]oc	150,460	.....	.....
Monterey	30,500	321	14
Napa	675,845	1,375	63
Nevada	213,870	300	.....
Orange	351,696	141,029	25,066
Placer	684,715	11,535	1,895
Sacramento	581,370	13,610	1,142
San Bernardino	2,319,847	2,286,200	18,000
San Diego	1,062,745	204,026	65,923
San Joaquin	305,711	2,752	87
San Luis Obispo	83,720	5,800	2,550
San Mateo	40,000	470	50
Santa Barbara	41,260	44,200	13,150
Santa Clara	2,024,008	1,335	331
Santa Cruz	307,195	216	128
Shasta	169.309	.....	.....
Sierra	8,591	199	44
Siskiyou	45,290	.....	.....
Solano	1,032,565	3,417	404
Sonoma	1,346,345	3,185	1,095
Stanislaus	51,098	17,796	568
Sutter	239 240	3,497	152
Tehama	413,495	1,246	218
Trinity	10,000	.....	.....
Tulare	461,051	3,330	1,885
Tuolumne	16,350	.....	.....
Ventura	347,573	63 700	36,727
Yolo	275,000	1,341	523
Yuba	120,000	21,159	327
Totals	17,649 765	3,958,350	416,467

The fruit industry is *the* industry in this State, for no longer does grain appear to hold the scepter. The following table of overland shipments shows at a glance its rapid growth:

have purchased it. Adjust train service and build cars, that many trains on fast time may stop everywhere and leave fruit. In a short time fifty million people will be customers and three million tons of fruit can be sold every year, if so much can be raised. Fruit-growing is to be the basic industry of California. It is just coming into use as food. The demand will increase when supply and reasonableness in price can be assured. California fruit ships better than any other. Special cars and general distribution on quick time will put California fruit ripened on trees into every family in the country and demand will grow as population grows." While the railroads appear to be doing so much to solve the transportation problem in favor of the orchardist, the latter should do his part in securing and keeping markets. This can only be done by planting the best known varieties to which his particular locality is adapted, while the cultivation should be done on scientific principle and the trees kept healthy and free from pest. The fact must be kept in view that, with each year witnessing more trees coming into bearing, the greater becomes the competition, and it will be only the best to command quick sales at remunerative prices when the markets are liberally supplied. A well-known writer on marketing fruit very truly says that fruit must not be bruised in any manner before starting on its journey, for a very small percentage of damaged fruit will destroy the appearance of the whole package and result in its being classed only as seconds or thirds instead of realizing the top market prices. The packages also need to be strong and clean, for a clean package neatly packed with good fruit that is attractive to the eye of the purchaser will always bring a shade more money than similar fruit if carelessly packed in a dirty or damaged box or crate. It is also absolutely necessary that all fruits should be of as nearly a uniform size as possible, for they keep longer and sell much better. The address of the party to whom the shipment is made should be clearly and securely marked in more than one place. The loss of an address means delay in delivery, which is ruinous to perishable goods. An illegible address also takes the time and patience of those who handle the freight, and may result in its receiving a little extra rough treatment. The contents of the package, with the name of the shipper and the station from which it is shipped should also be clearly marked on the outside. Attention to all these matters of detail occupies but little time, does not decrease the market value of the shipment, but rather tends to increase it, for the trade will soon look for shipments that are of good uniform quality, neat and attractive appearance. Fruit-growers must always carefully watch the different market quotations, judging which centers will prove the most remunerative after deducting the different rates of freight that rule to the different points. If they find that there is a glut of fruit in all markets and that shipments will barely pay the transportation and commission charges, let alone make any return to the grower for his time and labor in cultivating and picking, then it is useless to make shipments at all. An important method of utilizing surplus fruit can always be found by evaporating or drying. In drying fruit, care must be exercised as well as in other things. It must be kept clean and also be neatly packed. A farmer would not expect to pay the highest price for a dirty or damaged set of harness, and he cannot expect that consumers will pay the highest price for his product if it be in any way damaged or unattractive in appearance. It is a very grave mistake to think that all fruit must be picked and sent to market as soon as ripe. By doing this, the market is liable to be glutted so that the farmer may realize next to nothing, whereas, by drying or feeding the surplus and culls to hogs, he is sure of some return, and will even aid in strengthening the current market prices, so that there may be a paying outlet for a portion of the ripened crop. It will always be better to make sure of some return rather than risk all and get nothing. In other words, do not grasp at the shadow and miss the substance; if the market will not pay you, do not throw away your fruit by shipping it; do not stop to pick up a nickel and miss a dollar later on.

SHIPPED OVERLAND BY S. P. R. R. CO.

Stations.	Dried Fruit.		Deciduous Fruit.		Citrus Fruit		Raisins.		Canned Goods.	
	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.	1890.	1891.
San Francisco	4,768,630	6,432,410	75.520	115,370	144,5[illegible]0	67,270	897,620	1,017,110	45,[illegible]30,140	19,537,390
Oakland	856,020	802,080	1,871,930	1,360,250	.....	.....	20 050	43,340	316 240	1,529 450
Sacramento	8,276,920	14,073,770	46,865,220	53,878,040	.....	.....	3,797 290	3,365,280	10.276 640	8,397,020
San Jose	13,962 210	25 496.020	12,185,020	12,785,840	.....	.....	185,440	191,240	16 654,780	11,111 030
Stockton	8,534,350	5,254,630	5.040,630	5,661,130	.....	.....	20,148,590	30 079,200	1,112,560	2,196,850
Marysville	2,131.770	4,619,520	992,510	1,958,760	28,850	20,000	546,340	394,730	3,422,660	2,276,050
Los Angeles	2,256,050	717,610	1,053,290	1,661,420	7,477,120	15,726,480	4 9.140	845,070	601,980	931,320
Colton	2,592,960	1 651 300	.....	.....	10,801,850	14.945,810	1,345,860	965 240	3,106,970	1,142.340
Totals	43,377,910	58,447,390	68,084 120	77,561,310	18,444,320	30,759,560	27,370,330	36,901,310	80,121,950	47,121,450

SHIPPED OVERLAND BY THE SANTA FE SYSTEM.

All places	.....	.....	.....	.....	49,975,000	57,435,000	.....	.....	.....	.....
Los Angeles Co.	10,036,360	4,030,000	.....	.....	.....	.....	250,000	52,000	.....	.....
Orange Co.	2,400,000	806,000	.....	.....	.....	.....	25,000	52,000	.....	.....
San Ber'dino Co.	8,290,000	6,396,060	.....	.....	.....	.....	11,275,000	7,332,000	.....	.....
San Diego Co.	490,911	312,000	.....	.....	.....	.....	2,200,000	2 938,000	.....	.....
Totals	21,217,271	11,544,000	.....	.....	49,975,000	57,435,000	13,750,000	10,374,000	.....	.....

While the above shows a most remarkable increase in shipments, yet outside of citrus fruit, owing to the crop being injured by frost, the overland shipments in this year will show as large a gain over those made in 1891 as the latter did over those in 1890. The increase in this year is due to the short crops of fruit at the East, the superior quality of California fruit and improved railroad facilities, brought about largely through the instrumentality of W. H. Mills. This year we are favored with better cars and quicker transit. Although there has been a marked improvement in the railroad transportation facilities for handling fruit expeditiously and with lessened percentage of loss, yet Mr. Mills, it is said, is perfecting plans to make is still more perfect. Referring to the subject, he says: The measure of the market for perishable products is the number of people to whom they can be conveyed in eatable condition. Thousands of tons go right by persons in Iowa, Kansas, Missouri and other States who would gladly

Dried Fruit.

There will be very little fruit dried east of the Rocky mountains this year, owing to short fruit crops, while abroad there will be quite a falling off in the crop of dried prunes, raisins and currants and also fewer fruits canned. The shortage in the fruit crops abroad causes the falling off in the pack. In this State there will be a large falling off in the pack of dried fruit, taking the different kinds as a whole, owing to a smaller apricot and plum crop and a large increase in the overland shipments of green fruit. The prices at which the market opened, and have since advanced, average fully 75 per cent more than the ranges at this time in 1891. It is claimed, and we think correctly so, too, that the grades will average very much better than they did last year. The fruit will average larger in size, be of finer flavor and of much better color.

Grapes.

The acreage devoted to the different kinds of grapes is as follows:

COUNTIES.	Wine.	Table.	Raisin.
Alameda	6,396	236	194
Amador	.....	.....	.....
Butte	111	65	604½
Calaveras	494	†	.....
Colusa	24	28	370½
Contra Costa	2,085	97	81½
El Dorado	1,019	370	123
Fresno	5,574	.....	43,936
Inyo	12	21	9
Kern	.....	.....	1,200
Lake	1,046	15	.....
Los Angeles	4,632	40	23
Marin	477	25	.....
Mendocino	190	14	.....
Merced	425	.....	1,421
Monterey	.....	.....	.....
Napa	18,177	52	.....
Nevada	190	30	.....
Orange	140	.....	4
Placer	354	1,431	500
Sacramento	3 181	1,164	335
San Benito	140	35	.....
San Bernardino	1,024	.....	2,691
San Diego	132	40	4,455
San Joaquin	900	346	.....
San Luis Obispo	437	33	1
San Mateo	747	26	15
Santa Barbara	260	10	.....
Santa Clara	10,294	1,126	103
Santa Cruz	1,365	319	.....
Shasta	122	104	242
Solano	† 1,928	1,167	432
Sonoma	22,851	332	.....
Stanislaus	82	13	524
Sutter	88	47	295
Tehama	3,705	80	227
Tulare	70	.....	9,849
Tuolumne	.....	.....	.....
Ventura	100	23	197
Yolo	1,575	1,000	1,125
Yuba	570	123	.....
Totals	90,227	9,300	68,837½

*Partial.
†Reported as wine grapes.

Notwithstanding that a larger number of vines came into bearing this season, the crop of grapes will be fully 20 per cent less than it was in 1891. The falling off is due to adverse weather. There will be a very large increase in dried wine grapes. It is claimed that there will be 5000 tons of dried fruit of which quantity 4000 tons are contracted at from $65 to $72.50 per ton. The pack of first-crop raisins will not be much more than were packed in 1891, while there will be very few second crop packed and no third crop. It is claimed that the pack will fall considerably below last year. The majority of the raisin-growers in the State have combined and fixed the price at which to sell, making a penalty for sales made at a less figure. It looks now as if they will get their figures. The stock of old on this coast and at the East is exhausted so that the new crop will come on a bare and hungry market, and as Europe has the cholera, besides which the crop is short, it is hardly likely that much will come from abroad. It is quite generally conceded that the consumption will be larger than ever before owing to the World's Fair. The grades will be more uniform and average higher than in 1891.

Beans.

We have not been able to get the acreage seeded to beans, but we think there will be a shortage, compared with 1891, of over 15,000 acres. The shortage we base on the general tenor of the more reliable advices regarding the acreage and also the returns of the county assessors of Ventura and Santa Barbara counties. The yield to the acre, it is said, will probably average more than it did in 1891. The new crop of beans will come on the market bare of colored and a very small supply of whites and Limas. It is claimed that there was a decided falling off in the acreage planted to Limas, owing to the low prices of the latter about planting-time. The outlook is of the most favorable character for a good market for whites and Limas, but not quite so good for colored. The crop of beans at the East and also abroad is short, which insures a good eastern demand, while lower freights to the East insures cheaper marketing. In Mexico there have been heavy rains, which insures a good crop, and therefore there will be a lighter demand from there. Drouth for about 18 months made the last crop a failure and opened up a good market for our colored beans. The suspension of duties by Mexico to September 30th, this year, admitted of sending beans there to a much better advantage. This demand, as stated above, cleaned up our market of all colored varieties.

Vegetables.

The cultivation of garden truck has become an important industry, and with improved railway facilities between local points and distribution points east of the Rocky mountains it will make rapid progress. There are many localities specially adapted to the cultivation of vegetables, several of which have been connected by rail with the demands, while others will be in due course of time. In the southern part of the State the growing of early spring vegetables for market is gaining a strong foothold, owing to improved facilities for marketing the truck in the eastern markets. In 1891 there was shipped overland 16,234 518 pounds of vegetables, 48,422,190 pounds of potatoes and 1,119,520 pounds of onions. These heavy shipments show what the industry can be pushed to under the fostering care of low freights and improved railroad facilities. Yet the grower must do his share by thorough cultivation and only marketing the more choice vegetables. It is much better to feed to the stock the poorer truck than attempt to market it.

The cultivation of onions has at all times received considerable attention, but within the past five years the outturn has been more than doubled in this State, with the quality showing a better average. The demands of shippers have made it necessary that only good onions be

grown and that the quality be of the best so as to cause the onions to stand shipment to distant points. The market price depends largely on the eastern demand. So far in this season this has been light, and in consequence our market has dragged at low prices, but as Oregon has a light crop, it looks as if better prices will rule later on. Considerable attention is given to the growing of pickles and also Italian onions. The latter is gaining in favor.

There are many varieties of potatoes raised in this State, but those which appear to give the best satisfaction are Burbank Seedlings, Garnet, Chile and Early Rose. There are others which are equally good but they have not been so thoroughly introduced. When the potato has has been grown on loamy, sandy soil, which is comparatively new or which has been cropped, the yield is large with quality unsurpassed. These command the highest market prices when mature and suitable for shipment or keeping in store. This year there is more complaint than usual of diseased potatoes, but it is doubtless due to continuous cropping on the same land. To get the best results, the land, when it begins to lose its power for turning out the very best potatoes, should be seeded to grass or equally as radical a change made for two or three years, when choice potatoes can be raised again. Rotation in crops is an absolute necessity to secure best results.

Live Stock.

The following gives the number of live stock in each county in the State:

	Horses and colts.	Stock Cattle.	Calves.	Cows.	Hogs.	Sheep and Lambs
Alameda	11,268	5,315	1,410	9,429	1,950	3,520
Alpine	221	540	450	270	65	500
Amador	3,238	7,161	1,080	2,813	5,804	5,160
Butte	7,648	8,080	2,486	2,240	6,276	39,010
Calaveras	5,380	6,590	3,400	3,126	1,130	22,100
Colusa	7,590	5,582	2,890	3,068	1,150	55,400
Contra Costa	10,442	6,372	3,840	5,870	5,170	6,110
Del Norte	2,162	1,152	663	2,918	910	450
El Dorado	4,158	3,592	3,060	3,795	2,075	7,726
Fresno	17,551	45,452	6,643	4,285	9,190	402,450
Glenn	5,230	4,010	1,210	2,100	8,100	21,500
Humboldt	6,341	17,870	7,620	12,290	7,585	101,180
Inyo	5,752	13,460	3,905	1,085	1,590	4,500
Kern	8,676	68,582	7,609	2,809	6,190	315,505
Lake	3,855	2,628	1,687	1,834	5,960	16,370
Lassen	9,025	17,302	7,883	1,509	1,176	11,025
Los Angeles	21,921	14,150	3,915	10,504	6,790	203,090
Marin	1,405	5,590	2,910	26,004	7,510	410
Mariposa	1,975	6,170	1,423	1,28	3,490	92,100
Mendocino	6,582	8,970	3,335	5,870	11,090	141,746
Merced	7,971	19,634	5,300	1,886	5,662	126,141
Modoc	11,658	32,180	11,699	1,790	2,242	13,442
Mono	1,464	5,066	1,685	442	190	2,210
Monterey	12,480	10,800	6,200	7,900	2,275	9,210
Napa	6,546	5,820	2,675	4,280	4,170	29,870
Nevada	3,947	2,120	1,193	2,419	9,100	1,980
Orange	6,548	5,053	2,093	2,128	2,617	115,983
Placer	8,396	2,891	3,876	3,120	1,787	48,500
Plumas	2,458	4,680	3,012	3,656	636	300
Sacramento	9,185	5,590	4,920	8,282	17,260	32,500
San Benito	9,531	18,641	4,920	2,901	1,210	13,200
San Bernardino	6,841	7,350	1,209	2,984	1,690	17,810
San Diego	11,678	21,388	5,822	4,709	4,765	32,500
San Francisco	1,902	.....	.....	8,150	2,100	4,500
San Joaquin	20,019	18,580	2,409	5,387	11,200	39,994
San Luis Obispo	12,515	39,970	8,986	20,544	7,337	18,910
San Mateo	3,658	3,680	2,560	7,122	2,120	345
Santa Barbara	10,280	20,821	1,436	6,159	2,248	116,720
Santa Clara	14,670	13,789	4,411	8,192	4,432	2,150
Santa Cruz	4,890	2,153	870	4,769	1,991	510
Shasta	6,066	8,958	2,924	4,008	9,010	12,000
Sierra	1,568	1,381	810	991	510	160
Siskiyou	8,334	18,354	6,890	2,811	5,652	15,170
Solano	14,695	6,226	5,430	16,822	6,917	31,400
Sonoma	10,390	3,618	4,480	2,186	14,910	15,910
Stanislaus	7,481	10,379	3,150	1,475	12,510	40,500
Sutter	5,891	3,850	1,780	1,486	7,827	33,500
Tehama	6,165	5,751	1,920	1,297	8,910	175,100
Trinity	1,259	3,025	1,520	5,861	270	9,115
Tulare	22,565	29,175	6,580	2,090	18,100	142,910
Tuolumne	2,205	1,600	910	1,681	2,100	6,400
Ventura	7,820	9,224	1,620	1,581	5,353	42,210
Yolo	8,980	4,223	2,158	4,716	11,200	36,520
Yuba	5,270	4,043	1,936	3,107	4,250	38,500
Totals	425,671	568,631	191,719	299,081	276,422	2,776,121

The number of beef cattle in the State is 16,150; oxen, 3510; mules, 39,820; jacks and jennies, 1310; common goats, 46,175; Angora goats, 2295.

A study of the above is a fruitful source of general information, and which is calculated to dispel any doubts as to California still taking a high rank as a stock-raising State. The scrubby breeds which formerly held sway have given place to the latest improved. The "mustang" and "cayuse" horses are seldom found now, but in their stead there are to be found the general utility, farm, and city animal, bred to meet the special requirements of this coast. There has been, and which doubtless will continue, an enlarging demand for large-sized and well-formed draft horses. This call is not confined to cities, for horsemen claim that the agricultural, lumbering and mining districts are large and apparently steadily increasing buyers. It is claimed that although costing more, yet for heavy work there is far more economy in purchasing them than in buying the small and medium sized. The cost of feeding is very little, if any, more, while their work gives greater results. Speed horses are receiving more attention, but in this line only a limited few, compared with the draft and general utility animal, command high prices. The driving animal does not meet with as much of a demand in the cities as formerly. The falling off, it is claimed, is largely due to the now general use of bicycles. The small-sized railroad horses are giving way to a more general introduction of cable and electric cars. As a roadster or riding horse the single footer continues to hold front rank. Match teams, of kindly disposition, good steppers and of fine bearing, find ready buyers at good prices. There are several breeders of horses for various uses who are making rapid strides in the breeding of animals adapted to the special wants of this coast. For this purpose they have bought and imported the best of stallions in the lines for which they are breeding.

Railroad construction and fruit and other farming have made a complete revolution in the cattle industry. The large wastes of land formerly given over to pasture have increased in value to such an extent that they have been given over to the industries of the times and either sold out or leased in small tracts or farms. With small holdings came a demand for better farm animals in which the cow took a prominent part. Cattle are not now raised so much for consumption as for general utilization, and the breeding is beginning mainly to be to get good milkers and at the same time a good beef animal, and in securing these two excellent points a cow for the farm is had which meets every requirement. Not only are farm requirements better met, but those of the dairy are filled equally as well. With so many breeds to choose from, it would seem that by systematic crossing, a good farm and dairy cow can be bred which will find a ready market at good prices. The more general introduction of the creamery on this coast is creating a large call for good milch cows, and it is claimed that their market value has appreciated at the expense of the poorer. Farmers should give close attention to each cow, and experiment with feeding so as to find out in what way the most milk can be secured at the least expense. The hog industry is steadily enlarging, and why not? In this State ample and all kinds of feed are found, and feed, too, which makes good pork. The greatest and possibly the only difficulty which has been in its way was the securing of a market at all times for the surplus. This will be met by the construction of large slaughtering pens and packing works near this city. The company having this in charge is said to be backed by ample capital to handle all the hogs raised in this State. The farmer wishing the most profit out of his hogs must breed for those which have a rapid growth, take on flesh rapidly, have small bones and large thighs. In our market, hogs similar to the above, when fed on grain, dairy fed or fruit fed, sell at the highest market prices. But it is claimed that those fed on grapes and fruit in general fleshen more quickly, weigh more and have sweeter meat than either dairy or grain fed.

Since writing the above, we find the following in the Chicago *Drover*, which is well worth careful reading if not preserving: H. C. Dawson of Iowa is of the opinion that the future hog must be a rustler, one that has the get up and go to him, an animal of fine proportions, with extra top line, broad, deep hams, clean-cut, smooth under line, free from flabbiness of jowl or belly, with deep bacon sides, the deepness extending well back to flank and forward to shoulder, not uneven, and deep in center, having a fine-cut head, smooth and broad between the eyes, jaws broad and tapering well and even to muzzle, eyes clear and prominent, with ears standing well out from the head, breaking evenly and smoothly toward the point, but would even prefer a standing-up ear to a drop or flop ear, as a drop or flop ear, flabby jowl and under line in my experience are not rustlers and are more inclined to disease from their slothfulness, and these bad points are generally found together. The bone should not be too large, but of fine and strong texture, firm, standing erect on their pins, tapering well from arm and thigh down to feet. Some people have an idea that the size is the most desirable in the selection of a hog, and that large bones, no matter how badly shaped, is the hog for them, claiming that large hogs must have extraordinarily large bones. While a good bone is desirable, if well shaped, a small bone is more to my notion than a big, awkward-shaped one, for this reason, a hog that has the right form and small bone possesses the faculty of putting on deep flesh, and making big returns for his feed, and carrying to market desirable meat, while the other is a harder, longer feeder and goes to market with a larger per cent of low-priced meat.

The sheep industry, like cattle-raising, is undergoing a complete revolution; large bands are no longer profitable in this State, owing to the high price of land. And with large bands of sheep relegated to the past, sheep husbandry becomes a farm industry, for it will then pay well for each farmer to keep a few head as farm auxiliaries, the keeping of which costs a mere trifle compared to the income derived from selling the wool, or the sheep for mutton. In keeping sheep on the farm it is desirable to breed for the large carcass, sweet meat and large fleece. All these points have been secured in Australia when bred for, and the sheep secured have given full satisfaction. It is claimed that even now farmers in this State are beginning to find it to their advantage to have a few head of sheep, and that as time passes the larger proportion will keep a few head on the farm. With fewer large bands of sheep there will be a ready market and at fairly satisfactory prices for the surplus raised on the farm.

Poultry.

The number of dozens of poultry in the State is as follows:

Alameda	3,956	Plumas	690
Alpine	120	Sacramento	7,110
Amador	118	San Benito	1,991
Butte	1,810	San Bernardino	3,122
Calaveras	2,210	San Diego	3,995
Colusa	1,950	San Francisco	1,610
Contra Costa	3,540	San Joaquin	6,812
Del Norte	610	San Luis Obispo	4,115
El Dorado	1,691	San Mateo	902
Fresno	7,580	Santa Barbara	3,077
Glenn	1,870	Santa Clara	5,963
Humboldt	2,200	Santa Cruz	2,566
Inyo	750	Shasta	3,109
Kern	6,890	Sierra	775
Lake	1,581	Siskiyou	1,183
Lassen	610	Solano	3,281
Los Angeles	8,925	Sonoma	6,410
Marin	691	Stanislaus	2,824
Mariposa	778	Sutter	2,988
Mendocino	1,552	Tehama	1,633
Merced	2,311	Trinity	555
Modoc	911	Tulare	3,293
Mono	150	Tuolumne	919
Monterey	5,510	Ventura	1,998
Napa	3,505	Yolo	2,339
Nevada	870	Yuba	1,335
Orange	6,171		
Placer	2,101	Total dozens	145,556

As an auxiliary of the farm, poultry-raising probably stands at the head of the list, for when given the attention it deserves, a good profit is assured, and that, too, at a comparatively light expense. The old slipshod methods must not gain a foothold or else the best results cannot be had. Poultry must be studied, and as much care given to securing the best stock as is given to other farm animals. In this State the egg which commands the highest price must be white in color and of good size. Yellow eggs, although claimed to be more meaty, are not sought for by the housewife. Farmers recognizing this, pay more attention to the Leghorn. While the latter are prolific layers, yet the fowl for marketing is small-sized and sells slowly at low prices. The writer's experience has proven that a cross between the Black Spanish and Houdan gives the best all-around results. When well-crossed, the eggs are very large and white in color. The fowls are deep-breasted, large-limbed and juicy, besides they are nonsetters and free layers. The Plymouth Rock is justly held in great favor as a good, all-around bird, but the Wyandotte probably excels. Both sell well and at the highest market prices, owing to the esteem in which they are held by consumers for both size and flavor. Of the other breeds, each has friends, and justly so, too.

Dairy Produce.

The receipts from California sources and from the East compare as follows:

BUTTER.

	California.	Eastern.	Totals.
	Pounds.	Pounds.	Pounds.
1891	10,484,900	1,580,900	12,065,800
1890	11,491,500	1,067,700	12,559,200
1889	11,098,600	4,325,000	15,423,600
1888	8,376,700	3,597,500	11,974,200
1887	9,547,100	783,600	10,330,700
1886	9,979,200	627,800	10,607,000
1885	8,019,600	494,400	9,504,000

CHEESE.

1891	4,427,800	1,820,500	6,298,300
1890	5,146,400	1,672,500	6,818,900
1889	4,272,000	1,155,200	5,427,200
1888	3,321,700	1,614,300	4,936,000
1887	3,989,400	968,400	4,957,800
1886	4,070,900	548,100	4,619,000
1885	3,657,500	471,000	4,128,500

EGGS.

	Dozens	Dozens	Dozens.
1891	2,156,288	4,525,000	6,681,288
1890	2,479,886	3,602,500	6,082,386
1889	2,660,993	4,210,300	6,871,290
1888	2,210,015	3,168,741	5,378,756
1887	1,391,745	1,735,335	3,127,080
1886	1,663,200	2,192,900	3,856,100
1885	2,778,280	1,154,090	3,932,370

The above only gives the receipts at this port, but it is claimed that fully 75 per cent of the home production and 60 per cent of the eastern shipments to this coast come to this city. If this be the case then it is readily seen that California, to supply the home consumption has to increase the sources of supply. But it now looks as if the dairy industry of this State is fast reaching that point when it will be self-sustaining, and we will not be dependent for supplies on the East during any part of the year. When this point is reached it will no doubt be credited entirely to the establishing of creameries. During the past two years a large number of private and and also of cooperative creameries have been built and equipped with the latest improved machinery. Nevada, Washington and Oregon report increasing attention to building creameries. Creamery butter sells at an advance over dairy, owing to its being considered of more uniform grade and better keeping qualities in hot weather. There has been a decided increase in the output of the better grades of butter; this increase has been at the expense of the poorer grades, so that the increase in one is, to a great extent, neutralized by a decrease in the other. This but confirms a familiar law of trade regarding supply and demand. The increased supply of creamery butter on this coast has cut off very materially the supply we formerly looked to the central States to furnish, and greatly, so far this year, to consumers' advantage. For the first five months in this year the receipts of eastern butter were quite light owing to a light output in the central States. This decrease is said to be traceable to two causes, one of which was, during the spring months and extending well into June, the poor and also impassible roads in the rural districts, and the other to fewer cows milked. The heavy and almost unprecedented rains in the central States made the roads so bad that it was next to an impossibility to go among farmers and gather cream in the early part of the season. With good roads, cream-gathering was resumed; and with good natural pasture for cows, the output of butter is very large. But it is conceded by the better-informed that even with a continuance (which is not at all likely) for the next month or two of the present increase in the manufacture, the deficiency cannot be made good. In this opinion they are further strengthened by the accepted opinion that the general introduction of creameries has been followed by more thorough and scientific feeding, and also by testing the the milk from each cow so as to keep only those whose milk gives the highest tests. This has been, and is still being done in European countries where creameries have taken strong hold. By this policy at the East there has been a weeding out of the poorer milkers, and they have not, as yet, been replaced, for it takes time to breed up to the standard now demanded by those dairymen and farmers who keep cows for all the profit that can be got out of them. This breeding calls for cows that give a good flow of rich milk and which also have carcasses and offspring that sell at the highest figures in the open market. The decreased supply of butter at the East, while causing market values to appreciate, did not cause prices to advance as high as they should with all else equal. Probably one, if not the most important factor in keeping the market from going as high as the supply and demand under ordinary circumstances would send it, is the increasing numbers of oleomargarine factories at the East. In Chicago alone there are six factories, whose combined product is estimated to displace the product of over 300,000 cows. The *Mercantile and Exchange Advocate*, published at New York, in its issue of July 2d, claims that there are about 20 oleomargarine factories in the United States. The same authority boldly asserts, and the facts evidently bear it out, that under the present law there is a continued increase in the manufacture and sale of the article. This should be accepted as proof positive of the correctness of assertions heretofore made that the present national law bearing on oleomargarine is in the interest of rich and

powerful companies. With a large and steadily increasing output of the stuff in the hands of rich combines, the profits in dairying are threatened to be reduced to such low percentages as to draw the dairying industry down to the lowest standard of agricultural enterprises. With this inevitable result staring in the face all that are directly and indirectly in dairying, it seems the height of wisdom that more energetic measures should be taken to fight to a successful issue the manufacture and sale of oleomargarine as now carried on.

Eggs.

Dealers in eggs state that consumers are discriminating more in favor of large eggs. This demand causes the retail trade to watch the size more closely, for by getting large and attractive eggs they are assured of quicker sales, even when an advance in the price is demanded over that asked for the smaller. This is reflected by the trade of wholesale commission merchants, for with them small eggs are hard to sell, even at a decided reduction from the price of large and attractive eggs. Not only the size, but the quality also, is given more attention. Eggs gathered and marketed daily command, if of good, average size, from three to six per cent more than do eggs "as is," and which are also of unequal or varying sizes. "Ranch eggs" do not now have the significance they formerly had, for now eggs sell on merit and not on name. The experienced handler can tell at a glance, or by handling, which are over two or three days old, and pays accordingly. By reference to our commercial department, the range in prices speaks more plainly than do words the exaction of trade in conforming to closer discriminating consumers. The eggs should be white, for the bulk of the eastern eggs sold in our market are dark. To secure hens that lay large-sized, white eggs should be the chief aim of the farmer, and probably no better breed can be had than the Houdan Black Spanish. By breeding a pen of Black Spanish hens to a Houdan cock, hens are secured which are nonsetters and which are layers of large, white eggs. Besides, the fowls have the large, juicy breast of the Houdan and the large limb of the Black Spanish, both excellent attractions to consumers.

The Vintage.

Winfield Scott, secretary of the Board of State Viticultural Commissioners reports as follows:

The viticultural industry of California is in a peculiar state. As far as the wine market is concerned, there are three conditions existing, which would seem to be incompatible. These are: 1st. Increasing consumption. 2d. Decreasing production. 3d. Low prices. That this condition can exist at all is due largely to the fact that for five years we have had a period of depression in the wine market, unexampled, perhaps, in the history of any California industry. In the period from 1880 to 1885 we had an era of planting wine-grape vineyards, and at the same time there was no commensurate development of the American market. At that time it was fondly believed that a market would be found whenever the wine was ready for shipment, and that almost any variety of grape could be depended upon in any section to produce a good wine and to return a fair profit to the grower. How rude the awakening has been we all know. When the great acreage of vines set out in the years specified came into bearing, the problem of disposing of the wine became a vital one. Under strict competition, prices receded year by year until 1891, which time marks perhaps the lowest ebb of the business. But at the same time, consequent upon this competition and low prices, the demand from the American market grew steadily, and in fact most surprisingly. To day, as far as quantity goes, we have the most satisfactory market ever known in the wine trade. I am of the opinion that we always underestimated our production of wine. I say this because there is a large home market to be met—how large is not definitely known. Commonly placed at 5,000,000 gallons annually, I do not think it is less than 8,000,000 gallons, and it may possibly reach 10,000,000 gallons. This will not seem excessive, when it is remembered that besides the hundreds of small retail wine stores to be found all over the coast, almost every wineproducer is in fact a retail dealer, and has some trade direct with the consumers. Moreover, there is a demand for 12,000,000 annually from the East and from foreign countries. There has been an increase of about 100 per cent in this business in the past five years. This will give some idea of the immense strides taken by the shipping trade since 1887, when the present depression really began. Turning now to the production. Reports from the principal producing sections indicate that there is no reason for believing that the total production of this year will exceed 13,000,000 gallons—of which less than 3,000,000 gallons will be of the varieties known to the trade as sweet wines, and including ports, sherries, angelicas, muscatelles, etc. Many causes have brought about the small production of this year. There has been, as is known, a terrible destruction of the vine in southern California by what is called the Anaheim disease; and in Napa valley, Sonoma county and Solano county the phylloxera has destroyed many thousands of acres of vines. Many vineyardists, discouraged by long-continued low prices, have rooted up their vines and have planted other crops. Furthermore, this season has been most unpropitious for a large crop. I doubt if there will be over a half crop in Napa and Sonoma counties, owing to frost, unseasonable hot and cold weather, to dropping of grapes (coulure), and to other causes. In Santa Clara and other counties there will not be to exceed a two-thirds crop. At this juncture, the stock of wine in the State becomes of importance. Knowing this, and knowing the prospective crop and certain demand, it is possible to predict with reasonable certainty when the long-promised revival of the industry will come to pass. The most careful estimates place the stock in San Francisco and in the interior cellars at not over 15 000,000 gallons. At the present rate of consumption, this is but nine months' supply, and it must be remembered that much of it is owned by people who are amply able to hold for better prices, and who will not sell until such can be obtained.

THE VINEYARD.

Viticultural Situation in San Joaquin Valley.

OFFICE VITICULTURAL COMMISSION,
S. F., Aug. 22, 1892.

TO THE EDITOR:—I take pleasure in enclosing herewith an advance proof-sheet of the report of president George West, as commissioner for the San Joaquin district, in which the situation of the raisin industry is discussed. This is supplementary to his report of February, 1891.

The proof is sent you that the suggestions therein contained may be brought before the raisin-producers of the State, at as early a date as possible.

The annual report of the board, of which this report is a part, will be ready for distribution in about six weeks.

WINFIELD SCOTT, Sec'y.

GEORGE WEST'S REPORT.

Since my last report there has been no material change in the condition of the viticultural interests in this district.

In the county of San Joaquin, little interest has ever been taken in vine-growing, although the vineyards now planted produce large crops which have always commanded fair prices and have yielded returns much more remunerative than grain. This is especially true of table-grapes, which can always be relied upon to produce $100 per acre at present prices. There seems no immediate danger of overdoing this branch of the industry, although the market will always be uncertain and fluctuate with the fruit crop of the East. All table-grapes will produce a good neutral brandy and consequently will be in demand at the wineries in years of depression at approximately the same price paid for low-grade wine grapes.

There has been no increase in the acreage of vines in San Joaquin county.

Stanislaus county planted quite an area in raisin-grapes in the winter of 1890–91. The same may be said of Merced, Fresno, Tulare and Kern counties, and it is probable that 10,000 acres of Muscats were planted in the winter of 1890–91. It is only fair to estimate that the plantings of 1891 and 1892 would no more than offset the acreage of older vines abandoned because planted on poor lands.

Fresno county is, of course, the leading grape-growing county of the district.

The business of growing wine-grapes in this county has suffered with the general depression throughout the State. The wine market presents the remarkable spectacle of increased consumption, decreased production and low prices. This state of affairs cannot long exist, and a reaction is sure to come.

The vintage of 1891 in Fresno was very large and the prices were unsatisfactory. The coming vintage will be relieved by the drying of a considerable amount of wine grapes.

Contrary to my expectations, the prices received by the raisin-growers for their crop of 1891 were hardly satisfactory. The crop of 1892 was severely damaged by coulure—so severely, indeed, as to amount to an almost total loss of the first crop in many of the young vineyards. In consequence of this and also of the general shortage of the fruit crop in the East, the prices for the year 1892 will be highly remunerative. This fact, however, should not induce extension of the acreage devoted to the cultivation of the Muscat grape, for there is nothing in the present outlook to justify the venture. By far the largest part of the vineyards of the valley are not yet in bearing, and will at the next good season produce a crop so unwieldy as to completely demoralize the whole industry, unless steps are taken to provide all possible outlets and to vastly improve the facilities for handling the crop. One of the most serious features of the whole business is the competition of the Zante currant now admitted into this country free of duty. Immense quantities of these currants are dumped on the markets of New York at prices which we cannot meet—especially with labor costing $1.50 per day against European labor costing about 20 cents per day.

Those growers who have established brands will always be in a position to command better prices for their goods than those who are compelled to sell to the packers.

The disposition of the second-crop Muscats is a matter worthy of the most serious consideration. A yield of one ton per acre of second-crop grapes from the raisin vineyards of Fresno and Tulare, when in full bearing, will produce an aggregate tonnage apalling to contemplate. It is conceded by all growers that the drying of this second crop will in a few years be out of the question. What can be done with them? There will be thousands upon thousands of tons to dispose of. During the past summer a great deal has been said about converting these second-crop grapes into wine and brandy, but the amount which could be so consumed would not in any way affect the aggregate production of grapes.

The wine market is, has been and will be fully supplied by the vineyards planted in wine-grapes, and the wineries will naturally handle all the Muscats that can possibly be marketed. So much can be used and no more; and an attempt to force a large amount of Muscat wine or brandy into consumption would result simply in depressing the market, so that there would be no profit left. The flavor of the Muscat brandy is very pronounced, and is much admired by some people. However, to the general public it is unknown, and to cultivate the public taste will take years. If some means could be devised for making neutral grape spirit from the second-crop Muscat, the whole question would be solved; for a very large amount of such spirit could be exported.

The making of table syrup is a matter which should be investigated by the raisin-growers of Fresno. Such a syrup condensed under a vacuum would present a beautiful appearance, and would be an article which could possibly be exported. There are several methods of producing this syrup. I have devoted considerable attention to this matter, and carried out a line of experiments with Mr. H. S. Lord, of Hartford, Conn., which demonstrated that an article could be produced pleasing both to the eye and to the taste. There would be a large market for such a product as a temperance fruit drink, and also as a syrup for general table and household use. There is also another process, owned by the Yaryan Co., of Toledo, Ohio. These should both be investigated by the raisin-growers of the San Joaquin valley. There may be some methods in use in the South which would be practicable here.

I have in this report made no attempt at the compilation of statistics total production, importations, consumption, etc., but shall in my next report give as close estimates as possible for the years 1891 and 1892.

I am aware that the publication of reports and statistics of the general tenor of my report of 1890 is not popular with people who own large tracts of land which they would like to subdivide and sell, but in closing I would state that the opinions I have advanced are backed by the most practical growers of California.

GEORGE WEST,
Commissioner for the San Joaquin District.

Why California Wines are not Better.

J. Knouth of Sacramento gives the *Bee* his views as follows: "We have in California a climate unsurpassed in any part of the world, as far as known, for the growth and perfection of the grape. We are less troubled with insects and pests (the phylloxera excepted), destructive to the vines, than any wine-growing district in Europe. We have also plenty of clean, suitable grounds for vineyard purposes, but almost invariably has the low, rich ground been selected for a vineyard, and contrary to the repeated warnings by those understanding the matter. The bitter consequences of the present have been fully foretold by those whose warnings were unheeded on this point. The throwing of such a mass of new, nonpalatable wine on the market could not result otherwise than as a damage even to really fine wines. Educating people's taste to a liking for such faulty wines, is a long-winded operation. We have grapegrowers making their own wine, and believing it to be pure, but they will not use any of their own production. They do not like its taste, but they wish to sell it for a good price to others whose taste may be educated.

Another drawback is the total ignorance of many in the art of making wine. Many of those having learned something of wine-making in other countries where the compound of the fresh juice and the conditions of climate differ so much from ours, adhere to their old methods and naturally without making much headway.

Another evil is the large vineyards held by one owner. At the time of gathering the fruit the hurry is often so great that, in order to keep everybody busy, the grapes are cut in advance and piled up in heaps waiting to be crushed. This is a most pernicious practice, which permits the grape to heat up and sour before the fresh juice is housed.

Put all this together and see if any but bad results can be expected, and nobody is to blame but ourselves. Of course some of our large dealers in wines are at fault for not paying a better price for upland grapes or wine, to encourage the extending of the like. They make no distinction, thus discouraging many of the growers who naturally say, "If I can't dispose of my grapes or wine for a better price than my neighbor, John, whose water-soaked adobe vineyard produces twice as much of grapes or wine as my upland vineyard, there is no use in extending my vineyard." Some of these wine merchants have flooded the market with the most ordinary stuff, having nothing in view but their immediate gain, and buying and selling at such ruinously low prices as to make it difficult to market our fine wines under the name of "California." Occasionally something will turn up, promising relief. Of late some have tried drying the grape and sending the product to France, there to be soaked up and made into wine. By drying the grape nothing is lost but the water; all the qualities, good or bad, remain and make themselves manifest as soon as the wine is ready and dry. Similar tests were made some 15 years ago by an Eastern firm by evaporating the fresh juice to syrup, but the result has not proven satisfactory, because good and bad qualities of the new wine were retained.

Grapes for the market, or table, may be grown on the moist or lower grounds, quality, such as is requisite for a good palatable wine, cutting no figure in table-grapes. It is the size, show and shipping qualities that are wanted, but the trimming of the vines should not be performed in such slipshod way as is often the practice. The object is to have as many full-sized, showy grapes as possible. A large quantity of small, indifferent-looking grapes is not desirable, and as the cullings will not make a good wine, the profit would greatly shrink.

Some say, why not turn such wines into brandy or alcohol? In the first place, this would be well if a distilled, poor wine would not influence the taste of the brandy so as to make it less valuable and slow of sale. Alcohol is generally obtained from refuse of sugar factories and other sources much cheaper than wine.

One thing should be said, however, before closing this unpleasant subject, and that is, if ever we begin again to root up our vineyards, let us spare those on the uplands. The time will come when our wines will be recognized and sought after under their own proper name. To attain this end we must learn the art of wine-making fundamentally, and we will no longer be at the mercy of anybody. A ripe, palatable and healthy wine will soon educate the people to appreciation and liberal use.

TEN immense logs, the largest ever cut in the forests near Tacoma, will be shipped to Chicago to go into the Washington World's Fair building. Each log is 122 feet long and 42 inches across at the small end. Every two logs required seven cars, 35 cars in all being required for ten logs. One hundred and twenty-six logs will be required for the foundation of the Washington building.

THE FIELD.

The World's Fair Exhibit at Mechanics' Institute.

Producers should bear in mind the display of California products in this city next January and the premiums for which competition is invited. The directors of the Mechanics' Institute, at a regular meeting held August 16th, adopted the premium list for the Preliminary World's Fair Exhibit of California, beginning January 10th and closing February 25th. This premium list is the result of a large amount of labor and covers a much greater range than former premium lists of this institution. Owing to the arrangements made with the California World's Fair Commission, special efforts are directed to the calling out of large agricultural and horticultural exhibits. Under the department of "Farm Products," over $6000 will be awarded in cash premiums, also six gold medals, three grand silver medals, 32 silver medals, one grand bronze medal and eight bronze medals. Among the awards are the following:

For the best, most extensive and varied exhibit of farm products, exclusive of live stock, by any county in the State.....Gold Medal and $1000.
For the second best display.....Grand Silver Medal and $500
For the third best display.....Silver Medal and $400
For the fourth best display.....Bronze Medal and $250
For the best display of wheat in grain and sheaf.....Silver Medal and $100
For the best display of barley in grain and sheaf.....Silver Medal and $50
For the best display of oats in grain and sheaf..Silver Medal and $50
For the best display of rye in grain and sheaf..Silver Medal and $50
For the best display of corn in ear and stalk, excellence and variety considered.....Silver Medal and $50
For the best general display of citrus fruits by the p oducer.....Gold Medal and $400
For the second best display of citrus fruits by the producer.....Silver Medal and $300
For the best general display of citrus fruits by dealer, quality and variety considered.....Silver Medal and $100
For the second best general display of citrus fruits by the dealer, quality and variety considered.....Bronze Medal and $50
Best display citron of commerce.....Silver Medal
Best display and variety of apples by the producer.....Silver Medal and $100
Second best display and variety of apples by the producer.....Silver Medal and $50
Best display and variety of pears by the producer.....Grand Bronze Medal and $100
Second best display and variety of pears by the producer.....Bronze Medal and $50
Best display of California raisins.....Gold Medal and $200
Second best display of California raisins.....Silver Medal and $100
Best general display of dried fruits by the producer.....Gold Medal and $200
Second best display of dried fruits by the producer.....Silver Medal and $100
Best display of cultivated nuts by the producer, variety and quality considered.....Gold Medal and $50
Second best display of cultivated nuts by the producer, variety and quality considered.....Silver Medal and $25
Best display of canned and preserved fruits and vegetables.....Gold Medal
Second best display of canned and preserved fruits and vegetables.....Grand Silver Medal
Best display of pickles and sauces.....Silver Medal
Best display of jellies in glass—home made....Silver Medal and $25
Best display of dried figs by the producer.....Silver Medal and $100
Second best display of dried figs by producer.....Bronze Medal and $50
Best display of dried prunes by the producer..Silver Medal and $100
Second best display of dried prunes by the producer.....Bronze Medal and $50
Best display of jams in glass—home made.....Silver Medal and $25
Best display of preserved fruits in glass—home made.....Silver Medal and $25
Best assortment and quality of pickles—home made.....Silver Medal and $25
Best general display of vegetables, quality and quantity considered.....Silver Medal and $50
Second best display of vegetables.....Bronze Medal and $25
Best display of butter.....Silver Medal and $25
Best display of cheese.....Silver Medal and $25
Best apparatus and methods for treatment of milk and cream.....Silver Medal
Best display of California honey in the comb..Silver Medal and $50
Second best display of California honey in the comb.....Bronze Medal and $25
Best display of wool, not less than four fleeces..Silver Medal and $50
Best display of cotton, not less than 50 lbs.....Silver Medal and $25
Best display of mohair, not less than 10 lbs....Bronze Medal and $15
Best remedies and appliances for destroying insects.....Silver Medal
Best display of hops, not less than 25 lb.....Silver Medal and $25
Best display of Chevalier barley, in grain for brewing.....Silver Medal and $15
Best display of cured forage plants and grasses.....$100
Best display of indigenous foods.....$100

In addition to the awards above mentioned, the following special cash prizes are offered, to be awarded to county exhibits fully in place on the opening day of the exhibition:

For the most complete exhibit.....$500
For the most original and attractive exhibit.....$250
For the widest range of useful products.....$250

These latter are special awards and are in addition and without regard to any other awards which may be made to the different counties, being special inducements offered to counties to have their displays in place on the opening day of the exhibition. The awards in the Art Department will include cash premiums of over $1000, together with a liberal assortment of silver, grand bronze and bronze medals. In addition to these awards, over $4000 will be expended for awards and medals in the other departments of the exhibition. It should be borne in mind that freight on all displays for this preliminary exhibit will be paid by the Institute and Commission, all that is required of the exhibitor being to box his products and deliver them for shipment to the nearest railway station or steamer landing. Detailed information can be had on application to Charles B. Turrill, manager of the Preliminary Exhibit, room 63, Flood building, San Francisco.

Stacking Hay.

Frank S. Chapin, the *Record Union's* traveling correspondent, writes the followig description of a cheap plan adopted by a Modoc county farmer for stacking hay:

Where stock raising is the leading industry, winter-feeding is necessary, and as stock must be sold at a price that those are willing to pay who drive them hundreds of miles and then fatten them before marketing, it becomes necessary to put up most hay at the least expense.

Acting under this stimulus, the farmers of Modoc county have shown much ingenuity. Peter Peterson of Fort Bidwell was putting up his hay from bunched winrows in this way: He hitches a horse to each end of a big rake or "buck," and draws about 1000 pounds at once to the end of the stack. The horses are then detached and a wire rope, running over the stack, is attached and another team hauls the load, buck and all, up a slide and over the top of the stack. All the handling that is necessary is to keep the stack nearly level, and this system packs the hay so solid in the center that it does not wet down.

The buck is made by taking a 4x6 scantling, 12 feet long, and inserting six two-inch teeth four feet long, horizontally, and four vertically. An iron hook on the upper side of the scantling, at each end, and six feet of chain dragging, forms the center and completes the rig. A horse is hitched to each end by a 12-foot rope, and the cross-lines are lengthened to keep the horses about that distance apart. The driver and horses soon acquire the tact necessary to gather up a thousand pounds easily and bring it to the stack.

For two teams they use four bucks, so that an empty one is always ready to start out with. The slide is like a section of a roof mounted on wheels, cut from the end of a log, and covered with an 18-foot fencing. It is 13 feet high on the side next the stack. At the top is an eight-inch log, rolling on gudgeons, for the rope to run over.

If it is necessary to make the stack more than 20 feet high, there is an apron twelve feet long that is hinged at the top and drops down against the stack until it is too high for the main slide. Then the slide is drawn a few feet away and the apron rested upon the stack.

When the buck has been left at the foot of the slide one of the men comes down the slide from the stack with the wire rope. This is 100 feet of ⅜-inch steel rope, with two ¼-inch ropes at the end, each 30 feet long. A loop on each of the short ropes is dropped over hooks on the slide and the team at the other end of the stack hauls the hay, buck, man and all up the slide and along the stack until he gets ready to push forward on the vertical teeth and dump the load. As the buck turns, the hooks loosen, and when freed from the load it is easily thrown from the stack.

With two white men to run the bucks, three Indians on the stack, and himself to run the stacking team, Mr. Peterson said they easily put up 40 tons per day in a way that was almost perfect, so far as settling or injury from weather was concerned.

On rough ground, hay is liable to be wasted, and where it is of alfalfa or any kind of clover, or extremely dry, there is liable to be loss from grinding it up or rubbing off the leaves.

Mr. Peterson was building his stacks 22 feet wide on a frame set on posts eight feet long, sunk two feet in the ground and covered with rails. The object was to shelter the cattle. He only counted the labor of getting out the posts and crossbeams, and said it cost him about $7 per stack. It would be a good plan on land subject to overflow.

THE VETERINARIAN.

Anthrax or Splenic Apoplexy.

Although we have previously printed full accounts of this dread plague of the herds, we republish the following from the Kern Co. *Californian* of last week because of the continued existence of the disease in this State:

Please allow me to answer a question through your valuable columns in regard to a disease which has caused the loss of quite a number of cattle in this valley during the past few months.

The disease in question is charbon, or anthrax (splenic apoplexy.) It consists in a special and primitive alteration in the blood by which an organism termed the *bacillis anthracis* is rapidly developed and propagated and is peculiar to the herbivora (herb-eating animals) and aves (birds). Inoculation with the blood or tissue of animals which have died with anthrax or its sequels induces, both in man and other animals, a malignant form of inflammation called malignant pustules, and for this reason anthrax is looked upon and described as a truly contagious disease.

Anthrax has a very ancient history, being described by medical writers in the early part of the 16th century. It was prevalent and of such fatal nature that several hundred people perished from partaking of the flesh of animals affected with the disease. Many outbreaks of anthrax of more recent date have been carefully studied by the medical fraternity until the true nature of the disease is well understood.

ETIOLOGY.—The influences which predispose to the development of anthrax are arranged by able writers under four principal heads, comprising, respectively, the influence of temperature; water spread over the surface of the earth as in swamps, stagnant ditches and inundated or irrigated lands; forage tainted with decomposed animal and vegetable matter; and by contagion.

Influence of temperature—The hygrometric and thermometric conditions of the atmosphere always exercise a marked action on the organism, disposing it under certain circumstances to anthrax, generally when there are hot days with cool and humid nights.

Influence of stagnant water—The history of the malady demonstrates that marshy and inundated or irrigated lands are favorable to its development. In this valley where the land is irrigated, the water is allowed to stand in the ditches or in low places and a large amount of vegetable matter that decays on the land is leached out during irrigation. Then, the water being allowed to settle in the low places, slowly evaporates and leaves a strong solution of decayed vegetable and, in many fields, animal matter. In this water is a fertile field for the development or propagation of the bacillis anthracis, and by a second irrigation the bacilli are carried from their place of propagation and lodged on the vegetation in other parts of the field, contaminating the provender with its deadly poison.

Anthrax is also disseminated through the agency of flies. I have observed that the disease was most prevalent when flies are most numerous, and I have induced the disease in rabbits and guinea-pigs by inoculating them with flies caught on the carcasses of animals which have died of anthrax. The flies themselves resist the influence of the virus, although bacteridæ are found in them.

PATHOLOGY.—The influence of all these causes upon animal economy, differing widely in their primary stages, induces certain changes within the blood which ultimately tend to grave alterations in its composition and to its death and decomposition.

First of all, we must consider the influence of highly-nutritious and nitrogenous food when suddenly brought to bear upon the animal body. Veterinarians are generally agreed that the result is the rapid formation of blood highly charged with albuminous material which neither the tissue nutrition nor the excretory organs are calculated to keep in anything like its normal condition. In consequence of this, grave changes occur, by which its constituents become degraded and the system eventually empoisoned. If it be remembered that every tissue and organ of the body, by withdrawing from the blood constituents which are essential to their well being, serve as excretory organs to the rest of the body, the subject will be more clearly understood. Without this withdrawal from the blood of these constituents, by every tissue and organ, it soon becomes unfit for the purpose for which it is intended, and the same condition results when it is so rapidly (and hence imperfectly) formed that the process of tissue nutrition cannot possibly eliminate or withdraw from it more than a moiety of its superabundant constituents.

For example, the whole of the body requires within a given time a certain quantity of plasma for all the purposes of nutrition, growth, heat, the formation of fat and what is eliminated by the excretory organs; and if within that period the quantity of plasma far exceeds these requirements, it naturally follows that the unused matter must accumulate and there undergo such grave alterations as to become injurious to the animal economy, empoison the blood, modify its power of absorbing and conveying oxygen from the lungs, destroy the integrity of the blood corpuscles and convert it into a proper habitat for the development and growth of low organisms, which cause within it a septic or putrefactive action by which its vitality is ultimately destroyed. It, in fact, brings about a condition of the blood similar to that which can be produced artificially by the introduction of decomposing animal matter or by giving it with the food upon which the animal is fed. When the blood is so altered, it tends to accumulate in the vessels of the soft structures of the body, such as the areolar tissue (that substance which connects the skin to the body), spleen, enteric mucous membrane and lungs, where it rapidly transudes through the walls of the altered and debilitated blood vessels and constitutes the various local manifestations, giving all, or a portion of those organs a black, congested appearance (in postmortem), misleading many stockowners to believe the animals die from indigestion or inflammation of some one or more of these organs, which is not the case.

It is supposed by many that anthrax (black leg) and splenic fever were of spontaneous origin; but in opposition to this theory, we have the observations of many eminent pathologists who maintain that the malady is due to the propagation of a now well-known organism—the *bacillus anthracis*. Various experiments have proven that these bacilli will resist inclement weather and elements for an indefinite period of time and still remain virulent and active if exposed to the atmosphere, from which they derive oxygen and thereby live. It has been fully demonstrated that the bacilli lose their virulence or die when deprived of oxygen by being placed in a sealed vessel. They are also destroyed or rendered inert when exposed to a temperature of 195° Fahr.

These experiments fully demonstrate the necessity of either burning or burying deep the carcasses of all animals which die, and the former is preferable. It is not uncommon to find a number of dead carcasses lying exposed to the elements on ranges and pastures of our stockgrowers, especially sheepmen, and then people will wonder why disease or sickness of their family and stock occurs, and will attribute it to ill-luck, which has nothing to do with it. Almost criminal negligence is the fault. Our State Board of Health should look after the matter and ask that stringent legislation be brought to compel the cremation or deep burial of all animals that die. In the putrifying blood of one sheep there would form sufficient bacilli to kill 100 head of cattle if they were inoculated.

Dilution of the fluid containing bacilli with a moderate quantity of water has no effect on its virulence, but a large quantity of water destroys it or prevents the development of the bacilli.

Anthrax, or splenic fever, is not transmitted by infection from one animal to another, for animals kept in the closest proximity to diseased ones, and placed under the most favorable conditions for infection through the air, do not become diseased.

Mice and rabbits seem capable of eating food containing bacilli with impunity and flies may gorge themselves with the infected blood and suffer no harm, but horses, cattle, dogs, cats and ferrets succumb after partaking of either food or water contaminated with the virus. T.

The Home Circle.

The Sleep.

"He giveth His beloved sleep."—Psalm cxxvii:2.

Of all the thoughts of God that are
Borne inward unto souls afar,
Along the Psalmist's music deep,
Do tell me if that any is
For gift or grace surpassing this—
"He giveth His beloved sleep"?

What would we give to our beloved?
The hero's heart to be unmoved;
The poet's star-tuned harp, to sweep;
The patriot's voice, to teach and rouse;
The monarch's crown, to light the brows?—
"He giveth His beloved sleep."

What do we give to our beloved?
A little faith all undisproved,
A little dust to overweep,
And bitter memories to make
The whole earth blasted for our sake;
"He giveth His beloved sleep."

"Sleep soft, beloved!" we sometimes say.
But have no tune to charm away
Sad dreams that through the eyelids creep.
But never doleful dream again
Shall break the happy slumber when
"He giveth His beloved sleep."

O Earth, so full of dreary noises!
O men, with wailing in your voices!
O delved gold, the wailers heap!
O strife, O curse, that o'er it all!
God strikes a silence through you all,
And "giveth His beloved sleep."

His dews drop mutely on the hill;
His cloud above it saileth still,
Though on its slope men sow and reap.
More softly than the dew is shed,
Or cloud is floated overhead,
"He giveth his beloved sleep."

Aye, men may wonder while they scan
A living, thinking, feeling man,
Confirmed in such a rest to keep.
But angels say, and through the word
I think their happy smile is heard—
"He giveth His beloved sleep."

For me, my heart that erst did go
Most like a tired child at a show,
That sees through tears the mummers leap,
Would now its wearied vision close,
Would childlike on His love repose
Who "giveth His beloved sleep."

And, friends, dear friends, when it shall be
That this low breath is gone from me,
And round my bier ye come to weep,
Let one, most loving of you all,
Say, "Not a tear must o'er her fall—
He giveth His beloved sleep."

—Elizabeth Barrett Browning.

Daniel Dicker's Fall.

Written for the RURAL PRESS by DUANE MOBLEY.

Forty years old! Not old for a man, but old for a boy, certainly; and little, so that the coat he wore and the shoes which covered his feet were bought of juvenile stock. And he shaved his face, every hair off, and perpetually wore a little bell-crowned hat, more crown than brim, making him look beneath it like a court-jester or like Barnum's buffoon.

As his ears were quick to hear, he knew that many called him "the little old boy." But he had a manly heart, manly principles and, moreover, he was a man, his vote being as weighty and consequential as that of any other man.

It was true, however, that he was just about mature when he became forty. All his life he had plugged about at this thing and that—gardening, cow-milking, rough carpentry and such like employments, but with little or no success at any of them, and injured by a fall while shingling a barn, was so hurt as to be of little good along that line ever afterward. There were odd jobs for the women folks then, and as his patrons had little money, he got little.

In an old, half-dilapidated building which, somehow, he had acquired possession of, he bestowed himself with his few belongings and lived. Small as he was, care rested upon him, drawing little wrinkles about his eyes and ploughing a furrow or so along his broad white brow. Though his body was small, his head was big, and with a good deal in it.

But a crisis had come. His fall had injured him and his chore-work brought him so slender an income that he was nearly on the town. On his pallet in his little, old, unused building, he lay deliberating about it. And the more he thought about it, the more he realized the necessity of his having a business of his own. How foolish he had been, to be sure, serving others year after year for the miserly pittance they paid! "I shall have a business of my own." So he declared to himself, en-soliloquy, as he deliberated. And it was his accident that had precipitated the necessity. Despite the little fellow's poverty, he had hidden away a funeral fund—a small sum to buy the coffin with and fee the gravedigger when life should cease. Like many another, he had a horror of the potter's field. "This little sum I'll use for a starter." So he soliloquized, and so he did, first securing a long lease of the half-ruined building for a song, and next getting a good, strong handcart and a few other matters to his liking. Evidently under the weather, no one paid much attention to his movements. But eventually they saw that he was out early and in late, scouring the little city in all kinds of weather for refuse tinware, and, in fact, for all sorts of old junk. So he made his first stake. Then he bought, repaired and sold old furniture, employing a likely young fellow to tend shop while he was abroad with his goods. In an inner room he passed his evenings and the long, stormy days of winter. It was secluded and few saw it; but when seen, as some were prying enough to peep through the crack of the door, they saw daybooks, ledgers, cashbooks and all the paraphernalia of a great business. Then the news spread that "the little old boy" was doing exceedingly well. But he was not, simply common or ordinary in the matter of trade. What the prying ones had discovered was a business college, the little fellow being both principal and pupil. But he mastered his studies, and after awhile when real estate was at a lag, he bought the little old house and the patch of ground which went with it. Then he new-weatherboarded, shingled and painted the building, making it look as near like the other business houses as possible.

"O, yes," he soliloquized when no one was by, "I must have a sign—in fact, two of them."

Eventually there appeared over the double front doors: "Daniel Dicker, Dealer in Furniture, New and Second Hand," and over the end door: "Expert Accountant. Business Solicited."

After that no one called him "the little old boy." It was, "Mr. Dicker, I wish you would overhaul my books," or "Friend Daniel, come around again and set my books right."

Then it was that he did accomplish something; his shopman managing the furniture, himself getting good pay for his own services and saving, as he did, the reputation of many a giddy-brained youth and the business of the employer. And he added to his own reputation and skill constantly.

One morning there was great commotion in the city. The County Treasurer had committed suicide; the books were found to have been falsified, and moneys retained to the extent of thousands. Just what condition the office was in was hard to determine, so the matter was brought to Dicker for him to figure out, he having to closet himself with the deputy for days. He finally found that fifteen thousand and some odd dollars had been abstracted and used—as a little detective work revealed—in stock gambling, the stock which the speculating official bought dropping 50 per cent instead of increasing in value that much. It was that unexpected decline that determined the official's suicide; but his widow came to time finally and paid the deficit out of her own private fortune; while the office affairs continued in the deputy's hands, but under the watchful eye of Dicker.

Strange! but three months later that same stock rose rapidly, doubled and quadrupled in price, and the widow realized a fortune. When election time came again, Dicker was chosen Treasurer by an overwhelming majority. It was current rumor that it was his influence that had secured of the widow the $15,000. In Dicker's hands the office affairs ran as smooth as clockwork, and the new treasurer's appearance changed somewhat to suit the new position, the credit and decency of the place he occupied—a fine soft suit of blue-black topped off by a new beaver.

It was the same Dicker, but a little more presentable. And again one day he soliloquized: "As I am a man," said he, "it is time I was getting married." And as he continued, he smiled: "How would I look, a little fellow like me, nearly 50 years old, asking a woman to have me?"

By a strange coincidence he was spared the necessity, for that same day the widow of the deceased treasurer sent her carriage for him to come up. And when they were alone after his arrival, said she: "Some one must look after my investments; will you not, Mr. Dicker?"

After some reasonable hesitation Dicker finally consented.

Then the lady grew more familiar, even tender, and said, as she impulsively laid one of her fat, red hands on one of Daniel's slender, pale ones: "Daniel, why not take this business for life, and superintend me whilst governing my money? Say you will, Daniel, and let us swear out the warrant Saturday and be married Sunday. You see," she explained, "Borden's death, such as 'twas, lost me social position and I rather wish to be the treasurer's wife again."

Dicker was so much in the habit of embracing his last best chance that he consented.

A year or two afterward, while Dicker was one day full of business as ever, dodging about the streets here and there, two men sitting on a dry-goods box at a store front noticed him. Said one of the men: "Who is that fellow? He looks like a regular little, old boy." "That is just what he used to be called," responded the other; "but it is the Hon. Daniel Dicker, our present county treasurer and candidate for Congress for this district. He's the smartest business man in this section of the State. While shingling, he fell from a barn roof, years ago, and it was the making of him, because, after that, he had to use his wits and his wits brought him business, notoriety, fortune. A fall is a good thing sometimes, especially a fall upstairs.

Bob's Particular Friend, Miss Shepard.

"Chose etrange d'aimer."

I.

"Give me your list now, if you want to,' said Miss Gardner, stopping her writing suddenly and looking up impatiently. She was making out invitations to a tea which she intended to give, and looked hot and cross. Bob drew a tiny piece of paper from his pocket, approached his sister cautiously, handed her the paper, and retreated to his armchair. Once more seated, he resumed his cigar, and, in a half-amused, half-curious way, watched his sister attentively. She scuffled her feet a great deal, and screwed her mouth into all possible shapes, as she read the names to herself, thereby affording Bob the greatest delight; for he liked to tease his sister because she got angry so quickly.

"Miss Shepard!" she exclaimed, suddenly turning and glaring at Bob. "Why, Bob," she went on, very impatiently, "I thought you hated Miss Shepard! You are always as rude to her as you can possibly be; you would rather do anything than dance with her at a party; you say horrid things about her, and here you've put her down on your list. I had left her off mine because I thought you hated her so." Miss Gardner paused to give her brother a chance to get in a word, a thing she seldom did, it seemed to him.

"Well," he said helplessly, "I thought she ought to come. It strikes me that it is rather hasty of you to leave her out on my account. Isn't she a friend of yours?"

"May Shepard is an awfully nice girl; a thing which you may have heard me say about a thousand times before!" exclaimed Helen, throwing down her pen and getting ready for a fight. "Bob Gardner, you are the most utterly inconsistent creature. There doesn't seem to be the slightest use in talking to you." Bob tried at this point to say, "No," but his sister had the floor. "What do you want her here now for? Just to be as disagreeable to her as you can? I don't believe she'd come, anyway, because she must want to keep out of the way of such a rude, sublimely conceited—"

"Then don't invite her, dearest; but forbear blackguarding me, because I don't want to go to the next Assembly very badly as it is, and the least thing—"

"I shall invite her, too; and if you don't treat her decently, you'll wish you had. Furthermore, I'm going to ask her to pour out, as I should have in the first place, if it hadn't been for you."

"Hadn't been for—who?"

Helen sat down to write the addresses on her list. Bob smoked his cigar in silence, with a satisfied smile on his face, as though he had attained success in some cherished project; then put on his hat and coat and started out. Helen wanted to tell him that it was time for lunch, but did not, under the circumstances, think it best to lower herself to do so. So Bob probably didn't get any.

II.

A week later came the tea—one of the ghastliest ordeals imaginable for Bob. A word with everybody, a sentence with nobody; a bewildering sea of black coats, on the shores of which were several excited girls serving sherbet, chocolate and tea, and all the time smiling, talking, laughing, frowning, at the solid wall of human beings around them. By great exertions Bob managed to pierce his way to a table more crowded than the others, where a slight, pretty girl, with blue eyes and light brown hair, was serving chocolate.

"Do you need anything, Miss Shepard?" he asked in a low tone, bending down over her.

"No, thanks; one of the other waiters is getting things for me," she said loudly.

Bob wisely ignored the compliment, nearly cracked his cheeks trying to smile, and finding a chair near the wall, drew it up and began talking to Miss Shepard, who seemed to pay very little attention to him.

"Aren't you tired of pouring out?" he asked at length, after he had seen several quarts disappear. "Helen said she would send some one to relieve you soon."

"Yes, I wish she would; I need relief," replied Miss Shepard.

This looked encouraging, but Bob was more or less used to it. Besides, as his sister hinted, he was conceited, so that Miss Shepard's last remark had no perceptible effect on him. A minute later another girl was brought by Miss Gardner to attend to the chocolate, and Bob walked away with Miss Shepard. They passed through the dining-room slowly and into the conservatory, which was just now vacant, and lighted very dimly by the sunset, but the hum from the other room filled the air.

"Well?" said Miss Shepard, sitting down stiffly in the chair he gave her. Bob tried to say something, but couldn't.

"Well?—we're having nice weather, Mr. Gardner," she said, half derisively. This little observation doesn't always kill conversation, for on this occasion it gave Bob's mind the little start it needed. "I haven't seen you for some time."

"No; I noticed you took particular pains not to see me on the street yesterday," said Bob.

"I didn't know you were anywhere around—were you?" she asked, carelessly.

Bob did not answer. He could hardly feel that the conversation had been a success so far. "I want to have a serious talk with you," he said, solemnly.

"Why, I hope I always talk seriously. But go on. I am dying to hear you say something."

"Will you tell me, if you can," he went on, "why I don't get along better with people? People seem to hate me instinctively; and why should they?"

"I don't know why they do," replied Miss Shepard, in rather a disgusted tone, for she really did know very well. "I've never heard any girl say anything about you, one way or the other; but I've known Helen so long that perhaps they wouldn't say anything to me on that account. How can you tell that they don't like you?"

"Well,—I don't know,—for various reasons," replied Bob, slowly.

"I guess the trouble is that they don't fulfill your expectations, that's all," Miss Shepard continued, mercilessly. "You know that a person's self-esteem is equal to his success divided by his expectations."

"But why do you yourself go out of your way to snub me on all occasions?" asked poor Bob. "I should think we might be good friends."

"Surely, I want to be good friends with everybody that I see as often as I do you. I have never meant to hurt your feelings. I never knew that I could. But did you bring me in here to give me a lecture on manners? Frankly, Mr. Gardner, I don't think you are the person—"

"No," interrupted Bob, "I brought you neither to ask you why you treat me so badly, because—I love you, and—"

A shriek of laughter interrupted the poor fellow, and Miss Shepard rose from her chair, nearly convulsed. At this moment Helen Gardner and Tom Smith, Miss Shepard's cousin, came into the conservatory together. Miss Shepard, still laughing, immoderately exclaimed: "Your brother there—proposed!—oh!" And as Bob made his escape the combined shrieks of the three reached his ears; but his sister's laughter was faint, in justice to her let us say.

Poor Bob, his head in a whirl, feeling like an abject fool, and crushed by a blow to his vanity, no less than chagrined that he had made such a confession to his enemy, as he thought he regarded Miss Shepard, hung around his mother and the older ladies for the next half hour. How he hated and cursed himself! It seemed to him that if he lived forever he must always feel like a fool now. But, finally, as he was wandering around, he caught sight of Miss Shepard in the hall, with her things on, about to go. Seeing that she was alone, he stole quickly up to her.

"Miss Shepard," he began, with a terrible heaviness at his heart, "I am very sorry that you saw fit to make public what I told you, and make me ridiculous. I had a better idea of you than that. What I told you was true—why couldn't you respect my feelings, even if they did seem absurd to you? I think—"

"I haven't time to talk now, interrupted Miss Shepard, brusquely, but with the shadow of a smile, "those girls there are waiting for me. And I hope, Mr. Gardner, that you will find out very soon why you

can't get along with most people. But, Bob," she continued, dropping her voice, "don't be too angry with me, for your sister and my cousin came into the conservatory an instant before you knew it, and might have made fun of you, anyway. If it is any consolation to you—I have decided to accept you."—Harvard Advocate.

"I Love the Woods."

O give me but that crag of rock
On which to build my simple cot,
And I'll not ask for palaces
Nor murmur at my lonely lot.

I do not need the silken garb,
The cushioned couch, or seasoned food;
I do not need the tongue of men
To voice the word that "Life is good."

I do not need the amber scent,
The honeyed smile and tutored song,
Or crowd of glittering sycophants
That in the halls of Crœsus throng.

I love the woods.

When o'er the distant line of hills
The rosy morning peeps its head,
And stars that through the night have watched
Now quench their light and go to bed.

I rise from couch of perfumed pine
And seek the purling brook that flows
Between its fringe of velvet moss,
Where tiny turquoise blossom blows.

I need no marble fountain rare
To purify and lave and clean,
And when I say my grateful prayer,
'Tis in His mighty dome of green.

I love the woods.

My silent friend, my faithful dog,
The horse that hastens to my call,
The birds that sing above my head—
They constitute my all in all.

I breathe the forest's fettered air,
The breeze that cools the mountain brow,
The snow-clad summit's atmosphere,
And praise the Lord I'm living now!

I love the woods.

—Richard Mansfield.

RATIOS OF YOUTHFUL GROWTH.—The year of greatest growth in boys, says the *British Medical Journal*, is the 17th; in girls, the 14th. While girls reach full height in their 15th year, they acquire full weight at the age of 20. Boys are stronger than girls from birth to the 11th year; then girls become superior physically to the 17th year, when the tables are again turned and remain so. From November to April, children grow very little and gain no weight; from April to July they gain in height, but lose in weight, and from July to November they increase greatly in weight, but not in height. These are the results of over 6000 observations. During the school months, children suffer far more from disease than in the vacation, and during school years far more than before or after. Usually, school-work is far too hard in the lower classes, and the children do not get sufficient muscular strength. Less school-work and more physical training until the 12th year are necessary to make our coming generation strong, and a child should not undergo any severe mental labor.

YOUNG FOLKS' COLUMN.

Rover Sherman and the Big White Dog with a Pedigree.

[Written for the RURAL PRESS by KATHERINA BRYANT NOLAN.]

It was a hot day. The sun shone dazzlingly down from the blue vault of heaven, and even the breeze had yielded to his influence; scorching instead of refreshing nature.

Frank Sherman and Rover walked—perhaps it would be more truthful to say dragged—themselves along the old San Fernando road, and an exceedingly parched and dusty thoroughfare it was, that never-to-be-forgotten morning. They went in the very center, as if to make the worst of a bad bargain, yet it was impossible to tell from the expression upon Frank's face whether he was in an agreeable frame of mind or cross. His small visage was screwed up into more wrinkles than could easily be counted, but that might well be from the glare of the sun rather than from ill nature.

Rover Sherman was a dog who had a duty in life, and he never allowed anything to interfere with his profession. Wherever his young master went, he was bound to follow, and he moved soberly and sedately at his heels. This trait was sometimes an inconvenient one, but as Rover always managed to get untied or let out, when he was shut up at home, Frank had at length decided to let him start with him, as he was sure to hunt him up.

It may be that the jovial mistress of the Sherman ranch had something to do with the mysterious manner in which Rover had regained his liberty and bounded off after Frank, but no one knew. Some mothers have curious ideas that some boys do not understand, yet on the whole they are very wise ones, as many a boy can prove, if he chooses to speak.

Suddenly a distant clatter arose, and Frank faced about, scanning the hazy looking track that lay straight and shining far behind him, but he did not change the expression upon his face, or move out of the the road until Tom, the driver, pulled the big red horses up just in time to avert a tragedy. Both he and Rover were lively enough then, and they must have been daydreaming until that moment, but no one will ever know what those interesting visions were.

"Halloo, Tom," said Frank.

"Halloo, youngster," returned the good-natured driver. "You and the dog must have a grudge against yourselves. Want to ride?"

"Yes," said Frank, smiling broadly, as he climbed nimbly over the forward wheel, and perched himself up on the hard seat; and then the big red horses and the great cart rattled on again.

Rover trotted under the wagon, close to the horses heels. The dust choked him, and his red tongue drooped languidly from one side of his wide open mouth, but he stretched his long legs cheerfully, and kept an eye on the left hand shoes of the nigh horse. The dust tickled his nose, but he gave a snort and shook his head savagely whenever it was likely to become unbearable, and raced on patiently.

Rover was chock full of philosophy. When he had anything to do he put forth all his energies, and took the very greatest interest in the smallest details, and it often made life a pleasure even in the face of great discomforts. The nigh horse struck many a flinty stone as he hurried toward his dinner, and the sparks flashed brilliantly, even in the glare of the sun now nearing the meridian, so Rover fell to counting them. He had a queer way of keeping tally. When he saw a spark, he thought of some dog he knew. When the dogs gave out, he began with the boys of his young master's acquaintance, and so whenever he wanted to recall these sparks, all he had to do was to remember the dogs and the boys. Some of the latter were favorites with him, and others bore a bad, black mark against their names in the book which Rover kept, up in one of the canyons, under a stone. Frank never could tell why Rover always dug and snuffed so around that stone, but it was simply to make sure his account-book was snug and safe, and he never forgot to growl and show his teeth when a boy came around whose name was registered in this volume. He was a resolute and watchful animal, and he knew some of these youngsters were envious of Frank, so he had no confidence in them.

"Be quiet, Rover. Oh, you needn't be be afraid of Rover! He won't bite. He just growls for fun," Frank always hastened to declare, when Rover explained his feelings in this dog-like fashion, but the boys always looked a little frightened and were pretty careful about playing tricks upon his owner, when Rover's teeth were in their neighborhood.

The truth was that when Rover first came to town he had attended a dogs' party. He was a stranger and he sat by himself, but he heard the dogs talk, so he learned a great deal in regard to the ways and manners of these fellows who aimed to be friends with his master, for he had big ears.

There was one great white dog there, and every other dog treated him with deference and listened to everything he had to say, and Jack Townsend whispered in a friendly way that he had a pedigree. Now, Rover did not in the least know what this meant. He had an idea that it was a new name for some big bone which the white dog kept hidden, to dig up and nibble at from time to time, when he was hungry or in need of excitement. There was never any knowing when some mischievous, prying, digging canine might carry off such prizes to his own hiding places, and Rover knew that when he thought of a bone and started to dig it up, he could hardly wait until he got there, to see if it was really safe.

After a time, he found it was something about the white dog's great grandmother, so he blushed at his ignorance and racked his brains to remember what he had heard concerning his own ancestors. For some reason, he was anxious to be on terms of equality with this white dog. He seemed to be the king of dogs, and he watched him out of the corners of his eyes critically.

"I must have had a grandmother," thought Rover to himself; "to be sure I do not remember the old lady, but she undoubtedly existed. So far so good," and then Rover licked his chops, and eat and cogitated shrewdly until Jack Townsend proposed a coyote hunt. He did not know what this meant, but he resolved to find out. At that moment, one of the dogs saw the moon coming up from behind the lofty Verdugo range, and he uttered a long, loud howl. The other dogs saw the man in the moon making faces at them, so they followed suit, and the whole town shivered and wondered what ailed the dogs. When the dog chorus felt satisfied that the grinning, derisive man in the moon understood their feelings toward him fully, they started off on the dead run, and the big white dog led the chase.

Rover was a black, smooth-haired dog and his legs were too long for his body. He looked something like a potato dog, which has wooden toothpicks for legs and sometimes sets in an uneasy way upon a window ledge as if afraid of falling off and forever disgracing himself in the eyes of the other toothpick-legged dogs, standing in a row behind him, as he can well see by the eyes in his back. It is pleasant and consoling to all toothpick-legged potato dogs to be able to see backward as well as forward.

Potatoes have curious little eyes; but Rover had no advantages of this sort, although his funny-looking legs proved a good thing in the coyote hunt so far as valor goes. They enabled him to keep up with the white dog and nip at the coyotes' heels in a crafty manner, when they had surprised him as he stood in the middle of a field and gazed at the moon. Rover bore the marks of the final struggle for many a long day. When the coyote was tired of being chased, he gave a short, quick snap of a bark, and then several prolonged shrill howls, calculated to send terror to the hearts of his friends and enemies alike. The big, white dog fell back a bit, and as the coyote wheeled and faced Rover, he laughed gleefully and ran off home.

It was a desperate struggle, but the coyote had at length presented a flag of truce in a gentlemanly style, and had signed an agreement to keep away from the Sherman ranch forever and a day. He trotted off to his home far up the breezy shadowy canyon, and Mrs. Coyote and the children went to bed without any supper. He looked very funny, for one eye was entirely closed up, and there were various little streaks of dark red that testified to the sharpness of Rover's teeth. Mrs. Coyote scolded some, but the very next day she took her knitting and spread the news of Mr. Coyote's adventure among all her acquaintances. They all agreed that Rover was a bloodthirsty enemy, and within a few days all the gentlemen coyotes had promised never to cross the line of the Sherman ranch under any circumstances. They met down in the valley and talked it over afterward and presented a prize to the coyote who howled the longest and loudest.

Pedigree or no pedigree, Rover now felt coldly towards the big, white dog, and he felt that he preferred his own grandmother at any rate. He learned by accident what the big, white dog's grandmother really had, and it was not anything half as nice as a bone.

"Yes," said Frank to his cousin, who was out on a visit from Los Angeles, "that big, white dog has a good streak of blood in him, but he doesn't show it. His father was imported from England and his grandmother was raised upon the estate of Lord Falmouth and took no end of prizes, but Rover Sherman will beat him every time on any kind of a hunt you can name. Rover winked hard and wondered if Frank could have found out about the coyote hunt. He wagged his tail until he raised a little cloud of dust and tried hard to place his legs so that they should look more graceful.

"I always liked Rover the very best of any dog I ever saw. He is a good, smart, lively dog. I don't think much of dogs that have pedigrees."

Rover could have cried, he felt so glad when he heard this from the lips of Frank's cousin; but he didn't. He licked his chops and wagged his tail harder than ever and speculated in regard to his ancestors for the rest of the day. The more he thought about them, the surer he became that he was a dog without a particle of pedigree, and he was very glad of it.

The red horses and the big cart belonged to the master of the big, white dog, but it did not trouble Rover as long as Frank chose to sit up beside the cordial young fellow, who drove this spanking team. He was a big-chested, light-haired young man, and he held the reins easily in one hand while he talked ceaselessly to Frank, who listened to him with a flattering attention. Once in a while a shadow crossed his face and he wished Rover was riding, too, but he did not like to suggest taking him aboard. So Rover ran and Frank rode toward the home of the big, white dog. The big, red horses turned sharply by a pile of lumber and crossed the railroad-track with a bound, and Frank would have been left behind only he landed on the seat by a miracle and then held on hard for his life. The driver was in nowise disturbed, and the trail lay through shining billows of silvery wheat, and far ahead of them the ranch-house and the tall windmill could be seen in the midst of a grove of eucalyptus and pepper trees.

The white dog was lying on the front portico snapping at the flies and listening to the lazy creaking of the windmill.

"I wish the thing would go or stop!" he snarled to himself. "I wish this place was screened. These flies are an abominable nuisance!" Just then he heard the noise of the team, so he stood up and shook himself. Then he rushed down the driveway and along the trail to escort the horses to the barn. He was in a very bad temper, and when he saw Rover under the wagon, he rushed at him savagely. There was a terrible yelp, and Frank Sherman's heart stood still. Tom pulled the horses up short—so short that they nearly sat down, as they were too well trained to rear themselves, and Frank jumped down and looked under the cart.

"It's your dog, Tom!" exclaimed Frank. "I'm afraid he's dead!"

Tom got down with considerable haste and ran behind the wagon to look at him.

"I guess you're right," he answered. "I never knew him to be so savage! The wheel must have gone over him."

The flies would never trouble the big, white dog any more. The windmill might go fast or go slow, he'd never hear it. He'd never attend any more dog parties nor bark at the man in the moon again, and the coyotes could take their ease and gaze at the moon in peace for all of him. The king of dogs was dead, and there was no one to take his place.

The big, white dog's master had him buried before the women and children found out what had befallen him, and Frank and Rover attended his funeral and listened to the men while they praised him and talked over his fine ancestors. Frank's breast was filled with joy, because it was the big, white dog that was dead instead of Rover; and Rover was very glad, too, and wagged his tail fiercely when the men patted him on the head.

"Poor Rover," said Tom, "I suppose he feels terribly. He looks as if he did! Say, youngster, what'll you take for yer dog? Hey?"

"O, I won't sell Rover," said Frank, hurriedly. "Come, Rover, we must go now."

The men smiled a curious smile and looked at each other slyly as Frank and Rover cut across the orchard toward the trail. And that was the end of the tricky white dog; but Rover yet lives, and is greatly beloved.

A CLEVER utilization of photography, for the purpose of correctly sighting a cannon, is due to the ingenuity of Marquis de Fraysseix-Bonin, a naval captain. He calls it the *tir optique*. The object to be aimed at being reflected on a plate, the marksman has only to bring the sight of his cannon on to the object reflected on the plate. This is done by a small, delicately arranged mechanical apparatus. The moment the pointer of this instrument touches the object on the plate the cannon is fired.

ROYAL


BAKING POWDER
Absolutely Pure.

A cream of tartar baking powder Highest of all in leavening strength.—*Latest U S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

WILD-FRUIT TREES.—Oroville *Register:* Geo. Gable returned from a two weeks' trip through the mountains of Butte this week. He is an experienced and observing woodsman, and for years has been accustomed to travel in all parts of the hills. He says there are many wild apple and peach trees that are bearing good fruit. These are usually found in the cool and shaded ravines or about springs where the roots of the trees can find moisture. The older trees that attained a good size ere cattle browsed them down, bear excellent fruit, but the younger trees are kept eaten down by cattle. He thinks that if the cattle did not destroy them, these trees would thrive and grow rapidly and that the woods would in a few years become filled with fruit trees. Where the peach pits and apple seeds were thrown down by miners in an early day, especially near the abandoned miners' cabins, these fruit trees are the most abundant. In most instances, the fruit is of an excellent quality and of good size.

TWO-THIRDS OF A GRAIN CROP.—*Register:* County Clerk Stilson recently visited the leading grain-growing sections of the county and says there is about two-thirds of a usual crop This is true of the whole section, while there may be exceptional cases where the full crop has been obtained. Chico, Nord, Dayton, Durham, Nelson, Biggs and Gridley were visited while on the trip, and for the whole section the grain will not average more than two-thirds of the usual yield.

Fresno.

FRUIT FOR CHICAGO.—Sanger *Herald:* The first shipment of green fruit from Sanger to Chicago went out from here this week. It comprised a carload of grapes from the Gray vineyard, five miles north of town, the fruit being carefully packed away in a refrigerator car. The freight will amount to more than $400, and the fruit will have to bring a good price to make it a profitable venture for the shippers—Messrs. Cook & Langley of Fresno. There is a space of two feet on top of the car to be filled with ice, which is put in several times along the route. The fruit is packed in crates, each crate having four 5-pound baskets of grapes. A car will hold 990 crates.

Kern.

PREMIUM PEACHES.—Bakersfield *Gazette:* The consignment of peaches with which C. A. Maul believes he will gain possession of the first prize at the Exposition at Chicago, was shipped by him last week. They were a handsome lot of peaches, some of them weighing as much as 22 ounces each, and were packed in wooden barrels, lined with cotton batting, and then filled with a preserving fluid. It is the intention to repack them in glass jars when they arrive at their destination.

THE EAST SIDE CANAL.—Bakersfield *Californian:* The work will begin at once on the canal and be pushed to completion by January 1, 1893. This will be welcome news to the settlers on the East Side lands, which are the richest in the county, but have been almost valueless without water. The values in these East Side lands have appreciated within the past two weeks over 40 per cent, and when the canal is finished a great deal of this land will bring $100 an acre. This has been the most rapid appreciation in the values of land in the San Joaquin valley in the history of its irrigation system, and large fortunes will be made here in the next six months by shrewd men who had the foresight and faith in the canal project to get in, and bond at $10 and $25 an acre valuable pieces of land which lay under the canal as projected, for a few dollars per acre, which already commands $60 and $65 an acre.

Los Angeles.

ORANGE PROSPECTS.—Pomona *Progress:* The orange-growers are happy over the splendid prospects for the largest crop and best prices they have ever had. There is little doubt that the orange crop in Florida will be small this year, and careful estimates place the loss of fruit which dropped from the trees last spring at 2,000,000 boxes; while Louisiana papers state that a protracted drought and untimely frosts have destroyed all hopes of a large orange crop in some portions of that state. On the other hand, never were prospects more favorable for a large and fine orange crop in this section. Drive where you will, and the orange-trees are loaded with fine-looking young fruit. Riverside papers estimate the crop at a million boxes for the State. Whatever it may be, it is certain that in this locality, with a considerable acreage that will come into bearing this year for the first time, the crop will be much larger than ever before. The money which it will bring into this valley, added to the thousands of dollars that are being put into circulation here this summer, will make the Pomona ranchers the happiest agriculturists in the country.

Mendocino.

HOP NOTES.—Ukiah *Press*, Aug. 22: The delightful hop-picking season is opening up. By August 29th a large percentage of Ukiah's population will be in the fields. Visions of new things bought with money earned in the hopfields delight the dreams of our young folk. Huse Burke began picking Tuesday noon. T. J. Fine and Berryhiill Bros. began Thursday. D. G. Pitner will commence picking Sept. 1st. Nearly all the growers will begin next Monday. Very little can be told about the yield as yet, but it is certain that it is not as good as last year. The quality is first-class. There is not a vestige of vermin or mold. The foliage is scant and the sun's rays have had full force in maturing. The price for picking fixed by the Association is $1.10 per hundred. Some are paying $1.20. The Chinese pick for $1, but the growers have to pay John's fare from San Francisco, which brings the price up to about $1.10. The picking is being done by whites, Indians and Chinese, in the ratio of about five, two, and one. Insurance companies are placing risks on hops at the yearly rate of $4.50 per $100. This is a basis rate of $2, with $2.50 added for hops in the kiln.

San Bernardino.

CHINO SUGAR.—Los Angeles *Herald:* Up to 6 A. M., August 15th, the Chino beet sugar factory had turned out this year 2,870,059 pounds of sugar. Of this quantity, 518,000 pounds was from syrups of 1891, and the balance was from this year's beet crop—2,352,059 pounds. About one-half of the entire quantity is mascrete or crude sugar, which will run between 80 or 90 per cent sugar. Upon this the Government pays 1¾ cents per pound bounty. The other one-half is raw sugar that has gone through a centrifugal machine. Upon this the Government bounty is two cents per pound. From present indications, this year's beet crop will amount to about 50,000 tons. For every ton the grower will receive on an average $4.50. This year 4000 acres have been planted to sugar beets, as against 2700 acres last year. This year the beets run about 15 per cent sugar, as against 13 per cent last year. Some of the beets will run as high as 20 and 21 per cent.

San Diego.

AN IRRIGATION PROBLEM.—J. S. Carter in *San Diegan:* The Colorado river is constantly changing its bed and course from two miles above, at and below the great break made by the flood of last year. The main stream is still taking to the west, cutting through the great cottonwoods; a part of it flows back into the old river near the easterly end of the big bend. From there up to the crevasse the old channels are entirely closed up with sand and driftwood. All of the small streams supplying Carter river near its source are nearly closed by drift and sand, although the late rise cut under the drift and let more water into Carter river than before. At one time there was not more than three inches of water on the bar. Below the crevasse there are immense piles of drift, which stop the flow of water and force it over to the east bank. Only for this the old channel of the Colorado would close up entirely. What a chance to irrigate all that country! There is hardly a square foot in the great desert that cannot be reached by the water that even now flows through the great crevasse in the river. Why not? The fall is 106 feet in 65 miles in a direct line. I say that every foot almost of the desert can be fully irrigated, and that, too, by the Colorado during the year. It carries water enough to water four such deserts, and then has enough to carry any steamer ever built at Yuma or the shipyards from the Grand canyon to the gulf. The Indians are putting in an immense crop for them, but the rats and cottontails keep them busy. The Indians put the entrails of fish (sic), stick traps, build walls of clay, and then are up all night beating tin cans, coal-oil cans, anything else to make a noise, and yet the pests come and destroy the corn, which the Indians keep replanting. I never saw such a growth of grass. The old Indians say that they never saw anything like it. It is from four to seven feet high and thick as it can stand. The wild hemp, which was just coming up two weeks ago, is from 10 to 12 feet high and almost as thick as the grass. All of the barren places, which for years have been like beds of ashes, or caked hard as an adobe, are covered with grass and calite. Even the few sandhills here and there, in that which was a desert two years ago, are now hidden by an immense growth of grass, weeds and brush. In fact, the desert is transformed, and to-day looks more like a garden or field. So much for water. This shows what every inch of the great desert will be when it is once properly irrigated, as it will be, not far in the future.

Santa Clara.

FRUIT NOTES.—Cupertino Cor. S. J. *Mercury:* The unusual cold weather that prevailed last April shortened the crop at least 25 per cent. That was the estimate of the most conservative, while some claimed that it would be fully one-half. The unfavorable weather that has prevailed since, taken together with the lack of moisture owing to the scarcity of rain last spring, has cut a decided figure in this year's output; the estimate now placed by conservative men is about 60 per cent of last year's output of wine. The winemen are beginning to prepare for the coming season. Many who intended to increase the size of their plants have changed their minds, owing to the short crop. The prune crop is much shorter than at first anticipated. One prominent buyer told me last week he would be well satisfied if the growers were able to furnish him with two-thirds of what his contracts call for.

CANNING NOTES FROM LOS GATOS.—*Mercury:* The packing and drying business continues lively. The Los Gatos cannery has had extra trains from Fresno for the last eight days. The fruit is received here at 8 o'clock at night and by morning it is distributed and assorted and made ready for the army of workers. In five hours the whole lot would be prepared, packed, cooked and packed away ready for market. The company has had two busses, carrying 20 persons each, running to San Jose and back each day, to supply the demand for labor. In addition to this extra help the company has provided rooms, with matrons to superintend and cook, where 40 girls from distant towns have the privilege of homes while they work in the cannery. The cottages are within the enclosure, and every precaution is taken to make the rooms pleasant and safe. The business prospects of the cannery are excellent. Five thousand cases of apricots and 1500 of cling peaches were shipped to England last week. At these rates the large pack will disappear in a short time. The importations of fruit from Fresno seem to have been made necessary by the overland trade here, which has reached large proportions. The agent, Mr. Hook, thinks Los Gatos folks must look to their laurels. The grade of peaches required was two and a half inches, but a great part reaches three inches in diameter. Those in the East who think the fine pictures on the wrapping an exaggeration will be astonished to see the fruit a third larger. The company is now working at pears, having 160,000 pounds going through the ripening process.

Solano.

FRUIT SHIPMENTS.—Vacaville *Reporter:* At our request Harry Free, the agent of the S. P., has kindly furnished the statistics of fruit shipments this year up to last Thursday, August 24th. He says there have been sent East 383 cars of green fruit and 18 of dried. At the same time last year the amount of dried fruit shipped was greater, but the shipments of green fruit this year were in excess of the shipments at the same time last year. Looking at the possibilities of the entire season, we expect that these conditions will be maintained. There is not the same amount of dried fruit going to be shipped out, for the reason that prices will not justify so much drying as in the past. This will swell the shipments of green fruit this year to a point where, in our judgment, they will be in excess of last season's shipments. Last season, it will be remembered, we shipped 564 cars of green fruit East, and 151 of dried. From the number of cars already sent out, with the period of heaviest shipments yet to come, it will be readily seen that the record of last year will be surpassed.

Sonoma.

HILLSIDES AND MOUNTAINS RECLAIMED.—Cloverdale *Reveille:* There are many skeptics in this section who look upon the hills that surround this valley as utterly worthless, when in fact there are no more desirable locations for homes and fruit farms to be found anywhere in the State. The land, as a general thing, is loose and mellow, and will grow anything when cultivated. Springs of water abound in almost every quarter section, and there is more tillable land than anyone has any idea of, judging the steepness as seen from the valley. There are plateaux and small rolling hills, principally covered with black oak, madrone and manzanitas, which, when cleared, will be the best fruit land in this section. The only drawback to the hills is the inaccessibility to the desirable localities, yet this can be obviated by building practical roads. What can be done on the hills has been clearly demonstrated by B. Hemseth, whose hillside grapes are among the best grown in the district, and Geo. Bond, who has pioneered out a home on the mountains. His fruit has no superior in the State. We had the pleasure of eating some peaches grown by him, and they were really grand in both size and flavor. These hills are not only adapted to fruit-growing, but grain and alfalfa flourish in places. There are nooks and retreats where homes can be located of wonderful attractions.

WINE-MAKING.—*Reveille:* Wine-making will begin at Moulton Hill winery about Sept. 1st, the Burgundy variety being ready for the vintage. Mr. Albertz informs us that he will make very little syrup this year. He had an opportunity to contract 20,000 gallons of syrup, but the price would not justify paying the price asked for grapes, and consequently he expects to run a short vintage this year. He has been offering $9 and $10 per ton for grapes, and finding no takers, he is compelled to refuse all offers to contract syrup, and will only make up about 2000 gallons of extra fine Muscat syrup, which will be put up in cans for table use.

A ROYAL ORDER FOR CANNED FRUIT.—Petaluma *Courier:* The fruit-canning company received through the Swedish consul at San Francisco, an order for a large amount of canned fruit for the private household of the queen of Sweden.

Sutter.

CANNING AND DRYING.—Yuba City *Farmer:* The rush at the cannery continues. From 23,000 to 25,000 cans of fruit, principally peaches, pears and plums, are being packed daily. In a few weeks the heavy run will be over, but operations will continue for a month at least. Considerable attention is given to drying peaches, and the grounds are covered with trays of fruit. Over 200 tons of dried fruit have already been sacked, and there will be large quantities yet to dry. A carload of egg plums was received a few days since from San Jose for canning. Shipping is going on as well, a carload of canned goods being sent off this week to New York. The help this year has been excellent, and the largest run will be made this season, from present indications.

Tulare.

LARGE YIELD AND BIG PROFIT.—Hanford *Sentinel:* Mr. John Nehls, living near Armona, has 368 peach trees on 3½ acres of ground. They are of the Muir, Susquehanna and Crawford varieties, considered the best for drying purposes. Early last spring Mr. Nehls sold the product of the trees, whatever it might be, to Antonia Onesti for $75 per acre. The trees were set in 1888, hence are four years old, and Nehls thought that a good price. In July Onesti sold to a Chinaman for $100 per acre. Last Tuesday John Russell hauled in the dried peaches for the Chinaman, who had sold to Chas. King for 12 cents per pound. There were three loads, weighing in all 8584 pounds, which, at the price paid, brought the neat sum of $1030.08, or $294.31 per acre. Mr. Nehls sold because he did not feel strong enough to do the work. Onesti sold because he could make $25 per acre and not touch it. The Chinaman bought and made $194.31 per acre for his work of picking and drying. The Chinaman got the most of the milk in the cocoanut.

Ventura.

THE CROPS.—Hueneme *Herald:* Of the nine threshers that have been at work on this side of the river, all but four have been laid up for the season and these will finish up their work very soon. Now that the Conejo has been threshed out the yield up there is found to be better than was expected. The yield of some of the valley lands this year has been most remarkable. In former years 10 or 12 sacks to the acre was considered a good average yield, and 20 sacks was considered an immense crop. This year more than 30 sacks have been threshed out in many localities. As noted in another column, 480,000 empty bags have been received here this year, and making liberal allowances for the number used or to be used for sacking wheat and corn and for grain hauled to points on the line of the railroad, we think 300,000 bags about expresses the amount of barley to come here this season. The barley is unusually clean and plump, and the entire lot will probably average fully 110 pounds to the bag.

OREGON.

CROP NOTES.—Crop-Weather Bureau, Aug. 23: Western Oregon—Springs and wells are said to be running dry. Threshing of fall and early spring wheat is rapidly nearing completion. Reports of the improvement of late-sown grain are still coming in, though it is conceded that the crop will be light. No decided change in the condition of hops is noted. In Marion county, there is yet some oats to be cut. The potato crop is almost beyond redemption now and no amount of rain can improve it. What little fruit there is still standing on the trees is in need of and would be benefited by well-distributed showers. Eastern Oregon—There has been no rainfall at all throughout this section since last report, and the need of a good rain is badly felt in the northeastern counties. Although the fall and early spring wheat crop is being harvested in most counties, in portions of Wallow county very little grain has been cut so far except rye. Threshing operations are just beginning. In Union county, late-sown grain is heading and ripening very short and uneven. More reports of the excellent condition in which the hay crop is being put are being received daily. Corn and potatoes continue to suffer for want of rain. It is doubtful if the latter could receive any great benefit from moisture at present.

HOP-LOUSE REMEDY.—Hillsboro *Independent:* In conversation with a local hopgrower a few days ago, he said he had but few lice on his vines, and that he did not spray but fed his parasites by the old German method. He explained that way was by sprinkling slacked lime. He first slacked lime by placing in a pit and applying water enough to reduce to a dry powder, the lime to be covered so as to retain all steam and gas. When cool, and during a smart breeze which turns the leaves up, he throws the lime powder against the vines. Watching for a wind from the opposite direction, he repeats the dose. Thus through the summer and early fall he guards his yards. He prefers a few lice to the villainous whale-oil soap compound used for spraying purposes.

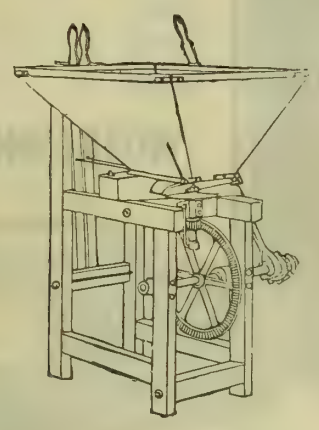
FRUIT CROP IN WESTERN OREGON.—Salem *Capital Journal:* Fruit of all kinds is scarce, and only enough to supply the home markets can be found in any part of the country. The only variety of prunes which did well is the Petit. Wherever any tree can be found of this kind they are full of fruit. Of course, apples are not plentiful, as hardly any of the farmers are spraying their trees, and the half-formed fruit falls off in vast quantities on account of the grub of the codlin moth. What few pears are found are of fine quality and quite large. Pears were caught by the frost in full bloom last spring, and consequently very few are on the market. Plums and peaches are a minus quantity. As far as the trees are concerned, they did well by attaining a good growth of foliage.

ARIZONA.

CROP SUMMARY.—U. S. Weather Bureau, Aug. 22: Crops have made an exceptional growth in southwestern Arizona during the past seven days. The weather has been especially favorable during the year for the growth of all vegetation, and the Colorado valley is teeming with healthy and vigorous vegetation. Fresh fruit is abundant, and field crops and citrus fruits are looking well. In extreme western Arizona, the weather has been too hot for the growth of melons, which wilted even with plenty of water. Alfalfa and other crops are looking well. In the vicinity of Prescott the weather has been favorable for the growth of vegetables and grapes, peaches and other fruits. The grass on the ranges is in need of a soaking rain. Farther east, in the vicinity of Farley's Camp, light showers insufficient for range grass have fallen. Heavy rains are much needed. Good rains have fallen in the vicinity of Dudleyville, in the northern part of Pinal county, which have influenced the growth of grasses and field crops. Plenty of water is available for irrigation. In the vicinity of Payson, and in the southeastern part of Yavapai county the drouth continues. Good rains would be of great value. Showers in the vicinity of Mt. Huachuca have brightened the grass in some localities, but in others grass is suffering from drought. In the vicinity of Tucson, heavy rains have fallen which will be of great benefit to the cattle interests. Cattlemen are wearing a pleasant smile. In southeastern Arizona, in the vicinity of Wilgus, rain is badly needed. Crops of corn and other vegetation irrigated are looking well, but grass is beginning to wilt; and as it is now getting late, farmers are entertaining serious apprehensions that grass will not be long enough for hay, which source of feed is depended upon almost entirely for the sustenance of cattle.

GEM SEEDERS.

REDUCED PRICES.



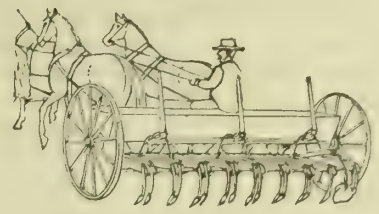
NO. 1—RUNS WITH CHAIN AND BEVEL GEAR.....$16 00
NO. 2—RUNS WITH CHAIN AND BELT GEAR..... 20.00
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All our Gems have Armstrong's Patent Force Feed, which makes them worth $5.00 more than any similar seeder. We charge no more for it. They will sow about 60 feet wide and about 15 acres p-r hour.

THEY ARE BETTER THAN EVER.
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SEEDERS AND CULTIVATORS COMBINED.



6 TO 14 FOOT.

11 TO 26 SHOVELS.

2 TO 6 HORSES.

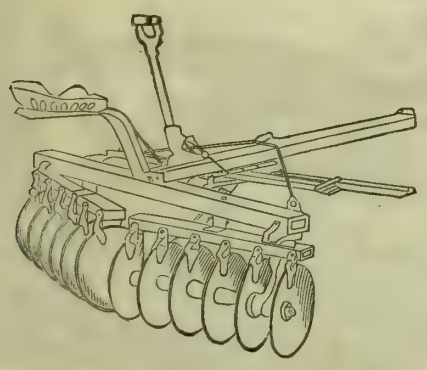
8 TO 40 ACRES PER DAY.

WITH CULTIVATOR.....FROM $100.00 TO $175.00
WITHOUT CULTIVATOR.....FROM $75.00 TO $131.25

Cultivator raised in sections—No heavy lift. Flat Scatter used on all sizes. We have sold them for over 15 years. We know they will do good work. We make them ourselves and know what they are.

CLIMAX DISC HARROWS

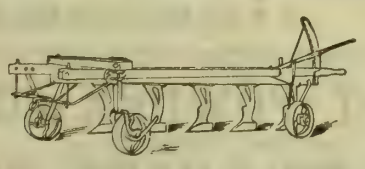
WITH AND WITHOUT SEEDERS.



We have sold them for years. They cut from 4 to 12 feet, use from 2 to 4 horses, have from 8 to 24 discs, and cost from $37.50 to $95.00. The Seeders cost from $20.00 to $35.00.

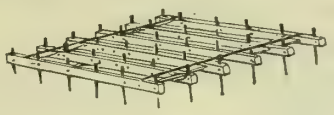
IMPROVED GRANGER GANGS.

WITH OR WITHOUT SEEDERS.



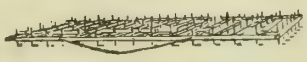
The best Bench Plow now in use. Runs well. Draft very light.

BENICIA WOOD BAR HARROWS.



Thirty to 100 teeth. Cut from 6 feet 6 inches to 13 feet. Have one-half by five-eighths steel teeth, and cost from $10.00 to $31.00. Quality is extra fine.

EUREKA WOOD BAR HARROWS



One to five sections. 30 to 150 teeth or 24 to 144 teeth. Made with one-half by five-eighths steel teeth. Extra quality throughout.

BENICIA PATENT ANGLE STEEL HARROWS.



One to four sections. 24 to 96 teeth; cut from 4 to 16 feet. Cost from $10.50 to $48 complete. Quality guaranteed. Weight from 80 to 260 pounds according to number of sections.

ALL THESE ARTICLES MADE BY THE

BENICIA AGRICULTURAL WORKS, Benicia, Cal.

BAKER & HAMILTON SAN FRANCISCO. SACRAMENTO.

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

TWO ROCK GRANGE ON COOPERATION.

Two Rock Grange has put forth commendable efforts in the way of Grange cooperation, and presents the following statement and resolutions, which will be mailed to every subordinate Grange in the State from this office:

Worthy Master and Members of — Grange, P. of H. of Cal.: Two Rock Grange, having practiced for nearly two years cooperative buying, and having made it an unqualified success as far as buying groceries, feed and a few other articles are concerned, but *not* having been able to satisfactorily buy our farming implements, vehicles and general hardware on the same plan, we have resolved to lay the enclosed resolutions before the next State Grange.

In order that you may better understand why we have become desirous of extending our system, we will make you acquainted with some of the practical results of our business transactions for the year ending Dec. 31, 1891.

We bought together groceries to the amount of $1246.41; the average saving amounted to 20 per cent, equal to $311.60. We also bought some hardware and made a very satisfactory saving, amounting to $37.56. Of coal oil we bought some $400 worth, a saving of 15 per cent, or $65.

We have thus saved $414.16, exclusive of what we saved on flour, feed and a few other articles, and also exclusive of what was saved by using the trade-card.

It should be remembered in this connection that Petaluma, where we otherwise do our trading, on account of its favorable location, sells goods closer than most towns, and that the saving made by us would be much greater in most other localities.

As mentioned before, we are not alone able to buy our implements, etc., as cheaply as we think it possible if we cultivated a closer commercial relation between ourselves and the manufacturers of our tools. It is for this purpose we ask your hearty cooperation, knowing that if it can be accomplished, a great saving can be made and we will be able to buy more labor-saving tools, thus directly benefiting ourselves and the manufacturers, and, indirectly, the whole country.

Hoping this will receive your most serious attention, we remain, with the kindliest greeting from all the members of Two Rock Grange, sincerely and fraternally,

JOHN R. DENMAN, W. M.
GEO. W. GASTON, Sec'y.
Two Rock Grange, Petaluma P. O.

RESOLUTIONS TO BE LAID BEFORE THE STATE GRANGE OF CALIFORNIA AT THE SESSION OF 1892.

WHEREAS, Two Rock Grange, having given cooperative buying a practical test, and having found it to work in every way satisfactory, so far as tried, and

Whereas, Having found that in one important item, to wit: the buying and selling of farming implements and general hardware tools, we have *not* been in ourselves strong enough to be able to buy to as much advantage as we consider it possible to do if we could with a determined cooperation of the subordinate Granges of California, buy as directly from manufacturers as possible, and,

Whereas, We think, that inasmuch as thousands of dollars could be saved to the Patrons of California by such a combination, it would be to the great advantage of the Grange and vastly increase its membership if we could accomplish such results, therefore be it

Resolved, That Two Rock Grange recommends the creation of an energetic committee, whose sole duty it shall be to try to bring this about, said committee to be called, The Committee on the Supplying of Farming Implements, Hardware, Tools and Vehicles.

PESCADERO.

Past Master Steele writes: Pescadero Grange had a most enjoyable meeting Aug. 20th. The third and fourth degrees were conferred, with the usual Harvest Feast. Crops are good in this section, and we are hopeful, although prices of farm products are low. There is no conflict between employers and employes here, so far as I know. It is to be hoped that reason will prevail in other sections of our country in the near future, and to amicable relation of capital and labor will bless our country with peace and prosperity. I believe in our Grange motto, "Individual happiness depends upon general prosperity."

FROM OUR ACTIVE MASTER.

The following contains so much in a short space from Master Davis, that we take the liberty of quoting his own words: I send MS. of my address in separate cover. Please send proof sheet to me at No. 21 Glen Park avenue, S. F., where my wife will be. She will forward same to me at some one of my appointments. I open the campaign at Sissons next Saturday night. Will not be home again during the month.

J. H. Brigham, Master of the National Grange, and E. W. Davis, Overseer of the National Grange and Master of the California State Grange, are among the very able, popular and worthy Patrons nominated for Members of Congress. They will receive the support of many Patrons irrespective of party, and the country will be fortunate when such Patrons are elected to office.

THE annual report of the Secretary of the State Grange will show a remarkably favorable year financially, as well as in some other respects, for California Patrons of Husbandry.

HISTORICAL EXHIEIT.—We sincerely regret that the opportunity seemed unfavorable for making a successful historical exhibit of the Patrons of Husbandry at the State Fair, which opens in Sacramento next month, and so no general effort will be made.

HATTIE S. JONES, chairman of the Committee on Woman's Work, has recently sent each Grange an interesting essay on the "Political Possibilities of the Farmers," from the pen of Mrs. M. D. Brainard, of San Jose Grange, who chose that subject as one of special importance to the farmers, and suggests its reading, to be followed by discussion in the Granges. Sister Jones' circular closes as follows: "Sisters, again a Grange year is drawing to a close. On the first Tuesday in October the California State Grange will convene in twentieth annual session at San Jose. That the State Committee on Woman's Work may be enabled to present a full report of the state of the work intrusted to us, you are requested to formulate as complete a recapitulation as possible of your labors for the present year and forward it to the chairman of that committee not later than September 25th. A summary of their report will be transmitted to the National Committee, and we desire it to be of such a character as will reflect credit on California's Matrons. Whether much or little has been accomplished, we wish to hear from each subordinate Grange, and trust you will recognize the importance of complying with this request."

TO SUBORDINATE GRANGES.

August 29th we forwarded to the Secretary of each subordinate Grange a supply of blank receipts for Patrons visiting the State Grange to have filled out and signed by the local ticket agents of the S. P. R. R. Co.

Purchase a first-class, unlimited ticket to San Jose and take receipt from the agent, and have it certified by the Secretary of the State Grange at San Jose. This certificate will enable you to buy a return ticket for one-third rate. The same rates have also been granted by the S. F. & North Pacific (Donahue) R. R.

We have also sent to the Secretaries blank forms of application for the fifth and sixth degrees, which will be conferred on Thursday evening at the State Grange.

A circular will soon be sent from the Secretary's office containing one or more proposed amendments to the constitution, full particulars in regard to the excursion rates to the State Grange, and other matters of interest to all Patrons.

It is important that full meetings of subordinate Granges be held. Every Patron should be present to discuss matters which should be brought before the State Grange. Among these questions will be that of cooperation as presented in the circular of Two Rock Grange, published in this issue.

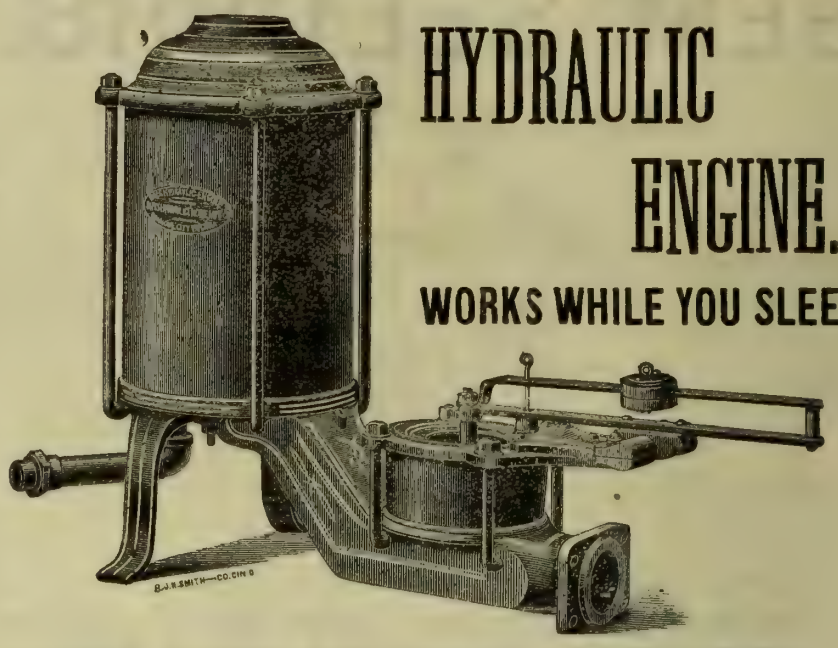
Every Grange which has not taken action on the Patrons' Relief Association, endorsed, and its constitution adopted, by the last State Grange, should give that organization a fair consideration and have the Master report on the same at San Jose. If possible, have the report supplemented with a good number of applications for membership. This would be a practical demonstration of the views of at least some of the members in favor of protection and cooperation.

"THE POLITICAL condition of affairs is to be deplored by every patriotic citizen. So long as spoils is the motive power that controls our conventions, we will have a horde of spoliators to make and administer our laws—a set of political hyenas ready to do the bidding of corporations that prey upon the legitimate interests of the country. The people have it in their power to correct these abuses. It is their votes that elevate the demagogues to position and power."—Exchange.

CALIFORNIA If you want to know about California and the Pacific States, send for the PACIFIC RURAL PRESS, the best Illustrated and Leading Farming and Horticultural Weekly of the Far West. Trial, 50c for 3 mos. Two sample copies, 10c. Established 1870. DEWEY PUBLISHING CO. 320 Market St., S. F.

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These machines have already come largely into use in all parts of the country and are rapidly superceding every other device for the purpose. They will work effectively under a head as low as two feet and for every foot of fall will elevate 20 feet. By means of an adjusting lever the capacity of any of the various sizes can be reduced 50 per cent or more, as may be desired, to provide for a variation in water supply, without disadvantage or loss in efficiency.

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Parties writing for information should give the quantity of water that can be supplied to the engine, either in gallons, cubic feet or miners' inches; the head or fall from source of supply to point where the engine is to be located, length of drive pipe, height to which the water is to be raised, distance from engine to place of discharge and the quantity of water it is desired to elevate. No reliable information can be afforded without an explicit answer to these inquiries. Address:

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The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

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Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

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HORTICULTURE.

The Almond in California.

NILES, Aug. 25, 1892.

TO THE EDITOR.—After a week's illness I rise to a personal explanation, called for by your kind notice of my *Popular Science Monthly* article on almonds. The criticisms you make are certainly just, as applied to the condensed form of the article. I do not know who my condenser may be, but I am sorry I did not, as I intended to, send you the printed article itself.

I mentioned the red spider, but may have erred in underestimating the trouble and expense of getting rid of it, as well as the damage it does if not got rid of. So I am not responsible for the false statement that the almond has no insect enemies.

I also stated that excessive or unskillful bleaching injures the meat, and how this result is to be avoided.

I named several other varieties of the almond, and intended to speak of several more, as soon as I got certain information which I lacked when the manuscript was forwarded. The same circumstances which have prevented my writing for the RURAL PRESS during so many months, prevented my carrying out this plan. I hope I did not convey the idea that the seedling paper-shell named is a leading variety as regards acreage. I should really like to know as to these new seedlings, which kinds are now being planted to the greatest extent, and which are proving the most remunerative. Nursery catalogues are neither definite nor reliable sources of information on these points. The nurserymen's books of sales would be conclusive on the first point, and on the second the testimony of orchardists would be good. I should like to see some of it in the columns of your paper. It would certainly be valuable information of which all prospective almond-planters ought to be in possession. The whole country is interested in having its almond orchards planted in the best varieties. It is so in all farming. Who can estimate the loss we all sustain from the fact that stockraisers are careless or uninformed as to breeds?

My condenser seems to make me say that sacks cost the almond-growers of the State $2,000,000. This was the estimate I put on the cost to producers of all kinds of sacked produce.

I must thank you for the compliment of giving my article so much space, and also for correcting a few of the errors in its condensed form. But they are such as I should be sorry to have your readers think me guilty of, hence this correction, if I may so call it, though I am pleased to observe that you took care to hint that perhaps they are my condenser's and not mine, for which also I am constrained to express my cordial thanks.

If they cause discussion which will call forth information of lasting benefit to the orchardist and the State, I shall not feel so bad after all. HENRY J. PHILPOTT.

How and When to Prune.

An essay read by I. C. WOOD of Ontario at the Chino Farmers' Institute.

By request I prepare this paper, "The Pruning of Deciduous Fruit Trees." So much has been written and said, and so well, I fear this paper, at least in part, will only be a repetition. I will confine this article, however, to a few of the leading varieties of deciduous fruits and those that are planted most extensively and seem so well adapted to this immediate section. The same rule laid down as a system to follow can be applied to most of the deciduous varieties of fruit.

First, I would impress upon the average planter the importance of selecting good, strong, young trees. One year old from the bud, if well-grown, is the proper age. In fact, with the exception of the apple and pear and cherry, I would not accept trees over one year old from the bud. The plum, peach and apricot, if properly grown and not too much crowded in the nursery row, should be 3½ to 5 feet high, stocky and well-branched. Why I object to selecting an older tree is not because a tree two, or even three years old cannot be transplanted safely (I would except the peach or apricot and plum if worked on the peach root) and the results entirely satisfactory, providing the plant has had space enough to grow in and the head properly pruned and shaped—a thing that I think is impossible, with few exceptions to find in the nurseries of this State, but because the average planter, as well as grower, is not educated up to the importance of paying or willing to pay for trees properly shaped at the right time and place in the nurseries and under the skillful hand of the nurseryman.

Select, as I have said, trees one year old from the bud of peach, plum or apricot. Lay your block of ground into squares of, say, 15 to 20 feet each way—15 I believe enough for the peach and plum and 20 for the apricot. When set, which should be during the month of February or March, go carefully over each tree and cut all side-shoots close to the main stem, after which cut that down also to within 18 inches of the ground. Do not set your trees too deep; as a rule very little, if any, deeper than they were in the nursery row, which can be easily seen by the light color of the bark which was under ground. Sift the soil carefully among the fine and fibrous roots, but leave them in as natural a position as possible. After the roots are all covered, firm the soil with the feet as solid as possible; in fact, plant as solid as a post, drawing some mellow soil about the stem as a mulch when finished.

If all is well, your 18-inch stub in due season will put forth many shoots all along the stem. Rub all off as soon as they get an inch or so in length, except, say, three; leave these on opposite sides near the top. Allow these to grow the first season at will, keeping off all others, from time to time, as they grow which will not amount to much after the second removal. The second pruning should be performed, if possible, just previous to the pushing of the next season's growth, as, indeed, all pruning should be, which allows but a short time for the severed points to dry back before the uprising sap supplies the wounded part with moisture, when the healing process at once sets in. While this is not of much importance where only small branches are removed, it is of vast importance where large wounds are made, especially on older trees or varieties that are sensitive to the pruning-knife, as the cherry.

The branches that have made their first season's growth should have made from two to four feet each; these should again be cut back fully two-thirds of their growth, and each branch in turn allowed to make from two to three branches each, which at the end of the second season will average three feet or more, and your trees will have from six to nine strong branches; each of these branches will have many side or fruit-bearing shoots, and the plant, if properly cared for, strong enough to ripen its first crop the first season after setting. These growths in turn should be cut back from one-third to one half, according to strength, and the stronger side-shoots accordingly, always bearing in mind to maintain a pyramidal shape to the form of the head, which to maintain successfully it will be necessary to shorten in the upright branches the more severely, especially as our trees get older the tendency of sap is to go to the extremities.

This rule for pruning will apply more particularly to the peach, prune or plum and the apricot, and if followed up with reasonable perseverance the first three or four years, our trees will become so compact, the main branches so rigid and the bearing branches so close to the strong wood that we will suffer very small losses with our trees blowing to pieces or splitting down, as we now so often see where trees are allowed to grow at will and carry the major part of their loads away out on their extremities.

Trees when once into full bearing will not require often very severe pruning, as the rampant wood growth will be very much lessened; however, a careful cultivator will look over his orchard every year, shorten in the stronger growth, remove dead branches and thin out such as are becoming too thick as well as unnecessary suckers. The apple, pear and cherry, however, during its first and second season will not yield as readily to severe cramping as the other kinds named, nor will it be neccessary. The cherry, especially the Bigarreau or Hart varieties, should be shaped the first summer in the nursery rows by pinching out the leader when a couple of feet high, and thus made to branch at the start, as it does not break readily from old or ripened wood like the peach or apricot.

Summer pruning, if done at the proper time, has some advantages, and on the right kind of subjects brings fine results, but should be confined to the more vigorous sorts. The shortening of the summer growth tends to check the plant in what may be called the unnecessary development of wood-growth and the more perfect development of fruit-buds by arresting the excess of sap or checking it in its wild career of wood-making which we see in the strong-growing apple, pear, plum, cherry, as well as some varieties of the apricot.

Root-pruning will accomplish the same results, or in some soils slack cultivating may tend to the same end, as the object is to check excess of wood growth; but in most cases this excess may be confined to individual trees or varieties in the orchard, while others need every encouragement in the way of good culture; therefore it may be better to summer-prune and thus check wood-growth and encourage fruitage by the encouragement of fruit-buds. Much more could be said about pruning and the field could be widened so as to take in the smaller-growing deciduous fruits, as the currant, gooseberry, blackberry and raspberry-family, as well as the dwarfing of those treated on, but as I understand it, information is more generally sought by those who make the production of fruit a business in a commercial sense. Therefore I have confined this paper more especially to these classes.

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Please state if you want single strap Harness, or folded style Harness, with traces double throughout.

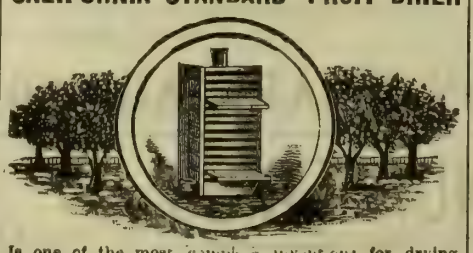
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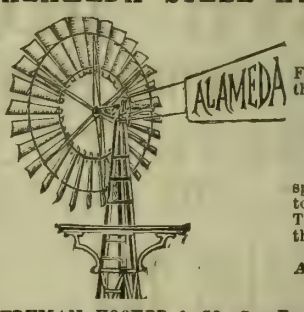
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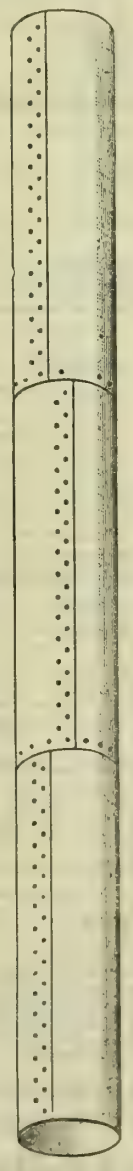
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THE ZIMMERMAN

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Preservation of Eyesight.

We have frequently in these columns, says *Optician*, given hints and advice concerning the care and preservation of the eyesight in middle life and old age. Up to the present, however, we have not pointed out that the excessive use of tobacco not only weakens the muscles of the eye, but also produces a lowering of the acuity of vision and a form of color-blindness. In fact, among the sources of the greatest trouble to the eyesight, strange as it may appear, is the chewing of tobacco. The excessive use of wine, spirits or beer, the indiscriminate administration of quinine, the use of cosmetics for heightening the luster of the eye, and mixtures for dyeing the hair and eyebrows, may also be ranked among the destroyers of vision, and there is a case on record where a diminution of vision has been traced to the wearing of an artificial wreath of flowers.

Another source of failing vision may be traced to impeded circulation. The wearing of tight neck covering, such as collars which are too small, or shirt-bands or neckties tightly drawn, should be avoided, as they prevent the downward column of blood returning to the heart, and dilatation and development of disease is likely to follow. The same rule holds good of constriction of other parts of the body, particularly the waist. Another most serious source of eye strain is constant reading in railway carriages, which is the practice of nearly all business-men in going to and from their offices, and the injury to the eye from this cause alone is incalculable.

Nothing gives tired eyes greater relief than a green disk or square of sufficient size suspended on a direct line of vision at or against a wall on which the eyes can rest; but best of all to look upon is a green grass plot or green trees. We advance the suggestion that it would be a public boon if our magazines were printed on paper of a neutral tint, and the drop-curtains in theaters should have scenes painted on them showing great perspective. It is a rest to the eyes after the contracted effort in trying to watch the facial expression or eyes of an actor to look upon such a picture. Many theaters have drop-curtains in which perspective is absent. The result is that no relief is given the eyes after each act, and people with the least visual defect always suffer from eye strain after spending an evening in such places of amusement.

After the last epidemic of la grippe, we were particularly impressed with the large number of people complaining of the loss of power of the converging muscles of the eye. Upon investigation, we found that while these patients were confined either to bed or home, they would read incessantly. The result of this overtaxation was weakened eye muscles, and so long as they remained unsupported by lenses the patient suffered with pain over the eye region, headaches and other evidences of eye strain. Individuals suffering from any depressing disease should be as guarded as to the length of time they read or use their eyes on straining work as they are with regard to physical exertion of any kind. Fresh air and a moderate quantity of light are great essentials to good eyesight. High temperature helps to ruin people's eyes more than is generally known, while too much light, especially if it be reflected, is particularly injurious.

The Earth's Elements.

The planet, as the storehouse of material for every construction, natural or human, yields a certain number of elements. About 64 may be accepted as the number hitherto discovered, and these certainly are all that are of any mass or quantity. Out of these for structural and working use only about one-fourth are employed either by nature or by man. Nature uses largely four gases: Oxygen, nitrogen, hydrogen, chlorine. She uses also largely two inorganic, nonmetallic bodies, carbon and sulphur. She uses metals, calcium and iron. She uses one metalloid, phosphorous. Man in his work uses all these elements, with some others. Nature uses iron sparingly; man uses it largely. Nature uses the metal calcium largely, letting it enter into the construction of the bone of every skeleton of animals; man uses calcium in a rough way, in the formation of buildings, in the compound form of lime, together with other metals in the grand storehouse, tin, copper, and, lately, aluminum, substances which nature shows no preference for in any of her artistic and mechanical works. Man also uses zinc, lead and mercury, for which nature has no special employment that is obvious to us.

Man uses carbon for the same purposes as nature uses it. He employs it as fuel; so does she; but he in the crude form of coal, from which, also, he produces for other purposes different useful products artistically applicable as coloring substances, in which art, as he may one day find out, he is following some undiscovered natural design. Man uses the same elementary gases as nature does, with others that she does not employ with the same intention. Both use oxygen for sustaining combustion, but nature uses it systematically for construction, which man does not, Man uses hodrogen for combustion as nature does, but not for construction. Man takes advantage of nitrogen for concentration of energy; nature takes the same advantage, by which hydrogen, though negative, becomes the most important of vital structures; but she does more, she makes nitrogen constructive as well as concentrative, an art man has not attained.—Longman's Magazine.

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FERTILIZERS.

A careful study of the soil, and the growth and development of whatever may be put into it, is something that should occupy the spare time of all farmers. As more intelligence is, from year to year, being applied to working the ground for all it is worth, the subject of fertilizers—reliable and adapted to different soils and conditions—becomes one of prime importance. Visitors to the State Fair at Sacramento this month are advised to pay especial attention to the exhibit of the Mexican Phosphate and Sulphur Co., of which H. M. Newhall & Co. of 309-311 Sansome St., San Francisco, are agents.

ATTENTION

Is called to the advertisement in this issue of Rife's Automatic Hydraulic Engine or Ram. It is being introduced on this coast by the Pelton Water-Wheel Co. Judging from the strong testimonials of those who are using this Ram in various parts of the country, its success in the Pacific States will speedily follow its introduction

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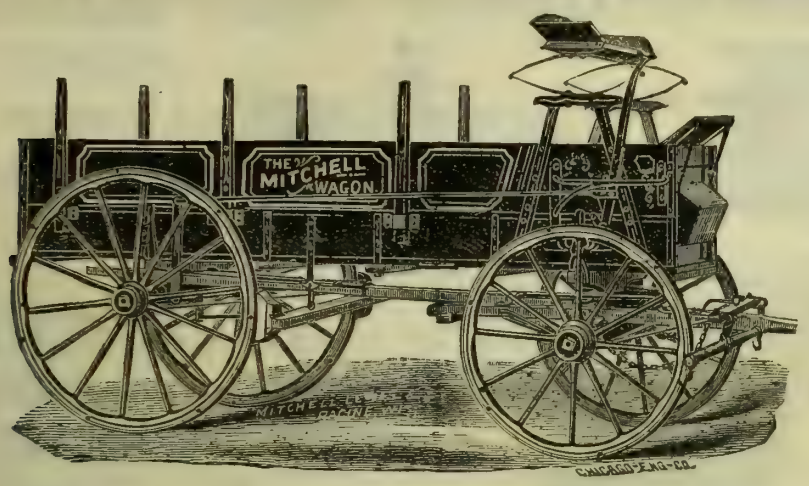
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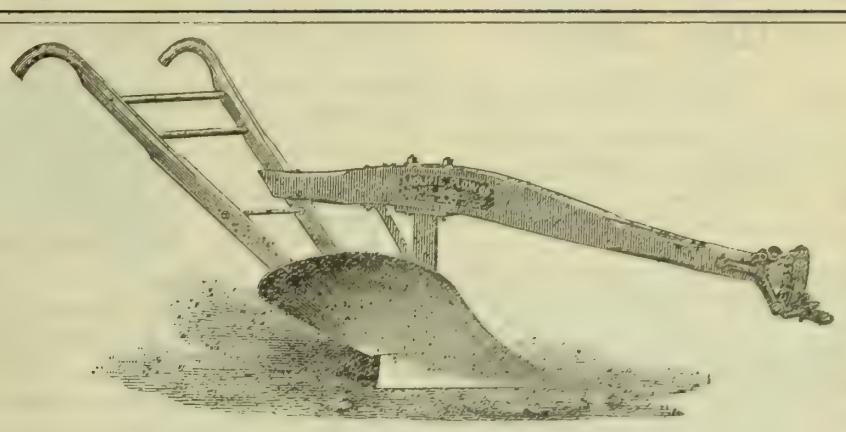
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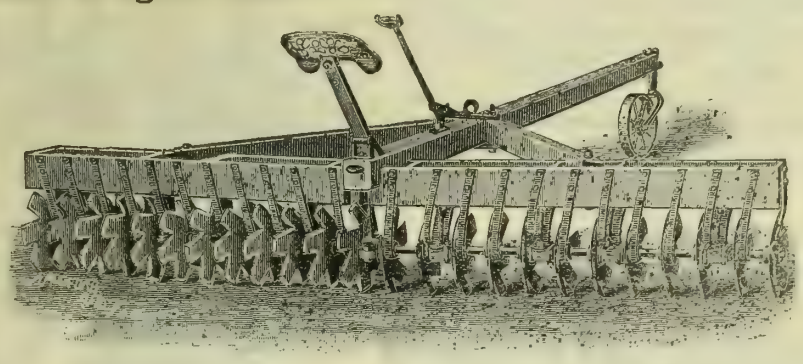


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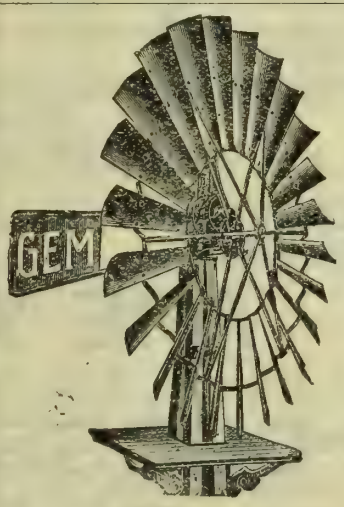
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Never Requires Oiling or Climbing of Towers.
Guaranteed more durable without oil than other mills that are oiled.

Practically, this mill requires no attention. Truly a Gem and worth its weight in gold. It combines Beauty, Strength, Durability and Simplicity. Governs itself perfectly, is easily erected and is sold on its merits. In fact it is the best mill on earth. They are geared back three to one—the whole making three revolutions to one stroke of the pump—making them run in the lightest wind or breeze. The mill is made entirely of Steel and Cast Iron. Each one of our Gem Windmill's is warranted. If not satisfactory freight will be paid both ways and money refunded.

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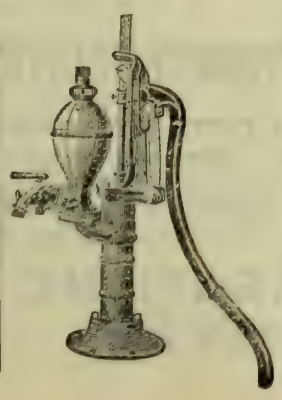
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Fig. 398.

Force Pump, $7.50 Cash.

These pumps are made especially to take the place of our more expensive Suction and Force Pumps; they have a brass stuffing-box, nicely turned up and finished, through which a brass-cased piston rod passes; a brass valve seat, and, with a revolving brake and bearer, it is available in any imaginable position. You are capable of forcing water into a tank or attaching a hose to the spout of pump for washing windows, carriages, watering gardens, sprinkling streets, etc. It is the most valuable pump for extinguishing fires, etc. This pump is adapted for wells where it is not over 28 feet to water; they will force water 50 feet in height if necessary.



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Horse Liniment

is certainly the best preparation of its kind in the market. Ranchers, Stock Raisers and Horse Owners of every description will tell you that it does good work every time.

MESSRS. H. H. MOORE & SONS, Stockton, Cal.—GENTLEMEN: In answer to your inquiry, would state that I used your H. H. H. Liniment on my Holland prize-winning cow, "Lena Menlo," for a wrenched shoulder, and it relieved her very much. She calved the next day, and while still suffering from the sprain gave the largest authenticated quantity of milk ever given on this coast (16½ gallons per day), showing conclusively the great relief received from your remedy. I consider it a necessity in my stables, and when away from home feel perfectly safe, as inexperienced men can do no harm with it, as they can with the more powerful blisters. Respectfully yours,
FRANK H. BURKE,
Breeder of Registered Holsteins and Berkshires.
Menlo Park, Cal., January 22d, 1889.

MANUFACTURED BY

H. H. MOORE & SONS,

THE DRUGGISTS,

243 MAIN STREET, STOCKTON, CAL.



THE DAIRY.

Humboldt Alfalfa.

LARIBEE, Aug. 19, 1892.

TO THE EDITOR:—Alfalfa is no strange sight in the valleys of this county, and it is also grown on the foothills along the ocean. But back in the interior, where there is sufficient warmth to raise the choicest prunes, peaches and grapes, it was taken for granted that alfalfa would be out of its element.

Last week Mr. A. J. Fairbanks, of the Fort Seward ranch near Blocksburgh, showed me a field of alfalfa that he sowed in 1886, that was about six inches high after having cut three hay crops this season. Mr. Fairbanks had this strip of land planted in corn for two years before sowing alfalfa, and the ground was entirely free from weeds and in excellent condition. He plowed the ground twice, and about ten inches deep, then cross-harrowed and sowed one-half the usual amount of barley with the alfalfa to protect the latter from frosts. The alfalfa and barley were sown at the same time, and then harrowed lightly.

Barley was preferred on account of its rapid growth, and would sooner give protection to the young growth. It is a debatable question whether anything should be sown with alfalfa or not, and I have heard it suggested that instead of sowing the alfalfa and barley together, it would be better to wait until the barley was up a few inches and then sow the alfalfa and roll the ground, but whether the rolling would be sufficient covering for the alfalfa I am not prepared to say.

The above field lies on the west bank of Eel river and is very level, of a rich, sandy loam, and is about 80 feet above low water. There is no chance to irrigate this five-acre tract, consequently all the moisture it receives comes from rains and the soil. The three hay crops cut this year yielded 40 tons of hay, and considering that the last crop was cut August 3d, and that the field will be used this fall to give weak calves a start to carry them through their first winter, the showing is not bad for a five-acre field.

There are many places in this section where water could be brought on to the land and alfalfa or clover could be irrigated the year round, but of course a few floodings would suffice.

In this portion of the country care should be taken not to sow too early in the spring, and if anything is to be sown with alfalfa, barley is undoubtedly the best grain, owing to its more rapid growth.

ED. ROBERTSON.

Sweet and Sour Skim Milk.

W. W. Cooke, in the *Country Gentleman*, gives the results of some feeding experiments with six pigs fed on skim milk. They were divided into lots of three each, one fed on sweet skim milk and the other lot on that which was sour, "thoroughly lobbered and rank, very often wheyed off."

"The pigs were fed two ounces of cornmeal to each quart of skim milk until they were large enough to take 12 ounces of cornmeal and six quarts of skim milk, daily. After that, whatever additional food they desired was made up of equal parts by weight of wheat bran and gluten meal.

"The 12 ounces of cornmeal and six quarts of skim milk, daily, were continued through the rest of the test," from May 18th to October 27th.

The following table will show at a glance the greater growth made by the pigs fed on the soured milk:

GAIN IN LIVE WEIGHT DURING TEST.

Pig No.	Food.	No. of days.	Tot. gain pounds.	Av. daily gain.
1.....	Sweet Skim	162	154	0.95
4.....	do	162	157	0.97
7.....	do	162	162	1.00
3.....	Sour Skim	162	182	1.12
6.....	do	162	176	1.09
8.....	do	162	166	1.03
Average—Sweet Skim.....		158		0.97
Sour Skim.....		175		1.08

It will be seen that the pigs fed on the sour skim gained an average of 17 pounds each more than the lot fed on sweet skim, a fact which may afford food for thought to those dairymen, if there are any among our readers, who are feeding milk fresh from the separator every day.

Mr. Cooke says that "it has been taught widely during the last year that the patrons of separator creameries were losing largely by allowing the skim milk to sour before they got it to their pigs. * * * A rather extensive canvass among farmers, recently, showed quite a decided preponderance of pigs doing better on sour milk than on sweet."

After suggesting that the probable reason for the superiority of the sour milk is due to certain chemical changes taking place during the process of souring, he continues: "It could not be said from our experiments that skim milk could be kept indefinitely and still not lose in feeding value, but it seems probable that there is no loss in feeding value in the first change of souring and lobbering.

As to why the sour skim milk should have done better than the sweet skim milk we cannot tell, unless the answer is found in the greater relish with which it was eaten, or unless it is a fact that the acid, during the hot weather, helps by keeping the digestion of the pigs in a little better condition."

The last sentence suggests the query, will sweet milk be better than sour in cold weather? As the gain of the pigs fed on sour milk was only 17 pounds each during a period of 160 days, in hot weather, when acid foods are considered beneficial, is it not possible that milk, sweet and warm from the separator, might prove superior to sour, under like circumstances, in cold weather?

It should also be remarked that milk which is allowed to become filthy, as well as sour, or in which putrefactive ferments, as well as lactic acid, are allowed to develop, will surely not come under the conclusions noted above. Old, cold and unclean skim milk is infinitely worse than fresh, sweet milk. Therefore, do not allow the results to be made a cloak for carelessness nor neglect.

THE STABLE.

The Select Clydesdale.

Some time ago we made reference in our columns to the new rules of the Treasury Department in regard to the importation of pure-bred livestock duty free, stating also that the select Clyde had been rejected for free entry on account of its being a cross-bred animal, being a cross from selections of both the Shire and Clydesdale breed of horses.

These crossbred cannot in any sense be looked upon as pure-bred, although they have a studbook in which their pedigrees are recorded, which also necessitates the recording of some pure-bred horses of both the above-named breeds in order to make the pedigrees complete.

This, however, does not constitute a pedigree of any one pure breed, and many breeders will undoubtedly be surprised to hear of the new decree issued by the Department of Agriculture in regard to the importation of breeding animals, as contained in the following letter:

(COPY.)

WASHINGTON, D. C., July 19, 1892.

Collector of Customs, New York, N. Y.—SIR: Upon the recommendation of the Secretary of Agriculture, made in accordance with the Act of July 5, 1892, which prescribes that he "shall determine and certify to the Secretary of the Treasury what are recognized breeds and and pure-bred animals under the provisions of paragraph 482 of the Act of October 1, 1890," the name "Select Clydesdale Stud-Book," in which is recorded the "Select Clydesdale" breed of horses of Great Britain, is added to the list of foreign books given in Department's circular of May 2, 1892, No. 66 (L. 12,734); and free entry will be accorded horses imported for breeding purposes, for which the importer shall furnish a certificate of record and pedigree in the form prescribed, showing that the animal is pure-bred and admitted to full registry in the book of record which has been duly established for such "Select Clydesdale" breed.

Respectfully yours,
[Signed] L. CROUSE, Ass't Sec'y.

This looks like taking a step backward after all the fuss that has been made by the Department in regard to importers being obliged to file certificates showing that every animal imported is *pure bred* and has a pedigree recorded in some standard studbook, or pay a duty of 20 per cent on the value of the animal imported.

As well might the Department have let things run along on the old-established basis of admitting duty free all pure-bred animals of recognized breeds, in fact better than to adopt any such vacillating policy as the one outlined above.

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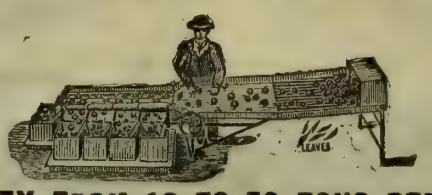
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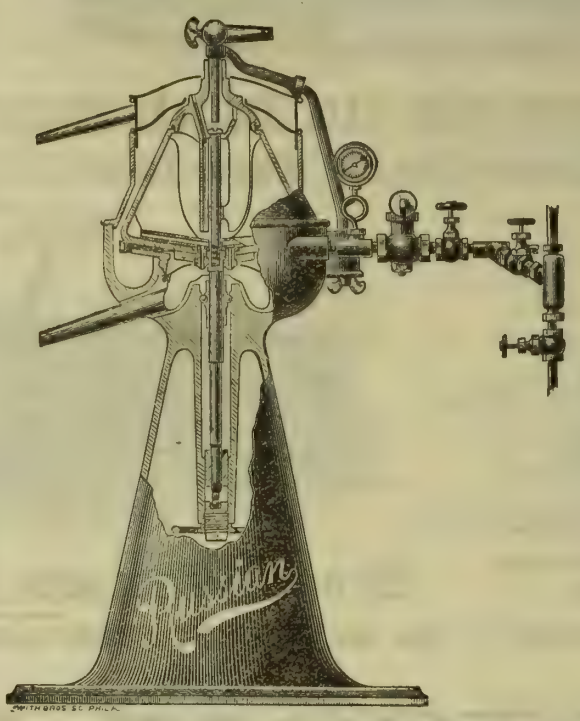
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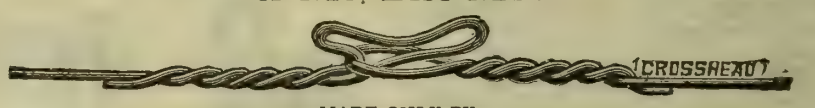
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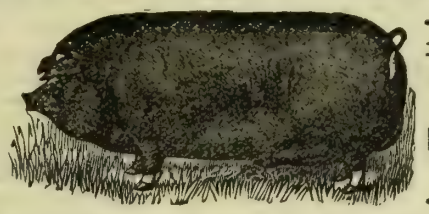
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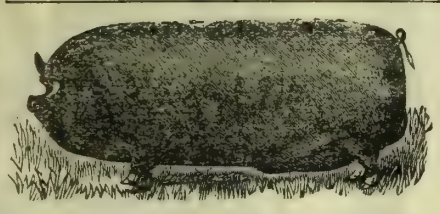
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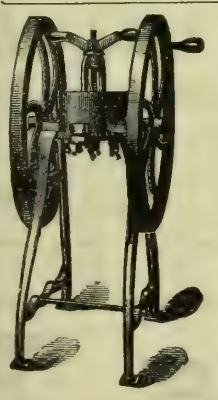


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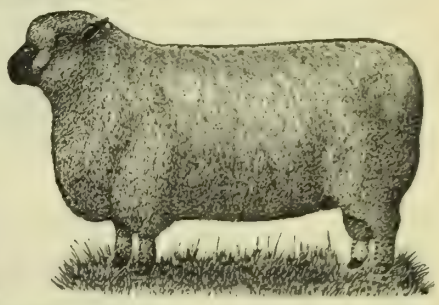
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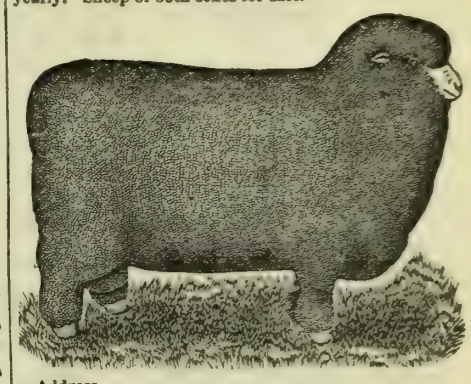
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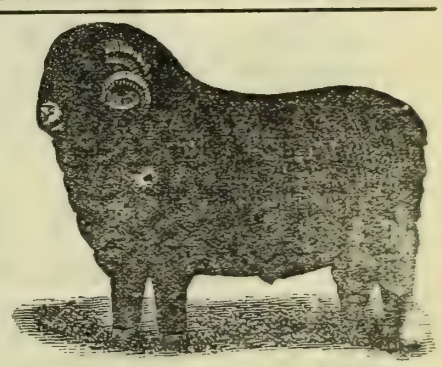
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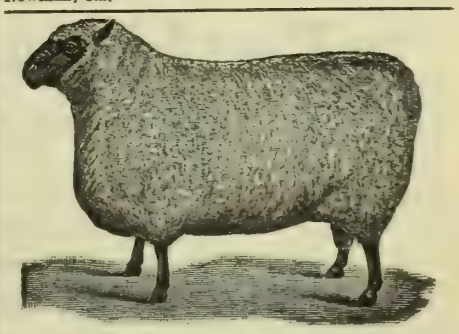
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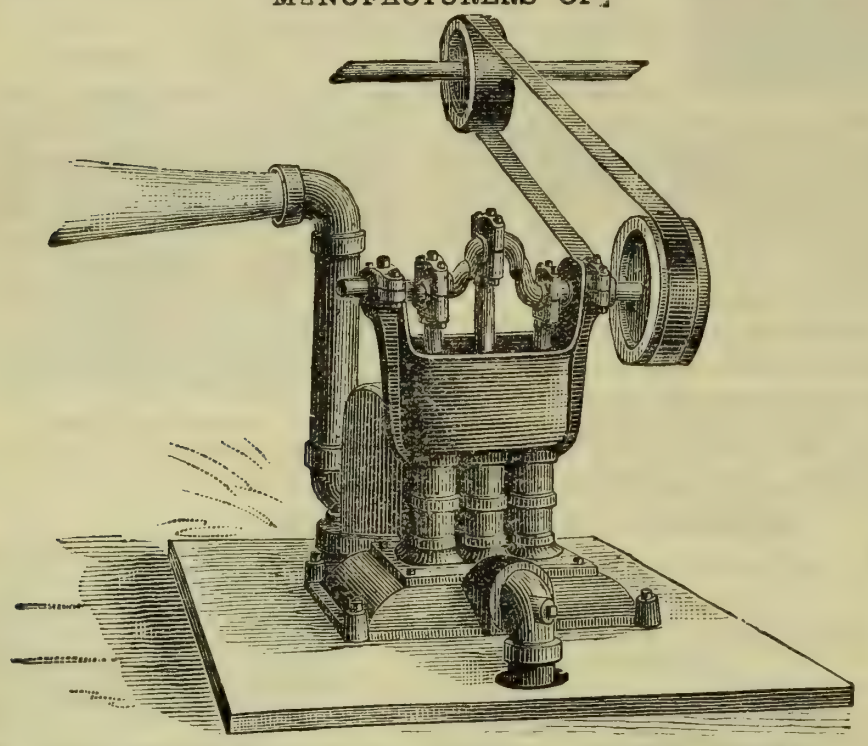


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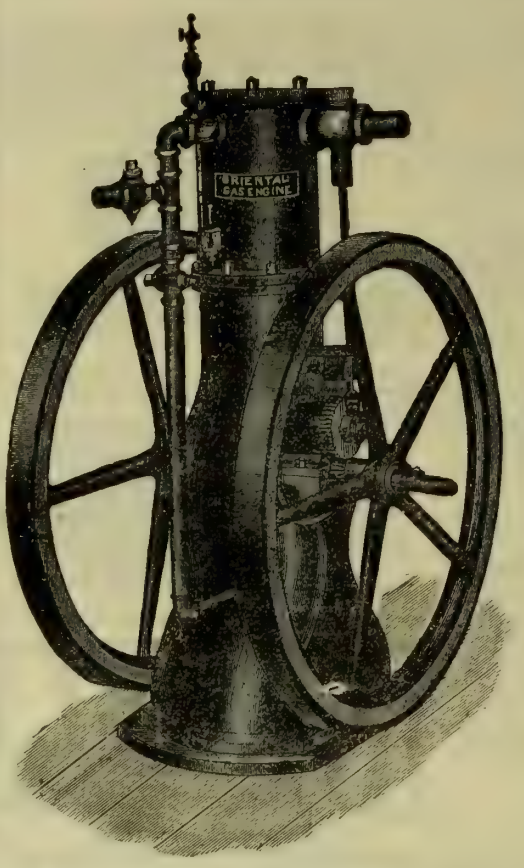
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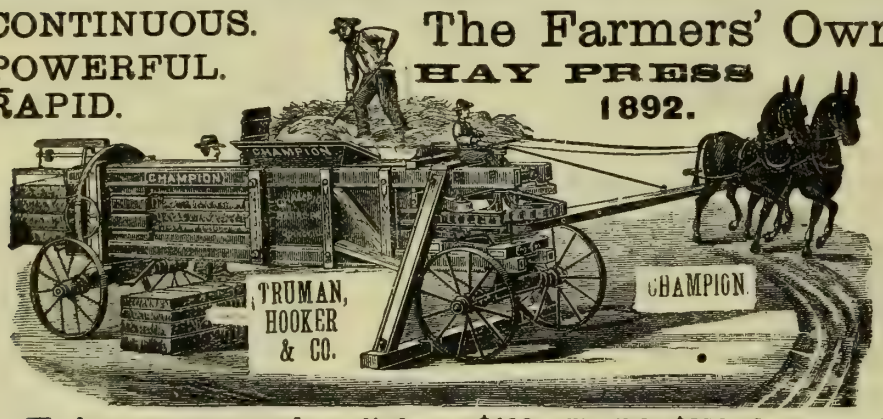
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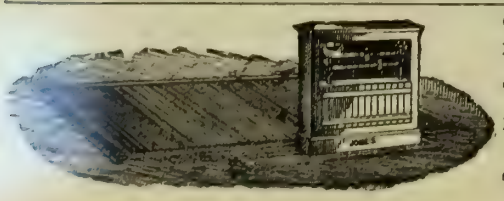
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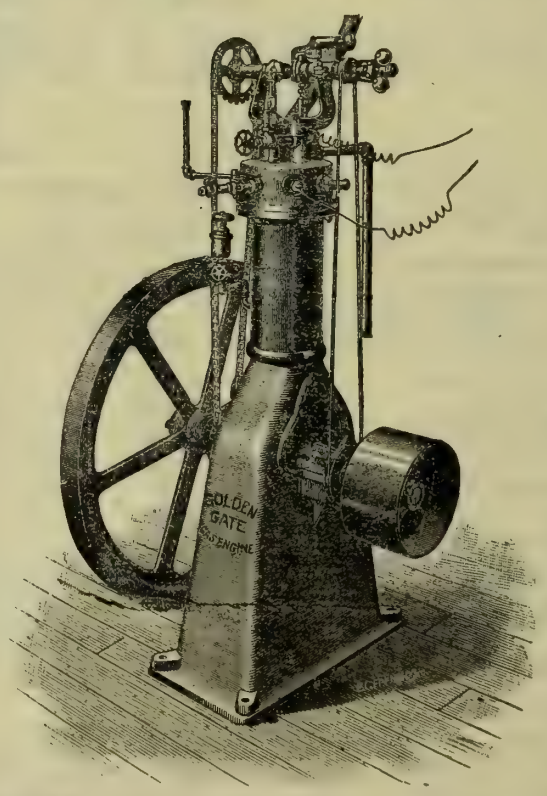
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, August 31, 1892.

There has been a continued free inquiry for funds from the grain-growing sections. The call, so far as we are able to learn, is largely to make advances against grain going into warehouses. The low bids made by buyers cause a very low general disposition to store wheat and barley. Some of the warehousemen it is claimed have loaned wheat belonging to farmers to exporters. If this is true, and those in position to know say it is, then the practice cannot be too severely condemned, for it is not only unsafe but it prevents buyers from entering the market, and, by their purchases, make better prices. Farmers should have a private mark on each bag, and, in taking warehouse receipts, have the mark specified. Farmers' organizations should look into this for their own benefit. Warehousemen who loan grain can, and probably do, collect storage charges for that which is loaned out, and, at the same time, get more grain for storage than to fill the space made vacant. Ships are lower. The ring made a strong fight to keep charters up, but the tenacity with which farmers have held grain has caused them to weaken. A leading English paper just to hand claims that the wheat markets of the world are under control of the powerful moneyed syndicate which is manipulating silver. If this opinion is well grounded then wheat will be more of a gamble than ever. The action of the market the past week at home and abroad seemingly gives color to the statement, for when silver advanced wheat went up, and when the former shaded off the latter also shaded off. But then time will tell if the wheat and silver markets are manipulated by a big moneyed syndicate. There is no longer any occasion for doubting that the wheat crop, taking all wheat-growing countries as a whole, is considerably below the outturn in 1891, and that before the winter passes better prices will rule. At the moment the market is unfavorably influenced by the low price of silver, a cholera scare and farmers in Europe and at the East rep rted to be selling corn very freely at present low prices. Barley is in an anomalous position, with only an average crop of bright color and choice grades. The market for the latter is made to move down in sympathy with the former, and that, too, with its exports largely in excess of what they were at this time in 1891. The very low rates by rail to Atlantic sea ports are stimulating the shipping demand. Poor grades of barley are only salable at home for feed and for which the market has shaded off. Corn has held fairly steady. Choice oats have been coming in slightly more freely. Poor to good oats are in liberal supply and easier. Rye is lower. Flour is weak, with more or less cutting in prices. There appears to be a big fight on hand by the flour combine to force other mills into the trust. Heavy receipts of millstuff from up north have broken the market for bran and middlings, and roll barley is lower in sympathy with the grain. The demand is free and steadily enlarging. Hay has come in quite heavily, causing a weak and concession market for the poorer grades. Under heavy receipts both tomatoes and sweet potatoes broke badly, although the latter at the close are stronger and slightly higher under more moderate receipts. Onions have ruled weak, while choice potatoes had good support, but good to fair were hard to sell. A combination was perfected the past week to advance choice to gilt-edged butter, which met with success, owing to a delay in the usual receipts from Humboldt and Del Norte. The demand is quite large, but this always obtains during fair times, which admits of the marketing of heavy supplies. Those who claim to know say that unusually large quantities are held back by some of the creameries, and besides there is an unusually large quantity in store in this city—the bulk of which is not reported in stock. With the advance in fresh, the trade has commenced on pickled, which is now beginning to move. The demand this year appears to show a large increase for keg. The Eastern markets for choice grades of butter and cheese are quite high. Unless our market advances considerably there will be very little choice brought from the East, but then the outturn in this State has advanced quite rapidly. Cheese is firmer. Choice, well-selected, fresh-laid eggs have had good support, as have choice consignments of Eastern. Fully one-half of the latter are sold in our city as California ranch eggs by the retail trade. The cool weather favors the bringing in of Eastern. Honey came in more freely, but the market holds strong. The poultry market, so for as hens and young fowls are concerned, went from bad to worse under heavy receipts on each day. Old roosters stood up well, but toward the close they are easier. Geese and turkeys had good support. The latter, it is claimed, are held back for the usual Thanksgiving and Christmas demand. Owing to the cholera scare, the demand for hog product at the East has fallen off, and in consequence the market is lower; ours is also lower in sympathy. In live stock, bullocks are stronger, mutton sheep firm and calves steady. In hops there is nothing new to report. Dealers appear to be watching the crop outturn, and also cholera movement abroad. The latter may possibly have considerable influence on the market. Fall wool is coming in quite freely. While the valley and southern clips are poor, those from mountain and up-country ranges are fair. Beans continue strong under light supplies. The bulk of new-crop Limas is said to have been contracted at around 3 cts. New-crop nuts are meeting with more inquiry. The bulk of the walnut crop has been contracted. The tone for all kinds is strong. New-crop raisins, it is now conceded, will probably do better. The shortage abroad and cholera scare will be in favor of Californian. Packers cannot exercise too much care in putting on the market only the better grades uniformly and attractively packed. The end justifies this course. Last year's inferior packing did great injury to the industry. Dried fruit is strong and tending up. It is claimed that there is not 500 tons of dried apricots unsold. Prunes are strengthening. The short crop and high asking prices abroad are in favor of sellers. Dried plums are scarce and high. Dried grapes continue to have strong support. Peaches are meeting with a freer demand in the country. Buyers are picking up all they can find that are not held too high. At present prices, it seems, driers are letting go. Pears and nectarines are steady, as are other kinds of dried fruit. The market for fresh fruit shows more strength for choice canning tree fruits, with still better prices looked for. There has been free buying of choice green Bartlett pears, with sales to the trade as high as $1.50 per box. Choice plums and prunes are scarce. Choice firm peaches are wanted at an advance. Grapes are improving in quality, and as the quality grows better, quotations are higher for the more choice. Heavy shipments are being made eastward and also up north. The cool weather is against a free consumption of watermelons, cantaloupes and nutmeg melons. The market fluctuates daily. Lemons and limes are scarce and high.

Markets by Telegraph.

Foreign Grain Review.

LONDON, Aug. 29.—*Mark Lane Express* says: The favorable weather last week allowed an unprecedentedly large area to be harvested. Probable yield: Wheat, 64,375,300 bushels; barley, 69,251,550; oats, 112,386 300. Best new English wheat, 32s 5d; old, largely offered, 29s; readily sold. Foreign wheats almost unsalable, is lower. American red winter wheat declined steadily, lost 2s 9d in 11 days. Barley and corn cheaper. Oats firm to-day. English, Russian and Indian wheats 6d dearer. California 3d dearer, owing to the heavy rains, which are regarded as jeopardizing the wheat still in shock. Flour cheaper. Yellow corn 3d lower; round, 6d lower; American flat, steady; oats, 3d lower; barley, 6d lower.

Eastern Wool Markets.

NEW YORK, August 26.—The demand for wool is not as strong as it was a week ago. Manufacturers are now well supplied. The goods market is in excellent shape and the mills are all busy. The consumption of wool is heavy and has greatly increased during the past year. There are at present no indications of wool prices advancing, and manufacturers feel confident of securing wool a month hence on as favorable terms as it can be bought now. Quotations on all grades are fairly sustained. The markets are more heavily stocked with domestic wools than they have been in previous years at this time. The receipts from the country are beginning to fall off, and accumulation from now on will be less rapid. Buying is still largely of fleeces. They are lower relatively than other wools and buyers have availed themselves of this advantage. There is less doing in Territories. Texas wools are quiet. California and Oregon wools are dull. Pulled wools are moving slowly. Stocks in pullers' hands are light. Skins are costing more than they did a year ago, but the wool is, on the average, 3c lower than in August, 1891. Australian wools are quiet. The next London sales will open September 13th. About 300,000 bales will be offered, but very little of it will be suitable for this country. Carpet manufacturers continue to buy quite freely. Now that wools from the cholera district are to be excluded there is a better demand for Scotch, China and Mediterranean wools. Values are very firm, but unchanged.

NEW YORK, August 28.—The volume of sales is smaller this week. Manufacturers are in receipt of some interior purchases; this cuts off the call at the seaboard. There is nothing which points to a shading of values. The marked prosperity of the goods trade and the inroad that has been made on supplies give a buoyant aspect to the later possibilities of stronger quotations. Sales at New York, 413,000 pounds of domestic and 476.000 of foreign. Boston sold 2,514.400 pounds of domestic, 600.000 of Australian and 250 000 of foreign carpet. Philadelphia conforms to the policy of her sister markets and allows stock to go into prompt sale, though prices are unsatisfactory in view of improvement when supplies become lessened.

Canned Fruit.

NEW YORK, August 28.—Canned fruits have considerable attentive inquiry, but no large takings have transpired. All are firm. Standard apricots, $1.75@1.80 spot.

Dried Fruit.

Fifteen cars of fair size prunes were placed, mostly for western account, at 9@9½c, September delivery. Unpeeled peaches quiet. Small lots are quoted at 13½c spot. Raisins show no special interest. Four cars, new and of established quality, sold at $1.65; per layers, box $1.45; choice loose, $1.25@1.35; good ditto, bag, quoted at 5c; Valencias are freely offered at 7½c delivered, duty paid. This favors buyers in competing with the coast crop. Market strong for best grapes. A car of apricots has been sold at 15¾c spot. Buyers want to see the goods this season, before purchasing.

Fresh Fruit.

NEW YORK, August 28.—It has been a tough week, for with 56 cars arriving we have had two rainy days and local stuff arriving freely. Dealers think they came out well even with the cheap rates. They will advise light shipments for a time. Plums are a drug; peaches low; only large green Bartletts made top figures. At the Liverpool sale Bartletts sold at 14s 6d. A prominent English fruit firm says: "The trial of shipments is not conclusively a failure. Pears, of course, must compete with the cheap French, but peaches are fairly certain of a market."

Miscellaneous.

NEW YORK, August 23.—Lima beans are firm with a prospect of full support later on.

Hops.—A soft condition pervades the market. Cash buyers bid 24 cents, for qualities listed, 24@24½. Pacifics range 23@24. Trade of the summer was below the average, and many of the best lines have been more or less broken up in meeting the light wants of brewers, and the country tone is easier for reserve and futures.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Aug.	Sept.	Oct.	Nov.	Dec.
Thursday	6s00½d	6s00½d	6s01½d	6s02½d	6s03 d
Friday	6s01 d	6s01 d	6s01½d	6s02½d	6s03 d
Saturday	6s01 d	6s00½d	6s01½d	6s02 d	6s03 d
Monday	6s02 d	6s01½d	6s02½d	6s03 d	6s04 d
Tuesday	6s02 d	6s01½d	6s01½d	6s02½d	6s03½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. O.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	33s3d	33s0d	33s0d	Inactive.	Unsettled.
Friday	32s6d	33s0d	32s6d	Quiet.	Firm
Saturday	32s6d	33s0d	32s6d	Steady.	Firm.
Monday	32s6d	33s d	32s6d	Firmer.	Showery.
Tuesday	33s9d	33s9d	33s9d	Weak.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, Aug. 31. – Wheat -- Weaker. California spot lots, 6s 7½d; off coast, 32s 6d; just shipped, 33s; nearly due, 32s 6d; cargoes off coast, slow; on passage, rather easier; Mark Lane wheat, quiet; French country markets, rather easier.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Sept.	Oct	Dec.
Thursday	135	137	142½
Friday	133½	136½	141
Saturday	134½	134⅝	14 ½
Monday	134½	137½	141½
Tuesday	133¾	136	141½

The following is to-day's telegram:

NEW YORK, Aug. 31.—Wheat 79½c for September, 81c for October, and 84½c for December.

Chicago.

Day.	Sept.	Oct.	Dec.
Thursday	125¾	127⅛	130⅝
Friday	125½	126½	129⅝
Saturday	126	127¼	13 ⅛
Monday	126⅞	128¼	131⅛
Tuesday	125	125½	13..¼

The following is to-day's telegram:

CHICAGO, Aug. 31.—Wheat—74¾c for September and 77¾c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Aug.	Buyer Sept.	Bnyer Oct.	Buyer Dec.
Thursday, highest	132	....	....	....	136⅝
" lowest	131½	....	....	....	135⅝
Friday, highest	132	....	....	....	136⅝
" lowest	130⅞	....	....	....	136½
Saturday, highest	132	....	132	....	136½
" lowest	132	....	132	....	136½
Monday, highest	134	....	134⅜	....	137⅝
" lowest	133½	....	134¼	....	137⅜
Tuesday, highest	132	....	....	....	137⅜
" lowest	132	....	....	....	136

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal—Buyer December, 100 tons, $1 35½; 500, $1.35⅝; 1200, $1.35⅝. Seller 1892 -1100 tons, $1.31½ ₩ ctl. Regular Session—Seller 1892, 300 tons, $1 31½; 100, $1.31⅜; 40), $1.31½. Buyer December, 1000 tons, $1.35½ ₩ ctl. Afternoon—Wheat—Seller 1892, 500 tons, $1.31½. Buyer December, 400 tons, $1.35⅜ per ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	88⅝	....	....	91	94½
" lowest	87½	....	....	90¼	94
Friday, highest	88⅝	....	....	90	94½
" lowest	86⅝	....	....	90	93
Saturday, highest	87	....	....	89½	93⅜
" lowest	87	....	....	88½	93½
Monday, highest	86½	....	....	88½	92½
" lowest	86⅜	....	....	88½	92½
Tuesday, highest	85½	....	....	87⅜	92
" lowest	85½	....	....	87⅜	91⅝

The following are to-day's recorded sales on Call:

Barley—Informal—Seller 1892, new—100 tons, 86c per ctl. Regular Session—Buyer December, 100 tons, 91½c; 200, 92c per ctl. Afternoon—Barley—December, 300 tons, 92c; Seller 1892—100 tons, 86½c. Buyer December—100 tons, 92½c; 200, 93c per ctl.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Aug. 30, '92, were as follows:

Flour, qr. sks	61,633	Bran, sks	16,644
Wheat, ctls	143,699	Buckwheat "	....
Barley, "	120,838	Middlings "	2,311
Rye, "	520	Chicory, bbls	30
Oats, "	15,475	Hops, "	9
Corn, "	4,688	Wool, "	1,112
*Butter, "	920	Hay, ton	2,741
do bxs	652	Straw, "	155
do bbls	77	Wine, gals	171,460
do kegs	83	Brandy, "	5,540
do tubs	15	Raisins, bxs	....
do ½ bxs	2	Honey, cs	313
†Cheese, ctls	676	Peanuts, sks	....
do bxs	123	Walnuts "	....
Eggs, doz	21,116	Almonds "	....
do " Eastern	69,81	Mustard "	1,211
Beans, sks	2,802	Flax "	....
Potatoes, sks	21 127	Popcorn "	....
Onions, "	2,283	Broom corn, bbls	....

*Overl'd, 341 ctls. †Overland, 80 ctls.

Exports by Sea from San Francisco from July 1 to Aug. 25

	1892-93	1891-92
Wheat, ctls	1,438.141	2,590,406
Flour, bbls	150,582	193,659
Barley, ctls	245,823	142,823

Tonnage Movement.

From reliable advices up to Aug. 24, the following summar tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	291,538	405,862	*169,295	61,862
San Diego	19 635	23,813	6,414	.....
San Pedro	12,480	8,332	.....	
Oregon	49,065	53,223	36,157	15,391
Puget Sound	37,002	27 794	.....	
Totals	409,720	520,054	211,866	77,254

*Engaged for wheat, 1892, 60,516; 1891. 56,094.

Tonnage on the way has increased. Spot charters are about 2s 6d per ton lower than one week ago.

Cereals.

The Minneapolis *Market Record* now estimates the wheat crop in Minnesota and the Dakotas from 110,000,000 to 115,000,000 bushels. It also reiterates the statement that the crop last year in the three States was 160,000,000 bushels, although the government report showed a yield of only 137,000,000 bushels. Recent estimates make the wheat crop of Italy 110.000,000 bushels, against 128.000,000 last year, and on this basis it is claimed that Italy will have to import 32,000,000 bushels.

Dornbusch says the English crop is turning out better than expected, estimates ranging from 60,000,000 to 68,000,000 bushels. Barley is turning out magnificently, but oats are disappointing, and beans and peas will be poor crops. In France, reports of the quality of new wheat are favorable. New rye is of fine quality. Oats are deficient. New samples of German wheat and rye are very fine. Russian reports are still irregular. Reports from the Danube suggest an ample supply of wheat for export from the Danubian provinces.

The Russian Agricultural Department gives a summary of the winter wheat outlook up to the 27th of July (new style), from information received from 2900 correspondents. The advices obtained are from the 50 governments of European Russia, exclusive of Poland and the north Caucasus, and the condition of the wheat crop at that period was as follows, taking 100 as the average: Two governments report an excellent crop, 125 per cent; 16 a good crop, 100 to 125 per cent; 20 an average crop, 90 to 100 per cent; 3 a mediocre crop, 75 to 90 per cent; 5 a very mediocre crop, 50 to 75 per cent; 4 an indifferent crop, under 50 per cent. The rye crop may be represented by 95, last year's not having exceeded 70.4. As to Poland and the Caucusus, the harvest appears likely to be above the average in the first and very abundant in the last-named region.

The stocks of foreign wheat and flour in the United Kingdom, August 6th, were 30,000,000 bushels, against 9 872,000 bushels last year. The stock of British wheat held by the British farmers is only about 8,100,000 bushels this year, against 9 875,000 bushels last year. The total amount of wheat in store, in farmers' hands and afloat for the United Kingdom is, however, 91,810,000 bushels, against 54,184,000 bushels last year.

The Paris *Mercuriale des Halles et Marches* estimates the present year's wheat crop in France at 99,822 750 hectolitres, and puts the average weight at 77 to 78 kil., which would give a total crop of 284,000,000 bushels. The *Marche Francais*, however, looks for an average crop, viz., about 296.000,000 bushels, and states that the quality and condition are very satisfactory. The annual requirements of France, it may be added, amount to 340,000,000 bushels.

C. A. King & Co.'s *Toledo Circular*, August 20th, says: "If any one had said a month ago that Toledo's receipts of wheat this August would be 7,000,000 bushels, as large as a year ago; that St. Louis would receive over 6,000 000 bushels, a million more than a year ago, and Baltimore as much, his word would have been doubted. But such promises to be the case. The winter wheat crop of Ohio, Michigan, Indiana, Illinois, Kansas and Missouri this year is only 200,000,000 bushels, against 240,000,000 last year. The price of wheat is 27c below a year ago, yet farmers have sold more freely. While receipts continue larger than a year ago, there can hardly be any material improvement in prices. Speculation has helped to sustain prices, but is timid while the farmers sell so freely."

The Kansas City *Grain Trade News* says: "All sorts of reports regarding the corn crop of Kansas are current, from the real estate boomer's loudly proclaimed statement that the prospect is the finest on record to the extreme pessimist who thinks the State will raise no more than enough to feed herself. The reliable information which comes to the *Grain Trade News* does not justify any change in the statement made last week. The present prospect is for a half a crop, and there is no likelihood of this estimate being raised. If Kansas produces 110 000,000 bushels of corn this year she will be doing well. Part of the southeast part of the State has been without rain for four weeks, and sections in the northern part have had no more than the slightest showers in that time. In some of the southern central counties there is a prospect for very nearly a full crop, but these are offset by the dozen or more counties which will not raise enough for home use."

The official report of the Indian crop and the exports are as follows:

	Crop.	Exports.
1892	202 985,000	.....
1891	255,435,000	54,850,000
1890	235,436,000	26,754,101
1889	2 7,522,000	25,758 553
1888	266.882,000	32,872,151

The local wheat market, or at least so far as quotations went to show, declined steadily up to Monday, when an advance set in, which held on yesterday, although futures shaded off slightly. The advance on Monday in Europe and at the East is said to have been due to the reports to the International Grain Congress showing a marked falling off in the wheat crop of the world. The decline was due to lower silver, cholera scare and continued free selling by eastern and European farmers. The decline in wheat charters at our port admitted of more vessels being taken, and also allowed wheat exporters to buy without quoting lower. In the interim, buyers are paying an advance on the published bids in this city. It is said that several sales were made in this city the past week at from 1¼ to 2½ cents above quoted prices. The selling offers are light; about everything is going into warehouses.

The receipts of barley the past week were the heaviest on record. A large percentage of the receipts was for shipment. Bright-color, choice barley suitable for exporting and brewing, is scarce and wanted, but buyers are slow in bidding up. Off-color, poor to fair barley is in heavy supply, which causes buyers to bid low or in keeping with the lower cross order sales on Call. The consumption of feed barley, owing to coming into favor, is quite large, with a steadily enlarging demand.

The receipts of oats were large, but then the demand is larger. The supply of choice grades is still light, although an increase is reported within the past week Poor to fair oats are in liberal supply. The crop up north is said to be short.

Corn has held to fairly steady figures under moderate receipts and a fair demand.

Rye is lower At the decline there is a slight improvement in the demand.

Dairy Produce.

Butter has been marked up with a barely steady tone at the advance. The trade is beginning to buy

pickle, which is good to gilt-edged and sells at lower figures. Commission-houses are meeting the market, while speculators are trying to force prices still higher.

Cheese is firm, but no higher. The demand is fair.

Eggs which are choice to strictly fresh-laid, and of large size, are firm and slightly higher, but other stock does not show any material change The receipts of eastern are fair, with the quality running good to choice.

Feedstuff.

Millstuff has declined under liberal receipts coming to hand from Oregon. Roll barley is lower. The demand is large and increasing.

The receipts of hay for the week ending August 29th were smaller, but on the 30th nearly 1500 tons were reported, which caused a weaker tone. It now looks as if the shipments from the State of Nevada will be quite light, owing to poorer pasture. It is claimed that the heaviest selling pressure has passed, and that from now on receipts will probably be smaller. The consumption so far this season shows a large increase over that during the like time in 1891.

Vegetables.

The market for garden truck has been irregular, being governed by the daily receipts. River tomatoes are slow, as are egg plants and ochre.

Onions have ruled weak under free receipts and only a fair demand.

Choice potatoes have held strong, but poor and diseased favored buyers. There is a continued free demand for the more choice good-keepers for shipment.

The market has been liberally supplied with sweet potatoes. To-day the market was barely steady.

Fruit.

Receipts of berries and tree fruit have been light, and in consequence the market strengthened for the more choice. Canners buying, forced both pears and peaches up. The supply of all kinds of fruit, except apples, is lessening. Apples are coming in quite freely, causing an easier market.

The market for dried fruit is very strong. Some claim that apricots will do still better. The shipments eastward are assuming larger proportions. There are those in trade who claim they can do better in buying from speculators than from driers. They say that the former are getting a good profit and are unloading before the holidays. European advices report a strong market, owing to short crops. The cholera scare may prevent imports, and if these are suspended, consumers in this country will have to depend entirely on California.

Raisins show signs of improving. There has been, and still is, a steady buying. It is said that purchases are made in such a way as not to excite sellers. The crop abroad, it is claimed, will be short.

Live Stock.

Rains in Arizona give an assurance of good pasture, which has stopped the strong selling pressure from there, and, consequently, our market is doing a little better for bullocks. The consumption is larger, owing to cool weather and higher prices for fruit. Mutton and hogs are unchanged.

Miscellaneous.

Hens and young fowls sold under, owing to free supplies, but old roosters held up top to Tuesday when they weakened slightly. Geese are lower, but turkeys are strong. Ducks are weak.

Beans are scarce and high. The demand is only fair, but the supply is light. The bulk of new crop Limas has been contracted.

Hops are essentially unchanged. Both buyers and sellers appear to be indifferent. Picking is well under way.

Fall wool is coming in freely. The grade is not up to last year's. The market is slow.

Honey is very firm and wanted at full figures.

Sugar is one-quarter cent per pound higher.

Grain bags are steadier,

Hams are lower.

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ¼c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½@	3½	
Do do prime	3½@	4	
Do do choice	4 @	4½	
Do sliced, common	3½@	4	
Do do prime	4 @	4½	
Do do choice	4½@	5½	
Evap. bleached, ring. 50-lb boxes	6½@	7	
APRICOTS—1892.			
Sun-dried, unbl. com.	4 @	5	
Do do prime	6 @	7½	
Do do choice	8½@	9½	
Do bleached, prime	12@	—	
Do do choice	13@	—	
Do do fancy	14@	—	
Evap. choice, in boxes	14½@	—	
Do fancy, do	15 @	—	
FIGS—1892.			
Sun-dried, black	4½@	5	
Do white	— @	—	
Do do washed	— @	—	
Do do fancy	— @	—	
Do do pressed	— @	—	
Smyrna boxes	— @	—	
Do sacks	— @	—	
GRAPES—1892.			
Sun-dried, stemless	3½@		
Do unstemmed	1½@	2	
NECTARINES—1892.			
Red, sun-dried	8 @	9	
Do Evap., in boxes	— @	—	
White, sun-dried	9½@	11	
Do evaporated	— @	—	
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8 @	—	
Do do prime, do	10½@	—	
Do do choice, do	11½@	—	
Do do fancy	12 @	—	
Evap, unpe'l'd, choice	12½@	—	
Do do fancy	13 @	—	
Sun-dr, pl'd, prime, bl.	— @	—	
Do do choice	— @	—	
Do do fancy	— @	—	
Evap, peeled, in boxes, choice	17½@	—	
Do do fancy	20 @	—	
PEARS—1892.			
Sun-dried, quarters	@	3	
Do sliced	4 @	5	
Evap, sliced, in boxes	7 @	8	
Do ring do	9 @	10	
PLUMS—1892.			
Pitted, sun-dried	8 @	9	
Do evap. boxes, choice	— @	—	
Do do do fancy	— @	—	
Unpitted	4 @	5	
PRUNES—1892.			
Cal. French, ungraded	7½@	8	
Do graded, 60 to 100	8½@	9	
Do do 40 to 60	11 @	12	
Fancy sell for more money.			
RAISINS—1892.			
London Layers, cluster, ℔ box	1 90 @	2 00	
Do choicest do	1 60 @	1 70	
Do prime, ℔ box	1 40 @	1 45	
Loose Muscatels, common, ℔ bx	— @	—	
Do choice, do	1 25 @	1 30	
Do fancy, do	— @	—	
Unstem'ed Muscatels, in sacks, ℔ lb	4 @	5½	
Stemmed do do	— @	—	
Seedless do do	— @	—	
Do do ℔ 20-lb bx	— @	—	
Sultanas, unbl, bxs	— @	—	
Do bleached, in bxs	— @	—	

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes

Live Stock.

BEEF.			
Stall fed	5½@	—	
Grass fed, extra	5½@	—	
First quality	5 @	—	
Second quality	4½@	—	
Third quality	3½@	—	
Bulls and thin Cows	2 @	—	
VEAL.			
Range, heavy	4½@	—	
Do light	5½@	—	
Dairy	6 @	—	
MUTTON.			
Wethers	6½@	—	
Ewes	6 @	—	
Do Spring	8 @	—	
HOGS.			
Light, ℔ lb, cents	5½@	—	
Medium	5½@	—	
Heavy	5 @	—	
Soft	4½@	—	
Feeders	3½@	—	
Stock Hogs	3½@	—	

Twine and Baling Rope.

BALE ROPE.	
Sisal, 3 yarns	9
Do, 2 yarns, light	9½
Duplex, 3 yarns	9
Manilla, 3 yarns, heavy	10½
Pure Manila, 3 and 4 yarns	12
Do do light	12½
TWINE.	
Pure Manila Hop, in balls, tarred	11½
Do, Grape-Vine, in balls or coils	12
Do, Spring	15
Duplex Hop, in balls, tar'd	9½
Do, Grape Vine, in balls or coils	10½

Grain and Wool Bags.

Calcutta, spot	5½@	5¾
Wool Bags	36 @	38

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowe notations. WEDNESDAY, Aug. 31, 1892

BEANS AND PEAS.			
Bayo, ctl	2 90 @	3 00	
Butter	2 50 @	3 00	
Pea	2 40 @	2 65	
Red	2 60 @	2 70	
Pink	2 30 @	2 50	
Small White	2 30 @	2 50	
Large White	2 20 @	2 40	
Lima	2 75 @	3 00	
Fld Peas, blkeye	1 50 @	1 70	
Do green	1 50 @	2 75	
Do Nlies	1 30 @	1 40	
Split	4 50 @	5 50	
BUTTER.			
Cal. Poor to fair, lb	16 @	—	
Do good to choice	20 @	23	
Do Giltedged	27 @	28	
Do Creamery rolls	23 @	28	
Do do Giltedge	— @	30	
Eastern	16 @	17½	
Cal. Pickled	20 @	22	
Cal. Keg	19 @	21	
CHEESE			
Cal. choice cream	9 @	—	
Do fair to good	7½@	—	
Do gilt edged	— @	10½	
Do skim	5 @	6½	
Young America	— @	11	
EGGS.			
Cal. "as is," doz	16 @	18	
Do shaky	12½@	14	
Do ca died	19 @	23	
Do c oice	23 @	26	
Do fresh laid	27 @	30	
Do do selected	— @	31	
Eastern "as is"	16 @	18	
Do candled	20 @	22	
Do selected	24 @	25	

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs and hard to sell.

FEED			
Bran, ton	15 50 @	16 50	
Feedmeal	27 00 @	30 00	
Gr'd Barley	19 00 @	21 00	
Middlings	19 50 @	21 00	
Oil Cake Meal	— @	25 00	
Manhattan Food ℔ ctl. cabinet	— @	8 00	
HAY.			
Wheat, per ton	8 00 @	—	
Do choice	— @	12 50	
Wheat and Oats	8 50 @	11 00	
Wild Oats	8 00 @	11 00	
Cultivated do	7 00 @	10 00	
Barley	5 00 @	9 00	
Alfalfa	7 00 @	9 00	
Straw, bale	40 @	55	
GRAIN, ETC.			
Barley, feed, ctl	80 @	—	
Do Choice	85 @	—	
Do Brewing	92½@	—	
Do do Choice	96½@	—	
Do do Giltedge	98½@	—	
Do Chevalier	85½@	1 10	
Do do Giltedge	1 15 @	1 20	
Buckwheat	— @	—	
Corn, White	1 38½@	1 41½	
Yellow, large	1 30 @	1 32½	
Do small	1 33½@	1 37½	
Oats, milling	1 47½@	—	
Feed, Choice	1 37½@	—	
Do good	1 35 @	—	
Do fair	1 27½@	—	
Do Common	1 15 @	1 25	
Surprise	1 55 @	—	
Black Cal	1 10 @	1 26½	
Do Oregon	— @	—	
Gray	— @	—	
Rye	1 12½@	1 15	
Wheat, milling. Gilt edged	1 41½@	—	
Do Choice	1 38½@	—	
Do fair to good	1 36½@	—	
Shipping, cho'ce	1 33½@	—	
Do good	1 30 @	—	
Do fair	1 27½@	—	
Common	1 25 @	—	
Sonora	1 25 @	1 37½	
HOPS.			
1892 Bid	17 @	19	
FLOUR.			
Extra, City Mills	4 00 @	—	
Do Country Mills	4 00 @	—	
Superfine	2 60 @	3 00	
NUTS—JOBBING.			
Walnuts, Cal. lb	6½@	—	
Do Choice	8½@	—	
Do paper shell	9½@	—	
Almonds, sft shl.	11 @	—	
Paper shell	14 @	—	
Hard Shell	6 @	7½	
Brazil	9 @	10	
Pecans small	11 @	13	
Do large	14½@	16	
Peanuts	3½@	4½	
Filberts	11 @	—	
Hickory	7 @	8	
Chestnuts	11½@	16	
ONIONS.			
Silverskin	30 @	40	
POTATOES.			
Early Rose, ctl	40 @	55	
Peerless	45 @	65	
Garnet Chilies	50 @	70	
Burbank Seedlings	45 @	65	
Do do Salinas	75 @	1 00	

Extra choice sell for more money.

POULTRY.			
Hens, doz	6 00 @	7 00	
Roosters, old	6 00 @	7 50	
Do young	5 00 @	7 00	
Broilers, small	2 00 @	2 75	
Do large	3 00 @	4 00	
Fryers	4 00 @	5 00	
Ducks	3 50 @	4 50	
do, large	4 50 @	5 00	
do, extra large	5 50 @	—	
Geese, pair	1 75 @	2 25	
Goslings	— @	—	
Turkeys, Gob'r	20 @	22	
Turkeys, Hens	19 @	21	

All kinds of Poultry if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food ℔ 100-lb cabinet	8 00		
PROVISIONS.			
Cal. Bacon, he'vy, lb	11 @	11½	
Medium	12 @	13	
Light	13½@	14	
Lard	8 @	11	
Cal. Sm'k'd Beef	11½@	—	
Hams, Cal salt'd	12 @	13½	
do Eastern	15 @	—	
SEEDS.			
Alfalfa	— @	—	
Clover, Red	14 @	15	
White	20 @	—	
Flaxseed	2 00 @	2 25	
Hemp	3¼@	4	
Mustard, yellow	3½@	4	
do Brown	2½@	—	
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17 @	21	
Sac'to valley	16 @	—	
S Joaquin valley	11 @	16	
Cala'v & F'th'll	16 @	21	
Oregon Eastern	12½@	19	
do valley	18 @	23	
So'n Coast, def	10 @	12	
Nevada (State)	15 @	19	
FALL, 1892.			
San Joaq'n, plain	6 @	8½	
do mountain	9 @	11	
do lamb	8 @	9	
HONEY.—1892 CROP.			
White Comb, 2-lb	9½@	12½	
do do 1-lb frame	11½@	14½	
White extract'd	7 @	—	
Amber do	6½@	7	
Beeswax, lb	25 @	28	

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. WEDNESDAY, Aug. 31, 1892.

Limes, Mex	5 00 @	6 00	
Do Cal	— @	—	
Lemons, box	1 00 @	6 00	
Do Sicily choice	7 50 @	9 00	
Strawberries, per chest— Longworth	6 00 @	8 00	
Sharpless	4 00 @	6 00	
Raspberries, ch.	6 00 @	8 00	
Peaches, box	50 @	75	
Do Mountain	85 @	1 00	
Bl'kberries ℔ ch	3 00 @	5 00	
Figs, blk box	50 @	75	
Apples	40 @	90	
Do Gravenstein	75 @	1 25	
Crabapples	50 @	75	
Canteloupes, pr crate	40 @	65	
Melons, pr 100	5 00 @	10 00	
Nutmegs, ℔ box	25 @	35	
Grapes, pr bx— Do White	40 @	60	
Do Black	35 @	75	
Do Muscats	40 @	1 00	
Do Tokays	65 @	1 25	
Prunes, Hung'n	50 @	65	
Do German	70 @	85	
Plums, ℔ box	50 @	65	
Pears, Bartlett	50 @	75	
Do do choice	1 00 @	1 50	

Fruit in bulk to canners: Pears, 1½@2½; Plums, white, 1½@2½c; colored, 1@1½c; Peaches, freestone and clings, 2@3. Extra choice fruit for special purposes sells at an advance on outside quotations.

Beets, sk	— @	75	
Carrots, sk	40 @	—	
Okra, dry, lb	15 @	—	
Do green box	25 @	40	
Parsnips, ctl	— @	1 25	
Peppers, dry, lb	10 @	—	
Do grn Chili, bx	20 @	35	
Do do Bells	20 @	35	
Turnips, ctl	75 @	—	
Cabbage, 100 lbs	45 @	55	
Garlic, lb	— @	—	
Squash, Sum, bx	35 @	50	
Tomatoes	— @	—	
Do River lrg bx	20 @	30	
String Beans, sk	60 @	1 00	
Cucumbers, box	20 @	40	
Mushrooms	— @	—	
Egg Plant, bx	40 @	50	
Green Corn, box	25 @	1 00	
Marfat Squash, ℔ ton	10 00 @	20 00	

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal. in cellar lots	10 @	15

Auction Sales of California Fruits.

At Chicago.

Aug. 25.—Five carloads: Bartlett Pears, $2 50@3; some overripe. $1 55@2; Clapp's Favorite Pears, $1.60; Crawford Peaches, 75c@$1.15; Peaches, $1,15; White Free Peaches, 75c; Kelsey Japan Plums, $1.20; Egg Plums, 80c@$1.15; Gros Prunes, $1.15; Silver Prunes, 3-inch boxes, 65c; French Prunes, $1.05; Fellenberg Prunes, $1@1 25.

Aug. 25 —Ten carloads: Bartlett Pears, $1.35@3.10; overripe 70. @$1.25; Peaches, 25c@$1.15; Grapes, 35c@ $2.45; Prunes, 75c@$1.30; Beurre Clairgeau Pears, $1.05 @1 20; Malaga Grapes, 60c@$1.25; Gros Prunes, 35c@ $1 25; Fellenberg Prunes, $1;20; Susquehanna Peaches, $1.15; Plums, 70c@$1.10; Seckel Pears, 35c; Beurre Hardy Pears, $1.15@2; Japan Plums, $1.15; German Prunes, $1.25.

Aug. 26.—Twelve carloads: Bartlett Pears, 40c@$2 50; Gros Prunes, $1.10@1.25; Hungarian Prunes, $1.20; Egg Plums, $1@1.15; Fellenberg Prunes, 55c@$1.10; Beurre Clairgeau Pears, $1.20@1.30; Lemon Cling Peaches, 50c; White Cling Peaches, 55c; Plums 90c@ $1.10; Malaga Grapes, 50c@$1.05; Muir Peaches, 75c@ $1,05; Orange Cling Peaches, 50@85c; Crawford Peaches, 25c@$1.10; Susquehanna Peaches, 20c$@1.20; Nectarines, 65@70c; Japan Plums, 80c@$1.10; Salway Peaches, 60c; McDevitt Clings, 65c; Muscat Grapes, 35c@$1.50; for half crates; double crates, $2 75; Tokay Grapes, $1@2 60; Prunes, 35c@$1 25; Silver Prunes, 90c@$1; Columbia Plums, 75c; Rose de Peru Grapes, 60c; F. B. Grapes, 70c. All ventilated cars arriving in bad order.

Aug. 26.—Six carloads: German Prunes, $1.10@1.20; Gros Prunes, $1.20; Golden Drop Plums, 75c; Japan Plums, 95c; Egg Plums 75@85c; Columbia Plums, 80@ 85c; Ickwith Plums, 85c; Susquehanna Peaches, 95c@ $1.05; Muir Peaches, 85c; Bartlett Pears, $2@2 40; Tokay Grapes, half crates, $2.40@2 65; Muscat Grapes, half crates, $1.25@1.30; Rose de Peru Grapes, full crates $1.45; Black Malvoise Grapes, half crates, 70c. Some fruit overripe and unsound sold for less.

Aug. 27.—Seven carloads: Gros Prunes, $1.05@1.10; German Prunes, 75c@$1.10; Silver Prunes, 75@85c; Hungarian Prunes, $1.10; Quackenboss Plums, $1 05; Golden Drop Plums, 80c; Magnum Bonum Plums, 75c; Bradshaw Plums, 75c; Columbia Plums, 85c@$1.25; Kelsey Japan Plums, 80c@$1.10; Red Nectarines, $1; Tokay Grapes, half-crates, $1 25@2; Muscat Grapes, half-crates, $1; Fontainebleau Grapes, half-crates, 80c; some Grapes unsound sold for less; Susquehanna Peaches, 75c@$1.10; Orange Cling Peaches, 60@90c; Lemon Cling Peaches, 60@75c Golden Cling Peaches, $1 05; Muir Peaches, 75c; Early Crawford Peaches, 90c; Late Crawford Peaches, 95c; Bartlett Pears, 60c @$1.25.

Aug. 27,—Nine carloads: Bartlett Pears, $1.30@2 50; Bartletts, bad order. 70c@$1 20; Peaches, 35c@$1.10; Plums, 65c@$1 40; Prunes, 70c@$1.40; Grapes, 45c@ $1.30; Gros Prunes, 75c@$1.05; Japan Plums, 70@90c; Muscat Grapes, 30c@$1.55; Tokay Grapes, 70c@$1 75; Howell Pears, $2.10; Onondaga Pears, $2.10; Beurre Hardy Pears, 80c@$2.15; Cling Peaches, 75@90c; Beurre Clairgeau Pears, $1.50; Quinces, $1.25.

August 29.—Seven carloads: Howell Pears, $2.35; Bartlett Pears, $1.80; Beurre Clairgeau Pears, $1.75; Duchess Pears, $1.50; Beurre d'Anjou Pears, $1 50; Gros Prunes, 80c@$1 10; German Prunes, 80c@$1.15; Fellenberg Prunes, $1,10; Hungarian Prunes, $1; Columbia Plums, $1.05; Egg Plums, 85c; Japan Plums, 75c@$1 05; Red Nectarines, 90c@$1; Orange Cling Peaches, 80@90c; Susquehanna Peaches, 85c@$1.15; Golden Cling Peaches, $1; Lemon Cling Peaches, 75c; Tokay Grapes, half-crates, $1.90@2; Muscat Grapes, half-crates, 85c@$1; Fontainebleau Grapes, half-crates 90c@$1. Some overripe fruit sold for less.

August 29.—Nine carloads: Bartlett Pears, $1@2.40; half boxes, Bartletts, 85c; Tokay Grapes, 80c@$2 25 ℔ single crate; Muscat Grapes, 45c@$1.25 ℔ single crate; double crates, $2.25; Peaches, 50c@$1.20; some rotten, 20c; Prunes, 70c@$1.20; Grapes, 55c; Bradshaw Plums, 65@85c; Nectarines, $1@1.25; Japan Plums, 75c@$1.15; Rose de Peru Grapes, 40@50c; Plums, $1.10; Beurre Hardy Pears, $1@2.05; Columbia Plums, $1.05; Fellenburg Prunes, $1.10; Gros Prunes, $1.25.

At New York.

Aug. 25.—Three carloads: Bartlett Pears, $3.10. Fellenberg Prunes, $1.40; French Prunes, $1 05; Silver Prunes (8-in. boxes), 55c; Egg Plums, $1.15; Susquehanna Peaches, 85c; White Free Peaches, 85c.

Aug. 25.—Five carloads: Late Crawford Peaches, 75c@$1.05; Early Crawford Peaches, 65@80c; Susquehanna Peaches, 80@95c; Cling Peaches, 85@95c; Muir Peaches, 75@80c; Orange Cling Peaches, 95c; Bartlett Pears, $1.30@3.30; French Prunes, 85c; Muscat Grapes, 55@80c; Tokay Grapes, $1.45@2 35; Figs, $1.10@1 55; Pears, $1.10@1.50; Gros Prunes, $1,20@2; German Prunes $1 60; Columbia Plums, $1@1.25; Egg Plums, $1 35@1 65; Nectarines, $1,15; Japan Plums, $2.10. Weather very hot and raining.

Aug. 26.—Six carloads: Bartlett Pears, $1.45@2.10; Santa Fe car, very bad order, $1 30@1.65; Orange Cling Peaches, 40@75c; half-boxes, 45c; Gros Prunes, $1.25@1.90; Fellenberg Prunes, $1.55; Bulgarian Prunes, $1 30; Columbia Plums, $1,20; Late Crawford Peaches, 70c@$1.25; Susquehanna Peaches, 90c; Bradshaw Plums, 70c; Fontainebleau Grapes, 52c; Pears, $1.45@1 55; Cling Peaches, 40@75c.

August 29.—Six carloads: Bartlett Pears, $2 35@2.95 some unsound, $1@1.30; Beurre Hardy Pears, $2.40; Congress Pears, $2.40; Fellenberg Prunes, $1.70; Gros Prunes, $1.20@1 60; German Prunes, $1.20@1.26; Bulgarian Prunes, $1.10; Hungarian Prunes, $1.20@1.45; Silver Prunes, 65c@$1; Red Nectarines, 90c; Susquehanna Peaches, 60c@$1 10; Golden Cling Peaches 90c; Orange Cling Peaches. 50@85c; Muir Peaches, 55@60c; Late Crawford Peaches, 70c; Lemon Cling Peaches, 70c; Quackenboss Plums, $1@1.20; Columbia Plums, 70@90c; Bradshaw Plums, 60@80c; Japan Plums, 85@ 90c; Egg Plums, 55c@$1.05; Tokay Grapes, half-crates, $2 20@2.35; Black Malvoise Grapes, half-crates, $1.10;

August 29.—Eight carloads: Bartlett Pears, $1.05@ 2.70; Yellow Peaches, 75c@$1.30; Late Crawford Peaches, 60c@$1.25; Nectarines, $1.50; Orange Cling Peaches, 45@70c; half-boxes, 40@45c; Cling Peaches, 40c@$1.20; Bradshaw Plums, 60c; Columbia Plums, $1 15@1.25; Prunes, 95c@$1.65. Ickworth Plums, 65c; Japan Plums, $1.40; Fellenberg Prunes, $1.15@1.35; Bulgarian Prunes, $1.10; Susquehanna Peaches, $1.08; Peaches, 80@90c; Muscat Grapes, 45c@$1.65 per single crate; Tokay Grapes, $2.60@3.30; Grapes, 55c@1.30; Figs, $1.55; Gros Prunes, $1.30@2; Malaga Grapes, 60c; Buerre Clairgeau Pears, bad order, 60c@$1.05.

At Boston.

Aug. 25.—Three carloads: Gros Prunes, 80c@$1.50; German Prunes, 95c; French Prunes, $1@1.35; Italian Prunes, $1.15; Silver Prunes, $1.05@1 10; Egg Plums, 85c@1.45; Columbia Plums, 85c; Bradshaw Plums, 85c; Early Crawford Peaches, 75c$1.10; Orange Cling Peaches, 85c@$1.10; Susquehanna Peaches, $1 05@ 1.30; Muir Peaches, 95c; Bartlett Pears, $1@1.80; Howell Pears, $1.10@1.25; Beurre Hardy Pears, $1 20; Easter Beurre Pears, $1.45; Late Crawford Peaches, $1.35.

Aug. 26.—Two carloads: Susquehanna Peaches, $1.10; Golden Cling Peaches, $1.35; Orange Cling Peaches, $1.15; McDevitt Cling Peaches, $1 25; Foster Peaches, $1.25; Muir Peaches. $1.15; Weaver's Favorite Peaches, $1.50; Muscat Grapes. good condition, half-crates, $2.50; Rose de Peru Grapes, half-crates, $1.60; Red Nectarines, 95c; Bradshaw Plums, 90c; Columbian Plums, 80c; Purple Duane Plums, 85c; German Prunes, 90c.

Aug. 27.—Two carloads: Gros Prunes, $1@1.40; Quackenboss Plums, $1.20; Columbia Plums, 75c; Imperial Plums, 95c; Egg Plums, 95c@$1.05; Bartlett Pears, 90c@$1.25.

August 29.—Three carloads: Early Crawford Peaches, $1.35; Susquehanna Peaches, $1.15; Orange Cling Peaches, $1 05@1.20; McDevitt Cling Peaches; $1.25; California Cling Peaches, $1.05; Gros Prunes, 95c@1.55; German Prunes, 95c; Fellenburg Prunes, 95c; Silver Prunes, 75c@$1.10; Bradshaw Plums, 95c; Yellow Egg Plums, 95c@$1.40; Columbia Plums, 80c@ $1.

At Minneapolis.

Aug. 25.—Three carloads: Peaches, 65c@$1; Pears, $1 80@1.70; Muscat Grapes, $1.45; Bartlett Pears, $2.05 @2.25; Plums. $1.15@1.50; Gros Prunes, $1.65.

Aug. 26.—Two carloads: Bartlett Pears, $2@2.15; Yellow Egg Plums, $1.25@1.30; Bradshaw Plums, $1.15@1.65; Japan Plums, $1.85; Gros Prunes, $1.55@ 1.65; Fellenberg Prunes, $1 15.

Aug. 27.—Two carloads: Gross sale of the two cars, $2388; Peaches, $1.25@1.40; Tokay Grapes, $2@ 2.35; Rose de Peru Grapes, 75c@$1; Muscat Grapes, $1.55.

August 29.—Two carloads: Bartlett Pears, $1.40; Beurre Hardy Pears, $1.25; Beurre Clairgeau Pears, $1.35. The fruit was in bad order.

At Omaha.

Three carloads: Peaches. $1@1.20; Plums, $1@1.50; Grapes, 15c@$1; Pears, $1 50@2.25.

At Montreal.

Aug. 25.—Two carloads: Crawford Peaches, $1.25@ 1.30; Orange Cling Peaches, $1.35; Lemon Cling Peaches, $1.30; Susquehanna Peaches, $1 30; Foster Peaches, $1.25; Yellow Egg Plums, $2; Bartlett Pears, $1.65@2.35.

August 29.—Two carloads: Late Crawford Peaches, $1 60@1.70; Orange Cling Peaches, $1.50@1.60; Susquehanna Peaches, $1 50@1.60; Lemon Cling Peaches, $1.45@1 60; Columbia Plums, $2 05; French Prunes, $2.15; Silver Prunes, $2.35; Bartlett Pears, $2.10; Tokay Grapes, half crates, $2.60.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	Sept. 10–14
Western Washington Industrial Exposition,	Tacoma	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
2	Stockton	Sept. 19-Oct. 1
4	Petaluma, Dr. Thos. Macleay, Aug. 29-Sept. 3	
5	Santa Clara, George H. Bragg	Sept 26–Oct 5
6	Los Angeles	Oct. 3–5
7	Salinas City, J. J. Kelley	Oct. 4–8
9	Rohnerville, G. Underwood,	Sept. 19–23
10	Yreka, C. S. Smith	Oct. 5–8
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
13	Marysville, G. R. Eckart	Aug. 28–Sept. 3
14	Santa Cruz, Oscar L. Gordon	Oct. 10–15
15	Bakersfield. J. J. Kelly	Oct. 11–16
16	San Luis Obispo, J. H. Barrett,	Sept 27–Oct 1
18	Independence, C. W. Craig	Sept. 27–30
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	Sept. 26–Oct. 1
22	Escondido, G. M. Dannals	Sept. 21–24
23	Concord, F. L. Loucks	Aug. 29–Sept 3
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
31	Hueneme, T. H. Merry	Aug. 30–Sept. 3
32	Santa Ana, W. A. Beckett	Oct 3–7
33	Hollister, A. D. Shaw	Oct. 11–15
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Oct. 4–8
37	Lompoc, W. I. Nichols	Sept. 20–23
38	Modesto	Sept. 28–Oct. 1
	—Glenn Co. Willows, W. V. Freeman	Aug. 9–13

A PENNY SAVED IS A PENNY EARNED.

This trite, homely but wholesome adage forms the foundation upon which the success of the Pacific Coast Home Supply Association has been built. Its rapid advancement and splendid success attests the solidity and permanence of the foundation, and assures a future of great promise. Its friends are scattered over a wide expanse of territory, but there are still many who might use the opportunities placed within the reach of consumers who have thus far neglected to do so, because they have failed to fully realize the advantage of always purchasing their goods at the lowest possible figure. There is perhaps no one who pays so little attention, or devotes so little time to the comparison of prices, as the farmer. He is in the habit of buying at the nearest point and paying whatever may be asked for the commodities wished, without going to the trouble of receiving quotations from the centers of trade, where conditions are such that he could and would obtain better rates.

The Pacific Coast Home Supply Association, by shipping direct to consumers, has adopted a plan which enables its patrons to buy whatever they may need at the very lowest cash price, and the success of the enterprise has demonstrated most conclusively that there existed a splendid opportunity for this kind of work. In fact, since this concern was established, a number of men have attempted to follow in their footsteps, but in nearly every instance they were imitators without either the originality or force to accomplish the same kind of work, and as a result have been unable to continue in the business.

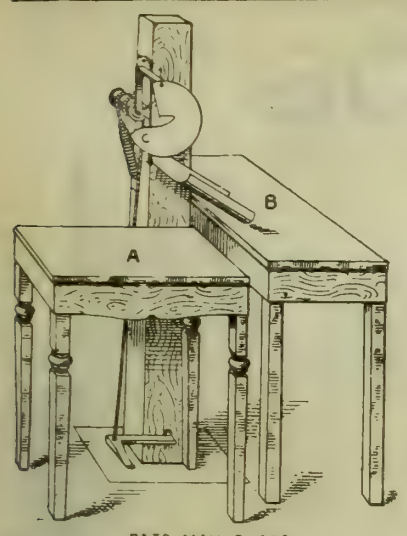
Sometimes the Pacific Coast Home Supply Association has been compelled to bear the blame of the mistakes and inability of these men to perform what they promised. This does not demonstrate that the plan is not feasible or advantageous to those who use it, but it is another evidence that it is always best to deal with the best concern of its kind.

Those who have not yet become thoroughly acquainted with the method of work, and what can be done in the way of purchasing goods at almost first cost, would do well to investigate this matter thoroughly, and they will find that they will not only save pennies, but in many instances dollars, on the necessary purchases of each season.

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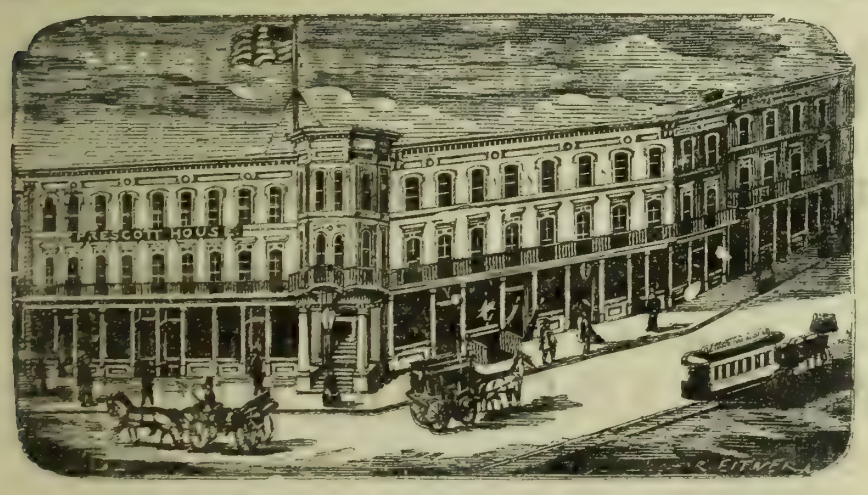
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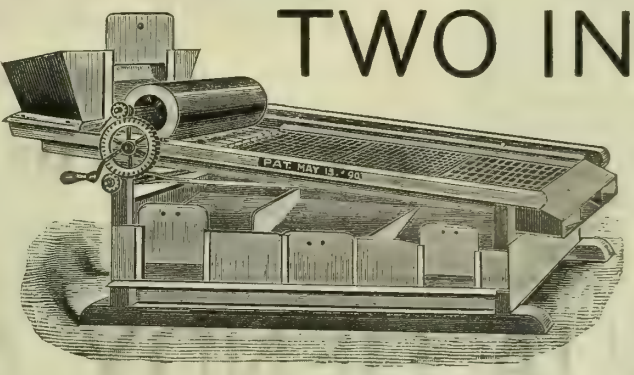
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"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St, San Francisco.

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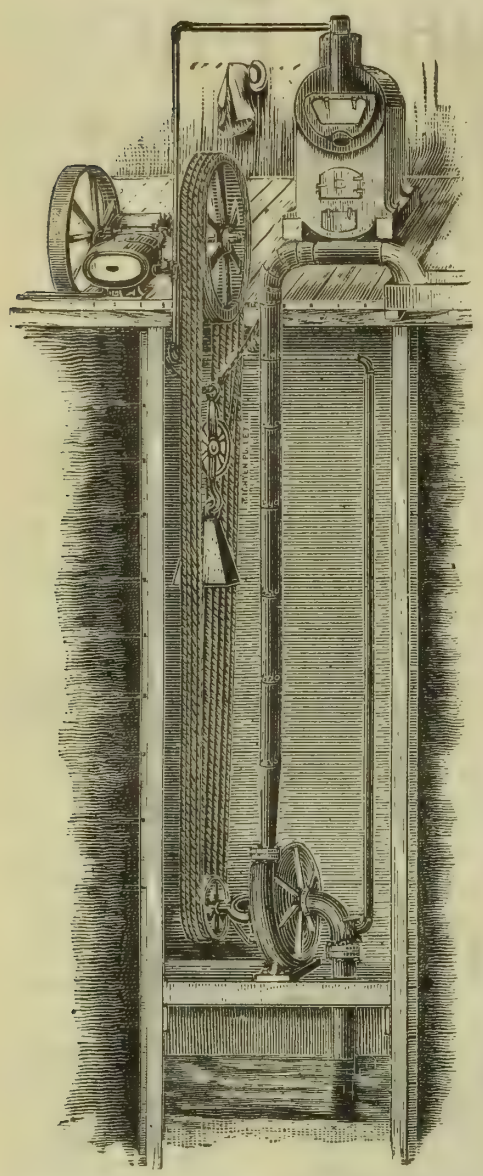
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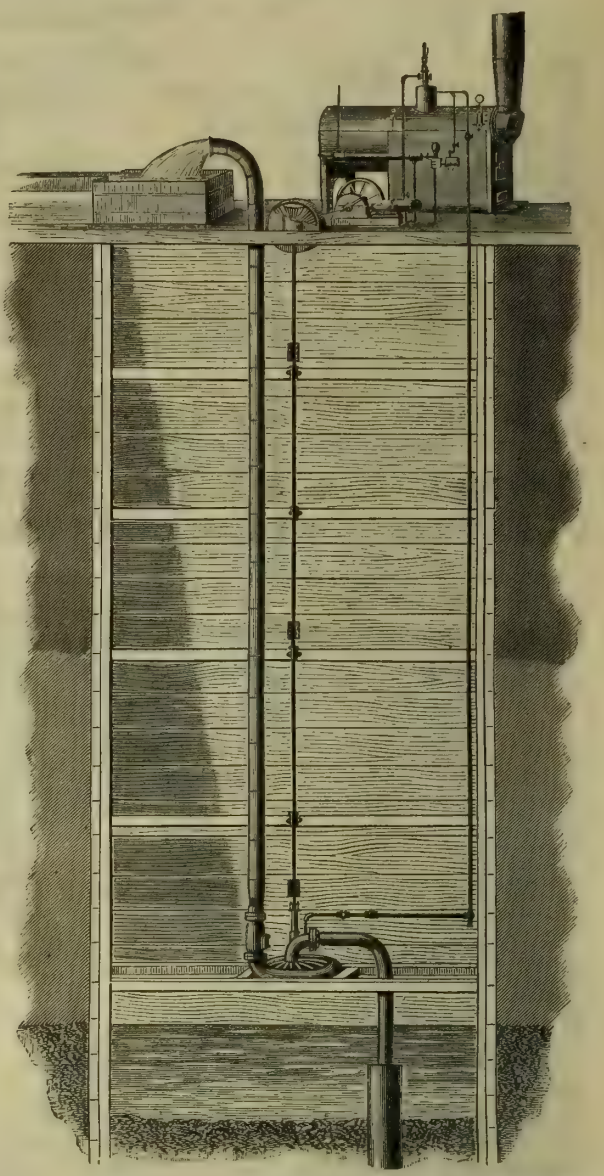
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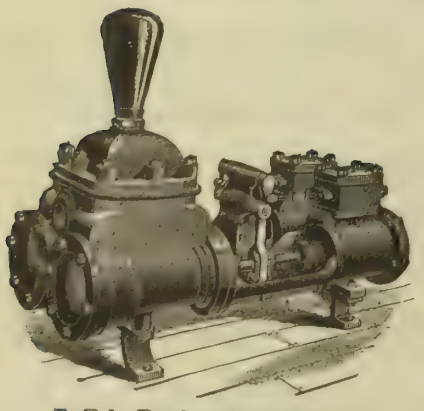
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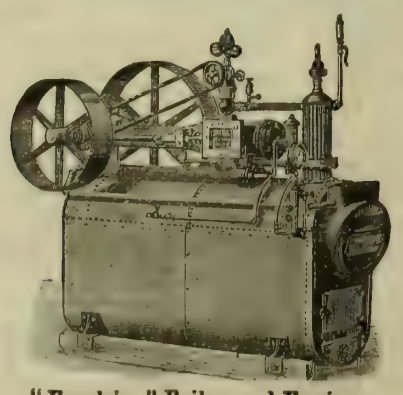
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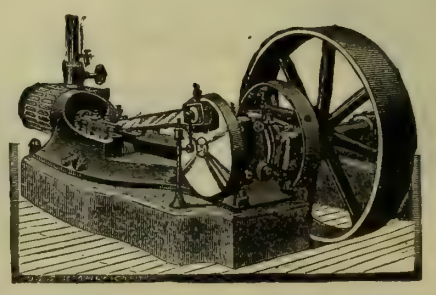
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PACIFIC RURAL PRESS

Vol. XLIV. No. 11. SAN FRANCISCO, SATURDAY, SEPTEMBER 10, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

The World's Fair Buildings and Grounds.

As in ancient times all roads led to Rome, so in present days all fairs point to the great Exposition at Chicago. Naturally the best which the local fairs bring to light will be gathered in to honor the greater occasion. This fact is giving increased interest to our district and State displays. In an issue of the RURAL fitting the occurrence of the California State Fair at Sacramento we cannot do better than cater to the general interest in the World's Fair by presenting a birds-eye view of the grand outfit now far advanced in preparation for next summer's millions of visitors.

A beautiful and suitable site was selected for the exposition, containing fully one thousand acres, charmingly situated on the shore of Lake Michigan. Jackson Park, in the southern section of the city, was selected as the site for the main exposition; the Lake Front, near the heart of the city for part of it, and the Midway Plaisance and Washington Park adjoining Jackson Park for other parts. Upon these parks there had already been expended nearly $4,000,000 in improvements prior to their being selected as the exposition site.

In the winter of 1891 the portion of Jackson Park to be used for the fair was a soft, marshy ground, shelving in irregular stretches to the water line. Now it is a firm level, a smooth, sandy surface upon a clay subsoil. It is now a level surface to the line of the lake, a surface a mile and a half in length and, at its southern extremity, nearly a mile in width.

As shown in the view upon this page, the available water has been grandly used in the design of the grounds. There is a large lagoon enclosing an island upon which some native trees are retained, while all other space has been fully planted by the horticultural department. The introduction of this island affords a natural scene in refreshing relief to the grandeur of the buildings, and, through its sylvan qualities, to the crowded and busy aspect that must be looked for almost everywhere else within the grounds.

In the picture a canal is seen to extend southward along the main building, and into a large water basin which is to form the center of a great square about which the principal buildings of the Exposition are grouped. Fountains will be in operation in this basin, forming a brilliant spectacle in the sunlight, or when illumined by colored incandescent lamps at night. The banks of these land-locked bodies of water are to be finished in a manner appropriate to the various localities through which they pass. The borders of the canal and the basin in the court will have embankments of stone or brick, surmounted by parapets or balustrades of stone, iron, brick or terra-cotta, and opening upon steps and landings, for the use of boating parties. In fact, much of the travel from building to building will be by means of passenger boats upon these waters. This facility of movement will be grateful when the visitor finds extreme objects of interest over a mile apart.

Many of the buildings shown in the view have already been separately illustrated and described in our columns. The lines under the engraving will serve to locate leading structures. One of the most interesting features perhaps is the pier shown in the foreground, which has been constructed 1000 feet into Lake Michigan. The floor of this pier slopes gently from the shore, so that visitors who arrive by water may get an unobstructed view of the court and its surroundings, the paved beach covered with people, and the architectural grandeur of the most imposing and important buildings of the Fair.

Although the California building is not shown in the engraving, its location is designated. The other buildings not named are those erected by different States and foreign governments.

Every effort will be made for the accommodation and comfort of visitors. All walks and outdoor places for assemblages of people will be furnished with numerous seats and resting places, and will be paved with mosaics of brick, stone or concrete blocks, except where gravel or stone chips may seem more expedient. The grounds will, of course, be highly ornamented with shrubs, trees, turf and flowers, most of which have been planted.



BIRD'S-EYE VIEW OF THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO.

HALF RATES ON PERISHABLE EXHIBITS—The Transcontinental Association, of which all the extreme western railroads are members, has notified the Traffic Department of the World's Fair of its willingness to make a half rate on perishable property and other exhibits which will not be returned. In the matter of ordinary exhibits, the former arrangements of full tariff rates on the forward journey and free return still holds good.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 *Market St.*; *Elevator*, 12 *Front St.*, *San Francisco.*, *Cal.*

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ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

SATURDAY, SEPTEMBER 10, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Truman, Hooker & Co.
Agricultural Implements—Frank Brothers.
Cider Mills and Presses—Baker & Hamilton.
Bargains in Property—John F. Byxbee.
Fruit Trees—W. W. Will, Oroville.
Fruit and Shade Trees—R. W Bell, Santa Rosa.
Ranch to Rent—Maurice Keatinge, Lower Lake.
Tabules—Ripans Chemical Co, New York.
Incubators—Reliable Incubator and Brooder Co., Quincy, Ill.

See Advertising Columns.

The Week.

By the time this issue of the RURAL reaches the reader the State Fair will be in full blast, and still with more than a whole week to run. Any one who can get to Sacramento between the 12th and 17th will find a mine of entertainment, diversion and instruction. As we go to press (on Tuesday this week because of the holiday on Friday) reports show that the fair will be as great as promised, and the novel features will be exceptionally attractive. Let all who can attend.

This is a week of two holidays. Monday, "Labor Day" was made a holiday by the Governor, and it was as generally observed as a new institution could be expected to be. Some celebrated by recreation and parade, others by working a little harder than usual—suiting the action to the word. Each has his own right to his method.

Admission Day, Sept. 9th, is a day especially dear to Californians and likely to be more highly esteemed as time wears on. It is the birthday of the Commonwealth of California, and since Uncle Sam has recently increased his family by twins and various other multiples, California is becoming a big sister, and has a right to command the respect of the youngsters.

By the way, this is to be a sort of a holiday autumn. September has two days; October one—Columbus Day, on the 21st; November two—Election and Thanksgiving Days. With such respites from toil, we ought to be able to struggle along until Christmas. Holidays are nice, it is true, but they are very awkward sometimes to business affairs. The farmer, as a rule, cannot pay much attention to these new marks on the calendar; if he has work to do, he has to do it. He has to rest and recreate according to his own schedule. Make it as open as you can, friends. It will be good for you and your families.

WRONG CREDIT.—We are informed that the articles on vine-training by Wm. Pfeffer, which we recently reproduced, should have been credited to the *Santa Clara Valley* of San Jose rather than to the journal we named, which seems to have copied them without credit. Let the honor go to the merit. We regret our share in its perversion.

REPORTS from all parts of Canada indicate that the crop will be as large in quantity and of more satisfactory quality than those of last year.

A Government Sugar Station in California.

Much interest pertains to an enterprise which will be entered upon in this State through the zeal and persistence of Hon. A. Caminetti of Amador county, who made a good record for activity and accomplishment during his first session as a California member of the House of Representatives. Though he had greater undertakings on hand, Mr. Caminetti was possessed with a deep conviction that California should make systematic experiments with cane sugar production. The result of his effort was an appropriation of $20,000 for the first year, with which will be established three stations specifically devoted to experiments with cane sugar, one in Florida, another in Kansas and a third in California. To show the aims and purposes of this measure as applied to California, we make the following extract from a speech made by Mr. Caminetti near the close of the last session of Congress and published in the *Congressional Record:*

In support of the provision of the bill now under consideration, placing it in the discretion of the Secretary of Agriculture to make experiments in the planting of sugar cane, and the production of sugar therefrom, on the reclaimed swamp lands of either the Sacramento or San Joaquin valley, in California, I desire to submit the reasons that prompted me to offer the suggestion in the Committee on Agriculture.

While considering the financial necessities of the Department of Agriculture for the next fiscal year, the item appropriating money to continue experiments for existing sugar stations was carefully examined.

It appeared at the hearing thereon that at least one station would be discontinued at the end of this year, the object of its locat on having been accomplished. It further appeared that at the station in Florida remarkable success was obtained in both quality and quantity of production. While Prof. Willey was stating the probable cause thereof, the fact developed that the experiments had been made on reclaimed swamp lands of a like character with thousands of acres situated in the valleys mentioned.

This induced me to enter them for the coming vacancy.

I rely upon the qualities of our soil and existing favorable conditions to justify the action of the committee. I have investigated the climatic characteristics of Florida, and find many points of resemblance with those of California. This accounts for the success both have attained in the cultivation of citrus and other fruits.

I quote a few extracts from a report on the Florida sugar fields:

"It was altogether beyond belief at first, that any one should be wild enough to talk of turning the Florida sand into cane juice. But the rumor came from many quarters, and at length, after an interval of a year or two, came the report that sugar had actually been raised in Florida. The objection I sometimes heard urged, that occasional frosts would injure the cane, was of no moment; for sugar has long been profitably raised in Louisiana, where they not only have heavy frosts, but have also thick ice, and sometimes snow."

This offers our people encouragement, as it tends to demonstrate that success awaits its cultivation in California.

The beet-root sugar industry is an established fact with us already; and there is no doubt in my mind that the experiment to be inaugurated will fare equally well.

The policy of the Government in granting a liberal bounty to the sugar-producer commits us to proper effort in hastening the time when the home market may be entirely supplied from our own plantations.

In furtherance of which purpose science and skill should be directed toward the discovery of methods to cheapen the cost of cultivation and augmenting the product within the present field of operations.

As our home consumption, in addition to the domestic product, calls for large importations of foreign sugar, thus crediting other nations in our trade relations with many millions of dollars annually, it is obviously sound public policy to extend this field of research in new regions.

The success of the proposed experiment will introduce a new branch of agriculture on the Pacific coast, yielding a ready revenue and adding to the locality suited to its cultivation by the establishment of factories, giving employment to many people.

The station to be established will be under the direct control of the United States Department of Agriculture. Machinery already owned by the Government, and now in Louisiana, will be moved to this State for the equipment of the new station. Mr. Caminetti has had especial reference in his work to the lands of the San Joaquin and Sacramento rivers, naturally moist and rich, and of which there are vast areas which await profitable uses. Tenders have already been made of suitable tracts of thirty to forty acres each. We presume it will not be long before steps are taken to make a suitable selection and to begin the work contemplated by the appropriation.

PROF. HILGARD'S LETTERS.—As will be seen by a short letter in another column, Prof. Hilgard has arrived abroad and has already put into practice his characteristic powers of close observation and graceful description. His brief sketch of the new in Germany will interest many Californians who are, like him, a generation removed from the old life in that country. The note which we print this week will serve excellently to the series of letters which we expect to receive from him for the edification of his hosts of friends in this State. He naturally desires to maintain the cordial interest and the free intercommunication which are mutually enjoyed by him and his California audience, and his letters of European agriculture as seen by an expert Californian, will retain for him the place so freely accorded him for his excellent public addresses, reports and bulletins. We are glad to promise our readers much in this line, especially as this winter's travels will probably take him into southern Europe, where so much is being done which Californians desire to know about.

Our Hay and Our Animals.

Prof. Henry of Wisconsin, whose visit we noticed last week, made a point in an interview with a San Francisco reporter, which we would like to emphasize as coming from an unprejudiced eastern observer. He is reported to have said:

The speed and draft horse in this region should be superior to any in America, because with racing-stock, for instance, outdoor exercise can be given almost every day, and for the major part of the year green food can be obtained. Again, these facts show the beneficent climate for the horse, whereas in the East for weeks the horse is snowbound in his stable, deprived of both exercise and green food, and fed with hay that is somewhat injurious, as compared with the wild hay of California.

Now, as to the hay of this State, it is much freer from dust than the eastern article, and therefore much brighter in color. It has none of the mildew dust or mold that we find in the East, and as an article of food is superior to most of what we have. Of course there is some dust in California hay, but it is not as injurious to stock as the dust that abounds in the eastern article, and which we endeavor to reduce to the minimum. The more I study stock-raising conditions out here, the more am I convinced of the presence of all those factors that go to produce a superior animal. A wise use of those factors is necessary, however, and I find a commendable amount of wisdom in that direction.

This is a very significant statement. The observation, of course, accords with claims which have been made in these columns for years, and which are the result of common experience and observation by those who have bred and grown gramniverous animals in this State. To have these points approved by a disinterested expert in animal growth and nutrition such as Prof. Henry is acknowledged to be, is of great value to the State.

It is naturally hard to see how animals thrive and grow fat upon dry pastures which are as free from anything green as a "yellow dog," but the lesson is soon learned by observation and this point is conceded. The superiority of our hay crop is not so generally understood nor so freely granted, and for this reason we desire to emphasize Prof. Henry's generous statements.

We admit it is rather startling that a country whose chief summer resource the tourist would pronounce to be dust, should produce so clean a hay crop. Such, however, is the fact. It may be due to several causes. Hay is cut usually before the dust becomes abundant. It is exposed a minimum time in curing, and is gathered almost from the mower into the stack, and from the stack it is baled almost as soon as the machine can be had. The result is that hay cut at the right time, untouched of rain, exposed to the air but a few hours, and then put into a tight bale into which dust cannot penetrate, comes out as bright, clean and fragrant as it is possible for hay to be. Contrast with this the lateness of the eastern hay ripening, the frequent drenching with rain, the abundance also of fungi which attack the eastern grasses while still standing, the prevalence of mildews and moulds in spite of the most energetic work with rake and tedder, the hauling, storage and transfer of hay in mass rather than in bales, and it is clear why it is more difficult to produce good hay at the east than in California.

Our people are often prone to lament the ill success of eastern meadow and pasture grasses in this State. The regret is to a great extent an idle one, although it may be freely admitted that we could be much better off than we are in permanent pastures in regions of the State not suited for the growth of alfalfa. We have, however, plenty to rejoice over in our situation as animal feeders, and the points made by Professor Henry should bring consolation to those who are prone to find all good in memory and none in present possession.

And yet there is a good proportion of wretchedly poor hay in California. Prof. Henry made his latest observations in the stables at Palo Alto and those of great companies in this city. The buyers for these concerns know what good hay is, and know that the best is the cheapest and will buy no other. But there is poor hay, the result of carelessness in late cutting, overexposure to the elements, deferred baling and a dozen other things which the lazy hayfarmer knows how to do. These things are not, however, chargeable to the State nor its climatic conditions. They are the result of personal ill-management in the face of the most favorable conditions. There should be much less of it.

EARLY HOP SHIPMENTS.—Sacramento and Wheatland seem to be running a close race in early shipments of hops this year. The first bale of Sacramento hops shipped this season was by the firm of Lilienthal & Co., of San Francisco, on August 27th, and was grown on the ranch of R. J. Merkley. The first carload of Sacramento hops was shipped by the same party from the ranch of George Menke, and was consigned to Lilienthal Bros., of New York, the shipment being made on Sept. 2d. On the same day a carload was shipped from Wheatland, from Rodda Bros.' yard, and billed to Horst Bros. of New York. The quality is said to be extra fine this year.

The Cholera Plague.

The cholera reports grow worse and worse. In Russia the deaths during the past week have numbered about four thousand per day and the plague, which at first was confined almost exclusively to the poorly-fed and poorly-housed peasants, is attacking the middle and upper classes. All hope of checking it is past and the stricken people can only wait and pray for the coming of frost. The disease is rapidly spreading in western Europe, but has not yet become epidemic anywhere except in Hamburg. There the situation is indeed deplorable. The death-rate is now about two hundred per day and is increasing with frightful rapidity. Business is suspended and all who can get away have fled from the stricken city. A correspondent, writing from Hamburg on Sunday last, says:

One funeral after another rolls by our house, which stands on a road leading to several cemeteries. Now it is a costly cortege, an imposing hearse drawn by four horses, then appears a curiously-clad leichenbitter in knee breeches, buckled shoes, wide collars and barretas, and last the mourning coaches, mostly without clergymen. After this imposing show come much simpler hearses, dashing along at full speed to the graveyard. There is a fearful number of these vehicles, all laden with the bodies of children. A heavy rumbling announces the approach of one of those abominable wooden boxes on wheels, which fetch the pauper victims of the plague from their dwellings. Faster horses draw the cholera carriages on their way to the hospital. They are large, comfortable landaus and well padded. On the box sits the driver and a hospital attendant, while another overworked attendant stares blankly and apathetically from inside the carriage at the crowd which the passage of these vehicles invariably attracts. Now and then some one tries to get a glimpse of their contents. From every carriage comes the odor of carbolic acid. We seem to smell nothing else here. We get it in the water, with which we wash and rinse our mouths; floors are washed with it, and clothes are soaked with it. We eat nothing but dry, toasted bread, with coffee. Butter, cheese and vegetables are shunned. On the breakfast table lies the *Hamburger Nachrichten*. We open it eagerly. A sudden noise disturbs me as I write this. In the street all is excitement. From the window we see at the next corner a workman staggering like a drunken man. He seats himself on a doorstep almost doubled up and then falls to the ground. The kinder-hearted ones among the bystanders bring him brandy. Quickly the police arrive, for the victim has grown icy cold and must be helped at once. All the shawls and wraps that can be found are requisitioned. A car arrives, the man is hustled into it and off he goes. Children have been standing close by throughout the episode. Such incidents are not uncommon on the streets of Hamburg.

There is not a considerable city in Europe which is not not in danger of just such a scourge. At London, Manchester, Glasgow, Antwerp, Bremen, Brussels, Havre, Paris—in every city of western Europe, in fact, there are a few cases. Every possible care is taken to prevent contagion, but, in spite of all, the disease slowly and steadily spreads and the danger of universal plague is very serious.

The dread disease reached this country on Thursday of last week, brought from Hamburg by the immigrant ship "Moravia." In her passage of thirteen days there had been twenty-two deaths, and at the time of her arrival two persons were sick. Both have since died. The arrival of the cholera at our own doors was the occasion of immediate alarm. The infected ship was sent to quarantine and strict measures adopted to prevent the landing of other ships from Europe. The President, who was visiting Whitelaw Reid at the latter's farm in New York State, hastened to Washington, and on the following day a proclamation was issued by his authority ordering that "no vessel from any foreign port carrying immigrants shall be admitted to enter at any port of the United States until said vessel shall have undergone quarantine detention of 20 days, unless such detention is forbidden by the laws of the State or regulations made thereunder, and of such greater number of days as may be fixed in each special case by the State authorities." Under this order, the ports of the Atlantic coast are now closed against immigrant ships and against all ships from European ports until careful inspection has demonstrated that they are free from disease. The order came just in time, for on Friday another ship, and on Saturday still another arrived with cholera on board. These two with the first plague ship are now held at quarantine. The wisdom of this policy has been abundantly proved by the spread of the infection among the passengers. On Saturday there were two deaths, on Sunday six, on Monday four. It is, of course, impossible to tell where the thing will stop, but in the meantime everything that can be done will be done to protect both the detained passengers and the public. The authorities are determined to keep the plague at bay, and if it is possible they will do it. There are, however, so many ways by which infection may pass the guard that it is hardly possible to fully protect the country. It is not to be denied that not only New York but all the United States is in imminent danger. The most favorable circumstance is that winter, with its salutary frosts, is not far off.

San Francisco Politics.

There is on foot in San Francisco a movement looking toward united action on the part of those whose interest in politics is founded in regard for good government. Readers of the RURAL do not need to be told that not only in the city election, but in the election of representatives in the legislature, the grossest corruption has prevailed. The city and county of San Francisco has sent to Sacramento on more than one occasion an organized body of scoundrels whose votes and influence have been openly for sale to the highest bidder, and whose presence in the legislature has been a menace to every legitimate interest, and the prolific source of jobberies and robberies. To nobody has this political degradation been more humiliating and harmful than to the great body of respectable citizenship of the city itself. But they have been, or have felt themselves powerless. The chains of party and of partisan organization have bound them down to practical, even though an unwilling, acquiescence in political and moral outrage. At last there is revolt, and such a revolt as promises to throw the old restraints overboard, and to bring the decent people of the city into practical co-operation for better results. The movement is non-partisan, and its leaders pledge themselves to keep aloof from personal candidacy for office. It is proposed to name for the coming election complete city and legislative tickets composed of representative men, chosen in equal numbers from each party. The new league is not a mere coterie of aristocrats with plans so high and mighty as to be beyond the understanding and sympathy of the mass of the people; but it appears to be a genuine popular movement for the betterment of local politics. With such a movement the interior counties ought to sympathize heartily for the interior, almost as much as the city, suffers from the corruptions of San Francisco politics. It will be, we imagine, the sincere hope of every friend of good politics and good government that the non-partisan movement in San Francisco will be as wisely promoted as it has been wisely conceived and that it will end in complete dethronement of the bosses and rings that have heretofore ruled this city, and through the city ruled the State.

Europe Revisited.

An Interesting Sketch by Prof. Hilgard.

HEIDELBERG, Aug. 1, 1892.

TO THE EDITOR:—According to promise I write briefly, before leaving this ever-beautiful place for Switzerland, to convey to your readers a few first impressions of the old country, revisited after an interval of 32 and in part of over 40 years, when, as a student, *fresh* from the *then* "far West" in Illinois, I spent my vacations, mostly on foot, in exploring the "highways and byways of Europe." The country was then (1848 to 1852), as will be remembered, much disturbed by political upheavals, to suppress which the armies of Prussia and Austria were kept quite busy. Thus my former impressions of the industrial and agricultural conditions may have been somewhat less favorable than they might have been in normal times. At all events, they may be summarized in the statement that matters both in Germany and Switzerland appeared to me to be extremely "slow" and unprogressive, more especially the peasant class, who seemed to have little aspiration toward anything better than the old ways and conditions. Other industries also moved only in the beaten tracks, and any innovation or improvement had a hard struggle against pure indolence, which seemed to deem any change unnecessary, if not impious. On landing at the important commercial port of Bremen from the New York steamer, one of my first questions was whether it was a holiday; as, compared with New York, there seemed to be hardly any business going on.

I must say that no such question arose in my mind on reaching the same city in 1892. However brisk may be the rush of business at San Francisco or New York there is now no chance for grass to grow on the streets of Bremen on week days. The electric car is there, and the electric light shines upon the ancient city hall and the queer, old, gabled houses; the whistle of the locomotive-engine, though very mild as compared with the ear-splitting notes of our American iron-horse, is constantly heard, and a very respectable wilderness of telegraph wires suggests the same municipal problems with which American cities are now wrestling. It is but fair to say, moreover, that the impressions received at Bremen were subsequently confirmed in visiting other commercial cities, such as Cologne Mayence and Zurieto. Assuredly, "there is life in the old land yet," whatever may be said of its "effete monarchies;" and the progress made during the interval of, say, 30 years is most striking. Very agreeable, also, is the absence of the vexatious customhouse and passport examinations within the country, which in times past would make the traveler's life a weariness, especially if he happened to be in a hurry. The German empire may not be an ideal polity, but the unification it has brought about in place of the numerous petty subdivisions of old is alone a great blessing. Not the least among the benefits conferred is the uniformity of coins, weights and measures. As regards the latter, the United States have a lesson yet to learn, in the exclusive adoption of the metric system instead of the irrational and troublesome pounds, grains and gallons. As regards the coin (the "mark" of the empire, equal to 25 cents), the only objection I find is that the fond illusion of its "going nearly as far as the American dollar" in living or traveling expenses is rudely dispelled by experience. In the main, a "quarter" brings you just about the same results, whether you call it a mark or a shilling. Mile for mile, railroad fare is quite as high in Europe as in the United States (outside of California local rates), but you rarely have as many miles to travel here as in our country of magnificent distances; and to take a sleeper is a measure resorted to on extraordinary occasions only, the more as these, as well as dining cars, exist only on a few of the great through routes.

Among the most striking symptoms showing that "something is going on," is the frequency of new buildings, finished or in course of construction, whose bright, red-tile roofs (shingles are rarely used) at once attract attention amid the gray mossy ones of the olden time. This is true of the country and villages as well as of the cities. Most of the latter have their "new town" outside of the old lines of walls, moats or other fortifications; and here the buildings, while nowhere ambitious of having from ten to twenty stories, are as modern-looking, and generally more substantially built, than those of the "additions" to American cities. "Brick, mostly pressed, and preferably of a pale cream tint, is the material mostly used for the walls. In the country, most commonly a wooden framework of rather heavy studding is filled in with brick—a mode of construction to be recommended for some of our earthquaky regions in place of the cardboard brick walls that collapse at the first shake.

Another feature very striking to an American, as illustrating the quiet, uncataclysmal climate of Europe, is the slender, almost pencil-shaped chimney-stacks that are everywhere relied upon to stand the worst storms. Few similar structures would even in the relatively gentle breezes of California outlive a single season, and one involuntarily speculates upon the havoc that a single western thunderstorm would work among the wilderness of chimneys that represents the great iron and steel works of the renowned firm of Krupp Bros. at and near Essen, in Westphalia ("Essen" means literally "chimneys," and the name fits the case admirably). It is true that a large proportion of these wand-like stacks serve to supply, maintain and increase the armaments with which the nations of Europe awe each other into mutual respect—that glorious "armed peace" which renders several million of men, in the flower of their age, unproductive of any useful result during two or three years. But it is also true that elsewhere we find these same slender stacks pointing heavenward by the score, serving much more useful purposes, in accord with the wonderful progress of industry during the last 30 years. Many a small town, only a village before, now outnumbers San Francisco in the multitude of these index-fingers of industry. But I am afraid I am disappointing the readers of the RURAL who have been waiting to find something about agricultural matters. In the absence of my trusty Remington—not the rifle but the typewriter—I am constrained to defer that topic to a future communication. I thought it best to draw a general picture of the situation, such as it appears to the American traveler, before going into detail. E. W. HILGARD.

That "Poor Man's Dollar" Again.

MONTEREY, Sept. 2, 1892.

TO THE EDITOR:

'I don't care how hard money is
Ez long ez *mine's* paid punctooal."

Mr. Bard seems to think that the money question is "the most vital, pressing and important issue which the present generation will have to settle." Mr. Editor, I hope not! I hope the world has not yet become so degenerate that there is no more worthy work before us than a trumpery dispute as to currency. One might suppose that it was a new question instead of one old as the hills. My quotation above was written by one of America's greatest patriots some 50 years ago while satirizing the insincere politics of that age. I don't approach this question as a politician nor as a Farmers' Alliance man, but simply as a farmer who remembers and retains the privilege of thinking for himself on any and all questions, regardless of party ties, though one party yesterday did me the honor of nominating me for our State Assembly.

In looking over the first letter in last week's issue, I find Mr. Bard is impressed with the idea that government fixes the value of silver and gold. Most modern governments have retired from the futile effort to fix the price of anything, although the King of the Cannibal Islands may, for aught I know, still have a corner in and fix the price of missionary pie. The price of everything in all civilized countries is regulated by supply and demand. And it don't matter how much any body of politicians may wriggle and squirm, we are, under present mundane conditions, compelled to fall in line with this regulation.

Overestimate the supply by a fictitious demand and down go values. It does not matter if the stimulus is applied to the supply of gold and silver or beans or barley; the same law is continuous as to all commodities. The silver rings call for more silver coin, which the farmers were and are bewitched enough to reecho, found silver at $1.20 only two years ago. How unsuccessful the Government's effort to fix the value of that commodity was can be seen readily by reference to the market price the daily papers, some 74½, I think. You may say, if you wish, that it is gold that is dearer. I say it's *silver that is cheaper*. If the farmer gets his pay in gold, as he can, he may take that gold to buy a great deal more silver than he could two years ago. If I can take a dollar to buy a cental of wheat, I call that cheap, too cheap; but if I can take a dollar and buy two centals, I call that buying the wheat *cheaper;* and I apply like phraseology to silver. So long as free production of silver is allowed, the value of silver is as much bound to vary as the value of sugar. Mining methods have improved and silver is more plenty and cheaper, and where the farmer's kick comes in I don't quite see. I can quite see where the big kick in the silver ring starts, but why that worries the farmer is something no feller can understand. It looks to me that Government, in buying up and salting down some $400,000,000 of silver, has been guilty of something very much akin to class legislation. Government has no more right to bull the silver market than to bull the bean market.

If the Government imprint makes money apart from intrinsic value, or ability to pay in intrinsic value, then why have metal of any value at all, why not all paper, or why not revert to the Spartan coinage of iron? The obvious reason is, it would make the counterfeiter's art too easy and too remunerative. Further, if this view be correct, why does Government tax us at all? Why not roll the money out of some printing-press, instead of our breeches pockets? Why not go further, and hand us a thousand dollars apiece from the same Government press, as the Alliance seems to think is possible?

Your second correspondent, Mr Smith, thinks the gold dollar "dishonest" because above par as regards silver. If I did anything, I should just reverse things here too and call the silver dollar dishonest because below par. *If* you do get fewer gold dollars (and I say *if* only), you can buy more of your neighbor's goods in proportion, so, as a medium of exchange (which is all money is), things remain about the same.

But if legislation could keep gold and silver on a par, I think, in spite of all Mr. Webster (third letter) writes, that England would be only too glad to join us in passing the needful Acts or Bills. Not only is much of her capital invested in silver mines, but the depreciation of silver has been, and *is*, a source of heavy loss and bitter lamentation to one of the most progressive and intelligent classes of her subjects, the Indian civil service and Anglo-Indians generally, involving, as it practically does, a payment of salaries in a debased currency, some two-thirds of its nominal value; Indian accounts being reckoned in silver rupees.

And Mr. Smith is wrong in supposing this question of a debased currency a modern question. If he will turn to Green's History of the English people, he will soon convince himself that any tampering with the coinage has produced nothing but misery, wretchedness and increased poverty among the poorer classes.

It sounds pretty, no doubt, to talk of a "safe, sound and

flexible currency." We all want it; but what does it mean just exactly? What is a flexible currency? If silver is the flexible currency, the farmer can get pay for all he has to sell in silver if he wants it. Would that help him any? If so, how? He can get it all in silver dollars, half-dollars, or quarters, or dimes, or even in nickels. That only means it's more cumbrous to carry—more bulk but no more value.

Why, then, does Mr. Webster think the laborer will be better if free coinage is permitted? There may be a few more miners employed in a somewhat unpleasant and undesirable industry; there may be a few more bonanza kings evolved; the poor man will be paid his hard earnings in "poor man's dollars" and the rich will make their special contracts payable in U. S. gold coin only. Mr. Webster has seen it done before. So have I. And I hate to see it asked for again, because I remember just whose fingers got scorched; and if it was not that same poor man's, I'd like to have Mr. Webster say just whose did.

Finally, what business man would follow the course our Government has in this matter; buying silver in a falling market and salting it down? It would have ruined any combination of millionaires in the land. What would ruin private individuals cannot be exactly healthy for the great American nation.

"If this be error and upon me proved,
I never w.it"

Farmers, don't be hoodwinked and cat's-pawed.

EDW'D BERWICK.

Thirteenth District Fair.

MARYSVILLE, Sept. 3, 1892.

TO THE EDITOR:—The enthusiasm of the World's Fair is communicated to every part of the country. As a consequence, every public enterprise is helped along.

In this district, the ninth annual fair will be counted the best. This year preparations have been made in a new way. The county exhibit was collected from the farms by a committee which bears the expense of sending it, after the District Fair, to the State Fair, and later to the Chicago Exposition. As these workers depend for their remuneration upon the premiums received, they have spared no pains to make the whole exhibit the best of its kind.

How they have succeeded is no longer a question when one is once inside the doors. The skill and good taste displayed in the whole plan of arrangement reflects credit on those who have carried the work forward. They have striven to make it not merely the usual fair, but as good in its way as what will be shown at the Columbian Fair in '93.

In the judgment of visitors, the pavilion excels that of any previous year. With a good building, and in the midst of a fine fruit and wheat section, the committee has much upon which to draw.

Through the energy, forethought and artistic skill lent to the work, the results surpass what one might be led to expect. The visitor concludes that nothing is prosaic or homely. A palace *might* be built of turnips, so that, at a proper distance, it would present an imposing appearance. The common products of field and garden are here utilized in charming ways. Certainly, the golden arch near the center of the pavilion is fit for King Midas. Measuring the height with the eye, one looks up until he sees our noble eagle, with wings outstretched, proudly surmounting the whole. Three six-foot men must add their heights to touch the bird's beak. The length of the arch is also 18 feet, and the width is nearly half as much. It may properly be called the gold arch, for it is covered with the gold of Sutter county—*wheat*.

At each end is arranged different cereals, upon a background of yellow grain, to form the date. The arch contains every variety of wheat raised in the county. The foundation is covered with the kernels, while in large letters made of heads of grain, "Sutter County" is printed across the front of the arch. The eagle, with all his lifelikeness, is made wholly of cereals, dark grain forming the wings and light grain the head and body.

Looking through the arch, one sees, on a pedestal ten feet high, a pyramid of glass jars in which are preserved the choicest fruits. The Eastern visitor sees nothing more attractive than these immense peaches, pears, plums and other fruits, natural as if just plucked from the tree. The method by which the natural color of the fruit is preserved will be of untold value at the World's Fair.

An Oriental pagoda made of grapes is one of the most unique fruit displays, the cool, luscious bunches lending themselves gracefully to the shape of the structure.

Amid such a luxuriance of fresh fruit, some provident soul murmurs, "If we might have such fruit all winter." As if in answer to the wish, there it is, cans upon cans in slender columns that meet in curving arches high overhead.

Every fruitgrower looks with more than passing interest at the little steamer apparently just ready to sail with Pomona's cargo. Its pennon bears the name Majestic, and on a streamer is printed, "The ship Majestic bore the first load of fresh fruit to England, Aug. 4, 1892."

The Yuba City Grange has its three graces, Pomona, Flora and Ceres, surrounded by fruit, embowered in flowers, loaded with grain.

From the gallery, one gets a good view of the general effect, and notes the ceiling decoration of tiny flags, the national interspersed with the bear flag.

A great mass of tropical plants, crowned by a thrifty banana tree, makes a fine showing. Such displays bring out strongly California's cosmopolite production. Half way across the pavilion hang two huge bearskins, and not far away is what no bear in his native surroundings ever saw, an electric car. The little track is in the shape of the figure 8, and is furnished with ties like a railroad. The little car is a model of the streetcar; it runs with some noise, emitting flashes as it speeds along the track. The wonderful ease with which it turns curves will be of great value if it can be brought into general use. The inventor is a Marysville young man, Wm. G. Murphy, Jr.

Very good exhibits were entered by Marysville firms, among the best being those of the *Appeal* and the *Democrat*, White, Cooley & Cutts, and Hampton Hardware Co.; and Hall of the book firm.

The notable things of the art department, besides a number of oil paintings and some good water colors, are a mirror painted in red thistles and a number of excellent pen and ink sketches.

Mention of the fine almonds, walnuts, huge pumpkins and melons, hops and hopvines, corn 18 feet high, nursery stock and individual exhibits of canned fruits and jellies, fails to include much that was worth seeing.

It is regretted that Mr. W. H. Murray's fine display of ramie was called for by another fair before the close.

The success of this fair of Sutter and Yuba counties seems to indicate that agricultural fairs are not to be left behind, but are to become, as they should be, indispensable aids in the advancement of the State. E.

The Situation of the Wine Industry.

EVERGREEN, SANTA CLARA CO., Sept. 4, 1892.

TO THE EDITOR:—Inclosed please find report of the committee appointed by a convention of Santa Clara valley grapegrowers, at their meeting of Aug. 11th. This report was submitted at the adjournment of this meeting to Aug. 28 h, ordered to be presented in writing at a further adjournment to Sept. 11th, when it will be definitely acted upon. In my opinion, it is about time that our people be given the unadulterated truth as to the condition of the grape industry. We are making what the American people refuse to drink, and must curtail our production or continue to lose money, until enough of us have been forced to quit the business. The newspapers are not sufficiently independent to open their columns to a free discussion of the subject, and if they refer to the industry, it is usually by a writer who has not mastered the situation and writes nonsense. I would like the RURAL PRESS to investigate matters, in a free and independent spirit, and inform its readers of the true status of the industry. In my opinion, the platform of the partial prohibition party is well worthy of consideration from our State. If whisky could be prohibited, and wine and beer substituted therefor, the cause of our industry would be much benefited, and that of true temperance as well. One closely associated with a whisky journal is hardly the proper party to answer, in behalf of our State, an inquiry of the founders of such a party. All vineyardists will be welcome to our meeting at Grand Army hall in San Jose, on Saturday, Sept. 11th, at 1 P. M. WILLIAM WEHNER.

THE REPORT.

Mr. President: In obedience to your wish I hereby submit, in writing, the report of the committee appointed "to investigate the present status of the wine industry and to propose ways and means for its improvement." Your committee has been diligently at work and begs leave to offer the following report on the situation: We find that the present deplorable condition of the wine industry is only in a measure due to a combination of San Francisco dealers, or rather to a lack of combination amongst these gentlemen. They could combine to keep the price of wine up to a certain and paying minimum figure, but they prefer to undersell each other and often only realize their own cost price and, all things considered, sometimes less than that. Your committee is of the opinion that the main and almost only reason of the present disastrous depression is "overproduction," and hereby offer facts and figures to substantiate this assertion. According to the compilation of the State Viticultural Commission there are now about 90,000 acres of wine-grape vineyards in our State. Under favorable conditions they will average three tons of grapes per acre, or 450 gallons of wine, making in all 40½ million gallons. About one million gallons of brandy are required for the trade, although a little more is made, which would take five million gallons of wine and leave us 35½ million. Some grapes are always dried, a small quantity of syrup is made annually and the must-condenser at Healdsburg of late years has turned several thousand tons of grapes into condensed must and shipped the same to London. However, if the fruit crop both in the East and in California is large, as this was the case in 1891, dried grapes are worth but little in the market. Suppose that 40,000 tons of grapes were used, otherwise than for wine and brandy, it would still leave us 30 million gallons of wine. Statistics show that we have never exported quite 13 million gallons from this State, to all countries inclusive of the U. S. It is generally assumed that we use in our State about five million gallons per annum, which would make the entire consumption 18 million gallons, thus leaving a surplus of 12 million gallons. Well-informed merchants do not think it probable that our markets can be materially extended in Europe, except at prices less than the cost of production, there being plenty of cheap wines in Italy, Spain and Greece which can be laid down in the northern markets at a low price. Freights and high cost of labor in our State make it impossible for us to compete with those countries. Our trade in Central America, the Hawaiian Islands and Japan and China is improving some, but these countries can take but limited quantities. Our main and almost only market is in the U. S. The American people, however, will not drink wine except to a limited extent. Our exportations from this State for the first seven months of 1892 are actually less than those for the same period of 1891. The large surplus mentioned above, your committee considers the real cause of the low prices that prevail. Our annual importations of wine from all countries do not exceed 5,000,000 gallons. If these importations would cease entirely, there would still be a large surplus. In time we may be able to partly replace them with our own product, but the finer and well-established brands of France, Germany and Spain will be extensively imported for many years to come. It is a well-established fact that the price of a product is low, if more is produced than the popular demand calls for. Under our tariff laws, it is possible for manufacturers and producers to amass great wealth in certain lines, and just as soon as the public realizes this there is a rush and boom, with the result that ere long more is produced than required, parties underbid each other, sell at cost and below, many go into bankruptcy, and finally a combination or trust is made, the production curtailed, prices put up and maintained as long as the combination lasts, and often much money is made by those interested. It has been the same with our industry, hence the demoralization. We have planted vineyards during a period of excitement without knowing what to do with the wine after it is made. Using the words of Senator Stanford, "Making wine for the million." The million will not drink wine, and is leaving us beautifully in the lurch, and the sooner we realize this, so much better for us. Although this year's crop is known to be very short, the price of wine has advanced but little, which is undoubtedly due to the large stock on hand in this State, New York, New Orleans and Chicago, but principally to the fear of a full crop the year following. There are now about 19,000,000 gallons in California. In order to reduce this surplus and to be prepared should the next year's crop be large, your committee advises that 25 per cent of this season's grapes be either dried or distilled, and the brandy held in bond for three years or exported. It suggests that a distillery be bought or built; that every grower who has not decided to dry his share deliver 25 per cent of his crop at this distillery to be made into brandy; that three trustees be elected by those interested; that after giving adequate bonds, the brandy be entrusted to them, with power to sell at the best obtainable price, provided it leaves the U. S., and cannot be reimported without paying duty, or to hold in bond for three years, as the individual owners may elect, the proposed distillery to be paid for pro rata to the acreage of the vineyards directly interested and cer ificates issued. Sufficient brandy would be sold for cash to pay for the plant. The committee further advises that experiments be made in drying grapes otherwise than by the heat of the sun, as the latter cannot be relied on in our climate. For a good quality of dried wine grapes from 3¼ to 3½ cents per pound can be realized this season, which is equal to from $16 to $17.50 per ton green, and for which cash can be had on delivery. If such a combination is entered into by our growers, those of other districts will join us, and we will wipe out the surplus, and the price of wine will respond at once and advance, and thereafter regulate itself. Our vineyards would be worth in the market as much as a prune orchard in full bearing, and the industry could be kept on a paying basis by reducing or increasing the dried grape or brandy output as the condition of the crop might warrant. The committee further advises that an association be formed with an office in San Jose, open all day to members and with a salaried secretary; that regular monthly meetings be held for the purpose of discussing matters of interest to the members, and that the secretary issue bulletins from time to time giving statistics, conditions of crop and wine market and other information to members only.

WM. WEHNER,
Chairman of Committee.

Wide or Narrow Tires.

Our readers will be interested to see a statement on this mooted subject which the famous wagon-builder, Clem. Studebaker, writes for the *Breeders' Gazette:* There can be no doubt that the general adoption of wide tires would work less harm to poor roads than would narrow tires. Broad tires for wagons, of any width that would be practical, would not, in my opinion, make good roads. They would simply have less tendency to cut up poor roads than would the narrow tire. The harm to wagon roads commonly occurs when the surface is saturated with rain and the roadbed is soft and yielding. At such times loaded vehicles fitted with wheels with narrow tires cut out ruts in the roadway more or less deep, according to the length of the wet spell and the frequency of the passage of such vehicles. When, however, the roadbed is solid and care is taken to promptly fill up inequalities which may be created by reason of the wear and tear of the surface, in such event narrow tires are, to all intents and purposes, no disadvantage to the roadbed, while they are unquestionably of greater advantage to the vehicle. Narrow tires tend to lighter draft in drawing loads over smooth roads and over soft roads. Over surfaces that are sandy or merely yielding in their nature the wide-tire wagons give the best results. The wide-tire wagons are accordingly better for general field use. We have, by the aid of a dynamometer, made a series of exhaustive experiments with the wide and narrow-tire wagons, and the result of these experiments justifies the statement contained in the foregoing Concerning the disposition of manufacturers toward the construction of vehicles with wide tires, I may say that we are prepared to manufacture these wagons in accordance with the demands of the market. It is nevertheless true that the supply of timber for fellies for wide-tire wagons is less abundant than that which is suitable for narrow tires. On this account wide-tire wagons are more expensive than those which have the usual tire, and in case of a greatly increased demand for them, the timber supply of this nature already being somewhat scarce, the tendency will be to still higher prices for wide-tire wagons.

TRANSFERS OF RECORDED BERKSHIRES. — Jno. G. Springer, Secretary American Berkshire Association, Springfield, Ill., sends the following transfers of Recorded Berkshires: Redwood Stumpy 24438 and Model Duke III 27840, Andrew Smith, Redwood City, Cal., to J. E. Alsford, Redwood City, Cal.; Royal George 27870, Andrew Smith to J E Pleasants, Santa Ana, Cal.; Charmer's Duke 27,767, John H. Temple, Puento, Cal., to Sessions & Co., Los Angeles, Cal.; Goldsmith 27,853 and Cherry Blossom Sallie III 27,854, A. J. Lovejoy & Son, Roscoe, Ills., to Sessions & Co, Los Angeles, Cal.; Andes 27821, Callao 27 822, Cuzco 27 823, Pasco 27,824, Lima 27,825, Amazon 27 826, Arica 27 827, and Iquique 27,828, Alfred Seale, Mayfield, Cal., to E. B. Granadino, Lima, Peru, South America.

THE sugar factory at Alvarado will commence handling beets about the end of September. The growers are fearing an early and wet winter.

FRUIT MARKETING.

California Fruit in New York.

A Great and Growing Trade.

It is now something like five years since California fruit became a recognized article of merchandise in the New York market. Each year has shown a noteworthy improvement over its predecessor, both in the quantity and the quality of the fruit received. But the trade of California with the eastern markets is nevertheless as yet in its infancy.

There is no question, however, but that next season's record will show a very decided increase in volume over the present season, which is a most prosperous one for all concerned in it, from the grower to the retailer. Prices are remunerative, and there is an urgent demand as a result of the poor condition of the fruit crops nearer by. In other words, the fruit of the Pacific coast is having a more general introduction this year than ever before, and it is putting its best foot forward. The condition of the fruit all through the season has been excellent, though just at present, owing to the great scarcity of refrigerator cars, it is coming forward rather riper than is desirable. Fruit is now being received daily, and there are daily sales at auction on the Erie piers, Nos. 20 and 21 North River.

The sales take place at 9 o'clock in the morning. On Monday last, for instance, 17 carloads were sold, including which the total receipts of California fruit so far this season have been 363 cars, against 329 last season. The fruit comes in both refrigerator and ventilated cars. The minimum capacity of a refrigerator car is 24,000 pounds, although very frequently there are 28,000 pounds to a car. The ventilated cars have a minimum capacity of 20,000 pounds, and frequently run as high as 24,000 pounds. These cars coming as freight last year made the trip from San Francisco in an average of 13 days. This year they come through in about 9 days. With the increase in business, there has naturally been a corresponding increase in the number of receivers. There are now in New York city five receivers of California fruit. The largest is the Porter Bros. Co. at 211 and 213 Franklin street. In addition to receiving and selling goods on commission, this company purchases outright a large amount of fruit, and the plan has consequently been most successful, as far as they are concerned, on account of the high prices that have been obtained. The second largest receiver is Mr. E. L. Goodsell, and the other three receivers are Sgobel & Day, P. Ruhlman & Co. and Barnett Bros. Mr. Goodsell sells his own fruit at auction, but Brown & Seccomb, the well-known fruit auctioneers, sell for all the other receivers.

The fruit this year differs very little from that of last year. It comprises cherries, apricots, peaches, plums and pears. Grapes are just commencing, and a few nectarines and fresh figs have come this season and have been given such a kind reception that increased quantities will come next season.

Nearly all the fruit starts from California by the Southern Pacific over the Sierra Nevada mountains to Ogden. The Union Pacific then brings most of the cars to Omaha, although the Denver & Rio Grande gets some of this business. All the lines running from Omaha to Chicago have their proportion of the fruit, and, as already stated, the Erie has a monopoly of the traffic east of Chicago. The Atchison, Topeka & Santa Fe carries a small portion of the fruit to Chicago. They have provided a new style of refrigerator car for the purpose, called the "Hanrahan."

As an item of interest, it may be mentioned that five cars of fruit come forward every week, and are shipped to England on the White Star steamers that sail on Wednesday. Returns have been received from the first two shipments, and they have not been satisfactory. The shipments are an experiment, and will, we are informed, be continued, even though unprofitable, until the end of the season as a sort of fruit educational measure. What fruit, however, has arrived in England has been in splendid condition, and the opinion prevails here that our California friends have only to find out the kind of fruit and the time it is wanted to make the foreign-market idea a success. The California Bartlett pears, for instance, have to come into competition with French pears, which sell at a very low price in England. The peaches did better than any of the other fruits, as far as prices were concerned.

According to late advices from San Francisco, California fruit is making as much headway in other markets as at New York. On August 9th, for instance, five special trains of fruit went over the Sierra Nevada mountains aggregating 65 cars. They were loaded with peaches, plums, pears and a few grapes. For the five preceding days the number of carloads was respectively 40, 30, 36, 62 and 50, and the total shipments for the seven days were 318 carloads, containing 3816 tons, or 7,632,000 pounds, which is a daily average of 45½ cars, containing 562 tons, or 1,124,000 pounds of green fruit. After the mountains are climbed, and Truckee is reached, the trains are combined in such a way that 60 or 65 cars are put into three trains and forwarded to Ogden, where the Union Pacific takes them and hauls them in about the same way on to Omaha. A less number of cars is made into trains at Truckee in a proportionate way, so that the mountain section of the road has an activity in the movement of trains that can hardly be appreciated by those on other parts of the Central Pacific, and the train dispatchers for that division are a very busy set of men in keeping these extra trains on the move through the snowsheds and out of the way of the regular passenger and freight trains. These extra trains have a limited time of 48 hours to Ogden from Sacramento, and are, it is said, making the schedule-time with remarkable regularity. The number of cars sent East from California up to August 12th was 1583, or 150 cars in excess of the same period last year. To put the matter in still another way, it can be stated that 18,996 tons, or 37,992,000 pounds of fruit have been shipped so far this season, as against 17,196 tons, or 34,392,000 pounds for the same time in 1891, being an increase of 3,600,000 pounds.

Mr. Doe, the manager of the Porter Bros. Co., says the season's business showed a decided improvement. The company was receiving fully 50 per cent more than last season. The fruit had been arriving in good condition, and owing to the light crop of the domestic fruit, it had found a ready sale. Mr. Doe thought further that the demand would continue until the end of the season, and he was advising free shipments.

At the office of Brown & Seccomb, the New York fruit auctioneers, Mr. Brown said that the California fruit business had this year shown a decided improvement. The fruit had arrived in good condition, and had brought good prices. Practically all the fruit, Mr. Brown said, was sold at auction on the Erie piers, and it was receiving far more general distribution than during any of the previous years. The packing this season had shown considerable improvement, and that and the faster train service had much to do with the improved condition in which the fruit arrived.

Mr. E. L. Goodsell put the matter in this form: "The action of the railroad companies in putting on the new expedited train service has been the greatest possible boon to the California producers, as well as the buyers at this end, and fruit has been coming through to New York in from eight to nine days, with some exceptions, and in consequence has landed in splendid condition, and I believe the trade has generally made money.

"Prices on Bartlett pears have ranged about 15 cents per box less than in 1890, while on peaches, up to the present, the average has been slightly higher. In plums and prunes, prices have ruled generally lower, while of course it is too early to base any comparative estimate on the grape results. In cherries a better market existed this season at more profitable prices than it did in 1890, comparatively speaking; therefore the market of 1892 up to the present will be the cause of a very great development to the California green-fruit industry, and the very greatest increased acreage must exist in consequence. The outlook for the coming ten days is that less supplies will reach this market, and a better state of affairs ought to be expected all around."—N. Y. Commercial Bulletin.

Pushing the Trade in England.

The *Record-Union* of August 31 says that the seventh European special, consisting of five cars of selected California fruit, was sent out the night before by the California Fruit Transportation Company. Two cars were by A. T. Hatch, from Suisun; one by J. Z. Anderson and A. Block, from San Jose; one from Gregory Brothers Company, loaded at Placerville, and one from the Cooperative Fruit Company of Auburn. This shipment will cross the ocean on the steamer Teutonic.

The results of the last shipment, which was sold in Liverpool and London on last Friday, are very good, realizing as high as 17s 6d per box for pears. In an interview last evening with G. H. Appel, agent for the California Fruit Transportation Company, he said:

"I have cable advices to the effect that shipments from now on should realize good prices, and that if we will continue regular shippers up to December, they will revolutionize the trade over there, making a good demand for the coming season, and giving California fruits precedence over fruits from other countries.

"What is wanted there is large, fine-colored, handsome-appearing fruit. The brands of the shippers who have been forwarding regularly by these trains have become established, so that for the English trade next season they will require no introduction.

"I have here extracts from English papers, which will give you an idea of the favorable comments made on the introduction of California fruit into Great Britain. We trust that shippers will give us their hearty support in the continuance of regular shipments during the remainder of the season, as we now feel that it is on a paying basis, and it is our wish to give this benefit to the shippers, especially when the domestic markets are filled and the results are evidently so unsatisfactory."

Mr. Appel stated that among last night's shipments was a box of tuberoses, sent by Captain W. M. Siddons to his daughter Nellie, who is now in Paris. He said they would endeavor to handle the package to good advantage, so the contents might arrive in good shape.

"This experiment," said Mr. Appel, "may develop the fact that the transportation of flowers from California to Chicago and New York for the World's Fair, next season, would be a feasible and profitable undertaking."

A neat stroke was accomplished when fruit of various kinds was forwarded to the Queen. Many of the English papers have given space to the fact, which is worth tens of thousands of dollars as an advertisement. All of the papers speak of the excellence of the California fruit. Peaches, pears, plums, nectarines, and prunes were forwarded to the Queen.

The English agents have written to Mr. Hatch as follows: "There is no doubt that the fruit has attracted a considerable amount of attention, and we believe that once the buyers obtain confidence in its keeping quality, remunerative rates will be realized. Your pears were in better condition than others, and we forwarded most of them to London."

Another Market.

CLOVERDALE, Sept. 1, 1892.

TO THE EDITOR:—One fact should be known by the prunegrower. It will give him courage. The writer has persevered in planting, year after year, as the redwood bottom lands could be cleared of the debris of sawmill operations, until he is afraid to state how many acres are in prunes. But there are enough to cause his neighbors to wonder what he will do with the fruit. They say there will be no market by and by, everybody, everywhere, seems to be planting prunes. What will you do if they decline in price to half a cent, or $10 per ton for them green?

Well, let them decline if the markets so will it. Fruit may be cheap and dull of sale, but pork is as good as gold coin. Operators cannot corner pork.

L. W. Ridenhour, on Russian river, has pursued mixed farming for over 30 years. He is a good observer. His small prune orchard, at seven years, bore an average of 400 pounds per tree in 1891. He states that prunes, pound for pound, are as good for fattening hogs as corn. One acre is good for ten times as big a yield, and the pigs harvest the crop and keep the orchard free of insects.

I feel like a general who has provided for a safe retreat before going into battle. The prune market cannot be cornered in California. J. B. A.

THE VINEYARD.

Vineyards in Southern California.

Hon. J. De Barth Shorb, Viticultural Commissioner for the State at large and special committee on the Anaheim disease, has filed with the Viticultural Commissioners the following report on the condition of the vineyards of the southern part of the State:

The vineyards of the counties of Los Angeles, Orange, San Bernardino and San Diego may be generally said to be in better condition than they were when the special investigation into the Anaheim disease was stopped in the beginning of 1891.

Since that time there has been a steady decrease in the amount of disease among the vines. In some places it seems to have quite disappeared. The present condition of the vines in the different counties may be summed up as follows:

LOS ANGELES AND SAN BERNARDINO COUNTIES.

The vineyards in the San Gabriel district are in good condition on the whole. A few cases of Anaheim disease may be scattered about, but none have been noticed in which the disease had started after the foliage had been put out. All the cases seen were of old standing, *i. e.*, the vines had been attacked some time during the previous seasons. In the Lamanda Park and Sierra Madre districts there was a little more disease, and a few vines—not more than half a dozen—were seen in which the disease had asserted itself after the foliage had been put out this season. Nevertheless there was a marked improvement in the condition of the vines.

At Pomona and Spadra, where the vines had been properly cared for, there were a very few old cases of disease, but no new ones. In this section many of the vines had been taken up to make room for fruit trees. Already over a fourth of the acreage listed in the new directory published by the board has been uprooted, and more will follow.

In the San Fernando valley district, in which may be included Glendale and Tropico, some of the vineyards are in splendid condition. Others are not in such good condition. Some have been quite neglected; others only partially cared for, and in these, various diseases have done much mischief. The best vineyards are in the upper part of the valley. One of these, some 200 acres in extent, is in splendid condition. It does not show any sign of the Anaheim disease, and indeed has never been afflicted with that malady.

In the La Canada district many of the vines have been taken out, and many will follow in the fall. The vines which are left are in good condion. There are a few scattered cases of disease, all of old standing, but in some vineyards no disease was seen.

In most of the vineyards throughout the country, though not in all, there might be seen either small patches of vines or single plants affected by chlorosis, and there were also some sunburn. As a whole, the indications are for a good crop, and in places for a very good one. In the Ontario district the vineyards were all in excellent condition, having been well cared for. Not a single case of disease was seen in Ontario itself. A few miles from the township there is an old vineyard of Mission vines over 20 years of age. This has suffered in a few isolated patches of small area from Anaheim disease. There are still a few diseased vines, but they are all of old standing, and are confined to originally diseased areas. The rest of the vineyard is in excellent condition.

In the Cucamonga district many of the vineyards are in good condition, though in a few there was a considerable amount of disease, several vines having been attacked after the foliage had been put out this year, but even here there seemed a decrease in the amount of disease. In this district there was also a considerable amount of chlorosis, and in one vineyard many vines were affected with Spanish measles.

ORANGE COUNTY.

In the county of Orange, where the disease first originated and where practically every vine was destroyed, all the young vines recently planted are in a very flourishing condition, and it may be said with confidence that the disease has here run its decimating course. Although this is the case, it is very doubtful if the large acreage in vines which formerly beautified and enriched that district will ever be reestablished, as the demoralized condition of both the wine and the raisin markets, gives small hopes of satisfactory returns on the capital, time and labor necessary to be invested in building up those industries.

SAN DIEGO COUNTY.

In the county of San Diego, and especially in the Cajon valley, the vines are in a remarkably healthy condition, and will produce this year an average crop of grapes. All evidences of recent incursions of disease have disappeared, and in fact at no time in this very fruitful valley had it ever taken a very strong hold. It will be remembered that it

was in the valley of the Cajon where the governmental scientist, sent out from Washington to examine into this remarkable disease, saw evidences of it throughout all the vineyards, and announced to the people, as the result of his investigations, that within another year there would not be enough grapes grown in the valley to supply the home consumption of table grapes in San Diego city and county. I was assured by one gentleman in charge of the largest vineyards there, that this untruthful statement has cost the Cajon valley not less than $200,000, by frightening away intending investors. It is true that at the time this statement was made the disease had made inroads in some of the vineyards, and in some places a general languishing condition of the vines was observable; but this condition was probably brought about more from an inadequate supply of water for irrigation at the time, and from an alkali soil in some places, rather than from the effects of the Anaheim disease itself.

From want of time, no recent examination of the vineyards in Ventura, Santa Barbara or the San Joaquin valley counties has been made, but from statements of reliable parties residing in these counties, I am assured that a general improvement in the condition of the vines is everywhere observable.

J. DE BARTH SHORB,
Commissioner.

Vines in Sonoma District.

I. De Turk, Commissioner of the Sonoma district, submits the following as his annual report:

Since my last report, made in 1890, there has been little or no planting of new vineyards in this district. The prices that have been realized for wines have been so unsatisfactory that nobody is encouraged to plant, and in the meantime the phylloxera has been steadily advancing up the Los Guilicos and Bennett valleys toward Santa Rosa. What little planting has been done has been largely in the nature of setting out resistant stock in the vineyards already devastated by the phylloxera, and I have doubts that the area in vines in this district is as large as it was in 1890, when there was reported 24,450 acres of vines, of which 22,585 were in bearing. Another cause that has contributed to the loss of acreage has been the uprooting of vineyards by discouraged growers who have planted orchards and other crops instead.

Aside from the phylloxera the district has been remarkably free from insect pests. The "flea beetle" and the thrip have appeared, but have not done much damage.

The vintage of 1891 was very favorable, and if the quality and quantity of the wine produced are to be taken as indications of success, it was one of the most successful ever known in the district. The '91 wines, I believe, will turn out remarkably good, but unfortunately the prices are not what is wanted.

The vintage of '92 will be at least 33⅓ per cent short in Sonoma county. The spring frosts did much damage, particularly in the Los Guilicos valley and other adjoining sections. This disaster was followed by several weeks of unseasonable and unusual cold weather, which further aggravated the situation, and reduced the crop. This has made holders of '91 and older wines in the country very slow about disposing of their holdings, and there is little willingness to sell, all believing that the short crops must eventually make better prices.

Through the kindness of Mr. A. V. La Motte of Glen Ellen, Mr. Oulevy of Kohler & Frohling's cellar at Glen Ellen, and Mr. D. D. Davisson of Sonoma, as well as by personal observation, I am able to give some information as to the extent of planting with resistant vines in Sonoma valley, around Glen Ellen, and in the Los Guilicos valley. I should estimate the acreage in resistant stock as follows:

Grafted and in full bearing, 500 acres.
Grafted and beginning to bear, 500 acres.
Not yet grafted, 700 acres.

This is a good showing, but it will be improved upon largely when there is the least sign of a revival in the price of wine. Let some encouragement be given to the producers and there will be many who will set about planting resistant stock and bringing a vineyard into bearing, laborious and expensive as it is.

THE STOCK YARD.

Fraudulent Cattle Foods.

TO THE EDITOR:—The New Hampshire Experiment Station, in a recently issued bulletin, gives some facts about the composition of certain condimental cattle foods and condition powders, that have been palmed off on stockmen in large quantities, as the very essence of concentrated nutrition.

The bulletin referred to comments rather severely on the facts, as shown by analyses made by the station chemist. One of the foods analyzed was made in Pennsylvania and sold at $6 per 100 pounds. The analysis showed the food to be wheat-middlings, to which had been added some fenugreek and about two per cent of common salt.

Another is a "condition powder," manufactured in New York city and sold at the rate of 50 cents per three-pound package. "In appearance it resembled a mixture of cornmeal and cottonseed-meal, and it had a saline taste and strong odor of fenugreek."

A Vermont "food," with a strong saline taste and odor of fenugreek, sold at $8 per 100 pounds, and on analysis compared with cottonseed-meal as under:

	"Food."	Cottonseed-meal.
Water	9.26	8.2
Ash	18.09	7.2
Crude Protein	12.74	42.3
Crude Fiber	5.60	5.6
Nitrogen-free Extract	53.08	23.6
Fat	3.23	13.1

The bulletin pointedly concludes as follows: "In conclusion it is hoped that the people of this State will be cautious about paying exorbitant prices, like $8 per 100 pounds for so-called 'concentrated cattle-foods,' when cottonseed and gluten meals can be purchased for one-sixth that price, and sulphur, salts, etc., for a few cents per pound."

We give the above facts from an authenticated source, as a "word of caution" to our readers who are interested in the well-being and well-doing of their livestock.

From personal observation and long experience among farm animals of all kinds, we have no hesitation in expressing the opinion that fully nine-tenths of the money spent on artificial, "concentrated," and, sometimes, spiced "foods," would be worth five times more if paid out for pure and wholesome ground wheat, barley, peas or oats, which, when judiciously used, with the addition of a moderate quantity of vegetables when there is no green grass, is the best spice that can be given, besides the usual allowance of sound, sweet hay. If cattle and horses do not thrive on such food as the above, all of which can be produced on the farm, then there is most likely something wrong in the management. Let a little more of the personal supervision of the owner be added; let him see that the food is fed in proper quantities to each animal, with the variation in kind that is frequently necessary to make the animals do the best they can be made to do, whether the aim be for the growth of flesh in cattle and swine, bone and muscle in the horse, wool in sheep, or dairy products from the cow.

All these can be produced more economically by a judicious use of the products of the farm than by buying high-priced "foods," which are not only high-priced in name, but in fact.

It is sometimes necessary to use means by which an animal will be tempted to eat, when confined to the stall the greater part of the time, but we have never found the use of spiced food necessary, even when pushing an animal to make a rapid growth. If an animal will not grow well and quickly when fed with such food as is named above, then it is not of the sort one ought to keep to breed from, and as to feeding such for the butcher it is an unprofitable business, a waste of wholesome food.

"The survival of the fittest" well applies to the livestock industry in these times of low prices, when it behooves all stockmen to keep only that class of animals which will make the best returns for the food consumed.

BREEDER.

Northern California Sheep Ranges.

Commencing at Oroville and traveling through the country north about five miles along the foothills, the character of the country is broken land, with occasional glades of good land, even suitable for garden purposes. It is not used as such, however, as the large sheepraisers run their flocks over it indiscriminately. They had the best land patented long ago, and the rest is lava rock with bunches of grass in the interstices. In fine, this is what may be called a good sheep range. There is plenty of brush to brouse on and shelter under during severe storms.

In former years the sheep were close herded, but of late they have been turned loose all winter, and it is a positive fact that the sheep do better and the ranges carry one-third more sheep. The coyotes not being so plentiful is a great point gained in allowing sheep to be loose-herded, thanks to the bounty of $5 per scalp; it ought to be a United States law and be $10 a scalp, then these vermin would all be exterminated, and sheep, turkeys and calves would have no enemy except the weather. I am sorry to say the sheepmen do not look after that at all. Every sheepowner in this part of the country should build a large shed on every section of land—that is, on every 640-acre tract. In the shed he should have 12-inch V shape troughs on stands a foot high, full of salt in large lumps; in that way there would be no waste by the sheep trampling it under their feet, as there is when small salt is fed on the ground. The sheds should be all boarded on the south and east sides to keep out the rain; cold in California does not hurt sheep. Some of the persons owning sheep in this part of the country could well afford to build sheds. They would save the cost of protection against the elements in two seasons in lambing alone, not to speak of all the weak yearlings they would protect until the grass came in large quantities in spring; then they would be as good as any sheep in two months.

Senator Stanford's large range is fenced by creeks; so is Joe Cone's, and the least such men ought to do would be to give their sheep shelter while they are poor in the early spring. If those men would show an example it would certainly be followed by others. The advantage would be in raising so much larger proportion of the lambs dropped and several other ways too numerous to mention.—Live Stock Gazette.

A Two-Ton Steer.

Wm. J. Fowler of Monroe county, N. Y., writes as follows to *American Cultivator:*

"A fat steer to be made to weigh 4000 pounds is to be one of the attractions at the Chicago World's Fair. The exhibit is to be made by Wm. M. Singerley, editor and publisher of the Philadelphia *Record*, who is an amateur farmer as well. It is claimed that in size, weight and appearance this steer will beat the record. If it reaches or exceeds the 4000 pounds weight, it will; otherwise not. Some 12 or 13 years ago Wm. and Frederick Fellows, farmers near Scottsville, on the Genesee flats in this county, bred and fed a steer which they tried hard to bring up to the two-ton weight. Had they succeeded, they could have sold the animal for $1 a pound, or $4000. They tried hard to bring it up to the required weight, but could not get anything higher than 3950 or 3975. The animal was, when I saw it, about four years old, a bright red in color, and of course a mountain of flesh and fat. It had been carefully bred from birth, the effort being to build as large a frame and put as much flesh on it as ever was borne by steer before, and more if possible. As Mr. Singerley's steer does not yet weigh 4000 pounds, it is not certain whether the old record can be beaten, though it may."

We have frequently heard people talk of steers that weighed two tons, but have always contended that there are no authentic records of a steer being made to weigh 4000 pounds.

The above is the nearest approach to that weight we ever heard of from any authentic source. We wish Mr. Singerley success in his efforts to break the "record."

THE DAIRY.

The Dairy and Fertility.

Reports from the trade in eastern cities show that the receipts of butter are very much less this season than the average in years previous. It is evident also that the production is very much less from some cause or other. No doubt the excessive wet weather of the spring and early summer had a good deal to do with the matter of production. Another cause is the Babcock test and the knowledge that has finally percolated into the comprehension of many farmers that their cows were utterly unfit for dairy work. Mr. A. Olson, of Burnside, Iowa, writes us under date of August 3, and says: "Our creameries all have separators, from one up to six. None of them are getting more than half the milk this season that they got last. The cows have gone to Chicago for beef."

This is a hopeful sign, and if this weeding-out process continues, we may hope in a few years to see the dairy business on a foundation where the farmer, who will put intelligence in it, can reap better profits from it.

The above is from *Hoard's Dairyman*, and conveys to us the idea that we may not expect to receive as much eastern butter this autumn as we have done in some seasons past, consequently, California dairymen may expect good prices for a prime article which can only be produced from well-fed cows from this time on till next grass season.

Hay is both abundant and cheap, and is worth more to feed to good cows than to send to market. Other feed is comparatively cheap, especially barley, which is one of the best of feeds for the production of a good quality of butter, when ground into meal and mixed with a little cut hay, besides which the cows should have all the hay they will eat, with the addition of other foods by way of variety, as the feeder may see fit to use.

Those who have not been in the habit of feeding their cows for the production of butter will be surprised to find out what their cows can produce if they will give good feeding a fair and honest trial. But, to be fair to the cows it must be begun in good time, that is, before the cows begin to fall off in their milk, which, when once they do and are allowed to continue to shrink for any length of time, it is next to impossible to recover the original flow, whereas if they are held up to it by good feeding and not allowed to begin to give less milk for the want of milk-producing food, there will only be the natural shrinkage due to the length of time they have been in milk since calving.

There are several indirect advantages to be obtained, as the effects of good feeding, such as the better condition of the stock and the continually improving condition of the land upon which it is kept, for, while poorly-kept, half-starved stock of any kind will impoverish land just as surely as continuous grain-growing, we have yet to hear of the man whose farm has become poorer by keeping a lot of well-fed dairy cows upon it, whatever the disposition of the milk.

There is very little exhaustion of the soil in butter-making, where the skim milk is fed to calves or pigs, and the manure properly taken care of. Cheese-making is more exhaustive than butter-making, and selling off all the milk, still more so. In the latter business, however, there is so much more purchased food used, or at any rate grain-feeding, that the impoverishment that would naturally be due to carrying off all the milk, is more than counterbalanced by the extra feed used during the year.

There are few, if any, foods composed of any kind of grain, peas or beans, or the offal from the same, but will return half to three-fourths their first cost in manurial value after they have given good returns in either dairy produce or growth of stock, generally to the full value of the food consumed.

Where additional fertility is needed, and there are few places where it is not, by far the cheapest method of obtaining it is through a judicious and economical system of feeding livestock.

The market price of nitrogen, potash and phosphoric acid, the most expensive ingredients contained in the best artificial manures, and the most efficacious aids to plant-growth, is in many cases no more per pound in stock-feed than in commercial fertilizers, especially in the more nitrogenous foods, such as oilcake and bran.

In some parts of the country these can be bought for less than their real value as fertilizers, but it is not so in California. However, at present prices, it is better for stockmen to buy the above named elements, in the form of food, for their stock than to pay the price of them as sold in commercial fertilizers.

Variation in Quality of Milk.

The English *Agricultural Gazette* publishes a report of the milking trials at the Essex Agricultural Society's Harlow Show. Cows in any class giving milk containing less than 12 per cent solids are disqualified.

In class 86, cows under four years old, is a striking example of the uncertainty of a test of one milking only, as seems to have been the case at this show. We give below a full report on the class, which needs no further comment. It is as follows:

No.	Weight of Milk, lbs. (one milking only).	Analysis. Total Solids.	Fat.
619	15½	13.27	4.23
617	16½	10.85	1.85

The latter cow was disqualified, owing to the abnormally poor quality of the milk yielded by her at the trial milking. It was observed, at the time of milking, that the cow was restless and nervous, and the attendant who milked her in the presence of one of us observed that she "held up" some of her milk. On the afternoon of the second day, being curious to investigate further a case in which milk of such abnor-

mal quality was yielded by a cow in good health and condition, we had her milked out again. This time the milk was normal and of good quality, showing:

Total solids	12.73
Fat	3.64

The milk obtained at the trial milking was like partially skimmed milk, and it is to be presumed that the strange deficiency of fat was due to the "holding up" of the richer part of the milk. It is well known that the "strippings" are richer in fat than the main bulk of the milk, but we were scarcely prepared to find so great a proportion of the fat withheld as was the case here. The first prize, which would otherwise have gone to this cow, was awarded to No. 619, Mr. J. S. Arnold (Tulip).—Bernard Dyer, D.Sc., Edward Rosling.

DAIRY TEST AT THE COLUMBIAN EXPOSITION.—At the recent conference of representatives of breeders' associations which expect to participate in the dairy test at the Columbian Exposition the following scale of points for judging butter was agreed upon: Flavor, 60; grain, 30; color, 10. Whether or not butter color should be used was left to the test committee to decide. Nelther this nor the disposition of the butter-color question was satisfactory to the Holstein-Friesian people. After further consideration, Chief Buchanan announces this new scale, which represents his final decision: Flavor, 55; grain, 25; solidity, 10; color, 10. Furthermore, he has decided that the use of butter color shall be optional with the representatives of each breed on the test committee. The scale by which cheese will be judged is as follows: Flavor, 55; texture, 25; keeping quality, 15; color, 5. The same condition as to coloring applies. The Holstein-Friesian people have signified their acceptance of these conditions and have formally pledged 25 cows for the test.—Breeders' Gazette.

THE APIARY.

Berries, Bees and Bloom.

GRIZZLY FLATS, El Dorado Co., Aug. 12, 1892.

TO THE EDITOR:—It has been my good fortune to spend the week with the well-known apiarist, S. L. Watkins, of Watkin's Glen, near Grizzly Flats, who is also the introducer of the California honey-strawberry. As a grower of berries and a beekeeper, my visit has been one of inspection.

The varieties of Alpine strawberries found here are certainly of great merit and most preeminent among them is the California honey-strawberry. This berry is now in full bloom and bearing, and gives promise of continuing until the snow flies. The berry is peculiar in shape and color, tapering from the center to both ends, with a scarlet body and white tips, making a brimming saucer of these berries as beautiful as they are delicious. To the berrygrower their chief attraction, however, is their immense and all-the-season yield. The berry bids fair to be a valuable acquisition and to find a friend in every berrygrower. If this berry can be crossed upon the domestic varieties so as to fasten its immense yield and ever-bearing characteristics upon the varieties so crossed, a great step forward in the culture of the strawberry will have been made.

Mr. Watkins has in cultivation the leading domestic strawberries and will cross, in various ways, the best of the Alpine or wild strawberries, and in time the lover of this, the queen of berries, will be given the benefit of his experiments.

While the berries are of great interest, their fertilizing companions, the bees, are equally so. Fortunately, Mr. Watkins' bees are very gentle in their disposition and allow him to remove combs from upper and lower parts of the hive, extract the honey in the open air and replace and rearrange the combs without gloves or veil. While the honey-flow has almost, if not entirely, ceased in other parts of the State, here the bees are seemingly just settling down to work, with the best of the season still before them.

MOUNTAIN BEE PASTURES.

The extent and variety of bee-pasture or bloom in this section seems almost incredible. On a small piece of bottom and side hill land that was cleared and burned over last fall, there have sprung up and are now in bloom, on less than three acres of ground, the following honey plants: Cardinal flower, lupines, larkspurs, columbine, potentilla, hulsia, meliotus, collinsia, wild buckwheat, golden rod, hemezonias, snow drop, pennyroyal, Mexican clover, thistle clover, several varieties of thistles, and wild asters, soap root, wild turnip, parsley, fennel, sorrel, chickweed, poppy, alfilarilla, poison oak, burr clover, oxalis, yellow meliot, folocio, several species of compositæ, milk weed, cammomiles, wild sunflower, dandelions, gilias, wild alfalfa, star flower, camphor weed, nettle, star grass, lilies, peppermint, horsemint, catnip, verbena, philadelphus, mountain ivy, rubus, wild rose, violets, tar weed, dwarf cherry, point grass, nicotania, paradise plant, hybrid currant, Indian pink, wild sweet pea, bitter cherry, morning glory, Indian cress, ball golden rod, smart weed, borage, wild gooseberry and currant, and 20 additional varieties that I cannot name.

So varied and great is the wild flora of this section that Mr. Watkins has been commissioned and now has in preparation for the World's Fair an extensive collection of the wild flowers of the State; a collection that is surprising both in its extent and the limited area required for its production. With all this wild bloom, there is no secret in the large yield of honey secured in this section, but the bees are in no way dependent upon the bloom, for the trees and bushes are attacked by aphides, that cause the trees to yield a flow of honeydew, that in the early morning drips from them like dew. This honeydew, while it is found at this elevation of 4000 feet, is still more common and the yield far greater at an elevation of 5000 feet. While the same flowering trees and bushes are to be found both here and there, the yield of honeydew is far greater in the higher altitude.

Among the flowering varieties of trees and shrubs are the madrona, flowering dogwood, maples, California lilac, chaparral, buckeye, alder, Oregon grape, laurel, coffee berry, willow, wild raspberry, wild cherry, wild plum, and manzanita, while the honeydew glistens underneath the smallest plant to the manzanita, firs, sugar pines, spruce, yellow pine, black oak, live oak, cottonwood, and the greatest of all yielders of honeydew, the incense cedar. So great is the quantity of the honeydew, that on the manzanita, where the leaves are in proper position to catch and hold the falling nectar, the sugar resulting from the evaporated honey dew is often thicker than the leaf itself.

Throughout the eastern and western States their honeydew is feared by all beekeepers, as the bees die when compelled to winter on it and the honey is not marketable. In California the honey from this source is delicious and very dense. While the sheep annually destroy all of the flora on the greater part of our mountains, the honeydew is constantly secreted, and at this altitude a quantity annually goes to waste that is a thousand-fold greater than the entire honey output of the coast at this time. When the California beekeeper follows in the wake of the Swiss and moves his bees from valley to mountain-top, as the flora of the season ascends; this elevation throughout the State, and the still higher altitudes, will become the apiarist's paradise.

E. H. SCHAEFFLE.

Bee-Keeping Near San Francisco Bay.

This is the first year I have done anything among the bees for five or six years. Ours is not considered a good location for bees—it is too near the coast, being three miles from San Francisco bay and about 12 or 13 miles from the Pacific ocean.

The finest part of our crop was partly extracted when we received word that our brother Andrew was sick. He was, for a number of years, in the employ of the Government in the Pension Department at Washington, D. C. After three weeks sickness, he died on June 2. He was a young man of much promise and would in all probability have made his mark in the world. His sickness and death was the cause of our doing nothing among the bees all through June and July. The fruit season was then over, and my two remaining brothers, who are the youngest members of the family, and yet schoolboys, were given charge of a gang of boys who were hired to harvest the fruit.

These brothers I speak of are interested in the bees with me, and as I had newspaper work to attend to in the neighboring town, only about one-half the hives were extracted from since June 1. We did not work for comb honey, though a couple of colonies gave us some very nice honey in the sections. In all, we obtained nearly a ton of extracted sweets, and there must be yet 500 pounds to throw out of the combs.

In looking through the hives recently to introduce queens, etc., I found that robber bees were exceedingly numerous. In fact, it was bad to open a hive, for the robber bees soon swarmed around.—W. A. Pryal, of North Temescal, in American Bee Journal.

THE FIELD.

Napa Valley Notes.

NAPA, September 1, 1892.

TO THE EDITOR:—Summer, cool, very agreeable, has passed and we enter upon the fall months that promise to be as the summer just past, one of the pleasantest seasons of the year. Each has its charms. We have had so little hot weather these past months it seems as if we had had no summer.

The result of the prevailing cool weather is noted more, probably, in the fruit output than in any other department of farm industry. Grapes are at least three or four weeks behind time in ripening and the season will be far advanced when the vintage shall have closed. The yield of grapes will be light. Prices have been fixed at from $8 to $15 per ton for the wine varieties.

The peach crop in this country was below the average as regards quantity, and also as to flavor. There was too little hot weather to develop the highest flavor of the fruit. As regards looks, they were generally of good size and appearance. While the yield of other late summer and the fall fruits was not as great as last year, prices have been far more satisfactory and orchardists are reaping a well-merited financial harvest. When prunes bring $50 per ton or more and other fruits sell correspondingly well, it is no wonder the face of the fruitgrower is wreathed in smiles. Several carloads of assorted fruit are sent from the valley each week to localities far away and near at hand. Some go to Chicago, Indianapolis, St. Louis and other eastern cities, where the fruit sells well.

Although the fruit industry has made great strides in this county during the last five years, it is as yet in its infancy. There is much land within ten miles of Napa that is adapted to fruit culture, and during the next decade a large acreage will be planted to varieties that florish here.

As for grapes, the acreage in the county is annually decreasing, owing principally to the ravages of the phylloxera. A considerable amount of phylloxera-proof vines has been planted and they have proven a success, but the raising of other fruits will overshadow this branch of horticulture in time to come. Yet there will ever be a very large sum of money invested here in viticulture.

Wheat, oats and barley have yielded well this season with us, the different grains weighing heavier than is generally the case. Probably we never had such a good yield of oats, white and black, as this season, owing probably to the cool weather of the summer months. The amount of hay cut was very large and much remains to be baled. Prices are not very satisfactory to the producer; they suit the consumer well enough.

The sixth annual fair of the Napa Agricultural Society has just closed. There was a large attendance at the park, where daily attractive programs drew large crowds. The managers seem to be well pleased with the financial results and the association is on a better footing than ever before. There was some fine racing and many excellent horses were on exhibition. Our horses are improving year by year as more attention is paid to breeding. Yet there is room for improvement, especially for horses of all work. The display of cattle was nothing to boast of. There were some good sheep and swine, also poultry.

If these fairs in other counties of the State, as well as ours, did not give so much prominence to horse racing, and encourage thereby features that are not very desirable, farmers in general would take greater interest in them. But this feature will probably always be a prominent one.

Our farmers seem to take little interest in the People's Party movement and not much progress has been made by said party. As a general thing our farmers still cling to one or the other of the leading political parties. There is no doubt but that should the farmers unite in a political movement they could accomplish much. But it is different here from what it is in some other counties and some other States. In fact it is difficult to get our farmers to unite on any one project. Years ago, when the Grange movement was inaugurated in this State, a Grange was formed in Napa, but did not remain long in existence and efforts to reorganize proved a failure. Still it remains true that in union is strength and farmers would as much profit by combining as other classes. May be the future holds large developments in this direction.

Mr. W. H. Murray, State Superintendent of Ramie Culture, was in Napa during the late fair, pushing the matter of cultivating ramie in this county. Evidently in time this will be a large industry in our State and a profitable one for the farmer and the manufacturer. Much of our valley land is well suited for this purpose and farmers may be induced to take hold of the matter.

R.

Steam on the Highway.

Peter Chalmers, a farmer of Farmington, is a genius in his line. When anything new comes out he studies to see whether it cannot be adapted to use on his farm.

For one thing, he has applied helmet oil-cups to greasing wagon-wheels. He has a score of grain-wagons, all of them supplied with these cups, and all of the wheels can be greased by means of them in ten or fifteen minutes—a job which would require an hour or more without them.

All the plowing done on Chalmers' big ranch is done with a traction engine, and during the last plowing season he ran the engine day and night, having three shifts of men. A locomotive headlight was employed to illuminate the path ahead, and another was used to throw light on the plows.

Now the farmer is hauling wheat to town with his engine. He brought a load in yesterday and stored it at the Stockton warehouse. There were nine wagons in the train, and each carried sixty-eight sacks of grain. Each sack weighs on an average 137 pounds, so each wagon-load was 9,316 pounds, and the aggregate of all the wagon-loads 83,844, or nearly forty-two tons.

The farmer has 30,000 sacks of wheat to haul, some of it belonging to neighbors.

"Is it much cheaper to bring the wheat in this way than it would be to ship by rail?" asked a *Mail* reporter of Mr. Chalmers.

"Well," was the reply, "I can't say positively that it is any cheaper at all, but I think it is. You see, this is only my third trip, and I haven't been able to cast up accounts yet. The wheat I'm bringing now comes from near Farmington, which is seventeen miles from Stockton, and it would cost $1 10 a ton to get it here by rail. Some of the wheat I'm going to haul is farther away, and to transport it on the railroad would cost $1 50 a ton. I don't think it will cost me a dollar a ton on the longest haul."

"Where does the saving come in?"

"Well, one has to load his wheat anyhow, and if ships it by cars he's got to unload and then load it on the cars. That requires men and time. This way all we've got to do is to load it in the field—the warehouse men do the rest. It requires only three men to take care of our train—an engineer, a fireman, and a man to look out for the wagons and see that they don't get 'hot boxes.' The only expense of hauling, therefore, is the wages of the three men and the cost of the coal used."

"But," said the reporter, "there's the interest on the money in the engine, which cost——"

"Four thousand five hundred."

"——And then there's repairs and the steady wear of the machine; and you've got to have a lot of money invested in wagons—you would only need a couple of wagons to haul to the railroad, but this way you need a dozen."

"Oh, I need the wagons and the engine on the farm, anyhow," was the reply.

In further conversation Mr. Chalmers said it would not be feasible to haul grain as he is doing except on level and good roads. The only trouble he experienced was in crossing small bridges, which he had to brace up on the first trip. The tender carries water sufficient for only twelve hours' consumption, but water is pumped into it from watering-troughs along the road.

It might seem foolish to say that the wagons follow one another around corners in the same path, since as a matter of course they would do so, but people often ask the farmer what sort of gearing he puts on his wagons to make them follow the lead.

The engine can haul the train at the rate of four miles and a half an hour, but to prevent jolting the speed is regulated to about three miles an hour.—*Stockton Mail.*

THE HOME CIRCLE.

After the Cows.

The pasture reached the bleak uplands where the sugar maples stood
Firmly-rooted amid the rocks at the edge of the great pine wood;
The brook from the spring in the forest leaped downward in clouds of spray,
And the tall ferns drooped and nodded their heads above the boulders gray.

The hush of the summer evening fell, restful and cool and damp;
The firefly in the buttercup meadows lighted his ghostly lamp;
And high the flare of the sunset climbed up the dome of the blue;
As three little children went after the cows, barefooted through the dew.

The whippoorwill sang in the alders that fringed the bank of the stream;
And, like the mystical mu ic one hears in a beautiful dream,
The tingle of cowbells blended with the rippling waters below,
And the full red moon in the shadowy east on the horizon hung low.

The air was sweet with the clover bloom from the banqueting grounds of the bees,
And the woodsy scent of the mosses that hid in the shade of the trees;
The cow-path wound through the hemlocks and round the high ledges curled,
Where, gazing out through the distance, we saw to the ends of the world?

We called the cows through the gloaming—Ruby and Bessie and Floss,
Cherry and Molly and Dimple and Bounce—"Co', boss! co', boss! co', boss!
Knee-deep in the gurgling river they crowded and pushed as they drank;
They reared and rubbed each other as they climbed the slippery bank;
They plunged their heads in the clematis as it hung in its tangled net,
And tossed on their horns the eel grass so snaky and green and wet.

Three little children followed them close, all fearless and happy and free,
Holding the tanned brown hands of each other—three little children, three,
Through the soft, cool damp of the shadows and under the light of the stars,
Driving the cows with their tinkling bells home to the barnyard bars. —*Wide Awake.*

Lorena's Manuscripts.

Written for the RURAL PRESS by LILIAN H. SHUEY.

I.

"Lorena, dear!"

An old man, sitting in a rocking-chair on a vine-trellised porch, called, in a thin, trembling voice, to a young woman, who sat just inside the door of the cottage, with her lap full of dark dress goods.

Lorena dropped her work and appeared at the door.

"Lorena, I want to talk to you."

The girl stepped back a moment and brought out a bit of white crochet-work in one hand and a chair in the other.

She seated herself by the old man and began to ply her needle.

"Well, father?"

"Ain't your dress most done, Lorena?"

"Nearly."

"I wish you'd ever get some time to write, Lorena."

"O father!" said the girl in a reproachful tone.

"Your mother used to write, Lorena, and she earned money, too. Did you ever find those copies of the *Young Ladies' Companion* I had put away? Your mother's pieces was in them, and I had it marked on them how much she earned."

"I looked everywhere for them, father." The girl had not looked up from her work.

"I wish you was as smart as your mother," continued the father fretfully." I think if you tried you could do just as well as she did. I'd like to see you try, Lorena, just to remind me of your mother. I'm getting old now, and I always wanted you to be a writer, like your mother was."

"But I have so much else to do, father."

"Yes, child, but there's some things you could slight, like she done."

The girl rolled up her work.

"Didn't you hear Rover bark, father?" she said. "I think the cow has come up."

Lorena went through the house, and came out on the kitchen porch with a wide hat over her round, sweet-looking face, and she carried the milkpail in her hand.

She went down a narrow walk hedged each side by currant bushes, and passed through a little gate into the corner of a yellow stubble field. She opened another gate into a small barnyard, and the cow, with Rover at her heels, preceded the girl into the barnyard.

Lorena brought a little bran in a pail and milked while the cow was eating, then she threw a little wheat to the chickens, and her outside evening's work was done.

She carried her milk to the house, and began on her preparations for the supper.

Lorena Newton was "chore-boy," nurse, housekeeper and sole companion to her aged and somewhat childish father.

Once there had been one hundred acres of land owned by the occupants of the little cottage. Lorena had seen a comfortable girlhood, and was at college when her mother died. After this, everything went wrong. Things were not managed as they had been. A dry year just before the death of the mother had increased the mortgage on the farm. Lorena returned to college after the funeral, but she soon found out that her father was borrowing money to keep her there, and that he was suffering for the care she ought to be giving him at home.

So she came home, glad to see some of the land sold to clear the home spot and a small field around it of debt. Lorena took charge of everything, and with economy and industry succeeded in making a living for the two. But she had to call the doctor sometimes to see her father, and when there were extra comforts to buy for him, she found it very close work to balance her accounts.

This was not the first time her father had talked to her about writing. His early fatherly ambition for her had degenerated with his mental feebleness into a mania which fretted him and annoyed her. She knew what it was to enter the field of amateur authorship. She had seen something of it at college, and although she had received much praise as a swift and adaptable writer, yet her ambition had never been aroused.

Another dream had filled her girlish days, and gone with her to her painstaking life at college.

Grant Maye, the son of a neighboring farmer, had been a schoolmate at the Maysville school. At sixteen they were timid, unconfessed boy and girl lovers, but at nineteen they had separated to attend different institutions; and when Grant Maye returned from college a graduate, three years after her forced return, everything was changed.

By the death of his father, he had come into the possession of a great deal of land. Maysville society received him with rejoicing, while Lorena, on account of her poverty and her daily round of work and care, had dropped her connections with her old associates.

Lorena had become accustomed to seeing him drive by with his handsome team without looking her way. The old dream was banished from her mind; but it had been a slow process, and it had left her sobered and reserved.

More and more her father was needing her care and attention, and she made no attempt to seek the society of young people. The isolation of her life was now leading her to think that possibly her father's idea was a good one. It would be amusement and company for both of them. And so, while her father read his paper and napped beneath the clambering roses on the porch, she set about preparing her first story in the pauses of her work.

II.

Joel Newton went three times a week to the postoffice at Maysville. It was about all he was able to do, and he considered this a really valuable service. He loved his papers, his weeklies and semiweeklies, better than anything he possessed, and it was his chief delight to go and get them. Regularly Lorena brought out the gentle mare, harnessed her into the comfortable old phaeton, and helped the old man in, thankful that there was still something that he could do and liked to do.

"Great was his delight when Lorena prepared her first manuscript and gave it to him to mail.

"You're bound to succeed, daughter," he said, "bound to succeed. Our family always had some literary folks in it, and I've been thinking of this for a long time, child."

Lorena nodded and smiled from the gate as he drove away.

"Now look out for the train, father," she called.

"Poor, dear, old father," she murmured, bending down a tall hollyhock over her slender form; "anything to make him happy, and I have seen worse stories than mine."

III.

"Father, dear father, don't worry about it. I don't care at all. Why, that's nothing; and you can't expect me to do as well as mother did at first."

The balmy fall of the California year had passed into early winter, and Joel Newton lay on the lounge, that his daughter had drawn up in front of the sitting-room stove.

"But you can, child," he answered insistently. There's something wrong about it. She never had her manuscripts returned. It's a shame. I read it coming from the office, and it's as good a story as your mother ever wrote. Dear, dear, it's too bad, and your first trial, too."

"Never mind, father; I'll try again."

Lorena passed her hand gently over the white hair on his throbbing head, and went out to serve the supper she had kept waiting while her father had walked the mare home as he read her manuscript in the chilling wind. He had come home with cold hands and hot head, in a fever of disappointment and indignation.

Her own disappointment was obliterated by her grief to see her father in this state of mind. When she had thought to please him by writing stories, she had not taken this probable trial into consideration.

Tears of pity and regret crowded into her eyes, as she drew the tea and served the dishes as neatly and daintily as she could. But she brushed them away bravely, and brought the old man out into the warm, cosy, little kitchen, talking cheerfully and trying to laugh away his distress.

Lorena did try again, as she was not one to turn quickly from a purpose, and her father clung as persistently to his ambition for her as he clung to his remnant of dependent life.

But the faithful daughter found, to her sorrow, that the same scene was repeated again and again. A mild and open winter allowed her father to go to the postoffice as often as usual, and although she sometimes went with him, yet the care of the mail was his especial and jealously guarded privilege.

She called upon the doctor one day, and tried to explain to him that her father seemed unable to bear little disappointments, and that slight annoyances fretted him greatly.

"Then," said the doctor to her gently, "you must not let these little things happen. Yes, by all means let him ride about all he can, but do not cross him if you can help it."

IV.

In her extremity Lorena conceived a plan by which she might gratify her father's unreasonable ambition, though it would be a sure blow to her own. In a short time she gave him another bulky letter to mail.

"It will be a go this time, Lorena," he said, as he climbed, with her aid, into the low vehicle. "Somehow, I feel it in my old bones."

She led gentle Mollie into the lane and watched him drive slowly away.

"Yes, poor father, we will succeed this time," she murmured, "but at such a price! No matter; nothing makes any difference to me any more, but you. I promised mother I would care for you and I will."

She heard the clatter of hoofs behind. It was Grant Maye, driving his high-stepping blacks. She crept into the house with a drooping face and a pain at her heart that her bravery for a moment did not subdue.

V.

The following spring, the editor of the *Western Fireside and Florist* was granted a few weeks' vacation. Before leaving the office he said to his assistant: "There is a woman who is sending manuscripts to this office from the Maysville postoffice. She invariably encloses some paper currency money, with the request that the manuscript be burned and the money returned to her. I have complied with this crazy request for the reason that the young lady was a dear friend of my roommate at college. I always thought he would marry her. Please attend to it while I am gone, and save the manuscripts and letters, as I may wish to enlighten my old friend."

Percy Graves, the editor, bought a ticket to Maysville, and went to the home of his old friend, Grant Maye, a large, roomy, country mansion, set in the center of a section-tract of grain fields.

Here he was heartily welcomed by the wealthy and cultivated young farmer and introduced to the stately mother and dark-eyed sister.

The young men sat on the cool, west porch at sunset, talking over the years since they had met.

"By the way, Grant," said Percy Graves, "what became of that pretty girl whose photo used to be on your desk in our room at school? I don't believe in long engagements; why don't you marry her?" He said this with a sly smile behind his hand.

Grant Maye dropped his forehead on his finger-tips and hid his face for some moments. Then he pointed over the waving sea of grain to a cottage-roof in the distance.

"She's living right over there now. She's become a literary woman. I haven't seen anything of her since she left college, after her mother died. Her mother was quite a writer, I believe, and I suppose the girl preferred to follow in her steps. I meet her father in the postoffice, occasionally, and the little, old man never fails to tell me that his daughter is getting to be quite a writer nowadays. Bah! I suppose you meet lots of such in your business."

"Yes," said Graves, "and I am not recommending them for wives just now." He preferred to say no more. He was glad that it was not necessary for him to add his testimony to save his friend from marrying a deceitful woman. But it occurred to him that he would like to make a little study of a woman as silly as Miss Newton appeared to be, and he resolved to find some way of doing it.

VI.

Joel Newton laid his book on a stand by his easy-chair on the porch. He had been disturbed by the continued thump of a flat-iron on the kitchen table.

"Lorena!"

Lorena placed her iron on the table and came out.

"'Pears to me, child, you don't do nothing but wash and iron, lately. When are you going to get at that story about poppies we were talking about? Sit down, Lorena, and rest."

Lorena sat down on the doorstep and reposed her pink cheek on her tired hand.

"Never mind; it's all done, father," she said. "I won't work any more to-day."

Her quick ears caught the faint click of the side gate and she rose quickly and went through the house, closing all the doors after her.

A kindly looking laboring man stood at the back door.

"The clothes are all ready, Mike," she said; "wait a moment."

She went in, and soon returned with a large bundle of neatly packed linen.

The man took the clothes and placed two silver dollars in her hand.

"You are awful kind, Mike," she said. "Are you sure no one knows I do this washing?

"Sure, Miss, they don't. The folks think the Chinaman does it. When you came out to the road and asked me to leave the clothes here instead of taking them to town, I made up my mind I wouldn't go back on you. I'll keep mum, and whenever I gits the clothes to take to town you gits them to do. You're a good girl, Miss, to be willing to help on that way."

Lorena looked after him, gratefully, as he turned away, but with weary heart and hand. She had taken desperate means to get money to send with her manuscripts. She was washing for the Maye's ranch, with the connivance of a good-natured hired man.

VII.

Joel Newton came home the next day in buoyant spirits.

"Lorena," he cried, "I've met about the nicest young man I ever see. He rode out with me in the buggy. He's stopping at the Maye's. He lives in the city, he says, and I guess he must be a literary man, the way he talks. I told him my daughter was writing for the *Fireside and Florist*, and he said he would like to come and see you. Now, what do you think of that, Lorena?"

"O, father, how could you? I don't want to see young men, and you know it," protested the suffering girl, as she led the horse away to the barn.

That night, at sunset, Percy Graves came through the green fields with his gun in his hand and came boldly on to the porch of the cottage to talk to the delighted old man. He felt no compunctions. He was too curious to see the girl who bought her own manuscripts.

Joel Newton went into the house, and after considerable delay, brought out a shrinking girl with a sweet and modest expression and manner.

She responded distantly to her father's proud presentation and sat down on the doorstep behind the visitor. But he boldly moved his chair and faced her. She saw, in the gloaming, a handsome, kindly face which began to wear a surprised expression.

"Yes, stranger," began her father, "my daughter's lots of help to me since she began writing stories."

"O, father, see that moth!" The girl sprang into the foreground with a swift, light motion, and caught the pretty moth in her hand. "See, father, isn't it pretty? Would you like to see it, Mr. Graves?"

Percy Graves admired the gay-winged insect and appreciated the girl's quick tact; but he wondered more and more, and curiosity led him to drop in frequently on his afternoon walks to make a further study of this quiet, self-possessed, young woman.

And Lorena did not know that the agreeable young man, who became so brotherly in his manner and attentions, was her coadjutor in her literary crimes.

VIII.

But one evening she followed him down the long rose-embowered walk to the little gate in the lane. The moonlight shone on the fluffy curls of her downcast head.

"Mr. Graves," she said in a tremulous voice, "I have come out to speak with you alone. My father persists in telling you that I am a paid contributor to the *Fireside and Florist*. You see, Mr. Graves, I cannot cross my father, and I wish to tell you all about it. You have been so kind to us, and it will do no harm for you to know."

Then Percy listened to her pathetic story, which he had already surmised, and his own voice was trembling as he took her cold hand in his.

"You are a noble girl; but I know something about this plot, too. I am the editor of the *Fireside and Florist*. My assistant has been reading your stories, in my absence, and I understand they are to be published."

She had snatched away her hand. "You shall not publish those stories out of kindness!"

"Indeed I will. Think how it will please your father. I am going in now to tell him who I am. Come, please."

She responded to his quiet air of authority and followed him.

Joel Newton lay on the lounge reading by the strong light of a student's lamp. He seemed not to be at all surprised that an editor from the city had sought out his daughter in this bold manner. It seemed to him to be only a fitting conclusion to his dreams.

"I was sure she would succeed. Her mother did," he said, beaming upon them both gratefully, and Lorena knelt by his side and Percy Graves held his thin hand.

"But I have learned to love your daughter," continued the editor, "and will you not give her to me?"

Lorena turned away her face, and the old man started up with indignation.

"No, sir, Mr. Graves, I won't give her to any man. I have kept her at home to make a writer of her. Why, sir, she might have made the best match in all the country round, but I broke it up. I've kept Grant Maye away from her these three years by tearing up his letters at the postoffice—real loving letters they was, too."

"Father!"

The girl fled back into the shadows of the room, but no word escaped her but that one cry of pain and surprise.

But Percy Graves knew his duty, and soothing the old man with a few words, he passed out of the room.

Years before, when Grant Maye and Lorena used to go to school together with little tin pails in their hands, Grant used always to summon her in the mornings by a loud whistle at the gate.

That evening, an hour later, the same old whistle called her from her watch by her father's bed.

Lorena ran down the rose walk straight into the arms of her lover. Only for a moment she let his kisses fall on her brow.

"Go for the doctor, Grant, I think father is worse," she whispered.

That night the old man died, and the modern Cordelia laid down her literary pen.

This is what she wrote to Percy Graves in reply to his protestations.

"The world is more in need of good home-makers than good story-makers. As I was faithful to my father, perhaps I can sacrifice as much and as well to be faithful to my new duties and responsibilities as the wife of Grant Maye."

THE BOTTOM OF THE OCEAN.—There is a common but erroneous notion to the effect that a human body, or even a ship, will not sink to the bottom of the profounder abysses of the oceans, but will, on account of the density of the waters at a great depth, remain suspended at some distance above the surface of the earth. This is an error. No other fate awaits the drowned sailor or his ship than that which comes to the marine creatures who die on the bottom of the sea; in time their dust all passes into the great storehouse of the earth, even as those who receive burial on land. However deep the sea, it is but a few hours before the body of a man who finds his grave in the ocean is at rest upon the bottom; it there receives the same swift service from the agents which, in the order of nature, are appointed to care for the dead, as comes to those who are revently inhumed in blessed ground. All save the hardest parts of the skeleton are quickly taken again into the realm of the living, and even those more resisting portions of the body in time are, in large part, appropriated by the creatures of the sea floor, so that before the dust returns in the accumulating water to the firm, set earth, it may pass through an extended cycle of living forms.—Scribner's Monthly.

YOUNG FOLKS' COLUMN.

Signal's Lily Flag Tells Her History.

Some of our young folks may remember that Signal's Lily Flag is the famous cow that is now queen of the Jersey race, because she produced 1047¾ pounds of butter in a year. Her story as told by herself in the *Country Gentleman* will please every boy or girl who has a pet cow, and possibly if you will read Lily's story to your cows they may do better themselves; who knows? But this is the narrative:

Born in Huntsville, a lovely town of Alabama, I was not considered anything remarkable, because my owner had other handsome calves, though my mother and father being of the aristocracy of cows, I of course inherited blue blood.

My first thought of the world was its beauty and happiness—the mountains in the distance, my owner's home, the kind colored face that looked after me, and then I wondered if all calves were as happy as I; all day frolicking in the sunshine, and waiting for my mother's coming home. Then leaving my companions, I would listen patiently to the conversation of the elders. One evening they said our owner had decided to send us to a farm two miles distant, and I wanted, very much, to ask questions, but being a well-trained calf, I waited until alone with my mother, and told her how sorry it would make me to leave our beautiful home, and the lovely flowers at which we could peep through the fence. She assured me it was much healthier in the country, and she thought we would be kindly cared for, so I became reconciled to the change, and the next day the dear home was left behind us. Then I had my first glimpse of the world—the Big Spring, where the clear, cool water, laving our feet, made me wish we could linger for hours, but the shadows were getting longer, and we had to "move on." Our town seemed so large that I thought we should never pass through its streets. There were big houses and strange people, and I felt frightened, but kept close to mother's side and shyly looking at her, the quiet, placid face made me know that I was young and ignorant, and that she was accustomed to the outside world. We met a number of cows, so different from us that I realized why my mother had such dignified pride. Some people said as we passed; "How foolish of Mr. M. to invest in fine stock; this is not the country for them, and he will surely fail." I wondered if failing meant dying, and if we would have to be sent to the slaughter-pen, for then I had not heard of money or its value.

The first change was not a happy one, but when our owner discovered this, he kindly sent us where loving care and wise judgment guided our future lives. How well I remember the green meadows of the new home as they first greeted our tired eyes! The sun was sinking in the west, casting its yellow glory on the surrounding clouds, and lovely Monte Sano, still encircling us with protecting arms, caused me to feel, truly, "here we rest." My readers must not imagine that a calf could give expression to such thoughts, but as a cow of celebrity I look back upon my past life, and think of that lovely scene with pleasure.

By our new owner's side stood a friend, who, I afterward heard, was from far-off Kentucky. He complimented us and said: "I would ask no surer fortune than a stock farm near your city; the climate is perfect, neither too hot nor too cold, and with care and cultivation your grass and grain will rival my own beautiful State. I predict a success for the Monte Sano dairy." How different were the words spoken as we passed through the town two years before! I wanted so much to know what it all meant, but he could not understand cow-talk, so I waited to ask of wiser heads than mine. The pretty daughter of the house came to welcome us, and as she stroked my head and claimed me for her pet, my heart went out to her, and the love I then gave her grew stronger as time went by.

For a long time, life was uneventful, but happy. I should like to tell of the pleasant days of calf-hood, of the merry Christmas nights, when, it is said, cows get on their knees at 12 o'clock, and other frolic times, but it might be tiresome. We were kindly and tenderly cared for, and when passing cows would stop to gossip, telling of being turned into the street to wander all night, after a scant supper, we were thankful for our own comfortable stable and beds of hay. Four years passed and I was a dignified matron, with the right to join in the conversations of my elders, and stand among the honored mothers of the herd. Dear Miss Eva was now a lovely maiden, and I still her favorite. Often she would come with salt for me to lick from her dainty hand, and laughed merrily as my rough tongue touched her soft palm, but she stroked my head lovingly, and with kind words bade me "good night." Her presence brought sunshine and brightness, for her life was a long summer-day. You, who belong to a higher race, do you doubt that animals notice changes in those they love? It was not long before I felt that there was *something* in the manner of my young mistress that I failed to understand. A soft light shone in her eye, and in its depth a gleam of strange joy. Her hand, too, rested more gently on my head, and I knew there was some secret, beyond the comprehension of a poor bovine. I did not, however, puzzle my brain over this, but found comfort in a good supper of corn-meal, bran and hay. One evening Miss Eva did not come alone as usual, but a handsome young man was with her, and the happy look was happier. It was my first experience with lovers, and I became greatly interested, listening with curiosity to their conversation, for they did not care to hide heart-secrets from a cow. Soon my owner joined them, and I was roused from my thoughts by his saying: "I believe I will enter Lily Flag this year for the champion cup, as I think she can easily become the queen of the world."

At these words, ambition stirred in me and I shook my head, trying to make him know that I would do my best. Miss Eva said, in a hesitating tone: "Then, papa, you will let her be my bridal gift; I have always loved her, you know." When I heard the promise given, there was another incentive to me to win.

Next day the great test began, and as the weeks and months went by, I eagerly listened to the daily record. As the year drew to a close, I became more excited—would I win and become the champion cow, and my small head wear the crown of victory? I could not be present at the daily churnings, but during the milkings I heard, each day, the number of pounds of butter discussed, and I knew I was gaining. Three or four gentlemen came from a distance; one, they said, was from a cold country called Canada, who was sent by the president of the American Jersey Cattle Club to be present the last ten days of the year. I did not know the meaning of it all, but I felt my importance, and would only associate with one or two of the best cows. My mother chided me for undue vanity, but my head was turned by the words of praise showered upon me daily. Finally the last day came, and I passed the world's record! But the number of pounds was not told me, as no one thought a cow would feel interested in her own work. I could hear them tell of friends invited to be present at the last churning, and what a triumph it was. In the meadow, gay voices reached us as the different carriages drove to the dairy, and I longed to be near, for I had learned to love the praise bestowed on me. Very soon, though, ladies and gentlemen came where I was, and each wanted to pat my head and give a word of praise; but the proud moment of all was when Miss Eva tied a blue ribbon on my horn, and with a wreath of lilies crowned me the champion cow—the Queen of the World. There was victory in my eye as I tossed my head and walked proudly away.

I must know the record; so, creeping close to the crowd, I listened. Signal's Lily Flag had made in one year one thousand and forty-seven pounds, and three-fourths of an ounce of butter—eighteen pounds ahead of any other cow—and she had won the cup!

My owners presented a handsome watch and chain to Mr. Godell, to whose nurturing and constant care, patience and good judgment, I owed my development. Three cheers were then given for Lily Flag. I should have liked to join them, but feared a little discord in the music, and possibly a panic in the crowd; but what rejoicing we had that night among the cows in the moonlight! I forgot my vanity and received congratulations from all friends with a happy, grateful heart. We raced around, throwing up the earth with our horns, and had a grand jubilee, while our owners dreamed of the victory won. Each cow told all she heard. One said fifty cows of the Jersey stock were to be sent to the World's Fair, and four from our herd had been selected. What was the World's Fair? Some of us had been at a fair in Huntsville, where men would walk around and look and talk about us, and then tie on a piece of blue ribbon, and we were brought home. Was that like the World's Fair? My mother said I would certainly be one of the four, and she thought it better to have patience and wait, as it was time for even the queen cow to be asleep. For days nothing was talked about but the success.

One evening I overheard a note read by my owner to our attendant, and in it were the congratulations of President Harrison, and another note came from Mr. Cleveland, who must have been some great man, too, for when his name was mentioned, cheers were sent up for him so like those given for me that I thought if I was a queen he must be a king.

Entertainments were given in my honor, of which I only heard, as, of course, I could not be present. Another excitement came into my life—the marriage of Miss Eva. It was a lovely October evening when I saw great preparations being made for the happy event. They gave me an extra good supper, and then rubbed me off until my skin was glossy and beautiful; a long white ribbon was tied around my neck, and then they led me in front of the parlor window. The scene was very lovely—a bower of flowers, soft music, and many pretty women and handsome men. In the center of the group stood Miss Eva in pure bridal robes, with the same soft look on her countenance I had seen during the past year. By her side stood the handsome young lover, and from his kind, manly face, I thought both Miss Eva and I could trust him with our future. I was formally presented by my two owners as a bridal gift, and as the fair bride held the ribbon I could only look my love. Should I attempt to describe all that happened on that memorable day, my readers would say: "How does a cow know of things beyond the animal kingdom?"—and, in fact, I *was* glad to leave the people to their pleasure and hie away to my companions.

Blind Girl's Buff.

Blindman's buff, under the new name of blindgirl's buff, is in our midst. This is the way it is done. The pretty buffer is blindfolded by means of a long, black mask, which effectually keeps her from gazing underneath. She is then seated in the middle of the room, while the company, joining hands, slowly walk around her. High above her head the buffer flourishes a weapon not unlike the shield which the darkeys down South use for protection against flies and mosquitoes.

As the mystic circle silently passes around the blindfolded enchantress, the latter brings down her wand lightly upon the head of any one whom its aim may concern. He quickly catches it, kisses the hand of the Queen of the Mask, and takes his place upon the throne, where he in turn sways the scepter. Should a young woman be touched with the wand she embraces her ex-queen and tries her own hand with the wand.

The game is made interesting by the announcement that should the queen fail in three strokes to touch one of her subjects she is presented later on with the Court Jester's paper cap and bells. And should any subject be so fortunate as to be three times chosen, she is given a jubilee and is awarded a gilt-crown, or, prettier still, a flower one. —New York World.

TOM (of Pittsburg)—Did you see the aurora borealis while you were East?

Laura (of Oshkosh)—No. You know there are very few theatres open at this season of the year.

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

Domestic Economy.

STRAWBERRY WATER ICE.—One quart of strawberry juice, the juice of two lemons, one pound of sugar and one pint of water; mix well and stand aside for one hour and then freeze it.

CORN MEAL MUFFINS.—Two cups of Indian meal, two cups of flour, one heaping tablespoonful of sugar, two eggs, one heaping tablespoonful of butter, two teaspoonfuls of baking powder, sweet milk to make a thin batter. Bake in gem-irons.

MOLASSES COOKIES.— One egg, two-thirds cup molasses filled up with white sugar, two-thirds cup lard, one cup buttermilk, one heaping teaspoon of soda, a little salt; mix soft, roll quite thick, bake quickly. They will keep quite awhile if kept in a jar covered.

TAPIOCA CREAM.—Soak three tablespoonfuls of tapioca in one half-cup of water over night. Bring one quart of milk to a boil, then put in the tapioca. When cool, add the beaten yolks of four eggs and one cup of sugar. Pour in a dish and add the beaten whites.

KATTOFFELPANNAKUCHEN OR POTATO CAKES.—For a family of four persons, take six large Irish potatoes and grate them in a bowl, add three eggs, teaspoon "level" full of salt and one of baking powder, one tablespoonful of flour. Beat well and bake in thick cakes on the griddles.

TO MAKE POTATO BALLS A LA ROUENAISE.—Boil the potatoes and rub them fine, then roll each ball in white of egg, lay them on a floured table, roll into shape of a pigeon's egg, dip them in melted butter and fry a light brown in clear, hot grease. Sprinkle fine salt over and serve in a folded napkin.

CORN STARCH CAKE. — Four eggs, the whites, two cups of sugar, two-thirds cup of butter, one cup of sweet milk, one cup of cornstarch, two cups of flour, two teaspoonfuls of cream of tartar, one teaspoonful of soda, one teaspoonful of lemon extract. Bake three quarters of an hour with a steady fire.

RHUBARB JELLY.—Take rhubarb stalks, wipe clean, peel and cut into inch pieces. To each pound of fruit add three-quarters of a pound of white sugar; put it on and boil it until the juice is well drawn. Strain into preserving kettle, boil quickly until it clings to the spoon; skim well and put in molds or jelly glasses. Use no water.

HAM TOAST.— Slices of toasted bread with the crust cut off, two eggs, two tablespoonfuls of butter, some cold ham or tongue grated. Put the yelks and whites, well beaten, into a stewpan with the butter; stir them two minutes over the fire, spread them over the toast and lay over them a sufficient quantity of of cold ham or tongue.

RHUBARB PUDDING.—Prepare the stalks as for pies; butter well the bottom of a pudding-dish, then lay in buttered slices of bread; cover with rhubarb, sprinkle abundantly with sugar, then another layer of buttered bread, and so on until the dish is full. Cover and steam while baking for half an hour, then remove the cover and brown.

BEEF FRITTERS.—Cut some thin slices from the undercut of the sirloin, and dip each slice into a good batter made of eggs, flour and milk, seasoned with allspice, pepper and nutmeg; have a pan of very hot lard or butter ready, and place each slice, well covered with butter, into it; fry a good brown; serve with mustard and mashed potatoes.

STRAWBERRY DUMPLINGS. — Make a dough precisely the same as for shortcake, roll into a thin sheet and cut with a large round cutter; put three strawberries in the center of each, fold the dough over, roll gently in the hand until you have a ball-shaped dumpling, stand these dumplings on a buttered plate, place them in a steamer and steam 20 minutes. Serve with cream.

QUEEN OF PUDDINGS.—Four eggs, the yolks, 1½ cups of sugar, butter the size of a walnut, one pint of crumbs, one quart of milk, one lemon, grated; bake until done, but not watery. Spread over the top a layer of jelly or preserves, beat the whites of the eggs to a stiff froth; add four tablespoonfuls of sugar and the juice of the lemon and spread this on. Then set it in the oven again to slightly brown.

CHOCOLATE CREAMS.—Two cups of white sugar, one-half cup of water. Cook rapidly for 20 minutes. Turn out on a platter, and with a large spoon stir until cold, when it will cream. Butter the fingers and work up into small balls, stick upon a large pin and dip into chocolate set over a steamer and melted; lay upon a greased platter to dry.

When Water Freezes.

Let us take our stand, says a contemporary, on the banks of a lake—preferably on a clear winter evening—and at once commence operations by ascertaining, by means of two thermometers, the temperature of the water at the surface and at the bottom, and we find, let us say, that these are 48° and 45° respectively. A cold wind sweeps over the surface of the lake, so that the temperature of the water there is speedily reduced, let us say, to 44°. By this reduction in temperature, it contracts and becomes specifically heavier, when of course it sinks and displaces the comparatively light and warm water below, which rises to the surface, gets cooled below 44°, and immediately falls, displacing the warmer water at the bottom, which in turn rises, gets cooled and falls, its place being again supplied by lighter and warmer water. And so the cooling and sinking process goes on, the upper thermometer always indicating the highest temperature, when suddenly the magic point, 39°, is reached, when all movement at once ceases. The upper layer of water is still exposed to the cooling influence of the wind, and speedily falls in temperature, but it still retains its place. Our upper thermometer shows plainly that the water which surrounds it is being rapidly reduced in temperature, but the lower one remains stationary at 39°. At that temperature we know that water is heavier than at any other, and there like a stone it remains at the bottom, and as it is fully protected from outward influences by the mass of superincumbent water, its temperature remains very much at the same point. The water on the top, however, having nothing to protect it, gets colder and lighter every moment. Down the thermometer goes to 37°, 35°, 32°, and then a slight breeze ripples the surface, and the next moment a thin sheet of ice spreads itself over all. The ice, however, is colder and lighter than the water, so that it floats on the surface and acts as a blanket, protecting the comparatively warm and heavy water below from being cooled. During even the severest winter, therefore, only a thin superficial layer of ice is formed, which serves all the useful and ornamental purposes required of it, and when its duty is finished, it readily melts and disappears under the genial influence of the first few warm days of spring.

How a Fish Sees.

The medium in which fresh-water fishes live gives them a chance to see a great distance only in the horizontal direction, and the proper adjustment of the eye would make, under usual conditions, the optical axis take this direction. To me it seems impossible to explain the constant revolution the eyeball on any other hypothesis except that given, viz.: That the optical axis extends forward instead of sidewise.

When a fish wishes to eat anything, either at the bottom of the pond or at the surface of the water, it swims directly toward the object; and in this case the eyes are instantly adjusted in line with the body, so as to bring the image of the particle desired upon the posterior portion of the retina. In this case they lose their usual horizontal position.

If a fish wishes to turn to the right or left in the water, the first movement is that of the eyes in unison with the direction of the turning. This would be entirely unnecessary if the apparent axis was the axis of most distinct vision, as one of the eyes would see all that was to be seen in the side of the turning. After this movement of the eyes, the body turns enough to bring the eyes into their normal position; then there is again a movement of the eyes, and next a movement of the body. This causes a peculiar jerking motion of the eyeballs during the whole time of the turning of the body.—American Angler.

PERPETUAL MOTION.—A writer in the *Engineering Magazine* says: The true inventor has no regard for dogma; he believes he sees light ahead and moves toward it. It may be that what he sees is an *ignis fatuus* or a chimera, but he insists on discovering that for himself, and he is satisfied with no theories. I recently talked with a perpetual motion man and tried to dissuade him, being confident it would be easy to convince so intelligent a person that his scheme was not possible. But he arose above my dogmas in an instant by showing that the whole solar system is a perpetual-motion device, moving without assignable cause and not varying an instant of comparative time within the period of its recorded history. I thought of Galileo and stopped.

Washing Laces.

Fine laces that might be ruined if put into water, and washed in the usual way, may be cleaned without injury by using benzine. If the lace is old, the best way is to pin it smoothly to a board covered with flannel, and wet it with plenty of the fluid; then press it dry with a soft cloth. If all the dirt does not come out at once, move to another place on the board and repeat the process. Laces that are made up may be cleansed by putting them into a glass can or an earthenware bowl and covering them with benzine. Stir the lace round and round in the fluid as quickly as possible; squeeze the lace, and rinse it in more benzine in a clean vessel. Washed in this way, fine old lace keeps its yellow color and does not shrink. After washing by this process, pin the lace on a linen-covered board, and lay in the sunshine several hours. Silk laces are best sent to the scourer for a dry cleaning.

Cotton laces may be cleaned with water and fine white soap, but it is always best to wash them, as well as fine linen handkerchiefs and embroideries of various kinds, by themselves. Dissolve plenty of soap in lukewarm water, put the lace in a bowl or graniteware basin and turn the suds over it. Let the lace soak for an hour, setting the basin where the water will keep warm. At the end of that time, squeeze the lace carefully, put it in a fresh water that is warm and soapy, and rub it gently with the hands. When it looks clean, put over the fire in cold water and leave it there until it boils; then rinse it through several waters that are lukewarm and squeeze dry. Starch the lace in starch-water that has been strained, first dipping in strained cold tea. It is best to dip a fragment of muslin in the tea first to test the color. Pin the lace to a small ironing-board covered with flannel and clean muslin, and take a pin and carefully lay the points and purling of the edge in place. Lay clean muslin over the lace and press till dry with a moderately hot iron.

Lace curtains and bedspreads are nowadays sent to those who make a specialty of such work, and who have frames and other appliances for doing the work well. The washing of such pieces is in itself easy enough, but the spreading to dry becomes very tiresome if there are many pairs of curtains to be freshened.

The dirt on such large pieces is often a great deal of it dust, and for this reason they must be thoroughly brushed before putting into the water. Soak the pieces in soft water, or in water softened by plenty of borax, and if possible set the tub containing them in the sunshine, as that will help to bleach them. The second day, rinse them through a tepid water containing pure white soap, and wash them up and down with as little rubbing as possible. Rinse through several waters until clear and white, and get out every particle of soap, as that will rot the lace. After rinsing, pass through a wringer, or press the water out by hand with as little wringing as possible, as hand-wringing is apt to weaken or tear the mesh. Hang out at full length on the line, and when nearly dry, rub into them starch containing gum arabic in a proportion of a tablespoonful to one quart of boiling water. Roll the curtains smoothly, wrap in a clean cloth for three hours, and then shake and stretch on a clean sheet pinned on the carpet. The curtain must be stretched and pinned evenly, or the edges will be very irregular when dried. An ecru color is given to lace by coloring the starch with tea made from timothy. Laces to be worn at the throat or wrists should never be starched or ironed. N. Y. Post.

Complimentary Samples.

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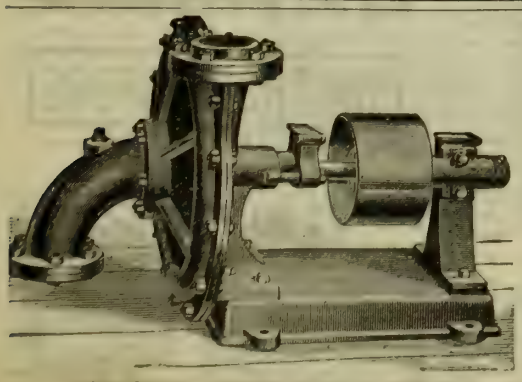
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AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

THE SUGAR-BEET CROP.— Pleasanton *Times*: Mr. J. W. Atkinson, superindendent of the Alameda Sugar Refinery at Alvarado, paid Pleasanton a visit in the interests of the sugar-beet crop. He made a visit to a number of the ranches and was greatly pleased with the outlook. In an interview with him, he stated that the crop had proven far beyond his expectation, and that he thought there would be no less than 3000 tons shipped from here this season. He also stated that shipping would commence within eight or ten days. Next year he expects to have a much larger acreage.

Butte.

FRUIT NOTES AROUND PALERMO. — Oroville *Register:* H. C. Bell and E. P. Farnum visited the Palermo orchards this week and speak very highly of them. The orange groves on the Hearst & Taylor tract are very fine, and the trees show as rank, vigorous and healthy growth as any in the county. The peaches, pears, grapes and other fruits on this land are exceptionally fine. The ground is kept in good condition, and everything indicates that money, labor and good judgment have all been combined. The grounds about the residence, the lawns, gardens, etc., are well cared for. The buildings are in good shape. A large quantity of peaches are being shipped this season and the fruit is choice. The orchards throughout the colony were all found to be doing well and in a thrifty condition. The irrigation ditches are running full of water, and many hands were at work irrigating the orchards. All the trees are in a good healthy condition. It was estimated by Mr. Schram who is in a good position to know, that fully 50 tons of green fruit have been shipped this season and 25 tons of dried peaches. This would be equal to nearly 200 tons of peaches in all. One of the growers said that his young peach trees now bearing their crop were returning him a dollar to the tree, or a little over $100 an acre.

PHENOMENAL GROWTH OF ORANGE TREES.—*Register*: "In 1886," said Senator A. F. Jones, "I planted 50 orange trees in my yard in Oroville; the outer row around the yard consisted of 20 seedlings. About ten feet west of seven seedlings was an eight-foot board fence which I have had whitewashed ever since. The seven trees next to the fence and east of it grew with wonderful rapidity. In December, 1891, they paid $2 to the tree and were about 16 feet high, 22 inches in circumference at the base and had an immense and luxurious top. The other trees of the same kind, planted in the same yard, grew very well but are one-third smaller, and have borne but little fruit as yet. Mr. John Rock of San Jose suggested to me in 1890 that the high whitewashed fence was the cause of this phenomenal growth, his idea being that the fence reflected the heat of the morning sun on the trees, and also prevented them from being burned by the excessive heat of the mid-afternoon of the hot summer days. In April and May, 1892, Mr. E. W. Fogg was planting olive trees in his olive grove at Thermalito, and I was planting olives at the Rancho Golden Grove just across the way. Mr. Fogg had seen my orange trees and heard of the suggestions of Mr. Rock about the fence, and just for an experiment he placed three stakes around his newly planted trees and tacked white cheese-cloth on these, leaving the southerly and east side open. The trees planted by me in the Rancho Golden Grove have done well, making an average growth of six inches, but those planted by Mr. Fogg and protected by his shading of cheese cloth have all grown 100 per cent better than mine; his growth is about 18 inches as against nine inches on my trees. The expense in erecting the shades was about three cent per tree.

Contra Costa.

THE RODEO MEAT-PACKING ESTABLISHMENT.—Martinez *Democrat*: At Rodeo, the site of the great meat-packing industry in this county, the various buildings are being pushed to completion. Five large boilers and a huge engine have been put in their positions, and the machinery for the various departments is being put up by skilled machinists. There are a large number of men and teams at work on the company's reservoir, which, when completed, will have a capacity of over 1,100,000 gallons. It can scarcely be realized by those who have not visited Rodeo that such an enormous amount of capital has been expended there within a few months, but such is the case, and in the near future the new town will present a busy scene, and one in which the sellers of sheep, cattle and hogs and the buyers will participate.

El Dorado.

FARM NOTES FROM BEAR CREEK.—Cor. Placerville *Democrat*: Fruit-pickers and packers are busy in this district. Bartlett pear and plum orchards have produced well, the quality of the fruit being fairly good. John Day raised a crop of wheat on his ranch that is fully equal in quality to any ever produced in this State. James Moore will commence next week to harvest his third crop of alfalfa from the same ground.

Fresno.

EXPERIMENTING WITH BOY GRAPE-PICKERS.—Fresno *Expositor*: A special car filled with boys, ranging in age from 16 to 20 years, arrived in Fresno from San Francisco. They were engaged by D. W. Parkhurst to pick his grapes. Mr. Parkhurst's Japanese struck, and he believed that he could employ a number of boys and have his crop gathered in a satisfactory manner. Being just from the city, of course they will know nothing about raiding watermelon patches and peach orchards. It would be too bad if they should come in contact with some country boy who would teach these guileless youths such bad habits as visiting watermelon patches and henroosts. When they left the cars they impressed upon those who saw them the fact that they seemed full enough of life to do a good day's work gathering grapes, and no doubt the boys will be a success. At any rate the move on the part of Mr. Parkhurst will be closely watched by other vineyardists, and if the undertaking is a success, next year whole armies of boys may be brought here to pick raisins.

Kern.

CORN SUCCESSFULLY CULTIVATED.—"B" in San Jose *Mercury:* The soil around Bakersfield is in the main a rich, warm, sandy loam, traversed with 300 miles of irrigating canals, which have an inexhaustible source of supply in Kern river. Combine these given facts with an almost tropical climate, and practical agriculturists and horticulturists will be prepared for almost any statement. And yet we almost hesitate to tell them the truth, that we saw thousands of acres of corn, the *average* height of which was over 12 feet, many stocks being from 14 to 15, and that there were many bushels of ears that even big Bill Brown could not have plucked without using a stepladder or bending the stalks. Mind, too, that this corn was not planted until July, a crop of barley hay having been previously harvested from the same land.

Orange.

THE WALNUT INDUSTRY.—Anaheim *Gazette:* The walnut industry bids fair in the coming time to be one of large magnitude in this section, where climatic conditions combine with soil characteristics to favor the best results in growing and marketing this profitable crop. Where we now ship out 125 or 130 tons annually, our exports are destined in a few years to be by the trainload. In the raising and marketing of this crop, we are second only to the Rivera section, admittedly the most extensive walnut-producing center in the country. At the present time it is doubtful if the trees in bearing here will cover more than 150 acres, a great many aligning the streets and roads; yet the acreage set out to young trees now rapidly approaching the bearing stage goes extensively into the thousands. Of the orchards at present returning handsome revenues, those of Mr. Stone at Fullerton and Mr. Gilman at Placentia may be cited in evidence. The former gentleman has an orchard of 33 acres of magnificent trees in bearing, which this year will produce 12 tons, valued at $1700. Mr. Gilman's crop amounts to 30 tons, and was sold a couple of weeks ago for $4200. The rest of the crop hereabouts comes from small orchards and from trees aligning the roadway, and will go probably to 125 or 130 tons all told. At 7 cents per pound, the crop will thus bring into this section the snug sum of $18,200. The output, moreover, is being increased constantly by the addition of young trees coming into bearing, and next year will undoubtedly be much larger than this season. New orchards are being set out on an extensive scale, the total new area amounting to 2000 or 3000 acres. The big walnut grove below town, containing 600 acres, the largest walnut orchard, by the way, in the world, is coming on nicely, and will in a few years be good for several hundred tons of nuts. Aged trees, say from 12 to 15 years old, yield upward of a ton per acre.

Placer.

FRUIT FOR ENGLAND.—Auburn *Argus*: The Auburn Cooperative Fruit Company shipped on August 31, by the export special train, a carload of fruit to James Adam, Son & Co., Liverpool. The car contained principally peaches, there being 950 boxes of that fruit, all of which were five-inch boxes, running about 49 peaches to each box, many of which were 20-ounce peaches. There were 150 boxes of pears and plums and a few crates of grapes, all of the choicest that could be gotten. It is expected that this will prove to be the finest and most profitable carload of fruit ever shipped from Placer county, and reports from the sales will be anxiously looked for. There are about 25 growers represented, and each brought in their best fruit. A box of the finest peaches were directed to the Lord Mayor of Liverpool as a gift.

Plumas.

THE HONEY LAKE DAM.—Reno *Gazette:* Wm. Bovard, one of the ranchers in Honey Lake valley, made a very flattering statement. He says that he has no doubt that the irrigation scheme of that company will prove a great success by reclaiming between 75,000 and 100,000 acres of as fine agricultural land as can be found on the Pacific Coast, lacking only water to make it as productive as the meadows on the Truckee. The completion of the dam now in the course of construction is assured. Two hundred horses and a large force of men are working on it steadily. All of the horses and feed, Mr. Bovard says, were purchased of the farmers in the valley.

Solano.

FRUIT NOTES.—Suisun *Republican:* On the 24th of August, Alex. Davis, a representative of Castle Bros., bought the entire crop of dried peaches of Mrs. E. P. Buckingham, paying 12½ cents per pound. Up to August 24th of this year, 383 carloads of green and 18 carloads of dried fruit have been shipped from Vacaville. Last year the number for the whole season was 564 carloads of green and 151 carloads of dried fruit. It is expected that that record will be surpassed this year. The receipts of cash this year have been $371,000 as against $241,000 at the same time last year.

Tulare.

HOW TO PLANT TREES AND VINES IN ALKALI. C. J. Berry in Visalia *Times:* Many of our orchardists and vineyardists have a small spot of alkali ground, located sometimes in the back part of their orchard or vineyard out of sight of the critics and generally out of sight of the owner, and for that reason does not cause the annoyance that it would if located directly in the front part of their ranch where everybody who sees their trees or vines looks at that spot first; and all the time I am confident that any and all of our orchardists will go to a good deal of trouble to overcome the appearance of this sore spot. To do so you should dig the holes for your trees or vines at this season of the year, in the month of September. The holes should be dug extra deep and wide, three to four feet, and the same width. All of the dirt that is dug from these holes should be scattered broadcast over the land, and when planting season comes on, none of that dirt dug from the holes or any of that surrounding them should be used. The holes should be let stand open until you are ready to plant your trees or vines. When so ready, with a wagon and team of horses, haul some good, rich, alluvial, surface soil from some other part of your ranch (do not use sand) and plant your trees and vines in the holes dug, with this good soil, and you will be pleased at the result, and the sore spots in your orchard will be cured. Be sure to be liberal in digging the holes. A little extra labor here will give you more satisfactory results. This process will give your plants a chance to get thoroughly rooted, and I have found when a tree or vine is once growing vigorously, what alkali is in the soil is a benefit to fruit and grape culture.

HEAVY WHEAT.—*Times:* J. J. Cairns, the biggest wheatgrower in the San Joaquin valley, came into Visalia from his home near Lindsay. His wheat is turning out moderately well. The quality of his grain this season is even better than last. On one tract near Deer creek he harvested 14,000 sacks that averaged 140 pounds to the sack—a quite heavy weight. Smut, he says, troubles him but little, and he attributes this to careful bluestoning of the grain before sown the spring.

A LARGE PRUNE ORCHARD.—Hanford *Journal:* The Kimble orchard embraces 544 acres, all set to prunes, and it is the largest prune orchard in the world, being double the size of the next largest, 250 acres located near Paso Robles. The land does not lie all in one body, but is in different tracts near together, there being five of these tracts in all, each in charge of a different foreman and all superintended by Mr. Clark. Along the public roads in front of the orchard are set 2¼ miles of acacia trees 37½ feet apart. There are 66,000 trees in the orchard, and probably 30,000 of these trees show a growth of 10 feet this year, and many a growth of from 11 to 12 feet, with a 12-inch girth of the trunks, the number of limbs on the trees varying from 10 to 40. With the exception of a few spots which were overflowed or were strongly impregnated with alkali, the trees have grown rapidly and evenly. The orchard has been plowed twice and harrowed right after plowing, and has been cultivated already about 12 times this season and hoed three times, and hardly an armful of weeds can be found on the whole tract. He started his cultivation at a depth of five inches, and has gradually increased the depth until the last two cultivations, which have had a depth of nine inches. None but white labor is employed on this farm, as Mr. Clark, who has had many years' experience in orchard and vineyard work, says that white labor is far preferable to Chinese, and cheaper. The employes on this ranch are well housed and fed, and the treatment they receive is evidently appreciated by the workmen. There have been as high as 85 men eating at the house at one time during the past spring, but the wants of their "inner man" have always been well attended to, and the average cost of board to the owners of the place has only been $11.25 per month per man. The cooking is also done by white labor.

ARIZONA.

DROUTH IN SOUTHERN ARIZONA.—Crittenden Cor. Wilcox *Stockman:* In your article on the drouth of southern Arizona, in your late issue just read, all that you say of the drouth, of the scarcity of grass—and you could have added with equal truth the scarcity of water—is true, but you destroy the whole force and effect of your article by adding that rain had fallen in large abundance. In no part of Pima county is this true. Sheriff Brown, who was here a day or two ago, having driven all the way from Tucson, reports that in his official business he has been in every precinct in the county, and that this is the most favored section he has seen for grass Our own observation coincides exactly with the above statement. There is no grass here, not even in the valleys, nor in the smaller draws that carry the water from the mesas to the valleys, and the farther from the valley you go the less the grass; even on the mountain sides to the summit all is gone. From present appearances, 50 per cent of all the cattle in southern Pima county are now dead. They died during the past winter and early spring. The rains of January and February, 1892, depleted the herds like as if they were showers of poison. No man to-day throughout all this section has within half the cattle that he had this time last year. There has been some fall of water over this section, but the area was limited over which it fell, and the time between each fall was so long that the effect of one rain was entirely lost before another came. Nothing but a miracle can prevent the total loss of every animal left in southern Pima county, and the sale of the cattle of T. Lillie Mercer at $2.35 per head was a good sale, considering the present condition of the range. Mercer gets over $2 for his cattle and the purchaser gets nothing.

A GRAND IRRIGATING PROJECT.—Tucson *Citizen:* The canal starts at the Oatman canyon in Yuma county near the station known as Chrystoval. It is 80 feet wide on the bottom, has 6 feet depth of water, and is 10 miles in length when it reaches the railroad from the river. It crosses the railroad track and again the second time crosses the railroad track 2½ miles east of Aztec and a third time it crosses the railroad ¾ of a mile from Aztec, then runs southeast 15 miles up and around the valley, then runs a trifle northwest following the base of the Mohawk valley, giving 70,000 acres south of the railroad under the canal and 91,000 acres north of the railroad, making a total of 161,000 acres. The Southern Pacific Railroad runs through 20 miles of this land. There is a large portion of this land that is mesa land, while at the north side of the track the river bottom lands have already in operation 22½ miles of canal. Thus we find a railroad traversing the entire length of these 161,000 acres subject to irrigation, and the farthest point from the railroad in this scope of land would be 15 miles—that is, the ranch that is situated on the extreme outskirt of this acreage would be 15 miles from the station. This canal company has 13 miles of continuous reservoir 11 feet of water depth to draw from covering 4000 acres. The length of the canal to Mohawk summit is 65 miles and a total canal length to the river of 75 miles. One of the features, and a most prominent one, of the designs of the company is to build a dam 110 feet high holding in reserve a volume of water covering 40,000 acres of space. This dam was the one so urgently recommended by the citizens' committee, two years ago, in Yuma. Where the dam is to be constructed, nature has so placed the topographical formation of the country as to furnish the material and aid the construction to a great degree inasmuch as the earth in that immediate vicinity is lava-covered to a depth of 10 to 40 feet.

NEVADA.

A BIG CROP.—Winnemucca *Silver State*: Chas. McDeid says he has just finished threshing at the Sonoma ranch, and is well satisfied for the yield this year. One hundred acres produced 2000 sacks of barley, and 30 acres produced 600 sacks of wheat. He will commence to-day to cut the second crop of alfalfa. The fruit orchard is looking very well, although the crop of fruit is not as heavy as in some years.

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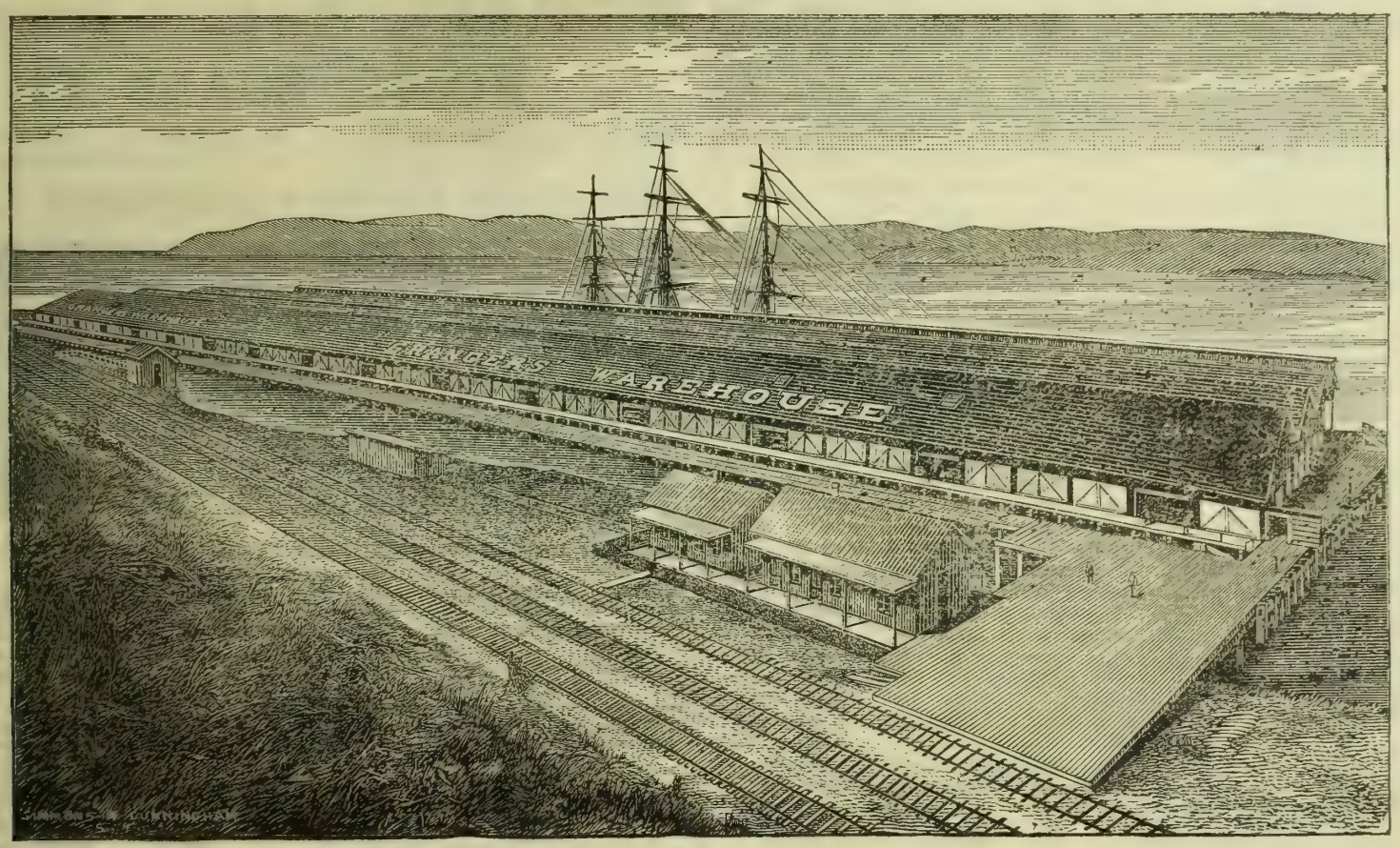
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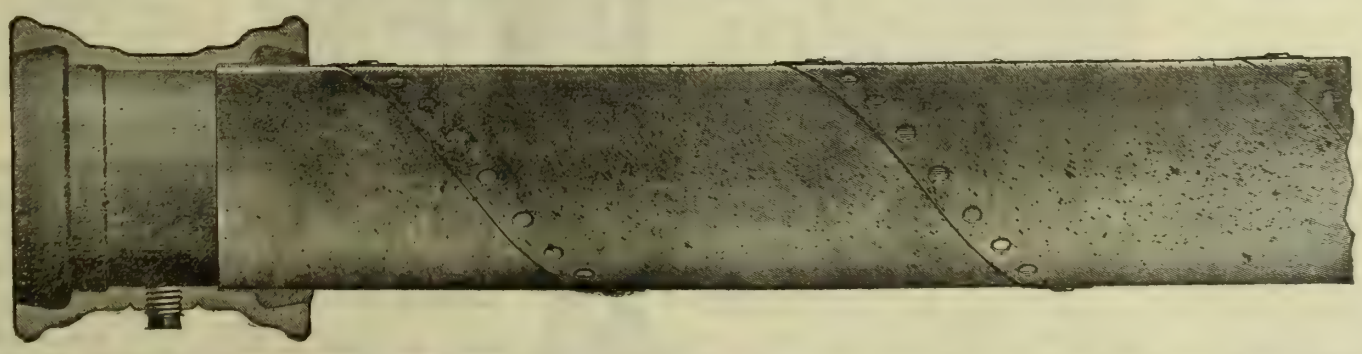
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The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

MR. AND MRS. S. C. CROSS, of Roseville Grange, have removed to East Oakland, and we trust will become regular attendants of Temescal Grange, where they will certainly be welcome. Their two sons will attend the Baptist College at East Oakland. We hope to receive some of Mrs. Cross' able pencilings for this column.

STATE GRANGE MATTERS.

Under this heading a circular was forwarded last week from the Secretary of the State Grange to each subordinate Grange containing reference to the proposed amendment to the constitution of the State Grange, railroad rates, election of alternate representatives, etc. We extract the following from the official letter accompanying the circular:

OFFICE SEC. STATE GRANGE,
SAN FRANCISCO, Sept. 2, 1892.

W. M. and Members of — Grange:—The twentieth session of the State Grange will convene in the new Unitarian Church at San Jose, at 10 A. M. Tuesday, October 4th.

All Matrons and Husbandmen in good standing in the fourth degree of our noble Order are invited to honorary seats as visitors. The brothers and sisters of San Jose are making extra efforts for the comfortable and profitable entertainment of all who will accept their fraternal greeting and cordial welcome in the Garden City of California.

After harmonious working in this jurisdiction through a year of financial Grange prosperity, why shall we not have a large and happy gathering in such a hospitable and beautiful section of our field?

I take pleasure in calling your attention to an accompanying printed sheet, containing matter which should be read at once, or in installments, as soon as feasible, before your Grange, and all the important points made known as fully to every member as possible.

The fifth degree (Pomona) and the sixth degree (Flora) will be conferred in ample form, with a grand Feast of Pomona, on Thursday evening.

All fourth degree members in good standing are eligible and privileged to advance to the fifth and sixth degrees of the P. of H., by filing applications in due form, according to blanks heretofore sent to your Secretary, and the payment of $1 for such degree.

All indications seem favorable for one of the most pleasant and perfect annual council gatherings of our great brotherhood.

Secretaries will now please make out their annual statistical report on the blanks sent, forwarding one copy to the Secretary of the State Grange for placing on file, and hand a duplicate to the Master of their Grange, to aid him in making out a written report to read upon the roll-call of subordinate Granges and publication in the Annual Proceedings. Also send, for filing in the State Grange Secretary's office, a full list of members, as has heretofore been requested by the State Grange.

Let all resolutions and other work for the State Grange session be as fully and thoroughly prepared for the speedy and perfect transaction of business as practicable, and all who can, attend with a determination to do their best to plan for a new year of advancement unparalleled in the annals of our sure and steadily advancing Order. Yours truly and fraternally,

A. T. DEWEY,
Sec'y State Grange of Cal.

VIA S. F.—Patrons visiting the State Grange, and passing through (or going from) Oakland, can return on the west side of the bay, via San Francisco, by paying 15 cents extra for a ferry ticket. Unlimited stop-over privileges are allowed on first-class unlimited tickets going to San Jose.

TEMESCAL Grange has ordered new badges.

H. M. LA RUE, Past Master of Sacramento Grange and Chief Viticultural Commissioner of the World's Fair, started to Chicago to assume the duties of his office last week. He has the hearty good wishes for the success he richly merits from Patrons and citizens generally.

FINANCIAL STATEMENT.—The balance on hand and in the State Grange treasury September 1st, 1892, was a follows: In the general fund, $675 34; in the lecturer's fund, $1,702 08; total, $2 377 42.

THE MANUSCRIPT of an excellent annual address has been received from Worthy Master Davis, and will soon be printed in readiness for distribution at the State Grange session.

ANOTHER GOOD LINK.—Past Master Overhiser has again scored a large credit mark by organizing on August 31st, with the assistance of a few others, Independent Grange at Linden, Douglass township, San Joaquin county, with 48 names on the charter list sent to the State Secretary. Officers were elected and a meeting appointed to install them on Wednesday, Sept. 7th, at 2 P. M. We hope there will be a good turnout of visiting Patrons from other Granges in San Joaquin county, giving the new Grange many warm hands of greeting.

AT THE STATE FAIR.—Many Patrons will [illegible] Sacramento during this and next week at the State Fair. Would it not be well for Sacramento Grange to establish Grange headquarters where Patrons can, day and evening, meet for mutual and fraternal conference? Sometime during the fair why should not Sacramento Grange have a rousing State Fair meeting? No harm to suggest, we trust.

PARAGRAPHS.

We cull the following from the *Farmers' Friend*:

The political pot is seething and boiling in this State, and, as usual, when the pot boils there is a great deal of dirt coming to the surface.

The political liar is at work, and working so vigorously that it is not safe to believe anything one sees in party organs about the sayings and doings of political leaders or men prominent in governmental affairs.

Cheer up, boys, the campaign orators will soon be on the stump extending sympathy to "the toiling millions." They always do just before the election, you know. When the ballots are all in, "the toiling millions can take care of themselves.

The fight against the adulteration of articles of food is growing pretty warm, and it would grow a great deal warmer if every one could read the special report on the extent and character of food adulteration, and find out that it is the rarest thing in the world to get a pure article of anything in daily household use.

The curse of this country is that its affairs are in the control of professional politicians whose principal means of support is office-holding. The man who has to devote all his time to keeping himself in office has none left to give to public affairs, consequently the business of the people is lost sight of in his persistent efforts to keep in office.

We have learned incidentally that the dominant political party of Bradford county made their nominations this year not by the old delegate system, but by what is known as the Delaware county system. The merit of the new plan is that each candidate goes before the entire voting population of his party on his individual popularity. The nomination is made by the people, each voter expressing his choice of men with as much freedom as on the day of the general election. This plan has a good deal to recommend it. The candidates selected are the choice of a majority of the voters of the party, and should of course have the full party support at the election in November.

Hotel Rates to Patrons.

The following hotel rates have been secured for Patrons during State Grange week in San Jose: Hotel Vendome, $2.50 per day; St. James, $1.50, except with some extra fine rooms the rates will be $2. The Nucleus, or St. Mary's hotel, will charge $1.25; the New York Exchange, $1.25; the Melville, $1; and the Auzerais House will furnish good rooms at 50 cents per day.

All communications as to hotels may be addressed to Cyrus Jones, San Jose.

The Pomona feast will be held in Turn Verein hall.

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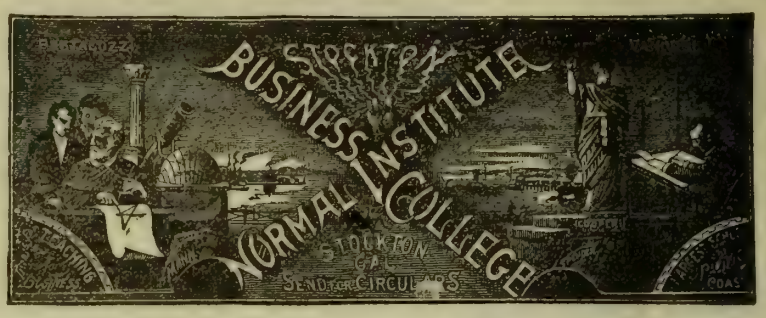
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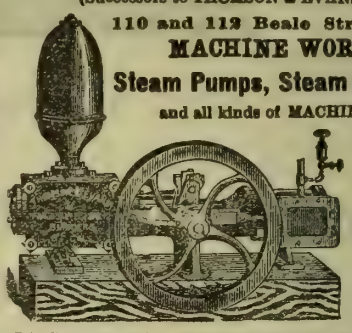
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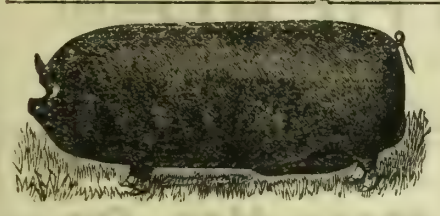
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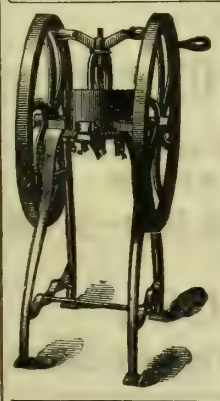


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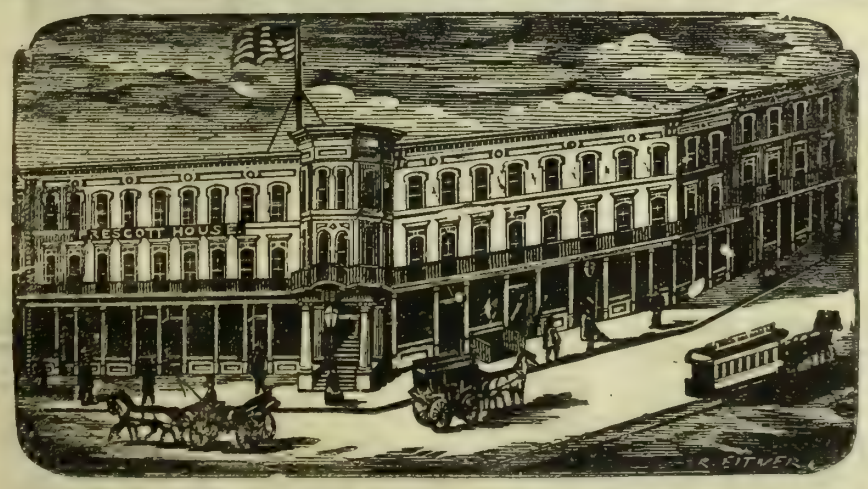


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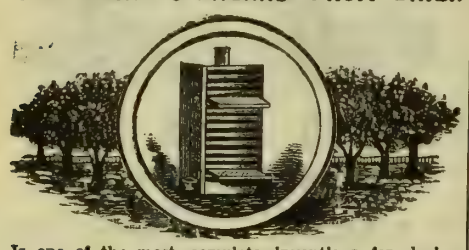
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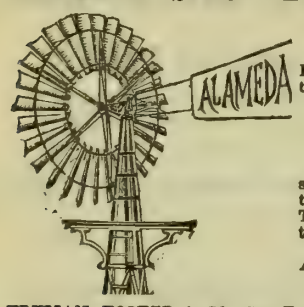
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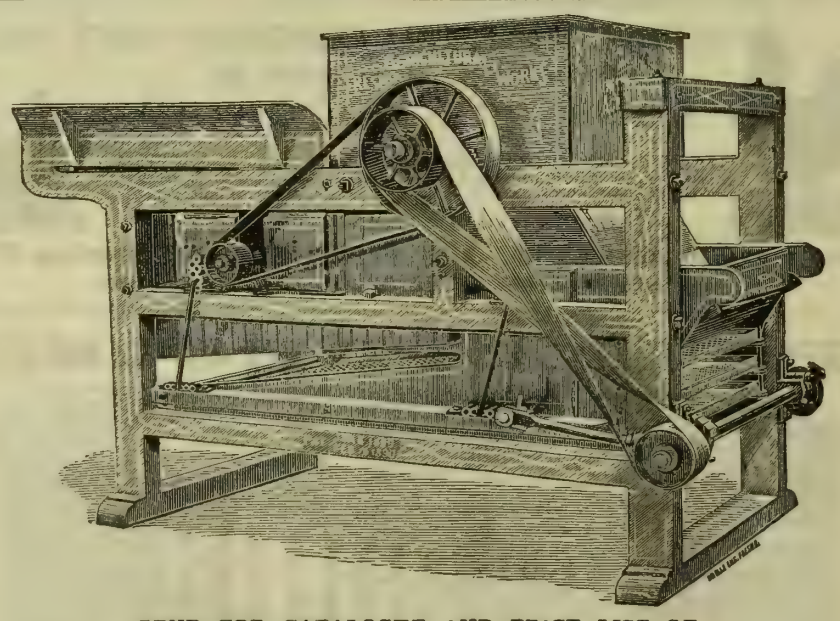
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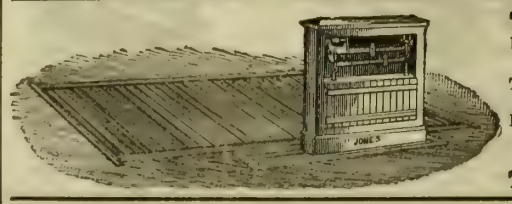
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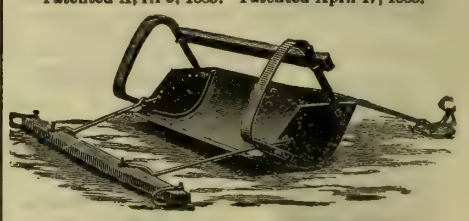
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S. F. MARKET REPORT

Market Review.

SAN FRANCISCO, September 6, 1892.

The week was broken by a holiday on Monday, which is to be followed by another on Friday. The two holidays coming so near together are a disturbing element in the local market, and until passed, operators in farm produce are more or less offish. The cholera scare at the East and abroad, is still being used for all it is worth by bear operators to depress the value of commodities subject to speculative influences. As is usually the case, wheat has been the target, and so far, success appears to have crowned the attacks of the bears. Under a normal condition of affairs, the wheat markets of the world ought to be considerably higher than they are now reported. European authorities estimate that the shortage in the world's wheat crop is about 80,000,000 bushels in comparison with the outturn last year. It is said that since these estimates were put out the European crop is not turning out so large as it was estimated up to two weeks ago, while in the United States the failing off is still more marked, owing to shrunken grain in the northwestern central States. It is now claimed that the crop in this country will not go much, if any, above 475,000,000 bushels against 615,000,000 bushels in 1891. A decrease of 140,000,000 will make itself felt later on in the various demand markets. The crop is not only smaller, but the flour-making quality of the wheat in the central States is very considerably reduced.

The local market holds steady with a firm undertone. The export clearances show a decided increase over the preceding week. Farmers offer their wheat sparingly, preferring to hold for better prices later on. Bright, plump barley has had good support, but dark and otherwise poor barley has ruled barely steady. Heavy shipments of the better grades continue to go forward quite freely, with New York and Liverpool the principal buyers. While the very high tariff placed on barley imported into this country is said to have caused Canadian farmers to devote less attention to its cultivation, yet the price on this coast and also at the East is fully 25 per cent less than at the like date in 1891. This decline is in the face of a decreased acreage, compared with that seeded in 1891, of about ten per cent. A larger crop abroad and a strong selling pressure are against American barley at present, but, like wheat, it looks as if the market will do better later on, or as soon as the selling pressure is withdrawn. Oats have barely held their own, owing to heavy receipts and an offish demand. Many consignments were forced on the market to save expense. Corn ruled weak in the absence of an active shipping demand. The crop in the central States will fall considerably below that gathered in last year. Rye has held fairly steady. At the lower prices, it attracts more attention. The large crop abroad is against any shipping demand, except at low prices.

Feedstuff sold at lower figures. The decline in millstuff was due to heavy receipts of bran and screenings from up North. The feeding demand continues to enlarge. Rolled barley has met with a good home and shipping demand. Straw is barely steady. Hay, outside of the more choice grades, has been irregular, with, at times, concessions made to induce buying. While there have been more or less concessions, yet it is claimed that they were not so frequent as has been the case in any week since the middle of July. The consumption demand was free. There were a few shipments to Central America.

Butter has barely held its own the past week. The rapid advance has drawn in more liberal supplies, and at the same time attracted the trade to pickle The latter coming into competition with good to choice fresh butter will naturally prevent an advance in these grades, and cause gilt-edged to barely maintain the advanced figures. If rains hold off, there can be no doubt but the market will do better, owing to high prices in the central States precluding the possibility of sending us supplies of creamery, and without free receipts from the East the surplus on this coast will be exported, as stated, unless early rains set in and natural pasture be provided in the southern and central counties. Cheese has held to steady prices. The eastern market is reported strong. Strictly fresh-laid, selected eggs have met with a strong demand, and caused slightly better prices. Choice eggs were also in good demand, but all below the latter quality was more or less irregular. Bakers have been free purchasers of as is at around 18 cents for eastern.

Garden truck has been more or less irregular. The demand is fair for the season. Onions have held to weak prices. Diseased and otherwise poor potatoes have favored buyers, but choice good keepers have had good support at steady but firm prices. The shipping demand was only fair.

Hop-picking is in full blast. So far as we are able to learn, buyers and sellers are still apart. The latter are confident that better prices will obtain after this crop is gathered. Honey has come in freely, but the market held strong in sympathy with high markets at the East. Fall wool has been disappointing in the smallness of the movement and the low prices current. Livestock did not change very materially. Poultry has been in oversupply, which caused free rejections and irregular prices. Hay product has declined, owing to the cholera scare at the East. Beans have held strong. New-crop Limas are in active demand for shipment to the East. Mustard-seed is coming in quite freely. The market shows continued strength.

About all the new-crop walnuts have been contracted. The market for other new-crop nuts has a strong, healthy appearance, although, it is said, buyers are talking bearish. The foreign crop of Brazil and almonds is reported short.

The fruit market has been in that condition peculiar to the season of the year, except that so far the East has taken green fruit more freely later in the season than ever before, although the cholera scare is said to be causing more indifferent buying at New York. Very choice, firm, green fruit is growing scarce. What is now called choice was a short time ago only considered good. Canners are still in the market for canning varieties, but they are bidding lower prices. The supply of overripe fruit appears to be increasing, which has caused a weaker market and lower prices for off qualities. The mountain tree fruit coming to hand is generally good to choice and commands the highest market prices. Grapes have come in more freely, which has caused a shading in prices. Choice, good-keeping apples are still in light supply. For the more choice there is a quick market. Dried fruit has had strong support in an improved demand from the East. Foreign advices report strong markets for prunes and a better feeling in raisins. These advices naturally strengthen the market in this country. It now looks as if the bulk of dried peaches, prunes and other dried fruit has been bought for shipment to the East, but this is the season of the year when the heaviest purchases are made.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan.
Thursday	5s11½d	6s0½d	6s01½d	6s02½d	.... d
Friday	6s00½d	6s01½d	6s02½d	6s03 d	.... d
Saturday	6s00 d	6s01½d	6s02½d	6s03 d	6s03½d
Monday	.....	.....	.....	.....	.....
Tuesday	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	32s6d	32s9½	32s6d	Easier.	Fine.
Friday	32s6d	32s9d	32s6d	Steadier.	Wet
Saturday	32s6d	32s9d	32s6d	Steady.	Unsettled.
Monday		.....	.....		
Tuesday		.....	.....		

To-day's cablegram is as follows:

LIVERPOOL, Sept. 6.—Wheat—Quiet. California spot lots, 6s ½d; off coast, 3's 3d; just shipped, 32s 9d; nearly due, 32s 3d; cargoes off coast, slow; on passage, rather easier; wheat on passage to continent, 938,000 qrs; wheat and flour on passage to U. K., 2,148,000 qrs; French country markets, quiet; weather in England, cloudy.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Sept.	Oct	Dec.
Thursday	131	133⅜	139
Friday	131½	133½	139
Saturday	.....	....	....
Monday	....	....	....
Tuesday	....	....	....

The following is to-day's telegram:

NEW YORK, Sept. 6.—Wheat—78c for September; 79¼c for October; and 82⅜c for December.

Chicago.

Day.	Sept.	Oct.	Dec.	May
Thursday	123½	125	128½	....
Friday	123	123¾	128⅜	....
Saturday	121¼	122⅜	126⅝	136½
Monday	....	....	....	....
Tuesday	....	....	....	....

The following is to-day's telegram:

CHICAGO, Sept. 6.—Wheat—72⅜c for September; 81⅜c for May; and 76c for December.

San Francisco.

WHEAT.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec.	May
Thursday, high st.	131⅛	131⅛	....	135	....
" lowest	131⅛	131⅛	....	134⅜	....
Friday, highest	131⅛	....	....	135⅛	....
" lowest	131⅛	....	....	135	....
Saturday, highest	131	....	....	135⅜	139
" lowest	136⅜	....	....	134⅞	139
Monday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Tuesday, highest	....	....	....	....	....
" lowest	....	....	....	....	....

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat, buyer December, 600 tons, $1.33⅜; 200, $1.33⅝; 200, $1.33⅞ ₩ ctl. Regular Session.—Buyer December, 1100 tons, $1.34; 100, $1.34½ Seller 1892, 100 tons, $1.30½ ₩ ctl. Afternoon.—Buyer December, 2400 tons, $1.34⅜, 200, $1.34½ ₩ ctl.

BARLEY.

	Seller '92.	Buyer Aug.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, highest	88	....	....	....	93⅜
" lowest	88	....	....	....	93
Friday, highest	....	....	....	....	9.⅜
" lowest	....	....	....	....	92½
Saturday, highest	87⅜	....	....	87⅜	....
" lowest	87⅛	....	....	87⅛	....
Monday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Tuesday, highest	....	....	....	....	....
" lowest	....	....	....	....	....

The following are to-day's recorded sales on Call:

Regular Session.—Barley, December, 100 tons, 91⅛c; 100, 91⅜c; 100, 9 ⅜c. Seller 1894, new, 200 tons, 86½c; 100, 86⅜c; 200, 86⅜c ₩ ctl.

Markets by Telegraph.

Foreign Grain Review.

LONDON, Sept. 5.—The *Mark Lane Express* says: The recent heavy rains seriously interrupted the wheat harvest Oats were benefited, but too late to make an average crop. Old wheat averaged 32s 6d, and new wheat 30s 6d; best flour is still quoted at 33s, but a decline to 30s is not improbable Barley has declined 3d in London and 6d in the Provinces.

Eastern Wool Markets.

NEW YORK, September 2.—The leading wool markets report a quiet demand, but firm prices on all grades. The manufacturers are well supplied, and unless they can get wool at their figures are not inclined to buy. The stocks are larger, but they are in strong hands. Fleeces still lead the market in point of demand. They are the cheapest wool on the market At the present quotations they are firm, and ought to go higher, or else other grades must go lower. Quarter-bloods are still quiet. There is very little doing in Texas wools, but the supply is light and prices are unchanged. Very little business is reported in California wools. A few sales are reported of Montana and Utah wools, but otherwise the Territories have been neglected. There is only a moderate trade in pulled wools. Australian wools are in light demand. The outlook for the next London sales, which will open September 13th, is favorable. The cholera reports have further strengthened the position of carpet wools. Manufacturers are buying ahead of their wants to a larger extent than ever before. The supplies here are light and the holders are very firm in their demands. Higher prices are expected.

NEW YORK, September 4.—The demand here was only moderate; but the East still makes a good showing. All prices retain their former ranges California and kindred unwashed are quoted at 15c to 23c. Sellers policy is to let wool go freely, believing that a prompt, steady reduction of the present ample supplies is bound later on to give the selling side more independence and work up favorable rates for an important bulk of stock that is certainly worth a better average than early sales have disclosed. During the week whenever fractional advances were suggested with any lip stiffness, buyers at once sought sellers, who comprehended that the time is not yet ripe for new figures. Sales at New York, 435,000 pounds of domestic and 131,000 pounds of foreign. Sales at Boston, 2,625,900 pounds domestic and 780,000 pounds foreign.

Dried Fruit.

NEW YORK, September 4.—Canned Fruits are without new features. Evaporated are nominal at 12½c free on board.

Prunes—Better trade feeling is noted. Sixties and nineties, boxed, sold in good blocks at 11⅛c for October shipment landed.

Raisins—There are no explicit quotations, and considerable bearish sentiment pervades the market, supported by the heavy shipments of Valencia in view. The pool enterprize of establishing uniform qualities is heartily commended. Success in this way will prove a better regulating factor in the market than the adoption of cast-iron prices, for which buyers are in no mood this season.

Apricots are scarce and in demand. Some fancy Moorparks are reported at 19c; other choice, 16@16½c; a car of good grocery trade, 15c; all spot.

Miscellaneous.

NEW YORK, September 4.—Honey—A car of light amber sold at 6¾c, free on board

Lima Beans—Round lots to arrive were placed at $2 10 landed; closing prices, $2@2 55, but no unfavorable reaction is feared

Mustard Seed—Firm with the lateness of the new coast crop. Old yellow, 4¾c; brown, 4½c; wild, 3⅞c. The stock here has not been so light for the past ten ten years; Picklers generally are supplied.

Canary Seed—Is up to 4¾c and tending higher.

Hops—The market sags under light trading on spot; cautious bids and buying attend the present indefinite crop accounts. Prime to best State has declined to 22½@23½c; Pacific, 21½@23c. These rates fully cover future States.

English Hop-Crop Prospects.

The *Mark Lane Express*, Aug. 22d, reports as follows: The reports from the plantations are somewhat conflicting. Down to the middle of the week prospects were improving generally, the hot weather being of great assistance to the plants. The heavy storms and rains of the last few days have destroyed much of the vermin that was left, and have no doubt been the means of saving many of the worst grounds from going into a black blight. There is still, however, a great deal of lice in a large number of plantations, and washing has again been done to-day at places. The forward hops are looking well, and the later sorts seem to be coming along satisfactorily in some grounds, though in others they are described as making but little progress toward development. From some parishes there are reports of a decided increase of mold, consequent upon the wet weather, while from others it is stated that mold does not spread. On the whole, we think that the prospects are better than last week, but not by any means bright. The crop, if it comes up to an average in quantity, must, under the circumstances, be one of variable quality, and the relative proportions of healthy, clean hops, indifferent samples, and those more or less diseased, will be determined by the character of the weather from now until picking time. Continental reports are mostly favorable.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Sept. 5, '92, were as follows:

Flour, qr. sks	139,054	Bran, sks	22,625
Wheat, ctls	389,166	Buckwheat "	....
Barley, "	93,78	Middlings "	2,770
Rye, "	2,495	Chicory, bbls	220
Oats, "	12,588	Hops, "	27
Corn, "	3,308	Wool, "	1,071
*Butter, "	1,007	Hay, ton	5,036
do bxs	1,180	Straw, "	200
do bbls	97	Wine, gals	264,330
do kegs	779	Brandy, "	600
do tubs	29	Raisins, bxs	1,413
do ½ bxs	87	Honey, cs	196
†Cheese, ctls	807	Peanuts, sks	....
do bxs	10	Walnuts "	....
Eggs, doz	22,140	Almonds "	210
do " Eastern	24,000	Mustard "	3,747
Beans, sks	4,961	Flax "	241
Potatoes, sks	22 019	Popcorn "	....
Onions, "	1,993	Broom corn, bbls	295

*Overl'd, 341 ctls. †Overland, 80 ctls.

Exports by Sea from San Francisco from July 1 to Aug. 31.

	1892-93	1891-92
Wheat, ctls	1,588,453	2,885,445
Flour, bbls	196,538	209,726
Barley, ctls	297,284	142,823

Tonnage Movement.

From reliable advices up to Sept. 4, the following summ tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	294,028	421,817	*155,473	67,183
San Diego	19,635	27,891	4,540	.....
San Pedro	12,480	5,022	....	
Oregon	49,165	59,028	39,856	15,639
Puget Sound	39,323	26,004	.....	
Totals	414,531	539,162	199,869	83,822

*Engaged for wheat, 1892, 44,653; 1891, 62,140.

Cereals.

London *Agricultural Gazette*, Aug. 22d, says: "Last year at this time the wheat crop more especially was very much 'in sight,' from the writer's point of view, all over the best wheat-growing districts of England: now the crop does not fill the eye in-sheaf as it did then (so uniformly at least), and it would be an exceptionally bold man, who has had exceptional opportunities of observation, who would, at this juncture, hazard an opinion on the wheat crop on that portion of England lying to the eastward of the chalk hills running from Gloucestershire to Norfolk, and including the most important wheat-growing counties other than Lincolnshire and Yorkshire. The Fen country of Cambridgeshire and Lincolnshire has hitherto been reported upon favorably.

The Hungarian Ministry of Husbandry makes the following estimates in hectoliters of wheat harvests, together with importations which will be needed: Great Britain, 23 000.000 to 25,000,000, imports 56 000,000 to 58,000 000; France, 105 000,000, imports 15 000,000; Germany 34 000,000 to 35,000,000, imports, 5,000,000 to 6 000,000; Italy 40,000,000, imports, 9,000,000 to 12,000 000; Austria 17,000,000 to 18,000,000; imports 8,000.000 to 10,000,000; total harvest 266 500,000 to 270,800,000; total imports, 144 600,000 to 153 000,000. The rye harvest of these countries is estimated at 440,000,000, against 370,000,0 0. This makes the import requirements of all European importing countries 320,000.000 to 348,000,000 bushels. The requirements of other countries are about 20,000,000 bushels, making the requirements of the world 340,000.000 to 368,000,000 bushels, or an average of 354.000,000 bushels. The export surplus of the United States is 160,000,000 bushels. South America and Australia 20,000,000 bushels, India, Servia, Turkey, Persia Egypt, Turkey-Hungary 91,000,000 bushels, leaving 82,000,000 bushels to be supplied by Russia, Roumania and Bulgaria. The estimate of the world's crop, as given by the same authority, makes a total of wheat of 2,127,000,000 bushels, against 2,352,000,000 the previous year. The decrease is 230,000,000 bushels. The world's rye crop estimated at 1,245,000,000 bushels, against 1,047 000.000 bushels last year, an increase of 198,000,000,000 bushels.

The serious injury to the French wheat crop reported last fall was confirmed by the imports of wheat this year, which were the largest on record, exceeding the estimate by several million bushels. The total for the year was 113,242 000 bushels, against 46 164,000 bushels the previous year and 24,876.000 bushels two years ago. Notwithstanding the enormous imports the past year, the bonded stocks of wheat on August 1, was only 1,118,000 bushels, against 6,448,000 bushels the previous year and 2 504,000 bushels two years ago. The crop this year is variously estimated from 276,000,000 to 299.000 000, or say, 285 000,000 bushels for an average, indicating requirements of 50,000,000 to 60,000.000 bushels for the coming year.

Dornbusch estimates the crop of wheat in Europe at 1,154 000,000 bushels, against 1,060,000,000 bushels last year, and 1,320,000,000 bushels two years before. Outside of Europe, the crop of America shows a decrease of 52 000,000 bushels.

The official report of the Russian crop in Russia proper is figured as meaning 600,000,000 bushels of rye, against 539 000,000 last year, and 721,000,000 bushels the previous year. The winter wheat crop is estimated at 52,000,000 bushels, against 71 000,000 bushels last year, and an average of 72,000,000 bushels for the last eight years. The spring wheat crop is estimated at 172,000,000 bushels, against 109,000,000 bushels last year and 131,000,000 bushels in 1890. The trouble with these estimates is that the Russian reports are usually much in excess of what actually turns out, the Russian reports being influenced by desires to report a big crop.

The local wheat market was quiet to-day at steady prices. The better grades of shipping and milling continues to be offered sparingly and to secure a round, straight parcel, buyers have to pay an advance on bids. The offerings are largely of small parcels and of varying grades. It is claimed that higher prices are bid in the country than in this city. Exporters and millers appear to confine their purchases to nearby wants. This season, owing to the milling trust, there is less buying competition for milling wheat.

Bright barley was firm to-day under a fair shipping and home demand. Dark barley and poor grades were barely steady. It is claimed that the sales of barley, so far this season, are fully double what they were during the like time last season. The low prices now ruling have created a larger feeding demand and also free buying for shipping and malting.

Oats were generally easy, although no changes in quotations were reported. There were several consignments which had to be placed to save expenses, and to sell them, concessions were offered Bright, choice grades are not offering very freely, but the large offerings of other grades unfavorably affects them.

Corn was barely steady. The demand was of an offish character. The stock is not large, while the crop promises to be less than it was last year.

Rye was steady at quotations.

Feedstuff.

There was a good demand for groundfeed, but the heavy offerings caused the market to rule in buyers' favor. The demand for rolled and ground barley is steadily enlarging.

Hay was fairly firm for the more choice grades, steady for good, but weak for poor. There is a growing belief that the market will soon begin to do better, provided heavy rains do not set in soon. Farmers, it is claimed, have about sold or else warehoused their surplus crop, and when either is an accomplished fact, the market usually strengthens.

Dairy Produce.

The market for butter was reported irregular today. The more choice, gilt-edged is said to be well held; but even with the supply in hand, unless an active demand sets in to clean it up quickly, the quality is apt to deteriorate. Warm and sultry weather to-day causes a better feeling with holders of gilt-edged. Some concessions were made to-day in good to choice.

Cheese was steady with a fair demand reported.

Choice, selected fresh-laid eggs moved off freely today with some extra fine stock said to have been placed at an advance on outside quotations. Choice candled eggs and choice packs of eastern were firm. Eggs suitable for bakers and Chinese were unchanged.

Vegetables.

The receipts of eggplants were more liberal to-day, but only the poorer suffered in price. The market for garden truck was essentially unchanged. There was a fair local and outside demand. Green corn was in lighter receipt.

Sweet potatoes met with a fair demand to-day. Receipts were free, but the market held up well.

Potatoes did not show any material change. There was a fair shipping and home demand for the more choice good-keepers, but the oversupply of poorer kinds kept the market easy.

Fruit.

For fresh fruit the market was irregular to-day. Choice and firm good-sized canning fruit was wanted and for which good prices were bid. The general range bid by canners was 1¼@1½ cts. per pound for peaches, 75 cts. to $1 per box for Bartlett pears, 1@1½ cts. per pound for colored plums and 1½@2 cts. for white. For each of the above kinds an advance was paid if the fruit was extra in all respects. Choice fruit was scarce, but poor was in more liberal supply and very hard to sell. The general market was weak Mountain fruit is wanted

Canteloupes sold slightly higher. There was a good outside demand.

Grapes are coming in quite freely. While choice have ready sales, poor are slow even at low prices.

Eastern mail advices received to-day report a very strong foreign market for prunes, with French driers claiming their ability to market the crop in Europe. These advices report that the trade is coming into the market for California dried fruit. They have heretofore held aloof, thinking Pacific coast crop advices were colored. Raisins are showing more strength at home and abroad. We advance the quotations for choice dried apples; all kinds of apricots are quoted higher, as are choice to fancy peaches. It is claimed that buyers are purchasing quite freely in the interior, but their buying is confined largely to the more choice.

Live Stock.

There are conflicting reports regarding rains in Arizona, but judging from reported lighter offerings of bullocks and beef cattle in general from Arizona and the southern part of the State, there must be some foundation to the report of heavy rainfalls. The local market for bullocks, mutton sheep and hogs is steady. The consumption shows signs of increasing.

Miscellaneous.

Poultry was demoralized under free receipts and only a fair demand. There are too many small-sized and poor-conditioned fowls coming in. Large, fat fowls are readily placed, but small, and also poor, are hard to sell.

This year's crop of Limas is about all under con-

tract. It is now claimed that 3¼@3¾c f. o b. is now asked. The stock of old beans is well cleaned up.

Hops were inactive both buyers and sellers being apart. Mail advices received from New York report sales of choice State at 25c.

Both fall and spring wools are slow, with quotations irregular and hard to give correctly.

Hay product was reported weak, but no lower.

Sugar was advanced another ¼c per pound the past week.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

SEPTEMBER 6, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 90	@	3 00
Butter	2 50	@	3 00
Pea	2 40	@	2 65
Red	2 60	@	2 70
Pink	2 30	@	2 50
Small White	2 30	@	2 50
Large White	2 20	@	2 40
Lima	2 75	@	3 00
Fld Peas, blkeye	1 50	@	1 70
Do green	1 50	@	2 75
Do Nlles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	17	@	—
Do good to choice	23	@	27
Do Giltedged	28	@	29
Do Creamery rolls	25	@	30
Do do Gilte'ge	—	@	32
Eastern, ladle	17	@	19
Cal. Pickled	21	@	23½
Cal. Keg	20	@	23
CHEESE			
Cal, choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	1 ½
Do skim	5	@	6½
Young America	—	@	11
EGGS.			
Cal. "as is," doz.	17	@	19
Do shaky	14	@	16
Do ca dled	21	@	25
Do c old	27	@	30
Do fresh laid	31	@	32
Do no selected	—	@	34
Eastern "as is"	17	@	19
Do candled	21	@	23
Do selected	24	@	25

Outside prices for selected large e gs and inside prices for mixed sizes—small eggs and hard to sell.

FEED.			
Bran, ton	14 50	@16	00
Feedmeal	27 00	@30	00
Gr'd Barley	19 00	@20	50
Middlings	18 50	@20	00
Oil Cake Meal	— —	@25	00
Manhattan Food ₩ ctl. cabinet	— —	@ 8	00
HAY.			
Wheat, per ton	8 00	@	—
Do choice	— —	@12	50
Wheat and Oats	8 50	@11	00
Wild Oats	8 00	@11	00
Cultivated do	7 00	@10	00
Barley	5 00	@ 9	00
Alfalfa	7 00	@ 9	00
Straw, bale	40	@	55
GRAIN, ETC.			
Barley, feed, ctl.	77½	@	—
Do Choice	85	@	—
Do Brewing	92½	@	—
Do do Choice	96½	@	—
Do do Giltedge	98½	@	—
Do Chevalier	8 ½	@ 1	10
Do do Giltedge	1 15	@ 1	25
Buckwheat	—	@	—
Corn, White	1 37½	@ 1	40
Yellow, large	1 28½	@ 1	31½
Do small	1 33½	@ 1	36½
Oats, milling	1 47½	@	—
Feed, Choice	1 37½	@	—
Do good	1 35	@	—
Do fair	1 27½	@	—
Do Common	1 15	@ 1	25
Surprise	1 55	@	—
Black Cal	1 10	@ 1	26½
Do Oregon	— —	@	—
Gray		@	
Rye	1 12½	@ 1	15
Wheat, milling. Gilt edged	1 41½	@	—
Do Choice	1 38½	@	—
Do fair to good	1 36½	@	—
Shipping, cho'ce	1 33½	@	—
Do good	1 30	@	—
Do fair	1 27½	@	—
Common	1 25	@	—
Sonora	1 25	@ 1	41½
HOPS.			
1892 Bid	17	@	19
FLOUR.			
Extra, CityMills	4 00	@	—
DoCountryMills	4 00	@	—
Superfine	2 60	@	3 00
NUTS—JOBBING.			
Walnuts, Cal. lb	6½	@	—
Do Choice	8½	@	—
Do paper shell	9½	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	30	@	40
POTATOES.			
Early Rose, ctl.	40	@	55
Peerless	45	@	65
Garnet Chilies	50	@	70
Burbank Seedlings	45	@	70
Do do salinas	60	@	95

Extra choice sell for more money.

POULTRY.			
Hens, doz	5 50	@ 6	50
Roosters, old	5 50	@ 6	50
Do young	4 50	@ 6	00
Broilers, small	2 00	@ 2	75
Do large	3 00	@ 4	00
Fryers	4 00	@ 4	50
Ducks	4 00	@ 4	50
do, large	5 00	@ 5	50
do, extra large	6 00	@	—
Geese, pair	1 50	@ 1	75
Goslings	—	@	—
Turkeys, Gob'r	19	@	21
Turkeys, Hens	17	@	19

All kinds of Poultry if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food ₩ 100-lb cabinet 8 00

PROVISIONS.			
Cal. Bacon, he'vy, lb	11	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	12	@	13½
do Eastern	13½	@	15
SEEDS.			
Alfalfa	—	@	—
Clover, Red	14	@	15
White	20	@	—
Flaxseed	2 00	@ 2	25
Hemp	3¾	@	4
Mustard, yellow	3½	@	4
do Brown	2½	@	—
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll	16	@	21
Oregon Eastern	12½	@	19
do valley	18	@	23
So'n Coast, def	10	@	12
Nevada (State)	15	@	19
FALL, 1892.			
San Joaq'n, plain	6	@	8½
do mountain	9	@	11
do lamb	8	@	9
HONEY.—1892 CROP.			
WhiteComb, 2-lb	9½	@	12½
do do 1-lb frame	11½	@	14½
White extract'd	7	@	—
Amber do	6½	@	7
Beeswax, lb	25	@	28

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap bl., ring, 50-lb bx	7½	@	8½
Fancy highest			
APRICOTS—1892.			
Sun-dried, unbl. com.	4½	@	5½
Do do prime	6½	@	8
Do do choice	9	@	10
Do bleached, prime	12½	@	—
Do do choice	13½	@	—
Do do fancy	14½	@	—
Evap. choice, in boxes	15	@	—
Do fancy, do	15½	@	—
FIGS—1892.			
Sun-dried, black	4½	@	5
Do white	3	@	—
Do do washed	—	@	
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	8	@	9
Do Evap., in boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	12	@	—
Do do fancy	12½	@	—
Evap, unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Do do choice	—	@	—
Do do fancy	—	@	—
Evap, peeled, in boxes, choice	17½	@	—
Do do fancy	20	@	—
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap, sliced, in boxes	7	@	8
Do ring do	9	@	10
PLUMS 1892.			
Pitted, sun-dried	8	@	9
Do evap. boxes, choice	—	@	—
Do do fancy	—	@	—
Unpitted	4	@	5
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster, ₩ bx	1 90	@ 2	00
Do ch icest do	1 60	@ 1	70
Do p ime, ₩ bx	1 40	@ 1	45
Loose Muscatels, common, ₩ bx	—	@	—
Do choice, do	1 25	@ 1	30
Do fancy, do	—	@	—
Unsteming Muscatels, in sacks, ₩ lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ₩ 20-lb bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Live Stock.

BEEF.			
Stall fed	5½	@	—
Grass fed, extra	5½	@	—
First quality	5	@	—
Second quality	4½	@	—
Third quality	3½	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Large, heavy	4½	@	—
Do light	5½	@	—
Heavy	6	@	—
MUTTON.			
Wethers	6½	@	—
Ewes	6	@	—
Do Spring	8	@	—
HOGS.			
Light, ₩ lb, cents	5½	@	—
Medium	5½	@	—
Heavy	5	@	—
Soft	4½	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Grain and Wool Bags.

Calcutta, spot	5½	@	5¾
Wool Bags	36	@	38

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

SEPTEMBER 6, 1892.

Limes, Mex	5 00	@ 6	00
Do Cal	—	@	—
Lemons, box	1 00	@ 6	00
Do Sicily choice	7 50	@ 9	00
Strawberries, per chest—			
Longworth	6 00	@ 8	00
Sharpless	4 00	@ 6	00
Peaches, box	40	@	75
Do Mountain	70	@	85
Blkberries ₩ ch	3 00	@ 5	00
Figs, blk box	50	@	75
Do White	30	@	50
Apples	40	@	90
Do Gravenstein	75	@ 1	00
Crabapples	50	@	75
Canteloupes, pr crate	50	@ 1	00
Melons, pr 100	5 00	@10	00
Nutmegs, ₩ box	35	@	55
Grapes, pr bx—			
Do White	40	@	60
Do Black	35	@	65
Do Muscats	40	@	75
Do Tokays	65	@ 1	00
Pears, Hung'n	35	@	50
Do German	40	@	60
Plums, ₩ box	40	@	65
Pears, Bartlett	50	@	75
Do do choice	1 00	@	—

Fruit in bulk to canners: Pears, 1½@2; Plums, white, 1½@2.; colored, 1@1½; Peaches, freestone and clings, 1½@2½. Extra choice fruit for special purposes sells at an advance on outside quotations.

Beets, sk	—	@	75
Carrots, sk	40	@	—
Okra, dry, lb	15	@	—
Do green box	30	@	55
Parsnips, ctl	—	@ 1	25
Peppers, dry, lb	10	@	—
Do grn Chili, bx	20	@	40
Do do Bells	20	@	40
Turnips, ctl	75	@	—
Cabbage, 100 lbs	45	@	55
Garlic, lb	—	@	—
Squash, Sum, bx	40	@	65
Tomatoes	20	@	40
Do River lrg bx	15	@	25
String Beans, sk	—	@	—
Cucumbers, box	20	@	40
Mushrooms	—	@	—
Egg Plant, bx	20	@	50
Green Corn, box	40	@ 1	00
Marfat Squash, ₩ ton	8 00	@10	00

Twine and Baling Rope.

BALE ROPE.	
Sisal, 3 yarns	9
Do, 2 yarns, light	9½
Duplex, 3 yarns	9
Manila, 3 yarns, heavy	10½
Pure Manila, 3 and 4 yarns	12
Do, 2 yarns, light	12

TWINE.	
Pure Manila Hop, in balls, tarred	11½
Do, Grape-Vine, in balls or coils	12
Do, Spring	16
Duplex Hop, in balls, tar'd	9½
Do, Grape Vine, in balls or coils	10½

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal. in cellar lots	10	@	15

Auction Sales of California Fruits.

At New York.

Sept. 1.—Four carloads: Cling Peaches, 50c@$1.30; Late Crawford Peaches, 40c@$1.05; Yellow Peaches, 55@85c; Salway Peaches, $1; Orange Cling Peaches, 45@85c; Susquehanna Peaches, 70@80c; McDevitt Cling Peaches, 75c@$1; Mitchell's Peaches, 85c; Bartlett Pears, $1.15@2.30; Plums, 50c; Gros Prunes, $1.50@1.65; Grapes, 30@90c; Tokay Grapes, single crates, $1.90@2.25; Muscat Grapes, single crates, 35c; Black Hamburg Grapes, single crates 65c; White Grapes, single crates, 50c; one car of Beurre Clairgeau Pears arriving in very bad order sold for 25@70c.

Sept. 1.—Three carloads: Golden Cling Peaches, 90c; Orange Cling Peaches, 75c; McDevitt Cling Peaches, 65c; Muir Peaches, 60c; Susquehanna Peaches, 75@90c; Tokay Grapes, half-crates, $1.75@2; Muscat Grapes, half-crates, 55c. Some fruit in bad order sold for less.

Sept. 2.—Three carloads: Salway Peaches, 75c; Cling Peaches, 60c@$1.35; Susquehanna Peaches, 60c@$1.35; Late Crawford Peaches, 75c@$1.25; Yellow Peaches, 40c@$1.20; Bartlett Pears, $1.25@3.10; Gros Prunes, $2 10@2.60; German Prunes, 60c@$2.10; Rose de Peru Grapes, single crates, 50c@$1.40; Muscat Grapes, half-crates, $1.30@1.40; overripe, 60@75c; Tokay Grapes, half-crates, $1.40@3; Malvoisie Grapes, half-crates, 60c; Japan Plums, $2@2.50; Figs, $2.95; Nectarines, 90c.

Sept. 2.—Four carloads: Bartlett Pears, $2.25@2.75; Beurre Clairgeau Pears, $1.30; Beurre Hardy Pears, $1.50; German Prunes, $1.10@1.30; Silver Prunes, $1; Gros Prunes, $1@1.70; Fellenberg Prunes, 95c; Japan Plums, $1 45; Egg Plums, 80c@$1; Tokay Grapes, half-crates, $1.35@.; Malaga Grapes, full crates, $2.40; Muscat Grapes, half-crates, 70c; Orange Cling Peaches, 70@85c; Golden Cling Peaches, $1; Centennial Peaches, 85c; Susquehanna Peaches, 85c; Late Crawford Peaches, 85c. Some fruit which arrived in bad order sold at less prices.

Sept. 3.—Two carloads: Susquehanna Peaches, $1.10; Cling Peaches, 90c@$1.05; Late Crawford Peaches, 85c; Salway Peaches, $1; Bartlett Pears, $1.30@2.10; Gros Prunes, $1 70@1.85; Tokay Grapes, single crates, $2 55; Muscat Grapes, single crates, $1@1 10; Black Hamburg Grapes, single crates, 55c; Rose de Peru Grapes, single crates, 60@75c; White Grapes, 25c; Peaches, 85c; Bradshaw Plums, 95c.

September 5.—Two carloads: Bartlett Pears, $1 75@2.70; some overripe, 80c@$1.50; Congress Pears, $1.75; fancy, $3.50; Beurre Hardy Pears, $1 10; Howell, fair condition, $1.25@1.60; overripe, 55c@$1; Gros Prunes $1.15@1.35; Fellenberg Prunes, 95@$1 05; Silver Prunes, 95c; Japan Plums, 95c; Egg Plums, 60@90c:

At Chicago.

Sept. 1.—Nine carloads: Bartlett Pears, $1.35@2 45; overripe, 90c@$1 10; Muscat Grapes, single crates, 90c@$1.75; double crates. $1 90@2.15; Peaches, $1.20@ 1.50; very bad order, 30@90c; Tokay Grapes, $1 30@ 3.35; Onondaga Pears, $1.75; Flemish Beauties' Pears, $1.25; Beurre Clairgeau Pears, $1.75@2; Grapes, 50c@ $1.05 Prunes, $1.10@1 45; Nectarines, $1.30; Duchess Pears $1.65. Beurre Hardy Pears, $1.55@2; Kelsey Japan Plums, $1.30; Fellenberg Prunes, $1.15; Seckel Pears, $1.40.

Sept. 1.—Two carloads: Bartlett Pears, $1.65@2.25; Flemish Beauty Pears, $1 40; Beurre Hardy Pears, $1.65; Gros Prunes, $1 10; Egg Plums, $1.15; Peaches, 65c.

Sept. 2.—Ten carloads: Ickworth Plums, 80c; Fellenberg Prunes. 85c@$1 05; Quinces, $1.75; Howell Pears, $1 60@1.95; Beurre Hardy Pears. $1 35@1 65; Beurre Clairgeau Pears, $1.65@1.75; Duchess Pears, $1.40@1.60; Onondaga Pears, $1 65; Columbia Plums, 85c; Egg Plums, 85c@$1 20; Silver Prunes, 80c; Damsons, 70c; Vicar Pears, $1 25; Diel Pears, $1 25; Bartlett Pears, $1.7 @2.35; Peaches, 80c@1.40; Nectarines, 95c; Grapes, 80c@$1.05; Muir Peaches, bad order, 40@50c; Crawford Peaches, bad order, 70c@$1.10; Cling Peaches, bad order, 60c@$1; German Prunes $1.15@ 1.35; Hungarian Prunes, $1.50@1 65; Muscat Grapes, single crates, $1.10@1.30; Tokay Grapes, single crates, $1.50@1.95; Rose de Peru Grapes, single crates, 60@80c; Malvoisie Grapes, single crates, 90c@1.40.

Sept. 2.—Four carloads: McDevitt Cling Peaches, $1.35; Wheatland Peaches, $1.35; Day's Cling Peaches, $1.45; Susquehanna Peaches, $1.20@1.40; Orange Cling Peaches, 85c@$1.20; Crawford Peaches, $1@1.40; Gros Prunes, $1.25, Tokay Grapes, half-crates, $1.20@1.75; Muscat Grapes, half-crates, 55c@$1; Red Nectarines, 80@90c; Bartlett Pears, $1.90@2.10; some overripe, $1.15; Japan Plums, 90c.

Sept. 3.—Five carloads: Bartlett Pears, $1.50@2 40; half boxes Bartlett Pears, 85c@$1.15; Grapes, 60 @1 25; Fellenberg Prunes, $1.05; Beurre Hardy Pears, $1 40@ 1.60; Beurre Clairgeau Pears, $1 60; Howell Pears, $1 80@2; Japan Plums, $1.10; Ickworth Plums, $1.-0; Peaches. 85c@$1.40; Prunes, $1@1.25; Gros Prunes, $1 50; Susquehanna Peaches, $1.50; Cling Peaches, 90c @$1.15; Rose de Peru Grapes, single crates, 55c; Muscat Grapes, single crates, 75c@$2.30; Tokay Grapes, single crates $1 55@3; Nectarines, $1 15.

Sept. 3 —Three carloads: Bartlett Pears, $2 15@2.25; Beurre Clairgeau Pears, $1.50; Beurre Diel Pears, $1 40; Duchess Pears, $1 45; Beurre Hardy Pears. $1.40; Lemon Cling Peaches, $1.10; Susquehanna Peaches, $1:30@1.40; Orange Cling Peaches, $1.20@1.25; Late Crawford Peaches, $1.35@1.40; McDevitt Cling Peaches, $1.15; Crawford Cling Peaches, $1 35; White Cling Peaches, 85c; McDevitt Cling Peaches, 75c; Tokay Grapes, half-crates. 95c; Fontainebleau Grapes, half-crates, 75c; Rose de Peru Grapes, full crates, $1 30; Malaga Grapes, full crates, $2.40; Red Nectarines, 85c: Gros Prunes, $1 20; Fellenberg Prunes, $1 55; French Prunes, 95c; German Prunes, 80c@$1; Bradshaw Plums, $1; Golden Drop Plums, 90c; Japan Plums, 90@95c. Some pears and grapes overripe and small sold for less

September 5. — Nine carloads: Susquehanna Peaches, $1.40@1 50; Golden Clingstone Peaches, $1 20 Early Crawford Peaches, $1.35; Late Crawford Peaches, $1.15@1.40; Strawberry Peaches, 1.20; Lemon Cling Peaches, $1.15; Orange Cling Peaches, $.65@1 20; Yellow Cling Peaches, 70c@ 1.35; Bartlett Pears, $1.75@2.25; Congress Pears, $1.60, Beurre Hardy Pears, $1.60; Beurre Clairgeau Pears, $1.55; Howell Pears, $1.85; Duchess Pears, $1.55; Red Nectarines, 80c Malaga Grapes, full crates, $2.20; Tokay Grapes, full crates. $2.70; half crates, $1 30@1.65: some poor, 90c; Muscat Grapes, full crates, $2.20; half crates, 55@90c; Fontainebleau Grapes, half crates, 65c: Gros Prunes, $1.15@1.45; German Prunes, 90c@$1.20; Silver Prunes, 90c@$1.15; Egg Plums, $1.15@1.20; Golden Drop Plums 90c; Japan Plums, 70c@$1.

September 5.—Nine carloads: Bartlett Pears, $1 40 @2.20; Susquehanna Peaches, $1.20; Cling Peaches, 75c; Malaga Grapes, single crates, 85c@$1.25; poor condition, 35@80c; Beurre Hardy Pears, $1 5@1 65, Beurre Clairgeau Pears, $1.25@1.70; Fellenberg Prunes, 80c@ $1 30; Columbia Plums, 85c; Egg Plums, 70c@$1.10; Gros Prunes, $1.22 Silver Prunes, 40c, Peaches, 70c@ $1 45; Tokay Grapes, single crates, $1.20@1.70; double crates, $2 40; Muscat Grapes, single crates, 65c@$1.55; double crates, $2 20; Pears, $1 30@1.65; Prunes. 45c@ $1.58; Nectarines, $1.

At Minneapolis.

Sept. 1.—Two carloads: Bartlett Pears, $1.05@2; Plums, $1. $1.60@1.75; Beurre Hardy Pears, $1.50; Peaches, $1.85.

Sept. 2.—Two carloads: Tokay Grapes, small crates, $2 15@2.30; Muscat Grapes, single crates, $1.10@1.40; Rose de Peru, single crates, $1.1 @1.20; Peaches, $1.60 @1 60; Pears, $1.05@2 30; Plums, 90c@ 1.90. Gross sales, two cars, $2177.

Sept. 3.—Two carloads: Pears, $1.40@1.90; Peaches, $1@1.55; Plums, 65c@$2; Muscat Grapes, single crates, $1.05; Rose de Peru Grapes, single crates, $1.05

September 5 —Three carloads: Late Crawford Peaches, $1 35; Mary's Choice Peaches, $1 25; Susquehanna Peaches, $1 35; Taylor Cling Peaches, $1 15@ 1 30; Orange Cling Peaches, $1.15, Gros Prunes, $1.70@ 1.75; Silver Prunes, 70c; Kelsey Japan Plums, $1@1.55; Golden Drop Plums, 75c; Bartlett Pears, $1.65@1.85.

At Boston.

Sept. 1.—Three carloads: Gros Prunes, $1.25@1.40; Hungarian Prunes, $1.25; Kelsey Japan Plums, $1 10; Bartlett Pears, $2 75; some overripe, $1.10; Early Crawford Peaches, 95c; Late Crawford Peaches, 80c@$1 25; Orange Cling Peaches, 65c@95c; Lemon Cling Peaches, 90c@95c; Susquehanna Peaches, 95c@$1.15; Wheatland Peaches, $1.15.

Sept. 2.—Two carloads: Bartlett Pears, $2 60; half boxes, $1.50; Late Crawford Peaches, $1.10; Orange Cling Peaches, —; McDevitt Cling Peaches, $1@1.35; White Cling Peaches, 95c; Susquehanna Peaches, $1.15; Hungarian Prunes, $1.20; Gros Prunes, $1.@1.25; Columbia Plums, 90c; Egg Plums, 95c; Fellenberg Plums, $1.20.

At Omaha.

Sept. 1.—Three carloads: Peaches, $1.25@1.40; Pears, $1 25@2; Plums, $1@1.50.

Sept. 3.—One carload: Peaches, $1.25@1 50.

September 5.—Two carloads: Pears, $1.25@1.50 Peaches, $1.25@1.50; Black Grapes, 75c@$1; Muscat Grapes, $1@1.25; Tokay Grapes, $1.50@1.75.

At Montreal.

Sept. 3.—Three carloads: Susquehanna Peaches, $1.25@1.50; Orange Cling Peaches, $1.20@1.30; Crawford Peaches, $1.35@1.55; McDevitt Cling Peaches, $1.30; Edwards' Cling Peaches, $1.30; George's Late Peaches, $1 30; Lemon Cling Peaches, $1.20; Bartlett Pears, $1@1.65; Tokay Grapes. single crates, $3.35; Silver Prunes, $2 10; Gros Prunes, $2.10.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	Sept. 10–14
Western Washington Industrial Exposition,	Tacoma,	

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
2	Stockton	Sept. 19-Oct. 1
5	Santa Clara, George H. Bragg	Sept 26–Oct 5
6	Los Angeles	Oct. 3–5
7	Salinas City, J. J. Kelley	Oct. 4–8
9	Rohnerville, G. Uuderwood,	Sept. 19–23
10	Yreka, C. S. Smith	Oct. 5–8
11	Sierraville, Fred Blinman	Oct, 3–7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
14	Santa Cruz, Oscar L. Gordon	Oct. 10–15
15	Bakersfield. J. J. Kelly	Oct. 11–16
16	San Luis Obispo, J. H. Barrett,	Sept 27–Oct 1
18	Independence, C. W. Craig	Sept. 27–30
20	Auburn, F. D. Adams	Aug. 30–Sept. 3
21	Fresno, J. M. Reuck	Sept. 26–Oct. 1
22	Escondido, G. M. Dannals	Sept. 21–24
26	Ione, C. T. La Grave	Sept. 27–30
27	Redding, H. R. Hodson	
28	San Bernardino	
32	Santa Ana, W. A. Beckett	Oct 3–7
33	Hollister, A. D. Shaw	Oct. 11–15
34	Susanville, C. E. Emerson	Sept. 3–7
35	Merced	
36	Vallejo	Oct. 4–8
37	Lompoc, W. I. Nichols	Sept. 20–23
38	Modesto	Sept. 28–Oct. 1

IN a lecture on fire prevention, Prof. Goodman again called attention to the value of wooden joists for building purposes, as compared with iron and steel. He explained that the two latter materials lose their strength at a not very high temperature, whereas wood will sustain a heavy strain for a much longer period when exposed to great heat.

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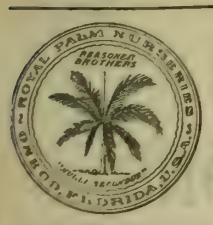
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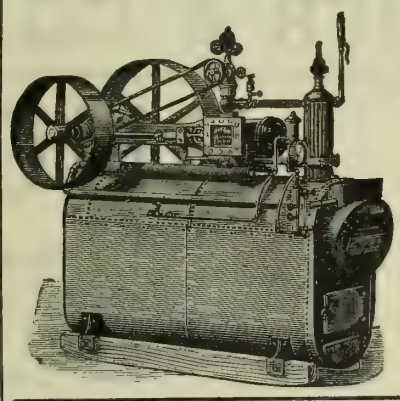
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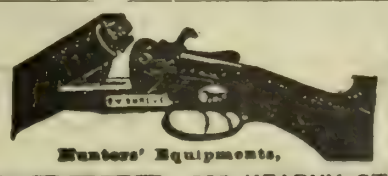
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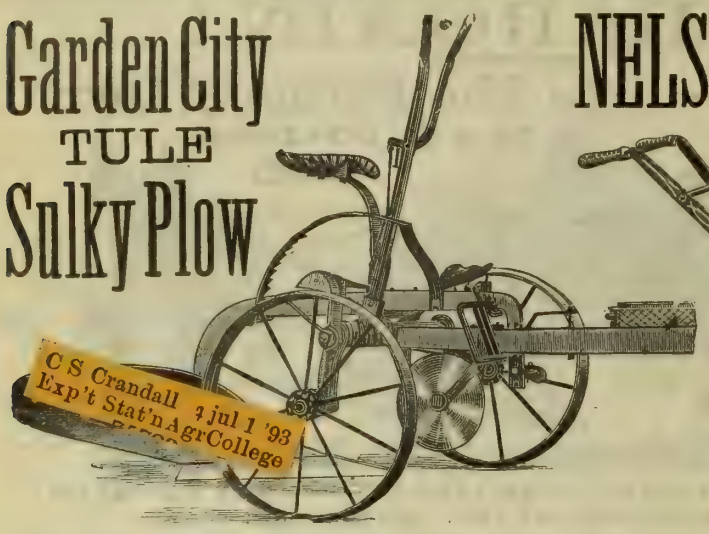
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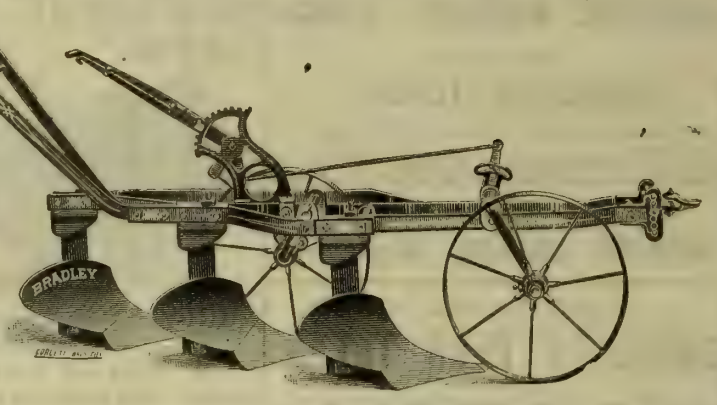


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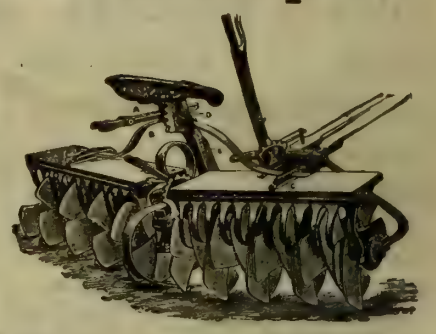
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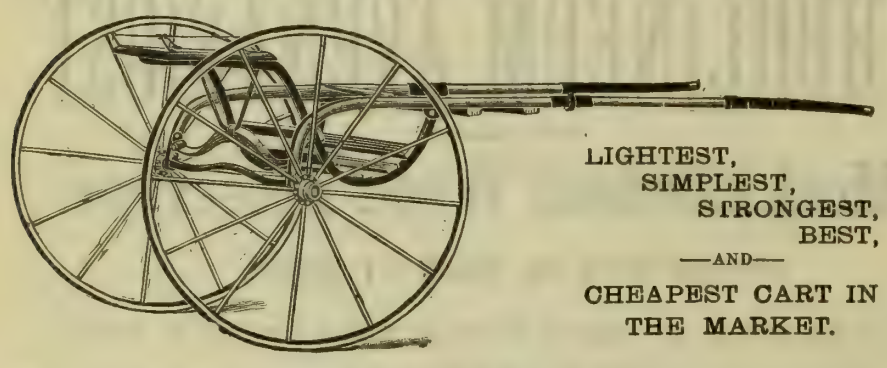


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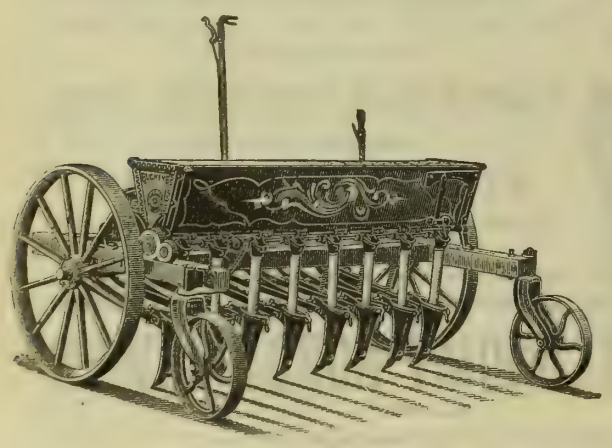
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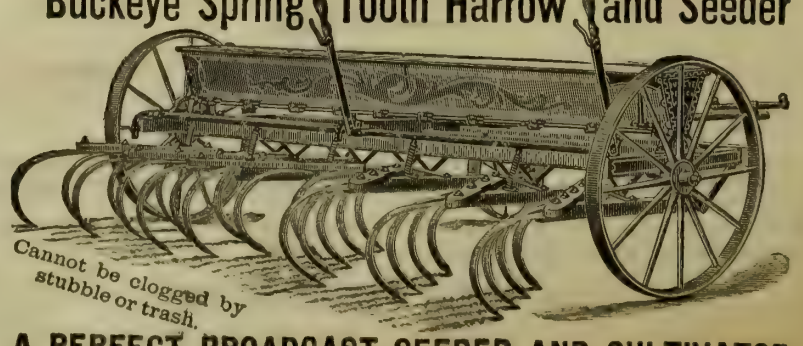
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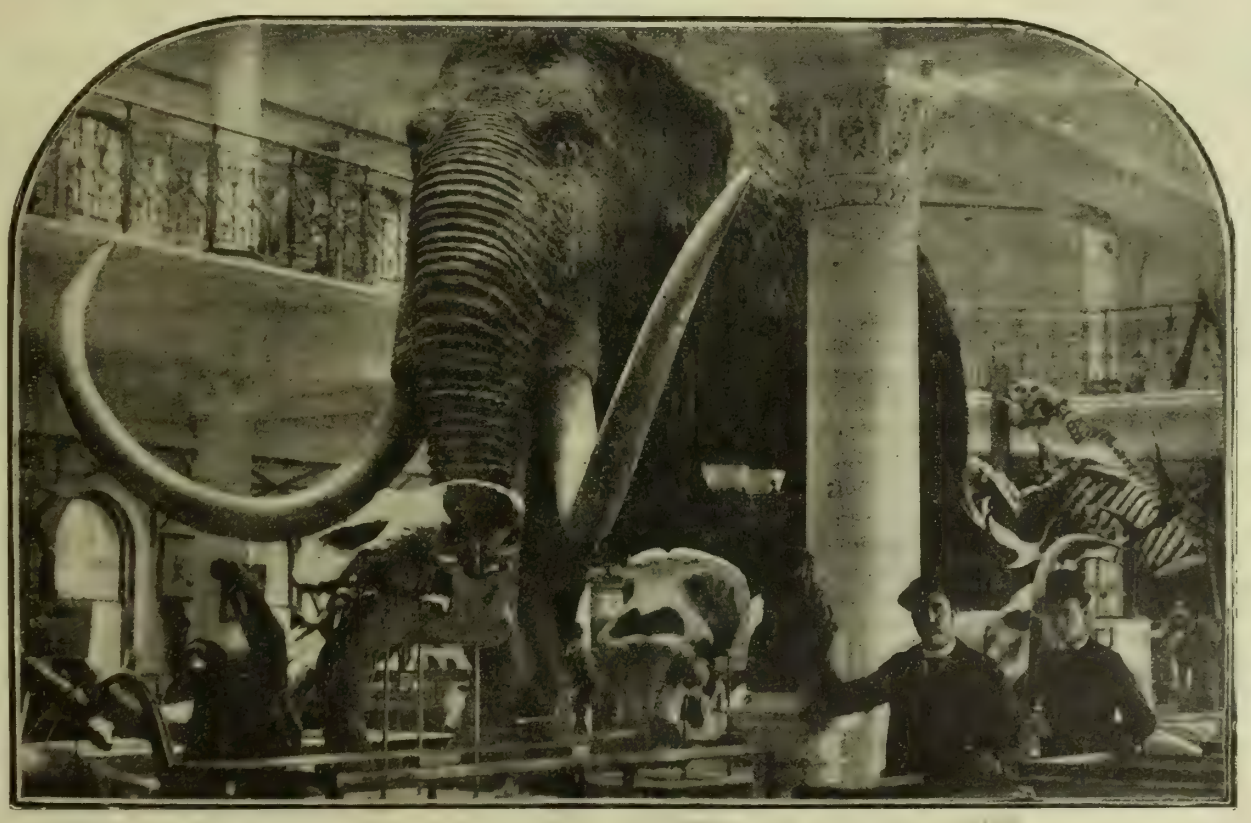
A PERFECT BROADCAST SEEDER AND CULTIVATOR

PACIFIC RURAL PRESS

Vol. XLIV. No. 12. SAN FRANCISCO, SATURDAY, SEPTEMBER 17, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

Giant Forms of Extinct Animal Life.

Mammoth remains are among the very earliest forms of extinct animal life which attracted the attention of observers of our earth and its natural products. The whole continent of Europe from France and England to the Ural mountains, and from Sicily to northern Russia, is strewn with mammoth bones in its alluvial and post pliocene deposits. Research has also shown the mammoth in India, Persia, Siam, all northern Siberia, China and Japan. In both the continents of Europe and Asia these remains are found to be more sparsely distributed in the southern lands and to abound in vast numbers on the northern limit, showing thus a strange disagreement in distribution with the elephant of the present day, which is confined, in its wild state, to the tropical portions of Africa, and to the equally hot countries of India, Sumatra and Borneo. All the northern shore of Siberia, particularly in the deltas of the Lena and the Yenessei rivers and the islands lying off these coasts, is crowded thick with the leg bones, tusks and teeth of these extinct animals. In some places the continued action of sea waves and river freshets have piled these bones together in quantities so vast that their number and volume is something incredible. It is plain that the mammoth was once an inhabitant of north temperate and frigid zones; now its descendants, reduced in numbers and degenerate in size, inhabit the tropics. More than a hundred years ago, not only their ivory, but their carcasses, were known to exist in Siberia, imbedded in solid ice. The first discovery of such remains was six degrees north of the Arctic circle, where the body, largely imbedded in ice, was still standing erect, and was almost perfect. The skin remained in place and the hair and fur were still attached in spots.



THE MAMMOTH—A RESTORATION IN THE ACADEMY OF SCIENCES MUSEUM.

The most celebrated discovery was at the mouth of the river Lena in 1799, when a fisherman found a complete body of a mammoth in the ice. The nomadic tribes had been feeding their dogs on the flesh. The skeleton, hide, etc., were carried 7000 miles to St. Petersburg and placed in the museum of the Imperial Academy of Sciences. This is the famous Siberian hairy mammoth, and stands unique in the history of fossil remains from the fact of the preservation of the soft parts of the animal—its flesh and sinews—in connection with the bones.

In the museum of the Academy of Sciences of this city is a "restoration" of this mammoth, made by Prof. Henry A. Ward, of Rochester, N. Y. The height is 16 feet, and length, including forward curve of tusks, 26 feet. The engraving on this page is from a photograph made in the Academy of Sciences museum on Market street. As may be imagined, this mammoth is the central figure in the collection exhibited in the museum-room.

A LARGE colony of disappointed Oklahoma homeseekers have left for Central America.

Bear Pressure on Raisins.

New York mail advices continue to note a strong bear pressure on California raisins, and, so far, with some degree of success. The bears' success is not in bringing about lower prices for the 1892 pack, but in keeping the trade from buying freely. Their chief stock in trade is that leading raisin-growers in this State had the audacity to form a combination for protection against the rapacity of Eastern speculators. The raisin combine will most unquestionably result to the advantage of those engaged in the industry, by keeping the market from going below profitable prices, and, at the same time, in establishing more uniform and better grades of raisins. With the combine working in harmony, it will be impossible for bear operators and also speculators to sell at low prices for future delivery which they could not control—and it is these sales which break the market for actual good.

The strong fight waged against the raisin combine may not make the combination a pronounced success this year, but the fact that growers can and will operate more in common insures success in 1893. The bears have been aided this year by the cholera scare in Europe sending to the United States supplies which otherwise would have been marketed in Europe. There arrived, in this month, at New York, the Alsatia from Denia with 40,000 boxes of raisins, while there are afloat and to arrive within the next 30 days about 85,000 boxes of Ondara and Valencia raisins. That the vessels fetching the raisins will come under the quarantine regulations is fully admitted, but whether the more rigorous precautionary measures will be adopted is an open question, owing to the cholera not having reached Spain. But if the cargoes are fumigated and steam admitted to the vessels' hold up to and over 200 degrees, there cannot be the least doubt but the raisins will be made more or less unmerchantable. Possibly the rigorous quarantine measures which have been adopted by New York officials will deter shipments of raisins, prunes and dates from European ports to this country, in which event California raisins and prunes will have a more open market.

Subirrigation and Underflow.

One of our exchanges takes considerable pains to correct a contributor who seems to have stated that much California land was subirrigated. It states correctly that subirrigation, as arranged by human contrivances, has proved impracticable and has been abandoned because of the great cost and for other reasons. We apprehend, however, that the contributor had no reference to the sub-earth distribution of water by pipes, but merely intended to state that much land does not need surface irrigation because subirrigated. Such a statement is correct, for the term "subirrigated" has, during the last few years, come to mean in this State land in which the water-level has been raised by seepage or percolation from open ditches on higher lines until there is on lower levels a permanent supply of subterranean water near enough to the surface to furnish to trees and vines all the moisture they need. Such lands are what we now call subirrigated and they are irrigated by underflow; by the natural disposition of water to run down hill among the particles of a loose subsoil as well as upon a surface decline. In some parts of the State, notably in Fresno county, perhaps, such lands comprise a large acreage, and thus the area of land made fruitful by irrigation is much greater than that upon which water is actually conducted.

The term subirrigated is not a good one, perhaps, because it implies the subterranean distribution of water by human agency, while, as a matter of fact, the water has escaped from man's controland has gone off on its own enterprises. If the subterranean distribution should be found feasible by art of man then subirrigation must be the term to describe it. In such a case we may have to use the term "underflowed," or something of that kind, to describe land moistened by natural flow from higher levels, even though the water be brought upon those levels by art of man.

AN ENSILAGE CORN HARVESTER.—Our dairy readers who are growing corn for the silo may be interested in a description which we find in an eastern exchange of a machine for harvesting ensilage either from hills or drills. The corn was 11 feet high, the drills three feet apart, and it cut and loaded on a wagon-frame over 1000 pounds in 30 seconds by the watch, using one man and a boy to drive. The writer says the machine was hinged to a long frame, hung low on iron loops attached to the axles of wagon-wheels, and was drawn by a light but spirited team. The uniformity of the cut, the clever manner in which the revolving wooden fans laid the stalks straight on to the wagon-frame, was really astonishing. The weight of the machine is not more than 300 pounds, and it is made of wrought-steel. The cutting discs are made from the finest crescent-steel, and are very strong, being 5-16 inch thick. The machine is adjustable as to cut, and can be set so as to leave the stubs high or low in the ground.

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, September 17, 1892.

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Feed Cutters—Baker & Hamilton.
Feed Cutters—Keystone Manufacturing Co., Sterling, Ill.
Plows—Economist Plow Co., South Bend, Indiana.
Incubators—James Rankin, South Easton, Mass.
Fruit Trees—J. H. Jones, Herndon, Georgia.
Well Machinery—Amerian Well Works, Aurora, Ill.
Fruit Trees—H. C. Graves & Sons, Lee's Summit, Mo.
Fruit Trees—J. S. Collins & Sons, Moorestown, N. J.

☞ *See Advertising Columns.*

The Week.

The cholera threatening our eastern coast is still the chief topic of conversation, which is full of dread and apprehension. Upon the following page the general situation at the East is described. Just as we go to press, telegrams report the determination of five cases in New York City during the last week, the detection having been made by microscopic recognition of the spirillum or germ. Whether secondary cases will result, and the disease thus get a foothold, is now the occasion of great anxiety. Even if the infection is held back by the quarantine in the lower bay, it may spread from the germs shown to exist in the city.

While the general danger is the engrossing theme, popular sympathy will freely go out to the head of the nation as he stands under the shadow of a crushing blow which may possibly fall upon him. Mrs. Harrison is so ill that her life is almost despaired of. She is at a resort in northern New York, and too ill for transfer to other quarters. The prayers of the nation will be that this life be spared.

Eastern and Foreign Apple Crop.

Recent advices confirm earlier reports that the apple crop east of the Rocky mountains is short, and it is further stated that the crop in Canada will hardly turn out 50 per cent of an average of the past five years. The crop will not only be short in quantity, but poor in quality. European mail advices report a lighter crop of apples than had been estimated. In England the crop will be short and poor in quality. In France and Belgium a medium crop is expected. In Denmark and Holland it will be under an average, and in Germany it will be light in quantity and poor in quality. According to the best authorities the European crops, including that of England, will not be much, if any, more than one-half of an average, and the quality will not be of the best. The green apples exported from the United States and Canada go largely to Great Britain, while the dried product goes to Germany, France, Holland and Belgium. While at present the cholera scare will restrict the European demand for ap[illegible] with cool, winter weather a call will set in and cause free shipments from this country. Naturally, with a short crop in the central and eastern States, any outside demand will create higher prices and the improved prices will cause a free demand for California dried apples. Already, buyers are scouring this State, Oregon and Washington, and contracting for dried apples. It is claimed that more good to extra choice have been contracted, and at an advance on prices ruling last year, than in any former season.

Garden Design.*

If we are on this far-away coast unfortunate, as some tourists claim, in lack of picturesque ruins, we are surely fortunate in being untrammeled by uncouth tradition or precedent. We have much to learn, it is true, but little to unlearn, and this is a Godsend to our teachers, for with the teaching class it is a common remark that their hardest labor is not in teaching but in eradicating the effects of previous ill-teaching. Nearly all our outdoor life and effort is full of the novel, the untried, the yet-to-be, but in some directions we have attained a degree of mastery over our peculiar conditions and have accomplished something of development. This is true of our commercial agriculture and horticulture; the horticultural arts which minister to the higher interests of mankind, such as beauty culture and home adornment, we are but just beginning upon. We have a perfectly free field so far as local example is concerned, for there is none to speak of; we have unbiased minds, because in our short life full of intense industrial activity, we have not had time to form an opinion, in fact hardly to think a thought; we have a climate which is unrestrictive and wonderfully fostering, not only as to plant growth, but to physical effort; we have a native flora of exceptional richness and variety and all the plant resources of all zones, except the immediate tropics, adapted to our purposes. With such advantages, is it unreasonable to predict for California as fine gardens as the world can show, whenever leisure, taste and wealth shall combine to produce them?

Such considerations always recur to us whenever we behold from afar the contests between Eastern and European writers over matters comprised in the terms landscape-gardening, landscape art, landscape architecture. We are rejoiced to see the hard and effective blows which are struck by the so-called natural school of landscape-gardeners against their opponents of the formal school. For our readers who may not have given any attention to the subject, it may perhaps be wise to risk the explanation that the "natural" in this discussion means the designing of gardens and parks with slopes, tree clumps, shrub clusters and flower masses in ways which suggest the work of nature and conceal the hand of man; the "formal" is just the opposite of this, and some of its leading manifestations are stiff and unnecessary terraces, trees and shrubs in lines of battle, and often shaven and shorn, flowering plants arranged in precise geometrical figures and pinched to absolute uniformity of dimensions, in short, showing forth the hand of man as clearly as a tailor-made garment or a freshly barbered militiaman.

It would seem that there could hardly be any choice between these two extremes of garden design. How any one who loves a tree can enjoy seeing its verdure tortured into a grotesque figure or even an apparition from the solid geometry is more than we can conceive. Nor can we understand how suggestions of the restful, the beautiful, the inspiring, which are so generously imparted by a natural scene, can be drawn from checker-board and pin-wheel garden designs. It seems, however, that there are those who argue even books full against the natural plan of garden-making and in favor of the formal and the precise as more dignified and as displaying more able designing. Concerning a portion of the claim there will be no dispute, for indeed some of the designs are fearfully and wonderfully made.

The distinguished editor of our esteemed contemporary, the London *Garden*, Mr. William Robinson, has, in the handsome book before us, most justly punished a couple of authors who have recently attempted to glorify the formal style of garden design, and to defame those who advocate the natural plan or method. This he does by exposing the fallacy of the claim they make that the architect should design the garden and the horticulturist should be only a workman to set plants on lines marked out by the architect and shear them into such forms as he prescribes, and which, forsooth, he conceives will best comport with the lines he puts upon the brick or stone of the building. These authors apparently give no place in their scheme to a knowledge of plants, nor to taste in harmonizing their hues or outlines to delight the eye of the plant-lover and garden-lover. In fact, they disclaim knowledge of this kind, and seem disposed to rule the horticulturist as well as the landscape gardener out of the undertaking, except as menials to dig, dung and drain, and sculpture foliage into ungraceful, unnatural and abominable forms and shapes.

It is undenied that the true landscape gardening is not yet a science, and that definitions and formulæ cannot yet be furnished to the student. It is admitted that expression has not yet been found for the principles of taste and ideas of method which the true landscape artist employs in his creation, and yet the grand result is immediately apparent to all who have any taste for and appreciation of the beautiful. It is admitted, also, that no fixed rules can be laid down, and that the landscape artist must work out his result with due regard for the factors in each case which comes before him. While this is probably true in the present state of the higher art of gardening, and to a certain extent must always remain so, we think we can clearly see that Mr. Robinson has, in his little work, brought some principles of true landscape work nearer to definition than we have seen them brought before, and that, in demolishing his opponents, he has done the higher service of making his art more comprehensible to any reader of ordinary intelligence and taste. This we count of great importance, and as we are, in California, as we intimated at the outset, clearly in the formative state of mind on this subject, we propose, as occasion offers, to further pursue in our columns the subject as discussed by Mr. Robinson. If, in our contemplated improvement of the environment of our homes, we can all get an idea of what we should aim to accomplish, we have no doubt we shall escape some of the errors which have been made in the past in older countries, and perhaps it is not too much to hope that we can produce results which shall be imitations of no style, but shall be, as they should be, characteristically Californian, though clearly established upon principles of taste which are universal because they are true.

*Garden Design and Architects' Gardens: Two reviews, illustrated, to show by actual examples from British gardens that clipping and aligning trees to make them "harmonize" with architecture is barbarous, needless and inartistic. By W. Robinson, F. L. S., London, John Murray 1892.

The Dairymen's Union.

The Dairymen's Union of California has won its first victory, for it must be counted a victory for a cooperative organization of producers to reach the end of its first year in a good state of health and vigor. The union has had a difficult task to intrude itself successfully upon an established line of city trade and to secure the support of enough producers to enable it to do this. Having accomplished this, it can well take courage for the future. At the annual meeting in this city, on Monday of this week, dairy producers from various parts of the State were present. The reports of the various officers were read, and showed that the experiment of the union had been a success. While no profit had been made during the year, the organization had held its own, and the financial prospect for the coming year could not be brighter.

One of the most important measures discussed at the meeting on Monday was that regarding spurious butter, and the union will cooperate with similar organizations in the eastern States to petition Congress to do all in its power to suppress the traffic. It will also prepare a petition to be presented to the legislature at its next session asking the same relief so far as that body can give it.

The trade in bogus butter is now being pushed in this city and in various bay towns with startling boldness. Various arts are being employed to render the imitation material attractive. It is really being put forward as something more desirable than genuine dairy butter. This is an extent of effrontery which should not deceive the people, and yet the dear people seems to delight in being wheedled and tricked. The problem of how to successfully meet a bogus product when it boldly declares itself superior to the genuine is difficult to determine. Probably the most important thing to do is to strive for the better education of the people on the subject, for we do not suppose any one will knowingly choose a lard and oil compound if they are kept informed of its character, even though the most persistent efforts be made to give it a good name. No doubt our dairy producers, by cooperating with eastern associations, can gain wisdom and strength to meet the evil which depresses them all. It may be possible that our dairymen may in some way join hands with our olive-oil producers in their strife for the recognition of a pure and honest product. They both have an issue with low oils and fats and falsification. Each side would, it seems to us, gain strength by joining hands.

The transactions of the Dairymen's Union may be summarized as follows: W. S. Pierce, E. W. Steele, I. Sortori, L. Yori, L. Tomasini, Warren Dutton, William Hatton, G. W. Burbank, P. Tognazzini and J. Muscio were elected directors for the ensuing year. All were members of the old board except L. Yori and L. Tomasini, who take the places of Dr. G. Burdell and A. Tognazzini, both of whom are now absent in Europe. The board of directors organized by the election of the following officers: President, W. S. Pierce; vice-president, Warren Dutton; treasurer, E. W. Steele; secretary, William Hatton. Executive committee—G. W. Burbank of Tomales, I. Sartori of San Rafael and L. Yori of Santa Barbara.

From an Independent Standpoint.

The break-up of the Transcontinental Traffic Association seems complete. The withdrawal of the Great Northern two weeks ago has been followed by that of the Canadian Pacific and Northern Pacific, leaving only the allied lines of the Union and Southern Pacific to work in harmony. The dispatches predict a general "rate war," but this seems as unlikely as it is really undesirable. Rate wars unsettle values and demoralize business and in the nature of things force the roads into new combinations. Such contests have no sort of correspondence to ordinary healthful competition, but, on the contrary, lead inevitably to its destruction. What is desired is not a fight among the transcontinental roads, but independent, reasonable and persistent competition. It looks as if the day of this sort of thing were dawning at last. And it looks, further, as if the new order of things would go hard with the old lines. All of these lines are vastly overcapitalized. Their stocks or bonds, or whatever combination of these securities stands representative of the properties, aggregate from two to four times the actual value of the several roads. That is, it would be possible at this time to duplicate the older roads, in all details complete, for from one-half to one-fourth of their present capitalization. The excess capitalization stands for extravagance in the original construction, for mistakes in engineering, for mismanagement in building or leasing connecting lines, for the difference in the cost of old-time and modern methods of construction, and very largely for direct and criminal injections of "water." Roads built in extravagant times and by wasteful methods have been and are still managed wastefully. Each of them maintains a large, very expensive and worse than useless organization of official "magnates," whose time and energies are devoted not to the practical and useful business of operating the road, but to speculative and political projects which are profitable only to themselves. It is the necessity of finding dividends for this excess capitalization and of supporting these enormous and illegitimate charges of management that lies back of heavy freight rates and of combinations to maintain them. All the roads have been subject to the same necessities—hence their cordial co-operation in the bad scheme of the Traffic Association.

The real cause of the break-up of the Traffic Association is prospective competition for through freights by the Great Northern, or, as it is called, the "Jim Hill" road. This line, which before the close of the year will be in operation between St. Paul and Puget Sound, is a novelty in the railroad world. It has been built without subsidy, without any sort of "aid," and without any sort of fuss. There have been no construction rings, no costly lobbies at Washington or elsewhere, no raft of high-salaried and useless officials. Mr. Hill has employed the best engineers, and has built the line with the same close business-like, economical attention to details that a prudent business man would give to the construction of a building. He has learned from the mistakes of others, and has avoided much that adds to their charges of operation. The result of all this is that Mr. Hill and his backers have a new and perfectly equipped transcontinental road, shorter by nearly three hundred miles than the Northern Pacific, with easier curves and better grades than any of the other lines, and, with all costs paid, *representing a capitalization less than one-half that of the Northern Pacific and about one-fourth that of the Union Pacific.* This is the situation which causes Mr. Hill to part company with the other transcontinental roads. This is the situation which enables him to say, as he is quoted, that transcontinental freight rates can be reduced one-half and still leave a handsome margin of profit.

What will be the result? Immediately, it will depend upon Mr. Hill. If he persists in doing business in a fair way; if he stands clear of combinations and carries freights at fair rates, the old roads will be broken down. Neither the Northern Pacific, nor the Union Pacific, nor the Southern Pacific can stand the competition of a road built and operated on fair business principles. If the new company carries out its promised policy, the old lines will get no through business at present rates; and if they meet the lesser rates they cannot pay dividends, or even fixed charges. The situation is not a comfortable one for them. They have either to bribe Hill into cooperation, or to face bankruptcy. Of course, they will attempt to seize the first horn of the dilemma—and there lies the danger to the public. Human purpose is often weak, and Mr. Hill is no doubt in the business for what he can make out of it. It is very much to be feared that the old rule which declares that "there will be no competition between railroads where combination is possible" will again be proved. But, in any event, the secret is out. The construction of the Great Northern has demonstrated the fact that the old roads represent too much money; that they can be duplicated for a fraction of their alleged capital; that upon an honest basis of cost and under prudent management railroads can profitably carry freight for one-half to one-third of present rates. With these facts known there can be but one end. The roads will in time, whether Mr. Hill stands to his fair promises or not, be put upon an honest basis. The "water"—whatever its source—will be squeezed out of them and they will be permitted a fair income upon their actual value, allowing for reasonable but not excessive charges of management. It may take twenty years to accomplish this good result, but it will come. The time when the public can be forced to pay dividends upon fraudulent railway capitalization is passing.

Should the Great Northern road stand faithful to the promises of Mr. Hill, it will, some time in December, begin to haul freights across the continent to Puget Sound at rates vastly reduced as compared with what we are now paying. It looks, at first view, as if California would come in for important and immediate benefits, but it is, in fact, very much to be doubted if she is in a position to benefit from it. To float goods from Puget Sound to San Francisco would be easy and cheap, but how then could they be distributed to the interior? The company which controls the transcontinental roads also controls the local roads, and it always takes good care to let its left hand know what its right hand does. Suppose the merchants of San Francisco could bring goods here at half the present cost, they would be helpless, because the local rates would be put at such a figure that the country could get no benefit from it. The local rates can always be juggled to control the situation, and this fact brings us face to face with the most neglected but really most serious aspect of the transportation problem in California. Important as the demand for cheaper transcontinental rates is, far more important is the demand for cheaper rates from point to point in California. An independent railroad from Los Angeles to Redding, with connecting and tributary side lines, would do more to relieve California from its transportation troubles than half a dozen lines across continent. That such a road is not in existence is the fault of our own people. They understand the situation, they control the traffic, and they have the money to build the road. That the necessity of the State has not been answered, that California has not long ago been relieved of its dependence upon a single railroad company is a pitiful comment upon our enterprise and a reflection upon the sincerity of our complaints. It is not surprising that outside capitalists do not come to our relief when, with all our boasted wealth, we raise not so much as a finger to help ourselves.

This practical want of confidence in California on the part of Californians is one of the curious facts of the time. Everybody knows that San Francisco is a rich city and that California is one of the richest States in the Union. California money is always seeking foreign investments. It helped to rebuild Chicago after the great fire; it has reared vast buildings in New York; it largely rebuilt Seattle three years ago; it opens the mines of Montana and waters the plains of Arizona, but—here is the curious and painful fact—it does nothing in California. Our richest resources are neglected and dead for the want of a mere fraction of the capital which streams from our coffers to enrich lands and cities remote. Look at our neglected mines; look at our fruitful lands thirsting for water and valueless only for lack of it; look at our wastes which only need transportation to make them the seats of population, industry and wealth. Our people admit the opportunity; they even boast of it; but when they come to invest their money they reject all local invitations save those which rest upon "cent for cent."

The trouble with San Francisco capital is that, for the most part, it is in the hands of men unskilled in business. They have acquired it less through superiority of abilities and enterprise than through the accidents of a new and rich country. In few instances has it brought to its possessors the discipline, skill and broad self-reliance which is usually the best effect of wealth upon those who hold it. If a half-dozen enormously rich men of San Francisco who might be named had acquired their wealth in commerce, in manufacture or in other large and legitimate projects, factories would be as common as vineyards, railroads would penetrate every district of the State, California products would seek markets all over the world in California ships, and we should have double our present population and four times our present wealth. But in getting their wealth these men drew from rather than added to the wealth of the country. They acquired for themselves by one scheme of speculation or another much money but not the skill to administer it wisely. Hence we see men like Mr. Flood, Mr. Mills, Mr. Fair and others always on the lookout for cent-per-cent investments, but never branching out into broad projects calculated to extend and invigorate the industrial organization of the State and stimulate a spirit of enterprise. If they ever go beyond the lines of cent-per-cent, they go abroad and put their California capital where it does nothing for California. It is unquestionably a fact that the only California capitalists who have ever done anything in a large way directly connected with the interests of the State are the much criticized railroad millionaires. They have at least, even while oppressing her, demonstrated their confidence in California and have accepted her pledges for the security of their fortunes.

The following from the Portland *Oregonian* has the cordial endorsement of the RURAL. It is in pleasant and wholesome contrast with the tone of the leading California daily papers:

> The public must not be permitted to forget, in the midst of rapturous enthusiasm over the victory at New Orleans, that prize-fighting is very low and dirty business; that it is a crime punishable with fine and imprisonment in nearly every State in the Union; that a prize-fighter is a law-breaker and that every person who assists in the performance is his accomplice, and that the practice appeals directly and wholly to the most debased and dangerous classes of society and to the most degraded instincts and sentiments in persons moving, for most part, in higher social circles. All the enthusiasm and adulation lavished upon victors in these bloody and brutal contests by persons who call themselves gentle and decent cannot obliterate their essential character. A prize-fighter remains a prize-fighter, though crowned with laurel, deafened with popular applause and smothered in personal flattery. He remains a person a trifle less respectable than a burglar or a prostitute, because his vocation partakes of the nature of both, since he is at the same time a law-breaker and a common merchant of his bodily perfections to gratify the most brutal passions of humanity. He sells his strength as the harlot sells her beauty; he who pays gate-money may enjoy the display of either. He is the male of her species. These are dull and commonplace notes to sound in the chorus of triumphant acclaim with which the country is now ringing, but they are needful to save the public from forgetting some things it is important to remember.

The practice of assessing candidates for office in the interest of the campaign fund merits the indignant criticism which Mr. Berwick heaps upon it. It is the source of innumerable evils, and, in its tendencies, utterly fatal to the American idea of representative government. Not least among its bad effects is that it bars out from the legislature, and from public life in general, just such high-minded, intelligent and independent men as our good friend Mr. Berwick. Such men will not buy office nor accept it upon humiliating and degrading terms. The tickets are therefore made up of men less scrupulous and less fit to serve the interests of the State. The campaign assessment scheme is one of the ways by which corporate and other sinister influenses maintain control over legislatures. The political agent of some job requiring legislative aid, prior to election, assumes the obligation and actually pays the assessments of many candidates, who, when elected, are bound to vote as he directs. The campaign fund thus created by corruption is naturally employed to promote further corruption. We are extremely gratified that one good, bold man has spoken out in plain terms of honest indignation concerning an abuse that has already vitiated the quality of our representative system and which threatens its destruction.

During the past week there have been daily accessions to the fleet of cholera-infested ships lying at quarantine just outside New York harbor, and the number of persons under detention is between three and four thousand, of whom four-fifths are immigrants of the most ignorant and unclean sort. Each day during the week there have developed from two to ten new cases, and each day the deaths have ranged in number from two to six. As yet, no case of cholera has developed on shore, and it is believed that no possibly-infected person has succeeded in getting past quarantine. The inconveniences of the detained passengers have been extreme, and in the case of the cabin passengers of the Normannia (chiefly Americans) have amounted to positive suffering. First, although there was no cholera above decks on the Normannia, and her cabin passengers therefore probably uninfected, they were detained on board ship and in danger of infection from the steerage for a full week. Finally, on Monday of this week, they were loaded on board an old sound steamer and dispatched to Fire Island, where the State had bought a summer hotel and prepared it for their reception; but when they attempted to land they met some four or five hundred bay boatmen, who drove them back, alleging the fear that their families and themselves would be infected. The ill-starred people were unprepared for such resistance, and spent the night as they had spent the previous day, rocking in the straits in a boat unfit for any service in rough water and unprovided with the commonest comforts. The distress of five hundred men, women and children thus situated, without beds or bedding, poorly

supplied with food and driven from the shores of their own country as unclean, can be imagined. It is described by those who suffered through the ordeal as immeasurably cruel, and their indignation against the quarantine officials is at the boiling point. On Tuesday the governor of New York sent a regiment of the national guard to disperse the rioters at Fire island, and the much abused passengers of the Normannia were landed and made comfortable. The steerage passengers will be landed on Sandy Hook, and all persons attacked with cholera will be removed immediately to Hoffman island, where the quarantine pesthouse has been established. The dead bodies are not buried, but destroyed in the quarantine crematory on Swinburne island. Thus matters rest at New York. At Hamburg the plague still rages, the number of deaths ranging from 110 to 200 each day. A few cases are reported each day in England, but in every case thus far the victim is a recent immigrant. As yet, Hamburg is the only European seaport seriously affected. About 2000 deaths are reported each day from Russia.

His Eyes Opened.

Mr. Berwick Finds Out How Campaign Funds Are Raised.

CARMEL VALLEY, Sept. 10, 1892.

TO THE EDITOR:—It is high time some one looked at our political methods "From an Independent Standpoint!" That's just what I'm trying to do! I had my attention rudely called to the matter. A week or two ago I thought I was honored by a party nomination for Assemblyman. My nomination was as unexpected as unsought. It was made and seconded in a flash, and in another I was called upon to speak. This is about what I said, after making due obeisance: "I never asked for an office; I never should have asked for an office; I never asked for a vote; I never will ask for a vote, nor will I use any clandestine methods to accomplish my election. If I go to Sacramento I go as your servant to do your work, and it is for *you* to thank *me* for going. If on these terms I suit you, well and good; if not, I am "not in it." The convention cheered and told me I was just the man they wanted. So far, all O K. A day or two of peace ensued and then, among other demands, came a letter from the County Central Committee (no matter which party; both do it!) informing me that I was assessed $—— for "campaign purposes," and requesting remittance at once.

Summing up the situation, things stood about thus: If elected, my legitimate salary for a 60 days' session would be $480, about one-half of which it might be proper to allow for personal expenses. If I followed party tradition and acceded to all demands these would have more than consumed the other half. Now, sir, a man either gets elected for honor or for lucre. An honor which is *bought* is, to all right-thinking men, the *rankest dishonor*. An honorable man would be poorly repaid by an "Honorable" prefixed to his name in public, while his inner consciousness rankled with a sense that "Dishonorable" would be more appropriate. It goes without saying then that only seekers of lucre,—"boodlers,"—will accept office on such terms.

Fortunately for myself, after 27 years of industry and frugality, I have attained a modest independence, and was able, summarily and indignantly, to refuse to contribute one cent for "campaign purposes," though well-knowing that I should be branded as a political blacksheep and severely let alone for all time to come. Had I been a chronic officeseeker I might have been compelled to fall in line.

Now, sir, what is this system of assessing nominees but an invitation to officers to become boodlers? The C. C. C. virtually say, we'll milk you and then you milk the great American people.

When a man has to spend his salary to get elected, what do you expect him to do but to "get even" in some illicit manner?

It is idle to declaim against boodlers in the Assembly at Sacramento when you teach them the trick right at home.

I never cared to investigate where "campaign funds" came from before. I had a floating idea that some open-handed men, who considered their partisanship was patriotism, voluntarily gave of their superfluous wealth. Now I see the thing in all its bald vulgarity—a sheer bargain and sale from end to end.

If you git me inside the White House
Your head with oil I'll kind o' 'noint,
By gittin' you inside the lighthouse
Out to the end of Iaalam pint.

If we are sincere when we affect to deplore the evils of boodle, stop the matter right at home! Stop assessing your candidates for "campaign funds!" Stop "campaign funds" altogether!

No doubt I shall be told the people must have their anvil-firing, their brass bands, their spread-eagle speeches. Some years ago there was one thing thought more needful than any of these. It made less blare and glare and racket, but men valued it as the one thing indispensable in politics—it was called HONESTY.

I, sir, for one, think there is too much brass, too much noise, too much wind in politics already, and I trust my fellow-farmers will all feel as I do in this matter and call on their party committees to cease from what is practically selling public honors (?) by assessing nominees for office.

I think the self-denial exercised in dispensing with spread-eagleism may be more than repaid by even such a paltry consideration as a reduction of taxes, consequent on an honest administration of public affairs.

San Francisco is awaking in the interests of uprightness! Farmers, stand by your guns! Let San Francisco see that virtue still keeps her abode in our midst. See that boodle does not choke her! EDWARD BERWICK.

Decreased Grape Yield.

SAN FRANCISCO, Sept. 12, 1892.

TO THE EDITOR: I notice that you recently published a report of mine on the condition of the grape crop. That article was written before the recent hot spell, which wrought such havoc in the vineyards of Santa Clara Co. I do not think now that Santa Clara will have to exceed 40 per cent of last year's yield, and there are some who place it as low as 33⅓ or even 25 per cent; others make it as high as 50 per cent. WINFIELD SCOTT.

[The above is sent us as a personal note from Mr. Scott and not as an official communication from the commission of which he is secretary. The decrease in product should exert an effect on market values.—ED. PRESS.]

FRUIT PRESERVATION.

Recent Improvements in Prune-Making.

We find in the *Record-Union* an article which is in part observation and in part anticipation, but in both parts interesting. It is as follows:

It seems to us a rapid advance in production of cereals when we look back 50 years and compare the sickle of that day with the harvester of this. In the 15 years that California has been producing prunes the advance has been almost as great, and that in an industry where labor was thought to be king, and in which we expected to see busy villages cover the whole country. We had learned that the prune must be subjected to many a peculiar process of heating, baking, etc., besides manipulations to make it part easily from the pit. One by one we have dispensed with such theories and practice and found that if the fruit is gathered when sweet, run into grades according to size, has the skin treated to facilitate evaporation, and when dry in the sun is cleaned and treated with a coating of glucose or grape syrup, nothing more is necessary for a product that will reach the world's markets in cargoes.

It has been found that almost every stroke of this work can be done by machinery. When prunes are fit to gather they drop easily from the tree. Taking advantage of this the load a low platform-wagon with big boxes and stop when the middle of the wagon is opposite the tree and six or eight feet distant. With a canvas about five yards square, and parted in the middle, fastened to a pole on one side, that rests against stakes upon the edges of the boxes, they spread the canvas under the tree, give it a good shaking and then raise the outer edge of the canvas, and, as they walk toward the tree, roll the prunes into the boxes.

They drive to the drier and there hand the boxes to a man who pours them into the elevator, where a draper, modeled after that on a header, carries them to the grader, which runs them into from four to seven sizes and leaves them in separate bins. One after another the contents of these bins are passed through the dipper, where machinery carries the fruit through a solution of hot lye to soften the skins.

They used to depend on heating the dipper over an arch and the strength of the lye was mainly depended upon. Now they are heating the dip with steam and are getting to rely so much on the heat of the liquid that many are disposed to give up the lye entirely. The smaller the prune the longer it needs to be dipped. This is one great advantage of grading before treatment.

As the prunes come from the dipper they fall upon a tray, three feet by eight, made of shakes nailed to a frame.

Fifteen or twenty of these frames are piled on a car or truck and run out to the curing grounds.

With remarkably favorable weather they may be ready to have two trays poured on, one within three days, but it is pretty good management and very fair weather if you can fill your prune trays once a week.

A set of the largest machinery now in use has capacity of 20 tons per hour. As each tray holds about 72 pounds and you place about ten trays on a rod, a little over 57 tons of fruit are spread on an acre. At this rate the big machine can cover a ten-acre field every three days, and the capacity of machine and yard should be calculated to handle the crop in about 12 full days' work. This amount of fruit would grow on 240 acres when in full-bearing. Machinery, building, trays, etc., cost in the neighborhood of $10,000.

THE PROCESS ROOM.

As prunes come from the drying-yard they are somewhat dusty and some have shriveled more than others. To perfect the product they are run through a second-grader and a double-dipper. In the first bath they are washed, and, as they come to the top of the apron, are rinsed with a spray, when they fall into the second bath in which is a solution of glucose, or grape syrup. Perhaps others use other preparations, for this is a feature that many try to surround with mystery in promotion of the idea that only their particular method of treatment insures the exquisite flavor. Either the glucose or the grape syrup will gloss the prunes. As the syrup gives the more agreeable flavor, and we don't know what to do with all our wine grapes, while we have to send away for glucose, the presumption is quite strong in favor of the syrup.

As the prunes leave the dip they fall upon a draper that is the first one of the series. Each of these connects with a bin, funnel-shaped, from which the prunes are sacked. The operator arranges his slides to deliver the fruit in either bin he chooses.

From these bins the fruit is run into sacks of 100 pounds each. A good, strong, cotton sack is the best package and a cheap affair (liable to burst at any time) the worst that can be used.

Now, all through this process the prune has never been handled once.

With improved appliances one day's labor is capable of producing from 1000 to 2000 pounds of the finished product, depending on skill, appliances and management. In this we make no allowance for hindrances, such as waiting for material to arrive, rehandling during damp weather, etc.

Now, the capacity of such a plant is only limited by the time required to empty the fruit into the hopper and take the trays away. The time may come when they will run two elevators and unload wagons from each side and take away trays with two discharges. Such a plant as here described in a general way costs about $10,000, and it is fair to allow for the use of such plants, including interest, insurance, wear, etc., 20 per cent of their cost. If the plant can only be depended on for two weeks' full work in a year, it seems doubtful policy to incur a cost of $1000 per week for machinery. If worked to its full capacity to produce 500 tons of dried prunes the cost does not seem so very heavy after all, when we figure it down to $2 per ton for use of plant, and $2 to $4 per ton for labor of gathering, drying and processing.

Locate such a plant where it can be used for apricots, then peaches, prunes, and finally for raisins, and it can be worked on much smaller margin. In a district where no extra help was needed, save in the prune seasons, it would be about as much trouble to get a crew together and train them for two or four weeks' work as to pay them. The time will come when prunes will be handled very much as wheat is turned into flour, and it may be as much the custom to keep a sack of prunes on hand as it is to keep a sack of flour.

As they become a staple article of food with the masses we can safely increase our planting, but we must remember that the cost to the consumer is the measure of the market's demand.

Drying Figs.

C. H. Leggett & Son of Oroville, who make an excellent article of dried figs, give the following as their method:

Let the figs drop from the trees—pick them up every morning, as any longer will sunburn those that are already dry. You will find, each day, figs on the ground in three stages of dryness, viz, those already dry, which want to go straight to the scalding room; those wanting to dry that day and a portion of the next, and those that want three or four days on the trays.

Scalding—Dissolve two to three quarts of Liverpool stock salt in 50 gallons of water in the kettle, and when boiling, jumping hot, dip in wire basket hung on a pulley over the kettle, and immerse a full half minute, hoist clear of the water, and let drain a few moments, then dip again. In packing, keep the hands moistened with salt water while manipulating the figs.

Crop Conditions.

Reports Received from Voluntary Observers Last Week.

The temperature has apparently been slightly above the normal in all sections, while there has been a very considerable deficiency in rainfall. The only rain reported was .04 of an inch at Eureka, Humboldt Co.

There has been considerable damp and foggy weather along the immediate coast, but in the interior it has been clear and dry.

At Sacramento the temperature has averaged a fractional degree above the normal; light to fresh southerly winds have prevailed, and there has been continuous cloudlessness.

Peaches, pears, plums and prunes have been about all disposed of, and grape-picking has begun. The crop is generally reported to be light. Some shipments have already been made, and it is expected that within the next week or ten days there will be great activity in this line. It is estimated that 60 carloads of grapes will be shipped from Sacramento within the next week or two.

The weather has been especially avorable to fruit-drying, and also to raisin making, which has begun in most sections heard from.

Hops are about all picked and are being shipped. The crop, in some parts, is reported to be somewhat lighter than was expected from previous estimates.

The reports for the week, received by Acting Director Burrows of the State Weather Bureau, have disclosed no material departures from the normal conditions or former anticipations. The prevalent tenor of most of the correspondence is, as heretofore, that the season's operations, taken as a totality, yielded rather satisfactory results.

The Honey Crop of the United States.

The *American Bee Journal* says: For the United States as a whole, the honey season has been a slight improvement over last year, although we cannot call it an average year. It may be well to call attention to the fact shown in the table, that Ohio, Iowa, Minnesota and Michigan took the lead in honey production this year, while California, usually the banner honey State of the Union, shows almost a total failure.

Alabama	Fair	Michigan	Fair to good
Arkansas	Indifferent	Minnesota	Fair to extra good
California	Very poor	Mississippi	Very poor
Canada	Fair	New Hampshire	Fair
Colorado	Below average	New Jersey	Poor
Connecticut	Poor	New York	Poor to fair
Delaware	Very poor	North Carolina	Poor
Florida	Fair to good	Ohio	Fair to extra good
Georgia	Fair	Pennsylvania	Fair to good
Illinois	Poor to good	South Carolina	Fair
Indiana	Poor to fair	Tennessee	Poor to fair
Iowa	Fair to very good	Texas	Poor to fair
Kansas	Fair to good	Utah	Poor
Kentucky	Poor to fair	Vermont	Poor to fair
Louisiana	Fair	Virginia	Fair
Maine	Fair	Washington	Good
Maryland	Poor	West Virginia	Poor
Massachusetts	Fair	Wisconsin	Poor

P. C. W. P. A.

TO THE EDITOR:—On the 21st, 22d and 23d inst., the annual convention of the Pacific Coast Woman's Press Association will assemble at Union Square Hall, San Francisco.

The literary exercises will include papers and addresses from the brightest women of the coast.

The subject of incorporation will be discussed in all its bearings, and some decisive step will no doubt be taken in the matter.

Much interest in the coming event is felt in all literary circles of the West. MAUDE PEASLEE.

WORK has been started upon a great water storage and irrigating enterprise in Sabino canyon, near Tucson, where reservoirs will be built. There will be three dams, the estimated cost of which will be $80,000. The capacity of these reservoirs, which are in a line one above the other, will be 6,000,000 gallons.

HORTICULTURE.

Robbing Bees and Drying Fruit.

LAMANDA PARK, LOS ANGELES CO., Sept. 8, 1892.

TO THE EDITOR:—I enclose you a sample of pears taken from the drying-trays after 12 hours' exposure to the sun. These pears you will notice have been eaten out and rendered absolutely unsalable.

This eating and destruction was done by bees. It occurred in the San Gabriel valley in the midst of a fruit-growing and fruit-drying district. What has happened to these pears has happened more or less to fruit dried all over the valley. Pears and apricots suffer most. The entire honey production of bees in and along this valley does not bring in as much as do the Bonine and Thompson fruit orchards, and still the whole of our fruit interest is annoyed and pestered by these excellent but ill-placed insects. We lose very considerable sums by these bees. As a matter of equity, it would be proper for the beekeeper to pay the fruitgrower for the fruit converted to his use by his bees.

These pears of Mr. Bonine have been taken—stolen by bees—for the benefit of their keeper. Ought not Bonine to have an action for this and a right to replevy the honey produced from his pears? It seems to me that this might be a good solution of the trouble. Trace the bees as we used to trace for bee trees, and so, the injuring beekeeper found, make him responsible for the full value of the fruit eaten or injured, and give a hold on the honey as you would for any other converted property that had been stolen. ABBOT KINNEY.

[Mr. Kinney sends us a most striking illustration of the sad work which bees perform upon exposed dried fruit. Nothing is left but the skin of the pear and the network of coarse fibers which were once concealed in the fruit pulp. It is simply "skeletonized" fruit. There must of course be a remedy for such robbery.—ED. PRESS.]

Walnut Raising.

Read by C. A. COFFMAN of Rivera before the Farmers' Institute at Chino.

The subject of walnut culture is an extensive one, and there is so much which may be said upon it that I fear we will not have time to discuss the question from all standpoints and give it the consideration it deserves.

The first matter to be considered is the soil. I think a deep alluvial deposit, with little or no alkali, is best adapted. It requires good drainage, any subsoil which is impervious to water being objectionable; water standing around the tree roots is hurtful, causing sour-sap, and in time killing the tree. It is especially so if impregnated with alkali or mineral salts. I consider a depth of less than ten feet to water objectionable; from 12 to 14 feet is better.

I do not think the fogs a detriment to walnut-growing, as our finest nuts are grown near the coast, where fogs are of frequent occurrence.

In planting, trees should be put at least 50 feet apart, and I think 55 or even 60 feet is better. I have seen trees planted 40 feet apart, and after they had attained about 20 years, the branches overlapped to such an extent as to injure the fruitfulness of the tree, and it became necessary to remove some of them.

I think soft shells might be planted 30 by 50 feet, and when about 16 years old remove each alternate one, thus leaving the trees 50 by 60 feet apart. The soft shell commences bearing at five years of age, and from that time until 16 years of age a tree ought to produce a total of 1000 pounds of nuts, or the trees could be taken out at 12 years and transplanted to good advantage. As I have said, the soft shells commence bearing at five years; at ten years they are at full bearing—that is, the tree is fruited to its utmost capacity. Of course the tree keeps on growing for a number of years, and the larger the tree the more walnuts it will produce. I consider this by far the best variety, as the tree is thrifty, a good grower and bearer, fruit superior and commands a better price in markets than the hard shell. The leaves also drop later, so that it makes gathering the crop more convenient, as the nuts are allowed to fall and then picked from the ground.

This year we sold soft shells at 8½ cents, hard shells at 7½, and paper-shells at 9 cents per pound.

The paper-shell trees are dwarfs, the nuts small and hard to hull. I think, however, they might be made profitable by planting them by themselves and putting more to the acre.

In gathering the crop, the nuts should not be allowed to remain too long on the ground after falling, as the fog and sun are injurious to them, causing the shell to burst open, turning the nut black, and exposure to the sun causes the nuts to become oily and rancid.

I think they should be gathered at least three times during the month or six weeks that they are falling. At the last gathering the tree should be shaken by means of a pole with crotch and hook.

The hard shells are not nearly so susceptible to the action of sun and fog as are the soft shell. In our section we have never been troubled with the hull sticking on the soft shell nor on the hard shell to any extent. Perhaps one-half of one per cent are unsalable on account of hulls sticking. In curing we use shallow trays about four by six feet and six inches deep. These trays hold about one sack of nuts (110 pounds), have lath bottom and handle at each end, which are taken by two men and thoroughly shaken. This allows the fiber and dirt to escape. They are then put through the grader. This has a sieve with inch meshes, and all nuts which are small enough to pass through this sieve are second-grade, and sell in the market for two cents per pound less than first-grade. Hard shells from old trees give five or six per cent of second grade nuts. The soft shell trees are younger, as we have only recently commenced planting them. So far, the second-grade soft shells will not exceed one-half of one per cent. Soft shells should be cured in the shade by spreading on a floor or in trays. They should not be spread over a foot in depth, should have an airy place, and will cure in a few days, especially if they have been allowed to fall from the trees. Hard shells can be cured in the sun, as they will not open when exposed to its influence as does the soft shell, but I question the propriety of curing any kind in the sun, as I think it starts the oil in the nuts, causing them to taste rancid.

In pruning, I think four or five feet from the ground high enough. It has been the custom to prune as high as six or seven feet in order to cultivate the ground underneath. I consider it detrimental to the tree from the fact that it causes it to lean, thus exposing the south side of the tree to the sun and causing it to become sunburned. In pruning grown trees, I should not trim the south side at all unless the branches interfered with each other. It is well to trim on the north side in order to balance up the tree, as they always lean toward the north. Nursery trees might be pruned to good advantage by cutting the tops off, thus preventing them from growing so tall and bending over.

In cultivating the young trees it might be well to plow an ordinary depth of four to five inches, but with the older trees the roots should be allowed to come to the surface; a cultivator or even a sweep might be used.

Land which requires fertilizing, I should not consider good for walnuts at all.

ENTOMOLOGICAL.

A More Encouraging Report of the Scale-Eaters.

A large meeting of horticulturists was held in Orange recently to consider the services and outlook of the new scale-eaters collected by Mr. Koebele in Australia.

Hiram Hamilton opened the meeting, referring to the absence of Prof. Koebele as unfortunate. Mr. Hamilton had been sent 100 specimens of the *orcus chalybeus* by Prof. Koebele for propagation in Orange county. He had placed them in his orchard at Orange and had that morning visited them in company with Prof. Craw. They were found to be doing well and promise the best of results. They had been placed upon his trees some weeks ago. Two days after placing them in a scale-infested orange tree in the middle of his orchard, he had gone to look at them, and had been able to find only five; six days later he could not find any, but he found a nest in the tree of nine eggs, which he took home, and last Sunday a week ago they had hatched out nine beautiful little cubs. In company with Prof. Craw on Thursday, he discovered many bugs, beetles and eggs in the tree, and was satisfied the parasites had come to stay. They had not made any appreciable inroad into the ranks of the scale, but Prof. Craw was of the opinion that they would in three or four months

Prof. Craw was introduced and explained the absence of his collaborator. Prof. Koebele had telegraphed him that it was impossible for him to come, as he had been taken with a sudden attack of illness just before starting from Los Angeles. Prof. Craw said that he had visited the *orcus* in Hamilton's orchard and had found them doing well. He was convinced that the parasite would be a perfect success. He had seen the parasites in Los Angeles the day before and had found a great many of them, including eggs and beetles. He thought there would be an abundance of them next May, when they would be scattered broadcast throughout the orange groves of the valley. In Australia a beetle preys upon the *orcus*, yet the latter exterminate from 50 to 75 per cent of the red scale. We have introduced the parasites, but not the beetle, and consequently they ought to exterminate the scale. The *orcus* does not propagate as rapidly as the *vedalia*. That is hardly to be expected. There is no evidence in entomological history of another visitation such as the *vedalia* had been to the white scale, millions of which had fallen prey to the hardy parasite. The *orcus* thrives best in shady trees, full of foliage. It likes shade, and once established will do yeoman service against the scale. The parasites now in the Hamilton orchard are doing well, and he thought by next April or May there would be enough of them to distribute throughout the orchards of the county. Prof. Koebele had stated when he left for Australia that he would not return until he had found a parasite for the red scale. Prof. Craw was satisfied that he had been successful in his search. The red scale here is the same as that found in Australia. It has been imported into this country from Australia, and taken from San Francisco to L. J. Rose's Sunny Slope ranch, whence it spread all over Southern California. The San Gabriel yellow scale, however, is different from the red. That had come from Japan. But the *orcus* would be equally deadly to both varieties. He had colonies of parasites established in Los Angeles and San Gabriel, and both were doing well. He had recently found 11 nests of parasites and was convinced that they would prove an entire success.

Prof. Craw said that no cessation in the warfare against the scale should be permitted, and that all means should be employed to eradicate the pest by fumigation. Scale on fruit cannot be effectually killed by spraying, but spraying with rosin wash would kill probably 95 per cent of the pests on the foliage.

A gentleman asked if the black scale did not prey upon the red, and in reply Prof. Craw occasioned some laughter by stating that he found that the black and red scale got along very well together. He considered the red scale the most deadly of all scales, because there was as yet no parasite to subdue them. Yet the *orcus* would be here in great quantities in the spring, when they would be distributed among the orchardists to begin their work of scale destruction. The red scale is not a pest in Australia. The parasite holds it in check. They are making a great success of raising oranges in Australia. Perhaps by next April or May the *orcus* would be introduced into every orchard in this county.

THE VINEYARD.

The Fresno Raisin Producers' Appeal.

The California State Raisin Growers' Association issued on Sept. 8th a statement for the purpose of making known to the raisingrowers of the State the action that has been taken by the association to sustain the price of raisins for the present season, and also the efforts which are being made by some packers who refuse to join the association to destroy the market and bring about this year the same deplorable result which last year gave the grower, in many instances, less than two cents per pound for his raisins.

When the association was organized in the month of June last, it found a very large portion of the raisins of the State had been this year, as in 1891, contracted and assigned to the packer to be sold by him on commission for the grower. The grower had signed an ironclad agreement with the packer, which enabled him (the packer) to dispose of these raisins at whatever price he (the packer) might see fit.

One of the first duties of the association was to ascertain at what prices these commission packers were selling the growers' raisins in the eastern market. About the middle of August it was reported that raisins were being sold by many of the California packers in the markets of New York, Chicago and Boston at prices that would net the grower considerably less than 4½ per cent a pound. Having in mind the deplorable, insane slaughter of raisins last year, the committee of this association caused telegrams to be sent to many brokers in the eastern States, asking for quotations and the names of firms who were quoting prices. The result was that nearly all the packing-houses and some of the cooperative societies of the State were found cutting prices. In answer to the earnest remonstrance of the association, and also with regard to the fact that the indignant grower, when informed of this state of affairs, in many instances intimated his intention to disregard his contract with the packer, and refuse to deliver his raisins to the packer who was thus slaughtering prices, the executive committee of this association felt that the association was strong enough to say to the packers: "This competition among yourselves in the eastern market at the expense of the grower must now and forever cease. We are strong enough as an association to stop you slaughtering prices. And to those who refuse to come into the association, we are able to render you powerless for evil by refusing to give you any raisins to handle."

On the 17th day of August last, about 200 of the growers of the State, members of this association, assembled in general meeting in Fresno. At this meeting the executive committee reported that 18 out of 22 of the principal packers and cooperative raisin-packing companies of the State had agreed to stop this jealous and insane competition among themselves.

This meeting was addressed by Mr. Williams, of the firm of Williams, Brown & Co., and Mr. Lemcke, of the firm of Schacht, Lemcke & Steiner, and the result was embodied in the following resolutions:

WHEREAS, We, the California State Raisin Growers' Association, in general meeting assembled, representing over 95 per cent of the raisin acreage of the State, have listened to the remarks, before the convention, of Mr. Williams, of Williams, Brown & Co., who also claimed to represent the firm of Cook & Langley, and the remarks of Mr. Lemcke, of the firm of Schacht, Lemcke & Steiner; therefore be it

Resolved, That in our opinion the manner of conducting the raisin business as expounded by the above-named packers is prejudicial to the best interests of the raisingrowers and tends to reduce the price of raisins; further

Resolved, That as long as these firms remain outside the packers' organization, and refuse to sign the agreement of other packers of the State to maintain minimum prices, that we, the California State Raisin Growers' Association, further bind ourselves neither to sell them our raisins or do business with them in any way; and be it further

Resolved, That we express our thorough disapprobation and contempt of those firms who are operating in a way that will bring ruin to the raisin industry of the State.

As the result of such resolutions and the action of the association, nearly all the packers and cooperative raisin-packing companies of the State have fallen into line and agreed to observe the following prices, which prices are calculated upon a basis that will pay the grower 4½ cents per pound in the sweat-box for all good raisins—those of the first and second crop.

Clusters, 20 pounds, $2 per box, minimum price.
Three-crown London layers, $1.65 per box, minimum price.
Two-crown London layers, $1.45 per box, minimum price.
Three-crown, fancy loose, unfaced, $1.40 per box, minimum price.
Three-crown, fancy loose, faced, $1.45 per box, minimum price.
Four-crown, loose, sacked, 5½ cts. per pound, minimum price.
Three-crown, loose, sacked, 5 cts. per pound, minimum price.
Two-crown, loose, sacked, 4 cts. per pound, minimum price.
Three-crown, loose, boxed, $1.25 per box, minimum price.
Seedless Muscat, 5 cts. per pound, minimum price.
Seedless Muscat, fancy, 5½ cts. per pound, minimum price.

The only dissenting packers, whose pack can in any way affect the market, are Cook & Langley, Schacht, Lemcke & Steiner and Williams, Brown & Co. Messrs. Williams, Brown & Co., although refusing to sign, have written to the association that it is their intention honestly to observe combination prices until further notice. The packers and the merchants both here and in the East are now reporting that they anticipate the raisin pack of this season, if properly handled, will fetch a higher price than ever before known in the State for the reason that the Spanish raisins will be entirely shut out from all the ports of the United States by reason of the cholera now raging in Spain; and also that the short crop of fruit in the East has so increased the price of dried fruit that raisins will, to a great extent, be used as a substitute for dried fruit. As a proof of the improved market which has been called into existence by the packer and grower agreeing upon one uniform price, many of the packers inform us that they have already sold, at the combination price, all the first crop of raisins controlled by them. The executive committee of this association feels that this encouraging state of affairs is due entirely to the

action taken by the association, backed by the firm attitude taken by 95 per cent of the growers of the State, members of the association, refusing in any way to sell or do business with those packers who decline to sign the agreement to keep up prices.

Every grower in the State should know the attempt being made by jealous packers to destroy the market. Mr. Lemcke, of the firm of Schacht, Lemcke & Steiner, told the growers at their meeting on the 17th of August that he had not bought a pound of raisins and that he did not intend to make any contract for raisins. He would buy just what he could see he could sell and watch the market. He further stated that last year he bought from the farmer—that is, the needy farmer—raisins in the wagon at the door of his packing-house for 1½ cents a pound, and he asked the meeting to believe him when he assured them that he lost money on the raisins he so purchased at that price.

Unsuccessful attempts are now being made by some packers to break up this organization and to destroy the market. Circulars are being issued quoting prices much below that agreed to by the packers. Eastern brokers are taking orders at low prices, but the packers are standing firm, and for the most part refusing to confirm the orders taken.

The action in sending circulars broadcast among the buyers of the East cannot be condemned in language too direct or forcible by the Raisin Growers' Association of this State. The packers of the State who are working in accord with the grower in developing this great industry should also place the brand of their condemnation upon the acts of those firms, and also of any who may be in sympathy with them. Every grower and every legitimate packer should work in harmony to rescue this fair and fruitful calling, alike beneficial to the raisingrower and the Golden State, as well as the consumer of the raisin, from the greed and utter selfishness of those packers who would for a temporary money-gain blast an industry that is not only the glory of California, but the pride of the nation.

California State Raisin Growers' Association,
By W. Harvey, Secretary.

Dried Grapes in Northern Sonoma.

We have heard this season every figure from 2½ cents net a pound to 3½ less 6 per cent. These figures give $45 to $65.80 to the ton dried—a wide range—and they mean from $11.25 to $17.50 to the ton green, as the grapes in general dry out three-quarters of their weight. Every man knows about how much he is willing to take for his grapes, and usually bases his ideas on the green product. He must therefore remember that it will cost him from $8 to $22 to handle each dry ton—the variations and details of the figures we will look at later—let us say $20 on an average. Deduct this $20 from the $45—the lowest offer—and we have $25 profit, and divide this by the shrinkage on the basis of four tons green to one ton dried, and we have $6.25 a green ton net as they hang on the vines, a pretty low figure for green grapes, even if we have counted the cost of picking in getting at the $20. Take, now, the highest offer, $70 less six per cent, or $65.80, and deduct the $20, and we have $45.80, or $11.45 net per green ton on the vines, which is not so bad. Just here we may compute the price the wineries ought to pay in order to compete with the dried-grape buyers. Add to this $11.45 the cost of picking, say $1.15, and hauling 75 cents per ton, and we have $13.45, the figures which will approximately net us as much for green-grapes as $65.80 for dried. If we contract to deliver in Santa Rosa from Healdsburg, we can deduct $1.80 per ton for the local freight rate, and we will receive, then, free on board at Healdsburg, $64 a ton, or $11 even for the green. These figures are borne out by the fact that in some parts of southern California the dried-grape buyers outbid the wineries by offering $16.75 to the to the others $12 and $13.—Healdsburg Tribune.

FLORIST AND GARDENER.

Seasonable Hints.

The following was read by F. A. Miller, San Francisco at the August meeting of the State Floral Society:

FREESIA REFRACTA.—This is the proper time to plant bulbs of Freesias for winter-flowering in pots. Select strong bulbs and plant five to six bulbs in a six-inch pot in the following manner: Put a few pieces of broken crocks in the bottom of the pot, over which place a handful of coarse pieces of dry cow manure; then fill the pot two-thirds full with ordinary rich potting soil, such as is used for hyacinths and other bulbs. Plant the bulbs by pressing them firmly into the soil and cover them up about a half-inch. Give them a good watering, and place the pots in the open air in a sunny exposure. When the plants are several inches high, fill the pots up gradually with the same kind of soil. This treatment will make the plants stronger and stiffer. As soon as early frosts may be expected, put the pots in the house in a sunny exposure. The plants may be expected to be in bloom in January or February. Freesias are delightfully fragrant, and I do not know of any plant which will give more satisfaction as a winter flowering plant than Freesia Refracta. Strong flowering bulbs can be had at 50 cents per dozen.

PANSIES.—The end of the present month and the beginning of September is the time to sow pansy seed, if they are expected to bloom during the winter months. The pansy thrives best in cool weather, therefore the finest flowers are produced during winter and early spring. The seed should be soaked in warm water for twenty-four hours in order to produce quick and uniform germination. Sow the seed in pots or boxes, in a light sandy soil, and place in a sheltered position and out of the reach of slugs, which often destroy an entire crop of young plants in a single night. As soon as the young plants are sufficiently large to be handled, they should be transplanted to shallow boxes. Set the plants about one-half to three-fourths of an inch apart. As soon as they crowd each other they should be transplanted into the ground where they are to bloom. It is hardly necessary to say that the soil in which pansies are expected to bloom should be made very rich in order to insure large and fine flowers.

CHINESE PRIMROSES.—This class of plants is indispensable for winter-flowering. The seed should be sown now in order to have blooming plants in January. They can be relied upon as constant bloomers for six to eight months. Of course they are house plants, and as such give universal satisfaction. The seed of the Chinese primrose is somewhat expensive. The seed should be sown in pots filled with light, sandy soil, mixed with leaf mould. The seed should not be covered, but a pane ot glass may be placed over the top of the pot to retain moisture and secure a more uniform temperature. As soon as the plants are up, more air should be given, and as soon as the little plants can be handled, they should be transplanted in pots or boxes in which they may be grown until sufficiently strong to be potted off in two-inch pots. They will make fine flowering plants in four-inch and five-inch pots. The proper soil for them is a light, porous soil of sandy loam mixed with leaf mould, coarse sand and a small proportion of old manure. Good drainage should be provided.

CINERARIA.—This is another very charming winter-flowering plant, the seed of which must be planted soon to have plants in bloom in January or February. The seed should be sown in pots and barely covered, and as the seed is very fine, the watering should be done carefully, so as not to wash all the seed into a heap or down into crevices near the rim of the pot. Good drainage must also be provided, and sufficient air must be given to prevent the damping off of the young plants. As soon as the young plants are strong enough to be handled they should be potted off in small pots. The cinerarias require plenty of pot room, and this necessitates the shifting into larger pots before they are thoroughly pot-bound. Green flies and other insects are very fond of the cineraria, and a very good way to keep them clean is to put tobacco stems on the shelf around and about the pots. They will bloom in five and six-inch pots, and when the buds make their appearance a little liquid manure will help the plants very much. Cinerarias make also fine blooming plants for the garden, and may be had in bloom during the entire summer, if they are planted out while they are in vigorous condition in early spring, as soon as the frost is over.

CEREAL CROPS.

Hot Water for Wheat Smut.

We gave some months ago an account of the hot water treatment of seed grain to prevent smut as a proposed substitute for bluestoning. As it is now approaching seed time it will be well to renew the suggestion that a trial be made in this State of the hot water treatment. We find the following in the Dixon *Tribune* of last week:

Smut in wheat is one of the greatest trials with which the average farmer has to contend. Copper sulphate, better known as bluestone, is generally used to prevent smut, as by soaking the grain in a strong solution the germs or spores of the fungus are destroyed. During the past few seasons very little of the wheat has been free from smut, and in the hope of learning of a more satisfactory method, J. N. Garnett recently wrote to E. J. Wickson of the State University. That gentleman forwarded him a Government bulletin describing the new Jensen or hot water method, a portion of which we copy.

This method, discovered by J. L. Jensen, of Denmark, in 1887, consists in immersing the seed, which is supposed to be infected with smut, for a few minutes in scalding water. The temperature must be such as to kill the smut spores, and the immersion must not be prolonged so that the heat would injure the germinative power of the seed. If the water is at a temperature of 132½° F., the spores will be killed, and yet the immersion, if not prolonged beyond 15 minutes, will not in the least injure the seed. The temperature must be allowed to vary but very little from 132°, in no case rising higher than 135½°, or falling below 130°. To insure these conditions when treating large quantities of seed, the following suggestions are offered:

Provide two large vessels—as two kettles over a fire, or boilers on a cook stove, the first containing warm water (say 110° to 130°), the second containing scalding water (135½°). The first is for the purpose of warming the seed preparatory to dipping into the second. Unless this precaution is taken it will be difficult to keep the water in the second vessel at a proper temperature.

The seed which is to be treated must be placed, a half bushel or more at a time, in a closed vessel that will allow free entrance and exit of water on all sides. For this purpose a bushel basket made of heavy wire could be used, with which spread wire netting, say 12 meshes to the inch, or an iron frame could be made at a trifling cost, over which the wire netting could be stretched. This would allow the water to pass freely and yet prevent the passage of the seed. A sack made of loosely woven material (as gunny sack) could perhaps be used instead of the wire basket. A perforated tin vessel is in some respects preferable to any of the above.

Now dip the basket of seed in the first vessel; after a moment lift it; and, when the water has for the most part escaped, plunge it into the water again, repeating the operation several times. The object of the lifting and plunging, to which should be added a rotary motion, is to bring every grain in contact with the hot water. Less than a minute is required for this preparatory treatment, after which plunge the basket of seed into the second vessel. If the thermometer indicates that the temperature of the water is falling, pour in hot water until it is elevated to 132½°. If it should rise higher than 132°, add small quantities of cold water. This will doubtless be the most simple method of keeping the proper temperature and requires only the addition of two small vessels, one for cold and one for boiling water.

Steam, conducted into the second vessel by a pipe provided with a stopcock, answers even better, both for heating the water and elevating the temperature from time to time.

The basket of seed should, very shortly after its immersion, be lifted and then plunged and agitated in the manner described above; and the operation should be repeated eight or ten times during the immersion, which should be continued 15 minutes. In this way every portion of the seed will be subjected to the action of the scalding water. Immediately after its removal dash cold water over it or plunge it into a vessel of cold water and then spread out to dry. Another portion can be treated similarly, and so on until all the seed has been disinfected. Before thoroughly dry, the seed can be sown; but it may be thoroughly dried and stored if desired.

The important precautions to be taken are as follows: (1) Maintain the proper temperature of the water (132½° F.), in no case allowing it to rise higher than 135° or to fall below 130°. This will not be difficult to do if a reliable thermometer is used and hot or cold water be dipped into the vessel as the falling or rising temperature demands. Immersion 15 minutes will not then injure the seed. (2) See that the volume of scalding water is much greater (at least six or eight times) than that of the seed treated at any one time. (3) Never fill the basket or sack containing the seed entirely full, but always leave room for the grain to move about freely. (4) Leave the seed in the second vessel of water 15 minutes.

[The reader will see that the above method of using hot water is only suitable to treatment of rather small amounts of seed wheat. If experiments are made this year with such small heating receptacles as are at hand and the result is satisfactory, it will be easy enough to devise appliances for heating on a large scale another year.—ED. PRESS.

THE IRRIGATIONIST.

Development of the West Side of Fresno County.

J. H. Harding writes to the Fresno *Expositor* as follows: Having just made a short prospecting tour over a portion of the county lying west of White's bridge and Mendota, I am prepared to state that the experimental tests made in plant and tree growth on that side in the past two years have fully demonstrated the fact that with the magic touch of water upon the rich soil of those plains future wonders may be looked for. To the south and west from Mendota, and contiguous thereto, lies a beautiful stretch of as rich land as can be found anywhere, even in California, and so level and even in character that it cannot only be very easily watered, but is susceptible of the highest state of cultivation.

In going southward from Mendota, the first place of noticeable improvements and fine tree and trim growth is Philip Dengler's, a gentleman who has taken an active part in the development of the West Side country, and has also been untiring in his efforts in the establishment of an irrigation district. High hopes are entertained now of the speedy consummation of their plans in soon getting a complete system of canals ramifying that whole country since Dr. Perrin's return from London with the good news that the sale of bonds for the district are as good as negotiated. The management have already advertised for bids for a speedy construction of the entire system, which it is estimated can be completed within a year from beginning.

Mr. Dengler has been trying the effects of a little water upon his trees, vines and alfalfa, procured from a deep well and windmill; and even with so limited a supply, I saw Carolina poplar cuttings that were planted last spring, and many have already made a growth of as much as eight feet this season and are now still growing strong and luxuriant. Figs and other fruit trees have made as strong a growth as those upon our subirrigated lands around Fresno.

His vines, now of three season's growth, are vigorous and healthy and bore a fair crop, which is already picked and cured and ready for the packer. This shows conclusively that they ripen much earlier than around Fresno. Alfalfa that he planted last March has already been cut six times, and to-day is knee high with a splendid stand. The Egyptian corn planted in May made a splendid growth and a fair yield without any irrigation whatever. He has several acres of it, and could not possibly water it from his well. Of course the space of trees, vines and alfalfa is limited to a few acres, but it shows the wonderful effect of a little water upon the rich soil.

I have procured samples of soil and artesian water, which I will send to the State University for analysis, so that those having land in the artesian belt and too high to be reached by the canal system, will still have means of irrigating their lands if the artesian water is not too highly impregnated with detrimental salts.

From Mr. Dengler's can be seen dozens of claim shanties and some quite pretentious houses where the possessors are holding on to their claims like "grim death to a dead nigger" in hopes of a reward in the near future for their pluck and energy, and I will say right here that just as soon as water is wedded to the soil they will have mines of wealth.

George Rupert pointed out to me a beautiful level tract of land where he expects to realize a fortune just as soon as the water comes, and I believe almost a single furrow plowed round it would hold the water on the entire piece, so level it is.

The whole country seems made up of a sedimentary deposit, and is as deep and rich as can be found anywhere, the difference being the lands upon the lower levels are a

shade heavier than on the high levels. I was also shown samples of gypsum from the adjacent hills in the Coast Range, where the quantity is unlimited, and Mr. Dengler informs me he can supply it laid down in carload lots in Fresno for $10 per ton, and guarantee its good quality. Here is a chance for our orchardists, vineyardists and alfalfa growers to increase cheaply their crops and right up their lands that are getting so strongly alkalied from excessive irrigation, and rise in the subwater level about Fresno. Those who have tried this gypsum can attest to the beneficial effects from its use.

There is no doubt in my mind that the magic touch of water upon those West Side lands will produce such wonderful results that brain, energy and muscle will convert what now seems a barren waste into a veritable garden of Eden.

In due time, specimens of productions, soil, gypsum, fossils, petrifactions and curios from this new part of Fresno county will be obtained and placed in the collection of exhibits by the commission for the World's Fair.

The Stock Yard.

Live Stock at the Petaluma Fair.

TO THE EDITOR:—On Saturday the 3d inst., we took a trip to Petaluma in order to see the live stock on exhibition at the fair then being held. There were about 130 head of cattle, representing six different breeds.

Bement & Son had their well-known herd of Ayrshires on hand, as also had Dr. Dixon of Sacramento, 11 head of his Polled Angus cattle, in good condition, being the most beefy-looking lot on the grounds. Next was a lot of some 20 head of Red Polled cattle exhibited by Messrs. Meecham and Fritch. These were an even, all-alike lot of cattle, and in nice condition throughout. We had expected to see them a somewhat heavier class of cattle than we found them to be and also were a little disappointed in not seeing some of them with good, big bags of milk, as the breed has some reputation in that line, but suppose this is the dry time of the year with cows, as well as grass. For that reason we probably expected more than the circumstances warranted.

The above three breeds had a "walk over" as regards the premiums, there being no others on exhibition of the same breeds to compete with them. There were two herds of Jerseys, one belonging to Mr. Geo. D. Campbell, a nice lot on the whole, and the other to Mr. Ward. The latter herd was not in as good condition as the former, nor as good as we have generally seen Mr. Ward's cattle looking, but we were given to understand that he had left some of his best at home getting ready for the State Fair.

There was a better show of Holstein, than of any other breed, the majority of those on exhibition being in good enough condition for a milking breed of cattle to be shown in. Then there was all the required evidence of milk in many of the cows and heifers, at any rate there were some big udders among them. The two herds belonged respectively to Messrs. J. H. White and F. H. Burke.

We now come to the Shorthorns, which were represented by cattle belonging to M. D. Hopkins and John Lynch, both of Petaluma. We had fully expected to see the Cotate ranch herd represented, but in this we were disappointed. There were a few good cattle among those exhibited, but on the whole they were not in as good flesh as visitors generally expect to see such, as show cattle, neither was the lower condition atoned for in any way by a single *big bag of milk* in the whole lot.

There is a good deal of discussion nowadays about the advisability of keeping general-purpose cows or special-purpose cows; each has its place and in due time will find it wherever wanted. As the claim of general-purpose is held for this breed when the dairy qualities have been encouraged and developed, as they have been in some few herds, there should be a show of either milk or beef, and occasionally milk *and* beef in the same animal, when a public exhibition of mature animals is made.

Evidently the exhibitors ot the Petaluma fair do not put in practice, the theory which some put forth, that the "feed is half the breed." It is nevertheless true that a breed will quickly deteriorate and run down for want of proper feeding; in fact there is no surer way of breeding out the thoroughbredness of a herd.

Thriftiness is a cultivated hereditariness in cattle, brought about by selection and good feeding through several successive generations, it may have been five or fifteen, but so easy is the down grade to travel that it takes but one or two generations, under careless management, to get back to the original, uncultivated unthriftiness of the scrub, and that of the worst kind; for the cultivated plant left to run wild can never hold its own with one of the same species that has for all time been struggling to maintain life against the aggressiveness of a thousand and one other plants equally hardy.

Thus it is with animals that have for some generations been dependent on having food provided for them, it becomes a fixed habit in the breed, whatever it is, therefore, those who buy good, well-bred cattle of any breed, that have this habit bred into them, should, by careful selection in breeding, and generous keep, (not pampering, as for obesity) endeavor to maintain that habit. It is a profitable one, in that it gives a good return for food consumed, which is the end aimed for by all good breeders.

DRAFT HORSES.

We did not see a parade of all the horses but merely the tail end of the Saturday morning's parade of the premium horses.

It is hard work to find out and see all the horses when shut up in box stalls, but in company with one of our best importers and breeders of this class of stock, we tried our best to do so, but in vain, as we were afterward told. Having no guide or instructor in the shape of a catalogue, there is no wonder if we did miss seeing some of the best, our informant said. However, considering the reputation the district has had for such a number of years, we did expect to see a better and larger show of heavy horses, especially of brood mares and young horses bred in the district. There can hardly be a doubt about them being there. Would that their owners would bring them out in true show-yard form and help to sustain the reputation of the district as having a larger number of good draft horses in proportion to the size and population, than any other in the State. There were a few good imported stallions, of the Shire, Clydesdale, Percheron and Suffolk Punch breeds.

The last named appears to find favor among farmers wherever tried, as a strong, active horse for all kinds of work on farm or road. He is equally at home in deep or light plowing, at heavy pulling or in long journeys with a load behind him, to the farmer, standinfi in the same relation to a general-purpose horse among horses as the Shorthorn does in cattle. There is vitality, size and action, with some spare strength for extraordinary occasions, which all work-horses should have in their respective labors.

THE JOURNEY THERE AND BACK.

We were very much pleased with this part of the day's pleasure, and noted with some degree of interest the signs, here and there, of development in the dairy husbandry, but especially in that most profitable branch of selling milk. On our return journey in the evening we counted milkcans enough on the boat to hold over 1000 gallons coming to San Francisco.

This amount of milk is probably from not less than 1000 cows, but more likely 1200, which have to be fed and provided for with milk-producing food.

Some efforts in this direction were shown forth in sundry patches of corn and beets growing on the choicest pieces of land. We cannot say that any piece we saw of either crop looked as if it had been done justice to in management. 'The man with the hoe" evidently had not been there in any profitable form, and the ground had all the appearance, as far as could be seen from a moving train, of *not* having had that "stirring up" which is necessary to not only prevent the growth of weeds, but to conserve moisture for the growing crop.

The corn was planted too close by one half or more for growing to the best advantage in both quantity and quality. By planting in rows farther apart, and a little thinner in the rows, a crop would be produced with taller and thicker stalks, green to the ground, and producing some ears which, when well formed, is the right time to feed the whole crop. At this stage of growth it is sweeter and more nutritious, weight for weight, than at any other previous time, and much superior to the dried up, brown-at-the-bottom-looking stuff one so frequently sees being fed out.

The beets also appeared to lack development in growth for the same reason—that of being too thick on the ground. As the late Mr. Mechi used to say when advocating the thin seeding of wheat, "There is no greater enemy to a wheat plant than another wheat plant." So it is in a measure with beets, all plants of the same kind requiring similar food. Yet we prefer to except weeds, considering them the worst enemies, and they should not have a chance to get above ground among a crop of beets in the dry, summer climate of California.

Another great fault is putting in the crop too early, before the heaviest of the rains are over, and these, falling upon the newly-planted ground, start the weeds, which will flourish above all things else in damp, cool weather, when it is difficult to kill them when one tries to do so. If the ground is kept in such a state of thorough cultivation early in the spring, so as to check all growth of weeds by stirring the ground and killing them soon after the seed is sprouted, after the last plowing, there will be little, if any, trouble, with weeds among the young beet plants when most difficult to handle. VISITOR.

The Field.

Cultivation for Moisture.

HUENEME, Ventura Co., Sept. 5, 1892.

TO THE EDITOR:—"Cultivating for moisture" is a subject to which I have, from necessity, given both thought and experiment. Within my experience it is a matter on which most California farmers go it blind, and I have been obliged to work it out in some detail. I believe my conclusions to be correct, but they may at least be suggestive and help to clear up the mind of some confused seeker after truth in this matter.

To begin at the beginning: I believe in deep-plowing for all soils, light and heavy. Not necessarily throwing over with the mold-board, but breaking and loosening the soil and letting in the air to a depth never less than nine inches; better 15 or 20. If this be done early in the season every drop of rain is taken up as it falls, and, besides the chemical benefit of the aerating, the moisture is all absorbed. Whatever the nature of the soil, *early* deep-plowing stores up moisture. Then, having gotten the moisture in the soil, the next step is to retain as much as possible through the dry season.

Firm soil, whatever its nature, retains moisture better than loose soil, and the more solid the ground is in April, the better will it hold moisture through the summer. But as even the most compact soil will lose largely through evaporation this must be prevented, as far as may be, by some covering or mulch, and the most convenient mulch is a layer of the soil itself. The efficacy of this layer in preventing evaporation is inversely, as its porosity; if the soil be heavy, adobe in nature, and in fine tilth, a shallow layer is enough; if lumpy, or loose and light, the mulch layer must be deeper. Right here comes in much of the confusion in discussing this subject. The loose top soil or mulch is not active soil at all, it is a mere blanket; the active soil in which the plant does its growing is the firm bed of moist soil below the mulch. Once the rains are over, the cultivator ought never to disturb this moist soil, unless it be to cut off a slice to be converted into mulch, or, in sandy soils, to prevent hardpan; but the cultivator ought to stir the mulch or blanket soil just as often as there is any tendency on its part to run into or become part of the moist soil below it, for thereby the blanket becomes too thin.

To my mind there is no question of the great benefit of early deep-plowing. The points which depend on soil quality and call for judgment are: 1, the settling of the ground to compact it; 2, the thickness of the mulch layer, and 3, the tendency of this mulch layer to compact with the moist soil below it.

First. Packing to retain moisture. The firmer the ground the better it retains moisture, but if too firm roots cannot penetrate it freely and secure the air necessary to their growth. The practical aim is to get it just so solid that it will not retard root growth. In clayey soils the rain alone will sometimes settle the soil too much, and it must be loosened up for the roots' sake. Loamy and sandy soils nearly always require artificial packing. The California farmer is prone to secure this solidity by shallow-plowing. This gives him the desired solidity, but he loses the chemical benefit of oxygen and his ground fails to absorb much rainfall, and sometimes in stiff soils his seedbed is too dense for the young roots.

Occasionally he tries deep-plowing, but follows it by the same harrowing that followed the shallow work. This leaves his soil too loose and it dries out rapidly. In my opinion, the absence of the splitting action of frost in this State renders deep-plowing of the greatest value, but, before evaporation begins for good, the soil must be firm and solid to carry the moisture.

Second. The top mulch layer. In heavy soils worked fine a very shallow layer of soil is enough, but as the soil lightens and becomes sandy, this layer must be deeper because such soil is much more porous. Sandy loam is, in my experience, a very difficult soil to handle in this respect. The mulch is extremely porous and I have had the moist soil hardpan under a top mulch layer six inches deep. My present plan is to begin the summer with a three-inch mulch, as near as may be, and then cultivate alternately deep and shallow. The deep cultivation breaks the forming hardpan and the next shallow drive compacts it again, some of the soil going back to the moist ground, some becoming mulch. In this way, hardpan can be prevented until September and often later. To cultivate such soil at one depth, either deep or shallow, invariably makes hardpan at that depth. Heavy soils do not hardpan in this way, and with them the mulch can be, and indeed must be, kept distinct from the moist soil by cultivation.

Third. Preserving the mulch layer. In sandy, light soils the tendency is for the moist soil to hardpan below the mulch layer; in heavy soils, the tendency is for the mulch layers to run into and become part of the moist soil. Summer cultivation in the former must be directed mainly to preventing hardpan; in the latter, to keeping the top layer loose and free from the moist ground below. It ought therefore to be done as often as either of these ends require.

All this is entirely independent of weed growth. Weeds are the worst moisture thieves of all, and, as a rule, but not always, they are a good guide in the work; but killing weeds and preserving or securing moisture are in themselves entirely distinct processes. As the seasons go in this State, the two processes can generally be combined. My own practice is to plow deep before Christmas, and then, whenever the weeds show, cross the land with a cultivator carrying V-shaped weed knives. These kill the weeds and settle the soil, and generally, but not always, by the time the rains are over the ground is left clean of weeds and of the right solidity, with a dry top layer of two or three inches. In preparing for broadcast grain, it is often necessary to cross perfectly clean soil in order to settle it to the necessary firmness, and if it be early grain, a good harrowing when about six inches high will both prune and help the shoots and tend to preserve the desired mulch. On late grain the risk of a norther makes the treatment dangerous, but if one is sure a norther will not come, or is willing to take the risk, he will find that such a harrowing will do great good.

Spring plowing, especially late spring plowing in California, is, in my opinion, extremely bad practice. The soil is left solid through the rains when it ought to be porous, and is loosened up when it ought to be solid. It can be immediately packed again, but nothing can bring back the rain that has run off and would have soaked in had the ground been loose and open. A. GUILLOU.

[A very clear and satisfactory statement; let us continue this discussion of principles and practice. Nothing could be more interesting or industrially valuable.—ED. PRESS.]

THE Chino beet sugar factory, Los Angeles Co., has turned out this year 2,870,059 pounds of sugar. Of this quantity 516,000 pounds was from the syrups of 1891, and the balance was from this year's beet crop, 2,352,059 pounds. About one-half of the entire quantity is crude sugar, which will run between 80 or 90 per cent sugar. Upon this the Government pays 1¾ cents per pound bounty. The other one-half is raw sugar that has gone through a centrifugal machine. From present indications, this year's beet crop will amount to about 50,000 tons. For every ton the grower will receive on an average $4.50. This year 40,000 acres have been planted to sugar beets, as against 2700 last year. This year the beets run about 15 per cent sugar, as against 13 per cent last year.

J. E. SHAFFER, of the La Punta Salt Works, San Diego County, has shipped twenty tons of stock salt to an ice company at Riverside and fifty tons to San Diego, during the last month. Orders have been received for thirty tons of salt to be used in fish-packing at San Diego. The salt is shipped from La Punta to San Diego by sloop.

The Home Circle.

The Swallow Sings.

Written for the RURAL PRESS by LILLIAN H. SHUEY.

I have just found out that the swallow sings.
I had never known that this common bird,
In the tender twilights, might be heard
As he cleaves the air with his pointed wings.
Always and ever the song for me
Was the song of the richest melody.
I had always felt as I upward pressed,
On the heights alone could my heart find rest.

But I have found out that commonplace things
Are fraught with the purpose of life and zest;
And full of the joy that striving brings,
Even lowly ways are lovely and blest.
There's many a pause where my heart can rest;
I have just found out that the swallow sings.

Irony.

I set my gaze upon two stars that seemed
Twin orbs of equal flame in heaven's dark height,
So close with interblended rays they beamed
From the deep dome of night.

"O happy stars," I thought, "like this to bide
Though mighty changes, lovingly withstood,
Companioned each of each, whate'er betide,
In silver sisterhood!"

Then sounded to my sense, from night's great thrall:
"On either star, this hour, there dwells a race
That knows not if the other lives at all,
So vast their sundering space!"

—Edgar Fawcett.

Sky-Rain.

Far on the meadow the grass-blades are crying;
Hark! in the valley the lilies' low sighing!
Vain is my watering, lost my endeavor;—
Thirsty, our roses go drooping forever.
Sweet rain! Sky-rain!
Descend in thy beauty, O gracious sky-rain!

Gray, on the mountains thy swirls are created,
Silvery veils in the lowlands awaited,
Fall in your softness, ethereal showers!
Visit us, pity our August-burnt flowers,
Scorched on the plain;
With rescue and healing, O come, dewy rain!

Bring us the sweetness of regions supernal,
Pure as the shining of planets eternal!
Fail us not, leave us not, quivering grasses,
Parched unto death on Earth's dreary morasses!
We suffer in vain,
Unless thou refresh us, O blessed sky-rain.

Rivers of Grace, glimmer on from the mountains,
Fed at celestial, mysterious fountains!
Human expedients fail in our sorrow,
Feeble, to-day,—the mirage of to-morrow;
But thou dost remain,
A permanent blessing, O pearly sky-rain.

Life has its deserts all burning and glaring,
Torrid with bitterness past our own bearing;
Fall on us faintly, like shadows of even!
Cool our hot faces, sweet Spirit of Heaven!
O silent sky-rain!
Our souls are athirst for thee, precious sky-rain!

—Caroline D. Swan.

The Sexton's Story.

For some time I had heard the ominous muttering of the distant thunder, but had been so absorbed with the beauties of the scenery that I had not realized the fast approaching shower till the first great drops which herald the coming tempest pattered around me, now and then one striking me and going through my thin summer coat.

I looked up and saw that I was just passing the gate of a country cemetery, and a short distance from the gate I espied a clump of trees, under which I thought I might find temporary shelter from the dash of rain that I knew would soon be upon me.

Passing through the gate, I went up the pathway a short distance and discovered a rustic house in the centre of the group of trees which I had seen from the road. I started toward this house, when a flash of lightning nearly blinded me.

When I recovered from the shock, the clouds had gathered so thickly that I peered into darkness as I approached the rustic house. As I was entering the door an apparent apparition arose before me, and I started back at the sight of an old man, all in white, with a long, snow-white beard and hollow eyes, who looked as if he might be the tenant of one of the old graves near by.

But a welcome from him, uttered in a very pleasant voice, reassured me, and I entered just as the shower burst in all its fury.

As I took a seat beside the old man, he said:

"Rather a dismal place to be caught in a thunder shower, isn't it?"

"Well, yes," I answered, "it is so. I am glad I have company. But how happened you to be here at this time? if I may ask."

"Why, certainly you may ask such a question. I am here to prepare a place for one of my tenants. You see I have been [illegible] of this cemetery for 40 years, and I have come to look upon all the inmates as my tenants."

I looked a little way from where we sat, and the pile of fresh earth indicated the place where he had made preparation for the new tenant.

Another blinding flash of lightning made me involuntarily start, and as the peal of thunder which followed died away, I said:

"Forty years! that's a long time. I suppose you could tell some interesting stories from your experience here?"

"Yes," answered the old sexton; "if I had the faculty of story-telling I could find enough to make many stories."

"Whose grave are you making ready now?" I queried.

"Mrs. Trescott's," he said, in a musing manner, and I asked:

"And who might Mrs. Trescott be?"

The old sexton sat in a study for a moment, and then replied:

"Who was Mrs. Trescott? Well, I'll have to begin at the beginning. Sixty years ago Thomas and Robert Edmunds came to this town from England. The two men were brothers and had married sisters Thomas, the eldest, was a widower with one daughter, three years of age. Robert's wife was an invalid, and their family consisted of a son, also three years old.

"These two brothers built those two house that you can get a glimpse of over the tops of the trees yonder. The houses stand side by side, and in the rear between the two stands a gardener's house, where lived Richard Trescott, a gardener whom the Edmunds brothers had brought with them from England. Richard Trescott's wife was a thorough lady, and they had one son, Richard, Jr., four years of age.

"The two brothers built the large woolen mill which you passed just below here, and for many years the business went on. The brothers intended that Edward and Alice should wed at an early age, and the property thus be kept in the family.

"Richard Trescott had been gardener for the family for many years in England, and had succeeded his father, and so he had grown up with the brothers. It was only natural, therefore, that little Richard should be the playmate of Edward and Alice.

"All was well for several years, but when the cousins were 12 or 13 years of age a slight trouble commenced. Edward had a hasty temper and an overbearing disposition, and so, on account of his superior standing and the knowledge that Alice was his intended wife, a jealousy was aroused by the strong friendship between Alice and Richard, and this jealousy had frequent outbursts.

"Young Richard was a manly fellow, and stood Edward's insults in a calm and quiet manner, never resenting any of his indignities.

"Matters went on thus until Edward and Alice were 16, and by this time the young man had become so exasperated that he told his father of the state of affairs Thomas was soon informed, and a stormy scene ensued. The result was that Richard Trescott was obliged to leave the employment of the brothers and so leave the town.

"Soon after this, Thomas, the elder brother was taken seriously ill, and, fearing that he might not live to see the union of his daughter and her cousin, he endeavored, by the most urgent persuasion, to make her promise that his desire should be realized on her 21st birthday.

"For a long time the girl refused to comply with this demand, but at length, when it became evident that her father could not recover, she consented.

"And so Thomas died, and it was understood that his will provided that in case Alice died before she was 21, her half of the property should go to Edward, and in case she passed her 21st birthday without marrying her cousin he would take the property the same.

"As Edward grew older he showed signs of dissipation, and after a few years it became a common thing for him to go home at a late hour in the night, very much under the influence of liquor. A path ran up through the cemetery where that driveway is, and this made a short route from the village below to the Edmunds mansions on the hill. This path Edward used to travel when returning from the village.

"As Alice's 21st birthday drew near Edward became anxious for the wedding, and it was said that when partially intoxicated he urged Alice to set the wedding-day a year sooner, and made himself so obnoxious that it was only her promise to her dead father that prevented a positive rejection.

"At length the time drew near for the important event. Just a week before Alice's birthday I had dug that grave by the side of the path where that tall monument stands. I finished the digging just before night, for the burial was to take place early the next forenoon.

"During the night we had a heavy thunder shower, and in the morning when I came down everything looked unusually bright in the clear morning sunlight. I came up the path and started back in astonishment to see a man lying in the bottom of the grave. On close examination, it proved to be Edward—dead. He had probably wandered aside from the path in the darkness, and falling, his head had struck the opposite side of the grave, breaking his neck.

"I hurried down to the village for help, and there I found great excitement prevailing. Squire Edmunds' mansion had been struck by lightning the night before, and both the old gentleman and his invalid wife had been killed. One chimney was demolished and the end of the mansion badly shattered, but no fire was discovered.

"We carried Edward home, and the three bodies lay in state till the day of the funeral, when all were buried in the lot over there on the hill.

"At the funeral, Alice was accompanied by a fine-looking young man who was a stranger to all the townspeople. Many conjectures were made as to who this stranger might be, especially as he rode home with Alice in the Edmunds' carriage.

"The next day after the funeral Alice received a note from the lawyer summoning her to call at his office.

"'Good-morning, Miss Edmunds,' said Lawyer Atwood, as Alice appeared in answer to his summons; 'I beg pardon for intruding in the midst of your sorrow; but there is a matter of business which must be attended to very soon. I believe your 21st birthday will occur next Monday, will it not?'

"'Yes, sir,' answered Alice.

"'And I suppose you understand that the desire of both your father and your uncle was that you and your cousin Edward should be married, and so keep the property in the family?'

"'I do,' Alice replied.

"'Now,' continued the lawyer, 'your Uncle Robert's will provides that Edward shall inherit all his father's property at the age of 21. In case he died before that age, it should come into your possession on your 21st birthday. That gives your uncle's half of all the property to you next Monday. But your father's share stands in a peculiar manner. In case of your death before the age of 21, it was to go to Edward; that part of the will is clear; but knowing that the objection to the union was all on your part, and wishing to make this union sure, your father intended to make provisions that if you passed your 21st birthday without marrying Edward, the property should pass into his hands. Of all this you are aware, but your father also willed that at Edward's death your portion of the property which he had inherited should go to the town to found a hospital and a public library.

"'According to these provisions, you would inherit your uncle's part of the property next Monday, and your father's part would go to the town.'

"Here the lawyer hesitated a moment and then continued:

"'I don't like this way of forcing young people to marry against their will, and I don't think a promise wrung from one at such a time as your promise was made, should be binding. I have studied your father's will carefully, and I find that the language used in the document leaves, by a technicality, one chance for you to acquire the whole property.

"'The will provides that if you pass your 21st birthday "without marrying," the property shall go to your cousin. Now, by a slight oversight, it does not specify whom you shall marry.'

"And with a pleasant 'good-morning,' the lawyer bowed Miss Alice out.

"The next Sunday there was a quiet wedding at the mansion on the hill, and it then transpired that the young stranger was Richard Trescott, Jr.

"And so the property was kept together, and Richard and Alice lived in the old house surrounded by a family of boys and girls."

Here the sexton paused and appeared rapt in memory. At length I broke his reverie with the question:

"And so the new grave is for Alice?"

"Yes," he answered, "for Alice, dear Alice. It was her last request of me that I should dig her grave myself."

"And what became of the gardener?" I asked.

"Oh! yes, yes, the gardener," he said, as if he but half understood my question. And then rousing himself, he said: "The gardener; well, you see Richard went to college and then my wife died, and I couldn't bear to be alone, and so I came back and became sexton of the town. Here I could be near the old home, and Alice always came to see me often, and my life was happy, until Richard came to live in the old mansion and I could call Alice daughter, and then I had the old house again. But I could never give up the care of the cemetery."

As the old sexton ceased speaking, the sun burst out again, and, bidding him good-day, I sauntered fourth on my ramble over the old town where I was passing my summer vacation. — David G. Davidson in American Cultivator.

Was Eve a Blonde?

It almost goes without saying that a well-bred woman does not dye her hair, writes Mrs. Mallon in "Some Suggestions About the Hair" in the July *Ladies' Home Journal*. If in some moment of, I was going to say, temporary insanity she should be induced to do it, although it would be mortifying, and she will have to permit herself to look like a zebra for a short time, still it will be wisest to face the situation and allow her hair to grow back to its natural color. The fancy for blonde hair, which has been credited to the fact that the beautiful Empress of the French possessed it, may really be traced as far back as history goes. It is always said that Eve was a blonde, while the hair of Venus was, so it is told, a perfect golden. Lucrezia Borgia, Lady Macbeth, Queen Elizabeth, Anne of Austria, Marie Antoinette were all light-haired. However, this does not make less marvelous the beauty of black hair, which from the jet black, which shines like ebony, to the dark-brown with its glints of gold, cannot be surpassed. The explanation as to the difference in the hair is told very funnily in an old book. It is said: "That heaven sent upon earth many women with golden hair so that they might charm the other half of humanity. Seeing this, the devil, who hates men, sent cooks. These, with their sauces and ragouts, disordered the human liver and produced the desired result—dark skin and hair." However, the color most esteemed just now is an ashy blonde—a shade that no dye will produce, and which, as it must have a clear white complexion accompanying it, as well as black brows and lashes, is counted by artists at once the most peculiar and artistic contrast. All hair is beautiful that is well cared for, and if it be remembered that smooth crimps are best suited to dark hair and fluffy ones to light, not so many mistakes will be made in arranging the coiffure.

What Is Home?

Here are a few of the definitions of home, selected from a collection made by an enterprising London exchange:

The golden setting in which the brightest jewel is "mother."

A world of strife shut out, a world of love shut in.

A grand old mirror through which both sides of us are seen.

The place for a married man after business hours.

The father's kingdom, the children's paradise, the mother's world.

A hive in which, like the industrious bee, youth garners the sweets and memories of life for age to meditate and feed upon.

The place where the great are sometimes small and the small often great.

The only spot on earth where the faults and failings of fallen humanity are hidden under the mantle of charity.

That source of comfort which youth does not fully appreciate, which young men and maidens lovingly desire; which the middle-aged generally possess, which the old rightly value.

An arbor which shades when the sunshine of prosperity becomes too dazz'ing; a harbor where the human bark finds shelter in the time of adversity.

Home is a person's estate obtained without injustice, kept without disquietude; a place where time is spent without repentance, and which is ruled by justice, mercy and love.

HOUSEWORK AS AN EXERCISE.—To keep the complexion and spirits good, to preserve grace, strength and agility of motion, there is no gymnasium so valuable, no exercise more beneficent than sweeping, dusting, making beds, washing dishes and the polishing of brass and silver. One year of such muscular effort within doors, together with regular exercise in open air, will do more for a woman's complexion than all the lotions and pomades that were ever invented. Perhaps the reason why housework does so much more for women than games, is the fact that exercise, which is immediately productive, cheers the spirit. It gives women courage to go on living, and makes things seem really worth while.—Medical Record.

A City Woman's View of Two Homes.

Florence was tall and slender, with dark-brown, velvety eyes that never seem to rest and blonde hair that might have belonged to some daughter of the sun. No ill-fitting frock could hide the beauty of that face. We went out for a little drive, and then the girl talked; she said: "I suppose I am all wrong; I suppose if father and mother knew, they would think it's dreadful, but I have gotten so I don't believe in anything or anybody. It's work most of the time, and see how much you can save the rest, and mother says I will see the advantages of it when she is dead, but I would rather see it now. I don't know what I want; I just want to get away from here. Yes, I do know what I want; I want some pretty clothes, and I want somebody to tell me I am pretty. I expect you think I am dreadful, but somehow I don't seem to care." The drive was not a particularly pleasant one. That night the future seemed to come to me, and I saw a mother weeping for a daughter who was not, and who had been driven from her simply because she had saved a few dollars that might have been spent in giving her pleasure, and which would now do her no good, for she had gone where her pretty face would find plenty of dollars for her. No love had been implanted in her heart, and she would soon forget the people in the country village.

The next day appeared another caller. Her frock was made with an entire disregard for style, but with a beautiful consideration for comfort. The greater time she talked to me she laughed, and, as the sweetest sort of an introduction, she brought me a posy of all the sweet-smelling flowers that grow in a country garden. She said: "People say I take life easy. Well, perhaps I do, but the children like it, and, if we ain't saving up any money, we are making them have a good time now; they are going to have a dance this evening; won't you come over?"

I said I would. When we got there I found a party of young, merry people; I found a round table covered with magazines and newspapers of the day, and I found that most delightful of all things—a hearty welcome. One girl played the piano and the rest danced, while my escort looked at the magazines on the table. They were going to get up a Virginia reel, and when I said I did not dance any more, I was laughed at and told that father and mother always came into that, and of course I must. So father and I stood at the head, and mother and a small boy of seven at the foot, and we danced away as if we had never danced before. Then we had ice cream and cake, which the girls made, and it was iced cream—there was no cornstarch in it—and after we went away my escort told me that all the girls of that house were engaged to be married—engaged to city men; and that, while some people who were very strict thought that mother did not hold a tight enough rein on the boys and girls, still they seemed to turn out better and have a better time than anybody in the village. And I thought to myself, "O wise mother!" And in the future I seemed to see boys and their wives and babies, and girls and their husbands and babies, coming back to see mother; to tell her of their joys and sorrows, and to find in that mother heart a never-failing spring of sympathy.—Bab.

Chaff.

MOLLIE—I wonder why they married. He isn't rich, nor a foreigner; not even an English lord.

Dollie—No, and she hasn't any money, nor been on the stage, nor done anything like that; and her father is only a common American, not even a knickerbocker. I can't understand it.

Mollie (with a bright thought)—Perhaps—perhaps they were in love!

SHE—Just think, girls, I came over in the steamer with three live lords, and they were all single.

The girls (in chorus)—Oh, how lovely! And wasn't one of them engaged?

She—Not until the third day out.

A LAWYER sent a very heavy bill to a woman whom he wished to marry. As she made some severe remark on the matter, the lawyer replied: "I wish to show you how lucrative is the profession of a barrister. You can see for yourself in what a profitable business I am engaged."

THE CAUSE OF IT.—They buried the copper miner with due reverence, and the widow suggested, as a suitable inscription on the tombstone, "His work is o'er." But the stone-cutter thought that an error had been made in orthography and that it would be more appropriate to read, "His work was ore."

YOUNG FOLKS' COLUMN.

Baby's Story.

Written for the RURAL PRESS by AUGUSTA E. TOWNER, Santa Ana.

She was such a dainty, wee thing; three years old, but not so heavy and strong as her brother, who was a year and a half younger.

You see, she had had so much trouble. When she was five months old she had the whooping cough, and though she was a nursing baby she had it so hard—the doctor said the hardest he ever saw a child have it, let alone a baby. How it made her papa's and mamma's hearts ache when the coughing convulsions came on to see her delicate little frame so strained and racked.

When she was eight months old, crying would still bring on a bad fit of coughing, but at that age her papa decided it was best to go to California, so everything was packed up that wasn't sold, and poor, tired mamma, tiny baby, papa, and the big brother and sister traveled and traveled *three thousand miles* till they came to their California home.

But what do you think happened on the way? Why baby caught the chicken pox from another baby on the cars. The family were not comfortably settled in their new home when baby broke out with it, and right after that she had the *cholera infantum*. Papa and mamma thought they were going to lose her. But no; baby, though frail and wan, seemed to have a strong hold on life.

Perhaps it was all owing to that bright California sun. It was an unusually dry, sunny winter; most of that first winter baby spent in the golden State. Mamma remembers how, the 2d of January, baby sat outdoors playing on a piece of carpet, dressed in linens, a cap of embroidered lawn on her curly head and an open umbrella steadied over her that the sun might not beat down too fiercely on the dear little crown. Yes, it must have been the climate that enabled her to grow well and strong, spite of all—that and the chance to get outdoors in the sun and to play in the dirt, for mamma just would let her play in the dirt. She togged baby out in creeping garments of blue denam, and baby would crawl and crawl everywhere.

Once she tumbled into a furrow when her papa was plowing behind the house, and there she lay on her back, her little feet kicking the air, her little hands flying about trying to grasp something; and when the horses came along, by and by, to make another furrow, they stopped and stared. Then papa heard a funny little noise and *he* stared. My! but didn't he say "Whoa!" loud, and pick up baby quick and carry her into the house!

"Here's a tumble-bug for you, mamma," he cried, and mamma laughed, though when she heard all about it she was frightened too, and took good care such a thing didn't happen again.

When baby was old enough to understand, mamma told her all about how she fell into the furrow; then baby would go outdoors and hunt up the big beetles everybody called "tumble-bugs," and tip them over on their backs with a stick, and baby would watch the six black legs flourishing so helplessly about, and chuckle and say: "Poor 'ittle baby! Did 'ee fall into 'ee furrow 'n toodn't get out? Where's 'ee papa?"

When baby was a year and a half old her little brother was born. She had just learned to walk. After the little brother came, papa would say: "Little girlie, your nose is broken." Then "baby" would carefully feel of her nose with such a solemn, puzzled air everybody would laugh.

But "baby's" nose *was* sadly broken, as she soon found out, though she didn't know it by that name. The little brother proved a strong, imperious, troublesome fellow, who by no means took things as patiently and sweetly as "baby" had done. Everything had to "gee" when he fussed.

Thus "baby" was crowded down and out of mamma's lap—that place where she longed ever to nestle—and she would draw up her little chair and stare at her fat baby brother, nursing, nursing away, with that air of his as though no one in the world had any rights but he. She never wished there was no baby brother, but only that mamma was stronger and mamma's lap was bigger, so she could be there too, nursing, nursing away and wiggling her toes.

But bedtime! There was the great difference. "Baby" had so loved to have mamma put her to sleep and sing to her or tell her stories. Mamma was always too tired to do it now. "Baby" had to tell them to herself, and by and by to her little brother. Yes, he would be laid beside her—mamma had headaches nights or else had to work—and "baby" would pat him and tell *him* stories.

Such stories! such extraordinary incidents! such transitions and change in personalities! Mamma had to laugh, no matter how tired she was or worried; they were so funny, so imaginative for such a little girl.

One night, when "baby" was three years and almost three months old, and the little brother was about twenty months old, mamma laid him by his sister in one bed. Then "baby" began to pat him and talk. He lay just as still, while her voice flowed on sweet and clear. Mamma took a paper and a pencil near (she had been a stenographer once), and took "notes."

This is what baby was saying: "There was a dog, and he went outdoors and found a bone with meat on it. But the meat was all inside, and he gnawed and gnawed the meat out, and some Woss (Ross, neighbors of theirs) dogs came along to bark at him; but somebody came along and he had a whip, and he struck the Woss dogs, and they ran away into the woods, and into the house, and the dog he went on to walk; and he came to the woods and he saw some foxes, and they had wings and they flew up in a tree, and the *big* fox he laid some *big* eggs, and the *little* foxes they laid some *little* eggs, and the *big* folkses looked at the *big* eggs and were 'stonished, and the *little* folkses looked at the *little* eggs and fawt (thought) they were *so* cunning. And the folks were girls, and they were Stella and Hattie and Fannie, and they went on walking till they came to a peach tree, and they said: 'Let's pick some peaches for supper.' And they were their papa's peaches, and they picked some ripe ones; but Dickey he picked some hard green ones, and Hattie said: 'Dickey, what makes you do so? Papa won't like it.' And Dickey said: 'I shall.' And Hattie she ate her ripe peaches, and they were so nice and didn't make her sick; but Dickey ate his hard, green ones, and O-o o! And Dickey he went along the woad (road) and he saw some ducks, and he said: 'I should like to catch those ducks and put them in a cage, and hear them make a noise.' And some bulls (in her rides to the ocean across the *mesa* "baby" had seen many strange animals to wonder over) and rams and bears and a skunk came along, and when they came to a tree the rams went up the tree, and the big strong bull says: 'What for you go up that tree?' And the ram says: 'Oh, I am so hungry, and I went up the tree 'cause I wanted something to eat!' And the big strong bull says: 'Here, I've got some bread and butter left that the little bulls don't want. Come down and you can have it.' And the ram said: 'We are afraid the little bulls will hurt us.' And the big bull said: 'I'll hit 'em if they try to, and won't let 'em hurt you, for I am a big strong bull, and I can do it.' And the ram said: 'Oh, won't that be nice for you to hit 'em! We are so hungry and we'll come down,' and so they came down."

The little brother had dozed and waked and dozed again. Before the hungry ram came down from the tree he was sound asleep. Rising on her elbow, "baby" looked over his chubby gown at her mamma—looked with sleepy, loving, longing eyes. And mamma? Well, she took her little three-year-old daughter in her arms, cuddling her, patting and petting her, with passionate kisses between. Happy "Baby!"

This is a true story. I can show you the battered, tumbling to pieces "every-day" book, which has been lying in a corner of mamma's desk for years, and which contains her "notes," and after them the name and age of "baby" and the date of "Baby's" story.

DOMESTIC ECONOMY.

Eggs, and How to Cook Them.

Eggs are such necessary adjuncts to the family larder that the good housekeeper is seldom, if ever, without them.

There are many dainty dishes, of which eggs form an important part, which are easily made.

Egg Balls—Boil eggs hard, cut in half, and take out the yolks, and mix with a few bread crumbs, chopped meat, melted butter, cream and salt and pepper. Mold into balls the size of an egg yolk. Put one in each half of the egg whites, set in a pan, and pour over them a teacup of cream. Sprinkle over some bits of butter, and brown in the oven.

Curried Eggs—Mince a small onion very fine, and brown it in a tablespoonful of butter in a hot frying-pan. Mix a heaping teaspoonful of curry powder with a half cup of milk, pour into the pan and let it boil until thick; break the eggs in carefully and poach them in the mixture. Squeeze a little lemon juice over them before serving.

Poached Eggs with Cream Sauce—Break fresh eggs into boiling water slightly salted. When set, remove from the water with a skimmer and pour over them the cream sauce: One teacup of sweet cream, a little chopped parsley, a tablespoonful of butter and a tablespoonful of flour mixed smoothly together, and salt and pepper to season. Boil three minutes and pour over the eggs.

Fricasseed Eggs—Boil a dozen eggs ten minutes. When cold, peel and slice. Season some grated bread crumbs with salt, pepper and nutmeg, and beat the yolks of three raw eggs very light. Dust the eggs with flour, then dip into the beaten eggs, then into bread crumbs, covering well on both sides. Fry in hot lard.

Scalloped Eggs—Break eight eggs into as many saucers, sift bread crumbs over each, dot with butter and season with pepper and salt. Fill the saucers with milk, bake till the eggs are set and serve hot.

Baked Eggs—Separate the whites and yolks of six eggs, putting each yolk by itself in a cup. Add to the whites a saltspoonful of salt and a quarter of a saltspoonful of pepper; then beat them to a stiff froth, spread them on a buttered dish, and slip the yolks on top, laying them a little apart, and bake five minutes in a hot oven, or until they are a light brown. Dust pepper and salt over the top and serve hot.

Scrambled Eggs—Melt one tablespoonful of butter in a saucepan. Beat four eggs light, and add a half teaspoon of salt and turn into the pan. Stir over a hot fire one minute and serve.

Fried Eggs with Pickles—Put enough butter into a hot frying-pan to entirely cover the pan, break in as many eggs as it will hold, dust them with pepper and salt, cook to the required degree, and put them on a hot dish; meantime chop a large pickle fine and put it in the pan after the eggs have been taken up. Leave one minute, then put it on the eggs and serve at once.

Eggs a La Creme—Boil six eggs hard and chop fine. Put layers of egg in a dish with alternate layers of bread crumbs. When the dish is full pour over it one pint of boiling milk, seasoned with salt, pepper and butter. Bake a light brown.

Eggs a La Suisse—Spread the bottom of a dish with two ounces of fresh butter; cover this with grated cheese, break eight whole eggs upon the cheese without breaking the yolks. Season with red pepper and salt, pour a little cream on the surface, strew about two ounces of grated cheese on the top and set the eggs in a moderate oven about 15 minutes.

Steamed Eggs—Butter a dish and slide upon it six eggs broken as for poaching. Strew over them small pieces of butter. Set the dish over a pan of boiling water and turn another dish over it. In about four minutes the whites will be set, then sprinkle with salt and serve.—Margaret Palmer in American Cultivator.

NEWBERN HOMINY.—Put one cup of fine hominy in the double boiler with one cup of cold water. Let it remain on the back of the stove until the water is absorbed. Then add one pint of milk and half a teaspoon of salt, and boil half an hour. Stir in one tablespoon of butter and turn out on a hot platter. Serve with poached eggs.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

The Acids of Fruits.

We know that many vegetable and fruit products are esteemed rather for their pleasant or refreshing taste, and for their antiscorbutic properties, than for any nutritive value which they may be assumed to possess. Yet even fruits of that character are especially valuable as addittons to our daily diet, on account of the potash salts and mild vegetable acids they contribute to the blood. We learn from Johnson's *Vegetable Food of the World* that the grateful acid of the rhubarb stalk arises from the malic acid and binoxalate of potash which it contains. The acidity of the lemon, orange and other species of the genus citrus is caused by the abundance of citric acid which their juices contain; that of the cherry, plum, peach, apple and pear from the malic acid in their pulp; that of gooseberries and currants, black, white and red, from a mixture of malic and citric acids; that of grapes from a mixture of malic and tartaric acids; that of the mango from citric acid and a very fugitive essential oil; that of the tamarind from a mixture of citric, malic and tartaric acids; the flavor of asparagus from aspartic acid, found also in the root of the marshmallow; and that of the cucumber from a peculiar poisonous ingredient, called fungin, which is found in many species of fungi, and is the cause of the cucumber being objectionable to some persons.

It will be observed that rhubarb is the only product which contains binoxalate of potash in conjunction with an acid. It is this ingredient which renders rhubarb so wholesome at the early commencemet of the summer, though in certain cases, known to medical men, its use may be injurious.

The following table, compiled from some analyses by Prof. Berard, shows the percentage average chemical composition of five unripe fruits and of eight ripe fruits, comprising apples, pears, gooseberries, grapes, plums, cherries, apricots and peaches :

	Unripe	Ripe.
Water	85.7	78 7
Albuminoids	0 7	0.6
Sugar	4.0	12.9
Vegetable acids	1.5	1.3
Pectose and gum	4.3	3.7
Cellulose, etc	3.8	2.8

The data thus given show that there is a considerable decrease in the watery particles of fruit as it approaches its full ripe character, resulting in a difference of 7 per cent, while the sugary constituents increase during maturation in a corresponding degree, rising from an average of 4 to nearly 13 per cent.

There is very little actual decrease in the percentage of acids from the green to the ripe stage of fruits, but the acidity becomes neutralized by the increase of sugar as the fruit approaches maturation.

Many persons know from experience how much more pleasant and agreeable fruit is when gathered and eaten direct from the tree. This is undoubtedly in part due to the freshness and briskness of the vegetable acids contained in the fruit, which, when so gathered and eaten, have not time to change into any other substance. Stale fruit, on the other hand, is unpalatable from the very fact that it has lost this pungent and brisk taste.

Pectose forms the substance known as vegetable jelly, and it is to this constituent of ruit that jams owe their firmness. Cellulose is the fibrous part of fruits, and it is in this portion that we should find the largest proportion of mineral salts, potash, etc.—The Gardener's Chronicle.

MAKING ANTIQUE OAK.—There are one hundred methods for darkening oak, some of them being fairly good, and some of them being decidedly bad, but one of the best methods, and one that never fails, is the fumigation of oak with ammoniacal vapor. When the work is ready to be darkened, place it in an approximately *air tight* room in which no light enters; for small work a packing-box will answer if the joints or cracks are covered with paper being pasted over them. Place the doors, furniture or other work in this room—a box—and place in the room a flat porcelain or earthen vessel filled with ammonia. See that the vessel containing the liquid is placed on the ground or floor, so that the fumes or vapor will strike the articles designed to be darkened. If the room or box is large, two or more vessels containing ammonia may be placed on the floor and left there until the wood is sufficiently dark. Of course, all openings in the room or box must be closed up, or the fumes will escape. Remember that the ammonia does not touch the oak, but the gas that comes from it acts in a wondrous manner upon the tannic acid in that wood, and browns it so deeply that a shaving or two may actually be taken off without removing the color. The depth of shade will entirely depend upon the quantity of ammonia used and the time the wood is exposed. Try an odd bit first, experimentally, and then use your own judgment.—Operative Builder.

Insect Illumination.

The secretary of the Smithsonian Institute, Prof. Langley, has been recently experimenting with Cuban fireflies with view to discovering the manner in which the illumination they emit is generated. He says that the light that they give is the cheapest in the world produced, that, is to say, with the least heat and the smallest expenditure of energy—and he believes that a successful imitation of it would prove a most profitable substitute for gas or electricity. The insects are beetles two inches long, and belong to the family of "snapping bugs," so called because when one is laid upon its back it snaps itself into the air with a clicking sound. The secret of the light this firefly gives is as yet undiscovered. Apparently it is conected in some way with the mysterious phenomena of life, and chemists and physicists have sought in vain to explain its origin. On each side of the animal's thorax is a luminous, membranous spot, and these flash at intervals, so that the Cubans put a dozen of the insects in a cage together and so obtain a continuous illumination, bright enough to read by. This light is accompanied by no perceptible heat, and is seemingly produced with almost no expenditure of energy. How great an improvement it represents upon all known artificial lights can be imagined when it is stated that in candle light, lamp light or gas light, the waste is more than 99 per cent. In other words, if they could be so obtained as not to throw anything away, they would give nearly one hundred times the illumination they do afford. Even the electric light is mostly waste.

COMPRESSING COTTON. — The adoption throughout the South of the roller cotton compress, which by a process simple in principle, and using no more power than is required for the plantation bale, will, says the *Manufacturers' Gazette*, it is anticipated, become very general; the capacity of the apparatus being equal to turning out a bale of less bulk, greater density, and of more even and smooth exterior than the large steam compresses make. The invention is expected to take the place of both the plantation press of to-day and the big compresses scattered over the country. Substituted for the ordinary plantation press, it will take the cotton right from the gin and turn out a 500-pound bale as small as, if not smaller, than a bale that has been crushed in the powerful hydraulic presses that are located at the various shipping points; and a bale from the roller compress is ready to put on the cars and be shipped direct to the mill, saving, of course, the charge and expense of unloading and reloading, and doing away with one set of middlemen altogether. The amount of money that is paid out annually for compressing the bales after they have left the country gins is very large, and this, it is claimed, is by this apparatus saved to producers and consumers alike.

OVERCOMING GRAVITY. — A boy who could not stand still for a single moment on a sheet of thin ice without breaking through it, could skate over it in perfect safety, simply because he put himself in antagonism to gravitation by pursuing a line of motion at a right angle with its downward vertical pull, and consequently lessening his weight as tested by a spring balance. In fact, the increase of velocity of any body not approaching the center of gravity, whatever its momentum, tends to lessen its weight, and were the whole periphery of the earth a series of the most delicate and sensitive spring balances, a body rolling over them throughout the whole of the vast circuit would register its weight more or less according to its velocity.—N. Y. Herald.

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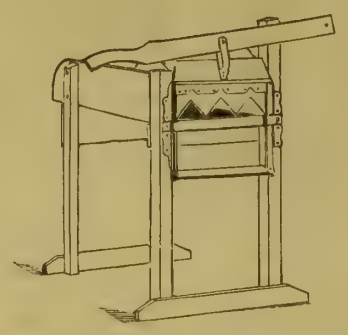
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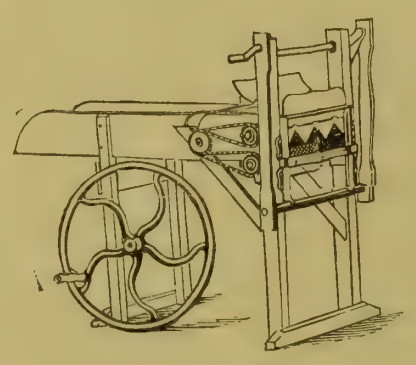
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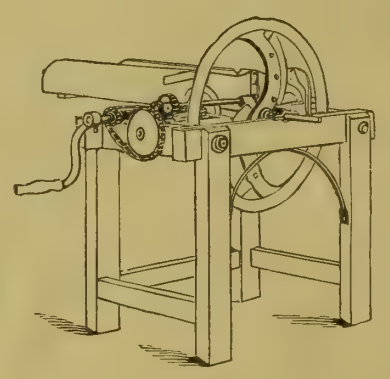
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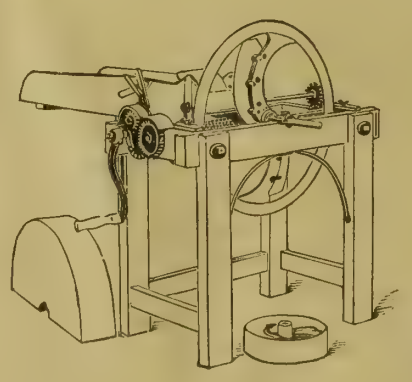
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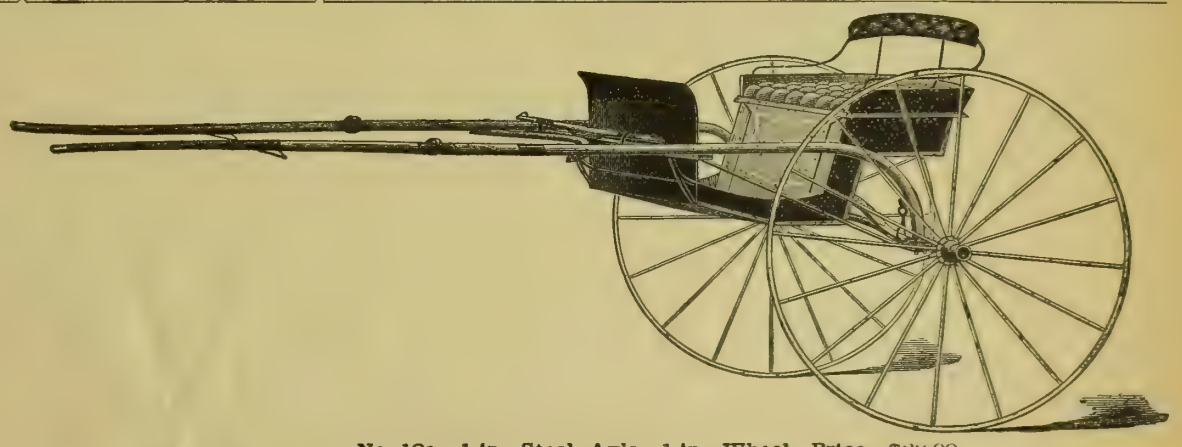
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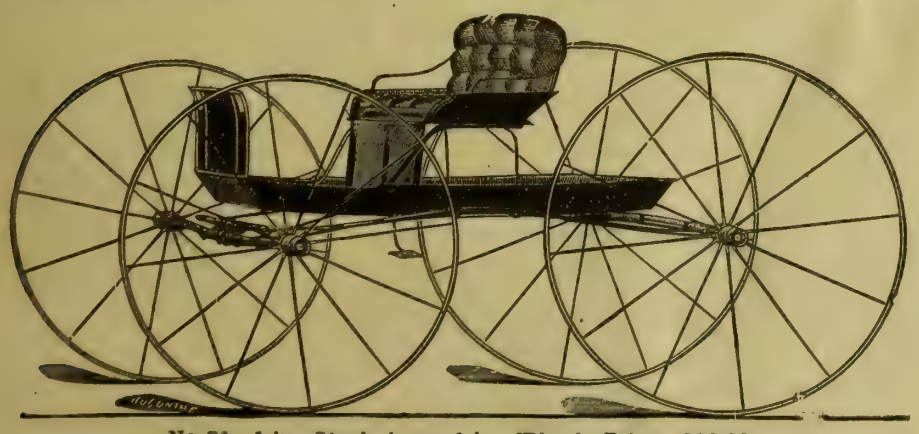
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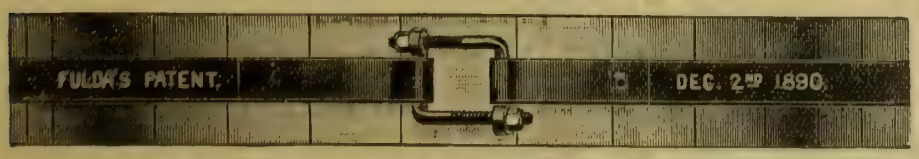
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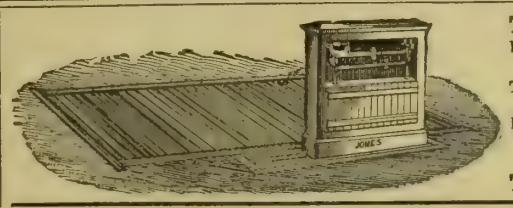
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

FINE PEACHES ON VOLCANIC LAND.—Oroville *Register:* The lava-bed region is proving itself one of the best orchard sections in the county. Cal. Yetter presented us on Tuesday with a box of peaches grown there which showed the merits of the fruit in perfection. There were three varieties, Brooks Butte, orange cling and a freestone white peach. We measured some of them and they averaged from 10½ to 11 inches, while they weighed from 10 to 12 ounces. Four of the Brooks Butte weighed 38 ounces and four of the orange cling pulled down the scales at 44 ounces. They were grown on abandoned mining ground and without irrigation.

Modoc.

FARM AND ORCHARD NOTES.—Williams Ranch Cor. Alturas *Herald:* After a six week's siege of hay-stacking on the Applegate and Smith ranches here, I have stacked the pitchfork and slid off (I hope) the last stack for the season. Heading is about over for this season in this vicinity. Will Mason headed the first crop for Wm. Clark, since then Messrs. Crawford and Gillett and the Barnes Bros. have kept their headers busy. Threshing will begin this week. Grain crops will be slightly under the average. We visited a number of farms at Davis Creek and inspected the crops and orchards, and while the crops are light as a rule, yet we found some excellent grain and much fine hay. The orchards were loaded with fine fruit, yet certain varieties of apple trees did not bear this year. In the gardens were some of the finest sugar corn and peas I ever saw, and as is well known in this mountain climate, the vegetables are tenderer and sweeter than those grown in warmer climes. Why would not Davis Creek be a good location for a cannery for corn, peas, beans and small fruits, and jellies? There are hundreds of acres of foothill land suitable for this purpose and abundance of water for irrigating. The good people of Davis Creek are going to send a fine exhibit to the fair at Susanville.

Napa.

PROFIT IN CHICKENS.—Calistoga *Calistogian:* There is profit in raising chickens if properly followed, though many persons make a failure of the business, or do not receive sufficient returns to compensate for the necessary labor. In 1891 Sidney Armstrong, who resides near Calistoga, began the year with 300 chickens. Chicks were raised and part of them sold, many of the old stock were disposed of and eggs were marketed during 12 months. January 1st last he still had 300 good chickens. Then, having carefully kept record of all expenditures on account of the chickens and also record of receipts from sales, he found that his net profit during the year had been $1.17 for each chicken. In this figuring, however, no allowance was made for his work, as he was physically unable to do hard manual labor. He is now engaging in the business more extensively and will soon employ an assistant. He has 800 chickens of different ages, and this number is to be largely increased. Mr. Armstrong says that he has in times past made his chickens average him nearly $1.50 per year above cost of maintenance, value of labor not included.

VITICULTURAL MATTERS.—*Calistogian*, Sept. 7: The weather has again been somewhat favorable lately for vineyards, but picking will begin very late, so late that vintage work will perhaps be interfered with by rains. The crop is very light, however, and it is possible that the vintage, though not beginning as soon, will not close later than common. The yield in nearly all vineyards of the valley will this year be far below the average. S. P. Connor says that the 4,500,000 gallons of wine made last year in the county will this year be reduced to 2,000,000, which is a remarkably small amount for the vine acreage. Prices for wine and grapes are steadily increasing, and growers should be very careful in the matter of making contracts, as it is generally thought that there will be no reaction, but that prices will go still higher. The market should be carefully watched. Of sales of wine and prices the St. Helena *Star* of last Friday says: "Several sales have been made at prices ranging from 14 to 15 cents net. We are credibly informed that one was made a few days ago by a winemaker residing near Bello station for 15 cents per gallon, delivered on board the cars and nearly all the purchase price paid down, which is better than 16 cents on time. We may look for a few sales to be made now that the prices have reached a good 15 cents per gallon, but not many, as nearly all our winegrowers long ago foresaw the shortage of the coming crop and have arranged to keep their wine on hand until a fair price is forthcoming." Of prices for grapes the same paper says: "We are reliably informed that offers of $15 and $16 per ton have been made for valley grapes to several parties and we have heard that that price has been refused. The above information is authentic."

Orange.

ORANGE-CROP PROSPECTS.—Santa Ana *Blade:* The outlook for a good orange-crop in this valley never was better than at present, and orange orchards never were in as fine shape as they are now. Old orchards that once were abandoned and given up as lost are now well kept, comparatively free from scale, and bearing good crops. Bug extermination has been entered into in this locality in earnest, and the good effects are perceptible on every hand. All kinds of fruit have brought a good price the present season, and it is cheering to know that a large crop of oranges will complete the list and be equally profitable.

THE MESA.—*Blade:* R. H. English finished his thrashing for this season on Tuesday evening last, and reports having thrashed, during the season, 60,000 centals of wheat and barley. He says the mesa below Westminster produced the greatest yield per acre of barley of any locality in the Santa Ana valley. On Mr. English's return to Tustin with his thrashing outfit, after his season of nine weeks' thrashing, Mrs. English gave the crew a grand supper. Mr. English says, owing to so much light grain, the average amount per day thrashed was not so large as last year, and for the same reason the machine had to be fed lighter than usual. His object was to do good work, and not to make a big record for the season.

San Bernardino.

FRUIT AND MONEY.—Ontario *Observer*: The marketing of the deciduous fruit crop at good prices has caused the distribution of a large amount of money among the ranchers of this locality, which, with the money distributed among the cannery operatives, is having a salutary effect on all business. The grape crop is a fair one, and when converted into cash many old debts will be obliterated and new bank accounts opened. After this crop shall have been sold in the form of raisins, oranges will begin to ripen, and thus the influx of money will be rendered perennial. Happily the loaning of money here on prime security at 15 or even 12 per cent in any considerable amounts is a thing of the past. Recently one of the ranchers secured a loan at seven per cent, and the capitalist who made the loan was glad to place it where it would draw so large an interest. Confidence in our real estate is now restored, and in consequence a large amount of eastern money will be offered borrowers at a reasonable rate of interest.

GOOD SHIPPING GRAPES.—*Observer*: E. M. Hatch sold from Geo. Witherell's place a carload of Malaga grapes to Mr. Atkins, of Lordsburg, who shipped same to Chicago. The gaapes brought $20 per ton delivered at North Ontario. The Malaga is a better shipper than the Muscat, though the latter, if properly packed, can be put on the market in good condition. Muscats have been successfully shipped from here to New York by slow freight.

Santa Clara.

FRUIT NOTES.—Campbell, Sept. 7: The Union loaded a standard-gauge car yesterday with dried apricots for the East. It has been offered 12½ cents per pound for its best grade of dried prunes. Frank Duncan brought 50 boxes of prunes to the drier the other day which graded out 37 boxes of No. 1 and the remainder nearly all No. 2. The three Duncans have the largest prunes brought to the drier this year, which is accounted for by the fact that they irrigated freely last winter. The Union has also contracted for all Solway peaches of 2½ inches, which it can furnish at $60 per ton. Smaller sizes will be dried.

FRUIT NOTES.—Campbell Cor. *Mercury*, Sept. 2: The cool weather is very favorable to the remaining peaches, as hot weather just now would ripen them so rapidly as to prevent full development. Some driers who bought prunes upon the trees by the acre, instead of by the ton, will find themselves behind unless the price of dried prunes should advance perceptibly. Ten cents per pound will not make them "whole" on some purchases. Mr. Volmer sold his crop from a little over 12 acres for $3600 upon the trees, and receives $100 for hauling them to the drier, having nothing to do with the picking. He had a remarkably fine crop for this year, yet he estimates now that he receives about $60 per ton on the trees. Our Union has sold most, if not all, of its dried apricots at prices ranging from 11½ cents per pound for the lowest grade, to 15 cents per pound for the best. There is quite a little inquiry for orchards and orchard land here. Prices have advanced in the last three months. Notwithstanding, this is considered a trying year for orchardists. Los Gatos Cor.—Though the packing of fruit is abating, the harvesting and drying of prunes continues the demand for labor. Mr. Romer of the Farmers' Union is purchasing large quantities. Crandall & West are handling about 12 tons daily. Many are drying their own prunes, so that the movement of prunes by wagon and railway represents only a part of the crop. It is doubtful if the crop aggregates that of last year. Prunes on thin soil or soil that is underlaid with porous gravel have felt the want of the usual copious rains. Long strings of teams hauling pears continue to await their turn to unload at the cannery. Crandall & West are trying the experiment of drying pears. The dried of ripe pears, too ripe for canning, is almost like glaced fruit, so great is the quantity of sugar in it.

Santa Cruz.

A BEETLE DESTROYS THE TUSSOCK MOTH. Watsonville *Pajaronian:* Two years ago the orchard of J. A. Blackburn, one of the oldest in the valley, was attacked by the tussock moth, and the fruit crop for that season was entirely killed, and for a time it looked as if the entire orchard would have to be dug up. Last year there was but little improvement in the appearance of the orchard, though all of the modern washes and sprays had been tried. After a time a little beetle put in an appearance and he started in to make a success of the work that the ingenuity of man had been unable to accomplish. Nature had sent him to exterminate the pest, and he succeeded so well that he did not leave a moth in the orchard. He has been on duty there this year waiting for the reappearance of the moth, but he has had no work to do. The rest of two years which this pest gave Mr. Blackburn's orchard proved beneficial in many ways. The growth of wood this year has been surprisingly large, and the apple crop has been enormous. There has never been such a yield in an orchard of this valley. It is estimated by the packers who are handling the crop that there will not be less than 14,000 boxes of apples, and it may run to 16,000 boxes. From one of the trees it is claimed that 50 boxes will be picked. Careful estimates made on this vast amount of apples show that it will take not less than 21 cars to hold them if all the crop is shipped at the same time. It takes a heavy engine to haul that many loaded cars in one train out of the Pajaro valley. The orchard does not contain over 15 acres of land, and yet it will produce a trainload of apples this year. There is not an orchardist in the valley who would have given ten cents a tree two years ago for the fruit prospects of the orchard. Mr. Blackburn had a loss for two seasons because of the visit of the tussock moth, but the yield of this year indicates that the orchard has taken a new lease of life and has made a record which he can safely challenge any other California apple orchard to equal.

Shasta.

LARGE PEACHES.—Redding *Free Press:* This has been a season for large peaches. A peach one foot in circumference will attract attention everywhere, and peaches from 11 to 12 inches have been brought to this office this year by several orchardists located in different sections of the county. Perry Mark brought us a large box of peaches that measured 11 inches; then B. Klukkert of Anderson showed us some orange clings which were about the same size. Then Mrs. McKinney gave us a sample raised right here in Redding, and the last samples were brought in this week from Ono, from W. S. Kidder's place, peaches weighing 14 ounces each, called the Ono cling; also a box grown by Mrs. J. Cushman of Ono, brought to us by Mrs. Sarah Powers, who was accompanied by two sisters, residents of San Francisco. Mrs. Powers formerly owned the orchard where these peaches grew. They measured one foot in circumference, and will be placed in the fair as samples of size and color. The peaches above mentioned were clingstones. But on Tuesday we were presented with several fine freestone peaches by Mrs. Dr. Stevenson, raised in her garden, which measured 11½ inches and were of excellent flavor.

Sonoma.

SHORTAGE IN DRY WINE GRAPES.—Santa Rosa *Democrat:* S. P. Connor and Wm. Rennie, both of whom are winegrowers of Napa county, have been on a tour of inspection through the dry wine-grape counties of the State as representatives of the Wine-Growers' Union of St. Helena. Their report of Napa county is that it has produced as high as 7,000,000 gallons. In 1891 the yield was but 4,500,000 gallons, and this year, says Mr. Connor, we will be in good luck if we get 2,000,000 gallons. Santa Clara county produced last year 4,500,000 gallons—a short crop. This year it will not make 2,000,000 gallons. They never saw the vineyards looking so bad. No one would believe it who has not seen them. The cause of the failure in Santa Clara county is lack of moisture in the ground and the excessive heat of the past few weeks which has burned the leaves off, leaving the bunches green and exposed to the scorching sun. They cannot ripen under these conditions. They did not visit Livermore valley, but heard from a reliable source that the crop there was as bad as in Santa Clara. They are now in Sonoma county with the view of examining the crop here. Passed through the Guillicos valley to-day and found the vineyards looking better than anywhere they have been, but there will not be half a crop there. From Santa Rosa these gentlemen will visit Bennet Valley, the Rincon, Fulton, Vine Hill, Russian River, Cloverdale, and will return home via Alexander and Knight's valley to St. Helena. They are now convinced that there will not be a yield of over 6,000,000 gallons of wine in all the dry-wine counties of the State, against a production of 15,000,000 gallons last year. It is thought that the prices for sound wine-grapes will range from $12.50 for ordinary to $25 per ton for finest wine varieties—Cabernet Sauvignon and some others. J. Chauvet of Glen Ellen was in Santa Rosa, and reports the grape crop light, especially the Gutadel variety. The Zinfandels in his vineyard are fair. The reports he has heard from Messrs. Shaw, Austin and others are all to the effect that the crop will be short. Mr. Chauvet has purchased a lot of cooperage lately and has sufficient to handle a vintage of 100,000 gallons, which he expects to make this year. The price of wine is still low, but Mr. Chauvet thinks this comes very largely from a combine of dealers which is now holding off under the impression that the growers who make wine will have to sell to release their cooperage. They also think that the larger manufacturers will have to sell to raise money to run their fall business. In the meantime, great preparations are being made in the county to dry grapes, which in this shape promise an equivalent of $15 a ton for the green fruit, which is a great deal more than can be realized for them in wine at present prices.

RUSSIAN RIVER FRUIT ITEMS.—Healdsburg *Tribune:* Messrs. Hotchkiss & Miller dried and dipped 102 tons of green prunes last week, and before the season closes they expect to dry 350 tons more, which will make about 25 carloads as against 42 last year. This constitutes the bulk of the product of Mendocino and Russian River townships. Mr. Hotchkiss says that this year's yield fell 40 per cent short of that of last season. After a busy season of 35 days' duration, the Russian River cannery closed on Saturday evening. An average of 350 hands was daily employed at that establishment, and the total pack was 16,211 cases segregated as follows: 2947 extra peaches in 3-lb. tins; 397 extra pears in 3-lb. tins; 3911 extra standard peaches; 3579 standard first peaches, plums and pears; 2262 standard plums and pears; 1536 second plums and pears; 690 gallons pie peaches. The largest day's run was 688 cases of peaches, with a total of all fruit of 749 cases. The average pack was 600 cases, and on the last day the output was 644. In a few days the goods will be shipped as fast as it can be boxed to New York City by water.

Sutter.

HOP CROP.—Yuba City *Farmer*: The hop crop is being gathered rapidly at Nicolaus. Chas. Engasser has finished and will have from six to seven tons. Grider Bros., Pat Carroll and T. J. Mulvany are picking. The yield is fair.

Tulare.

RAISIN PACKING AT TULARE.—Visalia *Register*: The Tulare Fruit Packing Company has in contemplation the doing of something in the nature of a commission business this year. The first crop of grapes comes pretty near being a failure on account of frosts late in the spring, cold north winds, and what the second crop will make will depend largely on what the weather is during September and October. If the weather holds dry, the second crop will turn out very well indeed and a very good pack can be made. The fruit, when it comes in, is graded as to quality and a hypothetical price fixed for that quality, and half the price advanced. When the season closes and the returns are all in, each grower is paid in the proportion that his goods bear to other goods as to quality. That is, if one pack is graded at five cents and another at four cents, persons consigning either quality will be paid in the ratio of four to five for each pound consigned to the company. The company will take out of the gross proceeds the expenses of handling and marketing and five per cent for commissions, the rest going to the producer.

SUCCESSFUL CULTIVATION OF FRUIT NEAR LINDSAY.—*Times:* A short distance east of the station at Lindsay an experiment in the fruit line has been made and it has proven an eminent success. G. S. Berry and W. S. Berry have a tract of 70 acres of vines and trees that practically demonstrates the possibilities of that soil. Fifty acres of this tract are planted in raisin grapes; part of these were planted last February, and the rest were planted a year before that. On these vines this summer was a yield of first crop grapes aggregating ten tons of green fruit. This crop has already been picked, dried and packed in bags ready for market. They made an extra good quality of high grade Muscat grapes. The other 20 acres of the tract are in trees. There are 12 acres of oranges and eight acres of all varieties of fruits. Most of the orange trees were planted last winter and they have made a fine growth. Among the other trees are excellent varieties of the olive, the lemon, the fig, the apricot, the nectarine, the peach, the apple and the pomegranate. The farm is irrigated by means of two pumps, both run by steam. One is a common suction pump, the other is a pump known as the pulsometer. It was thought necessary to have two wells and two pumps, as they now have, but a year's experience has taught them that one of their wells with a steam pump is amply sufficient to irrigate everything in that 70-acre tract. An adjoining 80 acres will be prepared for more fruit this fall and winter. On this tract a nine-inch well has just been bored to a depth of 80 feet. There is a column of water in it already 54 feet high. A centrifugal steam pump is now on the ground ready to be put in operation in this well, and it will supply water enough for the whole half quarter-section.

NEVADA.

WILD HORSES.—Reno *Gazette*: It would sound strange in any other country to even suggest that a bounty be paid for horse scalps, as is done for those of wolves and other wild animals. There are estimated to be 100,000 horses running wild in the mountains of Nevada that are not worth catching and breaking. They are remnants of bands that have strayed away and of small fragments owned by Indians, which were worthless to begin with, and have constantly deteriorated until they are small and weak. They will gather to themselves animals that chance to stray into the hills and render it very difficult to regain possession of them. Even good horses are low-priced now, and scrubs and fuzz-tails are not worth the grass they eat. They use food which is needed for cattle and sheep, and the day will come when some action will be necessary in order to keep them down. Extermination would be the proper remedy, but it is practically impossible, the animals being as wild as deer and capable of getting over the rocks faster than a tame horse with a man on his back. Even now many of the cattle and sheepmen carry rifles for them and shoot the stallions on sight when they get within reach. Of course nothing in this article refers to the bands, numbering thousands of head, which are managed by horsemen and cattlemen. Many valuable animals are raised annually for the market and add a valuable industry to our State.

OREGON.

HOP PICKING.—Eugene *Register*: One of our leading hop growers informs us that the crop, so far as picked, is falling short of what had been anticipated, and they had not looked for a full crop. He states, however, that the quality of the hops is first class. Pickers are complaining because of the light crop, as they cannot make as much money. It is feared that a good many of them will quit before the crop is all gathered, but it is to be hoped that they will not. One thing favorable to the growers is that there are a great many people who need the money they will get for picking, though it be a small amount.

AN AMATEUR.—"I judge that you have not written much poetry," said the editor to his caller after examining his manuscript.

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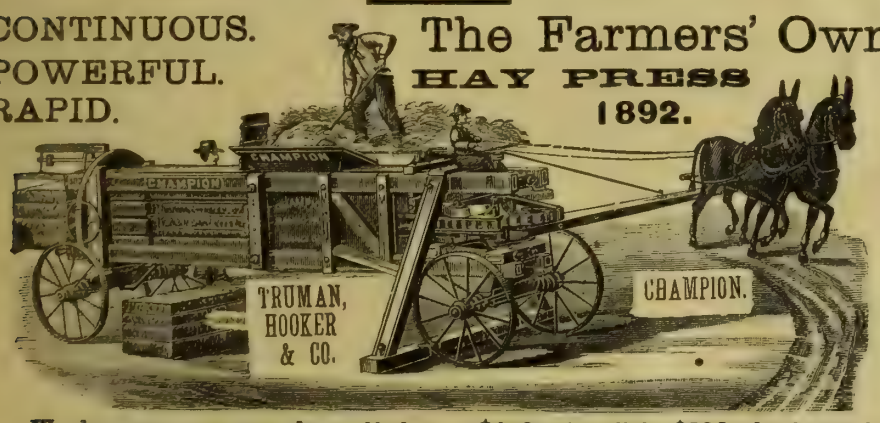
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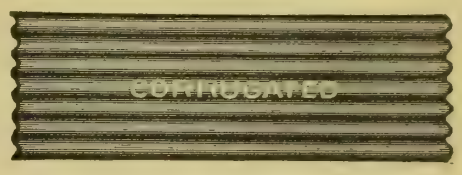
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PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

GRANGE MUTUAL FIRE INSURANCE COMPANY.

Some two years ago, the Legislature having failed to provide for the organization of farmers' mutual fire insurance companies, the Patrons of Sacramento discussed the matter, appointed a committee, and Judge McKune of the committee drew up what he believes to be a perfectly legal and practical plan for organizing an insurance company under the contract plan, to enable farmers, with perfect security to avoid the double taxation they now suffer from the fire insurance companies' trust or combine.

The following form of policy will give some insight as to the plan of insuring:

THE PATRON MUTUAL FIRE INSURANCE COMPANY OF SACRAMENTO CO., CAL.,

Formed by a contract, material parts of which are printed hereon, having received application No. — of and from —— —— for a policy of insurance against damage and loss by fire of certain property described in said application, which is hereby refer ed to and made a part hereof.

Now, know all men by these presents, that, in consideration of the premises, in accordance with said agreement, and the payment of $—— premium, said company does hereby insure the said —— —— against loss or damage by fire, to the aggregate of —— dollars, as follows: [Insert list of articles and valuation.]

And the said company does hereby agree that it shall be subject and liable to pay, make good and satisfy unto the said insured, —— heirs, administrators, and assigns, according to the tenor and effect of said agreement, all such damage or loss by fire as shall happen to the said property and the several portions thereof, as above specified, not exceeding in amount the sum herein insured on said property, or any article or portion thereof, during the time the said —— —— shall remain a member of this company and comply with the terms of said agreement, as herein printed.

The said company, by its Board of Directors, has, by order, directed that this policy issue and be made firm and effectual. Sacramento, ——, 18—. —— ——, Pres.; —— ——, Sec'y.

The application upon which the policy is issued consists of a carefully-prepared covenant, made with the trustees of the company, agreeing to abide by the rules and regulations of the contract signed by the applicant. "These words of covenant" seem very fair, reasonable and in no wise onerous or pecuniarily or otherwise hazardous to signers. There are 32 sections in all.

The Sacramento committee proceeded so far as to print a quantity of blank applications, "Words of Covenant," containing the regulations for conducting the business safely, and blank policies for entering upon business. A copy of each of these blanks has lately been mailed to the Secretary of every subordinate Grange in California from the office of the Secretary of the State Grange, believing that a discussion of the subject in open Grange, or its consideration by a proper committee to examine the printed provisions and report for the action of the Grange before the representatives attend the State Grange would be for the essential good of the whole Order.

The Sacramento committee failed to put the plan in operation from the fact that a portion of its committee, through the opinion of some outside attorneys or other individuals, declared that such an organization would be unconstitutional. Judge McKune risks his reputation upon his thorough belief and opinion that such an institution can be constitutionally conducted under our present Constitution and laws.

The thorough consideration of the question among Patrons at this time may bring forward sufficient light on the subject to secure judicious action at the coming State Grange session, so that if the insurance combine again defeats the repeated petitions of the farmers of this State for the privileges commonly enjoyed in other States for forming mutual fire-insurance companies, there may be an effectual remedy in spite of the combiners.

The following statement, written at our request by Judge McKune is opportune in connection with this matter:

To A. T. Dewey, Sec'y State Grange of Cal:—Title 2 of the C vil Code provides for the formation of insurance corporations. Sec. 414 provides that after the Secretary of State issues the certificate of incorporation, the Directors named must open books of subscription to the capital stock to the full amount of the fixed capital stock, etc.

Sec. 417 provides for dividends. Sec. 419 provides that every "Company, corporation or association hereafter formed or organized under the laws of this State for the transaction of business in fire, marine, inland navigation or life insurance, must have a subscribed capital stock equal to at least $200,000, 25 per cent of which must be paid in previous to the issuance of any policy."

After I drew the plan for mutual insurance by agreement (a copy of which I gave you), under direction of a committee composed of Bros. Thos. McConnell, David Reese, Geo. W. Hack, A A. Krull, Theo. Deming with myself, the matter was referred to Bros. Hack, Deming and me to put our plan in operation. After some little delay, Bros. Hack and Deming called my attention to the matter above quoted from the Civil Code, and suggested that such a provision might render our movement inoperative.

I gave them my opinion that it would not [illegible] action and suggested, viz:

[illegible] the provision was contained in a part of the Code wholly devoted to the formation of corporations.

b. That the provisions quoted, when compared and construed in the light of other provisions of the same code, clearly indicated that they applied only to the formation of insurance companies for profit.

c. That the words "Organized under the laws of the State" clearly meant that the words "Company" and "Association" meant that they must be formed under some provision of the Civil Code.

d. That our proposed action was not to be taken and did not constitute a company or corporation organized under the laws (statutes) of the State.

e. That there was nothing unconstitutional in such an agreement as we proposed and such a contract could be enforced.

f. That the business, being placed in the hands of men who would carefully administer the provisions of the contract, could be made beneficial.

Bros. Hack and Deming were of a different opinion and declined to act further in the matter, and so the plan has never been tried. I have some hope that the next Legislature may give us some relief, but unless that body shall be formed of different materials from those of the last two sessions, with a body wielding so much money as the insurance combine to contend against, my fears overbalance these hopes. I am, etc., J. H. MCKUNE.

A "HINT" MERELY.—It is desirable that every Grange should admit as many applicants as possible before the State Grange meeting. When the first annual meeting of the State Grange was held at San Jose, a very large class was instructed in the last degree, and we presume that Grange would be willing to confer the third and fourth degrees, in the early part of the State Grange week, on any second-degree members that may be present, if such a favor should be requested by any subordinate Grange. Such a ceremony would afford one of the most practical and instructive exemplifications of the secret work that could be given before the members and visitors at the State Grange.

INDEPENDENT GRANGE.—We have recently received an order for the necessary printed documents for the new Grange, "Independent," lately organized with 48 members by Past Master Overhiser at Linden, all of which have been forwarded. The following are the officers of this new link in our fraternal chain: Geo. Klinger, M.; E. Davis, O.; Mrs. D. Harrison, L.; J. A. Drace, S.; F. W. Fisher, A. S.; Mrs. Drace, C.; Chas. Perryman, T.; H. H. Fine, Sec'y; A. B. Spencer, G. K.; Miss Annie Hart, Pomona; Miss Minnie Fisher, Flora; Mrs. McIntire, Ceres; Mrs. Watkins, L. A. S.

E. W. DAVIS, W. M., delivered the Annual Address at Petaluma Fair, Aug. 31st. We have no doubt it was an able and instructive document.

SEVERAL members of Tulare Grange will be in attendance at the State Grange.

TO PACIFIC GROVE AND SANTA CRUZ.—Gen. Pass. Agt. Goodman in his letter relating to excursion rates to the State Grange, incidentally mentions that if tickets enough are guaranteed from San Jose to Pacific Grove and return, he will make a rate of $2.45, or a rate of $2.10 from San Jose to Santa Cruz and return. This is a mere suggestion for Patrons to consider whether they desire to make up an excursion to either of the above places after the close of the State Grange.

STOCKTON GRANGE.—Mrs. W. D. Ashley informs us that this Grange finishes up the initiation of a class with a Harvest Feast, September 17th. All San Joaquin Granges are invited, including the new Linden Grange, Independent.

STAND BY THEM.—Whenever a worthy member of the Grange is nominated for office stand by him, if he is competent and worthy of the place. Congress and the Legislature of California certainly need a new deal in their membership. Who is there that does not know a wonderful improvement would take place in the honorable bodies mentioned if every seat was filled with Grangers and farmers.

TULARE GRANGE.—The conferring of degrees at the last meeting was deferred, as two more applicants have knocked at the outer gate, and all will be admitted together. As no sister would promise to attend the State Grange as alternate, two brothers were elected. The sisters prepared ice cream and cake for the last meeting all the same, and Master Shoemaker says everybody enjoyed it.

J. H. BRIGHAM, Master of the National Grange, recently took a lecturing tour into Wisconsin and neighboring States. Mentioning the home of Past Master S. C. Carr, well known for his lecturing tour in California, Milton Junction, Wis., he says: I found here a "hive of industry," and another man who makes farming pay, and yet finds time to devote to the Grange. Bro. Carr has a fine farm and a pleasant home, and knows how to appreciate both.

VISITORS.—Among late visitors, we have had the pleasure of welcoming to our new Secretary's office S. T. Coulter, I. C. Steele, G. P. Loucks, H. Pomeroy and Don Mills.

IN MEMORIAM.—Bro. J. D. Huffman sends us an ably written memorial from San Joaquin County Pomona Grange, of which Mrs. Albert Woods was a charter member. She was also one of the highly-esteemed honorary members of the State Grange. Having published the resolutions from her subordinate Grange, Tulare, we can only well give space for the following paragraph from the adopted report of the committee, consisting of Alida Allison, R. Pixley and M. Merrill, viz.:

We feel that when Sister EVA WOODS passed into the beyond that a loving wife, a tender mother, a warm friend, and a true member of our Order, left vacant a place which will always be held sacred to her memory in the hearts of those who loved her. We desire that there shall be a memorial page set aside in our Record Book inscribed to memory of Eva Woods.

OFFICERS' REPORTS.—Overseer Roache has sent in his Annual Report for the coming State Grange session. In the accompanying letter he reminds us that

"The time is short until once again
We meet the women and the men
Who labor for our country's cause,
For Truth and Right and Equal Laws."

Bro. Roache adds: "We have just finished up our last class of seven with Harvest Feast and celebration of Ceres', Flora's and Pomona's days combined. We have just started another class."

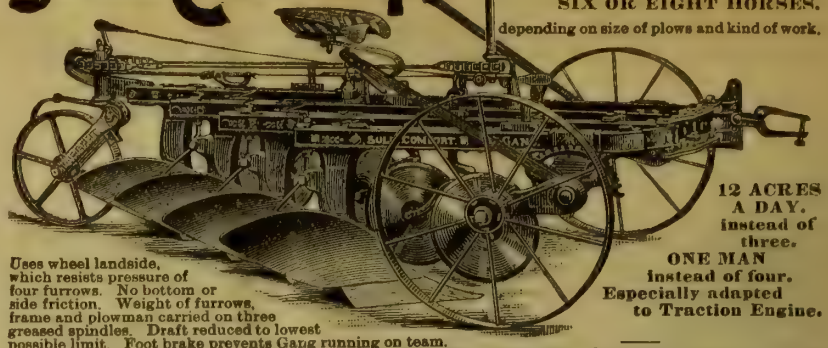
WORTHY STEWARD W. W. GREER promised us his report while at Sacramento last week. Let all officers of the State Grange remember that it was their duty to forward their anuual report before the 15th of September for advance publication and circulation at the coming session of the State Grange. The "majority," we are sorry to have to say, should now be hurrying up their reports.

IT may be gravely questioned whether we, as a people, do not devote too much time to the worry and care of business, and too little to innocent and enjoyable recreations for our moral and physical health. We have been quoting the wise saw, "Business before pleasure," so long that we can now revise and improve it a little so that it will express the whole truth and read, "Business before pleasure, and broken-down manhood before the meridian of life is reached." Overwork and worry to gratify mercenary and avaricious desires are doing much to undermine physical health, and lower the moral tone of society. There are *other sins* than those which follow in the wake of recreations. Farmers' Friend.

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3d
Plenty of reasons why, in your favor and ours, but life is too short to explain them all here.

4th
Watch the *prices* quoted the balance of this year, in our advertisements in this paper. Will make our record on *them*.

5th
∴ *If* you can buy the same high grade goods elsewhere at our prices, go ahead, but if not, help us sell that million.

6th
Keep posted, send for our daily price list and monthly list of 40 pages. Special new bargains all the time. Cash does it.

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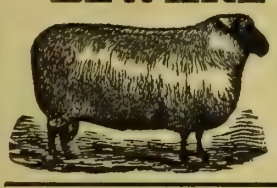
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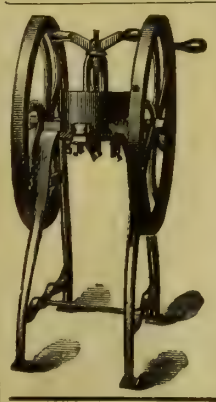
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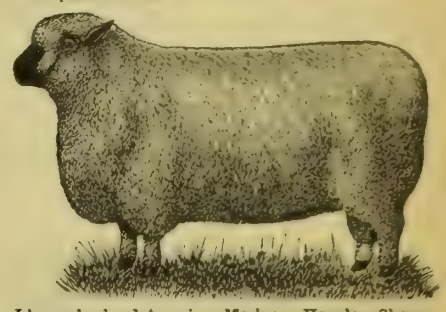
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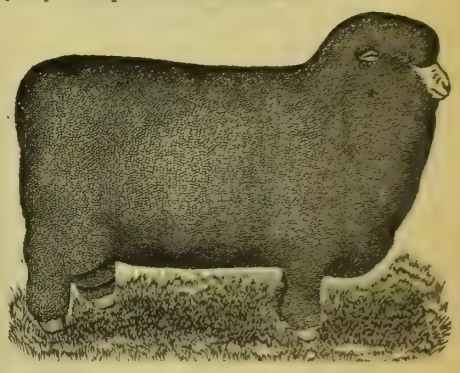
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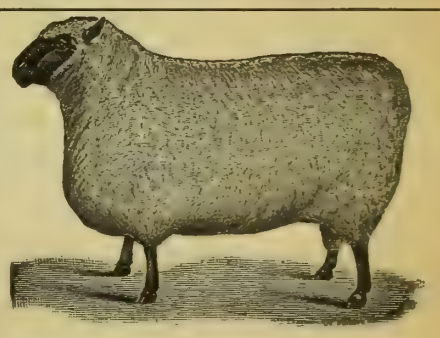
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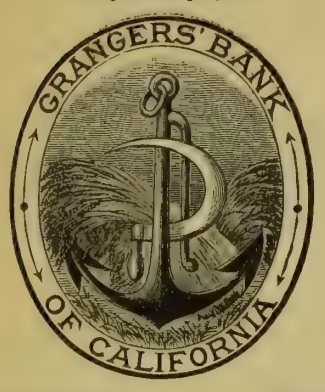
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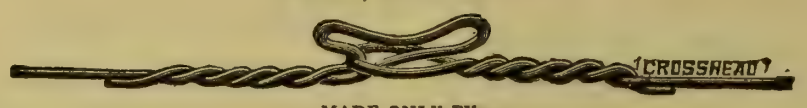
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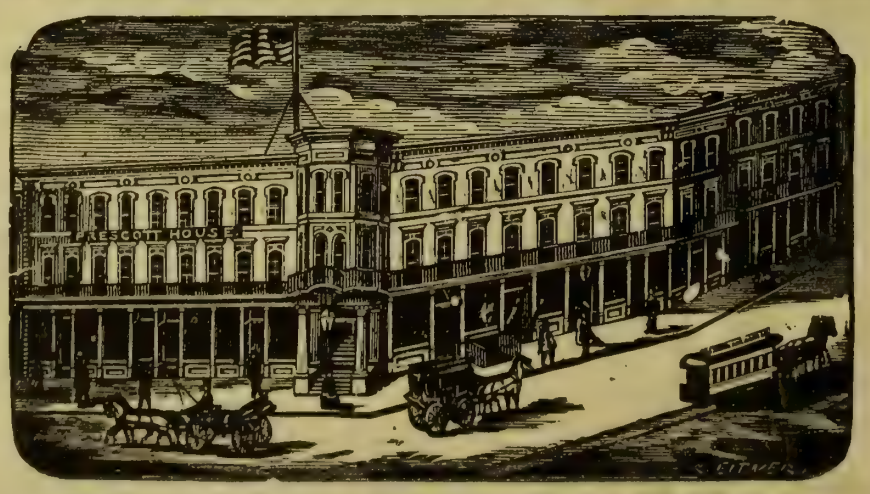
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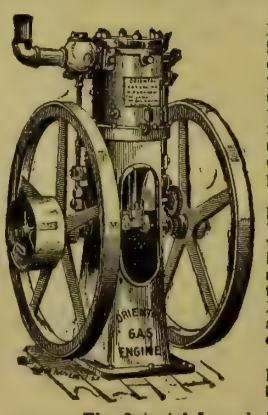
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S. F. Market Report

Market Review.

SAN FRANCISCO, Sept. 14, 1892.

The banks, as a rule, report a lighter call for funds with which to make advances against warehoused grain. The rapid drop, through crossorders on Call on this coast and at the East, bear reports and bear writing in paid newspapers here and at the East, has unquestionably caused some of the banks, and also capitalists that have made advances on wheat of over $1 a cental, and barley at 65 cents up to 80 cents, according to grade, fearful, and call for more margin either by selling or giving more security. That the present depression is unwarrantable and the work of a strong moneyed clique at home and abroad goes without saying. With silver a commodity, the clique is the better able to manipulate the grain markets of the world. Last season, while the clique was selling at high figures, bull representations were made by paid newspapers to induce farmers to hold; even bad-crop outturn telegrams, and all else to promote a bull sentiment with farmers, were resorted to, but so far this season it is the reverse. The papers now glory in giving bear news and larger crops in Europe to induce selling by farmers. Last year the short crop in Europe was paraded, but the unprecedented crop in this country, India and Chile was ignored. This year the increased crop, when compared with the exceptionally short crop in last year in Europe, is blackboarded, but the very large falling off in the United States, India and two or more other countries, is ignored. The crop, taking all countries as a whole, is fully 200,000,000 bushels less in this year than it was in 1891, and yet paid newspapers publish only bear information by which the clique can the better gain its point. A year ago the RURAL PRESS advised selling, and time proved it to be correct. This year the writer advises holding—*prices are too low to sell.* Farmers in storing their grain should exercise care and not get it into the hands of those who loan wheat to shippers, to be returned when the latter buys it. By this practice, the market is worked in the interest of speculators, shippers, millers and the ship ring.

The week under review was broken by two holidays, from which the grain market has not fully recovered. The State and district fairs are attracting an unusual degree of interest, and until they are well over, the farming community will give little attention to the markets. Buyers report that considerable wheat is offering, but sellers' views are largely above those of buyers'. The offerings are mostly of undesirable grades. Shippers bid for No. 1 white shipping, $1.27½ per cental, but pay from 1¼ to 2½ cents advance for straight parcels. Millers bid $1.35 for good milling and $1.37½ to $1.40 for choice to gilt-edged white milling, but pay for straight parcels an advance of from 1¼ to 2½ cents. The U. S. Agricultural Department's report on the 10th places the wheat crop of this country at below 500,000,000 bushels and the corn crop below 1,600,000,000. The falling off of 20,000,0000 bushels in winter wheat on last official estimates reduces the total crop estimate of wheat. Barley has ruled irregularly weak under heavy receipts, chiefly of coast. Buyers are discriminating in favor of good to gilt-edged bright barley. There is a continued heavy export movement of barley. So far this season, the shipments aggregate nearly 300 per cent more than during the corresponding time in 1891. The Hawaiian islands are increasing their purchases of roll barley. Oats have eased off under heavy receipts from Washington and Oregon. Buyers are offish even at the lower prices. Corn has been easy, with sellers giving concessions. The shipping demand is next to nothing. Rye has been offering more freely, and like other cereals, concessions were in order.

There has been a good demand for ground feed, but it is claimed that the buying does not indicate that feeders are buying beyond near-by wants. This doubtless is due to a prevailing opinion that the rainy reason will set in early, and, unless we have a severe, cold winter, natural pasture will be abundant. Bran has sold down, while middlings were firmer. Roll barley was in good demand at irregularly weak prices. Feed meal and cracked corn sold lower. Hay has pressed the market and, in the absence of large competition, buying prices have shaded off. It is quite generally claimed that at least 20 per cent more hay is being fed than at this time in 1891, but fears, it is said, of an early winter cause a desire on the part of farmers to force sales. It is altogether likely that if we have an early winter it will also be very cold and require more feeding and better care of stock.

In dairy produce both dairy and creamery butter have weakened off, but firkin butter has strengthened. The absence of Eastern tub creamery favors firkin butter. Square butter at the higher prices drags. Eastern advices report splendid pasture and an unusual flow of rich and high-colored milk which admits of a larger output of butter at this season of the year than has obtained for several years past. Cheese has held fairly firm with a good demand reported. Gilt-edged mild new is scarce and wanted. The East reports large output for the season of the year. The receipts of eggs have been light. Another advance has been established in strictly choice fresh-laid eggs received from near-by points. At the advance the demand is lighter. Selected Eastern eggs are receiving more attention. The eggs, to fetch the best figures, must be known to have been shipped by packers having a good reputation for honest stock. "As is" eggs are still low, although the high prices asked for the more choice cause them to meet with slightly better favor. Baker and Chinese eggs are in ample supply.

Garden truck has moved off fairly well at essentially unchanged prices. Canners are still taking tomatoes, but any advance on the part of sellers causes them to hesitate. Onions have come in quite freely. The demand has been fair. An improved shipping demand has developed for the more choice potatoes. Eastern advices are confirmatory of a short crop, which gives assurance of a market for our surplus. The receipts of poor to fair potatoes are heavy. There are unusually large quantities of diseased and wormy potatoes on the market.

Fresh or green fruit has come in sparingly, but as the demand was light the market held to more or less steady prices. The receipts have been largely of poor to fair; very little choice was received. The market cleans up quickly and at higher prices than are quoted for the more choice. Canners, as a rule, are still running to full capacity. They want the more choice grades of canning fruit. The belief that canned fruit can be eat during a cholera epidemic is largely in favor of the industry and which has no doubt stimulated the increased demand from the East and also from abroad for our canned fruit.

The dried fruit market has ruled easier for both grapes and peaches. This is due to reports ot a largely increased drying and the trade, on these reports, is holding off. The Chinese will, it is claimed, soon press the market with peaches. Apricots and plums are very strong, with another advance established in the latter. Those in position to know claim that about all the surplus has been bought. In Oregon the plum crop was light and prices were high, which caused growers to sell their green fruit and dry very little. Prunes are getting scarcer, but the market is no higher. It is said that owing to two dry winters a large proportion of the prunes are thick-skinned, but outside of this they are fully equal to former seasons. The cholera scare and strict quarantine regulations at the Atlantic seaports are against foreign shipments, which is accepted as favorable to California. Outside of this higher views abroad preclude the possibility of a profit on shipments to this country. Pears are being inquired after, with considerable quiet buying reported. Nectarines, it is said, are meeting with a better demand this year than ever before. There is an improved demand for choice to extra choice dried apples. Liberal contracts for future delivery have been made in this State and Oregon. The buying is mostly to fill Eastern orders. The outlook for all kinds of dried fruit is of a promising character, but if prices are pushed too high the consumption will fall off.

Raisins appear to have been gaining in strength, although there is no falling away in the bear pressure. The lateness of the season and prospects of early rains, the same as was experienced three years ago, cause a more pronounced bull-feeling. The cholera scare at the East is causing very few shipments to be made from European ports. It is claimed that all packs are being picked up which can be secured at shaded prices.

Markets by Telegraph.

Foreign Grain Review.

LONDON, Sept. 12.—The Mark Lane *Express* says: New England wheat averages 31s 11d, an advance on the small amount offered. There is little demand for foreign; American Red Winter brought only 29s. There are rumors that contracts have been made for October delivery at 27s 6d. Barley and corn are cheaper. Oats are steady. To-day there was a small show of new English wheat which brought 32s. Foreign wheats are 6d cheaper, but California and Red Winter are steady. Flour is held at the old prices. Barley, oats and corn are in better demand and unchanged. Rye, 27s.

Western Oregon Hops.

SALEM, Sept. 12.—The hopgrowers of this section are about through picking. The yield has been about half a crop, but the increased acreage will bring the aggregate up to more than half the yield of last year. Some growers are finishing up baling, after which the buyers will probably talk business. One firm of buyers has been asking for whole bales or several bales, five or ten, as samples, paying 15 cents and the raise for samples. What their scheme is no one seems to know definitely. Not many growers have furnished such samples and no more are likely to.

Wool.

NEW YORK, Sept. 10.—Conditions of trade similar to last report. Prices perhaps are a little crisper, but no prompt advance foreshadowed. Volume of sales good. Sales at New York, 546,000 pounds of domestic, including a line of Montana, and 529,000 pounds of foreign. Boston sold 3,200,000 pounds of domestic and 437,000 pounds of foreign.

Canned Fruit.

NEW YORK, Sept. 10.—The invoices per sail are well forward, the Frederick Billings landing 30,000 cases this week. Few lots are changing hands, but prices indicate settled strength. Standard peaches are quoted at $1.90@2; apricots, $1.65.

Dried Fruit.

NEW YORK, Sept. 10.—Apricots—Strong for lots here and close-by sales at 15@16½c for good to prime straight; 17c for fancy and 19c for extra. Dried peaches are strong at 15 cents spot, though not in a large way. Prunes are in good shape, and it would not require much Coast shading in rates to arouse an improved demand. French prunes, four sizes, sold: September delivery at 10@10¼c; October, 9½@9¾c, tending upward at the close.

Raisins.

NEW YORK, Sept. 10.—The situation continues unsatisfactory for opening the domestic interest. Foreign stock will be on hand materially in advance of the Pacific grades, and it is said it possesses a fine quality this season. Prices, too, are more attractive than California wants to land her pack at. All this tends to call off trading for early, interior wants, and it is feared in the trade that much of the outside demand that has been so patiently drummed up for the California product will run back to Ondara and Malaga layers and Valencia off-stalk. No definite bids for Pacific were named.

Miscellaneous.

NEW YORK, Sept. 10.—Honey—Firm and wanted. Lima Beans—Though the demand is moderate, holders are not disposed to make marked sacrifices. Market closes stiffer at $2@2.05 spot. Hops are without stimulating influence in any grade, spot or future. Choice have about petered out. Range for all, commont o prime, 20@23c; weakly supported.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan
Thursday	5s11½d	6s0½d	6s01½d	6s01½d	6s03 d
Friday	5s11½d	6s0½d	6s00½d	6s01½d	6s02½d
Saturday	5s11½d	6s01 d	6s01½d	6s01½d	6s03 d
Monday	5s0½d	6s01½d	6s02½d	6s03½d	6s03½d
Tuesday	5s11½d	6s.1½d	6s01½d	6s01½d	6s02½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	32s d	32s6 l	32s d	More inq.	Finer.
Friday	32s d	32s6d	32s d	Slow.	Fine
Saturday	32s d	32s6d	32s d	Slow.	Fine.
Monday	32s d	32s6d	32s d	Steady.	unsettled.
Tuesday	32s d	32s6d	32s d	Quiet.	Fine.

To-day's cablegram is as follows:

LIVERPOOL, Sept. 14.—Wheat—Hardly any demand. California spot lots, 6s 4½d; off coast 32s 6d; just shipped, 32s 9d; nearly due, 32s 6d; cargoes off coast, firmer; on passage, steadier; Mark Lane wheat, quiet; French country markets, steadier; weather in England, fair.

San Francisco.

WHEAT.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec	May
Thursday, high st	129	129⅝	....	134½	....
" lowest	129	129¼	....	134¼	....
Friday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Saturday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Monday, highest	128	129½	....	134	139½
" lowest	128	129	....	133⅝	139¼
Tuesday, highest	127⅝	128⅝	....	133⅝	....
" lowest	127½	128⅜	....	133⅜	....

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat, buyer December, 300 tons, $1.33½; 1000, $1.33⅜. Seller 1892, 100 tons, $1.28½ ₩ ctl. Regular Session.—Buyer Decemb r, 200 tons, $1.33⅜; 100, $1.33⅝; 100, $1.38⅝; 2600, $1.33⅜. Buyer Septemb r 200 tons, $1.29; 200, $1.29½; 500, $ .29⅜; 100, $1 29½ ₩ ctl. Afternoon.—Buyer December, 1800 tons, $1.33⅜; 700, $1.33⅝. Buyer September 100 tons, $1.29. Seller 1892—100 tons, $1.28½; 200, $1.28⅜; 100, $1.29 ₩ ctl.

BARLEY.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec.
Thursday, highest	86½	....	87½	92
" lowest	86½	....	87½	91½
Friday, highest	....	....	....	....
" lowest	....	....	....	....
Saturday, highest	....	....	....	....
" lowest	....	....	....	....
Monday, highest	85½	....	87½	90⅞
" lowest	84½	....	86½	90⅜
Tuesday, highest	84½	....	85⅞	90¼
" lowest	84½	....	85⅝	89¾

The following are to-day's recorded sales on Call:

Regular Session.—Barley, December, 100 tons, 90⅝c; 100, 91¼c ₩ ctl. Afternoon.—December 500, 90½c; 200, 90⅜c. Buyer December—100 tons, 91¼c; 200, 91¼c ₩ ctl.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Sept.	Oct	Dec.	May.
Thursday	13[illegible]	132⅞	138½	....
Friday	131½	133¼	1 8¼	...
Saturday	131⅝	133⅝	138¾	....
Monday	131	132⅝	138	148¾
Tuesday	131⅝	133⅜	138½	....

The following is to-day's telegram:

NEW YORK, Sept. 14.—Wheat—73¾c for September; 79⅝c for October; and 82⅛c for December.

Chicago.

Day.	Sept.	Oct.	Dec.	May
Thursday	122	12 [illegible]	127½	136¼
Friday	122½	124⅝	128	136⅝
Saturday	122	124⅜	128½	137½
Monday	122	123⅓	127	136½
Tuesday	122½	124	127⅞	137

The following is to-day's telegram:

CHICAGO, Sept. 14.—Wheat—74½c for October; 76½c for December; and 82⅛c for May.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Sept. 13, '92, were as follows:

Flour, qr. sks	64,445	Bran, sks	12,415
Wheat, ctls	91,780	Buckwheat "	400
Barley, "	62 753	Middlings "	3,006
Rye, "	509	Chicory, bbls	110
Oats, "	24,373	Hops, "	147
Corn, "	5,444	Wool, "	2,043
*Butter, "	976	Hay, ton	3,284
do bxs	1,250	Straw, "	90
do bbls	37	Wine, gals	201,720
do kegs	241	Brandy, "	12,150
do tubs	81	Raisins, bxs	152
do ½ bxs	49	Honey, cs	84
†Cheese, ctls	525	Peanuts, sks	3
do bxs	65	Walnuts "	....
Eggs, doz	19 870	Almonds "	25
do " Eastern	46,5 0	Mustard "	2,917
Beans, sks	6,958	Flax "	....
Potatoes, sks	26,596	Popcorn "	....
Onions, "	3,448	Broom corn, bbls	....

*Overl'd, 341 ctls. †Overland, 80 ctls.

Exports by Sea from San Francisco from July 1 to Sept. 8

	1892-93	1891-92
Wheat, ctls	2,034,813	3,156,688
Flour, bbls	214,404	241,194
Barley, ctls	448,317	143,917

Tonnage Movement.

From reliable advices up to Sept. 14, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	282,212	420,167	*169,304	74,169
San Diego	16,554	27,477	6,223	.....
San Pedro	12,480	3,471	....	}
Oregon	48,377	68,034	39,610	} 13,298
Puget Sound	37,320	37,588	.....	}
Totals	393,943	556,737	215,137	87,467

*Engaged for wheat, 1892, 49,165 1891, 67,155.

Cereals.

In the United States the outturn is likely to be 112,000 000 bushels less, in Canada 8,000,000 bushels less, making a total of 120,000,000 bushels less production in the two countries. Estimates of the South American crop show some increase over last year but not material. South Africa, which raises about 4,000,000, reports the crop destroyed by locusts.

The Australian crop is about the same as last year, namely about 34,000,000 bushels. The Indian crop is known to be 53,000,000 bushels less than last year. Using the South African as a stand-off against the American, the total decrease outside of Europe is about 150,000,000 bushels. In England the crop is 10,000,000 bushels less than last year, Spain 8,000,000 bushels less, Portugal 2,000,000 less, Italy 9,000,000 bushels less, Austro-Hungary 6,000,000 less, making a total decrease of 85,000,000 bushels, or added to the decrease outside of Europe, a total decrease of 185,000 000 bushels.

Recent estimates on France make the crop 60,000,000 more than last year, but still considerably under the average. In regard to the other countries of Europe little is known. The Vienna Congress report can scarcely be taken as a guide. General indications and advices are for a larger production in these countries than last year, but how much larger will never be known until the official reports are out, and even these will have to be discounted. It is at least certain that the world's crop will be considerably short of last year, which will be partially offset by the increase of rye. The corn crop is considerably below last year's.

The Consul-General of the Orange Free State has received a letter from the American Consul-General stating that the writer had good reason to believe that there would be a decided scarcity of grain not only in that State but in Cape Colony, Transvaal and other colonies in South Africa. The trouble came from great clouds of locusts which destroyed everything

Official reports from Roumania and Bulgaria state that the wheat harvest has given good results, but barley will hardly reach an average. Maize is quite promising. The official report of the Servian crop makes the total production 48,968,000 bushels.

The potato crop of Europe is expected to be a large one, which may considerably influence the demand for foreign wheat.

The official estimates of the wheat crop of Italy placed it at 11,200,000 bushels, a decrease of 26,000,000 bushels from last year.

The local wheat market was steady to-day at the lower bids. Buyers report light purchases, and even these are forced sales. The opinion is gaining ground that wheat will do considerably better and that, too, before the fall months pass. The large tonnage in port and to arrive is in favor of holders.

The barley market to-day was quiet, but fairly firm for choice to gilt-edged bright, suitable for shipping or brewing, but feed grades were barely steady, particularly for dark

Corn was quiet and in buyers' favor. The demand is of an offish character.

Rye and buckwheat were unchanged.

Feedstuff.

Both bran and middlings were strong and slightly higher. The demand is quite active.

Hay is coming in more sparingly. The low prices are inducing farmers to hold back. The market had a slightly steadier tone to-day.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in August were as follows:

Source.	Butter, Lbs.	Cheese, Lbs.	Eggs, Dozen.
California	1,146,100	456,100	114,235
Oregon	91,100	23,700	332,640
Eastern	139,100	215,000	450
Totals	1,376,300	694,800	447,325
January	502,200	476 950	420,315
February	622,550	313,500	200,245
March	1,188,700	574 200	258,756
April	1,793 050	802,900	590,068
May	1,713,100	715,300	536,170
June	1,810,200	634,100	603,735
July	1,157,700	789,100	374,211
Eight months	10,344,800	5,001,400	3,134,050

During the first eight months of 1891 the receipts were 9,603,500 lbs butter and 4,723,600 lbs cheese, 3,363,257 dozen.

The market for butter was fully one cent lower on the more choice grades and weak for other grades. The impression is that prices will ease off some more.

Cheese was in fair demand to-day at unchanged quotations.

Fresh-laid, white eggs shipped from near-by points were in active demand to-day, and 40c was readily paid for selected, large, white eggs; colored eggs will not fetch so much Poor to good were unchanged.

Vegetables.

The market for garden-truck was essentially unchanged to-day from that given in the review.

Onions were strong and higher to-day, under a free-shipping demand. It is claimed that still better prices will rule. The demand is largely from Colorado.

Choice and good-keeping shipping potatoes were in good demand, and for something extra a slight advance was obtainable. Poor stock is still slow.

Fruit.

Choice apples for shipping are wanted. Very fine, choice have, so far, put in an appearance. Choice Gravenstein sold up to $1.25 and good Greenings up to $1. The market is liberally supplied with wormy and otherwise poor stock. Prunes and plums are coming in sparingly; choice are wanted. The trade paid to-day as high as $1 per box for choice mountain peaches. Choice, firm grapes meet with a fairly good demand, but soft, watery are slow. Owing to low prices, very few grapes are coming in from the raisin sections. Figs are in good supply. Quinces are coming in fairly free, with the market ruling steady. Choice and good-keeping pears are scarce, but inferior and poor keepers press the market. Canteloupes are in active demand for shipping, with at times an advance paid on outside quotations. Melons are unchanged Berries are in light receipt, with a strong market ruling.

Mexican limes are weak and irregular, owing to to quality. Sicily lemons are virtually out of the market.

The incoming orange crop, if it escapes the frost, will be quite heavy. Some inquiry is making regarding the probable prices.

The remarks in the review for the week cover to-day's market for both dried fruit and raisins.

Live Stock.

Live stock has been taken more freely by slaughterers. The cool weather is enlarging the consumptive demand. Hogs have sold down while mutton sheep favored buyers.

Miscellaneous.

Large-sized, well-conditioned poultry continues very scarce and readily sells at a marked advance in our outside quotations. Sales of hens have been made at over $8 per dozen, but they weighed over 5 and 6 pounds each. Very few of this kind come in. The same proportionate prices rule for other choice, gilt-edged stock.

Hops are meeting with a better inquiry. Eastern advices indicate a bullish tendency.

Wool is essentially unchanged. While the market at present is in buyer's favor, all advices indicate that a favorable turn is near at hand. Owing to the cholera quarantine, there is no importation of coarse wool, which is in favor of American carpet wool.

Honey is wanted for shipping, and for round, straight parcels an advance is bid.

New-crop beans are coming in. The market is weak and lower for all kinds except Limas, which latter are well sold up.

Hog product is weak and lower, in sympathy with the East.

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manila Hop, in balls,	11½
Do, 2 yarns, light	9½	tarred	
Duplex, 3 yarns	9	Do, Grape-Vine, in balls or coils	12
Manila, 3 yarns, heavy	10½	Do, Spring	16
Pure Manila, 3 and 4 y rns	12	Duplex Hop, in balls, tar'd	9½
Do, 2 yarns, light	12½	Do, Grape Vine, in balls or coils	

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

SEPTEMBER 13, 1892.

BEANS AND PEAS.			
Bayo, ctl..	2 50	@	2 75
Butter	2 50	@	3 00
Pea	2 40	@	2 65
Red	2 60	@	2 70
Pink	2 30	@	2 50
Small White	2 25	@	2 45
Large White	2 00	@	2 15
Lima	3 00	@	3 15
Fld Peas, blkeye	1 50	@	1 70
Do green	1 50	@	2 75
Do Niles	1 30	@	1 40
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	17	@	—
Do good to choice	23	@	26
Do Giltedged	27	@	28
Do Creamery rolls	24	@	29
Do do Giltedge	—	@	31
Eastern, ladle	17	@	19
Cal. Pickled	21	@	23½
Cal. Keg	20	@	23
CHEESE			
Cal, choice cream	9	@	—
Do fair to good	7½	@	—
Do gilt edged	—	@	10½
Do skim	5	@	6½
Young America	—	@	11
EGGS.			
Cal. "as is," doz.	18	@	20
Do shaky	14	@	16
Do candled	21	@	25
Do choice	27	@	30
Do fresh laid	35	@	—
Do do sled white	—	@	40
Eastern "as is"	17	@	19
Do candled	21	@	23
Do selected	24	@	25

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED			
Bran, ton	14 50	@16	00
Feedmeal	27 00	@30	00
Gr'd Barley	19 00	@20	50
Middlings	19 50	@21	50
Oil Cake Meal	—	@25	00
Manhattan Food ₩ ctl. cabinet	—	@ 8	00
HAY.			
Wheat, per ton	7 00	@	—
Do choice	—	@12	00
Wheat and Oats	8 50	@11	00
Wild Oats	7 00	@10	00
Cultivated do	6 00	@ 8	00
Barley	5 00	@ 8	00
Alfalfa	7 00	@ 9	00
Clover	8 00	@10	00
Straw, bale	30	@	50
GRAIN, ETC.			
Barley, feed, ctl.	75	@	—
Do Choice	85	@	—
Do Brewing	92½	@	—
Do do Choice	96½	@	—
Do do Giltedge	98½	@	—
Do Chevalier	85½	@ 1	10
Do do Giltedge	1 15	@ 1	25
Buckwheat	2 00	@	—
Corn, White	1 25	@ 1	35
Yellow, large	1 25	@	—
Do small	1 30	@	—
Oats, milling	1 32½	@	—
Feed, Choice	1 27½	@	—
Do good	1 25	@	—
Do fair	1 20	@	—
Do Common	1 10	@	—
Surprise	1 47½	@	—
Black Cal	1 05	@	—
Do Oregon	—	@	—
Gray	1 25	@ 1	32½
Rye	1 10	@	—
* Wheat, milling			
Gilt edged	1 35	@	—
Do Choice	1 32½	@	—
Do fair to good	1 30	@	—
Shipping, cho'ce	1 30	@	—
Do good	1 27½	@	—
Do fair	1 25	@	—
Common	1 22½	@	—
Sonora	1 22½	@ 1	35
HOPS.			
1892 Bid	18	@	20
FLOUR.			
Extra, CityMills	4 00	@	—
DoCountryMills	4 00	@	—
Superfine	2 60	@	3 00
NUTS—JOBBING.			
Walnuts, Cal. lb	6½	@	—
Do Choice	8½	@	—
Do paper shell	9½	@	—
Almonds, sft shl.	11	@	—
Paper shell	14	@	—
Hard Shell	6	@	7½
Brazil	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	55
POTATOES.			
River Reds	50	@	65
Early Rose, ctl.	50	@	65
Peerless	50	@	75
Garnet Chilies	50	@	70
Burbank Seedlings	50	@	70
Do do Salinas	80	@ 1	05
Sweet	1 00	@ 1	37

Extra choice sell for more money.

POULTRY.			
Hens, doz	6 00	@ 7	00
Roosters, old	6 00	@ 6	50
Do young	5 00	@ 6	50
Broilers, small	2 50	@ 3	25
Do large	3 25	@ 4	00
Fryers	4 00	@ 4	50
Ducks	4 00	@ 4	50
do, large	5 00	@ 5	50
do, extra large	6 00	@	—
Geese, pair	1 25	@ 1	75
Turkeys, Gob'r.	17	@	20
Turkeys, Hens	17	@	18

All kinds of Poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food ₩ 100-lb cabinet	8	00	
PROVISIONS.			
Cal. Bacon, he'vy, lb	11	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	12	@	13½
do Eastern	13	@	14
SEEDS.			
Alfalfa	—	@	—
Clover, Red	15	@	—
White	25	@	—
Flaxseed	2 00	@ 2	25
Hemp	3½	@	4
Mustard, yellow	4	@	—
do Brown	3½	@	—
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'll.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (State)	15	@	19
FALL, 1892.			
San Joaq'n, plain	6	@	8½
do mountain	9	@	11
do lamb	8	@	9
HONEY.—1892 CROP.			
WhiteComb, 2-lb	9½	@	12½
do do 1-lb frame	11½	@	14½
White extract'd	7	@	—
Amber do	6½	@	7
Beeswax, lb	25	@	28

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ½c to 1c per lb.

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bl., ring, 50-lb bx	7½	@	8½
Fancy higher.			
APRICOTS—1892.			
Sun-dried, unbl. com.	4½	@	5½
Do do prime	6½	@	8
Do do choice	9	@	10
Do bleached, prime	12½	@	—
Do do choice	13½	@	—
Do do fancy	14½	@	—
Evap. choice, in boxes	15	@	—
Do fancy, do	15½	@	—
FIGS—1892.			
Sun-dried, black	4½	@	5
Do white	3	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	8	@	9
Do Evap., in boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	12	@	—
Do do fancy	12½	@	—
Evap, unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Sun-dr, pi'd, prime, bl.	—	@	—
Do do choice	—	@	—
Do do fancy	—	@	—
Evap, peeled, in boxes, choice	17½	@	—
Do do fancy	20	@	—
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap, sliced, in boxes	7	@	8
Do ring do	9	@	10
PLUMS—1892.			
Pitted, sun-dried	9	@	10
Do evap. boxes, choice	—	@	—
Do do fancy	—	@	—
Unpitted	4	@	5
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster, ₩ bx	1 90	@2	00
Do choicest do	1 60	@1	70
Do prime, ₩ bx	1 40	@1	45
Loose Muscatels, common, ₩ bx	—	@	—
Do choice, do	1 25	@1	30
Do fancy, do	—	@	—
Unstem'ed Muscatels, in sacks, ₩ lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ₩ 20-lb bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Live Stock.

BEEF.			
Stall fed	5	@	—
Grass fed, extra	5	@	—
First quality	4½	@	—
Second quality	4	@	—
Third quality	3	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Range, heavy	4½	@	—
Do light	5½	@	—
Dairy	6½	@	—
MUTTON.			
Wethers	6½	@	—
Ewes	6	@	—
Do Spring	7½	@	—
HOGS.			
Light, ₩ lb, cents	5½	@	—
Medium	5	@	—
Heavy	4½	@	—
Soft	4	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Grain and Wool Bags.

[illegible] spot	5½	@	6
[illegible]	36	@	38

Wine.

[illegible] Wine from bay counties, vintage of 1891, per gal. in cellar lots 10 @ 15

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

SEPTEMBER 13, 1892.

Limes, Mex	5 00	@ 6	00
Do Cal	—	@	—
Lemons, box	1 00	@ 6	00
Do Sicily choice	7 50	@ 9	00
Strawberries, per chest—Longworth	—	@	—
Sharpless	6 00	@10	00
Peaches, box	50	@	85
Do Mountain	70	@ 1	00
Bl'kberries ₩ ch	4 00	@ 6	00
Figs, blk box	50	@	75
Do White	40	@	60
Apples	40	@	90
Do Gravenstein	75	@ 1	00
Crabapples	—	@	—
Canteloupes, pr crate	50	@ 1	00
Melons, pr 100	5 00	@10	00
Nutmegs, ₩ box	25	@	40
Grapes, pr bx—			
Do White	30	@	60
Do Black	25	@	50
Do Muscats	30	@	60
Do Tokays	45	@	75
Prunes, Hung'n	—	@	—
Do German	50	@	65
do Gros Gold'dp	50	@	60
Plums, ₩ box	40	@	65
Pears, Bartlett	50	@	75
Do do choice	1 00	@	—

Fruit in bulk to canners: Pears, 1½@2; P.ums, white, 1½@2c; colored, 1@1½c; Peaches, freestone and clings, 1½@2½. Extra choice fruit for special purposes sells at an advance on outside quotations.

Beets, sk	—	@	75
Carrots, sk	40	@	—
Okra, dry, lb	15	@	—
Do green box	25	@	35
Parsnips, ctl	—	@ 1	25
Peppers, dry, lb	10	@	—
Do grn Chili, bx	20	@	35
Do do Bells	20	@	35
Turnips, ctl	75	@	—
Cabbage, 100 lbs	45	@	55
Garlic, lb	1	@	1½
Squash, Sum, bx	25	@	40
Tomatoes	25	@	35
Do River lrg bx	20	@	35
String Beans, sk	1 00	@ 1	50
do do Wax, lb	4	@	5
Cucumbers, box	20	@	40
Mushrooms	—	@	—
Egg Plant, bx	20	@	40
Green Corn, box	40	@	75
Marf'at Squash, ₩ ton	8 00	@10	00

Auction Sales of California Fruits.

At New York.

Sept. 7.—Two carloads: Bartlett Pears, $2 50; Orange Cling Peaches, $1.40; Susquehanna Peaches, $1 30@2 35; Globe Peaches, $1.85; Tokay Grapes, half-crates, $2@2.30; Muscat Grapes, half-crates, 85c; Japan Plums, $1.25. Some fruit overripe and unsound sold for less.

Sept. 7.—One carload for $1003, gross: Malaga Grapes, single crates, $1,20@1.35; Rose de Peru Grapes, 45c to 55c

Sept. 9.—One carload: Bartlett Pears, $2 20@2.55; Beurre Hardy Pears, $1 95@2.10; Gros Prunes, $1.70@2.10; Plums, $1.20; Egg Plums, $1.10@1.25; German Prunes, $1.60@1.70.

Sept. 10 —One carload: Tokay Grapes, half-crates, $1.95@3 45; Muscat Grapes, half-crates, 85c@1.85; Rose de Peru Grapes, 85c@$1 15; Malvoise, $2 15; Black Morocco Grapes, $1.55; Black Prince, $1.10; Assorted Grapes, $1.40@2.70.

Sept. 12.—Two carloads: Comice Pears, $2.65@2.70; Onondaga Pears, $1.55; Beurre Bosc Pears, $1.20; Malaga Grapes, 95c@$1.10; Tokay Grapes, half-crates, $1.40@1 45

Sept. 12.—Three carloads: Bartlett Pears, $2.80@4; some ripe, $1 95@2.30; Beurre Clairgeau Pears, $1 95@$2.10; Beurre Hardy Pears, $1.60@1.75; Gros Prunes, $1.75@2 05; German Prunes, $1.75@1.90; Fellenberg Prunes, $1.75; Egg Plums, $1.35@1.45.

Sept. 13.—Two carloads: Beurre Hardy Pears, $1 45@1.55; Bartlett Pears, $1 85; half-boxes, $1.10@1.15; Tokay Grapes, single crates, $1.35@2; double crates, $2 60@2 87; Muscat Grapes, single crates, 55@80c; double crates, $1.50; Japan Plums, $1.50; Red Nectarines, $1.75@2 40.

At Chicago.

Sept. 7.—Three carloads: Bartlett Pears, $1 90@2.30; Beurre Clairgeau Pears, $1 60; Flemish Beauty Pears, $1.50; Tokay Grapes, $2.50, half-crates, $1 30@1.40; Muscat Grapes, $1.75: half-crates, 90c; Susquehanna Peaches, $1.40; Salway Peaches, $1.35; Freestone Peaches, $1.30; Orange Cling Peaches, $1.20@1.25; Yellow Free Peaches, $1.60; Yellow Cling Peaches, $1.25; Cling Peaches, $1.15; Gros Prunes, $1.40@1.45; Fellenberg Prunes, $1.25; German Prunes, $1.10; Silver Prunes, 85c@$1; Japan Plums, $1 15; Egg Plums, $1.05 @1.10.

Sept. 7.—Four carloads: Bartlet pears, $1 65@2.60; Tokay Grapes, 90c@$2.20; Muscat Grapes, single crates, 60c@$1.15; double crates, $1.60; Beurre Clairgeau Pears, $1 50; Figs, 25@40c; Peaches, 75c@$1.35; Nectarines, $1.35; Japan Plums, 80c@$1.35; Rose de Peru Grapes, 60@80c; Malvoise Grapes, $1@1 15; Fellenberg Prunes, $1.10; Silver Prunes, 85c; Gros Prunes, $1.40; Egg Plums, $1.15; Columbia Plums, 80c; Gages, 80c.

Sept. 8.—Seven carloads: Muscat Grapes, single crates, 70c@$1.50; Tokay Grapes, single crates, 90c@$1 95; Rose de Peru Grapes, 40@80c; Peaches, $1@1 70; Beurre Hardy Pears, $1.75@2.10; Beurre Clairgeau Pears, $1.50@1.70; Malaga Grapes, 55@80c; Hungarian Prunes, $1.25@1.50; Grapes, 70@95c; Nectarines, $1.30; Bartlett Pears, $1.45@2 55; Egg Plums, 75c@$1.20; Japan Plums, 85c; Gros Prunes, $1.45@1.95; Fellenberg Prunes, 80c@$1.30; Damsons, $1.40.

Sept. 8.—Six carloads: Bartlett Pears, $2.15@2 55; Beurre Clairgeau Pears, $1.60@2; Beurre Hardy Pears, $1.60@1.75; Congress Pears, $1 50; Orange Cling Peaches, $1.10@1.50; Roseville Cling Peaches, $1.15; Lemon Cling Peaches, $1.05@1.10; McKevitt Cling Peaches, 95c@$1.35; Quinces, $1.05@1.30; Tokay Grapes, $2,40; half-crates, $1@1.35; Muscat Grapes, $1.55; half-crates, 65@80c; Japan Plums, $1@1.10; Egg Plums, $1.10@1.20; Gros Prunes, $1.60; German Prunes, $1.25@1.30. Some fruit, in a damaged condition, sold for less.

Sept. 9.—Six carloads: Muscat Grapes, double crates, $1.25; single crates, 50c@1.75; Malaga Grapes, 50@85c; Tokay Grapes, 65c@$1.50, double crates, $2@$2.40; Beurre Clairgeau Pears, $1.45@1.75; Howell Pears, $2.20; Dutchess Pears, $1.45; Dell Pears, $1.25; Bosc Pears, $2.50; Onondaga Pears, $1.85; Bartlett Pears, $1.75@2.70; half-boxes, $1.30; Pears, $2.50; half-boxes, $1.15@1.25; Japan Plums, $1 15; Peaches, 50c@$1.70; Nectarines, $1.20; Vicar Pears, $1.30; Winter Nelis Pears, $1.10@1 35; Figs, 55c.

Sept. 9.—Eight carloads: Bartlett Pears, $2.25@2.45; Beurre Hardy Pears, $1.35; Congress Pears, $1 40; Beurre Clairgeau Pears, $1 45@1.65; Onandago Pears, $1.40@to $1.45; Duchess Pears, $1.35@1 65; Salway Peaches, $1.50; Orange Cling Peaches, $1.15; White Cling Peaches, $1.05; McKevitt Cling Peaches, $1; Roseville Cling Peaches, $1; German Prunes, $1 40; Silver Prunes, $1.05@1.10; Fellenberg Prunes, $1 35; Ickwith Plums, $1.25; Quinces, $1 50; Japan Plums, $1.05@1.10; Tokay Grapes, $1.90; half-crates, $1.05@$1.25; some small and poor color, 65@85c; Muscat Grapes, $1.35; half-crates, 60@65c; Grant Cling Peaches, $1.25.

Sept. 10.—Two carloads: Bartlett Pears, good condition, $2.15@2.30; Beurre Hardy Pears, $1 60@1.65; Beurre Clairgeau Pears, $1.30@1.60; Onondago Pears, $1.40; Doyenne Pears, $1.50; Salway Peaches, $1 40; Susquehanna Peaches, $1.35; Roseville Cling Peaches, 90@95c; Tokay Grapes, $1.90; half-crates, $1@1 10; some without color, 60@80c; Muscat Grapes. $1.35; half-crates, 60c; Gros Prunes, $1.50; German Prunes, $1.15@1.35; Kelsey Japan Plums, $1; Egg Plums, 85c@ $1.10.

Sept. 10.—Six carloads: Bartlett Pears, $2@2.40; Beurre Hardy Pears, $2@2.25; Peaches, $1.15@1 50; Tokay Grapes, single crates, $1.10; Grapes, single crates, 45c@$1.40; Egg Plums, 85c@$1.20; Japan Plums, $1.20@1.25; German Prunes, $1.20; Gros Prunes, $1.65; Silver Prunes, 85c@$1; Fellenberg Prunes, $1.15 Howell Pears, $2.30@2.50; Verdel Grapes, poor condition, 40@50c; Comice Pears, $2.30@2 50; Quinces, $1.55.

Sept. 12.—Five carloads: Comice Pears, $2.10@2.25; Duchess Pears, $1.50; Beurre Clairgeau Pears, $1.50@ $1.65; Howell Pears, $2.55; Quinces, $1.25@1.45; Damsons, 60c; Bartlett Pears, $1.70@2.45; half-boxes, $1.05; Peaches, 75c@$1.60; Muscat Grapes, single crates, 55c @$1.40; Tokay Grapes, single crates, 75c@$2; double crates Muscats, $1.40; double crates Tokays, $2; Rose de Peru Grapes, 60c; Plums, 85c@$1.50; Seckel Pears, 75c.

Sept. 12.—Six carloads: Bartlett Pears averaged $2 per box; Beurre Hardy Pears, $1.80; Beurre Clairgeau Pears, $1.65; Salway Peaches, $1.25@1.40; Edward's Cling Peaches, $1.50; McDevitt Cling Peaches, $1.50@ $1 55; George's Late, $1.10; Crawford Peaches, $1; Grant's Cling Peaches, $1; Lemon Cling Peaches, 90c; Red Free Peaches, $1.15; Tokay Grapes, $1.50@2; half-crates, 70@85c; Muscat Grapes, $1 35; half-crates, 60@ 65c; some bad, 45c; Egg Plums, 95c@$1.50; Gros Prunes, $1.50@1.80; German Prunes, $1.35; French Prunes, 95c; Silver Prunes, 90c.

Sept. 13.—Six carloads: Muscat Grapes, single crates, 65c@$1.65; double crates, $1.35@1.40; Tokay Grapes, single crates, 95c@$1.65; double crates, $2 20 @2.30; Malaga Grapes, 60@85c; Figs, 70c; Egg Plums, 90c@$1.05; Peaches, 85c@$1.50; Bosc Pears, $2.30; Bartlett Pears, $1.60@2.60; half-boxes, $1.05; Silver Prunes, $1; Howell Pears, $2.25; Superb Pears, $2.45; D'Anjou Pears, $1.90; Beurre Hardy Pears, $2.05; Diel Pears, $1.50; Vicar Pears, $1.30; Pears, $2; Verdell Grapes, 70c

At Boston.

Sept. 7.—Three carloads: Bartlett Pears, $1.65@ 2 40; Tokay Grapes, half-crates, $1.35@2; Rose de Peru Grapes, 75c@95c; Muscat Grapes, half-crates, 70c@95c; Black Malvoise Grapes, 95c; Susquehanna Peaches, $1.50; Golden Cling Peaches, $1.20; Lemon Cling Peaches, $1@1.15; Cream Cling Peaches, 95c; McKevitt Cling Peaches, 85c@90c; Rose Cling Peaches, 85@90c; Orange Cling Peaches, 95c@1.25; Late Crawford Peaches, $1 30; Kelsy Japan Plums, $1.10@2; Gros Prunes, $1.10@1.25; Silver Prunes, 80c@$1.05.

Sept. 8.—Two carloads: Gros Prunes. $1.30@1.75; German Prunes, $1.25@1.35; Silver Prunes, 80c; Bartlett Pears, $1.10@2.80; Beurre Hardy Pears, $2.35; Egg Plums, 95c@$1.40; Japan Plums, $1.05; Orange Cling Peaches, $1.15@1.20; Late Crawford Peaches, $1.30; Lemon Cling Peaches, $1.15; Taylor Cling Peaches, $1.25.

Sept. 10.—Two carloads: Tokay Grapes, $3.20; half-crates, $1 35@2 10; Muscat Grapes, half-crates, 85c@$1.05; Golden Cling Peaches, $1.30; McKevitt Cling Peaches, 95c@$1.15 Roseville Cling Peaches, $1.05; White Cling Peaches, 95c; Red Nectarines, $2@ 1.25; Bartlett Pears, $1.55@1.85.

Sept. 13 —Three carloads: Salway Peaches, $1.50; Susquehanna Peaches, $1.25@1 60; Lemon Cling Peaches, $1.25@1.50; White Cling Peaches, $1.30; Golden Cling Peaches, $1.40; Roseville Cling Peaches, $1.35; Bartlett Pears, $1.60@2.10; Tokay Grapes, $3 50; half-crates, $1.40@1.75; Muscat Grapes, $2 10; half-crates, $1@1.20.

At Minneapolis.

Sept. 8.—One carload: Pears, $1.65@1.85; Peaches, $1;35@1.40.

Sept. 8 —Three carloads: Orange Cling Peaches, $1.20@1.35; Lemon Cling Peaches, $1@1.25; White Cling Peaches, $1.10@1.25; McKevitt Cling Peaches, $1.15; Gros Prunes, $1.85@1.95; German Prunes, $1.20 @1.30; Egg Plums, $1.15@1.30; Red Nectarines, $1; Muscat Grapes, $1.65; half-crates, 85c@95c: Tokay Grapes, half-crates, $1@1.20; Bartlett Pears, 90c@1.85; Howell Pears, $1.70; Beurre Clairgeau Pears, $1.15@ 1 60.

Sept. 9.—Three carloads: Peaches, $1@1.30; Pears, $1.65@2; Grapes, 60@$1.40; Rose de Peru Grapes, 70c; Muscat Grapes, 80c; Tokay Grapes, $1.25; Plums $1@1.55

Sept. 10.—Two carloads; Gros Prunes, $1.70@1.75; German Prunes, $1 20@1.25; Silver Pruues, 85c; Damson Plums, $1.80; Egg Plums, 70 @1.05; Bartlett Pears, $1.65@2; Beurre Hardy Pears, $1 85; Beurre Clairgeau Pears, $1 65@1 75; Quinces, $2 20.

Sept. 13.—Four carloads: Bartlett Pears, $2.25@ 2.35; Winter Nelis Pears, $1.55; Tokay Grapes, $2; half-crates, 85c@$1.20; Muscat Grapes, $1; half-crates, 50@75c; Orange Cling Peaches, $1@1.25; White Cling Peaches, $1.25; Red Nectarines, 90c.

Sept. 13. — Three carloads: Pears, $1.10@2.15; Peaches, $1@1.20; Malaga Grapes, 55c; Quinces, $1.70 @1.75.

At Omaha.

Sept. 9.—Three carloads: Peaches, $1 25@1.50; Pears, $1.25@2 25; Quinces, $1.50@1 75.

Sept. 12.—Three carloads: Pears. $1.50@2; Plums, $1@1.25; Peaches, $1.25@1.50; Bartlett Pears, $1.25@2.

At Montreal.

Sept. 7.—Three carloads: Susquehanna Peaches, $1.25@1.55; White Cling Peaches, $1 25; Rose Cling Peaches, $1.35; Lemon Cling Peaches, $1.10@1.15; Cream Cling Peaches, $1.10@1.15; Strawberry Cling Peaches, $1 10@1.15; Bartlett Pears, $1.25@3; Tokay Grapes, half-crates, $1 30@2 10; Black Hamburg Grapes, half-crates, 65c; Rose de Peru Grapes, half-crates, 75c; Golden Cling Peaches, $1.40; Orange Cling Peaches, $1.25@1.55.

HOW TO TRAIN CHILDREN.—Be very vigilant over thy child in the April of his understanding, lest the frosts of May nip his blossoms. While he is a new vessel, season him; such as thou makest him, such commonly shalt thou find him. Let his first lesson be obedience, and the second shall be what thou wilt. Give him education in good letters, to the utmost of thy ability and his capacity. Season his youth with the love of his Creator, and make the fear of his God the beginning of his knowledge. If he have an active spirit, rather rectify than curb it; but reckon idleness among his chiefest faults. As his judgment ripens, observe his inclination and tender him a calling that shall not cross it. Forced marriages and callings seldom prosper. Show him both the mow and the plow, and prepare him as well for the danger of the skirmish as possess him with the honor of the prize.—Quarles.

A REMARKABLE imitation of black walnut may be manufactured from poor pine, the quality and appearance of the article being such as to defy detection, except upon very close examination. To accomplish this, one part of walnut peel extract is mixed with six parts of water, and with this solution the wood is coated. When the material is half-dry, a solution of bichromate of potash, with water, is rubbed on it and the made walnut is ready for use.

THAT which is popularly known as the funny bone, just at the point of the elbow, is in reality not a bone at all, but a nerve which lies near the surface, and which, on getting a knock or blow, causes the well-known tingling sensation in the arms and fingers.

THE BALLOON IN WAR.—A series of interesting experiments was conducted the other night at Stanford Bridge grounds, London, with balloon and apparatus invented and improved by Mr. Eric Bruce for use in military signaling at night over intervening woods and hills, says the London *News*. Within the balloon are hung on a small swinging ladder six incandescent lamps, connected by insulated cable with a battery on the ground, worked that night at 24 volts and giving 60 candlepower of illumination. By ready manipulation of the buttons at the instrument, the operator flashes on the translucent sides of the balloon the signals of the Morse or any code, and these can be easily read at a distance of six miles. The balloon used was a small one of 18 feet diameter, containing 1000 feet of gas, and was held by a cable at a height of 300 feet. The strong wind prevailing rendered the position of the balloon unsteady and uncertain, but the signals were, nevertheless, read by military experts and answered from a station on land. The experiments were witnessed by Prince Edward of Saxe-Weimar, by military attaches of the Chinese and other embassies, and a number of scientific men. The experiments were varied by hanging the lamps outside below the neck of the balloon and flashing direct. The illuminated balloon, when a few feet above ground, gives a beautiful light, and can be utilized when required for executing work at night.

THE CROTON AQUEDUCT SYSTEM.—Although something like $25,000,000 have been expended already on the New York water system, including about $15,000,000 for a new aqueduct to provide adequately for the future wants of the city, a new dam in the valley of the Croton river is necessary, which will cost in the neighborhood of $4,150,000. So far as the Aqueduct Commissioners know, this is by a large figure the greatest sum ever proposed to be expended in a dam for aqueduct purposes, at least in this country. Contractors were invited to submit bids, and the enormity of the work, the large amount of bonds required, and the great capital necessary to carry it on, limited the number of bidders. Only six firms made propositions, and the sums they offered to do the work for varied in round numbers from $3,500,000 to $5,566,000. The contract was awarded to ex-Commissioner of Street-Cleaning J. S. Coleman at his figure of $4,140,573. Engineers the world over will watch the construction of this dam with lively interest. Some difficult problems are to be solved. An enormous watershed is to be controlled by it. It is to be furnished really as a reservoir, wherein are to be dammed up the entire weters of the Croton watershed; containing thousands of millions of gallons, and from it are to be drawn such supplies as the present aqueduct does not furnish.

CELLULOID.—It is said that celluloid was discovered in 1689 by Hyatt. It is prepared by directing a jet of a mixture of five parts sulphuric acid and two parts nitric acid upon a roll of unsized paper, which is slowly unrolled by machinery to receive it. It then becomes pyroxylin, a variety of nitrocellulose. After washing, the compound is ground with camphor until thoroughly incorporated, and then dried under a hydraulic press between bibulous paper, again ground and compressed in a special apparatus and heated to a certain temperature, when it becomes a translucent, hard and elastic substance, capable of high polish. When heated to 250° F. it becomes soft and malleable, can be drawn into very thin leaves, which, being mixed with various colored substances, is made into a variety of articles. It is soluble in methyl alcohol, amyl acetate, a mixture of ether and alcohol, either ethylic or methylic, in a solution of zinc chloride, in twice its weight of hydrochloric acid, etc.

A NOVEL CANDLESTICK.—The make an unusual kind of candlestick insert an iron nail in the lower end of a short candle in order to make that end heavier and place the whole in a glass containing enough water to reach the upper edge of the candle without wetting the wick. As the candle burns it grows lighter and lighter and rises gradually as it diminishes in length, so that the lighted end always remains above the surface of the water. Moreover, the outside of the candle being cooled off will melt much more slowly than usual and the flame will make a little hollow in the center. This hollow place also helps in making the candle float and preserves the wick from the water. Thus the candle will continue to burn until the wick is consumed.

IT appears that a colored or dark pigment in the olfactory regions is essential to perfect smell. In cases where animals are pure white, they are usually totally devoid of both smell and taste; and some, the white cat, for instance, are almost invariably deaf.

Red Spider on Fruit Trees.

Some of the orchardists are complaining that the red spider, which attacks the pear, prune and almond trees, has made its appearance in this locality. The first effect noticed from the presence of the spider is the falling of the leaves. To discover if a tree is infested or not, shake the leaves over a sheet of white paper, and if they are there, the spiders can be seen on the paper, although they are very small. Following are directions for making a solution that will kill the spiders and work no injury to the trees. This preparation has been used at the Carmelita and Mount Campbell vineyards, and is highly recommended by Mr. Earl:

Lime	25 pounds
Sulphur	20 pounds
Salt	15 pounds

DIRECTIONS.

Winter remedy—Take 10 pounds of lime, 20 pounds of sulphur and 20 gallons of water; boil until the sulphur is thoroughly dissolved. Take the remaining 15 pounds of lime and 15 pounds of salt, and when thoroughly slacked, mix together and add enough water to make in all 60 gallons of solution, strain and spray warm.

Summer remedy—Add to the above solution two times as much water as you have solution, or two gallons of water to one of the solution. It is also thought best to use 10 pounds of salt instead of 15 in the summer remedy.

The winter remedy is never to be used on trees while in foliage, for the reason that there is great danger of killing the tree. The solution should be kept well-stirred while spraying. If drawn on a wagon, the motion of vehicle is sufficient. Spray on the underside of the leaves, as that is the place the spiders stay. Three men and team can spray 40 acres daily of two-year-old trees.—Reedly Exponent.

Agricultural Fairs.

State Fairs.

STATE.	PLACE AND SEC'Y.	DATE.
Oregon,	Salem, J. T. Gregg	Sept. 12–17
California,	Sacramento, Edwin F. Smith	Sept. 5–17
Washington,	Spokane	Sept. 19–24
Nevada,	Reno, C. H. Stoddard	Sept. 10–14

District Fairs.

NO.	PLACE AND SEC'Y.	DATE.
2	Stockton	Sept. 19-Oct. 1
5	Santa Clara, George H. Bragg	Sept 26-Oct 5
6	Los Angeles	Oct. 3-5
7	Salinas City, J. J. Kelley	Oct. 4-8
9	Robnerville, G. Uuderwood,	Sept. 19-23
10	Yreka, C. S. Smith	Oct. 5-8
11	Sierraville, Fred Blinman	Oct, 3-7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
14	Santa Cruz, Oscar L. Gordon	Oct. 10-15
15	Bakersfield. J. J. Kelly	Oct. 11-16
16	San Luis Obispo, J. H. Barrett,	Sept 27-Oct 1
18	Independence, C. W. Craig	Sept. 27-30
20	Auburn, F. D. Adams	Aug. 30-Sept. 3
21	Fresno, J. M. Reuck	Sept. 26-Oct. 1
22	Escondido, G. M. Dannals	Sept. 21-24
26	Ione, C. T. La Grave	Sept. 27-30
27	Redding, H. R. Hodson	
28	San Bernardino	
32	Santa Ana, W. A. Beckett	Oct 3-7
33	Hollister, A. D.Shaw	Oct. 11-15
35	Merced	
36	Valejo	Oct. 4-8
37	Lompoc, W. I. Nichols	Sept. 20-23
38	Modesto	Sept. 28-Oct. 1

Complimentary Samples.

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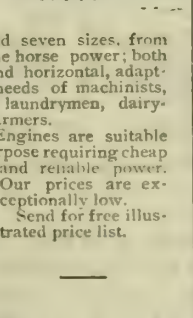
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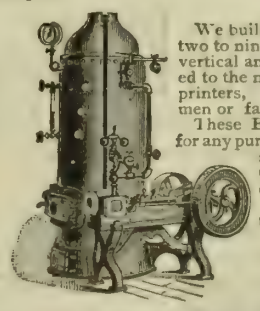
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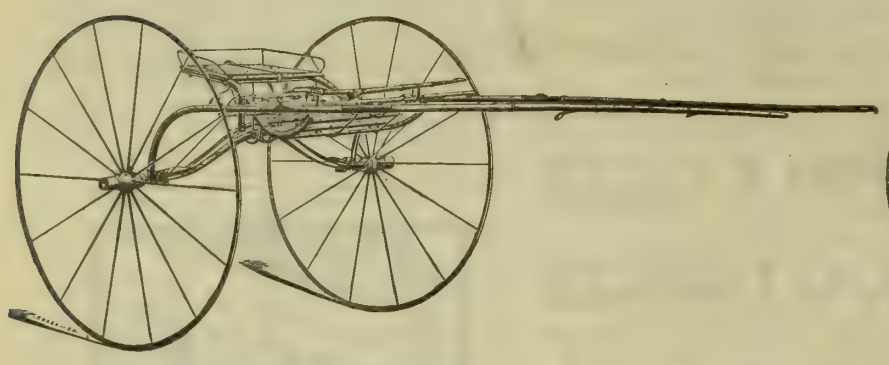
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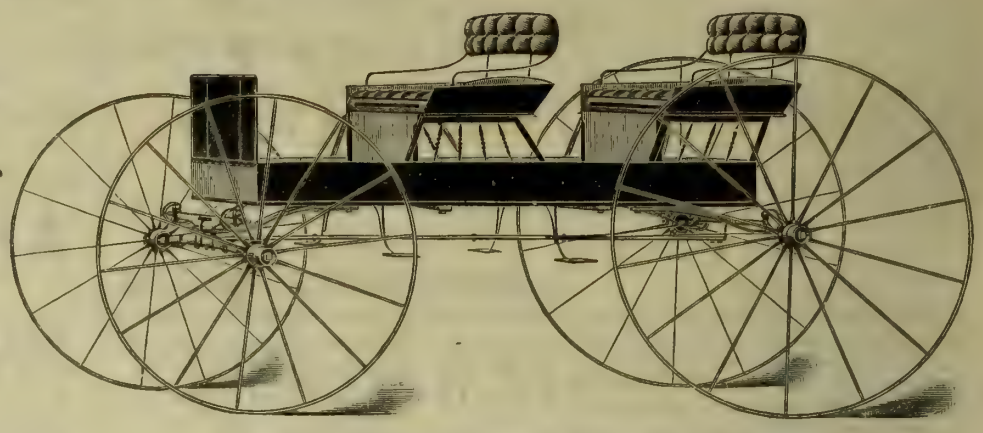
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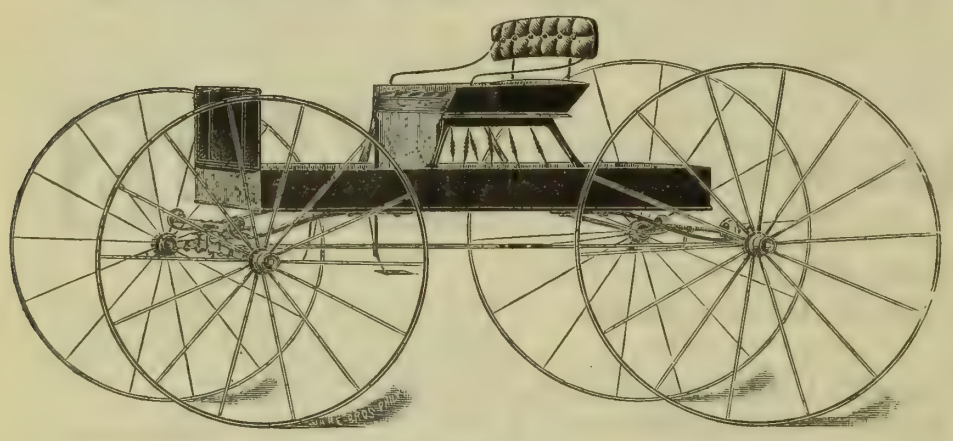
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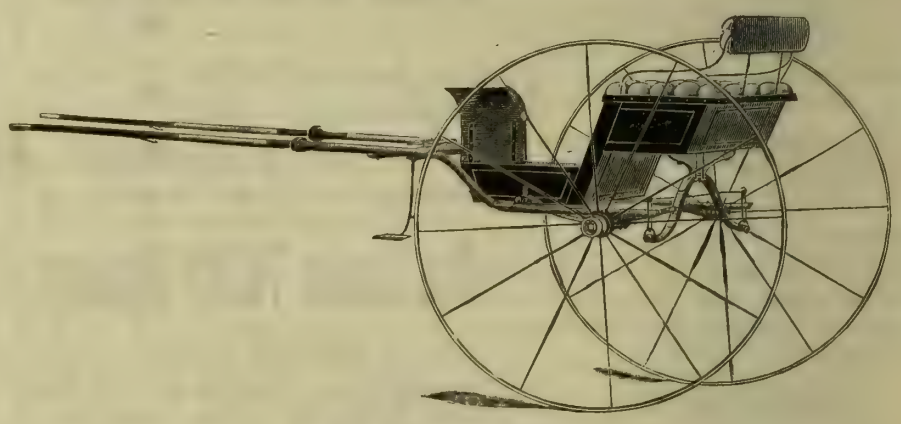
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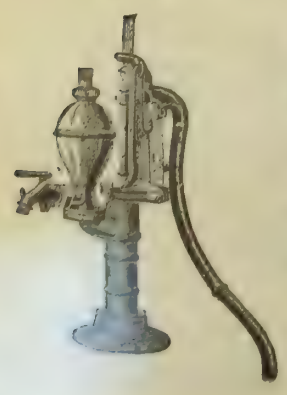
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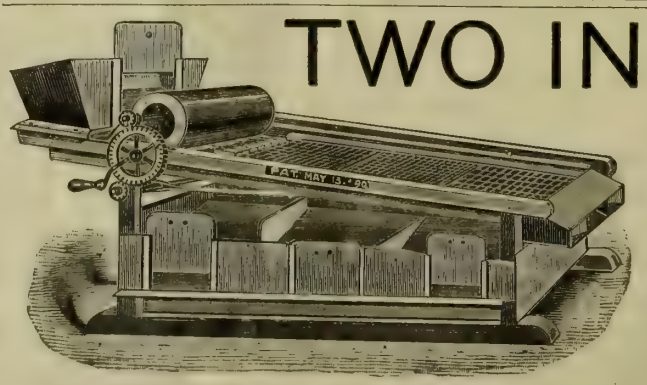
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VERY SPEEDY.

No machine compares with this in speed. Will grade apricots for drying, also walnuts and pecans.

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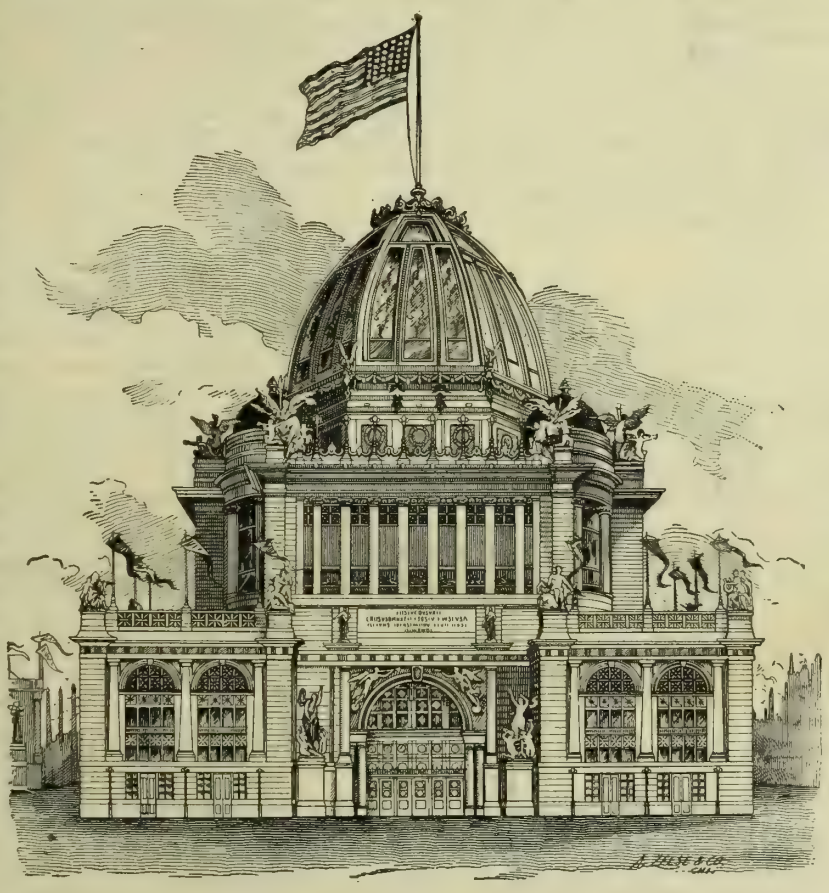
PACIFIC RURAL PRESS

Vol. XLIV. No. 13. SAN FRANCISCO, SATURDAY, SEPTEMBER 24, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The World's Fair Buildings.

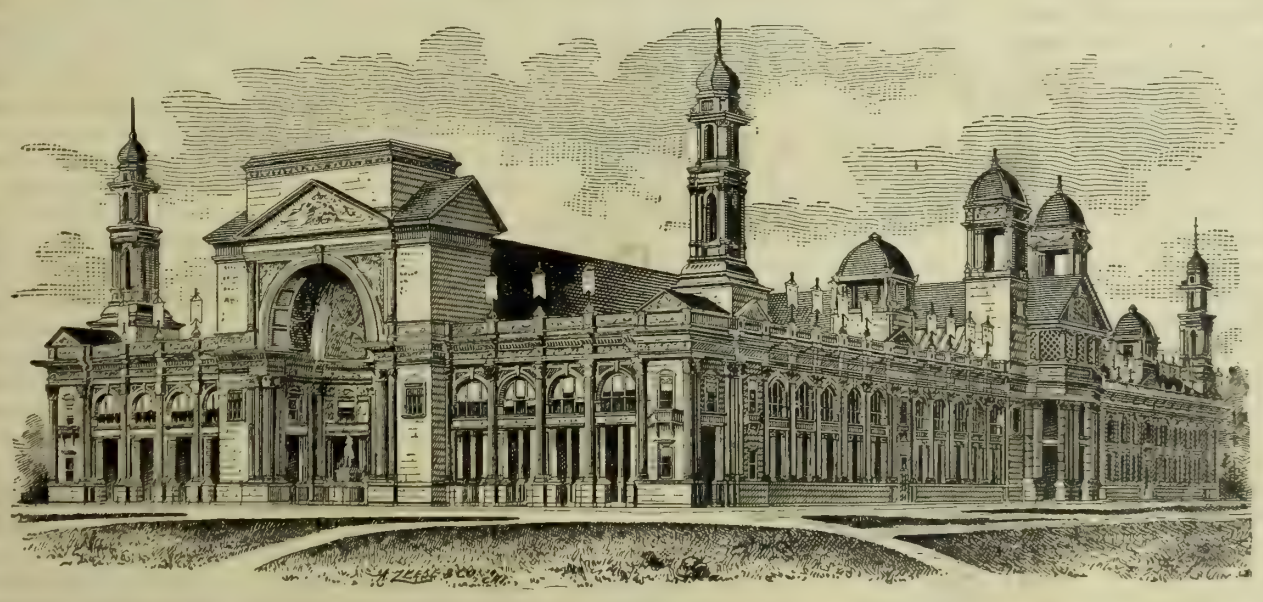
In connection with the general bird's-eye view of the World's Columbian Exhibition which was recently presented on this page, a promise was made to give views of the individual structures as occasion offered. In accordance with the plan we have on this page two buildings which will perhaps prove among the most attractive of the fair to most visitors.

The Administration Building is expected to be the most imposing and beautiful of all the great palaces to be erected on the World's Fair grounds. It will be the most ornate, and in proportion to its size, much the most costly of them all. It is situated upon a slight eminence already known as the "administration hill," and from it the observer will gain a realistic sense of the distinctive features and general magnitude of this stupendous undertaking. At this point he is practically in the center of the sites allotted to the principal buildings and the system of terrace work which will surround them.



ADMINISTRATION BUILDING, WORLD'S FAIR.

The cost of the Administration building was estimated at $50,000, and it covers an area 225 feet square. It consists of four pavilions, 84 feet square, one at each of the four angles of the square of the plan, and connected by a great central dome, 120 feet in diameter and 250 feet in height, leaving in the center of each facade a recess 82 feet wide, within which is a grand entrance to the building. The general design is in the style of the French renaissance, carried out in the academic manner of the Ecole des Beaux Arts. The first great story is in the Doric order, of heroic proportions, surmounted by a lofty balustrade, and having great piers at the angles of each pavilion, crowned with sculpture. The second story, with its lofty colonnade, is in the Ionic order. Externally the design may be divided in its height into three principal stages. The first stage consists of four pavilions, corresponding in height with the various buildings grouped about it, which are about 65 feet high. The second stage, which is of the same height, is a continuation of the central rotunda, 175 feet square, surrounded on all sides by an open colonnade of noble proportions, it being 20 feet wide and 40 feet high, with columns four feet in diameter. This colonnade is reached by staircases and elevators from the four principal halls, and is interrupted at the angles by corner pavilions, crowned with domes and groups of statuary. The third stage consists of the base of the great dome, 30 feet in height and octagonal in form, and the dome itself, rising in graceful lines, richly ornamented with heavily molded ribs and sculptural panels, and having a large skylight of glass to light the interior. At each angle of the octagonal base are large, sculptured eagles, and along the springing lines are panels, with rich garlands. This great dome will be gilded, and rising at the end of the long vistas, which open up in every direction, across the lagoons and between the adjoining palatial buildings, will form a fitting crown to the whole system of buildings and environment.



ELECTRICITY BUILDING, WORLD'S FAIR AT CHICAGO.

The other building shown upon this page is that devoted to electrical science and art. In view of the astonishing progress recently made in the application of electricity to human uses, it is probable that great popular interest will center in this structure. The building is 345 by 709 feet, thus covering an area of nearly six acres, and its cost is estimated at $375,000. Naturally, the largest exhibitor in the Electricity Building will be Thomas A. Edison. He applied for 35,000 feet of space, or about one-seventh of all that the Electricity Building contains, and has determined "that his display at the Fair shall be the greatest achievement of his life. In talking of his application for space Mr. Edison admitted that he was asking for a large section of the building, 'but every inch will be put to good purpose,' he added. 'I shall not waste a foot of the area assigned to me, but will present a series of the most interesting electrical inventions ever produced." He is making an almost innumerable list of novel and spectacular exhibits. Other electricians are not idle, and the building promises to be crowded throughout.

GOOD PRICES FOR WINE GRAPES.—The market for wine grapes opened this season at quite an advance on prices which have obtained at any time within the past four years. The advance emphasizes the shortage in the crop and gives assurance of better prices for California wines. Already the price of the latter for cellar parcels of the 1891 vintage has been advanced about five cents a gallon over the range ruling one month ago. The latest sales of wine grapes range as follows: Common varieties (Zinfandel, Mataro, etc.) in the country at from $11 to $15 per ton, and choice varieties (Cabernet-Simillon, etc.) at from $20 to $25 per ton. The range of values for Zinfandel is as follows: In Napa county, $14 to $15 per ton; Sonoma, $11 to $12; Santa Clara, $12 to $13.50, and in San Francisco, $17.50 to $21. The higher range in Napa county is due to the crop not being equal to the demand. Some of the wineries in Napa county have to buy supplies in Sonoma county. It is contended by some dealers that before the season is over still higher prices will rule for all varieties of wine grapes.

HAWAIIAN SUGAR INTERESTS—The island sugar interests seem to be somewhat in a bad way through drouth and the McKinley bill, which removed the sugar duty of 2¼ cents per pound. At a meeting of the Hawaiian Commercial Sugar Co., in this city last week, it was announced that the company had already made an overdraft of $40,000, besides interest due, and if they attempt to continue the plantations they will be $271,988 behind. It was also said that if they ran the concern next year and should produce say 10,000 tons of sugar next year at the same cost as this year, and sell it at the same price, they would lose $380,000 more, and on Jan. 1, 1894, they would be in debt over $650,000. From this it rather clearly appears who made the money when Hawaiian sugar came in free and the sugar of the rest of the world had to pay duty. Claus Spreckels has a bond on the stock of the company and can foreclose it at at any time. During its life the bankrupt company is said to have paid $840,000 in dividends since its organization.

THE Persian fat-tailed ewe at the Golden Gate Park has a lamb, and the foreman of the station at Paso Robles writes that he has expectations of the ewe in his charge.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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ne inch	1.50	5.00	13.00	42.00

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, September 24, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Agricultural Implements—Truman, Hooker & Co.
Agricultural Implements—H. C. Shaw Plow Works, Stockton.
Agricultural Implements—Frank Brothers.
Disc Harrows—Baker & Hamilton.
Harrows—G. G. Wickson & Co.
Sale of Horses—Killip & Co.
Almond Trees—Percy W. Treat, Davisville.
Percheron Horses—Wm. B. Collier, Lakeport.
International Dictionary—G. & C. Merriam Co., Springfield, Mass.
Stock Scales—C. H. Lindemann.
Situation Wanted—H. O.

See Advertising Columns.

The Week.

Meteorological matters seem to be shaping for rain. Atmospheric conditions, which all recognize as portending this, have been noticeable for the last week. The trade winds have relaxed their hold. Fogs and mists threatening moisture have replaced the dry fogs of midsummer. The light wind has the scent of dampened earth upon it. The clouds disclose autumnal aspect. Even the midday sun has a different brilliancy from that of our dry season. All such signs which the lay reader of weather science gives heed to are enforced by the announcement of the professional observers, who record rain at the north and east and movements along the upper coast which disturb barometrical affairs in our latitude. It seems likely that the "first rain" will not be long deferred.

Fortunately, it is not likely that rain will yet reach interior valley regions in any amount. For weeks to come the raisins will need clear sunshine and absence of showers. In coast regions the weight of orchard fruit-drying has been effected, and owing to improved wine-grape prices, there will probably be less drying than usual. But much rain in the fall is not desirable. Even the feed is seldom improved and often injured by an early downpour. Still sometimes it comes, and the outlook seems to be as good for this year as ever. The thoughtful man will hardly need the suggestion that his exposed grain and hay should be covered and his leaky roofs made tight before a rain may bring him loss or discomfort.

On the whole, it will be pleasant to greet a change in the season just as soon as property interests are ready for it. Fresh grass and dust-free evergreen foliage will be delightful to contemplate. Hard and dustless highways will delight the carriager and teamster. The mellow air and the genial sun heat of autumn make the last months of the year the most delightful of all for open-air life in California.

The Chrysanthemum Show.—The State Floral Society at its regular meeting, September 16th, decided upon holding a grand crysanthemum show in the Mechanics' Pavilion on November 1st to 4th prox. There is a full list of liberal premiums offered, and the active interest of all flower growers, both amateur and professional, is solicited. Premium lists can be had on application to Miss E. F. Bailey, Secretary of the Exhibition Committee, 309 Fell street, San Francisco. The exhibition of all horticultural merchandise is invited, and special space will be set apart for such trade displays.

California a Fruit Orchard for Great Britain.

It will please many California fruitgrowers to have such a name bestowed by British authority as a result of the enterprising efforts put forth during the last few weeks to introduce our fruit to British markets. A letter received in this city from a prominent resident of Liverpool contains these sentences:

"This week we have had a most wonderful exhibition of California green fruit being sold in our markets. I never have believed that plums, peaches and the more delicate fruits could be brought over here perfect; but I have been convinced now that with all the new apparatus for keeping them cool, the small boxes in which they are packed, and the speed with which they come, it is practicable. California is now but a green-fruit orchard for Great Britain.

"If I had not known the extraordinary low prices at which these beautiful fruits can be grown in California, I could not have believed that they could compete with European productions. I am told that the shipments have been made at no loss, and if so, there is certainly a door open here for another of your productions. The only danger now is a monopoly among fruit merchants which will enable them to buy the fruit for next to nothing in California and sell it on this side at an enormous profit."

We do not anticipate any trouble in the line mentioned. If English merchants desire to come here as buyers and take their own risks of transportation, we can sell them fruit cheap enough. California can produce almost an unlimited amount of fruit at prices which all will concede to be cheap, and then make plenty of money at it. Then if these British buyers attempt to control their own market at home and to exact high prices, they will cut their own throats, because people will not buy the fruit. There is plenty of room for all available skill and capital in growing and trading in California fruits on fair business principles, but if one gets too ambitious or avaricious, the whole thing will drop on him and crush him out. Let the British dealers come in. We have no objection to British gold as an industrial commodity. It is only the politicians who affect great abhorrence of the metal.

The Raisin Producers.

No doubt the raisin-producers anticipated no little trouble in carrying out the reforms in trade which they advocate, and they are having it. The latest trouble is the operation of two packing houses who agreed to the schedule of prices to be asked for the different brands and then straightway began selling two-crown raisins under a three-crown brand and at the two-crown price, thus creating the impression that they were selling a better raisin at a lower price than other packers. The Raisin-Producers' Association of course repudiate such a transaction, and gives the offending parties two weeks to answer the indictment. The raisin-growers of Riverside and vicinity on Monday organized a raisin-growers' protective union, whereby the growers expect to realize better prices for this year's crop of raisins. Last year, most of the growers consigned their raisins and lost on them. The combine effected to-day is similar to the one at Fresno, and all the raisin-growers think it will be highly successful in controlling the raisin market.

It is, of course, too much to expect that a cooperative movement dealing with new conditions and materials, and encountering the force of opposing interests, should accomplish everything desirable in the first year of its existence. The movement has already achieved far more than its enemies supposed possible, and that it has a future cannot be doubted when the proceedings contain such items as this:

Mr. Bateman of Hanford said that he felt that all the raisin-growers in the State were deeply indebted to the executive committee for the pluck and ability they had displayed in rescuing the raisin crop of this year from the disastrous results of last, and he thought the work had only just commenced, and that it was a work for the future of this industry and ought to supported liberally by every grower in the State; he had already paid his assessment and given his donation, but he would be happy to contribute a further sum of $50. He handed the treasurer his check for that amount.

Those engaged in some other lines of production and who see the need of doing something for themselves, should learn a lesson in determination and in liberality from the raisin-men.

Cattle Looking for Feed.—It is telegraphed from Phœnix, Arizona, that cattlemen from northern and eastern Arizona have been scouring that region for pasture for their famishing cattle. All water is gone and feed is short from the outside, while the pastures about Phœnix are almost full. There are 75,000 cattle already in Salt River valley, and they are selling at 1¾ cents, with few buyers. If it does not rain soon the range will be depopulated.

Fruit Still Going Abroad.—The ninth special fruit train for London, loaded with peaches, pears and grapes from Florin, Sacramento county, and Rocklin, Placer county, left Sacramento last week. California fruit is daily growing in popularity in England, and the California Fruit Transportation Company is now receiving letters from Berlin and other cities asking for it.

A Promising Outlook for Vegetables.

Latest crop advices from the States east of the Rocky mountains give assurance of a liberal demand later on for California potatoes, onions, beans and cabbage. In the large potato-growing central States the potato crop was damaged in last month by heavy rains, which reduced very considerably the July promise of a crop in the United States aggregating about 200,000,000 bushels. According to the United States Agricultural Department report on September 10th, the crop of all the States will not go above 175,000,000 bushels, against a yield of 235,000,000 bushels in 1891, 125,000,000 bushels in 1890, and 190,000,000 in 1889. It will be remembered that the light yield at the East in 1889 caused a fair demand for California early potatoes in 1890, and that the very small crop in 1890 created an exceptionally heavy call on us in the first half of 1891. With a light crop this year in the central States, and the total yield of the entire country at not exceeding 175,000,000 bushels, and possibly as low as 150,000,000 bushels, it is quite certain that this coast will be called on for liberal supplies before the first half of 1893 passes, but whether we can meet the call is, as yet, an open question. In this State the acreage planted was seven per cent less than was that put in in 1891; in Oregon it was six per cent less, while in Washington there was no falling off. In this State and also in Oregon the yield to the acre averages less, while the quality is considerably poorer. There are more diseased, wormy and otherwise poor potatoes in California this year than there have been for all of three years past.

According to *Farm and Home* the onion crop of the United States this year shows a falling off of fully 20 per cent in comparison with the yield in 1891. The yield in 1892 is placed at 2,485,380 bushels against 3,189,700 in 1891. In the States east of the Rocky mountains, farmers are pursuing the same course as those in this State, viz., marketing poor keepers at the best prices obtainable. This free selling will undoubtedly cause a scarcity later on which will create much better prices. Already quite a demand has set in for California onions for shipping to Colorado points, and as the season advances the demand will enlarge.

Beans are a staple article of food and therefore the market value responds quickly to any improved demand. In this State the acreage planted to beans was largely reduced particularly that devoted to Limas. There was a reduced acreage in Indiana, Illinois, Nebraska and Kansas, but the condition is generally good. In Ohio, Michigan, Pennsylvania and New Jersey, the acreage and condition are about the same as they were in 1891. In New York the acreage devoted to medium and pea beans was largely reduced while the crop has been troubled to some extent by rust. In New England, except in Vermont, the condition, is good. The French crop is said to be short and therefore, the imports from that country will probably be light. The carryover of the 1891- crop in the United States is said to be very light owing to our exporting to July 1st nearly 400,000 bushels and the imports not going over 874,000 bushels against 1,651,000 bushels imported during the season of 1890–91. Taking an impartial view of the general situation and it looks very much as if better prices will obtain after the first rush to sell has passed. The Lima crop in this State is about all contracted at from $2.75 to $3 per cental. These heavy sales virtually take the Lima beans out of the market and leave competitive buying with the other varieties.

The large crop of cabbage east of the Rocky mountains in 1891 reduced very largely the call for California cabbage and caused lower ranges of values to obtain. The acreage devoted to cabbage in this year shows a falling off on this coast, particularly in this State. At the East, New York reports a decreased acreage, but the condition is good. In the New England States, except Maine, the acreage shows a falling off of ten per cent, with condition generally poor. In Maine there is a full acreage, but a poor condition. In the central States the acreage is slightly less, with the condition below an average. Similar reports come to hand from the southern States. The large crop in 1891 gave an oversupply, which caused low prices to rule and frequently netted a loss to shippers. The growing of cabbage in California has become quite an industry, particularly in the southern part of the State where the Santa Fe railroad has arranged to facilitate the marketing of them and also of early spring vegetables in the distribution markets in the southern and central States.

Things We Would Like to Know.

Who has tried the soja bean as a fodder plant, and with what result?

The same as to prickly comfrey and teosinte.

Who will write us a letter about mustard as a crop? How is it grown and what is the ordinary yield per acre?

From an Independent Standpoint.

Profound alarm spread over the country on Thursday of last week when it was reported that five cases of cholera had been discovered in New York City, and public apprehension was scarcely relieved by an official statement from the Health Department that four of the "suspects" were suffering from other causes and that there was really but one genuine cholera case. The victim, a young working woman named Mary Connerty, was given over to the care of the health office physicians, who published hourly reports of her symptoms. The tenement house in which she had lodged was guarded by the police and its occupants herded together to prevent the spread of infection; the clothing, bedding and furniture in the room recently occupied by Miss Connerty were destroyed and the whole neighborhood elaborately disinfected. After two days of waiting for the case to develop, and after continued study of the patient's symptoms, it dawned upon the medical gentlemen that they had made a mistake, and—well, at last accounts they were speculating as to whether it would be a boy or a girl. The city broke into a hearty laugh when the truth was made known, and though half a dozen cases of cholera have since been reported, it has been impossible to create another scare. The later reports, like those which came earlier, when run to the ground, have proven erroneous. Up to this time no case has developed on American soil outside of the New York quarantine station. If the course of the Health Department has seemed in some respects severe, its justification is found in the fact that thus far the plague has been held at bay. All the infected ships are still detained in the lower harbor, while the passengers have been landed on the islands or on Sandy Hook. Only a few cases have developed during the past week. Monday about 1000 persons were permitted to land in the city after a thorough fumigation. All the immigrants are still under detention, and they will be held until the last possibility of infection has been disposed of.

Official returns do not confirm the newspaper reports that the plague is subsiding on the other side of the Atlantic. At Hamburg the cholera figures for Monday of this week were: New cases 621, deaths 187, burials 292, patients in hospital 2939. Up to date there have been reported in all 15,664 cases and 6764 deaths. A few new cases are reported each day from Antwerp, Havre, Paris, and half a dozen other continental cities. In England there have been no original cases—that is, none in which the victims were not foreigners who had contracted the disease on the continent. In Russia the weather is cooler, and the plague therefore is less fatal. The deaths during the past week have averaged about 1200 daily. Hamburg is the only city of Western Europe where the cholera has become epidemic, and it is suffering frightfully, not only from disease but from its effects upon commerce and general business. Everything is at a standstill and hundreds of firms are upon the eve of failure. Many thousand commercial clerks have been discharged, and there is absolutely no employment for laborers. The city will unquestionably have to look to the outside world for relief. The people are helpless, and unless assistance comes from abroad, famine will devour what the plague has spared.

The cholera has at least accomplished one good thing, namely, it has opened the eyes of the American people to the perils of unrestricted immigration. The loads of human refuse which fill the cholera ships are fair samples of the material which is being dumped, week by week, upon our shores. It would be impossible to exaggerate the miserable condition of these poor people. They are the worst offspring of iniquitous systems of government, poverty stricken, diseased, and in many instances criminal—wretched alike in mind, body and estate. To make of such distempered beings clean, wholesome and self-reliant American citizens is a thing impossible. Their presence here is not only a public burden, but it is a positive danger to a government which rests upon the intelligence of the people. This danger is not new. It has long been noted, but the cholera scare has, for the first time, opened up the immigrant ships to general inspection. If it does not result in such modification of the immigrant laws as will protect us from future invasion, we shall deserve all the ills which must follow persistent infusions of tainted blood into our body politic.

The "American policy of protection" falls short just at the most critical and vital point. We protect ten thousand material things, but we do not protect the things which most of all need protection—the American workmen and the American Government. Surely, the workman is not protected when every day five ships arrive at New York loaded with hundreds who are ready to compete in the labor market for pauper's wages. Surely, our system of government is not protected when we admit not alone to residence, but to actual citizenship, those who can have no conception of American political ideals, no knowledge of American history, and no share in the American spirit; but whose ideas and principles, on the contrary, are based upon the prejudices of alien birth and alien breeding. The false notions which prompted the recent labor riots were not acquired in the American public school nor in the free course of American life. They are the bad products of bad systems of government, and they came to America in the immigrant ship. Before our industrial communities were dominated by foreign elements, there was free intercourse between employer and workman, frank avowal and discussion of differences and friendly adjustment. It is the foreigner who has substituted mutual dislike for the old fellowship, who has separated employer and employed into distinct and antagonistic classes. Clearly, we have carried the motto of "America—An asylum for all mankind," too far. We have failed to discriminate between the enterprising, provident and self-sustaining immigrant, who comes to America to escape from tyrannical systems, and the shiftless, ignorant and morally diseased being thrust out of his own country, who brings with him the ideas and standards of his early home. For the former, there is and will always be room and welcome in America; against the latter the doors should be locked and barred.

NEW YORK, September 19.—A Wall-street journal says: The talk in the Northern Pacific crowd is that the company has been unable to sell bonds and is threatened with a loss of earnings on account of reductions in rates by the Great Northern competition and the breaking up of the Transcontinental Association. This is assumed to mean a receiver for the company and a readjustment of its obligations. Insiders make a point that the company, which earned last year nearly $1,000,000 in excess of its fixed charges, does not seem in great danger of a receiver. A block of $200,000 Northern Pacific consols was thrown on the market last week, presumably for account of a large insurance company which took alarm at the cholera scare.

The above paragraph, which we copy from the telegraphic reports of the day, closely confirms our prophesy of last week. Nothing is more certain than that the Great Northern or Hill road has it in its power to force the Northern Pacific to the wall. It is, or will be within a few weeks, as complete and efficient as the N. P., and will compete with it for both local and through traffic. It can afford to do the business for half the rates necessary for the Northern Pacific, because it represents only about half the investment of capital. With such a rival, and with genuine open competition, the Northern Pacific cannot maintain itself. And it ought not to be able to maintain itself, because a large part, at least one-half of its enormous capitalization, is bogus. It represents not honest investment, but folly, extravagance and fraud. What is true of the Northern Pacific is true of every other transcontinental road. Each of them represents in its capitalization from twenty-five to one hundred per cent more than the present actual value of its property as measured by what it would cost to reproduce it. Not one of these roads can stand the competition of a road honestly constructed and honestly operated. The immediate hope of the Pacific coast is that the Great Northern road will hold to Mr. Hill's pledges. It will be the beginning of a better era, for it will be the first movement in the process of squeezing the water—in other words, eliminating the fraudulent capitalization—out of the great railroad companies.

This squeezing process is not new. Most of the railroads in New York and New England went through it 20 years ago and the chief agent in the good work was the late Samuel J. Tilden, who came so near being president of the United States. Before the reform began the New York and New England roads were earning dividends on large issues of watered stock. By some chance the secret was let out, just as Mr. Hill is letting out the secret as it applies to the transcontinental roads. Enterprise supplied honest competition and the over-capitalized roads followed each other to the bankruptcy court. Of course, great numbers of innocent investors in the watered stocks suffered and suffered severely, but the public was relieved of an incubus. The public cannot be expected to submit to abuses simply because innocent people have foolishly bought bogus securities. For his part in the New York railroad reform, Mr. Tilden was dubbed the "Railroad Wrecker"—a title applied in reproach, but in fact a badge of honor. He wrecked not the railroads, but their fraudulent capitalization, through which they were leeching and fleecing the country. A "wrecker" who would repeat this good service for the transcontinental roads would do the Pacific States the highest possible service.

MORE LARGE PRUNE YIELDS.—It is telegraphed from Visalia that the product of three prune trees of the Briggs orchard was picked and weighed Sept. 19th in the presence of a large number of people. The largest yield of fruit from one tree was 1017 pounds. The average of the three trees was 940 pounds.

Live Stock at the State Fair.

[From our own Correspondent.]

The Thirty-Ninth Annual Show of the California State Fair, held during the last two weeks at Sacramento, might fairly be considered an average one, taken all around, in regard to live stock.

Draft horses, sheep and pigs were there in greater force than usual, but the cattle classes were not so well filled as last year, neither were they of as good average quality as on many previous occasions.

Among draft horses there is more distinct classification of breeds than in former years, when the Normans and Percherons were shown in separate classes, and the Suffolk-Punch, Shire and Clydesdale breeds all in one class; this year, however, the order is reversed and the three last named breeds have separate classes, while the two former are more sensibly merged into one, for, as noted in our report last year there is now very little difference between the two breeds. Whatever they may have been in former times they are now practically one of the same breed of horses.

AN OBJECTIONABLE RULE.

A new rule that went into effect this year is this:—

Any animal that has heretofore received first premium for best three years old and over is barred from competing for that award.

What benefit is this likely to be to either the society or to visitors even?

We, like many others whose opinion we heard expressed upon the matter, fail to see any good in it.

It will have a tendency to keep away some of the best animals that would be exhibited in the aged classes, and thus detract from the merits of that part of the show. We heard the matter discussed by some stockmen, not exhibitors, who altogether agreed that the man who had the best animal should be allowed to show him until some one else could show a better one. To receive the blue ribbon, however, is not always proof positive that a man has the best animal.

In regard to this rule there was considerable dissatisfaction expressed at the Shire stallion, Midge, being barred because of his being winner in a mixed class last year. It was not expected that the rule would apply in such a case as that.

THE HORSES.

Of horses there was a larger show than we remember to have seen before.

The stalls on the grounds were all filled, and many horses had to be stabled outside.

DRAFT HORSES.—There were only three stallions and three mares of the Suffolk Punch breed on exhibition. The latter had come from Nevada, and consisted of an imported mare, a two year old and a yearling filly, the produce of the imported English mare, and taken altogether they were worthy representatives of the breed, a strong, sound, clean-legged lot,.

The three stallions were the ones exhibited at the Petaluma fair by Theo. Skillman, who also had both Shire and Percheron stallions and one Norman mare. Amongst exhibitors of the last named breed, were Mr. P. J. Merkeley of Sacramento, with four fine large mares and Mr. A. W. Foster of San Rafael, who had four good grey mares from his farm near Hopland, Mendocino County; these, we believe, were bred by Captain Collier of Lake County, and had some of their produce exhibited along with them.

Among other exhibitors of the largest numbers were Mr. J. H. Glide of Sacramento, Mr. McNear of San Francisco, with Clydesdales. Mr. A. M. Linnett had Shires, Clydes and Percherons, and Mr. W. H. Haskell of Los Angeles county had a good show of Clydesdales and Shires, including the above named stallion, imported Midge.

The two largest, heaviest and most powerful mares on the ground were two Clydesdales, of about 2000 pounds each, bred by the late James Roberts and exhibited by Mr. Henry Pierce of San Francisco.

Messrs. Holbert and Conger of Los Angeles exhibited one excellent imported Shire stallion, one Cleveland bay, and three German coachers, which were very much admired. Amongst the latter was one of the most symmetrical and best proportioned horses it has ever fallen to our lot to see anywhere, of any breed of coach or carriage horses.

A few well-matched teams of carriage horses were seen on parade, also a large display of roadsters, which our limited time at the fair did not allow of getting particulars thereof.

The list of awards, upon another page, will give the respective winners in each class.

SUGGESTIONS FOR IMPROVEMENTS.

There were many other good animals than those I have noted, but it is next to impossible to find out all particulars, there being no classification of the different breeds as they stand in their stalls, and no means of knowing the horses either when out on parade or before the judges, except by a course of questioning, which becomes tiresome, and sometimes unpleasant, when plied sufficiently to get the desired information.

All of this might be avoided by the entries being closed a week or two before the fair, as we have before suggested, and printing a catalogue of everything on exhibition, with corresponding names and numbers; also, stall numbers of all live stock.

Who would not be willing to pay a reasonable price for such a guide? It would afford an easy means to visitors in finding what they want to see most particularly, at their leisure and in their own way.

If some better system of selecting judges of live stock were adopted, the work of awarding premiums would not have to be continued so late in the second week of the fair.

A good deal of the work had to be done on Thursday and Friday, and some on Saturday. It was not till after 1 o'clock on that day that the last ribbon was handed out. Such a course is wearisome and trying in the extreme to both exhibitors and onlookers, and gives little chance for visitors to compare notes on the premium animals.

There is also some carelessness among exhibitors that sometimes causes delay—by their not being on hand with their stock when wanted in the ring—of which we noted one instance in particular. In the class for stallion and five of his colts, other than thoroughbred, neither the man in charge nor the owner of one lot could be found to bring them before the judges when wanted, although it is distinctly stated in the premium list that the class would be judged on Thursday. That same lot of six head would have been an easy winner of the $100 premium, as we afterward had the opportunity of taking a good look at them. They received the blue ribbon as being the most meritorious display of horses by one exhibitor.

This is an extreme case, no doubt, but it is well for exhibitors to bear in mind that they have duties to perform, as well as directors and other officials in charge of the management.

Punctuality in all parties concerned is a wonderful lubricator in a machine like a State Fair, in which every branch of agriculture is represented.

Experiments with Resistant Vines.

SAN FRANCISCO, Sept. 16, 1892.

TO THE EDITOR:—Herewith find recommendations of Chief Executive Officer Wetmore to the Executive Committee of the Board of State Viticultural Commissioners, which have been adopted by the committee. The experimental work will begin at once.—WINFIELD SCOTT, Secretary.

MR. WETMORE'S PLAN.

To the Executive Committee of the State Viticultural Commission: At the last meeting of your committee you requested me to draw up a plan for carrying out your idea of establishing experimental plots in different sections of the State, for the purpose of testing the resistant properties of the different American varieties, and also for determining the best varieties of European vines to graft upon them.

It is a well known fact that a certain American variety will resist completely the attacks of the phylloxera in one place, while planted in another where the soil and climate are different it will be only partially resistant. In order, therefore, that the vinegrowers of the State may be able to determine which is the best variety of the resistant vines to plant in his locality, I would advise the adoption of the following plan for establishing experimental plots in those counties where the phylloxera is known to exist:

1st. That there should be a plot established in the following counties: Napa, Sonoma, Santa Clara and San Joaquin.

2d. That each plot shall contain two acres.

3d. That in each plot there should be planted all principal varieties of resistant vines.

4th. That each plot shall be located in a vineyard where the phylloxera is known to exist.

5th. That the selection of the plot shall be left to the commissioners who represent the districts in which they are situated.

6th. That the cost of planting and taking care of these plots shall be borne by the commission.

7th. That these plots shall be under the supervision of the Chief Executive Officer, who shall have power to purchase the necessary vines and give instructions how they shall be planted and taken care of. He shall receive his instructions from time to time from the Executive Committee and he shall be required to make a report to them for publication at least twice a year. This report should show the number of varieties planted and the relative condition of each variety in each plot. The Chief Executive Officer should be required to visit each plot at least once a month from April to September, and as often as necessary during the remaining months.

8th. That these plots shall be open to the inspection of all persons at all times. CLARENCE J. WETMORE,
Chief Executive Officer.

World's Fair Notes.

Exhibitors at the District Fair that embraces Sutter county have decided, almost without exception, to turn into the World's Fair fund all cash premiums received from exhibits at the fair. Over $1500 in premiums was distributed in that county last month. Besides this, the exhibitors generously placed at the disposal of World's Fair managers the best of all their products in fruit, grain, etc.

At the last meeting of the Butte County World's Fair Association, arrangements were made for preparing a large number of boxes for holding dried fruit. The contract was let for the securing and polishing of specimens of every kind of wood grown in the county.

At the last meeting of the Board of Supervisors of San Luis Obispo county, the board decided to add to the tax levy for the present year a sufficient per cent to raise $2500 to aid in defraying the expenses of a county World's Fair exhibit.

Work on a number of the great Exposition buildings at Chicago is now progressing night and day. More than 10,000 men are at work daily in preparing the buildings and grounds, to have them as attractive as possible by the date of the dedication ceremonies, October 21st.

H. M. LaRue, Chief of the Bureau of Viticulture, writes from Chicago under date of September 9th, that he arrived from Sacramento on the 5th inst., and immediately assumed the duties of his new position. He urges interior counties in this state to make exhibits of raisins and table grapes in the Horticultural building as well as the California building.

In Orange county, the supervisors have provided for the compensation of two competent women to make a tour of the county in an endeavor to further exhibits prepared primarily by women.

Weather and Crops.

William Burrows, Acting Director of the State Weather Bureau, furnishes the following summary of the crop reports received the last week from voluntary observers throughout the State:

The temperatures have been very appreciably below the normal over the entire State. There have been some light rains in the northern counties. At Red Bluff the fall amounted to more than a quarter of an inch on the 18th, and did slight damage to the fruit. The nights have generally been cold, with heavy dews, while on and near the coast the mornings have been foggy or cloudy, followed by bright, sunshiny days.

In the northern portion of the State and in the Fresno raisin district the low temperatures have retarded fruit-drying and raisin-making somewhat, but in the southern portion of the State the weather seems to have been especially favorable to all branches of the fruit industry.

According to reports from nearly all sections the late grape and fruit crops are exceeding the most hopeful expectations, being excellent in all respects, and prices seem to be equally satisfactory. At Sacramento and vicinity the weather has been generally cloudless, with the temperature averaging 4° below the normal.

WEATHER AND RAISINS AT FRESNO.

FRESNO, Sept. 19, 1892.

TO THE EDITOR:—The week has been cloudless, with the temperature three and one half degrees below the normal, with cold nights and heavy dews, which is causing much delay in curing the raisin. About all of the first crop is now on the trays, but not yet ready to turn. Two weeks more without rain should get the first crop out of the way in good shape. The first crop of Zinfandels is now in the sweat-boxes. Highest temperature, 96°; lowest, 53°.

J. R. WILLIAMS,
Observer U. S. Weather Bureau.

GEOLOGICAL MAP.—The United States gelogical survey has been for ten years engaged in making a great map of the United States, parts of which will be on exhibition at the World's Fair. The piece, six feet in length and four feet in width, now ready, includes the State of Connecticut and a bit of Long Island and eastern New York. This vast map will take at least twenty-five more years to complete. Its detail is such that upon it will be indicated every stream, brook, hillock, mountain, valley, farm, village and city. It will show every public and private road as completely as a surveyor's map of a small township. This map when completed, would, if spread out, cover a little over three-quarters of an acre in superficial area. Of course it would be impossible to suspend such a map as to make it available for practical use, and therefore it will have to be published in sections. In addition to this piece of the map of the United States the geological survey is preparing an outline map of the country, which will also be exhibited at the Fair. It is to be spherical in shape. By it at a glance the different elevations, the tablelands, the mountain ridges and the valleys will be indicated in the outline, the highest peaks of the mountains being proportionately elevated as much above the sea level as are the peaks of the Rocky mountains above the Atlantic and Pacific coast lines.

THE Northeastern California R. R. Co. recently incorporated intends to build and operate a standard gauge railroad to run from Castle Crag, on the line of the California and Oregon Railroad in Shasta county, and running thence in a northeasterly direction in and through Shasta county to a point at or near the southwest corner of section 28, township 40 north, range 1 east, Mount Diablo base and meridian, in the county of Siskiyou. The estimated length of the road is thirty miles. The Company also proposes to construct and operate a telegraph and telephone line along the railroad. The Directors are E. A. Lancaster of Chicago, D. E Miles and L. D. Brewster of Wisconsin, Henry L. Tatum and J. J. Bowen of the well known firm of Tatum & Bowen of San Francisco, and S. P. Smiley and A. M. Willis of the sime place. The capital stock is $150,000, which has been subscribed. The Directors are members of the Red Cross Company which owns extensive timber interests in northeastern Shasta and southeastern Siskiyou and the route will be the one from Lower Soda Springs or Castle Crag which has already been started for Bartle on the McCloud, the center of the Company's vast lumber interests, where they have built a big sawmill.

THE Fish Commissioners have made some important distributions of young fish throughout the State during the past two or three months. Over 3,000,000 young salmon have been hatched and distributed from the principal State hatchery at Sisson, near Mount Shasta, into the head waters of the Sacramento, Pit and McCloud rivers. This has been done for about one-half of the expense heretofore incurred by the commission in like work. The reduction in expenses has been accomplished by abolishing the office of State Superintendent, and the commissioners have taken the duties of that officer on themselves. The hatchery established at Bear Valley, Marin County, has proved a great success. Between 700,000 and 1,000,000 New Hampshire trout have been hatched at that point, and distributed into the principal streams of Marin, Sonoma, San Mateo, Santa Cruz, Monterey and San Benito counties.

POMONA FEAST COMMITTEE.—At a recent meeting of San Jose Grange, the program for the State Grange meeting was discussed, and the following members appointed as a committee on behalf of San Jose Grange for "Pomona Feast," which will be held in Turn Verein hall: Mrs. S. A. Bickwell, chairman; first, second and third assistants, Mrs. George Tarleton, William Beauchamp and Miss Hattie Pettit; general assistants, Mesdames Georgia McBride, Lillick, Lee, J. Snow, W. A. Parkhurst, W. H. Wemple and R. P. McGlincey; Misses Jennie Sanders, Miss Webb, Lulu Tenney, Phelps, Ella Sanders; Messrs. H. Pomeroy, Glendenning, J. C. Kingsbury, George Tarleton, Webb, Lee, Gilmore, Powell and Blake.

MISCELLANEOUS.

A CHICAGO syndicate is investigating the country about Shasta with the intention of establishing a paper manufactory to be run by water power.

IT is estimated that the deciduous fruit of Southern California for this year will reach 10,000 carloads, valued at $3,000,000, and that the citrus fruit will reach 6000 carloads, valued at $3,500,000.

A PLAN is being arranged at Santa Rosa to build a boulevard between that place and Petaluma. If the new road is opened, the long-talked of electric road between the two places will undoubtedly be constructed.

THE people of the State of California have the sum of $198,646,411.08 in the several banks of the State. The savings banks hold $127,312,088.41, the commercial banks $53,247,262.73, and the national banks $16,669,177.83.

J. H. HENRY and associates, the owners of the electric railway from San Jose to Santa Clara, have petitioned the Council for a 25 year's franchise to furnish electric power for mechanical purposes throughout the city of San Jose.

WORK at Oneta's marble quarry, Amador county, is progressing. They are making preparations and excavating a foundation for a derrick and mill. The company propose to ship the marble in a finished state and small blocks.

THE San Felipe Havana Tobacco Co. has been organized at Gilroy, Santa Clara county, to manufacture the product of Culp's San Felipe plantation; capital, $100,000. P. C. Hodges is president, and George T. Dunlap secretary. Work will commence at once.

IN the township round about Mission San Jose, Niles and Alvarado, there are four great industries—fruit-growing, wine-making, a beet-sugar factory and extensive salt works. The section also sends about $100,000 worth of early vegetables each year to the city markets.

AMONG the most important of the newly inaugurated industries of Humboldt County is the fish hatcheries at Gaston and Redwood. Though still in their infancy the success of the enterprise is assured, and the temperature and surroundings have proven all that is required for the complete propagation of fish.

A TUNNEL 1140 feet long on the Fort Bragg logging railroad has just been completed. It connects Redding creek with Noyo river, where the Fort Bragg Redwood Company will carry on logging operations this season. The tunnel opens up a fine body of timber miles in extent where the ax has never been struck except for ties.

THE city of Alameda has ready for use a salt-water plant for street-watering. It is located next to the electric-light works, near the bay shore, and there will be two hydrants—one on Park street and the other on Park avenve. If the experiment proves a success the system will be extended throughout the city, thus effecting a large saving, as the city is now paying about $3000 per month for fresh water.

THE cannery at Whittier, Los Angeles county, has already canned and shipped 200,000 cans of apricots. It is now working on peaches, pears, apples and prunes, and the output is 10,000 cans daily and drying 20,000 pounds daily. This week the canning of tomatoes will be begun, and 350 tons of tomatoes have been engaged. Two hundred people are steadily engaged, and no Chinese are to be found on the premises.

THE Rodeo Cold Storage Company has secured a ten-years' lease with the option to purchase, of the four fifty-varas east side Sixth, south side King and north side Berry, from Mrs. Annie Donahue. The South San Francisco Cold Storage Company has purchased for $125,000 the two fifty-varas northwest corner sixth and Townsend, and leased the property on the northeast corner from Thomas Magee for ten years for $99,000.

THE fall run of salmon on the Sacramento river is the largest known in years. For the first time in three years the canneries have been opened to do business on the full run. The Benicia, Black Diamond and Chip's Island canneries are running to their full capacity, and will continue to do so for three weeks yet, though the salmon season closed on September 1st. The salmon are now spawning, mostly in the headwaters of the McCloud river.

THE *Astorian* announces that the Northern Pacific Railroad Company has acquired by purchase the surveys made for the railroad commonly known as the Goble road. These surveys are for an extension of the Northern Pacific from Goble to Astoria. An option was recently given on them by the parties interested here. The purpose of the Northern Pacific in acquiring these records is undoubtedly to extend its track from Goble to Astoria, a distance of about fifty-seven miles.

THE illustration of the great engineering work of the world will be one of the most interesting features of the Transportation exhibit at the World's Fair. Following the announcement that the large and very perfect model of the Forth bridge has been secured comes the application of the management of the Gothard Railway company, of Switzerland, for space in which to show a large model or relief map of that road. This will illustrate in the most graphic manner possible the famous St. Gothard tunnel and the manner in which mountain inclines are surmounted by modern engineering science.

THE prospects of the San Francisco and Great Salt Lake Railroad are said to be very encouraging. New capital from an unexpected source has been subscribed, and by the time the full details are made public all will be in readiness to commence the work of construction. E. L. G. Steele, one of the principal promoters of the undertaking, is authority for the statement that there is no doubt whatever of the building of the road. Four surveying parties are in in the field between Suisun bay and Beckworth pass, and the work is being done very thoroughly. The road from Sacramento to Oroville is to be built first and put into operation at once.

HORTICULTURE.

Pruning the Pear.

Mr. P. G. Schluch of Elmira writes to the Winters *Express* on pruning the pear, and his views will be of interest to those who have this work before them this winter:

Is it possible to bring pear trees, especially Bartletts, to bear as they ought through pruning?

It is very common to see pear trees, particularly Bartletts, three, four and five years old without any, or but little, fruit, which is hanging on the ends of the growth of one year previous, a place where fruit ought not to be allowed on pear trees. What can be the cause of Bartletts not bearing until they are five and six years old, and some even older? One says it is natural for this pear; another says it is in the soil or climate, and still another says it is the fault of the nurserymen, who sell trees grafted or budded from trees which have never borne any fruit. And now one says, "I believe it lies in pruning," and sure enough he is right. During 20 years' experience, in nearly every climate where fruit can be raised, I have never seen pear trees more neglected in pruning than in this vicinity. Just in the first three to five years after planting, the most knowledge is needed to prune a pear tree to bear, besides bringing the trees into the most convenient shape without going too far with nature; and it is the greatest fault to let a pear tree grow at will until the fall of the first year after it is planted in the orchard, and then cut all branches down to a level, and all that is thought to be too much is taken out clear to the base, or only do the latter and let the remaining limbs grow at will. In so doing, no one can expect fruit the next and third years, except perhaps a few on the ends of limbs which are better fit for whips than part of a pear tree. By pruning a pear tree from the first year in the right way, it surely will bear the third year, and I can name the places where I have proven this, in our neighborhood, to any one desiring my advice how to prevent full-bearing pear trees, six to ten years old, from bearing their fruit on the ends of the branches, and so be liable to break down if not tied up at the right time. We have to break with handling the trees as it is done here, and see that we get most of our fruit inside the trees all over the branches. I can prove the possibility of having the trees that way when six to eight years old, pruned under my direction for one and two years. I will try and explain some points in pruning pear trees the first and second year after planting in the orchard. But first we will see what are the objects of pruning. The objects in pruning are to keep the tree well-balanced and equal in shape. These objects are accomplished by pruning strong-growing branches less than the weaker-growing ones. Through this operation the bud, just below the cut on the weaker growth, will grow out very strong, against a less strong growth on the less-pruned stronger branches, and the former will soon reach the same dimensions as the latter. This method taken as a foundation, the trees have to be pruned thus:

First year—The trees in general come from the nursery with one stem of about 2½ to 7 feet in length, sometimes branched at the height of from 2 to 4 feet, the latter being too high, it being preferable to have a pear tree with a short stem. The stem or main branch should be cut back to two feet, after the trees are planted, making the cut just above a bud which stands above the cut of the wild stock, so as to have the top bud grown perpendicular above them. Under common circumstances the trees, by the end of June, will have made a fair growth of about two or three feet, having besides the main branch more or less side branches, which I will name the main leading branches to be better understood. From the middle of June till the end of July the trees should be pruned—summer-pruned—as follows:

The stem or main branch is cut back to about 6 to 8 buds, making the cut above a bud standing exactly above the cut made the spring previous, so as to have the main branch growing as perpendicularly as possible. The leading branches are cut back four to six buds, making the cut above such buds as are pointing to the outside of the trees. An exception to this may be made only in the case of hanging limbs, when the cut will have to be made above a bud pointing sidewise. If all leading branches are hanging, the cut should be made above a bud pointing upward. Never allow two branches to grow that are coming out of the same bud. Always cut one clear out, keeping the one which has the best stand. All growth not used to form the tree should be cut off at the base.

The points above given may be looked upon as a base, for under certain circumstances there may have to be left one or two buds more, or contrary, on each main and leading branch.

FIRST YEAR—WINTER-PRUNING.

The trees, after having been pruned as aforesaid, will have made another nice growth by the fall of the first year. The main branch, besides having made another growth from the top bud, will have put forth some other sprouts which will form leading branches for the future. The leading branches will also be a good deal longer, besides having some side branches. Cut the main branch back to 6 to 8 buds, making the cut above a bud which stands right above the cut made by summer-pruning. Cut the leading branches back to 3 to 6 buds. All buds above where the cut has to be made must stand to the outside. From the side branches in existence, take out all that grow to the inside of the tree; those growing straight upward and those standing too close together should be cut clear to their base, without injuring the ring right at the base.

SECOND YEAR—SUMMER-PRUNING.

There will be lots of new growth by the middle of June, the trees having put forth sprouts from nearly every place where a cut has been made, and now we are at the very point to prune our tree so that it will bear next year. After the main and leading branches are cut back the same way as in the first year, using good judgment as to how many buds to leave, reckoning with the growth of the tree, all side branches which are closer together than four inches should be cut out, leaving the nearest bud to the base uninjured. The remaining side branches should be cut back to one-half or one-third of their length, making the cut always above a bud pointing to the outside of the tree. All other growth which has come from the places where sprouts have been cut out to the base, consisting often of two to five sprouts, should be cut out clear with the ring on their base, with the exception of one. If there are five sprouts, cut out first the three which grow straight out in one direction, not injuring the two remaining ones. The two remaining, growing in different directions and not crossing or standing too close to another limb, should be left if not longer than 3½ inches, if their top is thicker than the sprout itself. In case the top of these sprouts is not thicker than the sprout itself just below the top, they are no good and should be cut back to one inch, more or less, above a place where the base of a former leaf can be seen. Never allow suckers to grow around the stem, from near the ground, with the idea of preventing the stem from sunburning. Cut them down smooth as possible and prevent the stems from sunburning by painting them with a good coat of lime and sulphur.

WINTER-PRUNING.

By the fall of the second year the trees are, and will be, in such a condition as not to need much pruning. Follow up the points given above on main, leading and side branches. All growth inside of the tree, coming forth where not required, should be cut out clean. The growth coming out of the pieces cut back in the summer to more or less than one inch should be saved as much as possible, only cutting out the one which is in the way of another. Suckers, easily recognized by their erect growth, should be cut down so as not to injure the ring at their base. By following this method of pruning pear trees you will be satisfied in every respect. Never allow your three-year-old trees to have more than 4 to 8 pears. The next year let them bear as many as they can hold without breaking.

ENTOMOLOGICAL.

Condition of the Imported Australian Insects.

The following is the official report made last week to B. M. Lelong, Secretary State Board of Horticulture, by Alexander Craw, the State Quarantine Officer:

In accordance with letter of instructions of August 28, to proceed, together with Mr. Albert Koebele, to Los Angeles, San Gabriel, Orange and Santa Barbara, and make an inspection and report upon the condition of the beneficial insects that have been placed there, and which were sent over by Mr. Koebele from Australia during his recent mission to that country, having completed said examination, I beg to herewith submit the following report:

On August 31st Mr. Albert Koebele and myself visited the orange orchard of Albert F. Kercheval, at Los Angeles, where the first colonies of ladybirds from Australia were placed, and which arrived last winter and spring. Besides us, there were present John Scott, Horticultural Commissioner of Los Angeles county, Henry W. Kruckeberg, editor *Rural Californian* Col. J. R. Dobbins, A. Scott Chapman, Esq., of San Gabriel, and others.

We made a very careful examination of this place and found *beetles, eggs, larvæ* and *pupæ* of the steel-blue ladybird, *Orcus chalybeus*. The first shipments of insects were received in very feeble condition, and having, as Mr. Koebele stated, hibernated in Australia and probably deposited their eggs before he captured them, the result of these first consignments was not very encouraging. However, later importations were received in good condition, and upon our visit we found sufficient of their eggs and pupæ to justify the assertion that this species has become established at Los Angeles.

Mr. Koebele says that this is the insect that keeps the red scale (*Aspediotus aurantii*) in check in the orange-groves in Australia, notwithstanding that a parasite preys on these ladybirds there which destroys fully 50 per cent of their first brood and about 90 per cent of the second brood. Great care was taken not to introduce this parasite, which is such a deadly enemy to them. When Mr. Koebele discovered that the young of these ladybirds were preyed upon by a parasite, he sent only mature beetles to California. Thus it may be safely said that it will only be a matter of time when we shall reasonably hope for the rapid increase of these valuable insects, and even better results from them than are obtained in Australia.

In another orchard at Los Angeles where a colony had been placed, we found but few beetles and larvæ, but enough to show that at this place also they had become established. The trees at this place were large and had been pruned high, so were somewhat difficult to examine.

On September 1st, Mr. John Scott, Mr. Hiram Hamilton, Horticultural Commissioners of Los Angeles and Orange counties, respectively, and myself examined the orchard where a colony of the steel-blue ladybirds you sent Mr. Hamilton had been placed. We found these doing well, and there were plenty of beetles and eggs from which small larvæ were hatching and were at work upon the red scale. These ladybirds had only been out on the trees 16 days, and as they are breeding there successfully, it is conclusive proof that the earlier importations had already deposited their eggs before they arrived.

On September 2d, Mr. John Scott, Col. J. R. Dobbins of San Gabriel, Mr. Koebele and myself inspected the Dobbins orchard at San Gabriel, where one of the first colonies of these insects was placed. Of these, we failed to find any trace, which was due to their bad condition upon arrival. The box containing the dead insects was produced, which established this fact. A later importation which you sent Mr. Chapman, 16 days before our visit, arrived in good condition, but we did not find any on the trees upon which they were placed. They no doubt will make their appearance in other portions of the orchard later on.

On September 3d, Mr. Koebele and myself visited Hon. Ellwood Cooper's orchard at Santa Barbara. It was at this place that several species were liberated in the open orchard immediately upon arrival. We found four species that have become well established, viz: *Orcus chalybeus, Orcus Australasia, Rhizobius ventralis* and a small scymnodes. Of all these, we found beetles, eggs, larvæ and pupæ. The trees upon which they were placed are infested with black scale, and they are feeding upon it. Mr. Cooper placed these insects in an orchard where he considered the conditions as to temperature and protection from the prevailing winds, favorable for their colonization.

On September 9th, I visited the orchard at Haywards, Alameda county, where Mr. Koebele had himself placed several species. I found beetles of the *Orcus Australasia* and *Rhizobius ventralis* apparently doing well. At this place a muslin tent was placed over a lemon-tree where the *Thalpocares coccophagus*, an enemy to the black scale, is being bred.

I placed a small colony of *Orcus Australasia* and *Rhizobius ventralis* upon trees infested with pernicious scale in Alameda, and upon examination two days ago we found beetles, larvæ and pupæ. The young have fed upon the scale and passed through their molts into well-developed pupæ, proving conclusively that they will prey on this scale.

The new Australian ladybird, *Novius Koebelei*, of which only three live insects were received last April, and which were bred in the office, have multiplied very rapidly, and from these many thousands have been distributed. The successful colonization of this ladybird has fully sustained Mr. Koebele in the statement that they are even better than the *Vedalia cardinalis* for keeping the cottony cushion scale in check. The colony of 50 which you gave Mr. John Scott at Los Angeles have done well, and from those he has distributed several thousand, and is well pleased with their work.

From the foregoing it will be seen that five new species of beneficial insects have been successfully introduced and become established in the State, and while we cannot expect much benefit from them this year, as time is required for those introduced to breed, I am confident that next spring and summer they will be abundant, and colonies can then be furnished to growers throughout the State.

The unprecedented success of the Vedalia has caused fruitgrowers and others to expect immediate and similar results from all of the new insects, but as the Chalybeus and Australasia have only three generations the increase will be slower; but I feel satisfied that the final result will be equally as satisfactory as the Vedalia. For the present, orchardists having trees infested with red-scale should not neglect spraying or fumigating this fall, so that their fruit will be clean and merchantable and the trees saved for the present from the pernicious effects of the pest.

Mr. Koebele has reviewed this report and concurs in the same.

ALEXANDER CRAW,
Quarantine Officer.

THE FIELD.

The Hop Outlook.

The following earnest letter from James Hart, of Slaughter, is addressed "To the Hop-Growers of Kings County, Washington," and contains much pertinent advice:

You are now in the midst of picking, and for the next few days will be doing all possible to have the crop harvested and dried. Many will also have them baled immediately, as every grower should whose hops are properly cured. And here let me suggest that when baling try this plan: Get a piece of hop cloth and let it be folded double; let it be two inches longer and two inches wider than the inside of your press, and when you put your hops in, place the cloth on the top and press the hops down with the cloth on the top. It will prevent the breaking and "shelling" and will turn out your bale in a much better condition than the old way. Hops of good quality should be whole, or as nearly as possible, of good color, silky and springy. Such a description of hops this year will, so far as human intellect can discern, bring a very high price.

It is specially on this item that I address you. From the conversation I have had personally with many of you, no person seems to know what is the price of hops. All are agreed "they will be high," but none appear to know what price the market will pay. The first bale, or "pocket," of English hops, 1892 season, has been sold in London and realized about 65 cents a pound. The English crop now we know is only half a crop and will leave them about 145,000 of our bales short; the German crop will be short ten per cent; Oregon is 2000 bales short; New York is short 20,000 bales and this State will be not less than 10 000 short.

The entire crop of the United States last year was only 215,000, and out of these 70,000 bales were exported, leaving only about 145,000 bales here for United States consumption.

We are often told that England does not like United States hops. Farmers, this is directly opposite of the truth, and the increase of the exports prove it. For the year ending June 30, 1891, 48,534 bales of hops were shipped to England, and for the year ending June 30, 1892, 70,025 bales were exported, and this proves the lie so often used by those who desire to mislead you. Further than that, the hops imported to the United States for the year ending June 30, 1892, was almost 700,000 pounds less than in 1891. This proves further, to-wit, that they are also more extensively used here than formerly. During the past two months first class hops have been selling in London at 38 cents a pound, which shows that they ought to have been selling here at 33 cents.

The present 1892 crop in New York has just been har-

vested, and James F. Clark, of Cooperstown, the largest grower in New York (having 150 acres), has been offered 25 cents for half his crop, which he has refused, and sales have been made at 30 cents. These facts should enable our growers to place some fair market value now on their crop, and unless the growers rush into the market and glut the same, there is no apparent reason on earth, with the great scarcity of hops, why 40 cents a pound should not be the price within two months.

You have the game in your own hands! Stocks are exhausted; there is no reserve fund to draw on; hops cannot be made by machinery from fir stumps; the brewers must buy your crop; they cannot do without it. The hop extract that we heard of last year so often is by this time sold out, brewed and drunk, and some other "bugaboo" must be created to make you believe they don't want your hops; but insist upon your price or hold them, and if you would only consult one another often before selling and meet twice a week at some established place and make all sales known to your fellow-farmers, then it would place all of you in possession of actual facts that would amply repay you for all your time and labors. Learn a lesson out of the books of all corporations. When there is a scarcity of the article combine and keep up the prices. Manipulate your sales slowly, so that nobody else can get hold of your stocks and cut your own throats. Don't send scores of samples with prices away and make brewers believe you are all "starving for a sale," but if anybody wants your hops tell him your quantity and price. Leave the buyer to say if the quality suits him; if it does not the first time, raise it a cent every time a buyer comes along and you will soon cure them of waiting.

The State Department of Washington has already issued circulars requiring all growers, immediately the picking has been done, to burn up the old vines and thus rid the yards of all vermin that may be in them. This should be strictly attended to by every grower.

This season has proved beyond a doubt that by constant spraying and proper cultivation that good crops can be raised in this county. The districts of Green river and Muckleshoot prove it, and there being every prospect of good prices again next year, should be a strong incentive to every grower to start in early next spring to spray, and keep it up until the hops are well advanced.

To neglect this means a failure of crop and a failure to get big prices and large profits. Don't contract your hops next spring, except at large prices. It is always better to have your goods in the bale and for sale than any other way. Then the question of quality is easily settled, and there is no disputing and litigation.

The *New England Homestead* is trying to get authentic information as to this season's crop for publication, so that every farmer interested will know the state of the same, and if any grower may furnish me with the information desired, I will see that it is duly forwarded, and such information will be valuable to every grower.

In past years you have been misled for want of information, and I trust you will this season so unite in the matter that you will all obtain just and proper prices for your hard-earned crop.

The Stable.

Horses Suffer in Silence.

It is a pity that horses suffer mutely. If they could express their torments by yells as piercing and loud in proportion to their size as, for example, a wounded hare utters, we should soon be enlightened as to the amount of suffering in our streets. Some of the hansom cabs which ply there are admirably turned out and driven, but there are still many whose owners act on the principle of a minimum of corn and a maximum of whipcord. In one such I was traveling one day. The driver plied his whip vigorously about the tenderest parts of his horse's flanks, and awkwardly allowed the lash to strike me across the face.

The pain was acute, and I did not suffer in silence; yet, for one indirect blow that I received in that journey, the unfortunate quadruped received scores. He received punishment at the rate of 50 lashes a mile, which, if his average daily task is moderately computed at 12 miles, would give the hideous total of 600 lashes a day.

This incident took place in broad daylight; but cabman's night horses are indeed a pitiful class. Nearly all of those that are assembled nightly in Palace yard by the House of Commons are suffering from navicular disease, caused by fast work on hard pavements. You can see the unhappy animals standing first with one forefoot, and then the other, pointed forward to relieve the pain, which must resemble toothache on a large scale, for it is caused by the decay of a bone nearly two inches long in the center of the foot. Would society endure horses being worked in this condition if they could signify their pangs as plainly as a fine lady with neuralgia?

The barbarity of tight-bearing reins was forcibly exposed and condemned by a writer in June, 1875, and certainly the excessive use of them therealter became less common, but it is still too often to be seen. It would not be seen at all if people in general understood the peculiar form of torture produced by it. A pair of well groomed, 16-hands carriage horses, standing in the streets, are not subjects to attract commiseration from passers-by. The restless tossing of their heads may be taken for pride and spirit; but what heart-rending groans could alone express what these fine animals have to endure!

Along the top of the horse's neck runs a massive sinew, strong enough to support the leverage of the head; it is attached to several of the vertebræ nearest the shoulder; then it runs free over the crest and becomes attached again to the vertebræ nearest the poll. When the head is pulled into the position decreed by man's vanity, the vertebræ under the crest press hard into the sinew, and must cause intense suffering, sometimes setting up the inflamation known as poll evil.—Blackwood's Magazine.

The Intelligence of a Horse.

Can a horse reason, or does he act solely from instinct? Many believe that he has reason and intelligence; others attribute all his acts to instinct. As a help to elucidate this question, I wish to present the readers of *Science* the following statement of facts based on long and close observation:

I have a horse, now 19 years old, that I have owned 13 years. I have used him all this time, almost every day, harnessed to a buggy, in going back and forth to my office. He is very gentle, good-natured and kind, and has never shown any vices. Soon after I commenced using him I noticed that on Sundays, whenever I drove him down town, he strongly insisted, by pulling on the lines, on going to the church where I had been in the habit of attending. I watched this disposition constantly after that, and on every Sunday since, when driven out, he has continued to do the same thing, and, if left to his own will, invariably goes to the church and stops. I thought it possible that he was guided by the ringing of the church bells, and tested him by driving him down town at all hours of the day, before and after the ringing of the bells, but the result was the same. He invariably insisted on going to church on that day, no matter how often I drove him down town. My office is one block west and one north of the church, and a half-mile west of my residence. In going to church, I usually turn south one block east of the office, but I sometimes go around by the office, where I usually drive him every morning and afternoon. In going to my office, he never offers to go to the church except on Sunday, but on that day he invariably begins to turn south to the street leading to the church, from fifty to a hundred feet before reaching the crossing, and, if not checked, turns into the street and hurries to the church. He has kept this up for at least 12 years. He never does this on any other day than Sunday. In bad weather or good weather it is the same, although at the office much of the time he has had stable protection from bad weather. On week days he often insists on going to the stable in bad weather, but on Sunday, even when I compel him to go by the way of the stable, he pulls over to the opposite side of the street and hurries on to the church, if permitted, though he may have to stand out in the cold, rain or snow.

Sometimes, from one cause or another, he has not been taken away from home from one to four weeks, and I supposed he would lose the run of time, or at least show some hesitation and uncertainty; but not so. On the first Sunday after I drove him out, he insisted, as before, on going to church. He never offers to go there any other day of the week, though the church bells are rung and numerous services are held nearly every day.

If on Sunday I go to the postoffice, which is on the northwest corner of the street-crossing, where we usually turn south to the church, instead of going from there direct to the office as on other days, he turns to the south and goes to the church. He never willingly goes to the postoffice on Sunday, but always stops there on week days of his own accord, if permitted. Many times I have taken other streets on Sunday and approached the church from other directions, but in all cases, when left free, he invariably takes the first street leading to the church. I have experimented with him very largely in this respect, with a view to learning how he keeps the run of time, but am unable to satisfactorily account for it. I have also observed and experimented with him in a great many other ways, and have taught him to know the meaning of many words.

When alarmed at anything, he looks back to me with a frightened look, as much as to say: "Will it harm me." On my saying, "All right, go on," he moves on. If much frightened, he will repeatedly look back for assurance from me.

He knows the meaning of many words, such as office, postoffice, schoolhouse, mill, farm, cemetery, church, apple, corn, grass, water, and many others. The fact that he knows the meaning of these words, or at least attaches a meaning to them, I have tested many times in many ways, the relation of which would make this paper too long. When his corn is about used up, if I speak of it to him and say, "Deck, your corn is out; you must go to the mill," even before starting from home, he turns in at the mill as I go by, and goes up to the office door where I have been in the habit of ordering his food. Sometimes I have forgotten it by the time I come opposite the mill, and would have gone by, but he has not forgotten it and turns in. If I say to him, "Do you want an apple?" of which he is very fond, he puts on the most wistful look and does all in his power to say that he does; and if the apple is not produced at once, he begins to explore my pockets and clothing with his nose in search of an apple suspected to be concealed about my person. If I say to him, "Do you want grass?" he at once shows that he expects to be turned out upon pasture.

He also knows a number of people by name, and where they reside, and if told to stop at the residence of one of them, naming him, he will do so, without any guiding.

These are only a few of the many evidences of his intelligence. Hundreds of examples might be given showing his knowledge and intelligence, and that he gives very close attention to and understands what is said to him.

Do not these facts strongly indicate that the horse has more than mere instinct, that he reasons; that out of the storehouse of his knowledge and experience he forms conclusions, thoughts, purposes and plans. He understands certain symbols, such as words; he keeps the run of time, and knows uniformly when Sunday comes, for he has not made a mistake in this respect for more than 12 years past; he uses many and diverse means for making his wants known.

Instinct is supposed to imply inherited knowledge of objects and relations in respect to which it is exercised, and will usually, if not always, operate where there is no experience to guide. But this horse's knowledge, in these respects, has not been inherited, but is acquired. He never was at this church till he was six years old. His mother was probably never there. In instinct there is no necessary knowledge of means and ends implied, though such knowledge may be present, but instinct is always manifested in like manner by all individuals of the same species, under like circumstances, which is certainly not true in this case.

Hence I infer that this horse does reason; that he has a high degree of intelligence, even much more than he is able to make us understand and appreciate.

But does the fact of his observing Sunday imply a moral sense? Why does he seek to go to the church on that day? It has been said that animals do reasonable things without having the gift of reason; that they do things involving distant foresight without having any knowledge of the future; that they work for that which is to be without seeing or feeling anything beyond what is; that they enjoy but do not understand; that reason works upon and through them, but is not in them. The facts that I have related and observed make me greatly doubt many of these statements. I find it hard to sharply define the limits between instinct and reason. The facts that I have related indicate reason, intelligence, motives, and the formulation of plans, methods and schemes for carrying out preconceived purposes. Some of the acts, at least, indicate pure reason based upon former and remembered sensations, perceptions and knowledge, and the purpose to gratify merely mental desires.

What motive does this horse have for going to church every Sunday, even at a sacrifice sometimes? It is not for rest, it is not shelter, it is not feed, it is not company, it is not to gratify any merely physical want, for all these things he has elsewhere every day. Is it not purely an intellectual or moral want that he seeks to gratify? He stands near the church door, hears much of the exercises, especially the singing, and will remain, almost without motion, whether tied or not, till the services are over and I am ready to go home. But it cannot be for the mere speaking and singing that he hears there, for he often hears speaking, singing, concerts, the Salvation Army, and music of various kinds while he stands tied at the office on the public square; but none of these take the place of his church-going.

These facts I have given as tending to illustrate and explain animal intelligence. I have given only such as I have verified many times.—T. B. Redding in Science.

The Dairy.

Clover Silage.

The question of making clover silage without running the material through a feedcutter is an important one; for if it can be successfully kept without cutting, the expense will be considerably lessened.

With this question in mind, the clover from one acre, 8¾ tons by actual weight, was placed in the silo on the college farm (at Corvallis, Oregon), the 7th of June. It was cut when partly in blossom, consequently very green.

The weather was cloudy and there were several showers on the clover after it was cut. It was such weather as to make it impossible to cure the clover for hay.

The clover was hauled as soon as cut, with no reference to the amount of water on it. In some cases, the water ran out of the wagon when it came into the barn to be unloaded. The men had to wear rubber boots to keep their feet dry while handling the material.

The clover was tramped as firmly as possible about the sides and corners of the silo, but further than this no extra precautions were taken in placing the materials in the silo.

After putting in the desired amount, a covering of tarred building paper over the top, and over this two inch planks were placed, laying them close together and leaving an inch or two space at the sides, so that the planks would not bind when settling.

Having some broken rock near by, we thought we would take the precaution to weight the silage. With this end in view, a ton of rock was placed around the outer edge of the covering. The material began to settle very rapidly, and before the silo was opened, a month later, it had settled one-half.

When placed in the silo, the 8¾ tons occupied 1080 cubic feet, and when the silo was opened it only occupied 500 cubic feet.

It will be seen by this that it would economize space very greatly to cut the material with an ensilage cutter. When it had thoroughly settled, it did not occupy much more space than green corn fodder cut in short pieces with a feed-cutter and stored in this way.

This is a brief account of the filling process; now for the results.

The silo was opened July 9th, and feeding began at once. On the top of the silo, after removing the paper and planks, we found a layer of three or four inches which was quite moldy. There were about three wheelbarrow loads injured too badly to feed. Below this the silage was perfectly good, except now and then a moldy place near the sides or corners of the silo. The silage has been fed night and morning to milch cows and young cattle, with the best results. While our neighbors complain of their cows falling off in their flow of milk, we have no such complaint to make. Our cows have not lost a pound of flesh, and as for young animals, we can show some that have gained from 75 to 100 pounds during the month of July.

On the whole, we are very much pleased with the results from feeding clover silage, and think it is a very cheap and convenient means of furnishing succulent and nutritious food when other sources fail.—Prof. H. T. French in Rural Northwest.

STOCKTON is to have the largest macaroni factory on the coast. It is to be built by a San Francisco capitalist, and the intention is to supply the Pacific slope with the product.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

MONEY IN FRUIT.—Oroville *Register*: James McPherson of Garden Ranch has three acres of Bartlett pear trees now eight years old. They were cut down when two years old by grasshoppers, so bear no more than trees six or seven years old, yet last season he picked 15 tons from the tract, and this season 11 tons from the same. The fruit averaged him two cents a pound delivered here for shipment to the Marysville cannery. This would return him this season $440 and last yea $600, or $1040 for the two years from three acres of land. This would amount to $340 an acre for the two seasons, or $170 an acre for each season. Last year his neighbor Jas. Stevenson obtained $65 from an acre and a quarter planted to pear trees, but this year he realized, by shipping to the cannery, $218, or about $175 an acre. The Bartlett and all other varieties of pears do well in the foothills, and, as will be seen above, they are profitable crops to produce.

A VAST NUMBER OF YOUNG ORANGE TREES.—*Register*: The number of young orange trees about Oroville and vicinity is greater than any one realizes. In the whole region of Oroville, Thermalito, Wyandotte and Palermo there are about 350,000 orange trees set in orchards, but this number is greatly excelled by the young orchard trees, those from one to four years old being raised in the nurseries. We picked up some figures this week that are startling in their magnitude, and they indicate that orange trees from this time forward will be so cheap that almost any one can afford to buy them. This will lead to the rapid extension of citrus culture in this vicinity, for when men can buy good, healthy four and five-year-old trees for a nominal sum, they will plant them in preference to almost any other fruit. The Citrus Association at Thermalito has 200,000 young trees. That means more than half as many as the total number planted in all the orchards of this vicinity. John D. Griswold and son have 15 000, H. Bird 1500, George and Fred Sparks 20,000, H. C. Bell 10,000, E. A. Kusel 25,000, Amos Howard 2500, C. D. Dunn 6000, Mrs. Z. M. Sexton 5000, S. C. Peasley 15,000, Albert Boynton 3000, Thos. Smuck 7000, Jas. C. Gray 1000, John Eicher 5000, Joe Gardella 2000, Wm. Smith 24,000, J. K. Mitchell 1500, John O Riordan 4400, L. Webster 1000, F. Taber 500, D. B. Hays 1200, H. C. Hills 800, L. B. Gardner 1200, Mrs. W. C. Topping 300, Mrs. J. Holmes 200, R. Delancie 600, Jas. McPherson 300, Mrs. S. Titus 250, John Watkins 2000, Geo. Hilton 6000, Dr. Parker 7000. This foots up 366,250 trees, yet we have obtained only a limited list of names.

Kern.

SORGHUM SYRUP.—Bakersfield *Echo*: We were recently shown a sample of sorghum molasses that is being made by Rev. Thompson and son out west of Rosedale. On the Frazine place a dozen or fifteen acres were planted to sorghum last spring, and the gentlemen named are now working it up. They will have between 2000 and 3000 gallons of molasses. We know nothing about the market value of this product, so very little of it is offered for sale here.

SOME MAMMOTH PEACHES.—*Echo*: Some days ago C. A. Maul brought in from his orchard a George's Cling peach that weighed 17 ounces. This was the largest of that variety ever shown, and of course it attracted attention. For several years a strong rivalry has existed between the growers of late peaches, and knowing that he had beat the record, Mr. Maul issued a challenge to the others to beat him if they could. Tuesday evening W. Lowell came into Mr. Drury's store carrying a peach, which he asked to have weighed. The request was granted, and to the amazement of all who were present, it tipped the beam at 22 ounces. It was of the George's Late variety, and hence holds the blue ribbon for that kind, though not against all comers. Two years ago Mr. Maul produced an Orange Cling that weighed 23 ounces. The Lowell peach was perfect in form and had a circumference of 13½ inches.

SEEDLESS RAISINS.—Bakersfield *Californian*: At the Pylema nursery, a hundred vines of the Lady de Thompson's seedless variety were reserved for the purpose of making raisins, at the time that the chief product of the vineyard was shipped to the eastern markets as table grapes. The fruit from these 100 vines is now being gathered, giving a yield of from two to three trays full to each vine. This is certainly a remarkably good product from a three-year-old vineyard.

Lassen.

THE HAY CROP.—Amedee *Geyser*: The hay crop in Lassen Co. turned out a great deal above what the farmer expected during the months of April and May. There was a great deal of new land seeded to hay of different kinds, which made the acreage a good deal more than other years. With the crop up to the average, and with acres of new hay which cut their first crop this season, the demand will far exceed the product, and prices will be good. Cattlemen and stockmen of all descriptions are commencing to buy up all hay that is for sale at this early stage of the season, and prices are looking up. This is the beauty of farming in Lassen and Modoc counties. Instead of the farmer hunting a market for his products, the market hunts him. It is not necessary for the farmer to go to the heavy expense of baling his hay, then hunt a market and handle it again, and go through one-half dozen other expenses to market it, and when all figured up at the end, he has put in a hard season's work and received hardly a living for it. In Lassen and Modoc counties it is different. You sell your hay in the stack, at a good price, the wholesale stock buyers drive their cattle to your place, feed the hay on your own ranch, and keep their cattle there until they are ready fo the San Francisco and other markets. You get cash for your hay in the stack, you receive good prices, and are not worried where you will find a market; but you can rest contented and know your market is at your door. As the acreage in hay increases, so the demand.

Mono.

MONO LAKE FRUIT.—Bridgeport *Chronicle-Union*: Ex-Supervisor A. F. Hector has been experimenting with fruit on his ranch at Mono lake, and so far has been quite successful. He has four large apple trees which this year bore more than the limbs could hold without being propped up, but the crop did not do him much good outside of satisfying him that such fruit can be raised on his place, as the Indians, or others, helped themselves to the fruit whenever he had to leave home. The Early Astrachan were prolific; but the Baldwins have not yet matured. He had a few of the Wealthy and Yellow Transparent, all of good size and flavor. He had some Russian apricots, Marion and Imperial plums and also French prunes—enough to satisfy him that they can be raised about the lake. The success of Mr. Hector's effort in this line should incite the Mono Lake farmers to set out orchards.

Orange.

A BEET SUGAR FACTORY.—Anaheim *Gazette*: At a meeting of stockholders in the cooperative sugar refinery, Mr. Dyer of Alvarado said that he had been in the beet-sugar industry for 22 years. He never had seen such good beet land as lays around Anaheim. He had been astonished at what he had seen. The farmers should have no lingering doubts about the success of the factory, as it could not possibly be anything but a great success. Rotation of crops would be a good thing for the beets, although it is not necessary to rotate oftener than every four or five years. He had raised 19 tons per acre on a stubble barley-field the first year beets were planted on it; the second year he raised 23 tons, the third 29 tons, and the fourth 25. The third crop, as a general rule, will be the best. Corn and potatoes are good crops to rotate with. An average yield of 15 tons to the acre is a good square average; often 20 tons per acre will be raised, and sometimes 30. Fifteen tons will produce 3000 pounds of white sugar, with beets at ten per cent of saccharine matter. At 1½ cents per pound profit, this will amount to $45 per acre; add $60 for the bounty (at two cents per pound), and we have $105 per acre for the crop. He referred to the cooperative refinery in Germany mentioned in these columns last week, in which the farmers had given their notes for the erection of the refinery, and the first crop of beets had paid all the expenses. The refinery did not cost the farmers a cent. The beets paid for it all.

Placer.

FRUIT SHIPMENTS.—Newcastle *News*: The following comparative statement will show the total amount of fruit shipped in pounds from Newcastle:

	Jan.	Feb.	March.	Apr.
1891	20,719	15,354	9,400	6,013
1892	7,611	7,168	9,321	29,203
	May.	June.	July.	Aug.
1891	237,819	986,247	1,745,491	3,221,970
1892	161,679	942,438	2,176,680	5,210,496

This shows a total shipment from this point thus far this season of 8,557,596 pounds, against 6,243,013 pounds up to the same date last season, or a gain of 2,314,583 pounds.

San Bernardino.

GRAPES FROM CUCAMONGA.—Ontario *Observer*: Mr. Milliken has received returns from each of the four carloads of grapes shipped to Chicago from North Cucamonga. They netted him over $50 per ton. The grapes shipped carried 22 per cent of sugar. They were grown without irrigation, to which fact is due their large per cent of sugar and excellent shipping qualities. Grapes of the same variety, Malaga, grown by irrigation in the same locality, carry only 18 per cent. The immense profit in producing table grapes for the eastern market is causing considerable demand for the cheap grape lands in the vicinity of Cucamonga.

Santa Clara.

WEST SIDE FRUITMEN DIGGING FOR WATER.—San Jose *Mercury*: The fruitgrowers on the West Side are becoming alive to the fact that a supply of water for irrigation can be had in their vicinity with but little exertion on their part. As yet no one has made a thorough attempt to get artesian water in sufficient quantities for irrigation, and the supply of surface water has not proven sufficient for extensive pumping. At present Perry Curtis, who resides on the Doyle road, is experimenting by digging a large pit 90 or 100 feet in depth, or as much deeper as is possible before the pit fills with water. From the bottom of the pit he will sink a well for artesian water, and it is expected that the pit will be filled, thus making a large reservoir from which to pump. It is also expected that from that depth the flow will be strong enough to supply him with all the water needed for irrigation. If the experiment proves a success, S. P. Sanders, who lives in the same vicinity, will make another well upon his ranch this fall. The fruitgrowers are anxiously waiting to see with what success the efforts of Mr. Perry will meet, and, if favorable, there will be many of these wells sunk.

FRUIT NOTES AROUND CAMPBELL.—Work at the cannery and also at the drier is about finished. The drier, however, will be obliged to resume on a small scale when the Salway peaches, which are too small for shipment, are brought in. The prunes and peaches and some of the best grades of apricots are yet unsold.

THE CODLIN MOTH.—Los Gatos *News*: Mr. Chittenden, who lives near the summit on the Bear Creek road, says that the codlin moth is not preva ling in that vicinity nearly as much as in previous years. He thinks it is being destroyed by a small bug or beetle, which crawls into the hole made by the insect soon after it is hatched and feeds upon it while it is a worm.

Sonoma.

BIDS FOR HOPS.—Petaluma *Courier*: It is said that the highest price offered for hops in Sonoma county thus far this season is 17½ cents. But few sales have been made, however, and most of the growers are holding their stocks for a better price—which they will be pretty apt to get.

Tehama.

IT PAYS NOT TO MISREPRESENT.—Red Bluff *Sentinel*: One of our leading fruitgrowers, H. B. Galliher, put up a carload of dried peaches, consigned to Messrs. Dean Bros. & Lincoln, wholesale grocers at Chicago, Illinois. The consignee has received a letter from the purchaser which we quote: "The car of peaches from Red Bluff which was assorted and sacked by H. B. Galliher, came in. I assure you that it gives the greatest pleasure to say that this car ran fully up to samples in every respect. Bag after bag was opened and each one was properly marked, and the whole car looked as if it had been properly handled. All of the different grades had been bulked and the samples drawn from them. I wish you to give the gentleman who shipped that car my best love. I would like to make his acquaintance, and when I die I will remember him. He is the only man who ever shipped a car of assorted fruit from California that came up to samples. Don't fail to remember me to him." We publish this for two or three reasons. First, it shows how buyers appreciate fair dealing; second, it shows that it pays to sample your goods fairly; third, it shows that the buyers can safely praise our goods, as they generally do. Our fruitgrowers will always find it to their advantage to cure and handle their fruit well and pack it in good order, and then buyers can afford to speak a word of encouragement to the growers.

Yuba.

HOP NOTES.—Wheatland *Four Corners*: Hop-picking will soon be a thing of the past. Picking was finished in J. H. Durst's yard Sept. 14th, and the other yards will be through in about ten days. The hops are turning out to the perfect satisfaction of the growers. Hop-buyers are coming in thick and fast. They are anxious to buy, but cannot satisfy growers with prices. About 800 bales have been shipped up to date from Wheatland. In next issue we will give shipment of each grower.

ARIZONA.

CROP SUMMARY.—Arizona Weather Service, Sept. 12: Crops have grown well during the past week in western Arizona. A good crop of pumpkins was harvested in the vicinity of Fort Mohave. In the vicinity of Yuma, good showers and an even temperature have ministered to the growth of all vegetation. Lemons and oranges are ripening well. In the region about Prescott, in Yavapai county, all fruits are ripening well, No rain has fallen here during the week and range grass is greatly suffering from drought, and, owing to the lateness of the season, the prospects for a good growth of grass for winter feed are discouraging, as it is feared frost is soon to follow. The corn crop will be rather light. In the vicinity of Buckeye, crops of all kinds have been benefited by the favorable weather of the past week. In the southern part of Yavapai county, in the vicinity of Farley's Camp, all vegetation continues to suffer from drought. Feed for cattle and water have never been known to be so scarce. Cattle are in bad condition. In the vicinity of Walnut grove, the corn crop is now ripe. Fruit is ripening slowly. The cutting of the third crop of alfalfa is now progressing. The drought continues in the vicinity of Payson and the northern part of Gila county. Stock is beginning to fail. A hard winter on stock is expected. Good rains have fallen in the vicinity of Dudleyville and surrounding country, and grass and crops are looking well. Plenty of water is available for irrigation. In the valley of the San Pedro, in the vicinity of Grand Central mill, the weather has been more favorable. Light showers of rain and cloudy weather have favored the growth of grass and all kinds of crops. Cattle are beginning to look better. Grass is short in the vicinity of Mt. Huachuca, except a narrow strip along the San Pedro, yet the prospects for rain in September seem encouraging. In the agricultural region around Calabasas, late crops are a little backward owing to the recent dry weather, and with good rains on will make only light crops. Corn and beans have been benefited by light showers. In the eastern part of Cochise county, in the vicinity of Wilgus, the corn and alfalfa crops are greatly suffering from drought. The cattle ranges are destitute of grass, and cattle will die unless removed to other ranges.

NEVADA.

CALIFORNIA & NEVADA CREAMERY.—Virginia *Enterprise*: The California & Nevada Creamery Co., located on the Newlands ranch in Lyon county, was started up some time ago, but owing to a hitch in the machinery, nothing but cheese had been manufactured. The creamery now receives about 2000 pounds of milk daily from the Newlands ranch and one-half as much from the Phillips ranch near by. It has a capacity of 20,000 pounds daily, and has the largest plant of the kind on the coast. D. A. Bender is president of the company, T. R. Hofer secretary and Gov. Colcord general manager. C. E. Merrick of Grass Valley, Cal., has reconstructed the machinery and put everything in smooth, working condition. The company calculates to furnish nearly all of Storey county with delicious butter at a reasonable rate.

The State Fair.

Following are the awards given out to competitors in the stock exhibit at Agricultural Park:

First Department—Live Stock.

HORSES.

CLASS I—THOROUGHBRED HORSES.

In this class none were permitted to compete but such as furnished a complete pedigree, tracing the entire line of descent to the English parent on the side of both sire and dam.

STALLIONS.—Three Cheers, best four years old and over—Mrs. W. M. Murry, Sacramento, $20; Wildwood, best three years old—Ocean View Stables, West Berkeley, $15; San Jacinto, best two years old—L. J. Rose, San Gabriel, $20; Steadfast, second best—W. F. Smith, Sacramento, $10; Alaxis, best one year old—L. J. Rose, San Gabriel, $15; Booze, second best—L. J. Rose, San Gabriel, $7.50.

MARES.—Isabella and colt, best four years old and over, with suckling colt—C. Halverson, Rontiers, $40; Jessie C. and colt, second best—Mrs. W. M. Murry, Sacramento, $20; My Badge, best four year old and over—L. J. Rose, $30; Maggie S., second best—C Halverson, $15; best three-year-old—L. J. Rose, $25; second best—Mrs. W. M. Murry, $12.50; best two years old—Mrs. John Wolfskill, Sacramento, $15; second best, L. J. Rose, $7.50; best one year old—C. L. Fair, Jr., San Francisco, $10; second best—C. L. Fair, Jr., San Francisco, $5; best colt under one year—C. Halverson, $10; second best—L. J. Rose, $5.

FAMILIES.—Best thoroughbred sire, with not less than five of his colts, all thoroughbred—Mrs. W. M. Murry, $50; best thoroughbred dam, with not less than two of her colts, all thoroughbred—C Halverson, $75; best stallion, other than thoroughbred, with no less than five of his colts, open to all—Denman & McNear, Petaluma, $100; best dam, other than thoroughbred, with not less than two other colts—J. L. McCord, Sacramento, $75.

CLASS II—STANDARD TROTTERS.

STALLIONS.—Ross S., best four years old and over—Mrs. Worth Ober, Sacramento, $40; Redondo, second best—Walter Mayben, Savannah, $20; Kebis, best three year old—W. F. Smith, Sacramento, $30; Freckles, second best Walter Mayben, $15; best two years old—C. L Fair, Jr., $20; second best—Mrs. Worth Ober, $10; best one year old—La Siesta Ranch, Menlo Park, $15; second best—William Johnston, Sacramento; $7.50; best suckling colt—William Johnston, $10; second best—E. J. Carragher, Sacramento, $5; best gelding—La Siesta Ranch, $20.

MARES.—Best four years old and over, with suckling colt, La Siesta Ranch, $40; second best—Wm. Johnston, $20; best four years old and over—J. L. McCord, $30; second best—A. L. Hart, Sacramento, $15; best three years old—Frank Hays, Poplar, Tulare county, $30; second best—Mrs. F. C. Snider, Sacramento, $15; best two years old—G. A. Buckman, Sacramento, $20; second best—E. S. Elkus, Sacramento, $10; best one year old—La Siesta Ranch, $10; second best, A. L. Hart, $5; best suckling colt—La Siesta Ranch, $10; second best—Geo. Lassner, Freeport, $5.

CLASS III—ROADSTERS.

STALLIONS.—Best four year old and over—W. Mastin, Sacramento, Nutwood Boy, $40; second best—B E. Harris, S. F., Marvel, $20; best three year old—J. M. Caps, Modesto, Fal Malone, $30; second best—S. Hogaboom, Woodland, John Clay, $15; best two year old—H. V. Tranynhan, Arbuckle, $20; second best—T. Beckley, Grimes, $10; best one year old—S. Pickett, Sacramento, $15; second best—E. M. Leitch, Sacramento, $7.50; best roadster gelding—E Oppenheim, Sacramento, $40; second best—Ras Spurgeon, Colusa, $20.

MARES.—Best four years old and over, with suckling colt, under protest, $40; second best—B. E. Harris, San Francisco, $20; best four years old and over—Frank Drake, Vallejo, $30; second best—J. E. Terry, Sacramento, $15; best three years old—J. W. Caps, Modesto, $30; second best—F. C. Knauer, Modesto, $15; best two years old—B. E. Harris, $20; second best—Walter Wylie, Sacramento, $10; best one year old—Valley View Farm, Auburn, $10; second best—George Lassner, Freeport, $5; best suckling colt, C. H. Gilman, Sacramento, $10; second best—B. E. Harris, San Francisco, $5.

Best four year old roadster mare—Ben E. Harris, San Francisco.

Second best four year old roadster mare—T. Waite, Perkins.

CLASS IV—CLEVELAND BAYS AND FRENCH COACH.

Best stallion, four year old and over—H Wilsey, Petaluma, Nonpareil, $20; best stallion three year old and over—Holbert & Conger, Los Angeles, $15.

SPECIAL FOR GERMAN COACH.—Best stallion four years old and over—A. M. Linnell, Orange Vale, $20; best stallion three years and over—Holbert & Conger, Los Angeles, $15.

CLASS V—CARRIAGE TEAMS.

Best matched span carriage horses, owned and used as such by one person—R. B. Hall, Pleasant Grove, silver goblet or $75; second best—F. H. Carson, Lodi, silver goblet or $40.

CLASS VI—ROADSTER TEAMS.

Best double team roadsters owned and used as such by one person—T. B. Gibbon, Woodland silver goblet or $50, second best—La Siesta ranch, silver goblet or $30.

CLASS VII—HORSES OF ALL WORK.

STALLIONS.

Best four years old and over—J. Heintz, Sacramento, $40, second best, B. E. Harris, San Francisco, $20; best two years old—G. Lassner, Freeport, $20; second best—Carson & Griffits, Geyserville, $10; best one year old—Mrs. A. D. Miller, Walsh's Station, $7.50; best under one year—G. Lassner, Freeport, $10; second best—Mrs. W. H. Hand, Sacramento, $5.

MARES.—Best four years old and over, with colt—J. Heintz, Sacramento, $40; second best—T. Waite, Perkins, $20; best four years old and over—H. L. Miller, Walsh, $30; second best—A. D. Miller, Walsh, $15; best three years old—A. L. Hinds, Oakland, $10; best two years old—J. H. Glide, Sacramento, $7.50; best one year old—T

Waite, Perkins, $5; best suckling colt—G. Lassner, Freeport, $5.

CLASS VIII—DRAFT HORSES—NORMANS AND PERCHERONS.

STALLIONS.—Best four years old and over—T. Skillman, Petaluma, $40; Second best—A. M. Linnell, Orange Vale, $20; best two years old—T. Skillman, $10; best one year old—F. B. Chandler, Elmira, $15; second best—Hopland Stock Farm, Hopland, $7.50; best under one year—F. B. Chandler, $10; second best, Hopland Stock Farm, $5.

MARES.—Best four years old and over, with colt—Hopland Stock Farm, $40; second best, F. B. Chandler, $20; best four years old and over—T. Skillman, $30; second best—Hopland Stock Farm, $15; best one year old—Hopland Stock Farm, $5; best suckling colt—Hopland Stock Farm $5.

CLASS IX—SUFFOLK PUNCH.

Best stallion four years old and over—T. Skillman, Petaluma, $20; best three years old—T. Skillman, $15; best two years old—T. Skillman, $10; best mare four years old and over—J. E. McDonald, Carson, $15; best two years old—J. E. McDonald, Carson, $7.50; best one year old—J. E. McDonald, Carson, $5.

CLASS X—CLYDESDALES.

Best stallion four years and over—Denman & McNear, Petaluma, $40; second best—C. L. Taylor, San Francisco, $20; best three years old—Denman & McNear, Petaluma, $30; second best—T. A. Nufer, Sonoma, $15; best two years old—T. A. Nufer, $20; second best—Denman & McNear, $10; best one year old—J. H. Glide, Sacramento, $7.50; best suckling colt—Denman & McNear, $5; best mare four years old and over, with colt—Denman & McNear, $40; second best—C. L. Taylor, $20; best three years old—Morgan Hill, San Jose, $30; second best—Denman & McNear, $15; best two years old—Denman & McNear, $7.50; best one year old—C. L. Taylor, $10; second best—Denman & McNear, $5; best suckling filly—C. L. Taylor, $10; second best—Denman & McNear, $5.

CLASS XI—ENGLISH SHIRES.

Best stallion four years old and over—T. Skillman, $40; second best—Parson & Griffith, $20; best three years old—Holbert & Conger, $30; second best—Parson & Griffith, $15; best two years old—Parson & Griffith, $10; best mare four years old or over with colt—J. T. Whitney, Rocklin, $40; second best—J. M. Madison, Rocklin, $20; best four years old without colt—J. T. Whitney, $30, second best—J. M. Maddison, $15; best suckling colt—J. T. Whitney, $10; second best—J. M. Maddison, $5.

CLASS XII—DRAFT HORSES OTHER THAN THOSE CLASSIFIED.

STALLIONS.—Best stallion four years old and over—J. T. Whitney, Rocklin, $40; second best—S. N. Smith, Sycamore, Colusa county, $20; best two years old—R. J. Merkeley, Sacramento, $10; best one year old—F. W. Midgley, Sacramento, $15; second best—J. H. Gilde, Sacramento, $7.50; best under one year—W. S. Wright, Davisville, $5.

MARES.—Best mare four years old and over with colt—J. T. Whitney, $40; second best—J. H. Gilde, $20; best four years old without colt—R. J. Merkeley, $30; second best—F. W. Midgley, $15; best three years old—F. W. Midgeley, $25; second best, R. J. Merkeley, $12.50; best two years old—J. H. Glide, $15; second best—R. J. Merkeley, $7.50; best one year old—J. H. Gilde, $10; second best—Charles Studarus, Routiers, $5; best suckling fillly—W. H. Harbell, Compton, $5; to the stallion making the fastest mile, waking gait, to wagon, with one ton weight exclusive of driver—Denman & McNear, Petaluma, $30; second best—T. Skillman, Petaluma, $15.

CLASS XIII—SADDLE HORSES.

Best saddle horse, mare or gelding—B. E. Harris, San Francisco, $20; second best—L. D. Droning, San Jose, $10.

CLASS XIV—JACKS, JENNIES, ETC.

JACKS.—Best four years old and over—J. R. Madden, Dixon, $40; second best—C. Studarus. Routiers, $20; best three years old—J. D. Rosenberger, Sites, $15.

JENNIES.—Best four years old and over—J. D. Rosenberger, $30; second best—C. Studarus, $25; best three years old—C. Studarus, $15; best one year old—C. Studarus, $5; best suckling—J. D. Rosenberger, $5.

MULES.—Best matched span, three years old and over, California bred—C. Studarus, $30.

Cattle.

THOROUGHBRED CLASS.

Best thoroughbred steer or spayed or barren heifer of any class, three years old or over—W. B. Gibson, Woodland, $30.

GRADED CLASS.—Best graded steer or spayed or barren heifer, three years old and over—W. B. Gibson, $15.

CLASS I—DURHAMS.

BULLS.—Best three years old and over—J. M. Grimes, Dixon, $40; second best—P. H. Murphy, Sacramento, $20; best two years old—Heilbron Bros., Sacramento, $30; second best—V. E. Hill, Hanford, $15; best one year old—Heilbron Bros., $20; second best—C. Younger & Son, San Jose, $10; best bull calf—Heilbron Bros., $15; second best—C. Younger & Son, $7.50.

COWS.—Best three years old and over—J. M. Dixon, $40; second best—J. M. Dixon, $20; best two years old—J. M. Dixon, $30; second best—Heilbron Bros., $15; best one year old—Heilbron Bros., $20; second best—J. M. Dixon, $10; best heifer calf—Heilbron Bros., $15; second best—C. Younger & Son, $7.50.

HERDS.—Best herd of thoroughbred Durham cattle, two years old and over, to consist of one male and four females, owned by one person, silver pitcher, or cash—C. Younger & Son, $60; best young herd of thoroughbred Durham cattle, under two years, to consist of one male and four females, owned by one person, silver pitcher, or cash—Heilbron Bros., $30.

SWEEPSTAKES.—Best bull, any age—Heilbron Bros., $65; best cow, any age—C. Younger & Son, $

CLASS III—HEREFORDS.

BULLS.—Best three years old and over—Heilbron Bros., $40; second best—Bement & Son, Oakland, [illegible] two years old—Heilbron Bros., $15; best one year old—Heilbron Bros., $10; best bull calf—Heilbron Bros., $7.50.

COWS.—Best three years old and over—Heilbron Bros., $40; second best—Heilbron Bros., $20; best two years old—Heilbron Bros., $15; best one year old—Heilbron Bros., $10; best heifer calf—Heilbron Bros., $7.50.

HERDS.—Best herd of thoroughbred Hereford cattle, two years old and over, to consist of one one male and four females, owned by one person—Heilbron Bros., silver pitcher or $30; best young herd of thoroughbred Hereford cattle, under two years, to consist of one male and four females, owned by one person—Heilbron Bros, silver pitcher or $15.

SWEEPSTAKES.—Best bull, any age—Heilbron Bros., $60; best cow, any age—Heilbron Bros., $60.

CLASS IV—ANGUS OR GALLOWAYS.

BULLS.—Best three years old and over—W. B. Gibson, Woodland, $20; best two years old—W. B. Gibson, Woodland, $30; second best—Dr. G. M. Dixon, Sacramento, $15; best one year old, W. B. Gibson, $20; second best—Dr. G. M. Dixon, $10; best bull calf—W. B. Gibson, $15; second best, Dr. G. M. Dixon, $7 50.

COWS.—Best three years old and over—W. B. Gibson, $40; second best—W. B. Gibson, $20; best two years old, W. B. Gibson, $30; second best—Dr. G. M. Dixon, $15; best one year old—Dr. G. Dixon, $20; second best—W. B. Gibson, $10; best heifer calf—Dr. G. M. Dixon, $15; second best, W. B Gibson, $7.50.

HERDS.—Best herd of thoroughbred Angus or Galloway cattle, two years old and over, to consist of one male and four females, owned by one person, silver pitcher or cash—W. B. Gibson, $60; best young herd of thoroughbred Angus or Galloway cattle, under two years, to consist of one male and four females, owned by one person, silver pitcher or cash—W. B. Gibson, $15.

SWEEPSTAKES.—Best bull, any age—Dr. G. M. Dixon, $50; best cow, any age—W. B. Gibson, $65.

CLASS VI—HOLSTEIN, OR FRIESIAN.

BULLS.—Best three years old and over—F. H. Burke, Menlo Park, $40; second best—T. B. Hall, Sacramento, $20; best two years old—F. H. Burke, $15; best one year old, T. B. Hall, $20; second best—F. H Burke, $10; best bull calf—F. H. Burke, $15; Second best—T. B. Hall, $7 50.

COWS.—Best three years old and over—F. H. Burke, $40; second best—F. H. Burke, $20; best two years old—T. B. Hall, $30; second best, T. B. Hall, $15; best one year old—F. H. Burke, $20; second best, T. B. Hall, $10; best heifer calf, T. B. Hall, $10; second best—F. H. Burke, $7.50.

SWEEPSTAKES.—Best bull, any age—F. H. Burke, Menlo Park, $60; best cow, any age, T. B. Hall, Sacramento, $60.

HERDS.—Best herd of thoroughbred Holstein or Friesian cattle, two years old and over, to consist of one male and four females, owned by one person—F. H. Burke, silver pitcher or $60; best young herd of thoroughbred Holstein or Friesian cattle, under two years, to consist of one male and four females, owned by one person—F. H. Burke, silver pitcher or $30.

CLASS VII—JERSEYS AND GUERNSEYS.

BULLS.—Best three years and over—Henry Pierce, San Francisco, $40; second best—L. M. Ecles, San Danias, $20; best two years old—Henry Pierce, $30; second best—W. C. Smith, Florin, $15; best one year old—Henry Pierce, $10; best bull calf—P. J. Shields, Sacramento, $15; second best—Henry Pierce; $7.50.

COWS.—Best three years old and over—Henry Pierce, $40; second best—G. D. Campbell, Petaluma, $20; best two years old—Henry Pierce, $30; second best—G. D. Campbell, $15; best one year old—Henry Pierce, $20; second best—G. D. Campbell, $10; best heifer calf—Henry Pierce, $15; second best—Mrs. E. H. Green, Sacramento, $7.50.

HERDS.—Best herd of thoroughbred Jersey or Guernsey cattle, two years old and over, to consist of one male and four females, owned by one person—Henry Pierce, silver pitcher or $60; best young herd of thoroughbred Jerseys or Guernsey cattle, under two years old, to consist of one male and four females, owned by one person—G. D. Campbell, silver pitcher or $30.

SWEEPSTAKES.—Best bull, any age—Henry Pierce, San Francisco, $70; best cow, any age—Henry Pierce, $80.

CLASS VIII—AYRSHIRES.

BULLS.—Best three years old and over—G. Bement & Son, $40; second best—H. B. Nichols, Grass Valley, $20; best two years old—G. Bement & Son, $15; best one year old—G. Bement & Son, $10; best bull calf—G. Bement & Son, $7.50.

COWS.—Best three years old and over—G Bement & Son, $40; second best—H. B. Nichols, $20; best two years old—G. Bement & Son, $30; second best—G. Bement & Son, $15; best one year old—H. B. Nichols, $20; second best—G. Bement & Son, $10; best heifer calf—H. B. Nichols, $15; second best—G. Bement & Son, $7.50.

HERDS.—Best herd of thoroughbred Ayrshire cattle, two years old and over, to consist of one male and four females, owned by one person—G. Bement & Son, silver pitcher or cash, $60; best young herd of thoroughbred Aryshire cattle, under two years, to consist of one male and four females, owned by one person—G. Bement & Son, silver pitcher or cash, $15.

SWEEPSTAKES.—Best bull, any age—G. Bement & Son, Oakland, $60; best cow, any age—H. B. Nichols, Grass Valley, $50.

CLASS IX—HERD SWEEPSTAKES.

BEEF BREEDS.—Best herd, to consist of one bull and four females of the following ages: Four years old or over, three years old, two years old, one year old—Dr. G. M. Dixon, Sacramento, $130.

MILK BREEDS.—Best herd, to consist of one bull and four females of the following ages: Four years old or over, three years old, two years old, one year old—T. B. Hall, Sacramento, $130.

Sheep.

CLASS I—SPANISH MERINO.

Best ram, two years old and over—F. Bullard, Davisville, $15; second best—F. Bullard, Davisville, $11.25; best three ram lambs—F. Bullard, Davisville, $11.25; best pen not less than five ewes, two years old and over—F. Bullard, Davisville, $11.25; best pen not less than five ewes, one year old and under—F. Bullard, Davisville, $11.25; best pen of not less than five ewe lambs—F. Bullard, Davisville, $11.25; best ram and five of his lambs—F. Bullard, $15.

CLASS II—FRENCH MERINO.

Best ram two years old and over—J. H. Glide, Sacramento, $15; best ram one year old and under two years—J. H. Glide, $11 25; best three ram lambs—J. H. Glide, $11.25; best pen of not less than five ewes, two years old and over—J. H. Glide, $11.25; best pen of not less than five ewes, one year old and under two years—J. H. Glide, $11.25; best pen of not less than five ewe lambs—J. H. Glide, $11.25; best ram and five of his lambs—J. H. Glide, $11.25.

CLASS III—SOUTHDOWN.

Best ram, any age—G. Bement & Son, Oakland, $10; best pen ewes, not less than five, of any age—G. Bement & Son, Oakland, $10.

CLASS V—SHROPSHIRE.

Best ram, any age—J. H. Glide, Sacramento, $20; second best—T. B. Hall, Sacramento, $10; best pen ewes, not less than five, of any age—T. B. Hall, Sacramento, $20; second best—J. H. Glide, $10; best ram and five of his lambs—T. B. Hall, $20; second best—J. H. Glide, $10; best three ram lambs—J. H. Glide, $11.25; best pen of not less than five ewe lambs—T. B. Hall, $22.50; second best—J. H. Glide, $11.25,

SPECIAL—PERSIAN SHEEP.

Best ram, two years old and over—C. P. Bailey, San Jose, $10; best ram, one year old and under two years—C. P. Bailey, $10; best ewe, two years old and over—C. P. Bailey, $5; best pair of lambs—C. P. Bailey, $5.

SWEEPSTAKES.

Best merino ram and five of his lambs—F. Bullard, Woodland, $36; best ram, other than merino, and five of his lambs—J. H. Glide, $26.

Angora Goats.

THOROUGHBREDS.—Best buck two years old and over—C. P. Bailey, San Jose, $25; second best—Isaac Lee, Florin, $12.50; best buck under two years—C. P. Bailey, $15; best pen of not less than three does, two years old and over—C. P. Bailey, $25; second best—Isaac Lee, $12.50; best pen of not less than three does, under two years—C. P. Bailey, $15; second best—Isaac Lee, $7.50.

GRADED.—Best pen of not less than three does, two years and over—Isaac Lee, $5.

HERDS.—Best herd of not less than ten, of any age or breed—C. P. Bailey, $30; second best—Isaac Lee, $15.

Swine.

CLASS I—BERKSHIRE.

Best boar two years old and over—C. C. Perkins, Perkins, $20; second best—Alfred Seale, Mayfield, $10; best boar one year old and under two years—J. E. Lucas, San Rafael, $15; second best—Sessions & Co., Los Angeles, $7.50; best boar six months old and under one year—P. H. Murphy, Brighton, $10; second best—Sessions & Co., $5; best breeding sow two years old and over—J. E. Lucas, $20; second best—Sessions & Co., $10; best sow one year old and under two years—A. Seale, $15; second best—Sessions & Co., $7.50; best sow six months old and under one year—Sessions & Co., $10; second best—P. H. Murphy, $5; best sow and six pigs under three months—J. E. Lucas, $20; second best, T. Waite, Perkins, $10; best pair of pigs under six months—T. Waite, Perkins, $15; second best—A. Seale, $7.50.

Best Berkshire boar—T. Waite, Perkins.

Best Berkshire sow—J. E. Lucas, San Rafael.

Best pen of pigs under six months—Alfred Seale, Mayfield.

Best family—Alfred Seale, Mayfield.

CLASS II—ESSEX.

Best boar two years old and over—G. Bement & Son, Oakland, $10; best boar six months old and under one year—G. Bement & Son, $5; best sow two years old and over—G. Bement & Son, $10; best sow and six pigs under six months—G. Bement & Son, $5; best pair of pigs under six months—Geo. Bement & Son, $7 50.

CLASS SWEEPSTAKES.

Best boar of any age—Geo. Bement & Son, $12; best sow of any size—Geo. Bement & Son, $12.

CLASS III—POLAND CHINA.

Best boar two years old and over—P. H. Murphy, Brighton, $20; second best—J. Melvin, Davisville, $10; best boar one year old and under two years—J. Melvin, $15; second best—P. H. Murphy, $7.50; best boar six months and under one year—J. Melvin, $10; second best—P. H. Murphy, $5; best sow two years old and over—P. H. Murphy, $20; second best—J. Melvin, $10; best sow one year old and under two years—P. H. Murphy, $15; second best—J. Melvin, $7.50; best sow six months and under one year—J. Melvin, $10; second best—P. H. Murphy, $5; best sow and six pigs—J. Melvin, $10; best pair of pigs under six months—J. Melvin, $15; second best—P. H. Murphy, $7.50.

SPECIAL—SMALL YORKSHIRE.

Best boar two years old and over—M. L. Ecles, Los Angeles, $10; best boar six months old—M. L. Ecles, $7.50; best sow two years old and over—M. L. Ecles, $10; best sow six months old—M. L. Ecles, $5; best sow and six pigs under three months old—M. L. Ecles, $10; best pair of pigs under six months old—M. L. Ecles, $7.50.

Poultry.

DARK BRAHMAS.

Best cock and hen—E. H. Freeman, San Jose, $3; best cockerel and pullet—E. H. Freeman, San Jose, $3; best breeding pen, to consist of one male and four females—E. H. Freeman, San Jose, $5.

BUFF COCHINS.

Best cock and hen—G. H. Crowley, San Francisco, $3; best cockerel and pullet—G. H. Crowley, San Francisco, $3; best breeding pen, to consist of one male and four females—G. H. Crowley, San Francisco, $10.

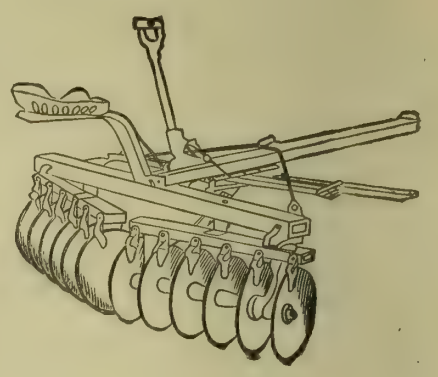
PARTRIDGE COCHINS.

Best cock and hen—E. H. Freeman, $3; best breeding pen, to consist of one male and four females—E. H. Freeman, $10.

(Continued on page 260)

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INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

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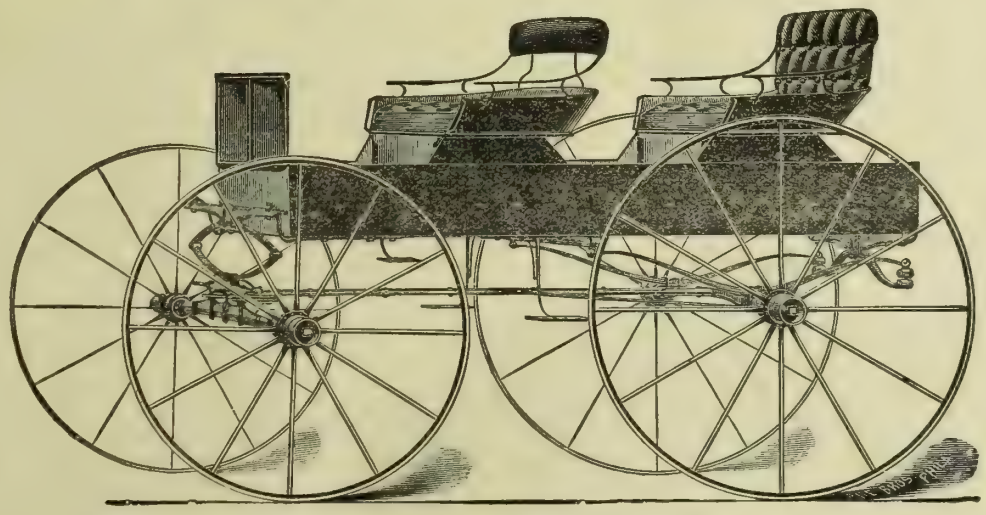
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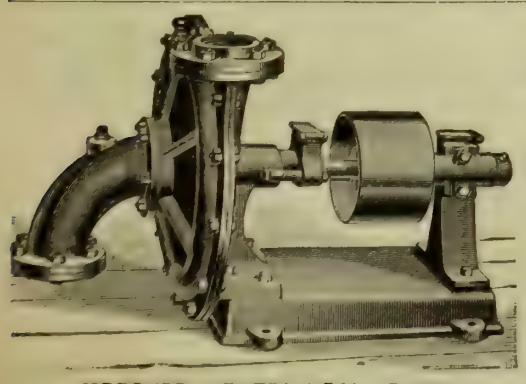
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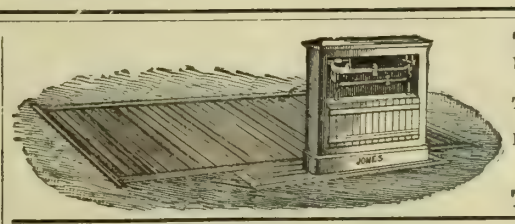
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The Home Circle.

Poem by Whittier.

"It may not be our lot to wield
The sickle in the ripened field;
Nor ours to hear, on summer eves,
The reapers' song among the sheaves.

"Yet where our duty's task is wrought
In unison with God's great thought,
The near and future blend in one,
And whatsoe'er is willed, is done.

"And ours the grateful service whence
Comes, day by day, the recompense,
The hope, the trust, the purpose stayed,
The fountain and the noonday shade.

"And were this life the utmost span,
The only end and aim of man,
Better the toil of fields like these
Than waking dream and slothful ease.

"But life, though falling like our grain,
Like that revives and springs again;
And, early called, how blest are they
Who wait in heaven their harvest day."

The Broken Wing.

I walked in the woodland meadows,
Where sweet the thrushes sing,
And I found on a bed of mosses
A bird with a broken wing.
I healed the wound, and each morning
It sang its old, sweet strain,
But the bird with the broken pinion
Never soared as high again.

I found a youth, life-broken
By sin's seductive art,
And touched with Christ-like pity,
I took him to my heart.
He lived with a noble purpose,
And struggled not in vain;
But the soul with a broken pinion
Never soars as high again.

But the bird with a broken pinion
Kept another from the snare,
And the life that sin had stricken
Raised another from despair.
Each loss had its compensation;
There were healings for each pain;
But the bird with the broken pinion
Never soars as high again.

—Anon.

Aunt Hannahran.

Written for the RURAL PRESS by KATHERINA BRYANT NOLAN.

Aunt Hannahran Stebbins rocked herself comfortably in a small old-fashioned rocker by the western window. Her fingers flew swiftly round a stocking of homespun blue yarn, while the needles clicked sharply and sent forth flashes of brightness that were an entertaining homily on her industry to a listening ear and a romantic eye, Aunt Hannahran's glasses, glinted with rainbow tints, caught from those western heavens which lay so far beyond the bare brown elms standing in the yard, like the trouble and sorrow ever standing 'twixt earth and heaven. Mayhap some thought of this was in her mind as she placidly gazed at them; still those busy, noisy needles never rested in the mad and merry race they were engaged in for an instant.

Aunt Hannahran was a woman of forty or thereabout, but she looked older than that by a number of years, and her dark, faded-looking eyes and her high, broad forehead were crowned with an abundance of silvery gray hair. She wore it brushed tightly back, showing three deep lines in her white brow—marks which the hand of time had set there and aggravating the crows' feet at the corners of her eyes into greater prominence. A less rigid style might have subdued and softened the contour of her face, but Aunt Hannahran was unmindful of any frivolous details and was prone to deal with the stern realities of life. This self-same living-room of the Stebbin's household was a refuge for the young folks of Denham, who always flocked to Aunt Hannahran sure of sympathy and much good counsel whenever the troubles of life became burdensome to their young souls. She settled lovers' quarrels in an edifying way, and she may have enjoyed the prestige she held all the more keenly on account of the fact that her husband, Hezekiah Stebbins, frowned upon her popularity.

"The course of true love never runs smooth," said Elsie Dinnock, the tinsmith's daughter, once upon a time when she had quarreled with Nat Parsons.

"Law, child, nothin' runs smooth any way; nothin' ever has since Adam and Eve went out, hand in hand, from the beautiful gardin' of Eden. Now, what have you been a sayin to Nathaniel, Elsie Dinnock?" Aunt Hannahran asked, looking at the tear-stained, angry little face belonging to the small body on the settle beside the big fireplace, where the great knobs of shining brass stood, listening, silent witnesses, seemingly eager to drink in all the stray gossip of Denham.

"Nat—"

"What did you say to Nathaniel?" Aunt Hannahran interrupted quickly, speaking each word with a deliberateness that brought the delinquent to a sense of her delinquencies, and hers alone.

"Well, Melissa Hopkins she told—"

"Yes, and Melissa Hopkins has been a throwin' herself and her pa's dollars and her pa's acres at Nathaniel for three year back, to my certain knowledge, and Melissa ain't got him yet. I dare say she will though," continued Aunt Hannahran, meditatively and calmly, "Melissa is a likely enough girl."

"Oh, Aunt Hannahran, don't say that! I know I was real hateful, and I 'spose Nat does think I'll make his life a burden. I get so mad, and Melissa always stirs up every bit of badness in me, and then I just do or say anything to shock Nat. Nat's so good and so stupid I can't help quarreling with him!"

"Well, I guess Melissa won't get Nat this year, but you must be more careful, Elsie. You don't bear the troubles we all hev to bear in a Christian sperit," and so Elsie went home comforted.

The next evening, Aunt Hannahran looked at Nat as he sat stiffly on this self-same settle, holding his hat in his hand. His hair was brushed back smartly, and plastered down over his ears in a vain endeavor to make it stay put, and he evidently expected a sermon and waited uneasily for it to begin.

"How's the cider gittin' on, Nathaniel?" she asked in a business-like tone, looking at him from over the top of her glasses.

"Tolerable" he answered briskly with a relieved accent, and his face suddenly assumed an easier expression. Aunt Hannahran was not going to lecture him after all.

"Seen Melissa Hopkins lately?" She went on in a reassuring and confidential way. I want to see Melissa. She's a likely gal and I hear she's learned a new embroidery stitch. She's smart!" said Aunt Hannahran meditatively as she carefully picked up a dropped stitch in her knitting work, "She'll make a good wife and the man who steps in and takes her off'n her pa's hands 'll be a lucky one. She can fix up a parlor spick-spack too, 'n I think its time she was agoin' off—she must be twenty if she's a day."

All this time, Nat's face was getting redder and redder. He shuffled his huge feet and twirled his hat in his big, red hands, and looked as if he heartily wished he had never come at all, yet he was as powerless to go as he had been to resist the summons Aunt Hannahran had managed to adroitly send him. Just the fact that Elsie Dinnock had been to see her, was enough to put him in torture until he was on the road to this refuge of all lovers. He wanted Aunt Hannahran to know that he loved Elsie Dinnock and now to hear her run on about Melissa was maddening. Cold chills raced up and down his back and he started as if he was shot when she suddenly said:

"You ought to be a settlin' down, Nathaniel. Now why don't you try for Melissa? It 'ud be a good thing for ye."

I don't care for Melissa, Aunt Hannahran. Since Elsie has quarreled with me I don't care about anything. I guess I'll go away" he gulped out.

"Ho!" said Aunt Hannahran. She laid down her knitting work at this juncture and pushed her glasses up on the top of her head. "I guess Elsie likes you but she is quick-tempered, and you know the Dinnock's a'nt wealthy; mebbe she's jealous of Melissa. I'll tell you what I'll do, Nathaniel. I'll find out. Elsie is a mighty good gal an' you're no need to look out for a rich wife, seein' you're an only son, though it's nice to have some one round who can fix up a parlor nice and spic-spac, and I a'nt no hand at that 'n I don' know as Elsie is."

"Oh, Aunt Hannahran, if you'd only fix it up with Elsie," Nat said, gulping down his emotion, "I,d do anything. I don't know how to take her right, but I don't care for any other girl."

Of course, Aunt Hannahran "fixed it," and the wedding bells soon chimed sweetly for Elsie and Nathaniel, at least in their hearts. Weddings in church were not the fashion in plain-going puritan Denham, and after this fashion the oracle ruled in a royal way.

To come back to the evening our story opens, which was destined to be a never-forgotten one in the family history, Hezekiah Stebbins went by the window once or twice and walked directly between the elms and the house with all his usual briskness. There was an old-fashioned escritoire beside the window, and before it, just where she, too, had a full view of the trees and sky, sat a young girl. A slight frown rose upon her fair face as this shadow crossed the prospect, but she bent to her work with greater studiousness.

She had indeed the fair, clear skin only seen in women with dark hair and eyes, and her print gown fitted a figure that was slender and slim with an unlooked-for nicety. Uncle Stebbins was a short, thick-set man with iron-gray hair and a close-trimmed, bristly beard, and he was never satisfied with anything that anybody did, always excepting Hezekiah Stebbins.

The ledger at which she labored was kept for the most part in a neat, schoolgirl, copy-like hand, but there were some pages done in a crabbed style, and if the handwriting is really an index of the character, then those symbols dwarfed and stunted and irregular were not a prepossessing indication of the amiability of temperament or the size of soul of Hezekiah Stebbins. Be that as it may, there they stood to mark the progress of events, and Carrie Defarge stumbled over them filled with impatience and vexation. It grew slightly dark and Aunt Hannahran went to sleep.

Carrie sat alternately watching her and the fast growing twilight, as she nodded, woke with a start, knit a bit and then dozed off again until she was sound asleep.

Suddenly, the outside door opened and some one came quickly through the outer kitchen and hastily lifted the latch of the room they sat in. Both women faced the door. Aunt Hannahran pushed her spectacles up and stared at the man who stood there gasping and breathing in agony in the vain effort to control his voice. Elsie looked at him steadily a moment, and her skin grew darker and her lips set themselves in a firm, straight line. Then she went up to the man and put her hand on his harm.

"What is it, Jabez? What's the matter?"

"Mr. Stebbins—Cæsar," gasped Jabez. Without a word she took her hand off from his shoulder and ran to the barnyard. It was so dark she could hardly distinguish anything in the corners where the deep shadows lay, but she thought she descried something that might be uncle near a rough pile of logs at one side of the barn, still she was unable to determine that it was Uncle Stebbins. Cæsar was a valuable bull of Devonshire stock and was usually easily enough handled, but now he seemed quite mad with rage, and he tore about the barnyard like a demon possessed with a furious longing to destroy the whole universe. There was no one to help! The nearest neighbor lived a mile away and Jabez was paralyzed with fright, but Carrie suddenly remembered the lane that led down to the wood and she determined to lure Cæsar into it. Once he was in the lane and the bars up behind him her uncle would be safe from his fury.

It was a dangerous undertaking, as she had a high, rough fence to climb over, and when the bars were down her life depended upon her luck in climbing back quick enough to escape those treacherous horns, but these ideas were mere flashes across her brain; scintillating sparks that hardly made an impression before the bars were down and she was climbing back. Her skirts caught and her hands were torn with the roughness, but she knew Cæsar had heard her and she had seen those glaring eyeballs searching out the intruder, and now she felt his hot breath on her neck; her teeth chattered like castanets, and for a moment she felt as if she must let go, but by a supreme effort of will she swung herself over and stood on the other side and confronted the animal.

She was just in time, and running along toward the wood, thus inviting Cæsar to a friendly race, she shouted back to Jabez and ordered him to put up the bars quick. Cæsar needed just this little friendly start toward the wood to remind him of the delights of freedom which civilization and imprisonment had hitherto denied him, and he set off at a mad gallop, so the thing was done and quickly, too.

Uncle Hezekiah Stebbins lay torn and bleeding by the logs which had sheltered him from Cæsar's fury. Aunt Hannahran mutely assisted Jabez and Carrie in moving him onto the old door that Jabez had wrenched off its hinges, and they started for the house without a word; words seemed useless, it was necessary to act. The stars were out now and Carrie always remembered seeing one star far away to the east, blinking and winking and seemingly holding out hope to a heart bursting with anxiety and excitement. This bright harbinger steadied her and nerved her for the struggle with death which was before them. He stalked grimly by the side and went into the door along with them and their senseless burden.

They carried him in through both kitchens, across the sittingroom and gently laid him upon his own bed. It was a small room, directly off this larger one, at one end of the house. Carrie brought water and towels and liniments and bandages, hartshorn and brandy, while the others worked.

"He breathes yet; I feel his heart beat! Jabez said, softly. I'll have Dr. Rider here soon's as I can find him. I'll send the Goodwin's up 's I go along.

When Doctor Rider walked into the kitchen, Mrs. Goodwin sat in the little rocking-chair, and judging by the looks of her face she was in a sorrowful, brooding mood. Pa Goodwin held the tongs in his hand as if to relieve his feelings by a strict attention to the burning brands in the fireplace before him, and those same great brass knobs winked silently at him as he sat there. This was something like! This was worth talking about! Pa Goodwin got up and put the tongs carefully to one side, along with the shovel, before he shook hands solemnly with Doctor Rider.

"How's the patient?" the latter asked in a brusk tone of voice calculated to express his disapproval of any morbid or uncalled for forebodings.

"He's pretty far gone," said Pa Goodwin, shaking his head mournfully. The doctor turned without another word, merely nodding his compliments to Mrs. Goodwin, and went in to see Uncle Stebbins. He was indeed "pretty far gone," so far gone that he looked as if death had already claimed him. His head was carefully bandaged, and the whiteness of the cloth added to his ghastly appearance. Doctor Rider looked grave. He examined his patient carefully and finally said:

"No bones broken; internal injuries. Has he appeared conscious at all?"

"No, he has laid just as you see him now ever since we found him. Can't you do nothin' to save him, Dr. Rider?" Aunt Hannahran asked.

"I'll leave him some medicine. He might rally. He has a strong constitution," he answered in an evasive tone, and presently he went away, having done all that could be done. It was all in vain. Hezekiah Stebbins never spoke again, and at midnight his soul went to stand before his Maker.

Paul Stebbins was an only son and the pride of Aunt Hannahran's life, but Paul and his father had never pulled together. They were too akin in the matter of obstinacy and tenacity of purpose, and so the boy had left the farm years before to make his way in the city. He had succeeded admirably, and his coming home to his father's funeral softened the pangs of grief for his mother to a great extent. He shielded her from the too talkative, too inquisitive neighbors, who were eager to know every detail of the tragedy and to formulate plans for the benefit of the widow.

Jabez did his duty under these trying circumstances manfully, and related the incidents minutely over and over again until his mouth and throat were parched and his tongue almost refused to articulate, and he did not forget to give Carrie all the credit due her. In these troublous days Jabez was brought into sympathy with the Psalmist who cried out lest he forget Jerusalem—that city of all cities to the house of Israel, and perhaps he really felt that his tongue might cleave to the roof of his mouth unless Carrie Defarge was fully understood to be the heroine of this drama enacted on the stage of the world of Denham.

(*Concluded next week.*)

COFFEE CAKE.—One pint of flour, one egg, two tablespoons of sugar, two teaspoons of baking powder; stir with cold water into a stiff batter. Bake in a long, flat tin, and, before putting into the oven, pour over it a heaping tablespoon of butter, one and a half spoons of sugar and a little ground cinnamon. Bake in a brisk oven, but watch carefully. Break instead of cutting. It needs to go on the table hot.

DAUGHTER—Shall we invite Dr. Bigfee to the reception?

Mother—I think we'd better not, he's so absent-minded. He might charge it in the bill.

WIDOWER—It was she who drove me to drink.

Miss A. (a litle weary)—What could she have driven you to that you would have liked better?

"MAMMA," said Mabel, during a severe thunderstorm, "I fink Dod is dettin weady to light his stars."

"Why, darling?"

"Cause he's scratching matches on the sky."

"ARE you the owner of this house, Jones?"

"I was before the baby was born. I am under the impression the nurse owns it now."

Good Old Times.

It is well, as an old deacon used to say, to "count up our blessings" occasionally, and this is the way the *American Economist* compares the present condition of the farmer with the "good old times."

Despite all the talk about the hardships of the farmer, he is a king compared to his father or grandfather.

If he doubts, let him hunt up the old gentleman's day book of 40 years ago and note the prices then.

A bushel of wheat would buy three-fourths of a barrel of salt; it will now buy two barrels.

A bushel of corn would buy seven and one-half pounds of sugar; to-day it will buy 12¾ pounds.

Ten pounds of butter bought 33⅓ yards of cotton cloth then; now it purchases 48⅓ yards.

Ten pounds of cheese were worth 25 pounds of nails; the cheese now pays for 54 pounds of nails.

A pound of washed wool grown ten years before the war would buy one-fifth of a barrel of salt, three and five-sixths pounds of sugar, three and two-thirds yards of cotton cloth or ten pounds of nails. To-day his one pound of wool will pay for three-fourths of a barrel of salt, eight pounds of sugar, six and one-half yards of cotton cloth and 22 pounds of nails.

These figures are based on New York city prices. But as a matter of fact he never realized anything like those prices in his local market.

Freights were high, and when the cost of bringing produce to the New York market was deducted from New York prices for farm produce and the cost of bringing the merchandise from New York to the village store at which he traded was added to the price of what he bought, the average farmer was really not more than half as well off ten years before the war as figures would indicate.

For instance, in 1857 it cost 25½ cents to bring a bushel of wheat by the cheapest route from Chicago to New York, in 1891 it cost less than six cents.

Surroupded by these conditions, life on the farm was hard indeed. Calico and Kentucky jeans had to do for Sunday garments, and an oxcart in which to ride to church was the height of style.

Luxuries for the table were almost unknown Johnny cake and salt pork was a princely diet.

Those were days of hard times, when the farmer cradled his grain, and raked and bound it by hand.

He toiled early and late, saved and scrimped, and received less in return for a week of hardest toil than the farmer in 1892 receives for a single day's pleasant ride on a mowing machine or a self-binder.

Let us have no more of such "good old times.

ONE WAY TO KEEP BURGLARS OFF.—I had gone to spend a few days with a friend in the country, and woman-like, we sat up rather late the first evening, talking. The servants had retired to the upper regions, and just as we were about to separate, I was surprised to see my friend take up two large newspapers, with the remark: "I must go and set my burglar alarm for the night." Wondering what the papers would have to do with it, I followed her and watched her spread one on the stairs and another across the hall floor. "Now we can sleep in peace; no one could either jump or walk over those newspapers without making a noise, nor could they even attempt to fold them up without rousing the house. It may not seem a very safe trap, but when everything is still the crisp rustle of paper is quite sufficient to awaken me. I have shut up the cat, so that there can be no false alarm," she concluded, and after having walked two or three times across the newspapers I was quite satisfied that the idea was not half bad.—St. Louis Chronicle.

"THEY tell me you have learned to count, Robbie," said a pious old lady to her little grandson, who was paying her a visit out in the country.

"'Course I can," answered Robbie, "listen. One, two, three, four, five, six—"

"That's right," said the old lady, encouragingly, "go on!"

"Seven, eight, nine, ten, Jack, Queen, King!"

DISCONSOLATE AUTHOR—But you assured me the book was bound to sell.

Genial Publisher—So it was, sir, but we could not sell it after it was bound.

"WHAT is wisdom?" asked a teacher of a class of a small girl. A bright-eyed little creature arose and answered: "Information of the brain."

YOUNG FOLKS' COLUMN.

Dranma.

Written for the RURAL PRESS by MAUDE PEASLEE.

A sweet, old face, with soft rings of white hair about the wrinkled forehead, had dear grandmother Pelton.

Little Jane, her namesake, loved devotedly the "dranma" who was never too tired and ill to spare time to pet and caress the dimpled darling who alone was left from a from a family of four bright children.

Slowly rallying from the shock of parting with her dear ones, Alice Pelton lingered long that pleasant fall at the home of her mother-in-law ere joining her husband, whose business had taken him to San Francisco.

At last, however, the time had come for the separation, and "dranma's" heart was full as she watched for the last glimpse of baby Jane through the car window of the slowly-moving train.

"I wish you needn't go," she had said often to her daughter-in-law. With this heart trouble I know I can't hope for many years here, and it is hard to let Jane go."

But now the train was gone and she tried to smile cheerfully at grandpa, who led her to the easy carriage in waiting.

"It won't seem home with baby gone," she said once during the homeward drive, but it was not until they passed the graveyard where were the three little graves, made only that very summer, that the tears burst forth.

Grandpa let her cry on undisturbed, only showing his deep-felt sympathy by occasionally patting her soft, wrinkled hand, lying as for so many years now, faithfully in his.

"Bear up, dear heart," he said, finally. "Poor Alice left the most of her life and heart here with us—her three little darlings yonder. She has only little Jane now; we couldn't rob her."

"I know," she sobbed, "but it is so hard for her and for John, our only one, father, to have this deep sorrow so early in life."

"It finds him with all a young man's strength to bear it, dear wife," said the good, old man.

And so they made their journey homeward to the lonely house so lately brightened by the laughter and sunny face of "Little Jane."

"Don't let her forget me, Alice," dranma had said, and the first letter brought sweet assurance that she was held in loving remembrance.

"Jane talks of you so often," Alice wrote, "and tells papa John how happy she will be when dear dranma comes to see us. You must come soon, mother dear, while we can still enjoy her precious baby ways."

The visit was planned for the spring, but during the winter months Mrs. Pelton began to fail, and one day the sad news reached Alice in her sunny, California home that "Mother Pelton" was dead, and that the lonely old man could not come yet so far from her last resting place.

To soften the news for Jane she was only told that dranma had gone to see Bessie, Tom and Frank, the brothers and sister she yet remembered and talked of with her still sorrowing mother.

"They wanted to see dranma so much she had to go darling," said Alice through her fast-falling tears.

"But I want her, too," said baby Jane, refusing to be comforted.

Out on their daily walk the following Sunday, the little one picked some yellow buttercups to be sent to "dranma, because she said they were like Jane's hair," explained the baby, all too soon tired from the slight exertion.

Alice Pelton sent them in a letter the next day to grandpa, who sat two thousand miles away, day after day, where he could see the low grave that held all earthly joy for him.

"Lay them above her breast, father," the letter read, "and whisper 'from baby Jane.' I know she'll somehow hear."

While the letter was yet on its way, Jane sickened, and despite all earthly skill and heart-wrung prayers to save this one last treasure, the little life-light flickered out.

Conscious of but little pain and with no horror of the fast-approaching change, she spoke often of "dranma," and asked if she was not going to see her now.

With hot, dry eyes, the mother whispered "yes," and choked bravely back the sobs that might have frightened the child and shaken the sweet peace of her unquestioning faith.

Late that night the faint breath died out, never more to return, and at that very moment a lonely, sorrow-stricken, old man laid a tiny bunch of buttercups on "dranma's" grave, whispering, brokenly, "from baby Jane."

Twin Sisters and Twin Brothers.

Written for the RURAL PRESS by DUANE MORLEY.

An old man going along a hard, gravelly road toward a distant city was surprised by a clattering tumult behind him. The sky was clear, the air calm, and all nature in a repose sweet and peaceful; and thereby the old man's mind was much affected, becoming tranquil as nature herself was. Now, when this clattering tumult broke rudely in upon the old man's tranquil mind, he quickly turned his head and beheld coming at a fearful pace a gigantic horse geared to an immense cart, such as merchants send out into country places well laden. This, too, was laden with much valuable merchandise.

"Now, now," said the man to himself as he beheld the spectacle, "this frightened horse and these endangered goods must be saved, and behold, there is no one but myself to accomplish it."

Nature had made the man both brave and wise, and although his natural strength was much abated, he instantly started to arrest the frantic horse and save the goods from harm. By great good fortune, which means as well skill and tact, he managed to catch one of the guiding reins, which, as the horse ran, whirled as vigorously about as a Jehu's whiplash. This, having caught it, he held on to until until the frightened beast veered into an obstacle by the roadside, thus bringing the cart with its contents to a dead halt.

In the encounter the old man was thrown down, his limbs being bruised by the contact with the hard earth. When he arose, he found himself so shaken that he could not pursue his journey, and so he was minded to turn about and retrace his steps. Before doing so, however, he righted the gearing of the horse, which had become much displaced, and with the guiding reins, firmly tethered the horse to a tree. Tremblingly, and with a whitened face—so great had been the shock—he made his way to his humble abode, which had once been a woodman's hut, standing upon a hill by the borders of a little wood. His strength was so much gone that by great exertion only did he crawl in and lie down upon his couch—a very primitive one, made of the dressed skins of wild beasts which had once roamed the mountains. The old man's situation was lonely and his condition desperate—so much so, that lying upon his rude couch, his muscles bruised and his flesh swollen, he half gave way to despair.

But the comforter came to him, as it comes to every good man, saying: "Lo! I am with you always."

The poor man knew the visitant, because it had been there oft before to comfort and revive, and so he lay upon his couch and slept, while the sun streamed in upon him through the wide-open door. As he slept two maidens—one very fair, the other very homely of face—appeared to him, standing side by side near his couch and looking upon him with expressions of anxiety and devotion. So fixed did their gaze become, as it seemed to him in his dream, that he awoke, looked all about him, but saw nothing. Overcome by a languorous perfume which pervaded the hut, he again slept. This time the two maidens stole in noiselessly, casting but a glance toward him.

Then the homely one kindled a fire at the humble hearth and brewed a liniment over it, gently bathing his bruises, while the handsome one seated herself upon a high bench in the corner of the room and sang to him as softly as the breathing of the night wind, which had every night sung him to sleep. The dream which had continued with the old man was a reality, for, touching a very tender place, his nurse awoke him and he perceived their presence. He half arose upon his couch and said to the maidens, one of whom was surprisingly lovely, and the other as surprisingly homely: "Who are you, and what is your mission?"

The homely one immediately replied: "My sister, the handsome, soothes by song, and I by humbler service. Our father fell from a cliff, there where the mountains pierce the clouds, and when mother died she admonished us of this, our duty; so forth we go, and wherever there is misery and sorrow, there we comfort and bring joy."

The old man perceived that it was of God, and so he rested content, while the homely maiden annointed his wounds and brewed him a broth of kid's flesh, his supply not yet being exhausted. While the homely one toiled the handsome one sang. Handsome and Homely were their names, and for a time their names were exactly appropriate. It was the old man's delight to gaze upon them, and yet he could not steadily, for Homely was so homely, and Handsome so handsome.

A dark cloud rested upon the brow of Homely; her voice was coarse and her motions graceless and irregular, while Handsome glided about like a princess and sang divinely as an angel, the while her face shone with its wonderful beauty. The old man's hurts were more severe than was first supposed, and he was prostrated for a long time. Then Homely had finally to go to the camps of the mountaineers for more goat's flesh, and into the lower valleys for meal of the maize.

And then, angelic as Handsome really was, she stooped from her perch of songstress to soothe by humbler service also. Someway, the more menial occupation, which was distasteful to her, but which she did largely from a sense of duty, divested her of a portion of her rare loveliness. At least, she was so humanized by it that the grateful old man could look upon her steadily.

Then, again, Homely, who had ever called the poor old man father, and wrought for him affectionately, and not altogether from a sense of duty, grew lovely as the days advanced. Her motions became graceful; her dark face changed to a bright one; her eyes shone with a tender light, and when she arrived from her long trips after meal and goats flesh, so radiant was she that the old man often called her by her sister's name, Handsome Finally—Handsome grown plain by serving instead of singing, but yet with the new light of gentle benevolence shining from her eyes—the old man said: "You sisters must be twins, so nearly do you resemble each other."

"Truly we are," was the reply of one of them; both born the same hour."

"And so your lot in life should be similar," continued the old man, who now spoke to them as a father would address his children, which was with the utmost affection. "Your prospects and fortune should both be identical." While he was yet speaking a knock was heard at the outer gate and a voice asking:

"Good friends, will you permit us to enter?"

"Certainly!" exclaimed the old man, who was so far recovered that he arose from his couch and stood by the doorway of his humble hut.

No sooner was the permission given than in came two fair and favorable youths, attired in velvet garments, with gold facings. Upon the breast of each glittered a silver star, which the king of their country had adorned them with, for their fair and honorable dealing with men. They were twin brothers and wealthy merchants from the interior.

"Months before that an agent of theirs," so they said, "had unfortunately met with an accident, his horse escaping from him. Diligent search revealed the fact that some kind hand had rescued it and firmly tethered it to a tree."

Then Homely, who was no longer homely, spoke quickly, saying: "This dear old man, whom sister and I have nursed these many weeks, he is the man."

Then great joy was had in the little hut; strong, soft garments were put upon the greybeard's trembling limbs and much money in his purse. And so smitten were the Twin Brother Merchants with the Twin Sister Nurses that not long afterward a grand mansion was erected upon the site of the humble hut, its house-warming being the wedding festivities. And so nearly alike in their beauty had the sisters at this time become that their husbands were compelled to adorn them—one with an emerald necklace, the other with a ruby—in order to distinguish them.

The moral of all this is, that right-doing brings it own reward.

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

The State Fair.

(*Continued from page 256.*)

PLYMOUTH ROCKS.

Best cock and hen—T. Waite, Perkins, $3; best cockerel and pullet—E. H. Freeman, $3; best breeding pen, to consist of one male and four females (all white)—E. H. Freeman, $3; best breeding pen, to consist of one male and four females—T. Waite, $10; best cock and hen, white—E. H. Freeman, $3.

BLACK LEGHORNS.

Best cock and hen—C. M. French, Stockton, $3; best breeding pen, to consist of one male and four females—C. M. French, Stockton, $5.

BROWN LEGHORNS.

Best cock and hen—E. H. Freeman, $3; best cockerel and pullet—E. H. Freeman $3; best breeding pen, to consist of one male and four females—E. H. Freeman, $5.

WHITE LEGHORNS.

Best cock and hen—E. H. Freeman, $3; best cockerel and pullet—E. H. Freeman, $3; best breeding pen, to consist of one male and four females—E. H. Freeman, $10.

ANDALUSIANS.

Best cock and hen—G. M. French, $3; best cockerel and pullet—G. M. French, $3; best breeding pen, to consist of one male and four females—G. M. French, $5.

WHITE-FACED BLACK SPANISH.

Best cock and hen—T. Waite, $3; best cockerel and pullet—T. Waite, $3; best breeding pen, to consist of one male and four females—T. Waite, $5.

WYANDOTTES.

Best cock and hen, silver—T. Waite, $3; best cock and hen, golden—E. H. Freeman, $3; best cockerel and pullet—E. H. Freeman, $3; best breeding pen, to consist of one male and four females, silver—E. H. Freeman, $10; best breeding pen, golden—$10.

POLISH.

Best cock and hen—T. Waite, $3; best breeding pen, to consist of one male and four females—T. Waite, $5.

WHITE MINORCAS.

Best cock and hen—G. M. French, $3; best cockerel and pullet—G. M. French, $3; best breeding pen, to consist of one male and four females—G. M. French, $5.

BLACK MINORCAS.

Best cock and hen—G. M. French, $3; best cockerel and pullet—G. M. French, $3; best breeding pen, to consist of one male and four females—G. M. French, $5.

PEKIN BANTAMS.

Best cock and hen—E. H. Freeman, $3; best breeding pen, to consist of one male and four females—E. H. Freeman, $5.

SEABRIGHT BANTAMS.

Best cock and hen—E. H. Freeman, $3; best breeding pen, to consist of one male and four females—E. H. Freeman, $5.

BLACK BREASTED RED GAME BANTAMS.

Best cock and hen—E. H. Freeman, $3; best breeding pen, to consist of one male and four females—E. H. Freeman, $5.

TURKEYS.

Best pair bronze turkeys—E. Hart, Clements, $10; second best—T. Waite, Perkins, $5.

GEESE.

Best pair Toulouse geese—T. Waite, Perkins, $5; second best—G. M. French, Stockton, $3.

DUCKS.

Best pair Rouen ducks—T. Waite, $5; best pair Pekin ducks—T. Waite, $5.

GUINEA FOWLS.

Best pair Guinea fowls—W. A. French, $5; chickens, special—Frizzles—best cock and hen—E. H. Freeman, $3; English bantams, one pair—C. W. Eldred, $3; special Pea fowls—W. A. French, $3.

Pavilion Awards.

SECOND DEPARTMENT—MACHINERY, IMPLEMENTS, ETC.

Best apparatus for raising water for irrigating or mining purposes, $20; best well pump, $10, Stewart, Trowbridge & Dykes, Berkeley.

Best water wheel California manufacture, $15, and best quartz crusher California manufacture, $15, Pelton Water Wheel Co., San Francisco.

Best steam engine California manufacture, $30, W. H. Ohman, San Francisco.

Best gas engine, $30, Daniel Best, San Leandro.

Best portable hand machine for manufacturing field or garden fence, $10, Stanton, Thomson & Co., Sacramento.

Best spray pump for orchards, $25, D. C. Crummey, San Jose.

Best light portable prospecting mill for reducing quartz, $15, F. A. Huntington, San Francisco.

Best machinery for securing gold from quartz, California manufacture, $25; best concentrator, $15; Stephen McShaw, San Francisco.

Best display of machinery from one shop, $50, Daniel Best, San Leandro.

Best display of agricultural machinery by any one house, California manufacture, $50, Benicia Agricultural Works.

Best thrashing machine, $30; best cider mill and press, diploma; best horse hay rake, $5; best power corn-sheller, diploma; best hand corn-sheller, diploma; best lawn mower, diploma; Baker & Hamilton, Sacramento.

Best hay and straw cutter, diploma, G. G. Wickson & Co., San Francisco.

Best hay press, $20, J. F. Hill, Sacramento.

Best sweep horsepower, California manufacture, $10, F. W. Krogh, San Francisco.

Best gopher trap, diploma; best vegetable cutter, diploma; best lawn sprinkler, diploma; Schaw, Ingram, Batcher & Co., Sacramento.

Best combined clod crusher, harrow pulverizer and leveler, silver medal; best cultivator, $10; H. C. Shaw, Stockton.

Best ramie-cleaning machine, $20, W. H. Murray, San Francisco.

Best wheat drill, $10; best reaping machine, $5; best potato digger, diploma; best one-horse cultivator, $5; Baker & Hamilton, Sacramento.

Best grain broadcast sowing machine, $10; best self-binding harvester, $10; best hay-pitching machine, $10; best harrow, diploma; Stanton, Thomson & Co., Sacramento.

Best mowing machine, $5, Amos Whiteley & Co., San Francisco.

Best horse hoe, diploma, G. G. Wickson & Co., San Francisco.

Best field roller and crusher, $10, Wm. Gutenberger, Sacramento.

Best fanning-mill, diploma, Fereva & Chivell, Butte county.

Best refrigerator, diploma, Louis Schaffer, Oakland.

Best grain-cleaning attachment for combined harvesters, $10, Matteson & Williamson, Stockton.

Best windmill, $25, Crane & Co., San Francisco.

Best grain cleaner, independent, $10, Daniel Best, San Leandro.

Best platform scales, silver medal, Schaw, Ingram, Batcher & Co., Sacramento.

Best washing machine, $5, Humboldt Washing Machine Co., Rohnerville.

Best display of haying and harvesting tools, $10; Baker & Hamilton, Sacramento.

Best garden seed drill, diploma; best display of dairy machinery, $20; best cream separator, silver medal; best cheese vat with heater attached, $5; best churn, $5; best butter-worker, diploma; best clingstone pitter, $5, and best fruit-grader, $5; G. G. Wickson & Co., San Francisco.

Best pruning shears, $2.50; J. Cartwright, Malago, Fresno county.

Best wine and cider press, diploma and $10; F. W. Krogh, San Francisco.

Best excavating scraper, $10; best road scraper, $10; Western Wheeled Scraper Company, Sacramento.

Best cabbage-cutter, $2; best sausage-meat cutter and stuffer, $2; best clothes-wringer, diploma; best pruning-knife, $2.50; Schaw, Ingram, Butcher & Co, Sacramento.

Best sulky plow, $10; best sod plow, $5; best plow for all purposes, $5; Benecia Agricultural Works, Benecia.

Best cast-iron plow, $5; best side-hill plow, $5; Baker & Hamilton, Sacramento.

Best gang plow, $25; best stubble plow, $5; best dynamometer, $5; Stanton, Thompson & Co., Sacramento.

Best steel plow, $5; best one-horse plow, $5; best chilled plow, $5; Schaw, Ingram, Batcher & Co., Sacramento.

Best vineyard plow, $5; G. G. Wickson & Co., San Francisco.

Best track sulky, $5; best carriage or cab for children, diploma; Studebaker Manufacturing Company, per T. A. Lauder, Sacramento.

Best two-seated open wagon, $10; Benecia Agricultural Works, Benecia.

Best training cart, $10; Baker & Hamilton, Sacramento.

Best closed family carriage, diploma and $20; best ladies' phæton, $10; best open buggy, $10; best business wagon, $10; A. Meister, Sacramento.

Best farm wagon for general purposes, $15; Studebaker Bros.

Best top buggy, diploma and $10; best single-seat trotting wagon, $10; best spring market wagon, $10; best pleasure cart, $10; J. F. Hill, Sacramento.

Best open family carriage, diploma and $20; breaking cart, long shafts, $10; M. Kestler, Sacramento.

Best hydraulic giant, diploma; best hydraulic water-gates, $5; best patent wrought-iron, lead-lined couplings, $2.50; Joshua Hendy Machine Works, San Francisco.

Best wire-rope way system for transportation of ores, etc., $5; Vulcan Iron Works, San Francisco.

Best system of transmission of power by electricity, silver medal; Electrical Engineering Company, San Francisco.

Best model for fruit truck, diploma; Smith McGarvin, San Jose.

Best magnesia sectional covering for steam pipes for boilers, etc., $5; A. B. Johnson & Co., San Francisco.

Best steel-tilting windmill tower, diploma; Aermotor Company, Sacramento.

Best ore-feeder for quartzmill, California manufacture, $5; F. A. Huntington, Sacramento.

Best concentrator for ores of all kinds, diploma; G. E. Woodbury, San Francisco.

Best hay tedder, $5; Amos Whiteley & Co., San Francisco.

Best hay wagon, $5; M. Kestler, Sacramento.

Best hose-coupling, diploma; W. H. Murray, San Francisco.

Best grape crusher, $5; best tire upsetter and welding machine, $2.50; Toulouse & Delorieux, San Francisco.

Best water filters, $5; Davis Water Filter Company, San Francisco.

Best disc harrow, $5; Stanton, Thomson & Co., Sacramento.

Best spading harrow, $5; H. C. Shaw, Stockton.

Best flushers for sewers, silver medal; Gravity Flushing Company, Alameda.

Best patent ventilator for refrigerators, $5; Louis Schaffer, Oakland.

A model sulphur house and car for fruit, exhibited by C. Ireland, Woodland, is given special mention.

Third Department—Textile Fabrics and Materials From Which They are Made.

CLASS I—CLOTHING AND KINDRED TEXTURES.

Best display of dry goods, $20; Weinstock, Lubin & Company, Sacramento.

Best exhibit of carpets and rugs, $20; best 15 yards of woolen carpet, silver medal; best Turkish rug, $5; best exhibit of window curtains, cornices and silver trimmings, silver medal, John Breuner, Sacramento.

Best display of fancy goods, $20; best display of bolting cloth, silver medal; B. Wilson & Co., Sacramento.

Best ten yards ramie cloth, California manufacture, $5; best ten yards dressed ramie, California manufacture, $5; best ten yards rag carpet, $5; W. H. Murray, San Francisco.

Best collection of furs, not less than six pieces, $10; B. Wilson & Co., Sacramento.

Best exhibit of men's hats and caps, silver medal; best silk hat, diploma; best soft hat, diploma; D. H. Quinn, Sacramento.

Best display of woolen goods by one factory, California manufacture, $25; J. A. Robinson, Merced Mills.

Best double carpet coverlet, $5; John Breuner, Sacramento.

CLASS II—NEEDLE, SHELL AND WAX WORK.

Best display of children's clothing, California made, $15; Mrs. Wm. East, Chico.

Best embroidered dressing gown, $5; Mrs. Bryant San Francisco.

Best embroidered children clothes, Mrs. East, Chico.

Best display of ladies' underwear, $10; Mrs. Patrick, Sacramento.

Best embroidered table cover, four ends, $5; Miss R. Flint, Sacramento.

Best embroidered table scarf, two ends, $3; Mrs. Bryant, San Francisco.

Best embroidered ottoman cover, $3; best embroidered chair seat and back, $5; best embroidered sofa pillow and cushion, $5; best silk embroidery on flannel, $3; best display of Kensington embroidery with floss or satin, $5; best embroideries, $3; best crochet shawl, $3; best lounge afghan, $5; best carriage afghan $5; best embroidered handkerchief, $3; best Kensington embroidery, $5; best hammered brass, $5; best embroidered on bolting cloth, $6; Mrs. Wm. East, Chico.

Best embroidered fire-screen, $5; best embroidered bedspread, $5; best embroidered necktie case, $3; best painted table scarf, two ends, $2; best painted wall banner, $3; best painted panel, $3; best water painting, $5; best toilet set embroidered in silk, not less than three pieces, $6; best Queen Anne embroidery, $5; Mrs. R. E. Chappie, Sacramento.

Best embroidered tea cloth, $5; Miss G. Bartlett, Oakland.

Best embroidered table cloth, $3; Miss Flint, Sacramento.

Best embroidered point lace handkerchief, $2; best braiding by hand, $2; best fancy braiding by hand, $2; best bead work by hand, $1; Mrs. Phoebe Brown, Sacramento.

Best embroidered piano scarf, two ends, $3; best elegant and fine display of silk embroidery on linen, $10; best embroidered sideboard covers, $3; best embroidered table runner, $3; best embroidered piano drape on India silk, $3; best embroidered portiers, $5; best applique work, $2; best embroidery on plush, $5; best embroidered glove case, $3; best combination of tinting and embroidery, $5; best, largest and handsomest display of articles made wholly by exhibitor, $20, Mrs. Bryant, San Francisco.

Best alliance embroidery, $3; best renaissance embroidery in rape silk, $3; best, largest and finest display of Turkish embroidery, $3; best French embroidery, $5; best embroidered toilet set, not less than three pieces; best Danish drawn work, $3; best painted toilet set, not less than five pieces, $10; best crochet nectie, $1; best set of embroidered napkins, $5; Miss Schubert, San Francisco.

Best embroidered center piece and doylies, $3; best crochet case, $2; best painted lambrequin, $5; best display of decorative painting on wood, plush or silk, $5. best display of decorative painting on velvet, glass or birch bark, $5; Miss Ough, Sacramento.

Best, largest and finest display of outline embroidery, $1; best and finest display of lace made by hand, not less than five pieces; best darned net, not less than three pieces; best macrame lace work, $2; best modeling in clay or putty, $3; Mrs. E. J. Clark, Sacramento.

Best hand sewing, not less than three pieces, $2; best child's afghan, $2; best patchwork quilt, $3; best raised wool work, $2; best hearth rug, hand made, $2; best display of paper flowers, $1; best crochet purse, $2; best tatting, not less than three yards, $2; Mrs. J. L. Small, Ione.

Best crochet bedspread, $5; Mrs. Belle Muddox.

Best knit bedspread, $5; Mrs. R. Kunigh, Sacramento.

Best crazy patchwork quilt, $5; Mrs. Perrin Stanton, Sacramento.

Best surface plush painting, $3; best laid plush painting, $5; best display of decorative painting on bolting cloth, linen, etc., $5; Mrs. G. D. Stewart, Sacramento.

Best painting on ivorine, not less than three pieces, $5; Miss Pearl Waggoner, Sacramento.

Best porcelain painting, not less than 12 pieces, $10; Miss Joey Richardson, Sacramento.

Best pair of print wool stockings, $3; Mrs. S. J. Conrad.

Best pair of Spanish hammock napkins or doylies, $5; Miss Mabel Steinman, Sacramento.

JUVENILE DEPARTMENT.

Best and most tastily made calico dress, etc., $5; Beryl Patrick, Sacramento.

Best hand-sewing, etc., silver medal; Marion Derby, Shasta county.

Best crochet work, napkin rings; Lizzie Purrington, Santa Rosa.

Best needlework picture, $5; Dollie Gribel, Lakeport.

Best pen drawing, napkin ring; Arthur Atkinson, Sacramento.

Best penmanship, napkin ring; Marion Derby, Shasta county,

The committee recommend that Kitty Gardener, of Sacramento, ten years of age, be awarded a special premium for exhibiting 14 pieces of fine work not included in the list for premiums in this department. In some respects the exhibits equal similar displays made by adults.

CLASS III—PRINTING, LITHOGRAPHING, ETC.

Best specimen of Lithographic printing—silver medal; best specimen of lithography, silver medal; A. D. Jenny, Sacramento.

Fourth Department—Mechanical Products.

CLASS I—MANUFACTURERS OF LEATHER, PAPER AND RUBBER.

Best exhibits of trunks, valises and bags—$10 and silver medal, J. Longshore, Sacramento.

Best display of rubber hose and belting—silver medal; best display of cordage—silver medal, Shaw, Ingram, Batcher & Co., Sacramento.

Best set of double harness, silver medal and $10; best set single harness, $10; best display of Mexican saddles, $5; best display of leather, silver medal; best display of saddles and bridles, silver medal; best display of saddle-trees, diploma; best display of shoe lasts, pegs and lasting machine, $5—A. A. Van Voorhies & Co., Sacramento.

Best display of Angora goat robes, $10—C. P. Bailey, San Jose.

Best pair of dress boots, $5; Best pair of heavy boots, $3; best pair of gentlemen's dress shoes, $5; best pair of Congress gaiters, $5; best pair of ladies' slippers, $3; best pair ladies' gaiters, $3—P. F. Nolan & Sons, Sacramento.

Best display of paper, two tons; W. H. Murray, San Francisco.

CLASS II—WORKED METALS.

Best display of lamps, diploma; best display of platedware, $10—Joseph Thieben Crockery Company.

Best display of wire rope, silver medal—Washburn & Moen Manufacturing Company, San Francisco.

Best display of modern building hardware, $20; best display of blacksmithing tools, diploma and $10; best display of general hardware, $20; best display of iron and steel, Pacific coast make, silver medal; best axles, California make, silver medal; best barbed-wire fencing, silver medal and $5; best display of mechanical tools, $20; best horseshoes, machine made, silver medal; best display of table cutlery, silver medal; best display of pocket cutlery, $5; best circular saws, $5; best display of files, $5; best exhibit of antifriction metal, diploma; best exhibit of shot, diploma; best display of butchers' supplies and goods, diploma and $10—Shaw, Ingram, Batcher & Co., Sacramento.

Best display of saddler's hardware, $10; A. A. Van Voorhies & Co., Sacramento.

Best mill saws, $5; N. W. Spaulding Saw Company, San Francisco.

Best horseshoes, hand made, silver medal; J. P. Browne, Santa Ana.

Best display of wire goods, diploma and $5; Washburn & Moen Manufacturing Company, San Francisco.

CLASS III—STOVES, CASTINGS, ETC.

Best ornamented statuary, $5; best ornamented fruit and flower stand, $5; best assortment Japanese ware, $10; best parlor grate, $3—Joseph Thieben Crockery Co., Sacramento; best gas stove, $5—Capital Gas Co., Sacramento.

CLASS IV—MUSICAL INSTRUMENTS—CALIFORNIA MANUFACTURE.

Best general display of musical instruments, silver medal and $20—M. L. Hammer, Sacramento.

CLASS V—FURNITURE.

Best wooden mantel, $5—Joseph Thieben Crockery Co., Sacramento; best display of furniture, diploma and $20; best set of parlor furniture, $20; best set of bedroom furniture, $10; best set of library furniture, $10; best set of office furniture, $10; best set of school furniture, $10; best folding bed, diploma and $10; best sofa, $10; best lounge, $5; best extension table, $5; best set of parlor chairs, $10; best dressing bureau, $10; best center-table, $5; best pair of side tables, $5; best display of upholstery, $10; best spring mattress, $5; best hair mattress, $5; best wool mattress, $3; best wardrobe, $10; best sick chair and couch, $5; best set dining-room furniture, $10; best display of willow furniture, $10—John Breuner, Sacramento; best display of California woods, silver medal—W. H. Chaffee, Mariposa county.

CLASS VI—WOODENWARE.

Best display of window shades, $5, John Breuner, Sacramento; best display of split-wood baskets, $3, Dr. Thomas Cogswell, San Diego; best display of woodenware, $10, W. F. Barnes & Co.; best display turning-lathe work, $5, Wm. Clark, Sacramento; best display of cedarware, $5; best display pineware, $5; best display of oakware, $5; best display of osier, $5; best exhibition of broomcorn brooms, $5; best assortment of coopersware, $10; best display of willoware, $5—A. S. Hopkins Company, Sacramento.

CLASS VII—ELECTRICAL APPLIANCES, PHILOSOPHICAL, SPORTING, SURGICAL, DENTAL, DRAWING, SURVEYING LEVELING INSTRUMENTS AND APPARATUS, ETC., OF FINE WORKMANSHIP, EXHIBITED BY MAKER.

Best double-barrel shotgun, $5; best breech-loading shotgun, 5; best sporting rifle, $5; best gamebag, $3—N. M. Kimball & Co., San Francisco.

Best exhibition of electrical appliances, consisting of dynamos, motors, arc and incandescent lighting, etc., $100; best electrical generator and dynamo, $20; best voltaic arc lamp, $10; best incandescent lamp, $10—Electrical Engineering Co., San Francisco.

Best level, diploma; best balance, diploma; best mining and blasting powder, silver medal; best sporting powder, diploma—Schaw, Ingram, Batcher & Co., Sacramento.

Best bicycle, silver medal—E. W. Melvin, Sacramento.

CLASS IX—STONEWARE, BRICKS, TILES, CROCKERY, GLASS, ETC.

Best display of table and bar glassware, diploma and $10; best display of queensware, $5; best flooring, $5; Joseph Thieben Crockery Co., Sacramento.

Best hydraulic cement, diploma, J. W. Grace, San Francisco.

Best general display of art-stained glass for architectural work, silver medal; best embossed and bent glass, diploma; Wm. Schroeder, San Francisco.

Best stoneware, diploma; best sample of drain tile, $5; best sewer pipe, $5; best roofing tile, $5; best display of terra cotta, $10; best pressed bricks, diploma; best pottery, various kinds, silver medal; best display of stoneware, $10; best water-pipe, diploma; best firebricks, $3; Muddox & Co. Sacramento.

Best exhibit of slate, diploma and $10, W. H. Murray, San Francisco.

Best artificial stone and concrete, diploma, Norting & Byling, Sacramento.

CLASS X—MINERALS, FOSSILS, BIRDS, FISHES, ETC.

Best cabinets of agates, crystallized fossils and crystallized quartz, $25, Alfred Tregidgo, Grass Valley.

Best collection illustrating the ornithology of California, silver medal, C. W. Tozer, Sacramento.

Best suite of useful minerals of California, including coals of California, iron ores of California, marbles of California, sandstones of California, marls of California, peats of California, soils of California, saltwaters of California, minerals of California, potters' clay of California, fireclay of Cali-

fornia, burr stones of California, gypsum of California; Alex. Keller, Auburn, $20.

Best suite of the vegetable kingdom, including the woods and most useful plants and native grasses of California, silver medal, Mrs. F. Perrington, Santa Rosa.

Best collection of minerals illustrating the geology of California, silver medal, R. Cosner, Colusa.

CLASS XI—MARBLE AND GRANITE WORK.

Best collection of polish of marble work, at least six pieces, $30, John Breuner, Sacramento.

Best collection of polish of California granite work, six pieces, $30, Sacramento county exhibit.

CLASS XII—INCUBATORS.

For the best display of incubators in operation, $25; for the incubator hatching the greatest number of chicks during the show, $10; for the best display of brooders, $10; J. W. Atkinson, San Jose.

Fifth Department.

CLASS I—FARM PRODUCTS

Most extensive, varied and perfect display of farm products grown by one person, Mrs. F. Perrington, Santa Rosa, $100; second best, Mrs. J. P. Odbert, Sacramento, $50.

CLASS II—SILK, COTTON AND TOBACCO.

Best display California manufactured tobacco, Love & Connolly, San Francisco, silver medal; best California tobacco in leaf, same exhibitor, $5.

Best grown cotton, $20; best display of silks, $15; best thrown and twisted silk in the gum and boiled off, made in California, $5; best machine spool silk, $5; best knitting spool silk, $5; best spool embroidery, $5; W. H. Murray, San Francisco.

Best cocoons, eggs and moths, $5, Mrs. F. Perrington, Santa Rosa.

CLASS III—FLOUR AND GRAIN.

Best sample Australian wheat, $10, T. B. Hull, Yuba City.

Best white Chili wheat, $10, C. A. Hull, Union House.

Best sample Proper wheat, $10, R. F. Moulton, Colusa.

Best white Club wheat, $10, T. B. Hull, Yuba City.

Best Sonora wheat, $10, Joseph Sims, Union House.

Best barley, $5, T. B. Hull, Yuba City.

Best Chevalier barley, $5, Robert Cosner, Colusa.

Best oats, $5; best buckwheat, 5; best yellow corn, $5 Mrs. F. Perrington, Santa Rosa.

Best Early corn, $5, C. A. Hull, Union House.

Best bakers' flour, $10, R. Nethereatt, Woodland.

Best family flour, $10, Colusa Mill Company.

CLASS IV—VEGETABLES, ROOTS, ETC.

Best six marrow squashes, $3, L. F. Moulton, Colusa.

Best six Hubbard squashes, $3, J. H. Hamilton, Sacramento.

Best six crooked-neck squashes, $3; best three watermelons, $3, L. F. Moulton, Colusa.

Best and largest pumpkins, $3, Mrs. F. Perrington, Santa Rosa.

Best dozen green sweet corn, $3; best six cucumbers, $2; best half peck Lima beans, in pod, $3; best half peck white beans, dried, $3; best half peck kidney bush beans, in pod, $3; best half peck pole bush beans, $2; best filled peas, dried, $2; best one-half peck garden peas, dried, $2; best castor-oil beans, $3; best and greatest variety peas, dry, $3; best table collection of vegetables, $20; F. Gabrielle, Sacramento.

CLASS V—FLOWERS.

Best and largest collection of flowering plants in bloom, $20; best collection of ornamental foliage plants, $20; best display of cut flowers, to be kept fresh during the exhibition by replacing, $20; best collection of new and rare plants, $15; best and most varied exhibit of named varieties of dahlias, $10; best collection of roses in bloom, $10; best collection of fuchias in bloom, $10; best collection of tuberoses, $10; best collection of pinks, $10; best collection of ferns, $15; best display of bouquets, $10; best collection of plants suitable for greenhouse, conservatory and window culture, $15; best display of hanging baskets containing plants, $10; best display of cut-flower designs, to be made on each Thursday evening of the Fair, $50; Bell Conservatory Company, Sacramento.

Best display of coleus, distinct varieties, $5; Mrs. J. D. Odbert, Sacramento.

CLASS IX—MISCELLANEOUS.

Best hock squashes, $2.50; W. D. Hack, Freeport.

Best royal Dutch cocoa, $5; best catsups, diploma; best Canada sap maple syrup, silver medal; best soups, $2.50; Williams, Brown & Co., San Francisco.

Best Scotch millet, $1; best nest-egg gourds, $1; best pomegranate, $1; J. H. Hamilton, Sacramento.

Best toboggan maple syrup, $2.50; C. B. Jennings, Sacramento.

Best condiment stock food, diploma; Charles Kertell, San Francisco.

Best sack of Hardy wheat, $1; best sack of Genesee wheat, $1; best Pride of Butte wheat, $1; best sack Neapaul barley, $1; T. B. Hull, Yuba City.

Best ramie seed, $1; W. H. Murray, San Francisco.

Best bamboo fishing poles, $1; best pomegranates, $1; best bitter almonds, $1; best hardshell almonds, $1; G. G. Gilbert, Sacramento.

Best evergreen blackberries, $1; best French breakfast radishes, best cayenne pepper on tree, $1; best Hixox peas, $1; Joe Tash, Sacramento.

Best four jars cucumbers, $1; best chow chow, $1; best pickles, Libby or Chili sauce, $1; best mustard pickles sauce, $1; best kohlrabi, $1; Mrs. J. P. Odbert, Sacramento.

Best nuthouse, $2; Bell Muddox, Sacramento.

Best Japanese persimmons, $1; best Portegue squash, $1; J. H. Hamilton, Sacramento.

Best pickled peppers, $1; best cucumber pickles, $1; Mary Kerr, Elk Grove.

Best sample Australian wheat, $1; best sample Club wheat, $1; best sample Proper wheat, $1; best sample Russian oats, $1; best sample of barley, $1; J. A. Robinson, Merced.

Best 42 varieties garden seeds, $2.50; J. P. Odbert, Sacramento.

Best display of native grasses, diploma; Della Krull, Sacramento.

Best collection of rare Cacti plants, $2.50; Herman Fisher.

Best sweet pumpkins, $1; Joe Tash, Sacramento.

Best cornmeal, $2.50; best graham flour, dip'oma; Colusa Flouring Mill, Colusa.

Best broomcorn in sheaf, $2; best yellow corn in the ear, $1; best white corn in ear, $1; J. A. Robinson, Merced.

CLASS VI—CHEESE.

Best and largest display of cheese, diploma and $15; best cheese one year old and over, $15; A. J. Rider, Galt.

Best cheese under one year, Dr. Harvey, Galt.

CLASS VII—CURED MEATS, BUTTER, BREAD, ETC.

Best domestic rye bread, $5; Mrs. S. J Conrad, Sacramento.

Best four loaves baker's bread, $3; best graham bread, $5; Mrs. J. P. Odbert.

Best soda biscuit, $2; best brown bread, domestic, $5; best display of domestic bread, $10, best butter in rolls, 40 pounds, $20; best butter in firkin, 40 pounds, $15; Mrs. C. A. Hull, Union House.

Best display of home-cured ham, bacon and lard, with formula, etc., F. Perrington, Santa Rosa.

Best domestic white bread, $5; J. M. Davies, Florin.

Best biscuit and domestic corn bread, $5; Belle Muddox, Sacramento.

CLASS VIII—SUGAR, SYRUP, EXTRACTS, CONFECTIONS AND CANDY.

Best 100 pounds sugar from cane, $20; W. H. Murray, San Francisco.

Best display of confectionery, $10; best general varieties of candy made in the hall during the exhibition, diploma and $10; J. A. Moynihan, Sacramento.

Best 100 pounds sugar from sugar beets, $20; best five gallons of syrup from either of the above, $10; W. B. Ewer, San Francisco.

Gold Medals.

For the most meritorious exhibition in the several departments of the pavilion, the Society's gold medals have been awarded to the following:

Second Department, machinery, implements, etc., Baker & Hamilton.

Third Department, textile fabrics and materials from which they are made, Mrs. William East, Chico.

Fourth Department, mechanical products, John Breuner, Sacramento.

Fifth Department, agricultural products, Manhattan Food Co.

Sixth Department, fruits, Mrs. J. P. Odbert.

Seventh Department, fine arts, Julius Ludovichi, San Francisco.

The grand gold medal for the very best exhibit in the pavilion will be awarded to-night.

To W. H. M Carthy, of San Francisco, for most meritorious exhibit of standard-bred horses—Dexter Prince and five colts.

To Denman & McNear, Petaluma, for horses other than standard-bred—Clydesdales.

To A. & A. Heilbron, Sacramento, for livestock other than horses—Durham and Hereford cattle.

The County Exhibits.

In the county exhibits, the awards have been made at the pavilion as follows:

First premium, increased to $750—Sacramento county.

Second—Placer county $300.

Third—Sutter county, $300.

Fourth—Colusa county, $300.

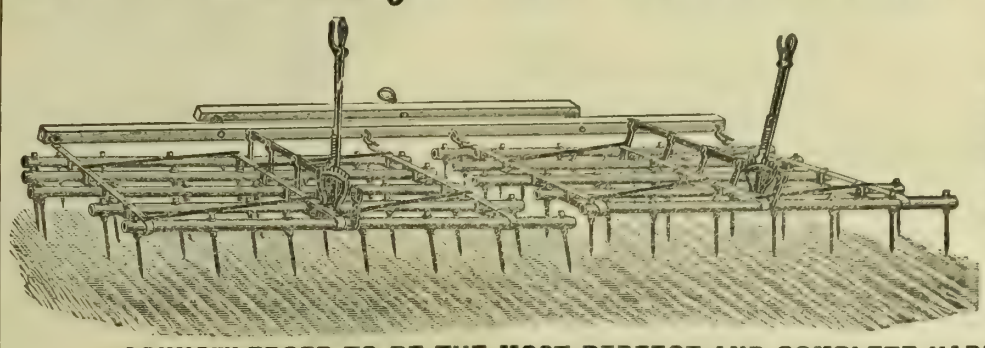
Fifth—Sonoma county, $200.

Sixth—Winters District, comprising parts of Solano and Yolo counties, $200.

Seventh—Merced county, $150.

Eighth—Mariposa county, $50.

The Evans Adjustable Steel Frame Lever Harrow.



IT HAS NO EQUAL. THE STRONGEST HARROW MADE.

Can be used as a straight-tooth pulverizing harrow, or a slanting-tooth smoothing harrow. By means of the lever the teeth can be set straight, or to any desired slant. The beams are made of steel tubes, and the teeth pass through the same and are threaded and held firmly in place by a tap. If stalks or trash accumulate on the teeth, when used as a straight-tooth harrow, the teeth can be changed in a moment, by means of the lever, to a slanting position for cleaning off the trash.

As a smoothing harrow it never clogs, all rubbish being cut in two, or passing down and off at the end of the teeth, and is completely buried; and for cultivating young grain in its early stage, it is unequaled. It thoroughly pulverizes the soil, and destroys all the weeds, while the young grain remains uninjured.

ACKNOWLEDGED TO BE THE MOST PERFECT AND COMPLETE HARROW ON THE MARKET.

No. 37,	made in three sections,	contains	120	teeth;	cuts	20	feet wide;	price	$60	No. 24,	made in two sections,	contains	70 teeth; cuts 11½ feet wide; price $35
No. 34,	" " "	"	105	"	"	18	" "	"	50	No. 25,	" " "	"	[illegible] " " 10 " " " 30
No. 31,	" " "	"	90	"	"	16	" "	"	45	No. 26,	" " "	"	50 " " 8 " " " 2

During next 60 days will make a Special Discount of 25 per cent for cash with order.

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APPLIED WITH AN ORDINARY BRUSH.

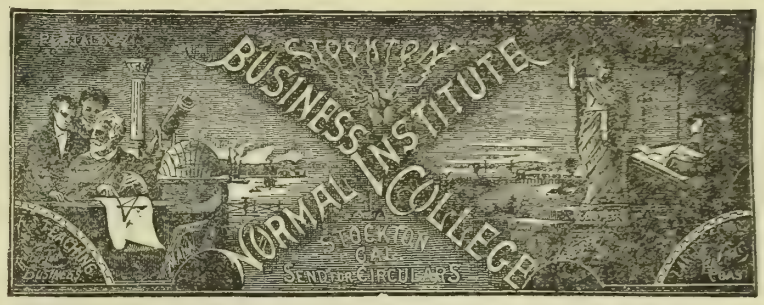
Protects All Kinds of Timber, Above or Below Ground or Water, from Rot and Decay.

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NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

FOR $19.00

We can send you one of our

SPECIALTY SINGLE BUGGY HARNESS,

Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

Just the Harness for an Elegant Turnout.

They sell here for $25 00, and harness not as good is often sold for $35.00 in retail shops If harness is not as represented, money will be refunded.

Liebold Harness Co.

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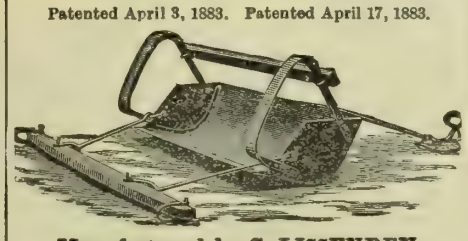
Collar and Hames, instead of Breast Collar, $2 00 extra.

Please state if you want single strap Harness, or folded style Harness, with traces double throughout.

—THE—

Porteous Improved Scraper

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Manufactured by G. LISSENDEN.

The attention of the public is called to this Scraper and the many varieties of work of which it is capable, such as Railroad Work, Irrigation Ditches, Levee Building, Leveling Land, Road Making, etc.

This implement will take up and carry its load to any desired distance. It will distribute the dirt evenly or deposit its load in bulk as desired. It will do the work of Scraper, Grader, and Carrier. Thousands of these Scrapers are in use in all parts of the country.

☞ This Scraper is all steel—the only one manufactured in the State.

Price, all Steel, four-horse, $40; Steel two-horse, $31 Address all orders to G. LISSENDEN, Stockton, California.

DOUBLE Breech-Loader $7.50. RIFLES $2.00 WATCHES **GUNS** BICYCLES $15 All kinds cheaper than elsewhere. Before you buy, send stamp for catalogue to THE POWELL & CLEMENT CO. 106 Main St., Cincinnati, O

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U. S. STANDARD, FULLY WARRANTED.

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GALE CHILLED PLOWS

BAKER AND HAMILTON

SAN FRANCISCO-SACRAMENTO

PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

VISIT TO SAN JOSE GRANGE.—Recently 15 members of Eden Grange (including Worthy Master Dennis and Judge Blackwood) chartered an omnibus and drove to San Jose, over 30 miles distant. They surprised the Garden City Grangers, to the delight of the Patrons of both Granges. A class of seven was initiated at the meeting.

MASTERLY SENTIMENTS.

In his address to members of the Order, March 21, 1892, J. H. Brigham, W. M. of the National Grange, expressed the sentiments which it is well for voters to consider at this time, namely: "We should also take a lively interest in the nomination and election of representatives. It is of no use to petition to men who turn a deaf ear to our cries. Nominate friendly men in your party conventions. Elect friendly men at the polls, and then all your reasonable demands will be granted. Retire every "people-be-dammed" man, in convention if you can, at the polls if you fail in convention. Ballots are even more effective than bullets. If the people fail to make proper use of the former, the time may come when the latter must be used to 'Keep the Jewel of Liberty in the Family of Freedom.'

"No more important campaign was ever entered upon by a patriotic people than the one just before us. The people must learn to distinguish between sound argument and sophistry. They must not mistake the railing of the demagogue for the inspired eloquence of the true patriot and honest citizen. No Order or organization has done more to qualify farmers to make wise use of their political power than the Patrons of Husbandry. We are proud of our past, intensely earnest at the present, very hopeful of the future."

SEVERE ILLNESS.—J. Hollister, P. M. of Eden Grange, we are sorry to learn, is seriously ill in San Francisco, under charge of the eminent physician, Dr. Lane. Bro. H., after having the "Grip" last winter, was painfully troubled with neuralgia, which has now been aggravated with other ills until his condition is deemed critical. He has many sincere sympathizers.

WHAT WILL THE PROGRAM BE?

This is the question naturally asked relating to the coming session of the State Grange, opening at San Jose, Oct. 4th. According to the ordinary custom, we can anticipate that the Grange will meet at 10 A. M. The room now being prepared in the new Unitarian Church, we apprehend, will be very commodious and comfortable. After hearty greetings between Patrons from various quarters of the State, and the singing of welcome Grange songs, the State Grange will be opened in ample form by Worthy Master Davis. The appointment of the Committee on Order of Business will be in order, also the report of the Committee on Credentials.

Tuesday afternoon the annual address of the W. M. and other officers' reports may be expected to consume most of the session.

Tuesday evening a reception to the State Grange by the Mayor, citizens and Grange of San Jose will be tendered, with appropriate speeches, music, etc.

The usual order of business will doubtless be proceeded with during succeeding days of the session, embracing the roll-call of subordinate Granges, reports of Masters and alternates, the introduction and discussion of resolutions pertaining to the welfare of the Order, reports of standing and special committees, and election of a member of the Executive Committee.

On some evening a dramatic entertainment will be tendered by the talented Patrons and their friends of San Jose. Thursday evening the fifth and sixth degrees will be conferred in ample form, followed by Pomona's Feast. Appropriate memorial services will also find place at some period of the session.

The following resolution, offered by Bro. Roache and adopted at the last session, should have due and timely attention:

"Realizing the importance and benefits of the social features of our Order, and also the self-evident fact that much of these benefits is unavoidably curtailed by a well-nigh endless order of business; therefore

Resolved, That some specific time be set apart for a complete observance of the annual Love Feast of the Order, and all be invited to participate in this much-enjoyed and vitally essential branch of our great fraternity."

The foregoing is mentioned as suggestive of a portion only of what is likely to take place. Many other exercises of great interest will doubtless be presented.

W. L. OVERHISER, P. M., called at our office on Monday. He is now ready to do some further organizing work before the State Grange session. He is quite enthusiastic in regard to Independent Grange, which is still taking in new members.

SACRAMENTO GRANGE is up and doing, taking in new members, and will have a good delegation at the State Grange. American River Grange will, we believe, also have a good turn out. In fact, indications appear good for a large attendance generally throughout the State jurisdiction.

CALIFORNIA PATRONS would be pleased to welcome a goodly number of visiting officers and members from Oregon and Washington at our State Grange.

BRO. THOS. MCCONNELL, whose term on the Executive Committee expires at this session, is now in Oregon. We hope he will return in season to attend the State Grange.

FROM THE LEGISLATIVE COMMITTEE.

The following resolutions will be presented for the consideration of the State Grange by the Committee on Legislation:

Resolved 1. That we are in favor of changing the Federal Constitution so as to provide for the election of United States Senators by a direct vote of the people.

2. That we are in favor of the passage of a law at the next session of the Legislature providing for the organization of mutual fire insurance companies.

3. That we protest against any extension of time for the payment of the amounts of money due the Government from the Union and Central Pacific R. R. Companies

4. That we are in favor of the passage of a law by the Legislature providing for the reassessment of all property in this State which has been assessed since and including the year 1883, and on which the taxes, or any part thereof, have not been paid, and for the collection of all unpaid taxes thereon.

5. That we are in favor of the passage of a law providing for the annual collection of a graduated tax upon that part of the net income of all trusts and corporations which is in excess of $50,000 per annum.

J. V. WEBSTER,
S. T. COULTER,
C. W. NORTON,
J. H. MCKUNE.

BROS. LOUCKS AND WALTON will examine the records and accounts of the State Grange on Friday, Sept. 30th, in the office of the Secretary, preparatory to the annual report of the Executive Committee, of which they are members.

THE S. G. Executive Committee will hold its regular quarterly session in the office of the Secretary in San Francisco, Monday, Oct. 3d, the day previous to the opening of the annual session of the State Grange.

A NOTE from Sister Davis, dated No. 21 Glen Park Av., S. F., Sept. 16th, closes with a mention of the W. M., as follows: Am pleased to say he is standing the trip very well. We will be at San Jose to the State Grange meeting in due time. Hoping that the meeting will be a very pleasant one, I am very truly yours, MRS. E. W. DAVIS.

STATE LECTURER HUFFMAN has appointments for speaking before the Grange at San Lucas; also to San Antonio Grange at Jolon.

NO AMENDMENTS NEEDED.—The amendment of the State Grange Constitution recommended by Bro. Huffman he now says is unnecessary, it being found to be fully within the jurisdiction of the subordinate Grange to dispose of funds paid in by applicants who fail to come forward for initiation. As no other amendments to the State Grange Constitution have been recommended, and none were adopted by the last session of the National Grange, for the first time on record, we believe, our State Grange meets without any opportunity for constitutional tinkering.

YUBA CITY is one of the many Granges that has had a prosperous year, and will be well represented at the State Grange.

COUNTY EXHIBITS.—The several county exhibits at the State Fair this year were very interesting and excellent in character. The displays were set up in varied forms, which added much to the attraction. Owing to preparations for exhibits at the World's Fair, cereals, dried and canned fruits were more than usually conspicuous. While the exhibits were not made so generally in the name of the Grange as formerly, we noticed that Grangers, in their individual capacity, prepared and tended to most of the county exhibits.

WHATEVER his politics, every farmer and workingman should see to it that fewer lawyers and more men of practical experience on the farm, in the factory, or in business, are sent as delegates to political conventions or nominated for office. There are many lawyers who are faithful, honest and conscientious, but the best plan for the average citizen is to leave them severely alone in politics. With fewer lawyers in our Legislature we should have less lawmaking, less litigation and a more equitable distribution of public burdens.—Farmers' Friend.

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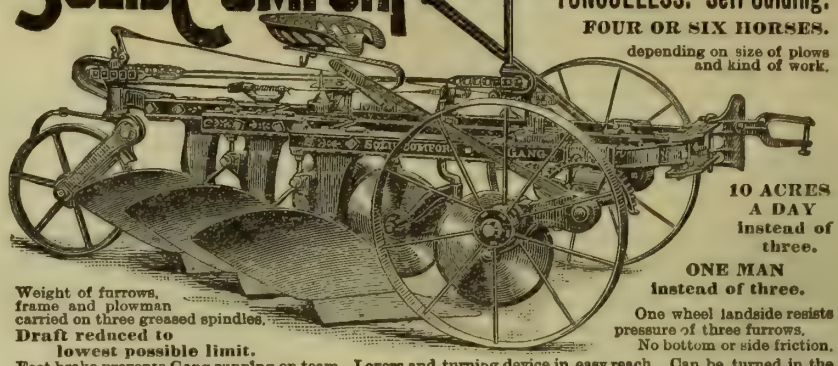
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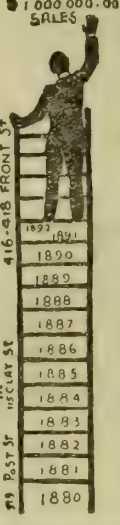
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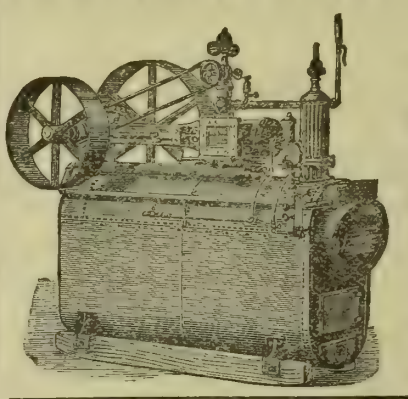
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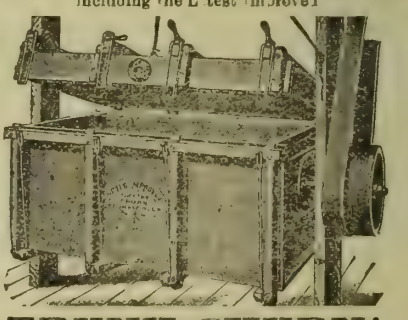
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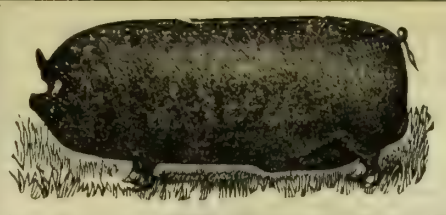
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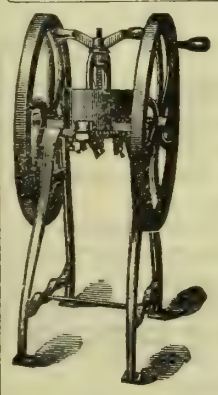
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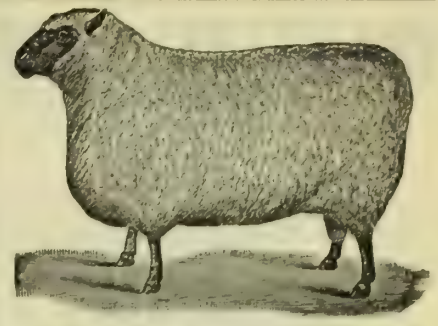
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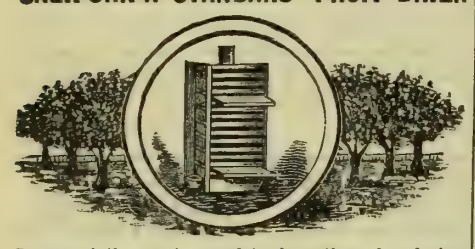
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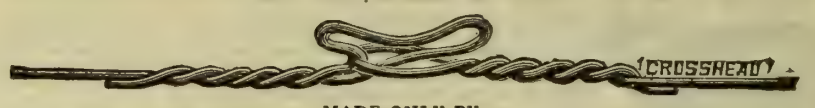
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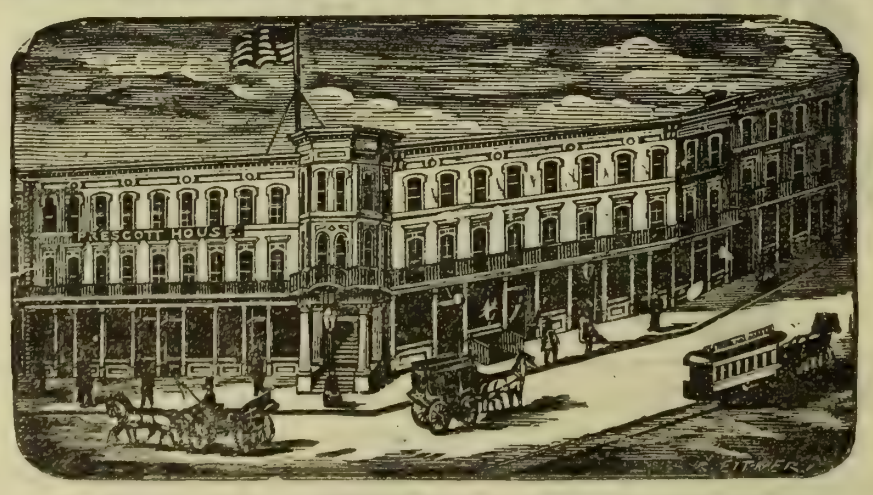
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DEEP WELL PUMPS

S. F. Market Report

Market Review.

SAN FRANCISCO, Sept. 21, 1892.

The local money market is working closer. It is claimed that the banks are not disposed to place funds against warehoused grain unless at full rates of interest; even, in some instances, an advance has been demanded. The closer market is not due so much to a lessened supply of available funds as it is to guarding against an emergency. Remittances from the interior are freer, and it is only a question of a short time when bank reserves will be very large. With larger reserves and fears of a cholera epidemic in this country allayed, the banks will again be pressing the market with funds at shaded rates of interest The only drawback to this would be a gambling deal in mining shares. During such deals the public are free buyers of shares and therefore borrowers of money, and thus they keep employed large sums of money and at good rates of interest.

Estimates continue to come to hand of the probable outturn of the wheat crop in all producing countries, and so far there are wide differences of opinion. The general opinion, though, is that the total yield will be fully 175,000,000 bushels, and perhaps 200,000,000 bushels less than it was in 1891, but that this falling off will be largely neutralized by a heavy carryover from last season. While this opinion is gaining ground, yet the concensus of opinion is that the consumption of wheat will, this season, be largely in excess of that during the season of 1891-92. This view of the situation is based on a lessened root and corn crop. Take, for example, the United States. In this country it is claimed that the carry-over of wheat from the 1891-92 season into the 1892-93 season was about 160,000 000 bushels, which fully meets the falling off of the crop in this year when compared with that in 1891. While the lessened outturn in 1892 is largely met by the carry-over, yet there is a lessened flour-making output, owing to more shriveled wheat harvested in the central States. Then there are two other vital factors to be considered. The outturn of potatoes and corn is considerably less than it was in 1891, and as these two articles of food meet with a heavy consumption, the price, particularly of the former, may be advanced to such figures as to turn consumers more to wheat-flour. There is another factor also to be considered, and one which will probably lessen the available surplus in this country, viz: The World's Fair in 1893 will cause a largely increased consumption of flour at the East.

The local wheat market has ruled fairly firm at steady prices througnout the week. The demand is said to have been light, owing to shippers and millmen being able to supply temporary wants by borrowing, and also by purchasing small parcels put on the market by impecunious ho ders. The prevailing opinion is that the ship and wheat rings will not be able to get the market down to the low prices marked some time ago to which to send prices, viz: for No 1 shipping, $1 25 per cental, and milling grades at proportionately less figures. The firmness with which farmers hold grain is against such a movement; besides, it is contended that there are large lines of shorts out, and also considerable borrowed wheat which will have to be placed, and when the shorts attempt to fill and borrowers to buy in the open market, much better prices will most certainly obtain. Ships are dull at a slight advance on 20s. f. o. The supply of disengaged tonnage is steadily increasing.

Barley came in quite freely the past week, but being largely off co or and otherwise undesirable for shipping, the market for the more choice grades of bright hold to firm prices. while feed was more or less weak at irregular prices. The fears of an early winter cause a selling pressure in some quarters, while it also causes many operators to go slow in stocking up. With those who have made climatic changes in this State a close study, the opinion prevails that we will not only have an early but also a late winter, and that it will be quite cold, fully up to the winter of 1889-90, when overland travel was often suspended owing to heavy deposits of snow on the mountain ranges. During that winter the consumption of barley was largely in excess of that during mild winters, while the late rains in the spring of 1890 interfered with seeding. The U. S. Agricultural Department report, issued on Sept. 10th, states that in the Central States the crop was light, but in California and New York it was a good average.

Oats have been coming in quite heavily, with both Oregon and Washington contributing largely to the general receipts, thus aiding very materially in sending the market to lower figures The large receipts from Oregon are a surprise to those who have been careful students of crop returns from that State, for the general returns indicated a large falling off in the outturn, and that in some of the counties there was barely enough to meet the local requirements. There is considerable poor oats on the market, for which very low prices rule. The crop of the United States is about 20 per cent less in this year than it was in 1891.

Corn has ruled weak throughout the week. While receipts were light, the demand was of an offish character. To force sales, concessions were in order.

Rye has come in sparingly, which was neutralized by a light home and shipping demand. It is asserted by some that, at present low prices, the more choice grades will bear being shipped to Europe.

Ground feed has held to fairly firm prices, with an increased demand generally reported. Hay has been more or less in sellers' favor. The latter appear to have the whip-handle and are using it for all that there is in it. Consignments which require early moving, and consequently were forced on the market, had to be sold at concessions on quotations.

In dairy produce, butter has held strong for choice to gilt-edged, with, at times, an advance obtainable for the latter. All grades under choice were slow and irregular, owing to the trade taking pickled in preference. Good dairy butter sold as low as 22 cts. The demand for pickled and firkin is quite active. Eastern creamery is about due, which will come largely in competition with the better grades of California. Cheese has been essentially unchanged. Gilt-edged or strictly fresh-laid eggs appear to be top heavy, owing to consumers turning largely to the more choice Salt Lake and Eastern. Eastern mail advices continue to report exceptionally good pasture in the central and eastern States.

Potatoes have come in quite freely, but the more choice good keepers met with a good demand. The market is oversupplied with wormy and otherwise poor potatoes, which, being sold at low prices, are against the market for choice potatoes. Onions have held to strong prices. Sweet potatoes have fluctuated. Tomatoes sold slightly higher under a free canning demand. Other vegetables did not show any material change in prices or demand.

Fresh fruit has come in sparingly, but as canners only took peaches, the market did not make any material advance. The demand came from shippers and the trade. Wine grapes are coming in sparingly. The market is strong at higher bids. We are informed that $17.50 to $21 is paid for Zinfandel.

Dried fruits have met with a good demand, with a further advance reported in the more choice grades of evaporated apples and also in plums The supply of the different kinds of dried fruits is going quite fast into second hands. The more choice grades of dried peaches are meeting with a quick market, but all below choice are slow with concessions in order. Last year all who held dried fruits until after the holiday demand had passed were heavy losers, but this year the disposition appears to be to sell and let buyers take the chances.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan
Thursday	5s11 d	6s0 0 d	6s00 d	6s02 d	6s02½d
Friday	5s10 d	5s11½d	6s00½d	6s01½d	6s02½d
Saturday	5s10½d	5s11½d	6s00½d	6s01½d	6s02½d
Monday	5s10½d	5s11½d	6s00½ d	6s01½d	6s02½d
Tuesday	5s10½d	5s11½d	6.00½d	6s01½d	6s02½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.	Weather.
Thursday	32s6d	32s d	32s6d	Quiet.	
Friday	32s3d	32s6d	32s3d	Quiet.	Unsettled
Saturday	32s d	32s6d	32s3d	Quiet.	Fine.
Monday	32s3d	32s6d	32s3d	Slow.	
Tuesday	32s3d	32s3d	32s d	Firmer.	

To-day's cablegram is as follows:

LIVERPOOL, Sept. 21—Wheat—Steady. California spot lots, 6s 3½d; off coast, 32s 3d; just shipped 32s 6d; nearly due, 32s 3d; cargoes off coast, firmer; on passage, firmer held; Mark Lane wheat, quiet and higher; weather in England, unsettled.

San Francisco.

WHEAT.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec.	May
Thursday, high st	128½	....	....	1¼	....
" lowest	128	....	....	133½	....
Friday, highest	....	128⅝	....	133⅝	137⅜
" lowest	....	128¼	....	133⅜	137¼
Saturday, highest	....	128	....	133⅜	....
" lowest	....	128	....	13 ¼	....
Monday, highest	....	....	....	133½	....
" lowest	....	....	....	133½	....
Tuesday, highest	....	128	....	133½	....
" lowest	....	128	....	133	....

The following are to-day's recorded sales on Call:

Morning Iuformal,—Wheat—Buyer December, 1000 tons, $1.33; 1800, $1.33⅛ per ctl. Regular Session.—Buyer December, 600 ton, $1.33⅛. 2200, $1.33⅜; 800, $1 33⅛. Buyer September, 200 tons, $1.28. Seller 1891, 100 tons, $1.28½ per ctl. Afternoon.—Buyer December, 1700 tons, $1.33⅜ per ctl. add Barley.

BARLEY.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	85½	....	....	9.⅝
" lowest	85½	....	....	91⅜
Friday, highest	....	....	....	....
" lowest	....	....	....	....
Saturday, highest	....	....	....	....
" lowest	....	....	....	....
Monday, highest	....	....	....	89⅜
" lowest	....	....	....	89½
Tuesday, highest	85½	....	85½	9 ⅜
" lowest	85	....	85½	90½

The following are to-day's recorded sales on Call:

Informal.—Barley—December, 100 tons, 89⅜c per ctl. Regular Session.—Seller 1892, new, 100 tons 85½c 100, 84⅛c; 100, 84⅜c. Buyer December, 200, 90⅛c; 100, 9.⅛c; 100, 89½c; 700, 89⅝c; 100, 89¼c. December, 200 tons, 89⅛c; 100, 89⅜c; 200, 89½c; 400, 89c. October, 300 ton, 84⅛c per ctl. Afternoon.—Buyer December, 500 tons, 89¼c; 300, 89½c. December, 100 tons, 88⅜c; 100, 88½c; 500, 88c. Seller 1892, new, 200 tons, 83⅜c; 200, 83½c per ctl.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Sept.	Oct	Dec.	May.
Thursday	1.09⅜	131½	136½	147
Friday	....	131½	136⅞	146⅜
Saturday	130	131½	136⅜	146½
Monday	133½	131	136¼	146¼
Tuesday	130⅜	130¼	137⅛	146⅜

The following is to-day's telegram:

NEW YORK, Sept. 21.—Wheat—78⅜c for October; 81⅞c for December; and 87⅞c for May.

Chicago.

Day.	Sept.	Oct.	Dec.	May
Thursday	120	121⅜	126⅛	134¼
Friday	122	122½	126¼	135⅛
Saturday	....	121¼	125⅛	13 ⅛
Monday	119⅜	121	12 ⅛	134⅜
Tuesday	120⅜	121⅞	125⅜	135¼

The following is to-day's telegram:

CHICAGO, Sept. 21.—Wheat 7.⅜c for October; 7⅝c for December; and 8.⅜c for May,

Markets by Telegraph.

Foreign Grain Review.

LONDON, Sept. 19—The *Mark Lane Express* says: New English wheats are largely offered. Foreign wheats arrive freely, weakening the market and causing prices to decline 6d. An estimate of the world's imports and exports of wheat and flour for the coming year shows 846,000 (?) quarters likely to be sent to buying countries that will only need 803,000 (?) quarters, and this promises low prices throughout the year. Barley and oats are cheaper; corn unchanged.

At to-day's market more wheat was offered, some selling at 29s. Foreign wheats were generally inactive; only American was firm at 30s. Flour unchanged. Barley, oats and corn steady. Rye cheaper.

Canned Fruit.

NEW YORK, Sept. 18.—Present wants are easily filled from supplies here. There are 110,000 cases yet to arrive by sail, so large buyers are not anxious about later replenishments.

Dried Fruit.

NEW YORK. Sept. 18.—Unpeeled peaches are very salable at 14¾ to 16c.

Prunes have good inquiry, but buyers want coast prices shaded before they will operate. Good orders are noted for new foreign. Sultanas are quoted at 7½c; French, 9¼@10c in boxes.

Raisins—California futures continue neglected. Extended development of sickness in Europe would undoubtedly help the home product for a time, but it is too early to place stress upon delayed foreign deliveries consequent upon a possible quarantine There is considerable trading in Valencias at 7¼c for layers and 6¼c off the stock.

CHICAGO, Sept. 20.—California dried fruits are generally firm. Old raisins have been pretty well disposed of and the market is in good condition for receiving the new crop. A few prunes have come to hand, but only small lots. They are expected to arrive more freely next week. Prices are quoted a shade higher. Advanced prices for peaches are quoted. There is good demand for meager offerings. Apricots are selling well and ruling firm. Nectarines are in fair demand and firm.

California Fruit in London.

NEW YORK, Sept. 18.—E. R. Hutchins, vice-president of the California Fruit Transportation Company, arrived here on the steamer Majestic from Liverpool last Wednesday. From personal observation, he predicts a most encouraging future for California fruits there. He has obtained a valuable equipment of information about special measures of packing, the proper time of competition and attractive varieties from the most experienced traders in London and Liverpool. He says the late auctions were conducted with honesty for all concerned, and that Pacific fruit brought more money—weight for weight—than French.

Eastern Wool Markets

NEW YORK, Sept. 16.—*Bradstreet's* says: As has been expected for several weeks, holders of Territory wools have weakened and considerable wool has been moved at concessions averaging 1c in grease and 2@3c in scoured ℔ pound. Compared with other grades, the stocks of Territories are large and prices have been relatively higher. Fleeces are still in strong demand, but owing to the light supply the sales are not large. The light supply keeps the prices firm Texas wools are quiet. A few large lots of California wool have been taken. It is understood that prices were made to suit buyers There is very little doing in pulled wool. Australian wools are more active. The London sales opened Tuesday. The offerings include 340,000 bales. The closing prices of the last sales are maintained. Very little wool has been bought for this country. Most of the wool is not suitable for use here. In carpet wools, the feeling is even stronger than a week ago. The supply is light, and it is costing more to import wool, owing to quarantine regulations.

NEW YORK, Sept. 18.—There was very heavy business at the New England market, but only moderate dealings at other points. Sales were swelled by two large eastern mill firms taking 1,500,000 unwashed, upon which some concessions were granted for taking the parcels as they ran. The general tone of prices is no weaker for straight lots, and some of these have been piled away for possible better times. Foreign wool was particularly active, with sales of 1,500,000 pounds. Some buyers evidently want to absorb stock that will be free from the defect of fumigation that may attend shipments later on At the London sales, little wool was offered for America The market was firm. The home woolen goods market is in good shape; sales at New York, 264,000 pounds of domestic and 614,000 foreign, mainly China and Russian Douskoi. Boston sold 4,138,300 pounds of domestic. Sales of foreign were 425,000 pounds Australian and 965,000 carpet.

Miscellaneous.

NEW YORK, Sept. 18.—Honey—Our light supply of Pacific strained has been much reduced by demand always brought out by the approaching Jewish New Year.

Hops are in the tame, inactive condion that has prevailed for weeks past. No speculative feeling exists, in fact option calls at the Hop Exchange have been indefinitely discontinued. Cash State range from 12c to 22c, including new; Pacific '91s, 12c to 21c.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Sept. 20, '92, were as follows:

Flour, qr. sks	217,799	Bran, sks	13,004
Wheat, ctls	249,119	Buckwheat "	
Barley, "	100,555	Middlings "	2,935
Rye, "	219	Chicory, bbls	25
Oats, "	20,429	Hops, "	410
Corn, "	5,0 3	Wool, "	2,449
*Butter, "	770	Hay, ton	3,8 3
do bxs	730	Straw, "	90
do bbls	75	Wine, gals	155,920
do kegs	301	Brandy, "	12,270
do tubs	71	Raisins, bxs	....
do ½ bxs	70	Honey, cs	20
†Cheese, ctls	687	Peanuts, sks	....
do bxs	123	Walnuts "	....
Eggs, doz	18,130	Almonds "	58
do " Eastern	12,000	Mustard "	540
Beans, sks	10,861	Flax "	....
Potatoes, sks	35,651	Popcorn "	....
Onions, "	5,187	Broom corn, bbls	....

*Overl'd, 542 ctls. † Overland, 438 ctls.

Exports by Sea from San Francisco from July 1 to Sept. 15.

	1892-93	1891-92
Wheat, ctls	2,226,732	3,598,465
Flour, bbls	216,374	250,328
Barley, ctls	470,379	143,917

Tonnage Movement.

From reliable advices up to Sept. 21, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	283,335	429,367	*166,686	79,009
San Diego	15,104	27,477	7,977	.....
San Pedro	9,165	3,471	....	
Oregon	50,316	71,643	40,181	13,067
Puget Sound	35,145	38,900	.....	
Totals	394,565	570,858	214,844	92,076

*Engaged for wheat, 1892, 40,309 1891, 70,311.

Cereals.

From Mark Lane *Express*, Sept. 5, we excerpt the following: Heavy rainfall during the last five days of August caused a serious interruption to wheat harvest, and deliveries of the new crop will not now be large during the present month. This will be no disadvantage, as the sales of old English wheat during August were very large and the stocks of foreign are more than ample to meet all emergencies. The yield of the British wheat crop this year is now assumed by almost all authorities at between 8 and 8¼ millions. This will leave 7¼ to 7½ millions for food wants, and necessitates an importation of from 19 to 19¼ millions in the new cereal year. The barley is admitted to be an average yield to the acre in all the principal counties, but blight and fog followed by rain have caused within the past ten days a great falling off in color, and it is to be feared a great depreciation in quality also. * * * * The world has poured such enormous crops into the ports of the importing countries that plenty is already assured for the coming year. The United Kingdom and France actually received 38,000,000 qrs. of wheat during the past cereal year from abroad, and will this year require only about 22,000,000 quarters. In the ports and mill granaries of the United Kingdom and afloat to the United Kingdom there were last week 6,470,000 qrs. of wheat and flour (as wheat) against 3,111 000 qrs. at the same time last year, and 4,167,000 qrs. two years ago. The total quantity in the hands of farmers and traders of the United Kingdom, afloat, and in America, was at the end of the cereal year no less than 11,462,000 qrs, or five million qrs. more than last year, and four million qrs. more than two years ago.

The London correspondent of the *Northwestern Miller* says: "The wheat trade in general seems to believe that America is not likely to flood Europe with wheat at such prices as are now prevailing, but there is a general state of discouragement and lack of confidence which is almost demoralizing the trade. It is now quite certain that European importing countries will want about 304.000.000 bushels, and it is equally certain that the sources of supply outside the United States and Canada will not be able to provide more than 168 000,000 bushels, so that the United States will be called upon to supply 136,000 000 bushels to Europe alone, in addition to the 20,000,000 to 24,000,000 bushels (in wheat and flour) usually sent to South America, China, Brazil, etc. Thus 160,000,000 bushels of American wheat (or flour) are absolutely required, and yet, in spite of this, American farmers are pressing sellers, evidently at prices which cannot leave the growers any margin of profit."

The local market for wheat, to-day, was quiet but firm. It is quite generally conceded that buyers are picking up odd parcels in the country at a slight advance on bids made in this city, and for straight parcels fully 2½ cents higher is known to have been made for choice No. 1 white shipping.

Barley was quiet to-day. The general tone was said to be slightly steadier.

Oats at the lower prices are attracting more attention from both feeders and dealers, but only the better grades show much strength.

Corn was inactive to-day, but so far as we could learn, there was no selling pressure.

Rye was slow. The demand was offish. Any selling offers were met by lower bids.

Foreign Hop Crop.

Mark Lane *Express*, Sept. 5: The gales that have been experienced this week have caused immense damage to the growing hops, and the consequence will be a much smaller proportion of bright-colored samples than had been expected. The heavy rains have also been prejudicial to quality, and now that the temperature has changed to that of October, mold is spreading very fast. Picking has been pushed on with during the week, but it is evident from the condition of the hops after drying that they have been gathered in an unripe state. If the weather should be fine in the ensuing week, picking will become general, and brewers will not have long to wait now before the best sorts of the new crop are on the market. In nearly all instances where the hops were thoroughly and carefully washed, they will not show any effects of the blight, but a very large proportion were not washed at all, or only after it was too late, when the lice had got inside the cones, and in these cases the quality will be inferior and the color bad. There will also be many moldy samples. The sound and healthy hops will be very fine, and will probably command a high figure, provided they are not rushed on the market. More favorable reports are to hand from the continent, and prices at Nuremberg are now more in accord with the views of buyers. The latest calculation as to the probable yield of the English crop puts it at an average of slightly over seven cwt. per acre, but this will be reduced if mold spreads to a serious extent, as it is likely to do with the present weather.

Feedstuff.

Roll barley continues to meet with a good demand both for home and shipping. Bran and middlings were in fair demand for up-coast ports.

Although the receipts of hay are not large, yet buyers are bears and are only induced to take much by lower selling offers. It is said that feeders are well supplied for near-by wants, and only buy when they secure concessions.

Dairy Produce.

Butter was essentially unchanged to-day. Cool weather favors holders, as do light receipts of gilt-edged Fears of heavy receipts of choice to gilt-edged creamery from the central states are against much better prices in the near future. All grades below choice favor sellers.

Cheese was in fair demand for shipping, but the market was unchanged.

While eggs were quoted unchanged to-day, the tone did not appear quite so strong. The eastern and Salt Lake eggs appear to be giving better satisfaction than they did when the weather was hot.

Vegetables.

The market for garden truck was fairly steady today. Canners are heavy buyers of tomatoes, but receipts are ample to meet this and also the trade demands.

Onions were very firm to-day with a slight advance obtained for the more choice.

There was a slightly better demand for potatoes today, but so far as we could learn prices were unchanged, unless, perhaps, a slight advance was paid for something extra to fill special orders.

Fruit.

The market for fresh fruits was generally strong for peaches, pears and plums, with an advance for grapes on an active shipping demand. Canners were in the market for peaches. For Zinfandel grapes $17 to $20 per ton was bid.

Dried peaches were offering freely to-day, which caused buyers to reduce bids fully one cent per pound; other dried fruits were unchanged.

Raisins were quiet. It is said that free sales are being made in a quiet way for shipping East.

Quite an active demand is reported this season for unpeeled, quartered, dried Bartlett pears. Choice bleached sell from first hands at 10@11¼ cts. ℔ lb.

Live Stock.

The market has ruled barely steady throughout the weeek. The low range of values for bullocks is a disappointment, for usually when fruit begins to get scarce and prices higher, beef grows stronger. Mutton sheep and hogs are essentially unchanged.

Miscellaneous.

Poultry has meet with an active demand at better prices. The improved call was due to the Jewish holiday. Receipts have been poor, but the quality was poor to good, choice still being few and far between.

Beans which have been steadily shading off made a slight jump to-day owing to a large operator entering the market as a buyer.

Honey is still scarce and wanted for both home and shipping.

The hop crop on this coast is now claimed to be considerably less than had been estimated. Some place the total outturn at about 77,000 bales. While the crop is light, yet we think it will go over the above figures.

Fall wools are coming in quite freely, but the market is inactive owing to the receipts being largely defective. The more choice grades are beginning to come in, but the supply as yet is not sufficient to induce buying except at prices favoring buyers.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

SEPTEMBER 20, 1892.

Limes, Mex	4 50	@	5 00	Fruit in bulk to canners:		
Do Cal	—	@	—	Pears, 1½@2; Plums, white, 1½		
Lemons, box	5 00	@	7 00	@2c; colored, 1@1½; Peaches,		
Do Sicily choice	—	@	—	freestone and clings, 1½@2½.		
Strawberries, per chest—				Extra choice fruit for special		
Longworth	—	@	—	purposes sells at an advance		
Sharpless	7 00	@	9 00	on outside quotations.		
Peaches, box	50	@	90	Beets, sk	—	@ 75
Do Mountain	70	@	1 00	Carrots, sk	40	@ —
Bl'kberries ℔ ch	3 00	@	4 00	Okra, dry, lb	15	@ —
Figs, blk box	40	@	75	Do green box	25	@ 33
Do White	30	@	50	Parsnips, etc	—	@ 1 25
Apples	40	@	65	Peppers, dry, lb	10	@ —
Do Choice	75	@	1 00	Do grn Chili, bx	30	@ 40
Canteloupes, pr crate	75	@	1 50	Do do Bells	25	@ 40
Melons, pr 100	5 00	@	10 00	Turnips, ctl	75	@ —
Nutmegs, ℔ box	35	@	76	Cabbage, 100 lbs	50	@ 60
Grapes, pr bx—				Garlic, lb	1	@ 1½
Do White	25	@	40	Squash, Sum, bx	30	@ 50
Do Black	25	@	50	Tomatoes,	25	@ 35
Do Muscats	35	@	60	Do River lrg bx	20	@ 35
Do Turkays	50	@	75	String Beans, sk	1 00	@ 1 50
Prunes, Hung'n	—	@	—	do do Wax, lb	2	@ 3
Do German	50	@	75	Cucumbers, box	20	@ 30
Do Coe's Gold'n	70	@	75	Mushrooms	—	@ —
Plums, ℔ box	50	@	60	Egg Plant, bx	20	@ 40
Pears	25	@	75	Green Corn, box	75	@ 1 00
Do Bartlett	1 00	@	1 50	Marf'at Squash, ℔ ton	8 00	@10 00

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manila Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grape-Vine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manila, 3 yarns, heavy	10½	Duplex Hop, in balls, tar'd	9½
Pure Manila, 3 and 4 yarns	12	Do, Grape-Vine, in balls or coils	10½
Do, 2 yarns, light	12½		

Continued on next page

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lowest quotations.

SEPTEMBER 20, 1892.

BEANS AND PEAS.

Bayo, ctl	1 95 @ 2 15
Butter	2 50 @ 2 80
Pea	2 25 @ 2 35
Red	2 25 @ 2 35
Pink	2 15 @ 2 30
Small White	2 20 @ 2 30
Large White	2 00 @ 2 15
Lady Wash	2 10 @ 2 20
Lima	2 80 @ 3 15
Fld Peas, blk eye	— @ —
Do green	1 75 @ 1 90
Do Nies	1 50 @ —
Split	4 50 @ 5 50

BUTTER.

Cal. Poor to fair, lb	17 @ —
Do good to choice	22 @ 26
Do Giltedged	28 @ 29
Do Creamery rolls	24 @ 29
Do do Giltedge	31 @ 32
Eastern, ladle	17 @ 19
Cal. Pickled	21 @ 23½
Cal. Keg	20 @ 23

CHEESE

Cal, choice cream	9 @ —
Do fair to good	7½@ —
Do gilt edged	— @ 11
Do skim	5 @ 6½
Young America	— @ 12

EGGS.

Cal. "as is," doz.	18 @ 20
Do shaky	14 @ 16
Do candled	21 @ 25
Do choice	27 @ 30
Do fresh laid	35 @ —
Do do sted white	— @ 40
Eastern "as is"	17 @ 19
Do candled	21 @ 23
Do selected	24 @ 25

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED

Bran, ton	14 50 @16 00
Feedmeal	27 00 @30 00
Gr'd Barley	19 00 @20 50
Middlings	19 50 @21 50
Oil Cake Meal	— @25 00
Manhattan Food ₩ ctl. cabinet	— @ 8 00

HAY.

Wheat, per ton	7 00 @ —
Do choice	— @12 00
Wheat and Oats	7 00 @10 00
Wild Oats	6 00 @ 9 00
Cultivated do	5 00 @ 8 00
Barley	5 00 @ 8 00
Alfalfa	7 00 @ 9 00
Clover	8 00 @10 00
Straw, bale	30 @ 50

GRAIN, ETC.

Barley, feed, ctl.	70 @ —
Do Good	81½@ —
Do Choice	85 @ —
Do Brewing	92½@ —
Do do Choice	96½@ —
Do do Giltedge	98½@ —
Do Chevalier	85 @ 1 10
Do do Giltedge	1 15 @ 1 25
Buckwheat	2 00 @ —
Corn, White	1 30 @ 1 37½
Yellow, large	1 23½@ —
Do small	1 27½@ —
Oats, milling	1 30 @ —
Feed, Choice	1 27½@ —
Do good	1 22½@ —
Do fair	1 15 @ —
Do Common	1 05 @ —
Surprise	1 47½@ —
Black Cal	1 05 @ —
Do Oregon	— @ —
Gray	1 22½@ 1 30
Rye	1 05 @ 1 10
* Wheat, milling	
Gilt edged	1 35 @ —
Do Choice	1 32½@ —
Do fair to good	1 30 @ —
Shipping, cho'ce	1 30 @ —
Do good	1 27½@ —

* Buyers' bids.

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb., and for 25-lb boxes, ¼c to 1c per lb.

APPLES—1892.

Sun-dried, ¼'s, com'on	2½@ 3½
Do do prime	3½@ 4
Do do choice	4 @ 4½
Do sliced, common	3½@ 4
Do do prime	4 @ 4½
Do do choice	4½@ 5½
Evap. bl., ring, 50-lb bx	8 @ 9

Fancy higher.

APRICOTS—1892.

Sun-dried, unbl. com.	4½@ 5½
Do do prime	6½@ 8
Do do choice	9 @10
Do bleached, prime	12½@—
Do do choice	13½@—
Do do fancy	14½@—
Evap. choice, in boxes	15 @—
Do fancy, do	15½@—

FIGS—1892.

Sun-dried, black	4½@ 5
Do white	3 @—
Do do washed	— @
Do do fancy	— @—
Do do pressed	— @—
Smyrna boxes	— @—
Do sacks	— @—

GRAPES—1892.

Sun-dried, stemless	3½@
Do unstemmed	1½@ 2

NECTARINES—1892.

Red, sun-dried	8 @ 9
Do Evap., in boxes	— @—
White, sun-dried	9½@11
Do evaporated	— @—

PEACHES—1892.

Sun-dried, unpeeled, common, bleached	8 @—
Do do prime, do	10 @—
Do do choice, do	12 @—
Do do fancy	12½@—
Evap, unpe'l'd, choice	12½@—
Do do fancy	13 @—
Sun-dr, pl'd, prime, bl	— @—
Do do choice	— @—
Do do fancy	— @—
Evap, peeled, in boxes, choice	17½@—
Do do fancy	20 @—

PEARS—1892.

Sun-dried, quarters	— @ 3
Do sliced	4 @ 5
Evap, sliced, in boxes	7 @ 8
Do ring do	9 @10

PLUMS 1892.

Pitted, sun-dried	10@11
Do evap. boxes, choice	— @—
Do do do fancy	— @—
Unpitted	4 @ 5

PRUNES—1892.

Cal. French, ungraded	7½@ 8
Do graded, 60 to 100	8½@ 9
Do do 40 to 60	11 @12

Fancy sell for more money.

RAISINS—1892.

London Layers, cluster, ₩ bx	1 90 @2 00
Do choice do	1 60 @1 70
Do prime, ₩ bx	1 40 @1 45
Loose Muscatels, common, ₩ bx	— @—
Do choice, do	1 25 @1 30
Do fancy, do	— @—
Unstem'ed Muscatels, in sacks, ₩ lb	4 @ 5½
Stemmed do do	— @—
Seedless do do	— @—
Do do ₩ 20-lb bx	— @—
Sultanas, unbl, bxs	— @—
Do bleached, in bxs	— @—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Live Stock.

BEEF.

Stall fed	5 @—
Grass fed, extra	5 @—
First quality	4½@—
Second quality	4 @—
Third quality	3 @—
Bulls and thin Cows	2 @—

VEAL.

Range, heavy	4½@—
Do light	5½@—
Dairy	6½@—

MUTTON.

Wethers	6½@—
Ewes	6 @—
Do Spring	7½@—

HOGS.

Light, ₩ lb, cents	5½@—
Medium	5 @—
Heavy	4½@—
Soft	4 @—
Feeders	3½@—
Stock Hogs	3½@—

Grain and Wool Bags.

[illegible], spot	7½@ 8
Wool Bags	36 @ 38

Wine.

[illegible] White Wine from bay counties, vintage of [illegible], per gal. in cellar lots 12 @ 20

Auction Sales of California Fruits.

At New York.

Sept. 14.—Two carloads: Bartlett Pears, $?@3.10; Bellflower Pears, $1.65; Beurre Hardy Pears, $1.70; Malaga Grapes, $1.25.

Sept. 15—One carload: Bartlett Pears, $3@4.10; Beurre Hardy Pears, $1.80.

Sept. 16—Two carloads: Bartlett Pears, $2.30@2 85; Beurre Hardy Pears, $1.55; German Prunes, $1.45@1.75; Duchess Pears, $1.85; Beurre Clairgeau Pears, $1.60@1.80; Onondaga Pears, $1.50@1.65; Silver Prunes, $1.20@1 30; Ickwith Plums, $1.25@1 40.

Sept 18.—Three carloads: Salway Peaches, $1@1.55; George's Late Peaches, $1@1.55; Cling Peaches, $1.05@1 25; Bartlett Pears, $2.90@3 20; Vicar Pears, $1.45; Fellenberg Prunes, $3.05; half crates Tokay Grapes, $1.25@2 10; half crates Muscat Grapes, 65@85c; Purple Damascus Grapes, single crates, $2.05

Sept. 19.—One carload: Salway Peaches, $1.20@1.35; Cling Peaches, $1.20@1.55; Yellow Peaches, $1.08; George's Late Peaches, $1.40; Bartlett Pears, $2 25@2.70; half boxes Pears, $1.55; Fellenberg Prunes, $3 10; French Prunes, $1; half crate Muscat Grapes, 35c@$1.10; half crate Tokay Grapes, $1.35@1.90; Grapes, 65c.

At Chicago.

Sept. 14.—Three carloads: Bartlett Pears, $1.60@2.60; Figs, 50c; Tokay Grapes, 70c@$1 68; Muscat Grapes, 75c@$1; Malaga Grapes, 60@75c; Peaches, 90c@$1.40; Pears, $1.15@2 25 Plums, $1.05@1 55; Seckel Pears, 80c

Sept. 14.—Four carloads: Tokay Grapes, $2 30@2.85; half crates, $1.15@1.45; Muscat Grapes, half crates, 75@90c; Silver Prunes, $1 05@1.10; Fellenberg Prunes, $1.45; German Prunes, $1.45@1.50; Salway Peaches, $1.35; Cling Peaches, $1.05; Strawberry Peaches, $1.25; Bartlett Pears, $2 20@2.55. Beurre Hardy Pears, $2.10; Beurre Clairgeau Pears, $1.90; Onondaga Pears, $1.85.

Sept 15.—Three carloads: One carload of Strawberry Cling Peaches averaged $1.30; Bartlett Pears, $1.75@2.75; Beurre Hardy Pears, $2.05@2.25; Beurre Clairgeau Pears, $1.65@1.90; White Doyenne Pears, $1.60; Duchess Pears, $1.70@1.85; Beurre Diel Pears, $1 50; Tokay Grapes, half crates, $1.05; Muscat Grapes half crates, 66@70c; Gros Prunes, $1.75; German Prunes, $1.35@1.50; Silver Prunes, $1.

Sept. 15.—Two carloads: Natoma Muscat Grapes to-day at auction for $1.85 per crate.

Sept. 16.—Two carloads: Muscat Grapes, per single crate, $1.75@1.80; Peaches, $1.25 per box.

Sept. 16—Four carloads: Bartlett Pears, $2@2 50; Beurre Hardy Pears, $2.25; Winter Nelis Pears, $1.65; Beurre Clairgeau Pears, $2; Tokay Grapes, half crates, $1.65; Malaga Grapes, 80c; Salway Peaches, $1.50; German Prunes, $1.45

Sept. 18—Three carloads: Half crate Muscat Grapes, $1@1.15; double crate Muscats, $1.80@2.25; double crate Tokay Grapes, $3@3 55; single crate Tokays, $1 25@1 85; Japan Plums, $1.60; half boxes Seckel Pears, $1.60; Bartlett Pears, $2 55@2 90; half boxes Bartlett Pears $1.35; Vicar Pears, $1.30.

Sept. 19—Four carloads: Bartlett Pears $2 35@2.85; Beurre Hardy Pears, $2.25; Beurre Clairgeau Pears, $2@2.05; Duchess Pears, $1.90; Winter Nelis Pears, $.55; Strawberry Cling Peaches, $1 20; Quinces, $1 30; Malaga Grapes, half crates, 75c; Silver Prunes $1.25; German Prunes, $1.55@1.60. Some fruit in bad order sold for less.

Sept. 19—Nine carloads: Peaches, 65c@$1.45; Tokay Grapes, single crates, 60c@$1.70; double crates, $3 05@3.55; Muscat Grapes, single crates, 80c@$1 75; double crates, $2.25; Winter Nelis Pears, $1 25@1.35; Orange Cling Peaches, 25c; Bartlett Pears, $2@3.10; half boxes, $1.35; Beurre Clairgeau Pears, $1.95; Comice Pears, $2 50; German Prunes, $1 55; Malaga Grapes, poor condition, 45@75c; Silver Prunes, $1.10@1.25; Fellenberg Prunes, $1.40; Egg Plums, $1.50; Japan Plums, $1.50@1 70; Doyenne Pears, $.@2.50; Beurre Hardy Pears, $2 55; Onondaga Pears, $2 75; Salway Peaches, $1.45; Cling Peaches, 70c@$1.15; Plums, $1 40.

Sept. 20.—Five carloads: Bartlett Pears, $2.70@2.75; Beurre Hardy Pears, $2.35@2 40; Bellflower Pears, $2.40; Beurre Clairgeau Pears, $2.05; Salway Peaches, $1.20@1 25; George's Late Peaches, $1.20; Picquet Late Peaches, $1.25@1.30; Tokay Grapes, $2.25@2 85; half-crates, $1.25@1.60; Muscat Grapes, half-crates, $1.05@1.15; German Prunes, $1.50; French Prunes, $1.20.

At Minneapolis.

Sept. 14.—Three carloads: Bartlett Pears, $2 55@$2 60; half-boxes, $1.20; Winter Nelis Pears half boxes, $1.20; Tokay Grapes, $2.20@2.30; half-crates, 95c@$1 25; Muscat Grapes, $1.40; half-crates, 55@65c; Salway Peaches, $2 15@1.30; Orange Cling Peaches, $1.15; Picquet Peaches, $1.10.

Sept. 15 — Three carloads: Pears, $2 15@2 75; Peaches, $1.25@1.50; Muscat Grapes, 70c@$1 50; Tokay Grapes, $1.25.

Sept. 18—Three carloads; Pears, $2 20@2.50 ₩ box. The Porter Brothers Company sold yesterday for account of Florin shippers a car of Grapes. Single crate Muscats, 85c@$1 05; single crate Tokays, $1.35@$1.45; Rose de Peru, 80@90c; gross sale on this car, $900.

Sept. 19.—One carload: Strawberry Cling Peaches to-day at auction at an average of $1.30 per box.

Sept. 20.—Two carloads: Peaches, $1.20@1 50; Muscat Grapes, 30@35c; Tokay Grapes, 55@1 35; Rose de Peru Grapes, 70c.

Sept. 20.—Three carloads: Bartlett Pears, $2 90@3; Salway Peaches, $1.10@1.25; Orange Cling Peaches, $1.10; Strawberry Cling Peaches, $1.10; Tokay Grapes, $1.80@2.30; half-crates, 85c@$1.25; Muscat Grapes, half-crates, 55@90c; Cornichon Grapes, half-crates, $1.25@1.35; Picquet Peaches, $1@1.30.

At Omaha.

Sept. 15.—Two carloads: Peaches, $1.25@1.50; Pears, $1.25@1.75.

Sept. 17.—Two carloads: Peaches, $1.15@1.35; Pears, $1.30@2.

Sept. 19.—Four carloads: Peaches, 1@1.25; Tokay Grapes, $1.25@1.50; Pears, $2@2.50; Grapes, 75c@$1 50; Muscat Grapes, 75c@$1.

At New Orleans.

Sept. 16—Three carloads: Tokay Grapes, $2.45@$2.50; half-crates, $1@1.25; Muscat Grapes, $1.75; half-crates, 90c@$1; Cornichon Grapes, half-crates, $1 25; Rose de Peru Grapes, half-crates, 90c; Red Nectarines, $1.10; Bartlett Pears, $1.25@2.30.

At Boston.

Sept. 16.—Two carloads: German Prunes, $1.35; Silver Prunes, $1@1.35; Ickwith Plums, $1 30; Bartlett Pears, $2 25; Beurre Hardy Pears, $1 60@1.70; Beurre Clairgeau Pears, $1.60; Duchess Pears, $1.60; Quinces, $2.25.

Sept. 19.—Two carloads: Tokay Grapes, $2.60; half crates, $1.10@1.50; Muscat Grapes, half crates, 95c@$1 10, Salway Peaches, $1.30@1 75; Bartlett Pears, $1.20; Winter Seckel Pears, $1.15@1.55.

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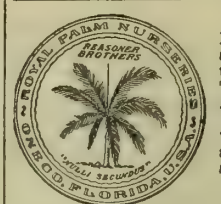
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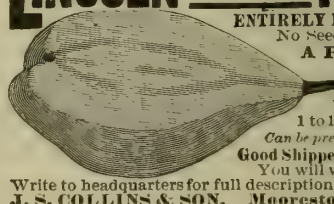
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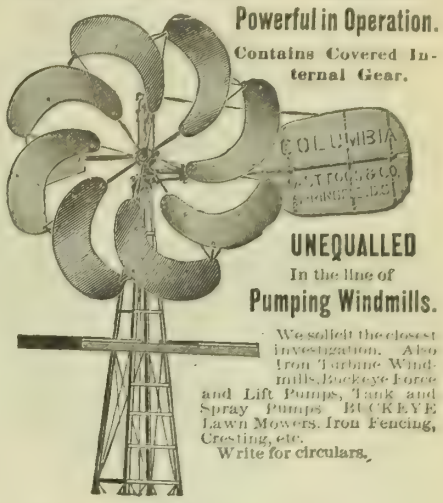
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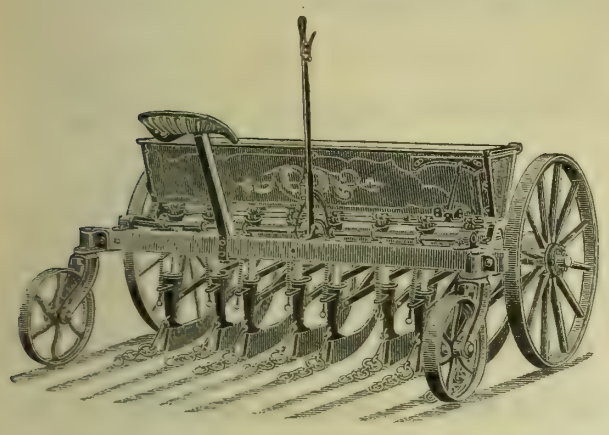
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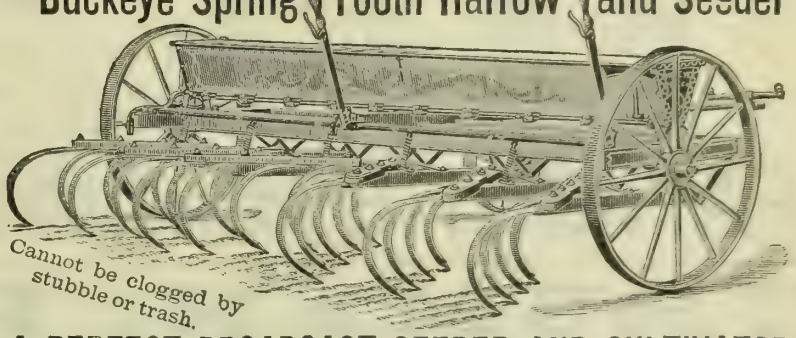
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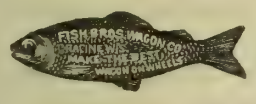
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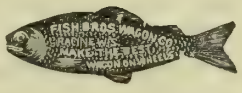
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5	Santa Clara, George H. Bragg	Sept 26-Oct 5
6	Los Angeles	Oct. 3-5
7	Salinas City, J. J. Kelley	Oct. 4-8
10	Yreka, C. S. Smith	Oct. 5-8
11	Sierraville, Fred Blinman	Oct, 3-7
12	Lakeport, H. A. McCraney	Sept. 27, Oct. 1
14	Santa Cruz, Oscar L. Gordon	Oct. 10-15
15	Bakersfield. J. J. Kelly	Oct. 11-16
16	San Luis Obispo, J. H. Barrett,	Sept 27-Oct 1
18	Independence, C. W. Craig	Sept. 27-30
20	Auburn, F. D. Adams	Aug. 30-Sept. 3
21	Fresno. J. M. Reuck	Sept. 26-Oct. 1
26	Ione, C. T. La Grave	Sept. 27-30
27	Redding, H. R. Hodson	
28	San Bernardino	Oct. 11-15
32	Santa Ana, W. A. Beckett	Oct 3-7
33	Hollister, A. D.Shaw	Oct. 11-15
35	Merced	
36	Vallejo	Oct. 4-8
38	Modesto	Sept. 28-Oct. 1

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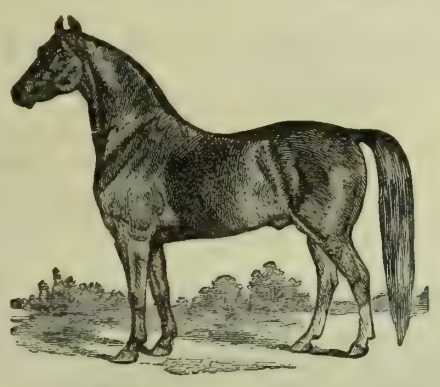
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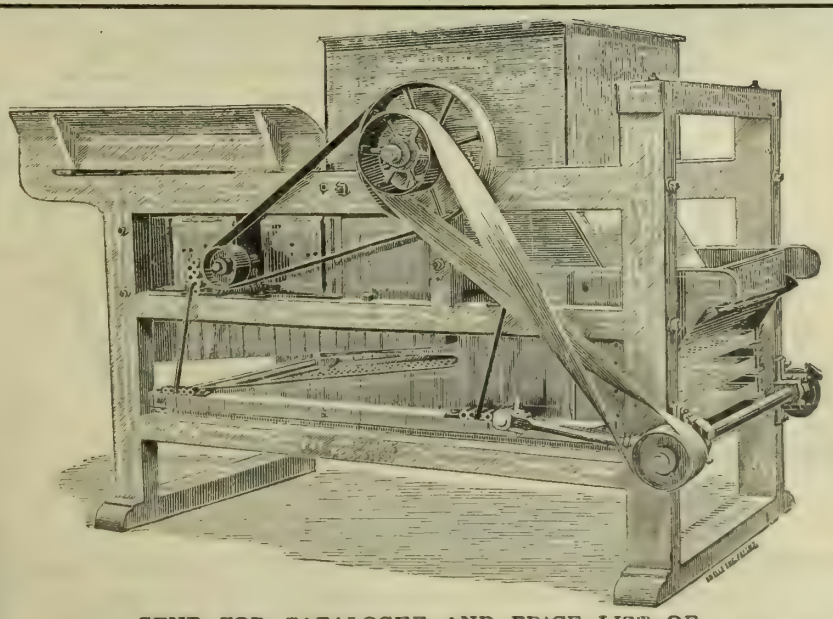
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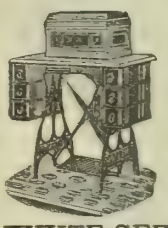
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July 30th 1892.

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I have given them a fair trial under various circumstances, and find them just as they are represented. They are strong, light draft, and easily handled, in a word, the best plow of its kind I have seen, and I heartily recommend them to farmers who wish to purchase a good plow.

I am yours

very respectfully

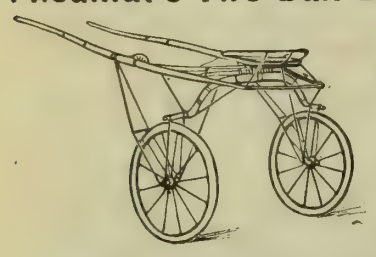
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THE ABOVE TESTIMONIAL IS ONLY ONE OF MANY WHICH WE RECEIVE.

It is the Strongest, Lightest, Simplest and Most Durable Plow in existence, being by far the Lightest Draft Plow made.

We have them Two, Three or Four Gang, either Riding or Walking. Write for Prices.

Pneumatic Tire Ball Bearing Sulkies.



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Special to Horsemen!

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THE MORGAN SPADING HARROW.

STYLE "E."

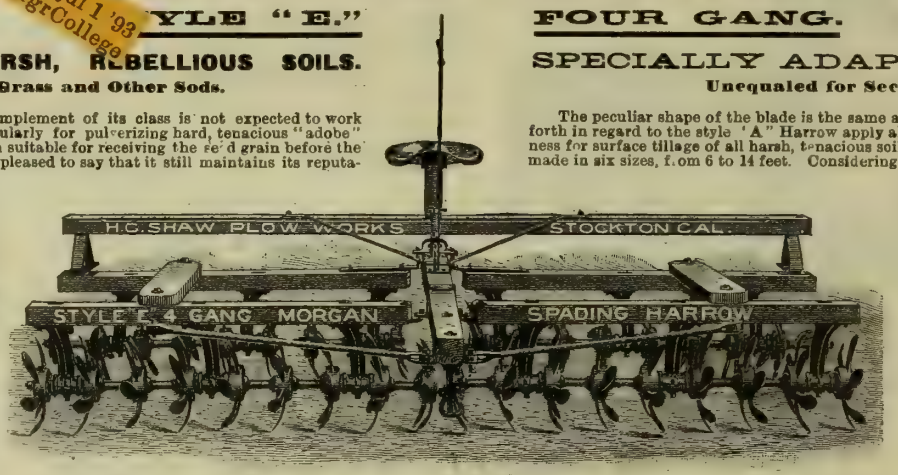
KING OF PULVERIZERS FOR HARSH, REBELLIOUS SOILS.

Matchless for Pulverizing Salt Grass and Other Sods.

The style "E" is designed for use in soils where any other implement of its class is not expected to work successfully. Intended for clay, or "adobe" soils, and particularly for pulverizing hard, tenacious "adobe" clods, in reducing "adobe" summer-fallow lands to a condition suitable for receiving the seed grain before the fall rains, it has leaped into prominence and favor, and we are pleased to say that it still maintains its reputation, won under great difficulties.

The front gangs throwing outward and the rear gangs throwing inward cause a most complete pulverization of all the surface and no furrow or ridge is left in the middle, as the rear gangs throw toward each other, leaving the whole "cut" of the harrow perfectly level and smooth.

The rear gangs of spades are so set that they run between the front gangs, thus presenting a cutting surface to the earth **every three inches,** whereas any two-gang disc or other harrow does not present a cutting surface to the soil any nearer than six inches. Owing to its peculiar construction, the style "E" Spading Harrow will do three times the amount of execution that any other kind of implement can possibly accomplish in the same time. The style "E" is a double machine, and by reason of one set of spades throwing the soil one way and the other set throwing the soil in an opposite direction, it accomplishes its work at one operation, or in going over the land once only, where disc or other harrows could not do the work in going over the land less than three or four times.



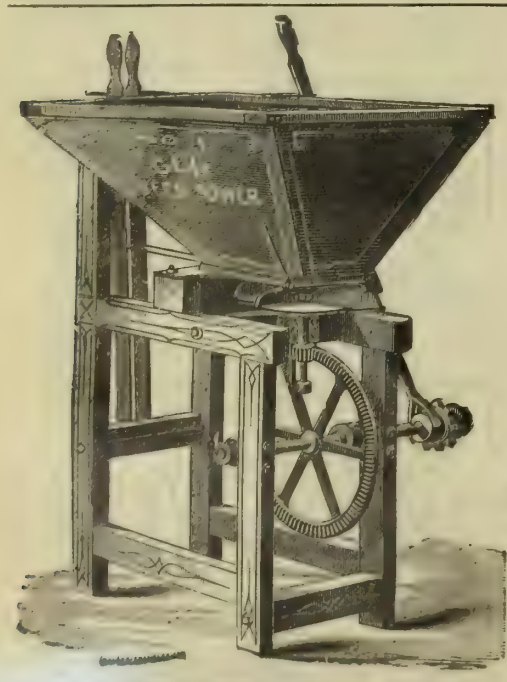
FOUR GANG.

SPECIALLY ADAPTED FOR DRY SOWING.

Unequaled for Seeding Summer-Fallow Lands.

The peculiar shape of the blade is the same as those used on the style "A" Harrow, and any "points" set forth in regard to the style "A" Harrow apply also to style "E." The style "E" is unrivaled in its effectiveness for surface tillage of all harsh, tenacious soils, and often proves an effective substitute for the plow. It is made in six sizes, from 6 to 14 feet. Considering the amount of work accomplished it is very light of draft. It loosens, crumbles and lightens the soil, does not pack it, and does what no other implement in the world will do, viz:—leaves the soil thoroughly pulverized, stirring it from the bottom upward, in fine condition and exposed to the enriching influences of sun and air. It thoroughly covers seed grain and is a most economical implement to use for this purpose alone. It will cover from a fourth to a fifth more seed than any other implement used in broadcast sowing

All of the materials entering into the construction of the style "E" Harrow being of the best obtainable, render it very strong and practically indestructible. No pole is used, as the harrow pulls perfectly "true" from strong draft irons. No unwieldy pole to be broken out or cause sore necks on the team. Write for prices.

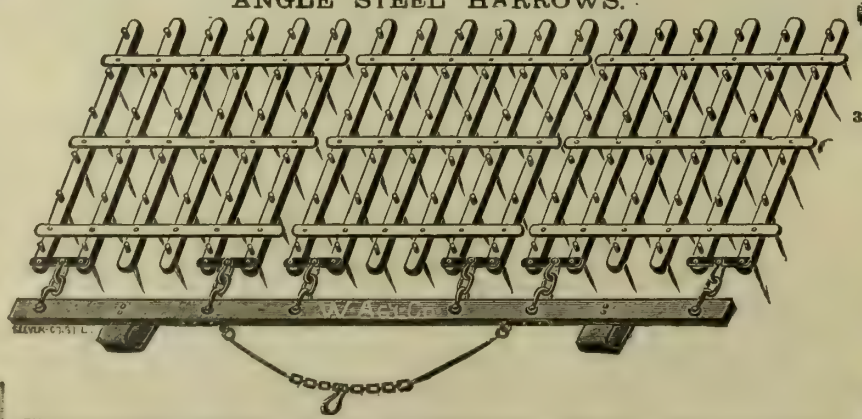


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ANGLE STEEL HARROWS.

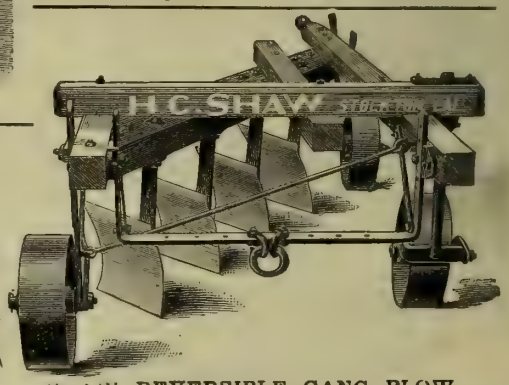


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SHAW REVERSIBLE GANG PLOW.

35,000 in Use. 25 Years of Continued Success. The Most Economical Plow on Earth.



SHAW SLIP SHARE GANG.

For Deep Plowing, Tule and Other Sod Lands.

PACIFIC RURAL PRESS

Vol. XLIV. No. 14. SAN FRANCISCO, SATURDAY, OCTOBER 1, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

Meaningless Crowns.

When the inhabitants of a free country get to dabbling with crowns, they generally make a mess of it. This emblem of royalty is evidently a misfit when applied to any sentiment or article of produce which a Republic may hold or set forth. Just now it is the old trouble with crowns as applied to raisins, and there perhaps never appeared more clearly the desirability of distinctively Californian raisin brands, which should have definite meaning and represent a recognized grade of produce.

Recently, we noted the arraignment of some merchants by the Fresno Raisin-Producers' Association because they were marking some two-crown raisins with three crowns, but selling them at a two-crown price. This, upon the face of it, appeared to be an attempt to cut under the rate fixed for three-crown stock, and the Association was disposed to be indignant at this breach of faith upon the part of merchants who cast their lot with the producers in fixing minimum purchase and sale prices. It has since transpired that it has been the custom so long to three-crown a two-crown raisin at a two-crown price that no reform can be accomplished this season. Therefore, the Raisin Association, at a meeting last Saturday, declared as follows:

> This Association will not consider it a breach of the agreement to brand a second quality of London layers as three-crown provided it was not sold for less than $1.45 a box, and that the first quality London layers, also branded a three-crown, remain as heretofore, to be sold at $1.65 a box.

Here, then, we have first and second quality raisins moving under the same brand and selling at two prices. It may not be desirable to insist upon any different arrangement for this season, but a change should be made as soon as possible. It is not fair trade to have different grades of produce bearing a mark which is understood to belong to the best.

ALAMEDA COUNTY FARMERS' INSTITUTE.—The meeting of the Farmers' Institute that was appointed to take place this fall at Niles has been set for Oct. 15th. It was arranged at the Livermore meeting that this Niles meeting, as it takes place in a region largely devoted to fruit-growing, should be a distinctively horticultural affair. Several of the prominent fruitgrowers of the district have agreed to give their experience in various lines of fruit-growing, and with the free and intelligent discussion that always follows papers, a great deal of common sense and valuable information is sure to be brought out concerning horticultural matters. Other subjects will be touched on, no doubt, but the one named will be given the most time. These meetings are free to all, and at this time of the year when farm work is "slack," it is hoped to have a good attendance from all over the county.

By the Sad Sea Waves

The engraving upon this page may strike with a chill some of our readers who reside in regions where winter is already beginning to close its grasp upon external nature. The nearer, however, one draws to the grand old Pacific in this latitude, the less he thinks of seasons, and consigns himself rather to continued enjoyment of the perennial mildness of the ocean bsach. For weeks to come, although the crowds of summer visitors have flown, surf-bathing upon the beaches of southern California will be delightful on all days not actually covered by storms. Our most popular seaside resorts are, in a sense, all-the-year affairs, and there is no boarding up of seaside hotels as there is upon the Atlantic coast. In fact, now that the tradewinds have ceased, there will come many days of delightful warmth in the air and quiet in the water which even months accredited to summer on the calendar seldom afford. Aside from the bathing, which is of course the feature of the foreground, the sweep of waters extending to the horizon is grateful to look upon and contemplate. The ocean at rest is well portrayed by the photograph from which the engraving is produced.



SURF-BATHING AT SANTA CRUZ.

OUR VEDALIA IN SOUTH AFRICA.—Readers may remember mention, some months ago, of a visit to this State by Mr. Louw, who came here from Cape Colony, South Africa, to get a lot of the Australian ladybird, which had done such wonderful work upon the cottony-cushion scale in this State. He returned hence taking two parcels of the Vedalia, one lot being shipped on ice and the other kept open and fed en route. Both were alive when he arrived at the Cape, and he writes that the experiment has been so successful that various parts of the Colony have been supplied with the insect, which, no doubt, will be as useful in clearing off the cottony-cushion scale there as it has been in California and the Hawaiian Islands.

THE CHOLERA.—Reports favor the success of the efforts to exclude the cholera from this country. No new cases have been reported in New York for several days.

Another Tobacco Enterprise.

J. D. Culp of San Felipe, Santa Clara county, has never lost his faith in California tobacco production, though he has gone through vicissitudes in this line which would have discouraged a less persistent producer. We notice in the Gilroy *Advocate* that the San Felipe Havana Tobacco Co. was incorporated and a contract made between its directors and J. D. Culp covering the terms upon which the company is to handle the product of his farm at San Felipe. The capital stock is $100,000; shares 20,000; par value, $5 each.

P. C. Hodges is president of the new company; Geo. T. Dunlap, secretary; and A. Robinson, treasurer. The Board of Directors are: P. C. Hodges, J. H. Ellis, A Robinson, S. T. Moore, Geo. T. Dunlap. The plan of the company is to proceed at once to the making of cigars, working for the time being in the building now occupied by A. Wolfrom, whom the Board has selected as superintendent. The directors hold in trust a large amount of working stock capital which will be continuously on the market to Gilroy purchasers at $5 per share, the par value, and with the stock already subscribed, the *Advocate* thinks, there is no reason why the enterprise should not grow into a large and profitable factory.

Many of our readers will be interested in this announcement, for many have been experimenting in the same direction. It has recently been stated that California tobacco has achieved a much better reputation than it formerly enjoyed. The old difficulties in the way of satisfactory curing in this dry climate must have been mastered. There is much interest manifested in the crop and from the successful growth of the plant which has been demonstrated in a small way in many parts of the State, it may be inferred that a large and profitable output is possible providing the leaf can be put in a cured form which is acceptable to the tobacco manufacturers. Mr. Culp's new start in a business with his neighbors as participators seems to indicate full confidence that his old-time anticipations will yet be realized.

STATE CITRUS FAIR.—The State Board of Agriculture has just decided to hold the next State Citrus Fair for Northern California in this city in January. The State appropriation makes available the sum of $2500 for premiums. The exhibition will be held at the Mechanics' Pavilion, San Francisco, in conjunction with the preliminary World's Fair exhibition, providing it can be done harmoniously. J. K. O'Brien of Smartsville, Yuba county, has been appointed Superintendent of the Fair. The Southern District Fair will be held in Los Angeles in March.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square	1.00	2.50	6.50	22.00
ne inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, October 1, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Dairy and Farming Machinery—G. G. Wickson & Co.
Sheep Dip—J. W. Grace & Co.
Grain Cleaners, Gas and Gasoline Engines—Daniel Best.
Paints—Paraffine Paint Co.
Olive Trees—Howland Bros
Ollive Nursery Stock—C. F. Loop & Son.
Windmills, Pumps—Frank Bros.
Guns, Revolvers—J. A. Johnston.
Sewer Pipe, Fire Brick—N. Clark.
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Vertical Engines—James Linforth.
Swine—J. P. Ashley.
Sheep and Goats—R. H. Crane.
Thoroughbred Swine—E. W. Melvin.
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Gang Plows, Harrows, Trucks, etc—Matteson & Williamson Manufacturing Co.
Freestone Peach Trees—Grant Oak Fruit Co.
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The Week.

Public attention which is not engrossed by the election which is now only about five weeks away, seems to be running upon events of nearly four centuries ago. The general plan of making the celebration of October 21st a school affair all through the country seems to be taking well. The suggestion was a good one. The young mind will be impressed as perhaps it could be in no other way with affairs connected with the birth of the hemisphere.

It seems strange indeed that the world, old as it is, should have lived so long without finding its better half, and how deep and wide was the impression produced by the discovery can be best brought to mind in this later day by starting the children at work upon it. What fills the mind of the child, older people can seldom escape from.

The prospect is that the world will learn more this year about the closing years of the fifteenth century than it has ever known before. All the accumulations of the scholars seem to be spread out for popular admiration, and the keenest interest is being manifested therein.

San Diego has done well this week with its unique celebration of the landing of the Portuguese Cabrillo in her famous bay 350 years ago. A ship built to imitate an old-time caravel carrying a modern Portuguese in ancient costume landed amid a welcome of the wildest Indians which they could make out of the modern degenerate material, and did not seem at all disconcerted to find a fleet of United States warships, a group of governors, generals and admirals and ten thousand people honoring the landing. It was a gala day, with the inevitable oration, brass bands and soldiery—another Fourth of July in the autumn. No wonder the affair is reported a wonderful success in every particular.

Increased Shipments.—Newcastle, Placer county, has shipped to September 20th, this season, 8,558,596 pounds of fruit, against 6,243,013 pounds up to the same date last season, or a gain of 2,314,583 pounds.

The State Grange.

The annual council of the California State Grange, to many of our readers the most interesting of all the year's events, will occur during the coming week. San Jose is the place and Tuesday the time of meeting, and it is expected that the deliberations with the festivities attending them will last through Wednesday, Thursday, Friday and Saturday. It is the good practice of these annual gatherings to emphasize the social side of the Grange plan and they have come in their general spirit to be festivals rather than conventions. Serious business is neither forgotten nor neglected, but it is attended to in business hours, and the intervening periods are given up to fellowship and diversion in those wholesome forms in which husband, wife, parent and child co-operate and vie with each other. Of all the conventions of the year there is none like the State Grange, because there is none other in which wives, mothers, sisters and daughters have equal part and none other in which the purposes are purely beneficent and into which some form of the evil spirit of partizanship does not enter.

In the way of business there will be comparatively little for the coming meeting to do. Mr. McConnell's official term as a member of the Executive Committee expires by limitation, and a successor will have to be chosen, but this we imagine will probably be done in five minutes. All other officers hold over for another year, so there will be no loss of time on that score. The most serious proceeding will most likely be the consideration of a series of resolutions which has been prepared and recommended for adoption by the Legislative Committee, composed of Messrs. Webster, Coulter, Norton and McKune. The resolutions are five in number, as follows: (1) Favoring a change in the Constitution of the U. S. providing for the election of Senators by direct vote; (2) favoring the passage of a law at the next Legislature providing for the organization of mutual fire insurance companies; (3) protesting against any extension of time for the payment of the amounts of money due the Government from the Union and Central Pacific Railroad Companies; (4) favoring the passage of a law by the Legislature providing for the reassessment of all property in this State which has been assessed since and including the year 1883, and on which the taxes, or any part thereof, have not been paid, and for the collection of all unpaid taxes thereon; and (5) favoring the passage of a law providing for the annual collection of a graduated tax upon that part of the net income of all trusts and corporations which is in excess of $50,000 per annum. In these recommendations there are some suggestions radically at variance with the fundamental plan of the Government, and it is not unlikely that there will be friendly differences of opinion and consequent discussion concerning them. There will no doubt be other subjects for discussion, but nothing is now apparent to indicate what they will be. The general business will be the reception of reports from the several officers, with discussions of the conditions and policies of the Order. These duties will not burden the delegates, who will no doubt find ample time to partake of the hospitalities which await their presence at San Jose. The festivities already planned include a general reception by the Mayor and citizens, a dramatic entertainment gotten up by the local Grange and a Pomona Feast. Incidentally there will be diversion in many other forms. San Jose affords many attractions, the surrounding country being one of exceptional interest to the farmer and orchardist from the variety and the perfection of its cultivation. Mount Hamilton is a comfortable journey from San Jose and many no doubt will view the glories of the midnight sky through the big Lick Telescope.

The past year has been a fairly successful one for the Grange in California. Its principal incident has been a general canvass which was prosecuted industriously through the spring and early summer and in which the officers of the State Grange, all the Past Masters, and nearly every prominent Patron in the State took part. While the results were not all that was hoped for, still the canvass was successful in that it awakened the Grangers of the State to new interest and activity in the Order. While it is certain that through this canvass a good many recruits were secured, it is impossible to tell how many because it is only once a year that official reports are collated. It is unfortunate that there is not a system of monthly reports by which the officers of the State Grange could be kept definitely informed of the doings and conditions of the several local organizations. If such a system could be devised, it would aid vastly in the work of administration and would result in very great benefit to the broader interests of the Order. The Master of the State Grange ought to be able at all times to know just what is going on in every part of the State, but under the present system, or rather in the absence of system, he is unable to get any information excepting by personal visitation or through the friendly assistance of fellow-workers. Although a considerable sum of money was expended in the canvass, the State Grange is in a good financial condition, and we are informed by the State Secretary that it has no debts and has money in bank. There ought to be a world of encouragement in this fact since in the present organization of society, financial independence is the first requisite to free and effective work in any line of effort. The fact that the Grange has money in bank is a consideration not to be over-valued. There should be good care in the future as in the past year to so husband the limited income of the State Grange as to maintain the present comfortable financial status.

The Grange in California, and the country at large for that matter, has gotten past its infantile stage and is now an established and permanent institution. The history of its efforts and the failure of some of its early projects is part of the history of the country. The Grange, like every other successful human institution, has had its experiences of reversal, and its later policy has been shaped with a wisdom born of discipline. The hardships of the "seventies" were, as they occurred, a severe trial, but in many ways the trial was wholesome. It demonstrated what was practical and what was not practical in the original Grange plan, and it separated the chaff from the grain. The overzealous and impractical and the faint-hearted—and these are found among rural as among all other classes—dropped out, leaving a circle of steadfast, sound-hearted men and women holding fast to the Grange for the good there was in it, not discouraged nor driven from the field because they failed to conquer the universe at the first assault. This solid element found instruction in failure, declined to consider itself either beaten or discouraged; and now, after many years of devotion to a good cause, finds abundant reward in the later victories of the Order and in its increasing power. The Patrons of to-day see the Grange, not indeed the hot revolutionist which immature hopes pictured it, but a stanch, conservative and respected social force working steadily in practical ways for useful ends. In reviewing the accomplishments of the Grange, they see them, and the whole intelligent world sees them, reflected in wiser laws, in a broadened intelligence among farmers, in a closer connection between the agricultural interest and the Government, in a better fellowship among neighbors, and in a new intellectual and social spirit among young and old in the country districts. They see rural life expanding in its interests and advancing in its influence as a direct result of the associations and the co-operative principal fostered by the Grange.

The vital power of the Grange, as the Rural views it, rests chiefly upon its social character and in the happy way in which it brings domestic and business aims into combination. No other organization so fully co-ordinates the interests of social, industrial and family life. In none other are instruction, entertainment and progress so leagued and bound together, and none other contrives to win by its interests an equal degree of devotion in both young and old. The Grange deserves to live and prosper, for its purposes are noble, its practices instructive and refining, and its influence wholly good.

A Great Horse Show.

Californians who may happen to be at the East during the week beginning November 14th should make note of a grand horse show which is to be held at the Madison Square Garden, New York, on November 14th, 15th, 16th, 17th, 18th and 19th. It is announced that the list of premiums will have an aggregate value of $35,000. The prizes for thoroughbred horses foot up a total of $1100, of which $750 will be the first prize, $250 the second and $100 the third. The trotters are very well taken care of indeed.

There is a champion prize of $1000 open to all stallions having taken a first prize at any recognized horse show prior to the closing of entries. There will be a first prize of $1000, a second of $400, and a third of $150 in class four for stallions to be shown with four of their get, the oldest of the get not to exceed four years. There are many other prizes very well arranged for the trotting classes. The roadsters, Clydesdales, Normans, Hackneys, coaching stallions, carriage horses and other classes are very well taken care of. So are the ponies and the hunters. The occasion promises to be a notable one.

Eastern Fruit and the Cholera Scare.—It is telegraphed that the cholera scare is having a disastrous effect on the fruitgrowers of the Hudson River valley. Every day fruitshippers receive notices from merchants in New York to discontinue shipping, as fruit is perishing in the markets. Many farmers in Duchess county are leaving their orchards untouched.

From an Independent Standpoint.

A reader of the RURAL PRESS asks for an explanation of "just what is meant by the phrase 'fraudulent railroad capitalization.'" The question is easily answered. Fraudulent railroad capitalization is that proportion of the aggregate of the stocks and bonds—or other evidences of ownership or obligation—of a railroad company in excess of the actual value of the property which it stands for. In other words, if a railroad company is capitalized for, say, $100,000,000, and if its properties are worth only $50,000,000, one-half of its "capital" having, in fact, no existence except on paper, is fraudulent. With the proportions varying from one-fourth to three-fourths, this is precisely the situation of most of the railroads of the country. Part, but not all, of the difference between the nominal and the actual value is "water," pure and simple. The "watering" process usually begins at the birth of a new railroad corporation. Some practical "financier" or some local coterie discovers an unoccupied field for a railroad. A company is organized with capital stock away up in the tens of millions and a few hundreds or thousands are paid in for the expenses of a preliminary survey and for the publication of a glowing prospectus. The company sends an agent to New York, Boston or some other money center who by dint of persistent drumming effects a sale of bonds, in this way raising enough money to build and equip the projected road. The completed road belongs to the original company subject to the obligation to the bond-holders, and the "capitalization" is the aggregate of the bonds and of the original stock (the aforesaid tens of millions.) The smallest fraction of the stock is ever really paid up but it is divided among the projectors (who might more properly be called the conspirators) and it figures forever after as part of the road are required to pay dividends. But this stock which the schemers get for next to nothing represents only a part of their profits from the enterprise. By virtue of owning the stock, the "financiers" control the expenditures for construction and the contracts are usually let to themselves, organized into "Construction," "Supply," "Development" or "Improvement" Companies. Naturally, the original company, (Smith, Jones & Brown) makes good terms with the "Construction Company" (again Smith, Jones & Brown) and Messrs. Smith and Jones and Brown as individuals usually come out very rich men with piles of money made in construction and supply contracts and by incidental townsite schemes in addition to their holdings of stock for which they paid nothing. It is by these methods that commonplace men become "magnates"—and by one and the same process they "skin" the investors, (the bond-holders,) on one hand and pile up "capitalization" which the public is expected to support by taxation in the form of freights and fares.

One of the best known of the Oregon roads (the Oregon Railway and Navigation, now incorporated into the Union Pacific system) affords in its history a good illustration of some of the ways by which excess capitalization is created. About fifteen years ago the Oregon Railway and Navigation Company acquired for six millions of dollars a steamboat property whose actual value was less than two millions. Later it acquired a steamship property at a cost proportionately above the actual value of the steamers bought. Subsequently it built at different times lines of railroad from Portland to the eastern boundary line of Oregon and into the heart of eastern Washington. The work of construction was done in "boom" times and by "boom" methods. The managers drew enormous salaries which were further supplemented by sharing in the profits of construction contracts, by percentages on the purchase of materials and supplies, by manipulations of the stock market and other familiar methods by which railroad "magnates" contrive to gain wealth, whether the properties under their administration pay or not. When the construction was finally completed, the whole property was shown to represent a "capital" of about forty-five millions of dollars, and it was leased to the Union Pacific Company for a term of ninety-nine years, under guaranty of six per cent per annum upon the whole capitalization. At the time of this transaction, which came about through a conflict between the Union Pacific and the Northern Pacific for control of the road in question, the writer was informed by a competent railroad engineer, a man who had had a share in the actual work of construction, that the real value of the property, as measured by what it would cost to duplicate it, was in the neighborhood of fifteen millions of dollars. Here, then, is an instance of a property worth fifteen millions capitalized at three times that amount and leased to a company pledged to pay six per cent on the whole "capitalization." Two-thirds of this enormous capitalization of forty-five millions was bogus. It had no existence in fact, for there was nothing in actual property to represent it. Is our inquiring reader now able to see what is meant by "fraudulent capitalization?"

Viewed superficially, this doubling and trebling of "capital" by railroad owners might be deemed an innocent form of self-deception, concerning only themselves. Closer scrutiny of the subject, however, shows it to be extremely mischievous and very much the business of the public whose contributions support the railroads. The companies claim, and on the face of things the claim is plausible enough, that railroad property is fairly entitled to a percentage of profit equal to the current earnings of investment in other forms of property. This principle admitted, and there would be no grievance if railroad earnings were made to yield a profit of five, six, or even seven per cent on the value of the roads. But here comes the rub. A "fraudulent capitalization," varying from one-fourth to three-fourths of the alleged capital of the roads, is made the basis of demand, and therein lies the injustice. The country which supports a road would not complain at rates planned to yield five, six or seven per cent upon the actual investment, but it resents as an unwarrantable imposition an adjustment of rates calculated to yield these percentages of profit upon a "capitalization" fraudulently expanded to double or three times the actual value of the property. How the scheme of over capitalization is made to work against the public may be seen by referring again to the Oregon Railway and Navigation property. The Union Pacific, to which this property is leased, pays six per cent per annum on a capitalization of forty-five millions, or thereabout, and must therefore, to make itself whole, not to mention profits on the transaction for itself, make the leased property yield $2,250,000 of profit. Six per cent on the actual value of the property would be only one-third of this amount, or $750,000. The public, therefore, is made to pay $1,500,000 per annum to support dividends on a capital which in fact has no existence. Is it surprising that the vast, rich Columbia River Basin, which supplies the traffic of the road in question, is racked by transportation charges? It is only surprising that the country is able to support its burden. The people suffer under it with tolerable patience, but the tax is too great for permanent endurance, and it cannot always or for very long be borne. The result will be, in time, such a practical protest as will force the road into bankruptcy, and when it emerges from the ordeal it will be upon a basis of its actual value. This is the inevitable final necessity in all such cases, and time will bring it about. The people of the United States will not go on forever paying tariff rates levied to support interest rates upon millions of dollars of "capital" which exists only on paper.

The apologists of the prize ring—and there are not lacking persons of respectability to defend this dirty, degrading and criminal "business"—claim for it that it stimulates "athletics" and thus results in mental and moral good. Unquestionably, it stimulates "athletics," but it is more than questionable if any good is thereby accomplished. What is called "athletics" is largely a waste of physical force in idle "sport," and its results, we believe, are oftener bad than good. During the past week two well-known "heroes" of the prize ring have died—and from consumption. The loss of such heroes is not, in our view, a very serious matter, but the causes of their taking-off may well occasion serious reflection as to the effects of "athletic" training. Our own observation goes to prove that such training is, in four cases out of five, actually harmful. It develops the muscular powers, stimulates them to unnatural efforts and puts a strain on the system which always finds and often snaps the weakest vital link. Nature, left to herself, never puts a man in what sporting men call "condition," and nature rarely sends a man, who begins life with a sound constitution, to the grave from consumption, heart failure, or any of the other ills which not uncommonly afflict the athlete. There is no man who cannot, if he will, keep his body in wholesome condition without the practices of "athletics." The resort to the gymnasium is too often the beginning of unwholesome courses. The interest is wholly apart from the best accompaniments of natural "exercise." There are no fresh breezes, no open skies, no scent of flowers, no music of waters, no song of birds in the gymnastic hall or on the tan-bark track. The work is purely muscular, and there is connected with it no charm of sense, no expansion of mind, no elevation of soul. The influence of it may be read in the chat of the hall. It runs chiefly, if not wholly, to the subjects and heroes of the prize-ring. The effect of all this upon character, especially upon the character of boys, is, to say the least, not good. That sort of thing never yet produced a high-minded, sweet-souled man. The gymnasium in which this type is developed is God's broad out-of-doors.

State Fair Cattle Show—No. 2.

From Our Own Correspondent.

As before noted, the cattle stalls were not as well filled as in recent years. Altogether, there were about 240 head, some 20 less than last year.

The Shorthorns, as usual, were most numerous, there being about 100 head of all ages and classes, but neither in quality nor condition were they as good as last year. This was particularly noticeable in three or four of the largest herds on exhibition.

It is true that prevailing prices are not very enthusing nor encouraging for bringing out cattle in high show condition, as there are few people who, under the present conditions of the cattle trade, care to pay enough for an animal to reward the breeder and feeder for the extra outlay the higher condition entails. But breeders, to insure success, must look ahead to provide for future merits in the herd by neglecting no means, however trifling it may for the present appear, that will insure such constant and steady improvement, by careful breeding and feeding, as is always necessary to keep up a breeding herd to a high standard of merit.

How quickly a herd of cattle will degenerate by neglect of what are seemingly trifling details, experience alone can tell. Any observing person who has watched the downward course of so many herds in this State during the last 20 years will have seen enough of that kind of experience, some of which is undoubtedly due to the fact that so many people start in to breed pure-bred cattle with too little knowledge of what is required in the management of them. Some have taken it up with a view to making money, bought high-priced cattle, had them attended to and showed around for a few years, and finally given up with disgust. Unfortunately, there is little money in it now, and the breeders who have money-making for their chief, and perhaps sole aim and end in breeding, are not the ones to hang on to the business through good and bad times.

How many breeders are there now in the State who have made a standing success of their work? If there are two or three representing each of the principal breeds, it is all we can expect; but are there so many?

It is just as well to look facts in the face and see how we stand in this matter now and how we are likely to stand in the near future. The cattle industry never stood in greater need of the support of successful breeders than it does now. The show-yard is a place to learn lessons by comparison; it brings out the best a man has; if he does not show something good there, it is more than likely that he has not got it.

SHORTHORN CLASSES.

The class for three-year-old bulls was a small one, there being only five animals forward. The first prize was awarded to Scotch Billy, a bull that has kept the width, depth and substance of last year when he was undeservedly left out in the cold, as to premiums; however, he had the justice he deserves this year. Though not by any means a *showy* bull, as we noted last year, a little more scale would help him in that respect, yet he is a good sort to have, with heavy flesh, short legs and the masculine character one likes to see in a bull.

Mr. P. H. Murphy took second prize with Duke of Wildflower, a four-year-old bull, with a good middle, back and thighs, but, like his more successful competitor, he also is not a showy bull; he has, however, got substance and good flesh, either of which count for more than mere style so attractive to some people.

In the class for two-year-old bulls, Heilbron Bros.' 3d Duke of Wildflower took first premium. This bull has not kept the good form he had as a yearling. He took the prize last year in that class and was, at that time, a very smooth and evenly-fleshed bull.

Mr. V. E. Hill of Hanford came in for second with Lucerne Duke, a pretty good, short-legged bull, but not in show condition; evidently, he had come right off the lucerne pasture. Mr. Hill had seven head on exhibition, two of which were cows entered for the Shorthorn milk test.

In the yearling bull class, Heilbron Bros. took first prize with a good, thick-bodied bull, by far the best in the class. The same firm was also first in the bull-calf class, in which there was nothing of extraordinary merit. Heilbron Bros. had about 23 head of Shorthorns on exhibition; they are not in the blooming condition they were in last year, consequently they did not show to the same advantage.

SHORTHORN COWS.

In the class for aged cows, Mr. J. M. Dixon's Manunga was placed first, and the same owner's Flora took second prize. At this we were somewhat surprised, as she is coarse and short in the hind-quarters, flat-ribbed and peaked on the chine, and is not, in any sense of the word, a show cow. There were two or three better cows in the class, but, particularly, Mrs. Younger's Red Dolly 27th, a roan by the way, a round-barreled, squarely-built, short-legged cow, well and evenly covered with flesh. If this cow had been placed first in the class there could have been no fault found with the decision. She was afterward awarded sweepstakes premium as best female Shorthorn, and justly so.

The sweepstakes premium for best bull was awarded to 28th Grand Duke of Gloster, belonging to Heilbron Bros., who were also first in the yearling and heifer-calf classes, though, in the former class, J. M. Dixon's second premium heifer, Manunga 5th, is a smoother and more evenly-fleshed heifer, with better back, ribs and loins than her more successful rival, and no injustice would have been done had their places in the class been reversed.

HEREFORDS

Were on hand to the number of about 20 head exhibited by Heilbron Bros., all in fine condition, much better than any other herd of beef cattle on the ground. Geo. Bement & Son had also a bull and a heifer, besides their regular herd of Ayrshire cattle, in which they had Mr. Nicholls for

competitor with another herd of the same breed. The show of

BLACK CATTLE

Was not so large as last year; nevertheless, Dr. Dixon of Sacramento succeeded in carrying off the sweepstakes premium for the best herd of beef cattle, with his Polled Angus herd of one bull and four cows. Last year the same was won by a herd of Herefords, over the black cattle and two Shorthorn herds. This year there was only one Shorthorn herd. Truly it is high time for those who have this breed of cattle to be looking to the laurels won in times past, for we don't yet believe they are going to depart from the breed; if so, the fault will be with the breeders and not with the breed

Mr. W. B Gibson of Woodland had a few of his Galloway cattle on hand, among them a fat cow, one of the best of any breed we have ever seen on this coast. Excepting that, proportionately, she is not quite so well covered on the loins as she is good on the crops, it is practically impossible to find a fault in her form and flesh. The same gentleman also showed a grade steer, but in this animal, as a whole, there was nothing for special commendation. This brings us to the

GRADED CLASSES,

In which premiums are not now given to graded cows, but to graded steers or barren heifers. Why this change of doubtful benefit? Are not the dairy interests of this State one of the most valuable in regard to the products of cattle? Certain it is that the State does not produce butter and cheese enough for home consumption, and that the required increase in prodnction must be brought about by the improvement and selection of our dairy cows; which improvement will be most quickly and thoroughly effected by a more general use of pure-bred bulls of well-known milking strains of cattle. Thus dairy cows, the great majority of which must always be grades, become an important factor, a kind of stepping-stone in the upward grading of our cattle that must be had at any reasonable cost.

JERSEYS.

There was a better and larger display of this breed of dairy cattle than we have seen for many years. Mr. Henry Pierce was deservingly the most successful exhibitor, taking something like 13 premiums with 14 animals.

There were a few from Los Angeles county, amongst which were some two or three dehorned ones. The operation had not by any means added to either the attractiveness or beauty of the animals.

HOLSTEINS

Were well represented by animals from the herd of F. H. Burke, Menlo Park, and from that of the Hall Stock Farm, near Marysville. Both were looked upon by visitors as being good herds and there were several milky looking cows in each lot.

Mr. Burke was awarded the sweepstakes premium for the best bull of any age, but in cows Mr. Hall was the winner, though on what grounds the premium was awarded to Mr. Hall's cow we could not see, unless it was that she was a little neater in frame, but she had not so good an udder, neither did she show as good indications for milking qualities in any other respect as did Mr. Burke's cow.

THE SHORTHORN MILK TEST.

There were six cows entered for the premiums given by the American Shorthorn Breeders' Association for the first and second best Shorthorn cows giving the most butter in two days, according to the Babcock test. Considerable interest was taken in watching the results of the test. Wishing to see how the thing came out from beginning to end, we dropped into the room when the first trial was being made and found the operator and two or three of the exhibitors poring over the contents of the test bottles, which showed an unreadable mixture of curds and butterfat. It looked a little like a forlorn hope, as far as the Babcock tester was concerned, and we are not sure but they had almost come to the conclusion that it was no good, when hope inspired a second trial, which, by accurately following the printed instructions, proved a success and showed the percentage of butter fat clear and distinctly readable.

The testing was done on the last two days of the fair, and, being in at the finish on Saturday night, we give the results of the two days' trial:

Name of Cow.	Morning's Milk.	Butter Fat, Per Cent.	Evening's Milk.	Butter Fat, Per Cent.	Total Milk from each cow in two days.
	Lbs. Oz.		Lbs. Oz.		Lbs. Ozs.
1—Fidget 8th	19 8	3.8	18	3	
	17	3.2	18	3.1	72 8
2—Joan of Baden 2d	15 8	3 2	14 8	3.1	
	14	3.6	15	2.4	59
3—Belle of Antelope	17 8	2 8	19	3.4	
	20	3	22 8	3	79
4—Rosely K	12 8	4	12	3 8	
	13	4	10	3.6	47 8
5—Rosabelle	16	2 6	18 8	2.6	
	17 8	4	16 8	4	68 8
6—Rose of Brighton	8 8	1.4	21	2·7	
	12 8	2.6	17 8	3.2	59 8

The cows Nos. 1 and 2 belong to V. E. Hill of Hanford, Tulare Co. Nos. 3 and 4 to Peter Peterson, Sites, Colusa Co., and Nos. 5 and 6 to P. H. Murphy, Brighton, Sacramento Co.

Notes of the sweep and swine classes will come later.

Correction in the Holstein-Friesian Premiums.

We are informed that the State Fair premium list, which we published last week, should be corrected as follows:

Best bull calf, T. B. Hall instead of F. H. Burke; second best 3-year old cow, T. B. Hall instead of F. H. Burke. Also under herds: Best young herd, headed by Duke Aaggie Clothilde, was won by T. B. Hall instead of F. H. Burke.

The Veterinarian.

Abnormal Milk.

Los Gatos, Sept. 12, 1892.

To the Editor:—I have a cow about four years old, who, prior to her last calf, made good butter, but since produces the poorest kind of butter—white and frothy. She gives nearly four gallons of milk a day; cream about the thickness of a table-knife, and of such consistency that it can with difficulty be taken up with the skimmer. She has the best of wheat hay, bran mash, cornstalks and other green feed, has a good appetite and appears perfectly healthy. Have a nice, cool place for milk and butter. Can you or your readers tell what the trouble is and suggest a remedy?

The cow is seven-eighths Jersey and one-eighth Durham, and yet since calving, her milk is the bluest I ever saw.

Subscriber.

Give the cow the following medicine night and morning: Powdered sulphate of iron, 1 drachm; quinine, half a drachm; powdered gentian, 2 drachms. Mix with half a pint of beer and drench her night and morning. Feed her crushed barley and flaxseed in addition to the food you mention. Continue the medicinal treatment for a fortnight, then notify me the result.

A. E. Buzard,
405 Broderick St., S. F. Veterinary Surgeon.

Larkspur Poisoning.

Hueneme, Cal.

To the Editor:—What is a good treatment for wild larkspur? This weed has caused a large mortality among the cattle in this district the past season. The poison causes a bloat, and when the animal is down, soon dies. The blood is black, and much relief is afforded by bleeding. What would comprise a good, compact outfit to be carried on the saddle for the treatment of this malady?

H. S. Harvey.

In cases where the animal is much bloated, it will be necessary to puncture the rumen (paunch) with the trocar and canular, which will liberate the carbonic acid or sulphuretted hydrogen gas. In the early stages give 4 ozs. of aromatic spirits of ammonia largely diluted with water. In the later stage give hyposulphite of soda in one-ounce doses dissolved in cold water. The above medicinal remedies can be repeated in half an hour if necessary. The trocar and canular can be purchased at Folker Bros., surgical instruments, Market St., S. F.

A. E. Buzard, V. S.

Southern Development.

Alessandro, Cal., Sept. 22, 1892.

To the Editor:—Everything is very quiet in the Alessandro district just now. Lines are being run for a proposed canal around the foothills at the north end of the valley, and there is talk of the construction of a large reservoir to store water for the lands below.

Many acres have been set out to trees and vines during the past year, and many more are being plowed and graded for planting this coming winter.

Moreno is having a fine, large schoolhouse built, that is nearing completion, at a cost of $3500. They have built a smaller one in the northern end of the district, at a cost of $1200. Cloverdale district has just begun the erection of one costing $1650, all this where it was hard to find the necessary 15 scholars to entitle us to a district three years ago.

Land that sold three or four years ago at from $15 to $20 per acre is now held at $200, without improvements, other than that the water has been piped to it.

While on a visit to Bloomington, four miles west of Colton, a few days ago, I found the country all around transformed from a desert, as it was five years ago, into a productive country that is furnishing homes and employment to a great many people. They have a fine schoolhouse nearly completed, at a cost of about $4400. The Congregationalists are going to build a church in the near future.

Rialto, two and a half miles away, is a thriving town, with hotels, churches, fine schools, etc. West Rialto, two and a half miles west of Rialto, has a fine school-building, just completed.

So, industry and thrift is transforming the desert into the homes of a people who realize that on the intelligence of the future citizen rests the safety of the nation.

L. S. Lyman.

P. C. W. P. A.

Written for the Rural Press by Maud Peaslee.

Last week the Pacific Coast Women's Press Association in convention assembled elected the following officers for the ensuing year: Mrs. Emily Browne Powell of Alameda, President; Mrs. Sarah B. Cooper of San Francisco, First Vice-President; Mrs. Charlotte Perkins Stetson of Oakland, Second Vice-President; Mrs. James Neall of San Francisco, Third Vice-President; Mrs. George T. Gaden (nee Lewis) of San Francisco, Corresponding Secretary; Miss Mary Lambert of Oakland, Recording Secretary; Mrs. Ella M. Sexton of San Francisco, Ass't Recording Secretary; Mrs. Florence Percy Matheson of San Francisco, Treasurer; Mrs. Nettie B. Wilcox of San Francisco, Auditor; Mrs. Sarah E. Reamer of San Francisco, Librarian; Miss Agnes Manning of San Francisco, Mrs. Lillian Plunkett of San Francisco, and Mrs. Nellie B. Eyster of San Francisco, the additional members of the Executive Board.

With regret for the past officers the association welcomes the new officers, and much pleasure was expressed over the ticket as presented.

On Wednesday morning, after roll call, the Convention was opened by a prayer by Sarah B. Cooper. Next in order was "Greeting," by Mrs. Nellie B. Eyster, which was responded to by Mrs. Ruthella Bollard.

Appointment of Committee on Resolutions, report of Nominating Committee and annual report of officers and standing committees absorbed the rest of the time for the morning session.

In the afternoon, a paper on "Genuine Fellowship," by Mrs. Sarah B. Cooper of San Francisco, carried many points straight home to the listener's heart. The president's annual address touched upon many vital points of interest to out-of-town members.

As an example of the power of woman to grasp and explain in detail the weighty problems of the day, the paper on the "Nicaragua Canal," by Mrs. Emma Russell Endres of San Francisco, was especially fine.

There were many other papers during the session, of subjects peculiarly interesting to workers of the newspaper craft. Among them were "A Country Newspaper Woman," by Mrs. Elizabeth Raymond of Santa Cruz; "The Press as an Educator," by Mrs. Emeline M. North of San Francisco; and "News or Gossip," by Mrs. Nettie B. Wilcox.

Others equally good are crowded out of this report for want of space, but justice demands especial mention of the paper, "A Story Well Written," by Maggie D. Brainard of San Jose, and "The Collector's Conscience," by Charlotte Perkins Stetson of Oakland.

An animated discussion on the "Employment of Children in California" was joined in by many.

Poems and music were pleasant diversions to the business of the convention.

World's Fair Notes.

The Educational Committee, appointed by the California Commission, has decided that in addition to the graphic and illustrative exhibit, there will be prepared for distribution at Chicago, cards and small hand bills giving the educational statistics of the States.

Santa Barbara County has about decided on a representation of a cloister to enclose the exhibit from that county that will be placed in the California Building of Chicago. It is proposed to construct the cloister of a light frame, covered with woven wire. The wire is then to be covered with the pale green moss that is found on the native live oak trees. The interior of the dome will be covered with pampas plumes, while the columns and a portion of the interior will be covered with festoons of live oak moss. It is desired to place a large palm in the center of the cloister and rare plants in the arches between the columns. The structure will be at least 50 feet square.

S. S. Boynton, of Oroville, Secretary of the Butte County World's Fair Association, reports that two men are now engaged in preparing specimens of all varieties of wood found in the county. Sections showing the bark, sap portion and heart of the tree will be shown.

The different World's Fair Auxiliaries in Santa Clara County have decided that the souvenirs to be used at Chicago shall consist of dried prunes and other dried fruits placed in small and neat pasteboard boxes.

The Fresno County World's Fair Commission, through the Ladies' Board, has decided not to have printed labels on articles exhibited at Chicago, but in lieu thereof will have silk labels and scarfs hand painted, with a picture of the fruit or article displayed on one end and also the name and address of the exhibitor embroidered in silk. A prize of $25 has been offered for the best 50 pounds of cluster raisins. An offer of $100 has also been made to the artists of California for the best design for arranging the Fresno exhibit for Chicago.

The southern California World's Fair Association has received orders from the various organizations in the six southern counties for 1250 boxes for dried fruits for World's Fair purposes. A lady in Pasadena has donated 2000 calla lily bulbs for the World's Fair.

Still in Doubt.—The Southern fruitgrowers seem still in doubt about the efficacy of the recently imported lady birds from Australia. There was held last week in Los Angeles a meeting, in which a report was adopted commending the effort made to introduce fruitpest destroyers from Australia, but denounces the circulation of glowing accounts by the State Board of the progress of these colonies as being at variance with the facts. A survey of the colonies of orcus chalybeus, orcus australasiae and leis conformis failed to show that they had propagated at all, or had attacked the various scale-bugs of which Koeble claimed they were the deadly enemy. The hope is expressed in the report that Mr. Koeble's predictions may yet be fulfilled, but advises fruitgrowers to trust more to artificial methods of fighting the scale than to the bugs. Fumigation is advised and a united warfare against injurious insects is recommended. There seems to be a straight issue raised between different authorities on the outlook for these insects, and the two local agents of the U. S. Division of Entomology seem to be on opposite sides.

Grape Prices.—T. R. Minturn, a prominent Fresno county vineyardist, says that the wine grapes throughout the entire San Joaquin valley are dried, in consequence of which the sweet wine product will be extremely small this season, but if the weather remains favorable for another week the grape growers will be benefited, owing to the fact that green grapes are worth $15 a ton. It is reported that the Tokay grape crop of Sonoma valley will be very light. Many growers report one-fourth of a crop. The grapes were ruined by cold nights followed by hot days during the months of July and August. Sonoma produces a splendid shipping Tokay.

At Alvarado.—A local correspondent of the *Call* says that the sugar factory at Alvarado will begin handling beets sometime about the end of September, and the growers are fearful of a wet and early winter. If so, without doubt, many beets will be lost, as much of the land is liable to overflow; the roads are bad and the mill will not receive muddy beets. There are about 1500 acres in beets this year. The price is $4.50 a ton.

Tall Bearded Wheat.—The State Board of Trade has received a sheaf of Mount Whitney wheat, seven and a half feet long, sent by W. W. Hammond of Tulare Co. This wheat is of the bearded variety, and was imported from the highlands of Russia. It is said to yield, under fair conditions, about 20 sacks to the acre.

Florist and Gardener.

Tuberous Begonias.

We are glad to receive a copy of an essay on tuberous begonias read by the distinguished grower John Laing, Forest Hill Nurseries, London, S. E., before the "Begonia Conference of the Royal Horticultural Society," which was held August 23rd. Mr. Laing introduces his paper with interesting historical and descriptive points and concludes as follows:

USES.

One of the most important uses to which Begonias can be put is for indoor decoration in pots and to a smaller extent in baskets. A fine display may be kept up from April to November by starting them in batches at different periods, retarding some, and by seedlings for late-blooming. Single-flowered varieties are the showiest, but a houseful of choice and refined doubles is an acquisition to any establishment, and give most satisfaction under glass. Some of the more floriferous and pendulous or drooping-habited kinds, taking after the style of B. boliviensis, are very effective when grown in pots or baskets and suspended from the roof of the house. Even here choice kinds may be used having medium-sized and not too heavy flowers. Some are decidedly fragrant, and if encouragement is given to their selection, a scented strain might yet be a reality. Marechal Niel and Fragrant Rose have this quality.

For exhibition purposes, Begonias are most effective in tastefully and judiciously arranged groups; but even here quality is liable to be overlooked in preference to mere display. Only medium-sized plants are capable of being worked into arrangements of this kind, with dwarf and erect flowering kinds for the front. Large specimens are not so popular as they might be, for they are bold and effective when well grown and tastefully manipulated so that staking is hidden.

There is a promising future for tuberous Begonias as bedding plants. Pelargoniums in a wet season grow like cabbages, but they are as green as kale. Whether it rains or shines, Begonias flower abundantly and are always dwarf and short-jointed out of doors. Of course, to make sure of a good display early in the season, tubers at least one year old should be employed. They may be started sufficiently early in pits or heated frames, so as to have them fairly into growth, but not showing bloom, and hardened off so that they may be planted out about the beginning of June. They do not experience the check that the plants in bloom are certain to get if the weather immediately after should prove cold or dry. Seedlings selected as to color are most suitable for this purpose; and those of stiff, erect habit and free-flowering character produce the finest display. Double varieties are more adapted for pot work, as the flowers are generally too heavy to withstand the effect of storms, of wind and pelting rain. They will yet be more extensively grown for indoor decoration, while the single varieties will be grown in thousands for bedding purposes. Figures would fail me to give exact data as to the numbers I have disposed of since I commenced the culture of this noble race of plants; they are to be computed by hundreds of thousands, if not millions. About half a million were pricked off into boxes last spring, and two-thirds, consisting of seedlings of single kinds, were planted out in June, and the remainder double varieties, besides several 100-ft. houses, filled with pot plants and several ranges of frames.

PROPAGATION.

There are at least four different methods of propagating tuberous Begonias, namely, by seeds, cuttings, leaf cuttings (as in the case of B. Rex), and division of the tubers. I approve of the first two methods only, for they are certainly the best, most practicable and profitable. Increase by cuttings is essential only in the case of choice standard kinds, to be preserved true to name. These are mostly used for pot culture, and as the most improved or advanced types of the race from whence the finest strain of seeds is derived. Young shoots from near the base of the plants make the best cuttings, and may be inserted any time during the growing season, but the earlier the better they will root and form tubers. A few of the young growths that arise from the tubers in spring may be taken; but the fact must not be overlooked that to take the same liberties with them as with dahlias would be ruinous to a good display of bloom on the old plants for a season. The cuttings should be inserted singly against the side of thumb pots, in a compost consisting of loam, leaf-soil and sand, in about equal proportions, and plunged in cocoanut fibre in the bed of a propagating pit or frame, and shaded till they have emitted roots, and may be grown on if required for late-blooming. The young plants should be kept in the cutting-pots till the following spring, and this is the more essential in the case of late-struck cuttings, but where practicable the latter should be potted and kept growing.

Propagation by seeds is at once the most legitimate, speedy, profitable, and certain mode of increasing this class of Begonias, either for pot-culture or summer-bedding. There will always be a certain amount of speculation with regard to the color, habit and character of the seedlings the first year; but, if derived from a good strain, they seldom fail to give satisfaction, and may be assorted for future work as they come into bloom. They may be sown at almost any time of the year, according to the convenience and requirements of an establishment. For my purpose, I find that the third or fourth week in January is the most suitable. Those who have a sufficient command of fire-heat will find it advantageous to sow early in the year, as the seedlings are less liable to damp off than when they are germinated in May, June or July.

The seeds are sown in square, round, or oblong pans or shallow, wooden boxes, in a compost of light, porous material, consisting of flaky leaf-soil, a little loam and plenty of sharp sand. This is mixed and used in a rough state, with some finely sifted material on the top to form a smooth and level seed-bed, which is pressed firm, watered, or more suitably dipped, and then the diminutive seeds carefully sown. The pans or boxes are placed in a temperature of 65° to 70°, with more bottom heat. The seedlings are pricked out into other boxes from time to time, as soon as they can be handled, with a finely pointed piece of wood, divided at the point to lift the seedlings. As they germinate very unequally, and in succession, the work of pricking them off employs some men and boys for weeks together. When the seedlings begin to get crowded, they are transplanted into other boxes at a greater distance apart. By the middle of May they are ready for hardening off. During the first three weeks of June, a staff of men and boys were constantly employed in planting those now in the open ground. By this time a large proportion of them had commenced to bloom, and several thousand of the most promising doubles, some of them gems, were transferred to 48-size pots, and placed in new houses especially built for their reception.

The ground in which the seedlings are planted out is heavily manured, and roughly dug up to the action of frost in autumn. Old tubers intended for bedding out should be started about the last week in March or the beginning of April; small-sized pots will be quite sufficient for them. A warm and showery month of June, and rather drier weather in July and August, are most favorable to Begonias in the open ground.

POT PLANTS.

One-year-old tubers are the most generally useful for pot work; but those of two or three years' growth make the finest specimen plants. When four years old they degenerate, some sooner, some later; hence the necessity of raising young plants to keep up the standard of perfection.

The first batch of plants may be started about the end of January or the beginning of February, and they will flower in April or May according to the amount of sunshine they enjoy or the artificial heat used. Successional batches of tubers may be put into heat during March or April to flower in June or July, and be it observed that the more slowly they are brought forward the more sturdy and durable will they be. Put them singly in small pots proportionately to the size of the tubers, in a compost consisting of equal parts of fibrous loam, leaf-soil, and sand in a rough or lumpy condition. Press the soil rather firmly if short growth and a long season is desired, merely covering the top of the tuber. Stand the pots on a bed of cocoanut fibre or plunge them in it, and keep the temperature of the house at 65° to 70°. Should the soil be dry at potting-time give a watering; but after that it should be applied with discretion till the plants begin to grow freely. Tubers that have been wintered in pots may be put into heat, watered a little, and afterward damped down with the syringe till they start into growth, and then repotted into suitably smaller sizes. Light is of great importance in the early months of the year, and it is all-important that the plants should be kept as near the glass as possible after they have started into growth, to encourage a short-jointed and sturdy growth.

Repot the plants before they become root-bound, and as the season advances and the temperature outside becomes milder, gradually give more and more ventilation, for upon a cool and airy atmosphere a great deal of success in Begonia culture depends. Low, span-roofed houses give most satisfaction. The soft and watery tissue of Begonias soon responds to favorable or unfavorable conditions; therefore let them have a house to themselves where possible, and no make-shift permitted. The smaller plants may be grown on the side-shelves on ashes or cocoanut fibre, while all the larger and taller specimens may be elevated on shelving—staging tier above tier in the center of the house and near the glass. A free play of air amongst the foliage keeps it fresh and healthy, and a dry atmosphere prevents the spotting of either flowers or foliage, as the weather gets warm about April and onward. More or less shading during the heat of the day will be required after that month. When the plants have finished flowering, or become useless for decorative purposes, stand them out of doors in a sunny position, but sheltered from wind, and keep them watered till the leaves show signs of decay, after which water may gradually be withheld till the tubers ripen and the stems drop away. Remove them indoors on the approach of frosty nights.

The Field.

The Government Crop Reports.

WASHINGTON, D. C., Sept. 14, 1892.

TO THE EDITOR:—It is due to the truth of crop-reporting history, the honor of the farmers' department of the Government, and justice to myself, to correct some recent statements which do not possess the slightest color of verity. While holding the voluntary testimony of the largest commercial organizations of the country to the utility and value of our crop reports, and receiving the compliment of the adoption of our system by several foreign governments, we find occasionally individual speculators, whose deals have disastrously collided with the truth, who vigorously anathematize our work and enter the columns of newspapers, and even the corridors of Congress, with the most absurd and reckless misstatements concerning it. It is not strange, therefore, that injurious misconceptions should occasionally be entertained by public men at variance with fact and enlightened public opinion. I desire to correct authoritatively certain erroneous views recently promulgated.

It is gratifying to notice, however, that in both Senate and House less than a half dozen persons indulged in any criticism of the crop reports.

The following letter to Hon. W. B. Allison corrects errors of statement made during the consideration of the Agricultural Department Appropriation bill:

J. R. DODGE,
Statistician.

MR. DODGE'S LETTER TO SENATOR ALLISON.

DEAR SIR:—I see in the *Congressional Record* statements made during the debate on the proviso in the Agricultural Appropriation bill relating to crop reports, made under misapprehension of fact, from hearsay, which do great injustice to the Department of Agriculture, and injuriously misrepresent its work.

The Senator from Missouri stated that, in the administration of Commissioner Coleman, "one of these monthly reports in regard to cotton was prematurely published, and got into the hands of speculators in New York, and thousands of dollars were made by it." While pretenses of advance information by speculators are of monthly occurrence, frequently half a dozen contradictory versions of the coming report in a single hour, they are rarely ever near enough to the official report to admit of the slighest suspicion of possible leakage. No cotton report, either under the previous administration or of any other administration since the time of Isaac Newton, ever was "prematurely published," and this is the first time I have ever heard of "a long and elaborate inquiry to ascertain how the information got out." Some months since a similar charge was made in a St. Louis paper, of premature publication in Liverpool. In response to my inquiry, Mr. Ellison, the great Liverpool authority on cotton, said there was a pretended advance estimation, but no attention was paid to it, as it was a monthly occurrence, and never proved to be a forecast of the reports. In this case he said it was three points out of the way. It is a further conclusive fact that no report, whether of cotton, wheat, corn or any other crop, has ever been proved to have been prematurely published or sent in advance by any person from the Department of Agriculture.

Relative to the Senator's statement in regard to the so-called controversy with a local cotton exchange, the facts referred to *were not stated in any crop report*, but were quoted from the crop movement records of the New Orleans Cotton Exchange and Ellison's crop consumption of the world, and were presented as a plea to American planters to save themselves from ruin by a reduction of acreage, which was so far heeded, as indicated by my June report of acreage, as to show an apparent reduction of more than three million acres, a result which, if true, will be worth many millions of dollars to cotton-growers.

A third statement of the Missouri Senator was that in one of the monthly reports of 1881, I "undertook to say that the tariff was necessary in order to exclude foreign agricultural products coming into competition with those of the United States." It is only necessary to say that at the date mentioned I was not statistician of the Department of Agriculture, or in connection with it in any way whatever.

In his further remarks, he says: "What right has he to say that there is an overproduction of 2,000,000 bales of cotton a year?" No such statement was made in the March report, or in any report ever made since the creation of the Department of Agriculture. That figure is distinctly given as the approximate accumulation of *two years* in the general and primary markets of the world, as shown in commercial records open to all intelligent readers.

The Senator from Minnesota states that during the past three years, "with two or three exceptions," these reports have had the effect of depreciating the value of farm products. Other influences may depreciate the value of these products, but a true presentation of crop conditions never. The reports are uniformly conservative, more frequently underestimating than overestimating crop products, as shown by records of production and distribution. The State statistics of North Dakota made the wheat crop last year more than that of the Department by ten million bushels, and those of South Dakota were also in excess of our estimate for that State. I state deliberately from careful examination of Department correspondence and published statements of grain-buyers, during the past three years, that in the autumn, when buyers are laying in their supplies for the season, their estimates generally average higher than ours; and further, that often in the spring and early summer, when the mills are seeking markets for accumulated stocks of flour, the same persons who thought the official figures were too low in the fall are persuaded in the spring that they were really too high. I have thus always found that their crop opinions varied with the seasons, especially the seasons for buying wheat and selling flour.

That speculators, and not the Department of Agriculture, are the cause of reduction in prices, was convincingly exemplified in the reception of the April report, when condition of wheat was reported at 81, the previous estimate being 85, tending to advance of prices, which immediately followed, until the bear operators got in their work and hammered down prices several points before the close of the day. The influence of speculation is thus frequently mistaken for that of the crop report.

But the most extraordinary series of misapprehensions came from the Senator from Arkansas. He brings up the apocryphal tobacco stories that have so long been the stock in trade of opposers of official crop reports, and says first that they refer to the crop of 1886. It was that of 1887. His next statement was that our report made the crop of Kentucky 92 per cent of that of the year before. It made, on the contrary, an acreage of 78 per cent and a condition of 77, which reduced the promise to 60 per cent instead of 92. (See report of July, 1887, page 305.) Six weeks later a report of continued effects of drought made a prospect of only 44 per cent, which I explained was in part real reduction and partly due to panic. The result was like the fulfillment of prophecy. The Kentucky Commissioners of Agriculture, from assessors' returns, ultimately made the crop 55 per cent of that of 1886, while mine was a million pounds less. The best census ever taken in any country could not come nearer the actual condition, as it was on the 1st of July, 1887, than my report of that date. It was an unprecedented reduction, truthfully reported, and a wonderful vindication of our crop-reporting method under difficult circumstances.

In the statements that follow, relative to the investigation, of which I have a perfect recollection, I scarcely recognize a point that is correct.

It is only necessary to say, relative to the assertion that the census of 1870 showed an acreage of cultivated crops less than that of these estimates, that *no areas of crops of any kind were reported by the census of* 1870! The areas of 1880, the first ever reported, were greater in most crops

and greater in the aggregate than Department estimates, sustaining the conservative character of our reports.

Finally, the statement concerning hay in Minnesota, showing a remarkable drop in aggregate tons of hay, comes from a separation of hay grasses, the bulk of it being the former, of wild grass from that of cultivated, and this fact is noted in the report in which the change is made, that for 1887, page 559. The debate has presented a series of blunders, which were not those of the Department, which a careful study of the reports should have prevented. Their publication should be regretted, but not by myself, provided the public can see the truth as it exists.

Washington, July 2, 1892. J. R. DODGE.

California Agriculture.

The following stirring tribute to California agriculture and rural life is from the opening address of President Cox of the State Board of Agriculture during the recent State Fair:

I believe that rural life offers the broadest and most certain field for the attainment of happiness and for the maintenance of a spirit of independence. As Washington Irving beautifully wrote: "In rural occupation there is nothing mean and debasing. It leads a man forth among scenes of natural grandeur and beauty; it leaves him to the workings of his own mind, operated upon by the purest and most elevating of external influences. Such a man may be simple and rough, but he cannot be vulgar."

In imagination I hear the prayerful hymn sung by priestly voices a century and more ago for the divine guidance of California in the path of peace and happiness. The prayer has been answered. The grape festoons the lifted hills, the orange blossoms scent the air from Shasta to San Diego. From north to south, from east to west, we see a succession of orchards and vineyards, and the valleys answer to the mountains in one unbroken strain of harvest song. Every known product of temperate and subtropical zones are produced in the State. California's chiefest and most profitable industry is, and will be horticulture. Her destiny is determined. The effect upon the intelligence and morals of the coming generation is not difficult to foretell. Even now the taste for horticulture is a distinguishing trait of Californian character. The professional man, the scholar, the business man and the man of leisure, own fruit farms, and are bringing to their culture the highest trained intelligence.

Horticulture demands the highest skill, and the field of experiment is wide and unlimited. The State recognizing this, excels any other State in the munificence of the appropriation for the encouragment of refined culture of the soil. The State Agricultural Society, the State Board of Horticulture, the Viticultural Commission and 38 district associations, and the Agricultural College of the University, are the recipients of the State's bounty, and are engaged in their several spheres in the promotion of horticulture and viticulture. The United States have established under the supervision of the University, five experimental stations in the State. These bodies are doing a permanent and encouraging work, by educating the public taste, by experiment, and by disseminating literature of the highest excellence. The effect of these forces will be to exhalt horticulture to the dignity of both a science and an art, in the pursuit of which will be found the greatest reward both of fame and wealth.

It is simply amazing the progress which has been made in the past ten years. I quote from the report made by Gen. Chipman to the California State Board of Trade in 1891, in which is shown the fruit shipments to the East in the year 1891. [Heretofore published in THE RURAL]

The value of the fruit produced annually is only a portion of the material wealth which has accrued to the State by the subjection of the soil to fruit culture. But for the tree and the vine the waters of the Sierra Nevada and Madre would still run unvexed to the sea. The plains of the San Joaquin would turn a brown and arid face to the sun—a sphynx-like face—unanswering to the voice of man, and southern California, the wonderful land, would be the inspiration of an ode to solitude. How changed the scene wrought in a few years! The rivers of the two Sierras pour their affluent waters over hill and plain. Schools, churches, cottages dot the land, trees and vines bear precious fruit, the meadows are in bloom, the hum of industry vibrates upon the blossom-scented air, and men come and go,

> "And talk of the grass, the flowers and trees;
> Of the singing birds and humming bees."

There is a lesson in this transformation, which should be learned by northern and central California. Wherever irrigation has been practiced, population and wealth have increased. The census of 1890 shows that since 1880 Merced county has increased in population 43 per cent; Kern, 75; Tulare, 118; Los Angeles, 204; San Bernardino, 225; Fresno, 238, and San Diego, 306 per cent. All of these counties are fruit-producing counties and have ample irrigation facilities. In the northern part of the State the soil is as fertile and the climate as balmy as the soil and climate of the counties named, and the water supply is as abundant, yet many counties have almost stood still while in others the ratio of increase has been very small. This condition demands our serious consideration.

Irrigation is the key to open up your locked treasures. The fable of Midas, who turned into gold whatsoever he touched, is, with us, no longer a fable. Water, water is the Midas. Whenever it has touched the land, that land has turned to gold, a mine of wealth. The people of this portion of the State should organize. You want more population, new blood and new capital. The people of the South understand this question. I glory in their enterprise, I am proud of their success, but as a Californian, interested in the North as I am in the South, I wish to see all parts of California move along in the path of progress. Do as they do, organize, form county boards of trade, support the State Board of Trade and send your literature to the people of the East to apprise them of the advantages of your respective sections. Turn the rich, fertilizing waters of the Sacramento, American and Yubas upon the foothills and plains, believe in your abundant resources and in ten years your population and wealth will have increased a hundred fold.

The chart for us has been unrolled. In lines of living light we read the history of this goodly land. Under the standard of religion the holy fathers took possession Today the church spires point the heavenward way wherever men assemble. The waterways which the novitates dug have fallen to decay, but in their place is seen the largest irrigation system on the continent. The trees the fathers planted with hope, and perhaps in doubt, have multiplied by the million. The hymn of petition, a thousand years old, sung in faith a hundred years ago, has been answered. The people in California are treading in the paths of peace. The Eden is here. The paradise of earth is here. Here, if anywhere, engaged in rural pursuits men and women will attain their highest intellectual and moral plane. "The common need, the neighbor touch, the brotherhood of prayer will make a man more precious than the gold of Ophir." In the path pointed out to us let us go and fulfill our destiny. The golden age, if ever it comes, will come to those who, as the ancient warriors did, restore their strength by the touch of mother earth. In this faith, with reverent heart, let California for time to come repeat her birthday hymn, "Veni Spiritus Creator."

HORTICULTURE.

Another Method of Curing the Lemon.

Daniel H. Burnham, one of the pioneers of Riverside and the first one there to introduce and propagate the Lisbon lemon, gives his method of curing them for market, which we copy from the Riverside Press, written by Mr. E. W. Holmes, who is himself an orange-grower and expert.

"The lemons were picked from the trees in November and later, as soon as they were large enough, and while still unchanged in color. Many at that time were still entirely green. Without waiting for the sweating or shrinking as many do, Mr. Burnham immediately wrapped them. He lined his picking boxes with manilla paper and after putting in a layer of wrapped lemons, laid a sheet ot manilla paper over them and so continued until the box was filled. The ends and top were also covered with paper of the same kind. These boxes were then stacked fourteen high in a large shed, one side of which is entirely open, the building being shaded by large trees. There these have stood untouched all through the winter until opened for packing at the end of seven months. Strange to say there was not a loss of three per cent of the fruit of the earlier picking, and not over five per cent of the latter. The lemons when opened, were all changed to a beautiful lemon color, and, as we have said, were the firmest of any long-cured lemons we have examined. The only ones not up to the general standard of excellence, were those in the top boxes, which were, in some cases, slightly shriveled. The specimens we saw were beyond question in the finest condition of any we have ever handled, and we claim to have shipped a good many fine lemons ourselves.

I is needless to add that the fruit was clipped and handled with the greatest care, for no lemon will keep which has not been so treated, nor will fruit keep such a length of time where it has been subjected to any great amount of frost."

The Los Angeles *Cultivator* adds the following. A quantity of his lemons cured in this way were recently shipped to Eveleth & Nash, commission merchants of San Francisco, who pronounced them "gilt edged, and without doubt the finest lot of California production ever sent to this market," and add that "we would certainly advise all who contemplate raising the lemon, to adopt this variety and follow this method of handling." The prices paid Mr. Burnham were the highest paid for any lemons, and warrant the belief that lemons of this variety, treated as Mr. Burnham treats them, will always command the first place in any market. Mr. Burnham says, also, that all the lemons that bear the name of Lisbon are not of the true variety, as many so-called are decidedly inferior to that introduced by him.

The Squirrel Problem.

Pomogadel writes as follows to the Contra Costa *Gazette*: The careful observer who is familiar with the locality has probably noticed that the ground squirrel is to be found about the base of Mt. Diablo. As a matter of fact, it is one of the richest squirrel sections in the State. The fruit orchards of the surrounding country in some directions are beginning to encroach upon the lower slopes of the mountain. Young fruit trees and squirrels do not harmonize. One or the other must give way or discord prevails.

Our Supreme Court has decided that squirrels cannot be exterminated and they have refused to sustain an ordinance of our Board of Supervisors requiring every landowner in the county to clear them off his own land. With all due respect to the book-learning and legal knowledge of the Court, we know better. We have cleared the last one off too many times to leave any doubt as to the ability of each farmer to take care of his own crop of squirrels, and at much less cost than it would be to let them live. The squirrel crop of the farmer who kills off his own squirrels is not the ones that cause him trouble and expense. It is those that come in upon him from his neighbors who will not take care of their own.

Under this state of affairs, what is the fruit-grower to do? Some of the almond orchards near the mountain are protected with a tight board fence six or eight feet high, let into the ground, and with strips of old tin at the top so bent that it is impossible for a squirrel to pass over it. Others station men or boys with shotguns to patrol the frontier and make it so warm for the intruders that they are willing to retreat. One orchardist was located where he was exposed on three sides to the grain and hill land about him. We can imagine his deep breath of relief when another orchard was planted on one side of him, at the thought that that front was now protected and would cause him no more trouble. The line fence between the two places was soon taken down and the neighbors joined forces in a war against the pests. The first of the two neighbors protected his frontier with a fence of posts and stringers with four-foot shakes put on perpendicularly, extending into the ground four or five inches. The same fence was extended around two sides of the new place. Holes were dug with a flaring opening, forming an entrance from the outside going down and under the ends of the shakes and coming up with a sharp turn into the orchard. The size of the holes was only large enough for one squirrel to pass through. These holes were about 50 or 100 feet apart along the whole line of the shake fence. Upon the inside of the fence a warm reception was prepared for the intruder. At the exit from each hole into the orchard a steel trap was placed with arms wide open to receive the visitor. A strong cord was so arranged that the squirrel could not carry the trap into the enclosure, and the hole was not large enough to admit of its being pulled through outside of it, so all that Mr. Squirrel could do was to stay right there and block up his doorway and prevent his neighbors from passing him.

The traps were visited conscientiously every morning, the dead taken out and the traps reset. For months the catch was from 25 to 75 a day upon the two places. With the holes arranged as here described, the squirrels did not scale the fences to any extent. The result of his treatment has been that now, in the fall of the year, scarcely a squirrel is to be seen around the outskirts of these two places. This is one of the items of cost to be met by the fruitgrower in the Mt. Diablo section. He feels that he has reason to congratulate himself that even at this cost he has secured so effective a means of protection against this pest.

Gophers are quite friendly, and sociable, too, in some sections. Upon one new place that we know of, containing 75 acres near the creek, over 1000 have been caught this season. This means an expense of $150 or $200 for this item alone. After the squirrels and gophers are disposed of, there still remain slugs, saw-fly, red spider, scale, frost, strong winds and morning-glory to contend against. The fruitgrower surely has his obstacles to overcome in order to make a living for himself and family much the same as the balance of mankind.

THE VINEYARD.

Feeding off Grape Leaves with Sheep.

The following statement by Newton B. Pierce, agent of the Division of Vegetable Pathology, Department of Agriculture, Washington, D. C., is sent to us by J. R. Williams, U. S. Weather Bureau Observer at Fresno:

In relation to the destruction of vine leaves by sheep, I should say that the leaf, as should be generally known, prepares the food which nourishes the growth of the entire vine, roots and all. The leaves have their cells well supplied with chlorophyll corpuscles, and the chlorophyll corpuscles are the bodies in which the starch required for the nourishment of the plant is formed.

As long as the green color of the leaf is retained, its functions are as yet incomplete.

When the leaves are yellow, the chlorophyll corpuscles have been destroyed and the leaf tissue is of no further value to the plant.

To remove the leaf from the plant while the chlorophyll corpuscles are still green and forming starch is to take from the plant such an amount of the stored-food supply for next season's growth as would be formed in the leaf between the time of artificial removal of the foliage and the time of its natural fall. Hence the earlier the leaves are removed the greater will be the loss to the plant in the matter of food for the next spring's growth.

To correctly estimate the actual loss to the vine or vineyard in productiveness by the premature removal of the leaves, so that it may be reduced to dollars and cents, is certainly beyond our ability at present, but I feel sure that it will eventually amount to much more than the gain arising from rental, and manure left by sheep feeding on the ground. This matter should be reduced to the gain or loss per vine. The gain per vine from the pasturage of sheep upon the ground, it will be seen, is a ridiculously small amount, an amount so small that the least loss sustained from the productiveness of the vine would be almost sure to exceed the gain.

It is a common practice in Europe to girdle the new cane, in the spring, just below the lowest bunch of forming flower clusters, for the purpose of retaining in the new branch and forcing to the opening flowers a greater amount of nourishment than those flowers would otherwise receive. This process strengthens the flowers and their organs of fecundation, and by this means a more perfect and general fertilization of the flowers results.

Now, at Fresno, coulure has caused a loss of over 50 per cent of the first crop of grapes in the Muscat vines the present season. The leading cause of this loss is imperfect fertilization of the flowers.

If in Europe it is often found necessary to aid the flowers in fertilization by stimulating them as here indicated, as a preventive of coulure, it would seem that the loss of food supply sustained by the vine through the pasturage of sheep in the vineyard before the leaves have completed their season's functions may, in some degree at least, often

result in increased coulure the following season. Should this be the case, the loss would be many times the gain arising from the pasturage of sheep in the vineyard.

NEWTON B. PIERCE,
Special Agent.

[This statement is interesting and,we are disposed to believe, in the main correct, so far as possible injury to the vine by premature removal of leaves is concerned.

As for the argument by analogy with reference to the girdling of vine-canes in Europe and the bearings of it upon the removal of leaves by sheep, it is of questionable pertinence. As stated, the European vigneron girdles the young cane to retain all the downflow of sap to the production of fruit above the girdle. In so doing he robs the stock of the vine. The man who allows sheep to eat the leaves while still green does the same thing exactly, if he produces any effect at all; any effect the leaves produce upon the cane itself goes for nothing, because the cane is all cut away at winter-pruning. The European vigneron robs the stock to help the fruit on the new cane; the Californian robs the stock to make wool and mutton. In both cases the stock of the vine is theoretically injured, whether it is practicably or appreciably injured in either case is still a question.

For these reasons we object to Mr. Pierce citing European girdling which robs the stock as reason why Californians should not do something else which also robs the stock or permanent portion of the vine. If he had stopped his statement with the claim that premature removal of the leaves probably reduces the storage of useful strength in the vine-stock, it would have been stronger than after he adds an argument of analogy in which whatever analogy there may exist tends toward the converse of his proposition.

Still his closing paragraph (all but the first clause with an "if") is probably pertinent; coulure may be caused by weakening the vine by feeding off the leaves. This claim is capable of demonstration locally by observing the crop of an acre of vines which has been fed off as compared with a similar acre not thus treated; or, better still, by the crop of several acres of each treatment. But we fail utterly to see what relation there can be between girdling a cane for the benefit of clusters then in sight above the girdle and a prescription which shall exert an effect upon a cane which is not produced until the following season.—ED. PRESS.]

JAMES PORTEOUS of the Fresno Agricultural Works has just completed and shipped from Fresno to Spain, by way of New York, two of the latest improved raisin stemmers of the largest size, with a capacity of from five to seven tons each per day. The same shop has made stemmers for the Australian market, and has successfully competed in that field. It had scarcely been expected that this young city, only a few years old, and scarcely past the experimental state so far as the raisin industry is concerned, would be able to teach the Spaniards how to stem raisins and furnish them the machinery to do it with, when Spain has been in the raisin business from time immemorial. But all these things have come to pass.

POULTRY YARD

A California Egg Farm.

A representative of the *Cultivator and Poultry Keeper* recently visited Mr. S. H. Olmstead of Artesia, whom the paper calls the "White Leghorn King." There were hens everywhere, nestled under the shade of a weeping willow which stood near an artesian well, flowing, not with milk and honey, but with nature's best gift to man, pure, fresh, cool water, in abundance. They were under the big gum trees, running about the yard, all talking in that hen language which betokens happiness and plenty of eggs.

"Just keep your eye out for any sick or drooping ones," said Mr. Olmstead, and we did so, but not one was seen. "Well, it is time to feed the chicks," so we went through the yard into the nursery.

The writer has seen several chickens in his day, but never saw such a fine lot or such a numerous family in California. Just fancy, ye chicken cranks, over 850 little fellows, all hatched during the hottest season, and not a droopy one among them—all chirping, busy, and as lively as—well, as healthy chickens should be.

Mr. Olmstead hatches with hens, and would not have an incubator about him. He has an ingenious arrangement for the setting hens, and each one has comfortable quarters, semidetached villas, so to speak.

The hatching-pen or yard is all portable, detachable and easily cleaned. They are 16 feet long, divided into 14 compartments, and consists of a sittinghouse with a tight side and roof, the latter being arranged so it can be lifted from the outside, thus giving easy access to the biddy. In front of this is a yard or run, four feet long and the same width as the nest—13½ inches. In this is placed the feed and watertrough, and the hen is kept right there until she hatches her brood, when two broods are given to one hen and the other is discharged.

Now, the one selected for the mother is placed in her own house, which is made of an oil or gasoline can, three shakes and three laths. Here she stays until her family is ready to "scratch for themselves."

By this system, Mr. Olmstead has extraordinary success with chickens, and any skeptic who claims that they cannot raise chicks in California, or during the warm weather, had better go and see Mr. Olmstead's place and study his method.

Leaving the young ones, we then went to the yards where the laying hens were. These at present number 750, all White Leghorns, and are housed in 28 pens, 16x24 and 16x22. made of six-foot laths, each yard having a house attached. These are made of shakes and there are 22 houses, 16 single and 6 double ones. The single ones are 8x4 feet, and the double ones each 4x6 feet. Everything is kept clean, roosts being detachable, nest-boxes easily cleaned and all joints and cracks kept thoroughly sweet and clean by a liberal use of Little's carbolized sheep dip, a splendid disinfectant.

At the far end of the yards was the "hospital," and there were about 20 inmates, but not a sick one. The writer suggested that the name should be changed to "infirmary," as the patients were all suffering from barley-beards or foxtail which had got in their mouths and worked up into their heads. These hens were laying from 10 to 12 eggs per day while under treatment, and some of our poultry-keepers would be glad to have their flocks as healthy as these.

Mr. Olmstead's breeding stock consists of fowls from Knap Bros., and are a fine lot.

Many readers will be interested to know of the methods and variety of food used. This consists mainly of wheat, corn, alfalfa, bran and meat. The meat is cooked and mixed with the bran. Sometimes a very little cayenne pepper is added to the mixture, and cracked shells and charcoal are always where the fowls can get at them.

The egg product at the time of writing is about 15 dozen per day, this in the height of moulting. In the laying-season the average is 50 dozen, and a ready market is had for both eggs and broilers.

There is on the place a clover-cutter (not a toy, but a first-class article), bonemill, egg-cases, etc. These are kept in the "shop." There is a small house, barn, granary with 200 centals of corn stored away, wagon, cart, three horses, etc.

The ranch, which is all under fence, consists of 40 acres of level, rich loam, A No. 1 alfalfa land, and is at present planted to corn. There are about 100 fruit trees of all kinds.

THE STABLE.

The Pneumatic Tire.

No man who has ridden in the ordinary sulky, with non-elastic tires, needs to be told that the jarring and jolting increases as speed increases, and this, of course, is wearing on both horse and driver. The pneumatic tires act as both cushions and springs, obviating the jolting and jarring, and they skim over the surface of the track in an elastic and rebounding style that favors speed and comfort. The ball-bearing gearing reduces the friction between the axle and the hub. In the ordinary wheel the whole interior surface of the hub fits upon and presees against the axle, thus, of course offering resistance when the hub revolves at every part of the surface of the axle. The ball-bearing hub is made with a concave interior face, and into this channel are placed steel balls, which, in motion, revolve against each other and against the axle. With only one point of the ball at once touching the axle and the balls on either side of it, the surface of contact and friction is also greatly reduced, and this decrease in resistance necessarily means an increase in speed. As in all really great and practicable inventions, the mechanical principle of the ball-bearing hub is simple.

The horsemen owe this improvement to the discoveries and improvements of bicyclists. Although the bicycle was invented in France 70 years ago, the perfected racing bicycle is an evolution of the last five years. The original bicycle was a crude and heavy affair, but with both wheels of the same size, as are those of the fastest bicycles of today. About 25 years ago a French inventor, Michaud, conceived the idea of making the front or driving wheel much larger than the other, and this, with the improved principle of crank motion, brought the bicycle into wider utility. Later India rubber tires wire used to relieve jolting. Later the ball-bearing improvement was made, and in 1890 the superiority of the pneumatic tire was demonstrated. The pneumatic tire, which is simply a large India-rubber tube filled with compressed air, "produced a marvelous improvement in speed at both short and long distances, whether on path, road or grass," to use the words of an authority on bicycling. In 1891 the bicycle record for a mile was reduced to 2:20¾, and this year it is already cut to 2:11.

The idea of the pneumatic or bicycle sulky "caught" at once, and the new sulky has attained success so instant and complete that the airy vehicle of the gossamer wheels seems doomed to soon disappear from our great trotting tracks. Almost all, if not all, the winners at Washington Park trotted and paced in the pneumatic-tired sulky, and certainly all the fast miles were made with the improved racing vehicle. Its success is now beyond the region of debate. Its steadiness and freedom from vibration or wabbling, its virtue of taking the turns at high speed without "slewing" and thus interfering with the horse's balance and stride, the reduced axle-friction due to the ball-bearing device, and the elasticity and lightness of motion produced by the pneumatic tire, are combined advantages which at once commend themselves to practical horsemen, and all the drivers with whom we have conversed are unanimous in praise of the pneumatic and ball-bearing sulky, the concensus of opinion being that it means a gain of about two seconds in a mile in speed. Conservative Budd Doble expressed the opinion that it added speed to harness racing, that it was easier to ride in, and an admirable vehicle for a heavy track. Ed Geers says: "The bicycle sulky enables a fast trotter or pacer to go faster, and two seconds a mile is perhaps a fair estimate on the increase of speed it gives." "My experience," said George Fuller," is that the bicycle sulky is an easy rider, and as it decreases slewing on the turns, I am led to believe that it increases speed about two seconds a mile." George Starr agreed that "it certainly adds to the horse's speed and the driver's comfort," and pronounced it "an admirable addition to trotting-track improvements," and A. T. Miller said he "would not drive a horse in a race to anything but a bicycle sulky." And so on, *ad infinitum*, the knights of the whip and rein praise the pneumatic tires and ball-bearings.—Exchange.

THE IRRIGATIONIST.

Results of Irrigation.

WASHINGTON, Sept. 15, 1892.—The Bulletin of the Census Bureau, just issued regarding irrigation in the arid States and Territories of the West, contains information likely to be of value to business men interested in land enterprises in that section of the country. It would appear that the results of irrigation have been reasonably satisfactory and that the irrigated lands have paid a fair profit. Of the 124,808 farms enumerated in the arid region in June, 1890, 52,584, or 42.13 per cent, contained land on which crops were raised in 1889 by the artificial application of water, the entire area of land irrigated being 3,564,416 acres—20.72 per cent of the total area of the 52,584 irrigated farms, 9.66 per cent of the total area of the whole number of farms enumerated, and about one-half of one per cent of the total land area of the arid region. To this must be added 1552 farms, containing 66,965 acres irrigated, in the western parts of North Dakota, South Dakota, Nebraska, Kansas and Texas, designated, for convenience, the subhumid region, where irrigation is slowly making its way, as a method of agriculture always advantageous but not always absolutely necessary.

The average value of the land irrigated in 1889, with the improvements thereon, is found to be $83.28 per acre, and the average value of products for the year stated $14 89 per acre. By correspondence with over 20,000 irrigators, fairly distributed through the arid and subhumid regions, it has been ascertained that the average first cost of irrigation is $8.15 per acre, and the average value placed upon the water rights, where separable from the land, $26 per acre, or over three times their original cost. The average annual expenditure for water, as distinguished from the purchase of water rights, is $1.07 per acre, and the average cost of the original preparation of the ground for cultivation, including the purchase of the land at the Government rate of $1.25 per acre, is $12.12 per acre. By applying, with necessary modifications, to the enumerators' returns the average obtained for each separate State and Territory, it has been found that, in round numbers, the total investment in productive irrigation systems utilized in 1889, in whole or in part, was, up to June 1, 1890, $29,611,000. Their value at that date was $94,412,000, showing an apparent profit of $64,801,000, or 218.84 per cent. In the same manner the aggregate first cost of the irrigated areas, with their water rights, not including the farms of the subhumid States, has been ascertained to be $77,490,000, and the value of the same on June 1, 1890, $296,850,000, showing an increase in the value of land and water rights of $219,360,000, or 283.08 per cent. In other words, the land irrigated in 1889 was worth nearly four times what it cost, no allowance evidently being made for failures. The total expenditure for water, including the maintenance and repairs of ditches, in the arid States in 1889 was $3,794,000, and the total value of products $53,057,000. The number of artesian wells used in irrigation in the arid and subhumid regions in June, 1890, was 3930, constructed at an average cost per well of $245.58, and giving an average discharge of 54.43 gallons per minute. The area of land thus irrigated, averaging 13.21 acres per well, amounted to 51,896 acres, or 1.43 per cent of the total area of irrigated land in the arid and subhumid regions.

The following table shows the extent of irrigation in States and Territories in the arid region:

States and Territories.	Area irrigated, acres.	Per cent of entire land surface of State.	No of farms enumerated.
Arizona	65 821	0.09	1.448
California	1,004 233	1.01	53 269
Colorado	890,735	1 34	16.505
Idaho	217,005	0 40	6.654
Montana	350,582	0.38	5,664
Nevada	224 403	0.32	1.341
New Mexico	91 745	0.12	4,174
Oregon (a)	177,944	0 39	10,513
Utah	263 473	0.50	10,757
Washington (b)	48 799	0.23	11,237
Wyoming	229,676	0 37	3 216
Totals	3,564,416	0 50	124,806

(a) 16 Eastern counties only.
(b) 13 Eastern counties only.

The following table shows the total approximate cost of productive irrigation systems and their value in 1890:

States and Territories.	Cost.	Value in 1890.	Increase.
Arizona	$465.000	$828,000	$363 000
California	13 005,000	39,446,000	26 441,000
Colorado	6,369 000	25 350 000	18,981,000
Idaho	1,029,000	2,860.000	1,831.000
Montana	1,623,000	5,273,000	3 650,000
Nevada	1,251,000	3.714,000	2,463.000
New Mexico	512,000	1.679,000	1,167,000
Oregon	826.000	2,755,000	1,929 000
Utah	2,780,000	7.072 000	4,292,000
Washington	197 000	642 000	445,000
Wyoming	1,281,000	3,801,000	2,520,000
Subhumid region	273,000	992,000	719,000
Totals	$29,611,000	$91,412,000	$64,801,000

The following table shows the first cost of irrigated areas, including water rights and their value in 1890:

States and Territories.	First cost.	Value June 1, '90.	Increase.
Arizona	$1,114,000	$3 204,000	$2,090,000
California	31,814 000	150,635,000	118,821,000
Colorado	16,140,000	59,696,000	43.556.000
Idaho	3,320,000	10 091,000	6,771,000
Montana	4,968,000	17,354,000	12,386 000
Nevada	3,905,000	9 200,000	5,295.000
New Mexico	1,701,000	4,677,000	2.976 000
Oregon	3.288,000	10,144,000	6 855,000
Utah	7,022 000	22,198,000	15,176,000
Washington	759 000	2,440,000	1 681 000
Wyoming	3.459,000	7,212 000	3 753,000
Totals	$77,490,000	$296,850,000	$219,360,000

The Home Circle.

By and By.

Written for the RURAL PRESS by ISABEL DARLING.

She stood and sighed to the heavy air,
Alone, as now at the door she stands;
But then unbound was her sunny hair
And small and white were her dimpled hands.
The clouds were gathering overhead,
The hot tears filling the baby eyes.
"The sun will shine by and by," we said,
Yet still unhushed were her sobbing cries.
"But by and by is so long to wait!
I'll be asleep it will be so late."

The years have passed with their sun and shade,
Time's clouds been gathering overhead;
Grief, care and labor their marks have made,
Yet tears are slower, impatience dead;
And through the tempest again she hears
The words unheeded in younger days—
"The sun will shine by and by." How clear,
How strong is her trustful gaze!
For by snd by is not long to wait,
She'll be asleep but 'twill not be late.

Aunt Hannahran.

Written for the RURAL PRESS by KATHERINA BRYANT NOLAN.

(*Continued from last week.*)

Uncle Hezekiah Stebbins was laid to rest with all the ceremony due to the husband of Aunt Hannahran, and the town turned out in honor of this one whom death had so unceremoniously and ruthlessly torn from his accustomed haunts. The old bell of the meetinghouse where he was wont to worship when in life, tolled a requiem as he was carried out to the ancient churchyard, followed by a long line of mourners. When all was over and the four members of the Stebbins' household returned home they found a gap; an empty chair stood by the hearthstone, but each one did his best to wear a cheerful demeanor. Finally Paul said:

"I must be off in the morning, mother."

Paul, I wish you'd come home now your father's gone," she said, laying her hand on his arm, gently.

"If you wish me to do so, of course I will; but I've worked hard to get up to where I stand in the store and it will be hard to throw it all up."

"I know that, Paul, and I suppose I ought never to have thought of such a thing," she said, with a sigh.

"I'll tell you what I've been thinking of, ma; now, supposing you were to sell the farm and come to live with me—you and Carrie. I—"

"Sell this farm!" Aunt Hannahran echoed in amazement. "Sell this farm, where I've lived all my life with your father! I won't sell the farm, and I won't live in no city, I can tell you! You can't teach an old dog like me any new tricks," and Aunt Hannahran hunted up her blue stocking and fell to knitting furiously, as a relief to her excitement and indignation.

Paul glanced toward Carrie. She stood with widely-opened eyes and parted lips, but as Paul colored and looked embarrassed, at the warmth of his mother's refusal to listen to his suggestion, she smiled slightly and then went out of the room. Carrie was amazed, and not without good reason. Paul had been Aunt Hannahran's ruling passion. She had bitterly lamented the separation from him and had never seemed reconciled to it, and to witness so decided a change of sentiment staggered her.

The subject was not again referred to, but Paul volunteered to return shortly, after a hurried look at his father's papers, to assist his mother in the attention to them that was necessary to satisfy the demands of the law, and the house seemed lonelier than ever when he was gone.

Carrie Defarge was a distant relative of Uncle Stebbins, and she knew nothing of her father excepting that Aunt Hannahran considered him a renegade and without the pale of Christianity, and, as she was a woman who held decided opinions upon all things, great and small, her opinions were not to be controverted.

If Aunt Hannahran would have told just what awful thing she knew, and then have been done with it, Carrie would have been truly and humbly grateful; but this nameless, intangible scandal hung over her and around her, and always followed her at every turn; a cloud of dreariness. The blossoms along the pathway of life bloomed brightly, yet, when she reached out and gathered them, they turned to thorns and thistles.

Aunt Hannahran came of good stock; those ancestors of hers had been God-fearing people; all "meeting-folks," and Aunt Hannahran saw nothing but stumbling blocks for Carrie in all the foibles the other young folks were allowed to indulge themselves in, so the girl finally settled down into a routine precisely similar to that her patroness adhered to. Her mother had died at her birth, and a neighbor in the little seafaring town where she first saw the light of day, so long as the remittances came from her father, took care of her. When she was seven years old, the money ceased to come, and the woman forthwith packed her clothes and sent her to Denham.

"Hezekiah Stebbins—he's related to yer ma, an' he's well-to-do. He can tek care of ye an' bring ye up ship-shape like. Mind now and behave yerself. 'Tain't likely he'll stand no tantrums, and ye needn't come sailin' back to me no ways, so yer mind yerself," the woman had said to this little mite of a girl.

"Hezekiah Stebbins had been amazed when this small parcel was set down at his doorstep, bag and baggage, but he had never entertained any idea of turning her away. He had trained her to be useful to him, and she and Paul had been inseparable, and Carrie Defarge always remembered one little thing that seemed strange to her. She had been looking at a small miniature of her mother one day, when he came along and took it out of her hand. He had looked at it a long time and then said:

"She was a gay gal in her day and the pictur is very like her." Then he had sighed deeply.

"Oh, tell me about my mother, Uncle Stebbins; no one has ever told me of my mother!"

"Some other time, some other time," he had gruffly said; but Carrie had never broached the subject again and the knowledge had died with him, and she felt his death more keenly than any one else, as she was dependent upon him for any feeling of security or any foothold in the Stebbins family.

When Paul walked in on his return to Denham, the sitting-room, living-room and kitchen combined was cheerful enough, and Aunt Hannahran sat with the homespun stocking in the little chair near the window. She seemed to be in a brown study. Her face expressed less placidity, and it struck Paul with a feeling of dissatisfaction; this indefinable change in her was vexatious on many accounts, but chiefly because of Carrie. All the chivalry of his nature was aroused at the forlorn condition of this girl; if she had been born a boy, why then she could have gone into the world and have been independent; every cold word from Aunt Hannahran struck a chill to his heart, if she had only known it. He had guarded his secret well, and his mother had not really been unkind, only her idea was, as she expressed it once herself:

"Gals hev to be brought up strict in these days." Yet Paul had always found it hard to endure, but for Carrie's sake he had borne it silently, and now he felt that it had been a mistake and that he should have been her champion. He heartily wished that he had declared himself and become an acc pted lover during his father's lifetime As he had not done so, he now planned out his campaign carefully. The goddess must be appeased, that was quite evident, and this was not an easy task as long as her opinions must be most deferentially treated, and she seemed so much changed and hardened.

"Paul, Aunt Huldah will never consent to it!" Carrie was standing in the doorway of the barn straight from a forage after eggs high up in the haymows. One feathery piece of hay had managed to get into the tresses of her hair, and Paul carefully pulled it out. It was the day after his return.

"That is not the question, Carrie."

"I think it is, Paul. Sure'y, you will not marry without your mother's consent," she said, shaking her small head with the air of a sage. She looked very pretty as she stood there, the sunlight falling on her slender figure, her hair blown about by the fresh breeze, and just enough color in her cheeks to enliven her face and soften it into a fresh beauty. "I don't think Aunt Hannahran will really want to part with me. I thought perhaps she would feel different now that Uncle Hezekiah is gone, but I think she depends on me, Paul. I think so."

Paul made no answer to this. He took Carrie in his arms, and before he released her, she owned to her abiding love and promised to marry him, always providing Aunt Hannahran proved agreeable; yet she was a little angry at so summary a proceeding on his part and taxed him with boldness after the manner of women.

After dinner, Aunt Hannahran settled herself to her knitting by the western window, and Paul busied himself at the desk with the ledger, wherein his father had left many an enduring memorial to his capability and thrift and good management. Thanks to these traits, his widow was left amply provided for. She sat meditating a little while, and then she said:

"I know what you want to say, Paul, an' I say don't say it!"

"But ma"——

"You've been brought up with Caroline and you've made up your mind to hev her. I've seen a good many matches in my day, an' helped 'em along, but this one's not to my likin', so don't talk to me, Paul."

Paul scrutinized the ledger calmly, his pale face growing whiter and sterner-looking all the while, and after a pause, he answered gently:

"I am sorry you take that stand, for I have indeed made up my mind to marry Caroline. She insists that I shall gain your consent, so consequently your attitude is a disappointing one for me."

Aunt Hannahran looked at her son in a puzzled way, but she made no reply. When he took this grandiloquent way with her, she hardly understood what he meant; yet she dimly realized that Paul had developed into a man of a world of which she knew nothing, and it made her all the stronger in that determination of hers to prevent a marriage between this simple country-bred maiden and her son.

So Paul went away again, and things went on in the same quiet fashion at the farm. Jabez managed affairs outside, under Aunt Hannahran's tongue, grown caustic with the sudden accession of power, but he did not appear to mind it and plodded on day after day in the good way Uncle Stebbins had laid out for him while he was yet living.

Jabez had a freckled, good natured, large face and an abundance of bushy, red hair. He wore a full beard and that was red; still he was not a repulsive looking man by any manner of means. He now developed a lively sense of the ways of Providence, and the stern necessity of preparing for death, and always stood in readiness to "hitch up" and take Aunt Hannahran to prayer meetings, sewing society gatherings, and he never failed to grace the Stebbins' pew at all of the Sunday services. This was much more than Hezekiah Stebbins had ever done, and although Aunt Hannahran kept on abusing Jabez to his face she held him up as an example when his back was turned.

Carrie was now left much alone, but the trouble in regard to Paul and herself made this solitude agreeable; it was easier to bear when no eye was there to see every changing hue upon a face which grew fairer as the days went on into months, and it was a year and more since Uncle Hezekiah Stebbins had met with that untimely death and Paul was coming home. The house was in a bustle preparing for his proper reception. He was to bring a friend with him and Aunt Hannahran was in a "stew" over her best cap, with its lavender ribbons, for fear Paul might think it too gay, and solicitous about the baking which the deep, cavernous brick oven held.

"Did you put plenty of sugar in those pies, Caroline," she asked for the hundredth time, as she anxiously examined the effect of the cap in the glass. She had latterly called the girl Caroline altogether. Carrie answered patiently and monotonously, as she was aware that Aunt Hannahran never once heard the answer, since her own thoughts led her so far away from the subject in hand. The pies came out in prime and luscious array, filling the house with savory, spicy odors, and at last Paul and his friend were driven into the yard by the indefatigable Jabez.

They were good-looking young fellows and sprang out of the wagon with much laughter and strode gaily into the house in search of the women folks. They staid in Denham two weeks and attended some kind of a party nearly every night, taking Carrie with them. Aunt Hannahran made no objections to this and noticed with joy that Andrew Blunt and Carrie seemed very much taken with each other. What a fine thing it would be to make a match for Caroline with this likely, shrewd young man and leave Paul free to look higher for his bride. It certainly would be a move worthy of the brilliant record of the past and stop these scandalizing tongues that whispered the tale of Paul's attachment and Aunt Hannahran's opposition to the match. She had lost prestige among the young people on account of it, but this would set the matter straight without any humiliating concession upon her part, and so she laid her plans carefully. As she foresaw, Andrew Blunt was quite agreeable to them, but he made the proviso that Caroline should consent to marry him before he ever broached the subject to her.

"I'll fix all that," she answered, "and if you say so you can be married at Christmas"

"All right," said Andrew, "that'll suit me to a T, but I am afraid she don't like me. I think she likes Paul; but Paul is so close mouthed. Do you think he cares for her now!"

"Oh, they've been brought up together and of course they've ways like to brothers and sisters."

Andrew asked no more questions, but when he went away it was an understood thing that they should come back at Christmas for the wedding. Paul seemed to take it hard, but he told his mother that of course Carrie had a right to choose for herself. Aunt Hannahran entered into the preparations necessary for this event with tremendous energy and the house was in a state of ferment for the next month.

It seemed hardly a day before she watched the young people drive off to the minister's house, this trio reinforced by Pa Goodwin's eldest daughter. Carrie looked very proud and pale and reserved, but she had been unable to withhold her consent under Aunt Hannahran's nagging. Then she liked Andrew, and if she must have somebody and Paul had ceased to care about her, why Andrew would be her choice. He was so much like Paul. So they drove on and were ushered into the cold, tomb-like parlor at the parsonage, and Carrie was so flustered that she noticed nothing until Paul stooped and kissed her just as the white haired parson was about to congratulate her.

"Paul," she gasped, and then they all laughed.

"This is a week of weddings," said the parson. "I have another to-morrow. I advise you and your wife to remain and witness the ceremony and be introduced to the bridegroom." Paul looked at him in a questioning way and he said:

"Ask Aunt Hannahran; she knows!"

"O Paul, Aunt Hannahran will never forgive us. I don't dare to face her," the trembling bride said as they neared the farmhouse on their return.

"Andrew and I will face Aunt Hannahran," Paul said, gravely. So these two conspirators sat down and carefully unfolded the conspiracy to Aunt Hannahran.

"So Carrie and I are married, mother," Paul said, at last. Aunt Hannahran was equal to the occasion and she said, as she knitted away on a blue stocking that was the counterpart of the one on the needles at the beginning of this tale:

"Yes, and I guess Jabez and I—"

"What about Jabez?" Paul asked, quickly, a sudden look of suspicion dawning in his eye.

"Well, Jabez is a likely man, ef I do say it, an' he's kept things agoin'—"

"Yes!"

"So," said Aunt Hannahran, defiantly, "me and Jabez are agoin' to git merried to-morrer. Didn't the parson tell ye? I told him to." Paul laughed long and loud and then he said:

"We'll have to shake hands on it; we are quite—," but Aunt Hannahran maintained her dignity and not a muscle of her face relaxed as she went on with her blue stocking.

[CONCLUDED]

About Us Poor Unfortunates.

Written for the RURAL PRESS by MAID OF ALL WORK.

A San Francisco literary man, truly a matchless critic and reckless wit, has announced to the breathless public that women have no brains. This startling announcement was a surprise to many people, but we are forced to believe revelations that come from so great an oracle. It has been some time since this important truth was made known, yet we see no change made, or about to be made, in the relations women bear to the rest of the people.

Helpless young maids are still turned out by impecunious fathers to make their own livings, bright girls are sent to normal schools, mothers are held responsible for the conduct of sons, wives are required to economize, and widows are expected to support their children.

Women still make dresses, trim hats, and sell merchandise for self support.

This is barbarous and inhuman. Now that the truth is known, these customs should be discontinued. Women having no brains, they should be taken care of like cows and canary birds.

Men should no longer say to their wives: "Great heavens, Jane, can't you keep the grocery bill within reason?" How can she? They ought not to trouble their wives with such questions as "Mary, shall we buy this horse, or that house?" or "Molly, does my collar fit just right?"

All this is outrageous, cruel. We don't expect hens to spin, or cows to read. And yet we require women, who have no brains to do all sorts of difficult and remarkable things.

The same oracle definitely announces that American women can't cook. This is but a logical conclusion, and should have been made known long ago. A great many

women don't like to cook, and if they could be relieved from their responsible duties in kitchens, from any cause or excuse, they would celebrate a jubilee.

Let the oracle lay to and drive this new discovery into all masculine skulls. Let us have no more trash on the dining table, no more brainless combinations. Drive the women out of the kitchen, clear away the mess, and let us have something to eat at last. Shades of New England and Virginia, who haunt and inspire us, go back into your graves, you are but a delusion.

A bright woman in the East has said that the solution to the temperance problem is to let men do the praying while women do the voting. The men would not have to pray long it is obvious. The world would wag on very well then.

Suppose women did vote, and did have to carry the sword to sustain that power. Conclusively, we would arbitrate to keep our women at home. Instead of fighting to preserve our homes, the nations would sue for peace to preserve the homes. This would be "The White Crown," international arbitration and peace, and as good a way as any to get it.

She Didn't Go to the Poorhouse.

The county-house wagon drew up at the old farmhouse door in the early morning light, and the poor overseer got out and knocked on the door with the butt end of his whip.

"Hey," quavered a thin voice within, "who's there?"

"We've come for ye, mother," said the overseer.

"Who calls me 'mother'?" asked the tremulous voice, and then the door was opened by a shaggy hand, and an old woman, dressed in shawl and hood, stood in the doorway.

"I 'member," she said, slowly, nodding toward the wagon "it's the selecman, an' I s'pose they know best; but if Jim knew—if Jim knew that his poor mother was goin' to the poorhouse, it 'ud break his heart."

"Are ye ready, mother?" asked the man, gently.

"Yes, I be. I ain't slept sense I heard ye were comin' for me. It's all right, an' I don't blame ye; but it's hard to hev worked all yer life an' raised a family, an' then die in the poorhouse. It'll a-most kill Jim when he knows."

The man on the doorstep coughed and turned away, pretending to examine the wisteria vine that blossomed over the door. Not for worlds would he have told her that he was only carrying out Jim's orders against the time he should bring his wife to the farmhouse.

She came out slowly, looking with vague, wondering eyes at all she was leaving—the trees she and Harvey—that was her husband—had planted when they were young, at the bed of cinnamon pinks, and the little lilac bushes at the gate. She stopped and gathered some of the fragrant southernwood—"old man" they called it—and then she looked up at the window of one room—bridehood, wifehood, motherhood, angelhood, that meant to her. Little Carrie had died there, Harvey had looked his last in the heaven of her own eye there. That was nigh on to forty years ago. Why, where was God this fair summer morning that he had forgotten her and let her go to the poorhouse?

"Hurry up, mother," said the man, gently. "We're to call for another paup—passenger a bit farther down the road. 'Taint much you're a-leavin'," with a short laugh. He was trying to make the best of it for her.

He helped her into the wagon, and in the golden light of another new day, they moved on, jogging along the country road, sweet with the scented life of nature, until they reached the stile that led into the old graveyard, where the sentinel stones shone among the trees in their strange, dumb witness.

"Oh, ef you don't mind—if I just could say a word to Harvey, it would help me so much, an' I wouldn't be long—I wouldn't keep you waitin'."

"All right, mother." The overseer jnmped out and helped her to the ground.

"Don't be long; there's a good soul," and he lit his pipe and talked to the driver, apologizing for his weakness.

"'Taint like as if she were a common pauper," he said. "There are folks here as remember when she was the belle of the county, and they do say it is this son Jim that has run through with the property, an' is gettin' her out of the way so he won't have to pay for her keep. I wouldn't tell her for a house and lot."

"She wouldn't believe yer if yer did," said the driver, seriously. "But she's taking her time in yonder."

No. It was not time she was taking, but eternity. When the overseer went to look for her she lay with her withered cheek pressed to the moss-grown stone that bore the name of her husband, and a smile that seemed to be a reflected glory from Paradise lit up her peaceful face. It had come to her in one brief moment, the assurance that she would not go to the poorhouse, and then—she had gone home.—Exchange.

HOW WHITTIER WAS DISCOVERED.—Mr. A. L. Haskell, of Boston, who is past eighty years of age, and is probably the only man now living who was a schoolmate of Wm. Lloyd Garrison, gave me a graphic account of "how Mr. Whittier was discovered.' As I remember the story, it was as follows: Mr. Garrison was editing the Newburyport *Free Press*. The box into which correspondence and articles for the *Free Press* were put was at the bottom of the stairs, out of sight of the editorial rooms. Anonymous poems came into this box week after week. The poems had the true ring, and so much merit that the editor earnestly, but vainly, sought for the author. There was a drug store opposite. Its door and windows overlooked the editor's box. An agreement was made with the druggist to keep an eye on that box, and to let it be known if he saw any one who was not among the regular contributors to the paper put in an article, or letter. They had not long to wait. Before many days the druggist saw a man at the box, who put something in and immediately left. He at once reported the fact to the editor. Mr. Garrison left his types, hastily put on his coat, and followed the retreating author. On overtaking him, he saw a tall, lean, bashful-looking youth, who, being confronted with the poem he had just left in the box, confessed, with blushes, it was he who had put it and others there. After some conversation, they went together to Mr. Whittier's father, who had been inclined to consider his son a lazy youth who "would do nothing but write verses." Thus was John G. Whittier discovered; he who later was to fire the nation's heart with the spirit of freedom, and to nourish in the popular heart the love of all tender and sweet and beautiful things.—Lucy Stone, in Woman's Journal.

YOUNG FOLKS' COLUMN.

My Little Sister.

When I was six years old, I was sent on a visit to my grandmother. It was very pleasant for the first day or two, but after that I longed unutterably for home.

"I suppose she could go back to-night," said grandfather.

"Oh, to-morrow will be soon enough," said grandmother.

"Day after to-morrow will be most convenient," said Aunt Martha. "It's not a matter of the slightest importance, anyway."

That was always Aunt Martha's way—to insist that matters which were fraught with weal or woe to me were not of the slightest importance!

The next day was so long that I felt myself growing perceptibly aged. Toward its close I comforted myself by thinking that when I did go home my mother would be sitting as usual in her little, low sewing-chair. She would draw me to her and kiss me and ask me if I had been a good girl. Always when I went away she told me to be good, and when I came back she asked me if I had been good.

My father would make no reference to goodness. He would say, "Hullo, chipmunk! What are you doing back here? I thought I put you off these premises once." And all the time he would hold me tightly in his arms, and I would put my face in his neck and think what a funny father he was, and how kind and nice he was.

I would tell them how homesick I had been, and when they said they could just as well as not have sent for me before, I would say, "It is not a matter of the slightest importance." Then they would be much surprised.

The next day after this long one that I have told of, as grandfather's hired man was going to the town a few miles beyond our house, it was arranged that he should "drop" me on the way. When he discovered how eager I was to reach home, he said it was very injurious to horses to make them trot. It put them into a fever. A slow walk was the best thing for them.

This made me so angry that I slipped out at the back of the lumber wagon, and ran home with all the speed I could muster. Arrived there, I flew panting through the lower part of the house, and then rushed in dismay to the kitchen.

"Sally! Sally!" I screamed at the cook; "where is mamma? What has happened?"

Sally deftly lifted me by one arm, and set me with unnecessary force on a chair.

"Stop your noise," she said. "Your mother is sick, and you're not to disturb her."

I sat still for a few moments, trying to realize the condition of affairs.

"Well, I declare!" exclaimed a familiar voice in the doorway; "if here isn't papa's girl." I sprang into papa's arms.

Papa led me very softly into mamma's room. I was not allowed to rush to her nor to hug her at all; and then they showed me a tiny face in a flannel bundle beside her, and said that was my little sister!

I looked at it first with pure wonder that any one could be so small and yet be alive. Then a pang of jealousy shot through my heart. This was my father and mother, and I had expected that they would be overjoyed to see me! Instead, they scarcely noticed me, but were gazing with unconcealed pleasure at this ugly, red-faced little interloper.

I went to bed with a strangely desolate feeling. There was no father to throw pillows at me and pretend that I had broken some of his bones when I threw them back again; no mother to tuck me in, and ask me to wake her next morning with a kiss.

My father played no more games with me. It would disturb the baby. My mother told me no more little stories. Her time was absorbed by the baby. Even cross old Sally said, "Bless its little heart!" when she spoke to the baby.

Once, when the baby behaved rather worse than usual, they sent off in haste for the doctor, and afterward when I had a bad toothache they said that was what I must expect when I got my feet wet every day.

At another time, papa, who was going away in a great hurry, exclaimed in a loud, laughing voice, "Only ten seconds for refreshments!" And as he spoke, he kissed mamma and the baby in the hall, and forgot all about asking where I was.

My heart ached and ached. I shut myself in my room, and cried desolately. I thought of every friend I had in the world, and it seemed to me that every one had been deliberately unkind to me. Cronk, the gardener, was a possible exception. I dried my eyes and went out to him with the hope that he would say something consoling.

"Mr. Cronk," I said, by way of drawing him out, "you are very handsome and clever, aren't you?"

Cronk straightened his commonplace person with a sigh.

"Ah, Miss Ellie," he said, "you ought to have seen me when I was a young man!"

"Well, anyway," I said, "I wish I was good-looking and clever both."

"Oh, you're pretty passable, said Cronk.

Somewhat discouraged, I went back to the house, and determined that if nobody cared for me I would care for nobody. In a few days, as a result of this decision, my mother had a serious talk with me. She told me how much I had grieved her and my father by my naughty behavior, and that it was an awful thing for a person to let the Evil Spirit get control of her thoughts and actions. Afthr a long talk, she told me to come and kiss my little sister, and I refused.

"It would only be a Judas kiss, mamma," I said. "I don't really love her. She has spoiled all my pleasure in life. And I'm not going to pretend to love her when I don't."

"Then you must go to your room, and ask God to give you a new heart," said mamma sadly. Some days afterward she told me my father wished to see me alone in the library.

I felt myself growing cold and leaden all over. I seemed to have lost all love for my father and mother, and as for my baby sister, I simply hated her. Perhaps my father thought he could scold me or whip me into pretending that I loved them. Well, he just couldn't, then! I was sure of that. I would not yield. I clenched my teeth, and locked my lean little hands together, and went down to my father. After I came in he closed the door behind me, and then he showed me a sad, sad face.

"Darling," he said, "I want to ask you to forgive me. I've been thinking it all over, and I see that ever since baby came I've been a poor, cheap, second-rate kind of a father to you. I didn't realize it before, but but I blame myself for all this coldness that has come between us, and—"

"But with a loud sob I had dropped before him with my face on his knees. He drew me up to his breast. "Oh, no, papa!" I said, "it isn't you at all. I have been wicked and cold and hateful—"

He stopped my lips with kisses.

"Don't you dare slander my chipmunk," he said, and I only tightened my clasp on his neck and gave a long, long sigh of relief and rest and blessed joy.

Since then I have always been very fond and proud of my little sister.—Ethelwyn Wetherald.

DOMESTIC ECONOMY.

ENGLISH PLUM PUDDING.—One cupful of melted butter stirred into two cupfuls of fine cracker crumbs; add this to one quart of boiling milk and stir till thick. One cupful of sugar, one-half cupful of molasses, two teaspoonfuls mixed spice, salt, two cupfuls of stoned raisins, one cupful of currants, one-quarter of a pound of citron, one-half cupful of wine or brandy, rind and juice of one lemon. When this is cool, add six eggs. Put in a dish in the oven and cover at first; when it is set, stir up thoroughly. Let it bake slowly by an afternoon fire four hours, or it can be boiled. Whipped cream makes a good sauce.

LEMON CUSTARD. — Six eggs, beaten separately, three teacupfuls of sugar, one-half cup of butter, four cups of water, five tablespoonfuls of cornstarch, two large lemons. Slice the lemons, and put them in the water to boil till the strength is extracted; then dip them out and drain the water. Beat the yolks, butter and sugar together, and pour the water over them; return to the jar, and when ready to boil, stir in the starch; beat the whites to a stiff froth, and stir in lightly after it is taken off the stove.

RED OR BLACK RASPBERRY JAM.—To use one-third currants to two-thirds raspberries is better than the berries alone. Mash the fruit well and let it boil 20 minutes; weigh the quantity; allow two to three pounds for the kettle to weigh, and to every pound of fruit use three-quarters of a pound of sugar. After this is put in let it boil till, by taking some out on a plate to try it, no juice gathers about it. Then it is ready to put away, as you would jelly, in glasses, or stone jars are nice.

CORNED BEEF HASH.—Chop sufficient cold corned beef to make one pint, it must be chopped rather fine, cold boil potatoes in the same quantity, mix meat and potatoes together, put them in a saucepan with a tablespoonful of butter, teaspoonful of onion juice, a cup of stock, and saltspoon of pepper; stir constantly but carefully until it just comes to boiling point; serve at once on buttered toast. Water may be substituted for the stock, but of course the hash will not be so good.

CABBAGE.—Cut the cabbage in two, or, if large, in four pieces, and well wash and boil it quickly in plenty of water, adding salt and a small piece of soda; when about half done, drain it in a colander and put it into fresh, boiling water; when soft enough, drain and press the water away; chop it, adding a little butter, pepper and salt; put it into a hot pan, and turn it out on a vegetable dish.

GOOSEBERRY WATER.—Put one pint of green gooseberries in a porcelain-lined kettle, add two quarts of water, a small piece of green ginger cut into slices, cover the kettle and boil until the berries pop; then stir for a moment, stand aside and pour carefully through a flannel bag, sweeten with loaf sugar when cold, add a small amount of cracked ice, and it is ready to serve.

HASHED POTATOES.—Cut the potatoes as for a pie; put them in a pan with a little chopped onion, pepper and salt; add a little butter, allowing about a half-ounce to each pound of potatoes, and quarter of a pint of water; cover the pan and let them stew moderately about 30 or 35 minutes.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

ONE MANAGEMENT.—Oroville *Mercury*: Geo. F. Ditzler, manager for A. T. Hatch, is one of the busiest young men in the State. He has charge of 1600 acres at Rio Bonito, 540 at Lincoln, 320 at Woodland, 320 at Red Bluff, and 2300 at Cottonwood, making a total of 4180 acres. He has a foreman at each place and is constantly on the go, supervising them all. Nearly all this land is set or being set to fruit under his supervision, employing a large number of men. From the Rio Bonito orchards he has shipped many carloads of fruit this season, and is now engaged in gathering almonds and other late fruits. He is now putting up gas engines to run machinery for shelling almonds.

Contra Costa.

TULE FRUIT. — Antioch *Ledger*: We were shown this week some beautiful apples and Bartlett pears grown in the tules on West Island. The fruit is very large and sound, and free from all parasites, and is proof of what the tule lands can do. West Island is not leveed and is flooded, and yet there are a few stray fruit trees on the island that tell their own story. They are wholly neglected, and yet they are as full of fruit as they can hang every year, and it is very large and clean. There is no doubt that if the tule lands contiguous to Antioch were reclaimed and planted in Bartlett pears that they would pay interest on a valuation of $1000 per acre. The problem of reclaiming these lands is not a serious one. They are too near the bay to be menaced by flood, and tide is all that has to be contended against.

GRAPES MOVING.—Martinez *Democrat*: The shipment of grapes has commenced in earnest, and load after load is being hauled to town and shipped to San Francisco and various other places. Wine grapes are bringing good prices, some of our vineyardists getting $20 per ton.

Colusa.

BIG BEETS —Colusa *Herald*: W. R. Mumma, the Grand Island farmer, recently harvested a crop of beets grown on 2½ acres of land on the island. The yield was 160 tons to the acre, and Mr. Mumma is of the opinion that the average weight of the beets was 50 pounds each.

Fresno.

FRESNO RAISIN NOTES. — Fresno *Expositor*, Sept. 23: Now that the raisins of the first crop are on the trays, or about all on the trays, a tolerable estimate of the total yield can be made. It is found that it is not the same in all the vineyards. In some the total yield of the first crop will not be more than ten per cent below that of last year, while in the other vineyards it is reported as much as 40 per cent, or possibly still more in a few isolated cases. Some find that their grapes have yielded better than they had hoped in the early part of the season, while others are disappointed because the yield has fallen short of their expectation. One of the worst complaints heard is that the weather for a few days past has been so cool, with so much dew at night, that the grapes have not been drying as well as they should. There is no doubt but that they will cure in good shape if the rains do not come and catch them. But this fear of an early rain enters into all the vineyardists' calculations. If the weather remains clear for ten days or two weeks yet, the first crop will then be about all out of the reach of calamities on account of bad weather. About that much time will be necessary to cure the first crop, which is now on the trays. Some, indeed, must have three weeks yet, but that is only a small part, and includes only the latest picking of the first crop. Of course, a large part of the second crop will be picked for raisins, providing the weather is such that they can be cured. But even if the weather should be all that can be desired, there would still be much of the second crop that will not be made into raisins. Many of the vineyardists have already arranged to manufacture these grapes into wine and brandy, thinking there is more clear profit in this than in raisins, when all the risk is taken into consideration. One company here has already engaged 50 carloads of the second-crop grapes, to be shipped north for the purpose of making wine and brandy. Other shipments on a large scale are also bargained for, and the result will be that many of the late crop will be disposed of in a similar manner.

VINEYARD PESTS.—*Expositor:* The vineyards on the White's bridge road, a few miles west of this city, are being ravaged by a species of worm, which is devastating the foliage of the vines. The intruders closely resemble the common tomato-vine pests, but are of a darker color. Much apprehension is felt by the vineyardists that these pests will give them much trouble later on. Already a number of vineyards infected present a very desolate appearance.

Inyo.

A LARGE DIVERSIFIED CROP.—Independence *Index*: Tim Madden and Louis Frevert had the Vagt place at Camp Independence leased this season. Sixty acres were under cultivation, and from this they harvested 70 tons of small grain, seven tons of corn, three tons of potatoes and 50 tons of alfalfa hay. One field of 30 acres yielded 43 tons of wheat and barley. And it is a fact that this season has not been as good as usual in this section.

Kern.

THE RAISIN OUTLOOK.—*Californian:* It is reported that the Rosedale Vineyard Company will have at least 150 tons of grapes this season, and that there will be from 150 to 200 tons more in the Rosedale colony. The promise is that this year's product will be of the very first quality, and that a superior lot of raisins will be packed at the Sumner warehouse this year. J. D. Browne's vineyard is expected to yield a ton of raisins to the acre.

ALFALFA.—Bakersfield *Californian:* E. Chauvin's place near Delano is watered from an eight-inch artesian well, 704 feet deep. This gives a flow of 3½ inches of water, all of which runs into a reservoir, from which it is drawn for irrigation purposes as it is needed. Three years ago, when the alfalfa was first seeded in a small field which he has, the yield was about one ton to the acre, but it has kept on increasing until this year the product is really marvelous. After a cutting, the alfalfa grows from an inch to one and a half inches a day, and when cutting time comes around, it takes four horses to pull the mower with ease. The record thus far this season is this: April, 2 tons per acre; May, 2½ tons; June, 3 tons; July, 2½ tons; August, 2½ tons; September, 2 tons—a total thus far of 14½ tons per acre, with at least two more cuttings, and probably more, to hear from. Its growth has been so rapid that it is now cut every 20 days or thereabouts. There are thousands of acres in that vicinity which, if irrigated, will yield just as well as the land in question. This alfalfa is sold to sheepmen and others, and brings about $8 a ton. This high price is of course due to the location of the field like an oasis in the midst of dry and unirrigated grazing lands, and would not obtain if the thousands of similar acres were also changed into alfalfa fields.

FINE CROP OF CORN.—Bakersfield *Gazette*: C. A. Maul has about 80 acres of Egyptian corn growing on his Rosedale place, and the growth speaks volumes for our valley. The land has never been irrigated. Last year he raised an excellent crop of Indian corn on it, and will gather a first-class crop off it this fall. The ground, which some years ago was remarkable only for its extreme dryness, has become moist by reason of seepage from the Calloway canal, and fruit trees or anything else will grow there with no irrigation whatever.

AN ALMOND GROVE ON THE WEED PATCH.—*Gazette*: J. E. Smith, the grandfather of the Weed Patch section, is as enthusiastic regarding his favored locality as ever before. He will put out a number of peach pits this winter, and plant for 100,000 almonds. He prefers hard-shell variety, Mr. Smith informs us that he has an orange tree that shows a growth of ten feet and two inches this year, and if any one can beat that, he will have to show the goods.

Lassen.

A BIG YIELD.—Susanville *Advocate*: Last year George Bantly cleared the sagebrush from some 60 acres of his land, lying between the Elledge and Newhaus places at Howard Flat, and below the Hutchinson & Leavitt canal. He broke the land up, plowing and harrowing it thoroughly, and this year put it in wheat. From these 60 acres of virgin sagebrush soil, irrigated from the Hutchinson & Leavitt system, he has irrigated a crop of fine, heavy wheat, averaging 40 bushels to the acre. The simple naration of these facts seems to us to indicate as clearly as may be that the only fertilizing agencies our sagebrush lands require, to make them yield more abundantly than the lands of the great wheat counties of the State, are labor and water.

Los Angeles.

THE CAHUENGA VALLEY.—Colgrove Cor. L. A. *Express:* The crops of the season in this valley are pretty nearly all gathered. Rain is now needed to lay the dust and to revive some of the drooping trees, and especially the orange, which seldom gets water here except that which falls from the clouds. No water is as yet brought in this valley for irrigation purposes. Several schemes are talked about and some are very promising. The one that proposes to bring the water from Tejunga is believed to be the most practical. It is said there is in that quarter an abundance of pure mountain water, ever running to waste, and it is not far to bring it nor difficult for it to be brought to supply all this country to the west, south and southwest of Los Angeles, comprising more than 100,000 acres of the best land in the world. A supply of irrigation water would be a god-send to this region of country, and enable the farmers to raise two or three crops a year instead of one, as at present. All fruits grow abundantly here, but it is found to be the natural home of the lemon. It is a fact not generally known that the lemon tree is much less in need of water than the orange. Lemons of the very best quality can be grown here in great abundance. The trees begin to bear in two or three years, and from that time on are very profitable. This business has spread much during the last two or three years. Hundreds and hundreds of loads of melons have been taken to market, but the ground is still almost covered with them.

GREAT FRUIT SHIPMENTS.—Pomona *Progress*: Returns from the shipments of green fruits to the East from Pomona have been coming fast for two weeks, and a better lot of deciduous-fruit growers have never been known here than those who have disposed of much of their crops in this way. Green-fruit shipments in the new refrigerator cars, and by the late modes of fast transit, are established successes. Next year, when the World's Fair in Chicago will make the greatest market ever known for our fresh California fruits, Pomona valley will be decidedly "in it." S. N. Androus reports that from the Dole & Andrews ranch there have been shipped 50 tons and 264 pounds of pears. The net returns from the fruit have been $62 a ton. The Phelps pear orchard of four acres yielded 23 tons that were sent to Chicago in the green-fruit shipments. The pears sold for four and five cents a pound, and the net returns have been $1486 for the four acres. The Golden Cling peaches from I. E. Woodward's place were sent as green-fruit shipments, and netted the grower $7.50 a tree. The trees are seven years old. At that rate, an acre of Golden Clings would be worth $750 per acre.

Mendocino.

HOP NOTES.—Ukiah *Dispatch and Democrat:* The hop pickers have all returned to town. A. S. Berryhill has left at this office as fine a sample of hops as we have ever seen. His entire crop this year is of splendid quality. Zach Bartlett finished picking yesterday. He informs us that he has about 3000 pounds more hops than last year, and that in quality they are the best he has ever raised. Thos. Parsons of Largo reports hop-picking completed in that vicinity, with a larger crop than last year. Mr. Parson's crop exceeded last year's crop by 3000 pounds of dried hops.

Orange.

THE RAISIN INDUSTRY.—Orange *Post*: The Muscat vineyards in and about Orange have produced a heavy yield of fine grapes, which have fully matured. The process of picking the same is nearly or quite over, and the grapes are now lying upon the warm gravelly beds where they are being rapidly transformed into raisins by the simply process of drying in the sun. The weather, so far, has been generally favorable for raisin-curing, the thermometer indicating 75° to 85° in the shade during the warmest part of the day. Much of the present crop has been grown upon vines but 17 months old from the cuttings, and at this present time the young vines are looking strong and vigorous after perfecting the fruit. To a person not accustomed to the productiveness of the soil in this locality, which is particularly adapted to the growing as well as curing of the raisin grape, the number of pounds taken from the vines in a single season seems little short of marvelous, and to the older settler is always a source of pride as well as of a good fair profit.

Placer.

SHEEP NOTES.—Auburn *Republican:* Large numbers of sheep are being driven from the mountains to the valleys for the winter. A band of several thousand passed through Auburn last Sunday. Mutton is mutton these days, sheepmen being offered nine cents for their sheep delivered at any station on the line of railroad. Some few of the Placer county sheepowners shear in the mountains, but the majority do not remove the wool until they have reached the valley. More than a hundred thousand State of Nevada sheep were pastured in the mountains of eastern Placer this season. These sheep are sheared in the mountains and continue to feed there until the first severe storm, when they are shipped to Nevada for the winter.

San Bernardino.

THE ORANGE-GROWERS.—Redlands *Facts:* A statement was made public last week to the effect that the average net price received for seedling oranges through the Orange-Growers Association last year was $2.19. This is misleading and probably an error. We have been shown the report of the secretary to one of the growers in which the gross income is given at about $1.80 per box. From this there is to be deducted the cost of picking, packing, the six per cent commission to the packing-house, and about three cents per box to the manager. From this report, it seems that the average net price brought by seedling fruit to the growers of Redlands was from $1.05 to $1.15 per box. The same authority quotes the net price on Navels at $3.22 and Mediterranean Sweets and other buds at $3.37½ net. As a matter of fact, according to the report of the secretary to the growers, these figures must be scaled down by about $1 per box. If the object in publishing two sets of figures, one for the public and one for the grower, is to boom orchard land, it is a great mistake. California needs no doctored returns. The truth is good enough, and at the true figures mature orchards will pay ten per cent interest on land at from $5000 to $10,000 an acre. But we prefer to think there is a mistake somewhere, and that the secretary, in making his figures for publication, did not give them to the reporter as net, but as the price at which some fruit had been sold, gross. This is undoubtedly true.

Santa Clara.

FRUIT SHIPMENT.—*Mercury*, Sept. 22: Canned fruits lead in last week's shipment, the amount being 1,474,385 pounds, with green fruit a close second. The total of all eastern shipments amounts to 3,788,485 pounds. The total shipment for the corresponding week last year amounted to 2,166,250 pounds, the increase this year being 622,235 pounds. The canned-fruit shipment for the corresponding week last year amounted to 751,770 pounds, the increase being 722,615 pounds, or over double last year's shipment. For the same period the green-fruit shipment amounted to 886,480 pounds, while the shipment last week amounted to 1,026,955, an increase of 140,475 pounds. In September, 1891, no prunes were shipped at all. A. C. Kuhn shipped 14 cars of dried fruit East last week, and yesterday three cars started in with the new week. Prunes, peaches, apricots and silver prunes were the consignments. The shipments last year, as compared with this year's business, were all one week behind. The 3,000,000-pound mark last year was not reached until September 29th, when 3,598,690 pounds went forward, and the banner week, when 5,036,040 pounds went forward, ended on October 17, 1891.

CAMPBELL FRUIT NOTES.—Cor. *Mercury*: Prune-gathering is about over. The yield has fallen far short of early calculations, but the shrinkage in drying is the least that has ever been known, some lots scarcely losing the half in drying. Some magnificent Salway peaches are being shipped through our drier. Mr. Leigh gathered ten tons from 300 trees at one picking, and all very fine peaches.

Shasta.

HAPPY VALLEY FRUIT NOTES.—Cor. Anderson *News:* The Happy Valley people are very much encouraged over the fruit industry. Those who have orchards bearing have realized a handsome profit from their fruit sales. Some have paid up all their debts which they were obliged to incur while getting their trees in bearing, and have money left, while others have paid part, with a good hope of paying up all next year. Mr. Sweasey is getting pretty well through budding. He has 75,000 trees in his nursery on Mr. Robert Mewes' ranch. Picking grapes for raisins began on the Alexander ranch this week.

Sonoma.

A FINE FARM.—Dixon *Tribune:* Petersen & Timm have a fine farm in Rio Vista township. About 1000 acres lay in the reclamation district and several hundred acres are outside. The land is superior to most of the tule lands and when it is reclaimed it will yield largely of both barley and wheat. The firm has spent much money in improvements and will soon have a model farm. The pasturage on the farm is excellent and by an ingenious device Mr. Timm conducts slough water through his own and his neighbors' farms in ditches which are now used solely for watering stock, but which will soon be used for irrigating alfalfa for feed. The firm has its own landing on Linda slough, and transportation by means of schooners is very cheap and satisfactory.

POOR PEARS—THE RESULT OF NOT SPRAYING. Santa Rosa *Democrat:* Speaking about Bartlett pears, J. H. Hunt says at one time Sonoma county raised as fine fruit of this kind as could be found anywhere. For the last two years, however, the fruit has been scabby and in other points inferior to the pears grown in the southern part of the State. He attributes these defects to the neglect of the farmers to properly spray their trees. Last spring the warning note was sounded by the State Board of Horticultural Commissioners, when it said that if the farmers did not spray their pear orchards for the fungus there would not be half a crop, and the quality of the fruit would be greatly deteriorated. The advice, it seems, was neglected to a large extent. Mr. Hunt says his father has been making a number of experiments in his orchard near Sebastopol, and the results in every case have convinced him that careful spraying is worth half the crop. Last year he sprayed all but one tree in his apple orchard. The fruit on that single tree was scabby and otherwise inferior, while all the other trees were loaded with perfect and evenly-matured fruit. This year he took one tree for experimental use. He covered up some branches and sprayed the rest. On the branches which were not sprayed the fruit was scabby. That on the sprayed branches was perfect.

TOKAY GRAPE CROP.—Sonoma *Index-Tribune*: The Tokay grape crop in Sonoma valley is almost a total failure, if we except a few vineyards. Many growers report one-quarter of a crop. The grapes were ruined by the cold nights followed by hot days during the months of July and August.

Sutter.

LENGTHY CUCUMBER.—Yuba City *Farmer:* At the Feather river orchard, below Yuba City, is a curiosity in the way of a vegetable. This spring a small plot of ground was planted to cucumbers and after the vegetables had begun to form it was noticed that a portion of the vines bore cucumbers of great length, some measuring at least five feet and still growing. They are of the same nature as an ordinary cucumber, but the remarkable length is surprising.

ARIZONA.

SALT RIVER VALLEY RAISINS AT THE EAST.—Phœnix *Herald*: Actual shipments of fruit speak louder than words, as to the resources and achievements of the Salt River valley. H. W. Adams' 80-acre ranch is devoted entirely to Muscat and Seedless Sultana Raisin grapes. On August 22d he made his first shipment of raisins to Chicago, and has continued shipping one carload per week since, making 55 tons, and he has yet 15 to 20 tons to ship. The first carload was shipped from Phœnix just one month before grape-picking was commenced in California. The eastern dealers write that this advantage will always give Arizona growers the cream of the market, providing their product is equally good, and they have no fault to find with the raisins of Mr. Adams, which are sacked. Of course the raisins packed in layers bring the next higher price, but for similar packing and curing the Salt River valley product takes the prize from the coast. Mr. Adams received the top market price, being 1¼ cents higher than he received last year. Arrangements are being made for packing hereafter in the very best manner.

OREGON.

THE HOP INDUSTRY.—Dallas (Polk Co.) *Transcript*: Sept. 17th witnessed the closing of the hop harvest in this section, and the crop has been saved in excellent shape. Though the output has not come up to the expectation of any of the growers, the hops are all of first quality and will pass as A 1 in any market, if the louse did get in his work in all of the yards. Experienced growers say that the crop will not be more than 60 per cent of what it usually is, owing principally to late spraying. So far we have been able to glean the following figures regarding the yield in several Polk county yards: Hill & Yocum, 16,000 pounds; Yocum & Grant, 10,000 pounds; Yocum & Mason, 5000 pounds; Kirkpatrick & Son, 9500; H. B. Plummer, 8200; J. H Dunlop, 2900; Siefarth & Son, 8500; H. Morrison, 13,280; Farley Bros., 7200; Lee Wann, 14,000; H. W. Clifford, 30,000; Mr. Cutler, 86,000; Harris & Stutsman, 33,000; Hubbard & Harris, 33,000; Mason & Son, 15,000; J. Rhodes, 5000; T. J. Morrison, 21,000; J. F. Groves, 17,000.

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

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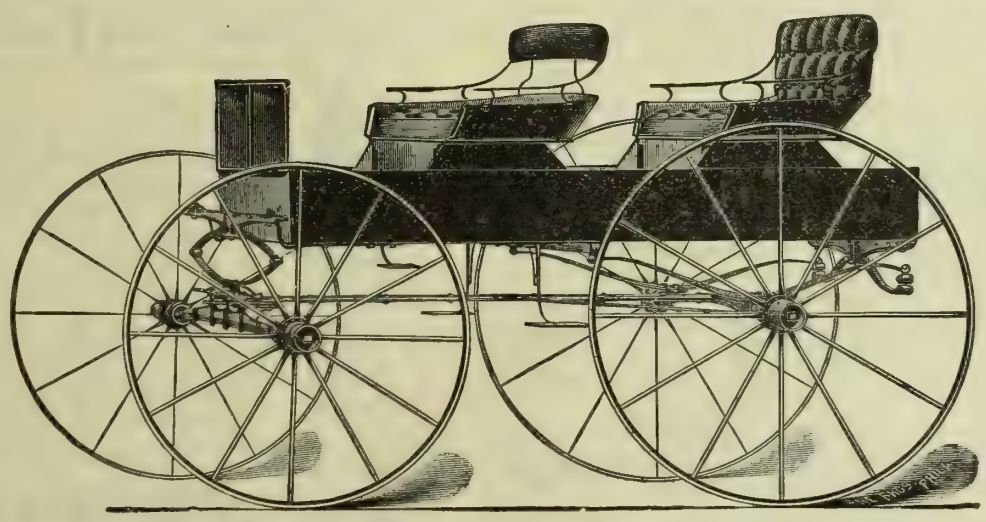
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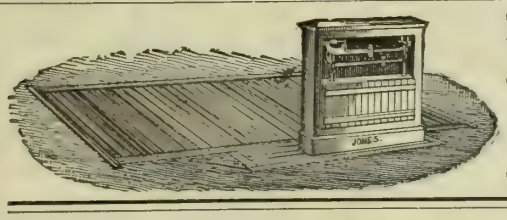
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PATRONS OF HUSBANDRY.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

MISTAKEN VIEWS OF THE GRANGE.

The following, written by Past Lecturer of the State Grange, Jeanne C. Carr of Pasadena, for the RURAL PRESS, long since, is still of pertinent interest:

The *Popular Science Monthly* contains an article on "the outcome of the Granger movement," by Chas. W. Pierson, which is one of the most singular illustrations of the inability of an outsider to understand what the Grange is and has been to thousands of farmers and their families.

The article is mischievous in its tone, but more so in its partial statements, and, possibly, not willful perversion of the leading facts in the history of the movement. He sails into his subject thus: "The founders of the Grange thought they were establishing an Order whose aims were to be social and educational. But these were soon overshadowed by the cooperative and antimiddleman features. This drew more into the Order than all other considerations combined, at one time threatening to transform our farming population into a race of traders, and this was likewise the cause of Grange decay. Fighting middlemen, unlike fighting railroads, was a legitimate kind of activity, as it had nothing to do with politics or theology—the two subjects tabooed by Granger law. Unfortunately, the story of Grange cooperation is recorded nowhere and thoroughly known to nobody. Those who know most preserve a discreet silence, mindful of questionable transactions and failures now generally forgotten."

Speaking of cooperative movements, he says, further: "It is always easy to experiment with other men's money. The State Grange officials found no difficulty in getting, *with the Grange funds*, into enterprises where disaster was inevitable. It came in every instance. The blow was so overwhelming that in some States they dropped at once from the Order."

It seems that Prof. R. T. Ely, in a recent book on "the labor movement in America," has illustrated the work of the Patrons in cooperation as worthy of all imitation. But our author sighs, "the failures! Has he not heard of the failures? Does he not know that thousands of farmers were carried into the movement, with no idea of the nature or aims of the Order? Does he not know that a Jersey City Grange (a *city* Grange forsooth!) had an army-general for its master, a stonemason for its secretary and the owner of a grain-elevator for its chaplain?"

Mr. Pierson is puzzled over the apparent resuscitation of the moribund State Granges and that the growth is especially marked in New England. "At the session of the National Grange in 1885, delegates were present from all States and Territories but eight. It is not easy to explain this growth, as there seems to be no great principle underlying it."

Mr. Pierson has probably never read the Grangers' Magna Charta, especially Art. III of the declaration of purposes. This will enable him to explain all the paradoxes of Grange history. Not one of the purposes announced in that immortal document originated in the Grange. Some are as old as Moses; as the Sermon on the Mount. The novelty lies in the mode of application. Mr. Pierson says "there was great lack of discipline in the Order from the first, but no discipline could have harmonized such a body."

But as if these Grangers' ways were altogether past understanding, our author says: "The harmless practice of holding great fairs is gaining ground. At a recent one in Pennsylvania [Williams Grove Picnic.—ED.] over 50,000 people were present in one day, and the sales of machinery direct to farmers (no middlemen!) ran up into the hundreds of thousands of dollars! Never were manufacturers and consumers brought into closer or more friendly relations." So it seems that the Grangers have got some discipline at last, and they must have progressed considerably if, as Mr. Pierson acknowledges, "the most enthusiastic Grangers at present are the farmers' wives and daughters, who are attracted by the social opportunities." He says they boast "more of their Grange buildings and libraries than of their business operations," even when they transact "business to the amount of hundreds of thousands," with their own brains to the fore!

That little handful of Grangers who met at William Saunders home in Washington, Dec. 4, 1867, would have been more than satisfied could they have foreseen the results of their organization *as it appears to-day*. What is 20 years in the history of a reform, of any great movement for the elevation of a class or a race? Every organization in its infancy strikes out blindly, but in proportion to the inherent worth of its underlying principles gains in strength.

Is it not true that religion and politics are tabooed in the Grange, though the partisan or sectarian is required to lay these burdens down when he enters its hospitable doors? Mr. Pierson confesses that in healing the sectional differences between the north and south, the Grange has deserved the thanks of the country.

The *Popular Science Monthly* has a larger audience among "thinking men and scholars" than among the Patrons of Husbandry, but is not a stranger in the Grange libraries, which Mr. Pierson approves as more profitable to them than cooperative undertakings. It is a curious fact that there is more understanding and sympathy with the truths of social and physical science among the laboring classes, especially in their organizations, than is found among the more intellectual classes in considering these truths *in their applications*. We can respectfully assure Mr. Pierson that to read the outcome of the Grange movement he will require a larger telescope and clearer lens, when he will no doubt recognize its true significance in the social development of the country. J. C. C.

THE STATE GRANGE.

Next Tuesday the State Grange will open its 20th annual session at 10 A. M. in the Unitarian Church at San Jose. State Lecturer Huffman informs us that the auditorium is handsomely carpeted and furnished with adjustable chairs, and the acoustic quaiities of the room are excellent. We have reason to expect one of the largest and most pleasant and profitable of sessions. San Jose Grange has taken great pains to prepare for the comfort and pleasure of all members and visitors. We hope an effort will be made in every subordinate Grange to have as large a delegation as possible attend, feeling sure that Patrons who miss going to the session will suffer a real loss. We hope to greet all old and many new attendants. The editor, in the general columns of this number, has made further mention of the meeting with other matter of interest to Grangers and other farmers.

THE W. M. has called the Executive Committee to meet at San Jose Monday next at 10 A. M.

ALTERNATE REPRESENTATIVES ELECTED.

The following have been reported to the Secretary of the State Grange:

Millville—Mary W. Webb.
Valley—G. F. Loucks, Mrs. M. Hook.
Temescal—A. T. Perkins, S. Goodenough.
San Jose—Mr. and Mrs. R. P. McGlincy. (Mrs. S. A. Bicknell was elected as representative with the Master who has no wife.)
Two Rock—Mr. and Mrs. W. D. Houx.
American River—A. A. Harris.
Tulare—A. J. Woods.
Pescadero—Geo. A. Piper and Mrs. A. M. Piper.
Roseville—J. F. Cross and Mrs. S. J. Cross.
Potter Valley—Fannie Thomas.
Danville—Mr. and Mrs. R. O. Baldwin.
Santa Rosa—S. T. Coulter.
Magnolia—Jennie Elder and Lee Bilderback.
Stockton—Mr. and Mrs. Nathan T. Root.
Dixon—H. Aylworth and Gotefey Schmeiser.
Woodbridge—John Thompson, Sister G. H. C. Ashley.

SAN JOSE.—A "Granger" writes: "We are all looking for a rousing good time at the meeting, and hope the many important questions will be fully discussed, especially that of 'Cooperation,' which has been inaugurated by Two Rock Grange."

BERTHA INGRAM, Secretary of Tulare Grange, and her husband recently returned to their ranch, several miles out of town, after a term of residence in Tulare.

BRO. H. E. HUXLEY, of Neenah, late Secretary of the State Grange and Grand Representative of the I. O. O. F. of Wisconsin, visited us on Monday. He was accompanied by two other solid veteran representatives from Wisconsin to the Sovereign Grand Lodge of I. O. O. F. at Portland, Oregon. Bro. Huxley (who is pretty good-looking for a Western Granger) reports the Order holding its own fairly well in Wisconsin. We are always glad to receive the friendly grip from Patrons across the mountains and plains, and especially such an old and intimate friend of Past Master S. C. Carr of Wisconsin. He reports Bro. and Sister Carr in good health and as full of Grange work and talk as ever.

GRAIN-BAG COMMITTEE. — This committee, consisting of J. D. Huffman, D. A. Ostrom and C. P. Berry, will meet on Monday night next to complete an interesting and important report for the consideration of the State Grange.

UNFINISHED BUSINESS.—The report of the Committee on Resolutions in relation to property rights of wives, and the "Stanford Land Loan" resolutions of Bennett Valley Grange will be part of the unfinished business to be considered at the State Grange.

STATE LECTURER HUFFMAN reports a good meeting at San Antonia Grange at Jolon last week. He also lectured a less well-attended meeting of San Lucas Grange.

ANNUAL REPORTS RECEIVED.—Reports from the Master, Overseer, Ass't Steward, Secretary, Pomona and Gen. Deputy Overhiser are among the few so far received out of those called for from all officers and Deputies, according to the resolution of the State Grange. The Lecturer has deferred his report to hear further from Sub. Grange Lecturers. The reports so far make a favorable showing.

STILL COMING IN.—D. Fisher, W. M. of North Butte Grange, Sept. 23d, writes: "We conferred the third and fourth degrees on a class of 11 to-day."

G. P. Loucks, of Valley Grange, Sept. 24th. says: "At our meeting to-day we admitted four by card and one by initiation. Two new applications. Having a new start, we hope to be able to add many more. We think of holding a special meeting to bring all up to the second degree on Saturday next."

ALL laws, rules and regulations for the government of society should be equal in their operations, so as not to impose upon some burdens from which others are exempt. When a law or rule is found by parties to be unequal in its operations, and to oppress one class, or to confer immunities upon some which it denies to others, it ought to be repealed and a more just statute enacted in its stead. It needs no argument to show that we have now laws which operate adversely to our agricultural interests. We do not pretend that these laws were framed and enacted with that end in view, but that is the effect produced by their enactment, and the result is the same whether we regard them as the outcome of a lack of information or a shameful disregard of the rights of the farmers and landowners of the State, or the product of business shrewdness. We are not now concerned, particularly, about the way they were placed on the statute books; but we are deeply interested in their taking off. A part, and the larger part, of our population is unduly burdened by these acts of legislation, and common justice demands their repeal and the enactment of statutory provisions which shall be equal in the distribution of public burdens.—Farmers' Friend.

PARTY men—men who are for party first and for principles and men as it seems expedient—are asking if it will be possible to whip or cajole the people within the party lines as of old; and other men—men who believe in principles and men first, and the parties as the instruments to get men into office to carry out principles—are just as anxiously asking if the people will be true to their own interests and their own beliefs.—Farmers' Friend.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 6 mos, $1; 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to othe s.

IN 1790 three patents were issued. One hundred years later the number was 26,292. The total number of patents granted during the 100 years was 453,944, or an average of nearly 13 patents for every day.

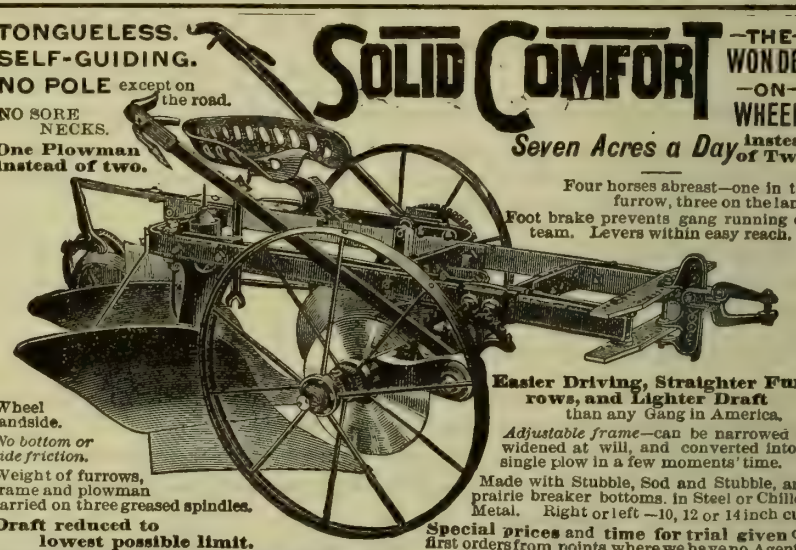
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New in Principal. Beautiful in Appearance.
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Contains Covered Internal Gear.



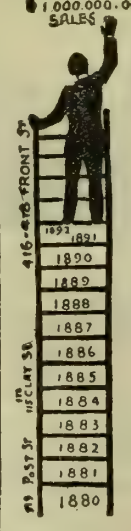
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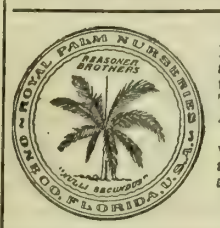
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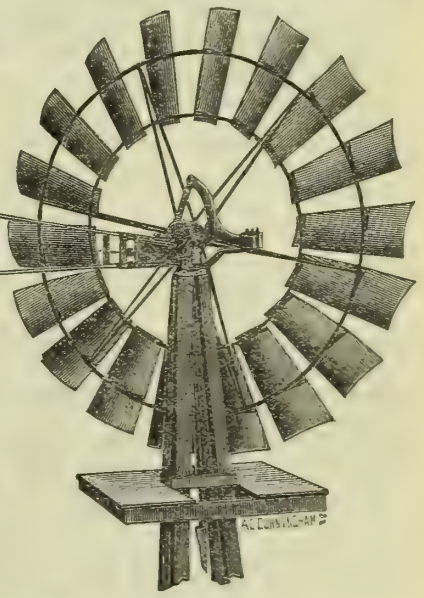
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Good Health.

Cholera Germs.

At the last meeting of the San Francisco Microscopical Society two papers were read on the cholera. The first was by Henry E. Sanderson, M. D., on "The Spirillum of Asiatic Cholera," and the second by R. H. Freund, "A History of the Cholera Organism."

Dr. Sanderson prefaced his paper by a brief account of the method pursued in laboratory work, with cultures of cholera and other disease germs. He said he had no doubt most of his hearers were already familiar with the methods, but for the benefit of his lay hearers he exhibited the various articles used and some of the apparatus.

In 1829–37 Europe, he said, was for the first time attacked by a hitherto unknown disease, which spread with great rapidity over the continent. It came originally from Asia, from the region of the Ganges delta in India, hence the name of "Asiatic cholera." It has since reappeared at varying intervals and has done its deadly work, but for many years its cause was but a mystic conjecture.

In 1883, as the epidemic again spread to the confines of Europe and threatened to cross the borders, the German Government sent a commission to the infected regions to investigate the disease, and especially to search out the causative factor. At the head of this commission was Dr. Robert Koch, who discovered in the discharges the germ since known as the comma bacillus.

In bacteriology there are three forms of vegetable life; the bacillus or rod-shaped, the micrococcus or berry-shaped and the vibrio or spirillum, the spiral-shaped. The cholera germ belongs to the vibrio spirillum group. Some are very slightly curved, others more markedly so. It is one-half the length of the Tubercle bacillus, much thicker and has rounded ends. Some are so much curved as to form almost a semicircle and occasionally, where two or more are joined together, a spiral or letter S form results. Where marked spirals occur it is due to peculiar circumstances, such as restrict the ordinarily quick subdivision, by means of which multiplication occurs.

The germ is very active in its movements. In proper culture media and with proper temperature they swim and wriggle around he field of vision like a swarm of gnats. At one end of each is a whip-like process or flagellum, by means of which this motion is induced.

The question as to the existence of spores is not yet definitely settled. No one has ever been able to prove their presence by staining methods. Hueppe claimed to have seen sporuration taking place in a hanging drop, but his observation has not been confirmed. In order to prove the existence of spores in bacteria it is necessary to prove the existence of forms with far greater resistance power than that possessed by the bacteria themselves. No such enduring forms have been found in connection with the cholera germs. On the contrary this germ is among the most sensitive microorganisms known. A temperature over 122° F. kills them quickly. They stand chemical influences very poorly, especially mineral acids. The hydrochloric acid of the gastric juice kills them, and if the gelatine-culture shows a trace of acid the culture will fail. Dryness kills in a short time, sometimes in a few hours, while in fluids they remain virulent for months. Other bacteria easily overpower them, and in putrefying fluids the germs of putrefaction are apt to kill them.

In artificial cultivations, as a rule, the free entrance of atmospheric air is required, though under some circumstances thriving without it. In the intestinal contents of man they thrive without atmospheric oxygen, but produce oxygen from the chemical changes induced by themselves. With a temperature under 50° and over 107° F. they do not flourish.

The method of infection of the general system seems to be somewhat misunderstood, if one judges from newspaper articles which have lately appeared in this city. The bacteria themselves do not get into the blood and the various organs of the body, but remain confined to the intestinal contents, with some invasion of the intestinal walls and occasionally of the intestinal lymphatic glands. From the intestinal tract absorptions of poisonous substances produced by the bacteria into the system at large, absorption of the "toxines," or *tox albumens*, and the consequent poisoning, is what gives the symptoms of the disease; although the thickening of the blood and the terrible drain upon the system from the copious evacuations does, also, great injury!

There are several other bacteria which look under the microscope very much like the vibrio of cholera, and these were very fully described by Dr. Sanderson. He had also placed under microscopes for inspection preparations of the cholera germ and these allied forms, all of which were closely observed by those interested in the paper. He gave a full description of the methods of culture of these various germs, the media employed for the most perfect and rapid development of each, and much valuable information.

HOT WATER FOUNTAINS. — The "hot water fountains" which the municipal council of Paris determined last year to establish, have made a practical commencement on the Boulevard St. Germain, on the south side of the Seine. It is an elegant circular column provided with a button, which, being pressed, after placing a halfpenny in the slot causes about eight quartz of water to be almost instantaneously heated by gas to 65 degrees Reaumer, and passed through a tap into the recipient's pail or can. When this operation is completed an inner weight rises and the gas is automatically turned off. The small householders and shopkeepers of the neighborhood are stated to be availing themselves eagerly of this privilege, which is eventually to be extended to every quarter of the city and suburbs.

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Of Quincy, Ill, has moved into new quarters and is now one of the largest exclusive incubator manufactories in the United States, equipped with motive power and new, improved machinery which adds to its facilities for turning out good work rapidly.

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P. & B. Paint Co.

In our notice of State Fair premiums in last week's issue, the awards granted to the P. & B. Paint Co. were unintentionally omitted. It was awarded the silver medal on "Best Prepared Paints" and a diploma on "Best Samples of Paint—California Manufacture." These are the highest awards granted by the State Agricultural Society for this class of exhibits.

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FOR $19.00

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SPECIALTY SINGLE BUGGY HARNESS,

Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

Just the Harness for an Elegant Turnout.

They sell here for $25.00, and harness not as good is often sold for $35.00 in retail shops. If harness is not as represented, money will be refunded.

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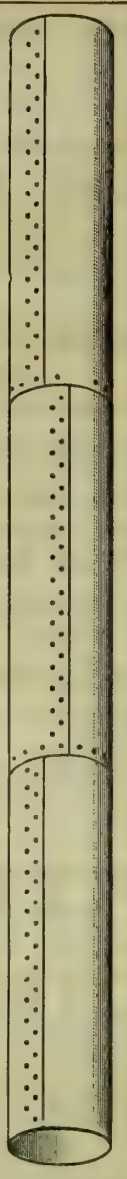
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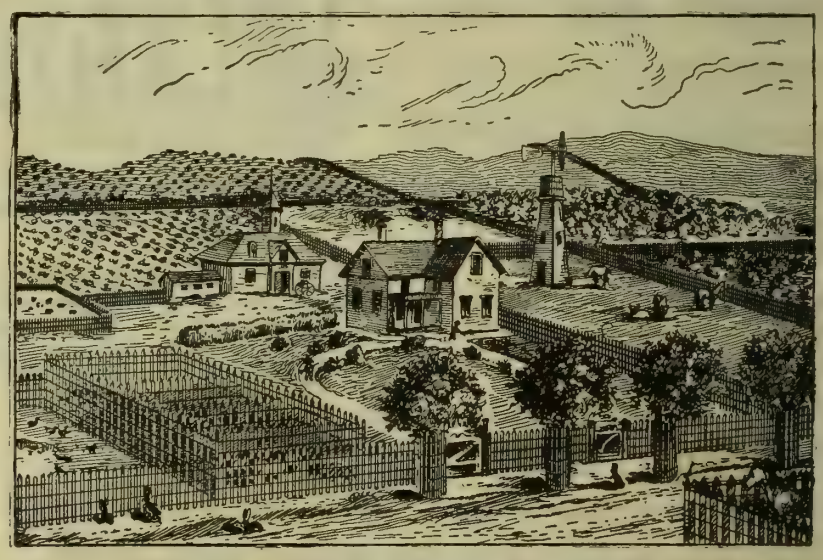
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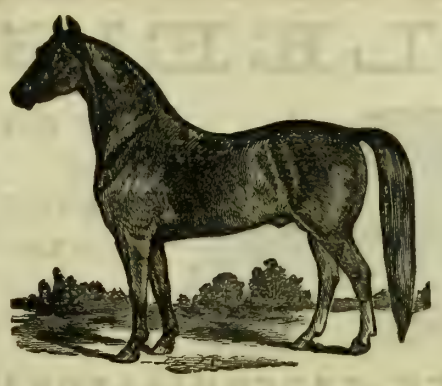
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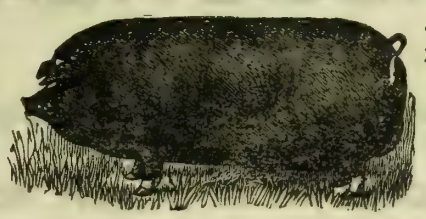
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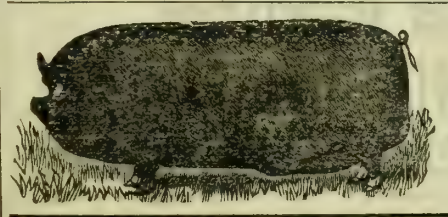
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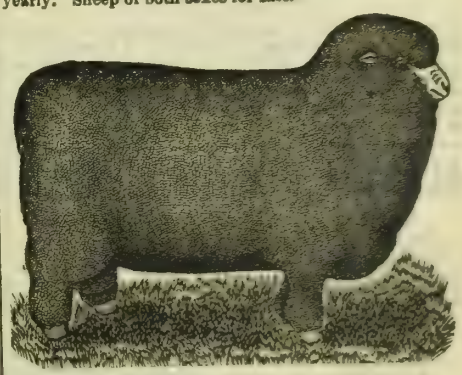
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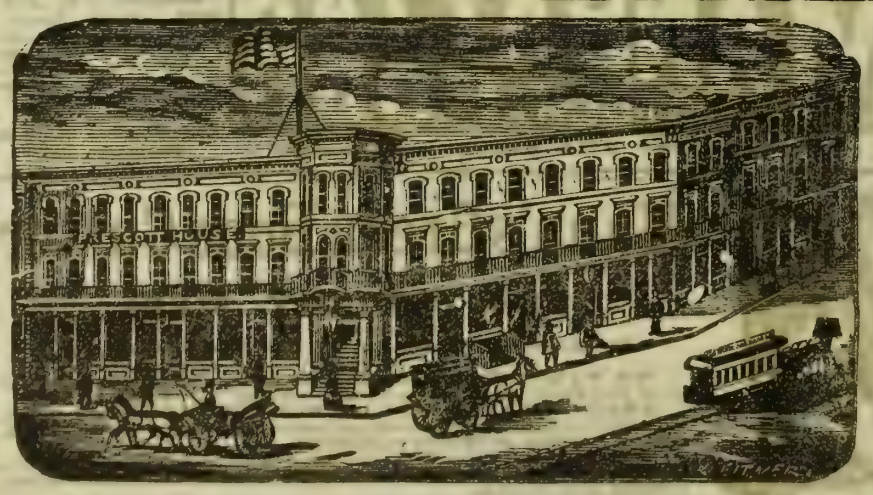
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S. F. Market Report

Market Review.

SAN FRANCISCO, Sept. 28, 1892.

The cholera scare continues an unfavorable factor in the world's market for about everything dealt in. Although its influence is still keenly felt, yet the edge is wearing off, for in some branches signs are multiplying of a steady return of the normal condition of affairs. Wheat is the first of farm products to show returning life and a corresponding appreciation in values. That the wheat markets have been unduly depressed by a strong moneyed syndicate goes without saying, and the cholera scare has been used for all that it is worth to facilitate the downward movement. The statistical position of the cereal, as has been repeatedly stated in the RURAL PRESS, is in favor of holders, and that sooner or later the market would recover and much better prices follow. These opinions were grounded on the best obtainable information regarding the probable supply and demand, and which are now being verified. The preliminary estimates of the world's crop of wheat made by the Hungarian Minister of Commerce, of a shortage in comparison with the crop in last year, are supplemented by later reports, and, with the corrections necessitated by the recent reports of the crop prospects at home and abroad, make an interesting comparison with last year. The total American crop is 603,000,000 bushels this year, against 716,000,000 bushels last year, a decrease of 113,000,000. The entire American crop this year is less than the United States crop last year. The Australian crop is about the same as last year, while the African crop is about 6,000,000 bushels less. The crop in Asia, including India, the Russian territory of the Caucasus, Turkey in Asia, etc., amounts to 385,000,000 bushels, against 440,000,000 bushels last year, a decrease of 55,000,000 bushels. The decrease outside of Europe is 174,000,000 bushels, compared with a year ago. Of the European crops, the principal countries showing a decrease are Germany, 25,000,000 bushels, and Italy, 13,000,000 bushels, while France shows a gain of 77,000,000 bushels and Russia of 26,000,000 bushels. The total European crop is figured at 1,250,000,000 bushels, against 1,161,000,000 bushels last year, an increase of 89,000,000 bushels, making a net decrease, taking the world's crop as a whole, of 86,000,000 bushels. The corrected figures to date indicate a crop of 2,307,000,000 bushels, against 2,392,000,000 bushels in 1891. Besides a shortage in wheat, there is a shortage in corn and also in staple root-vegetables.

Wheat, the past week under review, sold at steadily advancing prices at home and abroad. The shortage in the world's crop, combined with the very low price to which the markets had been sent, caused farmers to withdraw from the market after selling a sufficient quantity to meet current moneyed requirements. Their withdrawal left the short interest, which has been steadily increasing, to the tender mercy of the bulls, made so by the favorable condition of affairs. At this writing it looks as if still higher ranges will obtain in the near future. In our market the offerings, which had been quite light, are now, with prospective better prices, almost nothing; and as there is a large engaged tonnage in port besides a short interest in futures, to secure requirements, it looks very much as if buyers will be forced to bid still higher.

Barley has come in quite freely, but with an improved demand the market hardened. The exports of the more choice grades of bright barley continue on an enlarged scale. This free exporting is in the face of the cholera scare, which has greatly reduced the consumption of malting grades abroad. The general opinion is that if the United States escapes a cholera epidemic, the demand for brewing barley will be quite active, owing to a large shortage in the central States of the grades suitable for malting. The consumption demand for feed barley has been active, with a steadily increasing quantity fed out. Roll barley is being more generally used in this State, and is also more generally taken for shipping to the Hawaiian Islands. Up north it is said that ground barley continues the favorite.

Oats have come in fairly free. The lower range of values and strengthening of the barley market attracted buyers, and as receipts lately show a falling off, the market has sold slightly higher. The crop this year in this State is larger than it was in 1891, but in both Oregon and Washington the crop is said to be short. In two of the counties in western Oregon, which usually have large crops, the yield will barely meet local requirements.

Corn, like wheat, barley and oats, has strengthened, but there has been an absence of life. The hardening tendency has been brought about more through the firmness of holders than by an improved demand. The crop in this State is unquestionably short, which, combined with a very large falling off in the central States, causes farmers to be offish in their offerings at the recent decline.

Rye has been dull and barely steady. Receipts are light, but the absence of an export demand, except at low prices, is against sellers.

Ground feed has met with an exceptionally good demand the past week, and although the receipts, particularly of bran, have been heavy, yet the market not only held up, but scored a light advance. The two comparatively dry winters made themselves felt this season in a short natural pasture.

Hay has strengthened, particularly for the more choice grades. It now looks as if the strong selling pressure is about over, and any improvement in the demand would be met by higher prices. It is claimed that large quantities are warehoused; it is also said that feeders have light supplies.

Gilt-edged butter has been advanced to still higher figures. The advance is due to moderate receipts and a fair demand. The receipts are said to be better concentrated, which admits of securing a higher range of values. All grades from good down are still irregular. The demand the past week shows an enlarged call for pickled. The receipts of the latter are increasing. Where a dealer has been taking two boxes of fresh butter he now only takes one, which shows that the consumption is running on pickle. Eastern creamery is on the way, but until the weather grows cooler the demand will be light. Norton, Teller & Co. has one carload due, which is put up in 10-pound packages for family use. This, we think, would be a good thing for California creameries to follow for their winter patronage.

Cheese has hardened under a steady demand, lighter available supplies and strong holding. It looks as if still better prices will obtain in the near future.

Owing to high prices, the consumption of fresh-laid California has fallen off, and with a lighter demand the market has been top heavy, which necessitates, at times, concessions to place consignments. The fine quality of Utah and several special packs of Nebraska, cause the trade to turn largely to them owing to their relative cheapness.

Garden truck has been more or less lifeless, with values largely nominal. Tomatoes, owing to canners still running on them, have moved off fairly free. The market continues to be controlled by the receipts; with an enlargement in receipts, prices go off, only to recover again when they are lighter.

Onions have been slow. The spasmodic effort to advance prices failed, owing to shippers holding off.

Choice shipping potatoes have moved off quite freely without any appreciable advance. Receipts were heavy. The supply of wormy, diseased and otherwise inferior potatoes has been in oversupply.

The fresh fruit market has been in an anomalous condition, with prices controlled more by receipts than for some time past. This is due to the demand being largely, if not altogether, confined to the trade and to coast and near-by shipping orders. Grapes, under moderate receipt, strengthened slightly, but with heavy receipts peaches sold lower. Common varieties of pears have been a drug. Bartlett pears are coming in more sparingly. Plums and prunes have been in moderate receipt, but, with an offish demand, the market has favored buyers. Apples are a glut. The only demand is for choice red, for which good prices are obtainable. Melons have met with a good inquiry.

Dried fruits have been inactive, which has created a weaker tone. Buyers have only been induced to take hold with any degree of freedom by securing concessions. The cholera scare at the East, and also abroad, is being used against the market. The offerings of peaches are heavier. We make several changes in quotations.

Raisins have met with a fair inquiry. Buyers appear to find more difficulty than was expected to break the market. Some short sellers will probably have to enter the market, so as to secure raisins to meet the sales made two months ago. It looks as if they will be compelled to pay prices which will net a loss.

Nuts are coming in more freely and are meeting with a good demand at fairly firm prices.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Sept.	Oct.	Nov.	Dec.	Jan
Thursday	5s11½d	5s11½d	6s0-½d	6s01½d	6s02½d
Friday	5s11½d	6s00½d	6s01½d	6s02½d	6s03½d
Saturday	5s11½d	6s00 d	6s01 d	6s02 d	6s03 d
Monday	6s0½d	6s01 d	6s02 d	6s03 d	6s04½d
Tuesday	6s00½d	6s10½d	6s02½d	6s03½d	6s04½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	32s3d	32s6d	32s3d	Steadily held.
Friday	32s3d	32s6d	32s3d	Firmly held.
Saturday	32s3d	32s6d	32s3d	Steady.
Monday	32s3d	32s6d	32s3d	Steadier.
Tuesday	32s6d	33s0d	32s6d	Improving.

To-day's cablegram is as follows:

LIVERPOOL, Sept. 28.—Wheat—Less disposition to buy; California spot lots, 6s 5d; off coast, 32s 6d; just shipped, 33; nearly due, 32s 6d; cargoes off coast, firm; on passage, firm but not active; Mark Lane wheat steadier; French country markets, steady.

San Francisco.

WHEAT.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec	May
Thursday, highest	....	....	....	133⅞	....
" lowest	....	....	....	133½	....
Friday, highest	129	128½	....	134½	....
" lowest	129	128½	....	133⅝	....
Saturday, highest	....	....	....	134⅝	139
" lowest	....	....	....	134½	138¼
Monday, highest	....	....	....	136½	141
" lowest	....	....	....	135⅝	140⅜
Tuesday, highest	130¾	....	....	136⅜	143⅜
" lowest	130	....	....	135⅝	139¼

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat, Buyer December, 500 tons, $1.35⅝; 400, $1.35½. Buyer January, 400 tons, $1.36¼ per ctl.

Regular Session.—Buyer December, 500 tons, $1.35½; 100, $1.35⅜. Seller 1892, 100 tons, $1.29½ per ctl. Afternoon.—Buyer December, 1700 tons, $1.34½; 200, $1.34⅜ per ctl.

BARLEY.

	Seller '92.	Buyer Sept.	Buyer Oct.	Buyer Dec
Thursday, highest	....	....	83⅜	88⅜
" lowest	....	....	83⅛	87⅝
Friday, highest	83½	....	....	88¾
" lowest	83	....	....	88¼
Saturday, highest	....	....	....	89
" lowest	....	....	....	88⅜
Monday, highest	85	....	85½	90½
" lowest	85	....	84½	89⅝
Tuesday, highest	....	....	....	91¼
" lowest	....	....	....	90¼

The following are to-day's recorded sales on Call:

Regular Session.—Buyer December, 100 tons, 91c; 100, 90¼c; 100, 90½c; 500, 90c; 100, 89⅝c. January, 100 tons, 9 ⅜c; 400, 90½c.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Sept.	Oct	Nov.	Dec.	May.
Thursday	....	131¼	134½	137	147
Friday	131½	132¼	135	137½	147
Saturday	13 ¼	132½	135	137⅜	147½
Monday	133	133½	13 ½	13⅞	148½
Tuesday	133	132½	136	138¼	148

The following is to-day's telegram:

NEW YORK, Sept. 28.—Wheat, 79¼c for October, 82¼c for December and 88¼ for May.

Chicago.

Day.	Sept.	Oct.	Dec.	May
Thursday	123¼	123½	128½	137
Friday	124¼	123	127¼	136
Saturday	....	123½	12 ⅞	136
Monday	124½	121⅝	128⅛	1 62
Tuesday	123¼	124	128½	130¾

The following is to-day's telegram:

CHICAGO, Sept, 20.—Wheat, 74c for October 76¾c for December and 81¼c for May.

Markets by Telegraph.

Canned and Dried Fruit.

NEW YORK, Sept. 25.—It has been a dull, uninteresting week in canned and dried fruits. Operators are not in force. Many have prolonged their vacation in consequence of threatened sickness in the city, and others seem disposed to await some actual marketing of coast goods, especially such as will have foreign competition, before committing themselves to prices. Canned fruits are nominally as high as before. Dried peaches show light sales at 12½@16c spot. Large-sized prunes are easier. Sales, two carloads of fifties at 10¾c and forties at 11c free on board. It would be difficult to duplicate these rates at the close Raisins are without new comment. Three carloads of new were taken at $1.65 for layers, 5c for three-crown bags and 4c for two-crown. These are for mixing with our old to fill numerous western orders. There is more or less of a hitch in the apricot trade, owing to the rejections that have occurred. Perfect lots are stiff and salable at 15@18c.

Eastern Wool Markets.

NEW YORK, Sept. 23.—*Bradstreet's* says: Manufacturers are taking considerable wool, but it is mostly of two or three grades. Territories are selling freely at a decline. Buying is mostly of fine medium wools, which are in large supply. Fine Territories are quiet and hard to move. Fleeces are still in strong demand and firm. Stocks are rather light. There is a fair demand for Texas wools, but the supply of spring wools is small, add fall wools have not as yet come forward. Some large sales are reported of California wool. In pulled wools there is very little doing. Sales are mostly of B supers. Australian wools are quiet and firm. Very little interest is being taken in the London sales because there is very little wool offering which is suitable for this country. American buyers have secured only small lots Prices are held firm in choice wools, but low-grades are weak and off in price. Carpet wools are in strong demand, and are selling quite freely. Prices are very firm, and the tendency is toward an advance Importers are experiencing considerable difficulty in obtaining their wool.

NEW YORK, Sept. 26.—A heavy outgo of Territorial and unwashed wool is again noted. It is quite evident that numbers of holders have modified their earlier views of value for these grades from the ranges of prices that have ruled in the past fortnight. This, however, does not indicate that a quotable decline has occurred. It is because more lots that had to sell as they run have been put on the market straight. Choice collections are no lower, nor do they show a weakness beyond the fact that they will be kept on a parity with other and higher styles. Certainly, the general offerings remain liberal. All foreign wools are active. There is considerable buying ahead and supplies are light, with a tendency to advance. The effect of the cholera scare is being felt in a marked degree. All steamers are closely watched and no wool is allowed to land without a certificate from the local health authorities, and it is understood that orders have been given to disinfect every package of imported wool, regardless of shipping points. Several good blocks of California sold this week at New York. The sales here were 826,000 pounds of domestic and 300,000 pounds of foreign, chiefly Montevideo.

Boston sold 2,864,800 pounds of domestic and 614,000 foreign. Philadelphia says heavy general supplies, especially of Territory, give buyers an independent feeling. There is a mixed volume of business at that city.

Miscellaneous.

NEW YORK, Sept. 26.—Honey is firm. There is room here for all the coast can spare.

Lima Beans—Quiet at $2@2 05.

Hops—Dealings continue light. Two carloads new California were offered at 20@22c, but were not taken There is a fair showing of contract trade with brewers at 18@20c for State, the lower price for interior business.

Foreign Grain Review.

LONDON, Sept. 26.—The *Mark Lane Express* in its weekly review of the British grain trade says: Deliveries of English new wheat are increasing and held at 20s a quarter. Millers expect to find 200,000 quarters salable weekly at 30s level. Foreign wheats are rather better and California steadier. Cargoes of American red winter quoted at 26s 7d. American flour averages 20s; the highest, 26s. Barley and oats higher. American corn, 23s. To-day's wheats were firmer, though new was in less favor. Flat and round corn was 3d cheaper. Flour dull. Malting barley firm.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Sept. 27, '92, were as follows:

Flour, qr. sks	99,125	Bran, sks	17,537
Wheat, ctls	375,424	Buckwheat "	
Barley, "	97,327	Middlings "	2,607
Rye, "	1,362	Chicory, bbls	60
Oats, "	10,200	Hops, "	456
Corn, "	2,526	Wool, "	2,810
*Butter, "	1,196	Hay, ton	2,572
do bxs	551	Straw, "	80
do bbls	156	Wine, gals	209,400
do kegs	38	Brandy, "	1,746
do tubs	21	Raisins, bxs	500
do ½ bxs	50	Honey, cs	291
†Cheese, ctls	825	Peanuts, sks	277
do bxs	112	Walnuts "	14
Eggs, doz	18,250	Almonds "	84
do "Eastern"	94 500	Mustard "	7,480
Beans, sks	12,748	Flax "	....
Potatoes, sks	31,509	Popcorn "	....
Onions, "	6,459	Broom corn, bbls	....

*Over'd, 150 ctls. †Overland, ctls.

Exports by Sea from San Francisco from July 1 to Sept. 22.

	1892-93	1891-92
Wheat, ctls	2,485,336	5,026,736
Flour, bbls	275,220	270,656
Barley, ctls	535,337	293,543

Tonnage Movement.

From reliable advices up to Sept. 28, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	285,620	430,615	*156,618	80,28
San Diego	12,038	25,108	7,977	.....
San Pedro	5 825	3,471	....	13,067
Oregon	5',683	68,407	49,131	
Puget Sound	28,858	38,730	.....	
Totals	381,024	566,331	214,844	93,347

*Engaged for wheat, 1892, 31,542 1891, 69,013.

Cereals.

On September 1 the stocks of wheat in Continental ports were 6,602,000 against 9,754,000 bushels for the corresponding time last year.

The Liverpool *Corn Trade News* reports that during the past year the imports of wheat of the principal importing countries amounted to 438,400,000 bushels, of which the United Kingdom imported 178,000,000 bushels, France 26,000,000 bushels, Germany 52,000,000 bushels and Italy and Holland 15,000,000 bushels each, with the balance scattering.

The weekly crop bulletin of Illinois states that the yield of rye is the smallest average per acre for the last 33 years, with the single exception of 1878. The average yield is only 14 bushels.

The exports of wheat and flour from the United States from July 1 to September 15 have been in round numbers 39,000,000 bushels, against 60,000,000 last year. This is a decrease of 11,000,000 bushels, while interior arrivals have gained 9,000,000 bushels, making a total increase in American supply, compared with last year, of 20,000,000 bushels.

The London *Times*, in its monthly report of the condition of wheat in the United Kingdom, shows a deterioration in the condition of wheat of 5½ points, and of 5.9 points in beans, whereas barley has gained 1 per cent, oats 1.4 and potatoes 1.3 per cent. Compared with last year, the condition of wheat is 6 1 per cent worse, barley 9 1 better and oats 5 per cent better.

In the cereal year just ended the imports of wheat into the United Kingdom were 23,348,787 quarters of 480 pounds. Of this amount the Atlantic ports supplied 11,511,000 quarters, against 5,178,000 the previous year. Pacific coast supplies showed little change The increase in the amount supplied by Canada was nearly 400,000 quarters, while India supplied 1,100,000 quarters more. On the other hand, Russia supplied 2,300,000 quarters less, Germany about 500,000 quarters less and the Danube about 700 000 less The supply from Chile was about 375,000 more than last year.

The output of flour at Minneapolis for the crop year just ended, September 1, was 9,491,480 barrels, against 8,441,998 barrels the previous year and 7,073,015 barrels two years ago. The production in 1888-89 was 5,740,830 barrels, showing a net gain of nearly 4,000,000 barrels since the close of that season.

Wheat to-day was lower on Call for futures, but in the sample market there was no change to report. It is claimed that the bears think that by shading futures, farmers will be frightened into selling the actual grain. Offerings were quite light.

The Produce Exchange has published a neat pamphlet showing how farmers can operate on Call. The pamphlet, which is sent free on application, illustrates how dealing in futures is done. This is the first time the Exchange has had sufficient public spirit to publish such information for the benefit of outsiders.

Barley was fairly steady to-day for feed and strong for brewing grades. The shipping and home demand for the latter is quite active. Holders appear to be firmer.

Oats were fairly steady. The low prices are restricting receipts, and as the latter decrease, buyers appear more anxious.

Both corn and rye were unchanged. Remarks in the "Market Review" cover to-day's report of the market

New York mail advices report that the wheat coming in from the central States is generally poor.

Dairy Produce.

The most of dealers claim that at top prices gilt-edged butter is top heavy. We quote 32½c as an inside figure. The warm weather the past three days is in favor of firm butter.

Cheese was strong to-day with a fair local trade and shipping call reported.

Eggs are weaker. To place consignments, concessions were necessary. The warm weather is against the market.

Feedstuff.

The market was a shade easier to-day for millstuff, but so far as we were able to learn, there were no concessions from former asking prices. Roll and ground barley had a fair inquiry to-day.

Choice grades of hay are said to be scarce, and a slight advance is obtainable on outside quotations.

Fruit.

St. Helena (Napa Co.) *Star*, Sept. 24: A gentleman in Napa valley has received a letter from a friend in Santa Clara, stating that he knows of spot cash offers of $13 and that many people will not sell for less than $15 per ton for grapes. He states furthermore that a wine-maker offers $12.50 on three and six months time, and he does not think he can get any at that rate. Grapes in Napa valley are bringing $15, and soon wine-making will be in full blast. Dowdell & Son have leased the large Bourn cellar. The firm has purchased all of W. B. Bourn's grapes at $14 per ton. The price of grapes has now been placed at $15 per ton, which all concede to be a fair price. Mr. John Thomann authorizes us to state that he will pay $18 per ton for good mountain grapes and $16 per ton for good valley grapes.

The market for fresh fruit to-day was slow for peaches and common pears. Wine grapes were offering more freely, but holders were not giving concessions, so far as we know. Table grapes were fairly steady.

In dried fruits there was nothing new to report. Buyers are offish. They are looking for lower prices.

Live Stock.

Bullocks and mutton sheep have held to fairly steady prices. The offerings are not heavy, while the demand is improving. Hogs are selling at lower figures, under freer offerings and offish buyers.

Vegetables.

The market for garden stuff was slow to-day, but we were not able to hear of any change in quotations from prices ruling the past two days

Onions were barely steady. The shipping demand appears to be offish, but a better inquiry is expected later on. There was a fair home and shipping demand. Receipts were fair. All choice good-keepers were readily placed.

Miscellaneous.

Poultry has ruled fairly firm for good-sized, well-conditioned hens, roosters and young poultry, but scrubby stock has been, as is usually the case, hard to sell. Ducks have been fairly steady. Turkeys have sold lower, but geese have sold higher.

Hogs are firmer. The crop on this coast is fully 25 per cent short of the yield in last year. At the East it is light, but in Europe it is about the same. The cholera scare is said to be against the market abroad, owing to less beer being consumed.

Wool is strong for better grades. The market shows signs of having touched bottom. The coarser grades are in better demand.

Honey is scarce and wanted at the higher quotations. The crop at the East is light.

Beans are fairly steady. The undertone appears to be strong.

Live Stock.

BEEF.		MUTTON.	
Stall fed	5 @ –	Wethers	6½ @ –
Grass fed, extra	5 @ –	Ewes	6 @ –
First quality	4½@ –	Do Spring	7½ @ –
Second quality	4 @ –	HOGS.	
Third quality	3 @ –	Light, ₰ lb, cents	5 @ –
Bulls and thin Cows	2 @ –	Medium	4½ @ –
VEAL.		Heavy	4½@ –
Range, heavy	4½@ –	Soft	4 @ –
Do light	5½@ –	Feeders	3½ @ –
Dairy	6½ @ –	Stock Hogs	3½@ –

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal. in cellar lots	12 @ 20

Continued on next page.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

SEPTEMBER 27, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 00	@	2 10
Butter	2 50	@	2 80
Pea	2 25	@	2 40
Red	2 25	@	2 35
Pink	2 15	@	2 30
Small White	2 30	@	2 50
Large White	2 00	@	2 20
Lady Wash	2 10	@	2 20
Lima	3 00	@	3 15
Fld Peas, blk eye	—	@	—
Do green	1 75	@	1 90
Do Nies	1 50	@	—
Split	4 50	@	5 50
BUTTER.			
Cal. Poor to fair, lb	17	@	—
Do good to choice	22	@	27
Do Giltedged	30	@	—
Do Creamery rolls	25	@	—
Do do Giltedge	32½	@	—
Eastern, ladle	17	@	19
Cal. Pickled	21	@	24
Cal. Keg	20	@	24
Eastern Creamery	25	@	30
CHEESE			
Cal. choice cream	9½	@	—
Do fair to good	8	@	—
Do glit edged	11	@	—
Do skim	5	@	6½
Young America	—	@	12½
EGGS.			
Cal. "as is," doz.	18	@	20
Do shaky	14	@	16
Do candied	21	@	25
Do choice	27	@	30
Do fresh laid	35	@	—
Do do sled wht	—	@	40
Eastern "as is"	17	@	19
Do candled	21	@	23
Do selected	24	@	25

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.			
Bran, ton	14 50	@	16 50
Feedmeal	27 00	@	30 00
Gr'd Barley	19 00	@	20 50
Middlings	21 00	@	24 00
Oil Cake Meal	— —	@	25 00
Manhattan Food ℔ ctl.			
cabinet	— —	@	8 00
HAY.			
Wheat, per ton	7 00	@	—
Do choice	— —	@	12 50
Wheat and Oats	7 00	@	10 00
Wild Oats	6 00	@	9 00
Cultivated do	5 00	@	8 00
Barley	5 00	@	8 00
Alfalfa	7 00	@	9 00
Clover	8 00	@	10 00
Straw, bale	30	@	50
GRAIN, ETC.			
Barley, feed, ctl.	70	@	—
Do Good	81½	@	—
Do Choice	85	@	—
Do Brewing	92½	@	—
Do do Choice	96½	@	—
Do do Giltedge	1 00	@	—
Do Chevalier	85	@	1 10
Do do Giltedge	1 15	@	1 25
Buckwheat	2 00	@	—
Corn, White	1 30	@	—
Yellow, large	1 22½	@	—
Do small	1 27½	@	—
Oats, milling	1 32½	@	—
Feed, Choice	1 30	@	—
Do good	1 25	@	—
Do fair	1 17½	@	—
Do Common	1 05	@	—
Surprise	1 47½	@	—
Black Cal	1 05	@	—
Do Oregon	—	@	—
Gray	1 22½	@	1 30
Rye	1 05	@	1 10
* Wheat, milling			
Gilt edged	1 35	@	—
Do Choice	1 32½	@	—
Do fair to good	1 31½	@	—
Shipping, cho'ce	1 31½	@	—
Do good	1 28½	@	—
Do fair	1 26½	@	—
Common	1 22½	@	—
Sonora	1 22½	@	1 35
HOPS.			
1892 Bid	18	@	20
FLOUR.			
Extra, CityMills	4 00	@	—
DoCountryMills	4 00	@	—
Superfine	2 60	@	3 00
NUTS—JOBBING.			
Walnuts, Cal. lb	6½	@	—
Do Choice	8½	@	—
Do paper shell	9½	@	—
Almonds, sft shl.	12	@	—
Paper shell	14	@	—
Hard Shell	7½	@	8½
Brazil,	9	@	10
Pecans small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	50
POTATOES.			
River Reds	60	@	70
Early Rose, ctl.	50	@	65
Peerless	65	@	75
Garnet Chilies	65	@	80
Burbank Seedlings	50	@	75
Do do Salinas	80	@	1 10
Sweet	1 00	@	1 25

Extra choice sell for more money.

POULTRY.			
Hens, doz	6 50	@	7 50
Roosters, old	6 00	@	7 00
Do young	5 50	@	6 50
Broilers, small	3 00	@	3 50
Do large	3 50	@	4 00
Fryers	4 00	@	5 00
Ducks	4 00	@	—
do, large	5 00	@	—
do, extra large	6 50	@	—
Geese, pair	1 75	@	2 50
Turkeys, Gob'r	18	@	19
Turkeys, Hens	15	@	18

All kinds of Poultry if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food ℔ 100-lb. cabinet	8	00	
PROVISIONS.			
Cal. Bacon, he'vy, lb	11	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal. Sm'k'd Beef	11½	@	—
Hams, Cal salt'd	12	@	13½
do Eastern	13	@	14
SEEDS.			
Alfalfa	—	@	—
Clover, Red	15	@	—
White	25	@	—
Flaxseed	2 00	@	2 25
Hemp	3½	@	4
Mustard, yellow	4	@	—
do Brown	3½	@	—
WOOL.			
SPRING, 1892.			
Humb't & Men'cino	17	@	21
Sac'to valley	16	@	—
S Joaquin valley	11	@	16
Cala'v & F'th'l.	16	@	21
Oregon Eastern.	12½	@	19
do valley	18	@	23
So'n Coast, def.	10	@	12
Nevada (State).	15	@	19
FALL, 1892.			
San Joaq'n, plain	6	@	8½
do mountain	9	@	11
do lamb	8	@	9
HONEY.—1892 CROP.			
WhiteCoomb, 2-lb	9½	@	12½
do do 1-lb frame	11½	@	14½
White extract'd	7	@	—
Amber do	6½	@	7
Beeswax, lb	25	@	28

Dried Fruits.

APPLES—1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bl., ring, 50-lb bx	8	@	9
Fancy higher.			
APRICOTS—1892.			
Sun-dried, unbl. com.	4½	@	5½
Do do prime	6½	@	8
Do do choice	9	@	10
Do bleached, prime	12½	@	—
Do do choice	13½	@	—
Do do fancy	14½	@	—
Evap. choice, in boxes	15	@	—
Do fancy, do	15½	@	—
FIGS—1892.			
Sun-dried, black	4½	@	5
Do white	3	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	8	@	9
Do Evap., in boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled, common, bleached	8	@	—
Do do prime, do	10	@	—
Do do choice, do	12	@	—
Do do fancy	12½	@	—
Evap. unpe'l'd, choice	12½	@	—
Do do fancy	13	@	—
Sun-dr, pl'd, prime, bl.	—	@	—
Do do choice	—	@	—
Do do fancy	—	@	—
Evap, peeled, in boxes, choice	17½	@	—
Do do fancy	20	@	—
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap, sliced, in boxes	7	@	8
Do ring do	9	@	10
Unp'led, q'rt'd bl'ch'd	10	@	11
PLUMS 1892.			
Pitted, sun-dried	10	@	11
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	4	@	5
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster, ℔ bx	1 90	@	2 00
Do ch icest do	1 60	@	1 70
Do prime, ℔ bx	1 40	@	1 45
Loose Muscatels, common, ℔ bx	—	@	—
Do choice, do	1 25	@	1 30
Do fancy, do	—	@	—
Unstem'ed Muscatels, in sacks, ℔ lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do ℔ 20-lb bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bleached, in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

SEPTEMBER 27, 1892.

Limes, Mex	4 50	@	6 00
Do Cal	2 00	@	4 00
Lemons, box	5 00	@	7 00
Do Sicily choice	—	@	—
Strawberries, per chest—			
Sharpless	5 00	@	8 00
Peaches, box	35	@	75
Figs, blk box	25	@	75
Do White	30	@	50
Apples	35	@	65
Do Choice	75	@	1 00
Do Extra choice	1 25	@	—
Canteloupes, pr crate	50	@	1 00
Melons, pr 100	5 00	@	12 00
Nutmegs, ℔ box	25	@	40
Grapes, pr bx—			
Do White	25	@	40
Do Black	25	@	65
Do Muscata	35	@	60
Do Tokay	40	@	75
Do Royal Isabel	75	@	1 00
Wine Grapes, Zinf'nd'l, pr tn.	14 00	@	20 00
Prunes, Hung'n	—	@	—
Do German	50	@	65
Do Imperial	70	@	85
Do Green, ℔ box	50	@	85
Pears	25	@	75
Beets, sk	—	@	75
Carrots, sk	40	@	—
Okra, dry, lb	15	@	—
Do green box	25	@	50
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do grn Chili, bx	30	@	40
Do do Bells	25	@	40
Turnips, ctl	75	@	—
Cabbage, 100 lbs	50	@	65
Garlic, lb	1	@	1½
Tomatoes	25	@	35
Do River brg bx	20	@	35
String Beans, lb	1	@	2
do do Wax, lb	2	@	3
Lima Beans	3	@	4
Cucumbers, box	10	@	25
Do pickle	⅜	@	1½
Mushrooms	—	@	—
Egg Plant, bx	20	@	50
Green Corn, box	50	@	1 50
Marfat Squash, ℔ ton	5 00	@	10 00

Auction Sales of California Fruits.

At Chicago

Sept. 21.—Four carloads: Beurre Hardy Pears, $2 55; Beurre Clairgeau Pears, $2.10@2 20; Bartlett Pears, $2 50; Onondaga Pears, $2.30; White Doyenne Pears, $2; Beurre Diel Pears, $1.70; Muscat Grapes, $1.85; half-crates, 85c; Tokay Grapes, half-crates, $1.10@1.20; Malaga Grapes, half crates, 70c; Strawberry Cling peaches, $1 10; Salway Peaches, $1 10; German Prunes, $1.55@1 65; Silver Prunes, $1.35; Ickwith plums, $1.45.

Sept. 21.—Six carloads: Fellenberg Prunes, $1.50@$1.55; Silver Prunes, $1.20; Peaches, 75c@$2.50; Beurre Hardy Pears, $2.55; Bartlett Pears, 90c@$3.15; Beurre Clairgeau Pears, $2.05@2.15; D'Anjou Pears, $2.20@$2.25; Howell Pears, $2.50; Muscat Grapes, single crates, 95c@$1.20; double crates, $2.25; Tokay Grapes, single crates, $1.25@1.45; Nelis Pears, $1.60.

Sept. 22.—Six carloads: Beurre Clairgeau Pears, $2.15@2 20; Diel Pears, $1.30@1.50; Vicar, $1.40@1.45; Quinces, $1.55; double crate Tokay Grapes, $2.90@3 40; sidgle crates, $1.15@2.10; double crate Muscat Grapes, $2.30@2.45; single crates, $1 05@1.20; Duchess Pears, $2 15; Bartlett Pears, $1 50; Peaches, 55c@$1.35; Japan Plums, $1 70; Seckel Pears, 80c; Nelis Pears, $1.30.

Sept. 22.—Three carloads: Tokay Grapes, half-crates, $1.20@1 50; Muscat Grapes, half-crates, $1; Beurre Hardy Pears, $2.05@2.25; Onondaga Pears, $2 @2 30; Howell Pears, $2 50; Doyenne Pears, $2@2 10; Duchess Pears, $2 05; Bartlett Pears, $2@2.10; Strawberry Cling Peaches, $1 10@1.15; some bad, 75c; Salway Peaches, $1.15@1.20; George's Late Peaches, $1.75; German Prunes, $1.20@1.65; Silver Prunes, $1.25, French Prunes, $1.25.

Sept. 23.—Five carloads: Tokay Grapes, $3.10; half-crates, $1.30@1.50; Muscat Grapes, half-crates, $1.15; Bartlett Pears, $2 70; De Comice Pears, $2.60; Beurre Hardy Pears, $2.50; Beurre Clairgeau Pears, $2.30, Glout Morceau Pears, $2.40; Duchess Pears, $2 05@2.25; Winter Seckel Pears, $2; White Doyenne Pears, $1 90 @2.45; Malaga Grapes, half-crates $1; Salway Peaches, $1.10@1.25; Picquet Late Peaches, $1.05; Golden Cling Peaches, $1.05; Red Nectarines, $1.20. Some fruit in a damaged condition sold for less

Sep. 23.—Three carloads: White Doyenne Pears, $2.85; Beurre Hardy Pears, $2.45@2.55; Duchess Pears, $2.05; Diel Pears, $2.05; Winter Nelis Pears, $1.40; Easter Beurre Pears, $1.35; Bartlett Pears, $2.50@3 20; Pears, $1.50; half-boxes Pears, 75c; Figs, 35c; Peaches, 75c@$1.25; Tokay Grapes, single crates, $1.25@1.55; double crate Tokay Grapes, $2.95@3 40; Muscat Grapes, single crates, $1.15.

Sept 24 —Two carload : Muscat Grapes per double crate. $2.75; single crate, 60c@$1.35; Tokay Grapes per double crate. $3.35@$3.40; single, 70c@$1.60

Sept. 24.—Three carloads: Bartlett Pears, $2.30@ 3.10; Beurre Hardy Pears, $2 60; Onondaga Pears, $2.25 @3; Beurre Clairgeau Pears, $1.00@2.20; Beurre Diel Pears, $1.60@1.80; German Prunes, $1.70; Silver Prunes, $1.35; Coe's Late Red Plums, $1.55; Golden Drop Plums, $1.35; Tokay Grapes, $2.80@2.85; half crates, $1.30@1 50; Muscat Grapes per half crate, $1@1.20; Malaga Grapes per half crates, $1@1.15; Salway Peaches, $1@1 15; Strawberry Cling Peaches, $1.15; Picquett's Late Peaches, $1 15; Quinces, $1.15@1.75.

Sept. 26.—Five carloads: Salway Peaches, 85c@$1; White Doyenne Pears, $2@2.35; Comice Pears, $2.70; Diel Pears, $2; Beurre Hardy Pears, $2.35; Winter Nelis Pears, $1.20@1.60; Bartlett Pears, $1.45@3.40; Vicar Pears, $1.50; Pears, 90c@$1.60; Figs, 40c; Peaches, 65c@$1.30; Cling Peaches, 75@90c; Picquet's Late Peaches, $1.25; Muscat Grapes, single crates, $1 10@ 1.40; double crates, $3; single crates Tokay Grapes, $1.15@1 60; double crates, $2.60@3.40.

Sept. 28.—Four carloads: Bartlett Pears, $2.30@ 3.10; Beurre Hardy Pears, $2 60; Onondaga Pears, $2 25 @3; Beurre Clairgeau Pears, $1.60@2 20; Beurre Diel Pears, $1.60@1.80; German Prunes, $1.70; Silver Prunes, $1.35; Coe's Late Red Plums, $1.55; Golden Drop Plums, $1 35; Tokay Grapes, $2.80@2 85; half crates, $1.30@1.50; Muscat Grapes, half crates, $1@ 1.20; Malaga Grapes, half crates, $1@1.15; Salway Peaches, $1@1.15; Strawberry Cling Peaches, $1.15; Picquet's Late Peaches, $1.15; Quinces, $1.50@1 75.

Sept. 26 —Three carloads: Tokay Grapes, $2 80@3; half crates, $1.25@1 45; Muscat Grapes, half crates, $1.35; Malaga Grapes, half crates, $1 20; De Comice Pears, $2.60; Onondaga Pears, $2.35; White Doyenne Pears, $2.50; Bartlett Pears, $2.10; Beurre Clairgeau Pears, $1 80@2.25; Beurre D'Anjou Pears, $1.90; Salway Peaches, $1@1.10; German Prunes, $1.75; Silver Prunes, $1.35

At New York.

Sept. 21—Three carloads: Figs 50c; Quinces, $1.80 @2.20; Beurre Clairgeau Pears, $1.90@2 45; Salway Peaches, 95c@$1.55; Cling Peaches, 65c@$1 40; George's Late Peaches, $1.35@1.40; Yellow Peaches, 65c@$1.35; Pears, $1.40@1.80; Muscat Grapes, $1.20@1.40; Tokay Grapes, $1.50@2 35; Beurre Hardy Pears, $2 45; Silver Prunes, $1 75; Ickwith Plums, $1.65; Seckel Pears, $2 @2.45.

Sept. 22.—Two carloads: Salway Peaches, $1 40@ $1.65. George's Late Peaches, $1.30@1 55; Levi Cling, Peaches, $2; Heath Peaches, $1 20@1.40; Figs, 95c; half-crate Tokay Grapes, $1.50@1.65; double-crate Tokay Grapes, $4@4 05; half-crate Muscat Grapes, $1 20; double-crate Muscat Grapes, $2.55@2.60.

Sept. 22;—Two carloads: Salway Peaches, $1.50@ 2.05; George's Late Peaches, $1.25@2.60; Heath Cling Peaches, $1.20; Yellow Peaches, $2; Winter Nelis Pears, $3; half-crates Tokay Grapes, $1.40@1.65; double crates, $3.85; half-crates Muscat Grapes. $1.45; double crates, $2.80@2.90; Black Morocco Grapes, single crates. $1 60@1 80.

Sept. 26.—Two carloads: Salway Peaches, $1.35@ 1.60; George's Late Peaches, $1 35@1.40; Yellow Peaches, $1.25; Figs, $1.50; Muscat Grapes, single crates, $1.05@1.30; Tokay Grapes, single crates, $1.20 @2 60.

Sept. 26.—Three carloads: Tokay Grapes, $3.65@ 3.70; half crates, $1.65@1 80; Muscat Grapes, half crates, $1.40; Cornichon Grapes, half crates, $1.70@ 1.75; Salway Peaches, $1.10@1.0; Picquet's Late Peaches, $1 15; Bartlett Pears, $2.85@3.30.

At Minneapolis.

Sept. 21.—One carload: Tokay Grapes, $1@1 20; Muscat Grapes, 30@90c; Peaches, $1.20.

Sept. 22.—One carload: Peaches, 85c@$1.15; Muscat Grapes, half-crates, 60c; Tokay Grapes, half-crates, 45c@$1.25.

Sept. 22.—Two carloads: Muscat Grapes, half-crates, $1; French Prunes, $1 10; Salway Peaches, 85c; George's Late Peaches, 80c; Bartlett Pears, ripe. $2.25.

Sept. 23.—One carload: Silver Prunes, $1.70; German Prunes, $1.50; Beurre Hardy Pears $2.55; Howell Pears, $2 30; De Comice Pears, $1.75@2.40; Duchess Pears, $2@2 35; Lawrence Pears, $2.10; Beurre Clairgeau Pears, $1 85@1.95; Quinces, $1.60.

Sept. 24.—One carload: Pears, $1.25@2.45; Quinces, $1.55@1.60.

Sept. 23.—Four carloads: Silver Prunes, $1.70; German Prunes, $1 50; Beurre Hardy Pears, $2 55; Howell Pears, $2 40; De Comice Pears, $1 75@2.40; Duchess Pears, $2@2.35; Lawrence Pears $2.10; Beurre Clairgeau Pears, $1 85@1.95; Quinces, $1 60.

Sept. 24 —One carload: Pears, poor condition, $1.25 @2.45; Quinces, $1.55@1.60.

At Omaha.

Sept. 22.—Three carloads: Pears, $1.50@3; Quinces, Quinces, $1 50@1.75; Tokay Grapes, single crates, $1.25@1.50; Peaches, $1@1.25.

Sept. 23.—Two carloads: Arrived in good condition. Quinces, $1.50; Pears, $1.50@2.50.

Grain and Wool Bags.

Calcutta, spot	1¾	@	6
Wool Bags	36	@	38

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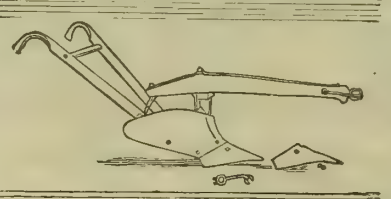
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Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping promptly attended to at this office.

Windmills.

Our reporter, while taking in Stockton Fair, was very much pleased with the Improved Hercules steel and iron windmill made by R. F. Wilson, one of the largest manufacturers of windmills on the Pacific Coast. His large shops are run to their utmost capacity to fill orders. Mr. Wilson has just perfected a new method of making wooden tanks non-shrinking, and has applied for a patent thereon. It adds but little to the cost of the tank and is superior to galvanized iron. Combining his steel windmill "Hercules" with the new wooden tank, he has an outfit that every farmer and ranchman needs. In addition to windmills in his large plant, he supplies all kinds of tanks and pumps if parties desire them.

One peculiar feature of Mr. Wilson's mills is that he gives a written guarantee with each mill that he sets up that if it does not work satisfactorily it can be returned without any charge for services whatever. It is undoubtedly true that in the line of manufacturing agricultural implements Stockton leads any city in the State, and Mr. Wilson's windmills are among the most popular windmills on the Pacific coast. Parties wishing information on this subject would do well to send for a circular.

The State Fair, 1892,

Proved a grand success, and also the exhibit of the Manhattan Food Co., Charles Kertell manager, elicited the unanimous praise of the visitors. Their display was very artistically arranged, showed great taste, and proved the most meritorious exhibit in the Agricultural Department, thus receiving the California State Fair's gold medal, 1892. The Manhattan Food Co. received the silver medal at State Fair, Sacramento, 1891, and also at Stockton Fair, 1891.

Some of our largest ranchers and poultry raisers in California and the East are loud in praise of this food (Red Ball Brand). Its extraordinary assimilative properties justly claim for it the merit of economy.

Thoroughbred Swine.

Mr. J. B. Ashley of Linden, California, made an exhibit of thoroughbred swine at the recent Stockton Fair that was highly commendable. He had the noted breeds Small Yorkshire, Victoria, Essex and Poland China, the entire herd consisting of over 50 head of registered and selected from some of the leading prize-winning herds in Nebraska and Missouri. Mr. Ashley makes a specialty of this class of stock, and from the fact that he took every prize in his class at the Stockton fair augurs well for the line of blood that he has in his herds. Mr. Ashley is reported to be an upright, reliable gentleman, and any one seeking information in this line will get facts that can be relied upon. For the class of hogs that he has, he is selling them at low rates.

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FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.
Fruit is round, of medium size, **VERY HIGHLY COLORED**, flesh firm and sweet.
THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new untried variety.
Tree healthy, strong grower, and heavy bearer, never having missed a crop
A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

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Tulare County customers can obtain stock from above Company at Farmersville, Tulare Co.

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This is a Compound Screw and Lever Press, is very powerful, strong and durable, and does not easily get out of order. It is easily worked by one man, who stands in one place and moves the lever up and down, the same as a pump-handle. This manner of operation is much easier than the old way where the operator is compelled to walk back and forth.



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STATE FAIR, 1892.





The following San Francisco Firms and Individuals Received the Highest Awards of the State Agricultural Society at the late State Fair.

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BEST DISPLAY OF MODERN DAIRY MACHINERY.
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PLANET Jr. HORSE HOE AND CULTIVATOR.
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CALIFORNIA FRUIT GRADER.
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CANNON'S SHEEP DIP—Three in competition.

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We make Iron Frame Gangs, Single Plows, Superior Channel Iron and Wood Frame Harrows, Disc Harrows, Warehouse Trucks, Wheelbarrows, etc., etc.

Our various shops are well equipped and we do all kinds of jobbing in Planing and Woodworking, Blacksmithing, Foundry and Machine Work.

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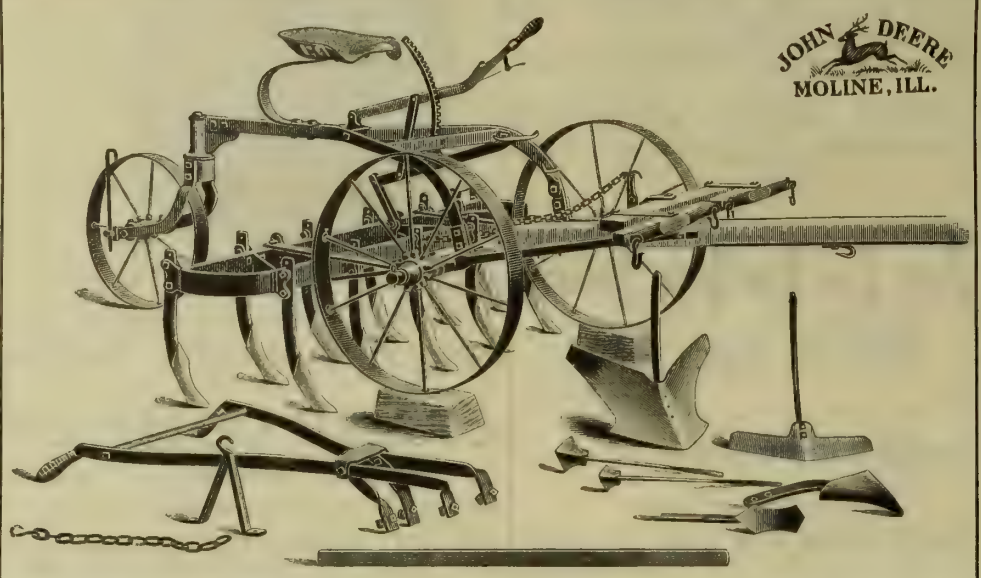
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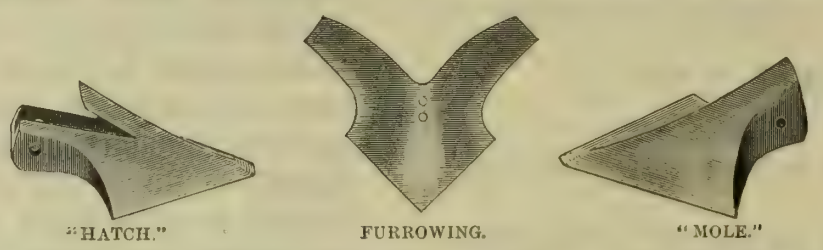
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STYLE "E."

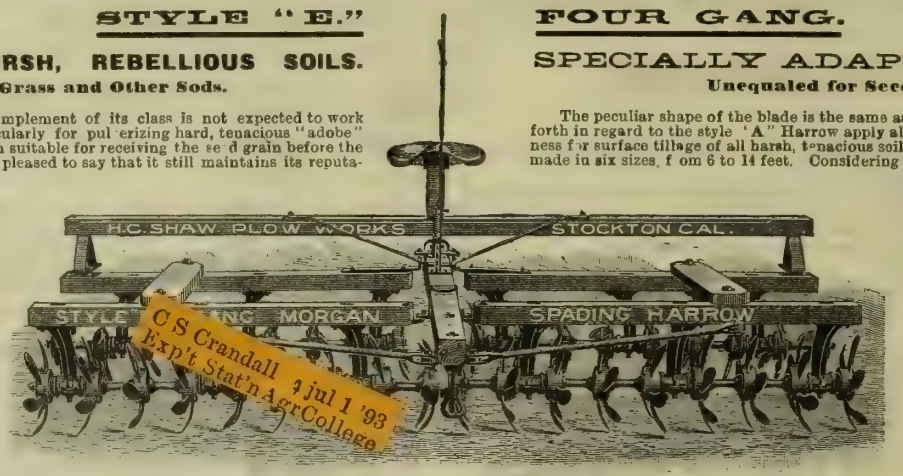
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Matchless for Pulverizing Salt Grass and Other Sods.

The style "E" is designed for use in soils where any other implement of its class is not expected to work successfully. Intended for clay, or "adobe" soils, and particularly for pulverizing hard, tenacious "adobe" clods, in reducing "adobe" summer-fallow lands to a condition suitable for receiving the seed grain before the fall rains, it has leaped into prominence and favor, and we are pleased to say that it still maintains its reputation, won under great difficulties.

The front gangs throwing outward and the rear gangs throwing inward cause a most complete pulverization of all the surface and no furrow or ridge is left in the middle, as the rear gangs throw toward each other, leaving the whole "cut" of the harrow perfectly level and smooth.

The rear gangs of spades are so set that they run between the front gangs, thus presenting a cutting surface to the earth **every three inches,** whereas any two-gang disc or other harrow does not present a cutting surface to the soil any nearer than six inches. Owing to its peculiar construction, the style "E" Spading Harrow will do three times the amount of execution that any other kind of implement can possibly accomplish in the same time. The style "E" is a double machine, and by reason of one set of spades throwing the soil one way and the other set throwing the soil in an opposite direction, it accomplishes its work at one operation, or in going over the land once only, where disc or other harrows could not do the work in going over the land less than three or four times.



C S Crandall 4 jul 1 '93
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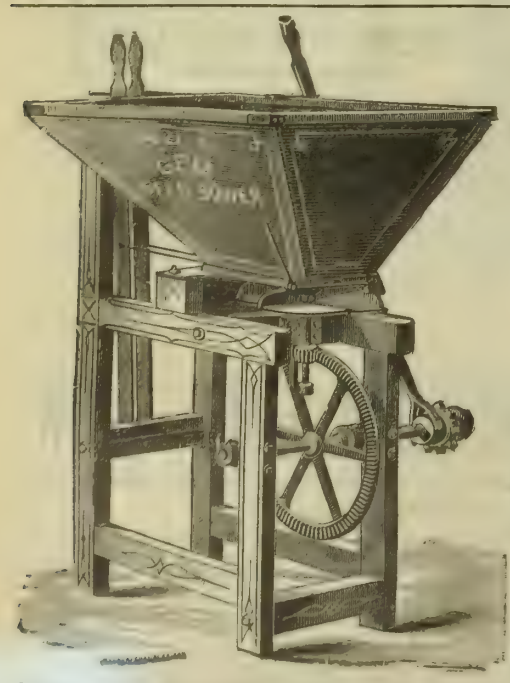
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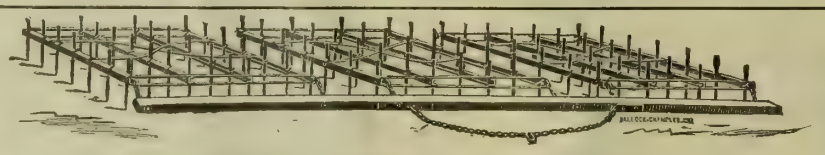
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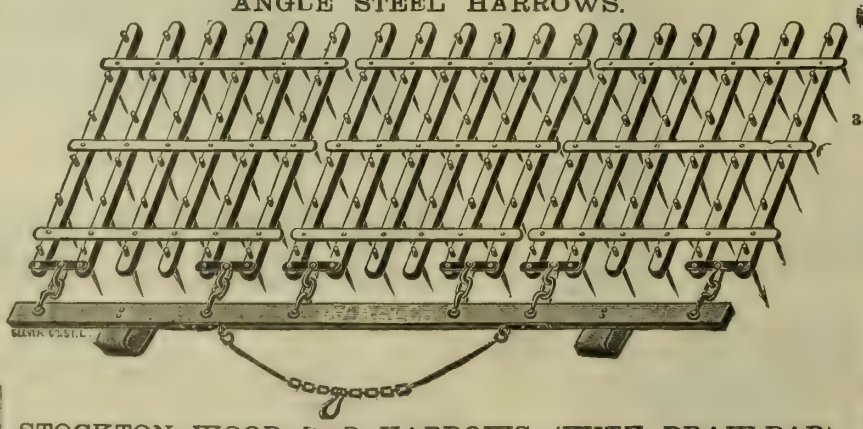


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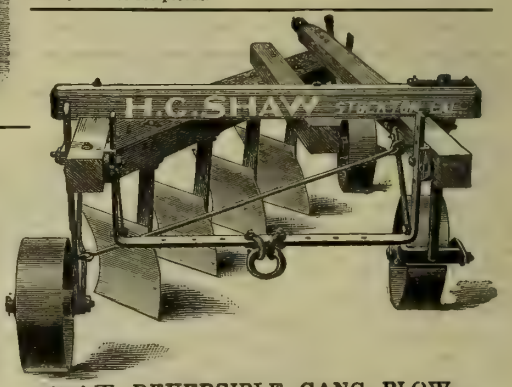


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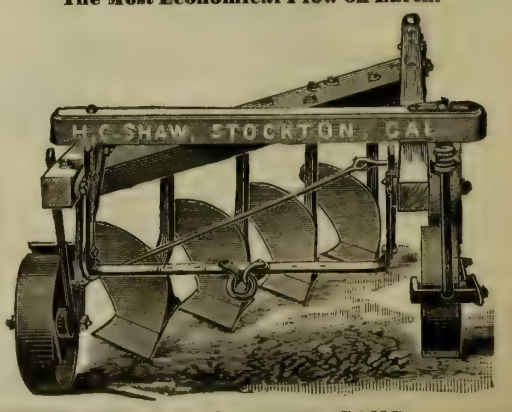
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PACIFIC RURAL PRESS

Vol. XLIV. No. 15. SAN FRANCISCO, SATURDAY, OCTOBER 8, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

California Chrysanthemums.

The glorious chrysanthemum season is at hand. Blooms of the earliest sorts are already appearing in florists' windows and in suburban gardens. These are, of course, but faint foreshadowings of the glories which will come later, as is now promised by the strength of the plants and the size of the buds which we see in our walks among the treasures of the best growers. So far as our observation goes, the outlook is very promising for 'mums of '92, and as the popular interest in the plant has been increasing in geometrical ratio during recent years, we expect that the fall shows will bring to view something finer than California has seen thus far.

The Californian enjoys marked advantages in the growth of the chrysanthemum, and can do much in the open air which has to be done under cloth or glass at the East and abroad. One can infer this much from the significant engraving on this page. Acres of chrysanthemums under a clear sky and not a sign of protection, unless it be that of the native oaks amid which they are growing at Sherwood Hall, Menlo Park, the suburban place of Mr. Timothy Hopkins. It is true that some growers rig up a sort of a fly of light cloth to protect the bloom from the excessive heat of the sun, which is occasionally strong enough late in the autumn to injure the purity and brilliance of the bloom, but protection, except from heat or dust is not thought of. Even the latest bloomers, which linger along until midwinter, do not find anything in the California winter temperature to disconcert them, but freely display their disheveled locks even amid the storms, bending by their own weight and that of the entangled raindrops and cast about by the breeze until they seem like sea nymphs vainly endeavoring to shake their tresses free from the gems which Neptune has showered upon them. Charming even in such distress, and when the winter garden would be otherwise well-nigh bereft of beauty, the chrysanthemum brings its marvelous forms and wealth of colors to make even the short, dark days delightful.

But it is the midseason varieties, of course, which carry the greatest weight of glory. In November the season is at its height, and then there is seldom rain enough to disarrange a bloom or drive an admirer to shelter. The heat and glare of midsummer are over, the winds are resting for later exertions, and amid the most delightful surroundings of warmth and quiet the queen of autumn displays her marvelous charms.

This exceptional adaptation of the autumn climate of California to the needs of the chrysanthemum has ed Californians to enlist most zealously in the service of this ruling goddess of the floral world. Even in distant parts where the culture of the plant is attended by greater difficulties than here, there seems no lessening of its popularity. Here its fame is clearly advancing, and we anticipate a permanent supremacy over all blooms but that of the rose. The culture requirements are so few to secure garden plants of satisfactory quality, the arts by which the finest show blooms are obtained are so simple, and the extreme ease with which the plant is multiplied and disseminated—all these are elements of popularity which assure us that all we have done with the chrysanthemum up to this time is but a faint foreshadowing of its future.

By virtue of our situation, we are enjoying the direct results of all the efforts which are put forth for the improvement of this plant upon both hemispheres. Our direct importations from the home of the crysanthemum on the east coast of Asia mingle with the choicest honor-bearers from the shows on the Atlantic slope and in England. Visitors who have admired those distant exhibitions say that the California shows surpass them. At San Francisco, Santa Cruz, Santa Barbara, Los Angeles and San Diego, notable displays have been held, and smaller towns have not been lacking in loyalty to the great autumn flower. Any one who has seen such exhibitions needs no exhortation to attend them, but there are hosts of our people who have no conception of the glories of these occasions. In this city, during the first week in November, the State Floral Society expects to turn the great Mechanics' Pavilion into a perfect blaze of chrysanthemum glory. All the people should aid this organization in its praiseworthy work, and, by patronage of its shows, make it possible to bring together floral exhibitions here superior in quality and extent to any held elsewhere. This is but what California should expect from people whom she has endowed with soil and climate which welcome enterprise beyond any thus far displayed.



CHRYSANTHEMUM FIELD AT SHERWOOD HALL, MENLO PARK, CAL.

The Race at Its Best.

We have had so many occasions to denounce racing as a feature of agricultural fairs, because of the gross immoralities and pernicious influences which too commonly attend the race, that it is gratifying to read of a speed contest which displayed all the innocent and desirable characteristics which such a contest can boast and a freedom from the evil characteristics which almost universally attend it. Such an account may be found in the letter upon another page, in which a well-known and esteemed contributor of the RURAL describes the Orange County Fair.

Some reader may claim, perhaps, that our approval implied in the foregoing sentence may be too sweeping; that our correspondent writes of the affair merely as she conceived it to be; that in her enthusiasm and in the purity of her own thought she saw no evil, though a more critical judgment would find much; that frequent allusion is made to the pools, and that though the correspondent looks upon pool-selling with the kindly eye of innocence, it is gambling all the same, and gambling in any form is vitiating, degrading, demoralizing and abominable. We are forced to admit something of this claim. We would have preferred to have read that the throng of good people, from which the so-called "sporting" element was conspicuously absent, had been content to let the contest be for the purse which was hung up, and have enjoyed all the interest and enthusiasm which the contest excited without indulging even a somewhat refined form of gambling.

But perhaps we expect too much at once. It would probably be an ideal contest against which no objection whatever could lie. It is possible that by ruling out at first the grosser forms of evil, there may be secured an evolution which shall proceed until the less objectionable shall also give way. It is certainly refreshing at least to read of a race in which the better elements of local society were conspicuous instead of the worst, and against which no charges of jockeying and chicanery can be urged. Almost all, too, will sympathize with the deep local interest which is so graphically described, and which evidently pervaded the whole community. For who can resist the appeal which equine nobility makes upon human interest and sympathy? Who, too, feeling the pride of home environment, can resist the patriotic glow of pride and affection for a horse which at that moment appears to embody, in a conspicuous way, home spirit and community interest? We confess to satisfaction in presenting a description of an affair in which even the most critical must concede that the better elements predominated.

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Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, October 8, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Irrigating Machinery—Byron Jackson.
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The Week.

Rain clouds are cavorting around the geographical extremities of California, but they are slow in approaching vital parts. It is just as well, for there are crops still out, although much finishing up in some lines has been recently accomplished. Dried fruit has moved out of the State as rapidly as the railways can handle it, and there will certainly be a great inflow of coin as the aggregate for this season's production. In spite of large supplies of dried fruits, the eastern quotations hold up well and the inquiry is good.

Growers of wine grapes are taking considerable comfort out of the fact that they are receiving a decent price for grapes for the first time in several years. It is true that there is a small crop to sell, and this fact has most to do with the advance in values. There is, however, a renewed confidence among the producers of wine grapes, who point to the recent victories of California wines at foreign wine-shows, and to other indications, as promising something of a reaction from the depression which has for some time prevailed. All the time, our producers are learning to handle grapes and grape juice more successfully, and will be able to furnish a better article than ever for the better price. If the tide should turn now, the winemen will be better able to hold the values. It will be fortunate in the long run if valves do not show boom colors, for a slow increase in production will probably better meet the future.

Nurserymen are getting many orders now for winter planting. If you intend to plant do not defer ordering. Many people have been disappointed during recent years by trying to get trees from empty nursery rows.

Fruit Canner Wanted in Australia.

At the last meeting of the State Horticultural Society B. M. Lelong, secretary of the State Board of Horticulture, announced that he had a place for an experienced canner to go to Australia, for the purpose of explaining the process of canning to the fruit growers of one of the colonies. Expenses and a liberal salary will be paid. Of course the best of references are required.

The cholera has ceased to be an issue in this country. The disease seems to have been effectually shut out from New York. In Europe the disease is still making some headway in new locations. Over 7000 deaths are reported from Hamburg, where the plague made its greatest stand.

The Garden Natural.

We recently alluded approvingly to a small work by William Robinson, the distinguished English horticulturist and landscape gardener, entitled "Garden Design," and promised later reference to some of the author's declarations. As previously stated, the work is controversial and its temperature at times is what an American would call red-hot. The author seems to have been lashed into fury possibly by circumstances which at this distance we do not understand, but we must remark that a quieter tone and a more gentle spirit would better befit the subject and the normal disposition of the author. We trust that ere long there may appear a book of equal bulk which shall treat of the subject constructively and not destructively, and a little expansion of constructive points which the little book really contains would furnish a welcome brochure to those who do not care to pursue the subject in more pretentious works which are extant.

The season of the year invites the Californian to thoughts upon landscape gardening. The early rains, which cannot be long deferred, will lead many, both old resideuts and newcomers, to begin upon the improvement of home environment. Perhaps the first thought will be of a plan, and with too many, possibly, the problem will be to make the place fit some plan instead of the truer conception of some plan to fit the place. Before determining, however, upon an outline of procedure in any individual case, it is well to reflect upon general considerations of garden design. Such consideration will be fostered by a few suggestions which we propose to draw from Mr. Robinson's work, to which allusion has been made. The two types of garden design which are in sharpest contrast, and consequently most easily grasped, may be called the garden natural and the garden formal. Upon the former we shall isolate some of Mr. Robinson's sentences and paragraphs which combine to convey an idea of the principles upon which this line of designing proceeds:

Beneath all art there are laws, however subtle, that cannot be ignored without error and waste; and in garden design there are lessons innumerable both in wild and cultivated nature which will guide as well if we seek to understand them simply.

That men have never yet generally enjoyed the beauty that good garden design may give, is clear from the fact that the painter is driven from the garden! The artist dislikes the common garden with its formality and bedding; he cannot help hating it.

Why is the cottage garden often a picture and the gentleman's garden near, wholly shut out of the realm of art, a thing which an artist cannot look at long? It is the absence of pretentious "plan" which lets the flowers tell their tale direct, the simple walks going where they are wanted; flowers not set in patterns; the walls and porch alive with flowers. Can the gentleman's garden, then, too, be a picture? Certainly; the greater the breadth and means the better the picture should be. But never if our formal "decorative" style of design is kept to. Reform must come by letting Nature take her just place in the garden.

After we have settled the essential approaches, levels and enclosures for shelter privacy, or dividing lines around a house, the natural form or lines of the earth herself are in nearly all cases the best to follow.

In the true Italian garden on the hills we have to alter the natural line of the earth or "terrace" it, because we cannot otherwise cultivate the ground or move with ease upon it. The strictly formal in such ground is as right in its way as the lawn in a garden in the Thames valley.

I hold that it is possible to get every charm of a garden and every use of a country-seat without sacrifice of the picturesque or beautiful; that there is no reason why, either in the working or design of gardens, there should be a single false line in them. By this I mean hard lines, such as the earth never follows. * * * Also every charm of the flower-garden may be secured by avoiding wholly the knots and scrolls which make all the plants and flowers of a garden, all its joy and life, subordinate to the wretched conventional design in which they are "set out."

"Reproducing uncultivated nature" is no part of good gardening, as the whole reason of a flower-garden is that it is a home for cultivated nature. It is the special charm of the garden that we may have beautiful natural objects in their living beauty in it, but we cannot do this without care and culture to begin with. A wretched flowerless, pinched bedding plant and a great yellow climbing tea-rose are both cultivated things, but what a vast difference in their beauty! There are many kinds of "cultivated Nature" and every degree of ugliness among them.

The landscape gardener of the present day is not always what we admire, his work often looking more like that of an engineer. His gardening near the house is usually a repetition of the decorative work of the house, of which I hope many artistic people are tired.

The soul of true gardening is to show, on a small scale it may be, some of the precious and inexhaustible loveliness of vegetation on plain, wood and mountain. This is the necessary and absolutely only true, just and fair use of a garden!

These few sentences will serve our present purpose which is merely to incline the minds of those who are now pondering garden design toward a little deeper thinking than is usually given the matter. In California we are doing some very creditable elementary work and are also perpetrating some outrageous work as well. So far as our observation goes the country places are, as a rule, more praiseworthy than the suburban creations. In the suburbs the homemakers too often play all sorts of pranks with earth and plants. Having a moderate area of ground they can torture it in many ways without too great expenditure. In the country, at least in those parts of the State where the surface is broken and there is a natural growth of tree and shrub, some very satisfactory work has been accomplished in adding to the charms of the place while not sacrificing its natural beauties. If we have not advanced as far in instances of good gardening as perhaps might be expected of a people upon whom such wealth has been poured, we have fortunately not made many serious mistakes and have produced some fair work. There seems to quite a general leaning toward correct taste and appreciation of that which is fitting and beautiful. The more interest which can be aroused in discussion of the matters involved, the better will be the surety for our future.

Boys in the Vineyards.

We have certainly made great progress during the last few years in the substitution of white labor for Asiatic in all departments of fruit-handling. Ten years ago practically all the fruit was picked and packed by Chinese, and Chinese, too, were the main reliance in the canneries and drying establishments. Now, with a product multiplied many fold, and consequently requiring vastly greater labor supply, we are handling it almost wholly with white labor. Of course some Chinamen are employed everywhere, and in some districts perhaps largely, but the white laborers, young and old and of both sexes, have a decided lead in the race. This, too, has been accomplished without any great immigration, and without the systematic introduction of laborers from European countries which was regarded as the only possible means of replacing the Chinese a decade ago. We suppose the legitimate conclusion is that young Californians are really better stuff than was thought formerly, and the increased labor supply is largely the result of growth of a generation of youth from the babes who were in arms at the time the discussion we have alluded to was rife. This is encouraging indeed, and the public will have to revise its judgment that young Californians were mostly hoodlums.

Even the San Francisco boy seems to be making of late a much better record than was dreamed possible. Capt. McIntire, who used city boys largely for several years on Senator Stanford's place at Vina, has given them a good name. This year D. W. Parkhurst started his raisin-gathering with boy-power, at Fowler, Fresno Co., and seems to have succeeded well, upon a progressive policy, with them. He tells a *Chronicle* reporter some of his arrangements as follows:

Through a San Francisco employment agency a large force of white boys from 13 to 18 years of age was engaged. Those who were without means to pay their fare to Fowler had it advanced to them and subsequently deducted from their wages. A comfortable house had been provided for sleeping purposes, and each boy was required simply to furnish his own blankets.

A novel but satisfactory system of compensation was arranged, each boy being given as many dollars monthly as he was years old. The thirteen-year-old boy received $13, and the eighteen-year-old boy $18, and so on. To each boy an abundant supply of plain, well-cooked food was furnished free of charge. In addition, prizes of shoes, trousers and other articles of clothing were given regularly to the 18 boys out of 50 employed who gathered the highest number of trays above 60 every two days. These prizes proved a great stimulus to the efforts of the boys, and there was much rivalry for the reward of industry. It was found that under this system these San Francisco boys accomplished more and better work than either the Chinese or Japanese.

Strict discipline was enforced, there being regular hours for each portion of the day's duties, and obedience to the tap of the bell was required. No drinking, cigarette-smoking or card-playing was allowed, and, as a result, the boys all sent the bulk of their earnings home to their parents. Many of the young workers have already obtained permanent situations and will make their homes in Fresno county.

No doubt the city can furnish as much of this sort of material as the country can assimilate. We trust the experience of other men in other years to come will be like that described by Mr. Parkhurst.

The Pure Food Show.—The committee of the State Horticultural Society who were entrusted with the California exhibit at the Pure Food Exposition in New York, reported at the last meeting of the society it had been obliged to discontinue all arrangements toward making this exhibit. The reasons given were the cholera fright at New York and the fact that so few of the exhibitors were willing to pay anything toward the expenses of preparation and transportation of samples. The report was adopted and all subscriptions made were ordered returned.

Orange County Fair of 1892.

Written for the RURAL PRESS by AUGUSTA E. TOWNER, Santa Ana, Cal.

County Fairs and State Fairs; State Fairs and World's Fairs; Pavilion Shows and stirs at the race-track; that is what a big part of the American world is talking about now, from Maine to California. That is what Californians are interested in, anyhow; and little Orange county, only old enough to be holding its third annual fair, is as wide-awake as the best. *We* think so, at least.

Really, there is reason enough for it. Coming events sometimes cast glories before. Sure it is that the World's Fair preparations have lent unusual interest to this year's county fair. It opened Tuesday, Sept. 27th, and closed Saturday night, October 1st.

AT THE PAVILION.

There were crowds every night; but by day, mothers with their children were the principal onlookers. Still, the attractions at the pavilion vied with those at the racecourse more than usual. There was on a table 56x6 feet 150 jars of the county World's Fair exhibit—jars in sizes from ounces to gallons, containing, naturally preserved in chemicals, almost every product of our section—fruit and vegetables and even trout from mountain brooks.

This display is gratifying both to public and private vanity; it is from the county, and then the contents of each jar is an individual contribution. Onlookers, with expectant, admiring faces, read the labels, hunting for their own names or the names of friends.

But the magnificence of this exhibit is rivaled—overshadowed, indeed, by a locality and individual exhibit on the other side of the hall. This is from the famous Bell Canyon ranch, back 25 miles in the mountains, and is entered by its owner and his wife—Mr. and Mrs. Joplin. This is perhaps the finest show in this fair, or in any fair in the State. The main table is 50x5 feet, arranged in pyramidal shape with six rows of shelves. On this are 2000 jars of canned fruits, jellies and pickles—jars of various shapes and sizes and in beautiful variety of coloring. These are all booked for the World's Fair. Behind are rows of shelves against the wall, containing a more miscellaneous exhibit—more canned fruit, jellies and pickles, besides dried and fresh fruits in great variety, nuts and vegetables. And we are told these are all from the cultivated five acres of Mr. Joplin's stock ranch, and that the fruit is all put up by his wife.

"You needn't tell me," exclaimed a fascinated spectator, "no, you needn't tell me that California climate is enervating, or that southern California would fall out of the race if it wasn't for Eastern capital coming in here to buy that climate; no, sir!" Then he looks at the plump, gray-haired, bustling little woman (with whom, just then, Prof. Wiggins, secretary of the Southern California World's Fair Association is shaking hands congratulatory), and says: "So she did it all. Well, these women, they beat the dickens!"

But there are other sights, besides the preeminent displays bound for Chicago next year. From the candy booth to the curio booth, from the bunch of corn in the corner behind the door (from Garden Grove), so tall it takes a man and a boy to look to the top of it, and so sturdy one avers it might serve as piling for one of Chicago's many-storied blocks, to the fancy-work, embroideries and hand-painted china on the stage, there is more than the most veteran sightseer can "do" in one afternoon.

"That settles it," said one tired woman, sinking into the campchair a friend had thoughtfully provided.

"Settles what?"

"Why, my going to the World's Fair."

"So you've just made up your mind you will go, then?"

"Not much," and the tired woman gives an emphatic flourish of her right arm, which is meant to include everything, from the monster yellow globe in the decorations overhead, emblematic of Orange county, to the tempting array of cakes and breadstuffs to her left. "Not much. Think I want to die of brain fag? If a three-year-old county fair like this is going to tire me to take it all in, suppose I'm going to try one a thousand times bigger?"

"Oh, well," says the friend philosophically, "I shall see you starting all the same next spring; but don't forget the races to-morrow. It's Friday; Silkwood and McKinney, you know. Our own Silkwood, and they say orange is to be his color. All the girls are making knots of orange-colored ribbons for themselves, and neckties and hatbands for their gentleman friends. There'll be thousands and thousands in town then from all over the State."

"Going? Of course I am!" and the tired woman suddenly sat up very straight. "Why, John's got a box. Come, I'm going to get some yellow silk and ribbon before I go home."

AT THE RACE TRACK.

In a high cupola, the upper air modifying its blare, the Santa Ana brass band "discourseth."

Away down below, very indifferent to the music or thronging crowds around, fancy poultry in their pens peck their grain or sip water out of their bright tin cups; while in strong, neat corrals, the cattle, swine, sheep and goats eat and sleep or contentedly watch the restless bipeds around, contemptuous, probably, of so much uncare that they can conceive no purpose for.

Not so the blooded horses at their mangers. They are alert and bright-eyed. They have nerves, intelligence. Carefully tended and housed, brought out occasionally to race against time and each other, before admiring crowds, petted and cheered, they know what it is all about. Yes, indeed. The world and all that therein is was created for their benefit; man is their servant, and the chief end of man is to breed fast horses and race them forever. One can imagine them saying to each other, on baby-show day, for instance: "Nice little things up at the pavilion, but just *human* babies, you know. No blooded stock. Ten to one they won't get any sort of experienced training. Bet you half of 'em will be regular lag-tails, or else break on the track every time. Never'll have a bit of money put up on 'em."

"No," says another, with a snicker-like whinny, "but cost money like the dickens. Humans ain't of much account, anyway, for show or action. Now there's Silkwood. See the attention paid him. Heard some one say: 'If he wins to-morrow's race he'll make Willit's fortune—be worth $50,000 at least.' Daisywood and Laguna are proud as peacocks because they are Silkwood's colts. And well they may be. Now, I've seen McKinney, and I tell you—"

Here, it is probable, some officious "human" interferes, thinking that the horses are trying to bite each other, instead of whispering confidentially on racing matters.

Whatever the interest elsewhere, at the fair here the interest in the races is paramount and almost universal Horse-racing, well conducted and by gentlemanly drivers, is a fine sight. The Santa Ana race track is called the finest in Southern California. This year everything was carefully conducted. There were no accidents of note, no gamblers were allowed on the grounds, and there were few cases of theft, even on the grand race day.

From Tuesday to Saturday there were races every afternoon, races in the usual variety—trotting, pacing, running and mixed races, repeating races for yearlings and for two and three-year-olds, and so on. Purses and stakes were up, big and small, for many thousand dollars. But the special race—purse $1500—was on Friday, between Silkwood and McKinney. This race brought thousands to town, who would not otherwise have come. The day before this race pneumatic tire sulkies were used for the first time on the track. They were used at the grand race between Silkwood and McKinney.

Silkwood, a pacer, is a Santa Ana horse, a favorite here, a beautiful black. McKinney, a trotter, is a Los Angeles horse, though trained on the Santa Ana track. In two year's races he has made such a reputation that, proud as Santa Anans are of their horse, few probably felt sure that Silkwood could outdistance McKinney. In betting parlance, before Durfee's big bay came to town it was "one to one and one half in his favor," and the night before the race, "ten to eight" in his favor.

I got my husband to give me all the figures. He carefully explained them to me and said that they were just like a thermometer to tell how judgments were running as to the two horses. I had a good box at the race-course, right in front and almost opposite the wire and judge's stand. Then I had a good opera glass. I went first Thursday—ladies' day. It was not specially interesting—the ladies' part of it. They showed they could keep their seats well, and did a little hurdle jumping quite gracefully.

All right in front. A pretty, black-eyed Miss won a gold watch and a thin-faced woman a valuable side-saddle. But there was a trotting race for colt stakes for yearlings that made me realize how beautiful a well-built horse looks in swift motion. It was won by Daisywood, a Silkwood colt. "If Silkwood looks anything like that—is even bigger and nicer, as they say he is—I want to see him go," thought I, so I went again Friday.

There never was such a crowd in Santa Ana before. As I looked down from my box at the sea of heads, the forms on both sides of the track, up and down, hanging over the fences and ropes, over all the shed roofs, on carriage seats, on top of buses and coaches, swarming, clinging everywhere, while the boxes around me and grand stand back were crowded to bursting, I realized what an attraction there is in a good horse race.

It was a nice crowd. A quiet, respectable, amiable crowd. I could see no sign of any "toughs" or "roughs," or anything offensively betokening the "genus sport." The nicest ladies I knew were in the boxes. Staid farmers and their wives and children were down below in abundance, eager and interested. The thousands who came to see the race certainly were well-behaved. "It's ten to eight in favor of Silkwood," said my husband, just as I was seated in our box.

We all wore the Silkwood colors. We, my cousin and I, had made orange-colored silk "four-in-hands" for the gentlemen of our party. Orange color or yellow was everywhere, some ladies having huge bouquets of yellow dahlias.

There was a tension, an excitement in the air. The bell sounds from the judge's stand. There is a watchful hush, a murmur. Durfee on his pneumatic-tired sulky and with McKinney appears.

"He's a fine horse, a gamy horse," says one. "I declare, I shall be sorry to see Silkwood beaten." A shout arises, which increases into a roar of welcome, *Willits with Silkwood.*

After a little exercising, and after several trials, finally it was a "go."

That was an anxious moment for Silkwood's admirers. So many thought McKinney the better horse, but Silkwood led from the first and won in 2:14¼.

O, what a shout and rush! The black beauty was unchecked, blanketed, garlanded with choicest yellow roses, while his driver and owner was presented with as choice a bouquet and congratulated on all sides.

"That's all very well," said the sober-heads, "but Silkwood has done his best, and McKinney can beat that. He's good for 2:13. I expected Silkwood would win the first heat."

The bell sounds. Again there is an admiring murmur when McKinney appears, and a roar of welcome for Silkwood. With but little "jockeying" it is a "go." This time Silkwood, though only making the mile in 2:15¾, outdistances McKinney more than before, while the latter "breaks" twice.

"It was 10 to 6 in favor of Silkwood after the first heat," says my husband, "and now it's 20 to 6, and hard to get at that."

The sober-heads still feel far from sure of victory; but Silkwood's feminine admirers are sanguine.

"O," said a sparkling brunette in the box next to me, "how I do enjoy seeing Silkwood win! I don't believe I shall feel so happy when I'm married!"

Two little tots, exercising hand in hand in the open below the boxes, call up to a young lady in one of them—

"Who you for, Lizzie?"

"Silkwood. Who are you?"

"Silkwood, course. 'Kinney's no good."

"*Ding-dong*" goes the judge's bell.

There is a curious *timbre* in the shout that greets Silkwood this time. This heat may decide it. "Make it a walkover," the cry seems to urge. The horses start in a hush. For the first time McKinney is a little ahead at the "go." But, as every other time, Silkwood outdistances him in the first quarter, choosing his place on the course. But this time the big bay does not break, and keeps nearer Silkwood than before. Yet, as before, Willits is seen to measure the distance between, glancing over his shoulder, and, as one expressed it, "turning on just as much steam as he thought necessary to beat."

And Silkwood did beat, making the mile in 2:13¾.

Such a jubilant crowd! Silkwood almost smothered by crowding admirers, who bring him an armful of fragrant alfalfa-hay for a tribute; Willits carried off on the shoulders of his friends.

Sober-head said: "I declare, I didn't expect it."

The cry is "Silkwood forever." The judge's voice announcing his engagement at the Los Angeles races is almost unheard. The band strikes up "Hail to the Chief," as usual, though a merciless wag urges the leader to play "McGinty," saying "the big bay is going to be rechristened" under that cognomen.

People can hardly settle for the next race of three year olds, one of them, Laguna, a Silkwood colt. Laguna wins, trotting beautifully.

"Silkwood's stock is way up," says my husband to me, as we drive home, "but he'll have to look to his laurels in Los Angeles; he'll be matched with a 'leven-quarter pacer there."

Then I overheard one man say to another: "Ought to have seen my wife. Never saw her so enthusiastic. But I tell her it wasn't fair for McKinney. He's a tip-top horse in his class. He was outclassed, that's all. Say, heard when Durfee got here and saw Silkwood, he realized it, too. Went to chewing a rag right off to think he'd brought him down here. Told his friends so. That's the reason the betting changed so soon. Tell you there was $20,000 just laid in the bank and wasn't touched."

Everybody who had one wore an orange silk badge the rest of that day. It was the never-ceasing, joyful cry, "Silkwood!" Even the sleepy children, as they tumble into bed after the evening's entertainment at the pavilion, are heard to murmur, "'Kinney's no good."

And Saturday evening, too, when again amidst all the display at the pavilion, the crowds gather for the closing entertainment, the topic of Friday's grand race vies with all the other attractions. The farmer, proud of his 200-pound pumpkin or 75-pound watermelon, the lady of her hand-painted china or dainty bit of arrasene work, confessed to equal enthusiasm when Silkwood's name was mentioned.

"Have you heard the Silkwood cry?" I overheard one young lady ask another.

"No. What is it?"

"O, —— told me. You know, I wondered why they brought out that bunch of alfalfa-hay to him after the third heat. But it seems that the Los Angeles horsemen have all along been 'jossing,' as they say, the Santa Ana boys, saying Silkwood was no good—fed on alfalfa and pumpkins'—making fun that way. Well, the Santa Ana boys are going to charter a car next Wednesday and go up to the races at Los Angeles, wearing the Silkwood colors, and their 'cry' will be, '*Al-fal fah! San-tan-ah! Silkwood! Silkwood! 'rah! 'rah! 'rah!*' I'm going to get some one to go up with me. I just must."

Exhibiting Stock in Show Condition.

HOME RIDGE FARM,
BAKERSFIELD, CAL., Oct. 1, 1892.

TO THE EDITOR:—I have been much interested in your complete reports of the State Fair, but from my personal experience and observations feel that I may be justified in taking exceptions to some of the comments of your correspondent, especially in regard to the *condition* of the cattle on exhibition. A number of years ago the breeding of fine cattle, particularly Durham, became almost a craze in the central States. Every breeder was ambitious to own prize cattle, and a pampered, show condition was the first requisite for a premium.

Practical stockraisers and farmers bought these ornamental cattle for useful purposes, and the experiment was disastrous. They learned by bitter experience an almost obvious lesson, viz: that the higher the artificial development, the lower and weaker the natural powers of reproduction. The reaction produced by this experience created an almost ruinous prejudice against thoroughbred cattle, which has required great care and judgment on the part of breeders to overcome.

A rule which has been almost universally adopted in prize rings in the eastern States, and which I am glad to note is gaining ground here is, that excessively fat animals are excluded from competition in breeding classes, and judges are instructed not to award premiums to animals that have been injured by overfeeding for the best results in breeding.

We heartily agree with your correspondent that to insure success, the breeder must give careful attention to all the details which tend to make his stock attractive and to maintain a high standard of merit. But he should not intimate that it detracts from the merit of a bull that he is not in "show condition," or of another, that "he had evidently come right off the lucerne pasture."

It is right on the lucerne pasture that the average farmer wants to put his thoroughbred bull, and he is glad of an opportunity to see just how the bull shows under such conditions.

It is not at all necessary in this age of well-informed

farmers that the faults be hidden or the good points helped in an animal by an extra layer of fat. A desire to cater to the general public and the praise of superficial observers has been a great temptation to breeders in the past to produce showy animals, and the high hopes of those who yielded have been wrecked on the rock of utility.

What has been said in regard to cattle applies with even greater force to the breeding of thoroughbred hogs, an industry just in its infancy in California, and one which, in its present condition and future outlook, is very promising.

I have referred to your report, not as an individual instance, but rather as a means of presenting a view of the question of prize exhibitions which is worthy of consideration. JAS. M. HUNTER.

THE VINEYARD.

Premiums for California Wines.

Several months ago Mr. Winfield Scott, Secretary of the State Board of Viticultural Commissioners, received a communication in which there was a request to the wine-growers of California to send samples of the products of their vineyards to the distillers' and brewers' exhibition, held in Dublin, Ireland, from August 15th to the 27th.

In response to this circular, 26 of the wine-growers sent samples of their products.

On Monday the secretary received the judges' report, from which it was seen that 11 of the exhibits had either received medals or special mention. The *Call* furnishes the following outline of results :

In white wines, it was pointed out that several of the exhibitors seemed to have been under the impression that age with these wines meant excellence. But they should not be kept as long in bottle or in wood as the majority of those sent from California appear to have been.

The Sauterne of H. W. Crabb was exceedingly good, nearest type to the Sauterne (French), and he was awarded a diploma for a gold medal.

The hock of the Napa Valley Wine Company had been a wonderful wine. It was awarded a diploma of the second class.

The Riesling of I. de Turk had been a good wine, but it had been quite long enough in bottle. It was awarded a diploma of the second class.

The Riesling of Jacob Schram was decidedly above the average type, and it was awarded a diploma for a gold medal.

Clarets are classed as a splendid type of wine, and just what is required in that country. It is pointed out that there is now some prejudice against white wines and an increasing demand for sound red wines, and the really important point for California growers to consider is their red wines. If they could put some sound wines on to the British and Irish market at say £10 per hogshead (48 gallons) in bond they would become formidable rivals to Bordeaux shippers.

The claret of Beringer Bros. was awarded a diploma for a gold medal, A. Haraszthy & Co. a certificate of merit of the second class, and G. Migliavacca a certificate of merit of the third class.

The judges were exceedingly pleased with the Burgundy wines and an encouraging feature on this point was that the trade for Burgundy was increasing in Ireland. The high class quality of these wines strengthened the opinion that in this department California could successfully compete with the Burgundies of France.

The Burgundy of the Italian-Swiss Agricultural colony was awarded a diploma for a gold medal; Inglenook vineyard, a second-class certificate of merit; Napa Valley Wine Company, a certificate of merit of the third class.

California growers are advised to turn their best attention to produce a port wine which could be sold in the Irish market from £20 per pipe of 115 gallons and upward (for beverage and for high class medicinal usage.) Sweetness must be avoided and dryness cultivated. Port wine, like claret and Burgundy, had an increasing tendency.

The ports of the Eisen Vineyard Company was awarded a diploma for a gold medal, and it was added that if they kept up that standard, they were on the right lines.

Sherry was not increasing in consumption, consequently stocks were ample, with low rates and keen competition, with a plethora of good quality.

The sherry of the Eisen Vineyard Company was awarded a diploma for a gold medal. The wine was very good indeed—perhaps rather full as compared with the wines generally consumed there.

In brandy a diploma for a gold medal was awarded George West & Sons of the El Pinal Vineyard. The striking resemblance of the 1882 vintage to old cognac caused some consternation among the judges. Such a sample was not expected from California, and the growers are congratulated upon the achievement. It was noteworthy that the other samples shown of different vintages by the same firm all bear unmistakable signs of the cognac type.

A diploma for a gold medal was awarded the Eisen Vinepard Company for Muscat and Tokay.

A diploma for a gold medal was also awarded A. Haraszthy & Co. for their champagne, which was peculiarly Californian, of an agreeable type.

To Help Difficult Fermentations.

Wm. Pfeffer writes to the *Tree and Vine* as follows:

The indications for the coming vintage point to a repetition of the vintage year 1885, in which year difficult fermentation had been the rule all over the dry-wine districts. Winemakers who understand the consequence of "stuck tanks" will gladly take any extra step in time in order to save nine.

The following nonpatented methods are not generally known, and will, I think, enable many to steer clear of difficult fermentation.

First, ferment in as small batches as you can—say not over a ton of grapes at a time—and should it happen with very sweet must that a small quantity of sugar is left, put the young wine in small casks of no more than 50 gallons capacity. Of course, in large concerns such proceeding is not applicable, but the following will do good service: Keep the pomace securely down at the bottom of the fermenting-tank, and, for equalizing fermentation in the whole tank, draw the liquid several times from the bottom and pump it on the top of the fermenting mass.

Still another way to prevent difficult fermentation is: Take the *half* fermented wine out of the fermenting-tank, press the pomace, and finish fermentation in the storage cask or tank. By this latter method, the storage cellar should not be very cool, as this could interrupt fermentation.

A PRIZE FOR CALIFORNIA WINE.—Dr. Ollino, Vice President of the Italian-Swiss Agricultural Colony, has received a cablegram announcing that the first prize gold medal had been unanimously awarded the wine display made by the colony at the Italo-American Exposition at Genoa, Italy. This is regarded as a great compliment and triumph for California wines, especially for those made from Italian grapes grown on California soil. It is claimed that at the Exposition the wines were in direct competition with the best vintages of Italy.

The State Grange, P. of H.

ITS TWENTIETH ANNUAL COUNCIL NOW IN SESSION.

From Our Special Correspondent.

SAN JOSE, Oct. 5, 1892.

The Twentieth Annual Council of the State Grange of California was convened in this city yesterday at 10 o'clock and was called to order by Worthy Master Davis. The place of meeting was the Unitarian Church, a spacious and comfortable building which had been handsomely decorated for the occasion. The rollcall showed every officer of the State Grange to be present, and among the general attendance were the following:

ALHAMBRA GRANGE.—W. M., H. C. Raap and wife.

AMERICAN RIVER.—W. M., N. H. Lauredson and wife; Alternate, A. A. Harris; A. Harris, Mr. Jas. Cornell and wife, Miss Cecily Cornell, Miss Etta Cornell.

CARPINTERIA.—W. M., O. N. Cadwell.

DANVILLE.—Alternates, R. O. Baldwin and wife; Mrs. G. L. Everett, Miss S. E. Wood.

ELK GROVE.—E. W. Stickney, Mr. and Mrs. Stone, Miss S. J. Stone.

FLORIN.—Alternates, D. Reese and wife; Miss Lillie Casey.

EDEN.—Annie J. Gading, M. C. Christiansen, H. Mousen and wife, Miss Josie Sharai.

GLEN ELLEN.—W. M., C, W. H. Bruning and wife.

GRASS VALLEY.—W. M., J. W. De Golia and wife, Mrs. S. L. Richards.

GRIMES.—Alternates, W. W. Kilgore and wife.

HOLLISTER.—W. M., Gustav Brown; Alternates, Bates De Hart and wife.

INDEPENDENT.—W. M., Geo. Klinger; W. S. Elliott, M. E. Harrison.

LODI.—W. M., C. H. Wakefield and wife, J. D. Huffman.

LOCKEFORD.—Mrs. E. E. Lower.

MAGNOLIA.—John Thomas.

MERCED.—W. M., L. H. Applegate; Mrs. M. D. Atwater, Miss E. E. Atwater, Miss Nettie Brouse.

MILLVILLE.—Alternate, Mary W. Webb.

NEW HOPE.—Alternate, Mrs. Geo. Carleton.

NORTH BUTTE.—W. M., D. Fisher and wife, Miss Ether Mould.

PESCADERO.—W. M., I. C. Steele, Mrs. M. A. Chanttler, Mrs. E. Leighton, Miss J. F. Leighton.

PETALUMA.—W. M., C. D. Grover and wife, D. M. Winans and wife, Mrs. M. Kelsey, Miss M. Kelsey.

ROSEVILLE.—S. S. Gladney, J. G. Gladney.

SACRAMENTO.—W. M., S. H. Jackman and wife. Alternates, C. A. Hull and wife, M. Sprague, T. L. Hamilton, E. Greer and wife, Mrs. J. H. Hamilton, Mr. and Mrs. A. A. Krull, Miss Elva Brown, Della Krull, Myron Smith. Mrs. L. Danie's, Mrs. S. H. Jackman, Walter Greer and wife, Daniel Flint and wife, J. H. McKune and wife, Miss A. M. Wilcox.

SAN JOSE.—W. M., E. T. Pettit and Mrs. S. A. Bicknell. Alternates, Col. R. P. McGlincy and wife, Amos Adams, Mrs. P. A. Simons, Jacob Jowell, A. H. Simons, Thos. Hersey, Mrs. P. A. Simons, Col. R. P. McGlincy, W. H. Gilmore, Miss Georgia McBride, Ella I. Sanders, Hattie B. Wells, Mrs. S. A. Bicknell, Mrs. M. J. Hall, Jennie M. Sanders, Mrs. W. Beauchamp, T. A. Whidden, Mrs. Arbella Hersey, Mrs. M. Scord, Euclera B. Warcen, Mrs. S. J. Watkins, Miss Helen G. Adams, Mrs. M. J. Tarleton, Cyrus Jones, Mrs. M. J. Worthen, A. E. Mintie, W. Beauchamp, Nellie Jefferds, W. C. Kingsbury, F. S. Jefferds, Sarah Kingsbury, Mrs. M. Barnes, Miss Julia Hayle.

SAN ANTONIO.—W, M., J. H. Martinus and wife.

SAN LUCAS.—Alternate, S. Sherwood.

SANTA ROSA.—Alternates, S. T. Coulter and wife, Mrs. Mary E. Saxton, E. W. Davis and wife, Chas. D. Bonner and wife, Ella C. Sutherland.

SEBASTOPOL.—W. M., Mrs. F. H. Lawton. Alternates, D. Litchfield, C. Wightman and wife, Mrs. F. H. Lawton, Miss E. Lawton.

SOUTH SUTTER—W. M., Mrs. M. E. Donaldson. Alternates, Rebecca G. Jones, Ann M. Roberts. Frank Donaldson, Mrs. W. E. Roberts, Miss May Donald on, Mrs. Ellen M. Boyd, R. A. Jones.

STOCKTON—W. M., N. E. Alling. Alternate, Miss B. Alling. Mrs. E. M. Stone, W. L. Overhiser and wife.

TEMESCAL—W. M., Walter Renwick and wife. Alternates, A. T. Perkins and S. Goodenough. A. T. Dewey, Mrs. S. H. Dewey, Miss Anita M. Dewey, Mrs. H. S. Brannan, Mrs. J. E. Gibson, Wm. G. Babcock.

TULARE—W. M., E. C. Shoemaker. Alternates, John Tuohy, A. J. Woods. Frank S. Chapin.

TWO ROCK—Mr. and Mrs. S. Q. Barlow.

VALLEY—Alternates, Mrs. M. Hook, G. P. Loucks.

WATERLOO—W. M., H. C. Strucke and wife.

WATSONVILLE—W. M., W. A. Bowman and wife. Alternates, A. P. Roache and wife. I. J. Cromarby, M. L. Cooper, Mrs. M. Fergusson, Mrs. G. N. Rowe, Vorce M. Roache, Mr. and Mrs. C. E. Bowman.

WOODBRIDGE—W. M. John S. Perrott. Alternates, John Thompson and wife. H. C. Shattuck.

YUBA CITY—W. M., P. L. Bunce and wife. B. F. Walton, Glen Harter, Geo. Ohleyer, Jr., Hattie S. Jones, B. F. Frisbie and wife.

This list of names is necessarily incomplete, since a great many have been tardy in registration. The list does not comprise more than two-thirds of those actually present, and it will be impossible to give a complete list until our next issue.

The time was largely given to the reception of reports, which were read by the several officers and submitted to appropriate committees. They are appended below in full, although it is possible there may be some changes before they have been acted upon by the committees and their final adoption by the State Grange.

Following the session a party of twenty-five ladies, upon invitation from the Vendome Stables, took a drive about the city, and upon invitation of Dr. A. E. Mintie, nearly all of the members of the Grange visited the rooms of the World's Fair Commission and viewed the exhibit which is being prepared for the World's Fair.

RECEPTION.

A reception tendered by the citizens of San Jose was an occasion of special interest, and every delegate participated in it. The following is the souvenir program:

1. *Organ Voluntary*.....PROFESSOR POMEROY.
2. *Solo*.... "O, Hush Thee, My Baby" "O, Dinna Forget" ....MRS. HILLMAN-SMITH.
3. *Reception to State Officers*.....*a*, Song of Welcome; *b*, Floral Presentation; *c*, Wand Drill by Little Girls. Under the direction of.....MISS WEBB and MISS JEFFREDS.
4. *Poem*....."The Granger's Welcome".....MISS ESTABROOK. Written for the occasion by Mr. E. F. Estabrook.
5. *Address of Welcome*.....HON. H. V. MOREHOUSE.
6. *Response*.....HON. E. W. DAVIS, Master Cal. State Grange.
7. *Male Quartette*.....*a*, "Grangers' Song;" *b*, "Fly Tender Birdling." 1st tenor, GEO. BABCOCK; 2d tenor, J. R. KOCHER; 1st bass, J. W. REYNOLDS; 2d bass, W. J. HAYWARDS.

This unique and attractive order of exercises was planned by Mrs. Amos Adams, with the assistance of Mrs. S. P. Sanders, and executed by those whose names appear with an artistic skill and close attention to detail that enlisted the enthusiastic approbation of the audience. Professor Pomeroy was unavoidably absent, but the voluntary was rendered in a way to delight the audience by one of San Jose's many musical artists, who are equal to any occasion or emergency. The solo of Mrs. Hillman-Smith was thoroughly appreciated, both for the culture of her voice and her attractive presence. Worthy Master Pettit was too modest to have his name appear on the program, but still gave us hearty assurance that the labor of preparation for entertaining this large assembly for a whole week had been a labor of love on the part of San Jose Grange. He also gave an interesting outline of the solid prosperity that has visited this city and State Grange alike since its first session here in '73.

The feature of the evening was a score of bright school girls, dressed in style suited to the occasion, who came marching in, each bearing a basket of flowers. After taking their places on the platform, in perfect time with the music of the piano, one after another came forward with her gift of flowers and recited a short poem, that seemed to have been composed specially for the occasion, and each presented one of the officers with her basket of flowers.

After that they returned and formed again on the stage, bearing wands about three feet long, gayly decked in blue ribbons. In perfect time to the music, they executed a fancy drill after the Dio Lewis system of light gymnastics that is so well calculated to train and develop, while entertaining, the child. All were graceful and showed careful training, but the leader, whose motions all were watching, was almost perfect in the grace and accuracy of her movements and equally perfect in her elocution when presenting her basket of flowers to the Worthy Master.

As we hope to have "The Grangers' Welcome" for publication, our readers can judge of its merits, but would have probably enjoyed it more had they listened to the hearty applause with which it was greeted.

The address of welcome by Hon. H. V. Morehouse was a scholarly and polished effort, showing how the prosperity of all classes rests upon that of the tillers of the soil. Worthy Master Davis responded in his usual happy style. Like all of us he was deeply affected by the interest shown in our Order by young as well as old, and hopeful of the future of a country whose chief pride is in the training of the men and women of to-morrow.

THE MALE QUARTETTE.—These songs were well calculated for the closing attraction of so pleasant an evening. Those more gifted with capacity to delight in harmony were engaged in a critical debate as to the comparative excellence of bass and tenor until the conclusion was forced upon the less critical that both were remarkable voices. Thus ended one of the pleasantest of all Grange receptions.

[We had hoped to be able to give a report of Wednesday's proceedings, but a delay in the mails from San Jose renders it impossible. We must go to press without the doings of Wednesday, but will give them with the reports for the rest of the week in the paper of the 15th inst.]

MASTER'S ANNUAL REPORT.

Brothers and Sisters of the State Grange of California: It is a pleasant duty to inform you that the Order in California is in the healthy and progressive condition that commands the labor, love and devotion of its membership and the respect and attention of its opponents. During the past year, our membership has grown in numbers, usefulness and ability. To-day, some of the leading and trusted men of California are proud to say hey belong to the Grange. These men of our Order are unlike the politicians of this day and generation, for they say, "the party belongs to them and they do not belong to the party." It would be a healthy condition of political affairs if more men controlled parties and fewer men were controlled by them.

Since our last annual conclave, many events have transpired which have, directly or indirectly, tried the metal of which the Grange is made. In every instance, so far as I know, the metal has been found good and true, and has nobly withstood all the assaults and strain made upon it.

In the Halls of Congress, the bills which were urged for

Continued on page 296.

HORTICULTURE.

Olive Varities on the Foothills.

Mrs. Emily Robeson, well-known as an olive grower and oilmaker near Auburn, Placer county, gave the following results of her experience at the last meeting of the Olive-Growers' Association in this city:

We have about eighteen different varieties of olives on this place, consisting of the following well-known kinds, viz: Rubra, Atro-rubens, Columella, Pendulier, Nigaina, Oblonga, Polymorpha, Macrocarpa, Regalis, Nevadillo Blanco, Manzanillo, Redding Picholine, and six varieties of the Mission. Of these, only the Rubra, Regalis, Manzanillo, Mission, and Redding Picholine have fruited in quantities necessary for practical oil-making. All of the other kinds are now in bearing, and we hope in sufficient quantities to thoroughly test their oil-making qualities this coming season.

As I understand only the results obtained from the varieties from which oil have been expressed are desired, I will confine myself to observations gleaned from the five kinds before mentioned, viz: Rubra, Regalis, Manzanillo, Mission and Redding Picholine.

The Rubra does remarkably well here. For four years in succession it has borne good crops and at the same time made fine growth. For two years we have made oil from this berry. It makes a fine grade of oil, of dark amber color, darker and heavier than the Mission. The oil flows from the pulp under the pressure very freely, in flakes as large as a silver quarter. The pulp after pressure is of a light color with reddish cast. This oil has a decided nutty flavor, and I imagine requires a cultivated taste to appreciate it fully.

As to proportion of oil obtained, would say that before filtering it ran about seven and a half pounds of oil to fifty-five pounds of berries, or, in other words, the yield was in the near neighborhood of 13 7-11 per cent.

The Regalis seems to thrive equally as well in the foothills. It is not, however, a uniform or regular bearer. The year before last the trees were loaded with fruit; last year they bore absolutely nothing. This year they are again full, which tends to demonstrate beyond peradventure that the Regalis is a biennial. The oil is, like the Rubra, heavy, of not quite so dark a color, but with a decided flavor. The yield is good, even better than that of the Rubra, running, as I now recollect, about 14 per cent. I noticed particularly that the oil seemed longer settling than other varieties.

The Manzanillo grows well, and is an even bearer with us, having gathered from successive crops. The oil made from the Manzanillo is lighter in color, and not so heavy as that expressed from the two varieties just mentioned. I like it personally better than the Rubra or Regalis. The yield obtained was not satisfactory, and I am inclined to think it will be found to prove more profitable to plant for pickling purposes than for oil.

As to the Mission, of course this tree being so generally planted throughout California, it seems superfluous to dilate to any extent upon it, in a letter to be read before a convention of olive-growers, any one of whom it is more than probable can give me more information on the subject in a single interview than I can impart in twenty such papers as this. I will content myself in saying that the Mission does probably as well at this altitude as any variety as yet planted, with the exception of its late maturity, the fruit sometimes not coloring until the middle of January. It is here, as elsewhere, not a uniform bearer, yielding a full crop every two years.

The percentage of oil will not vary far from an average of 13 per cent. The Mission, like all heavy oils, is not as palatable to those who are cultivating a taste for olive oil as the lighter oils. It is more appreciated by those who have long been accustomed to its use.

Now, the last and least valuable to most persons is the much written-about, long-suffering Redding Picholine. A description of this tree and its fruit is no doubt as familiar as the Mission. That it does remarkably well at this altitude cannot be gainsaid; it grows rapidly and fruits at an early age, there now being four hundred young trees on this place in fruit at five years from the cutting. It bears well every year, in fact, although better or with fuller crops every second year. The oil is light in color and possesses a delicate flavor very much liked. The yield of oil is quite equal to that of the Mission. Last year it averaged about 13 per cent, although there were many pressings that made as high as 15 per cent.

An advantage the Redding Picholine has in this climate is its early ripening, giving the grower an opportunity to get the oil made before the winter rains commence, thus saving loss by birds, storms, etc.

There seems to be an erroneous idea in regard to picking this berry. It is in reality more easily harvested than the larger kinds that have to be gathered by hand. We spread a canvas under the tree to be picked, and comb the berries onto it with short-handled rakes or combs. As yet we have found no injury to the succeeding crop by this method of picking the fruit. The leaves, dirt, etc., are fanned out by running the berries through a Fresno raisin-cleaner.

Now, my observation has taught me, among many other things, that the olive tree, like any other, will repay generous and kind treatment. It may thrive and flourish for awhile with niggardly care, but treat it with generosity, give it water, give it cultivation, give it fertilizers, and it will repay your kindness a hundredfold.

Under these conditions I do not believe the planter anticipating putting out olives can well miss success with a half dozen different varieties that can be named. I have perhaps a preference for one or two distinct kinds that I believe may be better under certain conditions than others, but all must bear in mind that locality, altitude, soil and other conditions must govern the olive, as other trees. What would do me in the foothills might make a complete failure in the valley, or near the seacoast.

It is my firm belief, however, that upon the olive, and those fruits that are grown for the purpose of drying, will depend the future of the horticultural industry of California, and if I intended to plant an orchard either in the foothills or upon the coast (notwithstanding the black scale) the olive would form a large portion of the trees planted.

I will now close this paper, feeling I have only gone over ground traveled so often before me by pioneers in olive and fruit-culture, and that I am therefore unable to go a single rod further in the way of giving information that has not already been given by these same pioneers. I would be happy beyond measure if I thought I could add one more mile-stone in the march toward the goal of success for my favorite of all trees, indeed the king of trees—the noble olive—a gift from God to man.

Experiments in Olive Oil Making and New Varieties.

The following was read by Edward E. Goodrich, of "El Quito," Santa Clara, at the last meeting of the Olive-Grower's Association:

In response to the request of Mr. Lelong, the Secretary of the association, I offer these few notes on the experiments and experiences of the olive season of 1891–92, at "El Quito," Santa Clara.

The Italian olive tree called "Cucca" seems to provide a satisfactory, large picking olive, which varies very little, if at all, from the large Spanish olive of trade. The variety seems very fortunate in grafting, is a large bearer, promises to be an annual, and is very hardy. The system of pruning adopted three years since seems to have improved the trees very markedly, and, assisted by the twice-stabbed ladybird, to have reduced the black scale to such a degree as to justify the belief of practical eradication, or, at least, control.

The system of pruning is that of the "goblet shape," the tree well hollowed out to admit air and light, but with the necessary careful study as to the wood required for the crops of the two following years.

The grafts of Italian olives produced sufficiently to make an experiment in oil extraction from their fruits possible on a small scale. Only the variety of olive called Correggiolo was in sufficient quantity for a separate experiment, and with these olives were mixed those of Grossajo, Infrantojo, and Razza, in about the following proportions: *i. e.*, Correggiolo, three quarters (¾); Grossajo, (¼); Infrantojo, three thirty-seconds (3-32); and Razza, one thirty-second (1-32). The result was an oil which seems so decidedly superior to that extracted from Mission oils as to justify the assertion that these olives are superior to the Mission variety as oil olives, at least at "El Quito."

As between the four varieties, the experiment is not final so far as the oil is to be considered, but careful observations at the picking and in the mill during extraction seem to prove pretty conclusively that the Correggiolo is the olive best fitted for oil at "El Quito," and probably in a large portion of the State. As an oil olive it shows less of the "fattiness" (which is the great trouble with the Mission olive oil), and less of the "*morcia*" or waste solid matter (which makes oil extraction so difficult in the case of the Mission olive), than either Grossajo or Infrantojo. This experiment is comparatively valueless as to the Razza, but observation at the picking and in the mill makes it safe to predict that it will be liable to fattiness on rich soils, and that it will be, as in its native home, a very shy bearer.

To sum up the advantages of the Correggiolo olive as an oil olive, it may be said that it seems to promise to be a larger bearer, a possible annual, that it ripens early, that it dries rapidly, that it has a very moderate quantity of "*morcia*," and that the oil separation is easily obtained and rapid, and that the oil is of an exceptional fineness. The result is so conclusive as regards "El Quito," that grafting into this variety will be continued until all trees of oil olives are Correggiolo.

In regard to oil extraction, one experiment on olives of the Mission variety is worth noting. The essentials of oil extraction are that the olives should be dried to a certain point; that is, until the "water of vegetation" is so far reduced in the berry that it will not, in the press—as it very frequently does, and will always do if not so reduced—bind the oil to itself and the solid matter which, to a certain extent, always escapes with the oil and water from the racks or cheeses; that the crushing of the berries shall be sufficient, and for this sufficiency that the pits be fully crushed, since under the pressure they help the process by, to a certain extent, holding the paste of the fruit apart and thereby allowing the escape of the oil.

Absolute cleanliness in all the machinery is an essential well-known to all olive oil extractors. The choice of time for gathering is rather large, and each grower will do well to try experiments at various points in the season. Early oil is liable to have a certain sharp taste, much admired by those to the manner born, but one which passes away in a few months, and leaves the oil as sweet as that of the later pickings.

The experiment in Mission olives was of an early picking, and the result an oil very much superior to any Mission olive oil ever made at the place before. The principle is a simple one, *i. e.*, that any olive which tends to fatness and coarseness, as does the Mission, is well picked quite early. It should be said that this early oil commands in Italy an advanced price, and perhaps, as the American public learns to distinguish between cotton-seed and olive oil, it may also demand as a "treat," in the early days of the olive season, its "*olio acerbo.*"

The experience of "El Quito" is very decidedly in favor of the old Italian system of sacks (*bruscole*) for holding the olive in the press and of drying by natural evaporation, rather than by artificial heat, which, at least, risks a cooking of the oil in the berry.

A redwood frame of one-inch by two-inch stuff, six feet by three feet in size, with six-foot laths—about eighteen or nineteen—and four cross-laths for strength, makes a convenient olive tray, and a great many can be racked up in small space, with bits of woods between the corners. At "El Quito" bricks are used, as they are at hand, which leaves four inches between trays.

Perhaps, or *certainly*—as it seems to the writer—the need of care in dealing with olive oil in its extraction comes especially as each "run" of oil is made. Nature aids the process of sending the water down and the oil up. For the best results the oil as it rises, and as soon as it rises, should be skimmed off as cream is taken from milk. Nature, however, resents tardiness, and any olivegrower who has ever tested the *morcia*, the waste stuff of his olive mill, can understand how absolutely necessary it is to remove the oil from this mass, which is so decidedly nasty and so ready to ferment. Again, as the oil taken off still contains some portion of the vegetable matter, it is necessary to continue the process of skimming. As a rule, skim off the oil four times the first day and twice the second day, and continue the process, always watching the deposit. For storage, oil needs, it need hardly be said, a cool cellar and occasional skimmings, or charges. The best storage tanks, so far as "El Quito" experience goes, seem to be those made of heavy redwood, lined with tin (as also the covers). Oil made, treated, and cared for in this manner will need no clarification for bottling, except that of passage through a fine quality of druggist's paper.

DISCUSSION ON MR. GOODRICH'S PAPER.

Mr. Kimball: I would like to ask how he has determined that there is a difference between the oil that remains on the lees and that which does not. Have your experiments been of that kind which determines the difference between that which lies on the lees for a week or a month, and that which has been removed two or three times a day, and that its taste is impaired by remaining on the lees?

Mr. Goodrich: I have had experience coming in this way: That under certain conditions of the olive, where the drying has not been much needed, and it has been necessary to leave the olives on the trees, afterwards the quality of the olives has been very inferior. An experiment between them is quite difficult. Two years ago the care of the lees was much more than in years previous, and this last year the care has been nearly double or treble, and I am perfectly satisfied that the oil of that year is very much better oil, and it is to be laid very much to that question. It is a matter of taste. If you were trying the experiment of leaving oil a certain number of hours in the tank, you would detect it by the taste.

Mr. Kimball: In your attempts, after you have skimmed off your oil, say the second time, what amount of deposition was there at the bottom of your tank?

Mr. Goodrich: It would be very slight; indeed, I am inclined to ask Senor Barzellotti to answer these questions.

Senor Barzellotti: When the oil is allowed to remain in contact with the lees, the water of vegetation is spoiled, for two reasons: first, because this water of vegetation and lees begin to ferment in a few hours, and when it is fermenting is heated, and the temperature may rise as high as 133° F., and that is enough to give a bad taste to the oil. The other reason is that this same mass of lees has a very bad taste. The oil may be spoiled in from six to eight hours. When we are making oil we must remove it from the tank immediately after the mass of olives is pressed, and for that reason we have to regulate the oils every six hours for the first two days, and for one week twice a day, until we see and are sure that the oil is perfectly free from sediment, or of any water of vegetation.

Mr. Kimball: What is the general temperature of your oil when you press, under ordinary weather conditions?

Senor Barzellotti: About 65° to 72°.

Mr. Kimball: Well, how much increase of temperature have you noticed—how much rise in the temperature have you observed when pressing?

Senor Barzellotti: Up to 135°.

Mr. Kimball: By natural fermentation?

Senor Barzellotti: Yes, by natural fermentation. The water of vegetation has a terribly bad, strong taste, and, as you know, the oil is very delicate. Take a fine oil, and you can change it by introducing a spoon. If this spoon has a bad taste the oil will take the taste.

Mr. Kimball: In the process of making oil, would you subject your olives to any artificial heat?

Senor Barzellotti: No; that would be to spoil the oil.

FRUIT MARKETING.

Results of Expediting California Fruit Trains to Eastern Markets.

At the August meeting of the State Horticultural Society Mr. Fred C. Miles, of Penryn, Placer county, was appointed to prepare a statement concerning the effect of reducing the time required to move California fruit trains to eastern points, both upon the quality of the fruit and the market for it. Mr. Miles sent the following letter of inquiry to several prominent shippers:

DEAR SIR:—The State Horticultural Society, being desirous of assisting, by sending out valuable information, in the development of the fruit interests of the State, seeks light upon the "Advantages that have resulted from the shortening of time for transit of green fruits from California to eastern markets."

As the responses received from those who ship the larger portion of the crop will form the reply to this question, will you kindly give me as full and detailed an answer as your time will permit?

I beg leave to offer a few questions—not to have a reply categorically made to them—but simply as suggestions only.

1. Average time of ventilator service from California to Chicago last season? This season?.

2. Arrivals in overripe condition or unsalable?. Last and this year? Cause?

3. Can fruit now be picked in much riper condition, as a resultant of shorter time in transit?

4. If so, affirmative to 3, its effect in enlarging the markets in the East?

5. Percentages due this season to having better fruit to offer in eastern markets?

6. Can better prices be obtained by shorter time transit and 3 when fruit products are in excess in the East?

7. Has shorter time in transit and 3 any bearing on European shipments and prices obtained?

8. Effects of shorter time and 3 on production of fruit in California?

9. Effects of shorter time and 3 in increasing value of orchard lands, etc.

To the above inquiries Mr. Miles received the following responses which he submitted at the September meeting of the State Society.

FROM THE EARL FRUIT COMPANY.

SACRAMENTO, CAL., Sept. 16, 1892.

Fred C. Miles, Esq., Penryn, Cal. DEAR SIR:—In reply to yours of the 14th instant, we will say briefly that the shortening of the time on fruit shipments to eastern markets has resulted in great benefit to the industry, as it enables the growers and shippers to get their fruit through to destination in better condition than was possible when shipments were longer in transit. The shortening of the time, however, has not resulted in any great benefit, as regards shipments in ventilated cars, as experience has demonstrated that shipments of fruit in ventilated cars, with the exception of a few varieties from certain districts, cannot be got through to eastern markets in good order, even by passenger train, therefore the greater portion of fruit shipments from California are now going in refrigerator cars. The shortening of the Overland trip has resulted in great good, as fruit in refrigerator cars will realize much better prices if got to eastern markets in faster time, and furthermore, the fruit can be shipped in much riper condition in refrigerator cars, thus insuring a better quality for the eastern consumer, and better prices in consequence; also a larger quantity of fruit for the producer, as fruit fully grown is larger and more weighty than immature fruit. Fruit can be shipped much riper if shipments are made in refrigerator cars than in ventilated cars, and can be shipped much riper if shipped in refrigerator cars making fast time, than when they made slow time, as in previous years. Of course the shorter the time in transit and the more mature the fruit is before it is picked, the better prices it will bring in eastern markets, and the shorter the Overland trip the more possible it will be to market fresh California fruits in the English markets. The shortening of the Overland trip will enable us to put California fruit in many of the smaller eastern markets, which could not be reached quick enough before. We refer to points off of the main line, such as Cincinnati, Montreal, etc. All of the above clearly proves that the improving of the Overland service will increase the value of orchards and vineyards to a great extent, and will encourage greater planting. One mistake the railroad people have made during the last three years is not encouraging the use of more refrigerator cars; in fact the Southern Pacific has discouraged the use of these cars in every way possible. Notwithstanding this, they are growing in favor, and have been the means of adding very much to the development of the green fruit-shipping industry. Yours very truly, EARL FRUIT CO.

FROM COÖPERATIVE FRUIT COMPANY OF NEWCASTLE.

NEWCASTLE, CAL., Sept. 29, 1892.

Mr. Fred C. Miles, S. F.—DEAR SIR:—Concerning the information desired regarding the development of the fruit interests of the State, would say that my time has been so completely occupied that I have been unable to give the matter any attention whatever. Since you so particularly request a line from me, however, I will offer the best I have under the circumstances.

In regard to the service from here to Chicago, I think nine days would be a fair average for last year, while for this season about six days has been the average time. This shortening of the time in transit has been of great advantage to the shipper for many reasons. In the first place, the fruit has arrived in such condition that it has enabled the purchasers to reship to their own trade in the States, thus warranting their paying more for the fruit than if compelled to use locally. It has also given the grower a chance to allow his fruit to mature and color up before picking, which of course enhances its value. Another reason why quick service has been advantageous is the fact of the shipper being in a position to calculate the time of arrival, enabling him to land cars in the different markets on the best shipping date. Every market has its poor days for the sale of fruit, which, if avoided, makes considerable difference in the result—for instance, Fridays and Saturdays are very bad days for the sale of fruit in some markets, while in others these same days are the best—and if in shipping we can depend on schedule time, we can calculate our shipments to arrive on the proper dates. There is still another good thing in favor of shorter time, viz., if a car should arrive on a day when the market is glutted, if the fruit is in good, sound condition in consequence of quick service, the consignee can hold same until next day, but if, on the other hand, this car has been dawdling along on its way, and the fruit is overripe and in bad condition, an immediate sale is necessary, no matter how poor the market.

Our experience this season, as to condition of fruit on arrival at destination, has been very satisfactory; in fact, we do not now remember of even one car having arrived in what might be called "bad order." Last season we experienced several complaints, and think it can safely be attributed to slow service. We do not believe that a large crop in the East would materially affect the sale of California fruits, provided our fruits are what they should be. The reason of poor sales is more because of carelessness in packing, etc., than of an excessive eastern crop. Our peaches will bring good prices at all times if in proper condition, no matter what the eastern crop may be.

The improvement in the service this season has certainly opened up new markets for our products, as, for instance, the matter of shipments to Europe, which with the old service couldn't be considered. We can land fruit in London this year in exactly the same time consumed on shipments to New York in other years, and every car of fruit forwarded to Europe deprives some American market of that much, thus leaving room for other shipments here. We think that any improvement in shipping facilities, whether by shortening the time or in lowering rates, will make itself felt in Placer county. It will most certainly encourage newcomers to invest in fruit lands, and it will doubtless make a considerable increase in the value of lands.

Sincerely regretting my inability to send you something more to the purpose than I feel this will be, I am very truly yours, F. J. MASON, Manager.

Our Fruits in England.

The whole object of marketing California fruits in Great Britain is of such great interest to our producers that we quote in full the accounts, written wholly from a British point of view by A. Taylor & Son of Liverpool, to the N. Y. *Fruit Trade Journal*.

On Friday the 12th of August, 1892, the second consignment of fresh fruit from California was offered in the salesroom of Jas. Adam, Son & Co., to a fairly crowded market. The various samples of pears, peaches and plums were in prime condition, and the demand at the prices named, was good, but the dealers were very careful not to enter keen competition by outbidding each other, but purchased with caution, especially so far as the pears were concerned, as the French crop is a formidable rival, seeing the carriage is high by comparison. The demand was, all circumstances considered, very good, and the prices fair, ranging from 9s to 12s 9d per box of 40 lbs. The peaches and plums sold readily, the peaches at from 8s to 9s 9d per box of 20 lbs. and the plums at 9s to 10s per box of the same weight. The vendors not being able to realize satisfactory prices for the whole parcel, the balance unsold were sent to the London market, where they are in higher favor and realize better prices. We bought some lots of pears for our local trade at 11s per box, containing net 40 lbs. of very fine pears, but next day we found very few buyers at 12s to 12s 6d. The fruit has to compete with the French William pear, which they much resemble. We are selling the French pears at 5s per box containing 45 good pears, but this French rival to California fruit will not be of long duration, for the French pear crop is short, and in any case, would soon be over when we know of nothing coming forward to compete with yours till next season. The pears so far appear to be the only fruit that can compete with our home or Continental fruit in the lusciousness of its taste. The plums peaches, nectarines, etc., in some instances are as fine or finer in their appearance, but when you come to the tasting or eating (and that is what they are for) there is absolutely no comparison, the English being so superior. All the same we think that if you can send us these fruits when our home and continental supply is scarcer, there is a great and profitable future before the exporters. It appears that the fruit should not be nearly ripe when gathered for export for the fruit that was ready to use when landed very soon showed signs of decay upon being exposed to the air, the change being, we presume, so great from the refrigerators, in 24 hours you would not think it was the same fruit, this too the experience of our country buyers, but we would like to see more of it before before giving a decided opinion.

At our saleroom on the 3d inst. we have to report a decided improvement in the demand and price of Bartlett pears. Those ex-Britannnica sold August 26th, we paid 14s 6d per case for, as against 11s for similar pears brought on the 12th inst. The buyers were very keen on the Bartletts which met a ready sale at 14s 6d. The Beurre Hardy pears we ran up to 12s, at which price they were withdrawn. As we were the highest bidder the vendor privately gave us the option of taking them at about 13s 6d. They were sent to London and realized next day 15s 6d per case. We sold the Bartletts we bought, at our store at 15s 6d per case, being afraid to hold them owing to their very perishable nature, but found this lot kept firm longer than we had anticipated, not being overripe, until the Wednesday following the sale, when we had quite sold out. We took a dozen boxes from a friend who had not been so fortunate in selling; he on Wednesday declared them in perfect condition, but on Tuesday we found nearly one-half of them worthless which shows what a pity it is that the fruit is not shipped so that it could be sold on the Monday or Wednesday's sale, thus giving us all the market days of the week for its disposal without Sunday intervening. Sept. 3d sales showed a still more decided improvement, although the samples were somewhat riper than last week's. Hatch's extra fancy selected Bartlett pears meeting a ready sale at 17s per case containing about 40 lbs., the next grade brought 15s to 15s 3d, whilst the Beurres were indeed more hardy, brought 13s 9d and 14s. To-night our unsold Beurres are in our ordinary store whilst our Bartletts are placed in our cool cellar to try and save them over Sunday. The rival to the Bartlett, the French Wm. has now entirely disappeared from our markets; any others in competition are not worth mentioning, so that from this week forward only land them in proper condition and success is certain and assured, but to make assurance doubly sure, you must pack the pears in boxes strong enough to do without what we call the bilge on the top, and in many instances on the bottom. We consider it a downright piece of vandalism to pack this beautiful fruit in such a fashion that when the top of the case is taken off, the fruit layer is bruised and many others crushed and disfigured. We simply frightened many of our customers away when we took off the top and asked from 12s to 15s per box for the damaged and discolored fruit we exposed to view. Grown wiser we now open the side, but we don't feel comfortable while we are selling, for we know the evil is there all the same and we don't like it. The wood in the boxes is altogether too light to carry with safety 40 lbs. of pears; it is only strong enough for a 20 lb. package. If some 20lb boxes were sent, they would not only arrive in a better condition, but they would meet with a brisker demand in our saleroom and a readier sale in our stores, for there are scores of storekeepers who would gladly give more in proportion for a 20 lb. box whose business would not allow them to buy the present larger parcels. As we foreshadowed in our last report, the California peaches, plums, etc., are at present nowhere in comparison or in competition to our beautiful luscious English fruits, but unfortunately these will not now last long. Their season being over, we will have nothing to offer in competition to your production until our lethargic and long benighted countrymen awake to a full patriotic sense of their responsibilities and of the capabilities of our Island, which according to Mr. Gladstone, properly cultivated will produce the finest fruits in the world.

Sept. 7, 1892. The pears sold on the 2d inst., and which brought such fancy prices in Liverpool, did not average so much in London by about 3s 6d per case, compared with Liverpool. The pears of this shipment being the ripest and consequently the worst keeping yet landed, the deterioration was so rapid, that, on the Monday following the sale, the merchants were glad to sell the fruit at from 10s to 14s per box, for which they had paid 17s, while the 15s Bartletts were disposed of from 9s to 14s. Many of the retail buyers would not have a second lot, but were constantly asking for and obtaining allowances for the wasty condition of the fruit they had bought. But the Beurre Hardy and Beurre Fancy, after being eight days in our store, are now in grand condition, some ready for the table now, others promise to keep good for several days to come. To day we, with several of our best customers, tasted a few ripe samples of the Beurres, and they one and all pronounced them equal to the best specimens of the Bartletts.

Sept. 10. Yesterday was shown at our saleroom the finest and best conditioned California pears ever seen in this country, but the deceptive state of the previous shipment had made the buyers very cautious and slow, the first lot of Hatch's selected 40 lb Bartletts being sold under the hammer at 13s 9d; several other lots, 13s 6d, 13s 3d, and finally 13s. The broker withdrew the balance upon the offer of 12s 9d and sent them to London. In addition to Bartletts at 13s 3d, we bought the Beurre Hardys at 16s 6d, and the Souvenir de Congress at 11s 3d per box. The offering of the peaches and plums and their whole appearance was a mere farce in the face of the splendid English samples now in our market. A. TAYLOR & SON.

THE DAIRY.

Prof. Hilgard Observes Alpine Dairying.

RIGI SCHEIDEGG, SWITZERLAND, Sept. 12, 1892.

TO THE EDITOR:—It may interest your readers to hear something about summering in the Alps, by way of comparison with a corresponding season in the Sierra Nevada, say Lake Tahoe or Donner Lake. I am now near the end of the fifth week of my stay at this elevated resort—one of the many that now dot the Rigi (pronounce *Ree ghee*), which is not properly one mountain, but a rather abrupt horseshoe-shaped ridge whose highest point, the "Kulm," rises to about 6000 feet. *This* point, the Scheidegg, is about 1000 feet lower, but has the advantage of being not a mere summit but a flat-topped ridge, on which there are pleasant promenades and walks on grassy slopes, from which you have magnificent and indefinitely varied views. To southward is the main chain of the Alps, with snow-covered summits from 9000 to 14,000 feet above the sea; immediately below, on the south and east, are three lakes—the classic one of the "Four Cantons," that of Lowerz and that of Zug (*Zoog*), with their deep blue water and constant traffic of passenger steamers, which from this height look like nutshells. Four weeks ago, after several days of warm "Fohn" (the "Souther," which here stands in place of our hot northers), there lay between the snow-capped summits and the green pastures of the foothills a broad band of blackish or reddish-gray rock, varied only by the bluish glaciers that hang down even to the valley borders and are marked with dark lines that at this distance impress you as being muddy wagon-ruts, but are really ridges of stone blocks—debris that rolled down upon the ice-sheet as it moved through the canyons and accumulate at its end as moraine ridges. The Rigi itself, and the slopes across the lakes, were beautifully green with a dense grass turf gay with bright-colored flowers, among which the bluebells, the gentians, both blue, red and yellow, the arnica, the scabious and a multitude of dandelion-like flowers were conspicuous.

All that has been changed in a few days, when rain set in that at this altitude soon changed into snow. For a week this summit has been wrapped in a dense cloud, except for an hour or two, occasionally, when rifts showed the mountains to be mantled in white clear down to the green pastures; to-day, the sun shines once more, but for a thousand feet below us the meadows are white, and flowers and grass are borne down by the load of snow, while lower down the slope the cows pasture as usual among the chalets that are promiscuously scattered on the mountain sides. Up here, for a day or so, the cows scraped a fair living from under the snow; then they were kept in the stable and fed with green provender that had been cut on the steep slopes on which a well-conditioned and prudent cow would not risk herself. To-day, they are being fed with hay cut from the same kind of risky ground, that has been put up in very diminutive stacks, each provided with a centre-pole, at the beginning of the haying season. To-morrow, if the sunshine continues, the snow may all be gone and the cows will again sally forth to their pastures which will (so says mine host) be little the worse for their chilly experience. The flowers also will again raise their heads and try to mature their seed, as though nothing had happened.

I should mention that this locality has the distinction of being a Swiss Federal Experiment Station, probably the highest now occupied anywhere, its chief object being the testing of forage and pasture plants, and of hardy, forest trees. Of both, quite a variety is under trial; among the latter a few California species, but not, probably, of the best selection. The proprietor of the hotel, Dr. F. Stierlin-Hauser (who stands high in the councils of agriculture in Switzerland, and in winter lectures at the agricultural school at Lucerne), is the superintendent and takes great

interest in this work; his specialty is dairying, and he makes the best of the high and broken ground that constitutes his domain, which, so far as it is practicable for cattle, is used for hay and pasture, alternately, each season. His experiments have shown already that timothy can be grown successfully at this altitude, and a good crop of oats is now being cut for green feed. Even a crop of potatoes, just in bloom, has been buried in the snow, but is also expected to recuperate, since the temperature has at no time fallen below the freezing point.

It must be understood that, in respect to rainfall, the alpine region of Europe differs radically from our Sierra and Coast ranges. Summer rains are frequent and abundant, and the pleasing contrast between green, flowery, succulent meadows and snowfields, that lends such a special charm to the mountain scenery of Switzerland and Tyrol, is due to this abundance of atmospheric moisture, supplemented by innumerable brooks, streamlets, and torrents that have their origin in the snowfields and glaciers. From this arises the fact, surprising at first blush, that the alpine vegetation is largely of a swamp character, and that sedges mingle very commonly with the sweet grasses. Nay, even the pest moss occupies not inconsiderable patches on this very plateau, mingled with heather and whortleberry, as in the Scotch highlands. You are sorely tempted to take a seat on the cushiony hillocks thus formed in the turf, but unless there has been a previous week of dry weather you are apt to find yourself admonished to rise hastily by a decidedly wet and cold sensation. But the slow decay of the grass-roots in the cool climate makes the turf itself so delightfully springy and cushiony that it is pure pleasure to walk and sprawl upon it on a sunny day. These turfy meadows are what is properly called "Matten" (mats), while a property composed of such pastures is an "alp," a term that, it will be noted, should not properly apply to the high, rocky and snowy ranges at all.

The *grasses*, properly so-called, do not differ widely from those that would be found in corresponding localities on the higher western slopes of the Cascade range in Washington; the bulk is formed by relatives of the June-grass, one of which has the curious habit of bearing on its stem small plantlets instead of flowers and seeds, these, falling on the moist ground, at once take root. Aside from the grasses, however, numerous other plants are of necessity cut in hay-making, and among these there is quite a number that are considered of at least equal value with the grasses for dairy purposes. In fact, a pure grass hay is not considered nearly as good, especially for high-class cheese, as the natural mixed growth of the alps which, however, also contains commonly a number of weeds, such as dock, plantain and others. In fact, the special excellence of the flavor of the cheese of certain localities is directly attributed to the herbage admixed to the grasses, whether in pasture or hay. Among these, the ladies' mantle (*Alchemilla*) is especially noted as increasing the fat-content, or butter yield, of milk, and is eagerly cropped by cows. It can hardly be doubtful that corresponding differences occur with us, and that the question of mixed growth for dairy pastures and dairy hay deserves more attention than has heretofore been bestowed upon it in the United States. To an American, an alpine hay and haying is a curiosity in several respects. The low growth acquired by the alpine grasses, at best, compels very close cutting, almost shaving, of the turf. The hay consequently consists chiefly of grass *leaves*, mostly very fine and slender, with but few stems; its average length does not exceed six inches and it has a delicious vanilla (new-mown-hay) odor. No wonder the cows do almost as well upon it as upon the green pasture itself.

But how can people afford to make such hay? Only, of course, under the condition of extremely low-priced labor; those performing such work receiving from 25 to 36 cents a day, with board and lodging.

With the temptation of this magnificent compensation before them, you see them climbing about on the steep, grassy slopes handling a primitive looking scythe which, however, is kept as sharp as a razor, since otherwise it would not cut the thin, flexible grass leaves. To swing this implement effectively and not lose one's balance on slopes too steep for grazing, that many a man would decline to climb when remembering that a slip of the foot may mean a tumble of say five hundred to a thousand feet, is a feat not learned in a day; its mere contemplation makes nervous people feel giddy. In fair haying weather, not too windy, the cut grass is left on the ground, on which it was mown, to dry; but often it is raked off green to a lower level where it is spread to dry in a sheltered place. There it may be put up in diminutive stacks; but the material, green or dry, is commonly got together by making it up into loads of 150 to 180 pounds, placed on coarse nets pinned into the ground at their edges. These are then drawn together and so form a manageable bundle, which is carried on manback wherever wanted. A person curious to know how such bundles are handled by the men on steep slopes may witness something like this: The bundle is laid flat against the slope at some point where a good footing may be had a few feet below; then the man *leans backward against it* and grasps it with both hands; then by the use of abdominal muscles that an athlete might envy, he raises himself to an erect position, gets his balance and then, slowly, step by step, ascends the slope above him with his load. Dr Stierlin has reduced this laborious mode of carriage to a minimum by stretching a wire cable from the summit down to his most productive hay-grounds, from which the bundles come up by means of a running pulley carrier.

The cows, whose substance is thus laboriously provided for, are all, of course, of the grayish-brown or dun-colored alpine breed; a well-proportioned, sturdy, hardy race, very gentle and intelligent; the large ears conspicuously white-hairy within, forming the most striking portion of the animal when it is looking at you. Their milking qualities are not extraordinary; the average of 40 cows during the summer campaigns of several years on Dr. Stierlin's pastures here has been about 9½ liters per day, or between 2½ and 2½ gallons; total solids, 12½ to 14 per cent; fat, 3½ to 4 per cent. The milk is therefore rich; it has not quite the neutral taste of our grass-fed milk, but a slight special flavor, doubtless due to the mixed herbage from which it is derived. A centrifuge driven by hand does the creaming; the butter, rather light-colored for grass-fed, is delicious and high-flavored—regular "gilt-edge." It is the more important as, with honey, rolls, milk and coffee, it forms the regular European breakfast, of which eggs, steak and chops form no part unless specially ordered. The skim milk, so far as it is not consumed by the calves (out of a square, queensware pot with rubber teat) is correctly made into cheese, which forms a staple article of home diet. In fact, in the chalets, the "meagre" cheese quite commonly stands in lieu of bread, while the rich, made of whole milk and aged somewhat, serves as the condiment. From former experience, I cannot say I admire this diet; but the "Seuven" seem to thrive upon it. I am told that a good many of these alpine "cowboys" have emigrated from this neighborhood to the Pacific coast. If so, they have doubtless by this time changed their ideas, both as to diet and compensation.

E. W. HILGARD.

The Stock Yard.

Sheep and Pigs at State Fair.

[From our own Correspondent.]

During the many years that we have attended the California State Fair we do not remember having seen the pens so well filled with sheep and pigs as they were this year.

Undoubtedly, owners of sheep have every encouragement to bring forward representatives of their respective flocks owing to the high prices they have been realizing, not only on pure-bred rams of the various breeds, but for cross-breeds and high grades, while consumers of mutton also experience something in regard to the higher prices paid now than in times past, even admitting that there has been considerable improvement in quality.

It is this high-priced mutton that has induced many owners of sheep to make some change in the class of sheep bred by giving more attention to the production of mutton than was formerly given; meanwhile, not forgetting the pecuniary benefits of a good fleece.

The breed that has been most drawn upon for a cross to bring about this combination is the Shropshire, of which very large importations have been made from England to the United States within the last few years.

Has the thing been overdone, or is it about to be overdone, as has been the case with so many other classes of live stock, in which high prices have proved a strong temptation for those importers who are not breeders to reject the selection of inferior animals for importation?

An English correspondent of the *Country Gentleman* writes:

"Most unsatisfactory prices are made at the sales and lettings of pedigree sheep, which always come off at this season. Perhaps the chief depreciation is among the Cotswolds, but Oxfordshires and Shropshires share the fall to a great extent. Like most matters, the thing has been overdone; but there may also be one or two other causes at work, chief among which is the unsatisfactory price for ordinary flocks at present."

Whether this should be taken by flock-masters as a "note of warning," or as a mere temporary setback in prices, time alone will tell, but in a later English exchange, we have very discouraging reports of the sales of some imported fine wool sheep in Australia, which entailed great loss on the importers, while the average price of Merino rams sold at the Sydney ram sales in 1892 is much below the average of the last ten years.

Of Shopshire sheep at the State Fair there were only two exhibitors, Messrs. J. H. Glide and T. B. Hall, both of Sacramento.

McGlide had also a number of French Merinos, which, with his Shropshires, were about two thirds of the whole number of sheep on the ground.

Excepting with the last-named breed, there was no competition whatever in the sheep classes. Geo. Bement & Son had a few Southdowns, Mr. F. Bullard had a goodly number of his Spanish Merinos, and Mr. Glide had the French Merino classes all to himself, just as Mr. C. P. Bailey had with his recently imported Persian or fat-tailed sheep.

These formed a novel sight, and we presume there were few, if any, people present who had ever seen sheep of that kind before. They had not recovered from the depleting effects of the long journey they had had by sea and land, consequently looked thin of carcass and long on the leg.

The tail really seemed to be the most valuable part of the carcass. It looked and felt as if it might be from 20 to 30 pounds weight on some of the animals and will probably grow to heavier weights when well fattened, as, judging by the general appearance and form of the animals, the greatest part of the fat goes into the tail. The wool is of a very heavy nature and will bear being improved upon to an unlimited extent.

Mr. Bailey also had a number of his Angora goats on exhibition, with Mr. Isaac Lee of Florin for a competitor.

SWINE.

Geo. Bement & Son exhibited some good specimens of the Essex breed; and Mrs. M. L. Ecles of Los Angeles some small Yorkshire whites, to which special premiums were awarded, there being no provision made for pigs of that breed in the regular premium list.

In the Poland China classes there were only two competitors, P. H. Murphy of Brighton and J. Melvin of Davisville. Both showed some good pigs, among which the premiums were pretty evenly divided. It was in the Berkshire classes that there was the strongest competition, there being six exhibitors, three of them residents of Sacramento county and one each from Los Angeles, Santa Clara and Marin counties. Both Mr. Alfred Seale of Mayfield and J. E. Lucas of San Rafael exhibited stock recently bought from the estate of the late Andrew Smith of Redwood city. They were about equally successful in getting prizes, taking three of the four sweepstakes premiums offered; L. Waite of Perkins taking that for best boar.

Sessions & Co. of Los Angeles, made a good exhibit and took fully as many premiums as any other exhibitor of Berkshires.

Thus ends one of the most successful fairs ever held in the State, especially for horses, sheep and swine.

LIVE STOCK AT THE WORLD'S FAIR.

The next great attraction, after the Christmas fat stock shows will be the world's fair in 1893, entries for which in the cattle and horse department will close June 15th; for sheep and swine, July 1st; dogs, May 20th; poultry and pet stock July 15th; and fat stock August 1st, 1893.

There are some liberal extra purses hung out for exhibitors of cattle; for Short-horns, $6,000 in added prizes and Herefords, $5 500, besides extras from other breeders associations of all kinds of live stock, bringing the added amount up to $50,000, which, added to the $150,000 appropriated by the exposition company for live stock makes a very attractive premium list, divided as follows: Cattle, $34,045; horses, $59,850; sheep, $16,512; swine, $22,285; dogs, $3,920 poultry and pet stock, $9 265.

The live stock exhibition will open with a dog show on June 12th, and Chief Buchanan has received assurances that it will be the greatest kennel exhibit ever held.

NO PLEURO PNEUMONIA.—Secretary Rusk issued on September 26th, his proclamation that the United States is now free from pleuro-pneumonia. The official proclamation has been delayed until six full months from the occurrence of the last case, on which occasion the animal found diseased, as well as all others with which it had been in contact, were at once purchased and slaughtered, the premises being quarantined to all cattle from that date to the present time. Although in many cases four months is regarded as sufficient, this extension of the period of complete immunity from four to six months was adopted so as to satisfy the most conservative and apprehensive that the grounds for the present proclamation were ample and its issue and the raising of quarantine in the United States for this disease thoroughly justified by the facts. The inspection system adopted by the Department has been maintained in full force and efficiency in those districts heretofore infected during that period. The seaboard and frontier inspection and all necessary cattle quarantine will be strictly enforced and there being no possibility of the occurrence of contagious pleuro-pneumonia save by its introduction from foreign countries, the country may congratulate itself upon the removal of all apprehension for its cattle interests on the score of contagious pleuro-pneumonia.

History of October Weather.

Lieutenant John P. Finley in charge of the weather office in this city has issued the following:

The month of October may exhibit all of the variations in precipitation which characterize the "dry" and "wet" seasons, from the entire absence of rain to more than seven times the normal amount of about one inch. During the past 41 years no rain has fallen in October in 1850, 1855, 1861, 1863, 1866, 1870 and only a trace, or an amount too small to measure, in 1887. The heaviest falls of rain occurred as follows: 1849, 3 14 inches; 1854, 2 41; 1853, 2 74; 1874, 2.69; 1876, 3 36; 1882, 2 66; 1884, 2.55; 1889, 7 28 inches. The records do not justify the establishment of any periodicity in rainfall during October which would permit of a long-range forecast as to years of heavy and light precipitation, except to say that the former do not follow each other without an interval of at least one year, and usually about four, but may reach a period of ten years. The probability of rainy days is more than twice as great as in September, but the average cloudiness is slightly less than during that month owing to a diminution in the prevalence of fog and the occurrence of more southerly winds.

The maximum temperature has ranged from 72 degrees in 1881 to 87 degrees in 1887, 1888 and 1889. The average at about 79 degrees shows a decrease of 3 degrees from September.

The minimum temperature, or that which occurs between midnight and morning, has ranged from 45 degrees in 1881 to 52 degrees in 1876 and 1885, the average being slightly lower than in September.

GRAPES AT THE UNIVERSITY STATION.—Foreman R. D. Cruickshank of the University of California Agricultural Experiment Station, brought to the county fair a most remarkable collection of grapes and cereals from the Paso Robles station. The collection comprises 77 varieties of grapes, the major portion of which are imported, including those of the following types: Bordeaux, Burgundy, southern French red, southern French white, Sauterne Rhenish red, Sauterne Rhenish white, Hungarian, Austrian, Tyrolean, north Italian, port, sherry, madera, table and raisin white, table black and red. The grapes are all plainly labeled and the opportunity should not be lost of carefully inspecting this wonderful collection, as it affords intending planters a chance of selecting the best varieties. Mr. Cruickshank kindly pointed out to us a grape called the Muscatello fino, and having tasted it and pronounced it the finest we ever tasted, he for comparison let us try an excellent common variety known as the California Malvoisie. It did not taste like a grape at all after the Muscatello fino. Most of the varieties shown are of wine-making qualities and it is amusing to witness the interest taken by the Germans and Swiss, who recognize such names as the Affenthaller, Gewartz, Franirer, etc. The grain and grass occupies nearly one side of the west-wing of the pavilion and is not only a masterpiece in husbandry, but the shape in which it is displayed is highly creditable to Mr. Cruickshank's artistic skill. It must be remembered that these samples are grown without irrigation, and this is an off season.—San Louis Obispo Tribune.

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passage by the Legislative Committee of the National Grange have, in most instances, failed to become laws. The reason for this is apparent to any observant person. It will ever be so, I fear, as long as farmers choose some one not of their own or a kindred calling to represent them. Let blacksmiths and carpenters, let bricklayers and miners, let bootmakers and tailors, let farmers and their employes, in short, let all those who in the sweat of their brows eat bread, unite with the one common purpose of the greatest good to the greatest number, and there will be more of healthy legislation and less of unhealthy legislators.

Now, I do not want to be understood as saying, or as thinking, that all of our present laws or lawmakers are bad. Not so at all. On the contrary, many of our laws are good, and many of our lawmakers are pure and honest men. The trouble is, that too many of our laws are made in the interests of private individuals and corporations, and too many of our lawmakers are the paid attorneys and employes of such corporations.

There are few people who would think of sending a farm laborer to the legislature, no matter how good a man he is or how fully competent to do the work expected of him. And yet these same farmers and artisans will very readily turn to, and help elect a man who has no other employment or qualification than that of a paid employe of a corporation. Nor does this fact hurt the man in any way, *provided* he is competent, honest and worthy. But, in the first instance, it is used to keep down worthy and efficient men, while, in the second instance, it too often is used to boost and advance unworthy and incompetent men. Let us, as a thoughtful and conservative element in the county and State in which we live, use our knowledge, our influence and our votes, at all times, in the direction of good government, rather than in the direction of a party victory.

NATIONAL GRANGE.

It is unnecessary for me to report to you, in detail, what was done at the last session of the National Grange. That work was done almost a year ago, and each of you has, no doubt, read the Journal of Proceedings. Suffice it to say that much important work for the upbuilding of the Order was done. Headquarters for members of the Order who visit the World's Fair in Chicago, in 1893, were ordered, and the Executive Committee of the National Grange were directed to provide for lectures, bureaus of information, cereal exhibits, and such other details as will make the world know there is an American agriculture and an American agriculturist. Full particulars of what has been done by the Executive Committee of the National Grange, and what the membership who visit Chicago may expect, will be made at the next session of the National Grange, soon to convene at Concord, New Hampshire.

I must not allow this opportunity to pass without saying a word to you about the importance of the Columbian Exhibition. It is going to be the grandest exhibit ever made by a civilized nation. As a means of education, of establishing international friendships, and of gaining, in a short time, for a nominal expense, the best insight into the progress of our time, there is no estimate too high to be placed upon this fair. By all means, I want to urge every farmer in California to so husband his resources that, with his entire family (for the youngest as well as the eldest will derive benefit), he may attend the World's Columbian Exhibition. Don't sacrifice health, don't defraud an honest creditor, but at almost any other sacrifice, take the family to Chicago in 1893. And, in this connection, it affords me pleasure to say that one of the members of our Order—one of the members of this body—Bro. H. M La Rue, Past Master of Sacramento Grange, has been honored with the position of superintendent of the viticultural display of this great exposition. We can, therefore, all of us feel at home when we attend the fair. Let us, as a body, lend our brother a helping hand, and give that word of cheer which will make his duties pleasant and his labors the more successful.

WOMAN'S WORK.

In accordance with resolutions of this body, a Committee on Woman's Work has been appointed. The work of that committee is among the most important of any to be done by the Grange; for the influence of the mother, of the wife, of the sister and of the sweetheart is coexistent with the thoughts, actions, power and prosperity of man. The power of woman, and it is nearly always a power in the right direction, is unmeasurable. By a sign, by a word, yes, and very often merely by her presence, a man has been saved from utter ruin, by the woman who loved and advised him, or whom he loved and respected. There is no wonder the Grange has been a success. The mere fact that women are at every meeting is a perfect guarantee of the success of the Grange. Woman's work is coexistent with the prosperity and perpetuity of the Grange. Let her be fully awake to the responsibility that is hers, and fully competent to discharge the duties which now and hereafter will devolve upon her.

GRANGE CANVASS.

Early in the spring of 1892, the Executive Committee of California State Grange determined on a thorough campaign of the State. To bring this about in the most economic and useful way, the entire State was divided into districts, and two or more speakers were detailed for each meeting. In all but two cases, the speakers charged nothing for their services; but the committee insisted on paying all necessary expenses of speakers when same were presented in the form of an itemized bill.

The good results of these meetings are well known to each of you. I would suggest that this or some other form of field-work be continued. The expense of such work, when done as it was this year, is purely nominal, while the benefits are full and far-reaching. For the expense of this work, you are respectfully referred to the reports of the Secretary, Treasurer and Executive Committee. Nor can I leave this subject without returning my own thanks, as well as those of the Order, to all of the speakers who did such valiant service in this cause. Their efforts were timely and redounded to the good of the Order as well as to their individual honor.

FINANCES.

The funds of this body are in a healthy condition; not a dollar has been expended for any purpose, unless those in charge of the funds, expected to get, 100 cents in return for the Order they represent. In this connection I can not too highly commend the honesty, capacity and watchfulness of the members of the Executive Committee. They have been, individually and collectively, attentive to all duties and have most worthily won the honor of "well done, good and faithful servants." In all matters pertaining to the Grange, they have been unselfish, persevering, progressive and true. The term of Brother Thomas McConnell expires by limitation. Select his successor with care, and be sure you get as good and worthy a man for the place.

TRADE CARD.

Our arrangements with dealers, whereby they are to furnish goods to members of our Order at reduced prices, have proved in the main satisfactory to all concerned. Owing to the geographic conditions, some of our Granges have not been able to derive as much benefit from the Trade Card plan, as others have done.

For further particulars on this subject you are referred to the report of the Special Committee on "Trade Card plan of Trading."

OFFICIAL ORGAN.

Early last spring the Executive committee were officially notified by Mr. Alfred Holman—manager of the Dewey Publishing Company, who are the owners and proprietors of the PACIFIC RURAL PRESS—that that paper would cease to become the official organ of the State Grange, unless the Executive Committee should pay a monthly subsidy or bonus, for the work then being done by the RURAL PRESS in behalf of the Grange. A meeting of the Committee was held. The subject was fully discussed and the Committee were unanimous in their conclusion. But that no mistake should be made by the Committee, whereby the Order would be injured, they adjourned to a future date, and sent invitations to all the Past Masters and others of the State Grange, to meet with them in a friendly discussion of the situation. At the appointed time there was a full attendance of those who have the interests of the Order at heart. It was the unanimous voice of all, that the Grange should not comply with the requirements of the Dewey Publishing Company. Therefore, all relations existing between the PACIFIC RURAL PRESS as the official organ, and the State Grange of California, were, with a mutual and friendly understanding, severed. Shortly after, arrangements were made with Brother H. A. Brainard of San Jose Grange, editor and proprietor of *Pacific Tree and Vine*, and Brother Samuel E Watson of Two Rock Grange, editor and manager of *Orchard and Farm*, whereby these two papers—one published on the first of each month, the other on the fifteenth of each month—were made the official organs. This arrangement gave a semi-monthly official organ, without any expense to the State Grange. The terms and conditions of subscription, to members of the Order, have been made known to each of you through your own Grange. This arrangement holds good till this meeting of the State Grange. The entire subject is therefore referred to you, with a hope that you will give it that careful consideration it deserves. This body *must* take some action at this session if they want an official organ. And I must not neglect to say, that there is no means more potent for the dissemination of useful information, there is no power so useful to the farmer as the power of the pen and printing press. We *must have* an official organ. It ought to be published at least *once a week*. Do what seems to you best in the matter, knowing that whatever your decision is, the Master will use his best efforts to make that action a success. Act, act not hastily but wisely. More depends than you may imagine.

COUNTY DEPUTIES,

have been appointed in conformity with the laws of the Order. These officers have many duties to perform. As they have no pay allowed by law for such service, I find they do not take the interest in the work of the Order they should take. I hope this body will take some action looking to the work of County Deputies, and preparing the way whereby the Order may be built up in sections where it is not to be found. The County Deputy is an important factor in the work of rebuilding and upbuilding the Order. Give this subject your careful consideration.

FREE RURAL DELIVERY OF MAIL.

This Order, through its National Grange is, and has been, urging Congress to give a free delivery of mail to those whose homes are on the farm. We believe the Government can afford to do this. Post Master General Wanamaker says the delivery will be almost quite or self-supporting. But, whether or not that be true, we are now helping to pay for four or six deliveries per day, to our city cousins in Chicago, Boston, New York, Portland, San Francisco, and hundreds of other cities. Why not let them help pay for a weekly, semiweekly, or daily delivery to us? The justice of the case seems too plain to require any argument. If this body feels as I feel, they will take such action as will make our Members of Congress know we want "Free Rural Mail Delivery."

EDUCATION.

Don't let any one influence you to believe that this part of the work of our Order is accomplished. We may now have better roads, and better schools, and better halls and better Granges, with larger libraries and more readers, than heretofore, but still the work of education is not done. Let it go on till there are none in our fair land who want to do their neighbor a wrong, till ignorance has been throttled, till lawlessness is unknown, till elections are honestly conducted, till strikes are things of the past, till prejudice is dethroned, till virtue is always rewarded, till right is supreme and wrong annihilated.

Till these things, and many more, are brought about, there will be education required by the Grange. And there will be no better educator in all this broad land than Subordinate Granges of the Order of Patrons of Husbandry. May the time soon come, when the world will recognize the fact, that our Order is an educational association that aids all sections, and elevates all who come into contact with it.

NATIONAL GRANGE HOME.

An effort worthy in every way, is being made to raise funds whereby a permanent building may be constructed for the use of the National Grange, and for the lasting honor of the Order. This body ought to do something at this session to show that Patrons in California are in hearty accord with the project, and are willing to assist in the noble work of building a house that will provide shelter, protection and comfort to those who till the soil, and who honor this country with honest lives and pure hearts.

SUGGESTIONS FOR GOOD OF THE ORDER.

Permit me, before concluding this paper, to offer a few hints; not with any desire to dictate, but rather to have this body take action. We must act, and act, and act, if we would succeed.

First, then, let the State Grange of California see to it that each Subordinate Grange duly observes the *fourth day of December*.

Second, let State Grange officers be more devoted to the work of the Order during the fifty-one weeks when the State Grange is not in session.

Third, arrange, at this time, if possible, for a big State Grange picnic, in the coming early spring.

Fourth, provide for the best and most economic way of making a Grange campaign of the entire State.

Fifth, See that Farmers' Institutes are more numerously held.

Sixth, urge the Governor of the State to give the farmers of this State a more liberal recognition in the many appointments at his disposal.

Seventh, have a committee of good men at Sacramento, during the coming session of the Legislature, to give information concerning agriculture, and to urge the passage of certain needed and reform legislation.

Eighth, let this body, at this session, examine the merits of the proposed amendments to the State Constitution, to be voted upon this fall, at the general election, and let such action be taken by this body as will inform the farmers of the State what their interest is in this matter.

Ninth, take such further action, after a careful investigation of the Patrons' Aid Association, as to you may seem wise.

Tenth, provide a plan, whereby the work of County Deputy may be more thoroughly done, and more liberally remunerated.

Eleventh, encourage public Grange meetings, being always sure to have a good program, and competent speakers, readers, singers and actors, to insure success. Nothing succeeds like success.

Twelfth, send the Grange Missionary through the length and breadth of California. There is much work for him to do. Many farmers ought to have the light, health, assistance and cheer which the Grange can furnish.

Thirteenth, extend the hand of fellowship to all orders and associations that are opposed to wrong; that stand for the right; that raise the fallen and care for the helpless; that work for a principle rather than for a payment; in short, let us join hands with all those that can see good in their fellow beings.

OUR DEAD.

Since last we met, the "icy hand" has plucked from our midst some of those we honored and loved. As silently as the shadows move, they were transported from our earthy Grange. Their faces we shall see no more forever, but their love and their work for this Order will be with us while life lasts.

Bro. Wm. M. Ireland, one of the founders of this Order and ex-Secretary of the National Grange, has been called to his "last home." This Grange can well afford to dedicate a memorial page to one who was so zealous as he was for the Order of Patrons of Husbandry. Among those of our members who have crossed the "dark river" since the last meeting, all will remember our venerable and respected brother, Thos. T. Hooper. We well remember, at the session last year, how his step faltered, and how his body trembled; but we also remember how his heart faltered not, and his love for the Grange was undiminished. Green, ever green be his grave, while peace be to his ashes.

And Sister N. A. Alling of Stockton Grange, our sweet singer, has been summoned to the Grange choir above. The melody of her voice was surpassed by the melody of her life. We knew her at her farm home, when two sweet girls, a bright boy and a loving father and husband, were wont to meet in sweet communion. How often! oh, how often! have we, since her death, thought of that now lonesome house, that saddened husband, those motherless children. May God, in his goodness, care for all.

But the list of the good and the true who have left us is yet incomplete; for we find, on rollcall, that these virtuous, loveable, worthy friends—brothers and sisters—do not respond. As we have said of Brother Hooper and Sister Alling, so say we of each of these—Sister P. Peterson of Antelope Grange and Sister A. J. Woods of Tulare Grange.

Bro. H. Davenport, for many years the venerable Chaplain of Sacramento Grange, and, at the time of his death, the oldest member of the Order in California, has been called to his Father's mansion during the past year.

Let suitable resolutions be prepared, appropriate devotional services held, and the memorial page dedicated to those who have left us.

CONCLUSION.

A brief review of the year's work gives the following: New Granges organized, viz., Madera, New Hope, Independent; and the following named have been reorganized: Wheatland, Petaluma.

A thorough canvass of the State, in behalf of the Order, has been made by competent speakers, at a nominal expense to the State Grange.

The change of official organ was made without any friction or personal feeling. The Representatives of the State Grange have been hospitably received and welcomed by members of the Order wherever they have gone.

There was in the treasury of the California State Grange, on the 1st day of September, 1892, the following amounts: General Fund, $660 89; Lecture Fund, $1695.63; total amount on hand, $2356.52

Let us take such action at this session as will compel candidates for legislative officers to know what we need in the way of legislation, and will encourage them, if elected by our votes, to remember us and our interests when they are in office.

We have met in the "Garden City" of the West for the deliberations of another annual session. This is a city noted for its beauty, its wealth and its intelligence. Here, we find the charming electric light, the speedy electric car, and the purest and best type of electric, magnetic, hospitable men and women. Here, schools are numerous, churches plentiful, and intelligence almost universal. Here, the eagle of America may well want to find a home and rear an offspring noted for its independence. Here, all that is progressive, honest, brilliant and American may well want to find an abiding place. And here we find ourselves, on invitation of San Jose Patrons and San Jose citizens, assembled for the good of our Order. Let us *act* with *magnetic, electric, honest, intelligent* purpose. Let no one go away and say, "The meeting is a failure;" let no harsh word be uttered to wound a sensitive heart; let no undue haste be made, yet let no time be lost in useless labor. Let the mantle of charity—which each one shall sometime need—be ready to cover the mistakes which we may think others make. Let the love of Humanity overshadow the love of self or of local section; let WISDOM SPEAK, while Courage, Virtue and Industry listen; let manhood be on guard at the outer posts, while womanhood counsels and assists at all our meetings. Let the experiences of the *past* join hands with the intelligence and honesty of the present, to the end that what we do, or say, or think, may redound to our honor and the benefit of the world in the *future*. In short, let us "*act, act* in the living present, heart within and God o'erhead."

Fraternally submitted.

E. W. DAVIS.

OVERSEER'S REPORT.

To the Officers and Members of California State Grange—DEAR PATRONS: The fleeting wings of Time, unwearied in their flight of other years, again bring us to the crowning glory of the season—the meeting and greeting of worthy sisters and brothers, from center to circumference of our golden State. And while hand clasps hand, and love warms the heart, the soul shines forth untrammeled by conventionality or creed, and the trials and tribulations of the year—if not of a lifetime—are shaded and softened by a mute sympathy which binds us closer, nearer and dearer, in our great family reunion.

Since our last parting farewell to the kindly remembered and noble patrons and people of Haywards, many eventful incidents have been transcribed upon the historic page, to be conned with pleasure, distrust or doubt, when gray old Time shall have added yet another century to the affairs of men; and in all this the Grange has played no unimportant part, has left no unredeemed pledges, and has lost nothing which a quarter of a century of education in unselfishness, humanity and truth has secured.

Since our last convocation, my official labors have been (regretfully) nothing. An aggravated attack of la grippe, which has continued, in a measure, until to-day, took complete possession of me soon after our meeting, and incapacitated me for anything useful, much less ornamental; yet, with pen and thought, it has been my privilege to visit many a Grange home and farm—not only here, but across the "mountains"—and to have heard not only the rejoicing, but the whispered secret of the burdens of many a weary matron, and the smothered wrath of many a wrong-racked patron.

The year just past has witnessed a victory for the Grange, in one of the most severe trials of its life, and, in the face of vacillating friends, who claim it does nothing, and jealous enemies, who claim it does too much, has unflinchingly stood at the post of honor which twenty-six years of broad, liberal, national service has gained for it, and stands to-day in the giant strength of its manhood and womanhood the peerless champion of law and order, and the acknowledged foe of dishonesty and crime. How its pioneers should rejoice that their sacrifices have been so richly rewarded, and how a grateful agriculture should ennoble and perpetuate its future! There is grave need that this should be done; for, while neither an alarmist nor a prophet, nor even the "son of a prophet," I daily note, with shame and indignation, the trend of the times in lockouts, strikes, recriminations, anarchy, violence and bloodshed, coupled with a sovereign contempt for all laws, both human and divine. The worm is already at the root of the tree of Liberty. Gold and place is God, and both are wildly, madly worshipped. Our nation is fast becoming the battle ground of cast and clan, of muscle and mind, of greed and avarice, of stupid ignorance and brilliant rascality, without a thought of anything but self aggrandizement, even if it be secured over the trampled remains of all that justice should protect, that right should secure, that liberty should defend and that patriots revere as sacred. Our public servants are becoming dictators, our laws death traps, our temples of learning are being undermined through intemperance and fanaticism, our trades are monopolized by tyrannical unions, who peremptorily refuse the sons and daughters of this so-called free republic, who are not in the ring, the right to acquire that skill in some useful pursuit, by which they may honorably support themselves and become factors of strength to the nation, instead of as now, strewn across every commonwealth as tramps and transgressors, punished and maintained in asylums, penitentaries and reformatories by the industrious millions, already overtasked and overtaxed through profligacy and misrule.

If such things are the legitimate result of centuries of civilization, then commend me to the savage in his wigwam, for there at least "Ignorance is bliss," and the slumbering volcano with all its dread powers of destruction, admired as the most beautiful eminence in all the landscape. But do you ask, is there no panacea for these ills? Happily yes. The deadliest poison has its antidote and requires only discovery and application to effect a cure. Yet we believe that the antidote for the poison of our body politic is to come from a different direction than that so confidently claimed. Our statesmen have been hugging the delusion that we may transgress the vital laws governing the existence of republics, and yet escape the melancholy doom which has overtaken others as proud as our own, if not as powerful, through our system of universal, and especially higher education. Laud education to the skies if you please, and you will scarcely sound its meed of praise but as religion requires faith supplemented by work for the fruition of its tenets, so education requires something more than the mere idea in the abstract. It requires not the education of the intellect alone (we are suffering from a superabundance of that already) but of heart and hand as well, the moral and physical if you please as well as the intellectual. It has been truthfully said, cultivate the physical exclusively, and you have an athlete or a savage, the moral only, and you have an enthusiast or a maniac, the intellectual only, and you have a diseased oddity, it may be a monster. It is only by training all together physical, intellectual, social and spiritual that the complete man can be formed. Unfortunately the higher education is lacking in a number of these ingredients, hence, cannot alone be relied upon to bridge the abyss of destruction already narrowing at our feet. The discrepancy must be supplied, and it is found in the happy homes of the descendants of those patriotic yeomen, who, when other tyrants no less relentless than those of to-day, planted the iron heel of despotism on the heart of this incomparable land, left their plows in the furrow to cooperate with farmer Washington in gaining us a heritage which we should make greater sacrifice to preserve intact, than they to secure. Yes, my friends, I tremble for my country, but have hope in its reserves, and that reserve, egotistical as you think me, is found in the intelligent tillers of the soil, and mainly, in the order of Patrons of Husbandry. There is not a day but I thank God for the Grange, and sincerely believe that the time is near, aye, very near, when it will be the Gibraltar on which the contending factions of selfishly organized capital on the one hand and as selfishly organized labor on the other, will be shivered to atoms and sent to their reward, while the Grange will be reverently proclaimed in high places, the savior of those most sacred of human possessions, the flag, the farm, and the fireside. All of which is respectfully submitted.

A. P. ROACHE, Overseer,

SECRETARY'S REPORT.

W. M., Officers and Members of California State Grange: The work of another session demands our attention. What have been the lines of our efforts, our successes and our failures, and what are the signs of our future? Your Secretary, as a single laborer in the vineyard, can only at best answer a minor portion of these queries. With the additional interrogation—what shall we do for the further upbuilding of our glorious enduring Order?—these are the main questions of our annual council, and must be solved by the words and minds of the many earnest and intelligent brothers and sisters gathered from all quarters of our field of labor.

To be useful and valuable for your deliberations, a Secretary's report must deal largely in figures, which are, proverbially, drier than our "wonderful climate."

FINANCIAL STATEMENT—GENERAL FUND.

RECEIPTS from Sept. 1, 1891, to Sept. 1, 1892.

Balance in treasury Sept. 1, 1891 (as per last statement)	$ 636 07
Interest to October 1, 1891	16 45
To cash sixth degree	78 00
" fifth "	28 00
" from Trade Card Houses	4 12
Subordinate Grange dues	1,194 10
Subordinate Grange fees	218 00
Supplies	173 10
Carpinteria Grange on deposit	55
Total receipts	$2,348 39
Total disbursements	1 673 85
Total balance	$ 674 54
Less cash in hands of Secretary	13 65
To total in treasury Sept. 1, 1892	$ 660 89

DISBURSEMENTS from Sept. 1, 1891 to Sept. 1, 1892,

Sept.	1	By Dewey & Co., rent of office	$ 15 00
"	1	" A. T. Dewey, salary	50 00
"	10	" Dewey & Co., printing degree blanks (original form)	5 00
"	10	" E. B. Balis, Sec'y's Assistant, bill of sundries	14 50
Oct.	1	" A. T. Dewey, salary	50 00
"	1	" Dewey & Co., rent of office	15 00
"	10	" Dewey & Co., printing Official Communication	4 00
"	10	" Dewey & Co., printing W. Work Circulars	4 00
"	10	" A. T. Dewey, sundry cash advanced as per bill	6 25
"	10	" Mrs. D. D. Hull, sundry cash advanced as per bill	8 80
"	10	" C. A. Hull, sundry cash advanced as per bill	22 30
"	10	" H. E. Pastor, printing	7 00
"	10	" A. T. Dewey, sundry cash advanced as per bill	5 30
"	10	" J. C. Irvine, repairing seal	2 00
"	10	" Dewey & Co., printing delegate certificates	2 50
"	10	" Upton Bros., printing	8 50
"	10	" A. T. Dewey, sundry cash advanced as per bill	6 75
"	10	" Eden Grange, to pay hall rent for State Grange	100 00
"	10	" Haywards Hotel, board Sec'y's Assistant and Typewriter	22 50
"	14	" National Grange for quarterly dues for September	60 20
"	20	" National Grange for sixth degree certificates	39 00
Nov.	2	" A. T. Dewey, salary	50 00
"	2	" Dewey & Co., rent	15 00
Dec.	9	" Dewey & Co., printing	5 00
"	9	" Geo. Spaulding, printing	9 25
"	9	" Dewey & Co., printing	2 00
"	9	" A. T. Dewey, sundry cash advanced as per bill	5 10
"	9	" Upton Bros., printing	16 75
"	9	" A. T. Dewey, salary	50 00
"	9	" Dewey & Co., rent	15 00
Dec.	9	By A. T. Dewey, stamps for Secretary's use	20 00
"	9	" Dewey & Co., printing	10 00
"	9	" Dewey & Co., printing	9 00
"	22	" Dewey & Co., printing 500 copies of Annual Proceedings	95 00
"	22	" Geo. Spaulding, printing	7 00
"	22	" Dewey & Co., printing	6 50
Jan.	2	" A. T. Dewey, salary	50 00
"	2	" Dewey Publishing Co., rent	15 00
"	10	" National Grange, quarterly dues for December	28 40
"	10	" A. P. Lemmon, printing	5 00
"	10	" A. T. Dewey, sundry cash advanced as per bill	5 00
"	10	" A. T. Dewey, sundry cash advanced as per bill	1 93
"	10	" Geo. Spaulding, printing	4 50
Feb.	1	" A. T. Dewey, salary	50 00
"	1	" Dewey Publishing Co., rent	15 00
"	9	" A. T. Dewey, stamps for Secretary's use	20 00
"	12	" E. W. Davis, 500 stamped envelopes	11 00
"	12	" Geo. Spaulding & Co., printing	6 00
"	24	" Dewey Publishing Co., printing	2 50
Mar.	1	" A. T. Dewey, salary	50 00
"	1	" Dewey Publishing Co., rent	15 00
Apr.	1	" A. Akin, four dozen G. E. song books	8 10
"	1	" A. T. Dewey, sundry cash advanced	3 25
"	1	" Herald of Trade Pub. Co., printing	28 15
"	1	" A. T. Dewey, sundry cash advanced as per bill	5 60
"	1	" A. T. Dewey, salary	50 00
"	1	" Dewey Publishing Co., rent	15 00
"	5	" B. F. Walton, expense attending Executive Committee meeting	39 70
"	5	" Geo. P. Loucks, expense attending Executive Committee meeting	16 50
"	5	" Thos. McConnell, expense attending Executive Committee meeting	37 40
"	5	" Herald of Trade, printing	5 00
"	5	" A. T. Dewey, sundry cash advanced as per bill	5 00
"	19	" National Grange quarterly dues for March	40 05
May	1	" A. T. Dewey, salary	50 00
"	1	" Dewey Publishing Co., rent	15 00
"	1	" Herald of Trade, printing	2 00
"	1	" A. T. Dewey, sundry cash advanced as per bill	7 00
"	1	" Herald of Trade Pub. Co., printing	4 50
"	9	" A. T. Dewey, stamps for Secretary's use	20 00
June	1	" A. T. Dewey, salary	50 00
"	1	" Dewey Publishing Co., rent	15 00
"	2	" National Grange, 50 digests	9 50
July	6	" A. T. Dewey, salary	50 00
"	14	" National Grange quarterly dues for June	25 65
"	14	" Dewey Publishing Co., rent	15 00
Aug.	9	" A. T. Dewey, cash advanced as per bill	9 60
"	9	" National Grange, 100 Rituals	16 00
"	9	" National Grange, four dozen song books	16 00
"	9	" A. T. Dewey, salary	50 00
"	9	" Dewey Publishing Co., rent	15 00
"	9	" A. T. Dewey, sundry cash advanced as per bill	6 25
		Total Disbursements	$1,673 85

RECAPITULATION OF RECEIPTS AND DISBURSEMENTS.

GENERAL FUND.

RECEIPTS from Sept. 1, 1891, to Sept. 1, 1892.

Balance in treasury Sept. 1, 1891 (as per last statement)	$ 636 07
Interest to Oct. 1, 1891	16 45
To cash sixth degree	78 00
" fifth degree	28 00
" from Trade Card Houses (to Oct. 1, 1891)	4 12
Subordinate Grange dues	1,194 10
Subordinate Grange fees	218 00
Subordinate Grange supplies	173 10
Carpinteria Grange on deposit	55
Total receipts	$2,348 39
Total disbursements	1,673 85
Balance	$ 674 54
Less cash in hands of Sec'y	13 65
Total in treasury Sept. 1, 1892 ——	$ 660 89

DISBURSEMENTS from Sept. 1, 1891, to Sept. 1, 1892.

National Grange dues Sept. 1, 1891, to Sept. 1, 1892	154 30
Rent Sept. 1, 1891, to Sept. 1, 1892	180 00
A. T. Dewey, Secretary's, salary one year	600 00
Stamps (exclusive of $15 on hand Sept. 1, 1891) for postage on letters, circulars, reports, etc	60 00
Printing circulars, blanks, supplies, etc	154 15
Blank books, stationery and other supplies for State and subordinate Granges	51 60
Expressage, freight, money-orders and sundry expenses	81 50
Dewey & Co., printing and binding Proceedings	95 00
Memorial and incidental expenses	31 20
Railroad fare and expenses of Secretary's assistants at State Grange	22 50
Eden Grange to pay hall rent for State Grange	100 00
Cash forwarded National Grange for sixth degree certificates	39 00
E. W. Davis, cash advanced for supplies	11 00
Traveling expenses of members of Executive Committee	93 60
Total	$1,673 85

LECTURERS' FUND.

RECEIPTS from Sept. 1, 1891, to Sept. 1, 1892.

Sept. 1, 1891—Balance (as per last statement)	$1,664 78
Subordinate Grange dues	970 40
Total receipts	$2,635 18
Total disbursements	933 10
Total balance	$1,702 08
Less cash in hands of Sec'y	6 45
Total in treasury Sept. 1, 1892	$1,695 63

DISBURSEMENTS from Sept. 1, 1891, to Sept. 1, 1892.

1891.	Oct. 10.	By G. P. Loucks, expense as Deputy	$ 26 70
	" 10.	" Mrs. E. Z Roache, expense Woman's Work Committee	5 00
	" 10.	" B. F. Frisbie, expense as Deputy	28 45
	" 10.	" Don Mills, personal cash deposited by mistake Sept. 27, 1889	4 00
	Dec. 9.	" G. P. Loucks, cash advanced to J. D. Huffman	14 70
1892.	Jan 13.	" J. D Huffman, expense as Lecturer	15 75
	Feb. 12	" E. W. Davis, expense as Master	31 05
	" 24.	" W. L. Overhiser, expense as Deputy	38 60
	Mar 25.	" Allen B. Lemmon, printing	3 50
	Apr. 5.	" E. W. Davis, expense as Master	42 50
	" 5.	" Dr. Jas. Caples, expense as Deputy	7 50
	" 5.	" B. F. Frisbie, expense as Deputy	42 60
	" 5.	" J. D. Huffman, expense as Deputy	53 40
	" 5.	" Mrs. J. A. Perry, securing charter list of Madera Grange	25 00
	" 5.	" I. C. Steele, expense A. P. Roache and wife	17 40
	" 19.	" W. L. Overhiser, expense as Deputy	37 65
	" 19.	" W. L. Overhiser, expense as Deputy	117 30
	" 23	" S. T. Coulter, expense as Deputy	24 70
	May 1.	" Daniel Flint, expense as Deputy	18 95
	" 9.	" S. Goodenough, expense as Deputy	9 15
	" 9.	" J. D. Huffman, expense as Lecturer	68 50
	" 19.	" Geo. Steele expense as Deputy	17 45
	" 24.	" E. W. Davis, expense as Master	20 85
	" 24.	" S. T. Coulter, expense as Deputy	23 10
	June 2.	" J. V. Webster, expense as Deputy	17 05
	" 11.	" Don Mills, expense as Deputy	50 00
	" 18.	" Robt G. Williams, securing charter list	25 00
	" 18.	" A. P. Martin, expense as Deputy	25 00
	July 14.	" W. L. Overhiser, expense as Deputy	78 25
	Aug. 9.	" I. C. Steele, expense as Deputy	15 25
	" 9.	" B. F. Frisbie, expense as Deputy	16 15
	" 9.	" J. D. Huffman, expense as Lecturer	12 50
		Total	$ 933 10

By amendment of our State Grange Constitution at our last session, the per capita dues paid by subordinate Granges to the State Grange were reduced one-fourth—from 20 to 15 cents per quarter. This amendment took effect with the quarter ending March 31st, so that our annual report to September 1st embraces three quarters at the reduced rates.

The admission fees paid to subordinate Granges by applicants remained as before—$3 for men and $1 for women—but the fees paid by the subordinate Granges to the State Grange were reduced for men from $1 to 50 cents and for women from 50 cents to 25 cents.

The statement shows that our income the past year from dues amounts to $2164.50; from membership fees, $218; from printed supplies and other sources, $173.10; total, $2555 60. Income the previous year: From dues, $2371; fees, $398 45; supplies, etc., $152 30; total, $2921 75. Decrease in 1892, $366.15. That there was no greater decrease from reduction of dues is accounted for from the fact that a portion of the dues paid in during the past 12 months were for returns of previous quarters at the higher rate. Consequently, the effect of the reduction will be more fully felt hereafter.

The following statement collated from the published proceedings of the State Grange, I believe, will prove valuable for reference and comparison by members:

The greatest special feature of the year's work has been termed the "State Grange Canvass," adopted by Worthy Master Davis, assisted by the Executive Committee, Past Masters, Deputies and Secretary in planning and carrying out the system for the first time in this or any other State. Nearly all the subordinate Granges heartily joined in the canvass by consenting to the request of the W. M. to call special meetings for receiving the State Grange Lecturers corresponding to the convenience of the latter for visiting subordinate Granges in rotation according to location. The Lecturers labored devotedly, and commendable enterprise was evinced on the part of many Granges to have a large class of candidates to receive instruction in the 3d and 4th degrees from the able hands of the State officers. Through this means, and the able lectures given in open meetings accompanying the special Grange sessions, goodly additions have been made to our membership in most parts of the State.

Two subordinate Granges have been stricken off the list as dormant, through failure to make returns for more than two quarters, viz: Gridley, No. 290, and Walnut Creek, No. 119.

Three dormant Granges have been reorganized and added to roll-call, viz.: April 27th, Grimes Grange, No. 293, with 23 members, by Gen. Deputy B. F. Frisbie; May 7th, Wheatland Grange, No. 260, with 26 members, by the same; June 4th, Petaluma Grange, No. 23, with 34 members, by Deputy A. P. Martin.

Three new Granges have also been organized, viz.: March 12th, Madera Grange, No. 300, with 28 members, the charter list being secured by Mrs. J. A. Perry and the Grange instituted by J. D. Huffman, S. L.; May 20th, New Hope Grange, No. 301, at New Hope, San Joaquin Co., with 30 members, by R. G. Williams, Deputy; Aug. 31st, Independent Grange, No. ——, at Linden, San Joaquin Co., with 48 members, by W. L. Overhiser, P. M. This gives an increase of four to the roll-call of subordinate Granges.

We are taught in all things by experience, and in my opinion the lessons of the State Grange canvass indicate that it is important that all Granges should, if possible, be visited by previous appointment by some State officer or Gen. Deputy; that while the movement continuously all along the line may have been necessary and the best on starting a new system, it will prove more satisfactory in future efforts to not hold the meetings on consecutive days in Granges in near proximity nor to try to supply two or more leading lecturers to visit the Granges of the entire State at one season of the year.

The financial returns of the year indicate a positive increase of membership all told in the jurisdiction. This is remarkable in view of the efforts put forth by other and more or less competing beneficial and fraternal associations, and all the more creditable to the sterling organization and principles of our firm and advancing Order. Let this, and the hope and belief that our goodly association is destined to avoid the rocks and quicksands of all previous attempts to organize the farmers of our land for protection against onerous legislation, monopolies, fraud, political and other corruptions, stimulate every Patron with strength for greater labors and nobler deeds in forwarding our cause, which is so just, to the highest point of success and the widest sphere of benefit to our own fraternity and humanity.

The State canvass enlivened up old Granges, and inspired and enthused the lecturers themselves. The open meetings connected

therewith in many places were successful, and extending information of the principles and merits of the Grange to outsiders, has no doubt sowed good seed that will bring forth hereafter.

It is a singular (if not unregretted) fact that no proposed amendment to either the National or State Grange Constitution is presented for consideration at this session.

In nearly all instances where members have reported patronizing the Grange Trade-Card system their experience has been favorable. For some reason, however, the system has not been well-patronized yet through either the San Francisco, Sacramento or Stockton firms that have contracted with the Executive Committee. This may be largely through a lack of thorough understanding of the system and privileges involved. About the same can be said of the Patrons Relief Association. I believe that both enterprises, with due encouragement, can be made strong auxiliary helps for the perpetuity and progress of our Order. Two Rock has been the banner Grange in cooperative enterprises, and its Master will duly present resolutions on the subject for your action.

By request of Master J. H. Brigham, Chairman of National Grange Legislative Committee, four separate blank petitions were forwarded in March to each subordinate Grange for signatures, as follows: In favor of Free Delivery of Rural Mails; Pure Lard Bill; Pure Food Bill; Gambling in Farm Products. These petitions were to be finally returned to the Secretary, John Trimble, of the National Grange Legislative Committee, Washington, and I hope were numerously signed and promptly forwarded and used to good advantage.

Pardon me, fellow Patrons, if I again urge too strongly the employment, if possible, of some zealous and competent officer or member of the Order, at a fair salary, who has the rare endowment of being fitted to make a farm-to-farm canvass in a becoming manner, during at least six months of the coming year, believing, as I do, from past experience and observations, that a larger amount of successful building-up of the Order can be thus speedily accomplished than in any other at present available manner.

The list of new and reorganized Granges shows that a few of our good brothers and sisters have labored earnestly and successfully in the field. It is to be hoped their example will inspire many others to cultivate and garner even greater sheaves to deliver at our next annual council and feast.

Of the many good deeds of California Patrons, I wish to congratulate you most of all upon the part taken in securing the Australian ballot system of voting in our State, knowing full well without the action of this State Grange and the self-sacrificing work of numbers of individual Patrons, that most important of all new laws would not now honor our statute books.

Let us be patient, kind, forbearing, forgiving and ever helpful, one to another, that our councils may be harmonious and our labors finally blessed with a liberal harvest. Fraternally,

A. T. DEWEY, Sec'y S. G. of Cal.

POMONA'S ANNUAL REPORT.

Pomona, in ages past, in her Roman home was crowned goddess of tree fruits. Armed with the pruning knife, she buried herself within her sacred groves curtailing the branches that straggled out of place, repressing the too luxuriant growth and destroying nests of insects, knowing that to reap a luscious and bountiful harvest her trees must be free from incumbrance and pest; and not alone for the mere preserving of her trees did her symbol prove a treasure but as time passed and not being entirely satisfied with what she had, she sought for something new and better, and after repeated experiments and trials she knew how and what to do. She had the means with which to split the twigs to insert a graft, thereby making them adopt a nurseling not their own.

After years of experimenting and toil in her Roman gardens she crossed the seas and took up her cultivation of fruits in a field called the "Grange," where the cultivation of mind was was added to the cultivation of fruits. It was here she met Ceres with her hands full of golden grain, and Flora prepared to strew her path with flowers. And then she knew that the new home would be amongst diversified crops with her sisters Ceres and Flora as co-workers. Thus, she has toiled on from year to year dispensing her fruits with a liberal hand. Now, let us consider for a few moments what use we can best make of the fruits of our labors for the furtherance of the Order we all love so well.

I think we will agree that the National Grange made a move in the right direction, in appropriating $20,000 for the erection of a Grange Home in Washington, But to complete this temple will require thousands of dollars yet unsubscribed. So, I say, Sisters Flora and Ceres, why can not we interest our representatives in every Subordinate Grange in the State, as their each successive season rolls around to give a festival in their name; the amount derived therefrom to be added to the temple building fund? And let us further ask that a report of the amount so derived be forwarded to us from every Grange, in time for us to embody it in our annual report next year, that we may all know what each Grange has accomplished in this way.

For thus it is with societies as in private life, if we wish to advance we must have some object in view, some plan formed to accomplish. We can not let things of the future entirely alone if we wish to increase in knowledge and usefulness Now that we have a plan that our superiors have presented to us let us bend every effort to assist them in its realization. Like Pomona, let us not be satisfied with what we have, but seek to improve and advance our possessions. Yet little will be accomplished if we fail to broaden and cultivate our intellects, but to have them bear a bountiful harvest we must so live as to develop and strengthen our physical beings.

May Pomona's symbol be of service to us in pruning selfish, imprudent and jealous thoughts from our minds. And in faith let us hope that we will ever be charitable to one another and mankind. Respectfully submitted,

ANNETTE BROUSE,

REPORT OF STATE DEPUTY W. L. OVERHISER.

Worthy Master, Officers and Members of California State Grange: I will, in this report, make the statement of my Grange work, since our last annual meeting, as brief as possible.

December 7, 1891, I visited Eureka Grange, at Auburn, Placer Co., by invitation of its Master, Bro. Grantvalley, to make a house-to-house canvass, and also to fill several appointments in that section, which had been made for me by Bro. Grantvalley. I arrived in time to attend a Grange meeting in the afternoon; in the evening we held a meeting in Edwood schoolhouse. There was a good attendance, and we secured one application for Eureka Grange. I went home with Bro. and Sister Bracher for the night. Next morning Bro. B. and myself started, in his vehicle, for Clipper Gap; weather cold and threatening rain. Arrived at Bro. Ham's residence, near Clipper Gap, about noon, where we took dinner. A meeting was to be held in the evening, but it commenced to rain early in the afternoon, and, as it was the opinion of all who were at Bro. Ham's that there were strong indications of a hard storm, I decided to take the train which would soon be due, and go home, to return and resume work when the weather should become settled. Receiving another invitation from the Master of Eureka Grange to visit them January 15th, I left home, on that date, for Auburn; train two hours late; did not arrive until 2:30 P. M.; went directly to the hall, and arrived just as the Grange was about to initiate a class of five. After initiation the second degree was conferred, and I then gave them the work and explained the Trade-Card system. It was voted that as many of the members as could would attend Magnolia Grange, who were to install their officers and have a Harvest Feast.

Next morning I left Auburn with a party of 12 good and true Patrons, in a four-horse coach, for Magnolia Grange hall, were we met the members of Bro. Still's Grange, installed their officers and had a profitable session. I returned to Auburn the same evening and spent the night with Bro. Giantvalley. Next morning we started early and canvassed all day. All we met seemed to think favorably of our Order, but wanted more time to consider the question of joining, as many had joined the Alliance, and were waiting to see how it succeeded.

Monday, Jan. 18th, I started out in good season, with Bro. G., for another trial to secure applications, with about the same result as the day before. At 2 P. M. I held a called meeting and conferred the third and fourth degrees on four members. Tuesday, at 6 A. M., took the train for home.

There seems to be plenty of material in Placer county for Granges, but it requires more time than I could then give, and an energetic organizer, to bring about satisfactory results.

The next call for help was from the Worthy Master of Vacaville Grange, to come and spend a week in canvassing the surrounding country, and see what could be done in the way of reviving their Grange. On the evening of March 9th I left for Vaca Valley; arrived at 10 A. M. next day, was met by Bro. Webster, and we commenced work at once, securing five applications by evening. Next day Sister Smith (at whose home I had spent the night) and I rode all day, stopping at every house where she thought the inmates would be at all liable to favor the Grange. We met with poor success in getting applications, but distributed Grange literature among the people.

Saturday, the 12th, I attended Vaca Valley Grange; only ten members present; received six applications and arranged for a called meeting on Monday at 2 P. M.

Saturday evening several members met me at Sister Smith's, and I gave them the unwritten work. Sunday afternoon, called on Bro. Ashley and family, and gave the work to the Worthy Master. Monday forenoon canvassed, and at 2 P. M. held a meeting at Grange hall, elected and initiated seven members and conferred the second degree.

Tuesday, March 15th, I left Vacaville for Woodland. At the depot I was met by a man sent by Bro. Blowers, whom I found at home, sick and unable to attend to business. Bro. B. thought there could be a Grange organized at that place, but as my time was limited, I could not remain long enough in Woodland to organize one.

Wednesday, the 16th, I went to Dixon. Master Kline received me. In the afternoon we circulated a call for an evening meeting, which was held, and I gave the work. I found that a good, active canvasser was needed, to work up an interest and get members in the order. Left for home next morning.

On March 20th I left home to fill a series of appointments arranged for myself and other Deputies by the Master and Executive Committee of State Grange, to commence at Salinas and continuing to Santa Barbara. I first went to San Francisco, stopped overnight, and took the morning train for Salinas, arriving at 1 P. M., Past Lecturer Bro. Geo. Steele arriving soon after from his home in San Luis Obispo county. We were met by the Master and secretary of Salinas Grange, and learned from them that no arrangement for or announcement of the meeting had been made. Tuesday, the 22d, we took a team and canvassed, and learned, by conversations with different parties, that the prospect was favorable to revive the Grange at Salinas, if sufficient time was taken by good canvassers to work it up. But, as appointments had been made for us at other points, we were obliged to leave on the 1 P. M. train Wednesday.

Bro. Steele became quite enthusiastic, and said he would meet me, at any time I might name, and spend a week to revive that Grange; but I have not yet found time to carry out our plan. We arrived at Jolon, the next point on our program, at half-past seven Wednesday evening, a portion of the distance on the train, and then 20 miles by stage. We were received by Past Master Paulsel and taken to his home.

Thursday, the 24th, we met with San Antonio Grange, and held a closed meeting in the forenoon, conferred the third and fourth degrees and had a feast. In the afternoon an open meeting was held, and Bro. Steele gave them one of his impressive talks. The whole affair seemed to be a grand success. The evening was devoted to enjoyment by the young people.

Friday, March 25th, Bro. and Sister Paulsel took us over to San Lucas, where we held a closed meeting in the forenoon, conferred the third and fourth degrees, and had the usual feast. In the afternoon we held an open meeting with good attendance. I think Bro. Steele's earnest words impressed the people in favor of the Grange.

Saturday, the 26th, we left San Lucas at 7 P. M. with Bro. Thos. Ross, Master of San Lucas Grange, who took us in his carriage to Bradley. Learning that no arrangements had been made for a meeting we immediately sent a dispatch to San Miguel, that we would be there that evening. We were met at San Miguel depot by a lady whose name I have forgotten, who, with her husband, was formerly a member of San Jose Grange. It was soon made known that a Past Lecturer and a Past Master of the State Grange were in town and had accepted an invitation to attend the Alliance meeting to be held that evening, and would speak. We were both called on. Bro. Steele gave them a good, earnest talk, and I think the people went home thinking more favorably of the Grange than before.

I will say, in passing, that in this section of the country, at least, the Alliance seemed to have swallowed up whatever of interest there may have previously been for the Grange, and that is why, in some places, no arrangements had been made for Grange meetings, as we had reason to expect there would be. The omission of those meetings was the cause of my being ahead of time in the later appointments.

Sunday, March 27th, at San Miguel, Bro. Steele and I parted, he to return home, and I left for Paso Robles on the 4 P. M. train, where I arrived in the evening, remained over night, and left by stage next day for Creston, arriving at Bro. J. V. Webster's at 9 P. M., unexpected so soon, but met with a warm Grange reception. Tuesday, March 29th, it rained all day and night, two inches of rain falling during that time, so that no canvassing could be done. At 10 A. M. Wednesday, Bro. Webster and I left for Paso Robles to hold a public meeting in the afternoon. There was only a fair attendance, the rain doubtless keeping many away. Returned from Paso Robles and went to Creston next day and talked up the Grange. It was showery all day.

Friday, April 1st, Bro. Webster took me around to see the people, and work up an interest in the Grange. We met with but little encouragement. Saturday, April 2d, was the day appointed for the Grange meeting, but there was not a quorum present. In the afternoon we held an open meeting, with a fair attendance, after which the the citizens met to organize a People's Party Club. Sunday, the 3d, Bro. Webster and I left his home in his vehicle for Bro. Geo. Steele's, arriving about 5 P. M., after a long and tedious ride over the mountains. There we met with a cordial reception, and were well entertained by Bro. Steele and family.

On Monday, April 4th, Bros. Steele, Webster and myself attended Arroyo Grande Grange, Bro. Steele Master. We held a closed meeting in the forenoon. After dinner an open meeting was held, with a good turnout. Bro. Webster gave them one of his practical talks.

Tuesday, April 5th, we took the train for Santa Barbara, arriving at Santa Ynez in the evening. Stopped over night and left at 8 o'clock next morning for Santa Barbara, by stage, over the mountains, arriving in the evening. Being two days ahead of time, I did not meet Bro. Woods as we had previously arranged. Bro. W. lived some distance in the country, so I looked up the Secretary of the State Alliance, Bro. Barbee, formerly a member of the Grange, and learned from him that the County Alliance was having a two days' meeting. Accepting his invitation to attend, I met many of the members of Carpenteria Grange there, who gave me a warm welcome. I learned that they were arranging for me to stay with them several days, and expected to hold their meeting the next week, but as I could not stay so long, they changed their program, and held the Grange meeting at the time appointed by the State Grange. The two meetings kept many of them on Grange and Alliance work four days, but they responded well. We had a closed meeting on Saturday in the forenoon, and an open meeting in the afternoon, with good attendance, many Alliance members who did not belong to the Grange being present. I talked until I was completely exhausted, and not a single person left the hall. When I stopped, some present, not members of the Grange, began to ask questions. I suggested that some music would rest us all. After listening to some good music by the choir, I then spent nearly an hour answering questions. They expressed themselves well pleased with the meeting and wished both Grange and Alliance Godspeed. I went home with Bro. Cadwell for the night and left next morning for Santa Barbara, where I took passage on the steamer for San Francisco, reaching that city at 10 A. M., April 12th, and Stockton the same evening.

My next appointment, as arranged by the Executive Committee, was with the State Lecturer, Bro. Huffman, to commence Monday, April 18th, at Vacaville; Grimes, Wednesday, 20th; Antelope, Friday, 22d; Ocland, Saturday, 23d; Millville, 25th; Red Bluff, 28th; Nord, 29th, and Chico, 30th. As Bro. Huffman has given you a detailed statement of our work, I will not go over the ground again, but will state that I received a letter from W. M. of S. G. requesting me to attend Dixon Grange picnic on the 30th of April. I then arranged with Bro. Huffman to finish up our engagement at Chico on the 30th and sent a communication to Worthy Master Master of Dixon Grange that I would be there on the evening of the 29th. But, again, we had to change our plans, for on reaching Red Bluff it was raining, and continued to rain all night, and learning that no arrangements had been made for meetings at Nord or Chico it seemed useless for Bro. Huffman to go to either place, so he concluded to go with me to Dixon and if the weather was pleasant, to remain over and attend the picnic. When we arrived at Dixon we could find no accommodations for the night, as the earthquake had so shaken the buildings that the brick hotels were abandoned and the wooden ones were full. Bro. Huffman decided to go to Sacramento on the evening train. Bro. Dudley invited me to stop with him, provided I would sleep in his house which had been so shaken up that his family was sleeping in a tent. It rained during the night.

Friday, the 29th, the weather was pleasant. During the day, while riding with Bro. Dudley, and nearing town, another shock of earthquake sent the excited people rushing to the streets of Dixon. I remained over night with Bro. Dudley and family.

Saturday A. M., April 30th, there were indications of more rain. While waiting for the train to start for home, Bro. Aylesworth and family passed on their way to the picnic grounds, and I accepted their invitation to join them. Arriving at the picnic grounds we found a few had gathered in. After lunch I gave them a short talk on the aims and objects of the Grange and what it had accomplished, and I think a good impression was made on the few who were present. I have no doubt that if I could at that time have staid longer in that vicinity a Grange might have been organized at Davisville. The work laid out for me by Ex. Com. and Master of S. G. being finished, I left Dixon that evening, arriving home May 1st.

Tuesday, May 17th, I attended a picnic at Walls' Grove, near Linden, where I met quite a number of the old members of Linden Grange which gave up its charter several years ago. In talking with them I found they were in favor of having another Grange at Linden. I then made them this proposition: If they would insure 40 charter members I would organize a Grange. Bro. Walls and others promised to see what could be done. After waiting a reasonable time I called on Bro. Wall; he had turned over the papers I had sent him to Mr. McIntire, and advised me to see him. I found he had done nothing in the matter, but intended to soon. I waited another week and called on Mr. McIntire again, with the same result. Together, we then started in my buggy and I rode about 40 miles that day, and we secured several names. I now felt that the work was started. Following it up I succeeded in organizing "Independent" Grange with 48 charter members, all good and reliable. I feel assured it will be a good, enthusiastic Grange. In my experience I find that an organizer must attend strictly to the business in hand and not let his interest in the work lag until the new Grange is in good working order, as very much of its subsequent success depends on thorough work at its first meetings.

I attended three meetings of Independent Grange before it received its dispensation. It is now in good working order and is represented at this session of the State Grange by its Master, who will report its condition at the present time.

W. L. OVERHISER, State Deputy.

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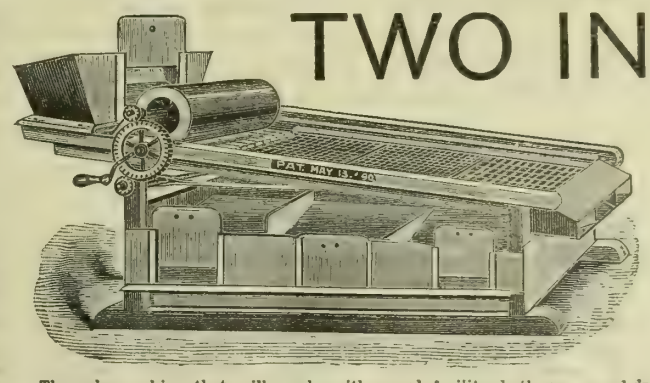
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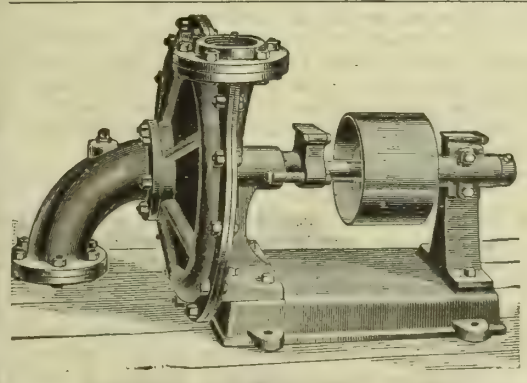
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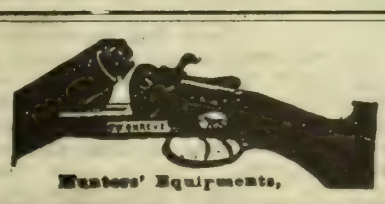
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The Home Circle.

The Norther.

Written for the RURAL PRESS by ISABEL DARLING.

With a quiver, a rush, and a whirl of the air,
Like the breath of a beast bursting forth from his lair,
The norther came down on the valley by night
And rioted still at the coming of light.
It swept down the highways,
And roared through the byways,
Then over the dark, shrinking forest it hung
And tore at its hair; it wrenched, twisted and flung
Each small, helpless thing, and then dropped as if spent,
With one morning's frolicsome mischief content,—
As still as a lion awaiting his prey,
As still as if listening; then far away
It moaned to the boughs of the shuddering trees
In mimicking scorn of the confident breeze
That came with the nightfalling in from the seas,
But fled with its soft, gently pitying tears
All chilled in the tumult of gathering fears,
All mocking with laughter,
The norther flew after,
Hurled back with the shriekings of savage delight
The blessing the ocean wind lost in its flight;
Then snatched into shreds the bewildered mist-clouds,
Called out to the ships in their pale, folded shrouds
And struck at the ocean's white, quivering hands;
But lingering long with the sea and the sands,
Forgot its resentment as over it stole
A tenderness born of the great Over-Soul,
And fluttering down by the water-worn rocks,
It whispered the secret of far-away shocks
Of battles, of earthquakes, of embryo stars
Flung forth into space, of fiery bars
That guard the mysterious, northernmost sea—
Of *all* pent-up forces that rage to be free.
Then glided the sea-wind, the soul of the waves,
Again from the innermost depths of the caves,
Caressed the fierce norther and veiled it in gray,
And sighed o'er the havoc it wrought on the way,
Till sobbing, repentant, at nightfall it turned,
And meekly accepting the blessing once spurned,
This strength that but yesterday raged to be free
Came bearing the clouds gathered over the sea,
With promise of plenty for famishing pain,
Of springtime and beauty, with down-dropping rain.

A Word in Season.

Written for the RURAL PRESS by ELSIE ANGE.

Mrs. Bradford had given one of her pleasant lunch parties, and as the afternoon passed in chat and fancy work, one of the guests, a pretty and graceful young woman, excused herself from remaining longer on account of her early dinner. She had no sooner left than she became the subject of an animated conversation.

"Who would think that was the gay, laughing Alice Flint of a few months ago?" asked one.

"Who, indeed?" echoed the rest of the guests.

"How she is fading!"

"What a fretful, unhappy manner she has!"

"How sarcastic she is upon the subject of marriage!"

Thus the comments passed around. Mrs. Bradford listened in silence, and she noticed that but little sympathy was expressed for the bride, who, the company seemed to think, failed to appreciate her husband, who was a man domestic in his tastes, temperate in his habits, and faithful in his business.

"Such a husband," they said, "was a perfect treasure."

"Poor Alice!" sighed Mrs. Bradford, when she was at last alone with her own thoughts. "How well I remember when I suffered as she does, and when I turned to others for sympathy I was criticised as she has been to day. Dear child! I wish I could lighten her sorrow."

Mrs. Bradford did not dismiss the matter with these sympathetic words, for a week later found her cheery face in her friend's pretty parlor. Alice was delighted to see her, because she was feeling blue, she said. Indeed, since her marriage, she was always low-spirited when she was alone.

"Then the worst thing you can do is to stay in doors," said Mrs. Bradford, "for you will grow morbid. Either work in your garden at such times or take an exhilarating walk."

"But I take no interest in gardening or walking, or scarcely anything else," Alice answered listlessly.

"Then you must fight against your inclinations," smiled Mrs. Bradford, "as I did in my early married life."

"Why, Mrs. Bradford! Did you ever feel as though you had lost all interest in everything? No, no! I cannot think so. You are too sunny in your disposition. Your home is so attractive, and your husband is so appreciative." Here Alice paused, with tears gathering in her eyes.

"Yes, Alice," answered Mrs. Bradford gently. "I have not only felt as you do, but I have also been one of the most unhappy wives in the world. No wonder you look surprised, for it is many years since I have broached the subject, and, after some bitter experiences, I learned to keep silent on the subject of my domestic infelicities for I found that people grew weary of my complaints, talked behind my back, and that my husband received all the sympathy. Like yourself, Alice, I left a home where I had been a cherished daughter to become the wife of a man newly established in business. As I was a favorite in society, my desire was to take a suite of rooms in a fashionable boarding house; but Lewis prevailed upon me to commence housekeeping in a cottage. I was entirely inexperienced, and I learned very soon that doing my own work conflicted sadly with my society duties. This shocks you, dear, because you think that you could not get along without your neat German girl. Well, my temper began to suffer in the contest, especially when I found that my husband did not sympathize with me in my trials. He could not see that I needed help, and I thought that he failed to appreciate my endeavors to please him. I scorched my hands (and also my face) in preparing dainty dishes for him. He took it as a matter of course. I donned my prettiest dresses, and then had to draw his attention to them. I told him angrily one day, that instead of a white silk dress, I should have been married in a calico kitchen gown. What did he say? He smiled and said that he would have been perfectly willing, as I looked fully as well in the one as the other. He meant what he said, but at that time I did not appreciate the compliment. But this was not all. Lewis was often so preoccupied with his own thoughts that he did not listen to me, and my witticisms often passed unnoticed. But the hardest of all to bear was the loss of the tender words and the delicate attentions of other days. I thought bitterly that they had been laid away with my wreath and veil. My husband was practical and undemonstrative, and it nearly broke my heart. Yet he was not unkind. He had a calm, even temper, and never scolded or raised his voice, but it had a most exasperating effect on me, who all my previous life had lived in an atmosphere of admiration and praise, and I feel ashamed of the many bitter, bad-tempered things I used to say to him.

"You say you think he deserved them. Well, I thought so then myself. It was not long before every one saw that I was unhappy; and then, I talked of my troubles to my friends. It is the deepest regret of my life that I ever did so. I remember, one day I was pouring my griefs into the ears of one of my dearest girl friends, while my face was bathed in tears, when all at once I discovered that she was laughing at me. Yes, laughing as though I was telling her some amusing story. It was wonderful how soon my tears were dried, and ever after, if I hinted of my troubles to her, it was in a humorous manner, which is far better if one must complain than to be tearful or sarcastic. I had another friend, a former schoolmate, who was very sympathetic and deeply interested in me.. She never seemed to weary of my complaints and was a most patient listener. I valued her friendship highly, until I found that she had depicted my experience in a bright little story, the opening for her of a successful literary career. You may imagine my chagrin when I was confronted by my relatives with being the author of the story, as they knew my complaints by heart, and there, they were printed in my own words! My friend had only changed the names, graced my husband's nose with eyeglasses, and transformed me into a blonde.

"What did my husband think about it? Well, for once, I was thankful that he was too practical to read stories, so he remained in blissful ignorance that he was masquerading in literature as a near-sighted domestic tyrant."

"Now, Alice, I am going to tell you of a great mistake that I, in common with many others, have made, but which, I trust, will have no part in your experience. There was another sympathetic friend who made a prolonged visit at our house. She was so tender and so kind to me, and so very sorry that I had thrown myself away upon such an unappreciative man as Lewis Bradford. Her pity was unceasing. Heretofore I had at times been reasonably happy in my home, but that woman followed me up relentlessly with her expressions of sympathy, until at last my eyelids were always red with crying and my mother was full of reproaches. My husband's long-suffering patience became sorely tried. One day, when our visitor was out, Lewis said to me:

"Do you know, Clara, that I believe that Mrs. Blank is trying to make trouble in our home?"

"No, she is not," I answered defiantly.

"Yes, she is," he returned firmly, "for she has attempted to sympathize with me."

"What is that?" I asked quickly, scarcely believing my ears.

He repeated what he had said.

"What did she say to you?" was my next eager question.

I shall never forget the way he turned and confronted me, while his eyes flashed with indignation.

"What did she say? Do you think for one moment that I would hear any one speak disparagingly about my wife? No, Clara, I am not that kind of a man."

Then he walked out of the room, leaving me blushing with shame and feeling dreadfully mean.

Well, Mrs. Blank seemed to feel uncomfortable and left soon after that, and I was not sorry to bid her good-bye. Such friends are very dangerous in the home, Alice."

Mrs. Bradford paused and seemed to be thoughtfully considering how she would continue her story, while Alice mused to herself: "No, I shall not invite Bertha James to visit us, as I intended." Then she said, while her face glowed wth interest: "My husband is also undemonstrative. Tell me how you became reconciled to your marriage, Mrs. Bradford."

"Reconciliation came with time and experience, Alice, for men like our husbands always wear well, however disappointing they may be to their brides. Why, it was only the other day that I was looking over some old wedding-cards of friends whom I envied their gallant, attentive husbands. Some have been separated for years; others have grown careless and indifferent to their wives, and a very few are still chivalrous husbands. I thought, as I looked over them, that I would not exchange my husband for the best among them. Indeed, he *is* the best to me now. But we can't put old heads upon young sholders, my dear. I know you miss the attentions of your lover, but try to appreciate your husband's virtues, Alice. If you are inclined to complain, be thankful for his even disposition and temperate habits. Get out of doors all you can. I find that tending flowers promotes cheerfulness, and that a canary bird makes even a sad home blithesome. Then, there are always poor people or sick friends that you can visit with your gifts and words of kindness. In cheering others, you increase your own happiness."

"I will try to profit by your advice, Mrs. Bradford. I feel my heart grow warm as I listen to you," Alice answered earnestly.

The kindly visitor smiled into the fair face before her. Such a change had come over it during her call! The blue eyes had softened into gentleness and the petulant droop had disappeared from Alice's pretty mouth as she continued:

"And now, Mrs. Bradford, I would like to complain a little more, if you will let me. I'll try and not do it again, for George is often very kind and appreciative; but how about our evenings? If we stay at home and have no company, George is dull and drowsy and don't appear to be interested in anything I do or say. If we call on friends, he seems bored and anxious to leave, and I can't help saying sarcastic things before people and then he sulks. If we go to places of amusement, he is so quiet and serious, and I feel that every one notices that he is negligent in paying me attention."

"Yes, I know all about that from my own experience, Alice. You are gay and vivacious, while George is quiet and retiring. Have congenial occupation for your evenings at home—your music, needlework or an amusing book. Let him doze if he wishes, but be cheerful yourself and don't complain about his dullness. He has cares and anxieties that you know nothing about, for, being a reticent man, he keeps them to himself. You can't change his disposition by finding fault, but you can ruin your own. Then, don't be exacting. Perhaps you watch him too closely, and expect too much from him when you are out together. I found that when I ceased to exact attention from my husband that he became as attentive as I could desire. Indeed,. Alice, I fear that I was very arbitrary in my early married life, and but few men can brook despotism. Their self-will rises against it like a wall of adamant."

"I have never considered myself arbitrary," said Alice, "but I know I am very sensitive."

"That is what I thought about myself, dear, and I wondered why my husband persisted in thwarting and wounding me; but my attention was arrested one day by something I was reading. It defined a sensitive person as a *self-filled* person, and I immediately saw myself in that light. Have you not noticed, Alice, that the happiest and most intetesting people are those that are always thinking of others, not of themselves?"

Alice admitted that she had.

"Now," continued Mrs. Bradford, glancing at the clock, suppose, as a supplement to our chat, that you run home with me and get a bunch of sweet peas for your dinner-table. I intended bringing some with me, but was prevented from gathering them by several interruptions, and the flowers were crowded out of my mind."

Alice gladly accompanied her friend, and when George returned that evening and met his wife's beaming face, he exclaimed: "Why, Alice! what has happened? You look so pretty to-day."

And the young wife, pointing to the flowers, rejoined with her old-time archness: "Pretty? Why, certainly, I have been gathering sweet peas in Mrs. Bradford's garden."

Mrs. Bradford must have had an object in selecting those simple blossoms, for they smiled upon Alice for over a week without showing any signs of decay, and they did not spend their perfume in vain in that cottage home.

A few months later there was another lunch party at Mrs. Bradford's, and Alice, as before, was the first to leave. The hostess was gratified in listening to the following comments:

"How bright and pretty Alice Flint is again! She seems perfectly contented and happy."

"Yes, she and her husband understand each other better. They are a very congenial couple."

"She was the light of our party to-day, and she is so fond of you, Mrs. Bradford."

The hostess smiled sweetly. There was a song in her heart which gladdened her whole life, for she had experienced the truth of these words:

"A word spoken in due season, how good it is! As an ornament of fine gold, so is a wise reprover upon an obedient ear."

Sunday in the Country.

Religion that once was the animating power of country life has dwindled in its direct influence. The large,old parish churches that formerly were crowed with worshippers on the first day of the week are now seldom more than half filled. Even the union churches, in out-of-the-way parts, are often closed a portion of the year. The religous burden is borne largely by the women. The men, with some honorable exceptions, remain at home, divert themselves with the Sunday newspaper, and rest or recreate, if they do not drive fast horses and pay a visit to the tavern. This is not the fact in all country neighborhoods. There are places where the farmers assemble still in church or school house, sing and pray with fervor, and listen to preaching of the old style, doubtless to edification. But the defection of the men from the church in small country towns and neighborhoods, where there are no social ends to be served by church-going, is only the more marked because of these exceptions.

The secularizing of Sunday has gone mainly in these directions. It is still a rest day, except, perhaps, in "catching" weather during the haying season, when some man exceptionally careless of public opinion hauls a few loads to the barn. The plough and hoe remain in the furrow, the click of the moving machine is not heard, the farm-wagon is drawn under the shed, the horses rest in their stalls or are turned loose in the pasture; but the steps of the young men and old men do not as a rule turn toward the sanctuary. The village church in many places has become the property of women and children.

There is something very sad in all this; for it seems natural to be devout in the still fair places of the country, where the sky bends, and the stars burn, and the green hills stretch their arms, and the great trees lift their crowns into the sunlight. God is manifest here to the reverent thought; and, though hard labor of any kind has a deadening effect on the intellect, still these influences must steal in, and speak to the toiler in their own language. Has the great temple become so fraught with meaning and grandeur and purpose to the country mind that churchly rites and symbols of worship can be dispensed with? Would to God it were so! But too often a heaviness as of the clod rises up from the furrow, and hangs upon the soul, which only strong excitements can banish. Fatigue makes thought difficult. The terrible old religon took strong hold of the country nature because it roused, and seldom soothed. Its rewards and punishments appealed to those who knew all the ruthlessness as well as the beneficence of nature. Thus the strong, severe, religious type of farmer was evolved, lean and brown, tanned and seasoned by the sun and rain and wind, with bent knees and shoulders and

hard, knotty hands,—the man who could raise a psalm tune in the ploughing, and who comforted himself with the old Bible, and found a sanctuary and a refuge in its grimmest portions. There is something almost sublime in this craggy figure of the man who brought up his family in the unrelenting sternness of the old Mosaic dispensation. But he has passed away, and in the reaction from this tremendous power of Calvinism have come indifference, the state of uncertainity, dubiety, in which so many find themselves to-day. New conceptions have not yet taken the place of old ones, and the mind drifts and slides. The thought comes that we can practically live without religion. In our easy and pleasant days we can perhaps; but when the cyclone strikes us, then there is a calling upon God: "O God, if there be a God."

To the farmer who draws his nourishment more directly than other men from the soil, the life is still more than meat, and the body than raiment. Pitiful it is that the old church that once was the focus of his ancestors' hopes and fears and aspirations is now indifferent to him. How profoundly Jesus felt for the country people, drawing as He did most of his illustrations from country facts and things! It would seem that the religion of Jesus, simple, unvarnished, pure, if such could be preached in our village and neighborhood churches to-day, might strike to the country heart, dispel its indifference and languor, and awake it to a new life, of the soul; for the life without God is no life, a mere empty show. Until the spring of thought and feeling is touched by the divine, we dwell like those beings fabled to occupy an intermediate state, neither quick nor dead. The only true life is that which is vital with the throbbing pulses of love sent from the great Fountain of all love, and with apprehension of the presence of the universal Spirit in all shows. As the sunlight falls abroad the field, He is there, the divine Husbandman. His energy fills every blade of grass, every blowing leaf. Nature ceases to be dead matter. All its changes speak to us as they did to Jesus. Suggestions crowd upon the mind. We are no longer children of chance thrown here by blind fate, left to ourselves, the helpless sport of circumstances. We are part of the great plan, necessary to our Father, who ever works in and through our labor, uplifting and sanctifying it.

Jesus walked through the wheat on the Sabbath, and, his disciples being an-hungered, plucked the ears, and in sublime words He justified the act. He walks still through all our wheat fields, and bids us eat, but not the gross material food alone: He breaks the bread of life and presses the grape of the spiritual vine, that we may eat, drink, and rejoice at the higher banquets of the soul.—Christian Register.

Fashion's Latest Fads.

Flirtation fans are of black lace, with two oval openings in the pattern at the center through which pretty eyes, black, blue and brown, can look with telling effect.

Of various hats suggested for wearing is white rice straw with stiff straight brim, the front laden with pink roses, one amid them standing high on a long upright stem. A bow of ribbon, holding a single rose, is fastened under the brim to put on the wearer's hair.

A wife wears mourning for her husband's family as for her own. Mourning may be worn one or two years, according to personal preference. Tamise, Henrietta cloth and veiling are appropriate mourning materials. A princess dress may be worn at church.

Black corduroy is predicted as one of the fashionable materials for tailor-made gowns this season. It is a material that fits well, and one that will undoubtedly be popular, for although it may be made up very simply it will stand either fur or braid trimming with artistic results.

There are many neutral colors like castor, llama gray and noisette, a tea rose color. The new shade of dress goods in gray is called this season Ural, in recognition of the popularity of all Russian fashions. A blackish brown shade is called "Egypt." In honor of the World's Fair, the new red is called by the French color makers "Chicago." It is a deep, rich color, shading from cardinal, but almost as dark as seal brown.

Never were the silks more beautiful than they are this year. The designs each year generally seem like those of the year before, a little modified or very slightly changed. But this year everything seems new. One very pretty and quite original design is in black watered silk. Across the dark ground runs pink satin stripes about two inches apart; between them, placed close together, are two narrow satin stripes of pale green. Nothing could be more harmonious, and when made up and the colors artistically blended in the fine trimming nothing more stylish could be imagined.

"Polish your nails with your fingers," says a manicure. "The friction of the flesh and the little oil which exudes from the pores gets up quickly a healthy circulation beneath the nail, making it rosy, and fingers impart, besides, a better actual polish than the chamois rubber."

When, as sometimes happens, one is forced to wear an uncomfortably tight shoe, it may be of value to know that folded cloth wet in hot water laid over the pinching point will often speedily afford relief. Change the cloth several times to keep up the heat, which shortly stretches the shoe and shapes it to the foot.

A charming little conceit for the lady of many vails is a strip of heavy muslin or silk, lined with a dark color, and with ribbons fastened to both ends with which to tie the precious gauzes safely in. On the outside is a fancy design and the following jingle embroidered in old English letters:

"Many veils I've held for you;
Dotted, plain, of every hue."

You will be quite a la mode as to the wearing of veils if you throw economy to the winds and buy the full width, which you generally make two veils of, using it all for one, and ruffling what is left up around your neck, which has a soft, becoming effect and is a kind of connecting line between head and body, unlike the people who wear dark veils just coming to the chin, and making their heads look as if suspended in mid-air.

Fur this winter is to be treated exactly as though it were cloth, the most entire liberty being taken with it. Furriers have not the advantage of the wool weavers and workers in other lines of goods. Their material can be varied but little. Novelty must be secured by combination and by new treatment.

FOOLS hate knowledge.—Proverbs.

THE punishment of falsehood is to suspect all truth.—John Boyle O'Reilly.

HE who has conquered his own coward spirit has conquered the whole outside world.—Thos. Hughes.

BUT for some trouble and sorrow, we should never know half the good there is about us.—Dickens.

THE nobleness of life depends on its consistency, clearness of purpose, quiet and ceaseless energy.—Ruskin.

THE opportunity to do mischief is found a hundred times a day, and that of doing good once a year.—Voltaire.

THE fact of causing the existence of a human being is one of the most responsible actions in the range of human life.—John Stuart Mill.

SIMPLICITY of manner is the last attainment. Men are very long afraid of being natural, from the dread of being taken for ordinary.—Jeffrey.

MAN carries under his hat a private theater, wherein a greater drama is acted than is ever performed on the mimic stage, beginning and ending in eternity.—Carlyle.

THE mother's yearning, that completest type of the life in another life which is the essence of real human love, feels the presence of the cherished child even in the base, degraded man.—George Eliot.

TO make a happy quotation is a thing not easily to be done. The art requires more delicacy in the practice than those conceive who can see nothing more in a quotation than an extract. Whenever we would prepare the mind for a forcible appeal, an opening quotation is a symphony, preluding on the chords whose tones we are about to harmonize.—D'Israeli.

IT has passed into a scornful proverb that it needs good optics to see what is not to be seen; and yet I should bn inclined to say that the first essential of a good traveler was to be gifted with eyesight of precisely that kind. All his senses should be as delicate as eyes; and, above all, he should be able to see with the fine eye of imagination, compared with which all the other organs with which the mind grasps and the memory holds are as clumsy as thumbs.—James Russell Lowell.

WHEN anything is demanded of you that you cannot do, refuse positively and leave no loopholes for false hopes; on the other hand, grant at once whatever you are willing to bestow; your promp refusal will make you friends as well as your prompt benefit, and your character will stand the higher: for it is hard to say whether a promise forgotten, a hope deceived, does not make us more enemies than a favor granted brings us friends.—Balzac.

YOUNG FOLKS' COLUMN.

An Unlucky Find.

Written for the RURAL PRESS by CAROLINE E. SANDERS.

"You came not into your place by accident, it was the very place God meant for you," said Morris Edgeley's Sunday school teacher to him one day after the lesson was over and he was having a little talk with the boys. "If so early in life you have crosses to bear they are meant, if met in the right spirit, to bring out some good traits in your character or to repress your faults, so take heart and meet them bravely."

This was said in answer to a remark from Morris that "it could not be difficult to be good when everything was pleasant in life." These few words from his teacher somehow struck home with him, he thought of them afterward and they might have exerted a lasting influence from that time had it not been for an unlucky find.

But a few years before Mr. and Mrs. Edgeley with their two young children, Morris and Helen, had been living in affluence with every advantage that money could procure. Then their father died suddenly and all was changed. Morris was recalled from the school where he was making a fine record, to help support his mother and sister. He did not meet his fate bravely but with a discontented, rebellious spirit, ever dwelling upon "what might have been." Only the day before he had said to his sister, "Suppose we shall have no Christmas this year, wish I could find some money to buy mamma and you some nice presents."

"Oh Morris, that is a wicked wish," said his sister, "for you would only be finding what some one else had lost—you did not think that, did you?"

He murmured something by way of reply about "their being able to lose it, perhaps."

It appears as if an earnest desire of this nature is sometimes granted to show us how incapable we are of directing our own affairs.

The next morning when Morris reached the manufactory where he was employed the janitor was just sweeping out the private office. He was an old man and had not noticed what Morris' sharp eyes detected in an instant, a bank note among the rubbish.

"There, you have not swept that corner clean," he called to the man in a jesting tone. He turned away to see if such was the case and Morris' object was accomplished. He snatched up the bill and transferred it to his own pocket. There was no opportunity to examine it until he reached home; he then found it was a new-looking $20 bill. Morris fairly trembled with excitement as he looked at it, while visions of of all the nice things he would buy with it flitted through his mind. But day after day passed and he somehow could not make up his mind to spend it. He had seen a nice cloak that would just fit Helen, and which she needed badly, and he decided to get that and a pair of warm gloves for his mother, and there would probably be enough left to buy a new hat for himself; but the one puzzling thought came up—what explanation can I make for having so much money?

He well knew that his mother would not allow him to it keep if she knew the truth, and he would determine to lie about it so far as to say he had tried to find the owner, yet he knew he could not deceive her, she understood him too well. He could have spent it all on himself and his own pleasure without finding it necessary to give an account to any one, but he was not a selfish nature and could imagine no enjoyment in that. Sometimes it appeared as if the bank note was burning a hole in his pocket and he would wish he had never seen it and felt like throwing it in the fire. With all their poverty he had never been so unhappy before.

So the time passed on to the end of the month, when he always went to the office to receive his salary. As he entered he felt ashamed to look his employer in the face, and hardly felt surprised when in a stern voice he said to him,

"I do not know how much is due you until I learn the value of that note I saw you pick up out there. When that is settled I shall not need you any longer."

Morris felt at that moment he richly deserved hanging, but oh what a comfort it was to be able to take the note out of his pocket-book and hand it to the gentleman. As he did so he could only say in a trembling voice,

"I couldn't spend it, I do not think I ever could have spent it."

Much to Morris' astonishment his employer laughed merrily as he examined the bill and then said, "Well Morris, by having a little conscience in the matter you have probably saved yourself from getting into serious trouble as you might have done if you had attempted to pass this bill, for it is counterfeit."

The nervous strain had been too great for the boy and he burst into tears. The gentleman could not but be touched by his grief, and understanding the struggle he passed through between good and evil, consoled him by saying, "Never mind, Morris, I think this will be a lesson that you will not soon forget, and you may be thankful you were not tempted beyond your strength. I will not expose you or discharge you, but I cannot raise your salary, as I had intended doing this month, until you prove that your principles have become fixed."

The truth of his teacher's words were often brought to Morris' mind in after years, for he accepted this trial bravely and in the right spirit; found himself able to repress his faults and became a noble, good man.

It Paid.

When Aunt Frances was a little girl, she did not like to mind quickly. When told to do any little task, she would say, "In a minute," or "By and by I will do it."

Aunt Frances's mamma knew this never would do. She talked often and kindly to her little girl of her fault. She told her she must drive old Mrs. Wait-a-Minute out of her house.

One Monday morning, Aunt Frances's mamma was washing. It was in the summer-time, and the hallway door was wide open. When she found her soap-basin was empty, she told her little girl to run to the soap-barrel under the cellar stairs and fill the basin.

Aunt Frances was reading her Sunday-school book, and she didn't want to leave the story. "In a minute, mamma," was on her lips, but she did not let the words come. She thought, "I promised mamma I would fight against the fault, and I will."

In half a minute she was down the hallway stairs on her mamma's errand.

She found the lid of the soap-barrel pushed half-way off, and when she dipped down to fill the basin, something in the barrel went "squawk, squawk." She looked in, and there, with just her head and neck out of the soap, was Aunt Frances's pet hen, Mabel.

She had hopped into the barrel hoping to find a good breakfast. She sank into the thick soap as though it had been quicksand. It glued down her wings so she could not fly out. In another minute her head would have gone under the soap, then Aunt Frances would have had no pet Mabel.

"I am so glad that I did not wait even one little minute, mamma," she said, drying the drenched feathers of her shivering hen, after they had been well washed and rinsed.

"Minding quick saved Mabel's life," her mamma answered. "You will find it pays all the way along to keep old Mrs. Wait-a-Minute out of your house."—Portland Transcript.

THERE is a French saying that "it is women who make the morals of a country." That is not true, it cannot be true, so long as men alone make the laws. For the law is a mighty teacher of morality or immorality, justice or injustice.—Mrs. Josephine E. Butler.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

A LARGE DRYING GROUND.—Biggs *Argus:* Manager G. F. Ditzler, for Hatch & Rock's orchards on Rio Bonito, is now busily engaged leveling and laying out 100 acres on a redland knoll just east of town for their immense fruit-drying works. The ground will be made as level as possible and every convenience for drying will be made. Hand-car tracks will be laid all through the grounds for carrying trays of cut fruit, etc. This drying-ground will be arranged similar to the same company's drying-grounds at Suisun, which hitherto was known as the largest and best arranged in the State.

ORANGE SALE.—Oroville *Mercury*: Jo. Gardella has sold his orange crop on the trees to the California Fruit Company at $1.40 per box. He has about one acre and a half in bearing, and the majority of the trees are young, but he will get about 500 boxes of splendid oranges.

Del Norte.

SMITH RIVER CREAMERY. — Crescent City *Record:* We are pleased to announce that a creamery will be erected in Smith River valley. The gentlemen who are interested in it are our leading citizens and dairymen. It will be only a matter of time until Del Norte butter will lead in the markets of San Francisco. It has already got the name of being one of the leading counties of the State for producing a superior article of dairy produce, and with the aid of a creamery will advance to the front. Cheese will also be manufactured for which there will also be a demand. The creamery will be centrally located in the valley and will be accessible to a large number of the dairies. There are 1100 cows within three miles of where the creamery will be built, on the north side of Smith river. The latest improved machinery will be had, and the management of the creamery will be entirely in the hands of and under the control of the local owners. The building will be a credit to the county. Another should be erected in Elk valley to give those in that section an opportunity to have a chance of receiving the benefits of a creamery.

El Dorado.

WILD FRUIT.—El Dorado *Republican:* S. L. Watkins is meeting with good success gathering botanical specimens for the World's Fair. It is quite probable he will obtain over 500 specimens, including the wild fruits, of which there are upward of 60 varieties. Wild fruits, generally speaking, are very highly colored, and will show to great advantage when preserved in salicylic acid. This collection of wild fruits will be of great value, as it will show the many climates that exist in the upper Sierras. Where each variety of wild fruit reaches its greatest perfection, varieties of common fruits will also reach their highest growth. Thus the various wild plums will show to a certainty that all the cultivated varieties, including the prunes, will do well. Mr. E. H. Schaeffle, who has traveled extensively all over the northern and central parts of the State, reports that in Calaveras county, at a very extreme height, the varieties of the French prune yield better and are far superior to valley and foothill fruit. White strawberries of the alpine variety have been discovered, and also yellow dewberries. Among the California wild strawberries are several very superior varieties. California botanists accredit California with only two varieties of "fragaria" (wild strawberries), while in reality there are possibly 40 or 50 kinds existing in these mountains.

Nevada.

STOCK IN GOOD CONDITION.—Truckee *Republican*: Some of the stockmen of the Truckee basin are leaving the mountains this week, and nearly all will take their departure next week. The feed has been good in the mountains this summer, and the stock is in fine condition.

Orange.

A BEET-SUGAR FACTORY ASSURED.—Anaheim *Gazette*: Mr. Capitain informs us that the number of acres subscribed for the cooperative beet-sugar factory reached 3204—204 more than enough. Deeds to 1700 acres have already been secured, and everything is going on satisfactorily. This insures the erection of the refinery.

A LARGE AREA TO BE IRRIGATED.—*Gazette*: The waters of the Santiago creek will shortly flow out upon the San Joaquin ranch, which will be irrigated from one end to the other and pass into orchard cultivation. Men and teams are at work excavating a ditch which will be 13 miles long and circle around the base of the San Joaquin hills. The Santiago creek will be dammed up in the canyon narrows, and the water will be led by means of a system of ditches to all parts of the ranch. The dam will be 60 feet wide at the base, 120 feet high and 365 feet long, and will be built of masonry in a substantial manner. Twenty thousand acres of land will be brought under irrigation.

VINEYARD NOTES.—Santa Ana *Blade:* We are informed that the vineyards on the gravel belt, in and about Orange, are yielding well, and that the county has taken on the old busy appearance of some years ago when wine and raisin-making were leading industries of this valley. Most of the raisin-grapes have been gathered and spread for drying, and in some instances are taken up and are now in the sweatbox. Of course the yield is limited in comparison with old vines, yet there will be quite a revenue to the valley this season in the manufacture of raisins alone, to say nothing of the wine grapes. We will name a few who have ventured the experiment of raising grapes since the deadly work of the vine disease: Tho. Walker has ten acres in raisin-grapes; the vines are three years old and will yield five tons to the acre. B. M. Sitton also has ten acres in the same class of vines which are two years old. They will yield well. J. M. Copeland has five acres in two-year-old vines which look well and will give a fine yield. Henry Hockemeyer also has a small vineyard that looks well and will yield splendidly. George Bennett has ten acres, set out last spring, and has a stand of 89 per cent. This vineyard is looking exceptionally well, and promises a large revenue for the future. The Hewes ranch has 25 acres, six months old, with a stand of 95 per cent, which is undoubtedly one of the best vineyards of its age in the county. W. G. McPherson also has 15 acres in the same class of vines, 18 months old, which are doing well. Mr. Van Dorn also has five acres, six months old, which are doing well, and five acres, 18 months old, which are doing nicely. Mr. Sanders also has a small vineyard which is doing well.

Placer.

DRILLING IN WHEAT. — Auburn *Herald:* Nearly a year ago the *Herald*, under the head of "Drilling in Wheat," published the following items: "L. Jarvis, a prominent farmer of near Lincoln was in Auburn on business last Tuesday. He tells us that he is planting his wheat this year with a drill, and that in between 200 and 300 acres already planted he has saved at least $50 in seed. He hopes also to reap a better crop, and if he does, the advantage of the drill over the broadcast method will be demonstrated, and to his enterprise in making the experiment the farmers of the country will be indebted." Mr. Jarvis was in Auburn recently, and he did us the favor to call and inform us of the result of his experience. As the above item shows, he saved from 15 to 20 cents an acre in seed, and his crop, now harvested and threshed, turned out nine sacks to the acre, while the average crop of his neighbors on similar land, planted by the old broadcast method, was about six sacks to the acre.

San Benito.

LATE BARLEY AT SAN JUAN.—Cor. Hollister *Advance:* Threshing will be finished this week. Johnny Bull, whom we announced last April as planting 150 acres to barley at that unusual late date, has just harvested his crop, and the result proves that Mr. James is more than the average prophet, for his expectations at that time have been realized. He has just harvested 36 sacks of plump barley to the acre.

San Diego.

OLIVE TREES ALONG HIGHWAYS.—San Diego *Union:* The planting of olive trees along the highways and wherever a property-owner has land that can't be put to any practical use, is urged by the leading horticulturists of Southern California. The olive tree flourishes with little care, and will grow where other trees will not. It will bear fruit in but a few years, and the fruit always commands a good price. Then, too, the olive tree will live and bear abundantly for many, many years. It is always in full foliage, and is one of the handsomest and freshest-looking fruit trees we have in this region. It is an ornament to any yard and lawn. Its systematic and general planting along the country roads would relieve them from their most disagreeable characteristic—the absence of shade—and add considerably to the income of property-owners along the public highways so improved.

Sonoma.

FRUIT DRYING ON A LARGE SCALE.—Santa Rosa *Democrat:* Everything is life and activity at the Crawford fruit drier. Thirty men, women, boys and girls are at present employed, and the business way in which they handle the fruit would almost make the beholder forget it was ever made to eat. Over 1400 cases of apples have already been put up. The prune pack will amount to 100 tons. Six thousand boxes of Bartlett pears have been dried. That is the largest pack of pears Mr. Crawford has ever before made. Formerly, he says, from five to ten boxes were sufficient to supply the demand, but this season the market took a boom and is still booming in that line. He is unable to account for this freak of the market, for such he thinks the unlimited demand for pears may be termed.

Tulare.

LARGE YIELD OF PRUNES.—Visalia *Delta:* Several persons from Visalia and elsewhere went to the Briggs orchard to witness the harvesting of the crop of some nine-year-old prune trees, and those who were present will sign an affidavit setting forth the facts. After arriving at the orchard three trees of the French-prune variety, near together, were selected. Some of the fruit had fallen and was gathered in boxes, and then the trees were shaken, the fruit cleaned of twigs and leaves and placed in boxes to be weighed. The first tree shaken yielded 812 pounds, but a considerable amount was left on the tree. The next tree bore 984 pounds and the third 1017. One large limb of the last tree, heavily laden with fruit, had been taken away. The total product of the three harvested amounted to 2813 pounds, and the average was 937.66 pounds. With 64 trees to the acre this would give a yield of 60 910 pounds, or 30½ tons. As 2.65 pounds of fresh prunes are required to make one pound dried, one acre would produce 23,362 pounds ready for market, and at 11 cents per pound, the present selling price, the gross value of the yield of a single acre would reach the enormous sum of $2569.82; at 2½ cents per pound on the ground, for which they could be sold to-day, the price of an acre's product would be $1522.75. In the Briggs orchard there are 12 acres of prune trees of different ages, and several experienced orchardists estimate the average yield at 600 pounds per tree. There are 64 trees to each acre, which would make 38,400 pounds to the acre, the value, which at 2½ cents per pound on the ground—the price at which prunes are now selling here—would be $960 per acre, a net profit (after allowing for every possible expense and loss) of more than $900 per acre. If dried at the orchard and sold, the value of the crop per acre would be $1593.90, and for the 12 acres the enormous sum of $19,126.80 would be realized.

Yolo.

GRAPE SHIPMENTS. — Woodland *Democrat*: George Carty, agent of the Earl Fruit Company, is kept busy superintending the shipment of two carloads of grapes from this place to Chicago each week. The Wyckoff estate, H. C. Howard, Harlan Bros., Wm. McGriff, R. Fitz, J. A. Redden, J. Fuchs, H. S. Deaner and H. Lusk have sold their crops to this company. Thirty girls are now employed by Mr. Carty, cutting and packing the grapes. The Earl Fruit Company formerly employed Chinese labor, but this year it is hiring white help only. This example is worthy of emulation. The shipping season will continue for three weeks, during which time ten carloads of grapes will be forwarded to the eastern markets.

RECEIPTS FROM FRUIT SALES.—Vacaville *Reporter*: On the 30th day of September, 1891, the receipts for fruit at the Bank of Vacaville aggregated $408,000. On the 30th day of September, 1892, the receipts amounted to $588,000. The difference of $180,000 represents the greater amount of money received by the fruit men this year. Added to the gross receipts, the amount paid for Vacaville fruit products will, at the present time, aggregate over $1,000,000. Compared with other communities, we believe that Vacaville is at present one of the most prosperous in the State. The deposits in the bank are larger than they have been at any previous time, and the condition of every individual is one of satisfaction, not only by reason of present circumstances, but also by reason of future possibilities.

ARIZONA.

CATTLE NOTES.—Silver City, N. M., *Sentinel*: The fact cannot longer be disguised that the cattle interests of Arizona are in a very deplorable condition. The summer rains have been confined to narrow limits and the broad ranges have derived but little benefit. There are a few favored localities where feed is abundant, but in general the condition is very bad. The stockmen—those who survive the present drouth—will profit by this severe lesson, and will not only supplement the uncertain ranges by fields of alfalfa, but will discover that it requires as much to feed a scrub animal as it does one worth double its price. A better grade of cattle will be placed upon the ranges, and while their number will be less the calamity of overstocking will be avoided. As an industry it will bring far more satisfactory returns and place it upon a footing wherein the element of uncertainty will be entirely eliminated. Mere size in cattle is becoming as objectionable to-day as mere size in hogs already is. The heavy-weight hog was formerly the high-priced hog, and the larger the size the higher the price per pound. But in these days the buyer of pork is after meat, not lard, and so the meaty rather than the lardy hog is what the market wants. The same condition exists regarding cattle. Kerosene went into the tallow business; tallow is not the valuable article it was in the days of the candle. There is also a more fastidious taste abroad in the land regarding beef. Certain parts of the carcass are relatively more highly prized than formerly and therefore command higher prices; and it is also found that the young, quick-maturing animal yields up the sweetest, juiciest cuts. The result of taste and discovery has been to increase the price of the well-made animal. Size of itself is not objectionable, but size alone is not enough to command the highest price. Quality, not quantity, is the pathway that cattle must travel to reach the goal of maximum price. Form, development, early maturity are now the prizetakers in all markets.

OREGON.

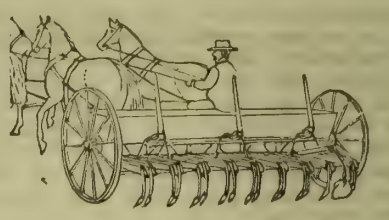
MONGOLIAN PHEASANTS. — Eugene *Register:* Mongolian pheasants are being killed by the hundred in Lane county and few people can be found who have not enjoyed a mess of these fine birds. They are very plentiful, though they have been introduced here but a few years and have been killed right along regardless of the law enacted to protect them. They increase rapidly, and if properly protected would soon furnish excellent sport for hunters during the open season.

LARGE YIELD OF BEANS.—Salem *Statesman:* D. D. Prettyman, near Turner, received 106 Prolific tree-beans and planted them, and this year raised from 105 of them 2488 pods, which contained 10,000 well-developed beans and 334 imperfect ones, they being stung by some insect. One stalk had on it 114 pods. This he sent East as a world-beater.

HOPS IN BENTON COUNTY.—Corvallis *Gazette:* It is a fact not universally known that Benton county has several large hopyards in the immediate vicinity of Philomath. While the yield this season is not up to the average, the hops are free from lice compared with other sections of the State, a fact that will tend to give the Benton county product a good rating in the market. These results were attained by careful attention and judicious spraying. Many hopgrowers throughout the State gathered their crop before the hops had attained their full growth on account of the lice, while on the contrary, William Zimmerman and Mr. Hartless, the Philomath hopgrowers, permitted the buds to mature before picking, as they had nothing to fear from the ravages of pests, and are consequently enabled to put a prime article on the market. Mr. Zimmerman is the heaviest hopgrower in Benton county, and has four yards. At one time this season he had 200 pickers employed, while, at the same time, Mr. Hartless had about 70 in his yard. About 1700 boxes was the product of the Philomath hopyards for this season, which fell considerably short of the yield last year.

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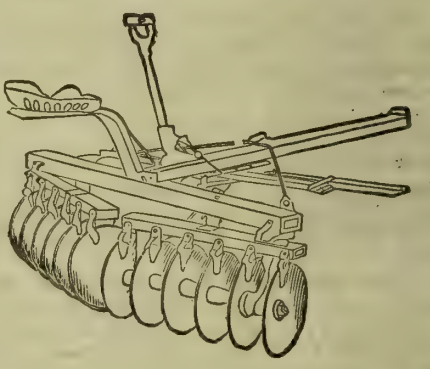
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Seeders cost extra.

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It will pay you.

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Domestic Economy.

Putting up Lunching.

Far better than a tin utensil is a basket divided into compartments with thin boards or well-fitting pieces of pasteboard, so that it can be packed securely. With a basket there is always a circulation of air and the food does not sweat. It is best to wrap everything separately in papers, and the whole contents should be covered with a napkin, which must be washed before it is used a second time in hot weather. A place also should be fitted up or reserved for a knife, fork and spoon.

Wives should make the basket as attractive as possible. and to do this must not pu in too much of a mixture.

For a few hints as to the contents, the following will suffice:

HOW TO CARRY DRINKS.

Instead of carrying coffee, or tea, or soup or other beverages directly in tin, as in the ordinary method, they should be put into a clean and well-scalded bottle and so conveyed in a basket.

Nearly all fluids when in tin, even for a short time, acquire a metallic taste.

If milk is to be used it must be sterilized in the bottle. To do this put the milk in the bottle, set it in water, heat it and let it steam for an hour, then cork it tight. This may be done the night before and so have it cool on the following day, and if not uncorked will keep perfectly sweet for at least one day, even though the weather is very warm.

For those who have been ill and are about to commence work again milk is an excellent diet and makes the best drink, Coffee and tea should be corked while hot. Many are very fond of soups and broths, even when cold. These should have been made the day before and allowed to get cool, so that all fat can be removed from the surface; then, if necessary, they may be reheated and sterilized in the same manner as the milk.

Of the solid contents sandwiches are usually the basis. These, instead of being made with slices of meat, so that in eating the meat pulls out from between the bread, should contain chopped meat of some form instead. These are more dainty and easier digested. Chicken, corned beef, ham, or even plain beef may be used for this purpose. For many "deviled" meats and the addition of a little mustard makes them more palatable.

Besides sandwiches, cold meats in slices, or parts of a chicken or turkey, may be used with advantage.

Fish, except possibly salt herring, should never be used, though occasionally, for those who can afford it, sandwiches made with anchovy paste are quite savory and tend to create an appetite.

Eggs should be boiled moderately hard and the shells left on. With these, a little shaker box or saltcellar should contain salt and pepper mixed. I have often seen fried eggs used, but this is a bad plan, as they are apt to break in pieces.

Few vegetables can be utilized in such a basket, as they are insipid when cold and generally too moist to be carried. Cold potatoes are not very appetizing, and with the exception of Saratoga chips, had best be omitted. Baked beans go well in a cup.

Nothing which is fermented, or which has a tendency to ferment, should be used in a lunch basket; so bread made of yeast is not always good, as it readily sours. It is better to use soda or baking powder biscuits, though bread pudding is nourishing and digestible.

Instead of plain bread, graham biscuits or corn bread or crackers are useful. So also pickles in vinegar should never go in, nor pickled meats, as these things are apt to make the rest turn sour; nor salads, nor anything that is very soft, like juicy pies.

Puddings, such as rice or custard or bread pudding, by making them in cups carry well and are both appetizing and nourishing.

Cakes, such as cookies or ginger-snaps or sponge cake, are also useful, but not moist, highly flavored, sugared and frosted cake should go in. Firm jellies may be carried in a small glass or cup and eaten with a spoon, so also a baked apple. Firm fruits, such as apples or peaches, make the whole tasteful to the eater.

EGG LEMONADE. — Separate four eggs, beat first the whites, then add the yolks and beat lightly; dissolve one cup of sugar in a pint of cold water, add to it the juice of four lemons, and then a small quantity of cracked ice; stir the eggs carefully into this and use at once.

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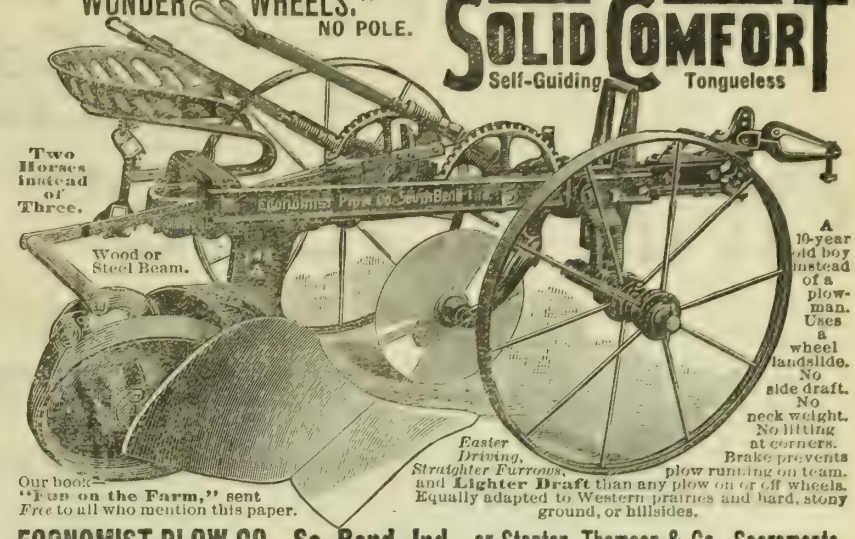
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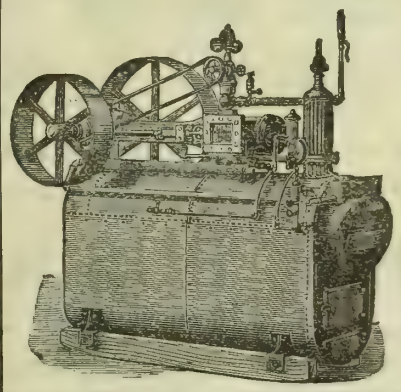
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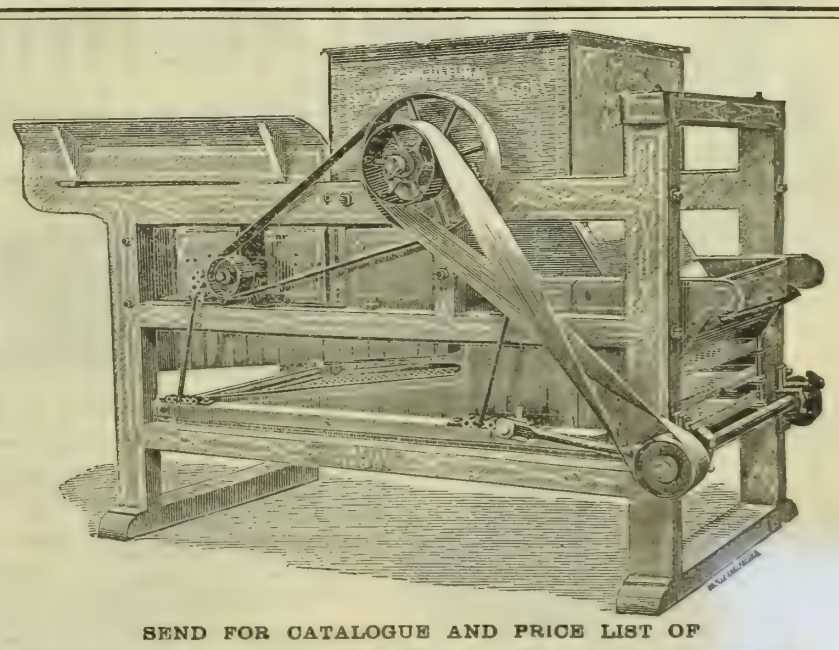
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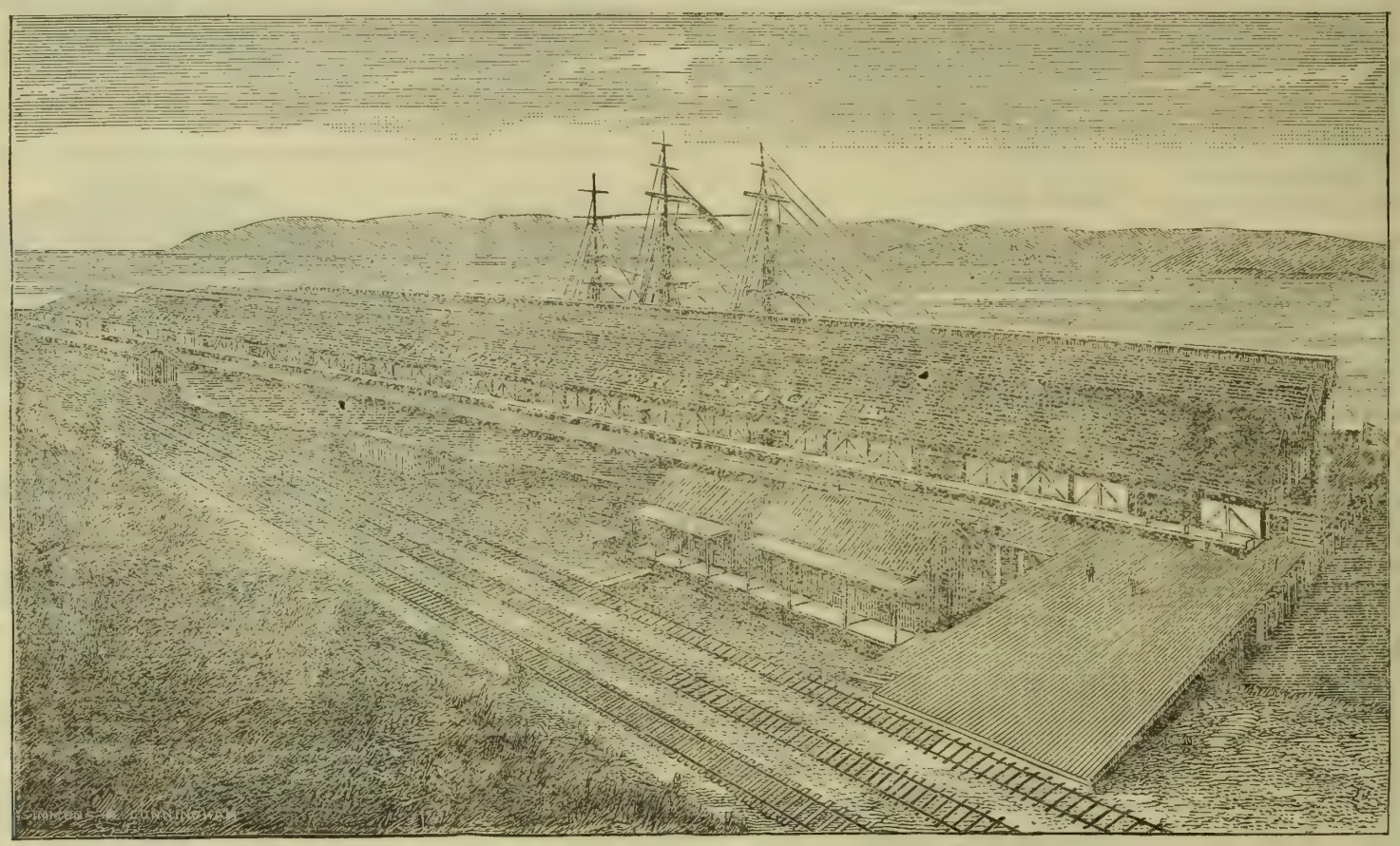
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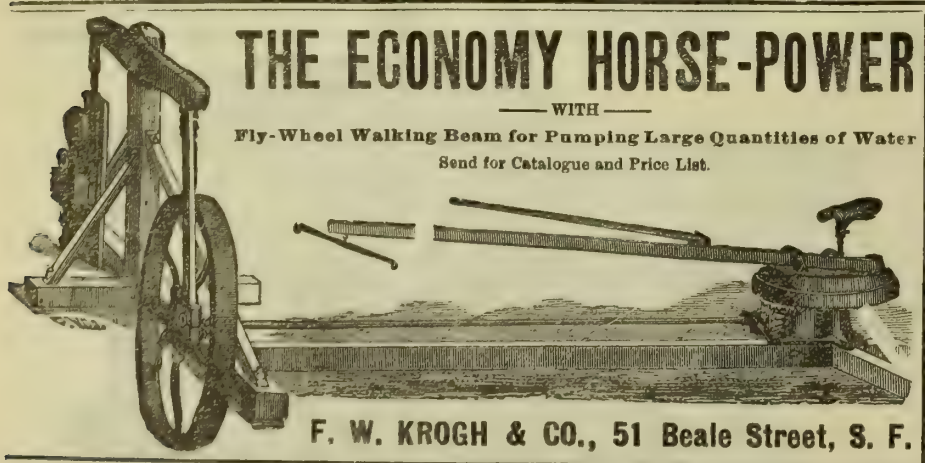
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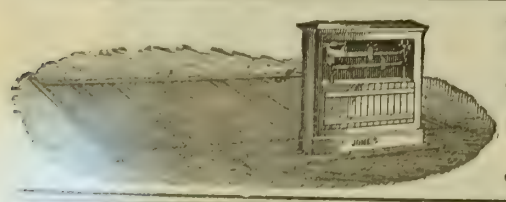
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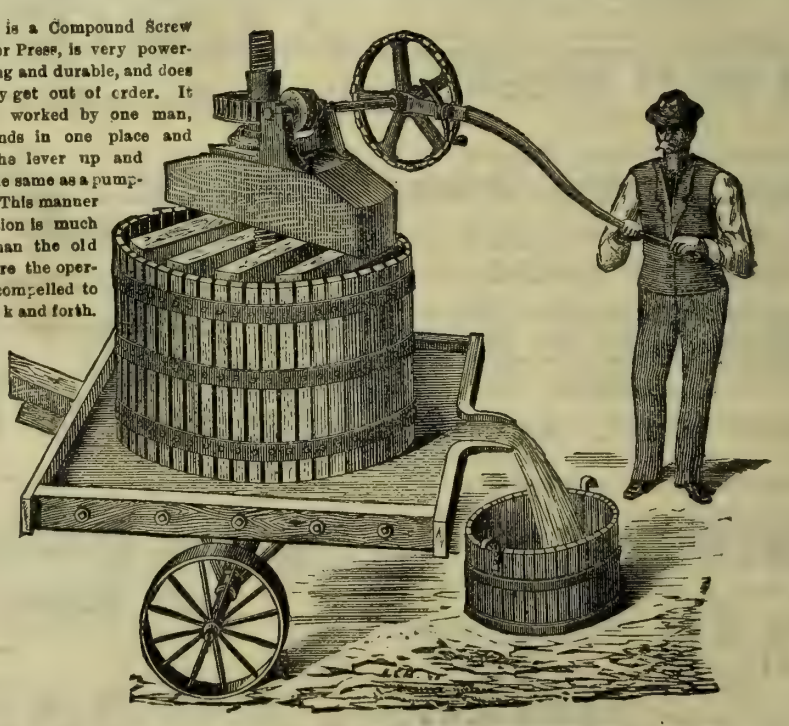
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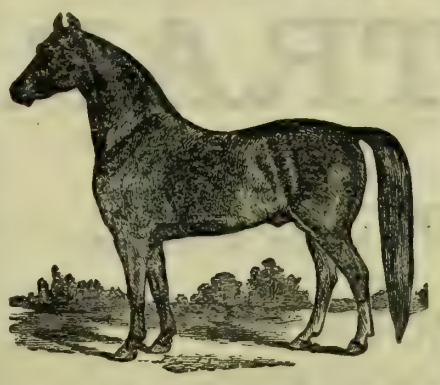
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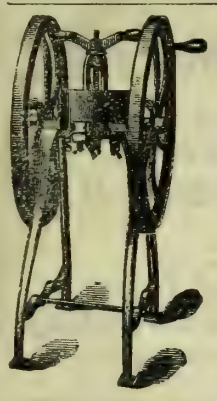
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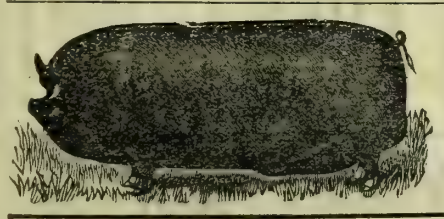
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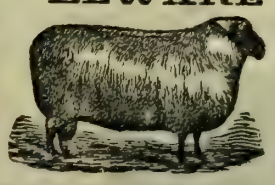
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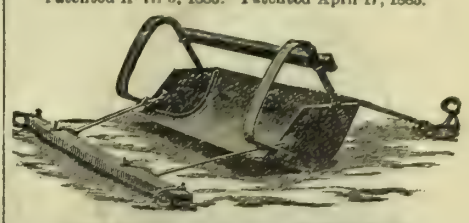
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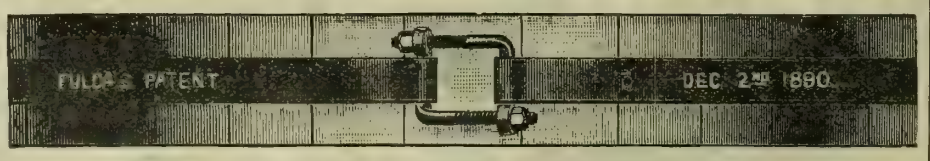
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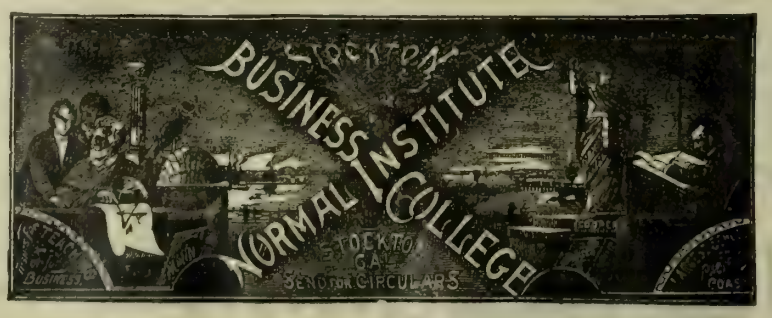


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"Greenbank" Powdered Caustic Soda and Insecticide.
T. W. JACKSON & CO.,
Sole Agents,
No. 5 MARKET ST., - San Francisco.

S. F. Market Report

Market Review.

San Francisco, Oct. 5, 1892.

The local money market continues to tend toward greater ease, with more funds offering. The uneasy and uncertain feeling which has been an important factor in creating more or less stringency, appears to be giving way to a feeling of confidence that the worst has been passed. This feeling is not confined to this coast alone, for it is being felt at the East and also abroad; but its full force will hardly be felt in Europe until some positive action is taken pointing toward restoring silver to the position formerly held. Our latest advices from London indicate a growing sentiment for more favorable legislation toward the metal. With higher prices for silver, the demand markets of Europe will not be flooded by the farm product of silver-using countries, to the great injury of gold-using countries. With higher prices—which would follow higher prices for silver—for farm products, business activity and more prosperous times may be assured. This position is beginning to be accepted by London *Money* and other leading European financial journals.

The wheat markets of the world have gained several points the past week, with strong tone at the close. The strength of the markets is but the natural result of more light being thrown on the statistical position of wheat the world over; and with this knowledge and a growing conviction that, for the present at least, the market value of silver will not depreciate further, speculators and large handlers of the cereal are more inclined to take hold of the market for a bull campaign. That they are justified in this course must be admitted by even pronounced bears, who give to the subject a few moments of unbiased consideration. The consumption of wheat has increased from about 4½ bushels per year per capita to over 7 bushels per capita. The increased consumption is largely due to the lower prices which have ruled throughout the world for wheat. The increase in production has not kept pace with the increased consumption, and consequently the wheat reserve in all countries has steadily decreased, until to-day they are, when compared with requirements, about exhausted. To be sure the small reserves have not held the importance they did over a decade ago, owing to time and space being annihilated by steam and electricity, yet with consumption steadily gaining on the production, they are beginning to be a strong factor, and promise soon to again hold the key to the markets of the world.

The latest reliable English review of the general situation of wheat gives the following estimated comparison of carryover on August 1st in America, Canada, United States, France, Belgium, Germany, Holland, Russian ports and afloat, 122,800,000 bushels in 1892, against 109,700,000 bushels in 1891. The carryover in Italy, Spain, Portugal, India, Switzerland, Greece and southeastern Europe was from light to very light in 1892, against an average to heavy in 1891. The crop this year is officially reported on September 1st by the United States, Canada, India, France, Austria, Hungary and Italy at 1,366,000,000 bushels this year, against an actual yield of 1,468,000,000 bushels in 1891. The crop in 1892 of the other countries is unofficially estimated at 749,000,000 bushels, against an actual outturn of 690,000,000 bushels in 1891. The above showing, which is the accepted from the bear point of view, must be conceded to be in favor of wheatholders.

The local wheat market, the past week, held firm with buyers advancing their bids. Farmers have not been disposed to offer on the market—holding for better prices—and consequently an advance was paid in the country on bids made or quotations put out in this city. Even an advance of from 1¼ to 2½ cents per cental, bid in the country over city quotations, failed, so we are informed, in drawing out much wheat. It is the prevailing opinion that there is a large short interest on the market which, if proved to be correct, will naturally result in better prices when those who sold short try to fill.

Barley, the past week, held strong for choice to gilt-edged bright grades for malting purposes. The call comes chiefly for shipping. It now looks as if much better prices will obtain for bright grades before the season passes. Feed barley held fairly steady the past week. Receipts, although quite free, were not up to the average of the preceding week's in this season. The consumption for feed continues to be very heavy. The more general introduction of rolling or crushing machinery for turning out rolled barley cuts off quite a trade heretofore enjoyed by the larger cities; and while seemingly lessening the demand, in reality creates an enlarged feeding of barley.

Oats have exhibited a fair degree of strength, and this, too, in the face of free receipts from California coast ports and also from Oregon and Washington. The demand has been fair, but the low prices bid cause many consignees to store, although sales have been made at concessions on asking prices for consignments so as to save expenses. The crop up north is now generally conceded to be below that harvested last year.

Corn and also rye have been featureless. Trading appears to have been confined largely, if not entirely, to near-by home requirements.

Ground feed has met with an enlarged demand, which caused a strong market to obtain for bran and middlings, and a firm tone for other millstuff. Hay has done better. The bringing of stock from mountain ranges to the valleys has created a larger demand, which has been added to still further by natural pasture growing scarcer.

Butter has been advanced under a strong holding and a fair demand. Receipts have been large, which is accepted as proof that some of the dairies held back supplies. The sultry weather has been somewhat against solid and pickled, which quite naturally enhanced the value of choice to gilt-edged fresh in squares and rolls. The high prices ruling in the central States for gilt-edged creamery is in favor of the California butter interest.

The advance in cheese has drawn to us more liberal supplies, and with more sellers in the market buyers became offish, which resulted in a weaker tone. Receipts overland have been quite free, as have receipts from home sources.

Eggs have shaded off slightly under heavy receipts and an offish demand. Some sellers claim that the weakening tendency will tend to cut off receipts from the East, which will cause better prices later on.

Garden truck has been irregularly weak under free supplies and an offish demand. Onions have come in quite freely, supplying the demand. A fair shipping call has ruled. Potatoes, after advancing slightly under a free shipping demand, fell back towards the close. Receipts have been exceptionally heavy.

Fresh fruit has been irregular the past week, with only the more choice tempting buyers to bid up. The review given in last week's Rural covers this week's information. Wine grapes shaded off under heavy receipts and a light demand. The majority of wine manufacturers were not, and even now are not, prepared to take care of grapes, and consequently selling concessions were in order, owing to the poor condition of the large bulk of consignments. It is claimed that the prices before published by us are still paid in the country.

The market for all kinds of choice to gilt-edged dried fruits is firm, but with one or two exceptions all grades below good are weak and in buyers' favor. The demand is chiefly for shipping to the East. There is a call from up north for the better grades of dried apples, which is proof positive of a short crop in Oregon and Washington.

Raisins have met with a good inquiry. It is claimed that the raisin combine prices are being fully maintained. It is feared that we will have early rains, which will be apt to materially reduce the pack. While all indications point to early and heavy rains, yet on this coast there is nothing so certain as the uncertainty of the weather.

Nuts are coming in moderately. Heavy rates are reported in the nut-growing sections. The purchases were made for shipping eastward.

Hops have come in quite freely. The market has made a slight advance in sympathy with higher prices at the East, and also abroad. It is claimed that 20 cents is now freely bid, while for gilt-edged goods a slight advance is offered. The crop abroad and also at the East, it is now said, did not turn out as large as had been estimated.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.
Thursday	6s00d	6s01½d	6s02½d	6s03½d	6s04½d
Friday	5s11½d	6s01½d	6s02½d	6s03½d	6s04 d
Saturday	5s11 d	6s00d	6s02 d	6s03 d	6s04½d
Monday	5s11½d	6s01 d	6s02½d	6s03½d	6s04 d
Tuesday	6s00 d	6s01½d	6s02½d	6s03½d	6s04 d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	32s6d	33s0d	32s6d	Steady.
Friday	32s6d	33s0d	32s6d	Very dull.
Saturday	32s6d	33s0d	32s6d	Quiet but steady.
Monday	32s6d	33s0d	32s6d	Quiet but steady.
Tuesday	32s9d	33s0d	32s9d	Firmer.

To-day's cablegram is as follows:

Liverpool, Oct. 5.—American advices affect market favorably. California spot lots, 6s 6d; off coast, 32s 9d; just shipped, 33s 3d; nearly due, 33s; cargoes off coast, firmly held; on passage, firmer and held higher; Mark Lane wheat, firm; weather in England, wet.

San Francisco.

WHEAT.

	Seller '92.	Buyer Oct.	Buyer Dec	Buyer Jan.	May
Thursday, high st	129⅜	....	134½	135½	139½
" lowest	129	....	134½	135½	139½
Friday, highest	129½	....	135	135⅝	....
" lowest	129⅛	....	134½	135⅜	....
Saturday, highest	129⅜	....	134⅝	....	....
" lowest	129⅜	....	134⅜	....	....
Monday, highest	130⅜	....	136⅛	....	....
" lowest	130	....	135⅝	....	....
Tuesday, highest	....	....	137	137½	141⅜
" lowest	....	....	135⅝	137½	141¼

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat, Buyer December, 100 tons, $1.36⅜; 900, $1.36½; 400 $1.36½; 300, $1.36⅜; 400, $1.36½ per ctl. Regular Session.—Buyer December, 1000 tons, $1.36½, 1500, $1.36⅜; 500, $1.36⅜ per ctl. Afternoon.—Buyer December—1700 tons, $1.36½; 600, $1.36⅜; 1500, $1.36⅜; 100, $1.36¼ per ctl.

BARLEY.

	Seller '92.	Buyer Oct.	Buyer Dec.	May
Thursday, highest	....	85½	90⅜	....
" lowest	....	85½	9	....
Friday, highest	....	....	91	....
" lowest	....	....	90⅞	....
Saturday, highest	....	....	9	93⅜
" lowest	....	....	90⅝	93⅜
Monday, highest	85⅞	....	....	....
" lowest	85	....	....	....
Tuesday, highest	....	....	....	94
" lowest	....	....	....	94

The following are to-day's recorded sales on Call:

Informal—Barley, Seller 1892, 200 tons, 85⅞c. Buyer December, 200 tons, 90⅝c per ctl. Regular Session.—December, 100 tons 89⅜c. Seller 1892, 800 tons, 81½c; 100, 85c. Buyer Decmsber, 100 tons, 90⅜c. May, 500 tons, 95c per ctl. Afternoon—December, 100 tons, 90¼c; 100, 90½c; 100, 90⅜c; 300, 91c; 300, 91½c; 100, 9 ⅛c. May, 300 tons, 95½c per ctl.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Oct	Nov.	Dec.	May.
Thursday	131	133⅜	136½	146½
Friday	131½	133⅝	1 55	145⅝
Saturday	130½	133	135⅝	145⅝
Monday	130⅝	133⅛	135⅝	145⅝
Tuesday	131⅝	134	136⅜	146⅜

The following is to-day's telegram:

New York, Oct. 5.—Wheat, 78⅛c for October, 81⅛c for December, 88c for May and 8 ⅛c for November.

Chicago.

Day.	Oct.	Dec.	May
Thursday	121⅞	126⅝	135½
Friday	121½	126½	134½
Saturday	121	126	134⅛
Monday	....	126½	134½
Tuesday	122⅛	12 ⅞	136⅛

The following is to-day's telegram:

Chicago, Oct. 5.—Wheat, 76⅛c for December and 82c for May.

Markets by Telegraph.

Foreign Grain Review.

London, Oct. 3.—The Mark Lane *Express:* The price of English wheat averages wonderfully low, deliveries at the west country markets selling at 24@27s ℔ quarter, the lowest average recorded. Threshing of the new wheat is disappointing, mean quality at least 1s 6d below 1891. Since harvest the English wheat sales amount to 34,000 [this is evidently too low.—Ed. Press] quarters, against 414,000 quarters for the corresponding time last year, and 781,000 quarters for the same time in 1890. An unusually large proportion of that cut in August last remained unstacked until the middle of September, owing to rain. Foreign wheats were steady. Millers require good foreign to mix with damp new English. Oats are 3d higher. Barley is in active demand, grinding being up 6d. Good American corn is selling at 23s 3d.

Hops Active and Higher.

New York, Oct. 1.—Our market was much enlivened at the close by export shipments. Eight hundred bales of selected new went to Europe, chiefly on consignment, but enough were sold outright on the basis of 23½ and 24 cents, delivered to vessel, to indicate a revival of the demand and impart a stiffer tendency to spot prices. At interior State points the feeling is decidedly buoyant. Sellers who have contracted with brewers at 22c now find difficulty in covering. New hops, State and Coast, are quoted as they run at 22½@23c. Ninety-ones range at 18c to 22c for State and 17@21c for California.

Wool Low, But Demand Active.

New York, Oct. 1.—The market is running in its old groove of low prices and free offerings. September made a deep inroad in seaboard supplies, but stocks yet present a bulk that discourages any inclination to form a better plan of rates for owners. A favorable feature, however, to note is the equalized absorption of all grades of washed and unwashed. If this continues and manufacture is unchecked (the latter being an unlikely condition) the market can be reasonably expected to ripen into better figures, though not to a degree that will inspire speculative comment, as manufacturers' prospective margins are too well defined. The sales at New York were 6,3,000 pounds of domestic and 413,000 pounds of foreign. Sales at Boston, 3,635,000 pounds of domestic, also 565,000 pounds of Australian and foreign carpet.

Canned Fruit Slow, Dried Active.

New York, Oct. 1.—Canned fruits are quiet and unchanged. The general trade is more interested at the moment in dried than tinned goods. Evaporated peaches sold at 14½@16c. Prunes, though easier, are above large buying views. A sale of four sizes is reported at 9½c, free on board. Faith in the stability of the raisin market is not apparent. No one seems competent or courageous enough to name top prices for home-raised. Valencias are lower; layers, 6c; off the stalk, 5c. Apricots are steady at 15@17c for even grades.

Honey and Beans Advancing.

New York, Oct. 1.—Honey—Strained light amber has gone up to 8½@8¾c spot. This would be paid for carload quantities. Lima Beans—There is more interest, showing the market is toning up. Spot, $2.05@2.10, the latter for strictly choice.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Oct. 4, '92, were as follows:

Flour, qr. sks	194,040	Bran, sks	13,666
Wheat, ctls	272,994	Buckwheat "	....
Barley, "	102,90.	Middlings "	2,325
Rye, "	....	Chicory, bbls	140
Oats, "	18,703	Hops, "	749
Corn, "	967	Wool, "	2,549
*Butter, "	1,719	Hay, ton	2,456
do bxs	185	Straw, "	65
do bbls	114	Wine, gals	138,970
do kegs	190	Brandy, "	12,830
do tubs	100	Raisins, bxs	....
do ½ bxs	78	Honey, cs	7
†Cheese, ctls	1,012	Peanuts, sks	....
do bxs	101	Walnuts "	32
Eggs, doz	17,150	Almonds "	36
do " Eastern	....	Mustard "	1,697
Beans, sks	24,276	Flax "	....
Potatoes, sks	27,750	Popcorn "	....
Onions, "	5,890	Broom corn, bbls	40

*Overl'd, 697 ctls. †Overland, 752 ctls.

Exports by Sea from San Francisco from July 1 to Sept. 29.

	1892-93	1891-92
Wheat, ctls	2,735,903	4,107,479
Flour, bbls	298,248	284,354
Barley, ctls	563,111	295,579

Tonnage Movement.

From reliable advices up to Oct. 5, the following summary tonnage movement is compiled:

	On the way— 1892.	1891.	In port— 1892.	1891.
San Francisco	283,345	424,803	*164,147	86,310
San Diego	9,770	25,224	11,960	.....
San Pedro	7 342	.....		
Oregon	53,425	69,207	35,607	11,532
Puget Sound	29,328	32,213	.....	
Totals	383,210	551,447	210,214	97,842

*Engaged for wheat, 1892, 40,445; 1891, 73,308.

Cereals.

Mark Lane Express, Sept. 19th, says: Foreign wheat has come in very freely, and made all the port markets dull. About 6d decline upon the week has to be quoted. The visible supply of wheat in England and America is now 18,443,000 qrs., against 14,048,000 qrs. one year ago and 14,623,000 qrs. two years since. America for the cereal year ended Aug. 31st last shipped to all countries 225,662,000 bushels of wheat and flour, against 106 181,000 bushels in the previous year. This increase of 119,481,000 bushels in the quantity of wheat available to meet requirements not only entirely wiped out a deficit of some 5,000,000 bushels in Russian exports, but left over 8,000,000 qrs. to the good. Stocks in the United Kingdom have been increased by between two and three millions, and French reserves by a full million. Consumption of wheat has also been stimulated on the one hand by the quite unexpected plethora of supply, followed by cheapness in price, and on the other by the deficiency in the European rye crops of 1891 sending up the price of black bread above that of white.

Chicago mail advices up to Sept 30th report that in every State, in the winter wheat belt, farmers are generally busy preparing their ground, and, in many instances, are putting in the crop, and that seeding will be earlier this year than it was last. In central Illinois everybody has been sowing wheat this week. The rains of a week ago put the ground in excellent condition. In southern Illinois the prospects are that the acreage will be about an average of what it has been for the past four or five years. But little has been seeded as yet, but the prospects are that everybody will be at work next week. Ohio reports that farmers are putting in their wheat rapidly. The ground was never in better condition. There is no prospect of any increase in acreage, if anything a little falling off. Indiana reports the ground in fine condition, seeding progressing satisfactorily, but the ground is getting somewhat dry, and rain at this time would be beneficial. Some farmers are holding off seeding, fearing the ravages of the fly. Michigan farmers are making excellent progress with seeding, and the crop is going into the ground in good shape. Southern Missouri reports wheat seeding generally two weeks earlier than usual. Ground in excellent condition, and no material increase in acreage. In Kansas, nearly all the land has been plowed for fall wheat, and from reports all over the State the condition of the ground is excellent. Some have already commenced to seed, and the probabilities are that the acreage will be larger than it was last season. South of the Ohio river, the States of Kentucky and Tennessee show that up to very recently the ground has been so dry that very little seeding has been done. No wheat will be put into the ground before October, which is the usual time in that section of the country for seeding.

The European and American stocks of wheat and flour, together with the stocks of wheat afloat on Sept. 1st, were 107,000,000 bushels, against 86,000,000 bushels on the corresponding date last year and 64,000,000 bushels in 1890.

A review of the situation in France shows that in the years 1889 and '90 the wheat crop averaged 320,000,000 bushels, and the imports each year about average for the two years 40,000,000 bushels. This year it is estimated, with a total crop of 309,000,000 bushels, that the imports will have to be at least 50,000,000. The acreage of wheat in France has been decreasing steadily for some years past, and, on the other hand, the consumption has been increasing. In the decade ending 1841, the consumption was 4½ bushels per capita. From that it steadily increased to 6.87 in 1872-'81, and in the past decade it has risen to 7.7 bushels per capita.

Advices from the Argentine Republic are that a large acreage of wheat was sown this season under very favorable circumstances and the plant is in very good condition.

Wheat to-day was quite strong in our market with a slight advance obtainable for shipping parcels desirably situated. For stiffening and topping off, exporters pay an advance on bids. The offerings are very light.

Barley was quiet to-day, but there was a firm tone, which indicates a slightly better bid for the more desirable grades in the near future. Some buyers think that, with early rains, the market for feed may go a shade lower, and, acting on this, they are not buying beyond immediate requirements.

Corn was slow and heavy to-day, but oats were steadier with a fair inquiry.

Feedstuff.

The market for bran and middlings was firm, steady for ground and rolled barley, and weak for feed meal.

Hay was in fair demand, with reports of sales made at a slight advance on outside quotations.

Dairy Produce.

Butter was weak and irregular to-day for all grades from good down, but strong for choice to gilt-edged. Owing to two vessels with large consignments on board from Humboldt being bar-bound, the stock of gilt-edged is very light, and holders are taking advantage of the scarcity to force prices up.

Cheese was slow to-day at unchanged quotations.

Eggs were very weak; buyers are holding off. Outside quotations are only reached in a small way.

Vegetables.

Garden truck was generally quiet and in buyers' favor to-day. Only the more choice met with any degree of favor.

Onions were dull and heavy, as were potatoes. Heavy receipts of the latter and an absence of a shipping demand were against sellers.

Fruit.

The market for deciduous fruits, without exception, was dull and heavy to-day. Several consignments of the more perishable were sold at the best prices obtainable. Winegrapes were slow. The quality was generally poor to fair; very few choice were to be seen.

Limes sold high, owing to a temporary scarcity. Lemons are slow at the advance.

Sellers report a weak and irregular market to-day for dried fruit. To force consignments, concessions are in order, but to enter the market full quotations, and perhaps a slight advance, would have to be paid.

Live Stock.

The market held the past week to fairly steady prices. At times a slight advance had to be paid for choice bullocks and mutton sheep. Hogs are weak.

Miscellaneous.

Poultry has met with a good demand throughout the week. Ducks are scarce and command an advance. Turkeys are also higher, but geese are lower. Choice conditioned large-sized hens and roosters continue scarce, and when found fetch an advance on outside quotations.

Honey continues scarce, so far as extracted is concerned, but comb is only fairly firm.

Wool is reported firmer under an improved inquiry. Scourers are reported to be sampling. The market at the East is reported to be improving.

Nuts are reported to be in fair demand.

Hops are reported quite strong for the better or more choice grades. Growers are reported as firm in their convictions that a better market will obtain soon.

Beans are fairly firm. Receipts are, as yet, light, barely enough to meet current inquiries.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

				October 5, 1892.		
Limes, Mex	7	00 @	8 00	Quinces pr bx	50 @	65
Do Cal	2	00 @	4 00	Extra choice fruit for special purposes sells at an advance on outside quotations.		
Lemons, box	5	00 @	7 00			
Do Sicily choice	7	— @	9 —			
Strawberries, per chest—				Beets, sk	— @	75
Sharpless	6	00 @	9 00	Carrots, sk	40 @	—
Peaches, box		50 @	75	Okra, dry, lb	15 @	—
Figs, blk box		25 @	75	Do green box	25 @	50
Do White		25 @	50	Parsnips, ctl	— @	1 25
Apples		35 @	65	Peppers, drv. lb	10 @	—
Do Choice		75 @	1 00	Do grn Chili, bx	30 @	40
Do Extra choice	1	25 @	—	Do do Bells	25 @	40
Canteloupes, pr crate		50 @	1 00	Turnips, ctl	75 @	—
Melons, pr 100	5	00 @	12 00	Cabbage, 100 lbs	50 @	65
Nutmegs, ℔ box		25 @	40	Garlic, lb	1 @	1½
Grapes, pr bx—				Tomatoes,	25 @	35
Do White		25 @	40	String Beans, lb	1 @	2½
Do Black		25 @	55	do do Wax, lb	2 @	3
Do Muscats		25 @	50	Lima Beans	4 @	5
Do Tokays		40 @	75	Cucumbers, box	10 @	25
Do Royal Isabel		75 @	1 00	Do pickle ℔ lb	½@	1½
Wine Grapes, Zinf'nd'l, pr tn	10	00 @	15 00	Mushrooms	— @	—
Plums, ℔ box		35 @	50	Egg Plant, bx	20 @	50
Pears		25 @	75	Green Corn, box	50 @	75
Do Bartlett	1	00 @	1 50	Mar fat Squash, ℔ ton	5 00 @	10 00

Live Stock.

BEEF.		MUTTON.	
Stall fed	5 @—	Wethers	6½ @—
Grass fed, extra	5 @—	Ewes	6 @—
First quality	4½@—	Do Spring	7½ @—
Second quality	4 @—	HOGS.	
Third quality	3 @—	Light, ℔ lb, cents	5 @—
Bulls and thin Cows	2 @—	Medium	4½ @—
VEAL.		Heavy	4½ @—
Range, heavy	4½@—	Soft	4 @—
Do light	5½@—	Feeders	3½ @—
Dairy	6½@—	Stock Hogs	3½ @—

Care of Tools.

One of the duties of the smith, as it is the duty of workmen in every department, is to keep his tools in order. The great trouble in the smith-shop is the battering of the heads of tools and faces of hammers. This battering is due to impact, which is a change of the molecules induced by heat generated by motion. The constant blows set the molecules in motion and cause crystallization, which is simply the forming of the molecules into crystals, which are the natural form of solids as the spherical is of liquids, and by this reformation of the molecules, their cohesive powers are weakened and the strength and resistance of the tool lessened. Steel hammers and sledges become crystallized in less than a year, from constant use, and chip off at the outer edges and sometimes inflict painful wounds. More than one such case has been recorded where chips from hammers have caused the loss of an eye, and where serious wounds have been the result of a careless failure to keep the hammers dressed up.

Hammers and sledges also become hollow on the face, from constant use and neglect, which not only unfits them for use, but makes them liable to split. They frequently split at the eye, which is caused by crystallization, and those which are fullered at each side of the eye frequently break at the fullered portion, causing more or less damage age and injury.

Aside from the danger of this neglect, the quality of the work is lowered. Imperfect tools cause the twist in the iron when swaged and the unevenness of the fullering, and that in smoothing off a flat piece of iron, one side becomes thinner than the other, and so on to the end of the chapter, so that, besides being a safer way, it is a more economical way to have the tools kept in proper order. If there is anything that looks shiftless, it is a tool bench with tools all battered up. While it is, of course, utterly impossible to have the heads in the best condition when the tools are in constant use, there is no necessity for leaving them till they are battered way down to the eye and beyond all usefulness and hope of repair, when an occasional dressing and repairing would make them safer and more useful, and at the same time increase their durability. The thrifty workman will not allow this state of affairs to remain, and will find time to keep his tools in good order, however busy he may be; as he realizes that it pays to do it, and in reality saves time in the work. A workman who understands his tools and how they are made will understand how to do this, and needs no advice; but to the apprentice, any suggestions in every line that pertains to his labor are welcome, and in the future we hope to have something more to say on this subject.—Amesbury Vehicle.

AMERICAN BERKSHIRE RECORD.—We have received Volume XII of this official publication by Berkshire breeders. The volume contains 3000 pedigrees—1077 boars and 1923 sows—numbered from 23,001 to 26,000, with 1053 boars and 1325 sows in the list of transfers of recorded animals. The appearance of this volume so soon after that of Volume XI, and during a time of general depression in the swine industry, shows that this breed yet holds its place in popular esteem. The liberal special premiums offered by the American Berkshire Association at the several State Fairs in 1892, and at the Columbian Exposition in 1893, are evidence that the Association is using its best endeavors, and intends that the Berkshire shall remain at the head of swine breeds. For this and previous volumes of the American Berkshire Record, the British Berkshire Herd Book, entry and transfer blanks, or other information, address John G. Springer, Secretary, Springfield, Ill.

IRON AS AN EVIL GENIUS.—Iron is so generally accredited as the most useful of metals that it seems somewhat strange to find it playing the role of a troublesome constituent. But such is the case from the glassmaker's point of view. To the worker in vitrified sand, iron is undoubtedly an evil genius. The public taste objects to the green color of ordinary commercial bottles, and demands a white or colorless glass. If the glassmaker could obtain pure materials at a reasonable cost, the making of white glass would be as simple as that of green. But as the minute quantities of iron in his materials are practically ineradicable, he must seek the desired end by chemical and chromatic methods. In its various forms, metallic, protoxide and peroxide, and the several mixtures of these states, the metal runs through the whole scale of colors—black, blue, green, yellow, orange and purple. All these colors are generally counted common and undesirable. Yet iron finds its way into the glass in so many ways that it is harder to avoid than any of the besetting evils of the glassmaker's work. It is in his sand, soda and lime, in the mixer in which he mixes them and in the barrels that bring these raw materials to the factory. It is in the clay of his pots, and the tempering-mills in which the clay is worked contribute a fair contingent. In the cullet is always to be found a number of nails, and the millings or blacks from the blower's pipes contribute a most baneful, because irregular, quota. Finally, the mischievous and holiday-loving gamin of the factory adds his mite from time to time. All his art and all his oxidizers, arsenic, nitrate and manganese, cobalt and nickel, must be pressed into the service of the glassmaker in order to bring to the nearly colorless state of peroxide as great a quantity of the iron as possible, and the remainder has to be hidden by chromatic effects.—Iron.

"Put Money in Thy Purse."

Our lady readers will be deeply interested in the advertisement of Glasgo Lace Thread Co., which appears on page 306.

TO NURSERYMEN and PLANTERS

In California and Arizona.

300,000 Pomolo (or Grape Fruit)

SEEDLING NURSERY STOCK.

ALSO 100,000 SOUR ORANGE STOCK.

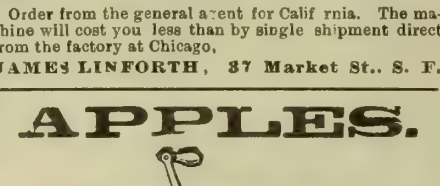
Will be offered at very reasonable prices for next 60 days by the grower,

S. M. STEVENS.
LAKELAND.....FLORIDA

Or C. B. HEWITT,
PASSADENA .....CALIFORNIA
Proprietor of Southern California Nurseries.

FOLDING SAWING MACHINE

9 CORDS IN 10 HOURS.

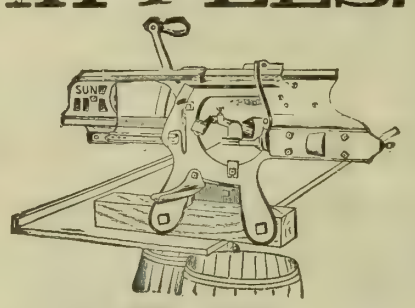


Send for free illustrated catalogue, showing testimonials from thousands who have sawed from 5 to 9 cords daily. It saws down trees, folds like a pocket-knife, weighs only 41 lbs., easily carried on shoulder. One man can saw more timber with it than two men with a cross-cut saw. 42,000 in use. We also make larger sized machine to carry 7 foot saw.

Order from the general agent for California. The machine will cost you less than by single shipment direct from the factory at Chicago,

JAMES LINFORTH, 37 Market St., S. F.

APPLES.



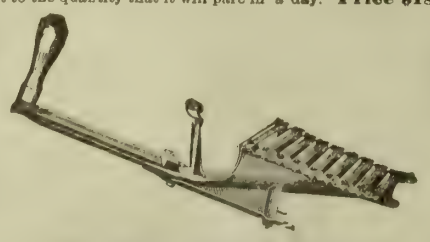
CORES. PARINGS.

THE SUN PARER AND CORER,

As now improved, comes nearer to meeting all requirements for rapid and effectual work than any other parer made.

Evaporators demand a parer that has sufficient stability to run three months without requiring twice the original cost in repairs. They want a parer that an ordinary person can keep in order and not be required to hire an expert machinist. One that is neat and clean to run, and does not spatter the operator from head to foot. They want a parer that will separate the apple cores and skins, leaving the apples on the trimming table and dropping the cores and skins in separate barrels; one that will pare 100 bushels of apples a day. The parer that meets the wants best is the parer that will pare the greatest amount in the shortest space of time.

The SUN PARER is the only practical lever machine made; it will pare as fast as the operator can pick up apples and put them on the fork. So draw your own conclusions at to the quantity that it will pare in a day. **Price $18.**



THE SUN APPLE SLICER

Gives the best satisfaction of any slicer on the market. It is the most rapid Hand Slicer in use. For cost of labor and quantity of work done with it, we challenge comparison with any Slicer made. A number of users state that it takes a little longer to slice the apples than with the foot-power machines, but it does its work so much better that they gain four times the difference of time in drying. **Price $5.00**

—ALSO—

CIDER MILLS AND PRESSES.

—ADDRESS—

G. G. WICKSON & CO.,
3 & 5 Front St., San Francisco.
346 N. Main St., Los Angeles. 141 Front St., Portland Or

STATE FAIR, 1892.





The following San Francisco Firms ana Indiviauals Received the Highest Awards of the State Agricultural Society at the late State Fair.

CRANE COMPANY,
For BEST WINDMILL—Four in competition.

BAKER & HAMILTON,
BEST DISPLAY OF AGRICULTURAL MACHINERY, CALIFORNIA MANUFACTURE, GOODS MANUFACTURED BY BENICIA AGRICULTURAL WORKS.
BUFFALO-PITTS THRESHING MACHINE.
TIGER HAY RAKES.
FAVORITE POWER CORN SHELLERS.
B. & H. LAWN MOWERS.
BUCKEYE REAPERS.
HALLECK POTATO DIGGER.
BENICIA SIDE-HILL PLOWS.
EUREKA SULKY PLOWS.
BENICIA SOD PLOW.
BEST PLOW FOR ALL PURPOSES, THE "BENICIA."
BENICIA SPRING WAGON.

G. G. WICKSON & CO.
BEST DISPLAY OF MODERN DAIRY MACHINERY.
ALPHA DeLAVAL CREAM SEPARATOR.
STODDARD BARREL CHURN.
MASON POWER BUTTER WORKER.
FARM CHEESE VAT WITH HEATER.
ROSS HAY AND ENSILAGE CUTTER.
ROCHESTER ORCHARD AND VINEYARD PLOW.
PLANET Jr. HORSE HOE AND CULTIVATOR.
PLANET Jr. HAND SEED DRILL.
CALIFORNIA FRUIT GRADER.
SMITH CLINGSTONE PITTER.

J. W. GRACE & CO.
CANNON'S SHEEP DIP—Three in competition.

F. W. KROGH & CO.
BEST SWEEP HORSEPOWER.
WINE AND CIDER PRESS.

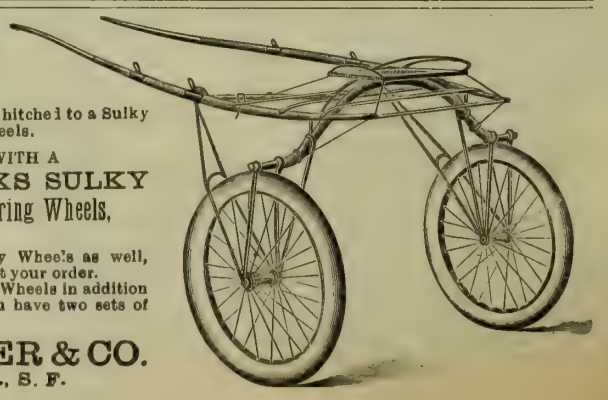
DANIEL BEST, San Leandro,
BEST GRAIN CLEANER. GAS or GASOLINE ENGINE.

PARAFFINE PAINT CO.
BEST PREPARED PAINT (P. & B.).
SAMPLES OF PAINT, CAL. MANUFACTURE (P. & B.).

Nancy Hanks

Record 2:05¼.

Trotted the fastest mile on record when hitched to a Sulky with Ball Bearing, Pneumatic Tired Wheels.



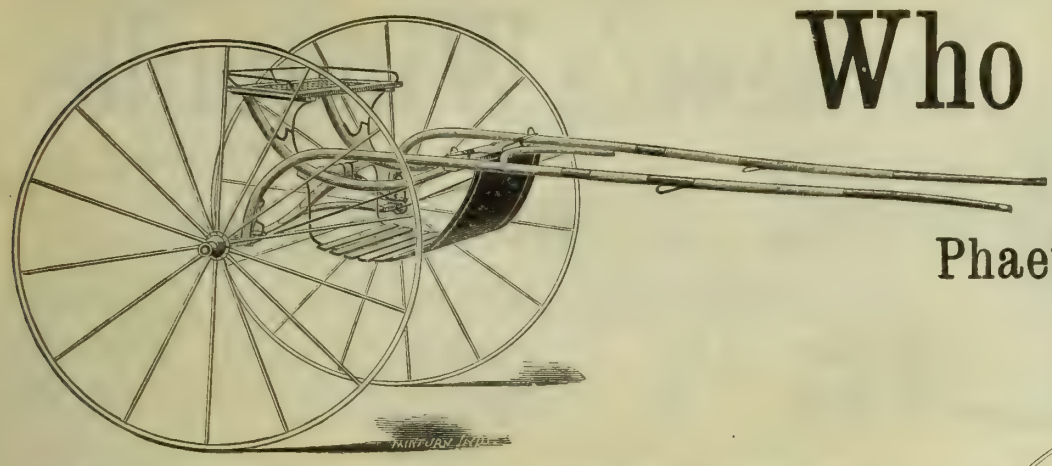
WE CAN FURNISH YOU WITH A

NO. 205 NANCY HANKS SULKY
With Pneumatic Tired Ball Bearing Wheels,
For $250.00.

This price includes the Regular Sulky Wheels as well, and either style may be used We solicit your order.

Remember, we give you the Regular Wheels in addition to the Pneumatic Tired Wheels. So you have two sets of wheels with each Sulky.

TRUMAN, HOOKER & CO.
421-427 MARKET ST., S. F.

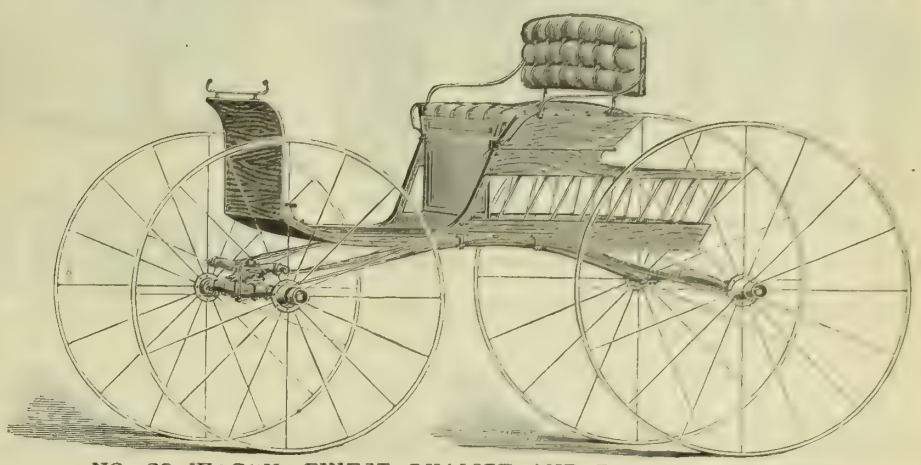


Who Wants a Buggy,

Road or Spring Wagon,

Phaeton, Surrey, Carriage or Harness?

NO. 1 CART, HIGH GRADE, CANE BOTTOM SEAT, PRICE $18.



NO. 30 WAGON, FINEST QUALITY AND FINISH, PRICE $68.

WRITE US FOR CATALOGUE, OR CALL UPON US.

WE SHIP GOODS EVERYWHERE

— AND —

WILL SAVE YOU FROM $20 TO $50 ON A VEHICLE AND $3 TO $10 ON HARNESS.

CALIFORNIA WAGON & CARRIAGE CO., 36½ Fremont St., San Francisco, Cal.

INDUSTRIAL PROGRESS IN THE SOUTH.—Since 1881 the corn crop of the South has increased 75 per cent, as against 71 per cent in the rest of the country; the cotton crop has increased from five and a half million to nine million bales—an increase in value, even with the present low price, of $200,000,000; in 1891 there were nearly 45,000 miles of railroad in the South, against less than 24,000 in 1881—a gain of 87 per cent, as against a gain of 56 per cent in the rest of the country. The passenger traffic of the same roads increased during the same period 360 per cent, as against an increase in the rest of the country of only 168 per cent. In pig-iron manufacture the South's output jumped from 451,000 tons in 1881 to 1,914,000 in 1891—a gain of 323 per cent, as against a gain for the rest of the country of 78 per cent; in other words, in 1881 the North and West made more than nine times as much iron as the South; in 1891 they made less than four times as much. The increase in the number of milloperators in the South was 135 per cent, as against an increase in New England of 17 per cent. And so in every line of productive activity the marvelous rapidity of increase is explained, showing that in assessed valuations the property of the South has in this period very nearly doubled, and increased from $187 per capita to $271—a record that is probably without a parallel in the whole history of substantial industrial growth. And in spite of the temporary depression caused by an overproduction of cotton, the increase goes on.—Forum.

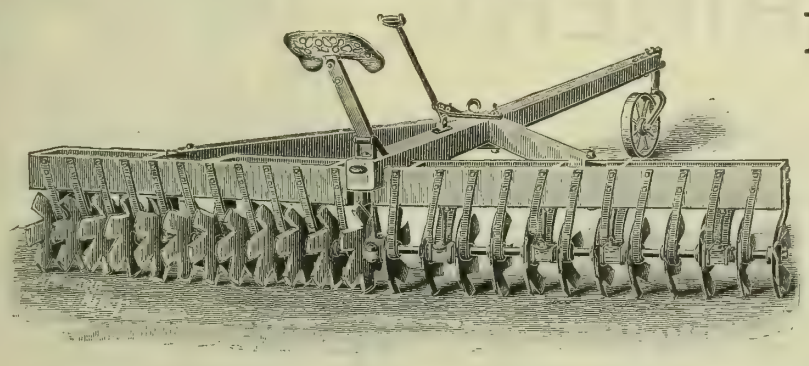
FINISHING REDWOOD.—In order to properly educate the Easterner in the proper way to finish redwood the following method—which is a satisfactory one—is published. It gives a hardness and lasting polish. It is as follows: For the first application use one part of boiled linseed oil to five parts of benzine or turpentine. This gives a rich dark color without staining, and by exposure to the sunlight a varied color is obtained, the softer part or end wood turning dark, the other remaining light. The wood should then be treated with two or more coats of shellac and well sandpapered; then apply varnish or hard oil as required, after which, if well rubbed with pumicestone, a highly polished surface is obtained. Where a light, cheerful finish is required use only white shellac for filler, and shellac, hard oil or varnish for outside coat, hard oil being preferable, as it gives a greater protection to the wood.—West Coast Lumberman.

D. M. Osborne & Co.

Attention is called to the advertisement in this issue of D. M. Osborne & Co., the well-known manufacturers of harvesting machinery.

They have greatly enlarged their manufacturing plant at Auburn, N. Y., and are now building a full line of harrows. As they have their own rolling-mills and malleable iron foundries, they are enabled to build these goods entirely of steel and malleable iron, which is a great improvement on the wood-frame tools of this description previously used in California.

COLOR blind and fire blind are not at all synonymous terms nor are the conditions similar. Color blindness is generally permanent; fire blindness only temporary. A person gazing intently at an open fire for some time may become fire blind for the time being, and thus be unable to judge of the degree of heat that is being taken on a piece of metal.—Sparks from the Crescent Anvil.



GREAT WESTERN

CUTAWAY HARROW.

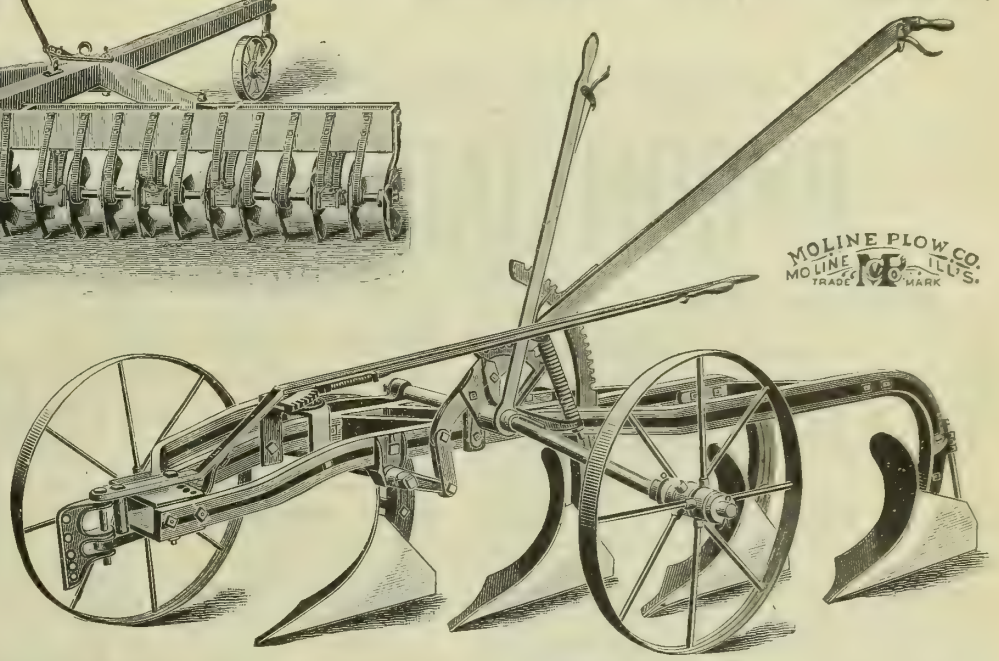
10 Ft., 12 Ft. and 14 Ft. Cut.

The only Disk Harrow that will cut hard land sufficiently deep to insure the proper covering of sowed grain.

Write for Catalogue and Price.

Mention this paper.

MOLINE GANG PLOWS.



ALLISON, NEFF & CO.

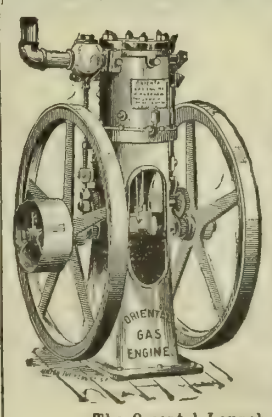
Southeast Corner Market and Main Streets, San Francisco.

1838.....54 YEARS.....300 ACRES.....1892

NUT TREES AND NEW PEARS.

Parry's Giant, Pedigree Japan Man moth, Paragon, and other Chestnuts. Japan, Persian, French and English Walnuts. Pecans, Almonds and Filberts. LINCOLN CORELESS PEAR—very large and very late. SENECA—large, handsome, and immediately after Bartletts. **Japan Golden Russet, Vermont Beauty and Idaho**, in collections at reduced rates. Bleagnus Longipes, **Hardy Oranges**, Wineberries, and other valuable novelties. **Shade Trees**, for Lawn or Street planting; Ornamental Shrubs, Vines, etc. **Grape Vines**, small fruit plants. Illustrated descriptive catalogue free. **WM. PARRY. Parry, N. J.**

THE ORIENTAL GAS ENGINE



IS THE BEST, because it combines simplicity of construction with power and economy in space. It can be run with natural or manufactured gas or gasoline at a cost of 20 to 25 cents per horse power per day.

It can be used for pumping purposes, as well as for all purposes where a perfect engine is required, with the advantage of lessening the risk of explosions. No licensed engineer at a high salary needed to operate it.

Send for circulars and prices if a good safe engine is what you need.

The Oriental Launch is Perfection.

M. A. GRAHAM,

Inventor and Manufacturer,

105 BEALE STREET. SAN FRANCISCO.

Educational.

School of Practical, Civil, Mechanical, Electrical and Mining Engineering,

Surveying, Architecture, Drawing and Assaying,

728 MARKET ST., SAN FRANCISCO, CAL

Open All Year.

A. VAN DER NAILLEN, President.

Assaying of Ores, $25; Bullion and Chlorination Assay, $25; Blowpipe Assay, $10. Full course of assaying, $50.

ESTABLISHED 1864 — Send for circular.

HEALD'S

BUSINESS COLLEGE,

24 POST ST., S. F.

FOR SEVENTY-FIVE DOLLARS THIS College instructs in Shorthand, Type Writing, Bookkeeping, Telegraphy, Penmanship, Drawing, all the English branches, and everything pertaining to business for six full months. We have sixteen teachers, and give individual instruction to all our pupils. Our school has its graduates in every part of the State.

SEND FOR CIRCULAR.

E. P. HEALD, President.

C. S. HALEY, Secretary

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos, $1 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

Our Agents

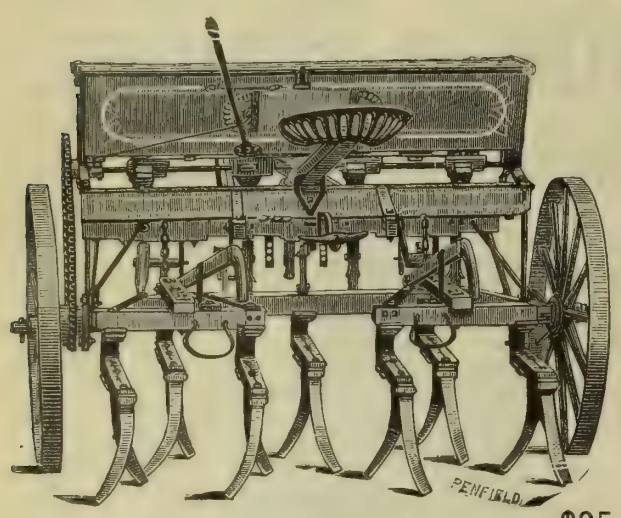
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E. H. SCHAEFFLE—El Dorado and Amador Co's.
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A Firm of Commission Merchants

SOLICITS AGENCIES.

PURCHASING IN CITY A SPECIALTY. ADVANCES made on consignments. Highest references. Address "Energy," this office.

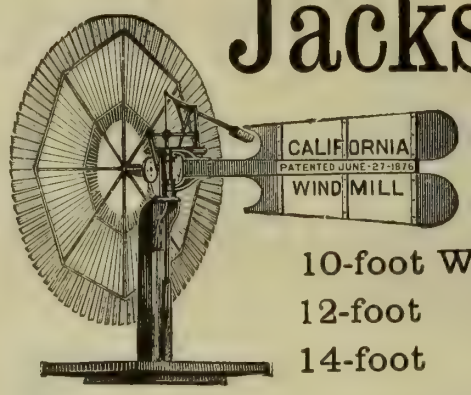
Postmasters are requested to be sure and notify us when this paper is not taken from their office. If not stopped promptly (through oversight or other mishaps) do us the favor to write again.



No. 3 "Bull Dog" Harrow, with Seeder attached, $35

(Cut does not show recent improvements; has 9 sets of teeth, as shown in cut below.)

Jackson's Windmills.



NOTE THESE PRICES:

10-foot Wheel, weight, 650 lbs.	-	-	$35 00
12-foot " " 700 "	-	-	45 00
14-foot " " 930 "	-	-	55 00

Superior Windmill Pumps at Equally Low Prices.

I MAKE A SPECIALTY OF

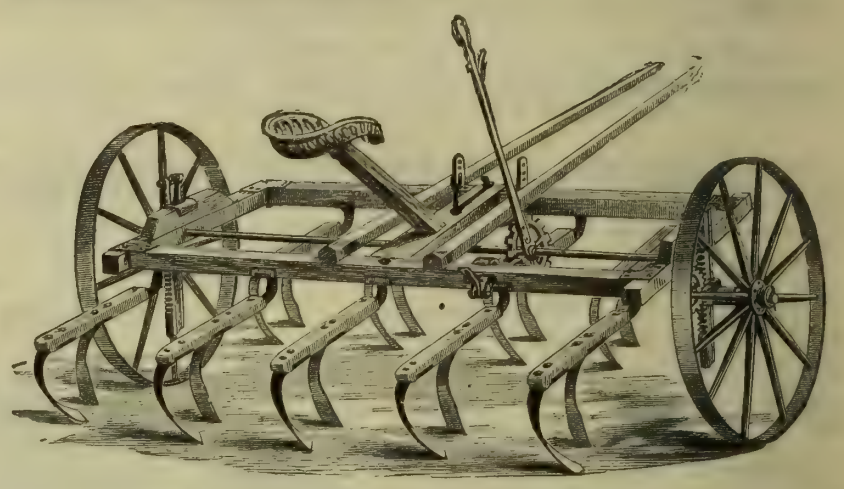
IRRIGATING MACHINERY.

WRITE FOR CATALOGUE.

BYRON JACKSON

625-631 Sixth Street, 149-169 Bluxome Street,

SAN FRANCISCO, CAL.



No. 3 "Bull Dog" 6-foot Riding Harrow.

"BULL DOG" RIDING HARROW, $25.00.

This tool is best adapted for hard, rough, stony, rooty, or boggy ground; is also excellent for cultivating summer fallow or fall plowing, when the ground is to be prepared for the seed.

It cuts 6 feet in width, has 18 teeth, and is recommended for the most obstinate soils, as, being an economical machine, which will do the work where no other harrow can be used.

THE MORGAN SPADING HARROW.

STYLE "E."

KING OF PULVERIZERS FOR HARSH, REBELLIOUS SOILS.

Matchless for Pulverizing Salt Grass and Other Sods.

The style "E" is designed for use in soils where any other implement of its class is not expected to work successfully. Intended for clay, or "adobe" soils, and particularly for pulverizing hard, tenacious "adobe" clods, in reducing "adobe" summer-fallow lands to a condition suitable for receiving the seed grain before the fall rains, it has leaped into prominence and favor, and we are pleased to say that it still maintains its reputation, won under great difficulties.

The front gangs throwing outward and the rear gangs throwing inward cause a most complete pulverization of all the surface and no furrow or ridge is left in the middle, as the rear gangs throw toward each other, leaving the whole "cut" of the harrow perfectly level and smooth.

The rear gangs of spades are so set that they run between the front gangs, thus presenting a cutting surface to the earth **every three inches,** whereas any two-gang disc or other harrow does not present a cutting surface to the soil any nearer than six inches. Owing to its peculiar construction, the style "E" Spading Harrow will do three times the amount of execution that any other kind of implement can possibly accomplish in the same time. The style "E" is a double machine, and by reason of one set of spades throwing the soil one way and the other set throwing the soil in an opposite direction, it accomplishes its work at one operation, or in going over the land once only, where disc or other harrows could not do the work in going over the land less than three or four times.

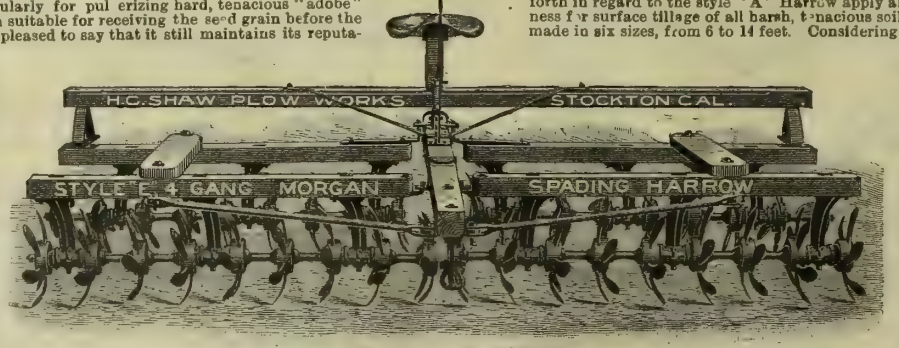
FOUR GANG.

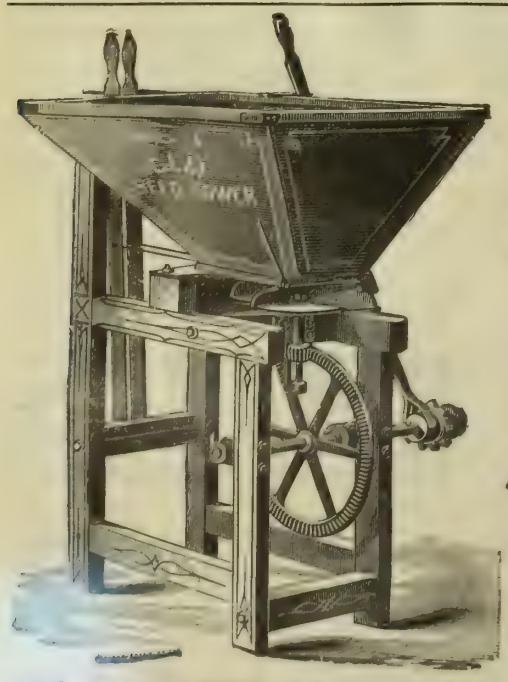
SPECIALLY ADAPTED FOR DRY SOWING.

Unequaled for Seeding Summer-Fallow Lands.

The peculiar shape of the blade is the same as those used on the style "A" Harrow, and any "points" set forth in regard to the style "A" Harrow apply also to style "E." The style "E" is unrivaled in its effectiveness for surface tillage of all harsh, tenacious soils, and often proves an effective substitute for the plow. It is made in six sizes, from 6 to 14 feet. Considering the amount of work accomplished it is very light of draft. It loosens, crumbles and lightens the soil, does not pack it, and does what no other implement in the world will do, viz:—leaves the soil thoroughly pulverized, stirring it from the bottom upward, in fine condition and exposed to the enriching influences of sun and air. It thoroughly covers seed grain and is a most economical implement to use for this purpose alone. It will cover from a fourth to a fifth more seed than any other implement used in broadcast sowing

All of the materials entering into the construction of the style "E" Harrow being of the best obtainable, render it very strong and practically indestructible. No pole is used, as the harrow pulls perfectly "true" from strong draft irons. No unwieldy pole to be broken out or cause sore necks on the team. Write for prices.



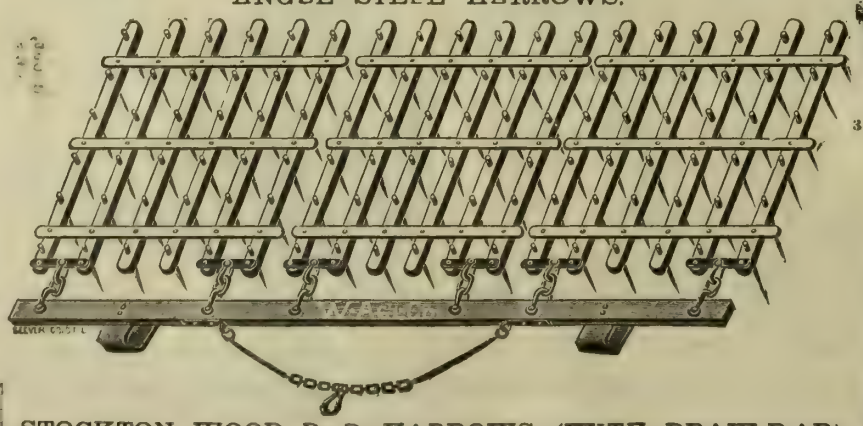


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All Sizes and Styles.



ANGLE STEEL HARROWS.

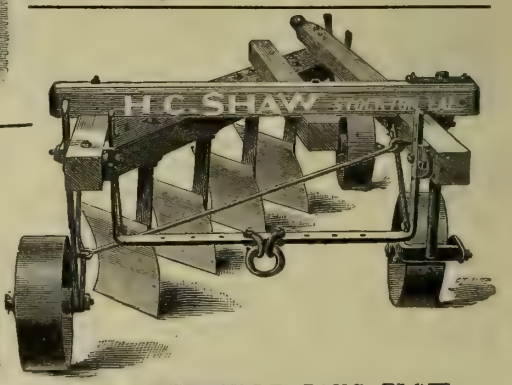


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SHAW REVERSIBLE GANG PLOW.

35,000 in Use. 25 Years of Continued Success. The Most Economical Plow on Earth.



SHAW SLIP SHARE GANG.

For Deep Plowing, Tule and Other Sod Lands

PACIFIC RURAL PRESS

Vol. XLIV. No. 16. SAN FRANCISCO, SATURDAY, OCTOBER 15, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Columbian Days.

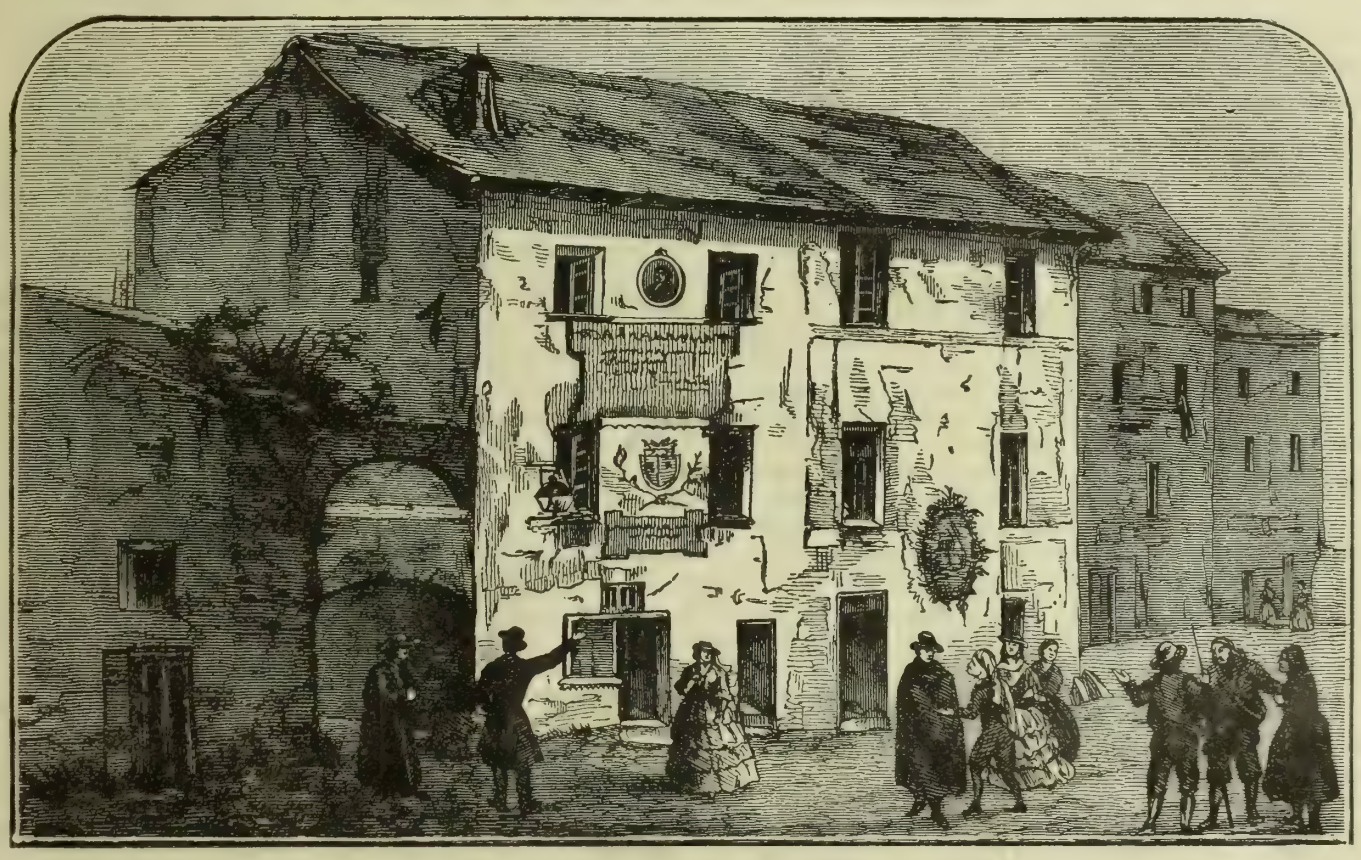
It is a comforting reflection that future generations will not have as great trouble in ascertaining a few simple facts about the heroes of our day as we experience in attempting to fix a few points about those who lived in past centuries. Thanks to the snap shot camera, the ubiquitous reporter, the magnificent detail of "sossiety" journalism, most of our great men are already embalmed against oblivion as securely as though packed in spices at the base of the pyramids.

If any have failed of this kind of immortality, verily are they not written and portrayed with lead and steel in county histories? Have they not bought space in a dozen series of "Prominent Men of Our Time," "The Builders of the Commonwealth," etc.? They have, indeed, done their share to make it sure that posterity will not groan for lack of knowledge of them. We are, however, inclined to be harassed with doubt as to whether these generous contributions to fame will, after all, serve well those who make the investment. How are the antiquarians of A. D. 2500 to learn the correct lineaments of any hero of the present day who invests in several $5 newspaper portraits of himself? We, of the present, cannot recognize the hero in any of them. But why do we borrow trouble? Let the unborn future fondle its own offspring.

Now that we are fairly launched upon the Columbian year the air teems with notes of the world's admiration and gratitude. There is the most ardent desire to learn the utmost that can be ascertained or even imagined of the man. Unfortunately, nearly all the statements are matters of information and belief, not of actual knowledge. The engraving upon this page shows a building in Genoa, Italy, which is generally conceded to be the birthplace of Columbus, but its claim to that distinction is not demonstrated. Still it answers the purpose of a birthplace for those who desire to honor Columbus at the present day and it may have done as well for the hero himself.

There is another building very closely connected with Columbus' life, about which there can be no doubt and to which brief allusion can be made. It has been proposed to erect at Jackson Park, Chicago, a fac simile of the ancient convent of La Rabida, of Palos, Spain. It was at the door of the convent of La Rabida that Columbus, disappointed and down-hearted, asked for food and shelter for himself and his child. It was here that he found an asylum for a few years while he developed his plans and prepared the arguments which he submitted to the council at Salamanca.

It was in one of the rooms of this convent that he met the Dominican monks in debate, and it was here also that he conferred with Alonzo Pinzo, who afterward commanded one of the vessels of his fleet. In this convent Columbus lived while he was making preparations for his voyage, and on the morning that he sailed from Palos he attended himself the little chapel. There is no building in the world so closely identified with his discovery as this, and fortunately its architecture is of such a character as to permit of a reproduction at a comparatively small cost, and at the same time furnish a picturesque view and appropriate group among the splendid buildings at Jackson Park. It will not only be of itself a monument to Columbus, but it will furnish commodious and convenient showrooms for the collections and relics of Columbus that are to be exhibited.



SUPPOSED BIRTHPLACE OF COLUMBUS, GENOA, ITALY.

METEORITES ARE REAL ESTATE.—A very interesting case at law has just been settled in Iowa. A meteorite fell on a man's farm; another man dug it out and sold it. The farmowner sued the finder. The court held that the stone became part of the soil on which it fell, and that the finder had no right to remove it. The defense claimed that whatever was movable and found on the surface of the earth, unclaimed by any owner, was supposed to be abandoned by the proprietor. The Supreme Court has just ruled that as this stone was in the earth and practically unmoved, and was placed there by nature, it was a stone included generally under the property to be claimed. It is said that legal records show no precedent, and that the meteorite has just appeared for the first time in terrestrial courts.

FRESNO FARMERS' INSTITUTE.—The next quarterly meeting of the Fresno Farmers' Institute will be held in Selma on October 29th. Selma is an excellent point for such a meeting, as was shown upon a previous occasion. We trust all our readers in that region will bear the date in mind and attend. Probably we shall be able to give an outline of the program later.

DISBANDED.—The Price Hay Press Company has been given permission to disincorporate.

Late Peaches.

This year has brought to light several seedlings which seem likely to extend the peach season in the line of fine yellow varieties. At the last meeting of the State Horticultural Society, Fred C. Miles of Penryn exhibited two notable seedling peaches. One was a very large yellow cling, rich and handsome, ripening ten days later than Salway. Another of about the same date of ripening was a very large, beautiful, yellow freestone. Both are seedlings by Mr. Barton, whose name they will bear. Their great size, late ripening and excellent shipping qualities bid fair to make them notable in the future.

A fine yellow freestone, which seems to be a few days later than these, has been brought to light by C. W. Albright of Placerville. It is not so large as the Barton, nor are the samples sent us quite such a brilliant yellow color. It is, however, of good size, with rich yellow flesh of high and true flavor. The samples were picked October 5th, stood shipment to San Francisco perfectly, and have remained several days since receipt in perfect condition. The variety promises to have a future if its bearing qualities are satisfactory. Mr. Albright writes us that the tree is a chance seedling four years from the pit.

R. W. Bell of the Santa Rosa Nurseries kindly sent us samples of the Wonderful peach, picked September 26th. We take it that this is the peach sent out by Lovett under that name. It is a medium-sized yellow freestone, rather oval, keeps well and is satisfactory in interior qualities. Samples grown under more favorable conditions will probably show better size.

W. T. Kirkman, nurseryman at Atwater, Merced county, also sends us a good yellow freestone, ripening last of September, which has originated in his neighborhood. It is a very symmetrical, handsome fruit, of good quality. Though of good medium size, it should be larger to compare well with the other seedlings of the same or later season mentioned above. It is certainly worth attention, and may prove very valuable locally at least.

THE MEXICANS WANT OUR CORN.—Secretary Rusk announces that the time for the free importation of corn into Mexico has been extended till December 30, and stating further that between December and July 31 next, only one-fourth of the regular duty, which is one cent per kilo, gross weight, will be collected on imports. The Consul-General adds: "This free importation until the end of November and reduced import duty until January 31 has caused a greatly increased demand for our American corn, particularly in all the regions west of the Mississippi." Those who have either to buy or sell feed-grains on this coast may do well to heed this movement.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square)	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, October 15, 1892.

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[NEW THIS ISSUE.]

Harrows—D. M. Osborne & Co.
Plows—Baker & Hamilton.
Commission Merchants—Judson Fruit Company.
Fruit Trees—Trumbull & Beebe.
Windmills—Frank Brothers.
Musical Instruments—Kohler & Chase
Bargains in Land—John F. Byxbee.
Cream Separators—G. G. Wickson & Co.
Meat Choppers—Enterprise Manufacturing Co., Philadelphia, Pa.
Information for Women—Mrs. Alice Wells, Oakland.
Shorthorn Bulls—Robert Ashburner, Baden Station.
Fruit Trees—W. H. Pepper, Petaluma.
Angora Goats—Ernest Weyand, Colusa.
World's Fair Views—World's Fair Panoramic Co., Chicago.

☞ *See Advertising Columns.*

The Week.

Evidently, the season is closing in. The first rain to reach the bay region came on Saturday night and was a good rain, reaching a precipitation of an inch in some places. Since then, the extreme northern portion of the State has been included in the rain area. As we write, a norther of considerable force and of characteristic aridity prevails over the greater part of the State. It will be welcomed by some who are not yet ready for continued moisture, for it will speedily dispose of the recent precipitation. Frosts are reported from remote portions of the coast.

The public mind is now running strongly on politics, and little else can command a hearing. Fortunately, it is an off season in agriculture and engrossment in issues of statesmanship are not likely to seriously affect industrial interests. Before another issue of the Rural reaches our readers, the new holiday, Columbus Day, Oct. 21st, will have come and gone. The school idea of celebration is the accepted one and will constitute the chief observance. New York not allowing for the change in the calendar, is celebrating magnificently as we go to press on Oct. 12th. Chicago, observing the change in the calendar, will celebrate grandly Oct. 21st. If the change in the calendar accomplished no other good, that of obviating a quarrel between these two great cities should compensate the peace-loving old monk for his brainwork in getting a new way of measuring time.

Cessation of Weather Crop Bulletins.—The The weekly crop bulletin, which has been furnished us by the State Agricultural Society, in cooperation with the United States Weather Bureau, during the past growing and harvesting season, has been closed for the season. Much credit is due to Director Barwick for the zealous and self-denying work he has done. He in turn gives thanks to all the voluntary observers who have furnished him local reports. Such observers are not expected to send further reports until next spring, when the system of weekly reports will be revived.

A Precious Weed.

A weed has been well defined as a plant out of place, or, as a more modern terminology would have it, a weed is an agricultural misfit. The truth of this humane view of a weed is clearly seen in the fact that just as soon as a weed is claimed by estheticism, or by the arts industrial or curative, to be beautiful or useful, it is no longer hated and deprecated but is admired and sought for. When this phase in its history is attained the plant becomes more abundant by cultivation, or it becomes more rare because the wildling rebels against culture and is soon rooted out by those who plunder its habitat. Many of our favorite garden flowers are glorified weeds, developed almost out of resemblance to their humble prototypes by hybridization, selection and pampering. Some of our most costly drugs are the products of weeds which have been hunted almost to annihilation by herb-diggers. Stamped as desirable for any considerable purpose, the weed becomes a useful plant, an honored citizen of the vegetable world.

These reflections are forced upon us by the storm of inquiries which assail us about a member of the disreputable dock family, which now seems to be disappearing as a weed and likely to attain importance as a cultivated plant. It is the so-called "sour dock," the canaigre of the Mexican vernacular, the *Rumex hymenosepalum* of the botanist. The plant will be readily recognized by any one familiar with plants, for it discloses its relationship to the docks by its style of leaf-growth and seed-stem. It is rather an attractive-looking plant, for its red leaf-stems and veinings contrast well with the bright green of the leaf. It grows wild and was formerly quite abundant in Texas, New Mexico, Arizona and southern California, as well as in the northern areas of Old Mexico. The root of the plant has been used from time immemorial by Mexicans and Indians in their tanning of hides and skins, and it now is on the way the way to eminence because the commercial tanners of the world have so drawn upon various barks which yield tannin, that the world's supply of tannin is becoming appreciably reduced. Local tanners in the region of the canaigre followed the home tanners in the use of the root, and in this way larger tanning concerns at a distance became aware of its value and availability. The inquiries which now assail us seek to know where there is a still available supply of the wild canaigre, and, in default of this, how does the cultivated root compare in tannin contents with the wild. Upon the latter question hangs the possibility of profitable introduction of this member of the disreputable dock family as an agricultural crop.

As most of our readers know, the College of Agriculture at Berkeley has maintained upon the University grounds, for the last decade and more, a garden of economic plants. To this garden are brought seeds and plants which are found of local use in all parts of the world. These plants are grown, are always open to the inspection of the public, and their useful parts or products are carefully examined in the laboratory of the Experiment Station to ascertain the percentage of desirable components when subjected to cultivation and other incidents of a new environment. Fortunately for the present demand for definite information, the canaigre root found a place in the University garden as early as 1884 and has been continuously grown since then. In the last report of the Experiment Station, there is a chapter reciting the results of comparative tannin assays of canaigre roots grown in California, by Charles S. Bonner, an agricultural graduate of the class of 1890. Any one desiring the full record of the subject can obtain it free on application to the director of the Agricultural Experiment Station at Berkeley. For our present purpose, it will only be necessary to cite a point or two arrived at by the investigation.

It was found that canaigre in the adobe soil at Berkeley had made a vigorous growth and produced a large quantity of heavy tuberous roots which were thickly clustered at the base of the plant. This is an important point because the native home of the plant is upon dry, sandy soils, which are hardly available for ordinary cultivation. The continuous trial at Berkeley indicates that the root may be grown on ordinary farm soils as well, and perhaps better, than upon waste lands in the arid region, for Mr. Bonner found by analysis that the plant grown in Berkeley stored in its roots an average of 36 per cent of tannin, while various analyses of Texas roots ranged from 26 to 38 per cent. It was also shown that roots dug in May showed more tannin than those dug in March, the inference being that the roots can be dug at any convenient time after flowering.

In connection with the foregoing, it may be stated that according to a letter in the *Irrigation Age* of October, the newly developed irrigation region adjacent to Eddy, New Mexico, is undertaking considerable of an enterprise in growing this root. It is claimed that the wild root has been so diligently gathered during the last two years that the supply has given out, and this is perhaps the reason why so many inquiries as to wild supplies of the plant have been sent to California. It is said that the dried root brings $60 to $80 per ton in Europe, and that local dealers agree to pay $5 per ton for the green root delivered alongside of the railway, and it is anticipated that they may pay even more. Several hundred acres are being planted to meet this demand. From five to ten tons of wild root have been dug to the acre by cheap Mexican labor, and one cultivator claims to have secured above 16 tons per acre from cultivated ground. It is also said that a factory for the extraction of tannin from canaigre root has been started at Deming and others are contemplated, the theory being that, by extracting the tannin and thus avoiding cost of freight and handling a vast amount of worthless matter, the business may be more economically and satisfactorily conducted.

Such, then, is the story of canaigre; a member of a pestiferous family of weeds, whose relatives are the accursed yellow dock and the deadly sorrel, rising above the ignominy of its birth and its family to become an honored and esteemed member of the aristocracy of plants useful to mankind. Its uprising, upon the basis of inherent worth and estimable public services, has bearings above and beyond those to which allusion has been made,

Advice to a California Cowfeeder.

Prof. W. A. Henry, of the Wisconsin Experiment Station, to whom we recently alluded as a leading expounder of feeding upon scientific principles, gives, through the *Live Stock Gazette*, advice to a San Mateo dairyman, who is feeding 220 cows for the production of milk, with feed at the prices stated below: Bran, $15 per ton; middlings, $19.50; oil-meal, $33 50; oat hay, $8; alfalfa, $10. The dairyman asks which of these feeds should be used and in what proportion. The answer is as follows:

As helping us somewhat in discussing this, the following table shows the constituents in most of the feeds named as found by the chemist:

POUNDS OF DIGESTIBLE CONSTITUENTS IN 100 OF FEED.

	Protein, Lbs.	Carbohydrates, Lbs.	Fat, Lbs.
Bran	12 6	44.1	2.9
Middlings	12.2	47.2	2 9
Oilmeal	27.0	32.2	7.1
Alfalfa	7 6	37.8	1.3

Of the three concentrated feeds named, bran is certainly the cheapest in the list, and if the large clean, flakey bran commonly found on the Pacific coast can be secured, let it be supplied with a liberal hand. The millers are apt to blow a good deal of dirt and worthless stuff into the middlings, though this is not always so.

For the general ration try the following: Twelve pounds alfalfa hay, five pounds oat hay, ten pounds wheat bran, two pounds middlings per day. Occasionally, substitute two pounds of oilmeal for the middlings. Oilmeal has an excellent effect upon the animal system and should be fed at times regardless of its mere nutritive constituents. Good alfalfa hay is one of the most natural cow feeds in the world, and when it can be obtained at anything like $10 per ton on the Pacific coast is cheap feed, and should form a large part of the ration.

Fine, bright wild-oat hay is also a good stock feed, and though better adapted to horses than cattle is still appreciated by the latter. It should form a portion of the ration at the low price here named. I have not been able to give an analysis of its constituents, but while on the coast this summer secured a sample which is now in our laboratory awaiting its turn at the hands of the chemist.

Our correspondent is to be congratulated upon the excellence of the list of foods for his stock and the comparatively reasonable prices at which they can be obtained, judging from the prices here quoted. They should be fed with a liberal hand, and if the above given table is used let it be only as a guide, the feeder carefully studying the likes and dislikes of the animals and catering to them. For the most part the cow is about as good a judge of good milk-producing foods as we can find.

These remarks will be read with much interest by our dairymen. The approval of alfalfa will strike a responsive chord in the hearts of interior valley residents who are largely dependent upon such hay and can produce it in unlimited quantity at a minimum price. In the city there is still something of a prejudice against alfalfa hay which we have always believed must result from excessive feeding of it or from too rapid changes in the ration.

We shall be interested to see Prof. Henry's analysis of oat hay from this state. We imagine he misunderstands his correspondent, whom, if we are not mistaken, alluded to tame oat hay rather than wild.

The tribute to the cheapness and excellence of Pacific coast stock feeds is characteristic of Prof. Henry and we hope he will never get tired of putting on record his observations in that line.

Growing Flowering Bulbs.—Eastern instructions for plant-growing do not always fit upon this coast, because of the difference in seasons and in climatic conditions. The intelligent reader can, however, often draw most useful hints from Eastern practices. Such a source of valuable suggestion is a handsome pamphlet just published by J. C. Vaughn, of Chicago, entitled "Flower Bulbs and How to Grow Them," by the well-known E. E. Rexford. It is sent by the publisher postpaid for 50 cents

From an Independent Standpoint.

In a letter which in its entirety is too long for the RURAL'S crowded columns a correspondent asks if it "is altogether magnanimous in a great paper courageous enough to prick a dangerous ulcer to leave its readers in the lurch without suggestion, scheme or plan for the eradication of this pestilential evil?" The RURAL, like critics in general, finds it easier to point out evils than to suggest the means of reforming them; but in the case of this particular evil which our correspondent is quite right to call pestilential, the remedy suggests itself. It is plain that we are receiving from Europe vast numbers of persons whose presence here is a direct damage to our working men and our women, and a serious menace to the American plan of government. To stop this influx would be very easy. Any one of a half a dozen of plans of inspection, the severest of which would fall short of the restriction imposed against the Chinese, would prevent undesirable persons from coming her in any considerable numbers. There would be no practical difficulty in keeping out the ignorant, the vicious and the impoverished if our people were united in the mind to do it—and right here is the difficulty. We have become a nation of moral cowards. We talk glibly enough of the "immigration evil" but when it comes to acting in line with this talk we falter because we are afraid of offending the foreign vote. Neither of the parties dare put in its platform a recommendation to Congress to stop the coming of Irish, German, Italian or Jew because neither has the courage, even for the sake of protecting the highest American interest, to offend the Irish, German, the Italian, or the Jewish vote. By the party leaders immediate political expediency, or what a few politicians deem to be expediency, is held higher than duty to country. Among the men who manage our public affairs there seems to be nobody left who would rather be right than be elected.

Further on in his letter our correspondent says:

Unbiased by the cant and claptrap of stump-speakers, with the heat and passions of the fight passed away, we can judicially review the history of the past and plainly see that the once-threatened Mongolian invasion of this country was never fraught with the perils and menace to our institutions, to our prosperity or our national life that this newer and more insidious foe carries. The Chinese, if ten million strong here, could not nor would not attempt to assimilate with us and debauch and debase our blood and individuality as a people. Their inclinations led them into menial forms of labor where they came less in conflict and competition with American workingmen than any other nationality seeking these shores; and last, but not least, they never attempted to engraft upon us those pleasing European institutions of riot, anarchy, treason and the boycott. Was it patriotism, a regard for American labor, the welfare of the American home that prompted this enthusiasm and the enactments that followed the agitation? Possibly; but I will continue to think that the discovery of a constitutional inhibition against the Mongolian from ever becoming a voter was the most potent factor in the whole matter. Yet when an alien's (Dennis Kearney's) slogan rang out, "The Chinese must go!" how the two political parties did tumble over each other's backs in the scramble to get there first with a preamble, a resolution or a platform denunciatory of the nearly innocuous Chinamen.

Here is a nugget of the purest truth. The Chinese, objectionable as they are in many ways, are ten times to be preferred as immigrants to such material as landed a few days ago from the cholera ships. The Chinaman did, indeed, bring his cheap labor to compete with white labor, but there the evil practically ended. He did not bring with him the schemes or the passions of revolution. He did not debauch the integrity of American ideas. He did not defile our body political or social. *He could not vote*, and so the politician and the demagogue jumped upon him. If the Chinaman was to-day a voter, the political trimmers who are now vieing with each other in denouncing him, and in inventing ways to harrass him, would be cap-in-hand before him just as they are before the several other "elements" of our foreign population.

But our correspondent asks for a "suggestion," "scheme" or "plan" to hold back the tide of European immigration. It is simple and easy—and the simple and easy way is always the best way—to prohibit the landing at any American port of any immigrant unless he could produce a certificate from a commissioner stationed in the country from which he came. Such commissioner should have absolute power, with wide discretion, to grant or withhold permission to enter the United States. He should be instructed to require of each applicant satisfactory proof of good character, and of his ability to maintain himself. This is simple enough, and there is no reason why it would not be entirely practicable if entered into in good faith. But it will not be entered into in good faith till we have a new birth of American independence. It will come in time, because the evil will become intolerable. A few more riots such as we have had this past summer, a few more speeches in Congress like those made by Senator Palmer of Illinois and Senator Voorhees of Indiana and a few more such exposures as that made by the cholera scare and there will be an awakening of public sentiment that will surprise somebody.

The solution of this immigration question, like that of nearly every other public problem, rests not in inherent difficulties, but in the minds of the American people. If we want to keep objectionable elements of population out of our country, we can do it. If we want to reform any one of the evils under which the country suffers, we can do it if we choose to go about it. The reason why we fail is because, as a people, we have become so bound up in our devotion to political parties that we think we can do nothing excepting through their instrumentality. Political parties naturally work for success and naturally are wholly without moral courage. When our people can sufficiently get out from under the domination of the party-whip as to think with freedom and to act without party restraint, then the business of reform will go forward with amazing rapidity. If the RURAL grows tiresome in its reiterated talk about the evils of partisanship, it is because, in its view of things, nothing is so much needed for the health of American ideas and for the health of our Government as a new birth of personal and political independence on the part of citizens generally. There are many encouraging signs that a better era is soon to come. The Peoples' Party movement with all its extravagances; the labor organizations in spite of their revolutionary tendencies; the farmers' Grange with its free discussions of public affairs—all these agencies are educating the people to freer views concerning the questions currently before the country. There are many evidences that party spirit is weakening and that the people are coming to view questions of social and governmental policy upon their merits and without the bias of partisan restriction. This is the true purifying principle in American affairs. When this new spirit has reached the point that political parties can only command popular support *when they are right*, the immigration evil with our other national evils will vanish.

The Eastern Market.

Mr. Mills' Suggestions—Free Discussion of the Transportation Question.

At a regular meeting of the State Board of Trade, held in San Francisco on Tuesday afternoon of the current week, Mr. W. H. Mills, of the Southern Pacific Railroad Co., read a paper designed to explain certain general economic principles as they apply to the present conditions of California.

The *Basis Industry*, of a State or community, Mr. Mills declared to be that specialty in which natural advantages place a certain product beyond reach of competition and in a condition for progressive development, as, for instance, coal and iron in Pennsylvania, corn and hogs in Iowa, etc. California was founded with mining as her basis industry. In the nature of the case, mining can never be a permanent foundation for national wealth. On the other hand, the fertility of our soil and the salubrity of our climate point to horticulture as a basis industry—profitable, permanent, encouraging skill and enterprise, and capable of sustaining fifty times the population of agricultural industries now generally followed in California. Economic production forces markets and builds permanent industries.

Our efforts should be along the line of reaching consumers in the most direct and economical method possible, and, for this reason, should be directed largely to transportation and distribution. Our early fruits reach Eastern consumers as luxuries, and California peaches, to-day, are retailing in New York at seven cents each. At the same time, when we consider the quality of the service and distance, the rates on transcontinental shipments of fruit are the cheapest in America. Present methods of distribution from wholesale centers are costly to consumer, and high prices discourage production by restricting markets. Last year, of the 909 cars routed to Eastern centers, New York received 530 and Philadelphia, a city of half the population and similar conditions, only 11. By the plan of distributing from the wholesale centers, fruit reaches consumers in comparatively poor condition and at high cost, and the plan of direct shipment meets concurrent favor.

Distribution is the office of merchants, not carriers. The market will be commensurate with the importance of the industry. It has reached its highest prosperity the present year. To cut loose from the present system of large distributing centers requires special equipment and special treatment, supplemented by small distributing centers. When this industry becomes so thoroughly systematized as to deserve the name organic, every article will be produced under the most favorable conditions.

In grain-farming, aggregation gives maximum profits and determines tendency. Horticulture is an industry of segregation and promises fifty times the population. All plans have met discouragements and new schemes must expect them. Prof. W. A. Henry, of Madison University, was quoted as having thought, in '86, that our fruit industry was destined to fatal overproduction, and on later visits he had become an enthusiastic investor. He says that Madison is large enough to consume a car of California fruit while it remains in good condition, and only gets what the people bring down in paper sacks when they visit Chicago and the little that is ordered by xpress for weddings and other grand occasions. The system of handling oysters throughout the East and of distributing ice in the South were given as plans worthy of imitation. When the train stops at a station, they take off the supply ordered for that place and proceed. In this way they distribute such perishable commodities as oysters and ice, and might distribute fruit even to points that could not handle more than 20 boxes at a time the first season. The possibilities of railroad transportation are very dimly understood, yet transportation magnates are very conservative regarding any changes in methods, especially if they involve any extra bookkeeping, such as figuring rates on a car distributed along the line. From the lofty pedestal of their preposterous pretentions they look pityingly down upon the laity as intellectual infants. While the cost of distribution is such that we may fairly say that sixty-two millions of our own people never taste California fruit, we are sending our goods across the ocean to find other consumers at a still greater disadvantage.

MR. MILLS ON THE WITNESS STAND.

At the conclusion of his remarks, Mr. Mills moved that the Board of Trade send an agent East to make examination regarding markets and methods for more direct and economical methods of reducing profit and distance between producer and consumer.

Regarding this proposition, which seemed to meet with favor, Mr. A. A. Hibbard of Chico inquired: "Can we afford it?"

Mr. L. C. McAffee of Kern: "How is the expense to be borne?"

Ex-Gov. Perkins held that our first question must be, what will the transportation cost? There is no question about the wisdom of the abstract proposition of reducing expense between producer and consumer to a minimum. The starting point is to learn to what extent those engaged in transportation will encourage such enterprises. He (Perkins) had enjoyed the consolation of a companion in misery when he joined with Mr. Tevis in shipping a car by the All gretti process, which paid an Irish dividend of $1600. Transportation should be the first question considered.

Mr. C. C. Hutchinson of Lassen thought that the rate to intermediate points was the vital question. Upon his first arrival in California from Kansas he was confronted with the bugbear of overproduction and replied that so far, not one in ten in the East had ever tasted California fruit. The doors of his mill in western Kansas had to be closed because it was the railroad policy to build up Missouri river points, and rates were made that carried the wheat from his door to mills on the Missouri river and the flour past his door again on the way to its market in Colorado. A similar policy had interfered with distribution of fruit. Transportation companies can remedy it. Will they do it? It is not necessary to send a man to Chicago to find that out.

Mr. Mills: No question is so misunderstood and none so badly misrepresented as that of transportation. All these matters are self-adjusting on the basis of that talismanic word which is the open sesame to every railroad heart—"profit." Early in the history of fruit shipments there was no profit in a rate of $1200 per car, because there was no equipment for the service and nothing to supplement large shipments. From the original rate of $1200 it was gradually reduced to $500 to New York and $350 to Chicago, and finally $250 was made a common rate to all points east of the Missouri river because it was profitable. A traffic manager, whose annual report showed that he was fixing such rates as to reduce the business of a road ten per cent, would earn his discharge because it would only take ten years of that policy to destroy the property. If the business of a road increases from one train a day to one train an hour, the effect upon its value as property is much the same as though 23 similar roads had been added without cost. Upon a deserted mill in the upper Sacramento valley surrounded by a deserted country, the speaker saw the legend.

"In God we trust' 'right," said his companion; "He is the only one who has ever done anything for this country." Mr. Mills asserted with considerable emphasis that he owned no railroad and no railroad owned him. He wore no collar. Years hence it would be said that it was a good idea that we had been discussing here to-day.

A suggestion was made by some one that fruitmen try and encourage the system of shipping to dealers' orders and thus avoid loss from glutted markets. After some complimentary remarks as to efficiency in similar missions it was moved to refer the matter to Mr. L. C. McAffee, of Kern.

Mr. Hutchinson, of Lassen, wanted to know the local rates by freight from such points as Ogden, Omaha and Chicago to smaller towns where fruit would be consumed. Fruit consumed in Topeka came from Denver by express at local rates and little was used.

S. J. Stabler, of Sutter, held that it was not the business of the Board of Trade to investigate markets as we had no money to spare. He despaired of any help until we have a competing line and until no company should have the power to subsidize other lines and to corrupt our legislatures.

Mr. McAffee was reminded of the results of a grand dinner which might be summarized chemically as a few ounces of carbon and a few of nitrogen. The Eddystone Light-house never reached Liverpool. We have held up to others the mirror of activity. What are the results of all this talk? Now it appears that there are *one hundred millions* of people in America and England to consume our fruit and that can raise a quantity practically unlimited, How shall we get it to them? This problem lies with the producer and his agents. There is one company really to do the business. They have carried fruit profitably to market. Still no one is in business for his health and all want pay. In an interview with Wells, Fargo, & Co. it appeared that their contracts with the R. R. Co. were such that no one else could deliver the goods at intermediate points. They could see no way to accomplish such results as are outlined in Mr. Mills' plans. When the proposition of carrying fruit to intermediate points by local freight was investigated these mountains became mole hills and objections vanished like the snows of Idaho before the Chinook wind.

Mr. B. M. Lelong, secretary State Board of Horticulture, said that he had acted with committees of producers at Marysville, Fresno, etc. Transportation was the main question in deciding whether such systems are practical. The first requisite is to get cars without delay. The Company must supply them. Have they offered to do anything? Will they put up suitable cars and supply them as needed? There is to be a meeting of the State Horticultural Society at San Jose, Nov. 15th, at which this question will be discussed. Mr. Mills was invited to present these views there.

Secretary Maslin, of the State Board of Trade remarked that the shortage of the present year had been in refrigerator cars only.

Mr. Mills said: The trouble has been to get the cars back. People don't understand the subject and have no conception of its magnitude. If the company owned the cars, half the difficulty would be solved. There are 1700 cars in the trade and they had to move 5000 cars of fruit this year against 3400 cars last year. As to the jurisdiction of the Central Pacific, it ends at Ogden. It is practically a State institution, and as an institution of the State, should be amenable to discipline, and sometimes receive it. Carriers have no voice in distribution. Arrangements should be made with local roads for prompt forwarding. Cost of transit depends on amount of traffic. Bituminous rock is carried from Bakersfield to St. Louis, Chicago, and even to Philadelphia at a lower rate than it reaches San Francisco, because there are mountains of the material, vast quantities demanded at low rates, and the road wants to do the business. Ice goes from Boca to Fresno for $4 per ton. In short, rates are made to fit conditions, and, for business reasons purely, fruit rates have dropped from $1200 to $250 per car. The problem of transportation is not the great impediment to growth of business and Mr. McAffee gained a wrong impression of conditions from his interview with Wells, Fargo & Co. Legislative regulations are a right and proper thing. Low rates will surely follow large tonnage.

Mr. Lelong said that transportation after all is the great question. Some years since, at a convention of growers, it was proposed to offer the railroad company one-half the gross proceeds for carrying and marketing the fruit. Senator Stanford replied that he was not in the peddling business. It was supposed by fruitgrowers that as the railroad company had reliable agencies everywhere they could do the business to better advantage than others.

Mr. Fisher rose to supplement Mr. Mills' idea of producers owning their cars. Armour & Co., Swift, and several other firms of wholesale butchers own about 5000 cars each and are able to distribute products and control trade. It would be well to formulate some plan by which owners of fruit districts would unite in ownership of cars necessary to move their united crops.

Mr. McAffee introduced three resolutions, embodying these issues: 1st, Approval of Mills' plan; 2d, Enquire as to best methods for its execution; 3d, Who can best undertake to carry it out?

Mr. Stabler, of Sutter, declared that we must go to distributing points, and suggested that 250 copies of the report of proceedings of this meeting be sent to San Jose on Nov. 15th for members of the State Horticultural Society. The McAffee resolutions were adopted.

Secretary Lelong moved that Mr. Mills be requested to attend the San Jose meeting. It was objected that his engagements with the Press Club at Pasadena would interfere, but it was hoped that he might attend at some later day of the session.

Pres. Gregory suggested that the matter of "Cooperative Ownership of Fruit Cars" be brought up at a later meeting.

Mr. McAffee moved its reference to a committee of three identified with transportation interests.

Mr. Frank Kimball, of National City, rose to supplement Mr.

Mills' remarks about Prof. Henry, who was thoroughly convinced when his attention was first called to semitropical fruits, that they would soon glut the markets. As he wanted some of San Diego climate, where he could retire to spend the evening of his manhood, he finally offered $100 per acre for 20 acres of such land as was then selling for $250 per acre, on condition that Mr. Kimball would take it back after five years at the same rate, if it proved unsatisfactory. The chance to make a hopeful convert was appreciated, and the offer promptly accepted. Prof. Henry had the sagebrush cleared away and the land planted to lemons, three years since. Now, he don't care to give up the land, for he received $200 per acre for his last crop of lemons and is among the most enthusiastic of the fruitgrowers of San Diego. He was much pleased with Mr. Mills' elucidation of the subject. In an interview with the late Chas. Crocker, when the rate on fruit was $1200 per car, he (Mr. Kimball) expressed the hope that a less rate might result in greater traffic, and was answered that he would never see fruit carried for less than $1000 per car. The discussion waxed very hot, and Mr. Kimball prophesied that he would, some day, be glad to carry four cars and possibly five for $1000. He has since had the pleasure of seeing Mr. Crocker's representatives seeking freight at $165, and hopes to see the service rendered for $50.

Thus ended a discussion in which the railroad company, through Mr. Mills, came face to face with the producers.

The Stockton Fair.

From Our Special Correspondent.

Stockton people have shown by building so fine a pavilion and laying out their kite-shaped track with all the conveniences that go to make an agricultural park attractive, that they appreciate the rare advantages of their location and are willing to let the world know what they can do.

THE STOCK PARADE.

This was led by a fine display of carriage teams, single and double, among which those of Messrs. Shippee & Doak attracted special attention. A very commendable understanding of the true object of a fair was shown by a procession of stallions with their families, also brood mares and colts. They realize that the first object of a fair is to learn how to produce valuable animals. Jacks and jennets were represented by many fine animals, which shows that breeders appreciate the fact that good animals are always ready sale even when the country is overstocked with the class of horses that must go begging for buyers.

HOLSTEINS —This popular dairy breed was represented by two fine herds. One was the well-known prize herd of F. H. Burke of Menlo Park, that took so many blue ribbons at the State Fair, and a fine herd from the State Insane Asylum. They have bought some fine animals from the Stanford herd, and besides their blooded stock have about a hundred grade Holsteins. Ed. Younger was there with his famous herd of Durhams from San Jose, that all visitors at the State Fair, since early days, remember as having been shown with so much pride by that old-style Kentucky gentleman, the late lamented Col. Younger.

Dr. Dixon was there with his show herd of Aberdeen-Angus that took sweepstakes at the State Fair, over all breeds as the best herd of beef cattle.

There was only one herd of swine shown, and all prizes were given them. Farmers don't seem to realize that we are buying most of our pork from distant States where the profits of swine are so highly appreciated that they speak of the hog as the banker. We submit to directors the suggestion that a single exhibitor deserves marked recognition for his enterprise, but that some provision should be made in such cases to avoid giving premiums to animals that are not excellent representative of their breeds.

THE PAVILION.

The display was particularly fine in fruit put on plates, and all carefully classified in a way to enable the amateur grower to accumulate much practical information. John Northrup from Amador was there, and the boys want to talk with the old man, for he is not only posted as to varieties and methods of production, but he has been there and knows how to get a price for what he raises by making it worth a price and then dealing as directly as possible with somebody who has use for the goods.

The famous Hatch Armstrong Company, who are among the largest and most enterprising fruit-growers in the world, made a fine exhibit and showed that they are going into the business with that kind of energy that has made Chicago more talked of than any city in America. We welcome the new blood, and see in it not only the impetus arising from their extensive enterprise, but a contagious enthusiasm. Senator Langford and his son George made a fine display from their model orchard near Clements. Your correspondent saw that orchard and knew at a glance that Senator Langford had found out that it was foreordained for a peach orchard from the beginning. One seldom sees a place so exactly adapted in all its conditions to the purpose for which it is used.

RAMIE.—There was an exhibit of machinery in operation that settled the problem of extracting the fiber. It can be done quite rapidly and thoroughly, at a small cost, when the stalk is so dry as it becomes in this rainless climate. Another process, equally satisfactory, separates the gum from the fiber and makes it fit to produce any of the fabrics shown, ranging from a potato-sack to a silk-like handkerchief or a lady's fine veil. The fiber has a strength and durability unknown to almost any other, and experiments indicate that it has found its home in the reclaimed tule lands about Stockton. It is receiving considerable attention from practical farmers, and is a subject of scientific experiment at our culture stations. Mr. R. R. Smith, living five miles from Stockton, has five acres planted and is very enthusiastic in his hopes of ramie.

RICE.—A plant was on exhibition, and renewed the inquiry that has so often arisen in our mind, why don't they raise rice on the river and reclaimed tule lands.

THE BANANA.—Mr. David Tola has a plant near the Jackson gas well, that was planted in 1890 and is now bearing fruit. If you tell a Stockton man that any climate on earth excels his, you might as well get ready for a visit to that banana and be prepared to take a back seat.

Vineyard-Pasturing and Coulure.

FRESNO, CAL., Oct. 7, 1892.

TO THE EDITOR:—I notice in your issue of October 1st, page 274, the statement of Special Agent N. B. Pierce with regard to feeding off grape leaves with sheep, to which he attributes the coulure of 50 per cent of the first crop this season. While there is a wide difference of opinion among vineyardists as to the true cause or causes, no one, who practically understands the situation here, attributes it, in whole or in part, to that cause. I know of three vineyards adjoining each other, and practically of the same soil and same age, pruned and cultivated substantially in the same manner, that have been pastured by sheep every year since they were planted, and in which there was a wide range of percentage in coulure. In the immediate neighborhood, land of the same character and all the conditions substantially the same, older vineyards, that have never been pastured, suffered from coulure fully as much as those that had been pastured; in fact, no expert could, by any means, determine by the coulure whether the vineyard had been pastured or not. I do not pretend to combat Mr. Pierce's theory, set forth in his statement, but suggest that, if he expects to prove it by the coulure in Fresno the present year, he will, at best, only get a Scotch verdict of "Not Proven."

N. L. F. BACHMAN.

[This is just the kind of evidence needed for the determination of such a question. The theory of the thing is well enough, but its announcement should be accompanied by demonstration, as we stated in the comments to which our correspondent alludes. Now, is other observation like that of Mr. Bachman?—ED. PRESS.]

Preparing for the Fruitgrowers' Convention.

The fruitgrowers' convention at San Jose, Nov. 15 to 18, promises to be a grand affair. Local meetings in preparation for the convention are now being held in San Jose weekly. On October 8th Secretary Lelong went down to consult with the local committee. According to reports in the local papers, there were present Chairman R. P. McGlincy, S. P. Sanders, J. S. Selby, D. C. Vestal, G. W. Worthen, J. R. Holland, W. H. Gilmore, H. A. Brainard, James A. Clayton, J. H. Flickinger, Wilber F. Parker (local quarantine officer), and B. M. Lelong, Secretary of the State Board of Horticulture. H. A. Brainard was chosen Assistant Secretary.

B. M. Lelong urged the committee to perfect arrangements for the accommodation of a large number of delegates and to provide means for an inspection of the orchards in this valley by the visitors.

Turn Verein hall was favored as a meeting place, but the matter was left with a committee appointed for that purpose.

S. F. Lieb was chosen to deliver the address of welcome. A committee consisting of Col. A. K. Whitton, G. W. Worthen and D. C. Vestal was appointed to arrange for the best comfort obtainable for the visitors.

Mr. Lelong objected to a banquet and suggested that a reception at the hall would be the proper thing. An excellent plan would be to request those present at the reception, who wished to meet any from other counties, to hand the names to the chairman, who would call the men named to the front, thus giving everybody an opportunity to meet fruitgrowers from other districts. It was decided to give a reception as suggested, and that the entire committee in session and the absent members, consisting of Col. Whitton, Prof. Chas. Allen and A. Block, comprise the committee on reception.

A committee on decorations was appointed as follows: Mesdames Watkins, Brainard, McGlincy, Holland and Saunders.

The following committee on exhibits was chosen: All the members of the general committee, together with Messrs. Wright, Bowman, Flickinger, Dawson, Righter, Gordon, Start, Morrison and Colonel Hersey.

Mr. Lelong stated that the State Board of Horticulture would publish the program to be rendered at the convention about October 20th, and that invitations would be sent to all parts of the State.

He suggested that prominent men be invited to prepare essays upon living topics of interest to the growers, to be read during the convention. W. Tarleton of San Jose was named for the essay on pruning

The growers expect to place on exhibition many of the products of Santa Clara valley, and special exhibits will also come from other parts of the State.

Faster Trains for Fruit.

We published last week several letters from fruitshippers obtained by Mr. Fred C. Miles of Penryn for submission to the State Horticultural Society. The following, signed by J. Z. Anderson and A. Block of San Jose, both large shippers, should be read in connection with those last week:

"We beg to submit that there is no doubt that faster time for fruit shipments would prove a great advantage to the California fruitgrowers and shippers, and has in the early shipments this season. We will say that there is no doubt but that fruit could be picked riper and better, and would realize more and have a more largely extended market throughout the United States provided the railroad company would give better time."

Southern Weather.

LOS ANGELES, Oct. 11.—Observer Franklin reports that the weather has been generally cloudy and foggy during the past week, which has retarded fruit-drying. The English walnut and peanut crops are being rapidly gathered. Citrus fruits are growing nicely. The largest yield ever known here is promised. Raisin-making in San Diego county has been retarded by the weather, but no loss has resulted so far.

An Australian Scymnus Established and Described in California.

A paper read by C. V. RILEY, U. S. Entomologist, at the recent meeting of the Association of Economic Entomologists at Rochester, N. Y.

The rapidity with which the Australian *Vedalia cardinalis* has established itself in California is familiar to every one. But the Vedalia was not the only scale-feeding Coccinellid which was sent or brought over by Mr. Koebele on his first trip to Australia in 1888–9. Among others, he brought several species of the genus *Scymnus* which, in due time, were set at liberty in the vicinity of Los Angeles. One of these, subsequently described by Dr. D. Sharp as *Scymnus restitutor* (*Insect Life*, I, p. 364), was lost sight of, while another much smaller species, originally collected by Mr. Koebele, near Sydney, New South Wales (see Bull. 21, Division of Entomology, p. 24), turned up the present year in a rather amusing way. In the March number of the *Entomological News* (Vol. III, 1892, p. 51), Dr. F. E. Blaisdell describes a new Californian Scymnus under the name of *S. lophanthæ*. He found it preying upon the San Jose scale (*Aspidiotus perniciosus*) which infested the limbs of *Acacia lophantha* at the Coronado parks, near San Diego in southern California. It is a very inconspicuous species of reddish color, the thorax often having an indefinite dark spot on the disk, and the elytra being of a blackish-bronze color. The last-mentioned character is foreign to our native species of Scymnus, which never show any traces of metallic color, and, for this reason, I at once suspected, upon reading the description, that *S. lophanthæ* was one of the species introduced from Australia. Upon comparing Dr. Blaisdell's description with the sample specimens sent by Mr. Koebele from his first and second trips to Australia, I had no difficulty in identifying *S. lophanthæ* with the species from Sydney mentioned above. Sebsequently, Mr. D. W. Coquillett sent me a specimen recently captured near Los Angeles which fully confirmed this identification. Whether or not the species has been previously described from Australia, I have no special means of knowing. but it does not appear to be among those described by Mr. Blackburn in 1889 (Trans. etc., Royal Society South Australia, XI, pp. 191–198). It is closely allied to *S. fagus* Brown, from New Zealand, and distinguished therefrom only by its finer and sparser elytral punctuations and the greater extent of the pale thoracic color.

Dr. Blaisdell does not mention in his description the structural characters of the species, the more important of which are as follows: Prosternal lines long, straight and converging slightly anteriorly; postmesocoxal line slightly reascending externally; postmetacoxal line complete, almost reaching the first abdominal suture; elytral epipleuræ horizontal, reaching beyond third abdominal segment, slightly concave; inner marginal line not leaving the margin.

The beetle and its larvæ are quite abundant in the Coronado parks, according to Dr. Blaisdell; and since it also occurs near Los Angeles, there can be no doubt that this useful little Coccinellid has fully established itself in southern California.

Alameda County Farmers' Institute.

The meeting of the Alameda County Farmers' Institute to be held at Niles, October 15th, promises to be one of unusual interest, as will be seen by the program given below. The institute is in no way connected with politics, as has been often stated before, and nothing may be discussed that is not directly related to farming matters. The connection with the State University and the readiness of the Stanford University to help, enables the officers to have several trained specialists on the program, and, as numbers of practical fruitgrowers have agreed to assist, there will be a great deal of valuable information to be had for the listening. All the meetings are free, and all farmers and others are welcome.

The institute will be conducted by Prof. E. J. Wickson of the State University and the sessions will open at 10 A. M. The following is the program for the day; each subject presented will be open for discussion:

Opening address, E. J. Wickson; "Tree Planting," W. W. Brier; "Fruit Shipping," Thomas Russel.

1 P. M.—"Insect Friends," Willis S. Johnson, instructor of entomology at Stanford University; "Insectivorous Birds," William W. Price, Palo Alto; recitation H. Overacker; "Scale Insects," C. W. Woodworth, assistant professor of entomology, State University.

7:30 P. M.—"Figs, their Hardness and Productiveness," C. H. Shinn; "Horticulture in the Old World," J. P. Smith; essay, Mrs. Fleda Bunting.

Mr. Johnson will bring specimens of insects and Mr. Price of birds, so that their hearers will be enabled to know by sight the ones mentioned, and Mr. Shinn will bring branches showing the effects of frost upon different varieties of figs.

THE last rails on the Bakersfield and San Miguel R. R., connecting with Asphalto, were laid last week. The men are now ballasting. Asphalto is 49 miles from Bakersfield. The completion of this road marks the enlargement of what is to be one of the most material interests of Kern—the oil and asphalt industry. The road to market is now at their very doors and prosperity is sure to attend them. Stevens station, 16 miles from Bakersfield, will be the shipping point for the oil, asphalt, sulphur, kaolin and other minerals of the Hazelton (Sunset) district, as well as of the lands to the south, and the junction point of oil-pipe lines from that district. The Buena Vista Reservoir railroad, with its 12 miles of road completed, needs only 10 miles to form a connection with this branch of the world. Everything argues in favor of the completion of this branch, as, independent of the large freight in oil, asphalt and minerals to come over it, the cattle, wool, sheep, grain and hay of the San Emigdio, La Carissa and other grants will find thence a convenient outlet.

Cereal Crops.

The World's Wheat Crop This Year and Last.

Last season it was generally admitted that the task of correctly forecasting the course of prospective supply and demand would be extremely difficult, and so it proved. The record was broken on several occasions, more especially in the volume of wheat that India and America proved themselves capable of shipping, and on the other side in the absorption by France and Germany of hitherto unheard of quantities of breadstuffs. The variation in the rate of freight, and the extraordinary depth to which the price of silver sank surpassed likewise all expectation. The extreme range of freights from the Black sea last season exceeded 30s. per ton, in a few extreme cases the variation amounted to 37s. 6d., equal to 8s. per qr. Silver fell to 38d. per oz. from 54d. per oz. in 1890, which means that the British sovereign is capable now of commanding 16 rupees worth of wheat compared with 12 rupees worth two years ago, or 14 rupees worth on an average in recent years.

Such difficulties are not so apparent this season. The situation being in a state of exceptional quietude, one is able to take an undisturbed view around and to build a fabric of statistics upon a sound, if somewhat abnormal, basis.

Reckoning the cereal year from the first August, 1892, to he 31st July, 1893, will avoid cutting into odd fragments of years. By the 1st August the great crops of America Russia, France, Hungary, Roumania, Italy and Spain are usually all ready to come upon the markets, the British crop following as a rule about a fortnight later, therefore the 31st July seems to be the natural date upon which to terminate the cereal year.

The first consideration must be the state of reserves of breadstuffs in the chief countries, which will be found to compare as follows with a year ago:

	1st August— 1892.	1891.
*America and Canada, bushels	48 300,000	31 600,000
United Kingdom	26,000,000	12,100,000
France	10,000,000	10,000,000
Belgium, Germany and Holland	5,500,000	12,000,000
Russian ports	8,000,000	6,000,000
Afloat	24,000,000	38,000,000
Total, bushels	122,800,000	109,700,000

*Rather more points counted now than a year ago.

The agregate stock of wheat carried over into the new season this year by several countries is undoubtedly extremely light, exception being made in the cases of the U. K., France and Germany, where the total this season of 42,000,000 bushels only comprises part of the reserves, much, owing to known causes, being invisible at this date. The American stock being taken at more points is, on the other hand, not a fair comparison with last season's total, the difference instead of being 17,000,000 bushels should only be about 9,000,000 bushels. The total of the reserves of all countries, counting the depleted visible and invisible stocks of such countries as Italy, Spain, Portugal, etc.—without, however, saying anything of India, where the deficiency as compared with last year must amount to ten or twenty million bushels, would probably be found to be as light or lighter than a year ago.

On the whole then it may be placed on record that the reserves of old wheat on the 1st August, 1892, were light, particular exception being made in the cases of the U. K., France and Germany.

It would seem now to be in order to reckon up the crops lately harvested and to compare them with the yields of last season, and for present purposes it will be better if we include in this sum only those crops about which official data are obtainable. The chief crops of wheat already known are the following:

	1892.	1891.
U. S. A., bushels	*495,000,000	611,000,000
Canada	55,000,000	62,000,000
India	217,000,000	276,000,000
France	†312,000,000	213,000,000
Austria-Hungary	176,000,000	168,000,000
Italy	111,000,000	138,000,000
Total, bushels	1,366,000,000	1,468,000,000

Deficiency this season, 102,000,000 bushels.
*Preliminary.
†Likely to be reduced 16,000,000 bushels at the next count.

A deficiency of 102,000,000 bushels, or 13,000,000 qrs., in the five chief crops cannot be turned into surplus by any addition to our knowledge of the outturn of the remaining crops of Europe, not even counting the Russian. The total outturn of the crops of Russia, Germany, Great Britain, Spain, Portugal, etc., may be estimated from commercial or semiofficial returns as follows:

	1892.	1891.
Russia and Poland, bushels	215,000,000	180,000,000
Germany	100,000,000	86,000,000
Great Britain	67,000,000	75,000,000
Spain and Portugal	80,000,000	78,000,000
Roumania	52,000,000	50,000,000
Bulgaria	27,000,000	24,000,000
Turkey-in-Europe	26,000,000	24,000,000
Turkey-in-Asia		
Roumelia	13,000,000	11,000,000
Servia	5,000,000	4,000,000
Belgium	19,000,000	15,000,000
Holland	7,000,000	5,000,000
Denmark	5,000,000	4,500,000
Sweden and Norway	5,000,000	4,000,000
Switzerland	3,500,000	2,400,000
Greece	4,000,000	4,000,000
Argentina	37,000,000	33,000,000
Chili	16,000,000	15,000,000
North Africa	34,000,000	44,000,000
Australia	34,000,000	32,000,000
Total, bushels	749,500,000	690,900,000

In these countries, where we have to depend upon estimates for the result of the crops, it will be seen that there is a surplus compared with last season's yield of 58,000,000 bushels. Adding the two totals together we have the following figure as representing the approximate yield of the world's crop:

	1892.	1891.
Six countries—actual official returns, bushels	1,366,000,000	1,469,000,000
Remaining countries — unofficial estimates, bushels	749,000,000	691,000,000
Grand total, bushels	2,115,000,000	2,160,000,000
Grand total, quarters	264,000,000	280,000,000

N. B.—It has been thought best to leave out of consideration altogether the crop of Asia Minor, which is variously estimated at from six to fourteen million quarters.—Corn Trade News.

The Dairy.

The Shorthorn Dairy Test at Syracuse.

Following is a report of the Shorthorn dairy contest at the New York State Fair, Sept. 8 to 15th. The test extended through two days, the milk being tested by the Babcock tester. There were five entries, as follows: G H. Bell, Rome, Nelly Bly 3d, 12 years old; A. Morse, Oxford, Maid of Oxford, 9 years old; A. Morse, Oxford, Maid of Oxford 5th, 3 years old; S. Spencer & Son, Kiantone, Fillpail 7th, 6 years old; S. Spencer & Son, Kiantone, Kitty Clay 5th, 5 years old. Spencer & Son withdrew Kitty Clay 5th from the contest, as she had been in milk only one day when the test commenced.

	Total milk. Lbs.	ozs.	Total lbs. butter fats.	No. days cows had been in milk.
Nelly Bly 3d	68	14	2.29	42
Fillpail 7th	84	7	2.63	29
Maid of Oxford	62	13	2.31	202
Maid of Oxford 5th	59	12	2.17	74

Spencer & Son were awarded first prize on Fillpail 7th, and A. Morse second on Maid of Oxford.

The first-prize cow at the New York State Fair gave 5½ pounds more milk in two days than the first-prize cow at Sacramento, or, at any rate, the one that gave most milk, and 12 pounds more milk than the second best at the same place, where the competition in butter fat was very close, Mr. Peterson's cow beating Mr. Hill's by less than 3-100 of a pound of butter fat in the milk of two days. All three of the cows had been in milk about the same length of time.

It will be observed that the second best cow in the above table, Maid of Oxford, had been in milk 202 days—173 days longer than the first-prize cow—for which, under present rules, no allowance is made, otherwise Maid of Oxford might have been considered to be the best cow.

This is a matter that ought to be corrected in some way, and we would respectfully suggest that the Board of Directors of the Shorthorn Breeders' Association take the matter into consideration before another show season. As it is now, it looks too much like giving a premium to the man who manages, whether by chance or otherwise, to have his cows calving just at the right time for doing their best at fair-time.

As a matter of course, so long as the premiums are awarded as at present, there is a certain amount of credit due to men who do manage to have their best cows calving about the time there will be most profit derived from them in any way they may see fit.

The plan adopted at the London Dairy Show (England) is to count one point for every ten days since calving after the first 20 days; one point for each pound of milk a day; twenty points for each pound of fat, and four points for each pound of solids other than fat per day. When the milk contains less than three per cent of fat, ten points are deducted.

By referring to the performances of the prize cows at the last London Dairy show, held in 1890, we find that the three cows with the greatest number of points were Shorthorns, the best of them giving 2 26 pounds of fat and 5 17 pounds of casein, etc., in one day. The next best in solids was a Guernsey cow with 2 pounds fat and 4 40 pounds casein, etc.

We are of opinion that this latter breed of cows ought to stand higher in the estimation of dairymen, and cannot think how it is that bulls of the breed have not been more sought after. Besides having a reputation for giving rich milk and a good quantity of it, the cows have fair size and weight of carcass, big enough for ordinary dairy purposes under the management generally accorded them on butter and cheese dairies.

The quantity of solids in the milk at the London Dairy Show is obtained by analysis, which method is generally supposed to be correct; but even in this, "doctors differ," as an instance of which we quote a case from *The Dairy* (English), which says:

A case of remarkable interest to dairy people was heard at Westminster Police Court, London. Briefly the facts were as follows: A Mr. Wright was charged with abstraction of cream from milk. The prosecuting analyst swore positively that at least 12 per cent of cream had been abstracted, the defending analyst stated that the milk might be pure, though poor, and lastly Somerset House analysts said it was only 5 per cent deficient in fat. Beyond these grave disagreements, it further appeared that one analyst fixed pure milk at 3 per cent fat, at the same time condemning the Somerset House analysis as useless, while the other fixed the limit at 2½ per cent. The case ended in the dismissal of the summons with costs; indeed, the only way in which it could end. Now, this case reveals a condition of things which most closely affects all who deal with milk, either as buyers or sellers. It clearly shows that any one of us is exposed to the danger of having our character for commercial honesty weighed in a balance which gives results widely varying according to the hand that supports it.

The above is, briefly, an example on the difficulty of detecting added water to milk. It is well known that there is pure milk, straight from the cow, that falls below the standard for purity without water being added, while there are cows that give milk far above the standard quality, say 12 per cent solids, which will bear some considerable dilution and yet be of better average quality than the pure, poor milk. Poor cows and poor feed will make an inferior quality of milk without the aid of the pump-handle.

Oregon Dairymen's Association.

Our sister State has taken a step in advance of us. While California organized a State Dairymen's Association more than a decade ago, it was allowed to lapse into innocuous desuetude. Oregon takes a fresh start and will probably hold to it, and perhaps California will revive by the force of so good an example.

The *Rural Northwest* states that a meeting of dairymen was held at the institute tent at the State-Fair grounds at Salem, Wednesday evening, Sept. 14th, for the purpose of effecting an organization of a State Dairymen's Association.

Mr. C. H. Schmidt spoke briefly but forcibly of the neglected and critical condition of the dairy interests of the State; of the large importations of Eastern butter, the high price of winter butter in this section and the necessity and propriety of fostering and developing this home industry. He also spoke of the work there is for an organization of this kind to do, and called a vote upon the question of organizing, which resulted unanimously in favor of such an organization.

Articles of association were then adopted.

The matter of electing officers being in order, Mr. C. H. Schmidt, in an eloquent manner, placed in nomination Hon. J. B. Looney, of Jefferson, as a man eminently fitted for the position of president. Mr. Looney was unanimously elected. The other officers elected were as follows: Vice-president, Geo. W. Weeks, of Howell; treasurer, Warren Cranston, of Salem; Secretary, H. M. Williamson, of the *Rural Northwest*, Portland.

In consideration of the services rendered to the cause of dairying by Col T. R. Cornelius, of Cornelius, who was not only a pioneer in the settlement of Oregon, but has also been a pioneer in the introduction of modern dairying methods of Oregon, he was, by unanimous vote, elected an honorary member of the association. The convention then adjourned

Sheep and Wool.

Sheep on Foothill Slopes and Mountain Meadows.

Hu Maxwell writes for the Fresno *Expositor* an article on the above subject which contains many indications of close observation and logical deduction. This point will be conceded, we think, by all who follow the writer. Whether the injury done is more or less desirable than the alternative he presents in his closing sentence, will find answer according to individual interest and inclination. The article is certainly very interesting:

The effects of the sheep on the physical geography of the Sierra Nevada mountains is seen mostly in the lower ridges among the foothills.

The testimony of others must be taken in order to arrive at a full knowledge of what this effect is; for a person in traveling through the foothills may observe the present condition of the land, but he cannot know in what manner the present differs from the past unless he can remember many years, or unless he is told by those who can remember. But there can be little doubt that the custom of pasturing sheep on the country has had the effect of changing the condition of things very materially from what it was 30 or 40 years ago, before the herds of sheep had been introduced into the country.

Old men say that many years ago the wild grasses and weeds grew much more luxuriantly among the foothills, below the region of the pines, than is now the case. It is said that the ground was well-covered with a growth that protected the soil from the excessive washings of rains. The roots formed something of a matting beneath, and held the sand and the gravel and the vegetable mold together, and the rains of winter had far less effect than now in washing the soil down.

But with the coming of sheep in such vast herds this wild grass and weeds were in a measure destroyed. The continued pasturage of so many flocks eat up the verdure and trampled it down, until at the present day the growth is much less than formerly.

Perhaps the greatest work of the sheep in destroying and hindering the grass is that they eat the seed in the summer that should remain for the rains and then sprout and grow. But sheep not only nibble the ripened pods and heads from the grasses and plants, but they often lick up the seeds that have already fallen to the ground.

The effect of this in any one year may not be so much, but when it is continued season after season for 20 or 30 years, it must have more or less effect in killing out and destroying certain kinds of grasses and plants that depend upon seed for their propagation and existence. People say that many hillsides are now barren, which formerly were covered in winter with green, and in summer with dry vegetation.

The result of this denudation is easily understood. The dashing rains of the winter wash the loosened and unprotected soil down into the gullies and the little valleys. By this means the hillsides are rendered barren and unproductive, and the grass, deprived of the fertile soil, becomes more and more scattering, and less and less luxuriant.

It is a habit of sheep in their wanderings through a hilly country to travel along the sides of the hills, rather than up and down. By so doing they trample paths, one above another, running in horizontal and parallel terraces. The appearance of a hillside thus trampled is that of a series of benches, one above another.

When the rains of winter come, these paths collect the waters until it overflows into the next path below, and on down, from one to another, until it reaches the bottom of the hill; and the result is that a gully is soon cut down the side of the hill.

It is a natural result that these gullies constantly grow deeper. When once begun, they always increase. Every

rain washes soil, sand and gravel from their banks, and a small gully soon becomes a large one.

This is seen mostly among the foothills. Farther back in the mountains there usually are so many large rocks in the soil that sheep are unable to tramp these parallel paths, and even if they could do so, the rocks would hinder the washing of gullies, except in a few cases here and there, where the conditions were favorable.

But, while the pasturage of the large bands of sheep have undoubtedly had much to do with destroying or hindering the growth of wild grasses, yet, in one instance at least, the sheep are responsible for the spread of a grass that is of more value than any of the grasses destroyed.

This is alfileria, commonly called by its abbreviated name "fileree." This grass is not a native of California. It was most probably brought here from the southern countries of Europe. At any rate, it was not here when the Spanish first came.

Its spread over the country is somewhat remarkable; and, while many agencies were instrumental in causing its spread, there is no doubt but that sheep did the most. Without them, this grass would not have been so universal as it is now.

Sheep carried away the alfileria seed in their wool from one place to another. If a band of sheep would sleep one night in the ripened alfileria, their wool would be laden with the seed, and for the next few days, or perhaps for the next two months, they would drop the seed along all the paths they might travel.

By this means the grass has been scattered over all the hills, and as far into the mountains as it can grow. Bunches of it may be found far back in the Sierra Nevadas along the sheep trails where the soil is such that it can grow. A few patches of it may be found almost to the summits.

If a person is looking for the effects of sheep in the mountains, beyond the foothills, the most visible effects will be seen in the meadows.

There can be no doubt but that the constant pasturing of sheep has injured these meadows a great deal, and has brought about a change by no means theoretical.

In some of these meadows the grass is almost destroyed by the constant nibbling and the incessant trampling of the herds. The summers are short, and it naturally requires about the whole of it for the grass to grow and mature, even if it is not interfered with. Then, when it is incessantly nibbled off by the ever-hungry herds, it cannot mature, and it must grow from the root, if at all, for no seeds are ripened. In one or two seasons perhaps no bad results might be seen, but in the course of a large number of successive years the effect must be that the grass will be killed.

In some meadows, where the soil is sandy, the grass is now about destroyed. In others, where the swampy nature of the ground keeps the sheep off till late in the season, the growth of vegetation has not suffered so much.

Persons acquainted in the mountains many years ago, before the sheep were taken there, say that in the meadows the grass and weeds were waist deep.

Deer could hide in the tall vegetation; but now, where the sheep have been, the growth is seldom rank enough to hide a rabbit. The principal source of food for the sheep is in these meadows and around the borders, and the sheep make their rendezvous there in the summer, and the grass cannot but suffer in consequence. The snow disappears from the meadows earlier than from the face of the higher mountains, and of course the feed is found earliest there.

A few remnants may be found here and there to show what the primitive condition of the mountain meadows was before the coming of the sheep. Here and there among the more rugged mountains a small meadow may be found, so surrounded by cliffs and precipices that the sheep cannot get into it. Here the grass and weeds still grow luxuriantly, and sometimes it is a difficult matter to make way across the meadows on foot, on account of the deep-tangled grass and weeds.

It may be presumed that all the mountain meadows were in that condition before the coming of the sheep; but these meadows still remaining in their primitive condition are very few, for so many are the sheep in the mountains, and so persistent do the herders search for feed, that no meadow escapes, unless, as already said, it is so situated that the sheep cannot reach it.

It is an interesting study, when one of these few remaining patches is found, to consider the original condition of the fine mountain meadows with a growth of vegetation which, in the short summer, almost equaled the verdure of the tropics. Undisturbed by man, the deer were plentiful, and it is said that in the early times, a person who would come suddenly upon one of these meadows often could see several deer running off.

If the national park should be made, and the country restored to nature, it is probable that in the course of time these meadows would regain their former state and be overgrown with tall grass, and there would be plenty of deer among them. The few bears still in the mountains would be given a chance for empire again, and in the course of years these beasts would be plentiful once more if hunters would let them alone.

With the sheep removed from the ranges of the Sierra Nevadas, there can be no doubt but that some changes would take place. The meadows and some of the ridges would gradually regain at least a portion of their lost vegetation. Wild game would increase in numbers. Many of the trails would grow up and disappear. By the aid of the fish commission, many of the streams—perhaps all the large ones—would be stocked with fish, and the country would be one of the finest fishing regions in the world. Soldiers, rangers and other government employes would stand guard at every path, and in order to hunt in the national park a person would require a pass or permit, like those required in order to hunt in European forests.

The sheep would be gone, and whether the rivers would carry down more water in the late summer than they do now, and whether the snow would be deeper and longer than at present; whether the forest fires would do less damage than now; and whether the hunting of deer and bear would be as profitable then as the herding of sheep is now; and whether the presence of soldiers on every mountain-path is a "consummation devoutly to be wished"—all of these matters are open for discussion by the friends and foes of the national park reserve.

The Stable.

Weaning Foals.

It is now about the time of year that most of the colts bred by farmers are weaned from the mares. This should always be brought about gradually, and can be done without inconvenience, in the case of working mares, by keeping the colts in the stable during the time the mares are at work.

It is a regular practice with some farmers to let the foals run with the mares while at work, a custom which has not the approval of our most successful horsebreeders.

It is better for the mare, and also better for the foal, that the latter should be left at home in a suitable boxstall, with a little choice food to nibble at as inclination prompts.

Before being weaned they should be taught to lead, which is really very little trouble when they are so young. We have seen some otherwise good horsemen put a halter on to a colt and try to lead him at once, but this often results in the colt throwing himself about a good deal and sometimes going over backward, at great risk of injury; in fact, we once came upon one that had been badly stunned by falling on the back of its head. Two men had attempted to lead it, after the manner named, at the risk of its life.

In our experience, the best way is to first tie them securely in a well-bedded stall, taking care that everything, halter, rope, etc., is strong and secure; then make fast before the colt has a chance to feel that it is tied, so that, on the first pull, nothing is likely to give way.

Let him pull as much as he will (taking care that he is so tied that he cannot hurt himself) and as long as he wants to. Some colts will give in after taking two or three good pulls on the halter; others, again, may prove obstinate, and will try more and longer. In any case, it is just as well to leave them tied 24 hours before attempting to lead them, and some that we have seen left tied for two whole days never pulled on the rope when taken out to be led. Some trouble should also be taken to let them know that there is nothing to hurt them, by making friends and handling them as soon as they have done the worst of the pulling. Colts treated in this way will seldom, if ever, afterward pull on a rope, either when being led or in the stall, and those raised on work mares are generally made tractable through the handling they get when around the stable, and are ever afterward ready to be caught and led when and wherever one wants them, a most convenient feature connected with early halter-breaking, which some farmers are liable to neglect.

In the meantime the feeding of the colt will have been attended to in such a way that it will not feel the loss of its mother's milk when entirely separated from her. A good deal depends on the first year's feeding for developing the good points in a colt; that is, he should be well fed from weaning time till there is good grass to turn him into, and on which alone a good growth will be kept up till he is a year and a half old, when a second winter of his life will be upon him, during which he should be kept growing by suitable feeding till another grass season comes round. Any check in the growth by stinted feeding can never be truly recovered; it is only by continuous growth that perfect development of bone and muscle can be obtained.

When on pasture, the feet will have to be attended to occasionally, as the hoofs are liable to break, crack or split, and the projecting pieces should be cut off before further injury is done. Sometimes a split occurs near the heel, which, if not attended to in time, may break right up into the fleshy part of the foot. In a case of this kind, the advantages of early handling will be appreciated on both sides.

We have more than once seen the feet of colts held up while a split piece of hoof, near the heel, has been cut off with a small, fine-toothed saw—a tool that all stockmen should keep by them, for it is equally useful in cutting the feet of cattle when they become in any way deformed or out of shape.

Colts that have been treated on the lines indicated will cause little trouble when old enough to be put to work; they merely want to be taught, not broke.

The Mule.

The mule has an important place in California agriculture, and in the rather delicate work of cultivation in orchard and vineyard stands especially high. The following from the *Farmer's Review* will therefore be read with wide interest:

The hybrid animal which is part horse and part ass evinces, more than any other such cross perhaps, all the distinguishing characteristics of both the parents. He has all the good qualities of the horse, some, however, being modified by the interfering tendency of those of the ass. Thus he has the strength, size and form, with much of the sagacity and docility of the dam, and the obstinacy, in good as well as bad, of the sire, with his hardiness, longevity, surefootedness, untiring patience and robust constitution. A mule is said and thought to be extremely obstinate, proverbially so; but this quality in this animal has its most useful development, for to it is due the fact that a mule never balks, but persists in pulling until he lies down for inability to use another muscle. It begins work earlier and continues longer by several years than a horse; it is rarely ever sick, and, generally, unless wofully misused, has nothing the matter with it from the time it begins to work at three years old until it is discarded at the age of 40. Mules have been known to live and work more than 40 or 50 years without any rest by summer-pasturing, but constant tugging of heavy loads on mountain-roads throughout the entire years. Their digestion is remarkably strong, and their appetite is easily satisfied. In the absence of its usual corn and blade fodder, it will most contentedly make a meal of the bark of a tree cut for the purpose on the roadside, where the driver camps at night after 25 miles of heavy pulling, with no bed but the ground and no roof but the starry infinite above. In cold and heat, rain or snow, in mud or over rocks, it wends its way without a break or an objection, and brays for its coarse fodder and eats it with excellent appetite wherever it may stop for its short rest. The mule is no racer, but it may be trained, says Henry Stewart in *American Agriculturist*, to travel under the saddle or in light harness at a very good speed, and it will maintain its pace for ten or twelve hours with more steadiness than a horse. Its compact build makes it the best pack animal. The horse is the more luxurious animal and more human in its disposition. Its nerves are more acute, it has higher instincts, and is more refined. It is kinder in disposition, and is more easily and strongly attached to its keeper and owner, who uses it kindly. It can make a more vigorous effort on the spur of the moment, but cannot maintain a slow, dogged energy like the mule. It requires more food, and that of a better quality for these reasons. Where quick work for a short time is wanted, the horse beats the mule; but for the slow draft and unchanging toil, the mule is the more useful. A mule is kept one-half more cheaply than a horse. It may be fed on blade fodder and a few ears of corn day after day without any change, and will do more work on this coarse fare than a horse of 200 pounds more weight. This character is so well fixed that in the South, where all the hard work is done by mules, a mule of 1000 pounds is worth $100 or $150 more than a horse of the same weight, and for smaller animals the difference in value is $50 in favor of the mule. For a few years past I have been rearing young mules and horses, and while the colts get the best hay and more grain, the mules get corn fodder, the coarse hay and few corn ears. An accurate account of the cost of feeding the two kinds of animals up to three years old shows that the mule may be reared for half the cost of a horse colt. A pair of small mules cost me less than $20 a year for the two years they were fed, and they lived during the summers in a wood lot, and cost nothing for their pasture. A mule will live where a horse will starve, and, when out of work, enjoys the coarse feeding of the woods. When the horses come to the gate and wait to be brought home for their feed, the mules have to be hunted up, and bells are put on them so that they may be found. On the whole, I am very sure that a pair of mules will do twice as much work as a pair of horses the same size, or somewhat larger, at half the cost of feed and other expenses. This takes into account the feeding, the work and the longer life. Much is said about the ill-nature of a mule. This is undeserved. Its frequent viciousness is taught to it by ill-treatment and general bad management. A mule will never kick unless it has been taught, except in frolicking when young. It is really affectionate and good-natured, and when otherwise it gives only what it gets. When kindly treated from the first by those who rear it, the mule will be kind, docile and even affectionate. It will not be so demonstrative of its affection as a horse as kindly trained, but it will show its good nature in its own more sober manner. The horse is a subject for the poet, the mule for the man whose life is spent with a freight-wagon or a plow before him.

The Apiary.

Notes From the Oak Leaf Apiary.

GRIZZLY FLATS, EL DORADO CO.

TO THE EDITOR:—To-day, September 17th, I extracted all the upper stories of the hives at the Oak Leaf Apiary. Honey, I, believe, is coming in more rapidly than at any other time this season. What honey is being gathered now is beautifully clear in color, of an exquisite flavor, and great density—in fact, some of it is pretty hard to throw out of the combs. I think our honey-flow here will continue until the latter part of October; and if the rainy season holds off long enough, probably well into November.

The honeydew will furnish most surplus after October. This year, here in the upper Sierras, we have had almost a continual honey-flow, from early in the spring until the present date, Sept. 17th. So far I have extracted six times, and may extract again next month if the honey is not too dense.

I increased my colonies very little this year, but I have them in splendid condition for rapid honey-gathering. I think sometimes that in certain localities where large numbers of bees are kept, that one-half of the number of colonies would gather all the surplus honey; and if it can be shown that they can do it, bee-keeping will become more profitable. I am certain that where 500 colonies of bees are kept in one apiary, as is the case in many southern California locations, that 250 colonies will gather all the surplus honey, if rightly managed. Too many bee locations are overstocked, and hence the poor yields from season to season. Generally speaking, one-half the bees in California, or colonies rather, that are kept in apiaries of over 200 colonies will be found to do the work better and cheaper than the full number of colonies at present employed. I do not think that I shall ever keep over 100 colonies in any location, no matter how good it may be.

What is needed and what we want is this; hives that are made so as to facilitate manipulation, and powerful colonies that are kept at their greatest energies of honey-gathering and comb-building; this is accomplished by always keeping an empty space, (the size of one frame,) in the center of

each story, on the hives and in the brood apartment also. (I am speaking of working for extracted honey).

When the combs are ready to seal, extract all the honey out of them. When the center frames are two-thirds drawn out or finished, remove from the brood apartment and place overhead in the upper stories. The center frames of the upper story can also be removed to the side, and empty frames inserted where these were taken from. Bees, to be kept at their high pressure mark, must be kept always comb-building, and have plenty of empty combs to store their honey in. By having them industriously employed in building out their center combs, all season long, their comb-building instinct is gratified,and the abundance of empty combs present after each extracting, stimulates them to to greater exertions in refilling them again, so that they are kept extremely busy all the time. Do not give bees a chance to loaf by allowing the hive to become too crowded with honey.

When running for comb-honey, be on the lookout when the first set of sections are two-thirds full, for then is the time to insert a new case filled with primed foundation sections. It is hardly advisable to let comb-honey remain too long on the hive, as it soon becomes travel-stained by the bees.

S. L. WATKINS.

RURAL IMPROVEMENT.

How to Beautify Country Roads.

By C. L. HANSON before the Farmers' Institute at Chino.

The people of California are just awakening to the fact that avenue and street planting is a necessity as well as a public benefit. There are few countries, if any, in the world that are making such rapid strides as California is to-day. Yet, if one only pauses for a moment and thinks what a great transformation could be made if the work of street-planting was followed in a more business-like and systematic manner, it would not be long before our streets and highways would be continuous stretches of cooling and inviting shade, instead of the glaring and dusty wastes they are at present. If people would first study the nature of their soil and allow for climatic conditions of their particular locality, there would be fewer disappointments.

There are many trees that grow in our eastern States that will do equally as well here in California, and after all what more beautiful sight is there than the fine old hard and soft maples, English and American elms, that make our eastern cities so attractive? Many people suppose these varieties do not succeed in this country, but I have proved otherwise by practical experience. While there are certain varieties which we all know do well here, yet there is no necessity for us to be tied down to a few when we have so many beautiful shade trees to choose from, all of which succeed equally as well.

The united action of people in a scattered locality can accomplish wonders if only pursued systematically. Let us take into consideration even the common blue gum or eucalyptus, its wonderful growth and very moderate cost, often not exceeding a cent per plant; also our peppers, grevillias, pines, Texas umbrellas, and many other sorts equally suitable for street planting, and compare the first cost of them with the horse chestnut, maple, and general variety that go to make up the list of eastern and foreign trees, we find we are indeed favored both in the number of varieties suitable as well as the first cost. Why, therefore, should we not have the finest and best kept avenues and streets in the world?

One of the chief things which strikes the traveler from California as he journeys through the older countries, England, France, Belgium, and I may say the greater part of the European continent, is the great attention paid to the planting of the highways. While we cannot but admire their beautiful edifices, ancient structures, cathedrals, etc., yet their cities would be homely enough were it not for the attention bestowed on their beautiful parks, grand boulevards and fine streets, all planted and cared for at immense cost. This has taken generations to accomplish, while we, with our magnificent climate and rapid-growing trees, can accomplish as much in a single decade.

As to the best way to go to work to accomplish the desired end, this must be left to the people in their respective localities. Should this essay be the means of starting people to think over the subject, my object will have been accomplished, as results are sure to follow quickly. We are all aware that it is very easy to talk and advise what we would like to do, but getting down to work is another thing. My idea is not for each individual to just simply plant a few trees along his own place, but to take up the work in earnest and arouse enthusiasm among his neighbors, and get nonresidents to cooperate with each other in the good cause.

What has made Riverside so famous? Not only her well-kept groves, but her grand Magnolia and other avenues. Take Ontario again, Euclid avenue, and her well-kept and well-planted streets have proved every bit as good an advertisement as her justly-famed orange and lemon groves. Redlands also boasts of Palm avenue, and so we might go on *ad infinitum*.

Let the good work go on in all parts of California, and do not let us cease our efforts until we make our highways the finest not only in the United States, but in the world. We have the climate, soil and trees, and all that is required is united action with the predominating enterprise for which the people of southern California are so noted.

RICHARDSON BROTHERS' steam wagon, which runs over common dirt roads, hauls from 30,000 to 35,000 feet of lumber daily up at Truckee.

EXCHANGE PROPOSED.—C. R. Orcutt, San Diego, offers choice seeds and plants in exchange for calla lilies and other bulbs.

The Sixth District Fair.

Exhibit at the Pavilion.

Written for the RURAL PRESS by CLARA S. BROWN.

The Thirteenth Annual Fair of the Sixth Congressional District opened at Los Angeles on Monday, Oct. 3d, and continued through the week. The agricultural, manufacturing and art display was made at Hazard's Pavilion. At the racetrack, many thoroughbred horses and fine cattle, sheep and swine were shown. In fact, there were 50 more horses entered than could be accommodated in the stalls. Thousands of people witnessed the races every day, and the attendance at the pavilion was large both day and evening. Entertainment of some kind was almost constantly provided, attracting many persons who might not have paid admission simply to see the exhibits, though they well repaid careful observation. The Mexican National Band, one of the finest bands that ever visited this coast, was engaged for three days, and baby shows and variety performances created much amusement.

For two years previous to this, the fairs were held at the Chamber of Commerce—a hall of much smaller dimensions than the pavilion, which is at all times filled with a large exhibit from all the southern counties. This permanent exhibit was so mingled with the competitive displays of the fairs that it could not be distinguished from them, and an impression of overflowing abundance was given which is not renewed by the exhibition at the pavilion this year. It was a surprise to be told by Mr. Wiggins, who, with Mr. C. D. Willard of the Chamber of Commerce, has this part of the fair in charge, that more entries were made this year than last. The pavilion is so spacious that, at the first glance, one does not realize how much it contains.

There has never been so much machinery in operation at a fair in Los Angeles as at this one, and the trades were more fully represented. The art display was very large, the fancywork department was well filled, and the exhibit of the Science Association occupied an entire room and comprised many curious and valuable things. The horticultural show was by no means what could have been made two months ago—our fairs come too late—nor was it representative of so many sections of southern California as it has been some years. There was but little sent in from San Diego, Orange or San Bernardino counties, and nothing from Santa Barbara county except art leather work.

Ventura county, as usual, made a display of great variety on a 40-foot table. There was a trellis covered with bunches of grapes of all colors and generous size. Vines were shown bearing immense clusters. Plates were filled with grapes, apples, pears, plums and peaches. Soft and hard-shelled almonds were shown in boxes and jars; glass dishes of various shapes contained dried apricots and the famous beans of the county; mammoth onions, beets and tomatoes were arranged in piles. Amongst all these were vases of flowers which put the finishing touch to an attractive table.

The largest exhibit of honey in the building was made by J. A. Archer, of New Jerusalem, who has 150 hives of bees in Ventura county. The exhibit comprised patent hives with swarms of bees busily at work in them, queen cells, honeycomb in every conceivable shape, extracted honey, and beeswax molded into various forms. One wondered how the comb got into the small-necked glass dishes, tubes and cylinders, until Mr. Archer explained that the dishes were inverted over the bees, who industriously filled them without using any foundation. Mr. Archer offers to wager that his bees can make one-third more honey without foundation than with it. The blossom of the Lima bean makes very nice, white honey.

San Diego was represented by Mr. S. E. Allen, who entered lemons, three varieties of grapes and seven varieties of apples. H. S. Mason, of Murrietta, same county, showed Bartlett pears. E. P. Norwood, of Cucamonga, exhibited French prunes, orange vinegar and grape syrup. A. H. Palmer, of Ontario, displayed dried prunes, peaches, plums, apricots, nectarines and pears.

The only entries that I could find from Orange county were oats, by J. Wakeham, of Santa Ana, and apples and orange-quinces, by T. L. Holloway, of Garden Grove.

LOS ANGELES COUNTY.

The largest individual exhibit in this county was made by I. Gibbs, of Vernon, who covered a table 40 feet long with productions from his ranch of 20 acres. No better object-lesson could be given the stranger desirous of learning what can be done on a California ranch than was afforded by this fine exhibit. What Mr. Gibbs has done, many other farmers are doing, but they did not exert themselves to give such testimony of the fact as he did at the fair. There were melons of several kinds, squashes, lemons, oranges, apples, peaches, tomatoes, figs, guavas, cabbages, onions, beets, blackberries, 11 kinds of pears, corn, walnuts, gourds, and 40 varieties of jellies and canned fruits, put up by Mrs. Gibbs. The table was adorned with many beautiful bouquets of flowers, among the most velvety, wine-colored dahlias I have ever seen. Pomona's table was covered principally with choice specimens of fruit preserved whole, in large glass dishes, by the Board of Trade. The table was in charge of W. T. Clark. Winter Nelis pears were shown by Edwin Borst, a big pumpkin by Mrs. Bacon, dried prunes averaging 33 to the pound by Schureman Bros., jelly by Mrs. E. Ayers. There were potatoes weighing three to four pounds each, and cornstalks of great height which grew in a second crop planted July 20th. A section of a castor-oil bean trunk, 2½ years old, was 9½ inches in diameter. It will be taken to the World's Fair. Everything in the exhibit from Pomona was grown without irrigation.

Long Beach had one of the most creditable exhibits from any locality, in charge of James C. Dunn, assisted by Mrs. Belle Lowe. It refuted the assertion sometimes heard that fruit will not do well on the sea coast. Seventeen varieties of apples were shown, some specimens weighing a pound and a quarter each, and all clean and handsome. One bunch of grapes weighed seven pounds and others weighed three pounds. There were nine kinds of pears, five of grapes, three of figs, besides Kelsey plums, pomegranates, guavas, quinces, enormous egg plants, the only raisins shown in the hall, 30 varieties of jelly, a beet weighing 30 pounds, the banana muskmelon, a new variety of muskmelon called the Kasauba (very large, late and thin rind), 65 kinds of flowers, and a lot of hops which Mr. Dunn raised as an experiment. The wonderful growth of the hops, he declared, threatened to drive him out of his home, and in every way the experiment proved a success.

The Pasadena Fruit Drying and Condensed Vegetable Company, W. R. Baker, manager, nearly covers a long table with its display of dried fruits, condensed vegetables, fruit leather, jams, jellies, and fruit canned by a "cold process" that preserves indefinitely without the use of airtight jars. Sulphur is not used in drying fruit, and Mr. Baker was especially proud of some luscious figs which he had successfully dried without using anything to bleach them. He has patented a drier which is economical of fuel, though intense heat is produced, enabling the fruit to dry in from 4 to 24 hours. He claims that the expense of curing fruit with this drier is not over $1 a ton. The canned fruit and jelly were prepared by Mrs. Baker. Condensed vegetables are now on the market. Pumpkin, potato, carrot, onion and turnip are put up in small packages of fine powder, and pies or soups may be made at a minimum of trouble and cost. A box of St. Michael oranges picked last March was shown by M. H. Waite, and some boxes of dried fruit were put up by C. C. Thompson.

Mrs. S. E. Crane, of Duarte, displayed a pyramid of jellies that many a housekeeper coveted. She is not an amateur in jelly-making, for she supplies stores with cases of her goods. The clearness of her jelly was something remarkable, and the delicate aroma of each fruit was perceptible as the covers were removed. Mrs. Crane thinks if some woman in the northern part of the State would plant an acre to currants and make jelly from them, she could make it profitable. Duarte's display consisted largely of dried fruits packed in glass cases, and grown on the ranch of Bliss Bros. It made a handsome appearance. Ernest Watson showed Valencia late and seedling oranges, also lemons.

Cahuenga has hitherto exhibited largely at these fairs, but Hammel & Denker made almost the only entries this time, showing giant beats, tomatoes, beans, etc.

C. N. Wilson, of San Fernando, exhibited some fine honey, with bees at work, also buckwheat, field and garden peas, beans, rye, oats and barley, all raised without irrigation. George Spiker, of West Glendale, showed Havana and Orinoco tobacco in all forms from the green leaves and stalks to boxes of cigars and "finecut" for pipe use. A. D. Hawks, of Sierra Madre, entered some fancy boxes of California prunes. J. Courtney, of Artesia, showed apples, peaches and grapes.

James Stewart, of Downey, had boxes of dried tomatoes, big sack English walnuts, and figs (which are his specialty) fresh, dried and preserved. J. W. Venable, of Downey, showed 12 varieties of apples and grape fruit in clusters.

A stand was covered with pint and quart jars most neatly packed with fruit by E. E. Foster of Los Angeles, who supplies Jeone, the grocer, with the same for use in the families of his customers. A patent knife and working table were also shown by Mr. Foster. E. M. Potts, of Los Angeles, made a large display of jellies, jams, pickles, marmalades and catsup. Sessions & Co. showed a box of choice butter. Mrs. S. D. Spear, of Pasadena, made the largest display of flowers, all labeled.

The Raymond nurseries had a bed of ferns and foliage plants directly opposite the main entrance, and displayed many carnations.

E. D. Sturtevant's tank of rare water lilies was much admired.

A. W Eames showed deciduous trees from his nursery in Los Angeles. Cole & Muir, of Glendora, showed semi-tropic trees; Barbour & Mawby, Covina, orange and lemon trees; and J. G. Calkins, of Pomona, 16 varieties of olive trees, also some Valencia late orange trees, one year old from the bud, which are 5½ feet high. Mr. Calkins has about 500,000 young olive trees growing in his nursery, in over 50 varieties.

In the center of the pavilion there was a mammoth pile of pumpkins and watermelons entered by the Chamber of Commerce, crowned by the monarch of all, a pumpkin weighing 225 pounds and raised at University with no irrigation.

The Union Oil and California Ink Company, of Santa Paula, Ventura county, made a pretty exhibit in the form of a pavilion, which will be reproduced on a larger scale at the World's Fair. Thirty kinds of lubricating oils were shown, crude and illuminating oils, paints, asphalts, petrocarbons, type-writing oil, aniline products and printing inks of all colors. This exhibit is to remain at the Chamber of Commerce. The Ladies' Annnex made an interesting silk exhibit, using an electrical spinning reel. The process was watched by many persons who had seen nothing of sericulture. The ladies propose to make a flag for exhibition at the World's Fair with the aid of the curious little silkworms.

No names were allowed on the cards this year, and the task of reporting was rendered doubly difficult. I must have omitted some of the exhibitors, though I made every effort to secure a complete list. Most of the tables had on one in charge of them, and the managers of the fair were wanted everywhere at once and could not be interviewed long enough to secure the information. At this writing, the condition of finances has not been announced, but it is expected that the balance will be on the right side, though expenses have been heavy.

The Home Circle.

If Mother Would Listen.

If mother would listen to me, dears,
She would freshen the faded gown;
She would sometimes take an hour's rest,
And sometimes a trip to town.
And it shouldn't be all for the children,
The fun, and the cheer and the play;
With the patient droop on the tired mouth,
And the "Mother has had her day."

True, mother has had her day, dears,
When you were her babies three,
And she stepped about the farm and the house
As busy as a bee.
When she rocked you all to sleep, dears,
And sent you all to school,
And wore herself out, and did without,
And lived the Golden Rule.

And so your turn has come, dears;
Her hair is growing white,
And her eyes are gaining the far-away look
That peers beyond the night.
One of these days in the morning
Mother will not be here;
She will fade away into silence—
The mother so true and dear.

Then what will you do in the daylight,
And what in the gloaming dim?
And father, tired and lonesome then—
Pray, what will you do for him?
If you want to keep your mother
You must make her rest to-day,
Must give her a share in the frolic,
And draw her into the play.

And if mother would listen to me, dears,
She'd buy her a gown of silk,
With buttons of royal velvet,
And ruffles as white as milk;
And she'd let you do the trotting,
While she sat still in her chair.
That mother should have it hard all through
It strikes me isn't fair.

MARGARET E. SANGSTER.

Calamity Day.

Written for the RURAL PRESS by DUANE MORLEY.

"Joe, dear! please do not set me any responsible task to-day, especially anything which has in it an element or opportunity for risk."

"What is the matter now, Kate—anything serious?"

"Nothing great, but this is *calamity day* come again. This morning when I lifted the screen to let in Tabitha Ann who had been out all night, moon-larking, the screen fell and jammed my thumb. And, while turning the breakfast buckwheats just now, my bare elbow came in contact with the kettle's steam: calamity day sure."

"You are a superstitious creature, Kate! and an alarmist also, trying to infuse me with your superstitious notions. According to your fancy, accidents run in waves, disasters come in battalions, and misfortunes fall upon us like showers, isn't that it?"

"Yes, Joe, that's it, and as sure as anything serious occurs with me before the breakfast hour of a day, just that certain such things will happen all that day. Now there was—"

"Spare the recital, Kate, I cannot bear it. Just drink a good, steaming cup of coffee, forsake your queer notions, read something soul-bracing, of Emerson or possibly Ruskin, and in an hour everything will run as smooth as a telegraphic transmission." Our breakfast talk then drifted into another channel; Joseph Cook's recent lecture, and thence to the usual daily gossip of which the men are reputed not to be fond.

Finally, Joe swallowed his last coffee and strode off to his office. Of course, he was sorry for me because of my bruises and burns, gave baby and I the goodbye kisses and then away—no, he said just as he passed out, "Kate, I wish you would dust the books and pictures. I was showing Greenbaum our new Scott the other night and I found it grimy, actually grimy—California dust is so penetrating."

We do not keep help; Joe cannot afford it yet. He is a "law limb," as he calls it, at that time, attache of the firm of W. G & L., drawing slender salary. After Joe had gone I romped with baby for a time, giving her her bath and clean suit; tidied up the kitchen; run the seams o a new gown; chatted for a while with Lillie Leffingwell, who is here at a neighbor's fresh from Illinois, and, forgetting about calamity day, I sailed into "library corner," as we call it—the book corner of our cosy little parlor—to dust the books and pictures.

Springing up the curtains to get more light, I noticed some cobwebs on the ceiling. Only a day or two before I had swept them and there they were again—vexatious. Getting the broom and short steps, I struck out at the webs. How it happened, I cannot say; either my ladder was not placed firmly or my strokes were too vigorous, for down I came, pitching forward as I fell, and punching a hole right through "Moses in the Bullrushes," through the bullrushes anyway.

I gave a gasp as I looked at the rent, for we had bought the picture at a recent art sale and Joe was much pleased with it. Just then baby screamed. I had left her in the kitchen holding Tab. Rushing out to see what was the matter, there I found her all covered with milk, the urn fallen from the table above, milk and broken glass on the oilcloth beneath, and Tabitha Ann quietly performing her toilet in a corner. For fully six months I had splendidly kept my temper in curb, but right there the curb broke and Tabitha Ann took wings through a convenient hole in the screen door, followed hard and fast by a stick of orange stovewood. I cleaned baby, dust-panned the broken glass and washed up the spilled milk, all the time strangely forgetting that it was calamity day. After vainly trying to eat—it being the lunch hour and Joe never lunching at home—I sailed back again into "library corner," patched up as best I could the broken bullrushes where the infant lawgiver still lay sleeping, refilled the Pittsburg lamp and then began to dust the books in their cases. By that time my feelings were much mollified, hoping, as I did, that the break in the picture could be more substantially mended, and as for the glass urn that could be replaced at small expense. I was even compunctious respecting the warfare between Tabitha and myself, for, doubtless, the poor cat was herself without fault in the matter.

Well, the books were dustier than I supposed possible, yet I got along nicely, admiring them as I replaced them upon their shelves. And then—well, I do not know how to say it. I had been telling Joe that the shelves were not properly supported, the end rests did not fit, and the connecting supports were not strong, and, to save the trouble of rearranging, Joe had placed several massive volumes upon the upper shelves, among the number a Universal geography, a two-volume cyclopedia, and a one-volume Shakespeare. I suppose that in taking out the volumes and replacing them, the end rests got shifted. Whatever caused it, there was a sudden decline in literature—right sudden—the three higher shelves dropping from their grooves and tossing their handsome freight, myself with it, down upon Joe's open desk, and thence to the carpet. My elbow struck a corner of the desk as I fell—the same elbow I had burned while turning the breakfast buckwheats. That reminded me that it was calamity day, and had you, dear reader, seen that disarray of books, you would have conceded that it was calamity something. It was a ruin. Joe's ink had been knocked over, the red lending a sanguinary hue to a volume on "Missions and Missionaries," the black finding a short-cut into "Byways of Europe." The leaves of many of the smaller volumes were loosened and their backs slit. One cover was gone from each of the two cyclopedias, the Universal geography—always shaky—had made of itself a leaflet circulation to the four corners of the room. Shakespeare, alas! was demolished; no Donnelly to save his *bacon*—the illustration of Romeo and Juliet torn in halves, Romeo on one, Juliet on the other. Emerson and Carlyle—well, I cannot go on. I could not then. I went to the window and looked out. I said nothing. As silent was I as the sphinx, and, too, while there was much that could have been said; then I left the room and the ruin behind me. Baby had, as I discovered, crawled up onto a chair and therefrom to the bed, where she lay sleeping. So softly she slept, it seemed like death, and so I thought of death and wanted to die, but I did not. Our petty griefs do not kill us. Womanlike, I threw myself upon the bed beside baby and cried. Then I slept; how long I slept I do not know, but when I again became conscious it was five o'clock and Joe home tearing at me to awaken me. "Out of that, Kate," said he, "out of that and hear the good news." Then he capered all over the room, shouting, "Good news!" "Why, Kate, you've been crying; what's up?" Then I recollected not *what was up* but *what was down*.

"Bad news!" I shouted, yanking Joe into the parlor to survey the wreck. He took it all in with one wondering look, uttering but one phrase as he fled from the room, "California cyclone, as sure as I live!" Joe's good news was that W. G. & Co. had promoted him into the partnership, making him a five-hundred-dollar cash present as a mark of esteem. Such was calamity day—calamity on my side, good-fortune day on Joe's.

"VAT would you say, Abie, if I geef you a dime?"

"I'd say twice as much fadder, for fifteen cents."

Mrs. Landers' Property.

Written for the RURAL PRESS by M. PULSIFER.

In a town not far from San Francisco, live two persons, who, in these days, and especially in California, may be considered phenomenal, for the reason that they never go anywhere; that is, to see and enjoy the doings and events of the day. They are by no means dull and disinterested, but living many years alone has had the result of making them morbidly cautious. They are afraid to leave "the house" alone, and each is afraid to leave the other alone, so it happens that they stay at home for mutual protection and general safety.

But let me introduce them—Mrs. Landers and her daughter Josephine, or Joe, as her mother likes to call her, since she has no son, and Joe has made the home since her father died. Although these two persons have seen little or nothing of the world for themselves, they have studied it through the eyes of others and the press, the latter being chiefly instrumental in forming and fixing their opinions of men and things. As it is not the province of daily papers to set forth the good deeds of mankind, I need not enlarge upon the ideas that have long ago petrified into belief in the minds of these two unsophisticated and innocent women.

Their friends have learned not to expect anything more than brief occasional returns of their many calls and visits, for Mrs. Landers and Joe seldom leave their home, and yet more seldom go together.

No one could tell how they would come out of a contest with desperadoes, for they haven't so much as a pair of tongs to defend themselves. As for firearms, neither of them would touch one of the inventions though it had been taken apart and put together before their eyes to convince them that "it was not loaded."

"Now, ma," says Joe, one evening, as they sat in the twilight, "I'm going to tell you something. When I was in town yesterday I met Mrs. Haply and Rufus, and they sent their compliments to you, with the request that you and I go with them to the circus, John Robinson's, to-morrow, at 2 o'clock. I want you to accept the invitation; it will give you pleasure, and break up the wearing monotony of going nowhere and seeing nothing."

"Wal, you know I don't like that ar' Rufus Haply, and I'm jus' sure he's behind the hull thing."

"Really ma, I think you are rather unfair in your dislike and treatment of Rufus; you have known him all his life, and I'm sure you know no wrong he has ever done."

"Pshaw! Joe, *you* know that is not the point. He thinks he'll step in here when I'm gone and it makes me hate 'im, for I never will call him my son, there!"

"Ma, you don't know him, if you think he is waiting for that, because he says he would come in to-morrow with your consent; that he could and would be a great comfort and help to you in your old age. Certainly, you can't accuse him of having any designs upon your property, when he is independent already, and will be quite wealthy if he outlives his mother. But we will not discuss Mr. Haply any longer; only, be assured, he is your friend as well as mine. *Will* you go to the circus?"

"Wal, the circus'll do us no harm, and I'm willin' if we s'cure the house and our few val'ables from incend'aries, thiefs and burgalars."

"Oh! dear me!" returned Joe, "I have that all planned, so you need give yourself no uneasiness, for once."

"*You!*" exclaimed Mrs. Landers. "I wonder if *Joe* has any interest in *her* earthly lot cast under this ere roof!"

"Oh! ma! You know I intended to say *we;* pray don't be so touchy. *We* will not leave anything *in* the house; all must be put outside, and my plan is to dig a hole and bury them until we come home."

"*Bury them!* Why, I wouldn't trust them under ground one minit! with them ar' pesky gophers as cuts my plants and shrub'ry down slick as a blade! I'll stay home and keep an eye on things. Them 'ar tarnal critters have holes big enough to swallow a hogset of water, as I've proven more'n once."

Poor Joe was rather taken aback, for she had really considered her idea a very safe one for securing some articles of worth that had come down to them from better days, but which they would trust to no bank safe.

Then she suggested putting everything in a box and hiding it in some of the many clumps of bushes that Mrs. Landers had encouraged to grow "wild."

"Goodness gracious me! that's worse than t'other! Did you never hear nor read of them walkin' scamps called tramps? They do nothin' but prowl in the bushes; *they* hides in 'em, and stays there all day—or, at least at night, or as much of it as they're not stealin' and murderin'! You may jus' quit talkin' and layin' such plans; I'll stay home and keep the gate chained and locked, then I'll know who comes in and who goes out. Besides them perfec' born tramps and villains, these ere meanderin' circuses carries a reg'lar gang that jus' spreads out over a hull community in no time, and they puts in steddy work at their bus'ness of robbin' widders and orphins and inverlids, while the animils and other indecent things is making fools and asses of the people generally!"

This silenced if it did not terrify Joe, for some time. The hour was getting late and she was forgetting the circus in the sweet sounds that are heard in late summer and autumn evenings.

The notes of the crickets under the window carried her from place to place, from old to new scenes, from old to new associations, from gladness to sorrow, from sorrow to gladness,—but that song had never changed!

She was half dreaming, and a long way back on the road she had traveled since her only and beloved sister had left her to reside in a distant town.

She was suddenly aroused by her mother saying: "Come, Joe, don't think so serious about the circus, and I'll go, for I've hit upon a way of safely hidin' the troublesome things, one and all. We'll put 'em in the woodshed, under the wood, and pile the wood on 'em! Now!" The last exclamation meant that the matter was settled; but it did not have the usual or desired effect upon Joe, who declared that she would take no hand in such a piece of tiresome work, and so stoutly, for once, did she dissent from her mother's wishes that Mrs. Landers yielded quite as readily as had Joe twice before.

"Since we cannot agree upon a plan of concealing the articles out of doors," said Joe, "we must both make up our minds to leave them in the house and risk the consequences, or stay at home. It must be 'yes' or 'no' to-night, for there will be no time to argue the question to-morrow."

"Listen!" loudly exclaimed Mrs. Landers, startling Joe, who had both her eyes and ears shut. "Didn't you hear that ar' noise in the laylock? I did, and—Oh, Joe! there's a man jus' run by the winder; sure's I live!"

Joe was frightened, but tried to conceal the fact from her mother, by rising and bravely going to the front door to see if any one went out. She saw no one, but heard receding footsteps; and advancing to the gate found it ajar, neither of which she told her mother.

"Now, Joe, I jus' tell you, that ar' feller in here, is no other than a circus scamp, layin' off work for to-morrow, and I'll not leave this ere house to a'sist his operations, if I know myself."

"Try not to be alarmed, please ma! I think it is some one who supposed we were asleep, and came round to see if the hose or something else was not left out for his benefit. If there be thieves with the circus, they are not here yet; and when they begin operations, it will be upon more promising establishments than ours. And then we will be home to-morrow night.

The Landers house was built fifteen years ago one spring. It was a neat five-room cottage, with a broad veranda extending the entire front, upon which French windows opened from parlor and sitting-rooms, making those apartments fresh and delightful in summer. The place was well kept and scrupulously neat, and bright with flowers nine months of the year.

Rufus Haply had called it the "Retreat of the Angels," which, Mrs. Landers said, would sound well enough from any one else; but she "didn't care to hear any comments upon her belongings coming from that ar' quarter. It's the easiest thing in the universe for han'som' men to make pritty speeches; but I tell you, Joe, they don't mean nothin'. Your pa never talked such silly stuff and rubbish, not in my hearin'. But your pa was not a homely man—by no means. But as for Rufus Haply, I never can, to my dyin' day, tolerate his black hair 'n eyes, an' that ar' pet, a mustach trained to curl to his biddin'; no one on arth would take 'im for a Puritan Yanky, but a full-blooded Spanish furriner, I vow!"

While Mrs. Landers is recovering her breath, I will speak of another house that was built in the fall of the same year, across the street from Landers and just opposite.

Part of the cost of its construction was borrowed money, upon which fact Mrs. Landers had remarked at the time: "Them as builds houses on borrowed money nails the devil in; and now, Joe, you mind my word if it isn't true in this case."

The passing years had, indeed, seemed to verify Mrs. Landers' proverb, for the history

of the house was a sorry one. During the time mentioned the Landers had seen seven owners and eight renters come and go, each one of whom had poured into the ears and confidence of Joe and her mother their various tales of woe and sorrow, for not one was happy who lived beneath its roof.

Its present owner grabbed it up during "the boom," and he is to-day half distracted over his many failures to find a purchaser for the little white elephant. Notwithstanding all its occupants, the house has been vacant fully half the time. There are those who can tell stories of lights and noises seen and heard within its walls during the dark hours.

Mrs. Landers declares the place is "haunted by the Old Boy;" but Joe has a secret opinion that it is haunted by more than one old boy, and those boys make it serve a purpose of their own that might be of interest to the local police.

She prefers, however, to let her mother hold the less disturbing belief, for Mrs. Landers had always said that "Satan never molested them as wouldn't sarve 'im!'

At the time our story opens, this house had been unoccupied for some months; and Joe, whose room was just off the front parlor, had been awakened more than once by the sound of wheels that always stopped there, and which would be succeeded by the noise of booted feet on the steps and through the house, going in and out.

(*Concluded next week.*)

The Lamb Among Wolves.

He enters the precincts of the bureau. Black is his brow, and rasping with unwonted harshness is his voice, writes Robert J. Burdette of the man who enters an intelligence office in search of a "cook" and a "second girl," in the October *Ladies' Home Journal*. Sternly he bends his gaze upon the superintendent. She lifts her own eyes a passing moment, to meet his ferocious expression, tranquilly, as one who had been weaned in early infancy on just such glances from much larger men. She resumes her writing. There is something in the atmosphere of this strange place that chills him. He snorts "Goodaftnoon!" in one word, and in the same tone in which he had snarled "Gmorn!" to his typewriter. The superintendent looks up pleasantly and says, "Good afternoon, sir," with excessive courtesy and just a little Boston icing on it. He breaks into a cold perspiration as the horrible thought sweeps across his mind that she may have followed him there to witness the battle. He looks over his shoulder as a murderer might look around at the ghost. He would give a dollar if the office boy would just come after him with a message. He knocks his head off. His tongue cleaves to the sunburned roof of his kiln-dried mouth. He takes off his hat. He prefers a request for an interview with a lady who might be willing to accept a situation to assist in general housework. The lady is presented. "An' how many have yez in the family?" "Five." He is alone. He hears an unfamiliar voice beyond the partition saying, as to an audience: "Thayre's a houseful o' thim." He suggests, in a hoarse, strange voice, that he will try for two. They are summoned. The candidate for cook is taller than himself; the "sicking gyrul" demands of him where he lives. He names the street. The two ladies turn to look into each other's faces; two harsh and hollow bursts of laughter grate upon the startled air; two faces look down upon him with pitying commiseration, and he is once more alone. He goes out like a man walking in his sleep. He falls over a dog and "begs pardon." He meets the office boy and lifts his hat to that astonished young rebel. He sees his typewriter waiting for a car, and calls a hansom for her. He reaches home, and when the "ad interim" Ellen Eliza opens the door, he calls her "Madam," and apologizes for troubling her. You say: "Where is the new girl?" He says: "Oh! Didn't have time to go for her." And he is correct. She went for him. After this, perhaps, you had better not say anything to him about it.

O patient, much-enduring, long-suffering woman, no man living knows upon what heart-aches and trials and tribulations of the flesh and spirit his happy home is founded. If he did he couldn't sleep in it.

FIRST BEGGAR WOMAN—"What do you pay a day for the hire of that brat?"

Second beggar woman—"Fifty cents."

First beggar woman—"That's too much. For that money you can hire a deformed husband, blind in both eyes. I don't see how you can lay up any money when you pay fifty cents for a child that is not even deformed and hasn't got a single sore on it."—*Texas Siftings.*

A Plea for Healthful Dress.

Written for the RURAL PRESS by MAUDE PEASLEE.

Although the days of tight bodices, heavy skirts and torturing pull-backs are gradually becoming of the past, still there are many all over our land who hesitate to make the change to the dress-reform garments, because they imagine the cost to be quite beyond their purses.

From my own pleasing experiences in this matter, I would offer a few notes for the encouragement of others as economical as I myself.

The first season I cut the superfluous length from my shirts and sewed them to the lower part of my flannels, thus doing away with one band. Experience, however, taught me it was cheaper in the end to buy the same grade of flannel already made up into Union suits. So many firms now manufacture them that is possible to buy a very fair quality, high necked, long-sleeved, gray, jersey-ribbed, for $1.75 a suit. These last me two winters, and right here I would suggest, when they begin to grow thin darn them in loose stitches instead of trying to patch so close-fitting a garment.

Therefore as it becomes necessary to purchase new flannels, pray do invest in the Union undergarments, the superiority of which over any other cannot be disputed. Fitting the body closely, with no superfluous weight or fullness, it wears twice as long as the old style, as it gives with every movement of the body with no severe strain on any part. Unless one has fairly tried it, there cannot be full appreciation of the advantages to be gained by the change.

There are many comfortable waists to choose from in discarding the corset, if indeed one feels the need of the waist. These wear much longer than any corset I ever used in my benighted days; therefore they are cheaper, and again the change is economical.

The next garment, the chemilette, combines three garments in one, and besides the comfort, beauty and grace, money may be saved in time, material and trimming, while if a seamstress is to be paid the bill will be much lighter.

The divided skirt must be tried to be even half appreciated. It was with fear and trembling that I ripped up an old full dress-skirt, and following the pattern made my first one. The warmth, freedom and grace of movement, and the evenly distributed weight, makes it far too comfortable ever to discard if once tried. The difficulty of making the change may lie in deferring the step because of lack of time. Of that each one must be her own judge, but if you still doubt, just talk it over with your doctor, and ask him if he doesn't think it might help to strengthen your weak back. If he agrees, you surely will not let anything stand in the way of a chance of renewed health.

The Gown Form is the finest thing Mrs. Jenness-Miller has given us in her many improvements in dress. It is not divided, as I find some imagine, but is merely a perfectly adjusted and well-fitting skirt and waist in one; in fact, a princess lining upon which the dress proper is arranged.

The many beautiful Jenness-Miller costumes prove that it is possible and practical to dress artistically, yes and stylishly, while obeying every law of health and hygiene.

In case of a skirt and bodice, the gown form is cut low-necked and short-sleeved, and the bodice is worn as usual; but there are no tight skirts, band or heavy dragging skirts, since all the weight comes from the shoulders.

In conclusion I would offer as the strongest argument for the change, that in a wide experience I have never known one who really adopted the system to drift back into the old slavery. It is a little hard for some to make the change for various reasons, but from existing facts I know it to be harder still to give it up after once having tried it.

"YES, dear wife," and he closed his eyes, "the end is near. The world grows dark about me. There is a mist around me gathering thicker and thicker, and there, as through a cloud, I hear the music of angels—sweet and sad."

"No, no, John, dear; that's the brass band on the corner."

"What!" said the dying man, jumping from his bed and flinging the bootjack at the leader, "have those scoundrels dared to come around here when I am dying!" And he recovered.—*Life.*

WAGGS (to young matron with the perambulator): Good morning, Mrs. Fullbloom! Are you taking the son out for an airing, or the heir out for a sunning?

Mrs. Fullbloom: Neither, Mr. Waggs. Baby is a girl.—Life.

YOUNG FOLKS' COLUMN.

An Old Fable.

Written for the RURAL PRESS by M. R. JOHNSON.

Dear little readers, have you never read the story of the fox and the stork?

A fox went out one beautiful, bright, sunshiny day for a long stroll, and took with him his young sons, all arrayed in their best dress. It happened, as these great people walked along, there came from the opposite direction an old family friend who for some time they had not seen. This friend was Madame Stork; she had also with her, for their afternoon airing, her two very beautiful daughters.

The fox seemed delighted to have met Madame Stork, and very cordially greeted herself and daughters, and lavished upon each many compliments, also adding that he should be so pleased to have his sons and her daughters thrown more frequently together, and then and there extended to them an invitation to dine at his home on the morrow. Madame Stork very readily assented, and, smiling, she thought to herself what a fine time was in store for her.

After bidding the ladies "a pleasant afternoon" and "good day," the cunning foxes went off to a neighboring wood in search of dainty game, of which they would prepare a most tempting bite for the great dinner on the morrow. Luck seemed greatly in their favor, and after a few hours spent in the wood, they returned home laden with all they could well carry.

According to her promise, the lady, with her daughters, each looking very charming, came to dine with the family of Mr. Fox. This fine gentleman had taken great pains and trouble to decorate the walls of his rooms with the finest and most tempting of game. Madame Stork looked about her in undisguised pleasure, and was still admiring the beautiful quail and birds hanging so plentifully about when she was startled by the tinkling of the dinner bell, and being quite hungry, she, with her daughters, went immediately to the diningroom. What do you think, my little readers? Madame Stork was very angry and disappointed, for all the good things she had expected to enjoy, and the game that she loved so well, was prepared in such a manner that none could eat of the splendid dinner but the cunning foxes themselves. You must all know that storks have very long, slender bills, and cannot eat off a shallow or smooth surface. So all the invited guests could do was to sit and look and appear not to be hungry, or in any way notice the slight, which of course would have seemed unbecoming well-bred people. So, appearing in the very best of humor, she passed the time until she should return home.

Before going, however, she politely begged of Mr. Fox that he, with his sons, should soon join *her* family at dinner.

The very kind invitation was accepted, and, in a short time after, the day was arranged on which they should dine together.

In *their* turn the foxes thought upon what a grand time they should all enjoy, and of the dinner in store for them, for they had often been told that the family of Madame Stork lived well.

Now, instead of taking off to the wood, as the foxes had done, the Madame Stork and daughters started for a stream near by, in which were an abundance of turtles, fishes and frogs. Having caught of each as many as they could well use, they returned home to temptingly prepare a dinner for the guests who were to come on the following day. Madame Stork was a very fine cook, and seemed to try herself on making her dishes as inviting as was possible and she was successful, too.

Mr. Fox, to the satisfaction of Madame Stork, came in good season, and the dinner was hot and steaming as they took their places at the table. But, now, it was Mr. Fox's time to be dismayed and angry, and angry he was; he did not even try to hide his anger. Madame Stork saw that her game had proven a success, but did not let on at all; she only insisted the harder that Mr. Fox should "eat" and "enjoy himself," saying "put in your bill," "eat and grow fat," and all such things, until the foxes were wild with suppressed rage and hunger, too.

At last, the daughters of Madame Stork could stand the joke no longer and began to dance and shout aloud "that 'twas only *tit for tat*," this, of course, did not mend matters, and in extreme disgust with himself and everybody else, and Madame Stork more than everything else together, he said his adieux and went to his home, after having been caught in the trap laid by himself.

If my little readers will think well, I am sure they can see the good moral taught in this fable. If the fox had done as he wished to be done by, perhaps he would have enjoyed the dinner of Madame Stork better.

A Halloween Party.

Children born on Halloween are said to be able to see and converse with fairies, witches and other supernatural beings, which reminds me that I once went to a delightful impromptu and informal Halloween birthday party, writes Alice Willard in the October *Ladies' Home Journal*. The invitations were sent by telephone and messenger on the very morning of Halloween, and all arrangements and plans for the evening's enjoyment were made on short notice. The rooms were lighted by candles instead of gas; pumpkin jack o'-lanterns stood in unexpected places about the halls and rooms. The mantles were stacked with brightly polished apples and, fancy dishes of nuts and raisins, grapes, oranges, figs, dates and homemade candies were set everywhere about the rooms, and every one was expected to help himself to anything he wanted at any time. Apples were suspended from the gas fixtures, the "luggies three" were there, and quarts of chestnuts with which to discover, at the hard coal fires in the grates, whether lovers were true or not. All the old customs which were practicable in modern parlors were tried. The festivities ended with a dance, and at half-past eleven we turned our faces homeward, to arrive in time to see, if possible, some of the strange sights which are supposed to appear on Halloween at "the very witching time of night."

CHILDREN NEED SLEEP.—Children, until they are twelve or thirteen years old, should have at least ten hours sleep, eleven is better; until eighteen or nineteen, nine hours is none too much, writes Mrs. Scoville in her valuable department, "Mothers' Corner," in the October *Ladies' Home Journal*. In this country our children inherit nervous temperaments. No hygenic measure soothes, quiets and strengthens the nerves like plenty of sleep. Children should never be wakened in the morning. Yet the demands of household convenience and the claims of school make it necessary that they should be out of bed at a certain hour, usually not later than seven. To make this possible, and give them their fair share of sleep so that they will be ready to waken of their own accord, they must be in bed between eight and ten, according to their ages. If bedtime is made pleasant to them, as mother-love can make it, with a story, a little talk over the events of the day, with loving words and ministrations, the hardship of banishment to bed will be robbed of most of its bitterness.

IN a hall in Glasgow a few weeks ago there was a lecture on "Marriage and After." The lecturer said that men should kiss their wives as they did when they were a year or two married. When the lecture was over an old man went home, put his arms around his wife's neck, and kissed her. Meeting the lecturer next day, he said:

"It's no go."

"What isn't?" said the lecturer.

"Weel," said the man, "when I kissed my wife she said: 'What's gone wrang wi' ye, ye auld fool, ye?'"—*Boston Globe.*

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

LARGE YIELD OF PEACHES.—*Register*: Charley Charvet of Thermalito tells us that from 11 peach trees he preserved 400 pounds of fruit, sold $10 worth of ripe fruit and $12.50 of dried fruit. Estimating the 400 pounds at two cents per pound, gives us $8, which, added to the $22.50, makes $30.50 for the 11 trees, or $2.75 per tree. This, at 100 trees to the acre, would be $275 per acre. From one tree he picked 672 pounds of peaches and from another 540 pounds.

STRAWBERRY GUAVA. — Oroville *Register:* Each year the list of fruits in this section of California extends. We were presented with a box of strawberry guavas from the Rancho Manzanita owned by Power & Son. The location is in the low foothills east of Oroville. The fruit was fully ripe and of a fine flavor. This fine fruit is a native of the West Indies and Brazil. There are several varieties, but in the islands the white guava is mostly cultivated, while in Brazil the red or strawberry guava takes the lead. This variety has been successfully introduced into Florida, where it forms a little tree six or eight feet high, and into southern California where its cultivation has been found profitable. The fruit is grown from the seed, but it is more profitable to buy plants eight or ten inches high from nurseries. The little shrubs bear the second year and are very prolific. They should be set as thickly as grapevines. Mr. Powers informs us that they stood the winter without any protection, and we think they will become a profitable fruit in this section. They are eaten fresh, or by picking some days before fully ripe, can be shipped long distances. They ripen during September, October and November. The leaf is a glossy green and the blossom white. They are considered the finest fruit grown for making jelly, and in the southern part of the State have been found very profitable.

THE LOQUAT.— *Register:* While this State has many fine varieties of fruit, the loquat is one that appears but little known. There are numbers of trees raised in this vicinity and in many localities in Thermalito and Palermo. The tree is a beautiful evergreen with leaves from 8 to 12 inches long, small white blossoms and egg-shaped, yellow, plum-like fruit. The tree blooms in January and ripens its fruits in April while other fruits are scarce. The loquat is subacid in flavor, with a large kernel. It is excellent for pies and sauce, especially when mixed with apples, while for jelly it is unexcelled by any other fruit. The flavor of the fruit is a little peculiar and combines that of the tamarind and the pineapple. T. B. Hutchins says of the fruit growing on his place: "There appears to be two varieties, or else the trees are male and female, for while one tree bears heavily another does not. The heavy bearing tree may be easily told by its darker and greener leaves, which can be distinguished 50 yards away from the leaves of the other tree. It ripens here about the first of May, and has a fruit about the size of Coe's Golden Drop plum with a large smooth pit. All the fruit does not ripen at the same time, so that it remains on the tree quite a period before the last has been gathered." It stands this climate well and forms a handsome shade tree, though rather slow of growth. This tree is cultivated extensively in Florida and lower Louisiana, and it is stated that large profits have been realized from the sale of its fruit. The tree was originally brought from Japan, and is sometimes called the Japan plum, but this is a misnomer.

Calaveras.

A MONSTER GRAPEVINE.— Mokelumne Hill *Chronicle:* In the garden of J. H. Zumwalt, who resides at the head of Spring gulch, about a mile and a half from this place, can be seen probably the largest grapevine in the State. The vine is three feet and a quarter in circumference at its starting point, and has been trained by Mr. Zumwalt by supporting it on poles about six feet apart and about five feet high, until the vine has now reached the enormous length of 102 feet. The vine last year yielded a ton of grapes, and Mr. Zumwalt says that there is more than a ton on the vine this year. There is also in his garden an orange tree that was planted in 1862 that is now three feet and two inches in circumference and covers nearly 60 square feet of ground. The yield last year from this tree was 147 dozen, the oranges being very large and sweet.

Fresno.

REPUTATION SECURES HIGH PRICE FOR RAISINS. Fresno *Expositor*: Colonel William Forsyth has sold 5000 boxes of his best raisins for a round $10,000. This foots up to the neat sum of ten cents a pound. This item in itself is one of importance. The price of ten cents a pound is not usual, and there is a reason for it. In the first place, Col. Forsyth has established a reputation for his raisins, and he has always seen to it that the quality of his goods was exactly what he recommended it to be. His vineyard is a fine one; his grapes are of the best variety; he employs intelligent labor; he sees that every detail of the work of picking, curing, sorting and packing is properly done. By following out this course in the past, he has shown the trade that it is possible to grow, cure, pack and market a first-class grade of raisins. For this reason, those who are acquainted with his work go to him when an extra fine grade of raisins is wanted. The 5000 boxes which he has just sold to the largest house of the kind in the world are the very best. He has sent them forth as a sample of what Fresno soil can produce, and what care, science, patience and intelligence can pack. That price is probably higher than the market will stand as a general thing, but in what Colonel Forsyth has done there is a lesson for all vineyard men to learn. They can see what care in packing and growing and curing will do. It can be seen that it is quality more than quantity that counts. It can also be seen that a reputation has an immense amount to do in the successful marketing of raisins. Dealers cannot open and inspect every box of raisins they buy, and they are willing to pay a good price if they can be certain that they are getting a first-class article and not a second-class article under a first-class brand. The profit on raisins of this sort is enormous, even when the careful culling has thrown out a large part of the crop. The raisin vineyards in Fresno are in their infancy, and the men have to learn much by experience. Since this is the case, the experience of successful men goes a long way toward educating others in the work of making the raisin output of California better.

Humboldt.

ANOTHER CREAMERY. — Ferndale *Enterprise*: All the arrangements for the building of a creamery at Swauger's were completed at the adjourned meeting held at Table Bluff hall on last Saturday evening. No difficulty was found in disposing of the stock on hand, and the result of the meeting was that a company to be known as the "Diamond Springs Creamery Company" was organized with a capital stock of $15,000, and corporation papers were drawn up and acknowledged by Notary P. F. Hart, of Ferndale, who was present. Directors for the first year were elected, as follows: W. P. Thomas, M. Fitzsimmons, N. B. Patterson, H. M. Dickson and H. Van Duzer. R. F. Herrick, M. Fitzsimmons and J. C. Foss were elected a committee on by laws, and W. P. Thomas, M. Fitzsimmons, H. Van Duzer and C. Paulsen were elected a committee on site. Over 2100 cows were represented by their owners at the meeting, and much enthusiasm over the project was manifested by all present. On Monday last, Surveyor Herrick, in the presence of the site committee, surveyed of a site for the new institution in the vicinity of Swauger's station; and Mr. Thomas informs us the work of erecting the buildings will be commenced forthwith.

Kern.

RAISIN CROP.—Bakersfield *Echo*: Loads of raisin-trays and sweatboxes are still going countryward. It is said that but few of the vineyardists bought enough trays and boxes in the first instance, the crop being so much larger than was expected. The original estimate of 30 carloads for Rosedale will have to be revised.

WATER IN THE DESERT.—Bakersfield *Californian:* There is something rather peculiar about the finding of fresh, pure water at a depth of 400 feet, by the railroad company, on the line of the branch road to Asphalto. Other people have bored wells and looked for fresh, soft water in that region, but failed to discover anything but salt and alkali. There is no water in the coast range mountains except some alkali springs in the foothills. When the road was built the company found it necessary to secure water in some way. In order to meet the pressing demand, they concluded to sink an artesian well at a place one mile west of the Kern Valley Water Company's canal, about 35 miles from Bakersfield. The altitude at this point is about 140 or 150 feet above the lowest depression in the valley, and beyond that the country has always been considered a desert, reaching through the foothills into the mountains. After sinking 400 feet they struck a flow of water, which came bubbling up as pure and soft as that of a mountain stream, and in such quantities as to supply all necessary demands. As the coast range is not a watershed, of course this water comes from the Sierra Nevadas, and it seems that the farther from the great reservoir the nearer the water approaches the surface. The termination of the road is at Asphalto, 35 miles beyond, and this extraordinary streak of good luck seems rather remarkable. It will furnish water for locomotives and may induce a colony, as the land in the vicinity is very rich, and only requires the application of water to make it exceedingly productive.

Los Angeles.

CANNED-FRUIT SHIPMENT.—L. A. *Express:* A special train of 23 cars, loaded with canned goods from the Southern California Packing Company, started eastward from this city Oct. 6th over the Santa Fe. The goods are consigned to various cities in the East, and it is said that 100 more cars similarly loaded are to shortly follow. This, the largest special train ever sent out of the State, was decorated with banners and was photographed and dispatched on its way.

Modoc.

CATTLE SHIPMENT.—Adin *Argus:* W. H. Nelson, a few days ago, started two bands of cattle—400 in each band—for the lower country market. Mr. Nelson was here Sunday on his way down, expecting to arrive at about the same time the cattle do. He will be back in about four weeks and, we understand, will at once begin buying cattle in Big valley to make another band.

Napa.

THE VINTAGE.—Napa *Register*, Oct. 7: Viticultural Commissioner E. C. Priber, as manager for the Napa Valley Wine Co., had a week ago bargained for all the grapes he cared to crush this season at the prices then prevailing ($15 maximum), but learning that there was a disposition to bear the market and run grapes down to $10 per ton, he made more room and reentered the field as a buyer. He says prices have dropped within a week from $15 to $12@$13 for Zinfandels; this by reason of the closing down of some wineries and the consequent lack of competition among buyers. The three Napa valley wine cellars with which he is connected—East Napa, Yountville and Glendale—will this year probably make an aggregate of 375,000 gallons of wine. The Napa Valley Wine Co. commenced crushing at their cellar in East Napa, Monday, the grapes coming from this neighborhood. Grape-picking and wine-making have been going forward in and about St. Helena for the last ten days. The crop is exceedingly light and the prices realized are anything but encouraging to the grower.

Orange.

WALNUTS AND FIGS AROUND CAPISTRANO.—Cor. Santa Ana *Blade:* Walnut-gathering is at hand—fully two weeks earlier than usual. On account of the abundant crop, the nuts are not quite up to the standard in size. Mr. Hoyle, superintendent of our cannery, has gone south to purchase the fig crop, which will be manufactured into his delicious preparations of that fruit.

A PRODUCTIVE VALLEY.—*Blade:* No stranger need ask a question concerning the productiveness of the Santa Ana valley. All he has to do is to watch the lines of trail wagons loaded with baled hay, corn, barley, hogs, vegetables, etc., as they convey the products of the farms to the depot for shipment.

LARGE BLACKBERRY FARM.—*Blade:* A drive of 40 minutes from Santa Ana brought us to the head of the Bolsa drainage ditch, where we found several men and teams at work on the waterway. Near the head of the ditch is where Garner's and McDonald's blackberry patches are located, and the reporter found no difficulty in locating the patch, but little in locating the berries, and no trouble in eating them. Although immense quantities have already been gathered the vines are yet heavily loaded, and some are even now in blossom. After regaling ourselves on the berries we drove on, and further along the ditch, where we found many more men at work. Fully 40 hands are pushing the work along as quickly as possible, and it is safe to say that the ditch will be completed within the next two weeks.

VINEYARD NOTES —Anaheim *Gazette:* Otto Rust and C. Sorenz are making wine, and Tim Boege and H. Wehmeyer are getting ready to start their crushers. Most of the grapes come from Artesia and Yorba and are of fine flavor and appearance. Mr. Rust informs us that the grapes are better this season than for many years past. He will make about 10,000 gallons of wine or more, and is paying from $12 to $14 per ton for the grapes. Mr. Wehmeyer's young vineyard on West street is doing well and shows no sign of disease. It is probable that wine-making will become again one of the leading industries of this section.

A BEET SUGAR FACTORY.—*Gazette:* The committee appointed to formulate a charter and adopt a set of by-laws for the land company organized in this city to purchase land in aid of the cooperative sugar factory, met at Mr. Chynoweth's office. The full committee was present, viz: Messrs. C. H. Gosch, H. W. Chynoweth, Dr. Pfeninger, P. Weisel and Ed. Pellegrin. Dr. Pfeninger was elected chairman and Mr. Chynoweth, secretary. The name of the company will be "The Anaheim Sugar Beet Land Co.," and the capital stock has been placed at $60,000, divided into 1200 shares at a par value of $50 per share. The affairs of the company will be under the management of a board of five directors to be elected annually.

THE CORN CROP.—Santa Ana, Oct. 8: The corn stalks are yet green in many places, and the crop is ripe and ready to be gathered. The The yield will be fully up to the average this year, and an average corn crop west of the river means something more than it does in any other land.

San Bernardino.

A NEW FIG.—Riverside *Press and Horticulturist:* J. E. Cutter believes he has found a variety of fig which will be of considerable value, at least for table use at home and possibly for shipping when the distance is not great. He received from the department at Washington some years since seven varieties of the fig, which are now in bearing. Among these are two which appear worth propagating. The Prolifero is of good quality, but has a tendency to sour, like most of the figs grown here. This same defect was found in all the others grown except the Dotato, which has ripened perfectly. It is a small, light-colored fig, with a rather thick skin, but most delicate in texture and flavor. The specimens of the Dotato that Mr. Cutter submitted to us for testing were the finest-flavored of any we have ever eaten, and we should place it at the head of all we are acquainted with for table use. It is said that this variety is never exported from Italy, but used entirely at home. We can think of nothing more delicious than such fruit when, with the skin removed, it is sliced in cream for dessert. If it were inferior in flavor, it would still be worth propagating if it shall continue to prove free from the souring which affects the fig so generally in irrigated sections.

PREPARING AGAINST FROST.—*Press and Horticulturist:* Very many orangegrowers in the valley are making preparations to checkmate Jack Frost, should he put in an appearance this winter. It has been clearly demonstrated that a number of fires in an orchard will raise the temperature enough to save the fruit during the coldest weather ever experienced here. It has been found that iron pots with coal is about the simplest, cheapest and most effective means; but Dave Ormand told us the other day that he had invented an arrangement to burn oil that would do the work cheaper than coal and with less trouble. If proper precautions are taken, no oranges need be injured.

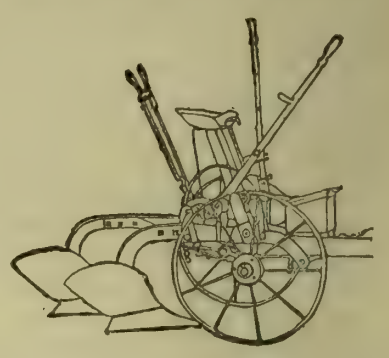
Santa Barbara.

DAIRY FEED.—Santa Maria *Times*: When we have a heavy rainfall and an abundance of feed on the ranges, there is but little attention given to preparing feed for use late in the season. This was the condition in which our dairymen found themselves one year ago, and, as a consequence, they suffered some loss before grass

Continued on next page.

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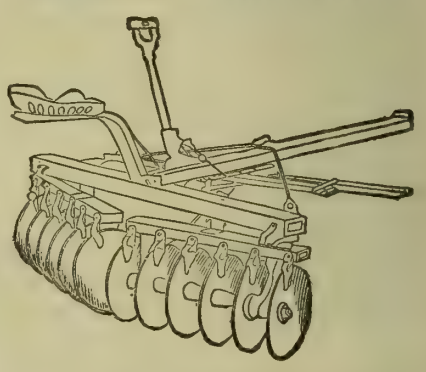
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Agricultural Notes.

Continued from preceding page.

came again; but they profited by it and are now better prepared for the hard part of the season than for years. All the dairies between here and Guadalupe are well supplied with hay, straw, pumpkins, carrots, etc., for feeding cows giving milk, and their dry stock is turned on stubble pasture. The dairies below Guadalupe and around the lake still have an abundance of feed on hand, although they all complain that their cows are drying up quite rapidly for the past few days. Yet there is plenty of dry feed, and all the stock will commence the winter in good condition. Bonetti, Mead, Adam, Sherman, Brown, Klein, Mathison and others are feeding heavily of dry feed. In Green canyon the usual fall raise of water has already brought a considerable growth of green feed. B. Pezonni always has an abundance of feed. At the Arellanes ranch they are preparing to turn in on the large stubble-fields on the ranch. There are also several acres of corn and pumpkins which will be left on the land for the benefit of the stock. Mr. Arellanes only runs his dairy about four months each year, preferring to give the young stock the benefit of the rest of the season. His ranch, consisting of 3000 acres of open range and 2000 acres of farm-land is carrying at present about 1500 head of stock. He has not sold off any beef cattle this year, preferring, rather than take the low prices offered, to keep them over another year, which he certainly would not do if there was any scarcity of feed.

A POULTRY ASSOCIATION INSTITUTED.—Lompoc *Journal*: A meeting relating to the poultry interest of northern Santa Barbara county was held at the Lompoc Lumber Co.'s store, and an Association was formed under the name of Lompoc Poultry Association. The following officers were elected: W. S. Bouton, Pres.; Waller Richardson of Lompoc; J. J. Holloway of Los Alamos; Mrs. H. N. Gifford of Stuart, Vice-Presidents; H. N. Evans, Sec.; W. H. Sudden, Treas. An Executive Committee was appointed consisting of Mrs. Waller Richardson, T. C. Callas, H. L. Hall, Wm. Barker and E. Jacobs.

Sutter.

FRUIT NOTES.—Yuba City *Farmer:* The fruit season is nearing a close, as almost all the late varieties of peaches, apples and other fruit have been picked. Some prunes and peaches are yet on the trays drying, but in a week or two everything will be inside the packing house or on the way east to market. In the vineyards a large amount of grapes are being turned for the last time, the greater portion now on trays being of the second crop. Wine grapes are about all gone. The trees and vines are becoming brown and are losing their leaves to some extent. In all the orchards the trees, while having produced a large crop, are in good condition, having been properly pruned to bear the fruit and still retain their shape. * * * * * R. C. Kells has a force of men at work packing his large prune crop. The fruit dried excellently under the improved system of dipping, etc., and is now ready for the market. Over two carloads have been sold to eastern firms at from 9 to 10½ cents per pound, according to quality. Mr. Kells expects to ship a carload or two the first of next week.

Ventura.

POTATO CROP.—Ventura *Free Press*: Potatoes are a good crop this year. In conversation with J. B. Alvord, of Colonia, the other day, it was learned that he had sold several carloads of potatoes this season, but none for less than $1 per 100. They are selling the refuse potatoes, including the small ones, to the Hueneme starch factory for 30 cents per 100.

Yuba.

IRRIGATION WORKS COMPLETED.—Marysville *Democrat*: A meeting of the directors of the Brown's valley irrigation district was held in the office of the directors in Browns valley on October 4th. The water was reported to be now running through the fifth or Pan Handle district, comprising 12,000 acres of land, and the farmers in that vicinity are all using it. Water would have been running through Browns valley last week had there not been a dispute about the contract, work leading from Dry creek to Finnimore's place not being up to the specifications. The engineers and superintendent claim that the ditch there is constructed shallower and narrower than what the specifications call for, and refuse to accept it until it is enlarged. Therefore, no water has been allowed to run through that part yet. Only about 1000 inches of water is being run down the main canal into the fifth district, until the canal gets thoroughly puddled and soaked, when the volume will be increased.

WHEATLAND HOP YIELD.—*Four Corners:* The Wheatland hop yards have yielded about 6710 bales, or 1 206,800 pounds of choice hops this season. We have secured the following reports by yards: John and William Roddan's yards yield about 1700 bales, of which 1210 bales have been delivered on contracts. S. D. Wood's yard turned out 1100 bales, and but 353 bales have been shipped on contract. J. H. Durst's yard turned out 610 bales; 201 bales have been delivered on contract and 280 shipped to London. D. P. Durst's total crop is 3300 bales; about 600 have been shipped on contracts and 1000 shipped to the English market.

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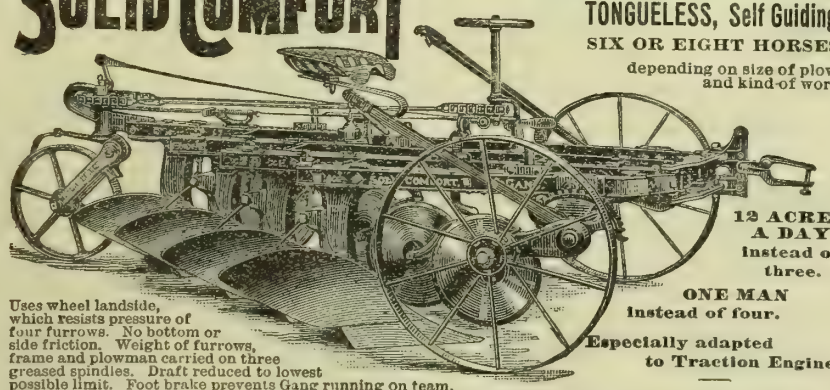
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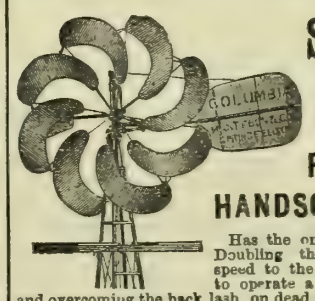
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By A. O. RIX.

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Announcement.

By unanimous vote of the State Grange in session on Friday last at San Jose, the PACIFIC RURAL PRESS was designated as its "medium of official communication" for the coming year. In accepting this appointment the manager of the RURAL pledged the paper to print all official reports; such discussions of Grange conditions and policies as should be submitted from time to time by leading members of the Order; reports of important doings by subordinate Granges; and to maintain a weekly department of Grange news under the editorship of some member of the Order, who should be personally satisfactory to the Executive committee. Within these lines the manager pledged the paper to give to Grange matters as much space, be it great or small, as the volume of important news should require.

This arrangement restores the old relationship between the RURAL and the Grange, with this difference, namely, that under it the Grange Department will be an incidental feature of the regular edition of the paper, going to all its readers; not, as formerly, a supplemental addition, going only to members of the Grange. The old "supplement," it will be remembered, was largely devoted to minor social and personal interests, while, on the other hand, the new department will be devoted almost exclusively to broader subjects. Important personal news and the more important doings of the local Granges will be given; but the editorial plan will be to subordinate this sort of news to considerations of broader significance and greater importance. This plan was frankly talked over in the State Grange between the manager of the paper and the delegates present, and the official arrangement was made upon a fair understanding as to its scope. It is proper to say that the new engagement puts no obligations or limitations upon the general policy of the RURAL, and that it will in no wise affect its editorial character.

The editor of the Grange Department has not yet been chosen, and will not be till the meeting of the Executive Committee some time within the next two weeks. When the selection is made the fact will be duly announced.

The National Grange.

The twenty-sixth session of the National Grange will be held at Concord, New Hampshire, commencing on Wednesday, November 16th. Worthy Master Davis, of the California State Grange, will be in attendance. Mr. and Mrs. Davis expect to leave Santa Rosa on the evening of November 8th and go direct to Concord, where they will remain through the entire session. Mr. Davis has promised to supply the RURAL with notes of the session for publication in our Grange Department.

The State Grange.

Reported by FRANK S. CHAPIN, of Tulare Grange.

The twentieth annual session of the State Grange closed last Friday, after a very pleasant session lasting four days. The weather was perfect, and the beautiful city of San Jose was in gala attire, as well it might be with the races, Grange and Mills' revival meeting going on at the same time.

The meeting was held in the new Unitarian Church, which is designed to provide for its congregation a social home where they can have entertainments and enjoy all innocent pleasures as well as teachings of ethics, morals and religion.

Positive Results of Session.

LEGISLATIVE COOPERATION.—In company with other industrial organizations, a committee of the Grange met in San Francisco on May 23, 1892, to agree upon needed legislation. They concluded to recommend a preamble pledging candidates to the support of these five propositions, briefly referred to here, as they have often been noticed in these columns elsewhere.

(a) Election of U. S. Senators by direct vote.
(b) Law providing for mutual fire insurance.
(c) Protest against extension of time by Government for payment of debt due from U. P. and C. P. railroads.
(d) Reassessment of property that has in part or wholly escaped taxation since 1883.
(e) Graduated income tax upon amounts above $50,000 per year, reduced by amendment to $10,000.

A series of resolutions embodying these points came before the State Grange with a favorable recommendation from the legislative committee, and it was moved by John Tuohy, of Tulare, that the questions be discussed seriatim. The first proposition met with only slight protest and the second met with general approval. Upon the third, Past Master J. V. Webster gave the figures and arguments very much as they have been published, briefly as follows:

"In '63 & '64 the Government guaranteed for the Union and Central Pacific R. R's $64,000,000 in bonds and when further aid was necessary took second mortgage in lieu of their first. Three years since the combined debts of the two roads aggregated $120,000,000 and they were thought by commissioners to be worth $108,000,000. Outside the Government their debts were $63 000,000." The proposition favored payment of balance of indebtedness, taking possession of property and using roads as a nucleus for a government system. The proposition was not carried to any decisive issue.

The fourth proposition excited considerable warm debate in which it was asserted that a railroad costing $15 000 per mile had passed through the speaker's farm and had been assessed for $25,000 per mile. Considerable sympathy was manifested for those who had resisted payment of taxes based on such an assessment, thus showing a desire of the Grange to be just. General sentiment favored a reassessment on a fair basis of valuation hoping that aggrieved taxpayers would meet them on the same grounds and the matter be finally settled upon the basis of justice.

The graduated income tax was originally designed to effect large corporations but Brother Tuohy, of Tulare, who had devoted much study to the subject of revenue and prepared an excellent paper, pointed out that it would be unjust to tax in this manner property that had already been assessed on its realty or personal property but that it would be a wise provision if protected against double taxation and applied to large salaries and other incomes that now pay no revenue for Government protection. To that end the amount was reduced to $10,000 per year.

THE BATTLE GROUND OF DEBATE.—The preamble to these resolutions, whose essential feature was a requirement of pledges from candidates was warmly opposed in discussion led by W. W. Greer, of Sacramento, who held that candidates most ready to pledge themselves would be the quickest to sell and the cheapest to buy, and that a pledged candidate would surely be a defeated candidate, etc.

Brother Walton thought it wise to copy methods of those who win rather than waste strength and lose influence by seeking the unattainable. Brother Tuohy thought that the Grange should go slow and drive in the middle of the road urging such measures as will prove of benefit without incurring fatal opposition. I. C. Steele expressed similar views. Bros. Webster, Coulter and Huffman put themselves on record as ardent champions of radical reform and some seemed to regard the failure to pledge candidates as the Waterloo of the Grange, but the feeling of the majority seemed to be that "it is better to go around the road to make a friend than across lots to make an enemy."

In this connection it was suggested that the Executive Committee have authority to employ a Grange representative, who should attend sessions of the legislature, endeavor to unite members of all parties who favored Grange measures in their promotion, carefully report the vote of each member on such questions and serve the cause generally in a way that it is not practical for a member who cannot leave his desk without risk of losing his vote upon some measure of importance. This suggestion was not pushed to a decision.

RURAL MAIL DELIVERY.—It was argued that as people in the country share in the expense of free mail delivery they should enjoy its convenience, but discussion did not include details of its accomplishment. The general idea was warmly commended.

MARKET INFORMATION.—A resolution was passed asking the Legislative Committee to urge the passage of such appropriation as will enable the State Board of Horticulture to furnish as complete information upon the distribution of fruits as they now do regarding their production. The resolution was drawn by one who had carefully observed for a long time the economy and efficiency with which the duties of that board are performed, embracing in their regular work and annual reports the most complete information within our reach regarding the production of fruits. Growers are realizing more fully every year that the disposal of their fruit is a question quite as important to them as its production. The administration of this board can be extended to embrace wide correspondence covering facts, statistics and suggestions regarding markets that shall be accessible to all papers and individuals much cheaper than it can be done by a new board.

Supplemental to this resolution was another, requesting our delegate to National Grange to secure its influence with the State Department, through the Department of Agriculture, to secure most complete consular reports regarding production of fruit in such competing countries as Italy, Spain and France, and such consuming countries as Great Britain. Such information should be furnished to the people through the proposed annex to the Board of Horticulture.

OLEOMARGARINE.—There was also a resolution asking for action necessary to make provisions against fraudulent sale of imitation butter, effective. It may pass through the hands of jobber and wholesale dealer in compliance with the letter of the law, and yet reach retailer and consumer as butter.

The last three are not measures likely to provoke any opposition, save from a limited number of grocers, and should easily prevail.

RIGHTS OF WIDOWS.—It is urged that some law be enacted to give widows the same control over community property as widowers have. It is not apparent that any good reasons can be urged against the justice or expediency of this measure. When a woman is left alone with the care of estate and family she generally has enough trouble without unnecessary legal complications and expense. The lawyers may oppose this measure.

DUTY ON GRAIN SACKS.—There was a demand that Congress remove the duty on sacks which are a leading article of farm supplies. Considering the present prices of grain, sacks can hardly be classed among the luxuries of the wealthy.

MINING DEBRIS.—There was a demand that the legislature sustain the court in the enforcement of laws against mining debris so destructive to agricultural interests.

MEDIUM OF OFFICIAL COMMUNICATION.—This question was a leading subject of the session. As our readers are well aware, the manager of this journal and officers of the Grange failed last spring to come to an understanding as to terms upon which Grange news should be promoted, and arrangements were made with other papers to publish official news. Both these papers say they received very little patronage from the Grange, and the members say that they have not known what was going on and have been losing interest, as was to have been expected. The old Scotch Dominie said: "My dear children, it is vitally important that ye be born again, but almost equally important that ye be born right the first time." So the Grange might say that it is vitally important that their doings, plans and prospects be suitably published, and equally important that such publications be read. A third essential is that it find readers outside as well as inside the Order, for the main hope of carrying measures and increasing their strength is among those of kindred interest not yet inside the gates. For this reason they seek, as a medium of communication, a journal that has a weekly and wide circulation, and that commands general confidence of their class. For these reasons they were delighted to have the manager meet them in friendly conference and concede all that they could unite in asking. By terms of his proposition, published elsewhere, the paper is to keep its readers thoroughly informed upon Grange interests, and the Executive Committee has a voice in selection of Grange editor. Those desirous of extending the principles and promoting the measures urged by the Order will interest themselves to see that the paper reaches those families that they wish the Grange to reach. Members returned to their homes feeling much more sanguine about the near future than they have for a long time, and determined to work to get new readers for the paper that stands ready, through their aid and communications, to build up their Order.

Lost Causes.

The resolution favoring the Nicaragua Canal was favored in the abstract and opposed in the concrete—that is to say, no one was able to point out a way that Government could safely aid in its construction. The Warner Miller franchise and the Clayton-Bulwer treaty stand in the way of Government ownership and control. Our past experience warns us against subsidizing or endorsing a corporation, and England has failed to secure, in America, that warmth of sympathy inviting a partnership in such ownership and control. Any measure of promotion not liable to serious objections of this nature may rely upon enthusiastic support from the Grange.

FIBER CULTURE.—Amos Adams of San Jose introduced and ably advocated a proposition for the legislature to turn over the State's property in Santa Clara formerly occupied as a home for the feeble-minded to the care of the Executive Committee of the State Grange as a culture station for experiments with fiber plants and machinery, especially ramie. To purchase machinery, put the station in order and provide expenses for two years, an appropriation of $10,000 was asked. After the institution became self-sustaining, it was proposed to use its profits in encouraging of fiber culture, thus diversifying agricultural industries. There was urged in its favor the value of the product—the many uses to which it can be applied; the need of more definite information; the large body of land in California especially adapted to this culture and to little else; the desirability of making wise use of State property now idle; and the general advantages of diversified industry. On the other hand, it was urged that the soil was adobe underlaid by gravel cement and especially adapted to the poorest growth of ramie possible; that fostered industries seldom become profitable; that the Grange could not well object to tendency to create many and costly commissions when soliciting such aid and control for itself. It was also suggested that such experiments were properly functions of U. S. Culture Stations and were being conducted already at several places in California, and that any further encouragement should be directed along those lines. The minority report, carrying with it the latter views, prevailed.

PATRON'S RELIEF ASSOCIATION.—This had been carefully organized upon similar lines to those in successful operation among Masons and workmen, and the general plan was discussed upon a resolution asking for an appropriation of $250 from the general fund to secure necessary applications for successful inaugurations. It was ably urged that it would strengthen the Order as it had other orders and prove a bond of sympathy and a help in time of trial. On the other hand it was urged that the general fund was the common property of all the Grange, whereas this measure would benefit only those who availed themselves of its advatages—that it did not make distinction in proportion to risk between young and old and that it substituted verbal statement for medical examination. The proposition was voted down.

THE PREAMBLE LOST.—As above noted the preamble to the cooperative legislative resolutions calling upon candidates for office to pledge themselves to the five measures presented was lost. This was perhaps the hottest incident of the session. The special significance was due to the fact that worthy Master Davis of the State Grange is now a candidate for Congress and that should the preamble be adopted he would be the first called up to pledge himself; and that by so doing he would place himself in opposition to powerful political elements in his district. There were whispers about San Jose that the effort to put through this preamble had its chief motive in an effort to down Mr. Davis, but there was nothing to support this charge.

Social Features.

The charming reception and welcome by citizens of San Jose was published last week. On Wednesday evening there was a poem by Maggie Downing Brainard acted in tableaux by young people of San Jose Grange to the great delight of the audience.

THE FARCE.—The tableaux were followed by a farce illustrating the sad tribulations of the original and only German John Smith "from Milpitas over." He had been attempting collections for the PACIFIC RURAL PRESS and found Bro. Overhiser unable to pay because too busy reading the Declaration of Purposes. Bro. Ohleyer could not pay because the slickens had covered his farm so deep that he found potatoes at the bottom of his 400-foot well and must take time to dig them.

The telephone rang for I. C. Steele, but John Smith stoutly asserted that the St. James was giving the best board in California for $1.50 per day, everybody else was doing the square thing and there was no steal in San Jose.

Bro. Wm. Johnston paid his bill promptly and it was certain that "he be Guv'nor pretty soon by and bye."

Bro. Coulter was too poor to pay until Senators should be chosen by direct vote of the people.

The incorruptible John Smith sternly refused to use his pull with the Grange against the election of E. W. Davis to Congress.

Don Mills would not pay, but they were pretty soon going to elect him a wife and then he would be all right.

In the midst of his severest trials, when money was gone, coat gone, shoes gone, and his body whipped black and blue, John Smith lamented that he did not belong to the Patrons' Relief Association already. He thought mutual fire insurance would never do unless Flint and Steele could be prevented from going on a strike. The farce was planned by Mrs. Amos Adams and the principal part acted by Secretary S. P. Sanders to the great delight of the audience.

THE LOVE FEAST.—This exemplifies the social work, in which the Order stands first among fraternal societies, and even as opposed to the judgment of older members, who have been accustomed to postpone this feature until most of the members have gone home, let us urge that it be given the second evening, when the Grange is at its best, and be organized and led by some one specially gifted in that line of work.

SUGGESTIONS FOR SAVING LABOR.—It was a great deal of work to get up that farce and for amateurs to train themselves to such a standard of acting as they showed. The personal Grange hits, which were the striking feature, were very attractive, but they might have been wrought into the literary exercises. Indeed, there should be enough at every State Grange who would be glad with essays, recitations, poems and songs to furnish all the entertainment needed to occupy one evening and the intervals of rest between business discussions. Let us try a home plan for next State Grange and enjoy the comfortable feeling that we are imposing no burden. It was manifest that the Chairman of Literary Committee should have work prepared in advance and should exercise certain editorial functions. It is for the interest of the Grange, as well as for encouragment of younger members that they appear at their best.

NORMAL SCHOOL.—Many visitors accepted the cordial invitation of the officers and were greatly pleased with the institution and its methods. The Training School, where teachers have actual practice under expert superintendence, was a very attractive feature.

WORLD'S FAIR EXHIBIT.—Dr. Mintie has been very energetic and successful in preparing the Santa Clara county exhibit, and the displays at the city Board of Trade rooms was highly commended.

EXCURSION TO MT. HAMILTON.—On Saturday morning most of the members remaining started on an excursion to the famous Lick Observatory, and thus ended one of those occasions which will alway bea pleasant memory.

The Next Session.

So many expect to attend the World's Fair next season that there was not the usual competition, and its location was referred to the Executive Committee.

When you visit a friend your pleasure depends largely on being made to feel that your entertainment has caused no special extra exertion, and that you are, for the time being, a member of the family. How it has been before, deponent saith not; but at Watsonville and Haywards it seemed as though every citizen had been on a strain for weeks for fear the State Grange should not be so elaborately entertained as it had been at some other place. At San Jose the members of the Grange felt strong enough without outside help, and must have made preparation their main business for at least a month. Permit the suggestion that future entertainments be on a less elaborate scale, Ceremonies of welcome, enlivened by song, are very appropriate and a proper recognition of local talent, but need not be burdensome to prepare for the first evening session.

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Its area is 5,184,000 acres.

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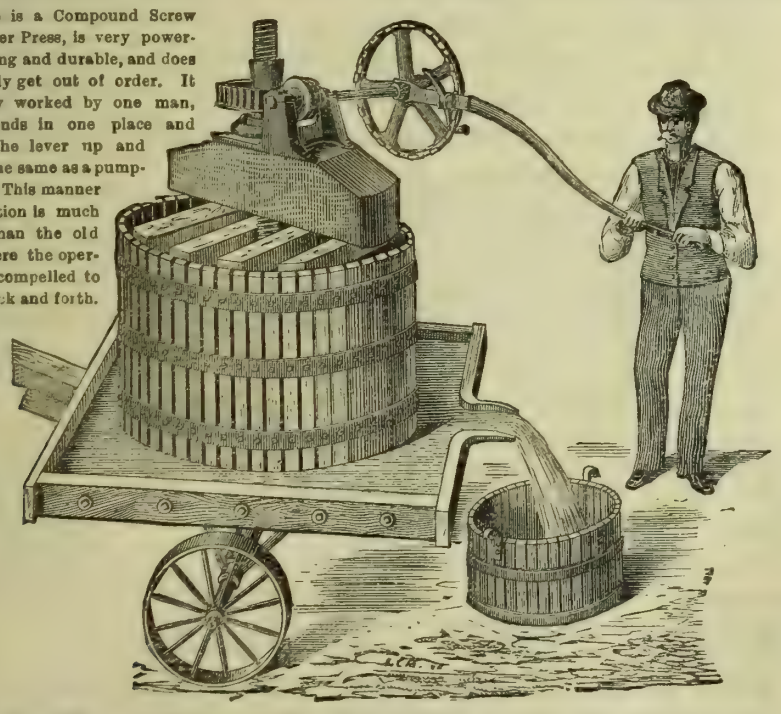
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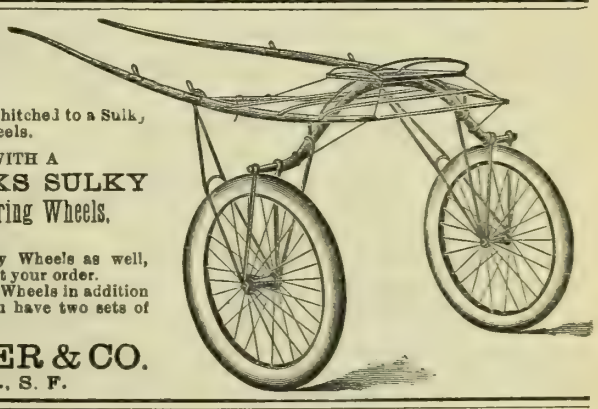
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The orthodox rule for the cooking of meat, fish and fowls is to allow a quarter of an hour to every pound, yet this receipt needs to be mixed with brains. Some families like rare, others, well-done meats; again, a joint may be unusually thick or remarkably thin; again, full-grown and mature meats, such as beef and mutton, are best with red gravy oozing from them; while immature or white meats, such as lamb, veal, pork, etc., are absolutely dangerous unless done through to the bone. A good rule is to allow 12 to 15 minutes, according to the taste of the family and the thickness of the joint, for the cooking of every pound of beef and mutton; 15 to 18 minutes for the cooking of every pound of pork, veal, lamb, ham, bacon, fish and every kind of fowl.

Accidents happen, however; the oven may be too hot or too cool, the fire too slow, and —what not; so a cook should learn to know by the appearance of the meat itself when it is sufficiently cooked. How can this be done? By carefully observing the appearance of the meat around the center bone or bones. If the learner be in doubt, the blade of a knife can be run in about half an inch, to the bone, and the meat slightly raised and examined for a moment or two. After one or two trials this will be found to be an infallible method. It is quite right that next to the bone, beef and mutton should be red and juicy, but if the beef be blue or the mutton has that strange, raw look peculiar to mutton that has just felt the heat of the fire, the joint needs a little more cooking; while white meats should be white, even to the bone, with the exception, perhaps, of lamb, which many people prefer with a little pinky juice oozing through.—Good Housekeeping.

RICE PUDDING.—Take a quarter of a pound of rice, and boil in a pint of milk until quite thick. If it should get too dry, add some more milk. Beat half a pound of butter to a cream, add one by one the yolks of eight eggs, a quarter of a pound of sugar, the grated peel of half a lemon, and the rice, which must be cold. Finally add the whites of the eggs, beaten to a stiff snow. Bake in a buttered mold, and turn out on a cake plate. Serve warm with a fruit sauce.

LEMON CUSTARD PUDDING—One cup and a half of milk, yolks of three eggs, the juice and grated rind of one lemon, half a cup of sugar; add the lemon last. Bake in a pudding dish. Beat the whites of the three eggs, and add three spoons of sugar, and spread over the top when baked; return to the oven and let it slightly brown.

SWEET POTATO WAFFLES.—Take two tablespoonfuls of mashed sweet potatoes, one spoon of butter, one of sugar, one pint of milk and four tablespoons of wheat flour; mix all together and bake in waffle irons.

A Valuable Publication.

The thirteenth edition of the "American Newspaper Annual" for 1892 is at hand. It is published by N. W. Ayer & Son, Philadelphia, and contains its usual vast and reliable array of information for publishers and advertisers, conveniently arranged and classified for quick reference.

A tabulated statement shows the total number of publications of all kinds in the United States and Territories and Canadian Provinces for 1892 to be 20,115, a gain of 1104 over the previous year. The following synopsis of contents will give some idea of its scope and value:

Catalogue of newspapers and periodicals arranged by towns in States in alphabetical order—embracing, besides the list of papers and the usual information concerning them, a gazetteer description of every place in the United States and Canada in which a newspaper is published; railroad and water communications; location of counties and places; distances from prominent points; telegraph offices; express routes; banking facilities. Newspapers arranged by counties in States, with State and county headings, giving location—physical features, soil, agricultural products and manufactures. Population of counties and county-seats. Political votes by counties. Religious, agricultural and class publications. Press and editorial associations. Tabulated statements, population tables, etc.

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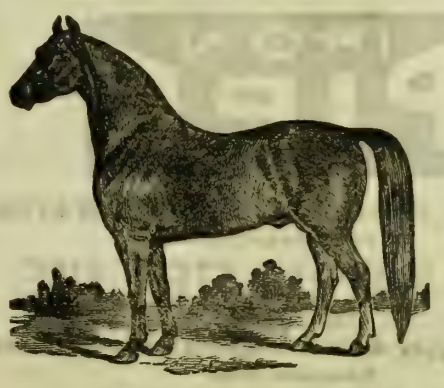


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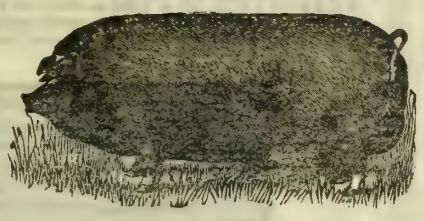
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At the head of the herd stands PERFECTION KING, No. 7579; KING OF THE WEST, No. 8921; HOOSIER BOY 2d, No. 8923. Breeding Sows as fine individuals and as strictly bred as any in the land; also recorded in the C. P. C. R. record with pedigrees full to standard. Breeders for sale at all times. I have first-class Pigs of both sexes at reasonable prices. Residence 1½ miles northeast of Davisville, Cal. Personal inspection solicited. All inquiries promptly answered. Yours truly, JOSEPH MELVIN.



Mann's Green Bone Cutter
FOR POULTRY FOOD.
Patented June 15, 1886; August 20, 1889. Canada Patent, June 12, 1890.

WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.
GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock. COST OF FEEDING MATERIALLY LESSENED.
These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing vaulable information in relation to feeding green cut bones.
PETALUMA INCUBATOR CO.,
Pacific Coast Agents. PETALUMA, CAL.



BERKSHIRE SWINE.
Prize Herd of Southern California.
FIVE FIRST PREMIUMS IN 1891.
PIGS OF ALL AGES FOR SALE.
SESSIONS & CO.,
P. O. Box 686 Los Angeles, Cal.

IMPORTANT!
COOPER'S  **SHEEP DIP.**
One Case Makes 1000 Gals. Dip. PRICE $16 PER CASE.
SHOOBERT, BEALE & CO.,
Wool Commission Merchants, and Agents for the Sale of all kinds of Live Stock.
307 CALIFORNIA STREET, SAN FRANCISCO. P. O. BOX 2079.

LITTLE'S CHEMICAL FLUID NON-POISONOUS SHEEP DIP.
BEWARE OF CHEAP IMITATIONS.



One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Little's dip is put up in red, iron drums containing 5 English or 6¼ American gallons, and is sold to the trade by the English gallon. For the convenience of our many customers it is also put up in one-gallon packages, for which we make no extra charge. Each drum and package bears the label of "Little's Dip."
CATTON, BELL & CO.,
Successors to FALKNER, BELL & CO., Sole Agents.
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MANHATTAN STOCK FOOD.
RED BALL BRAND.
Genuine only with RED BALL brand.
Recommended by Goldsmith, Marvin, Gamble, Wells, Fargo & Co., etc., etc.
It keeps Horses and Cattle healthy. For milch cows; it increases and enriches their milk.
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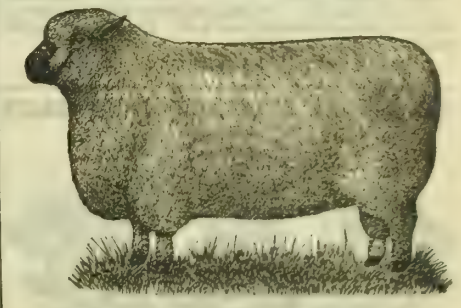
APIARIAN SUPPLIES. Golden Italian Queens. Tested, $2.00 each; untested, $1.00 each. L. Hives, $1.90 each. Root's V groove sections, $5.00 per 1000. Dadant's comb foundation, 48c and 55c pound. Smokers, $1.00 each. Globe veils, $1.00 each, etc. WM. STYAN & SON, San Mateo, Cal.

WELL MACH'Y *All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam: Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1500 Engravings.* The American Well Works, Aurora, Ill. also, Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.

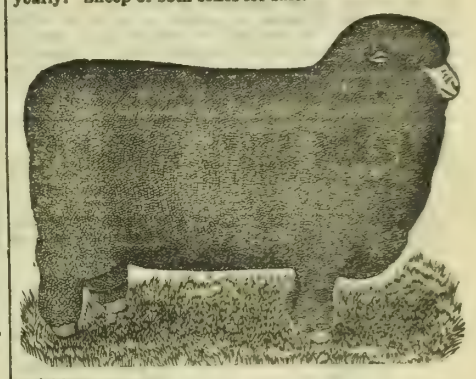
MECHAM & FRITCH,
Importers and Breeders of
Red Polled Cattle.
We have about 150 Head of Imported and Graded Stock, all Deep Red Color.
Full Blood and Graded, of both sexes, for sale. Address all communications on cattle to
W. S. FRITSCH, Petaluma.



H. MECHAM,
Importer and Breeder of Shropshire Sheep.
They were all imported from England, or bred direct from imported Stock.



I have also bred American Merinos—Hornless Sheep—for 22 years. They are a large sheep, without wrinkles. Rams will produce 20 to 25 pounds of long white wool yearly. Sheep of both sexes for sale.



Address
H. MECHAM,
Stony Point,
R. R. Station, Petaluma. Sonoma Co., Cal.

COLTS BROKEN.
THE SOUTHER FARM,
One and a half miles northeast of San Leandro, Alameda County,
— HAS —
Every Facility for Breaking Colts Properly.
Rates Very Reasonable.
HORSES BOARDED AT ALL TIMES.
THE SOUTHER FARM,
GILBERT TOMPKINS, Proprietor,
P. O. Box 149.....San Leandro, Cal.

JACK WANTED.
I will trade 30 acres of fine valley land adjoining the most thrifty orchard in Monterey County, for a good Jack. Must be large, clean limbed and guaranteed.
Address JOHN F. CAHILL,
San Miguel, San Luis Obispo Co., Cal.



MONEY "HOW CAN I Make Some?"
By using the Pacific Incubator and Brooder, which will hatch any kind of eggs better than a hen. In universal use. Gold Medal wherever exhibited. Thoroughbred Poultry and Poultry Appliances. Send 8 cts. in stamps for 82-page catalogue, with 30 full-sized colored cuts of thoroughbred fowls, to Pacific Incubator Co., 137 Castro St., Oakland, Cal.



THE HALSTED INCUBATOR COMPANY,
1313 Myrtle Street, Oakland Cal.
Send Stamp for Circular

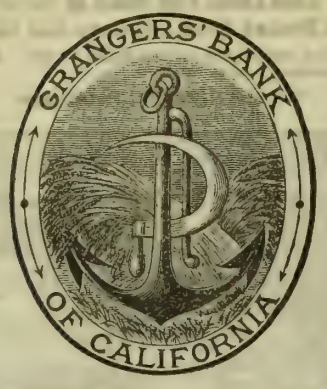
POULTRYMEN, Hens are laying [illegible] consequently the price of eggs is advancing. [illegible] should now feed Wellington's Improved Egg Food [illegible] If they desire to have eggs to sell when they reach high prices. Get it of any MERCHANT or of Proprietor, B. F. WELLINGTON, 425 Washington St., San Francisco.

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OF CALIFORNIA,

SAN FRANCISCO, CAL.

Incorporated April, 1874.



Authorized Capital	$1,000,000
Capital paid up and Reserve Fund	800,000
Dividends paid to Stockholders...	720,000

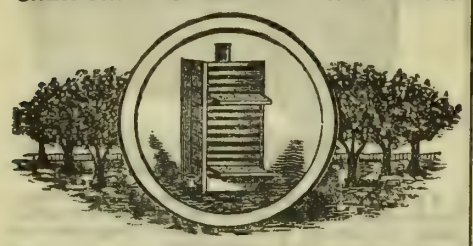
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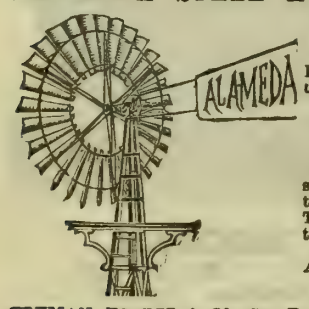
January 1 1892 A MONTPELLIER, Manager.

CALIFORNIA STANDARD FRUIT DRIER



Is one of the most complete inventions for drying **Raisins** and **Prunes** by steam in 24 hours—other fruits less time. No sulphur or potash used. Retains all syrup, juice and flavor in original purity. Capacity, dries from 75 lbs green fruit to 20 tons. Send for circulars. CALIFORNIA FRUIT EVAPORATING & M'F'G CO., 347½ S. Spring St., Los Angeles, Cal.

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft.

Cheaper than any First-Class Mill in the market.

Every One Guaranteed.

No bearings, no springs, no wheels to get out of order. The simplest mill in the world.

Agents Wanted

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TRUMAN, HOOKER & CO., San Francisco or Fresno.

MONEY CAN BE MADE SAVED BY

Writing us before placing your orders for

WIND MILLS!

Our goods are thoroughly reliable and our prices are as low as the lowest.

Eclipse Wood Wheel Mills.
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(Mention this paper)

SPECIAL VERTICAL ENGINES.

TWO TO SIX HORSEPOWER.



With Tubular Boilers, made of steel plates of 60,000 tensile strength.

Durable! Efficient! Safe!

Lowest Priced on the Market.

Material and workmanship warranted equal to those of any make.

Tested with cold-water pressure at 150 lbs. and they are warranted to carry that much steam pressure.

SEND FOR PRICE LIST.

JAMES LINFORTH,

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SPRAY YOUR TREES!

Whitewash Your Barns and Fences!

WAINWRIGHT'S PUMPS

Do Either Successfully.

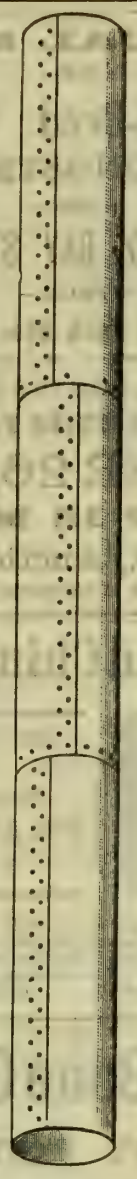
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Engraving. Superior Wood and Metal Engraving, Electrotyping and Stereotyping promptly attended to at this office.

SHEET IRON PIPE



IRON PIPE

ALL SIZES, FOR GAS, STEAM AND WATER.

— WE MANUFACTURE —

SHEET IRON AND STEEL PIPE,

ALL SIZES,

For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

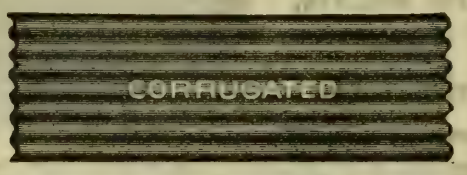
The Cut shows a Section of Three Joints

DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a high grade of annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of **ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit.** It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



CORRUGATED IRON,

Black, Painted and Galvanized, for Roof and Sides of

HAY BARNS, DRY HOUSES, STABLES, ETC.

W. W. MONTAGUE & CO.

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P. & B. FRUIT DRYING PAPERS.

(Patented Feb. 28, 1888.)

Specially Prepared for Drying Grapes and Other Fruits.

NO NEED OF EXPENSIVE WOODEN TRAYS. NO NEED OF TURNING FRUIT. COSTS MUCH LESS THAN ANY OTHER METHOD.

Put up in Rolls containing 1000 square feet, or in Reams of 480 Sheets—24 x 36.

SAMPLES AND CIRCULARS FREE.

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CARBOLINEUM AVENARIUS!

THE Most Efficient Wood Preserver.

APPLIED WITH AN ORDINARY BRUSH.

Protects All Kinds of Timber, Above or Below Ground or Water, from Rot and Decay.

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OFFICE, 108 DAVIS STREET, SAN FRANCISCO, CAL.

Warehouse and Wharf at Port Costa.

CONSIGNMENTS OF GRAIN, WOOL AND ALL KINDS OF PRODUCE SOLICITED.

Money advanced on Grain in Store at lowest possible rates of interest.
Full Cargoes of Wheat furnished Shippers at short notice.

ALSO ORDERS FOR GRAIN BAGS, Agricultural Implements, Wagons, Groceries and Merchandise of every description solicited.

E. VAN EVERY, Manager. **A. M. BELT, Assistant Manager.**

Commission Merchants.

DALTON BROS.,

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—AND DEALERS IN—

CALIFORNIA AND OREGON PRODUCE,

Green and Dried Fruits,

Grain, Wool, Hides, Beans and Potatoes.

Advances made on Consignments.

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Consignments Solicited.

ALLISON, GRAY & CO.

501, 503, 505, 507 & 509 Front St.,

And 300 Washington St., SAN FRANCISCO.

GENERAL

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GREEN and DRIED FRUITS,

POULTRY, EGGS, GAME, GRAIN, PRODUCE AND WOOL.

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GREEN AND DRIED FRUIT, NUTS, PRODUCE, POULTRY, EGGS, ETC.

CONSIGNMENTS SOLICITED. PROMPT RETURNS.

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WOOL, GRAIN, FLOUR

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310 California St., S. F.

Members of the San Francisco Produce Exchange.

Personal attention given to sales and liberal advances made on consignments at low rates of interest.

[ESTABLISHED 1854.]

GEORGE MORROW & CO.,

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SHIPPING ORDERS A SPECIALTY.

BRAY'S SONS & CO.,

Successors to BRAY BROS. Established 1855.

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Members S. F Produce and Hay Exchange.

OUR SPECIALTIES—Grain, Beans & Hay.

Consignments from farmers and others solicited. Highest market prices. Prompt returns. Correspondence invited.

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And Dealers in Fruit, Produce, Poultry, Game, Egg Hides, Pelts, Tallow, etc., 422 Front St., and 221, 223, 225 and 227 Washington St., San Francisco, Cal.



REGULATE THE
STOMACH, LIVER AND BOWELS,
AND
PURIFY THE BLOOD.
A RELIABLE REMEDY FOR

Indigestion, Biliousness, Headache, Constipation, Dyspepsia, Chronic Liver Troubles, Dizziness, Bad Complexion, Dysentery, Offensive Breath, and all disorders of the Stomach, Liver and Bowels.

Ripans Tabules contain nothing injurious to the most delicate constitution. Pleasant to take, safe, effectual. Give immediate relief.

Sold by druggists. A trial bottle sent by mail on receipt of 15 cents. Address

THE RIPANS CHEMICAL CO.,
10 SPRUCE STREET, NEW YORK CITY.



N. CLARK & SONS,

17 Spear Street, - San Francisco.

SEWER, WATER AND CHIMNEY PIPE AND CAPS.

Send for prices on Sewer Pipe for culverts, for roads, and for draining lands.

LARGEST STOCK OF

SADDLERY AND HARNESS

On the Pacific Coast—AT LOWEST PRICES.

C. L. HASKELL, 10 Bush St.,

SAN FRANCISCO.

S. F. Market Report

Market Review.

SAN FRANCISCO, Oct. 12, 1892.

The local money market continues to work toward more general ease. So far as the writer is able to learn there is now over 50 per cent more of available funds in this city than there was at the like date in 1891. The increase in the reserve has been brought about by an undefined fear of what the future might have in store, and therefore it was the part of wisdom and prudential banking to be prepared for the worst. Now that a feeling of confidence is setting in there appears to be a growing disposition to place more funds, and it is this growing disposition which is weakening the rates of exchange. Eastern advices report a more active money market but with no increase in the rates of interest. The general ease at the East in the rates of interest and a fairly active money market in a presidential campaign cause surprise, but this election, so far, has been very quiet and has not interrupted business in any branch of trade.

The wheat markets of the world met with a steady growth up to yesterday (Tuesday), when the strong bear contingents, the world over, entered the market and hammered down futures at home and abroad. They succeeded in forcing prices down one or two points. The Government crop report was accepted as being bearish which gave the excuse to shade off prices. So far from being bearish, the report, as we figure it out, is decidedly bullish, for instead of a wheat crop of over 500,000,000 bushels, as claimed by the bears, it is nearer 485,000,000 bushels; which shows a shortage of 130,000,000 bushels when compared with the outturn in 1891. And then, aside from a shortage in wheat there is the certainty of a large falling off (about 450,000,000 bushels) in the corn crop. But this is not all, for the potato crop is almost a failure, and the potato crop cuts a more important figure than is generally accepted, owing to the tuber being used for food by both man and beast. With a large shortage in corn and also in potatoes, the consumption of wheat will necessarily be larger per capita than for years. Increased consumption means a lessened percentage in the surplus for available for export. Eastern mail advices report that farmers are offering more sparingly, which has had the effect of strengthening the markets.

The local market for wheat held to strong prices throughout the week. The advance has not been so pronounced as it should have been, owing to ships getting more money. I is said by some that farmers sold quite freely at the advance, while this may be so, yet the large shipments and free-loading of vessels look very much as if considerable wheat-borrowing had been done which, if correct, will cause the borrowers to combine with short-sellers to get prices. There is a more general disposition at the close to bid slightly lower for wheat, which has caused a less disposition on the part of farmers to offer on the market. We are informed by several commission merchants that farmers have not and are not now selling freely, and that buyers find considerable difficulty in meeting their requirements. Barley has met with a continued good demand for feed, malting and shipping. The rains in the past week, while not of sufficient duration to cause grass to grow, took the substance out of stubble and dry feed. This, it is thought, will cause more feeding of barley and also of hay. It is said that for straight parcels of choice, bright grades for shipping, an advance has been paid over quotations Oats have come in quite freely, but the market held to steady prices with, at times, an advance paid for desirable parcels. Oregon and Washington sent us liberal supplies the past week. Corn has been more or less inactive and in buyers' favor, and this, too, in the face of a light crop in this State and the grade not up to the average. It is the general impression that Mexico and the Central American States will require very little corn the coming season owing to favorable weather for the growing crop. Rye was in fair demand the past week, and, under strong holding, an advance was established.

Ground-feed of all kinds was in good demand throughout the week. By those who should know, it is said that the feeding so far in this season has been fully 25 per cent larger than in the like time in either 1891 or 1890, and in consequence the supply of millstuff has been kept down. There is a steadily growing demand for rolled barley for feeding. Hay has met with a good demand. It is quite generally conceded that the rains in the past week have made it necessary for stockmen and farmers in general to feed more hay owing to the substance in dry pastures being more or less destroyed.

In dairy produce, butter has been irregular, with a shading in price of choice to gilt-edged creamery and dairy. The decline was due to free receipts from the northern coast, and also to consumers switching off to pickle. When the pickle season first opens the selling is rather indifferent, but as the taste becomes cultivated, the demand increases and at the expense of fresh. As yet the weather is not in favor of solid butter, but with colder weather it will attract buyers. The receipts of Eastern are quite heavy; much of it is going into cellars or cold storage. Cheese has shaded off under freer offerings and only a moderate demand. Receipts from the East continue free. Eggs have been cut, under stronger selling. The trade has been steadily turning to choice Eastern and letting choice Californian alone, and to place the latter, concessions were in order. Cooler weather has favored shippers from Utah and Nebraska.

Garden-truck has been quite steady, only one or two kinds of vegetables having changed in price. Onions have met with a fair shipping inquiry, but free receipts kept the market from appreciation. Potatoes have held fairly firm, with a good demand for the more choice for shipping. The crop of choice, good-keeping potatoes was light in this State, owing to the larger proportion gathered being wormy and more or less diseased. The government report of a large shortage in the crop, particularly in the central States, creates the belief that this coast will be called on for heavy supplies later on in the season.

The fresh-fruit season is going out, and consequently prices are irregular and more or less nominal. The only varieties in liberal supply are poor pears, apples and grapes. Rains the past week did considerable injury to grapes in several sections.

Dried fruit has been inactive with buyers bearing the market. The market acts very much as if the first trade demand had been met, which will probably be followed by a free and enlarged demand toward the close of the present month. Holders, so far as we know, have confidence in the future, and are therefore slow in making concessions to induce buying. Choice fruit of all varieties is now in heavy supply, and consequently is sought for. Large-sized, choice prunes are wanted at the East, owing to higher prices being named abroad. The abatement in cholera in Europe is undoubtedly causing more buying by European countries.

Raisins are late, yet free shipments are going forward. From all advices obtainable up to this writing the pack will be considerably less than had been estimated a month ago. Eastern advices are more favorable, but the demand is confined to requirements.

Both walnuts and almonds, but more particularly the latter, are meeting with a good demand and at full prices. The markets at the East for almonds show considerable strength, with an advance established in sympathy with higher prices abroad due to a poor crop.

Hops have been coming in more freely, with buyers bidding an advance for the more choice grades. New York mail advices report that two of the largest brewers in the central States had entered that market and paid 25 cents, and even slightly higher, for choice grades of this year's. The export demand at last advices was light, but a gradual increasing call is expected to set in as soon as the cholera scare subsides In this city, as high as 21 cents was paid the past week for gilt-edged hops.

Wool continues disappointing. With an advance in England and eastern manufacturers consuming increased quantities of wool, yet the market does not appreciate. In our market the stock is, as a rule, undesirable, and therefore buyers are only induced to operate freely by getting concessions. Scourers are about the only buyers in the market.

Markets by Telegraph.

Foreign Grain Review.

LONDON, Oct. 10.—The Mark Lane *Express* says: The average price of new wheat is 28s 3d, but brings 30s 4d in London, where a higher quality and better weight is offered. Barley is strong, oats firm and corn weak. To-day good, English wheat readily brought 30s to 34s. Indian was 1s dearer. Other foreign wheats were 6d higher. Flour was firmer and barley and corn were dearer. Oats were 6d dearer.

California Raisins Steady, Foreign Lower.

NEW YORK, Oct. 9.—California raisins are dull. A few have appeared, but not enough to make a sensation. Ninety thousand boxes of Valencias have already been distributed to the early trade. Two hundred thousand boxes are computed to be on the way. These are now down to 5¾c for layers and 5c off the stalk.

NEW YORK, Oct. 10.—Early shipments of California raisins are practically all marketed, and it is a matter of speculation whether the low prices named on the last shipment of Valencias will affect the market for Pacific coast goods prior to the holidays. For the time being, former prices are firmly adhered to for October and November shipments from the Pacific coast. The first arrivals of new California raisins realized $1.75 ₱ box here for three-crown and $1 90 for four-crown quality.

Dried Fruit Firm.

NEW YORK, Oct. 9.—Canned fruits are quiet. There is no inquiry to increase attention. Unpeeled peaches are quoted at 13½@15c in a small way for the styles offering. Prunes had some development of business, about eight carloads being sold for the week, quoted at 9¼@9⅜c for four sizes, 10c for fifties, 9½c for sixties, all free on board. Apricots—First wants are fairly supplied, but good fine are held at 15@17½c with confidence.

Lima Beans Weak and Lower.

NEW YORK, Oct. 9.—Accumulated supplies depress the market and many are going in store. The extreme price at the close is $2.05, and there are sellers at $2 spot.

Hops Active and Higher.

NEW YORK, Oct. 9.—Early in the week a western call upon New York owners opened considerable business at 25c. Spot new advanced to 23½@24c for State, and 21@24c for Pacific; other growths are no higher than last reports.

Wheat Statistics.

NEW YORK, Oct. 9.—Exports of wheat from United States seaports, both coasts, this week (flour included as wheat) equal 4,017,059 bushels, compared with 3,958,000 bushels in the week one year ago. Last week the total export was 4,045 000 bushels. Stocks of available wheat in Europe and afloat therefore on October 1st, as cabled to Bradstreet's, did not vary materially from the like aggregate one year or three months ago. In the United States and Canada, both coasts, like stocks are 32,000,000 bushels larger than on July 1st, last.

Wool Higher in London.

LONDON, Oct. 8.—At the London wool sales competition has been keen and prices have been firm, thus tending to strengthen quotations on this side. Only 40,000 bales have thus far been secured for the United States.

Wool Steady—Woolen Goods Active.

NEW YORK, Oct. 9.—Wool—There is no material change in seaboard wool affairs. Positive activity is not expected until after the Presidential election. Large manufacturers are fairly supplied through past purchases, still there will be demand enough from the busy small mills to prevent stagnation. It is remarkable that for fully three years domestic wool prices have not even had a spasmodic advance; a general steady decline has settled the market price to the present low scales. With the woolen goods market active and all the mills running to their full capacity it would seem that it was time for some improvement to occur in raw material. Sales at Boston—3 354,000 pounds of domestic; 533,000 pounds of foreign, mainly Australian. Philadelphia reports a demand for upper classes of wool, with unwashed quiet.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.
Thursday	6s00¼d	6s01¼d	6s03 d	6s03¼d	6s04¼d
Friday	6s01 d	6s02¼d	6s03½d	6s04¼d	6s05½d
Saturday	6s00½d	6s03 d	6s04½d	6s05 d	6s05¾d
Monday	6s00½d	6s02¼d	6s03¼d	6s04¼d	6s04¾d
Tuesday	6s01½d	6s02¼d	6s03¼d	6s04¼d	6s04¾d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	32s9d	33s3 i	32s9 i	Firm.
Friday	33s0d	33s6d	33s3d	Improving.
Saturday	33s3d	33s9d	33s3d	Strong.
Monday	33s6d	34s d	33s6d	Firm but less active.
Tuesday	33s6d	33s9d	33s6d	Less disposition to buy

To-day's cablegram is as follows:

LIVERPOOL, Oct. 12.—Wheat—Red very dull and white firmly held California spot lots, 6s 7½d; off coast, 33s 3d; just shipped, 33s 6d; nearly due, 33s 3d; cargoes off coast, quiet; on passage, Ameri an advices cause depression; Mark Lane wheat firm but not active; weather in England, fine.

San Francisco.

WHEAT.

	Seller '92.	Buyer Oct	Buyer Dec.	Buyer Jan.	May
Thursday, high st	....	....	137	137⅝	141½
" lowest	....	....	136⅝	13 ⅝	141
Friday, highest	131½	....	139⅜	140	143½
" lowest	134½	....	137⅜	138⅜	142
Saturday, highest	....	....	138½	....	142½
" lowest	....	....	137⅜	....	141½
Monday, highest	134	....	137¼	....	141½
" lowest	133⅜	....	137¼	....	141½
Tuesday, highest	133	....	136½	....	141
" lowest	133	....	135⅝	....	140½

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat, Buyer December, 100 tons, $1.36½; 500, $1.36⅝; 1100 $1.36⅞; 2800, $1.36¾. May, 100 tons, $1.41⅜. Seller 1892, 200 tons, $1.33½ per ctl. Afternoon.—Buyer December, 800 tons, $1.36⅞; May, 100, $1.4 ⅜ per ctl.

BARLEY.

	Seller '92.	Buyer Oct.	Buyer Dec.	May
Thursday, highest	....	....	91	....
" lowest	....	....	90⅝	....
Friday, highest	86⅜	....	91⅛	....
" lowest	86⅜	....	91⅛	....
Saturday, highest	86⅜	....	91⅛	....
" lowest	86¼	....	91⅛	....
Monday, highest	87	....	92½	95½
" lowest	87	....	91⅛	95½
Tuesday, highest	....	....	....	94
" lowest	....	....	....	94

The following are to-day's recorded sales on Call:

Regular Session.—Barley, Buyer December, 200 tons, 92½c; December, 200 tons 91½c; January, 100 tons, 94c; Seller 1892, 100 tons, 87½c. per ctl. Afternoon—December, 100 tons, 91⅜c; 100, 91½c; 200, 91½c; Buyer December, 100 tons, 92½c; 100, 91½c; May, 100, 95c; 100, 95⅜c; January, 100 tons, 92c; 100, 91⅜c per ctl.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Oct	Nov.	Dec.	May.
Thursday	131⅝	134	135½	147½
Friday	133½	135¼	1 8	148⅝
Saturday	133⅛	135	137⅜	148⅝
Monday	133⅜	135	137½	148⅜
Tuesday	131¼	135	135¼	145⅝

The following is to-day's telegram:

NEW YORK, Oct. 12,—Holiday. No reports.

Chicago.

Day.	Oct.	Dec.	May
Thursday	123¼	128	137
Friday	123⅜	129	138½
Saturday	123⅜	128½	13 ¼
Monday	124	128⅜	138
Tuesday	121	125⅜	134½

The following is to-day's telegram:

CHICAGO, Oct. 12.—Wheat, 75⅜c for December and 81½c o May.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Oct. 11, '92, were as follows:

Flour, qr. sks	102,278	Bran, sks	16,043
Wheat, ctls	385,498	Buckwheat "	....
Barley, "	72,788	Middlings "	4,245
Rye, "	308	Chicory, bbls	15
Oats, "	16,806	Hops, "	884
Corn, "	3,494	Wool, "	3,144
*Butter, "	1,507	Hay, ton	2,224
do bxs	854	Straw, "	120
do bbls	286	Wine, gals	191,670
do kegs	169	Brandy, "	4,080
do tubs	18	Raisins, bxs	....
do ½ bxs	135	Honey, cs	278
†Cheese, ctls	649	Peanuts, sks	8
do bxs	20	Walnuts "	7
Eggs, doz	14,430	Almonds "	351
do "Eastern	24,150	Mustard "	67
Beans, sks	....	Flax "	....
Potatoes, sks	20,402	Popcorn "	....
Onions, "	5,164	Broom corn, bbls	369

*Overl'd, 877 ctls. †Overland, 267 ctls.

Exports by Sea from San Francisco from July 1 to Oct. 5.

	1892-93	1891-92
Wheat, ctls	2,904,877	4,431,485
Flour, bbls	322,922	312,013
Barley, ctls	606,898	296,608

Tonnage Movement.

From reliable advices up to Oct. 12, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	279,149	457,549	*166,023	75,277
San Diego	11,378	26,143	9,677	.....
San Pedro	7 344	5,470	....	} 8,320
Oregon	52,159	75,695	44,160	
Puget Sound	27,089	28,323	.....	
Totals	377,119	589,180	219,860	83,597

*Engaged for wheat, 1892, 54,346; 1891, 65,934.

Cereals.

A leading London produce exchange says that it is curious to notice that the area in France under wheat, in spite of the high protective duty, follows of recent years much the same course as it does in the U. K. Indeed going back for 20 years, the average area under this cereal was larger then than it is now. The consumption, on the other hand, shows a constant tendency to increase, the average per inhabitant during the past 50 years being as follows, in periods of 10 years:

	Per capita. Bushels.
1882-91	7.7
1872-81	6.87
1862-71	6.02
1852-61	5.58
1842-51	5 11
1832-41	4 5

The London *Corn Trade News* says: In spite of the enormous export of wheat from the Black Sea, the aggregate shipment of breadstuffs to Europe is only a trifle above the average weekly requirement, and this notwithstanding the very heavy clearance of wheat and flour from American ports to the U. K. The purchases of continental buyers are simply surprising, bearing in mind all that has been written as to their present and prospective abstention from the export markets. Holland has taken 1 8,000 qrs. this past week; Belgium and France between them 131,000 qrs, and Italy 149,000 qrs. The fact seems to be that wheat merchants are waking to the fact that with India and Russia both likely to be partially out of the market soon, and America with a crop of 15,0 0 000 qrs. less than last season, wheat at 30s. per qr. ought not to go begging.

As having a direct bearing on the food question, the following estimate of the world's production of rye by Beerbohm is published, the quantities being expressed in quarters of eight bushels each:

	1892.	1891.	1887.
European Russia	75,000 000	59 800,000	76,050,000
Poland	6 000 000	4,500,000	5,500,000
Germany	31,000 000	28,900,000	27,000,000
Austria	9,500,000	8,475,000	9 800,000
Hungary	6 000,000	5 000,000	6 900 000
France	8 500,000	7 875 000	9,200,000
Spain	2,000 000	2,000 000	2,180,000
Belgium	2,500 000	1,000,000	2,100,000
Holland	1,400,000	1,000,000	1,500 000
Roumania and Bulgaria	2,000 000	1,725,000	2,000,000
Denmark	2,750,000	2,300 000	2,040 000
Sweden	2,500,000	2,750,000	2,625,000
America	3,400 000	3,750,000	3 500,000
Canada (Ontario)	250,000	250 000	195,000
Total quarters	152,300 000	129,325 000	160,590,000
Total bushels	1,216,000,000	1,034 600,000	1,284,720,000

Wheat was firmer to-day with an active demand for milling grades. It looks as if the mill trust did not control milling wheat as the members evidently expected, for now milling grades are wanted and none can be had except by paying quite an advance on bids A 250-ton parcel of fair shipping was placed to-day at $1.32½. Farmers are slow sellers.

Barley was quiet but strong to-day. Sellers forced in the market had to sell at quotations, but buyers forced to purchase had to pay an advance on quotations. The general tone to-day appeared to be upward.

Oats were steady but firm with a freer call reported.

Rye was higher and strong, but corn was unchanged.

Vegetables.

Garden-truck was essentially unchanged to-day. Tomatoes sold slowly, but cucumbers were firmer. Pickling cucumbers were readily placed.

Onions and potatoes were easy for poor keepers, but firm for choice good keepers. The market is overstocked with wormy, diseased and otherwise poor potatoes.

Fruit.

The market was slow for all kinds of fresh fruit. Poor apples, poor pears, and, as for that, all poor fruit, was hard to place. The low and indifferent market for poor fruit causes choice to sell lower than it otherwise would. Wine grapes sold at $10 to $14 for Mission and $12 to $16 for Zinfandel.

Dried apricots are scarce and hard to get even at an advance. Dried peaches were offering freely today. About every commission merchant in the city appears to have samples of parcels for sale. These offerings frightened buyers. The market for other dried fruit was dull, and to sell concessions had to be made.

The remarks on raisins under Market Review cover to-day's market for that fruit.

A member of a leading commission house says: Should present favorable drying weather continue it will add considerably to the present stock of dried peaches; while on the other hand any considerable rainfall would stop drying and have a tendency to strengthen the market. While the offerings are not excessive it is the almost, (I think temporarily) entire absence of an Eastern demand which has caused the present easier tone of the market for the stocks here do not justify any decline—should an inquiry from the East revive, the market would quickly right itself. I am of the opinion that the Eastern buyers imagine that we have an inexhaustable supply of dried fruit and do not realize that we have only a limited quantity. They are holding off waiting for the market to settle to lower prices, in which, I think they will find themselves mistaken. This is the season of the year when receipts are the heaviest, with odds and ends coming to hand from all sections of the State and forced for sale. Receipts will soon begin to drop off, which coupled with an Eastern demand will strengthen the market and in the spring the demand is likely to be larger than the supply, particularly with the largely increased consumption during the World's Fair, and the light pack of dried fruit in the central and eastern states.

Feedstuff.

Both bran and middlings appeared to be stronger to-day with available supplies light. Roll barley was firm, but feedmeal was easy.

It was quite generally stated to-day that dry pasture, where there was any, was not injured by the rains, but it was also said that there is very little dry pasture to be had. There was a fairly free market for the more choice grades of hay at current quotations.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in September were as follows:

Source.	Butter, Lbs.	Cheese, Lbs.	Eggs, Dozen.
California	1,3 ,800	429,900	87, 60
Oregon	66,600	14,000	270
Eastern	177,900	343,000	371,550
Totals	1,560,300	786,900	459,280
January	502,200	476 9 0	420,345
February	622,550	313,500	200,245
March	1,188,7 0	574 200	358,756
April	1,793 050	892,900	590,168
May	1,713,100	715,300	536,170
June	1,810,200	634,100	603,735
July	1,1 7,700	789, 00	374,211
August	1,376,300	694,800	447,325
Nine months	11,905,100	5,788,3 0	4,040,655

During the first nine months of 1891 the receipts were 10 976,700 lbs butter and 5,226,000 lbs cheese, 3,814,318 dozen.

Pickled butter was offering quite freely to-day by several dairies, which caused an easier tone. Fresh butter was weak, with the tendency to lower figures. In a small way, 37½ cents was paid for gilt-edged creamery, but for round parcels it was difficult to get much over 35 cents bid. Buyers are holding off.

Cheese, like butter, was top-heavy to-day, and as is always the case when a market is sloppy, buyers bid lower. Stocks are large.

Eggs were slow to-day, with outside quotations only reached in a small way.

Live Stock.

Bullocks and mutton sheep have held fairly steady with, at times, an advance obtainable for bullocks that would cut up with little wastage. Hogs, under free offerings and an offish demand, sold lower.

Miscellaneous.

Poultry held to fairly firm prices throughout the week, but, to-day, hens, roosters and young chickens were dull and lower. Heavy arrivals of Eastern broke the market. Turkeys were higher to-day, under a more active demand.

Beans were fairly active, with the trade stocking up. There was a fair shipping demand, also. It is

said that some future sales (short sales) have been made at less prices than are now quoted.

The market review covers to-day's market for both hops and wool.

Honey has come in quite freely. Comb honey is barely steady, but extracted is strong.

A reported strong cutting in prices by C E. Whitney & Co. and Armour & Co. has kept this market for hog product below the Eastern parity. With an amicable settlement of difficulties, prices would advance.

Alfalfa is strong at an advance. A short crop in Utah has caused our market to advance. Other seeds are firm. The mustard-seed crop is reported to be well concentrated.

General Produce

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

OCTOBER 12, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 10	@	2 15
Butter	2 50	@	2 80
Pea	2 35	@	2 50
Red	2 20	@	2 40
Pink	2 15	@	2 30
Small White	2 35	@	2 55
Large White	2 05	@	2 20
Lady Wash	2 10	@	2 20
Lima	3 00	@	3 15
Fld Peas, blk eye	1 45	@	1 55
Do green	1 75	@	1 90
Do Niles	1 45	@	—
Split	4 50	@	5 50
BUTTER.			
Cal., poor to fair, lb	17	@	—
Do g'd to choice	27½	@	34
Do Giltedged	—	@	35
Do Creamery Rolls	30	@	35
Do do Giltedge	—	@	37½
Eastern, lad e	17	@	20
Cal. Pickled	22½	@	26
Cal. Keg	21	@	25
East'rn Cream'y	25	@	30
CHEESE.			
Cal. choice cream	9½	@	—
Do fair to good	8	@	—
Do Giltedged	—	@	11
Do Skim	5	@	6½
Young America	—	@	12
EGGS.			
Cal. "as is," doz	18	@	20
Do shaky	14	@	16
Do candled	21	@	25
Do choice	27	@	30
Do fresh laid	—	@	35
Do do s'led white	—	@	40
Eastern "as is"	18	@	—
Do candled	22	@	35
Do selected	—	@	27½

Outs de prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.			
Bran ton	15 00	@	17 00
Feedmeal	27 0	@	30 00
Gr'd Barley	19 00	@	20 50
Middlings	22 00	@	24 50
Oil Cake Meal	—	@	25 00
Manhatan Food per ctl cabinet	—	@	8 00
HAY.			
Wheat, per ton	7 00	@	—
Do choice	—	@	13 00
Wheat and oats	7 00	@	11 50
Wild Oats	6 00	@	9 00
Cultivated do	5 00	@	8 00
Barley	5 00	@	8 00
Alfalfa	7 00	@	9 00
Clover	8 00	@	10 00
Straw, bale	30	@	50
GRAIN, ETC.			
Barley, feed, ctl	71½	@	—
Do good	82½	@	—
Do choice	85	@	—
Do brewing	92½	@	—
Do do choice	96½	@	—
Do do Giltedge	1 00	@	—
Do Chevalier	85	@	1 10
Do do Gi tedge	1 15	@	1 25
Buckwheat	2 00	@	—
Corn, white	1 32½	@	—
Ye low, large	1 20	@	—
Do small	1 25	@	—
Oats, milling	1 32½	@	—
Feed, choice	1 30	@	—
Do good	1 25	@	—
Do fair	1 17½	@	—
Do common	1 05	@	—
Surprise	1 47½	@	—
Black Cal	1 05	@	1 27½
Do Oregon	—	@	—
Gray	1 20	@	1 22½
Rye	1 15	@	1 20
*Wheat, milling			
Gi t dged	1 35½	@	—
Do choice	1 33½	@	—
Do fair to good	1 32½	@	—
Shipping, choice	1 33½	@	—
Do good	1 3 ½	@	—
Do fair	1 28½	@	—
Common	1 25	@	—
Sonora	1 22½	@	1 25
HOPS			
1892, fair	17	@	—
Good	19	@	—
Choice	20	@	—
FLOUR.			
Extra, city mills	4 00	@	—
Do country m'ls	4 00	@	—
Superfine	2 60	@	3 00

NUTS—JOBBING.			
Walnuts, Cal. lb.	6½	@	—
Do choice	8½	@	—
Do paper-shell	9½	@	—
Almonds, ftsh'l	12	@	—
Paper shell	14	@	—
Hard shell	7½	@	8½
Brazil	9	@	10
Pecans, small	11	@	13
Do large	14½	@	16
Peanuts	3½	@	4½
Filberts	11	@	—
Hickory	7	@	8
Chestnuts	11½	@	16
ONIONS.			
Silverskin	40	@	50
POTATOES.			
River Reds	55	@	65
Early Rose, ctl.	55	@	65
Peerless	55	@	70
Garnet Chilies	60	@	75
Burbank Seed's	50	@	65
Do do Salinas	80	@	1 25
Sweet	1 00	@	1 40

Extra choice sell for more money

POULTRY.			
Hens, doz	6 00	@	7 00
Roosters, old	6 0	@	6 50
Do young	5 00	@	6 00
Broilers, small	2 75	@	3 25
Do large	3 25	@	4 00
Fryers	4 00	@	5 00
Ducks	4 50	@	—
Do large	5 50	@	—
Do extra large	6 50	@	—
Geese, pair	1 50	@	2 00
Turkeys, gob'r	19	@	21
Turkeys, hens	17	@	19

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food, ₱ 100-lb. cabinet 8 00

GAME			
Quail, per doz	75	@	1 50
Ducks	—	@	—
Do Mal'd ₱ doz	4 00	@	5 00
Do Sprig	2 25	@	3 00
Do Teal	1 75	@	2 50
Do Widgeon	1 50	@	1 75
Do small	1 00	@	1 50
Geese	—	@	—
Do gray ₱ doz	2 25	@	3 00
Snipe	—	@	—
Do English, doz	2 25	@	3 00
Do Jack, per doz	75	@	—
are, per doz	1 25	@	1 50
Rabbits, large	1 25	@	1 50
Do small	87½	@	1 25
PROVISIONS.			
Cal. bacon, heavy, per lb	11	@	11½
Medium	12	@	13
Light	13½	@	14
Lard	8	@	11
Cal sm'k'd beef	11	@	—
Hams, Cal salt'd	12	@	13½
Do Eastern	13	@	14
SEEDS.			
Alfalfa	11	@	12
Clover, Red	15	@	—
White	25	@	—
Flaxseed	2 25	@	—
Hemp	3½	@	4
Mustard, yellow	4	@	—
Do brown	3½	@	—
WOOL.			
SPRING, 1892.			
Humboldt and Mendocino	17	@	21
Sac'to vall y	16	@	—
S Joaquin valley	11	@	16
Calaveras and Foothill	16	@	21
Oregon Eastern	12½	@	19
Do valley	18	@	23
Southern Coast, defective	10	@	12
Nevada (State)	15	@	19
FALL, 1892.			
S Joaquin, plain	6	@	8½
Do mountain	9	@	11
Do lamb	8	@	9
Northern lamb	10	@	14
HONEY—1892 CROP.			
White comb, 2-lb frame	9'	@	12½
Do do 1-lb frame	11½	@	14½
White extracted	7½	@	—
Amber do	7	@	—
Dark do	6½	@	—
Beeswax, lb	23	@	—

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

OCTOBER 12, 1892.

Limes, Mex	7 00	@	8 00
Do Cal	2 00	@	4 00
Lemons, box	5 00	@	7 00
Do Sicily choice	8 —	@	—
Strawberries, per chest—Sharpless	5 00	@	8 00
Peaches, box	50	@	1 00
Figs, blk box	25	@	75
Do White	25	@	50
Apples	20	@	50
Do Choice	75	@	—
Do Extra choice	1 00	@	—
Canteloupes, pr crate	50	@	1 00
Melons, pr 100	5 00	@	10 00
Nutmegs, ₱ box	35	@	55
Grapes, pr box—			
Do White	25	@	40
Do Black	20	@	45
Do Muscats	25	@	60
Do Tokays	40	@	65
Do Royal Isabel	75	@	1 00
Do Cornichon	50	@	75
Wine Grapes, Zinf'nd'l, pr ton	12 00	@	16 00
Mission	10 00	@	14 00
Pears	25	@	1 00
Quinces pr box	55	@	75

Extra choice fruit for special purposes sells at an advance on outside quotations.

Beets, sk	—	@	75
Carrots, sk	40	@	—
Okra, dry, lb	—	@	—
Do green box	40	@	75
Parsnips, ctl	—	@	1 25
Peppers, dry, lb	10	@	—
Do grn Chili, bx	25	@	35
Do do Bells	30	@	50
Turnips, ctl	75	@	—
Cabbage, 100 lbs	65	@	75
Garlic, lb	1	@	2
Tomatoes	20	@	35
String Beans, lb	1	@	2½
do do Wax, lb	2	@	3
Lima Beans	3½	@	4½
Cucumbers, box	40	@	50
Do pickle ₱ lb	⅔	@	1½
Mushrooms	—	@	—
Egg Plant, box	25	@	50
Green Corn, box	75	@	1 50
Marfat Squash, ₱ ton	5 00	@	10 00

Live Stock.

BEEF.			
Corn fed	5½	@	—
Grass fed, extra	5½	@	—
Good quality	5	@	—
Second quality	4	@	—
Third quality	3	@	—
Bulls and thin Cows	2	@	—
VEAL.			
Large, heavy	4½	@	—
Small, light	7½	@	—
Heavy	6½	@	—
MUTTON.			
Wethers	6½	@	—
Ewes	6	@	—
Do Spring	7	@	—
HOGS.			
Light, ₱ lb, cents	4½	@	—
Medium	4½	@	—
Heavy	4½	@	—
Soft	4	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES 1892.			
Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4
Do do choice	4½	@	5½
Evap. bl., ri g, 50-lb. bx	8	@	9
Fancy, higher.			
APRICOTS—1892.			
Sun-dri d, unbl. com	4½	@	5½
Do do prime	6½	@	8
Do do choice	9	@	10
Do bleached, prime	12½	@	—
Do do choice	15½	@	—
Do do fancy	14½	@	—
Evap choice, in boxes	15	@	—
Do fancy do	15½	@	—
FIGS—1892.			
Sun-dried, black	3½	@	4
Do white	3	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	8	@	9
Do Evap., i boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled	7	@	7½
Do do prime, bl ched	10	@	—
Do do choice, do	11	@	—
Do do fancy	12	@	—
Sun-dr., pl'd, bl'ched		@	—
Do do prime	14	@	—
Do do choice	—	@	15
Do do fancy	—	@	16
Evap., peeled, in boxes choice	17½	@	—
Do do fancy	20	@	—
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap., slic'd, in b'xes	7	@	8
Do ring do	9	@	10
Unp'led, q'rt'd, bl'ch'd	10	@	11
PLUMS—1892.			
Pitted, sun-dried	10	@	10½
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	4	@	5
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12
Fancy sell for more money.			
RAISINS—1892.			
London Layers, cluster per box	1 90	@	2 00
Do choicest do	1 60	@	1 70
Do prime or bx	1 40	@	1 45
Loose Muscatels, common, pr bx	—	@	—
Do choice do	1 25	@	1 30
Do fancy do	—	@	—
Unstem'ed Muscatels in sks pr lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do pr 20-lb. bx	—	@	—
Sultanas, unbl. bxs	—	@	—
Do bl'ched in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manilla Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grapevine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manilla, 3 yarns, heavy	10½	Duplex Hop in balls, tar'd	9½
Pure Manilla, 3 & 4 yarns	12	Do, Grapevine, in balls or coils	10½
Do, 2 yarns, light	12½		

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal., in cellar lots 12 @ 20

Auction Sales of California Fruits.

At New York.

Oct. 4.—Four carloads: Levi Cling Peaches, $1.25 @1.55; George's Late Peaches, $1.20@1 35; Salway Peaches, $1.20@2: Plums, $1 20; Figs, $1.40; half-crates Muscat Grapes, $1.12@1.60; half-crates Tokay Grapes, $1.55@2.05; double-crates Tokay Grapes, $3.90@4.12; half-crates Emperor Grapes, $1 60@1 65; half-crates Morocco Grapes $1 65; Coe's Late Red Plums, $2 30; Japan Plums, $1.50; Winter Nelis Pears, $2.80@3.05; half-boxes Bartlett Pears, $2.70; De Comice Pears, $4.35@5; Glout Morceau Pears, $2.70@3.90; Winter Seckel Pea s, $2 70.

Oct 4.—Three carloads: Beurre d'Anjou Pears, $6; Tokay Grapes, $3.80@5; half-crates, $1.40@2.20; Purple Damascus Grapes, half-crates, $1.75; Salway Peaches, $1.40@2 05: Heath Cling Peaches, $1 25@ 1.35; George's Late Cling Peaches, $1.20@1 35.

Oct. 5.—Two carloads: Half-crate Tokay Grapes, $1.25@2.10; double-crate Tokays, $2 37@3.62½; half-crate Muscat Grapes, $1.05@2: Malvoise Grapes, $1.50 @1.80; Morocco Grapes, $1 85@2.10; assorted Grapes, $1.40@2.40; White Tokay Grapes, $1.60; Cornichon Grapes, $2; Peaches, 65c: Salway Peaches, $1.30@1 50; Cling Peaches, $1.05; Plums, $2.70; Bartlett Pears, $3.12; Seckel Pears, $1.90; Winter Nelis Pears. $3 20.

Oct. 7.—Two carloads: Tokay Grapes, $3.50@4 45; half-crates, $1 40@2 15; Purple Damascus Grapes, half crates, $1 05; Winter Nelis Pears, $3.

Oct. 7.—Four carloads: George's Late Peaches, $1.25@1.45; Levi Cling Peaches, 85c@$1.90; Salway Peaches, $1.43@$2 85; Bilyeau's Late Peaches, $2.10@ 2.60; Pears, $2.20@3 30; half-crate Tokay Grapes, $1.25 @1.95; double-crate Tokay Grapes, $2.75@3 25; half-crate Muscat Grapes, $1.10@1 40; half-crate Emperor Grapes, $1 53; half crate Malaga Grapes, $1.40; Rose de Peru Grapes, 70c.

Oct. 10.—Two carloads: Tokay Grapes, $3@4.35; half-crates, $1.25@2 05; Winter Nelis Pears, $2.50; Clapp's Favorite Pears, $2.35; George's Late Cling Peaches, half-boxes, 60c.

Oct. 10.—Six carloads: Half-crate Tokay Grapes, $1.10@2.15; double-crate Tokays, $3 05@3.20; half-crate Muscat Grapes, $1.20@2.35; Rose de Peru Grapes, 75c; half-crate Morocco Grapes, $1 20@2 65; Black Prince Grapes, 90c; assorted Grapes, $1 65@2.55; Emperor Grapes, $1 42; Purple Damascus Grapes, $1.20; Peaches 65c@$1.45; Levi Cling Peaches, $1.20@ 1.45; George's Late Peaches, $1.05; Pears, $2@3.

Oct. 11.—Six carloads: Double-crate Tokay Grapes, $2 55@3.20; half-crate Tokay Grapes, 75c@ $1.95; half-crate Muscat Grapes, 65c@$1.25; Malaga Grapes, 92c; Malvoise Grapes, 65c; Emperor Grapes, 90c@1.35; Black Morocco Grapes, $1.40; Cornichon Grapes, $2.20; Black Prince Grapes, 70c; Plums, 45@ 70c; Coe's Late Red Plums, $2.18; Salway Peaches, $1.45@2 65; Cling Peaches, $1.25@1.40; Levi Cling eaches, 80c@$1.30; Billyeaus Late Peaches, $1 35@ 2 35; Winter Nelis Pears, $2.70; Pears, $2.12@3.12; Quinces, $3; Pomegranates, $3.10.

Oct. 11.—Two carloads: Tokay Grapes, $2.65@4; half-crates, $1.10@2; Cornichon Grapes, half-crates, $2.10: Coe's Late Red Plums, $2; Winter Nelis Pears, $3 35.

At Chicago.

Oct. 4.—Four carloads: Peaches, 90c@$1 65; Pears, $1.80@1.90; Tokay Grapes, single crates, $1 05@1 55; double crates Tokay Grapes, $2.85@3.80; Muscat Grapes, single crates, 95c@$1.60; Morocco Grapes, $1.70; Cornichon Grapes, $1.50; Emperor Grapes, $1.25; Malaga Grapes, $1@1.25.

Oct. 4.—The Earl Fruit Company sold California fruit at auction to-day at the following prices: Bartlett Pears, $3.75; Keiffer Pears, $3.15; Tokay Grapes, $2 75@3.25; half-crates, $1.35@3; Muscat Grapes, $2.90; half-crates, $1.40; Cornichon Grapes, half-crates, $1.25; Salway Peaches, $1.25@1 30.

Oct 5.—One carload of Quinces at auction to-day at $1.35 ₱ box.

Oct. 5.—Two carloads: Salway Peaches, $1.35@1.40; Hawley Cling Peaches, $1.25@1.30; Strawberry Cling Peaches, half-boxes, 65c; George's Late Cling Peaches, half boxes, 65c.

Oct. 7.—Four carloads: Bartlett Pears, $4.15; Duchess Pears, $3 30; White Doyenne Pears, $3 30; Beurre Clairgeau Pears, $3; Onondaga Pears, $2 75; Winter Seckel Pears, $2 65; Kelsey Japan Plums, $2 95; Malaga Grapes, half-crates, $1 60; Tokay Grapes, half-crates, $1 20@1 60; Black Morocco Grapes, half-crates, $1.15; White Cornichon Grapes, half-crates, $1 55; Cornichon Grapes, half-crates, $1 20; Purple Damascus Grapes, half-crates, $1.25; Muscat Grapes, half-crates, $1.10@1.15; Bilyeau's Late Peaches, $1.45; Salway Peaches, $1.30@1.40.

Oct. 7.—Four carloads: Bartlett Pears, boxes, $3 40 @4; in crates, $1.80; Verdelle Grapes, double crates, $2.25: Muscat Grapes, double crates, $2.60@2.70; Muscat Grapes, single crates, $1.15@1 50; some in poor condition, 85c@$1.15; Tokay Grapes, double crates, $2.50@3 60; Tokay Grapes, single crates, $1.20@1 50; Cornichon Grapes, double crates, $2 40; Malaga Grapes, single crates, 60c@$1.05; Black Morocco Grapes, single crates, $1.35: Pomegranates, $2; Peaches, $1.25@1.35; Quinces, $1.10@1.20; Pears, $2.05 @2 15.

Oct. 8.—Three carloads; Tokay Grapes, $2.90@3 50; half-crates, $1.30@1.45; Muscat Grapes, $2 85; half-crates, $1.25@1.40; Ferrara Grapes, half-crates $1.30; Verdelle Grapes, half-crates, $1.15@1.30; Emperor Grapes, half crates. $1 25; Salway Peaches, $1.65; White Freestone Peaches, $1.15; White Doyenne Pears, $3 25; Glout Morceau Pears, $3.25; Beurre Diel Pears, $2 80@2.85; Winter Nelis Pears, $2.25; Vicar Pears, $2 25; Beurre Clairgeau Pears, half-boxes, $1.60; Quinces, $1 35; Coe's Late Red Plums, $2.20.

Oct. 10.—Three carloads: Beurre Clairgeau Pears, $3 35; Glout Morceau Pears, $3 25; Beurre Gris Pears, $2.50; Winter Nelis Pears, $2 30; Vicar Pears, $2.15; Coe's Late Red Plums, $2@2.25; Silver Prunes, $2; Tokay Grapes, $2.45@2.95; Muscat Grapes, half-crates, $1.15@1 35; Black Morocco Grapes, half-crates, $1 35; Quinces, $1 35; Salway Peaches, $1.40; Hawley Cling Peaches, $1 40.

Oct. 10.—Four carloads: Pears, $2@2 50; half-boxes, $1.55; Bartlett Pears, $3.35@3.40; Peaches, 45c@$1.75; Muscat Grapes, single crates, $1.20@1.50; Tokay Grapes, half-crates, $1.20@1.60; double crates, Tokay Grapes, $2.70@3.35; Cornichon Grapes, single crates, $1.30@1.55; Quinces, $1 20@1.25.

Oct. 11.—Three carloads: Malaga Grapes, 70c@ $1.05; White Grapes, $1 80; single-crate Tokay Grapes, $1.25@1 55; double-crate Tokay Grapes, $2.30@3.45; single-crate Muscat Grapes, 75c@$1.50; double-crate Muscat Grapes, $2.15@2.55; Cornichon Grapes, $1.30; Emperor Grapes, $1.05; Peaches, $1.15@1.75; Quinces, $1.50; Plums, $1 80; Winter Nelis Pears, $2.50; Glout Morceau Pears $3.20.

Oct. 11.—Four carloads: Winter Seckel Pears, $3.50; Glout Morceau Pears, $2 90@3; Winter Nelis Pears, $2 20@2 75; Duchess Pears, 2.35; Vicar Pears, $2 25; Tokay Grapes, $2.50@3.40; half-crates, $1 25@1.60; Muscat Grapes, half-crates, $1.25@1 35; Emperor Grapes, half-crates, $1.30; Cornichon Grapes, half-crates, $1.15@1.20; Malaga Grapes, half-crates, $1.15; Quinces, $1.25; Salway Peaches, $1.75. Some Grapes in bad order sold for less

At Minneapolis.

Oct. 4.—Two carloads: Pears, 60c@$2 45; Cling Peaches, 55c@$1; Freestone Peaches, $1.3 ; Muscat Grapes, $1; Tokay Grapes, $1@1.60; Quinces, $1.50; Plums, $1 50.

Oct. 5.—One carlord: Peaches, 85c@$1.35; Grapes, 60c@$1.30; Pears, $1.90@2.50.

Oct. 7.—One carload: Peaches, 85c@$1; Pears, $1.20@2.

Oct. 8.—Three carloads: Peaches, 90c@$1 45; Grapes, 65@85c; Pears, $2@2 50; Quinces, $1.55; double-crate Tokay Grapes, $2 10@3 10; half-crate Tokay Grapes, $1.

At Boston.

Oct. 4.—One carload: Salway Peaches brought $1.45 per box.

At Omaha.

Oct. 4.—Three carloads: Pears, $1@2 per box; Peaches, 50c@$1.15; Grapes, 50c@$1.25 per half-crate.

At New Orleans.

Oct. 4.—One carload: Tokay, half-crates, $1.85@ 1.40; Rose de Peru, half-crates, $1.25@1.40; Muscat Grapes, half crates, $1.25.

Oct. 7.—Two carloads: Tokay Grapes, half-crates, 90c; Muscat Grapes, half-crates, 90c; Rose de Peru Grapes, half-crates, 85c.

Oct. 11.—One carload: Muscat, half-crates, $1 25@ 1.30; Tokay, half-crates, $1@1.10; Rose de Peru, half-crates, 95c.

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He is apt to appreciate the good things of this life all the more when he can have such palatable dishes as those which the Enterprise Meat-Chopper will assist him, or his good wife, in preparing. For chopping Sausage Meat, Mince Meat, Hamburg Steak for dyspeptics, Hog's-head Cheese, Suet, Hash, Tripe, Clams, Peppers, Scrap Meat for poultry, Corn for fritters, Stale Bread for bread crumbs, Horse Radish, Cocoanut, Lobsters, Vanilla Beans, Cabbage, it is not excelled, and the economical housewife will find it almost indispensable in preparing Chicken Salad and Chicken Croquettes, making Beef Tea for invalids, mashing Potatoes, pulverizing Crackers, etc. In a word, the Enterprise Meat-Chopper will be found invaluable in the kitchen in many processes of cooking. All hardware stores sell it and the price is only $3.00. Reader, buy one! and send to the Enterprise M'f'g. Co., Philadelphia, for one of their interesting Catalogues—they are furnished free.

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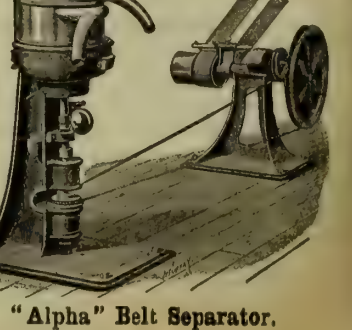
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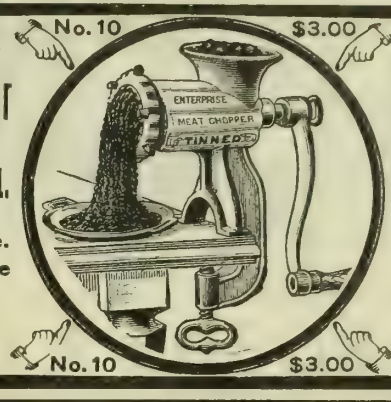
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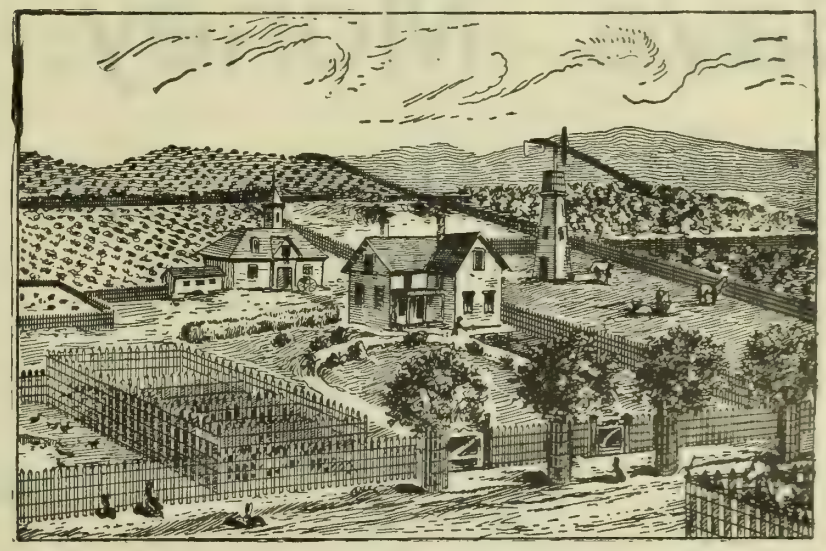
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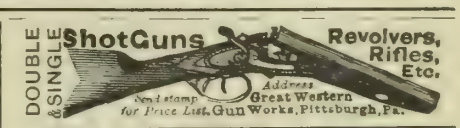
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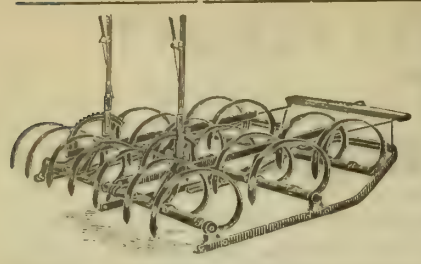
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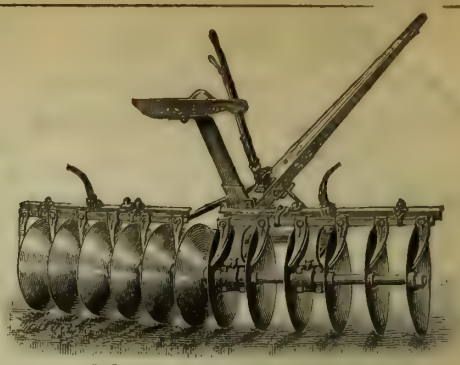
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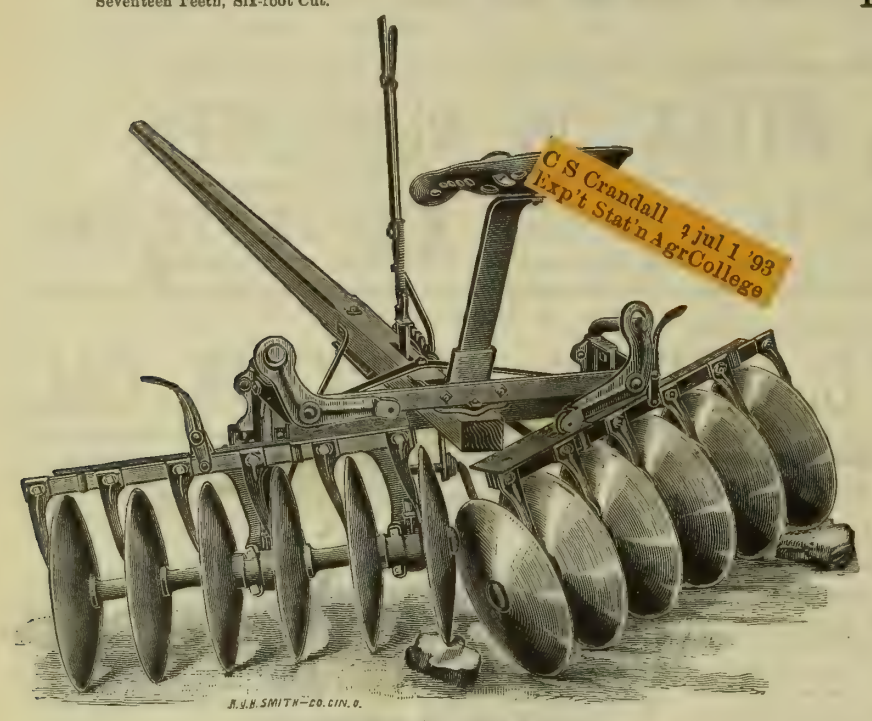
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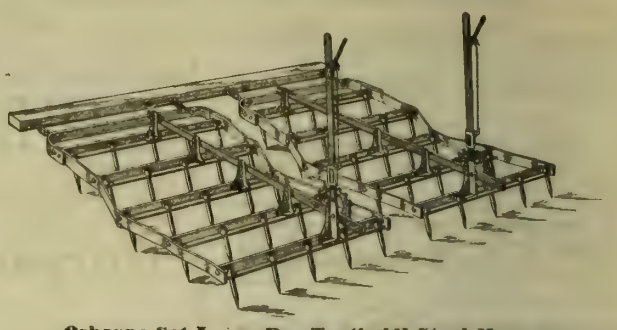
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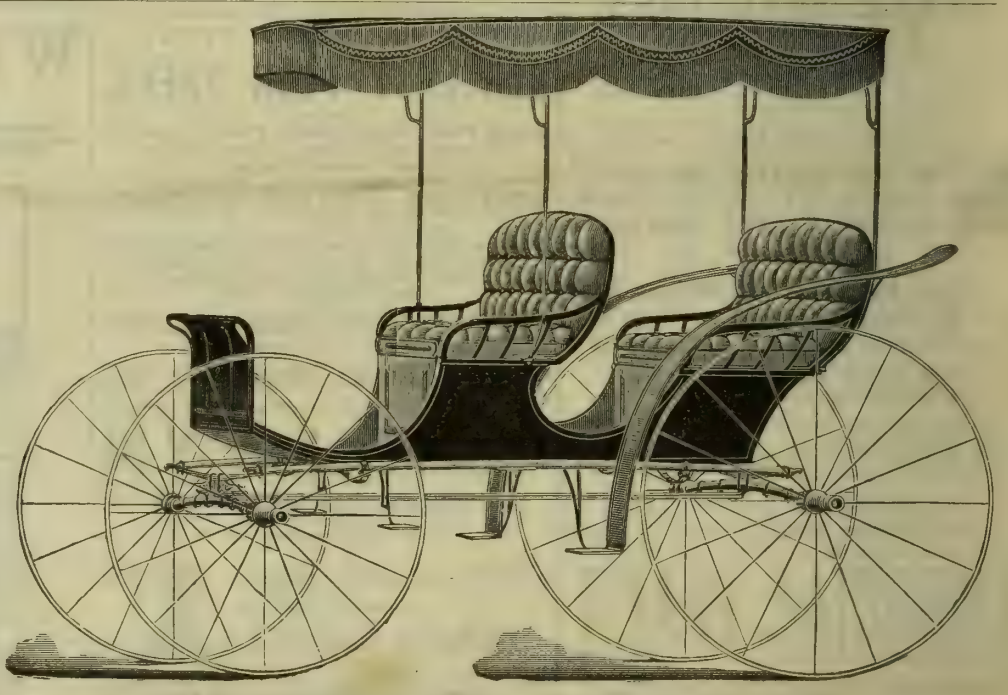
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PACIFIC RURAL PRESS

Vol. XLIV. No. 17. SAN FRANCISCO, SATURDAY, OCTOBER 22, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Northernmost Group of Sequoias.

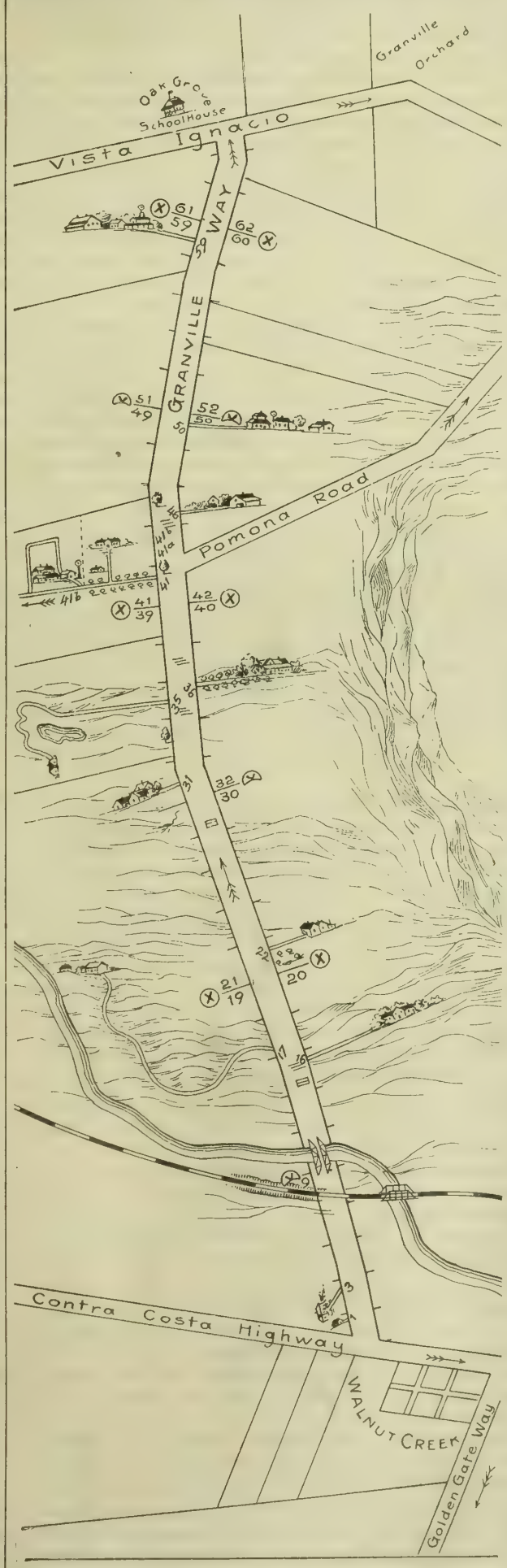
The announcement recently made public that a small group of big trees, isolated and difficult of access, existed in Placer county, has created wide interest. The sequoia bears such a weight of years and is so unique botanically, that the extension of their habitat northerly is a matter of real concern. We are glad to see that the Government is moving to prevent this heritage of the earliest times from falling into destructive or selfish control. It seems that upon the first announcement of the discovery Secretary Noble sent a special land inspector of his department to view the trees and see what was desirable to reserve them. This officer will recommend to the department that at least a township of land surrounding the immediate location of the grove be reserved by the Government for park purposes. In relating the particulars of his mission, the inspector, Major Weigel, said:

The grove, which consists of eight trees, is on a branch of the middle fork of the American river in Placer county, about seven miles southeast of Last Chance. Two of the trees are down, one of these being 25 feet in diameter. The average diameter of the others is about 17 feet. There are some young trees of the same species, sequoia gigantea, in the grove, but they have attained no great size. The region is difficult of access, but when once reached the surroundings are very picturesque, the little valley being hemmed in by precipitous mountains that are split in every direction by rugged canyons and wild ravines. Only a mile and a half distant is what is known as Big Oak Flat, a level plateau of considerable extent completely covered with a growth of giant oaks.

The existence of such a park at a distance from the Tulare reservation and nearer a great highway of travel than any of the other groves, will be a public advantage. It should by all means be immediately made and diligently protected.

THE GREAT WEST SIDE.—We are informed that the meeting of the Fresno county institute at Selma, Saturday, October 29th will be largely devoted to the discussion of an important local topic, viz., the Sunset Irrigation District and what may be accomplished in irrigating the West Side; the soil and all questions appertaining to such a great irrigation system. This is a very important topic and a proper one for a local institute to take up for elucidation. We should suppose the announcement would lead to a large assembly of West Siders at Selma and it is very possible that a thorough consideration of the matters involved might be very far-reaching in its effects. It is exceedingly desirable that there should be an authoritative and correct declaration concerning the important stretch of the country involved. There have been recent operations which tend to cast a shadow upon lands somewhat geographically related and anything which can assure the public that there are legitimate and promising enterprises, and really productive lands in the region, and that the worthless in land and the evil in enterprise are the exception and not the rule, will be pertinent. The Fresno institute has started one great movement among the raisin producers; it can do another important thing in the line it now takes up. In the evening of the Selma session, Prof. Woodworth of the State University will lecture on "Plant Diseases."

CALIFORNIA FLOWERS FOR THE WORLD'S FAIR.—Miss Faustina Butler, who was appointed last spring by the State World's Fair Commission to make a collection of the native flora of California and to make sketches of wild flowers has completed her labors for this season. She has returned from the Lake Tahoe region, where she secured a large quantity of seeds, bulbs, etc., of wild flowers which will be used in ornamenting the grounds around the State building at the fair. In all, Miss Butler has made about 400 sketches in oil and water colors, and has secured about 4,000 seeds and bulbs. She will leave this week for Chicago where she will superintend the planting and handling of the flowers.



A POPULAR CALIFORNIA RURAL IMPROVEMENT; THE TEN-BLOCK SYSTEM ILLUSTRATED.

SEE NEXT PAGE.

Figures Which Need Explanation.

Sergt. J. A. Barwick, director of the California Weather Service, has returned to his post at Sacramento after an eastern trip made for conference with leading eastern meteorologists. Among the correspondence which accumulated during his absence he finds two letters referring to statistics quoted from the RURAL PRESS in the Monthly Bulletin of the California Weather Service for August, 1892, which he sends to us for remark.

First is a letter from a Calaveras county orchard-owner, resident in New York, who writes:

I desire to know if the figures showing 770,000 fruit-trees in Calaveras county are correct. We have a few trees at our place near Milton, but I did not know there were so many in the county, and it seems an error.

It is unquestionably an error and the figures, though given officially in the report of the State Board of Equalization, are hard to account for. Whether some previous county assessor drew upon his imagination for a large figure and that subsequent reports have multiplied the error, we don't know. We have no confidence in the statement.

Another correspondent fitly alludes to a wrong view of things which results directly from railway methods of crediting produce shipments to terminal points instead of to the regions actually producing them. This point is fully explained by J. R. Williams, the Fresno Observer of the Weather Service, as follows:

Referring to the table of shipments on page 44 of your monthly bulletin for August, 1892, I wish to call your attention to the errors and omissions therein, and would request that in the interests of justice and accuracy, you make the necessary corrections. Fresno is not mentioned at all, and it ranks third in amount of exports; it is ahead of Sacramento or Stockton. Having no land or water competition, it is not made a "terminal point" by the railroad company, and all overland shipments via the C. P. and U. P. R R. are way-billed to Sacramento and Stockton, which places claim the credit, to the detriment of Fresno, which is gross injustice. To illustrate: You credit Stockton with 20,000,000 pounds of raisins, 18,000,000 of which came from Fresno. Stockton does not make raisins. For your information I give you the figures of shipments taken from the books of the Fresno freight office:

	1890. Pounds.	1891. Pounds.
Raisins	18 893 986	19,886 566
Dried Fruit	1,688,771	1,038 147
Green Fruit	4,653,448	3,180,947
Canned Goods	.....	1,878 550
Wine	.....	7,118,258

These amounts will be exceeded this year by 25 per cent.

The facts which Mr. Williams complains of could well have been noted in connection with the table, but we take it most intelligent readers know that raisin shipments credited to Stockton belong higher up the valley.

THE INSTITUTE AT NILES.—The Alameda County Farmers' Institute held at Niles, Oct. 15th, was excellent in spirit and in the interest manifested. The attendance was unworthy of the region and still there were enough bright people present to fill the time completely with important contributions. The leading proceedings will appear in our columns. One of the most taking features of the day was an essay by Mrs. Fleda Bunting, a lady fruit-grower, who has a wide name for horticultural and business ability. Such a paper clearly shows that our institutes are beginning to draw upon our best resources of successful experience and close-thinking, and this fact assures their success and value. Of course there were other good things at the meetings, as our columns will show.

STATE FLOWER OF WASHINGTON.—An official count gives the victory to the beautiful Rhododendron as State flower of Washington. The result was: Rhododendron, 7704; Clover, 5720; Gaillardia, 730; Washington Holly, 227; Marguerite, 84; Dogwood, 34. Total, 14,449.

CHOLERA BARRIERS THROWN DOWN.—The disappearance of the cholera scare is marked by the announcement from New York that immigrants are now landed without detention.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St.*, *San Francisco.*, *Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, October 22, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Nursery Stock—E. Gill, Oakland.
Nursery Stock—Van Gelden Wyhe, Stockton Cal.
Nursery Stock—Cox Seed and Plant Co.
Nursery Stock—J. M. Harris, Grant Springs, Mariposa Co.
Olive Trees—W. Alston, Hayne, Montecito, Cal.
Aermotor Co.—Chicago.
Dairy Machinery—G. G. Wickson & Co.
Plows—Baker & Hamilton.
Plows—Allison & Neff.
Shropshire Sheep—L. E. McMahan & Sons.

☞ *See Advertising Columns.*

The Week.

Another good rain has covered quite a large area of the State. It came quickly, fell generously and cleared brightly. Thus it records itself as a rain which brought as much good and as little evil as such an early rain can afford. It has in some places fitted the land for plowing, and yet the injury to the grapes which are still on the vines was reduced to a minimum by the immediate return of clear skies and dry air. It is the long, dank drizzles which spoil the late fruit.

So far, the season promises to be a good one to get fall and early winter work well ahead. Conditions bid fair to promote early planting (which is the best planting), and no time should be lost now in getting land into readiness for the trees by thorough and deep plowing. Land for new orchards should be broken just as early as the soil condition suits, and every drop of subsequent rainfall is stored for the first year's growth. To allow the early rains to evaporate from a hard surface, and then to get entangled in a rush of preparation and planting later in the season, is not good practice. If the land is plowed now and plowed again just before setting the trees, it will be all the better for it. People are apt to underestimate the advantage of getting trees into perfectly-worked soil.

Every thought which can now be raised above the political issue turns to Chicago. As we write on Wednesday, the telegrams are bringing forecasts of the great events of the World's Fair celebration of Columbus Day. The notables and the not notables from the four quarters of the country are gathering. Illinois has now more Governors within her borders than she has had in all her history. Friday will be a day of pageant, trumpet blare, oratory and pyrotechnics, which will make the eagle scream with delight. The Chicago small boy will feel more thumping under his jacket than ever shook the mantle of Columbus. Indeed, these are days worth living for.

The New Orleans Cotton Exchange statement of the movement of the crop shows a big falling off over the past two years.

An Agricultural Chautauqua.

The last decade has been notable for the multiplication of means and agencies looking toward the extension of agricultural education. Assemblies of agriculturists were never before so numerous nor so active in spirit and progressive in tendency. Agricultural colleges have increased in their student rolls, improved in their teaching force, and facilities for their instruction and have been more generously endowed with available funds. They have won increased popularity also by shaping their courses in length and in character to meet popular demands and necessities. The agricultural experiment stations have demonstrated their right to exist by the multitude of new facts brought to light through their investigations and the multitude of old facts which have been marshaled into useful and significant association. The Farmers' Institutes have arisen and flourished and have brought all other educational agencies nearer than ever before to the people who may profit by their work. A general view of all these allied and cooperative forms of activity would suggest the question whether any thing more can be done to promote the interests of intelligent and progressive agriculture than is now being carried on.

In view of a recent eastern announcement which has just come to our notice, we are disposed to declare that there is indeed one more agency which will serve grandly as a connecting link between the parts of the chain of intelligence which now encompasses the agricultural industry; or rather, perhaps, to serve as private lines to the central agencies of truth-seeking and truth-telling. Perhaps some will say, have we not already such means of connection? Do not the agricultural journals connect us with various centers of agricultural investigation and thought? Why, then, is anything more needed?

The agricultural journal cannot be a systematic instructor in the elements of agricultural knowledge. It presents them constantly, it is true, in one or another connection; it introduces them as they serve to build higher structures of theory or practice upon, but it cannot pursue a systematic course of instruction in agriculture any more than a political journal can satisfy its readers by confining its discussions to the elementary principle of government. The journal must reflect advanced knowledge, the most successful practice, the thoughts and methods of men who have either advanced far beyond the study of the elements or else by the empiric method have attained advanced truth without the systematic search for it.

Evidently, there must be some other agency by which young and old, who cannot pursue systematic study at a distant institution, may do the same in their homes. The institution must be brought to those who cannot go to it. This is the latest tendency in higher education; it is to seek those who, by force of circumstances, cannot seek it. The general name for this movement is University Extension.

Evidently in the dissemination of the principles underlying the truest agricultural practice, there must be a kind of university extension adapted to the most scattered element of our population. The Farmers' Institutes can reach most of them if they will, but the Farmers' Institute is really a sort of an advanced educational agency after all. There is demand for elementary knowledge the dissemination of which will advance the Farmers' Institute and increase its benefits and popularity. What can do this better than an Agricultural Chautauqua?

The credit for the first application of these ideas to agricultural instruction belongs to the Pennsylvania State College, which has organized the "Agricultural Chautauqua," or, in other words, a course of home reading in agriculture live stock, horticulture and floriculture. The plan is thus presented by the authorities:

The college offers to those who cannot take advantage of its facilities for agricultural instruction, aid in carrying on study at home, as follows:

1. A carefully prepared course of reading, designed to cover the most important branches of agricultural science and practice.

2. A reduction of price upon the books needed, all of which are standard works.

3. Personal advice and assistance through correspondence, topical outlines and supplementary lectures.

4. To those who desire, examinations upon the subjects read, with certificates and diplomas for those attaining a certain degree of excellence.

We should like to hear what our readers think of such a scheme as suited to their desires and needs. If a good showing can be made of the desirability of such an undertaking, it is more than likely that some local arrangement for it can be made. It is perfectly in harmony with work now being accomplished at the University Experiment Station. The instructors are constantly advising individuals by interview or correspondence on just such studies as are contemplated. It would only be a question of system and detail to lead hundreds in the same lines.

With such a community of pupils in all parts of the State, the Farmers' Institutes conducted by the University would find earnest promoters and participants. Such meetings would give opportunity for personal contact between teachers and pupils and for supplementary instruction, conference, and perhaps for examination. It is easy to foresee a system of elementary agricultural instruction more widereaching and available than anything which has been hitherto proposed. What do our young people think of it?

The Ten-Block System Illustrated.

All of the country roads of Contra Costa county have been officially named, the ten-block system of numbering the country houses has been adopted, and the work of establishing it is now being carried on. This system of numbering was devised by A. L. Bancroft of San Francisco, who has a farm in Contra Costa county, and the first full description of the system was presented in the Rural Press of June 21, 1892. Since that time it has attracted attention in all parts of the country as an excellent California idea. On another page of this issue there is another proposition of Mr. Bancroft for country mail boxes, and it opens with a brief outline of the "ten-block system" of numbering. Our present purpose is to give an object lesson in the application of the system by means of the engraving on the first page of this issue of the Rural.

The following information relating to the first road brought under the system, taken from the field notes of the "blocker" or surveyor who does the measuring, shows the character of the work and makes quite a satisfactory guide for the visitor driving through the county, as well as being very useful to the citizen, business man or politician who may wish to interview the people along the road. Later, a directory of the entire county should be published.

In the field notes, which will be carefully copied and permanently preserved in the office of the county clerk at the county seat, the exact position in the block of the entrances and connecting roads are given, as well as of the landmarks, such as trees, culverts, bridges, etc. The object is to make this work permanent, and to afford data from which to readily and definitely locate entrances, as houses may, years hence, be built along the roads.

By comparing the following with the map of this road given in connection herewith, quite a satisfactory idea of the system and of the work being done in Contra Costa will be reached.

For convenience in referring to the feature of the directory to the resident upon a road, the entrance numbers precede their names while the block numbers showing the location of the landmarks, etc., follow the enumeration of them.

The name of the first road blocked is

GRANVILLE WAY.

No. 81 in official road list. Begins at 211 Contra Costa Highway, at the town of Walnut Creek. Course at outset N. 20° E. General direction N. 35° E. Elevation at beginning 96 feet. Ends at 92 Vista Ignacio. Numbers in road 66. Course at finish N. 35° E Elevation at end 154 feet.

Character and condition of the road: Partly improved; some of it raised in the middle and less of it graveled; a fair summer road; places almost impassable during a very severe winter.

Exact point of commencement, 429 ft. in No. 211 Contra Costa Highway (*i. e.* 429 ft. in or within No. 211, the distance from the beginning of the block).

1. E. Dunn.
3. Two-story white house—vacant.
   Summit of small hill and crossing of San Ramon branch of the S. P. R. R., 484 ft. in No. 8.
   Granville bridge over Walnut creek, 154 ft. in No. 12.
   Culvert, 227 ft. in No. 16.
   Small bridge, two floodgates, 306 ft. in No. 16.
16. Mrs. Wm. Rice, about .4 m. distant. Mrs. X. R. Hill.
17. San Miguel Stock Farm, about .7 m. distant, owned by Irvin Ayres.
   Summit of hill. Fine view back beyond the town of Walnut Creek; 400 ft. in No. 20.
   Spring, and willow trees, about 20 ft. back from road; 430 ft. in No. 22.
22. Manuel Welch.
   Summit of Spring ridge. Elevation 250 ft.; 160 ft. in No. 26.
   Fine view of Ignacio valley and Mt. Diablo, 28 | 26.
   Sulphur spring, about 75 ft. back from road; 30 ft. in No. 29.
   Culvert; 140 ft. in No. 30.
31. A. G. Gurnett.
   Eucalyptus 2 ft. in diam. at edge of roadway; 394 ft. in No. 33.
   Small bridge; 100 ft. in No. 36.
35. Antonio Ginocchio, about .7 m. distant.
36. E. Randall. Samuel Randall.
   Small bridge; 300 ft. in No. 36.
41. H. H. Bancroft.
41a. Aloha Farm, .4 m. distant. Aloha Farm Nursery. A. L. Bancroft. Geo. Reed, Supt. Aloha Farm. Crofton and Granville Orchard. Bert H. Bancroft. Wm. Cury. W. P. Thomas.
41b. Crofton, 1.4 m. distant. E. Galli.
   White oak 2.5 ft. diam. in roadway; 400 ft. in No. 41.
   Pomona road. Course at outset E. 20° S. Elevation 160 ft.; 516 in No. 42.
   Small bridge, 44 | 42.
   White oak 3 ft. diam. in roadway; 337 ft. in No. 43.
46. F. G. Tuttle.
50. Lot Moore.
   Interior of Ignacio valley. Fine view of Mt. Diablo and surrounding country, 52 | 50.
59. H. P. Penniman.
   End of Granville Way; 367 ft. in No. 66. Connects with Vista Ignacio at 355 ft. in No. 92.

From an Independent Standpoint.

In last week's RURAL the cause of political independence was by inadvertence alluded to as "this new spirit." Nothing could be more misleading than this phrase, since the spirit or principle of political independence is by no means new. It is, in fact, the oldest of all the glorious principles which make up the doctrine upon which our Government is founded. It was this principle which inspired the Declaration of Independence; it was this principle which animated the men who fought out the Revolution; this principle presided over the deliberations which brought the Constitution of the United States into existence; and the strong and guiding hand of this spirit led the Government through the critical time of its earlier years. Whoever will study the history of the country will find that the highest development of the spirit of political independence was contemporaneous with our period of greatest moral and intellectual progress. The times that produced our wisest statesmen were times when men dared to think without fear, to speak and act without restraint.

Unable to meet the arguments of those who demand freer thought and freer action in political affairs, the advocates of practical politics resort to ridicule and abuse. Men like the late Mr. Curtis, who dare speak out in plain terms concerning the giant evil, are called "cranks" by those who, because of their ignorance, do not know that if these men are cranks so were those wise and good men who founded the Government and who brought it through its early trials. In his "Farewell Address to the American People," published September 17, 1796, George Washington said:

I have already intimated to you the danger of parties in the State, with particular reference to the founding of them on geographical discrimination. Let me now take a more comprehensive view and warn you in the most solemn manner against the baneful effects of the spirit of party generally. This spirit, unfortunately, is inseparable from our nature, having its roots in the strongest passions of the human mind. It exists, under different shapes, in all governments, more or less stifled, controlled or repressed, but in those of a popular form it is seen in its greatest rankness, as it is really their worst enemy. The alternative domination of one faction over another, sharpened by the spirit of revenge, natural to party dissensions, which in different ages and countries has perpetrated the most horrible enormities, is itself a most frightful despotism. But this leads at length to a more formal and permanent despotism. The discords and miseries which result gradually incline the minds of men to seek security and repose in the absolute power of an individual and sooner or later, the chief of some prevailing faction, more able or more fortunate than his competitors, turns this disposition to the purpose of his own elevation on the ruins of public liberty. Without looking forward to an extremity of this kind (which nevertheless ought not to be entirely out of sight) the common and continual mischief of the spirit of party are sufficient to make it the interest and duty of a wise people to discourage and restrain it. It serves always to disturb the public counsels and enfeeble the public administration; it agitates the community with ill-founded jealousies and false alarms; it kindles the animosity of one party against another, foments, occasionally, riot and insurrection.

What Washington saw in 1796 as a possibility, had forty years later become a demonstration. The evils of partisan domination were realities in 1832 and we have the opinion of Daniel Webster concerning them in a speech delivered at Worcester, Mass., on October 12 h of that year. Said Mr. Webster:

The same party selfishness which drives good men out of offices will push bad men in. Political proscription leads necessarily to the filling of offices with incompetent persons, and to a subsequent mal-execution of official duties. This principle * * * elevates party above country; it forgets common weal in the pursuit of personal emolument; it tends to form, it does form, we see that it has formed a political combination united by no common principles among its members, either upon the powers of the Government or the true policy of the country; to hold together simply an association under the charm of a popular head seeking to maintain possession of the Government by a vigorous exercise of its patronage. * * * If this course of things cannot be checked, good men will grow tired of political privileges. They will have nothing to do with popular elections; they will see that such elections are but a mere selfish contest for office; they will abandon the Government to the scrambling of the bold, the daring and desperate.

It would seem that the "cranks" who are painting the party spirit in the colors of its true infamy and who are pointing out to the American people that the way of honor lies in a new birth of political independence among the people have very good authority for their opinions. But perhaps in this latter day and generation there are men so wise as to deem George Washington and Daniel Webster impractical cranks.

If we have as yet escaped the "permanent despotism" which rose hideously before the imagination of Washington, we have so suffered under the lesser evils which he enumerates as to attest the keenness of his judgment. Already we have seen the spirit of party "disturb the public councils, * * * enfeeble the public administration, * * * agitate the community with ill-founded jealousies and alarms, * * * kindle the animosity of one party against another, * * * foment riot and insurrection." Who is bold enough to say that, if no way is found to check and overthrow this evil spirit, we shall not suffer the catastrophe of Washington's dreadful picture, and in the end, indeed, witness "despotism" established upon the "ruins of public liberty"? Already we see good men abandoning their political privileges, wearied and disgusted with the shameful contests for spoils which we call "practical politics." We see the high duties, which in the better years of the republic commanded the wisest and ablest men, abandoned, as Webster predicted they would be, to the "bold, the daring and the desperate." It is the spirit of party which has wrought this havoc. The duty of the hour, the duty before all other duties, is to unhorse this spirit; and the way to do it is to liberate men from party bondage, to educate them in the principle of country before party. The work will not be accomplished until the first tenet in the political creed of the American citizen shall be: "*Country before party; for party when it is right!*"

But the effect of the party spirit upon the Government, degrading and destructive as it is, is but one and by no means its most serious consequence. Far worse than the destruction of our Government would be the destruction of the noble courage which created it. The party spirit in its worst aspect is seen in its relations to private character. It stifles the better impulses of man; it condemns intellect to paralysis and decay; it cowers the brave; it weakens the strong. If this be doubted, look at our gagged and degraded public press; witness the decline of influence in the pulpit; see the evidences of moral degradation attested by the control of the "boodle" element in public affairs outside as well as inside the pale of politics! But in spite of all this, there are hopeful signs. There are indications unmistakable of revolt on the part of the conservative, moral forces of society. This year, for the first time since the war, great numbers of citizens are declaring their independence of party rule and their purpose to vote for principles rather than for names. This spirit is seen on every hand. It is not a new spirit, but the revival of an old—a new birth of that political independence which inspired the Revolution and brought the Nation into being.

It might have been supposed that on the one occasion in the present campaign, when Mr. Blaine was induced to address his fellow-citizens, he would say something worthy of his great abilities and his great fame; but the occasion has passed and the friends of Mr. Blaine have less cause to commend him than to apologize for him. On last Thursday night, Mr. Blaine was the guest of Whitelaw Reid at Ophir Farm, White Plains, N. Y., and in the evening some hundreds of Mr. Reid's neighbors called to pay their respects to him. Mr. Blaine made a few general remarks about the tariff, then spoke as follows:

I see it is stated that the Democrats boast of having the mass of the Irish in their ranks this year. It is one of the mysteries of our politics that the question which interests England so supremely, which is canvassed almost as much in London as in New York, should have the Irish vote on the side of Great Britain. I know appeals are frequently made to the Irish voter, and I make it with emphasis now, for I am unwilling to believe that with the light of knowledge before them they will deliberately be on the side of their former oppressors.

Nothing can be conceived in a spirit narrower than this. It is an appeal in the bluntest possible form to a foreign prejudice which has no just relationship to American politics. It is an attempt to revive, for campaign purposes in America, a feeling which every Irish emigrant ought to leave behind him when he turns his face toward the West. The tariff question in the United States is a question of policy to be determined upon a just consideration of the facts and arguments; and its effects upon England form no good reason for or against it. Nobody knows this better than Mr. Blaine, and nobody knows better than he that any attempt to swing the Irish voters into line in favor of the protective tariff by stimulating their animosity toward England is very small and contemptible politics; and it seems the smaller and even more contemptible in a man like James G. Blaine, capable at all times of saying the truest and the wisest things.

THAT MYSTERIOUS VINE DISEASE.—It seems likely that we have been whistling before we really got out of the woods in speaking of the disappearance of that inexplicable vine trouble which is now known as the Anaheim disease from the place of its first appearance. A dispatch this week from Santa Ana says the disease is reappearing in southern California. Vines brought from distant parts of the State, and planted on land from which former vineyards had been removed by the disease, are now showing the same disease. If this be true, it will be a great disappointment to those who only recently reported that the trouble had disappeared and the vineyard interest might be restored. We trust the announcement may not be true.

American Persimmons.

MARKSVILLE, LOUISIANA, Oct. 15, 1892.

TO THE EDITOR:—As a test of their shipping qualities, I mail you sample fruits of three varieties of our native American persimmons. It has only been recently found out that we can ship them just as well as the pear if picked when yet hard. I get fancy prices for them in northern markets. It pays better than the pear. I am preparing to set a large orchard of them. I expect to set more of the seedless variety; you will find them much superior to the Japanese sorts. They are never caught in bloom by late spring frosts—sure croppers, very prolific, and will thrive and do well even on our poorest kind of soil without any cultivation whatever.

J. L. NORMAND.

The persimmons arrived in perfect condition, some just right to eat, others just right to pucker. We agree with the judgment of our Californians who hail from the southern States that the native persimmon excels in delicacy of flavor the Japanese varieties grown here, but when it comes to size and beauty there is no comparison at all—the Japs are clear out of sight. The seedless variety which Mr. Normand most favors is a very small fruit not over one inch in diameter. The largest variety he sends is about 1¾ inches in diameter, with six immense seeds, which displace much pulp.

The Japanese persimmons have not yet established their claim to distinction as a profitable crop here. Very enterprising efforts have been made to market them acceptably and to instruct the purchaser as to the way to ripen and eat them, but the effort has not accomplished much so far. Once in a while, however, a few persimmons sell very well. We doubt whether there is much future for the native persimmon in our markets. Some may sell well to southern people who may like to recall old times, but we should not care to own many trees. The growth at the South for the northern markets may, however, prove profitable and considerable amounts may be disposed of.

An Issue on Hops at the North.

It is telegraphed this week from Tacoma that the Washington hopgrowers claim the existence of a combination between the chief buyers and brewers of the Northwest to bear the hop market. They say the buyers are keeping out of the field, only buying the hops offered by growers who are obliged to sell. State Senator Van de Vanter of Kent, a large grower, says hops will bring 40 to 50 cents a pound before June, and he has advised the growers to hold for better prices. The first sale of the season was made Oct. 15th in Puyallup at 20 cents. Buyers deny that that the combine exists.

We cannot, of course, affirm the existence or otherwise of the alleged combination. It is perhaps natural enough that such an effort should be made in view of the present and prospective value of hops. Buyers and brewers always try to get cheap hops. The growers should, of course, know that the situation in hops is strong and the outlook fine, and if they can't arrange to relieve themselves from the depression by local dealers and consumers, they must be short of resources. Still, care should be taken not to be misled by extravagant views. The hop market is the most flighty one in existence, and sometimes it flies amazingly high. The present chance seems to favor considerable soaring.

Note from Mr. Coulter.

Comment on a Phase of the State Proceedings by a Past Master.

SANTA ROSA, Oct. 17, 1892.

TO THE EDITOR:—The *unofficial* report of the proceedings of the State Grange published in the issue of your paper of October 15th inst., closes its reference to "Lost Causes" as follows:

As above noted, the preamble to the cooperative legislative resolutions calling upon candidates for office to pledge themselves to the five measures presented, was lost. This was perhaps the hottest incident of the session. The special significance was due to the fact that Worthy Master Davis of the State Grange is now a candidate for Congress, and that, should the preamble be adopted, he would be the first called upon to pledge himself, and that by so doing he would place himself in opposition to powerful political elements in his district. There were whispers about San Jose that the effort to put through this preamble had its chief motive in a desire to down Mr. Davis, but there was nothing to support this charge.

It is gratifying to myself, as a member of the legislative committee, to have the testimony of the member from Tulare, that there was nothing to support this charge.

But the whole history of the State Grange since Mr. Davis' connection with it up to last May, when the committee formulated the resolutions and report referred to, is a refutation of the charge.

The resolutions reported by the committee were taken from the journal of past sessions of the State Grange and were but reiterations of *its* utterances. And the report was in direct line with its former acts, and in accord with the advice given by Worthy Master Davis in his annual address, delivered before the State Grange at Haywards in October, 1891, in the following language, to wit:

From the committee on legislation appointed by this body one year ago you will have a full report. For further particulars of work done by them and legislation enacted, reference is hereby made to that report. But before quitting this subject, let me say, I hope such action will be taken at this session as will prepare us intelligently to act for our own interests at the next general election. See to it that no man is sent to either House of our State Legislature who will not pledge himself to vote for a mutual insurance law, for a senator of the United States who is pledged to the elections of United States senators by the direct vote of the people and for the free and unlimited coinage of all silver dug from American mines. See that any man who wants to represent you in the lower hall of Congress is alike sound on these questions Look well to legislation.

This paragraph of the master's address was referred to a committee and upon it a report was made and adopted, endorsing

the sentiments therein. Said report concluded with the following language:

And we would further recommend that at the coming election all members of our Order use every effort to secure the election of good and true men to Congress and our State Legislature, and that a pledge be exacted from candidates that they will support the passage of a mutual insurance bill, the election of United States senators by direct vote of the people and that they will so vote and work as to compel the great corporations of the country to pay their just debts, pay their taxes and pay them when due, failing in which that he will support all and every measure, both in our State Legislature and in Congress, to work forfeiture to the Government.

It was in pursuance of recommendations and actions like the foregoing that the committee, whose report was under consideration, had been appointed and had performed the duty assigned and made report.

"The special significance" of this somersault of the State Grange and its worthy master—this most egregious stultification of a long and well-established policy—a policy in which it had attained a gratifying measure of success, is strongly hinted at by the author of the published report in the *candidacy* mentioned.

It was a great blunder. Carrying water on both shoulders is a difficult undertaking.

Christ said: "He that is not with me is against me." Good old Brother Nelson used to say: "If you are with me, why in the devil don't you say so." S. T. COULTER.

Firing Against Frost.

The experience of last winter was such as to impress upon orangegrowers the need of some effective and economical method of raising the temperature in the orchards in case it should again drop to so dangerous a point as that of last Christmas evening. It is true that there are few points where serious injury has before been done by cold, but nobody knows when the vagaries of the weather clerk may inflict another dose of unfavorable weather upon us.

The smudge fires formerly made use of in isolated cases, have been found useless in a case of unusually low temperature, and are no longer considered worth bothering with.

There are several growers of Riverside who, as the result of their own experience last winter, propose henceforth to keep ready for use in winter, appliances for warming the orchards on a scale likely to make the scheme a success. They claim to have demonstrated to their perfect satisfaction that the temperature can be raised in a cold night from four to ten degrees by the use of fires at regular intervals throughout the orchard. While it would pay to make use of these at considerable expense they have not been satisfied to trust to the crude methods of the past.

Several large growers have provided themselves with coal oil cans, in which they will, after making a suitable hole in the bottom to admit a draft, lay kindling of an easily ignited sort and upon this put ten pounds of New Mexican coal. This fuel is bought cheap in large quantities. The loaded cans remain under the trees to be moved into the open spaces in case of need. When ignited they give forth a considerable heat, and will burn six or seven hours. Different orchards will use from eight to twenty-five fires to the acre. There is little doubt that with the larger number of fires named there would have been entire immunity from harm last winter. By this plan the first cost is inconsiderable, the charge for each can costing about ten cents, or from 60 cents to $1.25 an acre per night.

Another method, and one likely to be more extensively and permanently used is one devised by H. B. Everest. It consists in locating a row of tanks containing a cheap grade of petroleum, from which pipes are laid so that the oil can be run into receptacles in which it is burned. The amount can be graduated so that the amount of flame can be large or small as is required, and can be turned off entirely if the weather moderates. This plan promises to be the most effective, and in the long run the most economical, though the first cost is considerable.

Another plan is to use a small tank containing enough oil for one or two nights. This plant will have a minimum cost of about $15 an acre. If the fires are increased in number the cost will of course be increased.

This fuel will cost about the same as the coal. It will be more economical in one way. The coal once lighted must all be consumed, while the oil can be turned off at any time. This is far more easily handled, as one man could light and extinguish an immense number of fires easily and they require but little attention.

Where neighbors can combine to prepare for protection they can be tolerably certain that all the cost and trouble will be repaid in the insurance of safety gained. Individuals can effect something alone, but we have thus called attention to this matter to suggest the need of cooperation, which will lessen expense and make results more satisfactory. The expenditure of a few thousand dollars last year would have saved a half-million dollars in this valley, and though the chances are against another cold night for the next eight or ten years, the danger is enough to warrant these reasonable precautions.—Riverside Press.

Coming Horse Sale.

A chance to get a good horse, one whose breeding is of the best, as well as a fine individual, is afforded often when the price will suit both seller and buyer alike, but the opportunity is now presented of getting an animal whose breeding is vouched for at the buyers own price. We refer to the auction sale of the "Oakwood Park Stock Farm." The offering will consist of standard-bred trotting youngsters, colts and fillies, and a few head of those famous Cleveland Bay horses. The sale will be held at the Oakland Trotting Park (Shell Mound Station) on Wednesday, October 26th at 12 o'clock. Every animal offered will be sold at square auction sale, neither in nor by-bidding being allowed. Killip & Co., 22 Montgomery St., will conduct the sale and furnish catalogues on application.

THREE thousand two hundred and four acres have been subscribed to the Cooperative Sugar Factory at Anaheim. Deeds to 1700 acres have been handed into the corporation, and now the work of putting up the factory will begin.

FRUIT MARKETING.

The Orchardist's Perplexities, Problems and Rewards.

An essay read by MRS. FLEDA BUNTING, of Centerville, at the Alameda County Farmers' Institute.

There are many vicissitudes in the life of an orchardist. We have our heavy years, when prices drop so low it hardly pays to pick the fruit. We have the scarce ones, when every pound is worth taking care of. We must spray for the codlin moth in spring and the scale in the fall. We must see to the pruning. We must decide between old-fashioned plowing and new-fashioned cultivators. There is the budding and grafting; the tieing and propping up; the thinning out, and just when one might think of a breathing space or dream of a duck hunt there are boxes to be made or wild morning-glory or hoarhound to be grubbed out.

On the years when blossoms are few and far between, when the half-formed fruit drops to the ground, and we realize that Nature is in one of her indolent moods, we begin to receive calls. The gentlemen represent different canneries, driers or commission houses. They vary in their different ways of doing business, their way of talking and plan of action, but almost without exception they are well dressed and drive dashing turnouts. Why, we can tell a fruitman as far away as we can see him! They all represent the oldest, most reliable or most accommodating of firms. Then is the time when we must weigh each price against the other. One will do better on one fruit, another favors a second variety; a third cannery gives a good price, but is too particular. This one is a fair talker, but we all know just how they try to squirm out of full weights, fond of throwing out and slow about returning boxes when the day of settlement arrives. Still another way, shall we depend upon the market? O that treacherous market! It would take a wise prophet to tell what a week would bring forth.

On the plentiful years we do not receive so many calls, and when they *do* appear there is no talking business; they are simply around to see what the outlook is. If a price is made, it does not suit *us*. Then comes the time when the poor orchardist dons *his* best coat and makes *his* calls. He finds, however, that the canner is well posted and prepared. He is not like the orchardist having no fixed price, but accepting the best he can get. The canner has a price, and a *low* one. You may go far and near, they are very indifferent—tell you they have bought about all they care to. You have but three choices—sell at canners' figures, send to market or dry. The second is out of the question on full years as long as the fruit is handled in the present way. One sighs as one thinks of the drying, the picking, the cutting and spreadtng, the sulphuring, watching and drying; then the picking up, the sweating and putting away, and always the cash at the end of the week, for the cutters must be paid each Saturday. O it is hard work to be thus independent! If one was sure of being well paid, that would be all right. Last year, however, plainly demonstrated that such is not the case. There is no use talking, it is a wrong state of affairs when we lose money on a plentiful year, and on scant years sell our refuse for more than No. 1 fruit will bring. That was the case this year.

We are gradually working up the eastern market. We even probe England and touch other tender spots, but have we made the most of our home market? It is a little like sending all our money off to missionaries and forgetting those near by, or grain to suffering Russia and neglecting our own poor. What have we done about the market here? It is run just as it was 20 years ago. It has not changed with the times. We have left it to the tender mercies of the commissionmen and the peddlers. That they handle it to their own advantage is but human nature. Of course the canners come in first, taking the best and most. They get it cheaper, because they take such quantities. The hotels get second best, and so on, until, when the mass is supplied, they receive fruit that we would not consider fit to use. Over and over parties will come from San Francisco or Oakland, and, on tasting and viewing the fresh fruit, say: "Where does it go? What does become of all of it? We never see any of it! Why, I had to pay so and so much for such inferior trash." We have regular customers that let us send the fruit just as it comes along, and they pay the freight. They get it much cheaper, and better fruit; as one frugal Chinese cook said, "No wastey one."

There is some means of reaching the middle classes of San Francisco with our best fruit—parties able and willing always to pay a good price for a good article. It is a problem that would solve this "dumping in the bay" and "glut in the market." It seems to me that our orchardists have neglected a vital point when they overlook this. Sooner or later this question will be solved; the sooner the better for us. I firmly believe that if every farmer and orchardist were active members of the Farmers' Alliance, the time would have arrived ere this. Who can answer the oft asked question, "Why will not the farmers, like all other classes, unite?" Whenever there is an effort at combined strength, you always hear the sneer: "They will never stick together." Other producers set their own prices. Manufacturers control their own goods, but the orchardist must politely ask some one else to set his, and bow meekly when he receives his price, no matter how poorly paid. It is all wrong. There is a certain price, based on the actual labor and expense, at which fresh and dried fruit will pay. The orchardist should be the one to determine the price, and at that it should be sold, and no less. Several methods have been discussed, but I do not believe any will be feasible until there is a united action. We do not want any failures. We watched the auctioning method with much interest, and while I, for one, did not feel that it was the best way, still the determined opposition of the commissionmen made me feel it was in the orchardists' favor. There is work ahead; the sooner done the better.

But now for the other side. With all these troubles and worries, there are many bright sides. Where is there a more enjoyable, independent or healthy life? A lovely tree to shade you, delicious fruit coming in, busy fingers packing for market, canning or drying, the choicest morsels for your own use. Some way there is certain satisfaction in knowing that the millionaire living in the city, with all his coin, cannot procure as delicious a peach as the juicy rareripe which you and your family enjoy, fresh and unbruised, from your own trees. There is a satisfaction in knowing that at least in our lovely valley the soil will always give us a living. If times *are* hard and money scarce, we can get along until crops are brighter and prices better. With a few good hens—producing their eggs and broilers—scratching for their living around the family cow that munches the little patch of corn or alfalfa—cream, milk and butter—to the blessed pigs that can snap their jaws over wormy apples and sour milk, without a thought of cholera—what is better than homemade hams, bacon and spare ribs? The vegetable garden—lettuce for salad, cabbage for the corned beef, your own potatoes, string beans and sweet corn. A few luscious berries. O yes! we can defy hard times and work and pray for better. We can always be thankful that, of all places on earth, the Lord has put us right here to spend our lives. Where could we have found a more lovely one?

The Year's Output of Beet Sugar at Chino.

This season has seen a great stride forward in the beet-sugar industry. The acreage was increased, the cultivation has been more intelligent and thorough, better yields have been obtained and a much better quality of beets harvested.

Last Saturday evening the last load of beets of this season's crop was delivered at the factory, and the season's work was wound up in a most satisfactory manner.

The entire crop of beets on the ranch delivered to the factory this year amounted to 27 098 tons gross, for which the factory paid $111,910.68. The average price per ton paid for the beets delivered during October was $4 30, and the average price for the entire season was $4.25. This price was based on an average of 15 per cent sugar.

The sugar percentage in the beets harvested here this summer is unprecedented. In the great beet fields of Germany and Austria, where a large part of the world's supply of beet sugar is produced, the average percentage of sugar in the beets is from 12 to 12½, and 14 is the highest percentage of sugar ever produced. Beets here this summer have gone as high as 22 per cent, for which the price paid was $6 per ton.

While the proper selection of seed and intense cultivation are important factors in this result, yet the clear skies, genial sunshine and equable temperature are the natural conditions which make this climate an ideal one for the culture of sugar beets.

The direct sugar product from beets, known as "firsts," has been finished at the factory, but there still remains a number of large tanks of syrups which will be worked up next week. The sugar output for the season by months has been as follows to date:

July, lbs	1,323,141
August, lbs	2.481,898
September, lbs	3 000 326
October to the 10th, lbs	882,020
Total to October 10th	7,687,385

The government bounty on this sugar will amount to $136,894.84. To this may be added probably 60,000 pounds for the syrups yet to be worked, and we have a total of say 7,747,385 pounds—3874 tons. Loaded into freight cars this would make a train of 200 carloads, or 10 trainloads of 20 cars each, solid to sugar from the roots grown on Chino soil. How many cups of coffee will that sweeten! How many cakes will it make!

But what does the production of these 200 carloads of sugar mean? It means the distribution in Chino for the beets and labor of about $250 000 this year. Mr. Gird's pay-roll for September for ranch labor alone amounted to $6217.16. The Sugar Company has paid for labor in the factory during the campaign $33,000. The factory has employed about 170 men during the campaign, and in the beet-fields there have been employed during the summer from 200 to 600 men. Mr. Gird alone at one time had 450 men on his pay-roll.

The returns from the crop to the farmers have been almost universally satisfactory. From $60 to $90 an acre have been realized from the crop, and that represents but very little invested capital and about six months' work. Men of small means who came to Chino a year ago are now enjoying a reasonable prosperity, and are building up for themselves homes surrounded with comforts and conveniences. The virgin soil of tens of thousands of acres is being made to blossom, produce and support a constantly-growing population. Hundreds of laboring men, who from the overworked fields of the older industries have been crowded and buffeted from place to place, are here finding steady employment and good wages, and are laying the foundation for a competency. The salvation of this country, as it has been of the older ones, will be the manufacturing industries which grow up in and around the great fields of agriculture. In this, Chino is in the van, and is reaping the benefits of wise forethought and bold enterprise.—Chino Champion.

N. E. SAGER, of Redding, is in the city closing up a deal for $300,000 worth of Mendocino county timber lands. The purchasers are Chicago capitalists, who will probably put in some extensive sawmill plants to furnish redwood lumber for the Eastern markets.

HORTICULTURE.

An Arraignment of the So-called Picholine Olive.

SANTA BARBARA, Sept. 27, 1892.

TO THE EDITOR:—As I feel perfectly sure you are deeply interested in gathering any facts that will throw light on the horticultural interests of California, I therefore send to you a letter received from my brother, A. P. Hayne, who is devoting four years to the study of viticulture and oil-making in Europe. The information I now send to you all came about in this way, and I therefore wish this heading published so that my motives will be fully understood. Some months ago I received a pamphlet through the postoffice, and these pamphlets were generally circulated throughout the entire State. The work was by Mr. Adolph Flammant of Napa, and he took special pains to try and induce the public to believe that the Picholine olive of California, so called, was a very superior and well-known variety in France. I read his work and was pretty thoroughly convinced that Mr. Flammant was just talking; still I knew that these pamphlets would reach many a man who would be utterly at a loss in regard to the truth of the statement. As far as I am concerned, I am quite familiar with the Picholine (so called), besides having 15 other varieties of olives now growing and bearing. The Mission olives, which are the standard of California, of which I have 200,000 young trees, and which are considered a very fine variety, Mr. Flammant abuses openly, and tries to convince the public that the so-called Picholine should take the place of them all. Mr. Flammant speaks of Mr. Ellwood Cooper's trees (Missions) as only bearing a handful of fruit, etc. I have seen Mr. Cooper's trees perfectly black with fruit, and he tells me that some of them yield as high as 40 gallons per tree, or 240 pounds, and a few of his trees have given over twice this quantity. Yet Mr. Flammant, in his very fluent way, is trying hard to convey to the minds of the planters of olives that they should uproot the Missions and supplant them with Picholines.

After reading his pamphlet, I enclosed it to my brother, who was then in France, and begged him to thoroughly investigate the matter, and then to write to me. I received his reply and have enclosed it to you. I have been propagating the olive now for 11 years, and when my brother was here in California he studied them carefully also, and then he went to Europe, where he is in a position to find out many facts which we in California would be at a loss to know. I now think that Mr. Flammant may regret that he sent me one of his numerous publications, for I have spared no pains to thoroughly expose a man who not only strikes directly at my occupation, but who is also doing all he can to mislead the public generally. Many a man may ruin himself, supposing, as he well may, that Mr. Flammant's work on the Picholine olive is sound. The public may therefore be somewhat interested in the letter I now enclose you, especially the olivegrowers. W. ALSTON HAYNE, JR.

THE OLIVE IN FRANCE.

MONTPELLIER INSTITUTE, Aug. 31, 1892.

Since receiving your letter asking for information concerning the Picholine olives, some months ago, I have revisited the entire region *de l'olivier* in France, and also those parts of Italy north of Pisa and Florence, and have gained all the information possible. In California you can have no idea of the extreme difficulty one has in attempting an investigation of this sort. It seems a very simple thing to go to a man—an olivegrower—and ask him what varieties he has—yes, very simple, but what kind of an answer do you get? He gravely tells you of names you never heard of before, of qualities that, if half were real, absolute perfection in olive varieties would be realized. His neighbor gives the same trees totally different names and different qualities, and so they go from farm to farm, Commune to Commune, and finally from Department to Department.

There are, however, a few gentlemen proprietors in France who have studied the question, and after 30 or 40 years of study can tell you somewhat. I had interviews with Prof. L. Degruilly, Professor of Agriculture at the National School of Agriculture at Montpellier, author of a book on the varieties of olives grown in France; with his collaborateur Prof. Pierre Viala, professor at the Institute Agronomique at Paris, Mr. Gaston Bazille, the pioneer scientific agriculturist of southern France, a gentleman who was famous as a scientist and *practicien* over 40 years ago, one who knows the Midi like a book. I also visited the country places, and had interviews with many of the oldest and most important olivegrowers of the region, besides long interviews with Prof. F. Gas, director of the Agricultural school at Antobes (Var), and Mr. Mari of Nice, without doubt the most capable person to discuss the subject yet met with. These are but a few of the authorities I shall quote. As for books, I have read all I could lay my hands on, in Latin, old French, modern French and Italian. The conclusion come to is that all that is printed in that circular broadcasted by Adolphe Flammant, one of which you sent me, is utter nonsense. His quotations from a lot of old literary dictionaries to support his thesis is too absurd to be listened to; besides, in all the cases that I could obtain these long dead and buried literary works, I find that he has only half quoted. But that is neither here nor there. The fact remains that it is not true.

In the first place, he says that the variety of olive bearing a small fruit, known in California as Picholine, is one of the "*best known* varieties of the Midi of France." This is false, for no one ever heard of it. I visited the Communes mentioned, and can speak from a three years' residence in their very midst, and a previous knowledge of the California variety besides the authorities given on the first page. Mr. Flammant can say what he likes, nobody knows it at the places mentioned by him, or anywhere else, and I defy him to find it under the name of Picholine. Again, he says that this special variety of Picholine (of which he has a large stock to sell to the people of California) was created by "Picholine himself," by *grafting* the Soarin on the Sauvegeon (wild olive). Aside from anything else, he shows himself either utterly ignorant of the fundamental principles of horticulture or willfully dishonest, for no one ever heard of creating a new species by a *graft*. He might as well talk about flying to the moon at once.

The name *Picholine* is variously used in France to designate a special way of curing olives for table use, or applied to all varieties used for pickled olives.

You will find in a previous letter the synonyms of the Picholine as given by Degruilly. All these are known to be fit for table use only—never for oil. Again, among the Languedoc peasants the name Picholine is given to any variety whatever that has a pointed fruit, slightly curved. The fact is that the Picholine brothers of the Commune of Miramas, Bouches des Rhone, France, introduced a method for preserving the fruit for table use. This was during the last century. The method was an improvement on those already existing, and soon spread; but in order to distinguish olives thus prepared from those prepared in other ways, the name of the inventor was given it.

As only large, fleshy olives were used (see synonyms), it soon came to pass that all varieties fit for pickling came to be known as Picholine; mind you, these varieties had been in existence and well known before the Picholine brothers were born. Therefore all talk about this special variety being *the* variety of France is absurd, and all the carefully prepared facts concerning it in France, to say the least, make one want to know something of Mr. Flammant, his motives, etc.

When I found that all the authorities on the subject were agreed as to the fact that no such variety, known as the Picholine in California, existed in France under this name, I tried to find out some variety that could have been mixed in with the original cuttings sent to California. This was no easy matter. With a great deal of patient search and the invaluable assistance of the gentleman just named, I think I have discovered it.

In the Arondissment of Aix, Communes of Eyrorgues or Eyguieres, there is found a small-fruited olive resembling the Picholine of California. It is known to the peasants as Dendiverdi or Dentiverti. It grows side by side with the Picholine proper (see synonyms) and might easily have been mixed up with the original cutting of the true Picholine.

An old man who has grown olives all his life (he is now 86 years old) told me that this variety was from the nature of the case unfit for pickling, but that the peasants let it stay and made oil from it for their own use. The consensus of opinion seems to be that so far as quantity goes, it yields as much as the regularly accepted oil varieties, but that the quality of the oil is vastly inferior. Not only is it coarse, but that it cannot be so clarified as to avoid excessive deposit of dregs; hence it will not keep so long as the oil made from other varieties, nor will it bring a paying price on the market. As it takes 15 or 20 years to get an olive tree into bearing shape in Europe, the peasant leaves it where it is, using the oil for himself. Both Mr. Mari of Nice and Prof. Gas of the Var agreed on this point, so I think it is very probable.

There are other varieties that resemble somewhat the Picholine of California, but I refrain from giving their names for the reason that when I saw them the fruit was too young to give me an accurate idea and I have not at hand an accurate botanical description of the California variety in question. Besides, I think the Dendiverdi fills the bill.

In his circular Mr. Flammant says that the Picholine is free from the "*scale bug*" and "black smut." This is untrue. In California I have seen it as badly attacked as any other variety, and while I have seen it entirely free from insect pests, yet it must be noted that at the same time the Mission and other varieties were also free.

After my studies in Spain, France and Italy, I have become thoroughly convinced that there are no known varieties of the olive that have any claim to more freedom from the attacks of insects than others. It all depends upon the location, soil and climate. All the authorities are in perfect accord on this subject, so I think Mr. Flammant has simply jumped at conclusions in order to sell his trees.

Mr. Flammant goes on to say that the "smaller the fruit the finer the quality," and takes viticulture as an example. In viticulture this is certainly not true; and when I read the statement out of Flammant's circular to some of the eminent viticulturists of France and elsewhere, they either laughed or said "he is a fool," so I don't think the argument holds for olives. In spite of the glowing description of the Picholine (for sale by Flammant) and the evils of the Mission variety as he sets them forth, I do not advise you to plant it. From my California experience and European observation, I think it would be a grave mistake to make to plant Picholines instead of the Missions. The Mission does well in California, as is proved by long experiment; its oil is both abundant in quantity and superior in quality; its pits are usually empty, and one of the greatest troubles in making fine, delicately-flavored oil is thus removed. Why, to-day, at all the oil schools, especially in Italy, and the large oilmills, one and all are trying to invent machines for crushing the fruit without breaking the pits. When I tell them that in California we have a variety in which there is generally no kernel, they all say, "Oh that it were so with us!"

Another thing I was struck with in Europe, and that is the great irregularity of the crops. The Mission is without any doubt the most regular bearer I have ever met with. Besides its facility of adaptation, its great recommendation is the delicacy of its oil, and the fruit when picked is very good. To speak of supplanting what you know to be good with something you know very little of, and that little rather doubtful is a mistake that I cannot bring myself to think any one would make, especially with all the varieties in the world, but I do hope that the people of California will not be led astray by the publications of Mr. Flammant, and cut down the Missions.

Thus far I have been unable to find any variety that resembles the one in question in the least that resists the cold. On the contrary, all come from the hottest parts of the region de l'olivier.

In conclusion, then, the Picholine proper (see synonyms) is a large, fleshy olive grown wholly for pickles, its oil being of very poor quality, and very small in quantity, while none of the savants or practiciens ever heard of a Picholine of small fruit grown for oil. From what can be learned, the California Picholine is the Dendiverdi, a variety of very secondary importance that exists on sufferance only. So far, then, as the question of supplanting the Mission or other varieties goes, it would seem to be an act of folly.

ARTHUR P. HAYNE.

[We regret the sharpness of these writings. A gentler tone and less direct accusation would have served the purpose better. However, the points involved—to wit, the origin and value of the Picholine—are very important in this State and are legitimate subjects for discussion.—ED. PRESS.]

California Olive Oil in New York.

Not long since the R. N. Y. expressed a doubt about the feasibility or possibility of buying any pure olive oil for culinary purposes, owing to the very general adulteration of that product with cotton seed oil and other adulterants. Mr. Gardiner, of Gardiner & Delafield, this city, gave us a chance to sample different oils.

"How many gallons of so called olive oil are imported to this country annually," said *The Rural*.

"About 800,000. Of this vast quantity, probably 200,000 gallons are pure and the remainder more or less adulterated. At least that is a conservative estimate."

"Is not some of the oil that is pure when imported adulterated after it reaches this country?"

"I presume it is."

"Well, then, if 600,000 gallons of adulterated oil are imported, and a part of the 200,000 gallons of pure oil is adulterated after reaching here, is it any wonder that we find it difficult to get pure olive oil!"

"Certainly not, and I am heartily with you in your efforts to put down the sale of adulterated goods. I only insist that we sell only pure olive oil, unadulterated oil. Every invoice is tested by chemical analysis before it is put upon the market."

"Don't you think the consumption of oil would very largely increase if the genuine article were more easily procured?"

"Without a doubt. The Americans as a rule are not large consumers of oil, but the percentage of those who use it is growing. The Italians are the largest consumers. They buy it by the gallon and use it as freely as our people use butter and in much the same way."

"Where does most of the imported oil come from?"

"Probably from Leghorn, Italy. There is not as much French oil imported as Italian."

"What about California olive oil?"

"California is making a very fine oil, but as yet the bulk of it is consumed at home. There is a little sold in New York and some in Chicago, but the amount is not yet great. The olive growers and oil makers of California have a compact organization and hold yearly conventions. They have strenuous laws against adulteration and do not attempt to sell their oil in competition with oils of a lower grade. They are enabled to keep up the price, as their home trade takes nearly all their production. Mr. Ellwood Cooper, formerly a large olive grower and the founder of the olive oil trade of California, says there is more pure olive oil eaten in Santa Barbara than in the city of New York. Would you like to taste some of the oils?"

The *Rural* man thought he would and three samples were set before him. Two were of Italian oil and one California, and all were unquestionably pure. The California oil was of a lighter shade than the Italian.

"Well, now that you have tasted them," said Mr. Gardiner, "give me your opinion of their quality."

"Well," said the *Rural* representative, "They are all good but I like the California oil best. They all have the distinctive aroma or bouquet of the genuine article, but the California oil has more of the nutty flavor and is more to my taste. It is, also, seemingly more fruity and not so greasy."

"That would be my taste also," said he, "but it is not yet the taste of the general public. Many of them prefer an oil so refined and filtered that it has lost all flavor and is simply a delicate, rather neutral grease. All the foreign oils border in this direction, because they are made to suit the demand. California is destined to become a great producer of olive oil, but it takes time. Meantime we must use the product of Italy or France—preferably the former."
—*Rural New Yorker*.

THE FIELD.

Gophers and Moles.

The subject of this article is of interest to farmers and fruit-growers who are only too conversant with the destruction caused by the pocket gopher; while moles, though useful in their way, are constantly irritating the owners of lawns and gardens by piling up mounds or digging under choice plants.

The order, Rodentia, contains mammals which have the front or incisor teeth remarkably developed for gnawing, while the canine teeth are absent. In this order occur the rats, mice, squirrels, porcupines, rabbits, hares, etc., and last but by no means the least, the gophers. Of this gopher family there are several genera and species. We have in the middle States a little fellow called the 13-lined gopher (*spermophilus tridecem lineatus*), and also the gray gopher (*S. beecheyi*) which is so common on the coast, and called the "ground squirrel." In California this gopher annually destroys thousands of bushels of wheat. The pocket gopher is represented by many different species in North America, but the one we have to especially consider is *Thomomys bulbivorous*. It is very common in many parts of California and Oregon. Its front teeth are strong and chisel-like, especially adapted for gnawing. On the sides of the face are capacious cheek-pouches which give the animal its name. These pouches or pockets undoubtedly offer a means of transporting its food. I have never found absolute proof that the earth was placed in them, though this is stated by some one to be the case.

The depredations of this pest are very extensive. They

are especially partial to the tender roots of fruit trees, and when carrots, potatoes and other garden truck are in the ground, it is impossible to tempt them with poisoned tidbits since they find attractive food in varied abundance.

One may plainly see upon whatever any rodent has been eating, the marks of the chisel-like teeth referred to above.

MEANS OF KILLING POCKET GOPHERS.

I am convinced from experiments that in the winter season when the root crops are out of the way a small piece of potato into which powdered strychnine has been introduced, and put down the hole will kill many. Frequently the fragment of potato will be thrown out with the dirt, but more often its nonappearance and the cessation of gopher work indicates that the poison bas been effective.

I have saturated a wad of cotton half the size of one's fist with bisulphide of carbon, and thrust it down the hole, and closed the aperture with sod and earth. This remedy is extensively advertised for the gray gopher, or so-called ground squirrel. We have not tested it upon the latter, and lack absolute proof of its efficiency in the case of either pest. This agent is extremely volatile, and if used in porous and comparatively dry soil a large portion of the gas would doubtless escape.

I have tried the sulphur gun, a mechanical device for forcing sulphur fumes into the burrow, and although I cannot positively assert that it killed a single gopher, it has certainly stopped their digging, and may have killed them.

A shot-gun is very effective, but the sportsmen are very likely to see the game when they have no gun.

We have specimens of all the gopher traps sent to the experiment station to be tested; all are highly spoken of (by the manufacturers) and many are endorsed by persons of high authority. Then I have tried trapping, patiently and carefully, and have to report failure, although a few gophers were caught. I often have found the trap covered with diggings, or, perchance, showing on their points a few hairs left by the vigorous Oregon pest. Traps may do better in California, but if so, the Oregon gopher is made of sterner stuff than his brothers to the south of us. Recently a gentleman loaned me a so-called gopher-gun, of simple and cheap construction. It has killed every gopher for which it has been properly set. Certain important points are to be observed in its use. The wire, or trigger, should have the point covered with a small cork or a bit of wood which will receive the pressure of the earth when pushed ahead by the gopher. The covered point of the wire should be in the center of the hole, near, but not on the bottom, that it may be perfectly free to slip backward. The gun is discharged by a percussion cap. A very small load of powder, say 2 drachms, and of shot, ½ oz. (we use No. 3) is sufficient. Leave the hole open. The gopher literally commits suicide by shooting itself. I have recently purchased a new gopher and mole trap which is said to be well adapted to the purpose. One gentleman reports having killed 114 with it in a few months.

The order to which moles and shrews belong is called insectivora, referring to their insect-eating habits.

In moles the snout projects some distance over the mouth, and the bones of the fore limbs are very strong. The especial feature of the skull is the very sharp-cutting and uniform teeth. They are adapted for gnawing. The mole should not be charged with eating carrots or potatoes or the roots of plants. The teeth marks on those injured objects are plainly those of the rodent tribe.

In a number of moles' stomachs examined no vegetable food was found all contained worms or grubs, or other insect larvae. In a few I have personally examined this spring I found nothing but earth worms.

But one says: "I know moles eat my peas," another says: "I have found moles burrows leading through my carrot field and have discovered pieces of carrots in the burrows plainly gnawed." This may be true, but there are species of meadow mice (*genus Arvicola*) which are known to use the burrows of the mole for an easy passage to their food, and these are probably the depredators. As for moles eating peas, I claim that they are befriending us by destroing insects or worms near the peas, and if the gardener is certain that the peas are being eaten, then he must lay the charge at the doors of another, doubtless some member of the *genus Arvicola.*

It is true moles are a nuisance, though we often malign them, forgetful that while they are burrowing in our lawns they are in search of grubs which injure the grass. But man having decreed that moles are pests, the question arises, how are we to combat them?

We see many ridiculous suggestions in agricnltural (?) papers regarding the destruction of moles. One man says, poisoned corn, another, poisoned potatoes, and another recommends the digging of deep holes through their burrows, into which they will fall and be unable to extricate themselves.

Regarding poisoned corn or any vegetable substance to kill moles, I say, "You cannot do it." Further, anyone who has been a witness of the rapidity with which a mole will burrow out of sight, will put no faith in the post-hole theory. These mistakes have doubtless in many instances, arisen from the fact that gophers and moles had been confounded.

We have tried a number of remedies for moles and only one proved satisfactory. The sulphur gun mentioned above has been used, and it evidently drives them away for a while, and one may possibly kill a few in this way, but their burrows are so extensive and offer so many opportunities for the escape of the fumes that this can hardly be claimed as a remedy. Bisulphide of carbon is not efficacious for the same reason. Moles are very apt to work early in the morning, between 5 and 7; again, about noon; and again, about 3 or 4 in the afternoon; and we have speared a number by thrusting a four-pronged fork through their soft mounds at the moment they are engaged in throwing them up. While this is effective, the fact that they are erratic in their hours of work, makes watching for them a rather irksome task. I sunk a five gallon tin can in course of runway, (it having been highly recommended), and covered up the hole with a board, sod and earth, but caught no moles. I have used the various traps, but with no success, with one exception.

Of the moles of the United States there are about five species, but these do not differ particularly from each other in essential characteristics.

F. L. WASHBURN,
State Experiment Station, Corvalis, Oregon.

RURAL IMPROVEMENT.

Wayside Mail Boxes and the Ten-Block System.

Written for the RURAL PRESS by A. L. BANCROFT.

The ten-block system of numbering country houses was developed and announced about two years ago. It was fully explained in numerous papers at the time. It has commended itself to the best and most progressive element among the people having rural tastes and desiring rural advancement and it is working to the front.

Contra Costa county, in whose interests it was worked out, has officially adopted it, and Postmaster-General Wanamaker has become interested in it, in connection with free rural mail delivery, and recommends it for general adoption throughout the country.

Briefly stated, the system is to have all the country roads bear distinctive names. The roads are measured and each mile is divided into ten *imaginary* blocks, having a frontage only, upon each side of the road, of 528 feet each. Two numbers are assigned to each block, one to each frontage; the odd ones upon the left and the even ones upon the right. All houses having *entrances* in a block bear the number of that block. When there are more entrances than one in the same block, which will rarely occur, the first one has simply the block number; all others have the same number followed by distinguishing letters, 698, 698a, 698b, etc. By dividing the house or entrance number by two and pointing off one decimal the distance in miles and tenths from the starting point of the road is given; thus 698 indicates 34.9 miles. The advantages of this system are numerous and great, the most prominent one probably being that is *permanent*. This has been shown in the articles already published, and it is a satisfaction to know that the advantages are being generally recognized.

In connection with the free delivery of mail matter to country residents, a feature or plan, based upon the ten-block system, is here outlined and offered for the consideration of the postal authorities and the public.

For the country postman to go to the very door and ring the bell of every house for which he may have mail matter, over a section containing say 10 or 12 square miles, on some trips going several miles off his direct course and at others not doing so, must certainly require too much time and would be too costly to be practicable. In little England, where the houses are closer together than in our newer America, it is somewhat different. If, however, *mail roads* or delivery routes could be established, the postman with his horse and cart could travel over 20 or 30 miles of them daily, rendering the service over the same road every day or every second day, and deposit the mail in mail boxes placed along the road, quite satisfactory service could be rendered, which would be of great benefit and would not cost too much when the residences were reasonably near to each other.

The boxes to receive the incoming mail should be placed by the roadside and be known by the block in which located and be so marked, and letters, etc., could be addressed to the particular box, as, for instance, Mr. Geo. Reed, Mail Box No. 41, Granville Way, Walnut Creek, Cal., which would soon become abbreviated to M. B. 41, Granville Way. The keys for each mail box should differ from those of all other boxes and all who have their mail addressed to a box should be able to obtain a duplicate key through the postmaster at the center of the delivery route. The postman himself would not require a key. The boxes should be of different sizes and should either be paid for by the people or they should make a deposit on them and be responsible for their safety. They should be placed at all crossroads and at the entrances of all neighborhood roads, or, as they have been named in Contra Costa, "locals," and at other points along the route where they would accommodate a number of families. Neighbors living off the mail roads could arrange among themselves than any one going to a box for the mail should also bring all the mail and deliver that belonging to the houses which he would pass on his way home and hold that for those living beyond him, or they might take turns in bringing the mail from the box for an entire neighborhood and thus establish, as it were, a private branch of the main delivery route.

The postman as he passes along and deposits the incoming mail in the boxes should sound a bugle-call which would give notice to all within hearing that the mail had been delivered. Notices that registered letters had been received could be placed in the boxes with the mail matter, when the persons so notified could go to the postoffice for them. The boxes and openings should be large enough to receive newspapers, books and all packages which are allowed to be sent through the mails; or the top might have a hinged lid which the postman's key would unlock for the insertion of the larger packages. It might, perhaps, be considered better to have the incoming mail deposited in the box only by means of the lid at the top, and have only a very thin opening for local notes, in order to prevent possible errors with the outgoing mail and for greater security.

By an arrangement of the service in this way, the distance to be traveled each trip by the country postman and the service to be rendered would be uniform, and the length of time required to make the trip would vary only with the condition of the roads and the freedom with which the horse moved along.

Side by side with each box for the incoming mail should be placed one for the receipt of the outgoing mail, or the two be combined into one box. The postman only would have a key to these boxes. He would unlock and collect the outgoing mail as he passed along the roads making his delivery. These boxes would be useful among neighbors, and many a mile of travel would be saved by depositing in his box a note for the farmer who lives a mile or two back in the hills.

Some of the important points of difference between delivering the mail at the door or depositing it in the wayside mail-boxes are these: When the postman on one trip takes the mail for one hundred families, ninety-nine trips are saved to the community, and a great public economy is thus effected. At the point where the postman leaves the road or his direct route and goes to a point, whether it is distant ten rods or a mile, and accomplishes only what a trip by any other one person (even a child) would accomplish, the economy feature ends, and very much better service would be rendered by the postman hurrying along his direct route, and not keep the people farther along waiting, while the countryman would go or send to the roadside for his mail. By this plan the people toward the end of his route would get their mail earlier and with much greater regularity, for if the postman (perhaps several times in the course of some days) was obliged to go off his route a mile or more, the residents would not know within an hour or two when the mail should reach them.

There is no reason why this service should be entirely free. Boxes or drawers at the postoffices are subject to a charge for rent. The Postoffice Department might furnish the wayside mail-boxes and charge a rental of $1 a quarter for one family or 50 cents a quarter for each family having a key when more than one receives their mail regularly at the same box. Or, all who prefer could have the exclusive use of a mail-box by paying the full rent for it when it could be located at their entrance and bear the same number as their entrance, in some cases more than one being located in the same block—41 and also 41a Granville Way, for instance.

Or, if this service was arranged by the country people who get their mail at the same or neighboring postoffices entirely as a private or neighborhood enterprise, the expenses need not be burdensome. If one man, cart and two horses alternating each day could travel over 25 miles of roads in one direction rendering this service, and on alternate days make a different trip of the same length, he would thus serve 50 miles of roads. Upon the basis of there being, on an average, four boxes to a mile, and the payment of $1.50 per box per quarter, or $6 per year, it would make a revenue to the postman of $100 per month, which should pay him fairly well for his time and for his horses and cart, and the expenses to the people receiving the service would not be excessive.

The postman might also act as expressman upon his own account, making purchases and doing little errands which would add something to his income and be a convenience to the country people.

The request for the bottle of horse liniment or pair of sheep shears wanted could be written out and placed in a conspicuous envelope addressed to the postman, which envelopes he himself would furnish. The money to pay for the articles wanted, together with the 15 or 20 cents for the postman's services, could also be placed in the envelope and be deposited in the outgoing mail-box, or be charged to the purchaser by the dealer, and after the next trip he would find his package in the incoming mail-box.

One of the San Francisco mail-collectors informed the writer recently that between 6:40 A. M. and 4:30 P. M. he drives 340 blocks and makes about 200 stops at boxes. For this service with his horse and cart he receives $108 per month. He uses regularly but one horse, but the poor old fellow looked as though his mail contract was too heavy for him. The collector is obliged to hire a second horse occasionally, so that his net earnings are but about $100 a month. The 340 San Francisco city blocks would probably be about 25 to 28 miles. The streets are paved, but are hilly. In the country, with good roads, one man, cart and two good horses alternating daily should serve 60 miles of roads every second day from one year's end to the other.

These mail-roads should be selected with two objects in view—one to locate the route in the most thickly-populated part of the country where the service would be of benefit to the greatest number of people, and the other to locate them upon the most important *through roads*, for the influence of the mail delivery upon the roads traveled by the postman must certainly be to make them the very best in all the country. Also, if free-mail delivery in the country should be conceded only where the roads have been named, measured and blocked off, and the roadbeds themselves have been put in proper condition, it would be a constant and powerful influence in favor of good roads, as as well as rural progress from one extent of the country to the other.

Aloha Farm, 41a Granville Way, Walnut Creek, Contra Costa Co.

THE APIARY.

Bees and Honey.

There is but very little honey reported upon the market this year, either in comb or extracted. It would seem that if there is as much adulterated or imitation honey made as some people would have us believe, the manufacturers of it would keep the market well supplied.

At the annual meeting of the North American Beekeepers' Association, Prof. Lintner, State entomologist of New York, said that there was as yet no conclusive proof that spraying with arsenic killed any bees.

At the meeting of the Ontario Beekeepers' Association, the president claimed that nearly 500,000 pounds of honey are now annually produced in that province, and that they were furnishing a wholesome, cheap food, not a luxury, as there is more nutriment in one pound of honey than in five pounds of fat pork. He has kept from 10 to 150 col-

onies, and his average is about 50 pounds to a colony, though he has taken 100 pounds. He winters his bees in the cellar, and the average loss of colonies is from two to five per cent.

The Foul Brood Inspector of Ontario reported visiting 197 apiaries, and though there must have been over 1000 cases of foul brood, but did not examine all hives where he found the disease, simply instructing the owners how to treat it. Where he examined them a second time, was generally well pleased with the success in ending it, but had to have six hives burned.

The Legislative Assembly of Ontario passed an act last spring, which provides that no person, in spraying or sprinkling fruit trees in full bloom, shall use "any mixture containing Paris green or any other poisonous mixture injurious to bees." The evidence taken was strong in advocacy of the idea that such spraying would kill bees, though no one was sure of it, and also that just after the petals of the blossoms fall would be quite as effectual in destroying insects.

Prof. Cook in Bee Culture protests against spraying trees with arsenical poisons while they are in bloom, and says serious losses of colonies and brood have occurred in some cases in Michigan and Illinois.

A writer in the Bee-Keeper's Guide says that he thinks his bees need salt as much as the horses, hogs or cattle, and he keeps a supply of water that has been slightly salted near them, and they prefer it to fresh water.

Cuban honey comes to the United States without duty. It is of fine quality, and American honey producers have filed a protest against the free entry with the state department.—Cultivator.

The Stock Yard.

The "Show Condition" in Live Stock.

To the Editor:—Mr. Jas. M. Hunter, of Bakersfield, takes exception to some of my comments on the cattle at the State Fair, especially in regard to the *condition*.

I am fully in accord with the principal advocated by him in regard to pampered show stock, never having been an advocate of that system of excessive feeding, which is enfeebling in its effects upon nature. All who go to the the fairs to see the live stock, however, expect to see show cattle in show condition, which need not mean that a beast be uselessly fat. Mr. Hunter does not say that he was at the State Fair; if he was he would not see any excessively fat Shorthorns, excepting, perhaps, the sweepstakes bull, which I think has been overdone, probably not to the impairing of his constitution, yet, somehow, he shows a want of that activity in his movements, which one likes to see in a bull that is being kept at the head of a herd.

I am well aware of the rule in regard to excessive fatness, that Mr. Hunter refers to, but whether it has ever really been put in force at any of the principal shows or not, I cannot say. I do know, however, that in California the fattest animals have generally taken the premiums, shape and other things being equal, and it is probably so with beef breeds, in nine cases out of ten, the world over.

The rule in itself is all very well, and if it could be enforced would do good, but the great difficulty with regard to it has been, and is likely to be, where to draw the line between fatness and excessive fatness, and who is to do it?

The discrimination, should any be thought expedient, will rest with the appointed committees of award, unless special committees are purposely appointed.

That much has been done to injure the reputation of some breeds of cattle by people buying pampered animals and failing to keep up the high-feeding, there is no room for doubt. In cases of this kind it is unfair to lay all the blame on the *breed*. If people buy hothouse plants they are expected to keep them in hothouses, which, both in principal and in practice, applies with equal force to animals.

In saying that Mr. Hill's Lucerne Duke was not in show condition and that he had evidently come right off the lucerne pasture was not said with any idea of detracting from the merits of the bull, and I did not for a moment suppose that anyone would construe it in that way. For certain reasons, connected with the breeding of the bull, I did not feel at liberty to say much, therefore I contented myself with stating what I personally knew to be a fact, and one that stands rather to the credit of the animal than otherwise.

For the same reason, I left unnoticed, some may think unjustly, the same owner's Fidget 8th, one of the best and certainly one of the most useful-looking Shorthorn cow on the ground. She, too, had come off the lucerne pasture. Her condition was good; in size, shape and style, if you please, she was equal to any, and what is not of less importance, she carried one of the best-shaped udders I have ever seen. This cow was exhibited in the class of three-year-old cows, but was not even looked at by the judges, though among onlookers, during the second week of the fair, she had more admirers than any other cow on the ground, these being attracted by her beautiful head and sweet countenance, short legs and well-rounded ribs, broad, square hind quarters and thighs, the latter being well and squarely filled in with her splendid bag of milk, which made itself felt in the Shorthorn milking test.

To return to the subject of feeding and condition, I copy a paragraph from my report of the Petaluma fair, which, I think, clearly defines my position in regard to the matter:

> Thus it is with animals that have for some generations been dependent on having food provided for them, it becomes a fixed habit in the breed, whatever it is, therefore, those who buy good, well-bred cattle of any breed, that have this habit bred into them, should, by careful selection in breeding, and generous keep, (not pampering, as for obesity) endeavor to maintain that habit. It is a profitable one, in that it gives a good return for food consumed, which is the end aimed for by all good breeders.

Now I hold to the theory, which is proved good by practice, that good pasture on good land is the cheapest and best food for growing up a strong, useful and healthy race of cattle; but there are few places where the pasturage is so good all the year round that it does not need to be supplemented by some sort of hand-feeding, if it be nothing more than good hay, to keep the cattle in a thrifty and growing condition the year round. The continuous growth of animals with a steady gain in weight, from birth onward, is the breeder's main stay. By feeding with this object in view only can he make a success of bringing animals to early maturity for the butcher, while a steady and vigorous growth in young cattle intended for the dairy will bring them into profit a year earlier than is the case with young stock that are allowed to lose in winter the flesh they have gained in the preceding summer, which is very often the case under the ordinary circumstances in which farm or dairy stock is wintered.

We sometimes hear people say cattle can be judged better when in low condition; "one can see the frame better," which is true enough. He can also discern between a coarse-boned and a fine-boned beast, along with certain indications of thriving qualities, judging of these in a great measure by the hair and handling, which, if soft and pliable, with the addition of a placid, contented look in the eye, may generally be depended upon as signs of thrift and well-doing in an animal. These will for the most part be found in the finer-boned animals as it is very rarely that a coarse-boned one is a profitable feeder.

With a lean animal it is something of guess work as towhat it is likely to do to say nothing of what it *will* do in the way of taking on flesh, but with one that is fairly fat, and if ripe for the butcher so much the better for the purpose, one can tell what it hasdone, and see how the flesh is laid on and, to a certain extent, judge of the quality by the way itis put on. If the thighs are thick and heavy, the loin and ribs well and evenly covered, the crops or chine broad across, with a good heart girth below it, making that part as nearly circular as it is possible for it to be in an animal with flesh distributed evenly and smoothly over the whole carcass, then we know there is a good butcher's beast, whereof the flesh is witness.

We see what the animal has done and by that may form an opinion of the capabilities of other animals of the same blood and breeding. That is what we want to do when we go to a cattle show where we expect to see a gathering of the choicest cattle of the country. We want the breeders to let us see what some members of their herds are capable of doing in the way of making a profitable carcass of edible meat, without grossness at as early an age as is compatible with the production of good beef.

Early maturity is the order of the day in these times of low prices for it is well-known amongst practical feeders that the cost per pound increases with the age of the animal.

Let us have better cattle if fewer of them. Better stock means better feeding, and vice versa.

Your Own Correspondent.

The Dairy.

Regulation of City Milk Trade.

At the last meeting of the San Jose Chamber of Commerce, Dr. E. A. Clark read a paper entitled "Milk," as follows: "In obedience to your request to prepare a paper in reference to the milk-supply for this city, the following is respectfully submitted: I have had no time or opportunity to consult authorities or statistics and, therefore, simply present a few plain statements. Milk is one of the most important foods. It is a necessity to rich and poor alike. It enters every household, is on every table and is used by nearly every human being in civilized life.

"Milk is exceedingly sensitive to all electrical and meteorological changes. It absorbs with great avidity all ill-smelling odors, all impurities brought near it, and thus becomes a powerful factor in conveying and spreading disease. Many epidemics of typhoid fever have been directly and indubitably traced to milk from cows which drank from water poisoned with human dejecta, which contained the typhoid-fever bacteria from typhoid patients. It has thus been shown that the exciting poison of at least one disease can be conveyed through the system of the cow to her milk and cause disease in human subjects. This demonstrates that danger to consumers of milk lurks, not only in impurities near to milk after it is drawn from the cow, but also in the very food and drink which constitute her pabulum.

"What do these facts teach us? Certainly the lesson is easy and simple. The utmost care and caution should be used in preserving this universal article of the people's food from all sources of contamination.

"How shall this be done? Shall we continue to leave the matter in the hands of those alone whose pecuniary interest it is to make the most money from the least outlay of labor or expense? Not only is milk subject to contamination from the food and drink of the cow and from proximity to impurities which may be absorbed by it, but we all know that it is frequently adulterated, in fact almost manufactured outright. The very water with which it is often diluted may come from some impure source and poison whole families, to say nothing about drugs and mixtures used to simulate genuine milk.

"What then does common prudence point out as a public necessity? The county and city authorities should establish a most thorough and rigid system of inspection of all dairies which supply milk for our city and suburbs. Every place where milk is handled or kept should be absolutely clean and pure. The sources of water-supply should be thoroughly examined from time to time. The food given to milch cows should be subject to rigid inspection. Samples of milk should be frequently analyzed. None of these examinations should be made at particular times, but at unexpected and irregular intervals.

"There should be some kind of permit or license issued to those engaged in the milk business—of course, with very little cost to them—without which no one could engage in it. When any one is found to be diluting or adulterating milk, or permitting the use of impure water or food for milch cows, their right to vend milk should be taken from them. I am not, in this short paper, attempting to enter into details, only briefly trying to indicate a general policy. Next year we may be visited by the Asiatic cholera. We should use every reasonable precaution to avoid this scourge as well as all other diseases. If any legislation is needed to give our county and city authorities the necessary power in this matter it should be procured at the next session of our legislature. This is a very important matter.

"There is a constantly-growing complaint in all our large cities about milk impurities and consequent danger to the health of all classes, but especially to the children. Our city is steadily and rapidly assuming the proportions of a large inland metropolis. Shall we not now take steps to protect our children from disease and death? With cleanliness at home, clean streets, well-flushed sewers, pure water, pure milk and other food we can snap our fingers in the face of all zymotic diseases and go steadily on our way rejoicing in good health, the necessary basis of all human happiness."

Dairy Notes.

The sooner the milk is strained after it is drawn from the udder, the better the proportion of cream obtained, and the better the cow is for butter purposes the more important this becomes.

Those who like sweet-cream butter are usually willing to pay a fancy price for it, but it does not possess the keeping qualities of butter from well-ripened cream, and should be quickly sold and quickly consumed.

The dairyman who makes good butter should never send out any without putting his name upon the package. At first the butter will give him a good reputation, and after a while his name will recommend the butter. But he must be careful to have all that he marks up to his usual standard, and sell all that which is a little "off" in flavor or other qualities for what it will bring without the name.

Milk that contains 13 per cent of solids is called rich milk, but if a very large part of these solids came from the outside of the cow or from the stable floor, we should call it "too rich for our blood," and take a thinner article.

An exchange says that "three beef animals can be grown and disposed of while one butter animal is being fully developed," which is true, as good steers can be fitted for market at two years old, while the butter cow seldom reaches her best until at least six years old, although she may have been paying her keeping for at least three years before that. But after that age it takes no more to make 300 pounds of 25-cent butter than it does to make the same amount of four-cent beef. There is where the profit of the butter animals comes in, or should do so if rightly managed.

Some of the agricultural writers are advising the farmers now to "cull out and sell all animals that it will not pay to grain feed," but we believe it will pay to grain feed the animals fit for food, no matter how old, if they are healthy and thrifty. If we had one that we thought it would not pay to give grain to before selling, we should prefer to sell it to the fertilizer manufacturers or dealers in dead animals than to a brother farmer, unless we had a spite against him on account of some previous trade, and wanted to get even. That would be wicked, we know, but revenge is sweet.

If the man who raises his own heifer calves does not have good cows, it is his own fault usually.

Poor butter requires a good salesman to dispose of it, but good butter will find a market for itself. A breeder of high-class dairy cows lately set prices upon some of his surplus stock, but before the buyer accepted his offer he was induced to have the milk product analyzed. The result astonished him and led to a complete revision of prices. One seven-year-old cow which he had placed at a low price was found capable of yielding 16 pounds of butter a week, and another cow gave him a similar surprise, while one that he thought more valuable than either could not yield seven pounds a week. Test them before buying or selling.—Cultivator.

A Rich Fruit Section.

San Francisco, Oct. 15, 1892.

To the Editor:—One of the richest fruit sections in the State is the locality surrounding Hanford, Tulare county. Its raisins are famous; its peaches, pears and, indeed, all kinds of fruit, are superlative in beauty, size and richness of flavor, and command the highest prices at home and abroad. On the Templeton vineyard, near Hanford, Mr. H. P. Thornton, one of the owners, picked a bunch of grapes last month which tipped the scales at five pounds. they were the Muscat of Alexandria variety, and he has had the cluster carefully preserved and will exhibit them at the World's Fair next year. The grapes here grow to large size, some measuring over three inches in circumference. Three peaches were picked by Mr. Thornton the other day from three-year-old trees, ranging in weight from 17 to 19 ounces each. Is it to be wondered that California is proud of her fruit interests, with such a showing? Visitor.

The San Francisco lumbermen interested in controlling the cargo output of the coast have prepared a schedule of the amount of lumber each mill may cut under the pool arrangement. The schedule is based upon the output of 1891, and is unsatisfactory to most of the small millowners, who may be subsidized, although it is not the plan now to subsidize mills. The new schedule, if made, may, instead of subsidizing, increase the output of small mills. It is held that $9 per 1000 can be secured just as readily as $7 per 1000, if the output can be controlled.

The Petaluma silk factory buildings have been completed.

The Home Circle.

The Mesopotamian Well.

GEN. XXIV.

Written for the RURAL PRESS by LILLIAN H. SHUEY.

I will tell you a beautiful story,
A story so very old;
You'll say you have heard it a thousand times
As soon as my story's told.

Way down in Mesopotamia,
Where the walls of Haran stood,
There lived the Syrian household
Of Bethuel and Laban good.

Within the city's protection
Their home was roomy and large;
With room for the friendly traveler,
For his beasts and men in charge.

And the light and joy of that household
Was one who was very fair,—
The kind-hearted daughter of Bethuel,
With braided and shining hair.

She was wont to go at evening
With the women strong and tall,
Who went to the well for water,
Outside of the city's wall.

One night, with her pitcher brimming,
Up from the well's deep pool,
She bore on her head, upbalanced,
Her burden, fresh and cool.

And, lo! By the well there waited
A stranger of lordly grace
With servants, and camels, loaded,
That knelt at the drinking place.

And the stranger ran to meet her,
And said, "Let me drink, I pray?"
She lowered her pitcher kindly,
"Thou'rt welcome, my lord, this day."

Then she hasted and emptied her pitcher,
"Thy beasts, I will draw for them;"
And she hasted and ran to the water
And drew for the camels ten.

And the stranger marveled greatly,
For he was seeking there
Just such a maid of the Syrian house,
And she was his answered prayer.

He said, as he placed on her brow and hands
The golden tokens bright,
"Whose daughter art thou, I pray thee?
I would lodge at thy house to-night."

Then the maiden ran to her mother's house,
With the jewel on her head,
And showed them her golden bracelet.
Then her brother came and said

To the man, "Come in, thou blessed stranger,
Wherefore standst thou here?
We have room and straw for thy camels,
We will give thee friendly cheer."

They came and ungirded the camels,
And water was brought for their feet,
And they of the household hurried
And placed them meat to eat.

"Nay, I will not eat," said the stranger,
When the food they gently pressed,
"Till I do my master's bidding;
For my master is greatly blessed,—

For the Lord hath given him servants
And silver and gold, and all
The flocks and gold and servants
To Isaac, his son, will fall.

I am Abraham's servant,
And he has made me swear
To bring him a maid from his father's house,
A wife for his son and heir.

Thou art my master's kinsmen,
And *this* is the maiden fair,
Who gave me to drink and my camels
In answer to my prayer.

Now, deal with me kindly and truly
And my labor of love is done.
Will ye give me this lovely maiden
For a wife to my master's son?"

And they said, "As the Lord hath spoken
And brought thee to this place;"
Then Abraham's servant worshiped
And bowed himself on his face.

And he took from the camel's burden
Silver and jewels rare;
Raiments and precious treasure
He gave to the maiden fair.

So her kindred kissed and blessed her
At the early dawn of day;
And, her nurse and damsels with her,
She rode with the man away.

This is the pretty story
The dear old pages tell,
Of Rebekah, the Syrian maiden,
At the Mesopotamian well.

California Poppies.

Beside the sea, above, below
The wrinkled sun-burnt crags that bar
The ocean's onset like a foe,
And wild as wind and waters are,
The careless yellow poppies grow.

As tremulous as stars that glow
In fairer fields of light afar,
Cliff-born, but beautiful, they blow
Beside the sea.

O'er many a rain-worn rent and scar
Their rootlets tenderly they throw.
Nor storm nor solitude may mar,
Nor mists that wander to and fro,
The freedom that the poppies know
Beside the sea!

—Martha T. Tyler in Sept. Lippincott's.

Mrs. Lander's Property.

Written for the RURAL PRESS by M. PULSIFER.

[*Continued from last week*]

Mrs. Landers and Joe were late in rising next morning, for they had slept little over their scare. When the breakfast work was over they set about securing their valuables as best they could. Then came the house. The back door was fastened and wedged so that no one could shake it; the door leading to the diningroom was locked and the key tied to the knob, that it might not be pushed out and the door opened by any false contrivance; the other inside doors and windows were treated in a similar manner, but instead of tying the keys to the knobs they were taken out and the keyholes stuffed with putty, which Mrs. Landers said, "would sorter confound their wits, if they did get in." Lastly came the "big front door" and the gate; if it were possible to exert greater ingenuity upon these chief avenues of exit and extrance, it was done.

Mrs. Haply had arranged that Mrs. Landers and Joe should take lunch with them at twelve, and by half-past eleven they stood on the veranda waiting for Rufus who was coming in their carriage to take them to the Haply mansion.

"I say, Joe, don't you think *Rufus* and *Haply* is about the softest and most triflin' combination of names that were ever j'ined together? I do, an' when I think of 'em long, they make me sicker'n weak coffee!"

"Ma," says Joe very quietly, "I can imagine circumstances and events that would cause you to think more of the man and less of the name; suppose, for instance, that I was happily married, and—"

"Yes; then it is again the very thing I knew, and that miserable, shiftless name. Thank the saints and prophets, your pa didn't give me a name that my darter can pun on. Never in all my life—"

What it was we shall never know, for at that minute Rufus drove up with a splendid span of black steeds which Mrs. Landers said "jus' matched the driver," but the sight of which always softened Mrs. Lander's heart, for she declared they reminded her of the time "when John was a livin' and Joe a little gal."

On the way up town, Mrs. Landers talked more to Rufus than was her wont; she even told him what she saw at the window last evening, and gave him her opinion, in full, of circus men, to all of which Rufus was so attentive that Mrs. Landers was quite happy and did not seem to remember that it was the first time she had permitted herself to more than pass the time of day with him in years.

"Mrs. Landers," ventured Rufus, "Joe has been taxing my credulity severely by telling me that you never before went to a circus. Is it true?"

"Mr. Haply, it is; and I'm of a mind that I oughter be in better business to-day than breakin' so honer'ble record in my old age."

"Why, ma, there is nothing dishonorable in the performances at a circus. I'm sure you will be be enchanted, and will not believe your eyes again for one month, at least."

"Neither do I believe, nor never will, them flarin' billposters with their antiluvian animils an' outlandish womin! Then, there's that ere Sheby and Sol'mon affair! Talk to me about the wisest man a holdin' up an infancy by the heels when he'd know sich doin's would cause appoplexic of the brain! But now that I've got started, I'm goin' to the circus jus' the same."

A few words about the Haplys may be in order here. The two families came to California together. Both were wealthy at the time, but Mr. Landers lost almost his entire fortune in the mines in less than ten years, and dying soon after, left Mrs. Landers and little Joe poor. Joe was a bright girl, and before she was fifteen found out what she was good for, and turned her discovery to account, as before mentioned. Mr. Haply died about the same time as Mr. Landers. His business had been in the mercantile line; he had prospered and left a large property. Rufus had a good business of his own as surveyor and civil engineer. The estate was settled up at once and the proceeds judiciously invested, leaving Mr. Haply Jr. free to pursue his own chosen vocation. Joe and Rufus had been raised together as playmates, and Mrs. Landers always liked him as a child, having about as much care for the boy as she had for her girl; but as he grew toward manhood and still retained his preference for Joe, Mrs. Landers' feelings apparently changed, and she had come to treat him with studied coldness. Rufus understood it all, but appeared quite unconscious, hoping the time would come when she would be herself to him again, for she was but acting a part. He had never given her the least offense, and memory told him that deep down in her heart she liked him, and so she did. Her two pretended aversions to him now were his name and his handsome presence, of which she never lost an opportunity of reminding Joe.

Joe Landers is a handsome blonde of twenty-eight whom Mrs. Haply admires and loves, and who would make many an arrangement of pleasure for the young couple if Joe would hear to it; but she does nothing without the full knowledge and consent of her mother, to whom she is very devoted.

I will pass over the circus, its effect upon Mrs. Landers and her quaint comments, and accompany the three back to Mrs. Landers' home.

As they came in sight of the house, Mrs. Landers remarked that "everything looked safe an' right." But the gate was open, and the dear old lady said kindly to Rufus as he assisted her to alight: "You must not go until we have gone through the house."

While her mother was unlocking the door, Joe was talking with Rufus; but not many words were exchanged before they were startled by a scream from Mrs. Landers, who speedily fell in a dead faint. Before Joe could reach her mother, Rufus had sprang from the carriage again, and without securing his horses, was at the side of Mrs. Landers, who was lying across the doorway. Joe would herself have been shocked, and might have fainted had she first looked upon the sight which met her mother's eyes. Everything in the room was turned upside down and inside out and the carpet torn up. This was the condition throughout the house. Every article they concealed was gone and some wearing apparel, including an elegant dressing-gown of Mr. Landers which his wife had thought too much of to part with. The Landers money was invested, and as they only had the interest, no great sum was ever in the house at any time, and this day none at all, for Mrs. Landers had it in her purse.

When she revived and again realized what had happened, she broke down and bewailed most piteously "the awfil calamity that had come upon her old age," and she told Joe she hoped "this ere circus would last a lifetime. But," broke off the old lady, "why don't you shout for the police, Rufus Haply, if you're a man? Joe, can't you do nothin' but walk round? Let me get out, I'll holler fire! murder! burglars! or anything else to 'rouse the people to the danger of their life and property!"

While Rufus did his best to console her mother, Joe *was* "walking around," but not aimlessly. She was ascertaining as far as possible, in short order, the number of articles missing for Rufus to report at police headquarters at once.

When Mrs. Landers saw Rufus about to depart, she informed him that he shouldn't leave the house an inch unless he solemnly promised to come right back and stay with them till midnight, for she would "never shut her eyes again until they lighted on them stolen val'ables."

Rufus promised but too gladly, whereupon the old lady kissed him just as she did years ago. It was so sudden and unexpected that Rufus still thinks it was a part of the bustle and disorder of that memorable occasion.

She called out after him "not to eat a bite at home, but come straight back and take supper with me an' Joe, fur I'm so cast down I'll not eat a bite unless you do. But the knives, forks an' spoons are all gone!"

These were her two first invitations to Rufus to come to their house, and he was rather dazed by the change that had come upon the old friend of his youth at last, and wondered how it would all end, and if it would vanish with the night.

"Joe, you take Rufus an' go round the house an' lock every door an' winder, and barrycade 'em besides; then you two set down and play chess, checkers or somethin' else, so I can look on an' pass the time, fur I feel terrible like and all broken up."

Mrs. Landers was instantly obeyed, and soon her first order was executed. A few minutes more and the three were seated at a small table, all seemingly interested in a game of chess; but I believe Mrs. Landers was really the one interested at all; not in the game, but Rufus. She sat very near him, and scarcely took her eyes from his face once. Between the moves he had told stories calculated to keep up the old lady's hope o' recovering her goods. Whether true or invented for the occasion does not matter; they were soothing, but some mysterious means led her to speak of her favorite aversion to Rufus, but she was careful not to be personal.

"Mr. Haply" (she never called him Rufus in these days when addressing him), "do you believe there's anything in names? I do. I'm jus sure there's names as prevents persons from bein' or doin' anything worth shucks!"

Rufus had been more than once that day inwardly convulsed with laughter, and at this unexpected outbreak of Mrs. Landers, he gave vent to his mirth and laughed until he cried. The old lady was surprised, and sat with dumb amazement pictured on her face.

"Yes, Mrs. Landers, there is much in names, as to sound and significance; regarding their influence upon character, I don't know. Many persons are of your opinion that the name makes or mars the individual. There is Madame Paul Minck, the Paris anarchist, and mother of two sons, who, if they live, should show how much there is in a name, and turn out to be heroes after their fond parent's own heart. The first was christened Lucifer Satan Vercing troix, and the second was to be known as Apottacus Blongin Revolution. How does that impress you?"

"I can't predict what the sons of sich a fool mother might be; but the hull thing makes me sick and tired. It's 'triflin' with Providence. I don't believe in common people havin' the liberty of names, no way. They oughter be taken from the Bible and given out by law; then there'd be no more fool nonsense about the bus'niss."

"Ma thinks Landers is immaculate and incorruptible. But she is mistaken. There is nothing in a name but—letters, and one may make a surprising difference. Just think what our name would be if an S or G were prefixed!"

"Joe Landers, I never seed your equal, to conger up sich onheard things! If anybody ever a'tempted to put them ar letters onto my name, I would sue 'em for libil and prosecute 'em to the end of time, there!"

Rufus was again thrown into a fit of laughter, in spite of himself, and arose, saying the hour was late and he must be going.

He was not allowed to do so until he had inspected the premises to assure Mrs. Landers that no one "was prowlin' round fur more plunder."

At half-past eleven the three stood at the front door, Rufus holding Mrs. Landers and Joe each by the hand, bidding them have no fear for the night nor doubt for the morrow, that all would be well.

Just then a light shone faintly through the inside blinds of one of the windows across the way.

Ah ha! Is that what you called haunted, Joe? Mrs. Landers, do you approve of my investigating that appearance?

"No! Don't you go near that ar evil place! It's the old one hisself, holdin' high carnivil with the powers of darkness!

Rufus did not believe in the mythical "old one," and said:

"Really, Mrs. Landers, I have a presentiment that some good may come of my going. Now you and Joe go in and shut the door until I return in less than ten minutes."

"Joe Landers, I always told you Rufus Haply was a fool, an' I'm just sorry now I hadn't told him so when I had a chance. Runnin' into infernal danger with his eyes open, a leavin' two women here alone to be killed! Oh! I wish he'd never been born, I do!"

"Ma, you are altogether inconsistent. You care nothing for Rufus, and yet you talk as though your sole dependence was upon him. I don't understand such contradictions of speech and conduct."

"Wal, I don't care what becomes of him. I'm jus' miser'ble and wish I had died when your pa did, there!

Rufus returned with big eyes and a bigger story. In one of the back rooms he saw, through a rent in some hanging at a window, five men squatting around and busied with various bundles, boxes and odd packages. He could not go on for Mrs. Landers.

Oh! my soul! have mercy on them ar sinners a handlin' my property! Give me somethin', quick' so's I can go an' confrunt the vil'ains face to face! They'll not deny it an' want no process of law. I'll just go an' take what belongs to me, an' others smart enough may do the same if they've got a speck o' sense."

"Dear Mrs. Landers, all depends upon the greatest caution. If your stolen articles are in the hands of those men, you must be guided by reason and listen to me, if you would recover them. I'll go at once to chief of police and give full particulars, then return to you and Joe, as you cannot sleep while this play is going on. I'm just in time

for the 12 o'clock car. Shut this door and lock it, and keep still. Good bye."

In half an hour Rufus returned, and in less than ten minutes more, six dark figures came rapidly down the street. Rufus went out to meet them and they all moved toward the house to be raided. Joe had difficulty in keeping her mother indoors, until the report of pistols broke upon the stillness of the night. The struggle between officers and thieves lasted some thirty minutes. Then a wagon was driven down from the corner where they had alighted, and besides the goods there were two prisoners handcuffed and three wounded men put into the vehicle, accompanied by two policemen, while the other four walked two on a side.

When the shooting commenced, Mrs. Landers went into hysterics, and eased her mind as usual.

"Oh! dear me! What have I ever done that I must come to sich times as these ere? Joe, I hope you will acknowledge now that them ar circuses are the old boy's own doin's. This ere thing all comes of Rufus Haply, an' I never want to set eyes on him again. I remember your pa told me I might live to see religious an' civil war, but I never dreamt of its comin' right to my very door! War and rebellion's what it is! I've not a doubt that that ar Sutag and Evins and the Daltons and them ar Mex'can brigonders, as they've been scouring the hull country for and couldn't find, is right here in that ar house, a hull grist and pile of 'em together! Oh! I do wish Rufus would come!"

The man Mrs. Landers saw pass the window the evening before the circus, had overheard all their conversation. Their house was entered by the front door, as everything indicated, by a false key, and locked again. The discovery and capture of the five men threw light on half a dozen burglaries of recent date in the town.

The house in which they were taken had been a place of storage for stolen goods, until otherwise disposed of. Search next day revealed a large quantity of miscellaneous merchandise, that was all recognized by its several owners.

Next morning Rufus came down in his carriage for Mrs. Landers to go and identify her property. Coming home, she said very plain but comforting things to him as follows:

"Mr. Haply, I don't deny that I hold you responsible for this hull a'fair. If you hadn't invited Joe and me to that ere circus, nothin' would'a been stolen; but if nothin' hadn't been stole, that ar pesky gang never would'a been found out, for under no other consideration than our house bein' burglarized, would I permitted you to spend a evening at our home, because I never intended to give you any encouragement as a son-in-law. But now, as you've proved what's in your name, as I always told Joe you would when you got a chance, I don't feel proper in standin' betwixt you two any longer; and now you may have it all your own way, exceptin' that you'll go to no more circus, and shall have nothin' to say about any names in the future. There!

A PRETTY PICTURE.—During the Mississippi Valley Suffrage Conference at Des Moines last week, the crowing of a baby made some of the audience turn their heads, and they saw a pretty picture. Mrs. Catharine Waugh McCulloch, a beautiful young woman lawyer, who is an active equal rights worker in Illinois, had brought with her to this conference her young son, a fine, bright-eyed baby, good-tempered and happy, but full of wriggle and finding it hard to keep still for a moment. As he waxed obstreperously merry in her arms, she had taken him to the window at the back of the hall, and was trying to hush his crowing, but without success. Outside the window, the folds of the great Wyoming flag were visible, waving in the wind over the heads of mother and baby. As we looked at them and remembered that the parents of that baby were both of them lawyers and both of them suffragists; that their marriage ceremony had been performed by Rev. Anna H. Shaw, and that the bride had gone to south Dakota for her wedding trip to speak in the woman suffrage amendment campaign, it seemed that several instructive morals might be drawn from that picture, especially for the benefit of those who predict the destruction of the home and the extinction of the race as a result of the acceptance of equal rights.—Alice Stone Blackwell.

LITTLE BROTHER—"Mr. Johnson, won't you go and stand before the window?"

Mr. Johnson—"Certainly, my little man; but why?"

Little brother—"Oh, ma says she can see through you. I want to see if I can."

YOUNG FOLKS' COLUMN.

Master Rudolph Bolensk.

Written for the RURAL PRESS by KATHERINE BRYANT NOLAN.

Rudolph Bolensk sat upon the front seat of the yellow-wheeled wagon belonging to the firm of Bolensk & Polaski, Los Angeles. He held a beautiful bouquet of Madame Laurette roses and dark red carnations in his small hands. His wide-brimmed, brown straw, sailor's hat was placed carefully between himself and his friend, Jim Whitby, and a fine halo of little flaxen curls set off his delicate face and blue eyes.

Rudolph's full attention was concentrated upon the delicate nosegay. He had received special instructions regarding the proper manner of holding it, lest the beautifully ornamented foundation of the flowers should become crushed. Josie Myers had given the bouquet to him with many qualms, for she was quite sure that the nosegay was doomed to destruction were Master Bolensk allowed the handling of it.

Josie was the girl who took the orders, but Rudolph was the well-beloved son of Herr Bolensk, and entertained an opinion that the son of the senior member of the firm was well able to safely deliver the biggest posy that any "order" girl ever saw.

"I tan tarry it, Jothie," he had said as he looked down upon the brand new knickerbockers and put his hands down deep in the pockets.

"You'll drop it and soil the ribbon," Josie had said despairingly.

"I won't drop it, Jothie."

"Come, hurry up, there!" Jim had cried from the sidewalk, and Josie gave an extra artistic snip on the ribbon ends with her small scissors as he spoke. She had then followed Rudolph out and placed the flowers in his hands with rather an angry little flirt. If anything happened to the order she would be blamed for allowing Rudolph to have the the least thing to do with it, and if the orders were belated Jim would be at fault for permitting any parleying upon the subject. So neither of these two people were in a very good humor.

Jim drove off rather furiously and Rudolph kept one eye on the notched ends of the blue ribbon as they rode up the steep hills. There was a fine stone mansion set up on the side of one of the hills like a ruined castle, only it was quite new. It simply reminded one of the fascinating castles one reads about in some books, and Jim stopped Bingo and sprang to the curbstone.

"Do I dit out here, Jim?" Rudolph asked.

"Oh you needn't git out, youngster. I'll have that bouquet inside in a jiffy."

Rudolph looked at Jim's hands and Jim glanced down at them with some confusion. To tell the truth they were rather grimy.

"Lift me out, Jim." Rudolph spoke in the tone of a person who expects to be obeyed and so Jim Whitby lifted him out. He toiled up the stone steps and Miss Rushmore came out upon the veranda as he went up the tesselated pavement, still holding the superb bunch of exotics in both hands.

"I tum to 'liver your flowerth," he said.

"That's very kind of you, you dear little boy," the girl answered. "Who is that magnificent bouquet for?"

"Jothie thaid the name was on the card," Rudolph said. He looked very much flattered.

"Oh I see, they are for me. Won't you come in? I should like to talk with you."

"No, thank you," Rudolph answered in his politest tone. "Joe is waiting an' tho I muth go."

He turned quickly and went down the walk, but as he reached the stone stairway he looked back, like the disobedient wife of Lot, and like her he immediately met with disaster. Rudolph lost his balance and disappeared.

Miss Rushmore ran to where he laid upon the first stone landing and knelt beside him. The fine nosegay laid upon the floor of the porch when the footman carried Rudolph into the dimly-lit hall, and Joe drove off furiously for Dr. Burdett and Mrs. Bolensk.

When Rudolph opened his eyes he looked into the soft, tear-dimmed eyes of his young mother and said:

"I 'livered the flowerth an' thee wath a buful young lady."

"Yes, I know, darling," Mrs. Bolensk answered, smiling through her tears and whispering something to the gray-haired physician who stood beside her. Dr. Burdett nodded his head and smiled at Rudolph.

"Jothie thaid that I'd muth it, but I—"

"The bouquet was in beautiful order, Rudolph," Miss Rushmore interrupted. "I shall tell every one how very carefully you brought it and delivered it."

"We'd better go home now, mamma," Rudolph said, sitting up very straight. He was rather dazed and did not seem to wonder at his mother's presence, and he acted as if he supposed that Dr. Burdett belonged there.

Rudolph rode home in his mother's victoria and the doctor declared that he was as good as new. "No broken bones this time, young man," he said laughingly.

Master Rudolph Bolensk has decided to be a doctor when he grows up. He considers it a very interesting and useful profession. Although Dr. Burdett persistently recounts the hardships of a physician's life, Rudolph is nothing daunted.

"Well, you thee it makth it very bad to break oneth bonth unleth there ith a lot of doctorth to thet them," Rudolph always answers, wrestling mightily with the little hissing aspirate which is such a stumbling-block to him on the royal road of progress.

The Reign of the Good-Luck Horseshoe.

Written for the RURAL PRESS by DUANE MORLEY.

It was the dining parlor with its gaily bedecked cash counter, its tastily furnished sideboard, its chairs, its nicely situated tables, and its pleasant proprietress and urbane usher.

Upon its peg just back of the cash counter, in full view of each fellow article of furniture, and where, too, it could cast its spell upon each entering and retiring customer, hung the good-luck horseshoe, magnet of fortune. Its graceful oval was twined with brilliant orange velvet, and its positive and negative poles each sharply defined and belligerent. Days passed. The broom in the corner was new, as was also the proprietress herself, new in the business, yet determined upon success.

For a week the increase was slow; then the floating trade, eager for change and aware of the newer venture, thronged in. And then it was that the proprietress smoothed the velvet-twined magnet lovingly, and patted its perfect oval as she said: "You are my talisman, aren't you?"

Then trial hours came; the novelty wore off and the floaters found a newer field; neither did advertising reattract, nor the changing of the chef and the cuisine reinvigorate.

The business was doomed and it drooped. The proprietress, now disheartened, cast reproachful, even angry glances at her once-loved talisman. Then bills due drifted in like snowflakes, and in the storm contentious voices were heard.

Even the clattering crockery, the clanging cuttlery and clinking crystals seemed to say to one another: "It is the magnet's fault; his charm is broken; let him be deposed." Soon, too, there were ominous occurrences; for the end was near. In the dark night hours a masked shape moved about, and gaseous, pungent odors followed him. Then alarm bells rent the air. * * * The morning disclosed a mournful scene. The chairs and tables of the dining parlor were charred, their drapery of cushion and cloth scorched, and each waiting vessel filled with the debris of conflagration.

The good-luck horseshoe still hung upon its peg, its wonted air of complacency changed to a look of despair, its oval blackened and its gaudy orange velvet scorched.

"How now, Mr. Talisman?" wailed the cinder-swept crystals sorrowfully.

"Now we are in the soup," responded the magnet *ironi*cally, "and the soup is sooty and awful."

In the House of Detention a man is held for arson—against dishonesty there is no material charm, and the reign of the good-luck horseshoe is at an end.

"THE doctors is always gettin' up a lot of new diseases, and the druggists is inventin' new nostrils to cure 'em," said Mrs. Partington. "There's Mrs. Jones has tonsors on her throat, and Mr. Jones has ulsters in his. Miss Smith has hermitage of the lungs, and her mother-in-law has two buckles on hers.'

FASHIONABLE WIFE—"Did you notice, dear, at the party last evening, how grandly our daughter, Clara, swept into the room."

Husband (with a grunt)—"Oh, yes! Clara can sweep into any room grandly enough; but when it comes to sweeping out a room she isn't there."

JACK—"I dined with Buskin the other day. He is a dry wit—called the turkey Douglas."

Tom—"Why?"

Jack—"Because it was tender and true."—*Truth.*

DOMESTIC ECONOMY.

Dangerous Use of Kerosene.

Building a fire with kerosene is becoming a fixed habit in this country, and should be discouraged by intelligent people.

At the City Hospital in Boston may be found at almost any time a victim of this dangerous habit. The only thing to be said in its favor is that it saves time and kindling—a trifling economy when compared with the serious, if not fatal, results which may follow.

The effect of the burn varies with the degree of the injury. Be careful in removing the clothes to save the skin unbroken. The contents of blisters should be carefully let out with a needle, and the cuticle pressed gently down upon the true skin. The first object is to exclude the air. This can be done by applying pure olive oil or vaseline. If the burn is slight, with only the surface reddened, dust with flour and cover with flannel or thick cotton wool.

If the surface be extensively burned the patient exhibits the sign of shock or collapse. In this case the skin is pale and covered with a cold perspiration, the pulse is rapid and feeble, with dilated nostrils and drooping lids. The patient lies in an apathetic state. In less severe cases there is nausea and vomiting.

Stimulants should be applied at once. Keep the patient's head low and apply hot bottles to the feet and sides of the body. Hot tea, coffee or beef tea may be given if it can be retained. When there is nausea, brandy is the best form of stimulant.

Every good housekeeper should do away with the possibility of this accident.—The Household.

CUSTARD PUDDING.—Take one pint of milk, stir into it gradually one tablespoonful of flour, the yolks of six eggs beaten light, sugar to taste, a flavoring of grated orange peel and a teaspoonful of brandy or jamaica rum. Finally, mix into it a teaspoonful of melted butter (which must not be hot), and pour into a buttered dish. Bake in a moderately hot oven.

EGG AND CHEESE SALAD.—Slice a dozen hard-boiled eggs, and put a layer of eggs in the dish. Grate on a thick covering of cheese, then another layer of eggs, alternating with the cheese till the eggs are used up. Sprinkle over the top a few capers and fine-chopped pickles. Pour over it all Mayonnaise sauce, and again cover with grated cheese.

CORN FRITTERS.—Two cups of cold, sweet corn cut from the cob or canned corn. Two eggs, one cup of sweet milk, one-fourth teaspoon of salt and half a teaspoon of soda two tablespoons of melted butter and thicken with flour to make a batter. Stir together; grease a spider with butter and drop in spoonfuls and fry brown; turn and brown other side.

BROWN SAUCE.—One tablespoonful butter, one tablespoonful flour, one-half pint of stock, one-half teaspoonful onion juice, one-eighth teaspoonful of pepper, one-half teaspoonful of salt. Melt the butter, stir until dark brown, add the flour, mix well, add the stock and stir continually until it boils; add onion juice, salt and pepper, and it is ready for use.

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

Fresno.

LARGE SHIPMENT OF RAISINS.—Reedley *Exponent:* Five wagonloads of raisins arrived at the depot Oct. 12th from the Carl Fruit and Wine Land Co., situated five miles east of Reedley. This is the first lot of a large sale of six carloads by this company consigned to the East, and is a better proof than any bare assertion of the adaptability of the soil and climate of the country surrounding Reedley to the culture of the raisin grape.

Kern.

SECOND-CROP RAISINS.—Bakersfield *Echo:* A visit to the Galtes vineyard, just across the river, will repay any one. About 20 men are now at work gathering the second crop of raisin grapes, and the amount of fruit the vines are yielding is something very gratifying. As one rides along the road at the end of the field. he sees each alternate row literally lined with trays of grapes. For rods at a stretch these trays lie as close together as they can. The foreman says the vines are yielding from 100 to 130 pounds each. The first crop gave from 40 to 50 pounds. Three pounds of green fruit make one of raisins, so from these two crops there is something like 50 pounds of cured raisins. They are worth about 4½ cents in the sweat-box, or $2.25 a vine. There are 500 vines to the acre.

FIRST RAISIN SHIPMENTS.—Bakersfield *Californian:* The Rosedale Raisin Vineyard Company on Tuesday shipped one carload of raisins to San Francisco and another to Los Angeles. This is the first shipment from here this season and others will rapidly follow. This season's crop is of the very first quality and will undoubtedly command the highest market prices. This infant industry of Kern is rapidly growing out of swaddling clothes, and by next year will be an important factor in the world's market. Those who have pioneered in this enterprise are already reaping handsome rewards. Three years ago a few hundred boxes comprised Kern county's entire product, while now it is a shipment by carloads.

Lassen.

A LARGE STOCK RANCH.—Amedee *Geyser:* J. H. Toomy, of Churchill county, Nevada, selected a tract of land of 11,000 acres, lying a few miles north of Amedee, on which to transfer his business of thoroughbred stock-raising.

Los Angeles.

FACTS ABOUT PRUNES.—Pomona *Progress:* Out of the many reports of large profits from the prune crop in Pomona that has been marketed during the past few weeks, we select only a few sample ones, to show how much actual money there is in growing the fruit in this valley. The Simpson prune orchard of six acres, out near Fifth street, has yielded a crop that sold to C. A. Loud for $2845, or about $466 an acre. The trees are seven years old. The six acres of prunes, only five years old, on the Seth Richard's ranch at North Pomona, have yielded a crop that has been dried, and Frank L. Palmer, the manager of the property, has been offered $1400 for the product. From 79 prune trees, about eight years old, on the Arnold ranch, south of town, 19,700 pounds of fruit were picked. When dried, the crop weighed 5120 pounds and sold at nine cents. The gross receipts for the yield were $460; the net receipts, $392. There are three acres of seven-year-old French prunes on the Kramer ranch that produced 55,800 pounds of fruit this season. The crop was sold on the trees for two and one-half cents a pound, or $50 a ton. A check for $1382 was given for the three-acre yield.

A GREATER ACREAGE OF DECIDUOUS FRUITS.—*Progress:* Unless all indications fail, there is going to be the largest planting of prune, olive, apricot and peach orchards in Pomona valley next winter, of any time in seven or eight years. Every day we hear of some one who is buying land, or making plans to buy, clear or plant the broad acres in Pomona before next April, to some or all these varieties of fruits. Several contracts have already been made for setting out prune and peach orchards here, and the nurserymen say they have the largest demand they have had since the citrus-fruit boom began, for young deciduous trees suitable for planting. Of course it is too early to make any kind of a correct estimate of the extent of the new orchard-making in the valley. Several well-posted men believe it will be about 1000 acres. The fact that Southern California has, in an experience of 10 years, been proved a most prosperous home for the production of these deciduous fruits, and the great profit there has been in their crops, at least seven years out of 10, has brought the attention of the public to the prune, peach, olive and apricot orchards as gilt-edged investments.

Plumas.

MOUNTAIN ORCHARDS.—B. W. Barnes, of La Porte, in Oroville *Register:* This section of Plumas county is situated in the neighborhood of 5000 feet above the level of the sea, and is close up under one of the summits of the Sierra Nevada mountains, but although the snow falls very deep, yet it is much warmer here in winter than in the valleys of the county, the thermometer seldom going lower than about 12 above zero. It is the deep snow which breaks down the trees and not the frost that prevents more fruit-raising up here, yet it will surprise many to know the extent to which fruits and berries can, with a little care, be raised on these hillsides and flat places. In the way of flowers, too, I think I can safely say that no town of its size at as high an altitude can boast of as many and as nice flower gardens as the little town of La Porte. I have said that fruit can be raised here with care. I will now give a few instances in which care has been taken, and mark the result. Many years ago ago Mr. Alex McIntosh, one of the earliest settlers of Plumas county and a pioneer fruitgrower of Goodwin township, went into the timber below here and made a location for a home now known as Forest Ranch, went to work with a will, stripped the hillsides and flats of their timber, and in their place planted fruit trees of all kinds, and now has one of the finest and most productive ranches in Plumas county. Some years ago my nearest neighbor planted in his garden, by way of experiment, a stray apple tree which he found that has been full of apples year after year, and now has them on. About ten years since, Mrs. Geo. Babb discovered growing at her back door what she took to be a young apple tree, and which she nursed with care; that same tree has borne fruit for years, and now hangs full. In 1879, Mrs. Tabor, of Gibsonvile, planted a peachstone in her yard, and gave the tree much attention. It has been bearing for years, and as I passed in sight of it the other day, I noticed the fruit hanging in clusters. As a specimen of what can be done in the way of growing berries here, I will say that Mrs. Robblee, of this place, has a patch of the finest strawberries I ever saw, from which she has sold $100 worth this year. From these facts, it will be seen that even in these mountains fruits, berries and flowers can be raised with proper care and attention.

Orange.

HOW THEY KILL SQUIRRELS ON THE SAN JOAQUIN RANCH.—Orange *Post:* Mr. James Irvine, the proprietor of the San Joaquin ranch, has had a large force of men at work for a long time killing the squirrels on his land. The squirrels have become so numerous and were so destructive to the grain that it was found necessary to destroy them if possible; poisoned wheat was used, the preparation of which was known only to the man who had the contract in hand. About 20,000 acres have been gone over at an expenditure of $4000, the owner to pay one quarter and the renters three-quarters of the expenses per acre. It is claimed that 95 per cent of the squirrels have been killed, or 1,000,000 in all. Plowing has already commenced on the ranch; at the present writing, the prospect for early rain is good, and we trust that the ranch people will all do well with their barley the coming season.

San Bernardino.

ORANGE NOTES.—Redlands *The Fact:* The orange crop now offers good promises for the year. This year for the first time the effect of the very extensive planting of the last few years will be manifest in the yield. From this on for 10 years, at least, each year should show a big increase over the previous year.

San Joaquin.

TO TEST DEEP-PLOWING.—Stockton *Republican:* J. M. Benson, of Ell ott, states that he has observed that his finest grain and greatest yield comes from a portion of his ground adjoining his orchard. He attributes this to the fact that he cultivates his orchard more than he does the grain fields. He intends to deep-plow one field this winter, replow in the spring, and sow to grain and watch the result. Mr. Benson runs a thresher, and for the past eight years has kept a record of the yields, and he has observed that the heaviest yields have regularly been obtained from lands that are pastured one year and cultivated the next year.

Santa Clara.

GRAPE NOTES.— Los Gatos, Oct. 12: The light showers had the effect of lowering the per cent of sugar in the grapes for a day or two. It is now back again, and if the weather remains clear may rise a little higher. Those who are unfortunate enough to have fruit undried say that the weather barely enables them to keep it from molding; that there is no force in the sunshine. Raisin grapes, of course, will have to be subjected to artificial heat. Since the experiment by the Jesuit Fathers, which resulted in making a first-class wine of the Muscat grape, few are cured into raisins. An experiment is being made with the white grape, Sauvignon Vert, with a view of making a sauterne wine. The White Riesling also belongs to the same family. Judicious experimenting with different kinds of grapes, either alone or as blends, will undoubtedly result in marketable wines, for it must be beyond all doubt that good grapes will, if properly handled, make good wines. Starting on this basis, wine-making promises a good future.

AN IRRIGATION WELL.— Permanenta Cor. San Jose *Herald:* The new irrigating well of S. F. Lieb is just completed, and it remains only to put up the machinery. This well is 200 feet deep, 100 feet of which is dug and the other 100 bored. It is said that a splendid stream was struck at that depth, sufficient easily to irrigate his large prune orchards. Such wells are frequent enough in irrigating countries, but this is the first of its kind in this land of springs and living water.

PRUNE NOTES.—Los Gatos Cor. *Mercury:* Fifteen years of uninterrupted prosperity in prune culture in Santa Clara county places it among the reliable sources of wealth. Other places may or may not equal it in the future. At present this county produces more than all the rest of the State and the product is increasing at a rate that will soon make it greater than all other productions. There is a fear among many that prune culture is be ng overdone. Let us consider it on the basis of the last crop, 24,000,000 pounds in round numbers. That would give each man, woman and child in the United States, saying nothing about other markets, only a mess or two. Not one person in ten has ever tasted them; not one in a hundred has anything like an adequate supply. The idea of overproduction is absurd. Ten times the present quantity would find a market. It is expected, of course, that the consumption will increase gradually with the production. Prune orchards may not always yield their owners $200 or $300 profit to the acre, as now, but the profits may go down much below that and still be much more than comes from the cultivation of the staples, wheat and corn, which are the largest sources of wealth in the United States. Owing to the nature of our soil and the character of our climate, we have little rivalry to fear with the Mediterranean prune, formerly the only supply for the world. These frequent showers, and even protracted rains in the summer, intefere seriously with the ripening and curing of the fruit. The foreign prune is not only deficient in sugar, but, owing to the necessary use of artificial heat, has a smoky odor and a decidedly decayed flavor, while ours is sweet, fragrant and wholesome, because sunshine does the whole work. There is no suspicion of pestilences and plagues in the California product. The Mediterranean country has been on the line of march of all the great epidemics for thousands of years. Every package of fruit from there seems like a Pandora's box, full of all possible evils. These facts indicate a great and permanent trade in the prune. Undoubtedly new varieties will appear that will be superior to that on which our trade was built up. Even now we have five or six for which especial merits are claimed. Economy in processes will also become an important factor in the future.

Santa Cruz

CONTRACTING FOR BEETS.—Watsonville *Pajaronian:* Contracts for the coming year are being made at the beet factory. Beet-growing has become one of the established branches of farming in this valley. At a straight price of $5 per ton there is no speculation about the crop and the returns are sure. It is expected that the beet acreage of this district will be considerably increased during the next year.

Solano.

THE RAPID RECLAMATION OF FERTILE BOTTOM LANDS.—Rio Vista *News:* Judge Smith has a fine tract of 600 acres on Brannan island, adjoining Isleton, of which this year he had 220 acres into barley, 130 acres into beans, and 70 acres in sweet potatoes, and other ranchers of the island have nearly the same proportions of their ranches under cultivation. The Judge says there is not a drop of water to be seen anywhere, and if no flood comes this season the entire island will be a rich garden spot next year. He thinks it is singular that the owners cannot come to an agreement and effect an organization, but he has done all he can do or intends to do unless brighter hopes of an amicable agreement are held out. The formation of a district, taking in Brannan and the lower end of Andrus island, is the Judge's idea of the most feasible plan of protection against high water.

Sonoma.

ON SENATOR FAIR'S RANCH.—Petaluma *Courier:* Ed. Phelps, foreman of Senator Fair's great ranch below Lakeview, reports the new mile race track nearly completed, and says that it will prove a very good track. Sixty men are at work on the big ranch at present, and an important feature is the harvesting of the potato crop. The yield will amount to about 10,000 sacks. A great deal of barley was also raised on the ranch this season, but it will be used entirely for feeding purposes. There are 100 head of horses on the ranch, and it is not necessary to state that they are all "good stuff." Only first class stock finds a home on this ranch, which is intended primarily to produce "fine goods" in the way of horseflesh. The main idea is to turn out as many thoroughly good horses as possible, at any expenditure of money, labor and pains.

Sutter.

FLOATING BRUSH DAMS.—Yuba City *Farmer:* Levee Commissioner Brophy last Monday brought down the river one of the large floating dams or mattresses used for protecting the river banks and levees. It was constructed of large willow trees lashed together by cables, and was 600 feet long, 6 feet deep and 8 feet wide. The Baker launch towed it down, and it was securely moored in front of the Farmers' Union frame warehouse, where the current was undermining the bank. Where these dams have been put in, there has been a noticeable fill and building up of the banks, as the current is checked and the mud allowed to settle under the brush.

Ventura.

BEAN STRAW.—Saticoy Cor. *Free Press:* Our farmers cannot be too careful in feeding bean straw as food to stock. Two of our citizens have had very sick horses in the past week from a too free eating of that kind of fodder.

LARGE STOCK RANCH.—Newbury Park Cor. *Free Press:* Some 3000 sacks of barley were harvested on the Banning ranch this season. This ranch, comprising about 8000 acres, will be devoted the coming season to cattle and hog raising.

OREGON.

LANE COUNTY HOP CROP.—Eugene *Register:* Hops are still coming. The crop in Lane county this year is estimated at little over 3000 bales, nearly 2000 bales short of an average crop. The quality is first-class, which will partly make up for the short crop.

SHIPPING HORSES FROM EASTERN OREGON.—Baker City *Bedrock:* H. B. Clark, a horse-buyer from New Orleans, who has been in this section for the past ten days, has purchased three carloads of Baker county horseflesh and expects to ship to-morrow. The horses are a fine-looking lot, averaging about 1100 pounds and ranging in age from four to seven years. They were purchased from Mr. York, of North Powder, Mr. Williams, of Burnt river, and Mr. Brown, of Rye valley. This shipment will be a good advertisement and good results will follow. Mr. Clark will return to Baker in about a month and make another shipment. This will be the third shipment the gentleman has made in the past three months.

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They are made by the
Benicia Agricultural Works
With California Capital and Labor.
There is just as good money
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Every year they
Take Premiums
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They are better made
Last longer and
Cost no more than
Any of their Competitors.

Made to suit all Work,
Garden, Orchard, Vineyard,
Stubble, Breaking, Subsoil, &c.
Every Plow marked "Benicia"
Which means "GUARANTEED"
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BENICIA AGRICULTURAL WORKS.

GOOD PLOWS	AS LOW-PRICED AS
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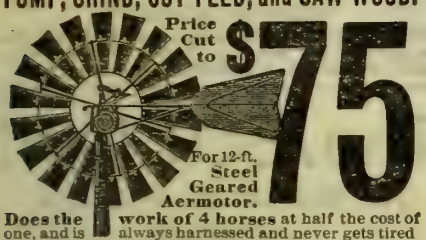
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Windmills, Pumps, Etc.

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GEARED AERMOTOR
Re-designed and much improved, furnishes power to
PUMP, GRIND, CUT FEED, and SAW WOOD.



Price Cut to $75
For 12-ft. Steel Geared Aermotor.

Does the work of 4 horses at half the cost of one, and is always harnessed and never gets tired With our Steel Stub Towe. it is easy to put on barn. Send for elaborate designs for putting power in barn.

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A True Spiral.

The Fan surface changes from 80° at rim where speed is greatest to 45° at inner end, giving wind free clearance, avoiding back suction and securing greatest power. STEEL BRACED.

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If you are handling WIND MILLS you cannot afford to do so longer without having our prices. If you want a Wind Mill for your own use you will lose money if you purchase before seeing our line.

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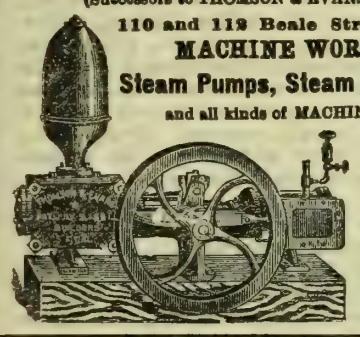
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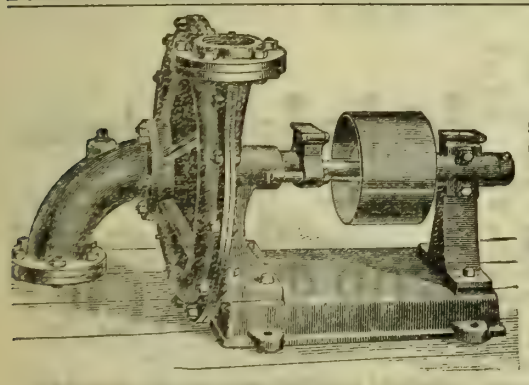


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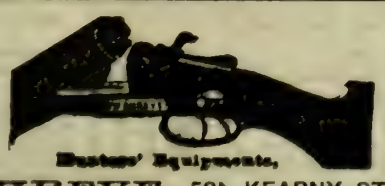
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The following San Francisco Firms ana Individuals Received the Highest Awards of the State Agricultural Society at the late State Fair.

CRANE COMPANY,
For BEST WINDMILL—Four in competition.

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BEST DISPLAY OF AGRICULTURAL MACHINERY, CALIFORNIA MANUFACTURE, GOODS MANUFACTURED BY BENICIA AGRICULTURAL WORKS.
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BEST PLOW FOR ALL PURPOSES, THE "BENICIA."
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BEST GRAIN CLEANER. GAS or GASOLINE ENGINE.

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Nancy Hanks
Record 2:05¼.

Trotted the fastest mile on record when hitched to a Sulky with Ball Bearing, Pneumatic Tired Wheels.

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NO. 205 NANCY HANKS SULKY
With Pneumatic Tired Ball Bearing Wheels,
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This price includes the Regular Sulky Wheels as well, and either style may be used We solicit your order.
Remember, we give you the Regular Wheels in addition to the Pneumatic Tired Wheels. So you have two sets of wheels with each Sulky.



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PATRONS OF HUSBANDRY.

To the Patrons of California.

At the recent meeting of the California State Grange, held at San Jose, it was unanimously ordered that the PACIFIC RURAL PRESS be, and the same is, hereby made the medium of official communication of the California State Grange. In pursuance of this order, I hereby urge upon the membership everywhere to write short, spicy, pointed articles for the PRESS. Report news, not fiction. Boil everything down to the point. Points are valuable. Let all the readers of the RURAL know *how* the Order is doing, and *what* it is doing, in your vicinity. By such correspondence the Grange will be benefited. Fraternally, E. W. DAVIS,
Worthy Master California State Grange.

The Official Wife.

In arranging for Grange representation at annual session the idea seems to never have entered the brains of the law-givers that it was possible for a patron to attain the standing in community and respect of his fellow-citizens implied in his election to the high office of worthy master without his having the good sense and fortune to choose a wife. But the best made plans of mice and men "aft gang aglee"—as Burns says and unmarried people are often elected masters.

Then follows a jangle about representation that sometimes results in four votes for one Grange and sometimes only one. In the confusion of alternates and their wives and masters' wives, and wifeless masters one Grange at the late session was reported to have elected a wife for the master. Not a bad idea after all! Probably he would have chosen one long ago had he known how many good true women were awaiting husbands. He did not feel acquainted—or was bashful, or too modest. Now the good sisters knew and respected him and realized how lonely he was coming to his desolate home with no loving smile to welcome him and they doubtless chose quite as wisely as he would have done. Then the next day I noticed a book entitled "The Official Wife" and know that she must have been the one elected by the Grange. Until ratified by the high contracting parties that would certainly be the title of one thus elected.

No master would be so ungallant as to refuse to invite one so honored to accompany him to the State Grange and there she would certainly be entitled to represent the Grange as intendant. If any question arose imagine the alacrity with which the worthy chaplain or Brother Perkins would happily adjust the matter. Where could young people make a start in life amid more pleasant surroundings or with a warmer circle of friends to wish them God speed than from a State Grange?

Of course this seems a ridiculous proposition; but after all nothing could create more merriment in a Grange, and its ten to one the votes would indicate a pretty wise choice and one that would frequently be ratified by the parties interested. The sisters would all attend Grange that day. At any rate no harm would be done, and full representation would be secured. Therefore allow us to prepare a new lady officer for half-headed Granges.—"The Official Wife."

An Omission Deeply Regretted.

Our reporter, who prepared the outline of the proceedings of the State Grange which appeared in last week's RURAL, made an unfortunate omission in naming the members of the Executive Committee. Hon. Cyrus Jones was elected to succeed Mr. Thomas McConnell and his name should have appeared as one of the new committee. Mr. Jones is well-known to readers of the RURAL and appreciation of his worth and ability extends beyond Grange circles. Nearly 20 years ago he brought to this State probably as fine a herd of Shorthorns as has ever been collected on this coast. In its best days, he was president of the old Shorthorn Breeders' Association. He has served with signal acceptability in our State legislature, and, in short, has always been regarded as a man of sterling integrity, as well as a man capable and valuable to any interest which commands his esteem.

Executive Committee Meeting.

The Executive Committee of the State Grange — Messrs. Walton, Loucks and Jones—met in the office of the Secretary on Tuesday morning and are still in session as we go to press on Wednesday. The particular work for which they were convened is to overlook the records of the late State Grange, arrange for their publication, and to attend to various other detail matters. A complete report of their doings will appear in our next issue.

Condition of the Order.

From the reports of lecturers and deputies which were commendably full and from reports of masters of subordinate Granges, read at the recent State Grange, we glean that there has been a steady and healthy gain of the Order during the past year, and an uncommonly good financial standing.

ENTERTAINMENTS.

In some places the free restaurant idea has been carried so far that a few sisters have to do all the work, and interest has centered so largely in that specialty that they may almost lay down the rule, "No feast, no Grange."

At Two Rock they have devised a system of providing for such things on regular stated occasions by dividing the sisters into classes which prepare entertainment by turns, and it is arranged what each shall bring in such a way that there is always plenty and little wasted, and yet the labor is not burdensome.

COOPERATION.

This is one of the features deserving more attention, as shown by the very satisfactory results attending several experiments.

Two Rock saved $500 (on purchases aggregating $2500) and might have done better yet had it not been for the cast iron regulations of dealers in hardware and implements with their local agents. Mr. DeHart reported a discount from $85 to $50 on a windmill through skillful use of trade-card advantages. Just a little care and attention in this direction would save enough to pay for the half-day's time the Grange takes once in two weeks, all the little Grange expenses, and the biggest profit the farmer makes on any investment besides.

Bro. Peterson, of Antelope, was made a life-long Granger by a saving of $500 in purchase of a steam threshing outfit very soon after his initiation. So fast as we can get in shape to live on last year's income instead of next, cooperation may be made a leading feature of promoting the organization. A Sutter county Grange proudly made the announcement that they came from a county were there was no saloon. [Great applause.]

CHILDREN'S DAY.

Exercises calculated especially to interest the children have been made a very successful feature of many Granges, particularly where it was made an open meeting and children were encouraged to invite friends.

LITERARY EXERCISES.

The lecturer's office is no sinecure in a live Grange for he must plan and superintend literary exercises and see that there is some interesting subject to come up at every meeting, so that no member shall ever go home feeling that he has not been paid for his time.

Right here let us take the opportunity to ask masters, lecturers and every other one who has the good of the Order at heart to help this department of the paper to build up the Order by sending in so many useful suggestions for discussion, instruction and entertainment that no lecturer may be so dull or so unaccustomed to such work but that a careful reading of this department may make him able to enthuse his Grange. Almost everyone of you have some good plans. Send them in and we will fix a place to boil them down.

ARBITRATION.

This is a feature that was but little discussed, but there has been a triumph in that direction during the past year worthy of extended notice.

On the St. Johns river in Tulare county were five conflicting water rights and prospects of unending controversy. Damage resulting was not from cost and ill-feeling, arising from litigation alone, but there was an uncertainty about water-supply that prevented development. With water, the country interested is among the most prolific sections in the State—the place where they get 1000 pounds of prunes from a tree. Without water, farmers get a crop of wheat just often enough to keep up their courage until they finally starve out. By influence of those who had been taught the theory of arbitration in the Grange, the St. Johns' River Association was formed and one representative of each conflicting interest elected a board of arbitration to which all questions arising are referred. It was a part of the agreement, carefully drawn and recorded, that the decisions of this board should have the same force and authority in law as a decree of court. This involves a prospect of settled prosperity in a country of about half a million acres, where all was uncertainty before and developments will proceed vigorously. Members of Tulare Grange deeply regret that the two brothers mainly active in this work seem likely to leave it for another organization. Wherever they go they will be followed by the good wishes of their fellow patrons, and the hope that they may be as useful in the new order as they have proven in the old.

Experience Gained From Grange Canvass.

The general tour of the Granges of California by leading advocates was a new plan of work and their reports showed that methods must be adapted to conditions to secure best results.

With strong Granges the plan was excellent giving new impetus to the work and often resulting in a large increase of members.

With weak Granges, the reorganization of those dormant and the establishment of new Granges it seems that a better plan would be to send one man to cooperate with those locally interested and remain several days.

It is very hard for a speaker to enthuse over an audience of empty benches and if he does succeed in imparting interest to a few the vital fluid becomes very thin when he leaves on the next train once it is spread over the whole community.

In organizing new or reviving weak Granges the approved method seems to be for the lecturer to make an appointment with that resident who has most of the Grange spirit in the community to meet him and visit such neighbors as he considers desirable material. By talking over in a friendly way by the fireside the objects, methods and plans of the Grange, embracing a clear idea of its social, educational, political and financial advantages they can interest almost every one who has the good of the community at heart in such degree as to make a desirable member. By appointing a meeting three or four days in advance and busily occupying the interval in a canvass of this kind they can generally draw out a good audience for the public meeting of whom the majority will remain and organize. Unless some of the members are veterans in the work and have not forgotten it the lecturer is needed about as badly at the second meeting as at the first.

A new Grange without help would be likely to live about as an infant would if thrown into the street without any mother.

Once get the master to understand that meetings must open promptly, in due form, and be conducted on business principles; the secretary to know that the records must be kept accurately and in a way to give a clear idea of the work, and the correspondence and accounts promptly attended to; the lecturer to provide that every member has something to do at every meeting, and your Grange can run alone. So long as every member feels, on the way home from each meeting, that he has been well paid for going, the attendance and interest will be maintained.

If John can do nothing more than bring a pail of water, and Susan a rose, see that John and Susan are there, and that their part in the work receives its share of recognition.

"No drones in our busy hive" was the winning motto of Watsonville Grange. It was not a motto simply to look at on the walls, but was woven into every fiber of its phenomenal vitality.

Granges that need the house-to-house canvass are, as a rule, those most remote from headquarters and most difficult for such busy men as the leading members of the Order to visit and devote the time necessary to work out the plan of a house-to-house canvass. For this reason it was suggested that the executive committee should give more encouragement to county deputies, as they often live so near that they can do the work at much less sacrifice to themselves and expense to the Grange than lecturers from a distance.

The suggestion occurs here that it would be a good thing at next State Grange, when one past master is exemplifying the unwritten work, for another to explain and illustrate to deputies methods of building and reviving Granges.

Among these, Worthy Overseer Roache has found the use of the local press very effectual. He made it a practice for years to insert some little paragraph about the Grange, every week, among the locals. He did not try to make a Grange department, but some news item to show the activity of the Grange and the nature of its work. In this way he kept it before the public in a way to increase its influence and usefulness.

FEAST OF POMONA.—At Turn Verein hall in San Jose, long tables for about 400 guests were tastefully decorated with fruit, flowers and cake, so that we might say it was a combined feast of Pomona, Flora and Ceres. The goddesses were shown in a magnificent tableau, displayed with brilliant effect by stage lights. The master performed a novel and touching ceremony in memory of our late worthy treasurer, the lamented C. J. Cressey. When a feast of Pomona takes place in such a fruit country as San Jose, under the auspices of people of such energy and taste as the San Jose Grange, it is truly a magnificent spectacle to be remembered for a lifetime.

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IN NO WAY MECHANICAL,

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We can send you one of our

SPECIALTY SINGLE BUGGY HARNESS,

Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

Just the Harness for an Elegant Turnout.

They sell here for $25.00, and harness not as good is often sold for $35.00 in retail shops. If harness is not as represented, money will be refunded.

Liebold Harness Co.

110 McAllister St., San Francisco.

Collar and Hames, instead of Breast Collar, $2 00 extra.

Please state if you want single strap Harness, or folded style Harness, with traces double throughout.

WELL MACH'Y All Kinds, Water, Gas, Oil, Mining, Ditching, Pumping, Wind and Steam: Heating Boilers, &c. Will pay you to send 25c. for Encyclopedia, of 1500 Engravings. The American Well Works, Aurora, Ill. also, Chicago, Ill.; Dallas, Tex.; Sydney, N. S. W.

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

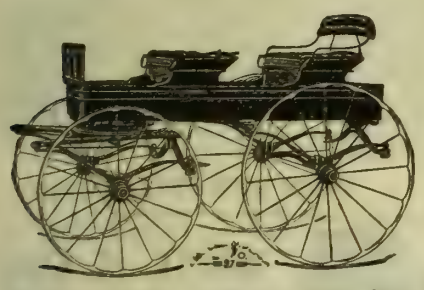
Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY.

S. W. FERGUSSON,
Bakersfield, - - - California.



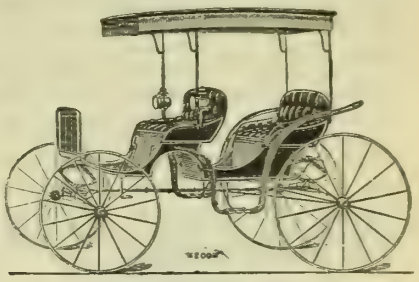
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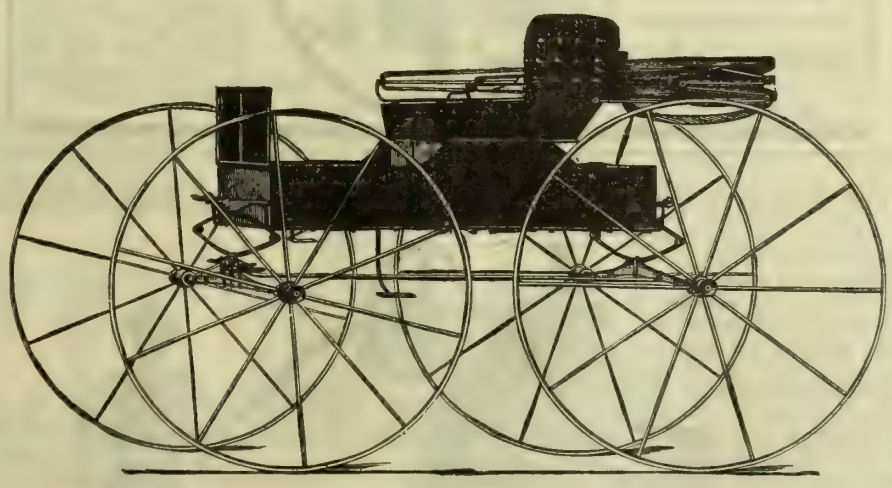


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CARTS, $14 to $25.

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A FINE BUGGY, EQUAL TO ONE FOR $125 AT $80.

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"Baby" Cream Separator

FOR HAND POWER.

A Grand Machine for Small Dairies.

Turns Easy, Simple, Practical for All who Milk.

"Baby" No. 2, Capacity, 300 Lbs. Milk per hour.
"Baby" No. 3, Capacity, 600 Lbs. Milk per hour.
Dairying no longer an uncertain drudgery, but PROFITABLE AND EASY. The Baby De Laval is as perfect throughout as our Large Power Separators and proves a source of great profit to purchasers.
Send for testimonials of users and further information.

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Home and Town Cleanliness.

The United States is to be congratulated on its escape from the cholera this year. New York city is to be complimented upon its successful effort to repress the invasion of the pest. The approach of winter made the efforts great and efficient as they were successful. The same efforts made in the last week of June might not result so favorably. We may hope that the rigors of a severe winter will put an end to the march of the epidemic, but it must be remembered that it has wintered in Russia and broken out in the spring. It is but logical to infer that it can only reach us next summer as a foreign importation. If it effects a lodgment on our shores in the early summer, it will in all probability spread over the continent. The efforts that have been made to place our habitations in good, sanitary condition will not be lost, even if cholera does not come. The result will be observed for many months in a lessened death rate from diphtheria, typhoid and other fevers, and minor ailments that arise from breathing emanations from decomposing animal and vegetable matter. The villages and smaller towns should, during the coming winter, while the ground is moist, improve their drainage. Very little effort in that direction has been made outside of the cities in California. In summer, while the ground is hard and dry, and the people engaged in agricultural pursuits, little is ever done in the way of such improvements. But no excuse can be advanced for not doing this work in the rainy months of winter, when there are idle hands enough to complete all that need be done, to place many of the small towns in perfect sanitary condition. Many beautiful hamlets, and some summer resorts, have no means provided for drainage, or have no sewers, and all refuse matter and house drainage is allowed to soak into the ground. It would be a paying investment to make all needed improvements of this character during the winter, and everywhere abandon as nearly as possible the abominable cesspool system. People living in the country towns may profitably bear in mind that in case of a cholera epidemic, the residents of cities will flee to the country and spread the contagion, and that small places not infrequently suffer in greater proportions than the larger towns. As a matter of economy a good system of sewers in a country village is always a paying investment. It acquires a reputation for salubrity, and induces the location of people of wealth and refinement, the building up of industries, and a rapid increase of population and enhancement in real estate. No sensible man will spend much money in beautifying a home where he cannot count an ample supply of pure water and pure air. Pure air cannot be obtained around human habitations where there are no means for the speedy removal of all refuse matter or waste, whether fluid or solid.

The Lincoln Pear.

The chief attraction in the Horticultural Hall at the Illinois State Fair was the new Lincoln Pear. Mr. F. S. Phœnix, of Bloomington, Ill., the introducer and sole propagator of the Lincoln Pear, exhibited samples through his agents, the Messrs. Jones.

This ironclad pear was first brought to public notice in 1889, through the *Rural New Yorker*. It stated at the time as follows: "The flesh resembles that of the Angouleme. The quality is, so to say, a combination of Bartlett, Angouleme and Anjou. Very juicy, aromatic. The skin is like that of the Angouleme. Seeds few and small. Received September 14th."

Mr. F. S. Phœnix soon secured control of this wonderful variety and is now disseminating it under copyright. A beautiful 16-page illustrated pamphlet, entitled "The Lincoln Pear," has been issued by Mr. Phœnix. It gives a full history of the variety, testimonials, etc. This pamphlet, with handsome colored plate, may be had on application.

No pear was ever introduced under more favorable auspices and we predict for it a great run as a permanent and invaluable addition to our fruit list.

Have Music in the Homes.

Its elevating and refining influence cannot be overestimated. A family without music is like a garden without flowers, while even one musical member will enliven and solace the home as will nothing else. "Very true," say the busy farmer and his still busier wife, "but where are our daughters and sons to find the time, when it requires several years constant practice to become tolerable, let alone proficient musicians?" In answer to this very just observation, you are advised to send to Kohler & Chase, Nos. 26, 28 and 30 O'Farrell St., San Francisco, for one of those beautiful catalogues of the new musical wonder—The Æolian. If this does not meet most of your objections, then inventive and musical genius are failures.

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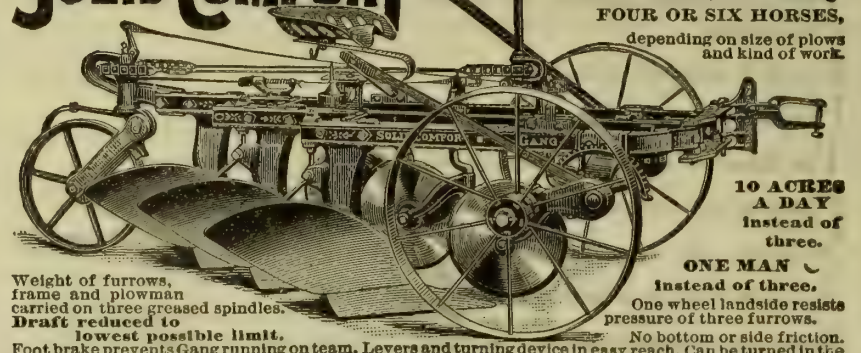
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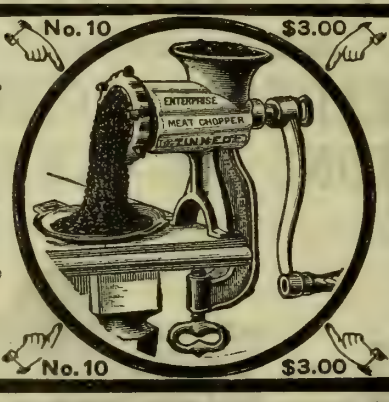
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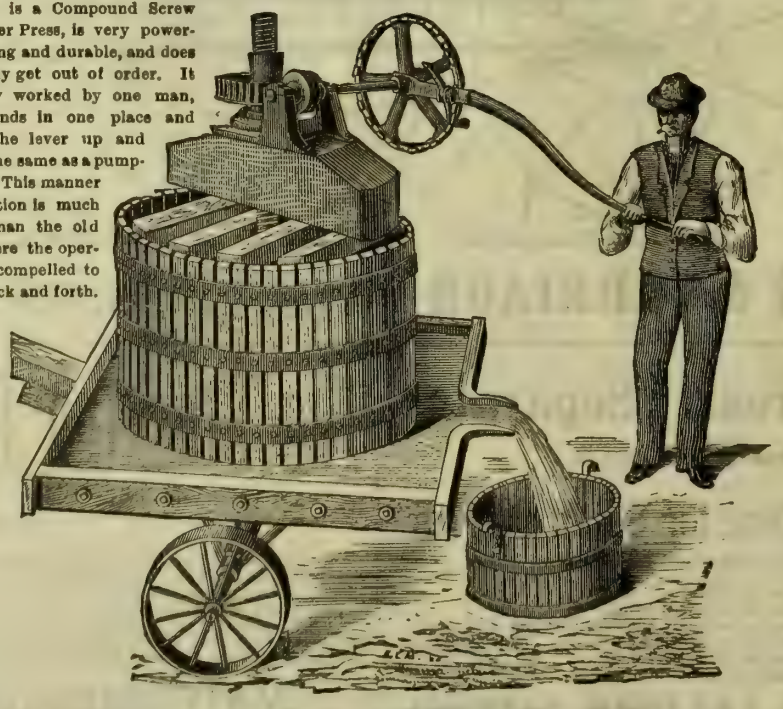
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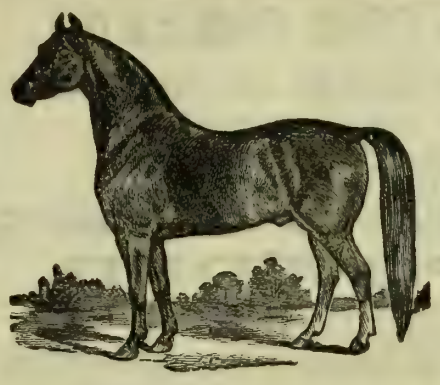
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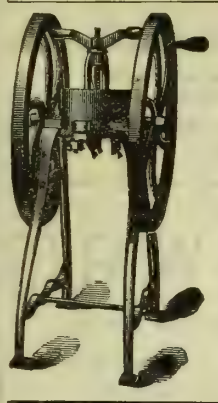
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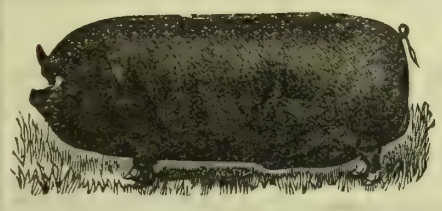
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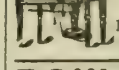
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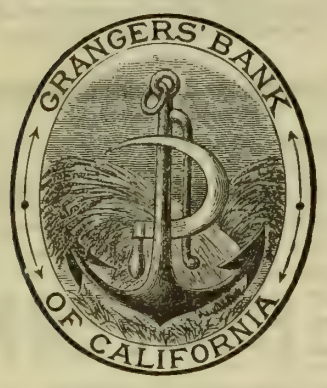
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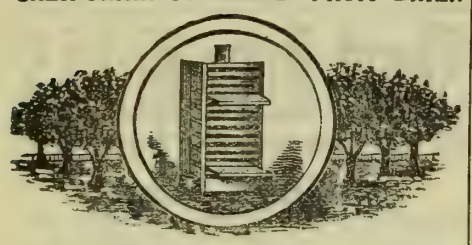
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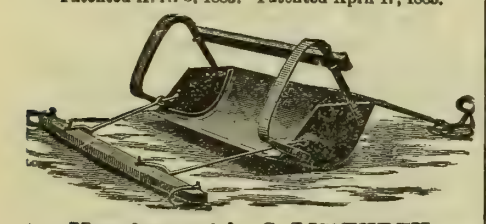


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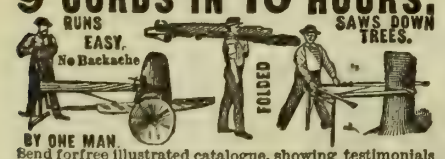
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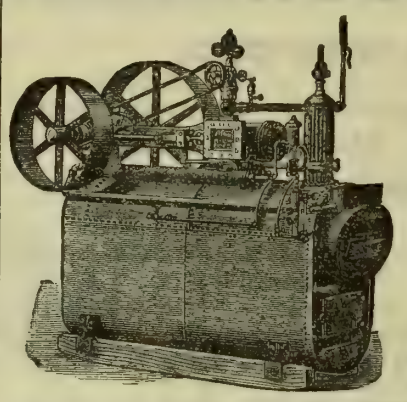
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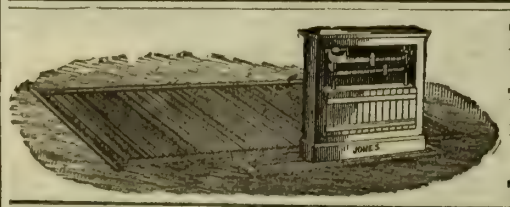
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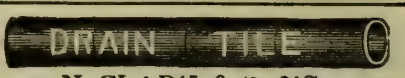
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S. F. Market Report

Market Review.

SAN FRANCISCO, Oct. 18, 1892.

The local money market is essentially unchanged. Remittances are reported slow, as is the demand. The rates of interest are, as a rule, in borrower's favor, with short time and also call paper given preference.

The wheat market at home and abroad has hung around at firm prices with the tendency upward. The strong bear pressure, heretofore reported, does not appear to have been removed, for public advices are still of a bearish character. The real statistical situation of the world's supply and demand favors sellers; in this view the best authorities agree. The estimates of two of the leading writers on the world's supply and demand are briefly summarized as follows: Beerbohm, in his last report, sums up the wheat crop of the world for three years as follows: Europe, so he says, has 1,232,400,000 bushels this year, against 1,117,480,000 bushels in 1891, and 1,304 720,000 bushels in 1890. Outside of Europe, the crop this year he estimates at 907,200,000 bushels, against 1,068,640,000 bushels in 1891, and 820 440,000 bushels in 1890. This makes the aggregate of the world this year 2 139 600,000 bushels, against 2,185 9 0,000 bushels in 1891. Dornbusch, in an exhaustive review of the wheat situation, after carefully considering the prospective supply and demand, concludes as follows: "It would seem as if the exporting countries will be able to spare about 344,000,000 bushels to meet the European shortage of 304,000,000 bushels and the 24,000 000 bushels required by the West Indies, Brazil, the equatorial republics, China, etc., plainly show that although there may be bread enough, there is nothing to spare in the current cereal year. Accepting Dornbusch's statement as more nearly correct, still it is of a bullish character, particularly when taken in connection with the world's rye and corn crop and a big shortage in the potato crop in the United States. Writing on the wheat situation, the Liverpool *Corn Trade News* says that the world's reserves are moderate, and in some places exceedingly light, and the crop of wheat lately harvested falls beneath expectations, and is actually 6.000,00 qrs. less than last year's, certainly a not very material deficiency, but yet one that is striking enough when the high prices of last autumn and the marked contrast between the tone of the trade then and now are borne in mind. If it be urged that last season the great rye crop of the world was lamentably short, it may, with equal truth and greater force, be remarked that the deficiency in the maize crop this season runs into hundreds of millions. It may be worth while to add to the world's wheat crop the crop of maize and rye, and compare the result with last season, viz:

	189?—Qrs.	1891—Qrs.
World's wheat crop	264,000,000	270,000.000
Russian and German rye	106,000,000	87,000,000
American maize	206 000,000	260 000 000
Total	576,000,000	617,000,000

We have here a deficiency of 41,000,000 qrs. or 328,000,000 bushels. Aside from the crop shortage, the market price of silver cuts a very important figure. The advance that has been established in the value of the metal has, according to the Mark Lane *Express*, caused higher prices to obtain for 1893 Indian wheat. That paper, just to hand, says: "Values are not hard to fix, for each quality of Indian wheat for 1892 is offered for 1893 at 1s. 6d. over 1892 terms, while buyers are forthcoming at 1s. more money."

Barley has held firm at a slight advance for both feed and malting. The receipts, though large, appear to have come to strong hands for concessions, unless in exceptional cases, were hard to secure. The demand continues to be large for feed, which is generally fed roll in the country. The supply of choice to gilt-edged bright grades, suitable for malting and shipping, appears to be lessening. English mail advices are quite bullish on malting barley; it is to this that we have to look for liberal shipments hence. The crop east of the Rocky mountains is considerably short of the outturn of 1891. Oats have held fairly the past week, under moderate receipts and a fair demand. Oregon and Washington are sending more moderate supplies to us, and as the receipts of Californian are falling off, the market has a stronger tone. Corn has come in quite freely and, with the demand of an offish character, the market sold to lower prices for the different varieties. The crop in this State is short, but, with no shipping demand, local buyers are masters of the situation. Rye has strengthened. The strength of the market is due to stronger holding and a good demand.

Ground feed has met with an unusually free demand. Bran has come in free, but the demand has been active, which kept prices fairly steady. Middlings have come in only moderately. The feeding of roll barley continues to enlarge, keeping pace with the starting of plows in the more favored localities. The receipts of hay have been light. The demand is said to be freer, which causes a firmer market for the more choice. It is claimed that dry-feeding has been ruined by rains, which, if correct, ought to make a still better demand for hay.

Butter still continues to hold the anomalous position reported in last week's review. Giltedged creamery has been sold in invoice lots at from 36 to 37½ cents, while 39 and even 40 cents was secured for single box lots from parties desiring special packs. At over 37½ cents the market has been weak, and even at that figure buyers are not any too willing. The absence of cold weather has been in favor of choice to gilt-edged fresh rolls or squares. Dealers report a continued fair demand for pickled, but as yet solid is not moving except to distant and colder points. Rains the past week were only of sufficient duration to start the grass in certain localities, but with seasonable rains during the next 40 days pasture will be abundant and the butter market probably feel the effect. Cheese has ruled barely steady. The demand has been quite free, but it has been modified by liberal supplies. Eggs have not exhibited any material change; anything from good down have been slow of sale and low in price, but choice selected have ruled fairly firm. Receipts the past week were light.

In garden-truck, tomatoes have met with a steady call from canners. Other truck has met with a fair trade demand, and, as receipts were only moderate, the market did not exhibit any material change. Onions have held to fairly steady prices. The demand is mostly for local consumption. Potatoes have come in freely. There has been a fair shipping and home demand. The U. S. Agricultural Department reports a light crop, which is corroborated by the Chicago *Farmer's Review* corps of correspondents throughout the central States. The reports, summarized, show that the crops, early and late, taken together, are very poor. In not one county in five of the States mentioned will there be an average crop. In Illinois 90 per cent of the correspondents report that the crop is very poor, in many cases almost a complete failure. A nearly similar state of affairs exists in Indiana, Missouri, Kansas, Nebraska, Iowa and Wisconsin. In Ohio and Michigan the crops are slightly better, about two-thirds of the counties reporting from a three-fourths to a full crop. Kentucky reports a full average crop in about half of the counties. In Minnesota about one-third of the counties will yield an average crop, but in most of the others it is decidedly poor. More than half of the correspondents in Dakota report a full crop.

The market for fresh fruit is confined largely to pears, apples and grapes. The market for each kind has held fairly steady the past week, the receipts and demand being about equal. Rains, it is claimed, did some damage to grapes in certain localities, but in others no damage was done, owing to their short duration and sunny weather since. Wine grapes have been doing better, owing to a better demand. Zinfandel sold at from $14@17 per ton, Mission $13@15 and white at $10@12

The dried-fruit market has been dull. Buyers appear to be picking up the odds and ends, and for which they bid less than current quotations. Holders of round parcels of choice do not appear to exhibit any uneasiness, for they think that better prices will prevail before new-crop season. The stock of all kinds at the East and also in Europe is reported lighter than it has been for years, which will tell later on in favor of the market. The Columbus festivities at the East are no doubt interfering with present trade, but after they pass, a much better inquiry is expected to set in. New York mail advices report moderate supplies, barely enough to meet the demand up to the time when the usual second fall demand sets in. Advices from Greece report only about half a crop of currants. Raisins are in good demand for home and shipping. The East reports an enlarging consumptive demand, but there does not appear to be any speculative movement.

There has been an active demand for almonds and walnuts, with round parcels of choice commanding a slight advance on current quotations. The light crop of almonds abroad is in favor of our market.

Beans have been moving off freely, under a good speculative and trade demand. Rains, it is said, did considerable damage; but so far as our experience goes, it is safe to say they did very little, owing to their short duration and drying weather since. The crop at the East and also abroad is said to be short.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.
Thursday	6s01½d	6s02 d	6s03½d	6s04 d	6s04½d
Friday	6s01½d	6s02½d	6s03½d	6s04½d	6s05 d
Saturday	6s01½d	6s02 d	6s03½d	6s03½d	6s04½d
Monday	6s01½d	6s01½d	6s02½d	6s 3½d	6s04½d
Tuesday	6s01½d	6s01½d	6s03 d	6s03½d	6s04½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	35s6d	33s6d	33s6d	Rather firmer.
Friday	33s6d	33s6d	33s6d	Firm but inactive.
Saturday	33s6d	33s6d	33s6d	Rather firmer.
Monday	33s6d	34s6d	33s6d	Steadier.
Tuesday	33s6d	34s6d	33s6d	Firm.

To-day's cablegram is as follows:

LIVERPOOL, Oct. 19.—Wheat—Quiet but not steady. California spot lots, 6s 11½d; off coast, 33s 6d; just shipped, 33s 9d; nearly due, 33s 6d; cargoes off coast, nothing offering; on passage, firm but not active; Mark Lane wheat, firm; French country markets, steady.

San Francisco.

WHEAT.

	Seller '92.	Buyer Oct.	Buyer Dec	Buyer Jan.	May
Thursday, high st	133	....	136⅞	....	141¼
" lowest	133	....	136½	....	141½
Friday, highest	....	....	137½	138	142⅛
" lowest	....	....	136½	138	142
Saturday, highest	133½	....	136⅞	....	141½
" lowest	133⅝	....	136½	....	....
Monday, highest	134	....	137½	....	141⅞
" lowest	134	....	136⅞	....	141½
Tuesday, highest	....	....	136⅞	....	140⅝
" lowest	....	....	136⅝	....	140½

The following are to-day's recorded sales on Call:

Wheat — Morning — Informal — May — 100 tons, $1.39½. Buyer December 500 tons, $1.3 ⅜; 700, $1 35¾ per ctl. Regular session: Buyer December 1700 tons, $1.35⅜; 600, $1.35¾. May—400 tons, $1.39½; 500, $1.39⅝; 100, $1 39⅜ per ctl. Afternoon: May—100 tons, $1.39½. Buyer December: 800 tons, $1.35⅜ per ctl.

BARLEY.

	Seller '92.	Buyer Oct.	Buyer Dec.	May
Thursday, highest	86⅞	....	91⅜	....
" lowest	86⅝	....	91¼	....
Friday, highest	86⅝	....	....	....
" lowest	86⅜	....	90⅝	....
Saturday, highest	86⅜	....	90⅝	....
" lowest	86⅜	....	90½	....
Monday, highest	....	....	90	....
" lowest	....	....	90	....
Tuesday, highest	....	87	90⅜	94½
" lowest	....	87	9 ⅝	94½

The following are to-day's recorded sales on Call:

Barley—Regular session: December—100 tons, 89½c; 100, 89⅝c; 1 0, 89¼c; 100, 89¼c; 100, 89c. January—100 tons, 90c; 200, 89½c per ctl. Afternoon: Buyer December - 200 tons, 9.¼c. December—100 tons, 89⅜ per ctl.

New York.

Day.	Oct	Nov.	Dec.	May.
Thursday	131⅝	133¼	136	146⅜
Friday	131	133	136½	146
Saturday	131	132⅝	135	146
Monday	131	132½	135	146
Tuesday	131	131⅝	134	145

The following is to-day's telegram:

NEW YORK, Oct. 13.—Wheat 78⅝c for November, 79⅝c for December, and 86⅜c for May.

Chicago.

Day.	Oct.	Dec.	May
Thursday	122¼	126⅜	135
Friday	122¼	126⅝	135⅛
Saturday	122	126	134
Monday	122⅝	126⅜	134⅜
Tuesday	122	126	134

The following is to day's telegram:

CHICAGO, Oct. 19 — Wheat - 73c for October, 74½c for December, and 79¾c for May.

Markets by Telegraph.

Canned and Dried Fruits are Firm.

NEW YORK, October 16.—Canned Fruits—Out-of-town orders have been received for trade lots of standard filling at full prices. Several wholesale parcels are in treaty. Dried peaches are steady at 14 @16½ spot. Prunes—Good samples are shown. The moderate offering of sacks has found buyers at 10⅞@ 11c for four sizes; fifties to seventies, 11½@12½c spot. Apricots are firm at 15½@17c for sacks and boxes.

Wool Active With Supplies Light.

NEW YORK, October 16.—The movement of raw wool is not active, and holders are firm in their demands, believing that small takings at London for America, about 6 000 bales, with relatively small domestic stocks, tend to strengthen the situation. There are no prominent changes in the situation. Trade here was checked by the Columbus celebration, but was active at other points. It is conceded that little of the clip now remains to come forward and with mills running steady, some on double time, and a comprehension of stock resources sellers quote rates crisper. Sales at New York, 304.000 pounds of domestic and 657.0.0 pounds of foreign. Sales at Boston 3,404,350 pounds of domestic, 140,000 pounds of foreign carpet, 90,000 scoured Australian at 68@70c and 235,000 sand Australian at 31@32½c which is lower. Philadelphia reports a fairly active, strong market, particularly for unwashed grades.

Hops Quiet But Steady.

NEW YORK, October 16.—Hops are quiet. There was one sale of choice Pacifics at 25c. Fair quantities of Pacifics are being shipped to Europe on consignments of delivery on early purchases.

Oct. 17.—Light sales to brewers. Best new State 25c, in sympathy with interior prices, Pacifics, 24c; other grades are unchanged. Exports for the week, 1,059.

Lima Beans' Holders Resist a Decline.

NEW YORK, October 16.—Holders resist the declining tone last noted. Choice is held at $2.05 spot a bushel.

Rejecting Raisins. Demand Improving.

There is more inquiry, but it is difficult to give a straight story about prices. Several lots missed contract arrival, and the wet, poorly-cured condition of a portion of the bags have brought up the entanglement of rejection. It must be said that the supplies of bags thus far do not inspire confidence; the quality must average better if the current of ordinary trade is to be wooed from Valencias. Some of the box receipts are giving satisfaction. Spot Three Crown layers sold at $1.75, and Four Crown at $1.90. Rates for loose are still above the large offering of Spanish.

Dried Prunes Advancing.

NEW YORK, Oct. 18—For new California prunes, 60s@90s; bags, 9¼c f. o. b. coast There has been a decline since Friday, when 9⅜c was paid in a few instances and 9½c generally asked; 50s to 90s sold a few days ago at 9½c and are now held ¼@⅝c higher. Upon the whole the market shows a decidedly strong undertone.

Wheat and Barley Higher in England.

LONDON, October 17.—The *Mark Lane Express* says: It is now believed that the yield of wheat in Great Britain does not exceed 8,000 000 quarters. There is a fine yield of barley, but fine malting grades are very scarce. Wheat has fallen 1s. Foreign wheats are firm, as the decrease in Indian shipments balances the large American crop. Barley is 6d dearer; oats and corn are steady. To-day English wheat was steady; fine American advanced 1s; ordinary was 6d higher Flour, 6d higher. Barley and corn were firm. Oats, 3d and linseed 6d higher.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Oct. 18, '92, were as follows:

Flour, qr. sks	175,633	Bran, sks	17,774
Wheat, ctls	281,288	Buckwheat "	40
Barley, "	66,228	Middlings "	3,826
Rye, "	670	Chicory, bbls	17
Oats, "	9,224	Hops, "	750
Corn, "	5,257	Wool, "	4,775
*Butter, "	1,318	Hay, ton	1,902
do bxs	597	Straw, "	76
do bbls	8	Wine, gals	143,500
do kegs	20	Brandy, "	650
do tubs	18	Raisins, bxs	4,029
do ½ bxs	100	Honey, cs	....
†Cheese, ctls	630	Peanuts, sks	774
do bxs	4	Walnuts "	182
Eggs, doz	19,370	Almonds "	64
do " Eastern	1,200	Mustard "	120
Beans, sks	26,169	Flax "	....
Potatoes, sks	28,405	Popcorn "	....
Onions, "	5,970	Broom corn, bbls	187

*Overl'd, —- ctls. †Overland, 228 ctls.

Cereals.

The Liverpool *Corn Trade News* says: "The key to the situation this season may be found in an unexpectedly large demand for wheat from the Continent which will help to raise prices out of the mire into which they have fallen. With the recent heavy importations of France and Germany so vividly in mind it is natural to look for an unusually light demand from these countries during the ensuing year, but the expected rarely happens. It will be in the memory of all how, in recent years, from 1884 to 1888, the annual consumption of the world appeared to be contracting, instead of displaying its customary yearly expansion. It was generally allowed that this delusion was owing to the fact that holders of wheat and flour, from the farmer to the baker, were so profoundly discouraged by the unexampled trade depression all over the world in those years, that they let down their normal reserves to the lowest possible point, and consequently supplanted the ordinary current supplies with certain invisible stores of their own. This tendency was no longer noticeable after the year 1888, and at some time in the following year, with a return of confidence in the future of wheat, a commencement was made to acquire and build up again the original reserves. There are numerous signs now observable that these invisible reserves have been partially reconstituted and it appears extremely likely that all classes of the trade, farmers, merchants millers and bakers will, without exception, be induced to maintain them at their present level, if not further increase them, as long as values remain in the neighborhood of 30s per quarter for average samples of wheat. It will be prudent therefore to reckon with the possibility and even probability of full average requirements by all the bread-eating nations during 1892-93, or for as long as the present depreciated currencies exist."

The wheat market to-day was steady, with a firmer tone. The offerings were moderate, while there appeared to be a slightly better demand.

Barley was slow to-day, but the tone was strong. Holders are disposed to ask more money.

Oats were quiet but firm at current quotations.

Corn sold still lower. The market closed weak under fair offerings and buyers offish.

Rye was barely steady.

Feedstuff.

The market for ground feed was firm at full quotations for bran, middlings and barley, but weak for feed corn.

In hay the market did not exhibit any material change. Receipts were light, barely sufficient to meet the demand. A better inquiry is expected to set in next week.

Dairy Produce.

Butter was weak to-day, with dealers not buying beyond nearby wants. For all grades under choice quotations are altogether nominal. Cheese was weak with concessions made to large buyers. Eggs were irregular. For very choice good prices were paid in a small way, but for all kinds under choice the market was weak and hard to quote.

Vegetables.

Rains and cold weather have caused cucumbers and tomatoes to sell higher. Other garden truck was unchanged.

Onions and potatoes were fairly steady under moderate receipts and a fair demand.

Fruit.

Grapes were in good supply to-day. Canteloupes were hard to sell even at low prices. Melons were also slow. Choice peaches sold well, also choice pears. The market is bare of extra choice apples. Figs were in light offering.

We omit quotations for dried fruit this week, owing to crowded columns, but the market is quoted the same as it was last week. To sell, low prices have to be accepted; to buy, full prices have to be paid.

Live Stock.

Last week's quotations cover this week's prices. Last week's remarks also hold good this week.

Miscellaneous.

Poultry has held fairly firm throughout the week for good stock, but weak for poor stock. To-day turkeys were scarce and wanted; as high as 22 cts. was paid for gobblers. Small broilers are scarce.

Hops have come in quite freely. European advices report advancing markets for choice, owing to short crop. In our market buyers and sellers are apart.

The receipts and sales of fall wool were heavy the past week. About all the buying is by scourers.

Beans were firm to-day.

Honey continues to hold to strong prices for extracted.

Nuts were about the same as reported in the review.

Hams and bacon were steady with a firmer tone.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

OCTOBER 19, 1892.

BEANS AND PEAS.		**FLOUR**	
Bayo, ctl	2 10 @ 2 20	Extra, city mills	4 15 @ —
Butter	2 5 @ 2 80	Do country m'ls	4 15 @ —
Pea	2 40 @ 2 65	Superfine	2 65 @ 3 00
Red	2 30 @ 2 50	**NUTS—JOBBING.**	
Pink	2 25 @ 2 35	Walnuts, Cal. lb	8 @ —
Small White	2 35 @ 2 60	Do choice	10 @ —
Large White	2 05 @ 2 20	Do paper-shell	11 @ —
Lady Wash	2 20 @ 2 30	Almonds, soft shell	12 @ —
Lima	3 00 @ 3 15	Paper shell	13½@ —
Fld Peas, blk eye	1 60 @ —	Hard shell	6 @ —
Do green	2 20 @ —	Brazil	7½@ —
Do Niles	1 60 @ —	P cans, small	11 @ 13
Split	4 50 @ 5 50	Do large	14½@ 16
BUTTER.		Peanuts	3½@ 4½
Cal., poor to fair, lb	17 @ —	Filberts	11 @ —
Do g'd to choice	27½@ 34	Hickory	7 @ 8
Do Giltedg'd	— @ 36	Chestnuts	11½@ 16
Do Creamery	30 @ 35	**ONIONS.**	
Do do Giltedge	— @ 37½	Silverskin	40 @ 55
East'n, bad to	17 @ 20	**POTATOES.**	
Cal. Pickled	22½@ 26	River Reds	40 @ 55
Cal. Keg	21 @ 25	Early Rose, ctl	45 @ 60
East'n Creamery	25 @ 30	Peerless	50 @ 70
CHEESE.		Garnet Chilies	60 @ 75
Cal. choice cream	9½@ —	Burbank Seeds	50 @ 60
Do fair to good	8 @ —	Do do Salinas	75 @ 1 10
Do Giltedged	— @ 11	Sweet	75 @ 1 25
Do Skim	5 @ 6½	Extra choice sell for more money	
Young America	— @ 12	**POULTRY.**	
EGGS.		Hens, doz	6 00 @ 7 00
Cal. "as is," doz	18 @ 20	Roosters, old	6 0 @ 6 50
Do shaky	14 @ 16	Do young	5 00 @ 6 00
Do candled	21 @ 25	Broilers, small	2 75 @ 4 00
Do choice	27 @ 30	Do large	3 25 @ 4 00
Do fresh laid	— @ 35	Fryers	4 00 @ 5 00
Do do s'ld white	— @ 40	Ducks	4 50 @ —
Eastern "as is"	18 @ —	Do large	6 00 @ —
Do candled	22 @ 35	Do ex large	7 00 @ —
Do selected	— @ 27½	Geese, pair	1 50 @ 2 25
Outs de prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.		Turkeys, gobbler	19 @ 21
		Turkeys, hens	17 @ 19
		All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.	
FEED.			
Bran, ton	14 50@ 16 50		
Feedmeal	26 00@ 29 00		
Gr'd Barley	19 00@ 20 50		
Middlings	22 00@ 25 00		
Jobbing Meal	— @ 25 00		
Manhattan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00	Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50
HAY.		**GAME**	
Wheat, per ton	8 50@ —	Quail, per doz	1 25 @ 1 50
Do choice	— @ 13 50	Ducks	— @ —
Wheat and oats	8 00@ 12 50	Do Mall'd	4 00 @ 5 00
Wild Oats	7 00@ 10 00	Do Sprig	2 25 @ 3 00
Cultivated do	6 00@ 9 00	Do Teal	1 75 @ 2 50
Barley	5 50@ 8 50	Do Widgeon	1 50 @ 1 75
Alfalfa	7 00@ 9 00	Do small	1 00 @ 1 50
Clover	5 50@ 9 00	Geese	— @ —
Straw, bale	30@ 50	Do gray	2 25 @ 3 00
GRAIN, ETC.		Snipe	— @ —
Barley, feed, ctl	75 @ — —	Do English, doz	2 25 @ 3 00
Do good	82½@ — —	Do Jack, per doz	75 @ —
Do choice	85 @ — —	Hare, per doz	1 50 @ 1 75
Do brewing	92½@ — —	Rabbits, large	1 25 @ 1 50
Do do choice	96½@ — —	Do small	1 00 @ 1 25
Do do Giltedge	1 00 @ — —	**PROVISIONS.**	
Do Chevalier	85 @ 1 10	Cal. bacon, heavy, per lb	11 @ 11½
Do do Giltedge	1 15 @ 1 25	Medium	12 @ 13
Buckwheat	2 50 @ — —	Light	13½@ 14
Corn, white	1 25 @ 1 30	Lard	8 @ 11
Yellow, large	1 10 @ 1 15	Cal sm'k'd beef	11 @ —
Do small	1 17½@ 1 20	Hams, Cal salted	12 @ 13½
Oats milling	1 35 @ — —	Do Eastern	13 @ 14
Feed, choice	1 30 @ — —	**SEEDS.**	
Do good	1 25 @ — —	Alfalfa	11 @ 12
Do fair	1 17½@ — —	Clover, Red	15 @ —
Do common	1 05 @ — —	White	25 @ —
Surprise	1 47½@ — —	Flaxseed	2 25 @ —
Black Cal	1 05 @ 1 20	Hemp	3½@ 4
Do Oregon	— @ — —	Mustard, yellow	5½@ 6½
Gray	1 22½@ 1 30	Do brown	4 @ —
Rye	1 15 @ 1 20	**WOOL.**	
*Wheat, milling		**FALL, 1892.**	
Gilt dged	1 37½@ — —	S Joaquin, plain	6½@ 10
Do choice	1 35 @ — —	Do mountain	10 @ 12
Do fair to good	1 33½@ — —	Do lamb	8 @ 10
Shipping, choice	1 35 @ — —	Northern Choice	14 @ —
Do good	1 32½@ — —	Do Defective	11 @ —
Do fair	1 30 @ — —	Do Lamb	10 @ 14
Common	1 26½@ — —	White extra comb, 2-lb frame	9½@ 12½
Sonora	1 25 @ 1 30	Do do 1-lb frame	11½@ 14½
HOPS.		White extracted	7½@ —
1892, fair	18 @ —	Amber do	7 @ —
Good	20 @ —	Dar do	6½@ —
Choice	21 @ —	Beeswax, lb	23 @ —

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

OCTOBER 19, 1892.

Limes, Mex	4 00 @ 4 50	Extra choice fruit for special purposes sells at an advance on outside quotations.	
Do Cal	2 00 @ 5 00		
Lemons, box	5 00 @ 7 00		
Do Sicily choice	7 00 @ 9 00		
Strawberries, per chest—Sharpless	6 00 @ 9 00	Beets, sk	— @ 75
Peaches, box	50 @ 1 50	Carrots, sk	40 @ —
Apples	20 @ 50	Okra, dry, lb	— @ —
Do Choice	75 @ —	Do green box	40 @ 65
Do Extra choice	— @ —	Parsnips, ctl	1 00 @ 1 50
Canteloupes, pr crate	25 @ —	Peppers, drv, lb	10 @ —
Melons, pr 100	5 00 @10 00	Do grn Chili, bx	25 @ 35
Nutmegs, ⅌ box	25 @ 50	Do do Bells	25 @ 40
Grapes, pr bx—		Turnips, ctl	50 @ —
Do White	25 @ 40	Cabbage, 100 lbs	35 @ 50
Do Black	20 @ 40	Garlic, lb	2 @ 2½
Do Muscats	25 @ 60	Tomatoes	20 @ 50
Do Trays	40 @ 60	String Beans, lb	3 @ 3½
Do Royal Isabel	1 00 @ 1 25	Lima Beans	3½@ 4½
Do Cornichon	50 @ 75	Cucumbers, box	50 @ 75
Wine Grapes, Zinf'd'l, pr tn	15 00 @17 00	Do pickle ⅌ lb	1 @ 2
Mission	13 00 @15 00	Mushrooms	— @ —
White	10 00 @12 00	Egg Plant, bx	25 @ 50
Pears	25 @ 1 00	Green Corn, box	1 00 @ 1 75
Quinces pr bx	60 @ 75	Marfat Squash, ⅌ ton	5 00 @10 00
		Cauliflower	50 @ 65
		Celery	50 @ 75

Auction Sales of California Fruits.

At New York.

Oct. 14.—One carload, full crates, Tokay Grapes, $3 20@3 65; half crates Tokay Grapes, $1.30@$1.90; Cornichon Grapes, $1 50.

Oct. 14.—Five carloads, double-crate, Tokay Grapes, $2 50@$3; single crates Tokay Grapes, 75c@$1.50; single crates, Cornichon Grapes, $1.35@1.82; single crate Muscat Grapes, 55c@$1.25 single crate Emperor Grapes, $1.10; Figs $2 40; Cling Peaches, $1.45@$1.85; Quinces, $1.36@$2 50; Salway Peaches, $1.15@$1.90; Coe's Late Red Plums, $1 90 Winter Nelis Pears, $2.70; Peaches $1.10@1.40; Billyeau's Late Peaches, $2 20@2 35; Levi Cling Peaches, $1 25.

Oct. 15.—One carload, full crates, Tokay Grapes, an average of $2 and for half crates of Tokay Grapes, an average of $1.10.

Oct. 17 —Three carloads: Cornichon Grapes, $3.65; full crates Tokay Grapes, $2.20@3.65; half-crates Tokay Grapes, $1 25@2.05; Winter Seckel Pears, $2 20 ⅌ half-box; Bilyeau's Late Peaches, $2.10 ⅌ box.

Oct. 17.—Five carloads: Half-crate Tokay Grapes,

55c@$1 70; double-crate Tokay Grapes; $2.45@3 15; half-crate Muscat Grapes, 55c@$1.35; Rose de Peru Grapes, 55@75c; Assorted Grapes, 80c@$1.35; Morocco Grapes, $1.45@e.65; Cornichon Grapes, $1.58@2.25; Winter Nelis Pears, $1.70@2.65; Vicar Pears, $1 60; Pears, $1 90@2.85; Bilyeau's Late Peaches, $1.50@2.25; Cling Peaches, $1.40; Levi Cling Peaches, $1.05@1.45; Ferrara Grapes, 75c@ 1; Quinces, $1.60.

At Chicago.

October 15.—Two carloads: Malaga Grapes, 55@ 85c; Cornichon Grapes, $2.65; Tokay Grapes, single crates, $1.30@1.4?; Tokay Grapes, double crates, $2.60 @3 40; Rose de Peru Grapes, $1 50; Muscat Grapes, single crates, $1@1.30; Muscat Grapes, double crates, $2.

October 15.—Three carloads: Full crates Tokay grapes, $3 15; half crates Tokay Grapes, $1.40; full crates Muscat Grapes, $2 55; half crates Muscat Grapes $1.15@1.20; half crates, Cornichon Grapes, $1.15; Salway Peaches, $1.85. Some grapes which arrived in a damaged condition sold for less than the prices named above.

Oct. 17.—Two carloads: Late Crawford Peaches, $1.70 ℔ box; Bilyeau's Late Peaches, $1.50@1 55 ℔ box; Black Morocco Grapes, half-crates, $1.40; Tokay Grapes, half-crates, $1 25@1.40; Muscat Grapes, half-crates, $1.10; Purple Damascus Grapes, half-crates, 90c; Beurre d'Anjou Pears, $2 50 ℔ box; Winter Nelis, Pears, $2.15 ℔ box; Vicar Pears, $2.15 ℔ box.

Oct. 17.—One carload: Double-crate Tokay Grapes, $2.85@3.05; single-crate Tokay Grapes, $1.10@1.45; double-crate Cornichon Grapes, $2.35.

At New Orleans.

October 12.—One carload: Bartlett Pears, $4 25, Tokay Grapes, $2.95@3; half crates,$1 30@1.50; Muscat Grapes, $2.40; half crates $1.10@1.25; Verdelle Grapes, half crates, $1.10; Cornichon Grapes, half crates, $1.30 Salway Peaches, $1.10@1.60

At Minneapolis.

October 12 —One carload: Pears selling $2.35@2 75; Peaches, $1 55; Grapes, 55@70c. Gross sale of car, $1191.

October 15.—One carload: Pears, $2@2.60; Quinces, $1 65.

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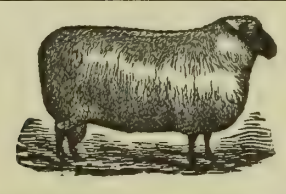
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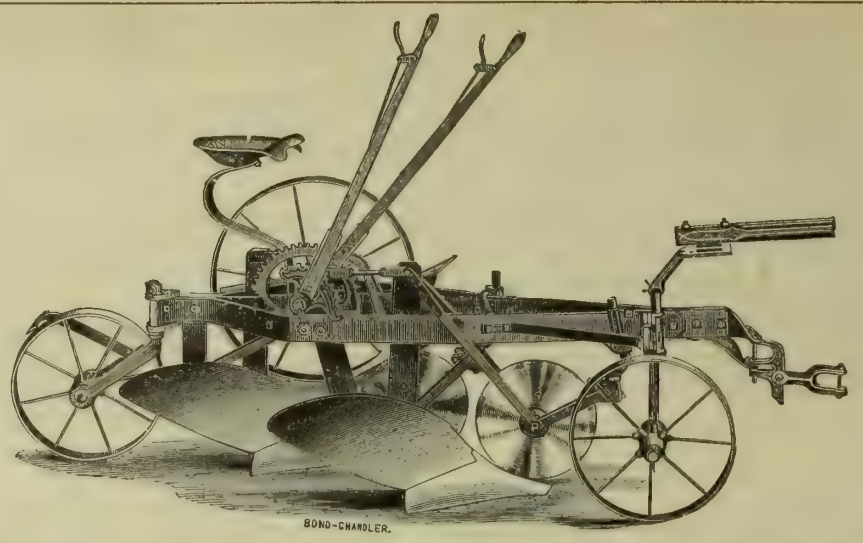
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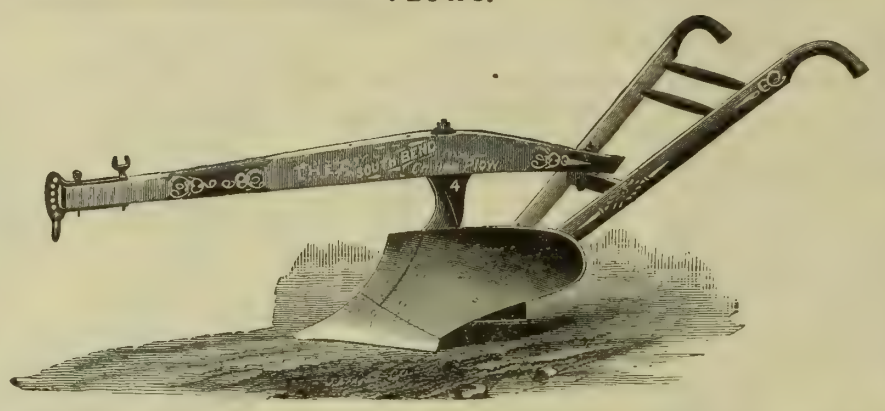
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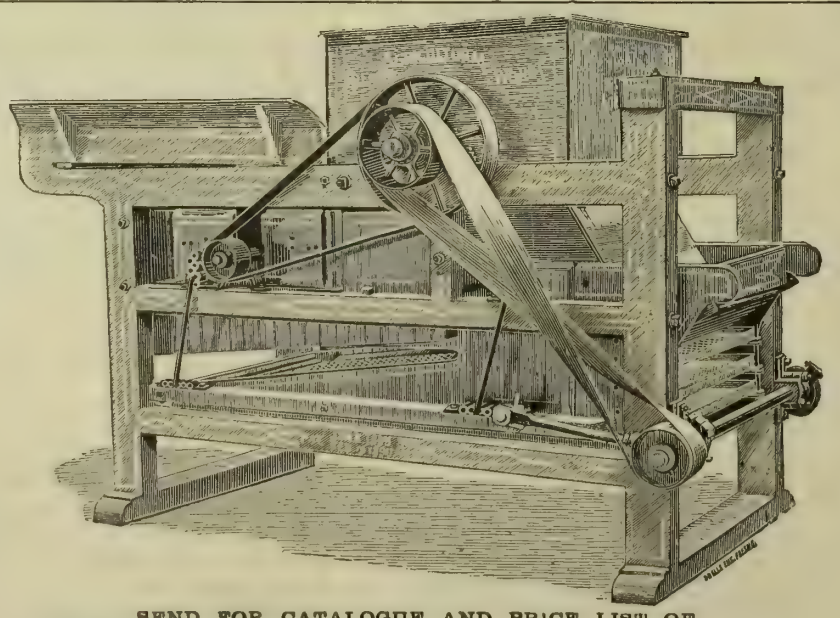
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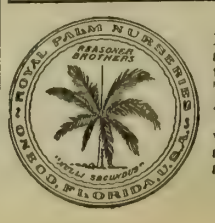
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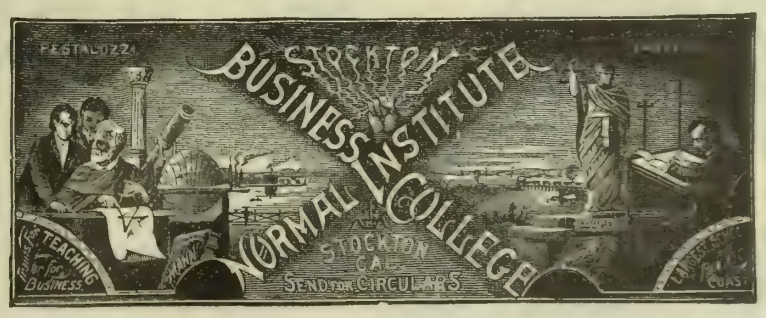
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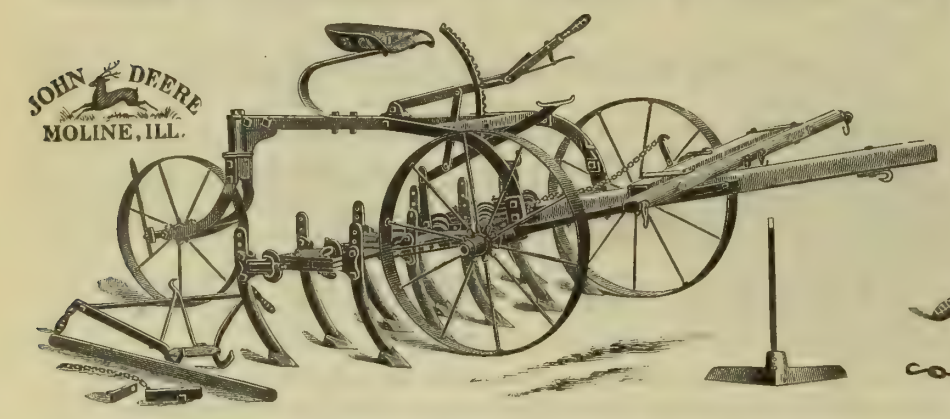
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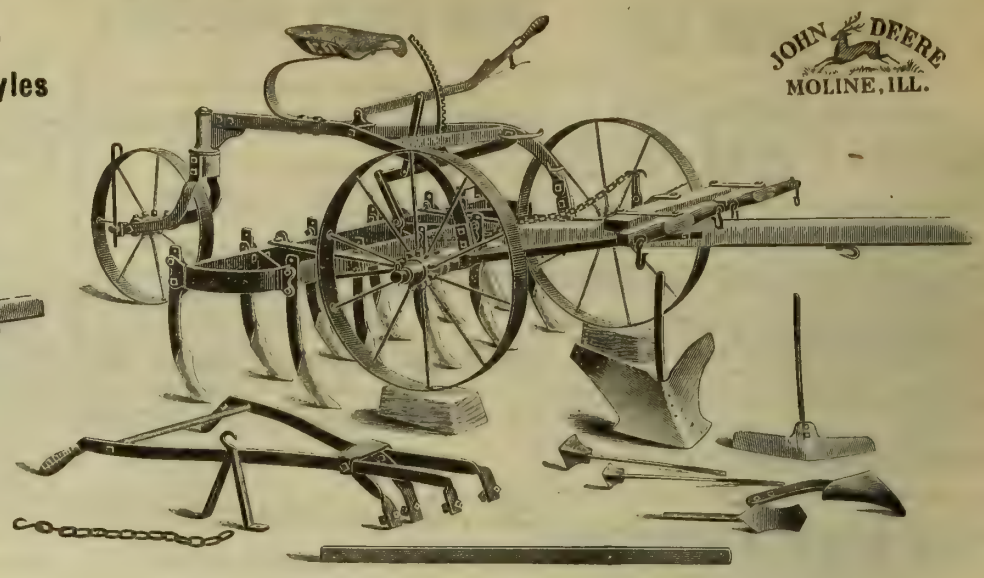
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"Atmospheric moisture is best absorbed by a loose, finely-pulverized soil surface. In this country evaporation outdoes absorption over and over again during the season of driest air. No one would think of "stirring up" soil to get anything out of the air, unless it might be in the fog belt of the coast. Better keep what moisture you have in the soil so the plant can have the full benefit of it."

The above sensible expressions we copy from an editorial in the "RURAL PRESS" of Sept. 3, 1892, and they have the endorsement of the successful fruit-raisers of this State, Turning damp soil up to the sun's rays will not keep it damp, but the air will take the moisture. To avoid evaporation

USE SHOVELS THAT LOOSEN THE SUBSOIL WITHOUT DISTURBING TOP SOIL.

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THE MORGAN SPADING HARROW.

STYLE "E."

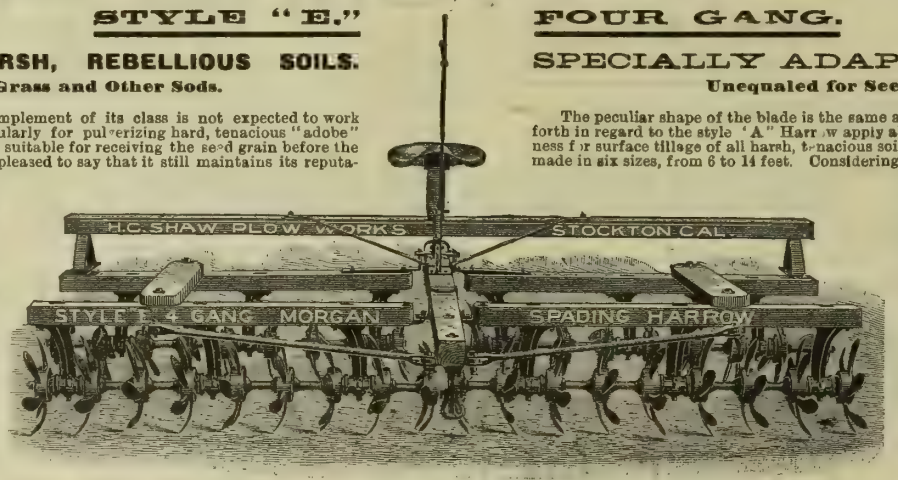
KING OF PULVERIZERS FOR HARSH, REBELLIOUS SOILS.

Matchless for Pulverizing Salt Grass and Other Sods.

The style "E" is designed for use in soils where any other implement of its class is not expected to work successfully. Intended for clay, or "adobe" soils, and particularly for pulverizing hard, tenacious "adobe" clods, in reducing "adobe" summer-fallow lands to a condition suitable for receiving the seed grain before the fall rains, it has leaped into prominence and favor, and we are pleased to say that it still maintains its reputation, won under great difficulties.

The front gangs throwing outward and the rear gangs throwing inward cause a most complete pulverization of all the surface and no furrow or ridge is left in the middle, as the rear gangs throw toward each other, leaving the whole "cut" of the harrow perfectly level and smooth.

The rear gangs of spades are so set that they run between the front gangs, thus presenting a cutting surface to the earth **every three inches**, whereas any two-gang disc or other harrow does not present a cutting surface to the soil any nearer than six inches. Owing to its peculiar construction, the style "E" Spading Harrow will do three times the amount of execution that any other kind of implement can possibly accomplish in the same time. The style "E" is a double machine, and by reason of one set of spades throwing the soil one way and the other set throwing the soil in an opposite direction, it accomplishes its work at one operation, or in going over the land once only, where disc or other harrows could not do the work in going over the land less than three or four times



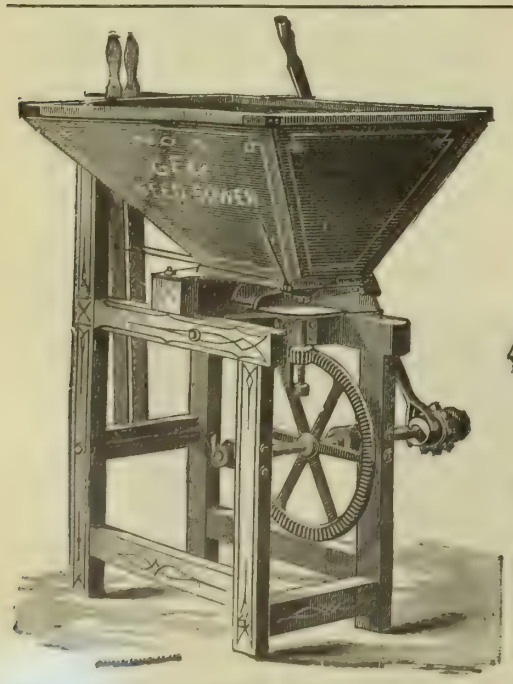
FOUR GANG.

SPECIALLY ADAPTED FOR DRY SOWING.

Unequaled for Seeding Summer-Fallow Lands.

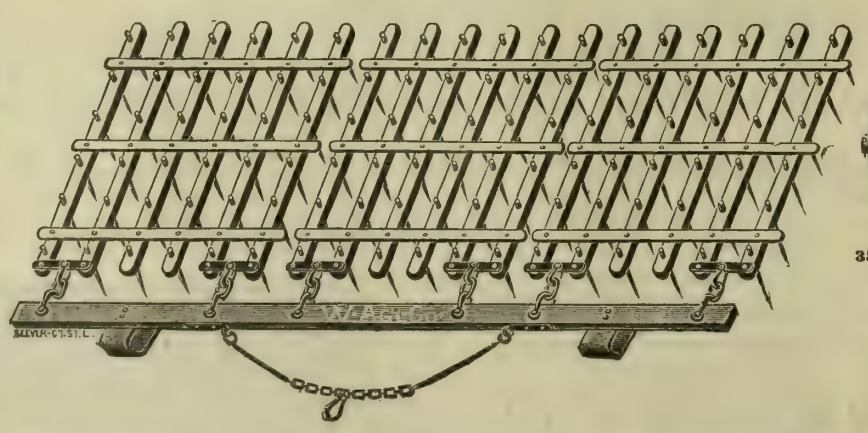
The peculiar shape of the blade is the same as those used on the style "A" Harrow, and any "points" set forth in regard to the style "A" Harrow apply also to style "E." The style "E" is unrivaled in its effectiveness for surface tillage of all harsh, tenacious soils, and often proves an effective substitute for the plow. It is made in six sizes, from 6 to 14 feet. Considering the amount of work accomplished it is very light of draft. It loosens, crumbles and lightens the soil, does not pack it, and does what no other implement in the world will do, viz:—leaves the soil thoroughly pulverized, stirring it from the bottom upward, in fine condition and exposed to the enriching influences of sun and air. It thoroughly covers seed grain and is a most economical implement to use for this purpose alone. It will cover from a fourth to a fifth more seed than any other implement used in broadcast sowing

All of the materials entering into the construction of the style "E" Harrow being of the best obtainable, render it very strong and practically indestructible. No pole is used, as the harrow pulls perfectly "true" from strong draft irons. No unwieldy pole to be broken out or cause sore necks on the team. Write for prices.



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All Sizes and Styles.



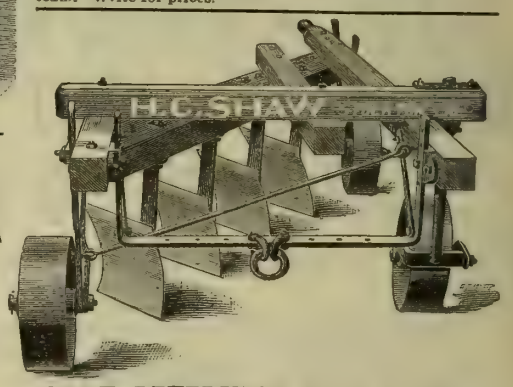
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We have Circulars descriptive of our goods, which we will send you at any time Address

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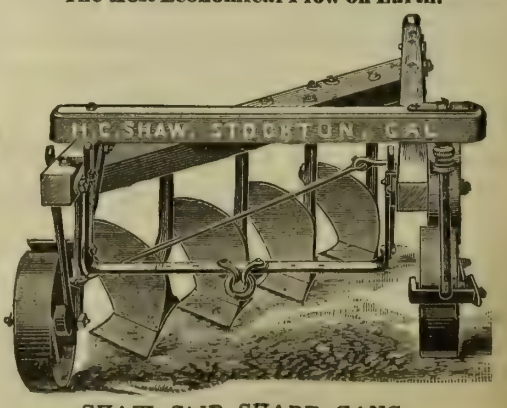
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For Deep Plowing, Tule and Other Sod Lands.

PACIFIC RURAL PRESS

Vol. XLIV. No. 18. SAN FRANCISCO, SATURDAY, OCTOBER 29, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

The Discovery of America.

The readers of the RURAL PRESS cannot fail to be interested in the picture which adorns this page. It represents the three famous caravels which formed the fleet of Columbus on the voyage in which he discovered the Western Hemisphere. One can easily understand the terrors with which sailors of the 15th century regarded the unknown waters when he sees what poor resources they had in the way of vessels. The largest of these caravels, the Santa Maria or Capitana, was about 90 feet in length by 20 feet breadth of beam. The second, called the Pinta, was a smaller but much swifter vessel. The third and smallest caravel, the Nina (Baby), was scarcely larger than a launch of the present day. Neither the Pinta nor Nina were decked amidships, and they were practically less seaworthy than the fishing smacks which ply their trade off the Golden Gate. On board these three vessels there were just 90 persons when Columbus sailed, an hour before sunrise on August 3d (the 13th, as we reckon it), 1492, from the port of Palos. A good deal of sentiment has been wasted in laudation of the sovereigns of Spain for their generosity in outfitting this little fleet, but their spirit in the matter loses its best aspect when we know that these three vessels were not their own, but were impressed into the service of the Crown for a time unlimited. The only resource which the owners had was an imperial order to the town of Palos to pay the rent of the Santa Maria and the Pinta for two months. It is easy to be generous in the way of lending ships when you have the power to lend somebody else's ship instead of your own.



THREE FAMOUS CARAVELS.

The discovery of America by Columbus was in one sense an unique event, but Columbus was by no means the first European who trod American shores. A colony of Northmen colonized Greenland in the latter part of the 8th century and dwelt there in large numbers for over 400 years. To this day the fiords of Greenland bear mute evidence in the form of ruined buildings of this old but long since abandoned colony. There is also abundant proof that there were frequent voyages about the year 1000 from this colony to a coast now known to be the western coast of the United States and Canada. The purpose of these voyages was for timber, which was not to be found in Greenland.

The records of these voyages have long been discredited, but recent investigations have given them new standing, and it is now demonstrated beyond question that Europeans, men and women, found their way to the eastern coast of the United States, not only one but many times during the colonial period of Greenland, and that at least one child afterward famous in the literary annals of Scandinavia was born on the coast of North America. The region thus visited was not suspected to be a continent; it was supposed to be an island which produced timber and was called by some of the adventurers "Markland," and by others "Vinland." While these visits, extending over a period of 40 years or more, were frequent, they were of no general consequence since they did not bring to the world the knowledge of the existence of what we now call America, and did not establish any permanent or even temporary contact between the streams of life in the Eastern and Western Hemispheres.

Although America was actually visited at a period anterior to Columbus' voyage, no ingenuity of argument can take from him the glory of an achievement which has and can have no parallel in the whole history of mankind. It is a mistake to suppose, however, that in the discovery of the West India Islands, and afterward of the coast of South America, Columbus brought the Eastern world into the knowledge of the Western world as we now know it to exist. The discovery of America in the broad sense was a work of gradual and orderly development, and was not completed in anything like the fullness of detail for 200 years after Columbus' voyage. Columbus died totally unconscious of the fact that his enterprise had yielded a new continent to the world and three generations had passed into their graves between the voyage of discovery and the time when America was known to be a vast continental mass and not a mere outpost of Asia.

It was another century before the interior of the continent had been traversed. The first work was done by Spaniards, the next was done by Frenchmen in penetrating the forests between the Gulf of Mexico and the Great Lakes, and the next was done by Englishmen or Americans themselves in pushing across the continent to the ultimate Pacific shores. It was indeed a long and multifarious process, pursued under difficulties which in this generation we can only feebly comprehend.

The 400th anniversary of the landing of Columbus at San Salvador, in the West Indies, which occurred on Friday last, was generally celebrated in the United States, and, very properly, the ceremonies were conducted with an idea to educational effects. There were magnificent demonstrations at New York and Chicago, and lesser celebrations all over the country, and in all of them the children of the public schools took the leading part. In San Francisco, in each of the schools, there were appropriate exercises in which the story of the discovery and its consequences was recited in plain terms and with ceremonies designed to impress the children with not only the facts, but the lessons resting upon them. It is the chief value of such occasions that they bring the minds, not only of children but of older persons, to reflections upon matters of vital historical interest, and thus, by increase of knowledge, tend to develop the mind and character of the country.

CHEAPER SODA.—Caustic soda has come into prominence among fruitgrowers' supplies because of its use in insecticides and otherwise. It will interest many of our readers, therefore, to be apprised that a North of England paper announces the discovery of a new process for producing caustic soda, chlorine and other chemicals direct from brine by electricity. The new process, it is asserted, effects a saving of 50 per cent compared with the cost of the old methods. Eminent chemists have pronounced the new process a success. If it practically proves thus, Californians, with the Pacific full of brine alongside of them, will have cheap caustic soda. It is too bad that the inventors cannot charm alkali out of the soil as well as draw it out of the ocean.

TURF LAW.—It appears after all that the jockeys are not the court of last resort in turf law, for it is telegraphed from New York that the general term of the Superior Court decided that Edward Corrigan's colt, Huron, should not have participated in the Futurity race run on August 29, 1891, and it reverses the order of Judge McAdam directing the Coney Island Jockey Club to permit the colt to enter the race. This, however, does not end the action, which is still pending over the matter.

THE CALIFORNIA BUILDING.—Captain Thompson of the State World's Fair Commission, who went to Chicago to attend the dedication of the Exposition buildings, reports that the main part of the California building is all inclosed and the contractors are now putting up the framework for the central dome. The building itself is very large and roomy, and a few days ago $13,000 additional was paid to the contractors in progress estimates of the total cost of $75,000.

THE FALL FLOWER SHOW.—The Chrysanthemum show of the State Floral Society will open at the Mechanics' Institute Pavilion in this city on the afternoon of Tuesday, November 2d, and continue until the evening of the following Friday. Present indications promise a show of exceptional extent and variety. The very creditable rose show of May last added much to the Society's reputation and a general disposition among growers of fine plants to participate is reported by the committee having the show in charge. Two very large collections, each covering 100 feet square of floor space, are promised. An exhibition of economic plants and other things of interest is expected from the State university.

The State Board of Horticulture also contemplates an exhibit, illustrating the character and scope of its work. Besides these there will come, of course, the great display of chrysanthemums, roses, foliage plants, ferns, etc., by by both professional and amateur growers. It is expected that the pavilion will be fully occupied by the exhibits, and that the fair will be, on the whole, the greatest of its kind ever held on this coast.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Half inch (1 square)	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, October 29, 1892.

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BUSINESS ANNOUNCEMENTS.

[new this issue.]

Nursery Stock—Riverside Nurseries, Lodi.
Spray Pumps—The Bean Spray Pump Co., San Jose.
Agricultural Implements—Truman, Hooker & Co.
Agricultural Implements—Baker & Hamilton.
Dairy Machinery—G. G. Wickson & Co.
Situation Wanted—Leo Essich, San Jose.
Foreman Wanted—Box L, Fresno.
Folding Sawing Machine Co., Chicago.
☞ *See Advertising Columns.*

The Week.

The weather has favored the late fruits. Warm sun and drying winds have attended the closing of raisin and dried-fruit curing. The same agencies have, it is true, dissipated much of the moisture from the October rains, but still the grass is starting in regions of heaviest showers and will hold its own probably until the clouds resume their kind offices. As we write on Wednesday, the signs indicate a change.

The fine weather is inducing an early start in orchard pruning on lands where the leaves have evidently finished their work for the season. It is not desirable to start pruning too soon, but where conditions favor it, much can be done now in dry long days better than in the short days and on the wet soil of midwinter. Where leaves are still green and wood soft, pruning should begin later.

The clear skies favor the political as well as the industrial workers. The sad death of Mrs. Harrison to which allusion is made in another column has demonstrated that the American people has indeed a heart full of respect and sympathy.

It is a decent thing and a creditable thing that the great contending political parties should stop in the midst of a heated campaign and cancel appointments for public meetings on the day of burial. In the face of bereavement the kinship of mankind is disclosed as in no other event. Perhaps it would be better did it more frequently appear, but better then than never.

Domestic Coffee.—We learn that a Missouri genius is besieging eastern newspaper offices with advertisements and samples of what he calls domestic coffee, offering to sell seeds from which any farmer can grow his own coffee. The proposition is full of humor when one knows that what he offers is beans—not the common bean, but the Soja bean, an Asiatic species which has been grown to some extent in the warmer parts of the United States. By planting these beans, which the Missourian will part with at an unflated valuation, the farmer is to be enabled to cut loose entirely from Mocha and Costa Rica and produce his own breakfast liquid. The Missourian seems to be infested with a vestige of a conscience, for he assures his victims that they can at least produce something as good as grocery-ground coffee, if not the finest. This, too, is rather a humorous point, for common grocery coffee is supposed to be largely beans, if not worse. The proposition is, then, that farmers grow beans, roast and grind them for coffee. They have always had this privilege, so the Missourian offers them nothing new. What he does offer is to sell them bean-seed at a hundredfold its value. In this portion of his work he is a fraud.

The Situation in Wheat.

The Rural has presented many facts of late showing that the world is likely to want wheat before another crop can be harvested. Statistical showings, which we have drawn from several authoritative sources, point to an unusually large inroad upon reserves and to very moderate supplies this year from most producing regions. If such views are true, and we have seen no question of their accuracy, the conclusion would be that the present disposition of the market and the prices at present outheld are not in harmony with the facts of visible supplies and prospective demands, which must be met by them before any more wheat can be gathered from the soil.

With these thoughts in mind, we sought an interview with Albert Montpellier, manager of the Grangers' Bank, well known to our readers as a constant student of conditions affecting values of our staple crops. Mr. Montpellier has exceptional opportunity for taking a broad view of such questions, and his bank is naturally interested in producers receiving full values for their products. We were not surprised that Mr. Montpellier should first call our attention to the fact that in only one year, probably, since the beginning of our export of wheat, had the value not reached $1.50 per ctl. That was in 1888, when the highest point was $1.45. If we contrast the conditions in 1888 we find that there was in that year a large carry-over from the previous year, and there was also heavy product generally in supply countries. As opposed to such affairs in 1888, Mr. Montpellier cited us to the following statement in an eastern journal:

Europe will have to cross oceans for at least 225,000,000 bushels of wheat. The surplus of India has already been exhausted, and her exports have been 24,000,000 bushels. From the minor countries of the southern hemisphere she will not get more than 25,000,009 bushels, leaving 175,000,000 bushels to be supplied from this country and Canada. The United States will have to supply about 25,000,000 bushels of wheat to the West Indies and to South American countries, so that there is demand upon her and her Northern sister for 200,000,000 bushels of wheat. Canada can supply 15,000.000 bushels. Can the United States export the remaining 185,000,000 bushels? Her crop is 520,000,000 bushels, her home requirements are 370,000,000 bushels, leaving a surplus of 150,000,000 bushels. Every bushel exported in excess of that quantity must be drawn from the reserves which, though they are liberal, are not extraordinary. It is certainly poor business policy to sell reserves of wheat at phenomenally low prices. It has never been done, and it is not likely to be done this year.

This view agrees closely with that we have urged before. On general principles, when a commodity is unusually low its tendency is upward toward a normal value. Sometimes, for various reasons, this course may be slow. In the face of heavy crops and large reserves, we might expect exceedingly slow advance from a minimum. With moderate produce and moderate reserves the recovery should be rapid.

Upon these grounds, which seem indisputable, there seems to be no reason why wheat prices should hold long at the present low ebb. In view of the general situation, wheat is worth more, and the present quotation of $1.31 per ctl. is not a fair equivalent for the produce. With only a single year in our history when wheat has not reached $1.50, and that fact accounted for as above, there seems every reason to expect ere long that the wheat now in warehouse shall be worth at least the minimum of $1.50—the low mark among our seasonal top figures.

It is important to point out, in connection with the condition of the wheat market, the unusually large tonnage now in port available for wheat, and also the large number of ships on the way here and expected to carry the wheat of this crop. There are now 29 of over 55,000 tons under engagement to load, most of which will be afloat with cargoes in 30 days. There are also over 50 more ships in port, representing over 90,000 tons of tonnage that can be had for wheat-loading at any moment that parties agree upon rates. The *Bulletin* remarks: "At the way we have been loading wheat ships in the past four months there is enough wheat tonnage now in port to keep shippers equally busy for the next three months, and during that interval enough more will arrive to furnish the market with all the wheat ships needed for the following three months." This abundant supply of ships, and consequently low freights, furnishes additional reason for local values more in agreement with the situation.

It may, of course, require a little interval to overcome the present effort which aims to depress values. There must, perhaps, be some more acute realization of the fact that there is no visible supply which warrants continuation of low values. At all events, from all indications now discernible, it is a mistake to sell wheat at present prices. It ought to be worth more.

Surplus Horses.

Almost every farmer has his pasture overstocked with unsalable horses that are eating their heads off. Still we keep right on in the same old rut, hoping that the market will be better next year, and reading of the great prices that Stanford, Haggin, Winters and others have received.

The truth is that for the past 20 years production has been out of all proportion to demand. From 1870 to 1880 the census shows an increase of population of 29 per cent and an increase of horses of 44.95 per cent. During the last decade population increased 22.6 per cent and horses 44.59 per cent. In California the last decade showed an increase of population of 39.7 per cent and of horses a gain of 46 per cent.

In the meantime, extension of railroads has displaced many stages and freight teams; cable and electric power have almost superceded horse cars and made great inroads on livery trade; steam has invaded logging camps and grain fields and settlement is gradually reducing the range territory and the demand for vacquero horses.

On the other hand, the change that is taking place in irrigated sections from extensive to intensive farming requires not less than four times the horses, and the phenomenal records that our trotters and runners have made demonstrate the advantage of a climate where the colt's growth is never checked nor his exercise interrupted, and auction sales in the East of undeveloped colts of approved breeding have been very encouraging. These data explain the apparently contradictory remarks that "There is no sale for horses," and again, "A good horse will always bring a price."

The truth is, different classes of horses and less numbers are demanded, and as the times have changed we have not changed with them. On freight wagon, stage coach or horse car it did not make so very much difference about the style, disposition or breeding, so long as animals were tough and sound. Vacqueros consider that horse a poor, lifeless stick unless he does responsible bucking when mounted. For these purposes the original mustang stock of California filled the bill.

Now that their vocation is passing away, these horses still keep on increasing. All along the eastern slope of the Sierra Nevada mountains great herds of horses run upon the sagebrush range almost without cost to their owners. Some of them grow gray without ever having been bridled, while others are driven home every winter to be fed and handled. Some of them are the original thoroughbred mustang with bucking attachment, others the degenerate offspring of American stock and still others are grades from imported draft or running horses. Owners reason that it will pay them to raise horses at $25 each. Some of the bands have grown to be wilder than deer or coyotes. By cunning stratagem or tedious pursuit they sometimes manage to corral a part of them and select some worth driving to market.

Some have been sold at auction in the mountains during the past summer at prices ranging from $2.50 to $10. Others have been driven to the valleys and sold for whatever they will bring, which generally leaves the drover poorer than when he started. During the State Fair at Sacramento, 20 of extra quality that had been worked one season, brought from $10 to $20 each.

Some of these horses finally become gentle and serviceable, while others never get to be so safe, but that the risk one takes every time he hitches him up is more than the use of the horse is worth. Whenever a man buys one of this class of horses for other uses than those named above, he must feel that he is buying a small chance in a lottery. The money that he brings is not enough to make good the loss to the horse-market from this class of overproduction and the feed that he eats would have raised a good steer or six or eight sheep. Often the men who corralled them had to take the pay for their trouble principally in the fun attending the risk of their necks, and the dealer took his profit in horse-trading experience.

If there could be some concerted action for a general rodeo of these range horses and an agreement to slaughter for hides and soap-grease all animals not likely to weigh more than 800 pounds at three years of age in fair condition and also every one with a serious fault in form or disposition the balance would be worth more than the whole and slaughtered horses might be made to net two or three dollars each. Then geld grade stallions; there are too many any way and it is very late in the day to expect a profit from raising, inferior horses.

Present demands are for general purpose, heavy draft, coach, trotting and running horses about in the order named. The ten-acre fruitfarmer wants a horse large enough to draw a 10-inch plow to a good depth in orchard ground; one that is good to cultivate the raspberries or strawberries; that mother or the children can drive to town; that will stand quiet on the truck while he is gathering up his load

of fruit and that will step off proudly on Sunday when the family is in the Surrey riding to church.

By crossing upon the deavy draft mares something with style and action we will often get a horse answering these requirements, also, but less frequently, by crossing draft stallions upon mares descending from trotting or running stock. There are large numbers from which this class of horses can be bred by giving proper care to keep the colts gentle and making intelligence and docility essential points in the sire. Two men out of three who want to buy horses are best suited with one bearing about this description.

For trucks, drays, busses, logging-teams, fire-engines, etc., very heavy horses are demanded, but our importers of Percherons, Clydesdales and shires have been so enterprising that it seems likely to be more profitable to use a part of this stock for breeding a more active general-purpose horse, in view of a prospective oversupply of draft stock.

If you wanted a carriage team worth $1000, that would attract all eyes as you drove through the avenue or park, where would you go to buy them? Visit the State Fair, and among the 800 on its grounds you would have found very few.

Cleveland Bays and French and German Coach are just coming in to fill this demand. Their grades will be likely to meet a large demand as general-purpose horses, and the finer individuals among the thoroughbreds to bring more money than any others, save those whose speed has been proven or such as go upon sale with a popular pedigree. It is hard for one to name any who have made a financial success for a term of years from trotting or running stock, except large breeders of high reputation, who make one of those classes the leading features of their business.

In applauding the few who reach the top of the ladder with their worldbeaters, we forget the many who have fallen by the wayside. As we crown Nancy Hanks, Sunol and Maud S. are retired with Sullivan, the once great, to comparative oblivion. Our columns are not supposed to address a constituency of sporting men, and we know of no way for the farmer or average horsebreeder to grow rich from fast stock, otherwise than by using them as a foundation for developing from coarser strains the good general purpose horse, for which there is so much demand.

Briefly, then, weed out the scrubs. Breed up the best. Use only the better sires. Raise a larger share of general-purpose and draft horses. Put your big money into coach horses. Let the professional horsemen produce the trotters and runners at their breeding-farms, and go to them for top-crosses to produce general-purpose horses.

The Nicaragua Canal Again.

CARMEL VALLEY, October 24.

TO THE EDITOR:—Since last writing on this question I have had opportunities of making a more thorough study of the situation, and am much impressed with the necessity of having it built and owned and operated solely by the American people. The work is not only so worthy to be undertaken by this great nation, but it is so important that no further monopoly should be saddled on the shoulders of a long-suffering people.

To say that the American nation cannot do what a half dozen of its own citizens can do is simply to talk preposterous nonsense.

It would not seem necessary to make this a party issue. Just let the people make all their nominees for Congress undertake to support the proposition that the Nicaragua canal must be and shall be built, owned and operated by the National Government, for the use and benefit of all commercial nations, and for the profit of its sole owners, the great American people.

Why, Mr. Editor, we could in a year ship almost enough pears and apples (cold storage steamers) from California to London to pay the operating expenses and fixed charges on the whole canal.

There's nothing more worthy of the attention of every voter in America to-day than this eminently practical matter of getting this canal built without undue delay. And for this occasion just let the people all speak at once, and all speak as loud as they can, and Washington must and shall respond "Amen."

EDW. BERWICK.

Beet Sugar at the Los Angeles Fair.

LOS ANGELES, Oct. 13, 1892.

TO THE EDITOR:—When writing my report of the Sixth District Fair, I overlooked the notes I had taken with regard to one of the most interesting exhibits—that of Messrs. Oxnard of the Chino Valley Beet Sugar Co. It comprised beets and sugar in all stages, from the garden product to the fine article ready for some housekeeper's nice baking. An expert was on hand to analyze any beets brought to him, and his explanations of the new industry attracted much attention. The season just closing proves that beet culture on a large scale is a success at Chino, although the dryness of the spring was unfavorable at the start. I am told that some fields yielded the remarkable amount of from 20 to 25 tons to the acre, and that the net profits ranged from $50 to $75 an acre. The report is that general satisfaction is expressed by the farmers, and a largely increased acreage will be cultivated next year. Labor-saving machinery has been invented which will hereafter increase the profits. The output of sugar from the factory this season is nearly 7,000,000 pounds up to date.

C. S. BROWN.

A PRIZE OFFERED.—The Chrysanthemum Show and Floral Festival of the State Floral Society will open at the Pavilion next week, beginning Tuesday, November 1st, and continuing four days. Orphan children at various city asylums will be the guests of the Sherwood Hall Nursery Co. That firm offers a $25-prize to the child from any of the asylums who will make the closest guess of the number of petals in a single chrysanthemum bloom, to be displayed at the coming show, in the Sherwood Hall Nursery Company's exhibit.

From an Independent Standpoint.

In the Presidential election of 1884 the total vote of California was 196,957, of which the Republicans cast 102,406, the Democrats 89,225, the Prohibitionists 2960 and the Labor Party 1847. In the Presidential election of 1888 the total vote was 250,220, of which the Republicans cast 124,782, the Democrats 117,671, the Prohibitionists 6107, with 1660 votes divided among the American Party, Labor Party, etc. In the State election of 1890 the total vote was 252,457, of which the Republicans cast 125,129, the Democrats 117,184, the Prohibitionists 10,073. Thus, in '84 it will be seen that the Republican majority was 7855. In '88 the Republican plurality was 7111, while two years ago the Republican plurality was 7945. The State, therefore, is nominally Republican by from seven to eight thousand votes. But this year there are many uncertain quantities in the field. The People's Party may poll 5000 votes or it may poll 40,000 and nobody can tell which of the old parties will suffer most. Another uncertain quantity is the Prohibition vote. We have seen that in 1884 its total was less than 3000; in '88 it was just above 6000, and in '90 it was upward of 10,000. The Prohibition cause is certainly growing, and it is not unlikely that this year the fact that a California candidate is in the field will make a further notable increase in the total Prohibition vote in this State. Gains made by the Prohibitionists represent practically losses from the Republican strength. In view of these figures and considerations, one man's guess is about as good as another's. The best judgment, as near as we can discover it, is favorable to Republican success by a narrow majority. This view is extremely doubtful in consideration of the uncertainty of the strength of the People's Party. The protective idea, which has come to be the basis of Republican doctrine, is unquestionably strong in California, many of whose interests are, as our people conceive, bound up in the tariff policy. On the other hand, the party is handicapped by a record of servility to corporate interests. It is weak, furthermore, in the lack of really strong leaders. It is, indeed, a notable fact that nobody has risen to take the place of the old warhorses. The trouble is that the ablest men of the party are so connected with railroad or other corporate interests that political growth is impossible. In the meantime, the party gets along as best it can under the domination of men like Estee, Felton, Perkins et al—good men in their way, but not of an intellectual stature adequate to the task of broad political leadership.

The lack of men of the first class in the Republican ranks in California is made manifest by the prominence into which lesser men have intruded themselves. This latter fact, a thing impossible under better conditions, is a serious menace to Republican interests at this time. To be plain, the candidacy of Mr. M. H. DeYoung for the United States senatorship threatens to give the legislature to the Democrats. It is believed, in several counties heretofore surely Republican, that the legislative ticket has been "fixed" in Mr. DeYoung's interest, and in these counties the chances of Democratic success have been greatly enhanced. There are thousands of Republicans who would prefer to see a Democrat sent to the Senate rather than DeYoung. It is felt that his election would fix upon California a deep and lasting discredit, and that it would establish here a system of politics even more hateful than that which now prevails. The objection to Mr. DeYoung is not at all surprising. He has, in all the years of his business life in California, been a notorious "black sheep;" and though none have been more persistent in effort, he has failed utterly to establish himself in the public respect. By the better elements of the community he is regarded as a vulgar, pretentious and pushing man, not qualified either by ability or character for the U. S. senate or any other public post. His candidacy, which is entirely of his own motion, is resented as a gross impertinence. In San Francisco it is the chief motive back of a non-partisan movement which promises to defeat the Republican legislative and city ticket, if, indeed, it shall not succeed in electing its own nominees.

Mr. Blaine has written a letter to the *North American Review* in which he suggests that the apparent lack of interest in the present national campaign is due to a decline of partisan spirit in the country at large. This is unquestionably true. There is, indeed, nothing at this time to inspire partisan spirit, since each of the so-called "issues" is a mere matter of economic policy. Men find it difficult to "enthuse" over a question of business policy—as to whether or not there shall be a tax on tin or whether there shall or there shall not be a tax on sugar. If it is the purse that in the end rules the world, it is still principle which inspires and commands enthusiasm. If the RURAL has any particular hobby, it is with reference to the evils of partisanship, and it holds these indications of a declining party spirit as signs of a better era to come. The new ballot system will contribute largely to the spirit of independence among the people, because under it, it will be impossible to vote a straight ticket on the wholesale plan. Under this new system, the names of the candidates of all parties are placed on each ballot, and the voter is required to designate by special mark the particular man of his choice. Thus he is called upon, whether he wishes to or not, to examine his ticket carefully and discriminate between the names contained in it. This is of itself an immense step toward a better system of politics.

Caroline Scott Harrison, the wife of the President, died at the White House early on Tuesday morning. Mrs. Harrison was an excellent woman of the plain western type, the daughter of a schoolmaster, a good mother and a good wife. She was born in 1832, was married at the age of twenty, and her career was a purely domestic one, broken only by the incidents of her husband's service in the war and his political life at Washington. These incidents, of course, brought Mrs. Harrison into exceptional prominence, in which her bearing was entirely adequate and worthy. She had the good sense to attempt no innovations in the domestic administration of the White House, and was content to bear a quiet, womanly part as the wife of the President. There was no assumption about Mrs. Harrison. She was the daughter of plain, respectable people, and she grew up in the spirit of her family; and her character, solidly founded in Christian faith, stood the trial of such prominence as falls to the lot of few women in this world. The family life of Mr. and Mrs. Harrison is said to have been of the sweetest, and there are none who will not deeply sympathize with a man now stricken in the midst of greatness. In the darkened chamber where Mr. Harrison sits alone with his grief, how pitiful and empty must seem the dignities and even the glories of this small world. Among the many letters and telegrams of condolence which have reached the White House since the death of Mrs. Harrison, the following will by the public be deemed the most notable:

To Benjamin Harrison, Executive Mansion, Washington: I hasten to assure you of my sincere sympathy in the hour of your terrible bereavement. GROVER CLEVELAND.

FRUIT MARKETING.

Plans for Selling Fruit.

SAN FRANCISCO, Oct. 24, 1892.

TO THE EDITOR:—At the Marysville Fruitgrowers' Convention in 1891, a discussion led by David Lubin of Sacramento considered a plan for more direct and economical contact between producers and consumers of fruit. A healthy condition of the business was recognized as one in which the producer receives a paying return for capital and labor, wisely invested, and the consumer receives an article of fine quality in good condition at a price which encourages free and regular purchases.

The necessity of some plan by which perishable fruit should pass through fewer hands, reach the consumer in less time, in better condition, at less cost and with less loss, was generally recognized. The plan proposed by Mr. Lubin contemplated a manager and force of licensed vendors in each distributing city under pay and control of producer. It met with much favor, especially as coming from so practical a merchant and fruitgrower as Mr. Lubin; but as no measures have yet been taken, the importance of the matter seems to merit further discussion at the coming San Jose convention, Nov. 15th.

The writer bought five pounds of pears for a quarter in San Francisco, and two days afterward saw better fruit rotting under the trees at Santa Rosa because it would not pay to send to market. That was an isolated instance, or one that cannot be easily duplicated, and is enough to show that reform is needed somewhere in our system of distribution. If the grower dealt directly with the consumer, selling rapidly for good pay, there should be something left for the fruit when twenty pounds instead of five were sold for a quarter.

That his theories might be made to fit conditions rather than other theories, the writer interviewed five representative retail stands to-day (Oct. 24th).

Apples are selling at wholesale at 20 to 75 cents per 40-lb. box; at retail, the average of all quotations given were 5 1/6c per lb., or $2.07 per box, or a profit of only 335%. Pears were selling at wholesale from 25c to $1 per box, and the average of five retail quotations was 6 1-5c per lb., or 310 per cent average profit. In one instance 566 per cent Muscat and Mission grapes are worth 20 to 40 cents per box wholesale. Six retail quotations averaged 5 1-6c per lb., 310 per cent profit. Again, Tokay grapes were quoted at 40 to 60 cents per box, and four retail quotations averaged 7c per lb., 180 per cent advance. Isabellas were worth $1 to $1.20 per box, and four retail quotations averaged 9¼c per lb., 77 per cent profit. Cornichons worth 50 to 75 cents per box brought an average of 6⅜c per lb., or 112 per cent advance.

These instances were intended to show average margins, and are nearly enough exact to demonstrate the necessity for improvement. One of these dealers had a very small stock of fruit and confectionery on Fourth St. near Market in a room about 12x16. Considerable of his stock was

spoiling on his hands. He said that his rent was $40 per month and sales $8 to $9 per day. For his own services and profits he realizes $50 to $75 per month. Another dealer at Valencia and 20th has a fine stock of fruit and vegetables and a room about 18x24. He pays $35 per month rent and says that his sales formerly averaged $60 to $70 per day, and now run about $15. Vegetables bring just about enough profit to make up for the small quantities that he gives away to buyers of fruit and for losses by decay. In the past five months' business his profits are mainly represented by $417 book accounts. He thinks that next year will be still worse, as he notices a disposition to save the little amounts due to small dealers in family supplies to accumulate funds to attend the World's Fair. The house did 10c worth of business from 1 to 2 P. M.

Free competition in this business seems to have multiplied stores and extended credits to the point where the farmer looks upon it as the poorest market in the country where he ships because the fruit will not bear eastern shipment, or is not wanted to can or dry. The buyer of family supplies has to pay such prices as to restrict consumption and encourage boarding rather than house-keeping, and dealers are holding their breath and waiting for the other fellow to starve out and give them a living trade.

As fast as one starves out, three come in to take his place, and our friend who keeps the corner fruit-store feels more and more nervous every time he sees or hears of the sheriff.

Under any plan similar to Mr. Lubin's, the retail dealer would seek some other occupation and the commission man would adapt himself to the new system or find other business. The fruit would reach the consumer in better condition at from one-half to one-fourth the present margin. With a large C. O. D. trade it seems as though a very small share of the present margin would carry on the business. Most of it now goes to pay rent and wages while waiting for customers.

THE ORDER SYSTEM.

In modification of Mr. Lubin's plan, allow me to suggest for further discussion, one in which the order system shall save a part of the work assigned to vendors. As in his plan, let uniformed solicitors canvass the city explaining system and soliciting patronage on terms as advantageous to consumer as producer. Keep business well-advertised. Invite housekeepers to send in orders on postal cards the day beforehand. Aggregate orders and invoice stock every evening. Buy enough to fill orders and meet retail demands when market opens. Have orders put up in delivery-wagons, one load for each ward, all ready to start the first thing in the morning. Let the deliveryman collect and take orders for next day's trade. Fix some plan by which those who asked for credit should make pay secure. It would be essential to success that a full stock be carried and delivery made as convenient for the housekeeper as possible, designing to make family trade a specialty. Some families would want orders filled with first-grade fruit, some with second and others with third. Order blanks should provide that quality be specified and price made to correspond.

Objection will occur that those already familiar with the trade would have previously started some such plan had it been practical. They have in the milk trade. Under present conditions any dealer starting such a trade could expect united opposition of competitors. Those now in the trade cannot be supported on a less margin. Indeed, if fruit were given them it is likely that enough more would go into the trade to keep about the same proportion on the verge of bankruptcy, and consumers would get their supplies no cheaper.

At present the keeper of a large boarding-house or hotel can go late into the market and clean up lots likely to spoil if held over, at rates below wholesale, and thus board families cheaper than they can buy their supplies at retail, and still make a profit besides paying rent and service. This undermines the home and one does not have to look far to see the train of evils inflicted upon public morality and prosperity by this system of trade, combined with other causes.

The question will arise, who is to "bell the cat" if those who understand the business dare not undertake it, and those who do not cannot hope to succeed? Every fruitgrower is interested in the accomplishment of any plan that will increase sales, provided they net a profit, and every housekeeper is interested in getting better supplies at fair prices. The number and capital interested have a common interest.

Let us call it the "Fruit Producers' and Consumers' Union."

It is designed to be of equal interest and benefit to both classes. As San Francisco is right here, and her market system needs reform worse than that of any other city, let it begin at home. Solicit subscriptions of stock from both classes. Both will be benefited. Let an executive board represent both classes. Fix upon some minimum subscription to stock which shall entitle holder to share benefits and profits. Receive all consignments from producing shareholders and credit them with wholesale market price on receipt; no dumps. Charge for goods a price that will safely meet all expenses and leave some balance. Lay aside a sinking-fund to provide for gradual increase of trade. On the 10th of each month divide balance on hand pro rata among producers and consumers. This system would make every member an advertiser, interested in the the success of the enterprise. Of course, the house would not always have trade for all that was sent in, and would sometimes need to send out peddlers or sell to canneries. On the other hand, they must expect to buy goods every day in the open market to fill orders. Housekeepers must have their orders filled satisfactorily. They cannot wait to buy cheap of a peddler who makes occasional visits with the surplus of a decaying stock or a glutted market.

The main success of the enterprise would depend upon the executive committee and the manager they should choose. It is to be presumed that the committee would be selected from such practical business men as were most interested in the success of the enterprise and that they would be able to retain some one whose experience and capacity qualified him to meet the opposition to be expected.

These suggestions are offered in no spirit of dogmatism, but with the hope that they may serve as the skeleton of a plan to be rounded into symmetry by the united wisdom of the many interested.

F. S. CHAPIN.

Oriental Plums.

We give some interesting extracts from a paper read by J. L. Normand, of Marksville, La., before the Louisiana Horticultural Society at its late meeting, on "Oriental Plums." Mr. Normand has given much time to experiments with new fruits from Japan and China, and is considered authority on these subjects.

Of all fruits that I have tested on my experimental grounds, the Oriental plums stand at the head of the list as the most profitable for us to plant, either for market or home use. I have sent them by mail and express as far as New York and Chicago, also to California, reaching distant markets in good condition. In northern cities they command fancy prices, and I predict that it is but a question of a very few years when the Gulf States will take the lead in supplying early plums to the North and West. We are at least 1000 miles closer to the great markets of the United States than California, which gives us an advantage in cheaper freight rates, fruits reaching destination fresh and the first on the market.

The Bougoume and Japan apricots are the first to ripen, about the middle of May; the Bougoume, like the Kelsey, is sometimes caught by late frosts in full bloom; it blossoms a few days ahead of Kelsey, hence it would not be advisable to plant largely of that variety north of here. The Japan apricot is much later to bloom; this is the only apricot that has ever succeeded with me here in central Louisiana; it can be planted from the Gulf coast to Mason and Dixon's line. The above two varieties were imported by ex-Gov. Hubbard, of Texas, while minister to Japan. The Kume and Hanayune, catalogued by some nurserymen as Gold Dust and Hubbard, bloom too early. I have discarded them, and keep only a few trees to supply a few Northern hothouses, to be grown under glass. The Bontonkio No. 1, another early bloomer, I believe would do well to force under glass.

Now comes, in rotation of ripening, the Hattonkin No. 1, which ripens the first days in June, and sometimes the latter part of May. It is about twice the size of the wild-goose fruit, beautiful golden and transparent in color. This variety was imported by H. H. Berger, of California; it is not as prolific as Hattonkin No. 2. Next, Hattonkin No. 2, which ripens about 12 days after. The fruit of this variety resembles the Kelsey in shape, but a little more pointed, very prolific; it was first introduced by Frost & Burgess, of Riverside, Cal. The two above came to me under the name of Hattonkin, and when I saw they were different in habit of growth, fruit and time of ripening, I added No. 1 and No. 2 so as to distinguish them in their order of ripening. Next comes in probably the finest of all, the True Sweet Botan. The tree of that variety is a marvel of prolificness, fruit large, flesh yellow, solid, reddish, purple on sunny side, practically cuculio proof. It would be well to state here in answer to many inquiries and the prevailing impression that there is only one variety of Botan; this is a mistake, as I have three varieties of Botans that are different in fruit, as well as foliage and size. The Abundance, or yellow-fleshed Botan, Mr. Lovett, of New Jersey, has been accused of renaming. Mr. Lovett was right in giving it a name as the introducer. It is a good variety, smaller than True Sweet Botan, and the shape of the fruit is a little pointed, whereas the True Sweet Botan is round and the Whited-Fleshed Botan has a white flesh. The leaves of the Abundance are lanceolate, not as broad as the other two kinds; these three varieties of Botan ripen about the same time. Then the Normand Japan. This variety was imported by myself; it came without a label, and, in the absence of a name, I have named it Normand Japan. This is my choice of all the Oriental plums, and fruited for the first time the last two seasons in this country. Fruit a beautiful golden color, a little larger and better than Burbank, shaped like an apple; fine flavor, tree of symmetrical growth and very prolific; ripens just after Sweet Botan. Next follows Burbank No. 1, much like the Sweet Botan in shape and color of fruit, a fine variety. The Burbank, which is different and which ripens right after the above, was first introduced by the great California experimenter, Luther Burbank. The Chabot and P. Simoni, the latter a shy bearer, but a fine fruit. Some years it bears better than others. Shiro Smomo, imported by Berckmans, of Georgia; this is a fine, deep purple plum, oblong, pointed in shape, with a beautiful lilac bloom, the brightest colored plum of all, presenting an attractive appearance. H. H. Berger describes this plum as white in color. Next the Bailey Japan, like the Normand, which came to me without name. I have called this variety after the editor of the *American Garden*. It begins to ripen the first days in July; it is different from any of the 30 varieties I have on my experimental grounds, fruited here twice this and last season for the first time probably in the country. Fruit almost as large as the Kelsey, nearly globular and overspread with a light cherry red; tree a prolific bearer, upright and vigorous grower. I shipped a box of Bailey Japan to Prof. L. H. Bailey in July, 1891. The following, under date of July 8th, was received: "The box of Bailey Japan plums came to-day; the fruit was ripe and delicious. It is certainly very attractive and luscious."

Continuing in rotation of ripening, the Satsuma Blood plum. This is a vigorous grower, with dark red bark and lanceolate leaves. It ripens fully two weeks before the Kelsey. The flesh of the fruit is solid, clear purple, from pit to skin, a fine shipping fruit; inclines to overbear; it grows as well from cuttings as the Marianna, and no doubt will be used largely as a stock to work other varieties on account of its deep-rooting propensity. The Marianna roots too much on the surface of the ground and its roots are torn by working in orchard, whereas the Satsuma Blood strikes roots like the LeConte pear—deep.

Lastly comes in the Kelsey. This was the first variety imported in the United States. It came by way of California, and was received by Mr. Kelsey in a bundle of Japanese persimmon trees, with no name attached. It is the largest and the latest of all the Japanese sorts. It is inclined to rot too much in wet seasons, and not a sure-cropper on account of its early blooming. Like the Bougoume, I get a full crop every other year.

I find that the Yellow Japan, Chabot and Hatankio to be the same plum under three different names.

The variety offered by Mr. Berckmans, under the name of Botankio or Hatankio, is the same as Hattonkin No. 2. The variety named Massu does not bear well with me; four-year-old trees bore a few small yellow plums. The variety which I got of Mr. Berckmans, under the name of Massu, is much larger and of a deep cherry red in color. As to prolificness, I am not ready yet to say until further tested, and here again the Yosobe from H. H. Berger and Berckmans are totally different—I prefer the Berckmans' strain. The one from Berger is small and round in shape, whereas that from Berckmans is medium to large and oblong in shape; both same color.

The following I have discarded as unprofitable, being perfectly barren. Some of them may be of European origin, as Mr. Berckmans suggested in his letter, viz: Longfruit, Engre, Ura Beni and Hoyo Smomo, Kelsey Prune and Ogon. Prunus Pissardi and Prunus Virgata are only fit for ornamental trees, the former for its dark purplish foliage. It produces an inferior fruit which ripens in May; the Virgata is good for its double blooms, which come out early in February. It looks like when one begins to experiment with fruits he never has enough. My hobby is on the plum. I have some 400 or 500 seedlings that will soon bear. I expect interesting sport from this lot of new seedlings.

TEXTILE INDUSTRIES.

Ramie Machines in New Orleans

WASHINGTON, Oct. 19.—The board of experts of the department of agriculture, who conducted the experimental tests of ramie machines last month in New Orleans, have made a report which is made public to-day by the department. The trial was for the purpose of ascertaining the capacity of American machines for continuous operation for a day of ten hours, instead of the usual tests of a few minutes. Only three machines were entered for the tests—the "Kauffman," the "J. J. Green" and the "Fremercy."

Owing to delays in transportation, the ramie stalks supplied by contract from the plantation of Colonel Gustave A. Breux in Lafayette were spoiled in transit, and the stalks used were obtained from Captain Willett near Algiers and from the government experiment station.

The experts report in detail what was done by each machine before clogging. Both green-stripped ramie stalks and freshly-cut jute stalks with leaves were tried. The experiments were soon abandoned on account of defects of the machines, and the board of experts decided not to estimate the run of any machine for a day of ten hours based upon these trials, believing the figures would be misleading.

Commenting upon the tests, Special Agent Dodge says: "While the figures for a day's work, based on the results of short running, are wholly misleading, it is interesting to note that the output of the Kauffman machine, during the 42 minutes of continuous work before it clogged, represents 4743 pounds of green stalks in ten hours of continuous action, or a little over two tons; with an output of 1257 pounds of wet ribbons, equal to about 420 pounds of dry ribbons, which weight would be considerably reduced after the loose hurds and woody matter remaining in the ribbons produced by this machine had been eliminated. In like manner, had the J. J. Green machine to run continuously for ten hours, turning out ribbons at the rate of speed shown when in actual operation (that is, deducting the 67 minutes spent in cleaning and readjustment), the output would have shown a capacity of 4821 pounds of stalks and 1232 pounds of wet ribbons, equal to about 410 pounds of dry ribbons. But both machines were unable to finish the 5000 pounds of stalks weighed out to each for the trial.

"The results of the New Orleans trials are satisfactory as far as they have demonstrated the status of the machines entered and established an American record that gives a starting point for future comparison, as the results of other trials are made known. One point demonstrated beyond all doubt at the recent trials is the perishable nature of green ramie, either stripped of its leaves or unstripped, and the experience recorded emphasizes the importance of taking the machine into the field where decortication of the green stalks is carried on. Two or three small bundles of ramie stalks, with leaves cut and tied upon on the Willet plantation before noon of the 29th, had begun to show signs of heating on the morning of the 30th, though the stripped stalks and the remainder of the unstripped stalks were in perfect condition.

"It is an interesting point for future experiment to determine whether ramie stalks can be perfectly dried in this condition for machine working in Louisiana, owing to the greater humidity of this section, compared with other sections of the country suitable to ramie culture. It would seem, from my observations in Louisiana, that slight kiln drying will be necessary, after at least ten days of sun drying in the field, in order that the stalks may be made sufficiently brittle for the machine to separate the woody matter readily, and the question of profitable cultivation is another problem which can be settled only by careful examination on a large scale."

PETALUMA GRANGE asks for the location of the next session of the State Grange in its prosperous town.

HORTICULTURE.

Hints for Beginners.

MODESTO, STANISLAUS CO.

TO THE EDITOR:—The subject of this essay—on the preparation of land for laying off and planting an orchard and vineyard, what varieties yield best results, pruning trees and vines, winter treatment of insect pests—embraces the whole foundation on which a horticulturist is to build his livelihood. If this foundation was more substantially laid than it is at present, in a good many cases, it would save half the hard work with which a fruitraiser has already to contend, besides making a big difference in his profits at the end of the season.

This essay, as I mentioned in my foregoing one on fruit-picking (RURAL PRESS, July 23d) is more for the small raiser who is thinking of extending his vineyard and orchard, although his experience with what he has already under cultivation ought to teach him what would bring him the best results in his later planting, the extension of his orchard and vineyard. I write also for the man who is what one calls *new* to the business and thus liable to make a good many mistakes, and these mistakes are liable to give him a very poor opinion of fruit-raising as well as a very poor profit in his returns. I am but an employe, so will just give my experience I have gained in the localities I have worked.

First of all, we have to find out what we desire to grow, for it is a sure thing, starting in a small way, one cannot grow everything, so you must confine yourself to two or three varieties, and not two or three dozen as I have seen in a good many orchards and vineyards. That notion is, however, dying out, and it is a good thing, too, for it is a poor speculation at its best.

Having found out what you desire to grow, find out the land and location suited best for these varieties. Of course trees and vines will grow almost anywhere where there is soil, but how will they bear and what sort of a living will you make off them? It is a common mistake with a good many to think that just where they buy a few acres of land anything they plant will grow and bear profitably. How many, after four or five years hard toiling, not forgetting the expense they have been put to, find they have planted varieties totally unfit for that locality; whereas, if they had planted something suitable to the soil, they would have had everything to make life happy and prosperous. I would sooner have 10 acres of first-class land at $200 per acre than 50 or 100 acres of poor land at from $20 to $50 per acre. Of course there are a good many favored spots not yet planted to fruit, still it does not pay a poor man to experiment with it to find out those spots. Having 50 or 100 ares of poor land, one has to toil the whole year and then not have good results; but on ten acres of good land it is the reverse. It is a common saying that a man with 10 or 20 acres can do all his work, then he can go and work for outsiders; but the trouble is when outsiders want work done, such as pruning, etc., the 10 or 20 acre man's pruning, etc., requires doing also, and so on. Thus, when he has finished, he will find the outsider pretty well finished too. There are times when he can go out and work for others, still 10 or 20 acres of good fruit requires a considerable amount of attention to bring good results, and he has to make every tree and vine do its share in bearing. By the time he has done that he will find he has not much time for helping a neighbor out unless he is considerably behindhand with his work.

In regard to preparing the land for laying off and planting trees and vines, it requires a lot of forethought, and everything that is to be done ought to be done thoroughly, which will save a lot of annoyance in after years. There are one or two things to be considered in planting; that is, to have all rows in a perfectly straight line; to economize the land as much as possible, yet leaving plenty of room for working the same. It is a common mistake in planting trees and vines too near a fence, etc., for it causes a lot of work in after years in working a team around them. I would advise a man to write to the "Secretary of the State Board of Horticulture" for a book on the prune industry of California, which will give him a general idea how to plant an orchard and prepare the land for the same. One cannot fully explain everything in an essay; it reqnires a book, and a pretty big one, I find; also for laying out vineyards I have gained some very good ideas in the State Board of Horticulture's reports, which one can obtain free by forwarding the postage. The State Board of Horticulture has been and is doing lots of good and deserves all the support it can obtain, for one can gain any information from them appertaining to fruit-raising by simply writing, so one need not long be in ignorance on any subject.

I will not give an elaborate plan for laying out an orchard and vineyard here, thinking an owner can gain a better idea from the books published by the above-named board or by seeing how one of his neighbors, who is experienced in these matters, manages it. There is in all communities one or more fruit ranches that one generally takes as an example to follow in regard to ways of doing work, etc., and a very good way, too, I have found out, so I will just confine myself to a few suggestions that one is liable to forget in starting out.

In planting an orchard, be sure and have each variety in its separate place and not mixed, for I can tell you it is in a fine pickle when bearing. It takes one man to hunt up each variety, there being a few trees here and a few there, which soon cause no end of bother. I have worked in one or two such orchards and vineyards, so can judge pretty well the result. Also, be sure and have each variety true to its name, for it is, I will say, rather humiliating for a beginner, when his trees arrive at a bearing age, to find he has totally different varieties from those he ordered. More especially, vines are apt to be this way. If there are only a few here and there, they can be either grafted or budded, thus making the varieties solid.

Trees are usually planted from 20 to 30, even 40 feet apart, according to variety. Vines it is usual to plant from 8x12 to 10x12 feet, both making a nice vineyard, allowing of a truck or sled for sulphuring, etc., to pass down the rows, which is a great consideration. Having a vineyard in blocks of about 25 vines each way, then an avenue of 16 feet is a great saving in packing the baskets when full and ready for the wagon to haul them to the packing shed.

If possible, have a row of trees, say walnuts, figs or any such variety, around the outside edge of the vineyard, as it gives a decidedly pretty appearance. Every one has his own particular taste, so must proceed accordingly; but one must not forget to bear in mind, when planting, to leave plenty of room (I do not mean too much) for plows, cultivators and wagons to turn around anywhere on the edge without running over young trees or vines, thus causing a lot of damage, besides spoiling the looks of the place. When planting, it may look a lot of land to leave for turning, etc., but in a few years a man generally wishes he had left a little more room, for trees and vines will grow if properly attended to.

As for what varieties give the best results, it is a pretty hard matter to determine, as each locality has its specialty; but taking fruit as a whole for shipping, drying or canning, I think the following varieties are among the best known and tried fruit:

Cherries—Royal Anne, Black Tartarian, Napoleon Bigarreau and Black Republican.

Apricots—Royal and Blenheim. The Moorpark is considered a shy bearer and requires a considerable amount of experimenting with to determine the best way to make the tree bear so it would not be a poorman's tree, as it would not be sure; otherwise it is a good all-round apricot.

Peaches—Alexander and Hale's Early are considered the best early peaches, although one has to make sure he has such a place as Vacaville and one or two other favored localities to grow them, otherwise he will find they will come in a little too late to fetch top prices. Early and Late Crawford, Susquehanna, Orange, Lemon and George's Late Clings, besides other innumerable varieties, each has its peculiarities.

Pears—Bartlett and Winter Nelis are two safe varieties, and will grow pretty well everywhere.

Prunes—French, German, Hungarian, Tragedy and Silver are among the chief varieties, each requiring its special locality to grow and bear to advantage.

Plums—Yellow Egg, Bradshaw, Clyman and Columbia, besides several others.

As for grapes, I prefer Chasselas, Tokay, Muscat, Cornichon and Emperor.

There are hundreds one may say of other varieties, so it would be pretty hard if one could not find something out of the long list to suit his locality and land; but be sure and get the right and you will come out right, otherwise it will be the reverse.

Having all planted and everything in shape, perfectly understanding that thorough cultivation has been the owner's aim from the beginning, we have that all-important matter of pruning before us—a subject that has caused more discussion and variance of ideas than any other branch of fruit-raising. Notwithstanding all this discussion, I find pretty well everyone prunes, in the main, the same. Here and there it will be different in regard to high and low pruning.

As a general rule, tree-pruning starts as soon as the leaves are off. As an employe, I prune as my employer desires, which is generally right so will not discuss this delicate subject. For a small fruitraiser, I would advise him to visit a neighbor who is experienced in the business, and he will soon put him in the way of it; the same with pruning vines, which generally begins about the last of December or the beginning of January, but where there is danger of frost, one had better start a little later. It will require a little more help; still, you stand a better chance of saving your crop. Do not have anything to do with those so-called professionals in pruning, grafting, etc., for I have generally found they know too much and want things all their own way, so will not be taught anything. Pruning, as all else in fruit-raising, requires common sense and good judgment, together with a knowledge of the peculiarities of the locality in which the owner happens to be located, and each variety of trees and vines requires its own special way of pruning, so one cannot lay down any hard and fast rules regarding it.

SPRAYING.

Although every precaution is generally taken to see that trees are free from scale and other pests when taken out of the nurseries preparatory to planting, still prevention is better than cure, so one needs to spray at least once a year to keep the trees free from all pests, for they are liable to turn up at any time. We resort to what is called winter-spraying, or while the trees are dormant and the heaviest rains are over. Of the many solutions used, I think the lime, sulphur and salt solution is the best for general purposes. The following formula, if properly mixed, will have the desired effect:

Unslacked lime	40 lbs.
Sulphur	20 lbs.
Salt	15 lbs.

Use water to make 60 gallons. Apply warm.

Directions.—Place 10 lbs. of lime and 20 lbs. of sulphur in a boiler with 20 gals. of water and boil for about an hour until the sulphur is thoroughly dissolved. Then place in a cask 30 lbs. of lime, pouring over it enough hot water to slack it, also adding 15 lbs. of salt. When this is dissolved, add it to the lime and sulphur in the boiler and boil for about one-half hour longer. Add sufficient water to make 60 gallons. There are various machines for spraying, each having its advantages, so an owner had better obtain one suited to his requirements and pocket. The spray ought to be applied when the dew is off the trees and should be done thoroughly all over the tree. I have seen the top part of the limbs sprayed, while the under part had not a drop near it, thus being only half done. The owner needs to follow his men right around, or even be helping, then he will be sure of good work, otherwise he will have to take his chances whether it is done properly or not.

A man starting a young orchard and vineyard will find that he will require an unusual amount of patience, for it is rather a tedious process working and waiting for his trees and vines to come into bearing. If he has paid particular attention to all the little details which make the whole, and in likewise doing everything thoroughly, he will gradually, not suddenly—as some have the idea—increase his income from the fruits of his labor until after a few years he will have a place that he will be proud to show to any one and to give strangers the results of his experience. Then he may forget the drawbacks and disappointments, but should not forget the hard work he had in getting his home to his idea of perfection which it has at last attained.

FELIX FOREMAN.

The Fruitgrowers' Convention.

SAN FRANCISCO, CAL., Oct. 20, 1892.

The sixteenth State Convention of Fruitgrowers of California will convene at San Jose at 10 o'clock A. M. on Tuesday, Nov. 15, 1892, and will continue in session four days. The citizens of San Jose and the members of the State Board of Horticulture cordially invite fruitgrowers, shippers, packers, nurserymen and others interested in horticulture and kindred pursuits to be present at said convention and to participate in its deliberations.

Every effort will be made to insure a large attendance, and it is hoped that the meeting will be of interest and profit to all. A large and fine exhibit of fruits and products of Santa Clara county will be made, and it is especially requested that samples of fruits, either fresh or dried, be brought for comparison. Packages of fruit may be sent, addressed to the chairman of exhibit committee, San Jose.

The Southern Pacific Company will allow return tickets at reduced rates from all points on their lines to San Jose; *provided,* not less than 75 persons make the trip, and a receipt for the ticket purchased to be taken at starting point. This will be countersigned by the secretary at the convention, and will entitle the holder to a return ticket (allowing 48 hours after adjournment to start for home) at *one-third* the regular rate. Hotel accommodations are ample, and reduced rates will be allowed. Many valuable essays will be read, and will be followed by general discussions of the wide and diversified field of horticulture. It is impossible at this time to make a complete announcement of a program that will include the entire list of writers, but it may be sufficient to say that a rare treat of valuable essays and discussions, excursions, etc., await those who attend. All will receive a cordial welcome.

ELWOOD COOPER, President.
B. M. LELONG, Secretary.

THE DAIRY.

A Ration for California Cows.

TO THE EDITOR:—D. L. G., of Los Angeles, writes to *Hoard's Dairyman* for advice upon the subject of milk production and says: "Am selling milk in the city and want to learn all I can about the dairy business, how to produce the most and best milk at the least possible expense."

He then goes on to say that he can have green feed nearly all the year, green corn from first of June till middle of November and alfalfa fit to mow for eight months in the year, yielding as much as 12 tons of hay per annum; sugar beets are now being planted which will be fit to use in the spring, so that D. L. G. is exceptionally well and favorably situated in regard to the production of green feed for his cows, and the best kind of hay at reasonable prices. He asks: "What will make the best and cheapest ration: Alfalfa at $7, corn with ears at $2, pumpkins at $2, watermelons at 50c., bran at $20, rolled barley at $21, oilmeal at $45 per ton? Have sown peas and wheat to feed later. Which will be the best to sow with peas—wheat, oats, barley or rye?"

It is doubtful if watermelons are worth the money as cow-feed, though, as an auxiliary to other foods, pumpkins may be, and probably are, as better results are generally obtained by the use of some vegetable, along with hay and grain, than without.

The price of oilmeal is prohibitory to its profitable use in any quantity.

The *Dairyman* gives the following answer:

In making up a ration from the foodstuffs named, we must be governed by the digestible nutrients contained in each, as well as by cost.

We are sorry to say that the tables by different analysts do not entirely agree, but we give below the latest figures which have come to hand, most of them collected from tables given by Prof. Henry in the *Dairyman* and *Breeders' Gazette*:

POUNDS OF DIGESTIBLE NUTRIENTS IN 100 OF FEED.

	Protein.	Carbo-Hydrates.	Fat.	Value.
Alfalfa	7.6	37.8	1.3	$ 9.00
Barley	9.5	57.4	2.3	13.50
Bran	12.6	41.1	2 9	14.00
Full corn	4.0	47.0	1.8	8.00
Oilmeal	27.0	32.2	7.1	24.00
Pumpkins	.9	3.97	.56	1.10

For a general daily ration we would recommend: Fifteen pounds full corn, ten pounds alfalfa-hay (or their equivalents when fed before drying), and from five to ten pounds of bran.

The above, no doubt, is a very good ration, both practically and theoretically, for the production of milk, yet in practice, we think five or six pounds of bran a day enough to feed to a cow, and it is better to use some other grain-feed to make up any additional nutrient that may be required. It will be observed that barley has a lower *theoretical* value in the above table of nutrients than bran. Can any practical dairyman give us his experience and observations in regard to the comparative value of the two for the production of milk?

As far as our own experience goes to prove anything, it is that barley is the superior food. Finely ground and

mixed with cut hay, as it is best that all meals should be, it produces not only more milk, but better milk, than bran, consequently we look upon it as the cheaper food of the two, at the prices named by D. L. G., and we have never failed to use it freely, with satisfactory results, at anything like the price named. There is also the advantage of having cows in better condition when fed on a fair proportion of barley-meal than they can possibly be when fed on bran as the only grain-ration, other things being equal.

It is true that the quantity and quality of the hay fed will have great influence on both quantity and quality of milk, as well as on the condition of the cows.

Alfalfa-hay, at $7 per ton, is a very cheap food and the best hay we have for the cheap production of milk. As to limit in quantity there is none, except the appetite, to the cow that is giving a large quantity of milk; she should, at any rate, have all she will eat.

There is some prejudice against alfalfa-hay, it is true, among milksellers; whether well-founded or not, we cannot say. Perhaps it is best used in moderation, though our own experience, by its free use either on pasture, or hay, has never given cause for complaint in the milk sold.

The conditions and surroundings under which it is used, as well as the proportions and kind of other food with which it is fed, all have their share of influence, down to the smallest detail, in producing a sweet, clean and wholesome article, all of which should be considered and attended to.

"Bran and middlings make plenty of milk, but keep the cows poor; we must use some stronger feed besides," said an experienced milkproducer to us. That was before the days of oilcake in California, but we had other feed that was proportionately, compared with the price of milk, cheaper than now, in either ground oats or barley and sometimes wheat, which to-day, in some parts of the State, is the cheapest and best food for milch cows that can be obtained.

On page 315 of the RURAL is Prof. Henry's advice to a San Mateo county dairyman. From the above it will be gathered that we object to the large proportion of bran, ten pounds a day, with no additional grain-ration, except two pounds of middlings, which he recommends. No doubt but that bran is the cheapest food named in the list given by the San Mateo dairyman, but we are strongly inclined to think that his cows will do better by either substituting some ground barley or two pounds of oilmeal daily for a part of the bran.

Professor Henry concludes, however, with a piece of advice which has the ring of sound, practical sense; it is this: "If the above table is used let it be only as a guide, the feeder carefully studying the likes and dislikes of the animals and catering to them. For the most part the cow is about as good a judge of good milk-producing foods as we can find."

This is in itself worth a volume of theories improved by practical experience.

We can never make the cows digest their food in exactly the same manner that the chemist does it, neither can we ever make any two animals make exactly the same use of any one mixture or ration. DAIRYMAN.

Separation of Butter from Milk.

Bulletin No. 20 of the Pennsylvania State College Agricultural Experiment Station (State College P. O., Penn.) describes a series of experiments in the separation of butter from milk by means of the hand or "baby" separation. Following is a summary of the result, with a brief account of the principles upon which the working of the separator depends.

The mechanical separation of cream from milk by means of the centrifugal separator has become almost universal in large creameries, the cost of the machines and of the power required to run them being more than offset by the greater yield of butter obtained, the smaller amount of space required, the saving in ice, and the greater certainty and uniformity of operation.

Within a comparatively short time several small separators have been put on the market, which, it is claimed, can be operated by hand and are suitable for the use of the private dairyman. This station has recently completed some tests of one of the best known of these hand-separators, manufactured by the De Laval Separator Co., and called by them the "Baby No. 2." This machine was kindly placed at the station for test by the company. The results of the test were briefly as follows:

1. The skimmilk contained, in most cases, less than 5-100 of one per cent of butter fat.

2. Out of the total possible amount of butter but 9-10 of one per cent was lost in the skimmilk, and but 3¼ per cent in the skimmilk, buttermilk and mechanical losses, or, in other words, 96¾ per cent of the total raw material (butter-fat) was recovered in the finished butter.

3. It is estimated that the saving by the use of this machine as compared with the use of cold deep-setting, will, in one year, with a herd of 20 to 25 cows, equal three-fourths the cost of the machine. [We presume this means the actual saving of butter-fat; the incidental saving of labor, etc., would make the machine pay for itself much sooner.]

4. The machine has proved very satisfactory in the regular work of the station creamery.

5. The use of handpower is only to be recommended for small dairies.

HOW A SEPARATOR WORKS.

The fat of milk is its most valuable constituent, and the one which the buttermaker aims to separate from it as completely as possible. This fat exists in the milk in the form of extremely minute globules floating in a heavier liquid. When we let milk stand undisturbed, these minute globules rise toward the top and accumulate in the upper part of the milk, crowding out a considerable portion of the liquid in which they are suspended. This upper part of the milk, where the minute fat globules are the most numerous, is the cream. It is plain from this explanation that we may get more or less bulk of cream from the same milk according to the time allowed for the globules to rise and according as they are able to crowd out the liquid more or less completely; consequently the bulk of the cream is a very inaccurate measure of the butter value of milk, a fact which has been proved by abundant experience.

The object of a separator is to hasten this process by substituting centrifugal force for gravity. If we swing a bucket of water rapidly around at arm's length, we feel a pull on the arm. This is caused by the so-called centrifugal force, the force which tends to make a revolving body move away from the center of motion. The faster we swing the pail the greater is the pull, and accurate experiments have shown that the centrifugal force increases as the square of the velocity—that is to say, if we swing the bucket twice as fast the pull becomes four times as great; if we swing it three times as fast, it becomes nine times as great, and so on. If we were to put milk in the bucket in place of water and swing it very fast, the centrifugal force would pull the milk against the bottom of the bucket just as gravity does when the bucket is at rest, the only difference being that, if the bucket were swung very rapidly, the centrifugal force would be much greater than gravity, and the pull on the milk correpondingly greater. The result would be that the cream would rise to the surface of the milk just as it would under the influence of gravity, but more rapidly in proportion as the centrifugal force was greater than the force of gravity.

The earliest centrifugal separator was constructed exactly on this plan, the milk being revolved rapidly in small buckets by means of suitable mechanical contrivances. In this apparatus the cream could be raised in from 15 to 20 minutes. The next step in the development of the machine was to replace the series of buckets by a bowl rotating about a vertical axis. The next step forward, and the one which made the separator of practical value, was the construction by De Laval, in 1879, of a machine for continuous separation—that is, one into which milk could be run at a regular rate as long as desired and separated into cream and skimmilk.

RURAL IMPROVEMENT.

The Value and Importance of Good Roads.

[An essay prepared for the meeting of the State Grange by A. P. Stanton, of Aptos, Santa Cruz County.]

No man who thinks for the benefit of himself, his neighbors or his country can controvert the statement that we need better roads. The discussion in regard to public roads, looking to the improvement of all the highways, is sure to continue until a great and permanent reform is secured. One great deterring element has been the fact that the farmers have turned their attention to this matter more in the abstract than the concrete. Had it been otherwise our country roads would long ago have been rebuilt in accordance with a system which would give them what may be called a scientific basis and a scientific superstructure. Just as soon as our farmers determine that they must have roads which can boast of all the modern improvements, road-reform will speedily become an accomplished fact.

It is no longer necessary to argue that good roads are important to a country, that they constitute an immense agency in the progress of civilization, or even that they have a distinct, an appreciable, economic value. All of this is accorded by men of intelligence.

"The road," says Bushnell, "is that physical sign or symbol by which you will understand any age or people. If they have no roads they are savages; for the road is the creation of man and a type of civilized society. If you wish to know whether society is stagnant, learning scholastic, religion a dead formality, you may learn something by going to universities and libraries; something also by the work that is doing on the cathedrals and churches, or in them; but quite as much by looking at the roads, for if there is any motion in society, the road, which is the symbol of motion, will indicate the fact."

To the man who reads to consider and who travels to observe, these facts will become doubly impressive. The ancient Romans, in the greatness of their power, taking heed of the splendid example set by the Carthagenians, laid a network of roads through their territory, so perfect that many of them are in use till this day. The influence of that work is imperishable and it will forever stand as a mute witness to Roman intelligence. In 1835 the English parliament awoke to the necessity of good roads and passed the general highway act. From that day began the systematic and intelligent management to which the superior quality of the English roads is due. In Ireland the roads add not a little to the delights of the picturesque Killarney district, and are everywhere found by the travelers who visit that beautiful country.

In France you may drive from Paris to Orleans, to Bourges, to Nevers, and across the Jura mountains to Switzerland. You may journey across Switzerland and continue on into Germany and follow the Rhine and its valley of legends till you reach the shoals of the North Sea. You may vary this journey in whatever way your inclination may urge; you may travel the roads of Scotland, Italy, Austria, Belgium, Baden, Spain, or Scandinavia, and you will everywhere find that the public hand has been industriously directed to the care and keeping of the common roads. Each of these countries has established within its civil government a department having exclusive control of the more important highways, and in most cases also a supervisory management of the parish and branch roads, which connect the smaller towns and serve as feeders to the main lines.

Varying, of course, in some degree as to details of management, there is still a practical unanimity among the great nations of Europe in this policy of the government control. It began with the popular recognition of two facts: (1.) that the public road, like the public postoffice and courthouse, is public property, established by law for the use of the people; and, (2.) that the extravagant waste of time, labor and property which had been for centuries imposed by the use of mud roads, could only be checked, and the true resources of the country brought out, by the construction and maintenance of good roads under an intelligent head.

This was the doctrine of Tresagnet and of his English deciples, Telford and Macadam, and events have verified it. Tresagnet learned from the works of the Romans, that the road was a structure; that it should have a foundation; and, adding to that the light of later knowledge, he built hundreds of miles of better roads than the Romans ever knew. Why cannot we take advantage of this and do likewise?

Strange as it may seem the farmers of the United States, as a rule, take less interest in the matter of road improvement than any other people. Very few of them are travelers, and but a small proportion realize how bad the country roads really are.

Postmaster-General John Wanamaker recently wrote as follows on this subject.

"Looking at it from a postal standpoint; enlarged free delivery, or anything like free delivery, will have to be postponed until there are better facilities of communication through the rural and sparsely settled districts. The experiments that we have made in the smaller towns and villages have proven the practicability of greatly extended free delivery, but without good roads it must necessarily be limited to the small towns."

An extract from a letter written recently by Major-General O. O. Howard, U. S. A., is as follows:

"That good roads, in good condition, are always of great value from a military point of view is plain enough; for active operations, the prompt transportation of material and the moving of an army would demand it. The greatest benefit, however, will be, as it should be, to farmers who will everywhere, doubtless, be willing to pay a part of the expenses—an expense which is in fact, like that of a waterway in a dry country, a profitable investment. The saving of time and means in the single item of transportation will be of great moment. Our farming interests are always the basis of the public weal. Here the national wealth originates, and as the State owes so much to the farming community, it is simply common sense to furnish the farmers as far as practicable excellent highways."

We must not alone measure the value of good roads in the sense that they will afford us a more rapid, cleanly and pleasant mode of transportation for people and merchandise, but we must also look to the saving that will be made in the wear and tear on vehicles, harness and stock. The farmer with one team of two horses is able to move on a good road more than he could with four horses and a wagon of much greater strength on a poor road. This has been tested many times. Farmers are constantly in the need of highways to transport their property and to move themselves from place to place. The average farmer is five miles distant from the nearest railway station, and his surplus produce must be moved that distance year after year. If he were to compute the saving that he and his neighbors would have by reason of first-class roadways they would discover that it would amount to more than the expense of putting the roads in good condition and keeping them so. He would not require so many horses or so much harness, nor so many teams, and the labor for caring for and conducting them would necessarily be lessened in proportion.

In France one horse pulls what would be considered a good load for two in America, and the only limit to the load is reached when there is no space left to stow any more burden. Naturally upon a highway that is smooth and well surfaced the strain upon harness is reduced to a minimum, and as there is no jolting the wear upon a wagon is but fractional. It is probably unnecessary to refer to the peace of mind that will ensue with the introduction of good roads.

With the subject of having good highways comes the thought as to their expense and the future cost of keeping them in repair. Nowhere is the art of road-making and maintenance carried to such perfection as in France where the necessity of constant supervision and prompt repairs is fully appreciated. Her roads have a length of 200,000 miles, of which more than 120,000 miles are macadamized. They have cost nearly $600,000,000 for construction, and the sum of $18,000,000 (or about three per cent of the first cost) is annually spent for their maintenance. Until we are prepared to spend the necessary sums for solid construction and incessant maintenance we cannot have good roads. The estimated cost to each inhabitant for the maintenance of a square mile of roadway in France is forty-eight cents. The estimated amount in other European countries is about the same, and the figures are considerably less than the average in the United States with our dust and mud roads. It has been estimated by competent authorities that $400,000,000 would give us a good system of common roads all over the country. This is a great deal of money but it is not great compared with the value which would be enhanced by its expenditure. And it is further estimated that the cost of repairing and maintaining a highway properly constructed in the first instance ought not be greater for a year than one per cent of its first cost. Even if three per cent be reached the figures are not exorbitant. In the three items of horses vehicles and harness the increased value of these properties would more than pay for the improvement.

The enhancement of the value of real estate would be so great that these items would seem insignificant. In one neighborhood alone—that of Union County, New Jersey—the improvement of the roads has changed values so greatly that men who a few years ago were struggling farmers with earnings so scant that it was difficult to make two ends meet are now absolutely rich. They can grow more profitable crops, can get them more quickly and cheaply to market, and can dispose of them to better advantage. Their land, which was formerly a drug on the market, now finds eager purchasers at prices that would have seemed

fabulous to the owners a few years ago. What has been done there can surely be done elsewhere.

It is sincerely to be hoped that the dirt road, or mud road as it is also called, will, in the course of a few years, be a memory of the past and that America will vie with Europe in the excellence of her roadways. When we get our roads we must accept *another lesson* from the Old World. European farmers use much *broader tires* than we use here, and the guage of their *front* wheels is less than that of their *hind* wheels, so that the two sets of wheels do not "track." In Bavaria, for instance, a stringent law is enforced against the use of narrow wheel tires, and the width of tires to be used is laid down as follows :

Two-wheel wagon with two horses, four inches; two-wheel wagon with three or four horses, six inches; four-wheel wagon with two horses, two and one-half inches; four-wheel wagon with three or four horses, four inches; five-wheel wagon with five to eight horses, six inches.

Carts having more than four horses and wagons having more than eight horses, are not allowed upon the public roads, except by special permission obtained from the authorities of the province. The wisdom of the foregoing provisions can be seen at a glance.

In many respects we have more need for hard-surfaced roads than has either France or England. Our rainfall is considerably heavier than theirs, and our dirt roads for weeks at a time are half as deep as they are wide. Farm traffic is suspended and horses are kept in idleness. Official statistics show that there are something over 16,000,000 horses and mules on the farms of the United States, and at a moderate estimate of 25 cents per day as the cost of feed for each animal, we see that it costs the farmers of this country about $4 000,000 per day for this item alone. Less than *fifty per cent* of these animals would be sufficient to do *all* the hauling of farm produce carried on in this country, if even the *main roads* were put in first-class condition; but, not to hope too strongly for the attainment of distant things, let us suppose that such an improvement be projected as would render unnecessary only *one eighth* of the total number of the draught animals now employed. This would reduce the entire number by a little over 2,000,000, and would effect a saving each day of 14,000 tons of hay and 750,000 bushels of oats, which, reduced to a money value, equals $300,000 per day, or about $114 000,000 per year. Add to this the value of the animals, $140,000 000, and we have a value of $254,000,000 saved for the first year. Of course these figures do not represent the *real* loss entailed to our farmers by the use of dirt roads. That loss is beyond computation, but in whatever way the computation is directed, and wherever the loss is susceptible of calculation, the same startling exhibit is bound to appear.

It is not within the purview of this paper to enter the field of construction. It will be sufficient to add that greatly improved results may be obtained by any device that will prevent earth and water from mixing on the road-bed, and that may be done in the way of improvement by a proper admixture of suitable earthy materials. The requirements of the material are that it shall not be readily affected by the moisture, temperature or pressure, which are the three principal destructive agencies. Clay is sensitive to water and temperature, or pressure, which are the three principal destructive agencies. Clay is sensitive to water and temperature and has a high ratio of absorption. Sand has little coherence and yields readily to pressure. Gravel has great mobility due to its spheroidal form, but by mixing these in the proportion of two parts of clay, three of sand and eight of gravel, an impervious roofing may be laid, which, if underdrained, will make an excellent earth road. When in the march of science the time comes for segregating the aluminum contained in the clay road into a hard, smooth, resisting medium covering its surface, we will then have a road metal, both in *fact* and in *name*, which will solve the problem of the clay pit and give us a medium of transportation which will surpass even the railway in cheapness and convenience. A. P. STANTON.

THE ORNITHOLOGIST.

Birds, and Their Relation to the Farmer and Fruitgrower.

Read at the Alameda County Farmers' Institute by WM. W. PRICE of Leland Stanford Jr. University.

We find mention made of the birds, in the works of the the earliest writers. The farmers in ancient Egypt, along the fertile valley of the Nile, sent their children into the grainfields to keep off the flocks of injurious birds; on the other hand, some birds are mentioned as being of great benefit. The rook and the stork nested among the rooftops and kept the streets free from decaying garbage. They were the scavengers. And so, from early history down to the present time, we have the story of injury and benefit done to man by the birds.

But in this State the study of birds is entirely neglected, although of the highest importance from an agricultural point of economy. Europe, during the past hundred years, has expended millions of dollars upon investigations and experiments connected with the economic value of plants, insects and birds. The Bureau of Agriculture in the United States is working at the same problems, but we hear little which affects us in California, and especially in this fertile district about San Francisco bay.

Nearly all the States have laws forbidding the destruction of various birds. The State of Ohio, as I learned from Professor Gilbert, had for many years upon its penal code, heavy penalties for the person who in any way should destroy the robin, bluebird, thrush, finch, nightingale and skylark. This law was probably taken in all good intent from the old English statutes, but the ornithologist smiles at the carefully phrased restriction, for the nightingale and skylark are not found within the United States except in cages. This only goes to show that, though the lawmakers were ignorant of the subject in hand, nevertheless they recognized the value of birds and made laws to protect them.

Strange to say, California has no laws prohibiting the destruction of song or insect-eating birds. It has laws, however, to protect the game birds, but that is simply to furnish a few months' shooting to sportsmen.

It has been said that the ornithologist cannot see the practical side of his science; that he has no interest in birds, except in a purely scientific or in a poetic way. However that may be, in so far as I myself am an ornithologist, I am here as the friend of the agriculturist, and, as far as possible, the protector of birds. But if, after a just trial, any species is found to be more injurious than beneficial, I shall urge its extermination. But it is well known to any ordinary observer that birds are often punished for crimes against man, which they have not been proved guilty of. I will mention one instance of this as a sample of what is still going on all over the State, though especially in the southern part.

About ten years ago my parents came from the East and settled in a town in southern California. Near us was a large apricot orchard; in this the birds, especially the linnets, were eating the young buds. The proprietor, thinking the crop in danger, hired a man to keep the birds from the orchard. Not a bird escaped his vigilance. I frequently went among the trees and gathered up numbers of the dead birds. As I remember the collection, there were linnets, which probably did deserve shooting; two kinds of bluebirds, a warbler and some sparrows, which, after eating flies, grubs and seeds all day, perhaps took, as dessert, a few buds at nightfall, to which, in simple justice, they were entitled, by way of compensation. There were also fly-catchers, woodpeckers, thrushes, goldfinches and blackbirds, which are hardly known to touch buds, and were in the orchard simply in search of insects. Thousands of birds, comprising a dozen different varieties, were killed in this ignorant way; of this great number not a tenth were destructive, but, on the contrary, were the fruitgrowers' best friends.

In the last few years great numbers of robins have come from the north and wintered in the groves and orchards about the bay. The slaughter of these birds has given a questionable pastime to a multitude of boys and men. On a Saturday or Sunday I have seen dozens of these creatures cross over the Oakland ferry and scatter among the hills, with the intent of shooting small birds. About Menlo Park such pot hunters have swooped down and slaughtered robins by thousands, 300 being considered a good day's work for each; and this merely to supply a few French restaurants in San Francisco. Yet these insectivorous birds are of great value to the agriculturist, a fact recognized in every other State by protective laws.

Never in the history of the State was fruit culture in such danger from insects as it is to-day. The codlin moth, the 12-spotted beetle, the various scales and the peachborers are increasing with wonderful rapidity. Already the profitable production of certain fruits, in parts of the State, is at an end, on account of some of these insects. In the upper Sierra fruit region, as an instance, where a few years ago the codlin moth was unknown, the apple industry is, in places, a failure because of this pest.

If birds destroy any great numbers of these insects, it should be known and the birds protected.

At present not enough is known of any of the birds and their food to warrant any supposition that they are either absolutely harmful or absolutely beneficial. Yet we do know that the linnet and grosbeak sometimes eat fruit, and that the wren and the blackbird destroy insects. However, before the destruction of any bird is begun, the farmer and the fruitgrower ought to study the the case with care and give the bird a fair trial. It may be found not only not to be an enemy, but a friend.

Perhaps it might be well roughly to divide the birds, so far as we know them, into two great divisions—the insectivorous birds and those which are known to eat both insects, fruit and seeds. Among the insect-eating birds are included the flycatchers, blackbirds, titmice, swallows, robins, bluebirds, thrushes, wrens, larks and hummingbirds. In the other division we find most of the finches and sparrows, jays, grosbeaks and orioles.

There is no reason whatever for molesting birds of the first list, and every reason why they should be protected. This summer, in the mouth of a woodpecker I found many larvæ of a wood-boring beetle. At the same time I found the hard shells of various insects in the stomach of a wren which I dissected. Blackbirds are always seen in freshly plowed fields in search of insects. I have in mind a peculiar instance of their effectiveness during a grasshopper plague at Riverside.

Some eight years ago the grasshoppers were very abundant on the surrounding plains, and as the green feed became less common, they encroached upon the young orchards along the outskirts of the settlement and rapidly stripped the trees of their leaves. I remember one orchard which had attracted the insects. Near by was a large colony of Brewer's blackbirds, which soon found out the hoppers. All through the nesting season they made regular trips to the affected orchard, each time returning with an insect. They soon rid this orchard of the pest and extended their visits to others.

A notable instance of the benefit, and injury also, done by birds, is seen in a paper by Dr. H. H. Behr of San Francisco on the "Economy of Nature." It reads: "I can here give a curious chain of events which caused the defoliation of our California live oak. There exists around the bay a moth, *Phrygaudia Californica*, which lives exclusively on the live oak. When in 1853 I first found the caterpillar of this species I considered it a great prize, so rare was the little thing. Gradually the insect became less rare, and as soon as a number of shotguns had been placed in the hands of little boys who shot little birds, I had ample opportunities to fill the empty spot in my collection, which for several years had only a single specimen.

"I have counted four generations of this insect in one summer. Nevertheless, they did not endanger the life of the trees inhabited by them. There still existed a number of insect-feeding birds to decimate the four broods of the moth, especially a kind of titmouse which took care of the eggs and of the adult caterpillar. This bird managed in some way to escape the shotgun, but then the English sparrow was introduced by some well-meaning but imperfectly-instructed people. The sparrow soon drove away the titmouse. The titmouse no more decimated the phrygaudia egg and larva, at both of which the sparrow looked with a contemptous smile. The moth multiplied in mathematical progression, the leaves of the live oak—for instance at San Rafael—disappeared four times a summer. Some trees survived, others died. And so you see the driving away of the titmouse destroyed our California live oaks."

Turning to the fruit-seed-eating birds, we find some of them exceedingly injurious. Perhaps we may take the English sparrow* as the worst type. This bird is known by its black throat and breast, noisy habits and fondness for buildings; it was introduced by some well-intentioned people into San Francisco during 1870 or 1871. For ten years they were confined almost exclusively to that city, but since the advent of the railroads they have spread to almost every large town in the state. They are abundant about the bay, especially in Berkeley and Oakland, where they have driven away the greater part of the native birds. They have scarcely a redeeming quality, and of all the crimes laid against these birds, they are partakers of nearly every one. In Oakland their harsh, noisy chatter is indescribable, and myriads of them frequent the cypress hedges, oaks and groves of blue gum trees. As yet no attempt has been made to get rid of them, and from the experience of trials made in the East, it would seem almost impossible. The past summer a few came into the University grounds at Palo Alto and nested about the buildings. Some drove away the swallows, which were nesting around the quadrangle, and took possession of their half-built nests.

The common red-headed linnet or house finch is another bird of doubtful benefit. I am chiefly acquainted with this species in the southern part of the State, where in the winter season it undoubtedly eats a good many fruit buds, especially of the apricot. To some extent it eats the ripening peaches and apricots; in places the fig crop is nearly ruined by its depredations. In the late winter I have examined many linnets, shot in the orchard, and invariably found traces of fruit buds. However, they seem to compensate in some degree for their pilfering, by eating the seeds of numberless weeds, troublesome to the farmer. As the seeds of certain plants ripen, the birds' crops are found to be distended with them; this seems to be the case during the breeding season when the parent birds have young to feed. At this time also they are of value, for they eat many insects. I know little about the feeding habits of the linnet in this section, except that it has usually a bad name among the ranchers, and I think it is a just name in this region. Last summer I noticed that the bird was quite destructive to a small cherry orchard in Senator Stanford's grounds at Palo Alto. Sometimes scattered flocks would dash down among the trees, feed awhile and fly away. Even now the pecked and dried cherries upon the ground attest their destructiveness. So far as I know, this bird is not harmful to the grain fields, and indeed it may be beneficial.

The linnet nests in shrubbery and in orchards and groves, and only in the winter time congregates in flocks to visit the open country. In the future it may be shown that this bird is a bane to the fruit grower and a blessing to the farmer; in the event of this I am unprepared to say just with whom I shall side. Careful investigation alone can solve the problem.

Another bird already mentioned is the black-headed grosbeak. This beautiful songster is persecuted in nearly every town in the State, yet I trust it will be found to be more beneficial than harmful. The male is at once known by its massive bill, black head and orange breast. The under side of the wings and lower part of the body are yellow. The female is much duller colored than the male, but it has the same massive beak.

Like the red-headed linnet, this bird is widely distributed in California. It is found in all parts of the State, from the valleys close to the sea up to 6000 feet in the Sierra Nevada. Wherever there is fruit this bird helps himself; but it eats insects too in great quantities. I have often seen it dart quickly at a moth or butterfly and carry it to its young. About the bay they are specially numerous and build their nests in the thick willow and alder bushes along the creeks. They lay three or four greenish eggs, speckled with brown.

The jay, that light blue, noisy fellow, so common in the foothill region, is another pest. It destroys fruit, nuts, and eats the eggs of many smaller insectivorous birds. It destroys some noxious insects, but it does not compensate, and it might be well to "shoot it on sight." The oriole also feeds to a small extent on fruit, but it mainly lives on insects. In the East some specimens have been examined and found to contain numbers of that mischievous beetle, the plum curculio.

The State of California should take this problem of the birds in hand. A commission should be appointed to make thorough investigations and to publish the results. Until then we are groping about in the dark, perhaps sparing some which ought to be destroyed and slaughtering many which should be protected.

In conclusion, let us hope that the farmer and fruit grower will study the habits of the birds observed around their grounds, to avoid destroying indiscriminately the innocent, the suspected and the guilty. Giving the birds a fair trial is merely economic discretion, to say nothing of common sense and justice. And it is well to remember, too, that Nature forgives no blunders. She will perform no miracles to save your orchards and fields, because you ignorantly destroyed the friendly birds.

* I have since learned that this sparrow has one redeeming [illegible]. Professor Wickson of the State University noticed that the black scale had been removed from certain twigs on some locust trees in San Francisco. Investigation proved it to be the work of the English sparrow.

The Home Circle.

An Arab Song.

I hid my love when near you,
  My pain for your sweet sake;
But now that you are absent,
  My heart must speak, or break.
God save you from such passion,
  It never knows despair,
For whether kind or cruel,
  You are the only fair.

You will not see me, Sweetest,
  Nor answer, when I call;
But I will follow, follow
  Beyond the giant's wall.
Go, shut your door against me,
  I will not doubt, or fear;
God still leaves one door open,
  The door of hope, my dear!

Could I have loved another,
  That time is now no more;
I cover with my kisses
  The threshold of your door.
Open the door of pity,
  And hear my burning sigh,
For absent from you longer
  Is sadder than to die.

—Richard Henry Stoddard.

Her Last Word.

Remember or forget me as you will!
Keep me in mind as one on the June's edge
Keeps the sole bloom that starred the sad March sedge,
Because it was the first, and hours were chill.
Or, else, let me be naught of good or ill;
The snow that one time whirled within the hedge;
Some fair, forgotten thing, too slight for pledge,
Vanished too long to make your pulses thrill.
When you do weep, my tears are salt as yours;
You laugh, and all my loads are light to bear;
Back of my sweetest thought a sweeter yet,
You bide with me, and will, while life endures.
Let me remember—but, if aught of care
Pricks you through me—then do you, love, forget!

—Scribner's Magazine.

A Ridiculous Muddle.

Miss Lucy Meadows had two admirers, each of whom endeavored to court her while the other tried to do the same thing. The experience is not uncommon, but it is always exciting.

It is scarcely necessary to say that Lucy was like most other girls and enjoyed the excitement. At heart she was an honest maiden, but she was addicted to harmless flirtation. She gave each suitor a little encouragement, but not too much, and excused her conduct on the ground that she did not yet know which she liked the better.

In fairness to our heroine it must be confessed that her excuse was not a bad one, for her admirers happened to be as nearly equally desirable as they could be. Each was fairly good-looking, each could make himself quite agreeable, each had average intelligence, each had a good business and attended to it in a creditable manner, and neither had any glaringly bad habits. By anxious mothers and prudent fathers they were both considered good catches for daughters.

To the young men the double courtship was not so pleasant as it was to Lucy. They were often on the tenters and regarded each other with jealous eyes whenever they met. But fate had decreed that their charmer also should have her feelings not slightly disturbed after she had for some time contributed to their torment without any compunctions of conscience.

Her punishment was meted out to her one winter evening. She had been to the theater with Jacob Walters, the suitor who at that time was to a small extent more in favor than his rival. The couple were strolling along, watching for a horsecar on which they could ride to Lucy's home. While they were chatting to their mutual satisfaction, they became involved in a jostling crowd that was pouring out of another theater. The girl became separated from Mr. Walters, and hurrying forward in search of him in the indistinct light, found him, as she supposed, and linked her arm in his with that confiding and affectionate touch which men like to receive from those whom they adore. She walked contentedly in silence for about a minute, when for the first time she raised her eyes to the face of her escort. She gave a little scream and quickly drew her arm from that of her companion. He was not Jacob Walters, but John Hutchinson, her other admirer.

"O, excuse me; I did not mean to. I—"

"No excuse is needed. I am delighted, I assure you," replied Hutchinson, who had concluded from the charming manner in which she had attached herself to him that she intended at last to show a marked preference for him.

"O, what shall I do! How shall I explain my conduct?" she continued, not heeding his words.

"No explanation is necessary. Tell me," and he bent over her eagerly, "were you not about to reward my devotion when you were frightened by your own boldness? O, tell me there is hope!"

He attempted to place her arm in his and to walk as they had done when they met.

"You must not; you do not understand," she cried, as with a desperate effort she extricated herself from his grasp.

"What does all this mean?" was the inquiry in excited tones.

Jacob Walters was again at her side after an anxious search.

The rivals glared at each other.

"It is none of your business," shouted Hutchinson, who proposed to show his sweetheart how doughty a champion he could be.

"You must not quarrel," exclaimed the girl as she ran between the two angry men. Overwhelmed with distress and confused in her mind, she extended her hands toward Walters.

"Forgive me," she cried; "it is all a dreadful mistake."

"Do you suppose I am a fool? You deserted me to go to my rival when you were bound by every rule of politeness to allow me to escort you home. Your conduct is amazing."

"Your language is amazing, also. I desire you to understand that I shall protect this young lady from insult," said Hutchinson with dignity.

Lucy turned toward him and said, "I beg of you to keep still. You do not know what you are talking about."

"Please enlighten me, then."

"Mr. Walters was escorting me home from the theater. We became separated in the crowd just before I met you. I searched for him, and when I took your arm I thought you were he. You were the last person whom I desired to see under the circumstances."

"Thank you; I shall endeavor to avoid meeting you hereafter."

Lucy saw her mistake, but knew not how to rectify it. Her intentions were good, but in her confused attempt to make a satisfactory explanation she had been guilty of a woeful lack of tact. Naturally at this disagreeable moment she turned to her other lover for simpathy.

"You at least must understand the situation and must know that I am not to blame," she cried in appealing tones.

"I am not satisfied," he replied gloomily.

Out of patience she exclaimed: "You are both so stupid! I shall ask no more favors of either of you."

She stepped into the street, and before they could recover from their surprise a passing horsecar was carrying her from them.

"What do you think?" asked Hutchinson.

"I think she is a consummate flirt."

"So do I."

"She has tried to hoodwink both of us. Whatever have been our differences in the past, we have a common cause now. It is incumbent on both of us to assert our dignity, and to show no attention in the future except what the most formal politeness requires."

"I agree with you; and I further propose that each of us shall solemnly promise the other never again to seek her hand in marriage."

"Your proposal suits me exactly."

They shook hands earnestly and vowed again and again to be faithful to their pledge. They were as friendly now as they had been hostile a short time before.

Meanwhile, Miss Meadows also cherished anger. She resolved never to forgive either of her admirers. But at the end of a week her mood was somewhat conciliatory. She reflected that the young men must by that time realize that they had made fools of themselves and that she had done nothing of which she need be ashamed. She expected that they would soon seek her presence in a sheepish manner, and she was prepared to show a gracious demeanor and to let bygones be bygones. But weeks went by and they did not call. She met them several times and they hurried by her and returned her greetings with cold formal bows only. It was now her turn to be very unhappy, especially as it was revealed to her that she did greatly care for one of her former admirers, viz., Mr. Hutchinson. She knew now how to decide between the two, but alas! the opportunity to make such a decision might never return.

Mr. Hutchinson also became uneasy. He was astonished to find how deep his love for Lucy was and how futile were his efforts to overcome it. He bitterly regretted his pledge; but as he himself had been the first to propose the compact, he could blame no one but himself for making it, and was under the strongest kind of an obligation to keep it.

The painful situation was soon further complicated by an act of Miss Meadows'. She began to encourage a middle-aged widower named Slawson, who had long desired to show her marked attentions, but who had been prevented from doing so by her cold demeanor toward him while his two younger rivals were in favor. He was now filled with inexpressible delight because of the winning smiles which the charming maiden for the first time bestowed upon him, and he was so elated because of his unexpected success that he did not stop to inquire why she treated him with a cordiality that she had never before manifested. But unlike the infatuated Mr. Slawson, Lucy was not dominated by sentiment alone. She was as wise as a serpent, while seeming to be as harmless as a dove. She hoped that her gracious treatment of the widower would render Mr. Hutchinson jealous and cause him again to seek her society for the purpose of preventing, if possible, a third admirer from winning her affections.

The manuvre was skillful, but it only brought about a part of what she desired, and even of that part she was ignorant. Mr. Hutchinson was made desperately jealous, but the agreement with Walters, which, of course, was unknown to Lucy, prevented him from endeavoring to become reconciled to her.

Two months elapsed. Seemingly Hutchinson was determined to maintain his indifferent demeanor. Miss Meadows was discouraged. She believed that the young man did not reciprocate her love for him and she began to think that the best thing she could do would be to marry Mr. Slawson. To be sure, he was a widower 20 years older than herself, and had two daughters, each of whom was not much younger than she was, but he was also wealthy and lived in a fine house. Moreover, she rather liked him and he adored her. She might do worse than to accept him as a husband.

At this critical time Hutchinson, unable longer to simulate indifference, resolved to tell Walters how he felt, although he feared that his former rival might still love the girl as much as he himself did. When the two young men next met, Hutchinson, growing red in the face, broached the subject that was uppermost in his mind.

"I want to ask you," he said in a blunt and desperate way, "whether you are willing to release me from keeping the compact by which each of us agreed not again to seek to marry Miss Meadows? I confess that I now love her more than I ever did. I suppose you may love her, too. I would like to be free to court the girl again, and, of course, if I had that privilege, you, too, would again have a right to show her attentions, provided you desired so to do. Let the better man win, I say, and if either of us is to win we must be lively, I tell you, for the widower is making alarming progress in the improvement of his opportunities, unless I am much deceived."

Walters laughed as the other spoke and looked at him in a peculiar way.

"I release you from your promise. Go ahead, and may you have good luck."

Hutchinson was much surprised.

"Can it be that you are no longer interested in Miss Meadows?" he asked doubtfully.

"I am no longer interested."

"May I ask the reason?"

"Yes; confidentially, I will tell you that I am now in love with another girl."

"I am so glad. I hope she will reciprocate your affection and that you will be very happy," said Hutchinson, as he fervently shook the hand of his companion.

"She has already accepted me."

"Good."

At 2 o'clock in the afternoon of that day Mr. Hutchinson stood beside Miss Meadows in the parlor of her home.

"Am I too late?" he asked.

"No; but you would have been one hour from now."

"What do you mean?"

"At 3 o'clock Mr. Slawson will receive his answer."

"What will you say?"

"Had you not called, my answer would be yes."

"What will it be now that I have called"

"No."—J. A. Bolles in American Cultivator.

BRIGGS—I hear you proposed to Miss Moneypenny the other night.

Griggs—Yes.

"How did you come out with your suit?"

"I saved most of it."

BUTCHER—Round steak, mum?

The Newly-married Housewife (who hates to appear ignorant)—N-n-no; a square one will do, I guess.

Johnson's Fortune.

"I've done my best mother," Farmer Hobbs said, coming in hot and tired from the hay-field. "That there dratted machine won't work, and ef I am to save my hay, I'll have to take that intrust money and buy a new machine." "I think you'd better not, father," Mrs. Hobbs answered, in mild alarm. "I don't know where you're goin' to get any more, and Johnson is powerful clost about gettin' the money on time. I'd be afeard to let it run over a minute."

"Well, but, Lucindy, the hay's wuth more'n the intrust, and you know they's no takin' the stock through the winter without it. The cattle might kinder rub along, but the horses is jist plum ableeged to have their timothy, and my timothy is as fine a piece as you ever sot eyes on."

"Suppose you try again," Mrs Hobbs suggested, helping her husband to a luscious quarter of raspberry pie. "I'll go out with you and help onchoke her, and we'll use plenty of ile, and mebbe you can rub through jest this oncet."

"Well, I'll try, Lucindy, I hain't no hopes, but I would like to save that intrust money."

Mrs. Hobbs stayed in the field till five o'clock, and the hay was cut with few delays. The girls brought out the supper, which was eaten with much relish in the hayfield. The horses being watered and fed, the work went on by the big harvest moon, and at ten o'clock the hay from the "big medder" was in the stacks.

A few days after, Jim Johnson came out to see if the interest money was ready. He tied his horse under a tree and started through the meadow to see Mr. Hobbs, who was fencing his ricks at the other side.

"Moses and the bullrushes! What's that?" he asked, gazing at glinty, blue reflections floating on pools of water standing everywhere, for it had rained heavily the night beore. "Oil, and no mistake!" he went on, after dipping his finger into a puddle and testing it carefully with his nose.

It was only the day before that the papers had contained an account of some new oil-fields found not above twenty miles away; an old partner of Jim had been the first to invest, and was consequently fabulously rich.

Johnson carefully rubbed his fingers on his pocket handkerchief, stowed the latter in a deep pocket and hastened across the field, his face pale and his eyes glittering very unpleasantly. He tried to greet the farmer with his accustomed familiarity, but his words came by jerks and in gusts, and his throat became so dry that he could scarcely articulate.

"What's the matter? Hain't you well?" Mr. Hobbs asked, suspending his work to gaze cnriously at his visitor. "You look taller-colored as the dead, an' your eyes is like burnt holes in a blanket."

"No, thank you, not at all," Johnson replied at random. "I'm quite well, except husky, sore throat—are you well? And the family?"

"Pretty fair—we've got a good deal of health mixed up amongst us—you know they's twelve all told."

"Yes, a large, interesting family—want to sell the farm?"

He tried to make the question less eager, but he could not quiet the tremor in his voice and he was in mortal dread lest Mr. Hobbs should have some reason to cross the field and see the oil, when his "cake would be dough," as he mentally expressed it.

"No," Mr. Hobbs replied shortly, and went on with his work.

"I'll give you a good price for it—I want it for a combination shoe factory. Set a figger."

"Well, twelve thousand—a thousand a piece," said Mr. Hobbs jokingly; the farm was not worth more than a third of that sum.

"I'll take it," with a gasp. "Here's fifty to bind the bargain, and I'll fill out a check for the balance right here."

He did so, and handed the paper to Mr. Hobbs, who kept his countenance and received it with perfect gravity. Privately he was convinced that Johnson was crazy.

"Come to the house and sign the contract for the deed."

"All right."

Mr. and Mrs. Hobbs accompanied Johnson to town, and were thunderstruck when they learned that the sale was real, and that they had twelve thousand dollars in the bank.

"Sense that Johnson hain't crazy," Hobbs began as soon as he was clear of the town, "wi y, they's somethin' in the wind. It may be a shoe factory, but I don't believe it. I wonder ef they've found gold?"

"It don't make no sort o' defference to us, father," Mrs. Hobbs answered. She was afraid that her husband would take alarm

and want to "rue back," as she expressed it. "No, it don't make a grain o' defference to us, an' we've got enough for the place ef they find dimints. I never did like it, an' I don't keer how soon we git away. Let's buy back our six acres on the edge of Cloverdale. We can git it for three thousand, an' then you'll have nine thousand to put out at intrust."

"Yes, mother."

"And we kin git little Jim his cornet and send him off to be learnt to play."

"You kin do jist as you please mother. I'm rich enough now, I reckin, to do as I like, and I hope I won't never want to do nothin' very bad."

"That's somethin' you never did do, father," dutifully replied his wife, "and I don't believe bein' rich is a-goin' to change you much. If it would I'd want somethin' to come along and take the money away from us, because it can't never pay to give up doin' good."

As soon as the transfer was made and the deed recorded, Johnson sent the following telegram to his whilom partner:

"Come on—bring all your loose cash—oil in abundance."

The cash was sent with instructions to buy adjoining farms on option of thirty days; the oil man would come later and bring an expert.

The farms were bargained for at ridiculously low figures, and then Johnson invited his friends out to see his "find."

"I tell you, boys," he said, as he rode up and tied his horse to the meadow fence, "the whole earth is jist a-soakin' with it, and it's jist burstin' out of the ground. You see this country has never had any oil taken out of it," he went on glibly, "and as it is constantly generating it has become so chock full that the ground can't hold it and it's compelled to come out. You'd be astonished to see how it is actually boiling up."

"It must be wasting if it is in that condition," some one remarked.

"What's a waste of a few millions o' barrels?" scornfully retorted Johnson. "There's enough left for me and my family and all my poor relations."

By this time others, having heard the news, had arrived at the farm, and quite a crowd had gathered when the partner with the expert drove up, followed by Mr. Hobbs.

"Just wait until you examine these blue patches," Johnson said to the two men after they had alighted from their buggy. "Now tell me if you ever saw a surer indication of oil?"

The expert gave a glance over the field, took a quick survey of the conformation of the country, and opened his lips to speak; but before he could articulate a word, Mr. Hobbs broke into the conversation with a remark that sent the cold chills down Johnson's spine.

"And is it them blue patches that indicate ile?" he asked with a glance half pitying, half contemptuous. "That's a fact, for I used mor'n two gallon on my ole mowin'-machine, a-tryin' to git through the season without buyin' a new one."

"Let this be a lesson to you, sir," said Johnson's partner.

"All the lesson I git out of it," again put in Mr. Hobbs, "is that when you are a-cuttin hay use plenty of ile."

"It's a swindle!" Johnson broke out, livid with rage. "And I'll land you in the pen before this is over."

"Don't talk to me about swindling," Mr. Hobbs began, advancing upon Johnson, who had retreated to his buggy. "Who was it swindled the Widow Robinson out of her property and drove her to commit suicide? Who was it that swlndled the people out of their taxes and barely missed the pen? Who was it that swindled—"

Johnson gave his horse a lash with the whip and drove rapidly away.

"I didn't know nothin' about this ile business until this mornin'," Mr. Hobbs explained to the people present. "I knowed they was somethin' up, but I had no idy what it was, for I supposed every blamed fool in the country would know machine-ile on a medder after a rain."—Waverly.

Sitting up Straight.

Grown people and children alike are inclined to fall into the very bad habit of sliding down into a chair, and sitting for hours with the spine bent almost in a half circle.

That this is injurious thousands of people who indulge in it never so much as dream, but that it is the cause of many serious ills those who have investigated the subject are well aware. The continual strain upon one side of the spinal column, with the corresponding compressions on the other, gives rise to nervous difficulties and affections of the brain. Dizziness, nausea and blind spells are not infrequently the result of this practice. While the strictly upright position is undoubtedly the most healthful it seems rather hard to persuade the young and indolent to maintain it.

Lazy people and those who love luxury have a habit of "slumping," so to speak, into their chairs and remaining in a semirecumbent position with the spine as nearly telescoped as may be. That portion of the human anatomy generally known as the backbone was intended to be worn in an upright position, and the constant pressure of the sections of the vertebræ upon each other is productive of various ills.

Children should be taught to sit erect, especially if they are growing rapidly. When tired or in a position for rest, let them lie down and entirely remove the strain from the muscles ot the back. If the youngsters who suffer from dizziness or headache are carefully observed, it will be frequently noticed that their position is faulty. The curved form of the spine results in the pulling of the muscles at the back of the neck, and the difficulty is quite certain to be removed by correcting the habit of sitting.—New York Ledger.

Young Folks' Column.

Reason in Animals.

Written for the RURAL PRESS by CAROLINE E. SANDERS.

There is a well-known society now existing for the prevention of cruelty to animals. People at last understand that the poor, dumb beast is not only capable of feeling bodily suffering keenly, but also possesses the faculty of enjoying good treatment.

No well-disposed boy or girl will illtreat a horse or dog; not solely because you know they are attached to you, but too, because they have so much intelligence, you feel they would resent your unkindness. But did it ever occur to you that in the lower order of animal-nature is found also a capacity for pain or pleasure, and that some of them have been known to show strong traits of affection, generosity and gratitude, as well as the opposite qualities of hate, revenge and jealousy?

A fish you might consider scarcely capable of an emotion, yet there is a well-authenticated story of a whale which had been attacked, but after striking him with their harpoon, before the whalers could secure him, his mate was seen coming with great speed to assist or defend the one in distress, and it was only by the most violent exertions the men saved themselves from destruction, as the object appeared to be revenge by endeavoring to break the boat to pieces. After they had escaped, the whale lingered around the place until his partner's struggles ceased and he floated without life upon the water.

Tyranny is plainly to be observed among animals which go in flocks or herds, as the leadership always falls upon one who has fought his way to the front. This is familiarly seen in every poultry yard where one rooster which is a good fighter inevitably "rules the roost."

Sparrows are known to be greedy, selfish birds, but an instance of the generosity of one to a canary is told in the Naturalist's Magazine, an English publication: The canary was in a cage which hung outside of a window. One morning a sparrow perched upon the cage and appeared to be holding a conversation with its inmate. Presently it flew away, soon returning with a grub which it dropped into the cage. After that it came every day with the same kind of an offering, and afterwhile the canary became familiar enough to take it from the sparrow's beak.

We all know that animals are capable of strong and enduring friendships, sometimes very singular ones with those of a different species.

There was once a stray kitten which had been adopted and brought up by an old cat, with her own family. It became a great frequenter of the stable, and there made two intimate friends—a pony and a lame bantam chicken; and a curious sight often to be seen was the kitten and the bantam asleep on the pony's back, where they would spend hours undisturbed.

There is another singular story of a lamb that was the pet of a man who had charge of some cows. It was raised with them, but after it was grown he put it with the other sheep. It would not associate with them at all, perhaps had forgotten sheep language or had become more aristocratic; however, it seemed so miserable that the man took it back to its old quarters. The cows rushed up to meet it, and each one in turn licked it all over.

An instance of this kind can be vouched for as authentic, as it came under my own observation. Dick was an intelligent Newfoundland dog. He was so honest and trusty that his master could send him home with a basket of marketing, even when it smelled temptingly of fresh meat. But alas! like some good people, Dick had a weakness, which in his case was a hatred of cats. Not only did his mistress have to part with hers because he tormented it so, but he would chase every strange cat off the place and had been known to hide behind a tree or around the corner of the house and lie in wait to pounce upon one to give it a good shaking and a race for its life.

One day a poor, forlorn, half-starved-looking little kitten was noticed out in the garden. It appeared too weak and sick to make its escape from Dick, so his mistress hurried out to drive it away before he should see it, but before she could reach the spot he was there, standing at a short distance wagging his tail and looking with evident co npassion upon the poor creature, which crept up to him and rubbed against his legs as if asking protection, while he looked down upon her in a very patronizing manner; then, catching his mistress' eye, he darted off to her, then back again to the kitten, as much as to say, "Do take care of the poor thing."

It was taken in, warmed and fed, with one eye upon Dick in the meantime, but from that day, though he did not cease to make war upon other cats, they were devoted friends. When he would lie down by the fire Miss Pussy would jump up on him, scratch his long silky coat until she made a place to suit her, then lie and purr a musical little song as long as she saw fit, or, if it suited her better, to cuddle down between his paws, he would keep his head elevated in a very uncomfortable manner for fear of disturbing her. He had learned the trick of opening the door into the hall, and kitty had only to scratch to effect an entrance. But poor pussy was doomed to meet with another misfortune in her short life.

Early one morning her master was disturbed by a violent scratching at the hall door. It was renewed again and again, until he was compelled to get up and open it. When he did so, he saw Dick stretched out at full length near the front door, apparently sound asleep.

"Dick," called the gentleman, "you lazy fellow, why could you not have opened the door for puss?"

Dick did not stir, and the cat, instead of coming in, walked back to him and mewed piteously. Suspecting then that there was something wrong, he walked up to him and found him dead—no doubt had been poisoned.

After thinking of all these things, you cannot but believe that these animals all possessed a kind of reasoning-power higher than mere instinct, which should make us careful to show kindness and justice to all created things, for

"The God who loveth us
He made and loveth all."

The Thoughtful Child and the Spirits.

Written for the RURAL PRESS by DUANE MORLEY.

The child stood by its mother's knee, her work laid aside for the time, that she might the better answer the thoughtful one his many questions.

And as she spoke, now telling him of the night, its sable wings enfolding the earth; now of the day, its rosy mantle glowing like gold; now of the moon, whose soft radiance lay like sheets of silver upon grassplot and grove; and again of the stars, which seemed like so many eyes blinking from the face of the darkness; ever the thoughtful child would answer: "Yes, mama! yes, mama!" Never was there anything that he liked better than to have his mother lay aside her work and talk to him about the thousand things about which he wished so much to know. Her voice was his sweetest music, and her eyes, mirroring back his large wondering ones, the heaven of his delight.

There came a time when the child, increasing in age and thoughtfulness, could not bide by its busy mother's knee, but went abroad, not far, but yet abroad to the little cup-like dell where the slender pines lifted their shapely spires to the sky. How soft and soothing the dark green foliage was, and how golden lay the sunshine upon the glade just out from the shadows of the pines. All this affected the thoughtful one, and his wonder increased.

One of the pines stood apart from all the others, and as the child lay in the shadow, the wind rippling his curly locks, his gaze fixed upon the beautiful tree, it became as a person to him, and he grew to wonder as the days passed by at the feeling within him which responded as he looked upon it. Then the question arose in his mind: "Why doesn't it speak to me as mother used to?' One day he could not leave the tree, not even for a few minutes, its form ever glassed in his vision, while a voice seemed to speak to him, either from the lithe branches or from the slender bole: "I am the Spirit of Gracefulness, come to satisfy a longing of thy nature; with thee I am willing to journey." So, whithersoever he went, the Spirit of Gracefulness went with him.

His steps took him to where a silvery brook, coursing its way from the mountains, fell in gentle cascades, the mists arising, gilded by the sunbeams. "Ah!" he exclaimed with delight, falling into the lush green grasses which grew by its brink, as into his own soft bed at home, "what have we here?" The more he looked at it the more his wonder increased, and the more he longed to know about it. So fixed became his gaze and so great his wonder that, when the great noon sun shot its shafts through the mists, a figure arose from the spray to speak to him. And, as if at his mother's knee, again he listened.

"Thoughtful one, I am the Spirit of Beauty, ever answering to a desire that is within thee. If it is thy pleasure, I will journey with thee."

Then, too, it seemed as though his mother's voice was calling him and he turned to go, but was drawn yet to linger by the soft-falling waters. Mother's voice? No, but oh, how sweet and delightful! Then these words came to him from the cataract:

"I am the Spirit of Music answering the desire of thy spirit, to gladden thy life with song. Let me, too, journey with thee."

So, with the spirits of Grace, Beauty and Music, Thoughtful continued his way. Faint from long fasting, he came upon a fire of coals between two rocks, and upon a shelf of rock the flesh of a young kid. Ah!" he sighed, "if only my mother were here, she would cook and I would eat." That did not satisfy his hunger but rather increased it, until a voice seemed to say:

"Lay the flesh upon the fire, cook and eat."

He did so, and the voice continued:

"I am the Spirit of Usefulness; take me with thee upon thy journeyings, and I will serve thee with health and long life."

Then the child continued on his way, and finding a bird imprisoned in a bough, he hastened to release it; and a little farther on, finding a kid fallen upon the jagged rocks and bleating from its pain, he comforted and caressed it, the while a strange sensation burned within him.

"Ah!" said he inquiringly of his own breast, "what is this?" No sooner was the wish manifest in the thought than a voice, speaking from within, said:

"I am the Spirit of Love! my home is within thee; never cast me out and thy life shall be blessed."

Then the thoughtful child, wholly engrossed by it, wept tears of joy, and a voice, seemingly from heaven, said:

"The Spirit of Usefulness, of Goodness, of Beauty, of Music and of Grace, are of God, and I am God."

Then the thoughtful child looked all abroad to see the face of the whole earth and the whole heaven bathed in glory.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

AGRICULTURAL NOTES.

CALIFORNIA.

El Dorado.

GRAIN-GROWING IN THE MOUNTAINS.—T. G. in El Dorado *Republican*: Now that the first rains of the season are coming on and the farmers of this State are everywhere getting ready to sow their grain, I would like to make a few suggestions in regard to grain-raising which may be of service to some persons here in this mountain district. We have a peculiar climate in this county which is in some respects harder on grain than it would be were it either warmer or colder. In the valley counties of this State grain grows nearly all winter, while here it is kept back by frost. In colder climates it grows later into the summer, while here it is checked by drouth, so that the period of growth is shorter here for grain than in most climates. Frost is harder on grain here than in places where the winters are more severe. This, at first thought, would seem unreasonable, but it is easily explained. When plowed ground freezes, the top rises slightly and in thawing settles back. The frost may not lift it but a little, but it always does lift it some. Now, if the weather is slightly cold, the ground will freeze a little at night and thaw the next day, or, in other words, it will rise and fall every day, while if the weather were severe it would freeze up and stay frozen for a considerable time and would only rise and fall once or twice during the entire winter. This continual lifting of the ground breaks off the roots and sometimes even pulls up the grain. It weakens the vitality of the plant, prevents it from stooling and keeps it back to late into spring. This difficulty may not be entirely obviated, but it can be, in a great measure, prevented by sowing acclimated seed instead of importing so much of the seed from the valleys, as some of our farmers here do. Why it is that acclimated seed will stand the frost in the winter better than valley seed. I do not know; but I have raised grain here for a good many years and I am fully persuaded that seed which has been raised in the mountains for ten years or more will produce better returns every time under the same circumstances. The only reason that I can give is that the grain gets used to the frost. It may not show any more top during the freezing weather, but it is growing root and will come out better as soon as it warms up. Mountain seed will not produce any taller grain than imported, but it will stool at least one-third more—that is, it takes one-third more valley seed to get the same stand. A piece of ground which requires three sacks of thoroughly acclimated seed (raised here for not less than ten years) will take at least four sacks of valley seed to produce the same stand and the crops would be nearly equal if cut for hay, but if the crop is threshed the mountain seed would produce better filled heads and a plumper berry, which would materially increase the yield.

Kern.

PACKING LA CORONA RAISINS.—Bakersfield *Californian:* E. H. Loveland has decided to pack the raisins from La Corona vineyard in town. Mr. Loveland will pack about 12 carloads from La Corona vineyard, and has already shipped two carloads East, so that the production from this young vineyard, now in its third year, shows itself to be very handsome. The raisins are of the very finest quality, and are certain of bringing a very satisfactory price in the market. Mr. Loveland has had the same experience this season as most of the raisingrowers in that the vines gave a much larger yield than his expectations. He has been obliged to order four carloads more of trays than he first calculated upon. The work of packing will commence this Tuesday afternoon, Oct. 18th, and it will be a very interesting place to visit for those to whom raisin-making is a new industry.

Mendocino.

A MODEL RANCH.—Ukiah *Dispatch and Democrat:* Mr. Foster has made his ranch the model ranch of the county. Thousands of dollars' worth of improvements have been put on the ranch since it came into Mr. Foster's hands two years ago. It contains the best dairy in the county, and the barns and stables are the finest by all odds that can be found in this section of the country. The lessee, Mr. McDonald, has 200 horses on the place. Most of them are of the finest strains of trotting stock, including representatives of Electioneer, Sidney, Guy Wilkes, Director and other celebrated trotting sires. He has also some fine Percheron stock. A band of his colts of this breed took second prize at the State Fair at Sacramento. They are perfect gray beauties. On the ranch is a splendid three-quarter-mile track. In addition to the large stock and dairying interests on the ranch, the fruit business is also receiving attention. Many acres of the finest young orchards in the State are to be found there.

Nevada.

RAISIN-MAKING. — Grass Valley *Telegraph:* Cosler & Fisher, who have a farm, orchard and vineyard in the southern part of Grass Valley township, are the most extensive raisin producers in the county, so far as we know. They put up a first-class article in a neat and proper manner. At present, they are drying their grapes so as to make them into raisins, and the weather is not at all favorable just now for that business; but they will have a good lot for market in spite of the weather. The yellow-jackets give a great deal of trouble this fall. The insects are very numerous and very destructive. They will get on a bunch of grapes and stay there until killed or until the fruit is entirely eaten. The great number of the jackets and their very great hunger make a sign of a severe winter, say those who study signs of the weather.

Sacramento.

HOP NOTES.—Sacramento *News:* George H. Menke reports having seen numerous red spiders on the short vines near the ground. He believes a sharp frost would do away with them. Mr. Menke will cut his vines close to the ground and burn them. George C. Brewer has raked his vines to the hills and during the short north winds fired them. This, possibly, may not hurt the roots, but we should not like to risk it. The chances are that the crown of the roots will be injured. George Menke will put out 14 acres more of roots this coming season, thus increasing his yard to 58 acres. Daniel Flint proposes to try an experiment the coming season. He has just thoroughly flooded with city sewage a four-acre yard, and he will now sow it to barley. When the grain has made a thrifty growth it is his purpose to plow it under and use the herbage as a fertilizer. Mr. Flint's experiment will be a new one here, though often practiced in the East with clover and other like herbage. The trouble which Mr. Flint will encounter is that his crop of barley will be turned under so late that it will not thoroughly decompose before the dry weather sets in. If this should be the case the barley, instead of a fertilizer, will assist in drying out the land and obstruct cultivation. As plowing cannot reach the hills there will be an extra expense incurred in cleaning the barley from the hills. However, the thing is worth trying. F. V. Flint, of Flint & Co., hopdealers, lately returned from a trip in Sonoma county. He reports a very fine grade of hops this year and the industry in a very flourishing condition. "One of the most delightful spots in Sonoma county," he said, "is Mt. Olivette, situated about eight miles northwest of Santa Rosa, on the Donahue system. Here are the homes of T. B. Miller and S. W. Purrington, proprietors of the Miller & Purrington hopyards. They are now the largest hopgrowers in the county, farming 60 acres on the bottom lands of Mark West creek. Their dwelling and kilns are built on a high elevation overlooking the hopyard. Three wooden kilns are used to cure the hops and accommodate 300 pickers. White labor is very plentiful. They were compelled to turn hundreds away. They came in all sorts of conveyances, and camped out in the fields or along the creek until the job was done. This yard is one of the few in this section having trellis, and it has met with such favor that a great many acres will be set up the coming season." These growers have a crop of 550 bales of fine golden hops as a reward for their efforts, 120 bales of which they are shipping to London to Knoakes, Son & Collard.

San Bernardino.

THE BIG CANAL.—Redlands *The Facts:* The canal for which the Bear Valley Co. is laying plans will have a capacity of 15,000 inches, and leads from Santa Ana canyon to the Alessandro tract. Some half-dozen surveys have been made, and the company now has the various surveys under consideration. We are assured that active work will be under way by November 1st in the construction of the canal. One of the most extensive works of the kind ever undertaken in southern California will be getting the water out of the Santa Ana river through tunnels aggregating a mile and a half in length. The company is not yet making public their plans for watering Yucaipe valley, if, as some suppose, that will be one object of the canal.

San Diego.

APPLES AT A HIGH ALTITUDE.—Cahuilla Cor. San Jacinto *Register*: Mr. James Hamilton's apples are now ripe, and, Mr. Editor, our altitude is 4000 feet and the fruits and products of the soil seem to have a flavor that is superior to that raised in lower altitudes. Although farming and fruit-raising in Cahuilla valley is limited on account of bad roads to market, we intend to improve in this line when we get our road completed.

CAHUILLA HONEY CROP.—*Register*: In regard to the culture of bees in the Cahuilla valley, all who have them give an encouraging report, although they have not taken out much honey this season, but say their hives are full, and as far as I can see, the honey is always a little dark but the crop is sure.

Sutter.

HANDLING PRUNES. — *Farmer:* The last prunes have been off the drying-ground a week or more, and packing and shipping is now actively going on. The season is very favorable in this locality for curing this fruit, and a choice article has been packed. The principal prune-grower of the county is R. C. Kells, who, by making a special study of the business, has now almost every convenience required in a first-class prune orchard for picking, drying, handling and packing the fruit. The last season he erected a separate building from his packing-house, in which is built a large steam boiler that heats huge vats, in which the prunes are dipped before placing on the large drying-ground. This portion of the system is well supplied by tin dipping-baskets, cranes, etc., which greatly facilitate the work. Before another season he intends putting in an eight-horse power engine, which, by connecting shafting with the packing-house, will operate the graders, elevators, etc. In the packing-house quite a force is busily engaged in putting the prunes into boxes holding 20 pounds each. The fruit had been carefully graded into six separate sizes by the new Hamilton grader in use at the house, and were carefully laid in the boxes and then pressed, the inside of these boxes being papered. Great care is used in packing and boxing, as the fruit looks much better when properly handled. Mr. Kells picked from 20 acres this season 136,500 pounds of green prunes, equal to about 40 tons dried; besides this, he has purchased and handled over seven tons from outside parties. A recent shipment of one carload lot was sent to Philadelphia, and this week one carload will go to Colorado and another to Cincinnati. It pays to grow good fruit, and in drying and packing the most improved conveniences do much to lessen the expense and raise the grade.

FRUIT SHIPMENTS.—Yuba City *Independent:* On Oct. 17th R. C. Kells shipped a carload of prunes to Chicago, and on Wednesday he forwarded another car to San Jose. On the same day the cannery sent two cars East; Williams & Green a carload of raisins to San Francisco, en route to Australia, and a carload of almonds left for Chicago from the orchards of Kells, Walton, Cutts and Sterns. Yesterday 17 cars loaded with canned fruit left for eastern points. Further shipments will follow during the week. The shipments of prunes to San Jose is very interesting in that the Santa Clara valley is considered the greatest prune county in the State.

Sonoma.

A MODEL FRUIT ORCHARD AT STONY POINT. Petaluma *Courier*: An experienced and scientific orchardist was out inspecting the fruit region in the vicinity of Stony Point last Monday, and his observations quite thoroughly convinced him that fruit-growing in that section pays, and pays well, provided the fruit-growers pay anything like reasonable attention to the care of their trees. By way of example, he states that S. B. Woodworth's apple crop, for which he is now getting from $1.25 to $1.75 a box, with reasonable certainty of a handsome advance before the winter is over, will yield not less than 4000 boxes of as fine fruit, on the average, as ever was marketed anywhere. Mr. Woodworth has 800 Spitzenberg trees that will yield fully 2000 boxes of selected apples. But Charles Woodworth has the model orchard and crop. Not counting those that go to the drier, his whole crop will amount to a little over 6000 boxes. From 300 trees—best Spitzenbergs—the yield is 3180 boxes. These trees are 32 years old, and this is the best crop they have ever borne. From 150 of his best Bellflower trees, Mr. Woodworth will market 1600 boxes of apples.

GRAPES AT OCCIDENTAL.—Santa Rosa *Democrat:* F. B. Glynn informs us that the traffic in grapes was never before so good at Occidental as at present. The vineyards yielded more than an average in quantity and the quality is excellent. Prices have ranged from $11.50 to $12 per ton, and will probably go higher under the existing favorable condition of the market. Nelson Drago, Charlie Nolan and Garnier & Lancel are the principal buyers. The latter will manufacture about 400 tons into wine at their cellar in Occidental.

Tulare.

IRRIGATING FOR GRAIN.—Visalia *Delta:* From the Waukena colony, in this county, come good reports of the success achieved in raising grain by means of irrigation. One farmer, a part only of whose land was flooded, harvested 1190 sacks of barley from 53 acres, and averaged 12 sacks an acre with wheat. Another farmer irrigated and summerfallowed 50 acres, planted it to wheat and threshed 1008 sacks. The company which owns the colony land planted 1500 acres last winter. Of this only 1000 acres was supplied with water, but notwithstanding this there were harvested 24,000 sacks of grain. What these results mean may be better understood from the fact that adjacent lands not irrigated yielded only two to four sacks to the acre, and much of it scarcely paid the cost of harvesting.

Ventura.

SIMI FRUIT NOTES.—Cor. Ventura *Free Press*: Last year 18-months-old Muscat grapes from cuttings, on C. F. Warren's place, yielded 1200 pounds of grapes. This year this tract, seven acres, has yielded six tons of grapes. The grapes have matured nicely and are now being turned into an excellent quality of raisins. He has a fine yield of silver-skin onions, being sound and plump. He will this year plant 700 prune trees on plum stock, 800 apricots on peach stock, 300 Winter Nelis pears and 600 budded apricots. Mr. Warren has a fair yield of white corn, good yield of beets, melons and pumpkins, having had a good crop of hay. Here is an important point—all the above were cultivated without irrigation.

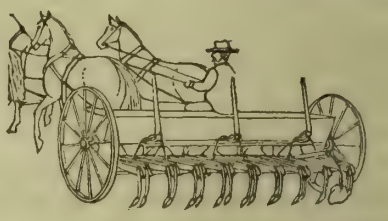
OREGON.

THE CREAMERY AHEAD.—Coquille City *Herald:* At the regular meeting of the directors of the Coquille Creamery Co., it was found that, after all the loss occasioned by paying too high a price for milk early in the season and the too great expense incurred for running and the transportation of milk, the company is now ahead, financially, on the present season's run, with bright prospects in view, and the secretary has been authorized to draw orders on Oct. 15th for all bills due. The price of milk has been raised to $1 per 100 pounds at all river landings, the company to do the delivering as formerly, extra, making the milk cost the company, at the creamery, $1.15 per 100 pounds, which must prove very satisfactory to those having milk to dispose of. We hear the early rumors of similar plants down the coast, below Bandon, at Myrtle Point and at Gravel Ford. We say, let them come. Our climate and section are specially adapted for this industry, excelling any we know of. We are informed by the secretary that the price of butter has steadily increased from 19 cents at the first shipments, until it has now reached 37½ in San Francisco.

HOPS AND PRICES IN JOSEPHINE CO.—Grants Pass *Courier:* J. P. Ranzau has been delivering 10,000 pounds of hops at the warehouse in this city. He had sold this much of his product on contract at 14 cents. He has several thousand pounds yet, which he can dispose of at the top of the market at his pleasure. Buyers are offering 20 cents in Grants Pass at present. Hop-raisers think that hops can be raised, picked, dried and baled in this county at eight cents a pound, and so present prices are fairly remunerative.

GORHAM

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6 to 14 foot,
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With or without Cultivator.

Cultivator can be Raised in sections.
No heavy lift.

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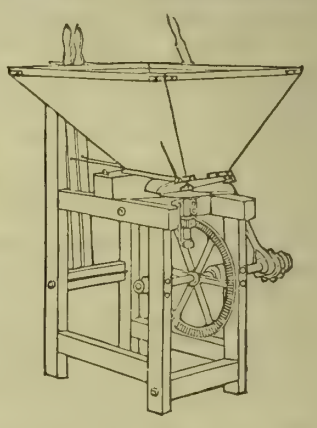
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They will not sow Barley
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The Earliest Yellow Freestone Known.

CURL LEAF PROOF.

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The Best Peach Known for Early Shipment East.

Reasonable prices to dealers and canvassers. For particulars apply to

W. W. SMITH, Vacaville,
A. T. FOSTER, Dixon,
Or, I. H. THOMAS & SON, Visalia.

PEPPER'S NURSERIES.

(ESTABLISHED IN 1858)

—A large stock of—

Bartlett Pear Trees and French Prunes

On Myrobolan Stocks, at Low Rates.

Also, a general assortment of Apple, Pear, Peach, Nectarine, Plum, Cherry, Quince, etc., grown in sandy loam, without irrigation, which gives a fine proportion of roots I offer no trees but what are grown in my own grounds and known to be true to label and free from scale bugs. Address: W. H. PEPPER, Petaluma, Cal.

Owing to age and poor health, I will sell my place and business at a bargain. Place consists of 250 acres of land, good buildings, 50 acres in orchard, and a large Nursery Stock, together with horses, wagons and implements, complete, for carrying on the business. A good opportunity for enterprising men with capital to step into a good-paying business. For further particulars address, as above.

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Prunes, Cherries, Olives,

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No Bugs.
No Irrigation.
No Substituting.

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See our prices before buying. They are very low.

ROOT GRAFTS

Apple Grafts at $3.50 per thousand.
Prune Grafts (on Mariana Stocks) at $9 per m.
Pear Grafts at $8.00 per m.
All first class and best of material used, f. o. b.

APPLE SEEDLINGS.

No. 1, graded 3-16th, and all up at $4.10 per m; and Pear Stocks, same grade, at $7.50 per m, f.o.b. Free of disease. We are strictly wholesalers, and grow nothing but the above stock. Our trade has grown to immense proportions (second to none) through the merits of our goods.
Send for samples. For full particulars, address
H.C.GRAVES & SONS, Lee's Summit, Mo.

OAK LAWN NURSERY.

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NO INSECT PESTS OR IRRIGATION.

Please Send for Catalogue.

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I will guarantee every tree true to lable and free from insect pests.

Correspondence solicited.

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Plants safely shipped everywhere. Send stamp for new and full catalogue which tells all about this subject.
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The New Yellow Freestone Peach.

FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.
Fruit is round, of medium size, VERY HIGHLY COLORED, flesh firm and sweet.
THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.
Tree healthy, strong grower, and heavy bearer, never having missed a crop.
A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

GIANT OAK FRUIT CO.,

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Tulare County customers can obtain stock from above Company at Farmersville, Tulare Co.

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ALMONDS! I. X. L., COMMERCIAL AND NE PLUS ULTRA.

EARLY CRAWFORD, FOSTER MUIR AND ORANGE CLING **PEACHES!**

FRENCH PRUNES on Myrobolan, Peach and Almond Roots.

BARTLETT PEARS, Apricots, Cherries, Olives, Walnuts, Etc.

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VARIETIES FOR PICKLING—Regalis, Grossaia, Hispania, Santa Catarina, St. Agostino, Ascolana (White Olive of Ascoli).

PRICE, 50 Cts. Each, $40 per 100, $350 per $1000; Ascolana, $1 each.

Terms of sale, Cash on delivery at the railroad station. Time for transplanting, January and February. Trees offered for sale are two years old, propagated from imported stocks.

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Now that the interest in the culture of the orange is extending so as to embrace nearly all parts of the State, a book giving the results of experience in parts of the State where the growth of the fruit has been longest pursued will be found of wide usefulness.

"Orange Culture in California" was written by Thos A. Garey of Los Angeles, after many years of practical experience and observation in the growth of the fruit. It is a well-printed hand-book of 227 pages, and treats of nursery practice, planting of orange orchards, cultivation and irrigation, pruning, estimates of cost of plantations, best varieties, etc.

The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St., San Francisco.

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FOR PLANTING SEASON, 1892-93.

Robe de Sargent Prunes,
French Prunes on Peach, Almond, Myrobolan.
Pears, Peaches and Apricots,
Leading Varieties, in large quantities.
A General Assortment of Deciduous Fruits.
All our stock is grown without irrigation and is guaranteed. Drop us a "Card," and we will send you our price list.

BALDWIN & STONE,
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In California and Arizona.

300,000 Pomolo (or Grape Fruit)

SEEDLING NURSERY STOCK.

ALSO 100,000 SOUR ORANGE STOCK.

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W. A. T. STRATTON, Petaluma, Cal.

Seeds, Plants, Etc., Continued on Page 371.

PATRONS OF HUSBANDRY.

The Work of the Grange.

The origin and progress of the Grange forms one of the most interesting and important chapters in the whole history of agricultural industry. Previous to its inception, the opportunities for educational and social advantages among farmers was very limited, and although that class of our people exceeded in numbers all other industrial classes combined, its influence was scarcely felt in the community or in our halls of legislation, either State or national. But during the 27 years of its existence it has wrought, either directly or indirectly, a greater change in the condition of those in whose interest it has labored than has ever been effected through the efforts of any other organization in the land during a century. To-day the farmer and his family stand on an equal footing, socially and politically, with the people of any other industrial class.

THE GRANGE AS AN EDUCATOR.

As an organization, the Grange has many purposes, as many, indeed, as are the needs of those in whose interest it has been established, and one of its chief purposes is to elevate the educational and social standing of the farming community, and to place before its members opportunities by which that end may be most readily reached. What it has done in that direction is patent to all who keep abreast of the times. This work has been mainly accomplished through the frequent meeting together of the men and women who compose the Grange for the purpose of becoming better acquainted with each other, of comparing notes and experiences, and through the reading, thinking and action which such association naturally induces. It is in such meetings that members have the opportunity of giving and receiving instruction and of frequently receiving inspiration from those whose abilities and training have more especially fitted them for giving instruction. No other organization has more earnest or more level-headed men as leaders, and its membership is composed of the most intelligent and progressive portion of the farming communities.

IN POLITICS

The Grange is in no wise a partisan organization. Its members are perfectly free to act with the party of their preference. Questions of political economy, however, are freely discussed in its meetings, but never from a partisan standpoint. All such discussions are conducted in the way of practical education as to the needs, rights and duties of American citizens, and with special reference as to what measures are most conducive to the needs and interests of the farming community. In this direction much has been accomplished and much progress has been made in work not yet fully accomplished.

In reference to what the Grange has accomplished it may be remarked that it opened and exerted a large influence in the discussion which finally led to the elevation of the Agricultural Department to its proper level and making its head a full cabinet officer.

It was also mainly through the efforts of the Grange that the interstate commerce law was passed, which has brought much relief to the farming community in several States. It has failed to accomplish any material benefit in California, for reasons which are well known.

The Grange was largely instrumental in securing the passage of the antitrust law by the last Congress, and is now supplementing that work in its efforts to secure legislation which will put a stop to dealing in futures, which consists chiefly in gambling on the products of the farm, to the great detriment of the producer.

It has ever been a consistent advocate for the purification of the ballot box, and to that end was among the earliest to advocate the introduction of the Australian ballot system, and it is largely, if not mainly, through the efforts of the several State Granges that the Australian system is now in operation in no less than 26 States.

The passage of the national oleomargarine law was mainly accomplished through the efforts of the Grange.

Among other measures of political reform in the interests of good and equal government, in which the Grange is taking an active interest may be mentioned—a graduated income tax; the election of United States Senators and the President by a direct vote of the people; a Government postal telegraph and telephone system, and a free rural mail delivery. It is also doing much in the way of introducing business cooperation, and in the establishment of mutual fire and life insurance companies.

MEMBERSHIP OF THE GRANGE.

According to recent statement of Mortimer Whitehead, the lecturer of the National Grange, taking the Grange at large through the country, it was never before in so flourishing a condition as now, and never better equipped to accomplish its highest object—the education and elevation of the American farmer. During its existence, over 27,000 charters have been issued to subordinate Granges, which have reached every State in the Union. During the past year new Granges have been established in 23 different States, showing that its progress is universal throughout the country. The State of New York has organized 107 new Granges during the past 12 months. Pennsylvania has gained 6000 new members. Over 1000 delegates and visiting members attended the meeting of the last National Grange at Springfield, Ohio. That was considered one of the best sessions the organization has ever held. The Grange may now be claimed as

A PERMANENT INSTITUTION.

Of the country. It has already in contemplation the building, at an early date, of a Grange Temple, at Washington, D. C., for the headquarters of the National Grange. The principles of the Grange have been thoroughly tried, have stood the test of time and command the respect of all good men and women everywhere. They are ever found on the side of justice, equality, education, temperance and morality. They take hold of everything that goes to build up a great, good and powerful people.

The Agricultural Chatauqua.

A Suggestive Topic for Grange Discussion.

Upon reading the editorial in last week's RURAL we were all surprised that the idea of adopting the Chatauqua plan to agricultural studies had not been put in practice long since. It has done more than any other movement to build a bridge between science and practice and bring the university to the home of such as cannot leave home for the university.

In this way it has extended the empire of letters and multiplied the numbers of well-informed people in America.

In no department of learning does it offer such advantages as can be secured to farmers by a concerted and thorough effort to systematize existing means of information in a way that we may acquire a solid foundation for such a knowledge of agricultural matters that we may classify, retain and apply what we learn. We enter a carpenter shop well stocked with tools and undertake to do a job of work. We know how to use a few of the tools and have a general idea of what is wanted but spend time, material and temper in securing a result by no means satisfactory.

The trained mechanic takes the same tools and material and makes no false motion until a good job is done.

Now you have noticed the same difference between people who take up a book or paper or listen to an address. One catches no idea, another a vague one that he cannot apply, while a third can reproduce the thought or put it in practice. The capacity to use the experience of of others as the trained mechanic uses tools is what we want the Agricultural Chatauqua to give to us and the boys and girls who are to be the farmers a few years hence. Teach them the use of intellectual tools and thereby make the information available for practical use that is now afloat about as far beyond the reach of the average farmer's power of practical application as though printed in a foreign tongue.

One of our successful fruitgrowers was telling of a brother in Texas who had some fine peach land and thought he would start a large orchard. He was given a careful outline of tne methods that secure the best success in all California and applied with "California Fruits" and all other of the latest works on practical fruit culture.

After several years our friend revisited Texas and reported that his brother had the most horrible orchard that you ever saw. He had hardly acquired a single correct idea from all his reading or advice. The lesson was, that a book is of little use to one who does not know the use of books.

As last week s editorial implies, this is one of the things that the paper cannot attempt to do; viz—undertake systematic training in the power of assimilating knowledge. We can supply the troops with ammunition but somebody else must act as drill sergeant.

Any student of the causes of agricultural progress will recognize that the most hopeful place to begin the use of fertilizers is the farmer's brain. In enriching your orchard you use materials calculated to add such vigor to the tree as to produce the largest crop of fine fruit. You work toward the dollar. Just so with this plan of improvement let it be with the view of extending and systematizing knowledge of farm affairs rather than to make us more like lawyers or poets.

The Grange is the place to discuss this and to devise plans for carrying out the work, remembering that the community will do for the Grange in exact proportion to what the Grange does for the community.

If you will read and discuss these articles before your Grange, and report your discussion, thus indicating a popular demand, we will do all that the paper can to further the movement, and think that it can find substantial aid and direction from both of our universities. There is a great deal of free information to be had, and many ways of getting cheap and valuable books and taking advantage of the experience of such as have been teachers or successful farmers in the Grange.

Almost every one who thinks carefully along this line will have some useful suggestion. Come let us put in the evenings of this winter to better advantage than we have ever done before. We will sit up nights and study with you if we can only feel that there is a good class of earnest workers, enthusiastic in their desire to learn.

We are starting in to hoe a very long row with the hope that a favorable season may produce the best crop that farms ever raise, and the one most productive of paying results—practical ideas.

Our encouragement to effort along this line and our success in securing cooperation from the universities or other sources will depend largely on the demand for such work, as indicated by replies received to these communications. Now, if any individual or any Grange has any word of suggestion or encouragement, let it be considered a duty, to self and to the cause of progress toward a brighter future for toilers, to write at once and let us know if we are in a line that will secure cooperation.

The National Grange.

The 26th annual session of the National Grange will be held at Concord, N. H., opening on Wednesday, November 16th, and continuing ten days. From the activity and enthusiasm manifested among Patrons everywhere, and particularly among the 60,000 in New England, it is expected that the coming session will eclipse all of its predecessors in both numbers and interest. It is confidently expected that the attendance will reach fully 2000. An interesting program has been arranged, which embraces excursions to the White Mountains and other points of interest in the more immediate vicinity of Concord.

The Sunday which will intervene will be devoted to memorial services in memory of members who have deceased during the year.

Subjects of great importance to the agricultural interests of the country will come before the session for discussion and action. The business sessions of the National Grange are always held in the fourth degree, so as to admit a general attendance of all Patrons.

From San Jose Grange.

"Granger," writing us from San Jose, reports that San Jose Grange joined in the Columbus Day celebration, with a float which was perhaps the most unique and attractive feature of the day. It was filled with fruits, flowers and grains and contained the three goddesses—Ceres, personated by Miss Hattie B. Wells; Pomona, represented by Miss Lizzie Webb, and Flora, represented by Miss Nellie Gefferds.

Our correspondent further says: "We would like to know if any other Granges took part in the Columbus Day celebration, and if they prepared floats. At the last meeting of the Grange we began the discussion of the proposed amendments to the constitution and will continue the same until we have completed the list. Of the local committees appointed to arrange for the fruitgrowers, nearly all were members of the San Jose Grange, and it is evident that our Grange is wideawake and ready to help in all good work. We hope that Grangers from other sections will visit the convention next month, as the meeting will be both profitable and instructive. The visitors will be received by the Grangers who compose the reception committee."

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

FOR ANOTHER YEAR'S WORK.

Now that the Annual Session of the State Grange is past, the next thing in order is for each Patron to begin work for the ensuing year, and uniting with others make the coming season more productive of benefits to the Order than any of its predecessors. The harmonious session proved that the Grange is in good working order. It is financially strong, and the opportunity for a good year's work, if all do their duty, is one of the best ever known.

Let individual Patrons study what best to do to double the membership and strengthen the usefulness of their own Grange; then let each Grange in turn plan for a general advance movement throughout the jurisdiction. Study up some new methods of creating interest in the work of the Order and attract the attention and meet the approbation of the younger members of the Grange families who have not yet joined the circle; also to bring other farmers and their families within our gates. On this subject we invite correspondence. Talk the matter up in your families, in your subordinate and Pomona Granges. Let the coming year be one of earnestness, activity, thorough work and a good harvest.

NATIONAL GRANGE.—We have received from M. J. Bachelder, Master of the State Grange of New Hampshire, a supply of blank applications for membership in the sixth and seventh degrees, the former to be conferred at White's Opera House, Concord, N. H., Thursday evening, Nov. 17th, and P. M. on the 18th, and the seventh degree (Priests of Demeter) on the evening of the 18th. From appearances, ample preparations are being made by New Hampshire Patrons to make the session a pleasant one to their visitors from abroad. One thing is certain, attendants will not need their summer clothing, as the almanac says "about these days" at Concord.

RECENT STATE GRANGE SESSION.

The State Grange resolved to oppose the constitutional amendment to increase the salary of lieutenant-governor to $4000 per annum.

IMPORTANT RECORD.—The following resolution offered by J. H. McKune of Sacramento Grange was adopted by the State Grange:

Resolved, That the executive committee of this Grange be and is hereby authorized, in its discretion, to employ a competent person to remain at the Capitol of the State during the session of the next legislature, whose duty shall be: 1. To take charge of the legislation recommended by the Grange and secure an introduction of the proper bills. 2. To keep a registry of all legislators and the action of each on the several measures introduced as recommended by the Grange. 3. To make a full report of such matters to the executive committee.

Resolved, That the data procured from such report and other sources be preserved by the executive committee for future use as occasion may require.

THE following report adopted by the State Grange, referring to one of the proposed constitutional amendments to be voted upon Nov. 8th, will be read with interest:

Your committee on good of the Order, to whom was referred the proposed refunding of the bonded indebtedness of the State, beg leave to report that they have duly considered the same and respectfully report the following:

In view of the law prohibiting the investment of the funds of the university at a less rate than five per cent, and the other fact that the remainder of the indebtedness is to State institutions, except $251,000, we recommend that it be declared the sense of this State Grange that said $251,000 be paid out of the surplus funds in the treasury, and if the remainder of the bonded indebtedness be refunded, the State take them at their present rate of interest.

THE speaking and music at the memorial exercises, according to the program arranged by the committee, were very good and appropriate. Yet some sadly missed the touching volunteer offerings often given at our memorial exercises. We also believe many felt that memorial exercises sandwiched in between business appointments come far from being as impressive as when held in quiet evening session, as has generally been the rule heretofore. The exercises occurred in the following order: 1. Solo by Miss Roxie Dennis; 2. Address by Bro. I. C. Steele in memory of Bro. W. M. Ireland; 3. Address by Sister W. L. Overhiser in memory of Sister N. E. Alling; 4. Music Quartette 5. Address by Bro. Amos Adams in memory of Bro. T. T. Hooper; 6. Address by E. Greer in memory of Bro. H. Davenport; 7. Solo, "Nearer My God to Thee," by Miss Gussie Wilcox; 8. Address by A. D. Logan in memory of Sister P. Peterson; 9. Address by Bro. E. C. Shoemaker in memory of Sister A. J. Woods; 10. Address by Sister Mary Merrill in memory of Sister Jas. Perrott; 11. Music by the Grange.

Addresses were limited to five minutes each.

The entertainment by San Jose Grange was throughout superior and won universal praise from both members and visitors, who will long remember pleasantly the "Garden City" and the Twentieth Annual Session of the State Grange.

One hundred dollars was paid by the State Grange to San Jose Grange toward the rent of hall and other annual expenses.

The Pomona Feast was unsurpassed in variety, decorations and presentation. The tables were entirely supplied, this year, by the local Grange.

INDEPENDENT GRANGE recently received its charter No. 302. We hope the Grange, like its name, will prove one of the best in the circle. Elk Grove also received a duplicate charter for the one burned.

EXECUTIVE COMMITTEE MEETING.

Brother McConnell was absent in Oregon and the regular annual session of the executive committee, usually convened on Monday preceding the State Grange meeting, was only held informally. Several consultations were had by the committee at San Jose but no formal action was taken there by the executive committee, consequently a special meeting was held in the office of the secretary Oct. 18th,

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY.

S. W. FERGUSSON,
Bakersfield, - - - California.

Bros. Loucks, Walton and Jones being present. In the absence of Master Davis, Bro. Loucks was made temporary chairman. J. D. Huffman, Geo. Ohleyer, Past Masters Hull of Yuba City and Walter Renwick of Temescal Granges were among the visiting Patrons. A number of bills were audited and ordered paid. The Committee on Women's Work was allowed an appropriation for the year not to exceed $50.

A remittance on account of dues was voted Elk Grove and Kibbesillah Granges on account of their losses by fire. The publication of the by-laws and the annual proceedings was left for further arrangement.

THANKSGIVING DAY.

What pleasant memories come to mind at the mention of this festive season, which has now become a national holiday. It is one of the best days of all the year for Granges to gather their families together for social and fraternal reunion. It affords an opportunity for having a pleasant occasion without much formality. Like a good picnic, "it somehow does itself." It brings forth pleasant memories and a better feeling toward all humanity. We do not believe any Grange ever attempted a Thanksgiving reunion that anybody was sorry about.

We therefore thus early urge Patrons of every Grange, large and small, to come together on Thanksgiving Day, which will doubtless be on Thursday, November 24th. These are days when the sisters are always found foremost, Who will write us some words of encouragement for those who may feel doubtful about celebrating on account of their Grange not being in the most prosperous condition? Is it not a good time for weak Granges to call for an arousing meeting?

GRANGE ANNIVERSARY DAY comes Sunday, Dec. 4th, this year. Most Granges will doubtless celebrate on Saturday.

MRS. S. J. CROMARTY has been elected secretary of Watsonville Grange.

ST. JAMES HOTEL was really headquarters for Patrons between daily sessions of the State Grange The proprietors, Mr. and Mrs. Tyler Beach, did their best successfully to make so large a number comfortable.

Possibilities of the Grange.

The following is from an editorial in the current number of the *California Orchard and Farm:*

We are convinced that the California Grange can build itself into a powerful order by following the example of ten or twelve eastern Grange States, which have made cooperation in dealing and insurance a leading feature, succeeding to a wonderful extent. Our first effort will be directed to securing reliable information on this question, and we hope to have the aid of well-informed Grange members in carrying out this purpose.

A need for cooperation in marketing is generally recognized among the orchardists, as well as other lines of rural occupations, and all that stands in the way of practical operation is the want of confidence that producers will hold together. Here is the opportunity for the Grange. Its reputation for honesty and stability will inspire the fullest confidence, and give it a splendid chance to undertake cooperative transactions for the producers that seem impossible to inaugurate in any other way. Such work as this, if cautiously managed, will help the Grange and bring in a desirable class of members, who will be attracted by such proof of its usefulness. It is an absolute fact that the strongest Granges in existence are those engaged in buying and selling for their members, without which the national Order would be struggling for life, instead of having a well-filled treasury. The business Granges constitute but 25 per cent, but furnish 75 per cent of the revenue that reaches the National Grange treasury.

In California we have one, Two Rock Grange, that has been built up by a judicious blending of business with sociability, and we predict that the success of this Grange will cause many others to follow in the same line, resulting in a larger and more vigorous membership for the State.

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Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

Just the Harness for an Elegant Turnout.

They sell here for $25.00, and harness not as good is often sold for $35.00 in retail shops. If harness is not as represented, money will be refunded.

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Collar and Hames, instead of Breast Collar, $2 00 extra.

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The State Alliance Meeting.

In their annual meeting at Sacramento on the 18th, 19th and 20th inst. the State Alliance discussed mainly the following subjects:—

Land.
Transportation.
Monopoly.
Money.
Cooperation.
Immigration.

As Alliance leaders are the principal promoters of issues represented by the People's Party they were discussed from a standpoint already made familiar in the political campaign. The point was well taken that these issues have been evolved from the people while the great parties have received theirs as legacies from their leaders.

A cooperative plan was inaugurated based upon successful experience at Compton of a store modeled after the famous Rochdale plan so popular in England. The idea is to begin prudently, develop as patronage extends and share the benefits accruing from a cash system and large purchases. With careful management and records of failure as well as success always in mind this system promises to confer substantial benefits to its patrons and hence add strength to the Order.

It was recommended that the State operate a plant at Folsom similar to that at San Quentin and also keep on hand a supply of the raw material sufficient to meet probable demands of market and discourage speculation on jute and sacks.

It was desired that the general government take immediate and efficient action to prevent further injury to streams from sedimentary deposits and also dredge and levee so far as necessary to preserve the streams in the best condition for commerce

The movement of those hostile to the present system of publication of school text books was denounced as proceeding from interested motives and the present plan was commended without endorsing all works published under that plan.

Sympathy was extended to those who are trying to bring about a better condition of wageworkers and it was recognized that the value of a market depends upon the purchasing capacity of the people. Concentration of wealth so far as it implies increase of paupers was recognized as a great evil.

To secure a more just and perfect assessment an Act of the Legislature was sought, requiring that all notes, bonds and other evidences of indebtedness should become void and incapable of collection by law in case they had passed a year without an official stamp to show that they had been assessed.

One of the most promising features of the session was the inaugural address of President J. L. Gilbert, of Fresno, outlining a policy of earnest and active work to increase the members and promote the interests of the Order. Most of his time and that of State Lecturer Cornell will be devoted to the work. The earnestness and efficiency of these officers has already been demonstrated in a way that inspires the Order with great confidence.

C. W. Thresher, of Butte county, was chosen for vice-president, and J. M. Moore and J. S. Barbee were continued in office as State agent and secretary and treasurer respectively. E. M. Wardall, of Los Angeles, L. M. Landsborough, of Sacramento, and Geo. B. Johnson, of Santa Clara, were chosen as executive committee.

Such were the leading results of an interesting and profitable session, showing the capacity of the Order for prompt transaction of business.

Best's Agricultural Works.

The Agricultural Works at San Leandro during the last sixty days have been enlarged and rehabilitated with new and the latest improved machinery. A building 144x110 feet, two stories, is being erected and will be covered with corrugated iron. This building will be devoted to combined harvesters, while the old harvester building will be used exclusively for traction engines. The hum of industry and extensive preparation for a large output of agricultural machinery are prominent features at this great plant. Our reporter counted six traction engines on the stocks and was informed by Mr. Best that he would build over 50 combined harvesters for next season. As usual Mr. Best has been awarded a string of first-class premiums and medals at the State and District Fairs.

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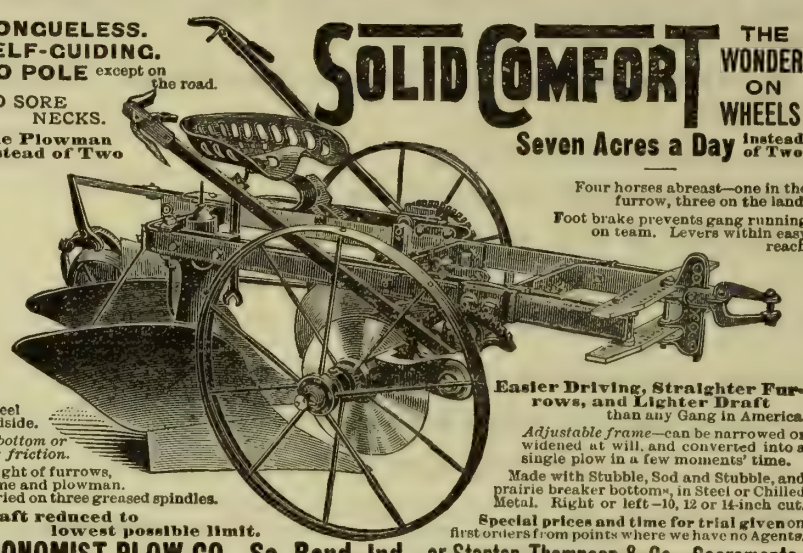
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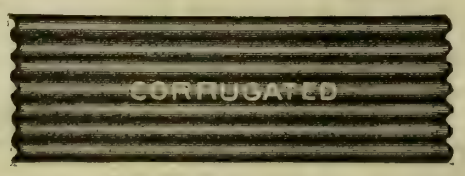
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18	"	10.08
28	"	15.40
44	"	23.76
60	"	31.80

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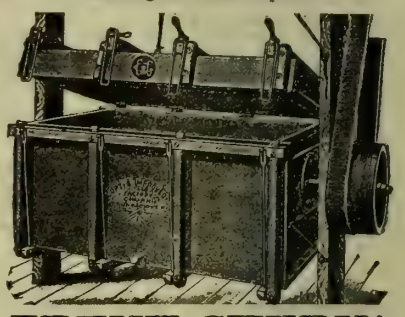
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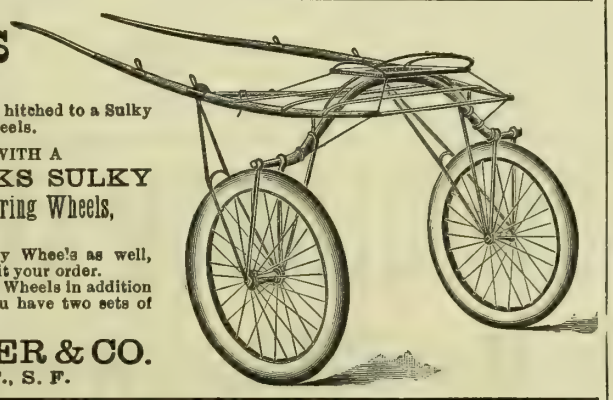
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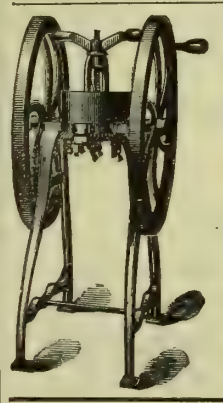
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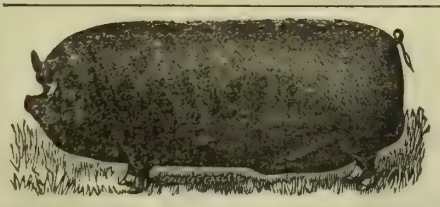
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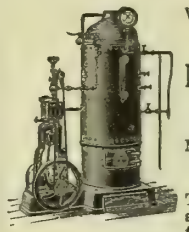
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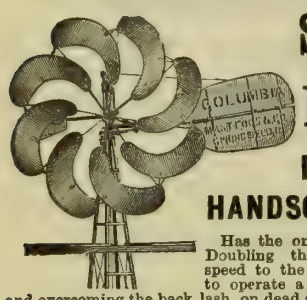
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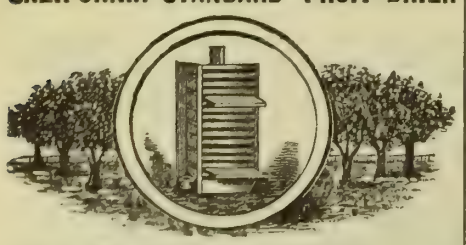
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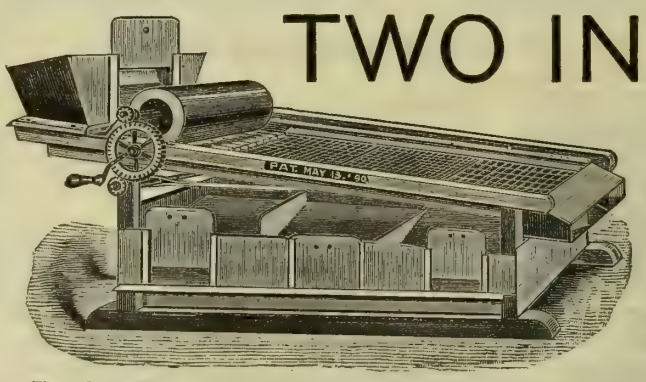
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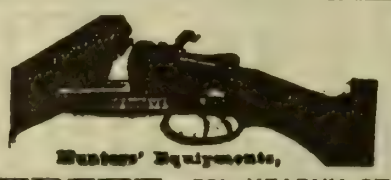
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S. F. Market Report

Market Review.

SAN FRANCISCO, Oct. 26, 1892.

The local money market is essentially unchanged. While bank reserves ar reported to be steadily gaining, yet there does not appear to be any disposition to let out money below a certain percentage. This spirit of caution seems to be developed to a larger extent now than at any time within the past three years. Remittances from the interior are only fair, while the demand is steadily falling away The election and Thanksgiving Day in next month and the usual holidays in December make inroads into the general business and until they are all passed an improvement is hardly likely to set in. The wheat markets of the world have been slowly settling under renewed strong bear pressure and an almost total absence of speculation. Continued heavy marketing of the cereal at the East is an important factor in undermining the markets, for the wheat movements in this country appear to be the barometer by which Europe gauges the markets. The requirements of Europe are now placed at higher figures, while the crop in the United States is placed at about 525,000,000 bushels against 495,000,000 bushels one month ago. Even at the higher estimate the crop is fully 100,000,000 less than was the yield in 1891. While giving the increased estimate yet the fact must be kept in view that crop reports and estimates are in many instances largely controlled by operators in railroad securities. There is a general concurrence of opinion that more railroad shares and bonds are held in this country than ever before known. This increase has been due to the panicky times in Europe causing holders abroad to unload. With heavy holdings in this country and a healthier and a more general growing feeling of confidence abroad it is but natural that the pools or syndicates at the East should be casting about to sell back to Europe; this can be the better done by creating the belief that the cereal and other crops in this country are very heavy which will increase the income of the railroads when the products begin to move freely. Europe is already beginning to buy our securities quite heavily.

There appears to be a more general impression probably grounded on past experience, that the consumption of wheat the current cereal year will be very heavy and as the season draws to a close the reserves will be still further reduced. That this opinion is well grounded appears self-evident and does not require enlarging to convince the most skeptical. It is quite generally admitted that the low average prices which have obtained for wheat during the past five years have not only enlarged the demand but have also increased the consumption per capita, both of which are important factors to be considered in estimating on the world's requirements. So large and steady has been the increased demand from these two sources that consumption the world over has steadily gained on production, until the latter does not now equal the former, which has about eaten up the reserves. This would make itself more keenly felt were it not that it is largely neutralized by steam and electricity, both of which can be and are called into service to draw, quickly, supplies from any given point.

The local wheat market the past week was somewhat interrupted by the Columbus festivals. Even with this past, there does not appear to be any general disposition on the part of operators to enter the market to any great extent until after the elections. Probably this is magnified so as to bear the market as much as possible. The large tonnage in port and to arrive makes it quite certain that outward charters will have to weaken, provided ship-owners wish to keep their vessels in service. Wheat gains by ships weakening, The offerings of wheat the past week were light, but light as it has been, shippers claim that, only in exceptional cases, they have been able to have their wants met without bidding upon the market, or, in other words, by not paying above the parity of European markets.

Barley has held to firm prices with, toward the close, a tendency to still better figures. There is no denying but the crop in this State was largely in excess of that in 1891, yet it is equally as certain that low prices and poor pasture have induced larger feeding, while for export the demand has been largely in excess of the call last year. There are those in trade who feel quite confident that the current season will go out with a small reserve, and in taking this view of the situation they are quite hopeful of better prices later on.

Oats have come in quite freely the past week, but the market absorbed the receipts without causing lower prices to obtain. The strength of the market is accepted as evidence that the crop in Oregon and Washington is short and that the supply later on will be quite light. Whether this opinion is well-grounded it is hard to say, but the fact remains that the tone to the market is not only strong but healthy. Corn has held to weak prices, under fair receipts and only a moderate demand. Rye has been irregular and only dealt in to a limited extent.

In ground feed, bran has weakened off with an easy feeling at the close, but middlings have held fairly firm. Heavy receipts and free offering of the former broke prices. Feedmeal has been slow at easier figures. The consumption of roll barley has been quite heavy in the country, while the demand for ground barley at the logging camps has been free. The consumption of ground feed so far in this season has been fully 50 per cent greater than it was during the like time in 1891.

Hay has met with a fairly steady call. The rain, followed by cool, foggy weather in some localities, is said to be improving natural feed, which is having an effect on the demand. Although there is a lessened call, yet there is nothing apparent to warrant the belief that feeding has fallen off; the lessened call is only an evidence that large feeders are not anticipating their wants, or else have liberal supplies on hand.

Butter has eased off under a stronger selling and buyers not being disposed to anticipate their wants. The offerings, are, it is said, largely in excess of current requirements. The stock of Californian in this city is largely in excess of the quantity on hand at this time in 1891. The quantity of pickled is about 1700 barrels more, and that in kegs about 1200 kegs more. While Californian shows a large increase, that of Eastern is very considerably less, and, what is more, the price of gilt-edged in the central States is above the parity of this market, which cuts off the supply from this source. It is quite generally claimed that the stock of pickled and solid-packed is not only larger in this city, but at other large distribution points it shows a corresponding increase. Cheese has held barely steady. The demand is only moderate, while receipts have been fair. The supply in this State to draw from is said to be quite large and a menace to the market. Eggs have moved up under lessening stocks of Eastern, light receipts of Californian and the markets in Utah and in the central States being quoted higher. Sales of round lots to arrive of fresh Eastern have been made at an advance.

The season for several varieties of gardentruck is going out, which causes quotations to be largely nominal. Cabbages, cauliflower and celery are in buyers' favor. Onions have come in only fairly free, but in the absence of any marked demand the market was slow, with only the more choice good-keepers wanted. The receipts of potatoes have been very heavy, but the bulk which came to hand were only poor to fair, and it has been the pressure of these on the market that caused lower prices to obtain than otherwise would. Choice good-keepers are steadily appreciating at the expense of the poor varieties, which causes a weaker range in quotations.

Mexican oranges are coming in fairly free, but the quality being only fair they meet with an indifferent demand. The incoming crop in California promises to be large and of most excellent quality, provided they are not overtaken by frost. Fears are expressed that we will be visited by early and severe frosts.

The fresh-fruit market the past week has been more or less unsatisfactory. Rains, and humid weather since, have about ruined grapes, owing to their being poor keepers, which necessitates forced sales before rotting. This applies to both wine and table varieties. There are no choice apples or pears in the market, and with heavy supplies of poor to fairly good, the market hangs heavy and decidedly unsatisfactory. Wine grapes have had a wide range the past week, selling all the way from $8 to $15 per ton

The supply of both dried prunes, apricots and plums in this State is quite light. There was shipped from San Jose alone the past week over 1,400,000 lbs. of prunes which, combined with previous shipments has about drained up the pack in Santa Clara county. Other shipping points note a corresponding condition. The shipments of other dried fruits are quite free. These shipments are made on sales made earlier in the season, for at this writing our market is slow with quotations largely nominal. To buy, full prices have to be paid, but to sell, concessions must be made.

Raisins do not appear to have shown any material change. Heavy shipments are being made to the East. The weather has been unfavorable to curing in some localities, but in the southern part of the State it has been quite favorrble. New York advices to October 21, report that market as follows: Valencia raisins are cabled decidedly stronger from primary sources, with best brands layer goods held at 18s@18s 6d cost and freight. Notwithstanding this spot stock is offered with considerable freedom and at prices showing no material change from those current the past few days. From vessels discharging and ex store 5¾c is asked for off-stalk and 6¾@6⅞c for layer, but there are goods on the Assyria, the latest arrival, which offer at 5⅞@6⅝c. To arrive we are reported sales of 3000 boxes layer at 6½c. California are in moderate demand and prices appear steady. New London are held at $2.25; three-crown loose in boxes, $1.90@$2; do in bags, 6⅛c, and two-crown do, 5⅞c. Old are passing out quite freely at 5¼c for two crown in bags, and 5¾@6c for three-crown.

Markets by Telegraph.

Wheat Strong, Barley Lower in England.

LONDON, Oct. 24.—The Mark Lane *Express* says: English wheat has slightly advanced in the provinces but is unchanged in London; foreign has ceased to advance: best California is quoted at 34s, Oregon 34s 6d and Duluth at 35s. To-day wheat and oats were dull and corn strong owing to diminished supplies. Flour was slightly cheaper and barley 3d lower.

Canned and Dried Fruit Quiet.

NEW YORK, Oct. 23.—Canned Fruits—There has been no inquiry for any lines; old prices are unchauged, with peaches very firm. Unpeeled, evaporated peaches range from 13c to 16c for fair to fancy, with the demand chiefly for the best. Prunes exhibit no particular life. Two carloads of four sizes sold at 11½c spot. Apricots are steady and unchanged.

CHICAGO, Oct. 25.—There was a slight reduction noted in the value of nectarines, but aside from that no changes appeared. There does not appear to be any particular rush of trade at present, but more of a quiet feeling prevails. Prunes are wanted about as much as anything and as yet the supply is small. Raisins as yet are quiet, but in a short time the holiday trade will open, and then an improved trade is expected.

Honey Advancing; Lima Beans; Futures Firm.

NEW YORK, Oct. 24.—Honey—The general trade has already realized the scarcity of California strained, and 8¾c is readily obtained. Lima Beans: Shipments of lots brought here for the West are going freely. The tone of the market seems sound for better future prices, but there are few buyers above $2 per bushel spot at that moment.

Hops Irregular.

NEW YORK, Oct. 24.—Tne hop market is unsatisfactory. Direct trading with interior State points continue to seriously cut into the spot fall business. The cable is not stimulating; England feels the depressing effect of some liberal shipments which were uninvited. Quotations are unchanged for all State or Pacific. Exports for the week are 1505 bales.

Desirable Wool Is More Buoyant.

NEW YORK, Oct. 23.—Wool develops more buoyancy than has been common. The buyers' menace of sending to the interior for supplies is no longer potent, for the clip is practically forwarded to the seaboard. Sellers comprehend their more independent position and decline to listen to suggestions of shading for any decent line. Besides, it is whispered that an outside speculative interest is springing up that may compete with manufacturers who "dicker" too long for the yet cheap desirable parcels. Sales at New York: 41,000 pounds of scoured California; 9800 pounds of spring and 372,000 other domestic on private terms; also 575,000 pounds of foreign of low grade. Sales at Boston: 3,023,600 pounds of domestic, including 543,000 pounds of foreign, mainly Australian. Fall California is quoted low and irregular on account of its heavy, seedy condition. Philadelphia quotes full quotations for all grades.

Foreign Hop Crops.

WASHINGTON HOP CROPS.—A report on the German and English hop crop, prepared by Consul-General Mason at Frankfort, has been received at the Department of State. The crop for this year in the German States is estimated at 48,300,000 pounds, about 1,500 000 pounds more than the crop of 1891, and 4,258 000 pounds less than the average yield of the past ten years. One-half is of high quality and a large portion of the remainder is fair. The English crop showed a total product of 40 000,000 to 42,000,000 pounds. This deficit brough to Germany a swarm of English buyers, who are purchasing heavily inferior grades of the new German crop Notwithstanding this, the market is nominal and steady.

Distrustful of Raisins.

NEW YORK, Oct. 24.—The market is dull; the distrust of the quality continues, based on our early samples. Faultless three-crown bags are quoted at 6½@7c; two-crown, 5½c; fair to prime boxes, loose, $1.75@2; layers, $2.25; all spot.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Oct.	Nov.	Dec.	Jan.	Feb.
Thursday	6s02 d	6s01 d	6s02½d	6s03 d	6s03½d
Friday	.....	.....	.....	.....	.....
Saturday	.....	.....	.....	.....	.....
Monday	6s00 d	6s00½d	6s01½d	6s02½d	6s03 d
Tuesday	5s11½d	5s11½d	6s00½d	6s01½d	6s02½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	33s6d	33s9 1	33s6d	Quiet.
Friday	....	....	....	
Saturday	33s	33s6d	33s	Steady.
Monday	33s	33s6d	33s	Slow.
Tuesday	33s	33s3d	33s	Quiet.

To-day's cablegram is as follows:

LIVERPOOL, Oct, 26.—Wheat, better tone. California spot lots, 6s 10½d: off coast, 3 s; just shipped, 33s 3d; nearly due. 33s; cargoes off coast, slow; on passage, very inactive; Mark Lane wheat, rather easier; French country markets, quieter; weather in England, frosty.

San Francisco.

WHEAT.

	Seller '92.	Buyer Oct.	Buyer Dec.	Buyer Jan.	May
Thursday, highest	133½	....	136	....	139⅝
" lowest	133	....	135½	....	139¼
Friday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Saturday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Monday, highest	....	....	135½	....	139½
" lowest	....	....	135¼	....	139⅜
Tuesday, highest	....	....	....	13?¼	139
" lowest	....	....	....	135	138⅞

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat, Buyer December, 100 tons, $1.35; 100, $1.34½; 1100, $1.34⅞. May, 100 tons, $1.38½; 200, $1.38⅝ per ctl. Regular.—Buyer December, 600 tons, $1.34½; 700 tons, $1 34⅝. Seller 1892, 200, $1.32½. January, 100 tons, $1 35; 3 0, $1.3o½. May, 100 tons, $1.38⅝; 300, $1.38½ per ctl. Afternoon.—Buyer December, 400 tons, $1.34⅛ per ctl.

BARLEY.

	Seller '92.	Buyer Oct.	Buyer Dec.	Buyer Jan.	May
Thursday, highest	....	....	90	89	....
" lowest	....	....	90	89	....
Friday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Saturday, highest	....	....	....	....	....
" lowest	....	....	....	....	....
Monday, highest	....	....	89	89½	....
" lowest	....	....	88⅝	89⅛	....
Tuesday, highest	....	....	91⅝	9 ½	....
" lowest	....	....	91	90¼	....

The following are to-day's recorded sales on Call:

Regular Session.—Barley, December, 100 tons, 90c. January, 500 tons, 90½c per ctl. Afternoon—May, 100 tons, 94⅜c; 200, 94¼c per ctl.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Oct	Nov.	Dec.	May.
Thursday	129⅓	129½	133	143½
Friday	....	....	....	....
Saturday	128¼	129½	131⅝	143
Monday	128⅛	129⅜	131⅜	143⅛
Tuesday	127⅛	128⅝	131	143⅛

The following is to-day's telegram:

NEW YORK, Oct. 26.—Wheat, 78½c for December, 80c for January and 85½c for May.

Chicago.

Day.	Oct.	Dec.	May
Thursday	....	....	....
Friday	....	....	....
Saturday	119⅝	123¼	131½
Monday	120	123⅝	132⅝
Tuesday	119½	123	132

The following is to-day's telegram:

CHICAGO, Oct. 26.—Wheat, 73⅝c for December and 79⅝c for May,

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Oct. 25, '92, were as follows:

Flour, qr. sks	162,60	Bran, sks	9,625
Wheat, ctls	257,634	Buckwheat "	....
Barley, "	34,694	Middlings "	2,851
Rye, "	....	Chicory, bbls	125
Oats, "	26,535	Hops, "	364
Corn, "	9,290	Wool, "	2,556
*Butter, "	552	Hay, ton	2,077
do bxs	703	Straw, "	54
do bbls	335	Wine, gals	226,170
do kegs	529	Brandy, "	27,370
do tubs	....	Raisins, bxs	8,182
do ½ bxs	25	Honey, cs	47
†Cheese, ctls	601	Peanuts, sks	45
do bxs	196	Walnuts "	48
Eggs, doz	16,500	Almonds "	282
do " Eastern	21,700	Mustard "	565
Beans, sks	33,516	Flax "	665
Potatoes, sks	30,443	Popcorn "	....
Onions, "	5,693	Broom corn, bbls	....

*Overl'd, — ctls. †Overland, — ctls.

Exports by Sea from San Francisco from July 1 to Oct. 19

	1892 93	1891 92
Wheat, ctls	3,462,311	5,078,666
Flour, bbls	408,528	366,521
Barley, ctls	675,492	448,215

Tonnage Movement.

From reliable advices up to Oct. 26, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	271,697	437,962	*154,8 3	99,157
San Diego	11,378	24,469	8,138	.....
San Pedro	4,9 5	5,954	.....	
Oregon	53,299	33,346	31,071	12,555
Puget Sound	22,794	25,843	.....	
Totals	366,003	527,294	194,102	111,712

*Engaged for wheat, 1892, 54,834; 1891, 90,372.

Cereals.

The London *Times*. in its last report on the English wheat crop, gave the average yield for each county for the past seven years, based on which the average yield for England, Scotland and Wales would be 24½ bushels per acre. This would make the total wheat crop of the United Kingdom 56,325,000 bushels, against 74,742,000 bushels. This crop would necessitate imports of at least 160,000,000 bushels, and possibly 170 000,000 bushels, but for the large stocks on hand at the beginning of the year.

Although the statements have been recently made that there were enormous supplies of wheat in south Russian markets, the statistics October 1st show small stocks on hand relatively, and reliable advices from Russia indicate that rye is selling for more at the interior than it is at the seaboard. The amount of wheat in sight is pressing on the market, but with the American crop 100,000,000 bushels less than last year, the increase in the amount in sight must be at the expense of the invisible supply. As a small crop cannot furnish larger receipts than a large crop without being more than correspondingly reduced, it is likely that toward the end of the season there will be a great falling off in receipts. Parallels drawn with the present condition show that in 1886 stocks were about the same, and from October to the following June, prices of wheat advanced 21 cents a bushel

The stocks of wheat in the principal continental markets of Europe amounted to 18 426.000 bushels, October 1st, against 16,212,000 bushels September 1st. Of this total, 1,272,000 bushels were at Antwerp, against 736,000 bushels; Havre, 1,544,000 bushels against 2,520 000 bushels; Dunkirk, 1,104,000 bushels against 1,288,000; Paris, 2,448.000 bushels against 2,320 000 bushels; Mannheim, 1,400 000 bushels against 2,000,000 bushels. The stocks in Russian ports were: t. Petersburg, 560,000 bushels against 536,000; Odessa, 2,800 000 bushels against 1 960,000; and Nikolaiev, 1,416,000 bushels against 560,000 bushels.

An item from St. Petersburg, dated October 2d, says that the rye crop in the northern provinces of Petersburg, Novgorod and Kever is about one third less than was expected. The quality of oats is fair, but the quantity is inferior. The new crops in the province of Kamenitz are in critical condition, owing to prolonged drought.

The local market to-day was steady for wheat. The offerings were light with sellers' views above those of buyers.

Barley was firm for bright grades with choice to giltedged wanted. Dark grades were steady under moderate offerings and a fair demand.

Corn was dull and heavy at the lower quotations. The stock here is in excess of the demand.

Oats were strong at the advance. Receipts do not appear to meet the requirements.

Rye was steady.

Feedstuff.

Ground feed met with a fair inquiry to-day. While dealers were disposed to meet sellers on ground or roll barley, they higgled over bran and cornmeal.

Hay was reported a shade easier to sell. The weak feeling was not due so much to the receipts as to large dealers and feeders wants being temporarily met, and a desire to watch the weather.

Vegetables.

The market is poorly supplied with gardentruck. The market was fairly steady. All kinds of roots were weak with some kinds quoted lower.

Onions were fairly firm. Sales were made of choice good keepers for shipping at 60 cts.

The receipts of potatoes were very heavy to-day, and as the demand was offish, lower prices had to be accepted to secure buyers.

Dairy Produce.

The butter market was demoralized to-day, with the general opinion that still lower prices will be seen before there is much stability. By the single box sales are made at times at a slight advance, but this depends on the buyer. We saw the same grade of butter sold to-day at 32 and 34 cents. The latter price was secured from a buyer who was anxious to get that brand, while the lower price had to be accepted to close out the consignment.

Cheese was slow but steady

Eggs were stronger to-day. Sales were quickly made at 42½ cts. for large sized selected, white, of strictly fresh laid, while in a small way 45 cents was realized. The entire line did better to-day.

Fruit.

Our review covers to-day's market for all kinds except wine grapes, which were steadier with a slight advance obtained for choice.

Dried fruit and raisins did not show any material change. There was some closing out to-day of "odd and end" consignments of different kinds of dried fruit by two commission houses. The remarks under review cover to-day's market.

Live Stock.

The market has moved along the past week in the usual groove. The tone appears to be slightly firmer, yet with free-selling offers, buyers become more reserved and bid slightly lower. This applies to all kinds.

Miscellaneous.

The receipts of eastern poultry the past week were quite free, and as they come graded and are usually larger-sized and in better condition, they go off quickly at an advance on Californian. The latter comes in mixed, and otherwise unattractive and not desirable, therefore they are hard to sell. To-day, the sidewalks were crowded with stock, which indicates a weak market.

Hops have held strong throughout the week, with the close pointing to still better prices for gilt-edged. English and eastern advices indicate that the supply of choice to gilt-edged is light, and for which buyers are in the market picking up all that can be secured at a slight advance on bids Growers in this State and also up north who have not sold are quite firm in their advanced views.

Wool is slow and accumulating, owing to receipts being in excess of the demand. Scourers, while running to full capacity, are not able to handle the receipts. A new scouring establishment will commence operations some time next month.

Beans are generally firm. Considerable river beans are said to have been damaged by the recent rains.

Wetmore Bros. received, this week, the first consignment of this year's crop of cranberries from Coos county, Oregon. They were shipped by McFarlin Bros. of Empire City.

Hams, bacon and lard are strong and higher.

(*Continued on next page.*)

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

OCTOBER 26, 1892.

BEANS AND PEAS.

Bayo, ctl	2 15 @ 2 25
Butter	2 50 @ 2 80
Pea	2 40 @ 2 65
Red	2 30 @ 2 50
Pink	2 20 @ 2 25
Small White	2 35 @ 2 60
Large White	2 25 @ 2 45
Lima	3 00 @ 3 15
Fld Peas, blk eye	1 60 @ —
Do green	2 20 @ —
Do Niles	1 40 @ —
Split	4 50 @ 5 50

BUTTER.

Cal., poor to fair, lb	15 @ —
Do g'd to choice	27½ @ 32½
Do Giltedged	— @ 34
Do Creamery	27½ @ 32½
Do do Giltedge	— @ 36
Eastern, lad e	17 @ 20
Cal. Pickled	21 @ 25
Cal. Keg	20 @ 24
East'rn Cr am'y	25 @ 29

CHEESE.

Cal. choice cream	9½ @ -
Do fair to good	8 @ —
Do Giltedged	— @ 11
Do Skim	5 @ 6½
Young America	— @ 12

EGGS.

Cal. "as is," doz	20 @ 20
Do shaky	16 @ —
Do candled	25 @ 30
Do choice	32½ @ 35
Do fresh laid	— @ 40
Do do s'ed white	— @ 45
Eastern "as is"	18 @ —
Do candled	22 @ 24
Do selected	— @ 26½

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.

Bran, ton	14 50@ 15 50
Feedmeal	26 00@ 27 00
Gr'd Barley	19 00@ 20 50
Middlings	22 00@ 25 00
Oil Coke Meal	— —@ 25 00
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00

HAY.

Wheat, per ton	8 50@ —
Do choice	— @ 13 50
Wheat and oats	8 00@ 12 50
Wild Oats	7 00@ 10 00
Cultivated do	6 00@ 9 00
Barley	5 50@ 8 50
Alfalfa	7 00@ 9 00
Clover	5 50@ 9 00
Straw, bale	30@ 50

GRAIN, ETC.

Barley, feed, ctl	75 @ — —
Do good	82½ @ — —
Do choice	85 @ — —
Do brewing	92½ @ — —
Do do choice	96½ @ — —
Do do Giltedge	1 00 @ — —
Do Chevalier	85 @ 1 10
Do do Giltedge	1 15 @ 1 25
Buckwheat	2 50 @ — —
Corn, white	1 20 @ 1 25
Yellow, large	1 07½ @ 1 11
Do small	1 12½ @ 1 15
Oats, milling	1 37½ @ — —
Feed, choice	1 35 @ — —
Do good	1 30 @ — —
Do fair	1 25 @ — —
Do common	1 17½ @ — —
Surprise	1 47½ @ — —
Black Cal	1 10 @ 1 25
Do Oregon	— @ — —
Gray	1 30 @ — —
Rye	1 12½ @ 1 17½
*Wheat, milling Gi tedged	1 35 @ — —
Do choice	1 33½ @ — —
Do fair to good	1 32½ @ — —
Shipping, choice	1 33½ @ — —
Do good	1 31½ @ — —
Do fair	1 28½ @ — —
Common	1 26½ @ — —
Sonora	1 25 @ 1 30

HOPS.

1892, fair	18 @ —
Good	20 @ —
Choice	21 @ —

FLOUR.

Extra, city mills	3 90 @ —
Do country m'ls	3 90 @ —
Superfine	2 50 @ 3 00

NUTS—JOBBING.

Walnuts, Cal. lb	8 @ —
Do choice	10 @ —
Do paper-shell	11 @ —
Almonds, soft sh'l	12 @ —
Paper shell	13½ @ —
Hard shell	6 @ —
Brazil	7½ @ —
Pecans, small	11 @ 13
Do large	14½ @ 16
Peanuts	3½ @ 4½
Filberts	11 @ —
Hickory	7 @ 8
Chestnuts	11½ @ 16

ONIONS.

Silverskin	40 @ 60

POTATOES.

River Reds	30 @ 40
Early Rose, ctl	35 @ 45
Peerless	40 @ 60
Garnet Chilies	40 @ 60
Burbank Seed's	35 @ 50
Do do Salinas	65 @ 1 00
Sweet	50 @ 1 00

Extra choice sell for more money

POULTRY.

Hens, doz	5 50 @ 7 50
Roosters, old	6 00 @ 7 00
Do young	5 00 @ 6 50
Broilers, small	3 00 @ 3 50
Do large	3 50 @ 4 00
Fryers	4 00 @ 4 50
Ducks	4 00 @ —
Do large	6 00 @ —
Do extra large	7 00 @ —
Geese, pair	1 50 @ 2 00
Turkeys, gobl'r	18 @ 20
Turkeys, hens	17 @ 19

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50

GAME

Quail, per doz	75 @ 1 25
Ducks	— @ —
Do Mal'd	4 00 @ 5 50
Do Sprig	2 25 @ 3 00
Do Teal	1 75 @ —
Do Widgeon	1 75 @ 2 00
Do small	1 00 @ 1 50
Geese	— @ —
Do gray	2 25 @ 3 00
Do White	1 25 @ 1 50
Do Brant	1 50 @ 1 75
Snipe	— @ —
Do English, doz	2 00 @ —
Do Jack, per doz	75 @ —
Hare, per doz	1 50 @ 1 75
Rabbits, large	1 25 @ 1 50
Do small	1 00 @ 1 25

PROVISIONS.

Cal. bacon, heavy, per lb	13 @ —
Medium	13 @ —
Light	14 @ —
Lard	8½ @ 12
Cal sm'k'd beef	11 @ —
Hams, Cal salt'd	13 @ —
Do Eastern	14 @ —

SEEDS.

Alfalfa	9 @ 11
Clover, Red	15 @ —
White	25 @ —
Flaxseed	2 25 @ —
Hemp	3½ @ 4
Mustard, yellow	5½ @ 6½
Do brown	4 @ —

WOOL.

FALL, 1892.

S Joaquin, plain	6½ @ 10
Do mountain	10 @ 12
Do lamb	8 @ 10
Northern Choice	14 @ —
Do Defective	11 @ —
Do Lamb	10 @ 14

HONEY—1892 CROP.

White comb, 2-lb frame	9½ @ 12½
Do do 1-lb frame	11½ @ 14½
White extracted	7½ @ —
Amber do	6½ @ —
Dark do	6½ @ —
Beeswax, lb	23 @ —

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¼ to 1c per lb.

APPLES—1892.

Sun-dried, ¼'s, com'on	2½ @ 3½
Do do prime	3½ @ 4
Do do choice	4 @ 4½
Do sliced, common	3½ @ 4
Do do prime	4 @ 4½
Do do choice	4½ @ 5½
Evap. bl., ri g, 50-lb. bx	8 @ 9

Fancy, higher.

APRICOTS—1892.

Sun-dried, unbl. com.	4½ @ 5½
Do do prime	6½ @ 8
Do do choice	9 @10
Do bleached, prime	12½ @—
Do do choice	13½ @—
Do do fancy	14½ @—
Evap choice, in boxes	15 @—
Do fancy, do	15½ @—

FIGS—1892.

Sun-dried, black	3½ @ 4
Do white	3 @—
Do do washed	— @—
Do do fancy	— @—
Do do pressed	— @—
Smyrna boxes	— @—
Do sacks	— @—

GRAPES 1892.

Sun-dried, stemless	3½ @—
Do unstemmed	1½ @ 2

NECTARINES—1892.

Red, sun-dried	8 @ 9
Do Evap., in boxes	— @—
White, sun-dried	9½ @11
Do evaporated	— @—

PEACHES—1892.

Sun-dried, unpeeled	7 @ 7½
Do do prime, bl'ched	10 @—
Do do choice, do	11 @—
Do do fancy	12 @ -
Sun-dr., pl'd, bl'ched	- @—
Do do prime	14 @
Do do choice	— @15
Do do fancy	— @16
Evap., peeled, in boxes choice	17½ @—
Do do fancy	20 @—

PEARS—1892.

Sun-dried, quarters	— @ 3
Do sliced	4 @ 5
Evap., slic'd, in b'xes	7 @ 8
Do ring do	9 @10
Unp'led, q'rt'd, bl'ch'd	10 @11

PLUMS—1892.

Pitted, sun-dried	10 @10½
Do evap. boxes, choice	— @—
Do do do fancy	— @ -
Unpitted	4 @ 5

PRUNES—1892.

Cal. French, ungraded	7½ @ 8
Do graded, 60 to 100	8½ @ 9
Do do 40 to 60	11 @12

Fancy sell for more money.

RAISINS—1892.

London Layers, cluster per box	1 90 @2 00
Do choicest do	1 60 @1 70
Do prime pr bx	1 40 @1 45
Loose Muscatels, common, pr bx	— @ —
Do choice do	1 25 @1 30
Do fancy do	— @ —
Unstem'd Muscatels in sks pr lb.	4 @ 5½
Stemmed do do	— @ —
Seedless do do	— @ -
Do do pr 20 lb. bx	— @ —
Sultanas, unbl. bxs	— @ —
Do bl'ched in bxs	- @ —

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manilla Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grapevine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manilla, 3 yarns, heavy	10½	Duplex Hop in balls, tar'd	9½
Pure Manilla, 3 & 4 yarns	12	Do, Grapevine, in balls or coils	10½
Do, 2 yarns, light	12½		

Wine.

Wine from bay counties, vintage of 1891, per gal., in cellar lots 12 @20

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

OCTOBER 26, 1892.

Limes, Mex	4 00 @ 4 50
Do Cal	— @ —
Lemons, box	5 00 @ 7 00
Do Sicily choice	8 00 @ 8 50
Strawberries, per chest—Sharpless	6 00 @ 9 00
Peaches, box	50 @ 1 50
Apples	20 @ 50
Do Choice	75 @ —
Do Extra choice	— @ —
Canteloupes, pr crate	— @ —
Nutmegs, ₱ box	25 @ 50
Grapes, pr bx—	
Do White	25 @ 40
Do Black	20 @ 40
Do Muscats	25 @ 50
Do Tokays	20 @ 60
Do Royal Isabel	1 00 @ 1 25
Do Cornichon	50 @ 65
Wine Grapes, Zinf'nd'l, pr tn.	— @16 00
Mission	10 00 @12 00
White	8 00 @12 00
Pears	25 @ 1 00
Quinces pr bx	75 @ 1 25
Beets, sk	— @ 50
Carrots, sk	30 @ 50
Okra, dry, lb	8 @ 10
Do green box	40 @ 65
Parsnips, ctl	1 00 @ 1 50
Peppers, dry, lb	7 @ 9
Do grn Chili, bx	40 @ 60
Do do Bells	40 @ 60
Turnips, ctl	50 @ —
Cabbage, 100 lbs	35 @ 50
Garlic, lb	2 @ 2½
Tomatoes	20 @ 60
String Beans, lb.	3 @ 4
Lima Beans	4 @ 4½
Cucumbers, box	50 @ 65
Do pickle ₱ lb	1 @ 2
Mushrooms	— @ —
Egg Plant, bx	25 @ 50
Marfat Squash, ₱ ton	5 00 @10 00
Cauliflower	50 @ 65
Celery	50 @ 75

Live Stock.

BEEF.		MUTTON.	
Stall fed	5½ @—	Wethers	6½ @—
Grass fed, extra	5½ @—	Ewes	6 @—
First quality	5 @—	Do Spring	7 @—
Second quality	4 @—	HOGS.	
Third quality	3 @—	Light, ₱ lb, cents	4½ @—
Bulls and thin Cows	2 @—	Medium	4½ @—
VEAL.		Heavy	4½ @—
Range, heavy	4½ @—	Soft	4 @—
Do light	5½ @—	Feeders	3½ @—
Dairy	6½ @—	Stock Hogs	3½ @—

Auction Sales of California Fruits.

At Chicago.

Oct. 19.—Five carloads: Kieffer Pears, $3.65 per box; Beurre d'Alencon Pears, $2 45 per box; Winter Nelis Pears, $2 35 per box; Vicar Pears, $2.15@2.20 per box; Easter Beurre Pears, $2@2.25 per box; Clapp's Favorite Pears, $3.60 per box; Tokay Grapes, double crates, $2.25@3.55; single crates Tokay Grapes, $1.25@1.55; some bad, 85c@1; single crates Muscat Grapes, $1@1.10; single crates Cornichon Grapes, $1.20; single crates Verdelle Grapes, $1.10; single crates Emperor Grapes, $1.05; Quinces, $1.25@1.30 per box.

Oct. 19.—Five carloads: Single crates Muscat Grapes, $1.@1.95; double crates Muscat Grapes, $2.20; Malaga Grapes, poor condition, 50@80c; single crates Cornichon Grapes, $1.25@1.50; double crates Cornichon grapes, $2.15@2 90; single crates Tokay Grapes, 70c@$1.35; double crates Tokay Grapes, $1 90@3.35; Peaches, $1.15@1 90; Plums, $2.20; Pears, $1.35@3; Bartlett Pears, in boxes, $3.15; Bartlett Pears, in crates, $1.40

Oct. 21.—Three carloads: Tokay Grapes, $1.25 per single crate; Emperor Grapes, $1.35 per single crate; Cornichon Grapes, $1.15 per single crate; Verdelle Grapes, $1.10 per single crate; Muscat Grapes, $1@1.10 per single crate; Glout Morceau Pears, $3 per box; Easter Beurre Pears, $2 per box; Winter Nelis Pears, $2 per box. Some damaged fruit sold for less.

Oct. 22.—Five carloads: Kieffer Pears, $3.55 per box; Beurre Clairgeau Pears, $3.35; P. Barry Pears, $2.95; Winter Nelis Pears, $2.35@2.40; Salway Peaches, $1.25@1.40; full crates Tokay Grapes, $2 85@3.35; half-crates Tokay Grapes, $1.30@1.60; full crates Muscat Grapes, $2.75; half-crates Muscat Grapes, $1.25.

Oct. 24—Four carloads: Winter Nelis Pears, per box, $2.40@2.60; half-boxes, $1.25; Beurre Clairgeau, $3.10; Beurre d'Anjou, $3; Vicar, $2.25; Pound, $1.55; Coe's Late Red Plums, $3.35; half-crates Tokay Grapes, $1.15@1.50; full crates Muscat, $2 25@2.55; half-crates, $1.05@1.15; Cornichon, $1.20@1.25; Malaga, 65c@$1.05; Cling Peaches, $1.40. It is raining hard.

Oct 25—Seven carloads: Double crates Tokay Grapes, $3 30@3.35; single crates, $1 35@1.50; double crates Muscat Grapes, $2.25@2 55; single crates, $1.10@1 15; single crates Malaga Grapes, 90c@$1; Quinces, $1.30 per box; Winter Nelis Pears, $2.35@2.60 per box; Pomegranates, 10-lb boxes, 75c. Some fruit arrived in a damaged condition and sold for less than the prices named.

Oct. 25.—Five carloads: Tokay Grapes, full crates, $3.20@3.50; half-crates. 85c@$1.55; Muscat, full crates, $2.90; half-crates, $1.10@1.55; Cornichon, single crates, $1.45@1 55; Peaches, $2.55; Beurre Diel Pears, $2 80@3.10.

At New York.

Oct. 19.—Three carloads: Tokay Grapes, fancy, double crates, $3.95@4.10; single crates, $2.15; double crates Tokay Grapes, $2.85@3 75; single crates Tokay Grapes, $1.25@1 85; single crates Cornichon Grapes, $1.75@2 05; single crates Black Morocco Grapes, $1.80; Winter Nelis Pears, $3.10@3.60 per box; Quinces, $1.85@2 per box; Coe's Late Red Plums, $2.30 per crate; Ickwith Plums, $1.15 per crate.

Oct 22—Four carloads: Double crates Tokay Grapes, fancy, $4.35@4.65; single crates Tokay Grapes, fancy, $2.25@2.35; double crates Tokay Grapes, $3.40@3 85; single crates Tokay Grapes, $1.85@2; Cornichon Grapes, single crates, $2.35; Winter Nelis Pears, $3.55.

Oct. 25.—Three carloads: Tokay Grapes, fancy, double crates, $4.75@5.20; single crates, $2.25@2.75; Cornichon Grapes, fancy, double crates, $4.65; single crates, $2.65; double crates Tokay Grapes, $3.75@4.15; single crates Tokay Grapes, $1.55@1.90; double crates Cornichon Grapes, $3.40@3.50; single crates Cornichon Grapes, $1.75@1.85; single crates Emperor Grapes, $1.45.

Oct. 25.—Two carloads: Pears, $2 25@3.75; Bilveri Peaches, $1.90@2 20; Clings, $1.75; Quinces, $1.70@2.60; Tokay Grapes, half-crates, $1.05@2.10; Muscat, 80c@$1 50; Emperor, $1.40@1.65; Ferrara, $1.25@1.50; Cornichon, $1.40@1.75.

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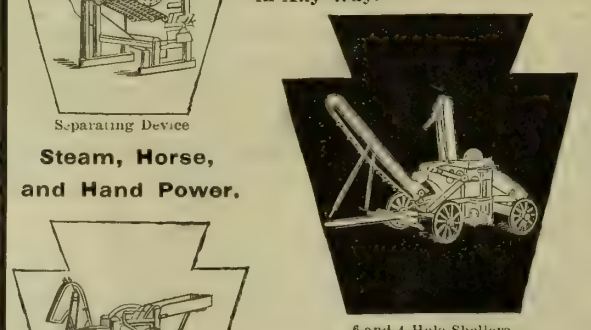
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State Game and Fish Laws.

In Effect May 17th, 1891, and Until Further Notice.

The Acts relative to game and fish, as amended by the last Legislature, are as follows:

Every person who, in the State of California, between the first day of March and the first day of October of each year, hunts, pursues, takes, kills, or destroys any quail, partridge, or grouse, or any kind of wild duck or rail, is guilty of a misdemeanor.

Every person who, in any of the counties of the State of California, at any time, takes, gathers or destroys the eggs of any quail, partridge, or grouse, or mallard duck, or any kind of summer duck, red head, teal, or any gray duck, or any other kind of wild duck, is guilty of a misdemeanor.

Every person who, in the State of California, between the first day of January and the first day of July in each year, hunts, pursues, takes, kills, or destroys doves, is guilty of a misdemeanor.

Every person who, in any of the counties of the State of California, hunts, pursues, takes, kills, or destroys any male deer, antelope, mountain sheep, or buck, for the period of two years from the date of the passage of this Act, is guilty of a misdemeanor.

Every person in the State of California who has in his possession any green hides or any green skins of any deer, elk, antelope, or mountain sheep, killed after the passage of this Act, and before the expiration of two years from the passage of this Act, is guilty of a misdemeanor.

Every person in the State of California who, at any time, hunts, pursues, kills, takes, or destroys any female deer, antelope, elk, mountain sheep, or doe, shall be guilty of a misdemeanor.

Every person who shall at any time hunt, pursue, take, kill, or destroy any spotted fawn, is guilty of a misdemeanor.

Every person who shall take, kill, or destroy any of the animals or birds mentioned in this section, at any time, unless the carcass of such animal or bird is used or preserved by the person taking or slaying it, or is sold for food, is guilty of a misdemeanor.

Every person who shall buy, sell, offer, or expose for sale, transport, or carry, or have in his possession, any deer or deer-skin, or any hide or pelt from which the evidence of sex has been removed, or any of the aforesaid game, at a time when it is unlawful to kill the same, as provided by this and subsequent sections, is guilty of a misdemeanor.

Every person who takes, catches or kills, or exposes for sale, or has in his possession, any speckled trout, brook or salmon trout, or any variety of trout, between the first day of November and the first day of April in the following year, except salmon trout taken with rod and line in tide water, is guilty of a misdemeanor.

Fishing for salmon, shad, etc., between six o'clock Saturday evening and sundown of succeeding Sunday prohibited.

Fishing by explosives, or by pound, weir, cage, trap or set net, prohibited.

Hollister Fair.

The San Benito Agricultural Association recently held a fair at Hollister, the county-seat of that county. It was in many respects one of the most attractive and meritorious of the fairs held in this State this year. The exhibition of horses and cattle, including livestock of all kinds, was quite extensive, and the display of vegetables, fruit and products in the pavilion was the best in quality that our reporter has seen this year. Bonnie Brae Farm, owned by Messrs. Cunningham, Curtiss & Welch of this city, of which Mr. J. L. Scholefield is the efficient manager, made an exhibit of squashes, beets, pears and apples that it would be hard to duplicate in any portion of this State. The exuberant growth may be shown when 90 pears filed a box. Squashes taking in 20 or more made an average weight of 160 pounds, some weighing as high as 173 pounds. Mr. Donovan made an exhibit of apples that would make a rival at the World's Fair of anything on the American continent.

Mr. Isaac Thexton of Paicines exhibited common beets that weighed 75 pounds each. This beautiful, picturesque and fertile section is the head of the great Santa Clara valley and is divided up into small farms as compared with other portions of the State, and there is an evident prosperity and thrift in and around this section of country that is seldom found in any portion of the Pacific coast.

We noticed that one of the large ranches known as the "Riverside" had recently been surveyed and placed in the hands of Mr. Thomas McMahon for fruit orchards. On the last day of the fair one or two of these tracts were sold to parties who were making this section their homes. Our reporter was much pleased with the surroundings of this section, and intends to make a more extended description of this attractive portion of California within the next two months.

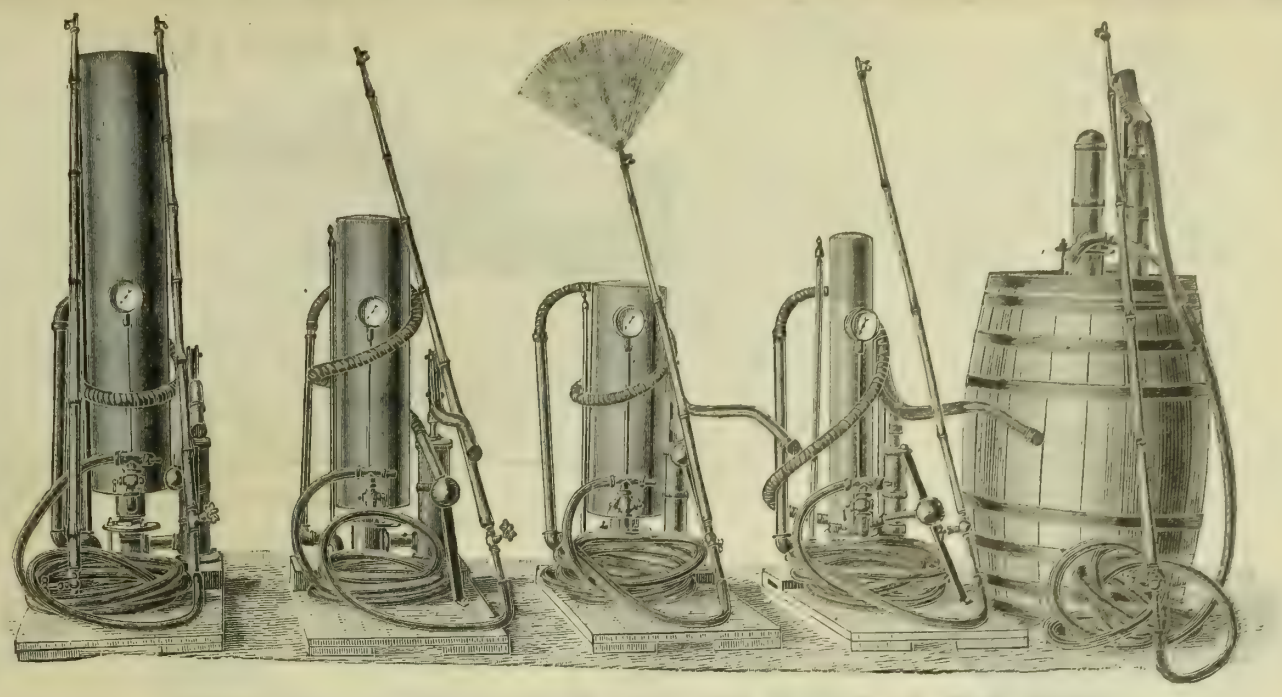
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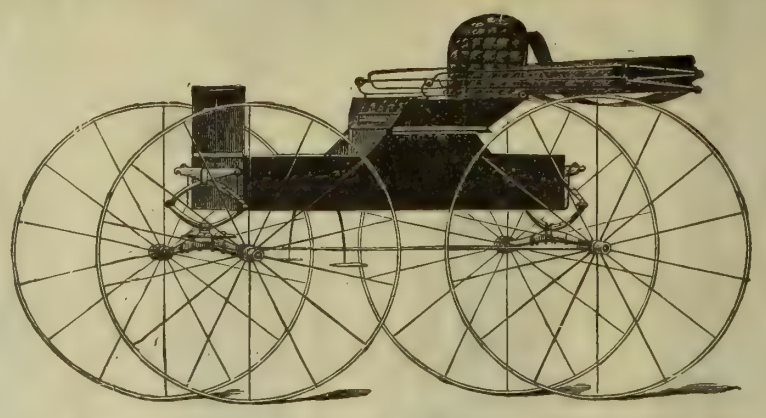
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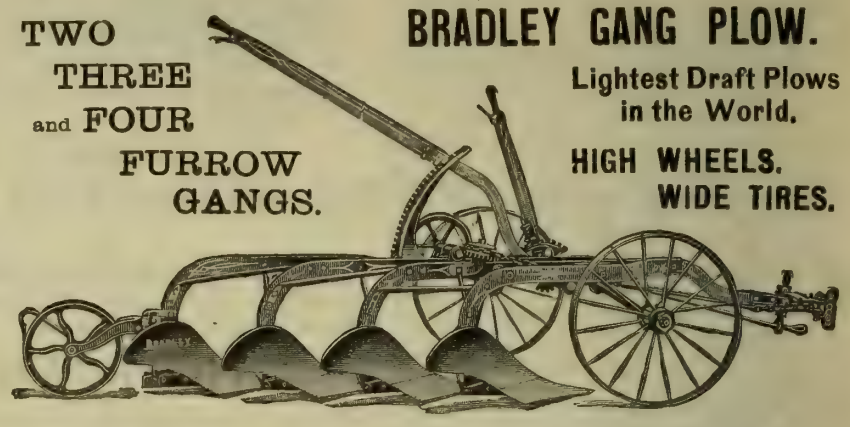
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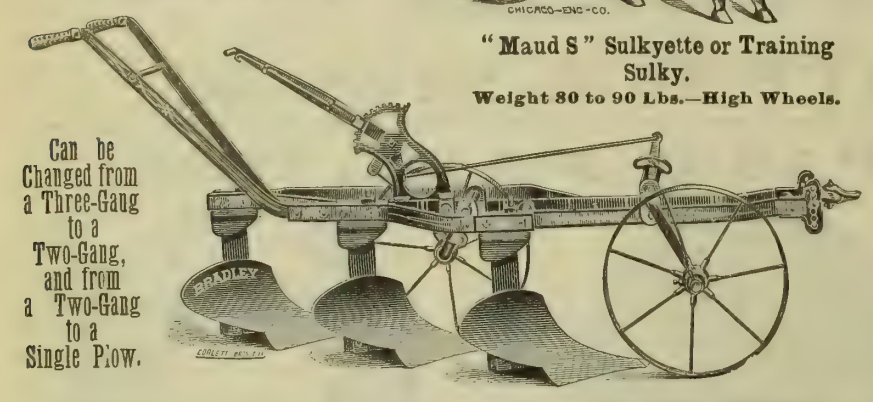
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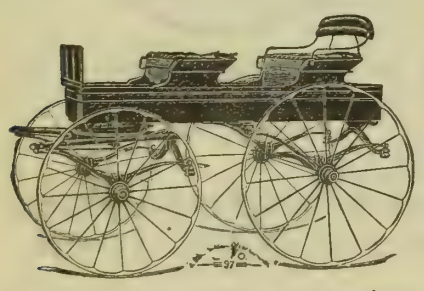
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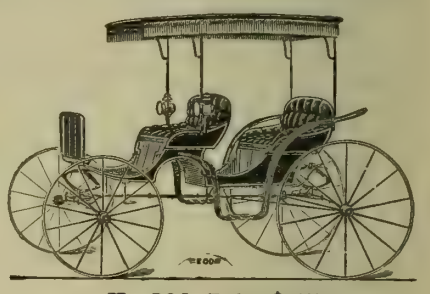
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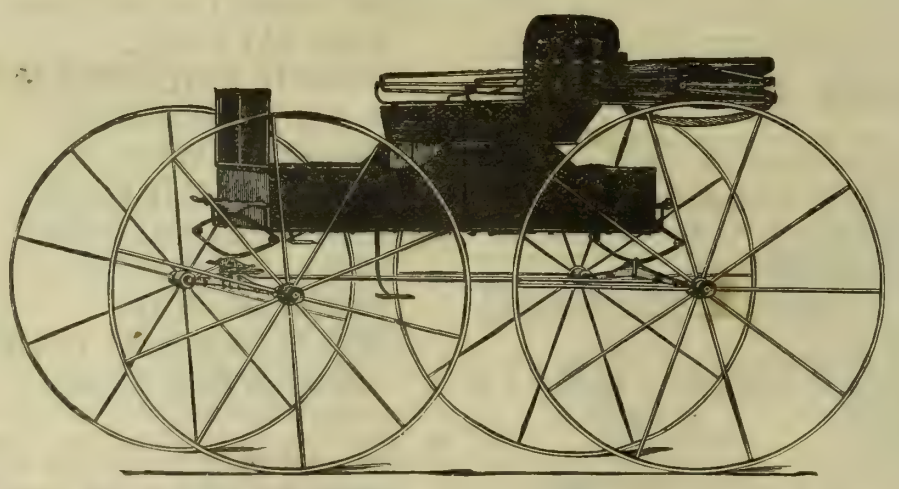


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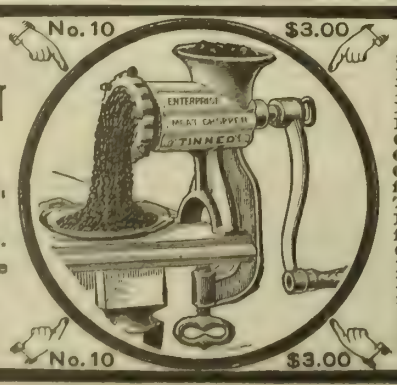
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PACIFIC RURAL PRESS

Vol. XLIV. No. 19. SAN FRANCISCO, SATURDAY, NOVEMBER 5, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

The Late Mrs. Harrison.

The portrait of the late Mrs. Harrison given on this page is a reproduction of a photograph taken in this city during her visit with the President in April of last year. There was nothing in Mrs. Harrison's appearance at that time to indicate failing vital strength, and no one whose privilege it was to meet her during that visit would have imagined that consumption would ever have claimed her as a victim.

Mrs. Harrison was a native of Ohio, the daughter of Prof. Scott, who was teacher of chemistry of Miami University at Oxford, Ohio, from which Mr. Harrison graduated in 1852 at the age of 18. Young Harrison's college career was exceedingly successful, for he captured not only a diploma, but the heart of the professor's daughter, whom he married just before he attained his majority. Of Mrs. Harrison's career the very best that can be said is that its only memorials are left in her own home. She faithfully fulfilled all the duties of wife and mother, and in the exceptional social eminence to which she was called by the accident of her husband's political life, she bore a dignified womanly part. Such women as Mrs. Harrison are found in every community, and they are always the very best element in it. They combine, as she combined, intelligence, character and good works, and have less regard for the frivolities of society than for the more wholesome interests of life. They form, in fact, the very best development of American civilization.



THE LATE MRS. HARRISON.

SHEEP ON FARMS.—We have often alluded to the fact that ere long we should be growing many sheep on farms instead of ranging sheep, as was formerly practiced in this State. The idea has taken possession of many people, and the inquiry for improved mutton breeds of sheep for the production of early lambs for market shows that we are making some progress in a very desirable direction. There have been several importations of late, but one just made by E. J. Baldwin, of Los Angeles county, seems to create considerable interest, as indicating what a shrewd business man thinks of the outlook. Mr. Baldwin returned to California from the East last week with his racehorses, and brought back with him from the East six ewes and two rams of the Shropshire breed of sheep. He says the sheepmen of California have always bred for wool, making mutton an entirely secondary consideration; that all sheep-ranges in the foothills will soon be taken up for orchards and vineyards, so that the day is not far ahead when men will have to breed mutton for the market, feeding the animals in corrals on alfalfa-hay and Egyptian corn. Every farm will then have from 60 to 100 sheep, as in Indiana and Ohio to-day. The bucks brought back by Mr. Baldwin weigh 228 and 196 pounds, respectively, and the ewes are proportionately heavy.

A FRUIT DRIER CONTEST.—In the Circuit Court of Appeals last week the case of John W. Cassidy *vs.* Hunt Brothers, for infringement of a patent on a fruit-drying apparatus, was decided in favor of the defendants, the judgment of the lower court being reversed. The reason assigned was that the evidence in the former trial was of such a nature as not to give the jury the means of arriving at any more than nominal damages. The lower Court gave $1350 damages.

STOCK CATALOGUES AT FAIRS.—Our State Fair correspondent this year alluded very forcibly to a matter to which we notice the *Breeders' Gazette* calls general attention. It is the importance of requiring exhibitors of stock at fairs to make their entries and furnish particulars early enough to permit the society to issue a catalogue that will furnish the necessary information to a visitor who comes to make a study of the stock. When shown in the ring, the stock should be numbered to correspond with catalogue numbers. All competing stock should be located in neighboring stalls. This system has been approved and its advantages recognized where it has been tried. Some effort should certainly be made to bring order out of the confusion now prevailing.

THE BEET-SUGAR OUTPUT AT CHINO.—In our issue of Oct. 22d we gave an account of the main part of the season's run at the Chino sugarie. The season actually closed Oct. 29th, having been in operation since July 1st. Nearly 28,000 tons of beets were worked up, for which the factory paid the farmers $112,000. The total output of crude sugar was 7,903,541 pounds, on which the Government gives a bounty of nearly $150,000. Over 500 hands were employed in the factory and beet fields, and $150,000 was paid out in wages. The beets have shown a remarkably high per cent of sugar, some lots running 22 per cent and bringing $6 a ton. Chino has 228 voters registered, while two years ago she polled 44.

The Fruit-Growers' Convention.

Our readers should arrange to attend the Fruit-Growers' Convention, to which reference has been previously made in the RURAL. The sessions will be held in Turn Verein Hall, San Jose, Nov. 15th to 18th inclusive. They will open each morning at 9:30, adjourn from 12 to 1:30, and open the evening session at 7:30.

On the opening day, in addition to introductory business including an address from President Ellwood Cooper, the important subjects of Co-operation among Fruit Growers, The Establishment of a Fruit Exchange, Auction Sales, Distribution and Management of Sales in Eastern Markets, Transportation Facilities and Rates, and Varieties of Fruit Demanded in Market, will be fully discussed.

On Wednesday the leading subjects will relate to practical culture, selection, grading and care of fruit; thinning, gathering, processing, etc.

On Thursday, Pests and Diseases, Remedies, Formulas and Time for Applying, also Quarantine against Foreign Pests and Diseases, will be leading themes, followed by discussions on Roads and Highways; Pruning; Cultivation; Fertilizing and Irrigation. On Thursday evening, Forestry and Flower Culture will be discussed, and the advantage of issuing an abridgement of horticultural literature of California from 1885 to 1891 inclusive will be considered.

On Friday, Legislation Necessary to Develop Horticulture, The Prevention of Fruit Depredations, The Columbian World's Fair Exposition, will occupy the leading hours; afterward there will be reports of committees and closing business.

The general plan is to allow fifteen minutes for reading of each essay. Such papers must be handed to the executive committee for revision or amendment before presentation. The discussion of important subjects will be favored, and as much time as possible devoted thereto.

PRIVATE CARS.—Anticipating the discussion at the Fruitgrowers' Convention of the question of using private cars for fruit transportation, the following statement, from the *Breeders' Gazette* of Oct. 19th, becomes pertinent: By the use of private refrigerator cars, the dressed-beef monopoly extended the industry so as to control producer and local butcher. It was a long time before the public learned what rebates were given to shippers using their own cars. The Chicago, Milwaukee & St. Paul R. R. began last fall to refuse shipments at current rates in private cars, as it owned nearly enough improved cars for its traffic. Several other roads have given private car companies to understand that it was best to discontinue. It was formerly a custom to rebate one cent per mile both ways, and thus private companies could contract with shippers, and divert traffic by allowing their customers a part of the rebate. The *Gazette* thinks it will take longer to displace refrigerator cars, but that it is only a question of time when private cars will be abolished on all American roads.

SEMITROPICALS.—It is announced from southern California that the prospects for a large orange crop of good quality are growing better. The lemon crop will be rather short, and the olive crop will not be very large. The olive yield seems to be very small this year in all regions we have thus far heard from.

PACIFIC RURAL PRESS.

BY THE DEWEY PUBLISHING CO.

Office, 220 Market St.; Elevator, 12 Front St., San Francisco., Cal.

ANNUAL SUBSCRIPTION RATE THREE DOLLARS a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Half inch (1 square	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

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Registered at S. F. Post Office as second-class mail matter.

ANY subscriber sending an inquiry on any subject to the RURAL PRESS, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, November 5, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

See Advertising Columns.

Peach Pits Wanted—Box 91, Templeton, Cal.
Shire Stallion for Sale—J. I. Parsons, Santa Rosa.
Harrows—Deere Implement Co.
Spray Pumps—Baker & Hamilton.
Wagons and Harrows—Allison & Neff.
Sale of Thoroughbreds—L. U. Shippee, Oakland Trotting Park.
Shire Horses—Parsons & Griffith, Geyserville, Cal.

The Week.

The glorious chrysanthemums are serving as a very grateful counter-attraction during the last week of a very noisy, confused and disagreeable political campaign in this city. The general campaign has been quiet and dignified, and the issues not of an inflammatory nature; but San Francisco has wrought up so much local excitement that the interests of national politics are but little thought of. Just as this local turmoil is in its last throes, the State Floral Society throws open the doors of the great pavilion of the Mechanics' Institute and invites the people to behold that peace and quiet and loveliness have not wholly gone from us.

It seems to be the general conclusion of those who have traveled that the two great flower shows of 1892 in this city are in some respects beyond even the greatest displays of the older centers of population. We have not here the almost priceless collections of Eastern and European millionaire plant-lovers, nor have we commercial establishments or Government establishments like distant States and countries.

The points in which excellence is conceded to us by those who have seen all countries and their flower and plant exhibitions are those secured through the unceasing benefits conferred by our inestimable horticultural ally, the California climate. The magnificence of our roses, our chrysanthemums, and the hosts of other plants which require no gold but California sunshine, and no care save that which the appreciative tyro can speedily acquire, is an item of our resources which cannot be taken from us and which distant regions cannot purchase.

The chrysanthemums in the Mechanics' pavilion this week are probably superior to any ever shown under Caucasian auspices; whether the Asiatic devotees of the flower in their own lands do better we do not know. The immensity of the bloom probably first strikes the beholder. We would not like to say there are blooms a foot in diameter nor would be willing to accept much smaller measurement. The indescribable variety of form, of color, of texture—these are but fitting companions for the astonishing dimensions; and these are attained to wonderful perfection in the open air and by acres in extent. Our fruits bespeak our climate, our wildflowers declare every degree of sun and shade and every quality of soil, but there are other people to whom cultivated bloom appeals unresistingly, and to these the achievements of California gardening are the greatest of California's blessings.

The Great Sunset Irrigation District.

Between the San Joaquin river and the Coast Range is a great body of land nearly level, but gently sloping to the northeast, that produces immense crops in the few years of excessive moisture, but is very uncertain as a rule. Streams coming from the Coast Range are a poor dependence for irrigation, and as the Lord "tempers the wind to the shorn lamb," so he has provided a natural elevation or "backbone" some eighteen feet higher than the level of the valley, and crossing it in a line running nearly west from Fresno.

Enterprising promoters have secured a thorough investigation and survey by Herman Schussler, C. E. of the Spring Valley Water Works, one of the most eminent hydraulic engineers in America, who pronounces unreservedly in its favor. They have also organized under the Wright law a district now comprising over three hundred thousand acres, have issued bonds amounting to two millions of dollars, have had the validity of their acts settled by a decree of court, and have found a firm of London bankers who will take the whole amount at 90 per cent of their face value as soon as the contracts are let to responsible parties.

They have purchased from owners of water privileges three thousand cubic feet per second of the waters of King's river, which they propose to carry along this backbone to a reservoir on the west side and distribute to consumers by three main canals.

The inducting canal will carry three thousand cubic feet per second, or one hundred and fifty thousand miners' inches, along this "back-bone" to the reservoir covering three square miles near the center of the valley. From this reservoir there is one gravity canal which is to supply two hundred thousand acres of the valley, and also one canal running to the higher land on the north side and another on the south that are to supply sixty thousand acres and forty-eight thousand acres respectively by a pumping plant. One of these raises the water twenty feet and the other forty. It is estimated that water can be supplied by the gravity canal at an annual cost of eighty cents per acre, and by the pumping plants at one dollar and twenty cents per acre.

Three responsible and experienced firms propose to compete for the work when the contract is let, some of whom think it can be completed in about four months.

This land is now valued by the county assessor at one dollar per acre, and by the assessor of the irrigation district at five dollars. If prospect of water increases values in this ratio, we may expect its realization to fulfill the idea of the Fresno dealer who claimed that water added *all* to the value of their land.

There was a lively debate at Selma last Saturday representing the extreme views on both sides that we almost always hear expressed of a new country. From them we gleaned that the soil is composed of lime, magnesia and vegetable matter washed down from the Coast Range.

In boring wells, logs have been struck at all depths up to five hundred feet, showing that the deposit is very thick. Instances were also related where good vegetation grew upon soil that came from the bottom of deep wells, after exposure to the air.

The common *theory* was that it would be almost impossible to saturate soil of such depth, and *experience* has been that it takes less than half the water required by sandy soils for irrigation, and that it produces as high as twenty-four sacks of grain per acre when well cultivated and irrigated.

In many places where wells depend upon surface water they fail altogether, or the waters are of such poor quality as to have created a strong prejudice that accounts for the low values placed on the lands. Artesian water is sometimes impregnated with mineral, and disagreeable at first to some tastes. People soon get used to it and the effect is highly beneficial to most systems.

Supposing that the parties who gave such contradictory accounts of the value of the land are all sincere, it follows that different tracts vary greatly in fertility, and in some places show a phenomenal growth of dense weeds as high as twenty feet, and alfileria so thick that sheep cannot be driven through.

Perhaps crops may be grown to which the winds will be an advantage. For instance, it is reported that raisins are cured and out of the way of the rains long before the grapes are ripe in the more humid climate on the East Side. The wind will certainly be useful in raising water from the deep wells and act as a preventive of malaria. What some consider an insurmountable obstacle to success others may convert into an essential element of progress.

With suitable means and energy and wise adaptation of enterprises to conditions, it may fairly be hoped that those opinions may be confirmed which rest upon the conviction that the Sunset district covers one of the finest and largest tracts of irrigable land in California.

From an Independent Standpoint.

The Presidential campaign, now in its closing days, has been the dullest since the reign of party politics in the United States. Many causes have combined to this end but, beyond question, chief among these causes is the growing independence of individual voters. Neither of the leading parties commands that absolute and enthusiastic devotion from its members which characterized the politics of former years. The passion is going out of politics as the issues of the war become memories and leave for the consideration of voters only questions of economic policy. There is nothing in the tariff question or in any of the other alleged issues of the present campaign to arouse sentimental interest or devotion, and the public has naturally declined to "enthuse" concerning them.

Furthermore, the public mind is thoroughly infected with distrust of the parties as they now stand before the public, and not without reason. One does not need to be a close student of the political situation to see that both the Republican and Democratic parties have been utterly wanting in moral courage in the campaign. Neither has had the nerve to take up the real questions that fill the public mind at this time. The currency question, the differences between employer and employed, the immigration question, the question of public ownership of railroads and telegraphs—these are the real issues of the time, but they have scarcely been mentioned in the campaign because neither party is brave enough to take positive ground or any ground at all concerning them. It would seem, as we look back upon the past few months, that the leaders had come to a truce upon these real and vital issues, and had determined to contest the election on grounds already well-worked and upon which each might with tolerable certainty reckon its positive strength.

That this is not the sort of politics the people of the United States demand at this time is shown by the abandonment of the old parties by great numbers of voters and by their adherence to the new Populist party which, though loaded down with extravagant and impracticable propositions, still commands attention and respect through the courage and energy with which it seeks to take up the new and vital issues of the time. It is impossible for one who looks at public affairs as the RURAL does, to join with this new party, because in the ardor of its youth and inexperience, it has espoused projects which would revolutionize the Government; but there is in this new movement, with all its heat and intemperance, the germs of a political party which will one day command approval from the country at large, and through this approval gain control of the Government. It will not probably be the People's party as now organized, but it will be a party founded like the People's party upon living issues, supported like the People's party by men of conviction and courage, and leading, as the People's party proposes, to substantial reforms in the Government.

Nothing can be less certain than the outcome of next Tuesday's election. The margins of Republican strength in the doubtful States of Indiana, New York, Connecticut and New Jersey are so small that no man is justified in saying that they may not be overcome; while the result in States like Nevada, Kansas, Montana, Washington and Oregon, where the Populist movement is strong, is beyond the foreknowledge of any political critic. The RURAL hazards a prediction that Mr. Harrison will win, not so much upon definite considerations, as upon the general tendencies of politics as illustrated by results in past years. But whether Mr. Harrison or Mr. Cleveland shall win, will make comparatively little difference to the country, since in the one case there will be the restraining element in the Government of an opposing House of Representatives, and in the other an opposing Senate. It is practically certain, in any event, that we shall have, during the coming four years, as we have had so often in the past, a Government practically divided brtween the two parties, and therefore held down to the routine business of administration, rather than the carrying out of new or radical policies. It is, perhaps, just as well that this is so, for it will give the country time to study the new issues outlined above, and which are bound to press their way to the front within the next four years.

There are many points of resemblance between a State Constitution and a house. Nobody ever yet built a house exactly to suit, and no State ever yet made a Constitution which in all its details perfectly answered the purposes in view at the time of its making. But because a house is not in all its features precisely what he would have it, no wise builder tears it down; rather he adds a wing here, knocks out a partition there, alters the slope of the roof and thus by gradual and easy processes adapt it to his uses. And so with a State Constitution. A wise community recognizing its faults will seek rather to amend them than

to throw the whole instrument over and begin anew. A State Constitution cannot in the nature of things be a ready-made, perfect fit; it must be an evolution developed by time and experience. With all its faults the California Constitution has one conspicuous merit, namely, it provides an easy way for the correction of its own demerits; and affords a good foundation for future constructive efforts. In the coming election the people will be called upon to decide for or against five propositions for its amendment. The first of these suggested amendments (which will appear on the ticket as "Senate Constitutional Amendment No. 10") proposes to extend the Legislative period from 60 to 100 days, or from two months to three and a half months. Just what the motive back of this proposition is we are unable to find out, but we suspect that it originated in the minds of certain boodle members of the Legislature who would like to extend their harvest season. There is absolutely no argument in favor of this proposition as it relates to the public at large. It would add a good many thousands of dollars to the cost of the biennial sessions of the Legislature, and we fail to see that it could result in any benefit to the public. There is no merit in the proposition and we trust that the people will have the good sense to vote it down by an overwhelming majority.

The next proposition (named on the ticket as "Assembly Constitutional Amendment No. 7") proposes to extend the period for which bonds may be issued by cities, counties, etc., in this State from 20 to 40 years. The amendment makes no other change in the provision (Section 18, Article II) which requires the assent of two-thirds of the voters of any city, town, school district, etc., before bonds may be legally issued. The motive for the amendment is found in the necessity of the irrigation districts, organized under the Wright law, to make their bonds cover a longer period than 20 years, which is now the constitutional limit. It has been found practically impossible to float bonds in very large sums within this limit of time, and the proposition to extend it seems a reasonable one under the circumstances. It is indeed an absolute necessity for the irrigationists, in connection with the great district schemes now projected in the southern portion of the State. There is no way to grant the irrigationists what seems to be an entirely proper demand without granting the same privilege to cities, counties, school districts, etc., and we see no reason why the amendment should not command the approving vote of citizens of the State.

The third proposed amendment makes changes in Sections 15 and 19 of Article V of the Constitution, which prescribes the duties of public officers and fixes the rates of their compensation. In brief, this proposition is to add to the duties and also to establish the salary of the Lieutenant-Governor. Under existing law the duties of Lieutenant-Governor are very simple. He is to preside over the deliberations of the Senate during legislative sessions, and is to succeed to the duties of the Governor in case of the death or disability of that officer. The proposition is to make him a sort of Inspector General of asylums, penitentiaries and State institutions, authorized to examine and report concerning them, and to increase his pay from the mere per diem which he now receives during sessions of the Legislature to an annual salary of $4000. If there is any reason for this act other than to create another "sop" to be handed out every four years to some politician, the RURAL fails to see it. There is no need for an Inspector General or an Inquisitor General for State institutions, and if there were, the duty could be much better performed by a committee of the Legislature or by some non-partisan board than by such politicians as usually fill the office of Lieutenant-Governor. Against the proposition to add $4000 a year to the current expenses of the State there is decided and legitimate objection. We trust the proposed amendment will be beaten.

Number 4 of these proposed amendments is one which we are glad to be able to approve. It proposes to amend Section 34 of Article 4 of the Constitution, which provides that no bill for the appropriation of State money shall contain more than one item, by excepting the General Appropriation bill and the General Deficiency bill. This is proper enough. It will save a good deal of legislative red tape and it ought to be adopted. This amendment will be named on the ballot as "Assembly Constitutional Amendment No. 4."

Amendment No. 5 proposes to allow cities containing 3500 inhabitants to make their own charters, whereas now the requirement as to population is 100,000. This merely gives to the smaller cities of the State the same rights with reference to their charters now enjoyed by San Francisco. This amendment ought to carry.

In addition to these three amendments, the voters of the State are invited, at the coming election, to express their opinion on three propositions, namely; (1st), for or against a proposition to elect Senators of the United States by popular vote; (2d) for or against a proposition to require every voter to be able to read and write his name and to read any section of the Constitution in the English language; and (3d) for or against a proposition to authorize the issue of State bonds in the sum of $600,000 for the construction of a Union Railroad depot on the State property at the foot of Market street in San Francisco. Concerning the first and second of these propositions, there will, we imagine, be small contention. Under existing law, the United States Senate is rapidly becoming a "club of millionaires." It is time that it were brought under the discipline of popular election. We do not have to go from our own State to witness pretensions respecting membership to the Senate by men who would not dare to submit their names to the people. Regarding the second proposition, the RURAL is not among those who imagine the illiterate vote to be the most dangerous element in our system of popular suffrage. But it is one of the dangerous elements, and the policy of eliminating it is unquestionably a wise one. For this proposition, as for that calling for the election of Senators by popular vote, there should be, and no doubt will be, practically, unanimous approval on the part of the voters of California.

The third proposition, to authorize an issue of bonds for the construction of a Union Depot at San Francisco on land owned by the State, seems to be the subject of general misunderstanding. The journals which make a business of fighting for or against the Southern Pacific railroad have succeeded in confusing the public mind concerning this proposition; on one hand asserting that the railroad has nothing to do with the proposition, on the other that the bond measure is a bare-faced railroad scheme or robbery. As usual, the truth lies between the extremes, the depot project being in fact a matter in which the Railroad Company and the State have interests in common. The relation as connected with this project is that of landlord and tenant of the property at the foot of Market street. The property belongs to the State and is rented to the Railroad Company for $4750 per month. Now the Southern Pacific wants a better depot, and it asks its landlord, the State, to provide it. If the State will, in its capacity of landlord, make the desired improvement, the railroad, in its capacity of tenant, asserts its willingness to pay a reasonably increased rental.

It is upon this proposition that the bond measure rests. The Harbor Front Commission, which is the State's organ of administration of its water front property, wants to make the improvement, but they have not the money in hand to do it, and they ask the privilege of raising the necessary funds by the issue of bonds bearing four per cent per annum, payable in 20 years from funds arising, *not from general taxation, but from harbor charges of San Francisco.* The Commissioners urge that if they can have the money in a lump sum they can do the work of construction better and cheaper than if they are compelled to carry it along by the method of piece meal. They urge, further, that there will be sound economy in getting the job done promptly, so that the property may bring in its revenues from rentals. Here, in brief, is the purely business aspect of the matter. We believe that a Union Depot would be a good business scheme for the State in its capacity of landlord, and that the Harbor Commissioners are right in their claim that it is better policy to borrow the necessary funds at four per cent than to undertake to build the depot little by little and taking ten years to do it.

But there is another consideration in that the depot project is related to the convenience, comfort and safety of nearly every person who comes to or goes from San Francisco. The present condition at the foot of Market Street is a constant menace to life and limb, not to mention weak nerves or considerations of personal comfort. Whoever lands at the foot of Market Street or departs therefrom, must run a gantlet that is always unpleasant and usually dangerous. It is objected to this depot project that in other cities railroad companies build their own station houses, but this objection loses sight of the essential fact that in no other city has the State the peculiar advantage of owning absolutely the only property available for depot purposes. Under the law of California, the water front property can neither be sold to private parties nor leased for any extended period. It must be rented by the month. Manifestly, under these conditions, the railroad company cannot do for itself what railroads do for themselves elsewhere. There must either be no depot at the foot of Market Street or the State must build one. The business proposition, from the State's point of view, is a good one, and the only objection to it is the danger that the Harbor Commission, which will have the spending of the money and the administration of the property when completed, may be corrupted in the interest of the railroad company. Of course, there is involved in this project, the risk which must always attach to large schemes of public expenditure and administration, but that risk does not prevent us from building State capitols and public institutions in general, and it ought not to stand in the way of a public improvement, demanded alike by the requirements of business. Surely the State ought to handle its property with business prudence equal to that of an ordinary landlord. We have tried to look at this matter in all its lights, and we believe that the best interests of the State and of the public will be promoted by assisting a great project which is really not only in the financial interest of the State, but for the comfort and safety of great numbers of citizens.

In connection with this depot proposition it is an interesting fact that at the San Francisco water-front, if no where else, the State manages to get just returns from the Southern Pacific Company. That company now pays, as stated above, $4750 per month for the ferry-houses at the foot of Market street. For this accommodation and for smaller stations at the foot of Lombard and Second streets it pays a total of $8050 per month, or $96,600 per annum. If the other tolls to which it is subjected at the city-front be added, its total contribution to the revenues of the State through the Harbor Commission is $12,550 per month, or $150,600 per annum. Really it is not surprising that the Southern Pacific Railroad wants for its money some better accommodations than the ramshackle ferry-house now provided; and since it stands ready to pay a reasonably increased rental for improved facilities, we see no reason why the State in its capacity of landlord should not grant its demands, especially since these demands are combined with the necessities of the traveling public. It should be borne in mind that the Harbor Commission, whose members are State officers, has the right to adjust rentals on the city-front in behalf of the State at any time; and that the railroad company will be compelled to pay whatever rates the Commission may impose.

Legislation and Transportation Rates

SAN FRANCISCO, CAL., Oct. 28, 1892.

TO THE EDITOR:—I hope the farmers of this State will not forget that they have the power to elect the majority of the members of the legislature, and should they fail to select the right men, they will be largely to blame. With honest and intelligent law-makers, who do not belong to the railroads or other monopolies, much may be done toward relieving this State from its present comatose business condition.

In looking over the railroad rates on grain from the interior to this city, I find them to average $2.52 per ton per mile, while the rates from the Mississippi river to the Atlantic seaports are only about one-half of a cent, or one-fifth as much as is charged here. The charges here on other freight are much higher yet, and it is no wonder that immigration comes slowly.

The freight on grain from San Jose to this city is $1.75 per ton; and calling it 50 miles, is just 3½ cents per ton per mile, or seven times as much as the eastern charges, although the road is nearly level. This is the highest charge on grain that I know of in this State; but as the people of Santa Clara county are considering the matter of building a monument to ex-Governor Stanford, this may account for it.

Now, railroads are very necessary and of great importance, as connected with the prosperity of the State, and should be encouraged when within their legitimate sphere and scrutinized very closely when they leave it and interfere with matters outside of their calling.

It is no doubt very important, considering the extortionate rates that are now charged for transportation, that something should be done as quickly as possible, and the question seems to be as to the plan. Competitive railroads would no doubt be the best method, but they require time and much money. The next is water. We have navigable streams, sloughs and bays that were in use before the days of the railroads, and we have them yet. They were once alive with water craft, and would be yet were it not that they were either bought off or run off by the railroad monopoly.

We have to-day an illustration of what can be done in the way of competition on the San Joaquin to Stockton. Now suppose a couple of good boats were put on the Sacramento river, to run to Sacramento, and a few smaller boats and barges above that point, low rates would follow, and thus low rates could be established all over the State when the produce was within a reasonable distance from navigable streams, and I believe that from 60 to 80 per cent of the heavy products of the State are raised within ten miles of what might be made shipping-points by water at small expense.

Now if roads were opened to such points, the farmers could utilize their teams to much better advantage than now and save more money. Water transportation would thus fix the rate by rail, even if only a portion of the business was done by water, and this is exactly what is wanted now—the rates must be lowered.

This I believe can be done quickly through a corporation composed of merchants, shippers and producers, who would be satisfied with small returns in the way of interest, and who would agree to give the opposition the preference in their freight for a term of years. The capital required would be small and not to exceed one-quarter of what is now paid the monopoly every month, and the result in lowering the rates would be as certain as the law of gravity. R. G. SNEATH.

The Fruitgrowers' Convention.

CAMPBELL, CAL., Oct. 29, 1892.

TO THE EDITOR:—The State Fruitgrowers' Annual Convention will be held in San Jose, Nov. 15–18. The local committee of arrangements is now at work perfecting plans which it is hoped will go far toward making the meeting a grand success. Reduced rates on the railroads have been secured by Secretary Lelong, who will furnish the necessary blanks; the committee has also secured reduced rates at the hotels, and all who attend will find ample accommodations for their comfort.

The local committee hope that the fruitgrowers of the State

will make a good display of their fruits—green, dried or canned. A large exhibition-room, adjoining the convention-hall, has been secured, and it is hoped that it will be filled with the choice fruits of the sections represented at the convention.

All who attend the convention will be accorded a hearty welcome by the citizens of San Jose and the fruitgrowers of Santa Clara county.

R. P. McGLINCY,
Chairman Local Committee.

Annual Meeting of the State Horticultural Society.

At the State Horticultural Society last Friday, besides the routine business, many points important to fruit-growers were discussed.

Howard Overacker, Jr., suggested that the State society take up the work that has been successfully inaugurated by the Alameda society and secure regular crop reports from competing sections. Had they been sent this year by telegraph it would have saved our growers, who sold too early, hundreds of thousands of dollars. [This work will be a part of the duties of the State Board of Horticulture, provided the resolutions of the State Grange, likely to be endorsed by the Fruitgrowers' Convention, receive legislative sanction at Sacramento.—ED.]

A. L. Bancroft asked advice as to treatment of Beurre Clairgeau pears that were being blown off, and was advised by Mr. Block to tie the limbs in a way to prevent a part of the loss and prefer to lose a certain per cent rather than sacrifice one of the very best bearers and market varieties.

Fred C. Miles exhibited two new varieties of peach, a free and a cling, that are very late, very showy, medium size, very sweet, and likely to be valuable for holding in cold storage for holiday market.

R. C. Kells of Yuba City gave valuable suggestions as to curing dried fruit. They take it up when still soft and finish curing in the storehouse by frequent stirring. This gives better quality of fruit and better weight, but those dealers who have been accustomed to buy fruit as dry as chips and add 25 per cent of water seriously object to a system which deprives them of that revenue.

E. W. Maslin of the State Board of Trade reported suggestions from one who claimed to be an almond expert from New York and thought that we were making a mistake in not turning our whole attention in the direction of hard shell almonds.

The united evidence of those who had most experience in almonds went to show that this expert was probably one of those who enjoys a monopoly in estimating the importance of his own views. Some of our paper shells may be injured in transit to consumer, but, as a rule, experience shows that we are on the right track.

Four new members were elected, and officers for next year as follows:

E. W. Hilgard	Honorary President
B. M. Lelong	President
Leonard Coates	Vice-President
A. T. Perkins	Treasurer
E. J. Wickson	Secretary
E. W. Maslin	Director
Fred. C. Miles	Director
H. Overacker, Jr.	Director
J. L. Mosher	Director
H. P. Batchelder	Director

The Picholine Olive.

NEVADA CITY, Oct. 23, 1892.

TO THE EDITOR:—In your issue of the 22d inst., I read with much interest an article on this fine variety of olive, under the heading of "An Arraignment of the So-called Picholine Olive," by Mr. W. Alston Hayne of Santa Barbara, in which Mr. Hayne takes Mr. Adolph Flammant of Napa to task for calling "Picholine" the variety propagated by the latter under that name, and for recommending it to the people of California as the best variety of olive to plant; while, on the other hand, he—Mr. Hayne—claims that the Mission fills the bill much better than the Picholine or any other variety of olive.

Now, I know nothing about the Picholine of Mr. Flammant, but I know this, however, that the Picholine is a well-known variety of olive in France, and one of the best varieties, too, for pickling. It is true that it does not go all around under that very name of Picholine, and in that respect Mr. Arthur P. Hayne is right when he says that it is very hard to obtain any precise information on any given variety of olive in France, on account of so many different names for the same variety as used from one Department to another.

The Picholine proper is a variety propagated both for oil and pickling, though I am inclined to believe that it is planted more for pickling than for oil. It has the name, in fact, of being the best olive for pickling, though the oil also is fine and sweet. The Picholine is a variety that grows to large dimensions; the leaves are large and sharp-pointed; the fruit is large, much elongated, of a reddish-black; the tree is very productive; it thrives to all exposures, and resists well very cold weather. In France it is recommended to plant it closer to the sea rather than inland and in a rich and moist soil.

It is known in its home under several names—under the name of Picholine at Beziers, Department of Herault; that of Saurin or Saurine at Nimes, Department of Gard; that of Saurengue at Aix, Department of Bouches-du-Rhone; that of Plant d'Istres at Istres, in the same Department, and last of Oblonga, under which name it is classified by Gouan.

As to the Mission, it has also many good points in its favor, and I believe that these points are well taken in Mr. Hayne's letter. But as a pickling olive, the pit is so large that it is much against it. Its size and beauty, however, make it appear with much advantage in glass jars and bottles, and in that respect might suit the American people's fancy better than any other kind.

I believe myself that there is a great future for the olive in California, and the public in general cannot but gain by having that olive question thoroughly ventilated.

FELIX GILLET.

THE DAIRY.

Scientific Dairying as Practiced in California.

[First Paper.]

Written for the RURAL PRESS.

The time came when the old-fashioned dairyman could hardly get back a new dollar for an old one. Cows had fed off and trampled out the feed so that the pastures produced less and the cows were in poorer condition from year to year. Hence the yield was less and the losses greater.

The railroad brought the great dairy region of the Mississippi Valley nearer to our principal markets in cost of transportation and ease of access than the more remote dairys in our own State. At the very time of the year when we had been accustomed to expect and receive best prices, butter was low in the East and enough came overland to keep butter as low as 15 to 18 cents for best. Swiss dairymen were taking the place of Californians, because their banks helped them to get money at lower rates than others. Their countrymen who had been trained in dairy work at home and accustomed to work for small wages were willing to continue to work on a similar basis here, rather than go among strangers who spoke a different language.

Rather than be driven out of the business one of our dairymen began to study how it was that eastern dairymen could afford to ship butter here at 15 cents and whether there was any way for us to meet such competition. On the labor question prices were at least $10 per month in their favor. On feed the introduction of ensilage had made the product of one acre of corn equal in feeding value for butter from four to eight acres of hay. In methods, their Farm Institutes, Dairy Conventions and Cooperative Creameries had started them so far along the highway of progress in breeding-up, feeding-up, scientific handling and systematic marketing that the Californians must *join the procession or throw up the sponge.* Some of our people have enough of the spirit of "49" to prefer to work in the lead.

Among these is E. W. Steele, of Edna, Cal., who reached the conclusions indicated above and began a thorough and determined struggle for first place by a systematic study of conditions.

Land must be made to produce more. Cows must be fed up and bred up to at least a 300 pound standard. Losses from disease must be guarded against. Butter must be made at such time of year as it brings the best price. Cost of labor must be reduced by such conveniences as increase its efficiency. Devices must be used to get more of the butter into cash and less in the skimmed milk and buttermilk.

TO INCREASE PRODUCT OF LAND.

Natural grasses on the hill-lands were alfileria, burr-clover, wild-oats and bunch-grass. It would be hard to improve on nature's selection for such conditions, but some of the pastures needed the chance for seed to take and cover the bare spots as well as to make sod thicker that a year's rest would give.

The farming lands needed a rotation. Some of them needed introduction of new grasses specially adapted to conditions, such as rye, grass, etc. Any one who has feeders of ensilage to compete with in butter-making must feed ensilage to equal them.

Besides doing this Mr. Steele has entered upon a systematic course of study and experiment to learn what well-balanced milk ration he can produce on his place at least cost. This embraces not only field experiments but chemical analyses at the university.

So far his experience leads him to favor corn ensilage, barley, horsebeans, roots and flax.

When grass is at its best he would use a supplementary feed of hay and hay only. So soon as grass begins to grow woody either from frost or drouth he would begin to feed ensilage and grain, always aiming to get a cow to eat all that she can digest and assimilate of a well-balanced ration. In this matter he would consult both chemist and cow.

It is evident that we have made great errors in feeding an excess of carbohydrates because they were cheaper than albuminoids and would keep the cows alive. This puts too great a strain upon the digestive system in proportion to results. We don't build a fine mill and then run sawdust through because it is cheaper than grain, but we keep that mill busy night and day, turning out the best flour it can produce. In the same way the digestive capacity of the cow should be used to produce the best results of which she is capable.

If we feed the cows with the view of keeping them alive at the least cost they often die and at best we are in about the position of the man who starts to market over a rough road with a team only strong enough to draw his empty wagon.

Team and wagon are there to draw a load and their value to him is in proportion to the load they can move.

In preparing ensilage Mr. Steele approves of the eastern custom of cutting corn just as it begins to glaze and grain when it is in the dough.

He finds it a very good ration for his large Holstein cows to feed 40 lbs. corn ensilage, four lbs. bran, four lbs. middlings, four lbs. corn meal, three lbs. of oil-cake. He feeds the grain with cut-hay. Where he has to haul mill-feed 25 miles and pay a high price for oil-cake this is a very expensive ration and as he can raise two tons per acre of horsebeans he is having them analyzed to learn their food value. He finds barley a good feed for milk and a crop well adapted to his land. He is favorably disposed toward experiments with roots. From these indications we expect to hear of his keeping more than one 300-pound butter cow to every acre of his farm and feeding ensilage, barley, beans, beets and flax. Oil-meal is very expensive where it must come such distances, but flax is not difficult to raise and it remains for experiment to show in what way it can be fed most directly from the field with best results. Mr. Steele sees a thousand times more ahead of him to learn than do those dairymen who are growing every year poorer in practicing the methods of their grandsires and preaching that the old way is the best.

It is an old saying that the feed is half the breed. From some results of Mr. Steele's experience we might almost conclude that the feed makes the breed.

He imported a four-year-old Holstein cow that only produced 8000 pounds of milk per year when his two-year-olds were running as high as 10,800, and he was disgusted with her record and disposed to discard her. By careful feeding she gradually increased her record to 13,000 pounds and *breeds from the advanced standpoint.*

Now right here is the meat in the cocoanut. Feeding and selection are the essential elements of improvement in breeds. Within reasonable limits, as you feed a cow up from the 8000 to the 13,000 pound standard, you increase the capacity of her family, in like ratio. If you destroy her constitution in doing it, of course you fail in the end, although successful in some of the means. Records can only be broken and record-breakers raised by best breeding and best feeding combined.

Probably this will hold just as good in early maturity of beef cattle as in yield of milk stock. Take two equal heifers of the same strain, and keep one thriving and the other rustling until at three years old one weighs 1600 and the other 1200 and you may expect a similar difference in their calves. Thousands of farmers have condemned improved breeds because they would not show the same superiority over common cattle when placed in conditions where they had to travel all day without water and go 20 miles for their feed, as they did when receiving proper care. Improved cattle imply improved farmers, and they will surely degenerate in other hands.

When Mr. Steele reached the conclusion that nothing short of a dairy capable of producing 300 pounds annually to the cow would answer his purpose, he began to study what breed would raise the standard in the least time, and after trying Jerseys, decided upon a butter strain of Holsteins.

He imported largely from the best strains in Holland, and has six cows already entered in the Advanced Registry and 15 more tested, all ready to enter in the next volume. He keeps a record of the weight of every milking, and frequent tests of the quality. So soon as a heifer shows marked excellence, he pays special attention to her breeding. In this way he discovered that he had sold for $60 one of the best bulls he ever had on the place. Before he began testing milk, this bull was condemned and sold because his heifers gave less pounds of milk than others. Now he finds that for his purposes this discarded animal was the best sire that he ever owned. The Babcock test is relied upon to prevent a similar mistake in the future.

THE TEN COMMANDMENTS OF THE MODEL DAIRYMAN.

1. Feed up, breed up and weed out your herd to a 300-pound average standard.
2. Commence the dairy season in September.
3. Feed every day, all the cows will consume without wasting, of a well-balanced ration.
4. Give the cows full advantage of the best pasturage at your command.
5. Let the cows dry up at the beginning of the summer season when the feed does, that they may begin milking in good condition in September.
6. Never let a cow get poor.
7. Manage to keep your cows in milk for about ten months.
8. Raise calves in the barn on a well-balanced ration adapted to age, and have them ready to wean when the grass is at its best in the spring.
9. Feed your cows a heavy grain ration at the time of year when butter is highest, and you can get best pay for your feed.
10. Save all your butter by improved appliances.

Sale of Trotting-Bred Horses.

The sale of horses belonging to John F. Boyd, which took place at the Oakland Trotting Park on the 26th of October, was a good one, everything being favorable to a successful sale. The weather was perfect, the company was good and the horses were good. Twenty-two head sold for $7185, an average of $326½ for each animal.

The highest price was $810, paid for the brown yearling colt Ameer—a superb animal in himself, with good size and symmetry, aside from the combination of fashionable blood in his pedigree, such as that of Geo. Wilkes, Mambrino Patchen, Electioneer and Almont.

All the colts and fillies, chiefly yearlings and two-year-olds, were well grown and of good size and looked like the making of good carriage horses, if ever they should be wanted for use other than the speed-track, so that buyers had two strings to their bow, as the saying is. Every animal was not only well bred, but also gave good promise of future usefulness.

After the sale of the young stock there were sold two imported Cleveland Bay stallions, viz., Royal Studley, 9 years old, sold for $185, and the 7-year-old Napoleon brought only $180.

The first-named, Royal Studley, is undoubtedly one of the best of the breed ever brought to this coast, and is more like the type of Cleveland Bays, as we remember them to have been some 40 to 50 years ago in their native country, than any imported horse of the breed we have seen in this State, with one exception perhaps. These two stallions ought to prove a "bargain" to their respective buyers.

HORTICULTURE.

Ways and Means of Horticultural Advancement.

Address of B. M. LELONG, President-Elect of the State Horticultural Society, Delivered at the October Meeting.

Members of the State Horticultural Society:—You have just witnessed the final act constituting me president of this society. I fully appreciate the confidence and great honor you have conferred upon me, and in accepting this trust I am not unmindful of the duties and responsibilities involved.

Before the opening portals of another year let us, as we exchange our friendly greetings, remember with pleasure the gratifying results of our labor in the year which has closed its record. In our pursuits, however, it cannot justly be said that such records have closed, because from season to season they link together as the fruit follows the blossom, and the attainment of any unusual development gives promise of new opportunity for greater effort and new achievement.

This society is the oldest of its kind in this State, and since its organization others similar in character have been established throughout the State, and from them their members have derived an immense amount of practical knowledge. We perhaps need to be constantly reminded of the importance of increasing our active membership, upon which the perpetuation of our society so largely depends. To accomplish this, it appears to me we should hold meetings at different places during the year and at times when orchards are undergoing treatment, such as pruning, thinning, etc., or during the packing or processing of fruit. This seems to me to be absolutely essential if we expect to make a success in fruit-growing. The members will not only find it profitable to attend these meetings, from the knowledge to be attained, but also as to cheapness in attending them, costing less than coming to the city. These meetings would also encourage others to become members. The cooperation of local societies should be asked, and I have no doubt but that they will be glad to give all the aid possible in making the meetings profitable and enjoyable, should you determine so to do.

By meeting fruitgrowers in their districts their wants and your needs can be discussed, acted upon and referred for action, if necessary, to the State conventions of fruitgrowers held yearly under the auspices of the State Board of Horticulture.

In speaking of the beneficial results from such a plan, Vice-President Murry, of the State Horticultural Society of Missouri, in an address before that society at Popular Bluff, in June, 1890, said:

> Some years ago we adopted the plan of changing from place to place in holding our meetings, in the hope that it would be the means of awakening a general interest in the pursuit of horticulture, and I am happy to say that the result so far has been very gratifying. Wherever we have gone we have had good meetings, new recruits have been added to our little army and we have been encouraged to extend our field of labor, and so to-night we find ourselves gathered from distant parts of the State before this intelligent audience, for an exchange of ideas and facts, gathered from practical experience in our calling. Here we meet many of our old friends and coworkers and form the acquaintance of new ones, and the whole tendency of these meetings is to elevate, refine and strengthen the social ties that will ever bind each trusting heart to heart in friendship.

The State Board of Horticulture will aid us in making these meetings a success, in fact, they will be only too glad to do so, because the functions of the board are to foster any and all things that aid the fruitgrower. The conventions of fruitgrowers held by the State board in different parts of the State have been of great value to all interested in this industry. The subjects discussed and put into effect are of a broad nature and are generally the outcome of well-matured plans. Then, is it not to our interest to develop and mature such plans for their final action?

It appears to me that there is great need of amending article 5 of the by-laws, in relation to committees. The duties of some, as provided in this section, are too broad and therefore inoperative. I would recommend the revision of this section and to amend it by including other committees, as follows: Committees on legislation; seedling fruits; apples and pears; peaches, nectarines and apricots; plums and prunes; walnuts, almonds and other nut trees; olives and olive-oil; cherries and small fruits; figs and dates; native fruits; Russian fruits; raisins, grapes and seedlings; evergreens and forestry; deciduous trees, and pruning; citrus trees, and pruning; irrigation; frost and fruit blossoms; nomenclature; marketing; dried and canned fruits; entomology; botany; ornithology.

This subject of committees is of the utmost importance, and while they should not be curtailed in their powers, their duties should be made as light as possible; their reports, which should be filed at different periods, should be embodied in our records, the value of which can only be conceived as time progresses.

The proceedings of this society have been of great value, and there have been many valuable papers read, and reports of great value have been recorded. However, it appears to me that we should enlarge our usefulness by publishing our proceedings in pamphlet form, or in some horticultural journal. This, of course, has been done to a considerable extent by our enterprising papers, but at times they have been crowded out of their columns and only brief notices have appeared; thus, much valuable matter is lost which ought to be on record. Therefore, what we most need is the recording of all valuable papers and discussions, as also reports of committees. I recommend the consideration of this subject, because these proceedings will continue to be of special interest to every practical horticulturist, and their record must be of easy access for consultation.

I desire here to compliment our worthy secretary, Prof. Wickson, who embodied many of these records in his work on "California Fruits and How to Grow Them," and for which we should feel grateful.

FRUIT PACKING AND MARKETING.

The organization of a Fruit Exchange for the marketing of dried-fruit products is of the greatest importance to the fruit-producers of this State. The establishment of such an exchange would tend to systematize packing and processing of fruit; would regulate its distribution without coming in contact with individual producers and producing sections; would enhance prices and encourage the industry in many respects. Every other profession, trade or calling throughout our country has its associations, and their meetings are most always well-attended and great interest is taken in every subject that affects their calling. Hitherto large consignments of dried fruit have been sent East, shipped without the knowledge of its demand or market, or the likelihood from competition of other similar shipments; the producers thus groping aimlessly in the dark, seemingly forgetting that in union there is strength. Until there is an organization established, future shipments will meet a similar fate. Much, of course, has been accomplished without concerted action, but it could not be expected that it will continue as successfully without an organization, especially with an enormous increase of yield.

Concerning the proper distribution of fruits, President Cooper, of the State Board of Horticulture, in an address last July, before said board, said: "The time has now arrived when we should more seriously consider the propriety of having fruit-inspectors, more control over the railroads and a combined effort to distribute and sell our fruits. There exists a general dissatisfaction with the results made by commission-houses. It is claimed by many that the distributors grow rich while the farmers in many cases, with the greatest economy, barely live."

In an address before the National City Convention, he said: "Regarding our fruit shipments, there is no excuse for those who ship unsound fruit. Four times out of five, shipments of unsound fruit give a loss to the owner. If this were all, it would not so materially concern the great body of shippers, but the markets are injured by the forced sales of unsound and worthless shipments, hence the necessity of inspection at the place of shipment. Again, we pay a fixed rate of freight to the railroad companies for a fixed time in transportation. The railroads should be compelled to insure the time. We have no control over the management and no recourse where losses are sustained by reason of delays."

R. C. Kells, an extensive and experienced grower, in an address before the Sutter County Horticultural Society, last July, said: "I do not believe in exposing the fruit to the sun until it would rattle like a lot of gravel when poured out. My rule is to spread the fruit in the sun in trays for a short time and then remove it in the heat of the day to the sweathouse, where it is bulked on the floor to a depth of from one to three inches. Here it is frequently stirred with scoop-shovels, gradually increasing the depth of the bulk and decreasing the area of the floor-room occupied, until the fruit is in a condition to sack for the market. It is then not dried, but cured. It will not rattle when handled, but is like soft leather. This way of curing does not suit the dealers who are manipulators. These manipulators prefer to receive the fruit in a hard, dry condition, so that by adding large quantities of water they can increase its weight and thus add to their profits. This is a condition which California growers have to meet. They should stand together and insist that their cured fruit be sold to consumers just in the condition in which it leaves the producers' hands. When in St. Louis, last winter, I saw on the fourth floor of a large establishment a pile of 30 tons of Missouri dried peaches. They were poured out in bulk at one end of the room and men were engaged with rakes in stirring the fruit, while other men were turning on the hose. In this way 25 per cent was added to the weight, and this alone was a fair profit to the dealer. Fruitgrowers should insist that this fraud be discontinued."

The raisingrowers have wisely formed an association for their mutual protection, through which they will no doubt receive an enhancement of prices and naturally control the markets for their products. This action on their part is to be commended, as it is the only way through which the problem may be solved.

The fruitgrowers of Santa Clara county have also foreseen this difficulty and have formed a similar organization for their county. As to the benefits derived from such a plan, I refer you to the letters of Col. Philo E. Hersey and Edward F. Adams, published in the San Jose *Mercury*, PACIFIC RURAL PRESS and the *California Fruit Grower*.

This subject has been under our consideration and the committee in charge will bring it to the attention of the fruitgrowers at their convention at San Jose. It is to be hoped that steps will then be taken whereby an organization may be effected. I hope every member of this society will exert himself, in his respective locality, to stimulate his neighbors to energetic action in the establishment of a Dried Fruit Exchange for the entire State.

EDUCATION AND INVESTIGATION.

The labors of the experiment stations maintained in different parts of the State for the advancement of the twin sisters agriculture and horticulture have been of vast benefit to us, and the bulletins issued recording the experiments performed and the results thereof should be in the hands of every fruitgrower to his profit. It is to our interest to watch these carefully and cooperate with the officers in charge to the fullest extent of our ability. Their efforts are in our behalf and it is wisdom on our part to avail ourselves of the scientific services so placed at our disposal.

Ably seconding the experiment station are the labors of the two great universities, of which we are naturally and justifiably proud—the State University and the Leland Stanford, Jr., University. In these are maintained corps of able and thoroughly scientific men whose duty it is, and this duty is their pleasure, to study and experiment in various directions, which shall be of practical value to the material interests of the State. The end and object of all education is to advance mankind, morally and materially. In the older countries where wealth has accumulated, where nature has been conquered and made to yield her fullest favors, education runs largely to giving its votaries the means of the fullest enjoyment in life, and to a great extent is often more brilliant than useful. It turns out well-informed and highly-polished men, but men who would often be incapable of grappling with the problems of active life. We have a new land, a world to be conquered for ourselves, and, while not neglecting the higher branches, so-called, our universities are devoted very largely to the practical, and the men there produced are fully prepared for the battle of life as it is to be fought in our own State. It is largely in furtherance of this plan, as well as to assist the producers of the State at large, that numerous experiments are being continually made and their results published. Each of these universities have, in the charge of thoroughly competent professors, departments in which the subjects of chemistry, entomology and ornithology are studied and taught, and the results of these studies are of incalculable value to our growers. Who can estimate the money value of the knowledge that has been sent forth from them in analyzing and publishing the composition of soils, the growth to which they are adapted, the fertilizers that should be used under certain conditions and for certain crops, the characteristics of various insects and birds and whether such were detrimental or beneficial? In many, very many, cases the great ship of agriculture has found in them a skillful pilot who has safely guided her over the shoals upon which she might otherwise have foundered. As growers we owe great obligations to our practical institutions of learning, or institutions of practical learning, however you may like to put it, and shall do well to cooperate with them in the future as in the past.

IRRIGATION AND FORESTRY.

There is another subject worthy of more consideration than we have heretofore bestowed upon it at our meetings, and that is irrigation. A very large section of our State, and the most prosperous section at that, depends wholly upon irrigation for crops. Fruitgrowers who live in the irrigated region are loud in the praises of their artificial system of watering, while those who do not resort to it speak with pride of the fact that fruit will grow in their section without irrigation. It is a question for consideration, whether even in those localities where fruit will grow without irrigation it would not do even better with it. I do not make this as an assertion, but merely as a suggestion for further discussion if it is worth considering. One thing is certain, however, and that is that to a very large part of our fruitgrowers water is life, and it is a matter of so great importance to us as a body that we should give it a large share of our attention and study out and suggest such measures as will advance the science—for science it is—of irrigation. Legislation may be required for its assistance, public experiments, or public works may be required, and the proper control of the water ways of the State for the greatest good of the public, are all matters worthy of consideration, and the efforts of this association turned to any point in this direction cannot fail of the desired result. Among ourselves it is to be considered the proper application of water as to varieties, seasons and conditions, the amount of water required per acre for different qualities of soil, how often it should be applied and so forth. It is a subject upon which much thought is now being bestowed and, as it is one that is of direct interest to us, one which deserves more than mere passing notice on our part.

Another subject closely allied with irrigation is that of forestry. We have a State Board of Forestry whose duty it is to look after and preserve the timber lands of the State. When it is considered that the denudation of our mountains by fire or the woodman's ax, has a direct and injurious influence upon the flow of the streams upon which we are dependent for our irrigating supply, the importance of the subject to us as horticulturists will be apparent and the necessity for acting in harmony with the board of forestry and aiding in its work need not be urged here. The effect of forests on climate is well recognized and its bearing upon human activity will be seen. The Prussian Forestry Commission has demonstrated by experiment under Professor Muttrich that the temperature of trees is nearly constant at about 54 degrees, and that the temperature and humidity of the air is positively affected by forests. No orchardist will question the truth of this assertion, for it is in the experience of us all that the temperature of a country which has been redeemed from a desert-condition by the planting of orchards and gardens is always modified Woodlands have an effect upon atmosphere in their vicinity similar to that exerted by the ocean, preventing the extremes of heat and cold. It is more especially in the preservation of the winter snowfall for summer use, the saving of those vast natural reservoirs—the forests—that our interests as horticulturists lie, and the subject is one of the greatest importance to us.

THE WORLD'S FAIR AND THE ISTHMUS CANAL.

There is another matter which requires our consideration, and our immediate consideration, too, if it is to be considered at all, and that is the making of a proper exhibition of our horticultural products at Chicago. The time is rapidly approaching when the exposition will open and in our interest we should make the finest display of fruit of all varieties and in all conditions of any State in the union. California has been called the orchard of the union and it devolves upon us to maintain our claim to the title. There are few fruits that grow anywhere in the world that cannot be found in some parts of the State, and our flora is unsurpassed by any equal section in the world. We can if we will make a showing that will astonish not alone the people of the United States but of the whole world. On the importance of such an exhibit I need not dwell. The Chicago exposition will be visited by more people than ever before were brought together on such an occasion, and tens of thousands if not hundreds of thousands of these people are interested in California. From the date of the first discovery of gold here California has been a charmed name the world over and her exhibit will attract more attention on the part of people from all parts of

the world than will any other. Whether that exhibit shall be worthy of our State depends upon our people and whether the horticultural portion shall be worthy of the Golden State, will depend directly upon us. Some action should therefore be taken by our assembly at once looking to cooperation with the World's Fair Commission—the making of a horticultural display that shall not alone be merely creditable, but shall take the first place among all such displays from the whole earth, and it could and should.

While upon this subject I cannot avoid alluding to the Nicaragua canal, in the early completion of which the California fruitgrower has a more direct interest than almost any other class of our citizens. With the vast area already planted to fruit in our State, it will not be long before we shall be compelled to seek a wider market than our own country can afford us. We are already pushing for a foreign market for our wines and for many of our fruit products to a limited extent. We have made the experiment of shipping green fruit to London by rail and sea, and while we shall always be compelled to avail ourselves of rapid transit for our more perishable products, a means of transportation that will enable us to reach the foreign market in reasonable time and at lower cost than now prevails will become absolutely necessary to our existence in a few years. Already our raisin and prunegrowers are confronted with the necessity for a wider market than they now have, and while the home market by judicious management can be very widely extended, unless its demand increases in the next five years at a very much greater ratio than it has in the past five years, we shall be in great danger of facing an overstocked home market and be compelled to compete directly with foreign products in foreign markets. Such being the case it behooves us to assist by every means in our power the construction of this great work which will open to our State a short cut to the European market. Another point to be considered in this connection is that the building of this canal would largely change the present course of the traffic of the world and divert it to our shore. It would make of San Francisco, with her phenominal harbor, one of the greatest seaports on earth. San Francisco is already our most important single consumer and whatever tends to her upbuilding promises to increase the demand for our fruit-products. So that the construction of the canal would benefit us in two ways, in increasing the home demand for our green fruits, and affording us speedy and cheap transportation for our cured products.

Touching upon the question of markets, I would call your attention to the experiment which has been made this season of disposing of fruit at auction. While the experiment was not wholly satisfactory, its operation is worthy of consideration by us. If mistakes were made in its operation in the past, we can discover and correct them and probably work out a more equable and just method of disposing of our fruits than now exists. Whether the auction method is worthy of further trial is a question that is at least worth our consideration and discussion.

FERTILIZATION.

In many of our orchards, artificial fertilization has become necessary. This is especially true of our citrus sections. This question is one worthy of our most serious consideration. The study is a deep one and embraces a knowledge of the chemistry of soils and the requirements of crops. We have got to learn in what constituent element our land is lacking, how great that lack is, and the best and most economical means of supplying it. The need is a continually growing one, and it is time that our society gave it the consideration of which it is deserving. Besides the proper use of fertilizers, another matter upon which we should take action in this connection is the securing of proper legislation to prevent the sale of fraudulent fertilizers of unscrupulous dealers. A fraud of this kind is a fraud of the worst kind, for it not only robs the purchaser of the purchase-price of the article, but also robs him of possible crops for years and of all the labor bestowed upon the cultivation of an orchard rendered barren for want of the proper elements which his purchased fertilizers should have supplied. We should work for stringent legislation to prevent such frauds upon us. In many States there are now existing statutes to protect the farmer and fruitgrower in this respect, and in self-interest, and I might say, self-preservation, we must work for such legislation in our own State.

TAXATION OF FRUIT TREES.

Another matter of great importance to which I call your attention, and which is becoming an obstacle in fruit-growing in California, is the taxation of trees. Heretofore trees have been taxed as improvements. Bare land is taxed at its real value, and its value is not enhanced materially as long as it remains unplanted. As soon as it is set out to fruits, its value necessarily increases, and thus aids in the enhancement of the county's wealth. Under the existing conditions, the trees planted on said land become taxable property. They are taxed in addition to the value of the land. They are taxed before they give any return to the owner. In other words, it is taxing unproductive orchards.

This State could better afford to pay a bonus to people setting out young orchards than to force the collection of this unjust tax. To impress the point on the minds of the members more fully, I herewith append a schedule of valuation which has been fixed:

FRUIT TREES.

	Per acre.
First year	$ 15
Second year	20
Third year	30
Fourth year	40
Fifth year	50

CITRUS TREES.

First year	50
Second year	75
Third year	100
Fourth year	125
Fifth year	150
Sixth year	200
Seventh year	225
Eighth year	250
Ninth year	275
Tenth year	300
Eleventh year	325
Twelfth year	350
Thirteenth year	375
Fourteenth year	400

VINES.

First year	15
Second year	20
Third year	85
Fourth year	40
Fifth year	50

Horticulture is a business that should receive every encouragement, instead of its progress being blocked by such an unjust tax. In other countries a bonus for every acre set out to fruit is paid by the Government. Thus the importance of horticulture is apparent, and the bonus offered stimulates new plantings. It is conceded that horticulture aids in the development of the State and enhances its wealth; then why not encourage the industry that makes it so?

LEGISLATION, ETC.

The subject of insect pests and fungoid diseases and their remedies is another matter of vital importance to the fruitgrower. In this connection, I would call your attention to the fact, and it is a matter upon which we can congratulate ourselves, that reports received from all portions of the State indicate the decrease of orchard pests, especially the pernicious scale, which, in many orchards once badly affected, has almost wholly disappeared. What the cause of this disappearance is, I am not prepared to state, but incline to the belief that it is due to parasites, in which we have ever found our most effective friends. Here is opened a wide field of study to the horticulturist, and one in which he must be informed if he would succeed. The nature and habits of predatory pests must be known, remedies which will keep them in check or destroy them must be discovered, and if there are parasites which prey upon them, these must be found and protected in their good work. Legislation for the prevention of the introduction and spread of orchard pests and diseases must be procured and enforced, and to this end we have got to work together.

There is another matter which, while it may appear to some a little foreign to our object, is nevertheless connected with it, and that is the subject of hydraulic mining. For years the hydraulic mines of the State have been closed down, working a great hardship to the miners, and thereby to the whole State, and to us as citizens of the State. It would be well for our association to meet the hydraulic miners half-way, and if some means can be devised by which their industry can be prosecuted with ample protection to ours, we should work together to that end.

Governor Markham, in his inaugural address, touched upon this subject and suggested that Congress be memorialized to take action thereon. The subject is one proper for governmental action. The gold of our mines is needed by the country at large, but to get it, the rights of individuals must be protected. Our industry cannot be sacrificed to it. It is contended that the debris can be impounded by the building of restraining dams, etc. Let us hope so, but it behooves us to see that whatever method is pursued, it will amply protect our industry, and surely with the ingenuity of the American people, some method can be devised by which our mines can be worked and our orchards remain uninjured. When this can be done, the miner will find no firmer friend than the fruitgrower, and to this great end we should work together.

The Bible says that as steel sharpeneth steel, so man sharpeneth the countenance of his friend, and that is the object and the result of our meetings. The California horticulturists have the reputation of being the most intelligent and best-informed body of men in the Union. They certainly are of this State, and the reason is found in the fact that they meet together to interchange ideas, put their ideas into practice and improve upon them and discover new ideas for the next meeting. By this means we acquire the aggregate wisdom of the whole society. As knowledge is power, and power is wealth, it follows naturally that we are at once the most intelligent, most influential and wealthiest body of citizens. I have no desire to convert this into a mutual admiration society, but the facts bear out my assertion, and the wonderful growth of the orchard industry in the past decade supplies the facts.

There are none of the subjects upon which I have touched—and I must confess they are numerous—upon which every successful orchardist has not some knowledge, and many of them a thorough knowledge, and it is largely due to our association and our meetings that we possess it. It is therefore incumbent upon us to maintain our society and add to its strength and membership, for there is much more to be attained in the future than has been accomplished in the past, and in union alone can we hope to accomplish it.

The Unreliability of Nursery Stock.

TO THE EDITOR:—There are many varieties of fruit trees that even an expert cannot designate till they fruit, and the buyer has to purchase in good faith, trusting entirely to the nurseryman that they shall be true to name. In too many cases, besides my own, the grower finds, after several years' labor and waiting, that he has not the kinds ordered and has worthless varieties for marketing, or has them all mixed up with different varieties, so that he has not enough of one kind to pay to send to market, also entailing extra cost and labor hunting through his orchard for like varieties. It has been claimed that the purchaser mixes the varieties when planting; in this case, how is it, on fruiting, he finds most of his trees of varieties never ordered or billed to him. As a sample, the writer ordered one hundred (100) Early Crawford peaches a few years ago. This season they fruited and only 27 trees were true to name, the balance made up of several varieties—some worthless. Also, 75 Kelsey plums were purchased at a big figure; only *three* are true to name, the balance made up principally of blue plums—*worthless*.

In my pear and plum orchards I find the trees all mixed up, instead of each block being of one variety. Among my yellow plums too many, on fruiting, turn out to be blue or purple plums, unmarketable. All that can be done is to root them out, plant others with perhaps like result after years of waiting, or graft and wait several years for the trees to bear, all causing increased expense and loss of time. I could keep on enumerating, "but sufficient for the day is the evil thereof." There is another issue, and that is the reckless manner the roots are spaded off, making it impossible for some trees to grow; also, the practice of falsely representing the root stock.

There are, no doubt, men in the nursery business who desire to do a square honorable business, yet are compelled to trust to the dishonesty or carelessness of employes, while there are others who only care to sell trees. In either case, if proceeding from dishonesty or carelessness, the buyer has to pay for it. Not long since, a reputable nurseryman had to pay damages on a suit, owing to his trees being untrue to name.

The advice to all intending to plant is to take a written guarantee from responsible parties, and not deal with any agent, and be prepared to seek the redress they will too often require, or he will find himself— FRUITLESS.

ARBORICULTURE.

Walnut Grafting.

An essay by FELIX GILLET of Nevada City, read at the October meeting of the State Horticultural Society.

At your request, I will hereby avail myself of the opportunity of laying before the Horticultural Society, for the consideration of its members in particular and the public in general, an outline of my recent observations in regard to walnut-grafting.

Through the planting for over 40 years on the Pacific coast of the most tender and inferior kind of English walnut to be found anywhere, and known here by the name of Los Angeles walnut, and also through the planting of large numbers of black walnuts, for which nuts there is no demand, walnut-grafting has finally become one of the most important questions which the fruitgrowers, not only of California but also of Oregon, can discuss. They have, as an incentive, the immense and ready market before us, the whole of the United States, and it is high time, I believe, that walnut-growing should be made to occupy the place that belongs to it by right among the long list of California's varied products, and which is nearer to the top than any other horticultural product to be named.

On account of the great difficulty in grafting young walnut trees, nurserymen in the New as well as the Old World had entirely given up the propagating of the walnut through grafting or budding till Mr. Treyve, an eminent French horticulturist, found, ten years ago, a new process, but which requires the use of a green or propagating house to graft one-year-old seedlings, with a prospect of succeeding with only 40 to 50 per cent of the grafts, and that is the reason why young grafted walnuts are still to this day so scarce, and found only in nurseries making a specialty of them. But the subject under discussion, as I understand it, is more about the grafting of large walnuts, found to be either unproductive or not hardy enough, or bearing defective nuts, like the Los Angeles walnut or bearing hard-shell nuts like the black walnut. Some people have an idea that the transforming by grafting and budding of a large walnut into another kind is a very difficult operation; such is not the case if we go at it systematically. I have had in this vicinity very large trees, almost two feet in diameter, with limbs in proportion, entirely transformed into some of the productive and hardy French varieties that I had found to do well here in California. But before describing how to proceed in grafting large walnut trees, I will first cite a case among many brought to my attention and bearing directly on the importance of the subject under discussion—grafting the walnut. Mr. Lawrence Russell, who owns a very fine orchard within two miles of Saratoga, in Santa Clara valley, had 374 large walnuts on his place. "The trees," said Mr. Russell in a letter to me dated last March, "were planted about 14 years ago, but they neither bear a crop according to age and size of trees, nor is the fruit of good quality; about one-third of the fruit is rotten, and the other two-thirds is only half filled. Last year and this year I took out 200 of this kind of walnut trees, as they had been planted only 20 feet apart. I have still 174 left, planted 40 feet apart, and it is about these I would like your advice. The trees are fine, large trees, and if anything can be done to improve them, then I am willing to give them another trial; but if not, I will take them out."

I wrote back to Mr. Russell to hold on, and by all means spare the trees; that I would go to his place myself next fall and show him how to redeem the trees, for I considered the case to be a too important one, in view of the fact that hundreds of such cases existed in this State and the adjoining one, Oregon, and that I had been battling right along to have the trees spared and redeemed by grafting, and I was very anxious to show by a fair trial on so many walnuts that it was practicable to transform large, defective walnuts into perfect kinds. So, in the latter part of September, I took a trip to the Santa Clara valley, and found the statements of Mr. Russell to be correct; his were really beautiful and healthy trees, with hardly one-fifth of a crop on, half of the nuts being defective, with a black spot on the side of hull that penetrated to the shell and dried up a good half of the meat. It looked as if these nuts had been scorched by the sun or touched by frost. It did not surprise me, however, having had many opportunities to study the numerous defects of the Los Angeles walnut and its subvarieties. Those defective nuts were certainly not scorched by the sun, for they could be seen in well-shaded parts of the trees as well as on limbs exposed directly to the sun's rays. The trees were branched four feet from the ground. Mr. Russell very sensibly remarked that he greatly wished they had been branched 18 to 24 inches higher up. The lower limbs were spreading out at an angle of 60 to 70 degrees. These limbs I advised Mr. Russell not to graft,

but to let them stand till, through grafting, the trees had put on a new top, but to graft the upper and straighter limbs, which would at the same time bring up the top to a more convenient height.

In leaving Mr. Russell's place, I stopped at Mr. C. P. Howes' model vineyard, in the same valley and five miles from Mountain View, and examined closely every walnut tree there. Mr. Howes has a long row of French walnuts planted on one side of his vineyard, about nine years old and just in bearing. On account of the dry spring in the valley, half of the leaves had already shed, and the nuts could be clearly seen among the denuded branches, but I did not find a single defective nut. All were perfect, and if I had not known before about the defects of the Los Angeles walnut, Mr. Howes' walnuts had been quite a proof that the defect found on the walnuts on Mr. Russell's place was not due to the soil or climate, but solely to the variety.

After having determined to graft over such defective trees as those of Mr. Russell into another kind, there arose another question, and quite an important one: What kind to graft and where to get the grafts from? For if, by grafting, a large walnut tree can be transformed into another kind, still must that kind be a valuable one which will bear fine and perfect nuts and an abundance of them, and, above all, the kind to be a hardy one, or else it would not be worth while to graft the "unimproved" kind into an "improved" one that would turn out to be no better. It is evident that a person cannot be too particular in selecting the kind or kinds to be grafted over the defective one.

I will now describe as clearly as can be done in the short space before me, how to bud and graft walnut trees:

SHIELD-BUDDING.

Common shield-budding, as is used with most all fruit trees, fails entirely with young walnuts; it is more apt to succeed, however, on stock of the year's growth and of the size of the middle or forefinger. The shield of bark to be inserted should be as long as possible, say two inches in length and broad accordingly. In removing the shield of bark from the cion, one should be very careful not to disturb in the least the corculum, or little cork-like, soft matter, not ligneous yet, that connects the bud itself to the liber or wood along which the sap runs up. Should the corculum remain on the cion, leaving a hollow back of the bud, the shield of bark would have to be thrown away as worthless, that is *blind*, and another one must be taken from the cion with the corculum on. With walnut-budding no wood whatever should be left at the base of the bud inserted. An incision is then made lengthwise, (where two eyes are far apart and the wood smooth and round) through the bark of the stock, and a cut at right angles at the top, the whole resembling the letter T; the edges of the bark, at the longitudinal insertion, are then raised half-way around the stock with the spatula of the budding knife, and the shield of bark pushed downward under the bark, being made to spread out as even as can be, so as to leave no hollow under the bud in binding. It will be noticed that below and right under the main bud is another little bud; it was placed there by nature to take the place of the bud proper, whenever anything happens to the latter, destroying its functions. In binding, the bandage might be made to cover that little bud, though it should not be squeezed too hard, but run tight enough above and under the big bud that should by all means stick out of the bandage. To enable the winding of the bandage around the bud, the base of the leaf stalk, always very large with walnuts, has to be previously shaved off with a sharp knife, to permit binding the budding tight under as well as over the bud.

When budding walnut trees in midsummer or early in the fall with the trees in full sap, the bandage should be loosened ten or fifteen days after insertion, and entirely removed two or three weeks after; if the budding was done later on in the fall, then it would not be necessary to loosen the ligature and remove it so soon, though it would be well to watch. The cions furnishing the buds have to be pretty well in sap, and so the stock; with the walnut more particularly, this is a condition *sine qua non* of success.

Another very important point in budding the walnut, whether it be shield or ring-budding, is to take the buds from the very base of the cion, and where the wood is perfectly round and not kind of angular-like, as it is the case with the upper portion of the cion; in fact, hardly more than three to four buds, and sometimes no more than two can be used from any cion, whether one or four feet long, and that is what makes good buds, or buds fit to be used, so scarce.

ANNULAR OR RING BUDDING.

This is the most successful mode of grafting the walnut. Much of what has been said about shield-budding applies with equal force to ring-budding. First, the stock or shoot to be budded must be at least ¾ inch thick. Every portion of the stock or shoot to be budded is not fit to receive the ring of bark; the wood should be not only perfectly round and smooth, leaving on the liber no roughness whatever after the removing of the ring of bark, but the eyes should be also far enough apart. In performing ring-budding, a ring of bark containing a bud, and at least 1½ inches long, should be first taken from the base of the cion, and in the following manner. Two circular incisions are made, one above and the other below the bud, leaving the latter right in the center of the ring, and a longitudinal insertion run betwen the two circular ones back of the bud; then with the spatula or end of the budding knife, the edges of the bark at the longitudinal incision are loosened on each side, about half-way round or ¼ inch from the bud; next, with a little twist of the thumb and forefinger, at the same time pressing gently down on the bark, to prevent the corculum getting out, or even being loosened up, the whole ring of bark is made to come off. Before inserting it, one of corresponding size is taken from the stock, in a long and smooth space between two buds, and in the following manner: The ring of bark from the cion is placed and spread out on the stock, and circular incisions made in the bark of the stock above and below the ring of bark, and a longitudinal incision run between the two circular ones and the ring of bark removed from the stock, and that from the cion inverted in its place. Should the ring of bark from the cion be too small to run clear around the stock, a strip of bark should have to be left on the latter, leaving only a space big enough to admit the insertion of the ring of bark from the cion; if, on the contrary, it would be too wide, a strip should be taken out till it would fit exactly the space covered by the ring of bark just removed. The budding is then well ligatured with a soft strip of old cotton cloth, the bandage being made to wrap around, covering all but the bud, and also above and under the circular incisions. The bandage should be loosened in the course of two weeks, the same as described for shield budding. As the taking off of such a large ring of bark weakens much the stalk so budded, the top should be cut off to two or three feet from the budding or tied up to a pole, to prevent accident. Sometimes the ring of bark from the cion goes only half-way around on the stock; such budding should be more properly called "plate" than "annular" budding; the farther around the ring of bark reaches the better. The ensuing spring the stock is cut off about an inch above the budding, and all shoots growing around the stump taken out except that of the bud proper. The cut should in every case be duly waxed. If the budding fails altogether the stock is cut back below where the budding took place, and one of the new shoots budded in the same manner the ensuing fall.

CLEFT SAP-GRAFTING.

Common cleft-grafting, with the cleft running through the *center* of the stock or limb to be grafted, does not succeed well on the walnut, and then it could not be performed very well on large limbs, six and eight inches in diameter; but cleft "sap grafting" succeeds well enough if done at the right time, or early in the spring, when the sap is commencing to flow up. Through sap grafting, the biggest limbs of a tree can very well be grafted; in fact, such grafting will succeed better on large limbs, say four to eight inches in diameter, than on smaller ones, three inches and under.

First, the stock is sawed off, and the surface of the cut, especially that portion of it nearer the bark, smoothed up; a strong knife or small cleaver or hatchet is then laid upon the *side* of the stock, so as to form the chord of a segment, and, with a mallet, driven down till the stock splits deep enough to permit the inserting of the graft; a small wedge made of iron or hard wood being driven down in the center of the cleft to open it sufficiently to admit the cion. The cion must be prepared with the base cut wedge-shaped, through a double scarf. But here is a very important point in preparing the cion—one scarf only should have the pith of the cion exposed; it does not matter precisely how thick it will leave the back of the inserted portion of the cion. Two buds are allowed to remain on the cion, one at the upper end, the other below it, just back of the scarfs. The top of the cion is cut off a quarter of an inch above the upper bud, slanting, and waxed after having been inserted. A stock three to four inches in diameter will admit two to four grafts, two opposite each other, if there is a scarcity of cions to graft with, or four, two to each cleft, if cions are plenty. Should the stock be much larger, it should be split on three sides, and from three to six cions inserted. In inserting the scion, one has to be very careful to make allowance for the thick bark of the stock, and insert the cion in such a manner that the inner bark of the stock next the wood and that of the cion will be brought together and unite the whole length as much as possible; the wedge being removed, the two parts of the cleft will draw together and hold the cion in place. But to prevent the cleft from reopening through the influence of the atmosphere and sun, the stock is well ligatured with a strong strip of old cotton cloth, doubled up, but not before the whole surface of the cut, including the clefts and tops of cions, have been duly waxed. The clefts are made to run outside of the heart of the tree or limb, right into the sap; hence the name of sap-grafting given to that mode of cleft-grafting.

Through the summer, sticks or stout poles have to be tied up to the stock or limbs, as the case may be, to tie up the successful grafts to them; for their growth, especially on large trees, is so rank that their own weight or the wind is liable to break them clear down to the stock and ruin them; so it is well to be prepared for such an emergency.

Now, should the grafts fail to grow, there would remain a fair chance to resort to annular-budding through the summer or fall of the same year; for a number of shoots would grow around the stock below the grafting, and if three or four only are permitted to remain, they will grow quite large that season, and could very well be budded as described in this paper.

Since to graft large trees into another kind by the ring-budding process requires the cutting back of the limbs at one foot from where they fork out, to allow them to grow new wood upon which to insert the buds, it is just as well, then, to try first in the spring sap-grafting; for, should the grafting fail, it would not put one to much trouble.

By all that precedes, it will be seen that a large walnut-tree can very well be transformed into another kind by combining both operations—cleft sap-grafting and annular budding—the straightest limbs of the tree being cleft-grafted, with the lower limbs allowed to remain for a year or two, as a safety valve for the ascending sap to escape; and if the grafts do not take, three or four of the shoots that are bound to grow up around the stump of the limb grafted, are ring-budded between the middle of July and the first of September.

The trunk of the tree, particularly when the lower limbs are cut off, and up to the grafting, should be shaded in some manner; bands of gunny sacks, wrapped up all around the trunk of the tree, up to the grafted limbs, and made fast with short nails or tacks, will answer the purpose. This will prevent the body of the tree from being sunburnt, and the borers from getting in it.

But there is quite a drawback, for the present at least, in grafting large walnut-trees into hardier, finer and more prolific kinds; it is the scarcity of good buds and good grafts throughout the State, of the improved and hardy kinds of walnut; for it is next to impossible to procure suitable buds for budding purposes on bearing trees of any kind; and as to grafts, they are much more common on large bearing trees than long and large cions, which are required for budding by the annular process. Trees of those improved and hardy kinds are still scarce in California, or so young that it makes it difficult for any one to procure the number of grafts required. To obviate that difficulty in obtaining buds and grafts, I have suggested the following ever since I have been advocating the grafting of large, unproductive and defective walnut-trees into better kinds, and which many people, acting on my suggestions, have done. Two or three years old trees, of the kind to be propagated by grafting, are procured, and set out in very rich and moist ground to stimulate their growth, and cut back two or three inches above the ground, or that much above the grafting, if grafted trees (and as much as possible grafted trees should be preferred to seedlings, for then you know exactly what you have); and three to four shoots for the first year are allowed to grow. If the ground is kept moist, these shoots will grow of the proper size through the summer, and all but one can be used for budding purposes. The ensuing spring, the remaining shoot is cut back in the same manner, and double the number of shoots allowed to grow, and so on as long as buds for budding purposes are needed. In nursery parlance, such trees are what are called "mother" trees. This planting of "mother" trees has the big advantage of enabling any one having several large walnut trees to graft, to grow his own buds and grafts, and not to depend on one or the other for cions held, too, at a high price, and, above all, to be sure to get as many cions as are needed. On account of the scarcity of buds and grafts in starting, it would take several years to graft over a hundred large walnut trees into another kind, unless cions of the kind desired could be obtained in large enough quantities.

The walnut is not the only nut-tree to be redeemed by grafting; for we hear of a very inferior chestnut, going under the name of Italian chestnut, a mere seedling, and as bad in all respects as the Los Angeles walnut, that should be attended to.

Mr. Geo. J. Hooper, of Sonoma, wrote me last winter that he had on his place 300 such seedling chestnuts, planted 15 years ago, that have grown beautiful trees, but bear very small nuts and not many of them; and that he had been advised to graft by ring process, using the French grafted Marron for that purpose. Mr. Hooper added that he had also a number of large walnuts that bear very poorly, and he, too, was inquiring how he could redeem the trees.

Large chestnuts should be grafted in exactly the same manner as large walnuts. Shield-budding and cleft-grafting do, however, succeed better with the chestnut than with the walnut; so it may be regarded as an easier operation to redeem large chestnut-trees than walnut-trees.

In conclusion, I would strongly urge the State Horticultural Society, in the interest of walnut-culture, to do their utmost in encouraging the grafting of large, unproductive, delicate or defective walnut-trees, of which there are so many all over the Pacific coast, or of trees like the black walnut, bearing an unmarketable nut; and discourage the planting of any more such kinds of walnuts as we are called to-day to redeem by grafting. FELIX GILLET.

[In the discussion which followed, Mr. West of Stockton stated that on his place the French varieties are unfortunately affected by the same blighting or disease as the Los Angeles variety. Mr. West said also that he had succeeded in grafting small walnuts in nursery rows by cleft and tongue-grafting underground. All did not take, but, if well done, he had satisfactory percentage of success.—ED.]

ENTOMOLOGICAL.

Our Good Friends in the Insect World.

Lecture given at Niles, Cal., before the Farmers' Institute Oct. 15, 1892, by W. G. JOHNSON, Instructor in Entomology in the Leland Stanford Jr. University.

The relationship and interdependence of all organic beings are so complicated that for us to pronounce any creation an unmitigated evil is the height of presumptive ignorance. It matters not how unnecessary they seem, how useless and insignificant they appear, they all have a significance and make links in the chain of being. This is especially true in the insect world. Very little attention has been given to the subject of the benefits which we directly or indirectly derive from them, while we are reminded on every hand of the personal injuries they do us and the losses they occasion us. Let us look at the other side occasionally and endeavor to single out our good friends and see how they assist us.

In a general way, insects are always busy. From morning till night, and from night till morning, they are flitting from flower to flower seeking nectar, and pay for it by fertilizing and cross-fertilizing our grains and fruits. The insects carry the pollen from the anthers of one plant to the stigmas of another of the same kind, and thus insure vigor to the germ and perfection to the fruit.

Naturalists have discovered within the last quarter of a century so great a measure of mutual dependence between plants and insects that should the entire class of insects be exterminated, the whole face of nature would speedily be changed. Many of our most valuable vegetable products would disappear, and with the disappearance of our grains and succulent fruits, man and the higher animals would probably perish.

Our orchards, our vineyards, our berry-beds, are all the more productive for the swarms of bees, flies, beetles and butterflies that flit about them. The crimson clover fields of the East would be banished from our landscapes with

the extermination of such common insects as the bumble-bee. It would be hard for us to estimate our indebtedness to this class of animals commonly known as insects, but contemptuously spoken of as bugs. We must remember what an important place they occupy as scavengers, reducing decaying animal and vegetable substances to their original elements. Another fact which we should bear in mind is, that they are the chief food supply of many of our birds and fishes.

Let us now examine more closely a few of the insects that are our friends. None, perhaps, has been of more economic importance in this State than the ladybird or ladybug. These little creatures have a peculiar fascination about themselves. We have been taught from childhood to shield and protect them. These predaceous creatures wage constant war, both in the adult and young stage, against plant lice and scale insects. More than a thousand species are known from various parts of the world. There are between 50 and 60 species native to this country, and only about a dozen of these are widely distributed.

The eggs are laid in patches on the stems or on the underside of leaves of plants and usually where plant lice and scale insects are the most numerous. The eggs are very small, oval, and generally pale-yellow or reddish-yellow in color, and are affixed to the stem or leaf in an upright position. The number of eggs varies with the season of the year, and the patches are composed of from 20 to a hundred.

As soon as the eggs hatch, the young begin their work of destruction on the lice and scales about them. The young vary in form, and many are gayly colored. When the young is fully matured, it attaches itself at the extremity of the body to some object, and remains in this state until the ladybird is matured, when it splits open on the back and comes out ready to repeat the history of its ancestors.

The story of the Australian ladybird, *Vedalia*, is an interesting one. It is an admirable illustration of our subject. It is now conceded that California is one of the greatest fruit-producing centers in the world, and every year there are brought into this State from foreign countries thousands of young trees. Several years ago the cottony cushion scale was brought over on a lot of trees from Australia. It multiplied rapidly and soon became so established in the citrus orchards that the fruitgrowers became alarmed. Every possible remedy was tried to exterminate it, and to no avail.

Nearly every variety of ornamental plants and shrubs were attacked. In many instances the cost of fighting the pest was greater than the value of the production of the orchards. Knowing that the citrus trees in Australia were not damaged very much by this pest, it was thought that there must be some natural enemy keeping it in check. Accordingly, two agents were sent to Australia to seek the enemy, and as a result the Australian ladybird (*Vedalia cardinalis*) was introduced, colonized and distributed. The result is well known. The fruitgrowers and farmers are free from cottony cushion scale and will ever look upon little Vedalia with admiration and protect it for the invaluable service it has rendered.

We have many other distinguished friends in this family. Pilate's ladybird is a very pretty little beetle with two bright-red spots on its wing-covers. This little creature feeds on the black scale. It is abundant in the southern part of the State. We have also the eyed ladybird and ashy-gray ladybird, both of which feed on the black scale. Of other Australian ladybirds we have two species of the genus Orcus. They were introduced in January, and both feed upon the red scale and plant lice. Besides these, we have a great many ladybirds that feed upon plant lice. Among these are the two-spotted ladybird, the ambiguous ladybird, and the convergent ladybird.

Another insect which we cannot help but admire is the *Lace-winged fly*. The wings are usually of a beautiful light-green color and present a network of veins. When the insect is at rest the wings are folded over the back, slanting like the roof of a house. The young of this insect is known as the aphis-lion, and is truly another of our friends. The manner in which the female deposits her eggs is very remarkable. When about to lay an egg, she emits from the end of her body a minute drop of a tenacious fluid. This is drawn into a long thread; it dries and hardens at once and the egg is held in midair. The threads are about one-half inch in length. The eggs are often found in clusters on these threads attached to the stems and leaves of plants usually in the midst of a colony of plant lice. When the young aphis-lion hatches, it crawls down the silken thread and wanders around the forest of egg stalks searching for some small insect or egg to feed upon. In doing so, it wanders about not observing the eggs above it. The young are spindle-form, and have long, sickle-shaped jaws. They feed, chiefly, on plant lice, but will eat any other insect such as it can overcome. Even with its own brothers and sisters it is "the survival of the fittest" when two meet. Thus it appears that this is a wise provision of nature to protect the eggs even from the ravages made by its own kind. Otherwise, if 20 eggs were laid on the stem or leaf of a plant, and one should hatch a little in advance of the others, it is likely the little cannibal would make a hearty meal on the remaining 19. The cocoon in which the young stage is passed is spherical in shape, small, rather white and composed of dense layers of silk. When the adult emerges, it cuts a circular lid from one side and escapes.

Closely related to the lace-winged fly is another small insect with yellowish-brown wings, many veins, and folded over the back in the same way. I know of no common name for this insect, and we will recognize it by its scientific name, *Hemerobius*. The young resemble the young of the lace-winged fly, and feed voraciously upon plant lice and other small insects; but, unlike the aphis-lion, after sucking the juices from their victims, they make a cloak for themselves of the empty skins, and appear like a mass of rubbish moving about with no visible means of locomotion. Both the lace-winged fly and hemerobius occur during the summer months in orchards and on other plants where scale insects and plant lice abound.

If you examine a colony of plant lice during the summer months, you would likely find several cylindrical maggots, without heads, the mouth parts consisting of from two to four outwardly-bent hooklets. These are the young of the *Syrphus fly*. It is usually less than one-half inch in length and beautifully banded with yellow. It is a very rapid mover, and can be often seen hovering over flowers. The eggs are deposited in the midst of a colony of plant lice. When the young hatch, they crawl about until they come in contact with the plant lice, which they pierce with their hooklets and suck the juices, devouring as many as a hundred daily. They are also found on trees infested with the black scale. This ungainly-looking creature, though headless, is truly a friend to the farmer and fruit-grower.

The *Ichneumon fly* is another insect that plays an important part in keeping some of our pests in check. It can be easily recognized by the usually long and slender body and the long, exserted ovipositor—an apparatus at the end of the body fitted for boring into very dense substances. It has been observed that a certain species actually bores through solid wood to deposit its eggs in the young of another insect; the ovipositor is worked into the wood like an awl. The eggs are laid by the female either on the outside or within the caterpillar or other insects, on which the young feed. When the eggs hatch, the young live on the fatty portions and fluids of its victim, which gradually dies from exhaustion. When the flies have emerged, there is nothing left of the caterpillar except an empty skin full of small holes. The *ichneumon flies* are thus very serviceable to the agriculturist, as they destroy annually great numbers of caterpillars and other insects. They are also making war on scale insects.

Let us now consider the habits and transformation of an insect common in the vicinity of streams and ponds, commonly known as the *dragon fly*. It has other popular names, such as darning-needles, spindles, snake-doctors and mosquito hawks. The dragon flies, literally, live on the wing; they never walk, and thus the muscles of flight are greatly developed. The eyes are very large, in some cases covering nearly the whole of the head, so that it appears "all eyes." Though gaily colored and brightly decorated, the dragon fly cannot be said to be an attractive insect; but on the other hand, is decidedly repulsive. It does not possess all the bad qualities that are usually ascribed to it. It does a great deal of good in devouring mosquitoes and other noxious flies and insects, as it is continually hawking about after gnats.

The transformation of these creatures has always attracted interest. Prof. Unler tells us that in laying her eggs, the female alights on water-plants, and pushing the end of her ovipositor below the surface of the water, glues a bunch of eggs to the submerged stem or leaf. Of another species, he says he has seen the female balance herself just above the water and drop a bunch of eggs into the open ditch. The egg-laying habit of still another is the most striking. The female, when impelled to deposit her eggs, deliberately enters the water and walks down some submerged stem, and with her ovipositor cuts gashes in the stalk, into which she deposits her eggs. The young are very active in their habits, constantly going about after food, crawling about the bottom, or making their way through the thickest submerged water-plants. This species has a lower lip greatly enlarged and so formed that it folds over the jaws and completely conceals them. It is a powerful weapon of offense. It is quite long, and is jointed so it can be brought forward in front of the head, and is armed at its extremity with a pair of sharp hooks, adapted for seizing and retaining its prey.

The manner in which the young of the dragon fly breathes is a very remarkable thing. The end of the alimentary canal, the rectum, is so modified that it forms a tracheal gill. It is a little enlarged, and is furnished with many tracheæ. The water is taken in and forced out alternately through the anal opening. The air in the tracheæ is purified by this alternating current of water. Not only does this serve as an organ for respiration, but also for locomotion. By drawing in the water gradually, and expelling it forcibly, the insect is propelled through the water with considerable rapidity. When the young are fully grown, they leave the water to transform. They climb upon some object, split open on the back and emerge, leaving the empty skin clinging to the object upon which transformation took place.

It is not strange that there are so many popular names for these insects. Among children it is believed that they sew up the ears of persons, and thus we attribute the name darning-needle. It is said the negroes of the southern States believe that dragon flies hover over dead snakes, bringing them to life, consequently calling them snake-doctors. In spite of the superstitious and harsh things said about the dragon fly, it is a desired friend of every community.

The snowy tree-cricket is generally believed to be more injurious than beneficial. Such a belief is erroneous. By the presence of these little creatures, many hundreds of plant lice and scale insects are destroyed. It is true, a few stems of the raspberry lose their life by the incisions made by the female when she deposits her eggs. This slight loss is nothing compared with the damage that would have occurred had the plant lice and scale insects been allowed to live, which it had destroyed. Prof. Comstock tells us a very interesting story about this insect. While he was out for a ramble, he stopped to rest under a tree, and hearing a cricket singing, he located it. It was the male. It would stop at intervals, and the female would come up and brush around him with her antennæ. As soon as she would stop, he would begin singing more vigorously. Again the female rubbed him with her antennæ, apparently scratching his back, while he remained placid and quiet. The object of this "scratch my back" is not known; but whatever be its function, the snowy tree-cricket is a friend of ours.

In spite of the fact that the scale insects cause so much destruction, and are the source of so much annoyance, there are certain species which are a source of profit. Many of our dye-stuffs are made from the bodies of scale insects. The females of a bark louse, which is found on a small green oak—a tree which is native of Asia and the countries bordering the Mediterranean—are gathered, dried, and are sold as a dyestuff known as kermes. This dye has been in use ever since the time of Moses, and Pliny states that the inhabitants of Iberia paid to the Romans half their tribute in dyestuff (kermes). We get a dye which gives a color much more brilliant than kermes from an insect known as cochineal. It is a member of this same family of scale insects, and is a native of Mexico, but is now cultivated in India, Spain and other countries. This dyestuff consists also of the female insect, which, when matured, is brushed off and dried. From cochineal is made lake and carmine. Aniline dyes are now taking the place of cochineal.

The stick-lac of commerce, from which shellac is prepared, is a resinous substance excreted by a bark-louse, which lives on the young branches of several tropical trees. The coloring agent known as lac-dye is also prepared from stick-lac.

A bark-louse is found in great numbers upon a large tree growing on Mount Sinai. The young shoots are covered with the females, which puncture them and cause them to discharge a great quantity of a gummy secretion which quickly hardens and drops from the tree, when it is collected by the natives, who regard it as the real manna of the Israelites. China-wax is also made from the excretion of an insect known as Pe-la. We have several species in this country which produce wax in considerable quantities. If these could be cultivated easily, they would be of economic importance. We must, at least, recognize our friends in this family of insects, even though we look with contempt on all the rest.

In many French villages, boards are set up containing the following instructions:

Hedgehog—Lives upon mice, snails and wireworms; animals injurious to agriculture. Don't kill a hedgehog. Toad—Helps agriculture; destroys 20 to 30 insects hourly. Don't kill a toad. Cockchafer and its larvæ—Deadly enemies to farmers; lays 70 to 100 eggs. Kill the cockchafer. Birds—Each department of France loses annually many millions of francs through the injury done by insects. Don't kill the birds.

It would be a good idea if some such system was inaugurated here, but I would supplement it with a list of our beneficial and injurious insects in order that the people at large could become acquainted with the names, at least, of their friends and foes. Whether it be hedgehog, toad, bird or insect, don't kill anything that befriends you.

NOTE.—I have purposely omitted all scientific terms and names, and used those names that are in general use as far as possible.—W. G. J.

THE FIELD.

The Gopher, and How to Get Rid of Him.

Nearly every orchardist in the State has found that among the numerous pests that attack his trees, the gopher is not the easiest to get rid of. And yet, when his habits are understood, it is not much of a task to free the orchard of his raids.

The gopher, or *Geomys thonomys*, as the naturalists familiarly call him, is a reddish-brown or chestnut-colored rodent, measuring about six inches in length. His body readily passes through a hole three inches in diameter when he is full grown. He has a pouch on each side of his jaw just in front of his shoulders, into which he stuffs his food and the loose earth from his runway. His front feet are broad and strong and his forelegs are short and muscular, well-fashioned both to dig or burrow into the earth and to push the earth before him when cleaning out his runway. His tail is short and his eyes are small and well-protected by strong skin and bushy hair, and living as he does in the dark, he is nocturnal in his habits.

The gopher's burrow or runway is usually dug from 10 to 24 inches below the suface of the earth and varies in length according to the abundance of food and the compactness of the soil. Where food is scarce, he will dig a runway 40 or 50 feet long; and where it is abundant, four or five feet are long enough for him. The same is true of the character of the soil, as he digs much longer runways in loose, gravelly earth than in the more compact, clayey soils.

The course of his burrow is marked by mounds of earth that are formed when the loose earth is dumped out. These mounds also serve as doors out of which he passes in search of food. They are always kept closed when the gopher is inside, and this is done by pushing the loose earth from within out into the opening and packing it hard on the inner side.

Each burrow is occupied by a single gopher, and when one is trapped, it is well to tightly close up the opening, as no more gophers will be found in the runway; and if the hole is left open, it tempts the young gopher to enter into possession of a domicile already prepared when he has been turned from the home-nest to make room for the next crop.

Each runway is provided with a chamber from 6 to 12 inches in diameter that is used for a storeroom in which to put food for the season of scarcity and for a long period of wet weather, as Mr. Geomys does not venture out when it storms. This chamber is also used for a sleeping-place, judging from the manner in which it is lined with soft grass and the further fact that it is usually dug under some mound or elevation of the earth which insures dryness to this part of the burrow when it rains.

FEEDING.

Being a rodent, the gopher feeds on grass, on roots and on grains, and these articles are what will be found in his storeroom when it is turned up, which will frequently be done in plowing deeply into land that is infested with these pests.

The little fellow may be seen early in the morning or

toward sundown, when the grass is green, pulling the young growth and packing it into his pouches, to be carried and stored in his storeroom. He is quick and wary in his motions, and at the slightest sound he will dart into his hole, only to come out again with great caution.

It is because of this instinct that leads the gopher to store food for winter use that poisoned food does not always destroy him. If poisoned food is placed in his burrow when his natural food is abundant, he is as likely to add it to his stores as he is to eat it. For this reason, the best time to put out poison is when food is scarce. Or, again, if it is in the fall of the year, when there is no green food, he may be tempted to eat of poisoned ripe fruit or some vegetable that he is fond of or raisins, but poisoned grain is not so tempting, and it is a form of food well suited for his storehouse.

It will be found that as long as there is other food in the orchard, the gopher will not molest the roots of fruit-trees; but when cultivation begins, every form of vegetation is destroyed and it is then that the gopher-mounds will be found approaching the trees. It is claimed that the roots of some fruit-trees, such as bitter almond and peach, are less likely to be eaten by the gopher than the roots of some other trees; but it is safe to conclude that most any edible root is better than no food. Judging from the mounds that are thrown up about oak-trees, it is not unlikely that even these roots are eaten in times of necessity.

BREEDING.

The *Geomys* family believes in increasing and multiplying. A female will bring forth from two to six young in a litter, and the young are large enough to burrow for themselves when three to four weeks old. It is quite likely that during the months of February, March, April and May about one litter is reared each month; and as each litter is forced out to hunt for themselves as soon as the next ones come along, it is during these months that the trapper must be most watchful.

The orchardist will find that the ground he considered free from gophers will be covered with mounds some fine morning and he may wonder where they came from. But he must remember that wherever land is unmolested, there the gopher will be found as thick as it is possible for him to exist. Consequently, when the new crop is forced out, where shall they go for burrows? As it is during the night that the gopher migrates, he soon finds as he passes from one burrow to another that he must either whip the old settlers or move on to some unclaimed piece of soil. The well-protected orchard offers then just the place for the youngster to pitch his tents, and he loses no time in getting below the surface and throwing up his signal of occupation.

Sometimes, however, the trapper will find instead of a small hole, denoting the presence of a youngster, that it is a hole dug by a mature gopher. When he is trapped, his sex is usually male, and he probably has been so set upon by some stronger brother that the neighborhood of his late dwelling has become too unpleasant for him to longer remain, and he has sought the quiet of the orchard lot.

The mature female gopher does not often migrate, but, like the hive of bees, she sends forth four or five crops of youngsters each year from some secure burrow outside of the orchard lot.

A favorite breeding-ground is under a roadbed. The hard, well-packed surface of the road turns the water from the burrows, and as the road is usually higher in the center than it is on either side, the nest is out of danger of being flooded by a sharp rain.

Wherever a large mound of earth is seen thrown up by the roadside, it usually opens into a burrow occupied by a female gopher; and if a trap is placed in it, one source of supplying future generations of the *Geomys* family will be effectually stopped.

HIS ENEMIES.

Most of the enemies of the *Geomys* family are nocturnal in their habits.

The gopher snake *Caluber Coupen*, he with the rings of black and of white on his jacket, and from three to four feet long, is partial to these rodents. Just how they catch them it is hard to say, but it is likely that the young ones are preyed upon by these snakes, and because they are not backward in crawling into a burrow if it is left open, the gopher rarely leaves it open.

As these snakes are harmless to mankind, there is no good reason for killing them, and the orchardist is interested in protecting them wherever found, as they are an important ally in clearing his land of the gophers, as well as squirrels, field mice and wood rats.

Another enemy of the *Geomys* is the *Felis domestica*, and he is the one natural enemy that mankind protects.

When Thomas or Tabby takes an evening ramble it is quite likely that a gopher will be met, and the result is that the gopher goes with the cat, even though the cat has to tuck him under the place where his belt would be if he wore a belt.

A good cat will destroy many gophers in a year, even though he may be well fed from the table. The feline instinct is for warm blood, and the gopher offers an easy chance to gratify that taste.

If Tabby happens to be the mother of a litter of kittens, she has also to gratify the yearnings of these catlets for gopher, and it is not unusual for Tabby to bring in two or three gophers daily.

Another enemy that the gopher dreads is the *Strix Flammea*, or barn owl, of rusty red color mottled with white. The unsuspecting *Geomys*, traveling across the field to pass the time of night with a neighbor, is suddenly scooped up by this owl, and many a meal does he make of this ubiquitous rodent.

A pair of *Strixes* were found nesting in a barn one year, and the haymow about the nest was littered with the bones of gopher, squirrel and bird from the time their eggs were hatched until the young birds learned to fly.

He is a wise fruitgrower that protects the *Strix rustica* and encourages him to multiply, even though it may be at the cost of an occasional broiler.

The most fatal of all the enemies of the *Geomys* is the "*Trappus springus*," or gopher trap. In the hands of a novice this trap is a delight to the rodent that is sought to be ensnared thereby, but in the hands of an observing trapper it will destroy 95 out of 100 gophers that elevate the earth into mounds.

THE PROCESS.

It will be found that the burrows terminate at a mound, and if this terminal mound is opened, one trap is all that is necessary. The earth should be shoveled out so that the level of the runway is reached, which will be at a depth of about ten inches. Then the hole should be cleared of loose earth and the trap placed well into it, far enough that only the handle projects from the opening.

It is a good plan to fasten a cord to the trap, and then tie the loose end over a pin driven in the ground. This is done to prevent the trapped gopher from dragging it into his burrow so far that it cannot be reached without digging for it.

As soon as all is quiet, the gopher will proceed to close the opening by pushing the loose earth from the runway into the mouth of the hole. In doing this he presses down the trigger of the trap, which permits the jaws to spring up and fasten themselves into that part of his anatomy that lies between his fore and his hind legs.

If a mound is opened that has been thrown up along the line of the runway, then it will be found that there are two holes or branches to the burrow. In this case two traps will be needed, as it is almost impossible to tell on which side of the opening the gopher may be. The best trap to use is one that has the ring end made not larger than two and one-half inches in diameter, and it will be found that a two-inch ring is large enough to catch any but the largest gopher.

If the trap is so small that it can be easily pushed out of the opening, it is a good plan to place a short stake against it, so that it will resist the pressure from the inside. Whenever a gopher tries to fill up his hole, he pushes with a force that is surprising, and it is for this reason that he will certainly spring the trap. The lever is an obstacle to the outward passage of the earth, and as soon as the gopher reaches it he pushes against it until it is bound to go down or the trap gives way.

A good plan is to have one trap three inches in diameter, another two and one-half inches, and two or three two inches. It is the small gophers that are most frequently found coming in on the cleared ground.

Another useful practice is to cultivate the earth along the fences. As a rule this space is allowed to grow up with weeds, and it offers a good nesting place for the females, as it is unmolested and grows food in abundance. Plow on each side of the fence as close as the plow can be run, and then take a hook hoe and hoe out the land that remains unplowed.

Another thing that is often overlooked is the condition of the fences at the bottom. As the gopher, when migrating, runs across the surface of the earth, he will be kept out of an orchard by a fence that is tightly closed at the bottom for a height of eight or ten inches. He is not a climber—his forefeet are not "built that way"—and if he finds no opening in the board he is not likely to burrow under it.

Some recommend that a ditch be dug around an orchard and that cans be placed in the bottom of the ditch. This may do if the orchard is not fenced, but if it is, it will be cheaper to make the bottom of the fence gopher proof, and just as effective as to ditch.

It is to be remembered:

That a ten-acre orchard is easily freed of the gophers that reside therein.

That as soon as the land is cleared of its resident rodents it invites the homeless from the neighboring fields or the roadside to come in and set up housekeeping.

That a tight fence is an effectual guard against these immigrants.

That after you have cleared your orchard from these pests, then the gopher snake, the cat and the barn owl will be found useful allies to keep the gopher thinned out of those fields that are not cultivated.

That eternal vigilance is the price of dead gophers.

C. D. S.

THE APIARY.

Beekeepers' Problems.

LAKESIDE APIARY, BAKERSFIELD, Oct. 22, 1892.

TO THE EDITOR:—It appears one at least of your correspondents survives to tell the tale of an off year in apiculture. Whether it be a survival of the fittest or a creature of circumstances does not clearly appear; yet, from the tone of his letter, we incline to the latter opinion. To the often-recurring question, "Does bee-keeping pay?" the writer would say yes; but would qualify this assertion by stating that success is quite as dependent upon environment as that of any occupation with which we are familiar. The unhappy apiarist is the toy of the elements in which a slight variation from normal means failure. There are some locations, I believe, both east and west, where, with combination of skill, a good measure of success is obtained year after year.

It would appear at times the beekeeper is the butt of many adverse conditions. Some months ago, I note, one of your correspondents advised his unfortunate brethren to seek Kern Co., as the Mecca of the apiarist. So far he is wide of his mark, for a newcomer would, we think, hardly find a benefit by location here. At the outset, so far as natural resources are concerned, it might well be said to be positive starvation, our main and only dependence being from artificial or cultivated bloom. It is true, in late winter and early spring, there is usually a succession of natural bloom, which suffices to build up colonies suitable to swarming and working condition; but there it ends, and the natural supply must be supplemented by the artificial or work of man. At this juncture, alfalfa has generally advanced sufficiently to yield nectar. In hay districts one often succeeds with fair crops. The fact, however, obtains that this is not a hay county, conditions being so favorable for the grazing of stock over a large portion of the year. Cattlemen do not, as a rule, harvest large quantities of hay, a circumstance which cuts short what otherwise would be an extended season or the beekeeper's paradise. Good ranges are at present, so far as I know them, occupied. Perchance, should a location prove fortunate in succession of alfalfa-cropping with corn harvest, either Egyptian or Indian, with sorghum, happy is the beekeeper, unless we are overtaken by other misfortune. The old proverb, "There is never a rose without a thorn," may be applicable to our industry; for, were all conditions favorable, we have disease, of which the writer has been complaining for the past four years, which it appears has come to stay. How to combat it with success none knows. So far as my investigation has extended, it goes to show the cause is beyond the control of the beekeeper.

Considering the circumstances as we know them, all beemen will do well to give Kern a wide berth. Personally, we are looking for pastures new to which to take our busy workers. In writing as to the number of colonies to a given location, the correspondent should qualify the estimate by the amount of flora. In the main he is correct, that ranges, as a whole, are overstocked and that probably by one-half; hence the remaining bees would more profitably gather the crop. The writer has thought that some means of expansion and contraction of colonies numerically might be devised, and has practiced such in a limited way, of which I will speak farther on. True, crops might be somewhat further increased. With me it takes stores to winter bees. I think it better to put them in with 50 pounds than less. My experience shows that a vigorous queen with heavy stores will send out an early and large swarm. Scrimping in stores is pennywise and pound foolish. One cannot get bees without honey or its equivalent, or honey without bees and thousands of them. Take, for instance, a new swarm that fills the hive and a cap also; give them frames and material, and note what they will do for you. We read of the wiseacres back East who winter on 25 pounds and come out with spring dwindle. Starvation in the beehive will never pay. A fat, well-fed bee "is a thing of beauty and joy forever," and full of business at both ends.

Holding down the increase works to larger yield of honey. We have succeeded well when there is much swarming fever and consequent after swarms, etc., by cutting cells and doubling up somewhat as follows: "A colony which has cast a swarm will work well until about the fifth or seventh day, when it will cast another. This will usually come forth and unite in the air or cluster with another. The virgin queen is of course lost (but we are not now figuring for increase), and they unite with the old queen. The after-swarm calamity does not trouble the writer, though it is best not to allow further depletion. Going through, we cut all cells, and as at this time they have no brood suitable to build others, the fever is broken. Unite now two or more of the swarms thus treated and move them where you like. Give a hatching queen cell after a few days, and you have a No. 1 swarm for business. At this season, all know, bees are easily manipulated. If they don't work just where I plan for them, why I twist my plan to suit them. What matters it, so long as they work. I have read about going out to smoke them into work, which is of course bosh. A bee is no idler and will ever work if his conditions are right; if not, you have to find where the hitch is, which often keeps one's thinking-cap on the jump if there are swarms coming at the rate of a dozen per day.

The point in regard to building of combs is well taken. In the writer's opinion, it pays to make wax; that is, to a certain extent. Our best success in hiving swarms has been on starters in hives and frames of second or third use. The smell of wax and former occupation appeals to home-seeking instinct of the bee. Here she finds ready use for her load of honey and wax. It is customary for me to let them work on a full set of starters until the queen begins to lay. If, then, there is a supply of old comb, to hasten matters, put in each day empty combs below, but never a full cap of combs, until all are drawn out below, unless over a queen excluder. Experience teaches that bees require to build a certain amount of comb to get the best results.

It is also better in this valley, and I believe elsewhere, to allow capping, as you get a certain finish which renders the house more healthful and gives it better keeping qualities. Your correspondent is in error as regards throwing out unsealed honey, as he will find probably by testing that such honey candies more rapidly, is not as clear and has an acid taste in the throat and mouth. After the first extraction, repairs upon comb and drawing out utilizes wax, hence it is not necessary to build the new as he suggests; still, one might do so if combs are needed. It would never pay me to raise a cap to keep comb-building going on below. Here the writer departs from nature, as the swarm does not seek to renew its brood comb, but rather only to extend for storage.

In contracting after harvest, I unqueen such as are not desired and unite bees, extract and melt comb. It is a nice plan to take a lot of queenless swarms and unite several on a frame of brood; all the bees will take the new location and stay with the brood, and generally hatch a new queen which will do good work the coming season. To preserve surplus combs, it has been found in this location that bees will take care of and keep the moths out of a tier several caps high. We have some now two high. This, of course, would not apply to a cold location. Thus it will be seen a limited expanding is had by fostering the best swarms, and contracting by culling the poor after harvest, also at the same time renovating your stock of combs.

The correspondents whom I have criticised should see that it is only in the kindly spirit, and for the purpose of provoking discussion. We hope to say something upon hives, especially patent hives, ventilation, etc., in the future.

W. A. WEBSTER.

The Home Circle.

Three Days.

Written for the RURAL PRESS by ISABEL DARLING.

We had questioned the deep, winding canyon,
Its innermost secrets to learn;
We had challenged the stoical boulder
And peeped in the tangles of fern.

In the dim, haunted aisles of the redwoods
The vines were ashiver with fright,
And the oak trees were climbing the hillside
Away from the specter of night.

The madronas were idly disrobing,
And the pines droned a chant of despair
As the thickets of slumberous laurel
With memories burdened the air.

We had followed the hurrying waters
Beyond where all-foaming they dashed,
With a whirl, on the rock, in their fury,
Then fawned at our feet, as abashed,

They had shuddered and sobbed to the mosses
Their story of struggle and fret,
Of the long-ago peace of the hilltop,
The rush, the recoil, the regret—

Still beyond, till they curved to the westward,
And leaped, with a frolicsome bound,
To the valley, and sunshine, and freedom,
With fluttering rainbows encrowned.

Then we turned, and the shadowy canyon
With color and warmth was alight;
All the redwood and pines were awaking
From dreams of the far away height.

The madrona leaves quivered with rapture,
The oaks spread their arms to the breeze
That paused by the thickets of laurel
To whisper of birds and of bees;

And below, on the island that nestled
Close under the silvery spray,
Stood a holly bush, crimson with berries,
Aglow with the glory of day!

* * * * * *

We had traversed the darkened alley
That sulked in the rear of the street,
And the dust of the way was upon us,
The throb of its wearisome heat.

All the idle, the vicious, the wicked
That cumbered the earth, so we said,
Had been huddled like venomous reptiles
Where misery flourished and spread.

But at last came a glory of sunshine
That scorched us no more with its heat,
For it brought from the generous ocean
A blessing to lay at our feet.

And we saw in the shimmering brightness,
A child with a tangle of hair
All a fluff of red gold on her shoulders,
And tiny feet dusty and bare.

She was and was not of the alley,
For out through the blue of her eyes
Her soul seemed to reach, in its kinship,
The beauty of ocean and skies.

And the wretchedness softened about her,
The sullen grew tenderly sad—
We thanked the dear child of the alley,
Then passed on our way and were glad.

* * * * * *

And again, as we lingered at evening—
The mystical evening of death—
And awaited in pitying silence
The floating away of a breath,

In the glow of the spirit, transfigured,
We saw the still form where it lay;
Then we knew 'twas not death, but transition,
A passing from twilight to day.

So, forever, we trust, and forever,
Though rough and uncertain our ways,
We shall come to the beauty and sunshine,
Somewhere, at the end of our days.

Fashion on the Farm.

"Mind, Elvie," called out Mrs. Serle, from the east porch, "get the darkest gingham you can find for the aprons."

"And some dark-colored ribbon for the hats," cried Cousin Kate, from the garden where she was pulling huge stalks of pie-plant for a batter pudding.

Elvie chirruped to old Fan, who trotted briskly along the prairie-road bordered by richly-growing acres of grain. Now and then a "high grade" was edged by long ditches full of clear, shining, rippling water, where young, yellow goslings were taking a morning bath, while the sloughs, filled with water after the late rains, showed fluttering plants above them and sun-sparkles on the tiny waves.

"O, what a fresh, inspiring morning!" exclaimed Elvie, aloud. "There's a white convolvulus! and a lovely pink wild-rose right under Fan's feet!"

She looked down at the bed of dead white bells among the fresh greenness and smiled at the bright-eyed daisies and the myriad creamy, syringa-like blossoms thickly strewn over the low land. Here and there shone a tiny golden star flower, while little clusters of [illegible] blue blossoms, with ferny leaves, grew close to the ground, half-hidden by the grass.

"So sweet after the rain!" said Elvie again. "How blessed it is that the Creator did not make them dark-colored, as I really believe mother and Kate would have done! They would not have taken pains to fringe those lovely daisies, nor shape the yellow stars either; they'd have given them the plainest shape possible—a shape which would have been of some real use! I'm tired of the way we dress! I never realized what homely, humdrum creatures we are in that particular until I saw Flo Darling's magazines yesterday. It's strange how they will fuss over cake-icing, meringues and the notches 'round cooky edges; how they will spend time in ornamenting pies and glazing biscuits and garnishing meats, while they ignore the little prettinesses of dress, whatever tends toward style or elegance in every-day wear. They? I must say we, for I've been doing the same thing. But I'm going to astonish them! I'm going to change my manner of dressing this very week!" She nodded decisively toward an aspiring sunflower stalk beside a heap of glittering bowlders.

"Those nicely dressed figures, those dainty aprons and hats and ties, flit before my mind all the time, ever since Flo unfolded their delights to my eyes. I am going to try to make an improvement in my wardrobe. Maybe Kate will consent to do so, too. I don't see, because a girl is a farmer's daughter, why she should wear old-fashioned, ugly clothes even about her work!"

So Elvie rode on among summer pleasures of sight and sound until she reached the little town where the windows of the "general store" displayed a goodly variety of the things usually pleasing to the feminine eye.

The eggs, poultry and butter were exchanged for the articles decided upon in family conclave, excepting Elvie's share of apron gingham, which she chose in blue and white instead of the "darkest," and two yards of handsome plaid ribbon instead of four of dark brown. She stopped at Flo Darling's to see the magazines on her return, and reveled for the rest of the ride in plans for remodeling her few gowns and other garments.

Visitors were at the farm when Elvie reached home, and the matter of entertaining left no time for anything else until late in the afternoon, when the trio sat in the kitchen resting before supper-time.

"I've been thinking," said Elvie, trying to speak boldly and cheerfully, "that we ought to pay a little more attention to our dress. It makes one more pleasing to look upon, and so adds to one's influence for good. We always make our work aprons so big and clumsy, and never trim them any, when we might as well look nice about our work as at any other time. And our hats, Kate! I bought some of this pretty ribbon, which I thought we might mix with the brown and put on in this fashion," and she deftly twisted it into some graceful loops.

Mrs. Serle's face grew sober. "We can't follow the fashions, Elvie. 'Tisn't possible when a body lives on a farm 'n' has work takin' up the mind from mornin' till night. The women that live in towns 'n' have nothin' else to do but dress up 'n' go visitin' can afford to have things fine 'n' fancy; but here we must have things plain 'n' serviceable, without any flyaway fixin's. You'll get a husband just as quick dressed as you always are, as if you rigged up like one of them fashion women."

"I never would have thought," chimed in Cousin Kate, who was a year older than Elvie, "that your head could be so easily turned with those foolish pictures! If you want to put flashy ribbon piled up in front on your hat, you may have it all; but I shall trim mine severely plain, as I always have. I do like neatness, plainness, and serviceableness in dress. There's that Flo; ever since she's been taking those books, she's been going round mornings with a white frill round her neck! 'Cats in gloves catch no mice,' I say. A body can't do housework faithfully, trimmed up in collars and cuffs and frilled aprons. And we'll get as good husbands, and better, as aunt says, by being snug and plain."

"Well, Katie, I don't believe all you have said, though you are sincere; and I mean to be as pretty and attractive in my way of dressing as it is in my power to be. You don't object to my doing my work with a collar on, do you, mother, providing I do it as thoroughly as without one?" Elvie looked eagerly at her mother.

"No, child. I'm willing you should fix up all you want to, so long as you don't neglect your duty; but there's somethin' more than living for fashion."

"Certainly, mother dear. I don't wish to make dress the aim of my life, but I want to practice what I lately have been led to believe: that as God has made things in nature for mere ornament, and to please our eyes, so we should not neglect pure ornamentation in personal appearance as well as in our manners. You smile beautifully, Kate, when you talk to people; why don't you keep your lips severely shut? You put peacock's feathers in the mantel vases, you make a paste tulip in the middle of the chicken pie; yet you refuse to let your garments smile or show a gay ribbon."

"Oh, fie!" cried Kate, going to the window. "By the by, did you hear the Langtons say that we are to have new neighbors over on the Fairmont farm?"

"Yes, two brothers, bachelors, by the name of Irwin, from the East. That's more than the Langtons told; I heard all about them at Farley's this morning. I hope they will soon marry; it would be so agreeable to have neighbors only a quarter of a mile off! Oh, Kate! when one of them sees you smile—"

"Fie! fie!" cried Kate again, while Elvie gathered her gingham and ribbon and tripped upstairs to her bedroom.

Next morning, a blond-haired maiden moved about the large kitchen with a soft, white ruffle about the neck of her calico gown, and her hair arranged in a new and becoming style. A couple of days after, she had on her new apron, daintily made with a bib and wide, long strings, and the edge trimmed with knitted lace. When there was scullery work to be done, a large apron, made from the back breadths of an old gown, was put on until such work was finished.

Kate looked severely askance at these innovations, as with brown, collarless basque, and ugly, print apron gathered full into a wide band buttoned about her waist, she starched, ironed, and cooked the nice dishes she delighted to adorn. Elvie's eyes were full of new joy as she contrived coquettish little bows and charming cheese-cloth aprons, sewed rosettes on her morning slippers, and even evoked a tea-gown out of two old cashmere wrappers that had long lain in oblivion.

"Such an enjoyable variety!" she said to herself. "It spices up the routine of paring and stirring and mending."

"You look nice, daughter," Mrs. Serle would say; "but it's useless frippery, after all."

"So much washing and ironing that is really needless!" Kate would chime in. "White aprons and frills and light dresses!"

"But I'd as lief wash and iron laces and frills for myself as for the spare-room pillow-cases," Elvie would answer, "and I do believe one feels in a more Christian like frame of mind when one is prettily and becoming ly dressed, than when one is not. I know I do."

"Girls," called Farmer Serle, one morning, "the Irwins are coming over to get supper and play croky. I saw them in town, and asked them."

"O!" exclaimed Elvie, "how fortunate that Flo Darling is coming to-day to help me with my jacket for the picnic! Won't we have a gay time, Kitty?"

"Yes, I must go to work at once and make a chocolate cake. We've only one kind, hardly suitable when strangers are coming. How you do fuss over jackets and things! My shawl has done me for three summers and will last three more."

"O Kit!" Elvie's eyes shone. "Do let another cake alone and let me fluff your pretty hair and fix you a dear little jabot for your brown sateen. The Irwin's would give more to have a well-dressed young lady sit down and chat with them than to eat two kinds of cake—even your pet forte, chocolate!"

"Tut! Nell. A man's heart is in his stomach! He doesn't care how a woman dresses if she's neat and clean. Don't think of prinking me up with your furbelows. You may dress and talk to the young gentlemen; I'll make a cake that will fairly enchant them!"

"But I made some rolls and floating island just as enchanting? Can't one make goodies and look nice, too? I'd like to know why one cannot do both equally well."

When Horace and Frank Irwin met the young ladies that afternoon, they noted with wonder and amusement the difference in the toilets of the fair damsels. Flora and Elvie were pretty in dainty lawn gowns with waves of lace about corsage and sleeves, and blue ribbons tied about their white throats, while Kate welcomed the strangers in an ungraceful attire of brown sateen, the bodice unrelieved by trimming of any kind, the neckband fastened with a black pin, and her full, long, kitchen apron, of dark calico, buttoned around her.

"She's really good-looking, and would make a fine appearance if she would pay more attention to dress," thought Frank. "Why doesn't she toss up her hair into pretty little curls as the others have done, instead of combing it down in that grandmotherly way?"

There was not much difference between the girls in the matter of attention to the comfort of the guests, so the latter noticed, but there was a nameless grace and winsomeness about the pair in the dainty muslins that the other certainly lacked, and that made them very attractive to the young farmers. After the well-ordered supper and the fascinating "croky" were over, and the Irwins walked home to their lonely house on the rich, beautiful prairie, around whose door grew the wild rose and the flaming scarlet lily, they talked of the trio with whom they had just spent three pleasant hours.

"That Miss Kate is a fine housekeeper, Frank," said Horace, "just the one to keep your quarters trim, if I might judge from my observation of her this afternoon. Not at all like the others is she?"

"No, to be sure! When I marry, Horace, it will not be a girl of her appearance. I prefer one one of the others."

"Pshaw, Frank! A farmer needs a steady, plain worker, not a butterfly, for a wife."

"Look here, boy!" laughed Frank, "we can scrub and keep the house clean and snug and all that, and we can make a dummy and dress it in a gown and apron, but a fellow wants more than plainness and substantialness to make his home a paradise. It needs the little airy graces and motions, the pretty dresses, and curls and ribbons, the thousand little femenine nothingness that you can't define, yet which you enjoy so much. And mind, old boy! those two pretty girls can keep house as well as the ill-dressed one, if my observations amounted to anything! And I know you think the same as I do, by the way you were looking at that lovely Miss Darling."

Horace reddened. "I—I couldn't help admiring that cute white apron which she wore, and the roses at her waist. To be truthful, I do agree with you, Frank, and hope that the Fates may kindly place the fair ladies in our homes, when our hands have done all that men's hands can do toward the home-making. You certainly seemed interested in Elvie Serle, so I know you will say 'Amen' to my speech. Yes, I believe that girls who are nice about their personal appearance will be nice in housekeeping and everything else!"

The Fates were kind, and in due time placed Elvie and Flora in the fine double farmhouse. Usefulness and beauty go side by side through every department of their homes. "If fashion is needed anywhere," Elvie still says, "it is needed on the farm."

And Kate remains Miss Kate, whose pleasant smile is no antidote to the unattractiveness of her apparel; and she still descants on the weakness of women who "follow the fashions."—Demorest's Magazine.

Brother Hardesty Refuses.

Trustee—Brother Hardesty, how much are you going to give for the support of the church this year?

Farmer Hardesty—Nothin'.

"Haven't you had good crops this season?"

"Yes; purty good."

"Had any sickness in your family?"

"No."

"Lost any of your livestock?"

"No."

"Has anything disastrous happened to your barns or farming implements?"

"Nothin'."

"Then it strikes me, Brother Hardesty, you are not showing a proper spirit of thankfulness for the prosperity that has——"

"Prosperity? Say, we've had the cholera scare, hain't we?"

"Yes, but the pestilence has not come, and that is all the more reason why you should——"

"Hasn't come? I'm not talking about the cholera. I'm talking about the scare. See that 14-acre field over yander?"

"Yes."

"Well, I planted it in cowcumbers for the New York market. Fourteen acres o' cowcumbers! An' they ain't wuth pickin'? That's what ails me this year, Brother Ashcraft. I hain't got no grudge, but I don't feel under no obligations, by gum!"

CLERK (of furnishing store)—Is there anything else, madam, that you would like to get for your husband, to-day?

Mrs. Bingo—No, I believe not. By the way, when you send the package home, be sure and have the pajamas done up separately. If you don't, he will get the idea in his head they are for him.

Vanity and Egotism.

Written for the RURAL PRESS by MAID-OF-ALL-WORK.

Some very original eastern writer has said that a woman without vanity is a monstrosity in nature. Call to mind, if you can, the fleeting glances you may have had of faces of sisters of charity, or the faces of some modern protestant sisters or deaconesses, who have been trained to be what they are, or look at the photographs of some young women who have long devoted themselves to study; think of these countenances and you will be conscious of something lacking in them all.

There is something lacking in the photograph of this devout deaconess, I hold in my hand, that gives me a bit of a heartache. She has prayed for "all of thee," and none of self, asking that the nature that God pronounced good should be set aside till something has gone out of her leaving its vacancy.

It seems to me that a woman who has not self-love enough to be natural, ceases, in a measure, to be attractive to others, and thus averts some of the good she might do. Those who are kept warm and strong by the play of the natural affections (and this includes loving to be loved) are in a far richer condition to give light and comfort than those who know no human love and joy.

An elevated spiritual condition is not enough; the heart should be happy as well as holy. Self-sacrifice in temporal things creates its own reward, but to stint love and happiness out of the heart, fancying that it will be more holy, is to quench the fire that would warm many a cold life. A barren and joyless spirit moves with a chill that is felt as it passes. To teach happiness, first live it.

Be vain enough, dear zealot, to know that you deserve friendship, love, happiness, joy, and the hands that carry ministrations will be warm and thrilling. If the natural, pure emotions of humanity exist in your heart, all the great deeds you would do will be easier done, and done closer to the will of the great human heart of God. The vanity I speak of is to hold yourself worthy of the joys of life, and being worthy, to get them.

The woman without vanity suggests the man without egotism, who is not a safe leader to follow. To feel that you can win the battle is the battle half won, and to feel that you will lose is the battle half lost. You must feel that you can do, in order to command the determination that is necessary to action.

We are sometimes annoyed by the bores, who are trying to do things in which they will never succeed; but what if the world were full of people who would not do things they might as well do. Indeed, there are more of them already than of the first class.

Egotism is commonly named as a too exalted opinion of oneself. Must we not have that in order to drag ourselves to higher points of endeavor? One must look up in order to get up, and reach in order to rise. The man who never does this is a block on the family and social wheel.

Humility after success is becoming, but humility before endeavor is the block on all the moral reforms of the times. The man who holds his head high and straight like a fast horse is the man who dares, and dares well.

If the woman of sweet and wise vanity rounds out the life of the man with sufficient egotism, and helps him to use it well, then the world will move very well for them, and for those who love and imitate them.

As Pronounced.

Written for the RURAL PRESS by A. E. T.

I live near the Pacific. Across the continent from the Atlantic coast once came to me the story of an old salt, who, on seeing in New York harbor a yacht named Psyche, remarked he "never saw 'fish' spelt that way."

I can match the story now with one I think as good (and I know is true) from the Pacific coast.

In a certain California town, a few miles from the ocean, lives a merchant, whose favorite recreation is fishing on "the banks," a few miles out to sea. For this he brought himself a pretty little "clinker" boat. This he named after his little daughter. So, painted on each side of its prow, may be read the bold, many-colored letters XARIFA. This rather unusual name, some may remember, occurs in a Spanish song, quite a favorite 40 or 50 years ago, and beginning

"Arise, arise, Xarifa,
And lay your golden cushion down," etc.

Well, one day when this merchant was starting out in his boat, an old party fishing off the wharf near by stared hard at the little craft, then, rolling his quid to the other side of his cheek, said:

"Well, I never saw Africa spelt that-a-way before!"

But funnier still, some of us think, is a remark made by this same little girl the other morning at the breakfast-table.

Her papa takes *Puck*. The little girl is as eager as any one to get hold of the paper each Saturday "to look at the pictures." No one knew how much she read in it till this time I speak of. Her elders were saying something about Munkiltrick's Arabian Nights, when up spoke the little girl:

"I'm reading the Conscientious Plunderer, too."

"The what?" and her big brother turned upon her, while every one listened to see if they had heard aright.

"Why, the Conscientious Plunderer—that story has so many unc——"

And then Xarifa stared in round-eyed amazement at the shout of laughter which went round the board.

"O—h!" cried the big brother, as he wiped his eyes, "Plumber—Plunderer—pretty good."

YOUNG FOLKS' COLUMN.

A Boarding-School Frolic.

"Girls, we're going to have such fun!" said Ida Colton. "Nell Evans has invited us all to Evansdale to a masquerade party—and you're to select your costumes at once!"

There was a universal outcry of joy at this pronunciamento, which was shouted in the sweetest of silvery sopranos from the top of a desk. Mme. Morini's young ladies were enjoying their noon recess on this bright glittering February day, and every one knows what a noise 20 school girls can make if they choose.

"A masquerade!" said Marian Hampshire. "How delightful!"

"Can we select any dress we please?" said beautiful Mirian Holley.

"Would it be *selon les regles* to go without any especial dress, if one has a fresh white muslin?" timidly asked Alice Appleton, whose mother was poor, and who earned her own board and tuition by giving lessons to the smaller girls.

"Will madame consent?" breathlessly questioned Louise Hayward.

"Madame will consent to anything that Nell Evans chooses to ask," triumphantly announced Ida Colton. "Nell was one of madame's graduates, you know, and a pattern damsel in all respects, and if Nell were to request that we should all attend her masquerade costumed in pink tinsel and walking on our heads, madame would say, 'Quite right, my dear, a very sensible idea of yours. I shall be delighted to have my young ladies go.'"

There was a general laugh at this, and then came the joyful task of selecting personalities, studying up the costumes in old engravings and antique fashion-plates, and turning over the combined stores of the whole school in sash ribbons, artificial flowers, jewels and plumes; for, although the graduating class, which alone was invited, consisted of only eight young ladies, the interest concerning Miss Evan's masquerade party was disseminated through the whole school in no measured degree.

And Alice Appleton's gentle heart in particular beat with innocent anticipation, for she had sometimes fancied that Capt. Hugo Evans, the brother of the pretty hostess, had looked upon her with a tenderer glance than he vouchsafed to the other young ladies of his acquaintance. To be sure she had no party dress, but the individuality suggested by Mirian Holley; "A Snow-flake," would be sufficiently interpreted by her simple muslin gown, with a few of the starry-white flowers of the Catalonian jasmine in her hair.

"But you're not going to let those girls go alone," said Miss Polly Prout, who was Mme. Morini's cousin, housekeeper and chief counsellor.

"Certainly I am," said Mme. Morini. "Why should I not?" It is only to dear Nell's house."

"It wouldn't be at all proper," said Miss Polly, pursing up her thin lips, and the hearts of the eight young girls sunk simultaneously into their boots. "Such a party of giddy girls with no responsible companions! Mme. Morini, I wonder at you! It would not be allowable, unless, indeed—"

"Unless what?" said Mme. Morini, and the eight lassies listened breathlessly for Miss Polly Prout's reply.

"Unless I am to go, too, as their chaperone!" said Miss Polly.

"Oh, that wouldn't be according to etiquette!" cried the girls in chorus. "Nell didn't invite Miss Polly Prout."

"Will you be silent, young ladies?" said Miss Polly, rapping on the desk with a wooden ruler, in a sort of autocratic way of hers which the girls especially disliked. "Mme. Morini certainly cannot have given the matter due consideration, or else she would at one perceive the impropriety of the original plan!"

And Mme. Morini, who was an amiable, easy-going lady, governed in most matters by her cousin's energetic will, finally gave way and announced her conviction that Miss Polly Prout was right.

"I can put on my green gown and a tin-foil covered helmet, and go as Minerva," said Miss Polly Prout; "and then I can keep my eyes on the young ladies the whole time."

"What have we done that a spy should be set upon our actions?" said Ida Colton, indignantly, when they were by themselves.

"Minerva, indeed!" cried Marion Hampshire, with a protrusion of her plump chin and screwing of her cherry mouth so exactly in imitation of Miss Polly Prout that all the girls burst at once into a spasmodic giggle.

"Hateful, forward thing!" sputtered Louise Hayward. "Why, she'll spoil every bit of our fun!"

"How dare she obtrude herself, uninvited, upon poor Nell Evans?" said Mirian Holley.

"She shan't come," said laughing Kate Kesley. "She shall never cross Nell's threshold."

"But how will you help it?" said Alice Appleton.

"We'll see!" was Katie's emphatic answer.

The next week was a week of glad preparation for the forthcoming event, and no one was more diffcult to please, or more exacting in her selection of materials, and her ceaseless calls upon the aid of the young ladies, than Miss Polly Prout, who ordered a new "bang" of glossy chestnut hair for the occasion, which would have been quite perfect if it had matched her back braids a little more exactly, and had a pair of green-satin sandals made by the village shoemaker, and a mosquito-pole gilded to represent a spear by the picture-frame dealer.

"One likes to observe all the niceties," said Miss Polly, while in her middle-aged mind rose up the delusive idea that perhaps some mature masquerader of the opposite sex might perceive in her some greater attraction than the youthful roses and girlish graces of the eight graduating girls.

"Stranger things have happened," complacently thought Miss Polly, as she stitched away at the satin rosettes which were to modernize her green gown!

But in spite of all her precautions, the first sleigh-load of laughing girls started without her, while she was tying her fur hood over the tinfoil helmet.

"What! gone already?" said Miss Prout, angrily. "Why didn't they wait? What right had they to go off without notifying me?"

"Don't mind, Polly," said Mme. Morini, soothingly. "Eight was all the sleigh could carry besides the driver. Michael says his orders were to bring the cutter for you."

"Orders!" shrilly repeated Miss Polly. "But whose orders? Does Kate Kesley manage this institution, or do I—and you? Me crowd into a cutter, indeed—with a staring Irish lad like Michael to drive! A pretty arrangement."

But in spite of her indignation, Miss Polly Prout was compelled finally to accede to the obnoxious plan.

"Drive quickly, Michael," she said to her young Jehu, "for it's getting dark already, and I don't at all like the woods that we have to go through. Why on earth those girls couldn't have waited—"

But the jingle of the sleigh-bells and the sudden start of the horse brought Miss Prout's sentence to an untimely termination, and away they went over the frozen road.

Not far, however. Just within the darksome limits of the cedar woods, where the purple dusk that still lingered in the open fields seemed turned to the gloom of absolute night, a tall, white figure, with a black mask covering its face, stepped forward and seized the horse's head, while, partially hidden by the drooping evergreen boughs, a little group of other figures lingered.

"Burglars!" shrieked Miss Polly Prout, dropping Minerva's gilded spear into the snow. "Assassins! Masked robbers! O, kind gentlemen, spare, spare my life, and all my jewelry is yours!"

And tearing her gold-plated bracelets from her wrists, she flung them and her watch into the road.

"Arrah, the saints betune us and all harrum!" squeaked Mickey, the Irish lad, as he cowered down in the bottom of the sleigh.

"Descend—and depart!" uttered a deep voice. "Look behind at your peril!"

"Wh—where shall we go?" stuttered Mickey.

"To the place whence you came," was the stern reply. "And at the risk of your lives be speedy and secret!"

As Miss Polly stumbled, more dead than alive, out of the cutter, she was turned briskly around by the shoulders, so that she was facing the winding road by which they had come, while Mickey found himself spinning, around and around, a few steps further on like a teetotum.

"Depart," once more uttered the warning voice, and Miss Prout and Mickey, clinging wildly to each other plodded away in an agony of terror.

Half an hour afterward the luckless pair arrived, half frozen and worn out with fatigue at the Morini Institute with a gruesome tale of having been arrested by masked robbers and having escaped by the most marvelous good luck from being murdered outright. The gardener and two men from a neighboring farmhouse were at once detailed in pursuit of the robbers, but when they reached the scene of action all that they found was old Dobbin shivering by the roadside with the cutter turned over on its side where he had dragged it into the deep snow.

The eight young ladies, however, enjoyed a most delightful evening at Evansdale, quite free from Miss Polly Prout's malevolent supervision, and, strange to say, expressed no sort of surprise at her nonappearance on the scene. But they took care to leave behind them at Evansdale eight black satin masks and eight white sheets, when they once more entered the double-sleigh to return home.

Miss Polly Prout transformed herself into a heroine next day as she related her adventures.

"And so you weren't stopped?" said she to the girls. "Not even molested?"—Well, well, how very singular! I really think if we hadn't made such a brave resistance I should be carried away by main force—a regular abduction you know," and Miss Polly simpered.

"How many ruffians were there?" innocently questioned Kate Kesley.

"Fifty, at least," said Miss Polly. "Great, coarse, bearded villains, with their eyes covered by masks."

"Dear, dear, how dreadful!" cried Ida Colton.

And the eight young conspirators looked archly at each other, as Miss Polly Prout hurried off to check the washerwoman's bill, and cried in laughing chorus:

"What a very romantic adventure! And what a very narrow escape for poor, Miss Polly Prout!"

"I TELL YOU," said the calamity orator, eloquently, "our conditions under the reignin' party is bad enough and they're gettin' worse every year."

"That's right," interrupted a sympathetic voice in the audience; "you ought to a seen the rust in my wheat this fall."

MARCH—When you visited the museum to-day did you see the instruments of torture that are on exhibition?

Hearwell—Yes, but the display is incomplete.

March—What does it lack?

Hearwell—A boarding-house piano.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

ROYAL BAKING POWDER CO., 106 Wall St., N. Y.

AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

THERMALITO OLIVES. — Oroville *Mercury*: Messrs. Jones and Fogg had at the Rideout bank to-day a jar of olives that were picked last week from their fine grove at Thermalito and pickled by Mrs. A. F. Jones. They kindly invited their friends to sample the same and pass upon their merits, and an epicure could not have discovered any fault in their flavor. They were rich in oil, of large size, and the bitter taste was entirely removed. They are fully the equal if not superior to the finest imported article. Although very young, a conservative estimate places the output of the grove this year at 1000 gallons, all of which will be converted into pickles. The pickling of the fruit is now going on. The grove is the property of Messrs. Jones, Fogg and McLaughlin, and the gentlemen expect to make a creditable exhibit of its products at the World's Fair.

Fresno.

MONEY IN FIGS.—Fresno *Expositor:* B. F. Lawson has come to the conclusion that it pays to dry figs and market them. He has a good many trees on his place for shade and ornament, but he did not think it worth while to bother with gathering the figs. One day an agent for a packing-house came along and asked Mr. Lawson why he didn't gather his figs. Mr. Lawson replied that he didn't consider them worth bothering with. The agent said he would give four cents a pound for them. Mr. Lawson said he didn't care to bother with them, but told his two girls that they might have all they could gather. The girls worked at gathering the figs occasionally and at odd times, and placing them on trays. The other day Mr. Lawson brought the figs to town and was surprised when he was handed a $92 check to pay for them. Mr. Lawson is now of the opinion that it will pay to gather his figs another season.

CURING SECOND-CROP RAISINS. — *Expositor:* Herman Meyer, a vineyardist living a few miles east of this city, has a new kind of raisin drier, which, for cheapness and efficiency of work, he con iders the best he has ever seen. The drier is small, being only 12x20 feet. He is using it this season for the first time, and so far it has proved itself to be a good arrangement by which to dry raisins. Mr. Meyer calls it his portable drier, on account of it being so easily moved from one portion of the vineyard to the other. The drier consists simply of a close tent stretched on the ground and in which the trays containing the grapes are stacked. The heat from the small furnace outside is conveyed to the tent, around through it and back out in an ordinary stovepipe. On the outside the pipe rises into the air so as to furnish the draft. The entire cost of such a drier need not be over $75. Mr. Meyer puts grapes in the drier only after they have been turned. The capacity of the drier is two and one-half tons. Three-fourths of a cord of wood will dry one drier full of turned grapes. Mr. Meyer now has all of his second crop of grapes about ready for market. During the day the sun shining on the tent helps to heat the drier, and also the light going through the canvas has the effect of giving the raisins the right color. During the night the drier is heated to about 95 degrees, and during the day from 100 to 125 degrees. Mr. Meyer thinks that for a small vineyard his experimental drier cannot be surpassed. He thinks that large vineyards could, by having several of them, use them to good advantage around through the vineyard.

Inyo.

LOOK OUT FOR FOXTAIL.—Ed. M. Clarke, veterinary surgeon, in Bishop *Register*: I wish to make known to the public the great danger in feeding or pasturing stock on the grass commonly known as "foxtail" when ripe or after the beards have well formed. A few days ago I held an autopsy on a horse that had been ailing for some time past, becoming more and more debilitated, having partially lost the power of deglutition, and presenting well-marked symptoms of pharyngitis, with other complications. On post mortem examination, found that the beards, and even the semi-masticated heads, of foxtail had passed through the soft palate in great numbers, giving it a perforated or sieve-like appearance. From this the inflammation had spread both forward and back, implicating the posterior nares, nasal septum and sinuses posteriorly, and larynx, trachea and pharynx. Beards could also be found in the mucus and muscular coats of the entire alimentary track, in which some had become encysted, while others had caused the formation of small abscesses.

Los Angeles.

PEANUTS BETWEEN TREES. — Cor. Pomona *Progress:* In growing an orchard there is scarcely any one who would not like to utilize the ground between the rows of young trees in planting some crop that will pay, or partly pay, the expense of cultivating and taking care of the orchard. During the long time that I have been engaged in horticulture, my experience has shown me that certain kinds of crops grown between the rows of trees are detrimental to the growth of a young orchard, while others do not seem to hurt the young trees. To enumerate those crops that are detrimental, I will mention corn, wheat, barley and oats. Those crops that do not seem to hurt the young orchard are potatoes, beans, peas, melons, tomatoes, pumpkins and peanuts. Of all these food products, of which our rich soil is so generous in its yield, I have found it scarcely pays the trouble to raise them, on account of our distance from a large market, excepting the one article of peanuts. The yield of this article in our wonderfully productive soil and glorious climate is simply phenomenal. I venture the statement that they will return $75 per acre at four cents per pound—they are worth more than that now in San Francisco. In order to raise them on a somewhat large scale, machinery for planting and cultivating them must be introduced here from the peanut-growing districts of Tennessee and Virginia. The same care that would be given to potatoes or beans in cultivation will answer for the "goober."

POINTS ABOUT SUGAR BEET CULTURE.—L. A. *Express:* A. H. Denker, the well-known rancher, received a letter from Frank de Coninck, a San Francisco chemist. The writer says: "I take pleasure in giving you my opinion about the country located between Los Angeles and Santa Monica, through which you drove me, as to the adaptability of the lands for raisng sugar beets. Except a few low and swampy lands the whole country is perfectly adapted to sugar beet-raising and by selecting judiciously the seeds, you may rely upon crops starting with a yield of 15 tons to the acre, which by proper cultivation may be progressively increased up to 25 tons and even more. As to the probable contents of sugar therein, our California climate is the best on earth for devel ping sugar in vegetables and fruits and you may be confident that the same European seed sown in your lands will always produce beets containing 2, 3 and 4 per cent sugar more than they do in Europe. I would only advise you to be cautious at the start about deep-plowing, which, although desirable and necessary, ought to be gained progressively in order not to expose the results of the first beet crop and to proceed as follows: Before winter sets in, that is to say, as soon as rain sets in, or before, it does not matter, plow your fields only two or three inches more than you do usually, but subsoil the same at about 20 inches and leave them so until the time of sowing is reached. Then plow a second time at four inches deep, more is unnecessary, and have soil three or four inches well, evenly and finely harrowed and pulverized. This in order to allow the air to enter and facilitate germinating and the swelling of the seeds. When your land is well-prepared, there must be no time lost, and the sowing must follow immediately. A good distance between the rows is 18 inches apart and the depth is ½ to 1 inch deep. If your drill doesn't sow and roll the surface at the same time, it is needless to roll the land over after sowing. Remember that uncovered seed does not cause so much damage as seed covered too much. When there is moistu e enough in the fields the seed sprouts in eight or ten days, but whatever may be the time the seed needs to germinate. When the plants have grown enough to see distinctly their rows, the first hoeing must be done and the sooner the better. A general good distance for leaving beets in the rows is seven inches apart from each other. Said distance may be lessened or increased according to the composition of lands. This done, horse or hand cultivation must follow, and the oftener lands are hoed the better will be the crop as to quantity and quality; because to develop beets in both weight and sugar, loosened soil, moisture, sun and air are necessary. By plowing your fields 2 or 3 inches deeper every year you will in a few years have the same in perfect shape for cropping a large tonnage to the acre."

A LARGE TRAIN LOADED WITH WALNUTS.—Anaheim *Gazette*: A special train, consisting of 26 boxcars, loaded with English walnuts, left Los Angeles Oct. 22d for the East, via the Santa Fe road. Nearly 20,000 pounds of walnuts were placed in each car, and the estimated value of each carload is about $1600. This is the first train of this character which has been shipped across the continent, and the occasion is an interesting one to shippers of California products. The nuts are the product of the Los Nietos Walnut Association. The entire train was photographed before it started on its transcontinental journey. The cargo will be distributed among the various large cities in the East. The walnut crop of Orange county will amount to $75,000, of which Anaheim and the country tributary produce nearly if not quite one-third.

Napa.

A SUCCESSFUL ORCHARDIST.—Napa *Register:* One of the most successful orchardists in this vicinity is S. M. Tool, whose 70-acre place is half a mile west of Union station. He is just now completing a fruit drying-house, 20x26 feet in size and two stories high. In this building he has placed an American evaporator, the hot air for which is furnished by two furnaces, in which either wood or coal can be used. The capacity of the evaporator is five tons of fruit for every 24 hours. When asked how much fruit he had handled from his own orchard this year, Mr. Tool gave these figures: Bartlett pears, 9600 (50-lb.) boxes; other varieties of pears, 700 (50-lb.) boxes; cherries, 2600 (10-lb.) boxes; plums, 2300 (20-lb.) boxes; peaches, 1700 (25-lb.) boxes; apples, 500 (50-lb.) boxes. He dried 12 tons of pears and 2½ tons of other fruits, peaches, cherries and plums. All this fruit was the product of 50 acres. Most of his fruit Mr. Tool has this year sold in the California market—a good deal of it to canners—and he has received satisfactory prices. He shipped 1000 boxes of plums and the same quantity of cherries east, also his dried fruit, three tons of which were prunes. For his dried pears he got 9 cts. a pound; for his prunes 10 cts. a pound, and for his peaches 12½ cts. He joined his neighbors, the Fishers, in drying 200 tons of prunes (70 tons when dried), for Webber & Co., of Chicago. When asked about shipments east, Mr. Tool said some 15 carloads had this season been forwarded from Union station; that while the charges had been all the traffic would bear, the service was all that could be desired as far east as Ogden, but when the Southern Pacific and Central lines were left it was oftentimes wretched. Mr. Tool's men are already at work pruning, the season for this job, with 16 hands employed, usually lasting with him from Nov. 15th to Jan. 15th.

Orange.

FACTS ABOUT THE VINE DISEASE.—Orange *Post:* A party, consisting of two representatives of the State Viticultural Commission, together with Prof. N. B. Pierce and a Los Angeles *Times* reporter, this week visited ten vineyards in this county, said to be affected by the vine diseease, for the purpose of ascertaining the truth of the reports. They examined ten vineyards, all said to be diseased, and found four of them entirely free from the malady. These were the Bennett, W. G. McPherson, Hewes and R. M. Sitton vineyards, all of which are reported in splendid condition. On the other places, more or less evidence of the disease was found, but it is not of the virulent type that has characterized its presence heretofore, and there is good reason to hope that the evil will be eradicated in a few years. Those intending to plant vineyards should investigate for themselves, and, if they conclude to plant, should take the utmost pains to secure cuttings from vines free from the disease.

SPECIAL TRAIN WITH PAMPAS PLUMES.—Anaheim *Gazette:* The Santa Fe will in a few days run a special train loaded with pampas plumes to Chicago. This, as special train service, will be quite as notable in its way as the big train-load of walnuts which was dispatched over the road last week. In walnuts and pampas plumes, Anaheim keeps right along at the head of the procession.

THE PEANUT CROP.—Santa Ana *Blade*: Immediately following the walnut crop, which is being shipped now, will be the peanut crop of the valley. A talk with some of the large raisers reveals the fact that the crop will be about a two-thirds yield, of superior quality. One great advantage of the Santa Ana valley is that the products are so diversified that one crop follows another, yielding a constant revenue to the producers.

Sacramento.

SUGAR-CANE EXPERIMENTS ON SWAMP-LANDS. Sacramento *Bee*: During the last session of Congress, Congressman Caminetti had inserted in the bill making appropriations for the Department of Agriculture for the year ending June 30, 1893, an appropriation of $20,000 for the purpose of making, in the discretion of the secretary of Agriculture, experiments in the planting of sugarcane, and the production of sugar therefrom, on the reclaimed swamp-lands of either the Sacramento or San Joaquin val leys. Similar experiments in Florida have been followed with remarkable success in both the quality and quantity of production. In regard to the matter, Mr. Caminetti received last evening from the Department of Agriculture a letter inclosing the following, addressed to the secretary of the State Board of Agriculture: "By the provisions of an act of Congress making appropriations for the investigations of sugar-producing plants by the Department of Agriculture, the Secretary of Agriculture is empowered, at his discretion, to make investigation of the swamp-lands of California with respect to their fitness for the production of sugarcane. I should like especially to get a statement from you in regard to the extent and character of such lands, especially those lying in the southern part of the State, where the climate would probably be favorable to the growth of sugarcane. I should be happy to receive from you any information which you may have conveniently at hand on this subject, together with such suggestions as you may see fit to make on the subject." Mr. Caminetti believes that the success of the Florida experiments offers our people encouragement, as it tends to demonstrate that success awaits the cultivation of cane sugar in California. "The beet-root sugar industry," says Mr. Caminetti, "is an established fact with us already, and there is no doubt in my mind that the experiment to be inaugurated will fare equally well. The success of the proposed experiment will introduce a new branch of agriculture on the Pacific coast, yielding a ready revenue and adding to the locality suited to its cultivation by the establishment of fixtures, giving employment to many people."

San Bernardino.

A RAISIN-GROWERS' CORPORATION.—Riverside *Press and Horticulturist:* The El Cajon raisin-growers have organized a company to be called the El Cajon Fruit and Raisin Company. It is to be a stock company with a capital equal to $100 per acre for all vineyards represented. The San Diego banks have offered to advance three cents per pound on all raisins after they are put in marketable form, on 30, 60 or 90 days' time, giving the grower the control of the price at which the raisins should be sold during the life of the loan. Fifty-five carloads have already been shipped from the valley.

San Diego.

OTAY WANTS WATER AND GOOD ROADS.—Cor. Julian *Sentinel:* As one drives over the beautiful valleys and mesas he is amazed at the rapid progress of development on all sides; everywhere are evidences of thrift and intelligent efforts in home-building. The lemon and orange take the lead of all fruits in this locality. This section only requires two things to make it blossom into a second paradise—water and good roads. Of the former much is being accomplished by the aid of wells. On all sides we find windmills running and engines pumping. This locality, like many others, has taken its first lesson in the "Wright Irrigation Chart," and has graduated—at the expense of six or seven thousand dollars. They have had enough of "irrigation that don't irrigate," and the most desirable thing that could happen to them at the present would be an opportunity to disorganize, and then procure water in their own way. As for roads, there is not such a thing in the valley. There is a line, or many lines, of travel, designated only by dust that penetrates like quicksilver, and ruts too deep to be called chuck-holes. These lines of travel produce clouds of profanity and dust that hang over the valley like a pall, and if the board of supervisors will be held accountable in the great judgment day, we truly pity them.

LARGE WATERMELON.—Escondido *Advocate*: Mr. and Mrs. G. L. Henderson, of Chula Vista, furnished the chamber with a 113½-pound watermelon last week, and Messrs. Henderson and Stuart promised Manager Young several more about as large, which he will try to keep for the World's Fair.

San Luis Obispo.

CLEAN TREES.—Santa Maria *Times*: The tree season is again at hand, and the tree-man is plentiful. Get clean trees at all hazards; they are the first essential to success. Infested trees mean a failure of your orchard. Do not buy trees of a stranger or an unknown nursery. Do not trust the destiny of your orchard to nurserymen. Learn to inspect trees yourself, and insist on having a commissioner's certificate before receiving any trees. If you know or hear of infested nursery stock coming into your neighborhood, report it.

Santa Cruz.

HOP CULTURE IN PAJARO VALLEY.—Cor. Sacramento *News:* They work the hopyards differently here than elsewhere, the ground being so rich and full of moisture that summer-pruning is necessary. Instead of cutting off the runners above ground, they dig away the earth and cut off the surplus as they do when pruning ordinarily. This is expensive, but must be done. Short stakes are used altogether. Trellises were experimented with this season, but were not a success. A ton to the acre is easily obtained by staking, and a crop is always assured. All of the yards have hopper kilns and Sacramento presses. The Pajaro hopgrowers are progressive, and have grown wealthy in the business, as the county records will show. You could not bond an acre here for less than $500.

Shasta.

ALOHA FRUIT FARM.—Anderson *News:* This farm consists of 525 acres, some 300 or more being cultivated, under the able management of D. G. Hawkins. There is an orchard of 175 acres set out of peach, pear and apricot trees. The trees on 100 acres are one and a half years old, the other 75 acres being planted last winter. The orchard is highly cultivated—not a weed to be seen. The trees all look fine, and the growth they have made this year is surprising. The soil is of a rich, sandy character, and never bakes and gets hard, and will grow anything that is planted in it. Fifteen acres of Egyptian corn was planted this year which, we were told, yielded two tons per acre. This of itself is quite an item. Large yellow pumpkins, squashes and huge watermelons lay scattered all over the ground, which served to carry out the richness of the soil. This is one of the model orchards of Shasta county, and shows what industry and proper cultivation will do. There are many fine orchards in this section, among them being the Ludwick Fruit Farm, Harry Dodson, W. Bernard, Mr. Alexander, D. Hill, Shasta Fruit Co. and several others, which we propose to give due notice. Happy valley has also quite a number. There is no disputing the fact that Shasta county, in a few years, will be one of the best fruit-producing counties in the State, and Anderson the shipping-point for the same.

Sutter.

WHEAT AT LIVE OAKS.—Cor. Yuba City *Farmer*: The last of the wheat crop has been stored. The Farmers' Union in this place has 5000 tons and the Live Oak Warehouse Co. 3000 tons.

Tehama.

ORANGE AND VINE.—Corning *Observer*: The orange trees in bearing about town look well with their large green fruit. The young trees in A. B. Aitken's tract have grown well this summer, and his olive trees could not look better or grow more thrifty. Next summer will see a wonderful transformation in this town and the neighborhood. All the young vineyards and orchards will be bearing luscious fruit, and hundreds more of acres will be planted.

Tulare.

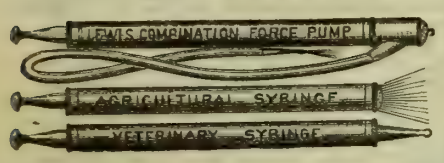
A THREE RIVERS CORNFIELD.—Cor. Visalia *Times*: Ira Blossom has the boss cornfield. The stocks are about four inches in diameter and 20 feet high. The ears are large and hang high. A sample of big corn, fruit, etc., from the hills should be sent to the World's Fair.

GOOD HOG FEED.—*Times*: A farmer of this county, in speaking of the present bad weather for drying grapes, said that raisin grapes are splendid feed for hogs; that when it is found that a field of raisin grapes cannot be cured, it is not a bad idea to get a bunch of pork hogs and let them pick the grapes. The sugar in raisin grapes makes hogs fatten rapidly, and the meat thus produced is the very best. The gentleman also said that half-dried grapes are dangerous to feed to hogs and often killed them. If rains come now there are many fields of raisins in the county that can be harvested by hogs and thus produce a revenue to the owners.

CLEANING MILL CREEK FOR IRRIGATION.—Visalia *Delta*: Twenty-five men from Goshen are engaged in cleaning out the debris in Mill creek above town, which has accumulated since the year 1862. Work was commenced four miles above, and the workmen are now within one mile of the city. The farmers in the Goshen country want all the water they can obtain this winter for irrigation purposes.

A PEAR TREE CURIOSITY.—Lemoore *Leader*: We have been shown several pear trees this season that are curiosities in their way. On the same tree may be found full grown fruit, half grown or second crop, and blossoms for a third crop. One of these trees stands in the grounds back of the Sweetland residence.

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COMBINATION SPRAY PUMP.

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REMEMBER: That these other Outfits, after the spraying season is over, are *worthless for the balance of the year*, while ours can be used for a hundred and one other purposes, such as washing wagons and windows, sprinkling your lawn, whitewashing your hen-house, etc., etc., and, as your Pump can be instantly taken apart, every part of it can be thoroughly cleaned in a few minutes.

REMEMBER: That we will gladly put up our Pump in competition with any other Spraying Outfit costing $12.00 or $14.00, and guarantee it to do fully as satisfactory work, etc.

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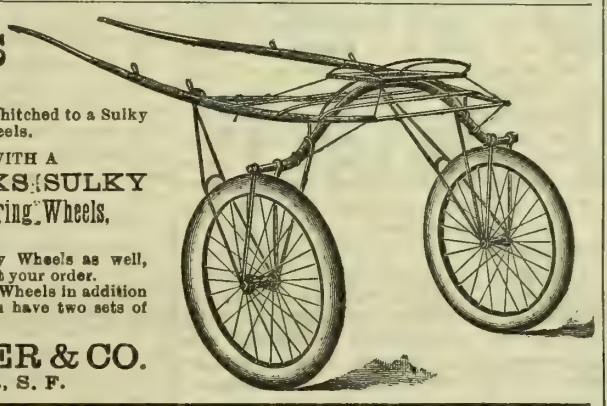
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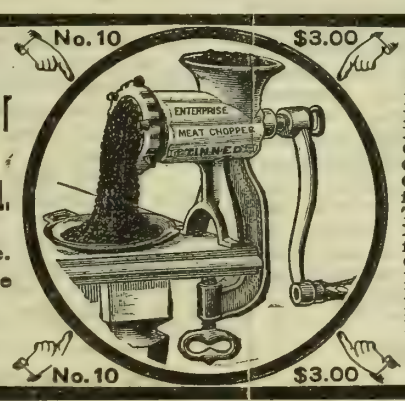
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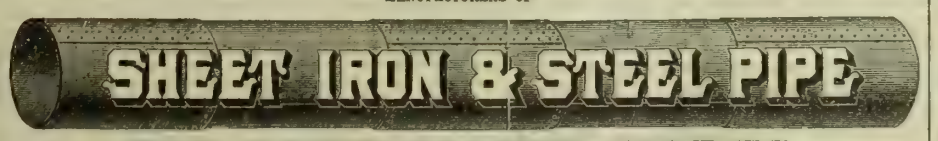
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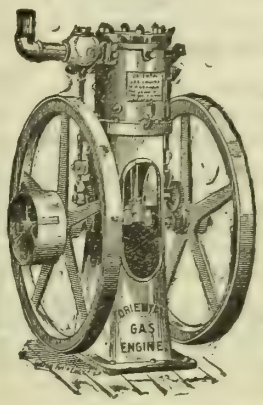
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The New Potato Culture, by Elbert S. Carman. Editor of the *Rural New Yorker*. For the past 15 years the author has given a part of his time to potato experimentation, in the hopes that he might throw some additional light upon the various questions involved in the central problem, "How to increase the yield without proportionately increasing the *cost* of production." The object of Mr. Carman's book is to show all who raise potatoes, whether for home use solely or for market as well, that the yield may be increased three-fold without a corresponding increase in the cost; to show that the little garden patch, of a fortieth of an acre perhaps, may just as well yield ten bushels as three bushels; to induce farmers and gardeners to experiment with fertilizers, not only as to kind, that is to say, the constituents and their most effective proportions, but as to the most economical quantity to use. Price, cloth, **75 cts.**; paper.....**40 cts.**

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ORANGE CULTURE A Practical Treatise by T. A. Garey giving the results of long experience in Southern California. 196 pages, cloth bound. Sent postpaid at reduced price of 75 cts. per copy. DEWEY PUB. CO., 220 Market, S.F.

PATRONS OF HUSBANDRY.

Accumulated Wealth a Dangerous Element.

History and experience has fully shown that private riches and combinations of wealthy men constitute the most oppressive and dangerous element in human society. Efforts to accumulate a reasonable competence are praiseworthy, and legislation which renders such accumulation possible is right and just; but when laws are enacted or a condition of things is permitted to exist whereby the accumulation of such colossal fortunes as are now met with in most of the chief cities of the Union, are made possible, there is certainly something wrong. The power which vast riches gives is sure to engender, in almost any person so favored, an undue degree of selfishness and ambition, dangerous alike to the individual and to the community in which he lives. Doubly dangerous is it when such accumulations are so numerous as to admit of combinations, whereby legislation may be influenced by the use of money, or the influence which money inspires.

What does history teach us in this direction?

When Egypt went down it is claimed that 97 per cent of her wealth was concentrated in about 3 per cent of her population.

It was the accumulation of wealth in a few hands that was the chief instrument in bringing about the fall of Persia and Babylon.

When Rome succumbed to the barbarian hordes of northern Europe, less than 2000 individuals owned more than 90 per cent of her entire wealth.

Greece, with more tenacity of endurance, held her power intact until over 95 per cent of her riches was absorbed by less than two per cent of her population, and then she too submitted to the inevitable fate of misdirected wealth.

Patrick Henry once said:—"We can only judge the future by the past." We have seen the past of other nations. Let us look for a moment at the present and future of our own country.

In 1850 capitalists owned 37 per cent of the nation's wealth. In 1870 they owned 63 per cent—a proportionate gain of 26 per cent in 20 years.

Again, statistics show that at the present time 31,000 of our citizens own fully one-half of all the accumulated wealth of the country—and that too without including any capitalist who is worth less $500,000. It is safe to say that all the wealth producers of the country, combined, do not own much, if any, more than one-tenth of the wealth which they have created.

For the past 25 years the accumulation of property in the hands of capitalists in this country has been making rapid progress. Ex-Senator Ingalls recently made a speech in the Senate in which he gave some remarkable statistics which have never been contradicted. He stated that there were 200 people in this country who were worth over 20 millions each; 400 others who passed for 10 to 20 millions each; and 1000, each of whom could count from 5 to 10 millions.

The most alarming feature of this property drift is the fact shown that nearly all the current accumulation of our national wealth is passing into the hands of capitalists. According to the census of 1890, the increase of wealth from 1880 to 1890 was 22 millions of dollars. The census also shows that nearly all of this increase has gone into the hands of capitalists, and that the property in the hands of farmers, artisans and the laboring classes generally differs but very little from the report of 1880. It thus appears that the United States is rapidly following in the steps of the nations which have been driven into obscurity mainly through undue accumulation in a few hands. Similar but less disastrous results have also been witnessed in more modern times. We might instance the Watt Tyler insurrection in England in 1381, in which the working people secured important concessions, but only after much anarchy and bloodshed. France, even in the present century, has passed through similar scenes.

NO CAUSE FOR ALARM IN THIS COUNTRY.

Whatever the history of the past reveals, there is no danger of a repetiton in the United States of the excesses and bloodshed of former times. There are some, it is true, demagogues in spirit, who prophecy an early enactment in this country of scenes similar to those to which allusion has been made. But such people forget that times and methods have greatly changed during the present century. They, moreover, mistake and miscalculate the conservative power and influence of the present

GREAT FARMERS' MOVEMENT.

There are no demagogues on the farm. Such people are found only in crowded cities, and among those who run political machines for personal benefit and not for the good of the people. In this farmers' movement the Grange is the leading and controlling factor. Since the establishment of this organization, some 25 years ago, the farmers within and without the Grange have been learning many valuable lessons of business and policy. They have learned also much in regard to husbandry. The Grange has been a great school into which demagogism has never found entrance. This movement is essentially educational—in business, in politics and from a social point of view as well. Among other things, the farmers have obtained a very good idea of their power and how to use it, in a conservative way. They have learned that in numbers they can rule the nation—with such power comes, naturally, conservatism. They have already won many victories in counties, States and also in our national halls of legislation.

Among other things, they have learned that the great rural population of the country, as well as the laboring people in general, have been made to bear an undue share of the burdens of society; but they propose to keep their heads cool, and to go about a better adjustment of things political in a quiet and strictly conservative manner. There is no "jingo" in the Grange or among farmers generally.

The inherent good sense of the American farmer will guide him aright in the selection of leaders and measures. With him the petty issues of the professed politicians have little significance. In carrying out his reforms, no man's rights will be invaded. The silent ballot will take the place of the deadly bullet. He is now looking around for the best methods of reform, by which the *people* may come in possession of their rights, which have been invaded by political demagogues and overgrown monopolists. He is seeking for the best methods of doing away with the giant monopolies of railroads, telegraphs, telephones, express services and all trust combinations. He has also entered his solemn protest against bossism, corruption at the ballot-box and in our legislative halls, and against all class legislation. Knowing well his power, he can afford and is willing to bide his time and move upon his enemies by gradual approaches—such as will not breed popular clamor or seriously disturb the present foundations of society. He has already issued his protest against the present methods of centralization, and his determination to restore a proper and healthy industrial equilibrium. In this last he joins hands with the artisan, protesting, however, against all violence, and pointing out the way to victory through the ballot-box and a strict regard for the rights of property and property-owners. The teachings of the Grange to itself and to all outside industries are to be cautious and wise in demands, to the end that victory shall be sure and without material disturbance to the industries and general conservation of society.

The "Kid" Grange.

With an expression of profound disgust, a fellow patron told us the other day: "We have nothing but a kid Grange any more. I have not been there much this summer."

It seems that some one had the tact to see that the way to revive Grange interest in that community was to enlist the young people and then make it lively enough to attract them. Of course, those who interested themselves in the young people were able to influence votes, and horrible to be said, a lady was elected Worthy Master. Perhaps our friend had only thought of it as a misfortune that the judgment and wishes of older members should be overruled by those upon whom they had been accustomed to look as children.

We hope our friend and those of similar mind will take a sober second thought, which will show them that we must depend upon the young for the future; that the teachings of the Grange are calculated to develop the highest standard of citizenship; that their presence and a regard for their welfare should impose upon every patron a double obligation of loyalty to the Order, both for the good it may do directly and for the sake of its influence in the training of those upon whom the future of the cause depends. By all means be the more faithful in the kid Granges, and be sure that every session has something to instruct and something to entertain them. We have no other way to live over again the happy days of youth save in sharing the pleasures of our children.

EDUCATION ON THE FARM.

The idea prevails that education is wasted on the farm. This proceeds from the idea that agriculture is a routine business depending principally upon the muscle. So soon as the farmer begins to study how to improve methods or results he finds use for mental training, and there is very little use for the farmer who never tries to improve. The more education the better for the farmer, his family and the community.

The model farmer loves nature well enough to search for her secrets. He loves profit well enough to study the laws of trade. He loves his fellowman well enough to live for the good of community.

Get more Grange in your members and you will get more members in your Grange. This was a leading thought impressed by Overseer Roache in his Grange canvass of 1891 at Tulare. It is one that will bear frequent repetition. If your Grange is dull, remember that an ancient city was kept very clean when every person swept in front of his own door, and ask yourself what you are there for. Do you come to be entertained? Probably others do the same. Have something prepared to entertain them. Do you come to learn? Keep a note book in your pocket every day in the week and when you see or hear or think of anything likely to interest others, note it down. Present it as clearly as you can at the Grange, and others will follow your example, and there will be something learned at the Grange.

People will not come many times unless they feel that have been paid for coming.

Perhaps you are one of those who cannot talk, and instead of going into the Grange, have been sitting on a nail keg in front of the store, talking pretty good, hard sense to three or four men of your kind who are waiting to go home, until the women folks come out of the Grange.

If you cannot talk without your nail keg take it up to the Grange. At least manage some way to break yourself of the idea that you cannot talk to people sitting quietly in a room, where they came on purpose to hear, as well as to a chance group in front of a store.

The master, lecturer and every other Grange worker should take it upon themselves to make it so easy to talk in the Grange that they will draw out the last idea that lies hidden away in the northeast cor- of the most bashful brain in the house, before they are done with a subject. Send every member home with the feeling that "we have had a good Grange" and you are on the high road to prosperity. Let members begin to say, "they ought to do this" or "they had no business to do that." So soon as the interests of an organization fail to appeal personally to its members and they shuffle the responsibility upon the shoulders of the few, it begins to row against the tide.

DISCUSS FARM SUBJECTS.

When you invite some member of a neighboring Grange to address you, it would be quite as well for him to present some important question in agriculture to be followed by general discussion as to speak as usual upon "The Good of the Order."

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

THE *Farmers' Friend*, Penn., makes the following hits:

"On election day the fellow who can't write and the one who can will be on a perfect equality. Each will have to make his mark.

"Isn't it funny that those who have the least at stake in the result of the election are the most concerned and make the most noise.

"The duty of every American voter is to weigh all the evidence for and against the various propositions, and then vote as the best interests of the people demand. Charge and countercharge of corruption and gross personalities should not be allowed to influence a single vote. On facts, not what passes for facts, should your decision be based."

The above, from the *Farmers' Friend* of Pennsylvania, also portrays the true situation in California. If the farmers, industrial and other well-meaning people do not unitedly act upon such truth, how can we expect to have aught else than the disgraceful scenes repeated in our coming legislature that have characterized the last (Republican) and the previous (Democratic) legislatures. Bosses and boodlers have run rampant in California, and our legislatures have become not only a disgrace to the members thereof, but to the whole State.

It is hoped that Patrons, farmers and industrialists will this year "vote as they think," and for no man for office who is not in favor of the resolutions repeatedly adopted by the State Grange, viz.: That U. S. Senators be elected by the direct vote of the people; that an Enabling Act be passed by the legislature for the organization of Farmers' Mutual Fire Insurance Companies; that the payment of delinquent taxes from individuals and corporations be enforced, no matter how wealthy and powerful they may be; that the time for the payment of the Central and Union Pacific railroad bonds be not extended.

Let every voter leave no stone unturned in bringing about the reforms that are so well known to be needed in our State government and legislative departments.

THE present presidential campaign has been singularly free from excitement, and, so far as observation goes, free from attempts to corrupt voters. This must be highly gratifying to every patriotic citizen. But the elimination of these elements, so common in battles for the ascendency, from the present contest, should not be regarded as indicative of a lack of earnestness on the part of active party workers. Indeed, this apparent apathy is ominous, foreboding disaster where disaster is least anticipated, and where it will be most hurtful to the farmers of the State. From rostrum and press come appeals to the voters to sacrifice everything for the success of a favorite presidential candidate. Don't do it, because, if you do, you will realize, when too late, that you have been duped. We do not wish to detract one iota from the importance of the presidential election, but we do want you to keep in mind that the President is merely an executive officer, who, in the language of the Federal Constitution, "Shall take care that the laws be faithfully executed." The disabilities which farmers complain of can only be removed by the enactment of new laws, and new laws, if enacted at all, must be enacted by representatives elected by the people. The President cannot make laws, nor dare he refuse to execute one placed upon the statute books in a constitutional manner.

A President is not the only thing to be looked after in this contest, and it will be very unwise for us to permit that one subject to monopolize our attention on election day. Members of the National Congress—lawmakers—are to be elected, and if you want good, wholesome laws enacted, we must send good, honest, intelligent men to make them.

There are also State issues of transcendent importance involved in this struggle, and it is to these that we desire to call attention more particularly.

"Farmers, stand by those who stood by you."

A LOVELY REPORT TO THE STATE GRANGE.

Ceres' report having been called for, we furnish it to RURAL readers in advance of publication in the Journal of Proceedings, as follows:

"Ceres brings glad tidings of peace, prosperity and health.

"While other nations are suffering from famine and disease, we are blessed with everything that makes life desirable.

"On my return home from the State Grange one year ago, I tried to ascertain what my duties in this capacity were. I looked over Ceres' report for the year past, and I exclaimed she has done her work so well that there is nothing left for me to do; but, in looking over my Greek history, I learned that Ceres had a daughter Prosepine, who ran away with a god named Pluto, and it occurred to me that I had better look after Flora and Pomona.

"Flora, I found courting with Cupid. I entreated her to dismiss him at once, and referred her to his past history as being an idle, capricious fellow. 'Indeed,' she replied, 'he is nothing of the kind; on the contrary, he is without a fault,' and advised me to look after Pomona, who was strolling through the vineyard with drunken Bacchus. I reprimanded her for keeping company with an intemperate, hilarious fellow.

"'You are mistaken in the man,' she exclaimed. 'He is not the one whose likeness adorns wine bottles and barrels, with a goblet of wine in his hand; his quarrels are sometimes riotous, but he first taught the art of navigation and the manner of tilling the soil, built cities, instituted wise laws, civilized savage nations and taught them to worship the gods; in place of the wine cup, he holds in his hand a javelin encircled with ivy and vine leaves.'

"Alas! Worthy Master, I fear these misguided young goddesses have partaken of the fruit of the Elysian fields and their return is impossible. I await instructions from you." DEE D. HULL.

FOR CONCORD.

Worthy Master Davis and wife will start on the evening of the 8th (or morning of the 9th) to be on hand in good season for the Annual Session of the National Grange at Concord, N. H. He has already begun preparation for his annual report, and the introduction of business delegated by the State Grange to our popular representatives to the National Council.

PETALUMA SPEAKS FIRST.

Petaluma asks for the next session, and Secretary G. D. Heald writes, Oct. 24th, as follows: "At a regular meeting of Petaluma Grange, held Oct. 22d, it was decided unanimously to ask that the California State Grange do us the favor of holding the next annual meeting in Petaluma. There was present at our meeting a large delegation from Two Rock Grange, and the matter was freely discussed, all being decidedly in favor of the next meeting of the State Grange being held here. When the vote was taken it was unanimous, and the secretary was instructed to so inform the worthy master and secretary of the State Grange and urge them to use their influence to have the next meeting appointed for Petaluma."

We can think of no place where the interests of the Order would be better served than by accepting the above invitation. There seems no reason why attendants should not be well pleased and accommodated by meeting at Petaluma, one of the thrifty and important growing towns of central California. There are six subordinate Granges in Sonoma county, all of which are within 20 miles of Petaluma, which can be conveniently reached by Patrons with their own conveyances. Petaluma is a young Grange with good prospects, Two Rock, its neighbor, is one of the most active and successful Granges on this coast. We expect to learn that the Pomona and all other Granges in the county will join hands heartily with Petaluma, their youngest sister, in paying the State Grange the honor of a reasonably delightful reception in 1893.

THE PROCEEDINGS of the late session of the State Grange are now in the hands of the printer and expected to be issued in the early part of December. Notwithstanding the efforts of the secretary to conform to the desire of the Executive Committee to make them as condensed as practicable, they will, as heretofore, make a large volume.

THE SECRETARY wishes to acknowledge the faithful assistance of Bros. E. B. Balis, Henry Raap and Geo. Ohleyer Jr. at the late session of the State Grange.

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

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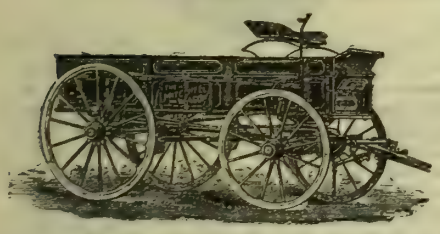
The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

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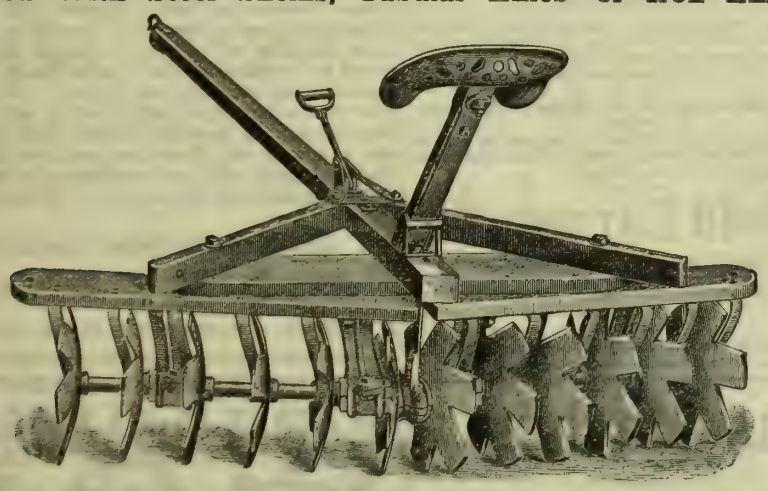


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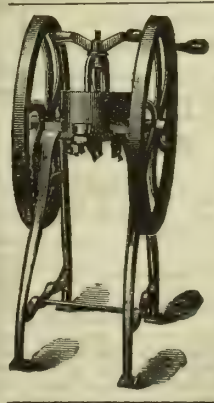
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Strain jelly into jelly jars which have been thoroughly washed in soap and water and have been standing in boiling water for half an hour. When the jelly is cool pour over it a small quantity of melted paraffine, let it harden; then pour more for as the first hardens it may crack or shrink from the sides and leave spaces where ferments may enter. In other words, the jars need to be made air-tight—not that the air does mischief, but because it contains the organisms which on entering the jelly cause by their growth the changes known as "souring." The object is to exclude all micro-organisms.

This may be done in other ways than by the use of paraffine. Cut a piece of white paper just large enough to cover the jelly; soak it in alcohol for five minutes, then fit it to the tumbler and pack over it a wad of sterilized cotton batting, letting it fill the mouth of the jar or tumbler like a stopper. This is an effectual means of preserving all kinds of fruit, as micro-organisms cannot go through the batting. Care must be taken, however, to have it properly sterilized. This may easily be accomplished by making the wads the required shape and size, and putting them on a tin plate in a hot oven for half an hour. When putting the cotton into jars be careful not to touch the underside of the wad or allow it to touch anything until it is placed in the jar; each may be wound with a piece of cloth to make it look neat, or a piece of paper may be tied over it.—Albany Argus.

PRESERVING POTATOES—Prof. Schribaux of the National College of Agriculture of France has recently devised a very simple, cheap and successful method by which he has been able to preserve potatoes in edible condition for over a year and a half. This process has been adopted by the French government to preserve potatoes for the army. The method of preservation consists of plunging the tubers, before storing them away, for ten hours in a two-per-cent solution of commercial sulphuric acid in water—two parts of acid to one hundred parts of water. The acid penetrates the eyes to a depth of about one-fortieth of an inch (two millimeters), which serves to destroy their sprouting power; it does not have any appreciable effect on the skin of the potatoes. After remaining in the liquid ten hours, the tubers must be thoroughly dried before storing it away. The same liquid may be used any number of times with equally good results.

MUTTON BROTH.—Take a shoulder or neck of mutton, cut into small pieces, wash and put into the soup-pot. When it comes to a boil skim it carefully, then boil gently two hours. To four pounds of meat add four quarts of water and half a cup of rice. Do not put in the rice until the meat has boiled two hours, then add rice, and season with pepper, salt and half an onion, boil two hours longer and serve.

OYSTER SAUCE.—Take two quarts of oysters, wash them out of the liquor with the hands to get out all the grit; let the liquor stand and settle, then drain it into a saucepan, add a little mace, and set it to boil. Braid two spoonfuls of flour into half a pound of butter; stir this into the boiling liquor and let it again boil up; then put in the oysters and give it one boil. Serve it in an oyster dish.

FRICASSEE OF POTATOES.—Cut cold boiled potatoes into small squares, and put them in a basin with milk, pepper and salt, allowing half a pint of milk to a dozen potatoes. Set the basin into another of hot water, and when it comes to a boil, add a teaspoonful of butter and set on the stove, and let it boil up once, then serve.

BAKED APPLE CUSTARD.—Take three quarts of stewed apples and mash them with a spoon through a colander; add one pound of sugar, four or six eggs, one teacupful of melted butter, two lemons, the juice and pulp. Mix these well. Have the pie pans filled with pastry and put the custard in. Bake slowly.

TO BOIL RICE.—Wash clean two cupfuls of rice; put it into a pot with two quarts of water, and boil it quite tender; turn it into a colander to drain, but do not stir it. Let it stand before the fire to dry about ten minutes. Every kernel of rice will be separate, dry and look very white.

CORN CAKE.—Three teacups of Indian meal, one teaspoonful of salt, one tablespoonful of sugar, one of butter; wet this with boiling water, and then beat in one egg; spread half an inch deep on buttered tin sheets, and bake brown in a quick oven.

THE CARE OF THE EYES.—Not long ago an advertisement was read in which an optician promised to examine the eyes of all who came to him *free of charge*, and to provide glasses for the same at moderate rates. The object of this free examination was evidently to provide customers for the sale of the glasses and spectacles. The advertiser may have been a skilled oculist, and perfectly able to provide for the needs of his patients, but is it worth while to make the experiment? Any one who has ever been threatened with blindness will protest against running any risk in the treatment of the eyes. Sight is the most blessed of all of the five physical senses. Blindness, or the thought of blindness, seems like a living death, and only those who have experienced the fear can understand it. Do not take any risks with your sight. Do not experiment or allow others to experiment with your eyes if they are weak or failing. Economy of money at the risk of losing your eyesight is foolishness. The eye is one of the most delicate of organs, and easily ruined and the sight destroyed. There is no excuse for negligence in the matter; there is no use to try home or cheap remedies. If your sight is failing, if your eyes are out of order, hesitate not for a moment, but consult a competent oculist at once, and seek none but the best. Sight is too valuable and precious to be trifled with. Those who have suffered will tell you the misery entailed. There are hospitals where the eyes are treated free in many cities by the best oculists, so it is not a question of money. And the warning can not be repeated too often—do not trifle with your eyesight under any consideration.—Harper's Bazar.

The Old Man's Reticence.

Ethel—O, Ernest, have you seen father?

Ernest—Yes; I have just come from his office.

Ethel—And did he give his consent?

Ernest—I couldn't quite make out. He was so noncommittal.

Ethel—Well, what did he say?

Ernest—He didn't say anything at all.

Ethel—Didn't you ask him?

Ernest—I said: "Sir, I wish to marry your daughter. Have I your consent?" and he turned and looked at me a minute, then he began to turn red in the face, and then he grabbed me and threw me over the balusters, and before I could ask him again he slammed his door and locked it.

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The question whether it pays to irrigate our lands has passed beyond the experimental stage, and it is admitted that it is the only system of husbandry that will pay. Mammoth enterprises have been inaugurated to bring water from our mountain streams to the great inland valleys for irrigating large tracts. Until a general system of irrigation has been completed, our vegetable gardens, vineyards, orchards and upland must use the pump for raising water, with either the windmill or the gas or gasoline engine for cheap motor-power. This demand has engaged the attention of our best mechanics and inventors to build a pump that would be durable and effective in raising large quantities of water.

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The book is sent post-paid at the reduced price of 75 cents per copy, in cloth binding. Address DEWEY PUBLISHING CO., Publishers "Pacific Rural Press," 220 Market St, San Francisco.

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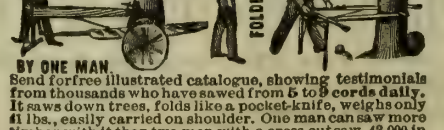
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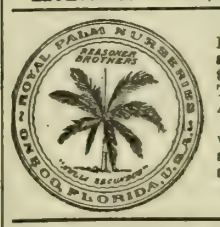
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Seeds, Plants, Etc., Continued on Page 395.

How Shellac is Made.

What makes your derby stiff? Shellac. What is sealing-wax? Shellac principally. What is shellac? It is the prodnct of a composite mass that is found on the young twigs and branches of the butea, croton and other trees that grow in the countries of the East. Shellac is consumed in great quantities all over the world in commerce and in arts. It is kept in the shops and large warehouses in large hogsheads. It varies in color and thinness and is transparent. It comes in broken pieces of irregular sizes, some of it being very thin.

The crude mass from which shellac is obtained is produced by a small insect (Cocars lacca) resembling somewhat the cochineal. The insect is hatched, matures and dies on these twigs. A number of female insects, with a few males, fasten themselves upon the tender twig and puncture the bark. A tenacious fluid exudes and envelops them. The insects feed upon the juice, derive their nourishment from it and deposit their eggs within it. The males only have wings, and as soon as the females begin to die a few females and the males go to other trees. After the females that remain in this gelatinous mass have deposited their eggs and have died, the eggs hatch out the young insects. The young burrow through the dead bodies of their mothers to the surface of the mass and then cover the neighboring branches. The eggs are deposited close to the bark, so that they are protected by their mother's bodies and by the mass that has exuded and enveloped the female insects. Finally the young twigs are completely covered with a thick, hard, resinous substance. When the females die the frames of their bodies form little cells like those of a honeycomb. As a result of decomposition there are the elements of a beautiful purple dye.

When these twigs have been sufficiently loaded with the resinous mass, the natives of the countries in which these trees grow, strip the trees of these twigs and break them into small sticks. These pieces are called sticklac. These broken twigs are immersed in hot water and the hot, resinous substance is kneaded by the hands to press out the purple dyestuff. After the gelatinous mass has become sufficiently soft it is taken out and dried. It is then put into coarse cloth bags and suspended close to the charcoal fires. Presently the mass begins to melt. By twisting the bags the mass is squeezed out, dropping onto flat sticks placed for that purpose. As it is dropping from the bags it hardly strikes the sticks before it is cooled by the air. It forms into thin cakes as it is deposited on these sticks or narrow, flat boards and dries. These cakes or sheets are called shellac. As the melted mass is dropping from the cloth bags, small drops unavoidably fall to the ground and dry in litttle, round bodies called cottonlac. Other and larger pieces that also fall to the ground nd dry are called platelac.—Boston Globe.

Finishing Oak.

The most fashionable method of finishing woodwork in the natural color of wood, according to A. P. Daire, is to use what is known as "quartered oak" for the panels. This is oak cut in a certain way so as to show the grain in the most variegated and attractive manner. This is then finished in either the antique or natural method. The finish of what is known as "antique oak" is produced in the following manner: The job should be made of hard wood, with as full an open grain as possible to secure a fine effect. Sandpaper this and clean off. Then prepare a priming made of 1 part japan, 1 part raw linseed oil and 1 part rubbing varnish. Drop into ½-gallon of the liquid 1 pound of commercial cornstarch, such as is used for culinary purposes. Next take some good, dry, burnt Turkish umber, and add about ¼-pound of this to the starch. Apply to the job a good flowing coat of this priming. Let stand until it is set and has soaked well into the grain, and then take a broad putty knife and slick it into the grain, working the knife crosswise of the grain. Again let stand a little while, and then wipe with rags; especially, clean out all the corners and get the job into as good condition as possible as regards having the grain well-filled.

Upon the completion of the operation above-described, it will be found that the open grain has absorbed the starch and umber, and that these portions now show the dark shade suggestive of age, while all the rest of the surface is also slightly darkened.

When again perfectly dry, give one coat of rubbing varnish, prepared by adding to it ½-pound of starch to each gallon of varnish. This coat should be flowed on freely as a medium coat of rubbing varnish, but be careful not to have runs or sags. This ought to completely fill the wood, after which proceed to varnish, rub and finish the job in the usual manner. To produce a natural oak finish, follow precisely the same course as above-described, with the single exception of omitting the umber. This will leave the wood in its natural color.

Polishing Wood with Charcoal.

A method of polishing wood with charcoal, now much employed by French cabinetmakers, is described in a Parisian technical journal. In this cosmopoliton city may be seen many articles of furniture of a beautiful dead-black color, with sharp, clean-cut edges and smooth surfaces, the wood of which appears to have the density of ebony. As against furniture rendered black by paint or varnish, the difference is so sensible that the great margin of price value between the two kinds of work explains itself. The operations are much longer and more minute in the case of charcoal-polishing, which respects every detail of carving, while paint and varnish would clog up the holes and widen the ridges. In the first process, only carefully selected woods are employed, of a close and compact grain; they are covered with a coat of camphor dissolved in water, and afterward with another, composed chiefly of sulphate of iron and nutgall. These two compositions, in blending, penetrate the wood giving it an indelible tinge, and at the same time rendering it impervious to the attack of insects. When sufficiently dry the surface of the wood is rubbed at first with a hard brush of couch grass and then with charcoal of substances as light and pliable as possible. Any hard grains remaining in the charcoal scratches the surface instead of rendering it perfectly smooth. The flat parts are then rubbed with natural stick charcoal, and the indented portions and crevices with charcoal powder. Alternately with the charcoal, the workman also rubs the furniture with flannel, soaked in linseed oil, and essence of turpentine. Repeated pouncings cause the charcoal, powder and oil to penetrate into the wood, giving the furniture a beautiful color and also a perfect polish without any of the flaws of ordinary varnish.

IT has been discovered that the first patent granted to an inventor in America, was to an Englishman named Joseph Jenks. An act was, it appears, passed in the year 1646 by the General Court of Massachusetts Bay according to this person "the exclusive right of making and selling his improved scythe for the term of fourteen years." The decree was, therefore, promulgated exactly 26 years after the "Mayflower" had landed its burden at Plymouth, in the State which was afterward destined to witness the commencement of the American War of Independence. The improvement protected by Mr. Jenks' letters-patent is stated to have consisted in changing the short, thick, straight English scythe into the longer, thinner, curved instrument with stiffened back.

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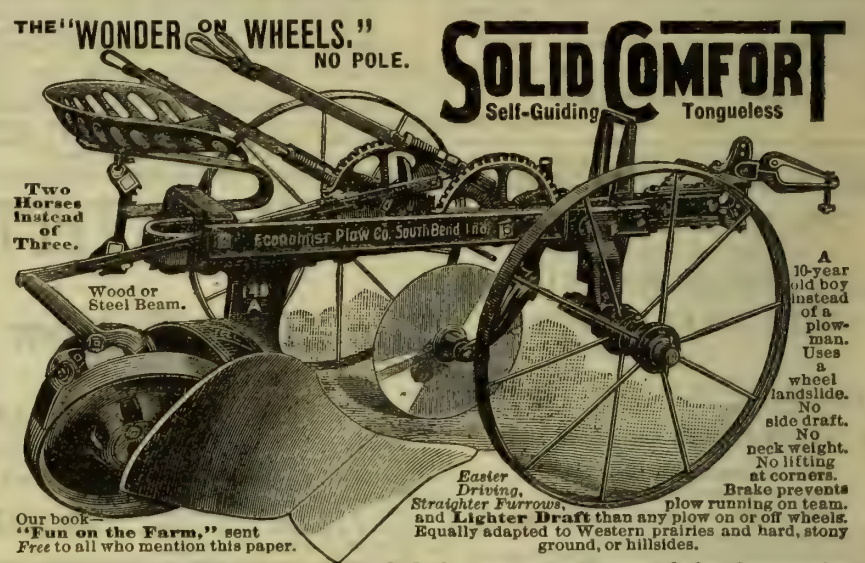
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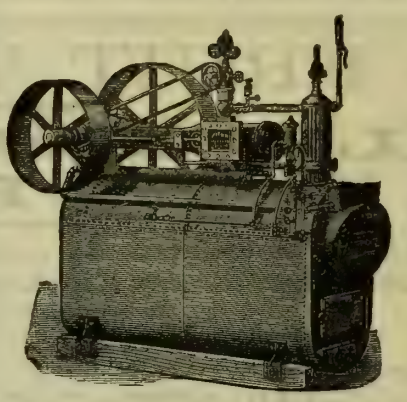
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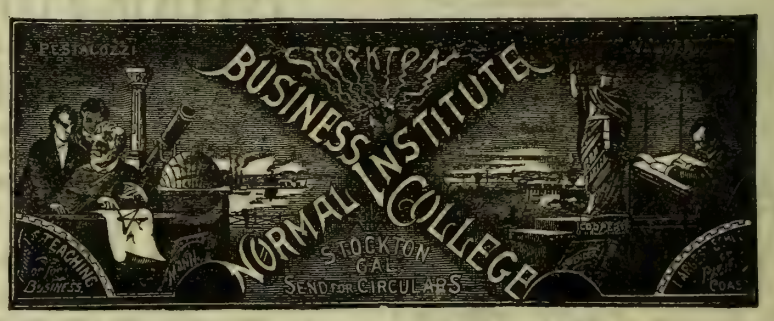
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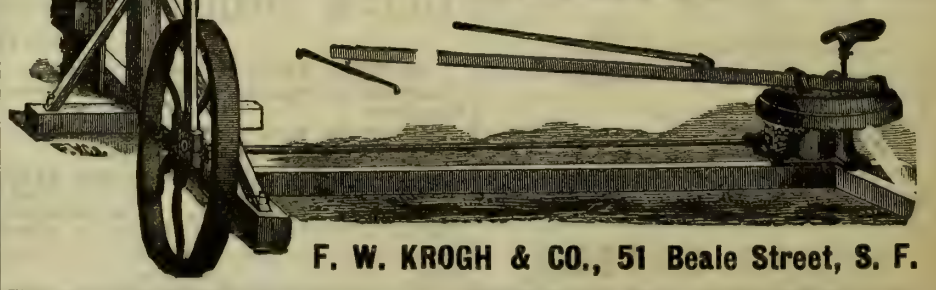
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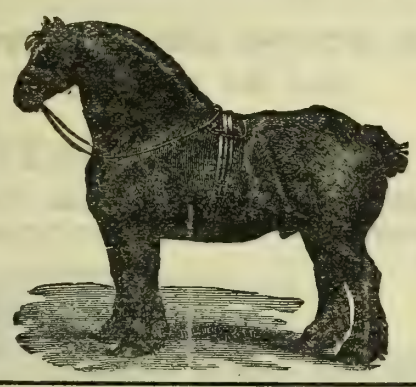


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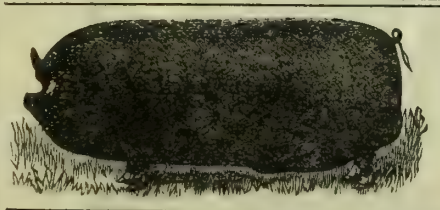
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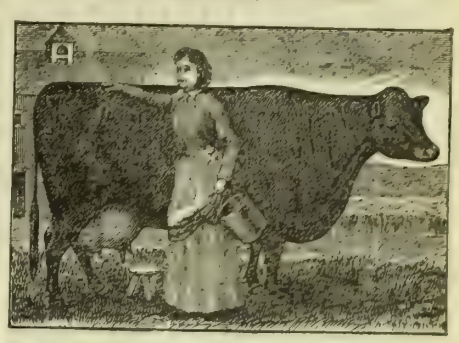
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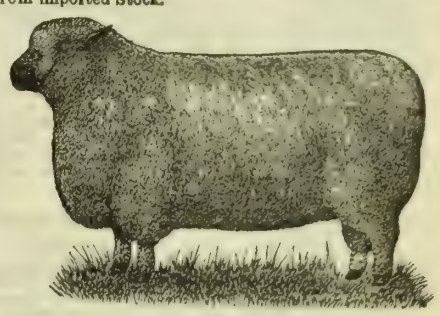
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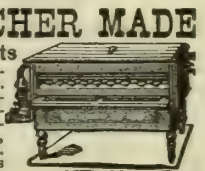


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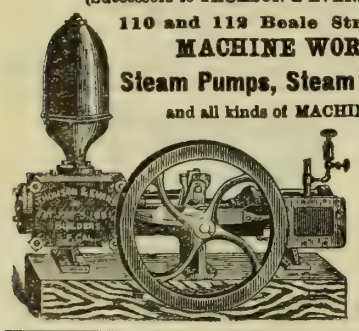
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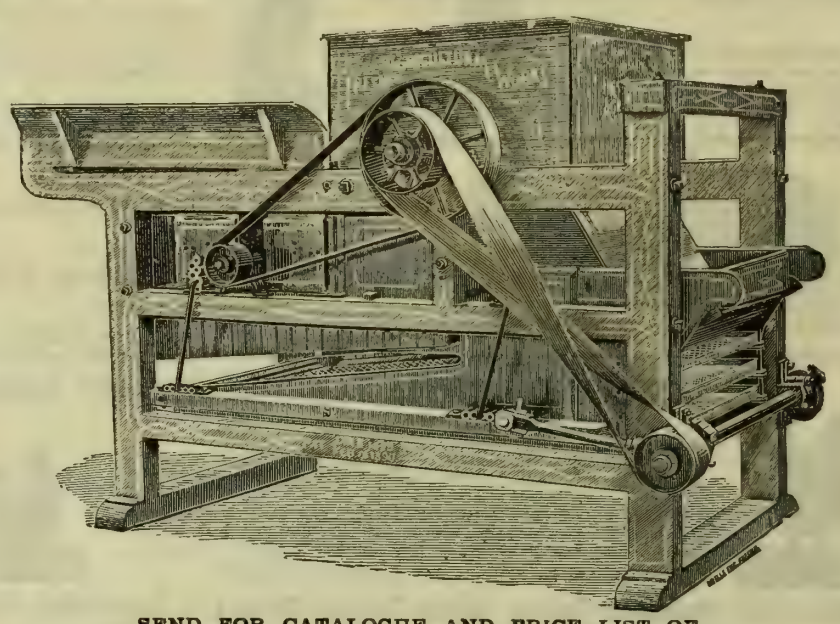
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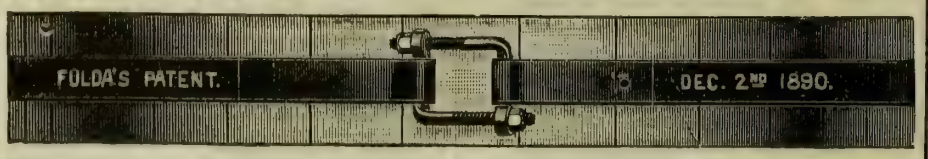


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S. F. Market Report

Market Review.

SAN FRANCISCO, Nov. 2, 1892.

The local money market, the past week, has been moderately active for the season of the year. The call from the country for crop purposes is about over, and as remittances are increasing, the available surplus in bank shows a fair gain. Notwithstanding the reserve is larger, yet banks pursue a conservative policy, and prefer to place money on short time or call. Long paper is closely scrutinized. This policy, it is thought, will continue to govern until we have fairly entered on the new year. There are increasing signs of growing confidence, and as this feeling enlarges, money will become more active and better rates of interest obtain. An active money market and higher interest are the forerunners of more prosperous times and an era of active speculation. The East and Europe are reporting more active money markets and a steady enlargement in speculation, with a steady appreciation in rates of interest.

The wheat markets of the world have been under strong bear influences, yet the signs of the times point to much better prices in the near future. First, and probably the more important, is the steady increase of confidence at the East and in Europe, which is accepted as an evidence that we have entered an era of speculation and greater prosperity, that will naturally bring about a bull campaign in wheat, owing to its favorable statistical position. It is no longer denied that the crop of the world, this year, is over 60,000,000 bushels short of the outturn in 1891, while the consumption per capita has been largely increased by reason of its cheapness and the relatively higher prices for other leading articles of food. While the crop was smaller, the movements to market have been larger, and to this free marketing is to be partly attributed the present low prices in the supply and demand markets. The low prices have been taken advantage of by speculators, and consequently the large proportion of the cereal sold has been bought for holding. The free movements of wheat have also made the bears bolder, who, it is said, have largely oversold in the Chicago, New York and Liverpool markets. These bears will probably yet find it hard work to fill, except at a heavy loss.

The following comparison of average prices at New York, for the month of September, shows the strength of the bear movement in cereals:

Articles.	Prices. 1892.	1891.
Corn (bush.)	$0 55	$0 66
Oats (bush.)	0 40	0 43
Rye (bush.)	0 70	0 94
Wheat (bush.)	0 80	1 05

The local wheat market the past week held firm notwithstanding every pressure possible was brought to bear to break prices. From all we can learn, nearly all the exposed wheat (that on the banks of the river) has been either marketed or else warehoused. It was this wheat which kept the market in buyers' favor. With this out of the way, and with any degree of firmness on the part of holders, both shippers and millers will have to pay more money for wheat before the close of the year, particularly so when it is understood that there is quite a short interest in futures on Call. It is said that the flourmill pool or trust has worked in the interest of buyers by lessening the number of competitive buyers. It is rumored that the pool or trust will make itself felt still more soon after election, by having one or more of the mills shut down. So far, it is asserted, the pool has not been able to advance the market price of flour, so as to net big profits, owing to strong selling opposition by the Starr Milling Co. and also by the mills in Oregon and Washington.

Barley, the past week, has held strong at steadily advancing prices. The improvement in the market appears to be well grounded and points to still better prices. The consumption for feed has been simply enormous, which has reduced the surplus to a still greater extent than had been estimated, while the shipping demand has been freer than for several years past. The short crop at the East and only a fair yield abroad favored shippers of more choice grades of bright, suitable for malsters. The low rates of freight hence have also been in shippers' favor. It is reported that there is a large short interest on Call.

Oats have ruled firm throughout the week, with an advance established in seed varieties. Receipts have fallen off, which is accepted as confirming the general impression among the better informed that the crop up north was short. The demand has been fairly free, particularly for the more choice grades. It is said that there has been more liberal feeding of oats so far in this season than during the like time for several years past.

Corn has ruled weak throughout the week. The decision of the Mexican Government to extend the time for admitting corn free of duty may possibly create a slightly better export demand for that country, but as yet there is nothing to warrant asserting that there is, at present, such a demand. From our exchanges we judge that the Mexican demand is being met largely, if not entirely, by Texas, and unless prices advance at the East, the movement from this coast will be confined to the usual demand points.

The market for ground feed has ruled weak for bran under a falling-off in the demand and free offerings, but for middlings the market has held fairly steady, owing to moderate receipts. Feedmeal and cracked corn have been weak and dull, but both roll and ground barley have met with a good demand at firmer prices, in sympathy with the market for the grain. The starting of the plows and cultivators in the more favored sections of the State has stimulated the demand for roll barley. Hay has sold higher. Receipts have been barely enough to meet current requirements, while the demand in some localities is increasing. It is said that owing to improving pasture in the more favorable localities, there is not so much feeding of hay to dairy cows and other neat cattle, sheep and range stock in general. While this may be the case in certain localities, it is probably more than offset by an increased demand from other sections.

As indicated in our review last week, the butter market has gone from bad to worse, with a demoralized feeling at the close. The oversupply of pickled and solid-packed has been and is still a menace to the market, and to which must now be added improving pastures in the more favored dairy sections. The improved pasture, it is said, is being favorably felt by an increased flow of richer milk. With larger milking a larger output of butter follows, and as this butter, as has always been the case, has to be marketed as soon as possible, it comes in competition with other kinds. Large holders are pursuing an offish policy. Cheese has not shown any material change the past week. The demand and supply have kept fairly equal. With small receipts of Eastern and light shipments on the way, eggs have ruled very strong, with an advance established along the line. The receipts of Californian are very light. The higher prices have restricted the consumption. With better green feed and favorable weather, the receipts of Californian should increase.

The varieties of garden truck are being confined to the usual autumn kinds. Tomatoes have met with a slow demand owing to poor keeping quality and canners not buying. The market quotations for all varieties are more or less nominal.

Onions have exhibited a fair degree of firmness, with choice, good-keepers given preference by buyers. The receipts of potatoes have continued free, but the market has held fairly firm for the better grades suitable for shipping or keeping. Poor keepers, wormy, diseased or otherwise inferior potatoes, rule in buyer's favor, and for which quotations are largely nominal.

Wools continue to come in freely, but the market does not exhibit any material change in value, being still in favor of buyers. This abnormal condition is a source of surprise to the many who closely watch the Eastern and English markets, both of which are fairly active Probably the best solution of the present unfavorably low range of values is to be found in the lower prices in the Boston market for Ohio and Michigan wools, which are tabulated as follows:

	Aug., '90. Cts. ₱ lb.	Sept., '92. Cts. ₱ lb.
Ohio and Penn. XX and above	32½@33	28@29
Ohio X and above	32 @32½	27@28
Ohio No. 1	37 @37½	32@33
Michigan X	28 @29¼	25@25½
Michigan No. 1	36 @36¼	31@32
Ohio, delaine	35 @36	32@32½
Michigan, delaine	33 @34	28@29
Ohio fine, unwashed	21 @22	19@20
Ohio, unmerchantable	23 @24	20@22
Michigan fine, unwashed	20 @21	17@18
Michigan, unmerchantable	22 @23	19@20
Ohio No. 1 combing, washed	30 @40	34@35
Michigan No. 1 combing, washed	38 @39	33@34

Hops continue to be subjected to strong bear pressure, which is hardly warranted by late English mail advices. According to the Mark Lane *Express*, Oct. 17, the London market was very strong, with merchants resisting an advance. The *Express* says that "the bulk of the Kent and Sussex second grades have been cleared, and it is now the turn of the choice Mid and East Kents. These are particularly good in color and quality, and, seeing that the quantity is not heavy, growers had reasonably expected that much higher prices would be offered, and, although at present it does not appear likely that their anticipations will be realized, there is little doubt that if they continue to hold out increased offers will be made. 'Fuggles' have sold especially well on account of their sound and healthy condition. This description of hops usually sells well in a season such as 1892 has been, when the more delicate kinds suffer from blight and bad weather. The most disappointing of all the districts this year is Surrey, whose crop has fallen considerably short of that of 1891, with only a small proportion of really choice quality. The usually famous Farnham grounds have come very badly off, the average growth being far below last year, and several planters assert that they are considerable losers. Worcester and Hereford have also proved much below 1891, and this is the more disheartening, seeing that the majority of growers in those districts spare neither expense nor trouble to secure good crops. In Continental and American hops the trade at present passing is on a very limited scale, but for the few lots that find purchasers pretty stiff prices have to be paid."

The market for fresh fruit has not shown any essential change so far as apples and pears are concerned, bnt table and wine grapes have done better, particularly the better keepers. The supply is running short. The market for apples appears to be shaping into better position. The supply of poor keepers and also of inferior is about cleaned up, which is creating a better demand for the more choice good keepers. It now looks as if better prices will rule in the near future.

The dried-fruit market has ruled quiet but strong for apricots, prunes and plums, but easy for peaches, owing to continued free offerings by Chinese driers. Choice to fancy apples are fairly firm, but anything below choice is weak. The shipments of prunes from San Jose, for the week ending with last Saturday, aggregated over 1,585,000 lbs. This is the largest shipment during one week within the history of the trade.

The weather continues against the free drying of raisins. From the best obtainable advices we think it quite safe to place the pack of merchantable raisins at fully 40 per cent less than would have been cured had the season not been so late and weather favorable. Shipments continue to fo forward fairly free New York advices continue to report complaints at the manner in which the most of the raisins were marketed. Advices to Oct. 28th are as follows: "Valencia raisins have met with most favor, and a large business in this staple has been completed. The more general inquiry has resulted in a decidedly stronger and, in instances, a higher market, and the condition of affairs at the close of the day was certainly of a more encouraging and favorable character. The stock has been pretty closely concentrated. The market is in excellent condition, and the indications point to even a higher range of values previous to the full covering by the trade of the country of holiday requirements. For California there is a steady moderate inquiry, though prime old goods are given the preference by most buyers at the difference in price as compared with new crop."

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.
Thursday	5s11 d	6s00 d	6s00½d	6s01½d	.....
Friday	5s10½d	5s11½d	6s 0½d	6s01 d	.....
Saturday	5s09½d	5s10½d	5s11½d	5s1 ½d	6s0 ½d
Monday	5s09½d	5s10½d	5s11½d	6s 0½d	6s01½d
Tuesday	5s09½d	5s10½d	5s11½d	6s00½d	6s01½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	33s3d	33s3 1	33s0d	Slow.
Friday	33s	33s	33s	Easier.
Saturday	33s	33s	33s	Steady.
Monday	33s	32s9d	32s9d	Quiet but steady.
Tuesday	33s	32s9d	32s9d	Held highe.

To-day's cablegram is as follows:

LIVERPOOL, Nov. 2.—Wheat—Red very dull and white firmly held. California spot lots, 6s 9d; off coast, 33s; just shipped, 32s 9d; nearly due, 32s 9d; cargoes off coast, quiet; on passage, rather easier; Mark Lane wheat, inactive; weather in England, colder.

San Francisco.

WHEAT.

	Seller '92.	Buyer Dec.	Buyer Jan.	May
Thursday, highest	131⅝	131½	....	138½
" lowest	131½	133⅛	....	137½
Friday, highest	131⅝	132⅝	....	136⅝
" lowest	131	132	....	136½
Saturday, highest	132	133½	133⅞	137½
" lowest	131¾	132⅝	133⅛	136⅝
Monday, highest	....	134⅜	....	138½
" lowest	....	133⅞	....	137⅞
Tuesday, highest	132	133¼	....	137½
" lowest	132	133	....	138¼

The following are to-day's recorded sales on Call:

Morning Informal.—Wheat—Buyer December, 200 tons, $1.32⅜; 1000, $1.32⅜. May, 100 tons, $1.36½; 900, $1.36⅜; 100, $1.36¼ per ctl. Regular Session.—May, 100 tons, $1.36⅜; 900, $1.36¼. Buyer May, 200 tons, $1.37½; Buyer December, 300 tons, $1.32⅜ per ctl. Afternoon.—Buyer December, 600 tons, $1.33⅜; 1300, $1.33½. May, 900 tons, $1.86⅜; 6.0, $1.36½; 400, $1.36⅜ per ctl.

BARLEY.

	Seller '92.	Dec.	Jan.	May
Thursday, highest	....	90	90⅞	95
" lowest	....	90	90⅝	95
Friday, highest	....	90½	91⅜	95½
" lowest	....	90⅛	91	95¼
Saturday, highest	....	*91⅜	....	....
" lowest	....	91¼	....	....
Monday, highest	90	91¼	93¾	97
" lowest	90	92⅜	93	96⅜
Tuesday, highest	....	91⅛	93	95⅞
" lowest	....	92⅛	93	96⅛

*Buyer option.

The following are to-day's recorded sales on Call:

Regular Session.—Barley—December, 200 tons, 91⅜c. Buyer December, 100 tons, 92½c per ctl. Afternoon.—December, 100 tons, 91⅜c; 100, 91c; 100, 91⅜c. January, 200 tons, 91½c per ctl.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Nov.	Dec.	Jan.	March.	May.
Thursday	126⅝	129½	....	....	140½
Friday	123	126	128⅝	134	137⅞
Saturday	123	126	128¾	134	138
Monday	124½	127	130	135	139
Tuesday	123½	126	129⅛	134⅛	138

The following is to-day's telegram:

NEW YORK, Nov. 2.—Wheat 73⅝c for November, 75½c for December, 77c for January, 80c for March, and 82½c for May.

Chicago.

Day.	Dec.	May
Thursday	121½	131
Friday	119	129½
Saturday	119¼	129½
Monday	120½	130
Tuesday	120	129

The following is to-day's telegram:

CHICAGO, Nov. 2.—Wheat—71½c for December and 77⅞c for May.

Markets by Telegraph.

English Millers Bidding Lower.

LONDON, Oct. 31.—The *Mark Lane Express* says: The low prices current are greatly affecting market deliveries of wheat, farmers having 15 per cent less and delivering 30 per cent less. Millers are bidding low for imported wheat, knowing that the greater part of the American surplus will come to Great Britain, as France will need only a fifth and Holland only a third what they needed in 1891. Barley, oats and maize are firm. To-day's damp wheat, poor quality, 30s. Foreign unchanged, owing to small imports. Barley, 1s.

Wool Consumption Continues Large.

NEW YORK, Oct. 28.—Bradstreet's says: Wool is only moderately active Manufacturers are not buying ahead, and whenever sales are made they are generally of small amounts. Dealers do not expect manufacturers to buy freely until after election. Mills have been successful as a rule this year in disposing of their products at a profit, and the output has greatly increased. Territories are still quiet and hard to move at quotations. Dealers are firm and refuse to make further concessions. Fleeces are in good demand, but stocks are reduced very low. Quarter-blood wools are moving quite freely, and there is a fair call for three-eighths blood wools. A moderate trade is reported in fall Texas wools. Pulled wools are more active. Fine Australian wools are in better demand. The supply is small. New wools will not come forward for over two months. The holders are, therefore, confident of their position. A fair demand is noted in carpet wools. Stocks are light and prices steady.

NEW YORK, Oct. 30.—The dominant features of the market are the steadiness of tone and an evident continued need of mill supplies that favor better prices in the near future. Sellers have stocks well in hand, and, with the prosperous position of woolen goods, most of them are solid enough to calmly await the outcome of the situation without admitting a feverish element of outside speculation. Sales at New York: 38,000 pounds of spring California and 440,000 pounds of other domestic, including a quarter of a million pulled, mostly lambs, on private terms, and 465,000 foreign, mostly carpet. The sales at Boston were largely Territory and unwashed Western. Total domestic, 3,147 500, including 112,000 California spring and 25,000 fall; also 710,000 foreign, of which 472,000 was Australian. Philadelphia mentions all grades as receiving attention at full prices.

Short Wool on Skin Free of Duty.

WASHINGTON, Oct. 29.—The committee appointed by the Treasury Department has rendered an opinion on wool on shearing sheepskins, which does not exceed a quarter-inch in length, that it is of such little value as wool that it should be passed free of duty, but that all shearing skins where the wool exceeds a quarter of an inch in length should be subject to duty. This conclusion has been adopted as the rule of the Department and all collectors have been notified. [The short wool is used by hatters and shoddy mills.—ED. PRESS.]

Lima Beans are Higher.

NEW YORK, Oct. 31.—Lima beans are steady at $2.05 per bushel, spot. Receipts for the month, 45,000 bags. Many have gone on western orders.

Poor Raisins Nominal; Choice, Very Firm.

NEW YORK, Oct. 30.—Receipts for the week, 16,500 boxes and 3500 bags for New England and 8300 boxes and 7300 bags for New York. The bulk has gone eastward. Valencia landed 70,000 boxes last week. As before, quotations are indefinite, except for perfect quality of California. Six and one-half cents is full for such three-crown bags, $1 85 for the best loose boxes and $2.25 for layers. The first bulk offering does not disclose the average good grade promised for October at this date. Out of town buyers already grumble at the condition, and considerable prompt business is checked.

Hops Hold Strong.

NEW YORK, Oct. 30.—There was a fair run of trade. Exporters show some eagerness to secure the first of new State, paying full prices, though the cable is not encouraging. Brewers took prime useful grades of State and Pacific, when they were to be had, at 21@23c. The spot offering is moderate, which keeps general quotations where they ranged a week ago.

Canned and Dried Fruit.

NEW YORK, Oct. 30.—Canned Fruits—Little has been doing in standards. Low grades are working out well for pie for bakers' use. Canned peas have no open quotations. The week's trade in dried prunes was mainly in spot single sizes: nineties at 10¾c, eighties at 11¼c, seventies at 11¾c, sixties at 12½c, fifties at 12½c, forties at 13¼c. Dried Peaches are weak. Choice are 12½@14c; fancy, 15@16c. Apricots are fairly well supported.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Nov. 1, '92, were as follows:

Flour, qr. sks	90,845	Bran, sks	11,928
Wheat, ctls	316,539	Buckwheat "	163
Barley, "	55,354	Middlings "	2,859
Rye, "	603	Chicory, bbls	60
Oats, "	22,275	Hops, "	653
Corn, "	7,656	Wool, "	2,776
*Butter, "	884	Hay, ton	1,539
do bxs	553	Straw, "	131
do bbls	71	Wine, gals	243,000
do kegs	280	Brandy, "	6,200
do tubs	180	Raisins, bxs	15,842
do ½ bxs	23	Honey, cs	68
†Cheese, ctls	450	Peanuts, sks	151
do bxs	124	Walnuts "	1,103
Eggs, doz	13,840	Almonds "	553
do "Eastern"	11,800	Mustard "	382
Beans, sks	49,036	Flax "	....
Potatoes, sks	26,957	Popcorn "	....
Onions, "	3,654	Broom corn, bbls	....

*Overl'd, 337 ctls. †Overland, 15 ctls.

Exports by Sea from San Francisco from July 1 to Oct. 26.

	1892-93	1891-92
Wheat, ctls	3,781,544	5,322,021
Flour, bbls	422,484	375,510
Barley, ctls	681,152	532,503

Tonnage Movement.

From reliable advices up to Nov. 1, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	247,433	437,662	*176,740	101,673
San Diego	11,378	24,489	7,886	.....
San Pedro	6,333	5,954	....	
Oregon	42,301	33,346	31,537	20,991
Puget Sound	22,157	25,843	.....	
Totals	329,602	527,294	216,163	122,664

*Engaged for wheat, 1892, 60,881; 1891, 91,546.

Cereals.

The London *Daily News* estimates the wheat crop of the world for 1892 at 2,139,000,000 bushels, against 2,185,000,000 bushels last year and 2,125,000,000 bushels two years ago.

Dornbusch says: "The weather during October has been quite unfavorable all through the United Kingdom, although the heavy rains up to the middle of October had not brought the precipitation up to the average. In France the sowing of wheat is being pushed forward, and the early-sown fields present a promising appearance. Rye also looks well. In Holland, Belgium and Germany, fine weather enables farmers to go ahead with autumn-sowing. Hungary has had splendid rain, and field-work is in full operation. In the Danubian provinces, fine weather marked the whole course of harvest, and unusually fine crops of wheat, rye and barley have been secured. The outlook in Russia was disheartening on account of the drought in the southern Governments, but this week the hoped for rain fell in the Caucasus and southwestern regions, also in the east, but up to yesterday the drought in Azov provinces was unbroken. This timely rainfall will permit of the immediate sowing of winter wheat and rye, and may lead to a freer movement of wheat toward the seaports."

The Chicago *Herald* says there are 10,000 loaded cars of grain in the vicinity of Chicago which the railroads cannot get rid of, because the elevators from Chicago to Buffalo are full, and nobody wants the stuff.

Omaha advices report: "The greatest car famine in the history of the West appears to be imminent. The roads centering in Omaha are commencing to shut down on receiving wheat and corn. There is not a railway in these parts that is not from three to four hundred cars short of actual requirements, and the prospect for a let-up in demand grows less every day." Sioux City, Iowa, advices report: "Despite the extraordinary precautions, a grain blockade and car famine on western roads has set in, and all the roads in Dakota and Nebraska and some of the divisions in northern and western Iowa are wholly unable to handle the grain business. Railroad yards and side-tracks are blocked, delaying traffic of all kinds."

Referring to the above, the New York *Mail and Express*, Oct. 28th, says: "This extraordinary movement has been responsible for large losses. The New York wheat market has passed below the lowest previous prices, and is at present at about the lowest figures reached. On the other hand, the Chicago market, which has been relatively higher owing to the small difference between the markets, has not reached as low figures as New York. October wheat there has been quoted as low as 71¾c, but in 1888 cash wheat sold at 71½c in April. The previous year in August it sold at 66⅝c. In October, 1886, it sold at 69⅝c, and in December, 1884, it sold at 69½c. Aside from the years mentioned, there have been no times in recent years when wheat has been as low as it has been at present It seems to be without doubt a fact that a good portion of the present weakness is due to the open spouts of the farmers' bins. There seems to be every reason for believing that, if re-

eipts of wheat had been as much smaller than last year as the crop, a large portion of the present depression would not have been seen."

Wheat to-day was easy abroad for American red but firm for white. The local maket held steady with very little offering. The tonnage in port shows an increase during the week. Charters closed weaker.

Barley was active and firm to-day. The call appears to be running chiefly on feed, of which the market for No. 1 is oversold. Dark barley is firmer. Malting barley is firm but not quotable higher.

The market for oats was quite strong to-day but no higher quotations were given.

Corn was dull but fairly steady at current quotations.

Stocks of Grain.

The Produce Exchange Call Board reports the following stocks of grain, etc., in city Call Board warehouses at the close of October, and on the 1st of that month:

	1st.	31st.
Wheat, tons	3,182	3,452
Barley	24,613	28 194
Oats	3,015	3,713
Corn	2,175	2,867
Bran	1,232	1,579

At the close of October, 1891, the stocks in city Call Board warehouses were as follows: Wheat, 7410 tons; Barley, 21,995; Oats, 4580; Corn, 719; Bran. 320.

The receipts in October, 1892, were 70,885 tons Wheat, 14,681 Barley, 4457 Oats, 1623 Corn and 3201 Bran.

The stocks of Wheat, October 31, 1892, in all Call Board warehouses were as follows:

	Tons.
San Francisco	3,452
Stockton	74,792
Port Costa	130,384
Total	208,628

As against 229,179 tons on October 31, 1891.

Feedstuff.

Bran was weak to-day, with offerings fairly free and an offish demand. Middlings were easy. Feed meal was quiet. Roll-barley was firm at current quotations.

Hay was firm to-day with only a fair demand and light offerings. Holders dot appear disposed to offer much on the market. This course is dictated by the belief that better prices will be obtained later on particularly so if we should have a hard winter.

Dairy Produce.

The butter market to-day was in buyers' favor and prices took on a wide range. Forced sales were made at from two to five cents per pound below prices which forced purchasers could have been made. Close buyers had things their own way. The market was unsatisfactory and hard to quote.

Cheese was steady for old and firm for mild new. The demand was only fair.

Eggs were strong and in good demand. While 42½ cents was the ruling price for selected, fresh-laid, yet 45 cents was paid for the better selected, white-colored, fresh-laid. Utah were firm and tending up. Cold-storage were firmer as were "as is."

Vegetables.

Garden truck was essentially unchanged to-day. Tomatoes in a small way moved off fairly free. Marrowfat squash for table use sold better, but cow-feed remained unchanged. Root vegetables, cabbages, celery and cauliflower were essentially unchanged.

There was a fair inquiry for choice shipping onions but the demand was met without advancing prices. Potatoes were firm with a strong tone for the more choice good-keepers, suitable for shipping or the better class of trade.

Fruit.

The market for table grapes was fairly active at firm prices for the more choice good keepers. Poor keepers were slow. The same remarks apply to-day to wine grapes. Apples met with a fairly good demand at the advanced quotations. Some Kern county peaches came in and have ready sales. Winter Nelis pears were strong, but common pears were slow.

Remarks under review cover the market for dried fruit and raisins.

Live Stock.

The market shows a fair degree of strength for bullocks. Mutton sheep have held to steady prices, but hogs have been barely steady. Calves are firmer. If range pasture continues to improve, it is quite likely that the offerings of bullocks will fall off.

Miscellaneous.

Poultry has been demoralized and unsatisfactory. Heavy receipts (five carloads) of Eastern the past week, filled up dealers and to force sales, commission merchants had to make concessions. Turkeys are lower, as are also geese.

Game has ruled fairly steady. Quails fluctuate from day to day. To-day, $1.10 was the outside figure.

Beans are in active demand. The extension by the Mexican Government for the time to import free of duty, has had a stimulating effect, as has an improved demand for shipping and to coast points.

Wool and hops are noted under the review.

Hams are easier, but bacon and lard are steady.

Sugar was reduced ⅛c per pound the past week.

Almonds are easier, but other nuts are steady. There is a continued free movement eastward.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

OCTOBER 25, 1892.

Limes, Mex	3 50	@ 4	50
Do Cal	—	@ —	
Lemons, box	5 00	@ 7	00
Do Sicily choice	8 00	@ 8	50
Strawberries, pr chest	5 00	@ 9	00
Peaches, box	50	@ 1	50
Apples	30	@	60
Do Choice	75	@ 1	00
Do Extra choice	1 00	@ 1	25
Canteloupes, pr crate	—	@	—
Grapes, pr bx—			
Do White	35	@	50
Do Black	30	@	60
Do Muscats	30	@	60
Do Tokays	35	@	65
Do Royal Isabel	1 00	@ 1	25
Do Cornichon	50	@	75
Wine Grapes, Zinf'nd'l, pr tn	—	@17	00
Mission	10 00	@12	00
White	8 00	@10	00
Pears	25	@ 1	00
do Winter Nelis	75	@ 1	25
Quinces pr bx	75	@ 1	25

Extra choice fruit for special purposes sells at an advance on outside quotations

Beets, sk	—	@	50
Carrots, sk	30	@	50
Okra, dry, lb	8	@	10
Parsnips, ctl	1 00	@ 1	50
Peppers, dry, lb	7	@	9
Do grn Chili, bx	40	@	60
Do do Bells	40	@	60
Turnips, ctl	—	@	10
Cabbage, 100 lbs	35	@	50
Garlic, lb	2	@	2½
Tomatoes	25	@	60
String Beans, lb.	3	@	4
Lima Beans	4	@	4½
Cucumbers, box	—	@	—
Mushrooms	—	@	—
Egg Plant, bx	25	@	50
Marfat Squash, ₱ ton	6 00	@12	00
Cauliflower	50	@	65
Celery	50	@	75

Live Stock.

BEEF.		MUTTON.	
Small fed	6 @	Wethers	6½ @
Large fed, extra	6½ @	Ewes	6 @
Fair quality	5½ @	Do Spring	7 @
Second quality	4½ @	HOGS.	
Poor quality	3 @	Light, ₱ lb, cents	4½ @
Cows and Thin Cows	2 @	Medium	4½ @
VEAL.		Heavy	4½ @
Large heavy	4½ @	Soft	4 @
Small	5½ @	Feeders	3½ @
Dry	6½ @	Stock Hogs	3½ @

General Produce

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

NOVEMBER 2, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 30	@ 2	40
Butter	2 75	@ 3	00
Pea	2 65	@ 2	75
Red	2 40	@ 2	50
Pink	2 10	@ 2	15
Small White	2 50	@ 2	65
Large White	2 45	@ 2	50
Lima	3 00	@ 3	15
Fld Peas, blk eye	1 60	@	—
Do green	2 20	@	—
Do Niles	1 40	@	—
Split	4 50	@ 5	50
BUTTER.			
Cal., poor to fair, lb	12½	@	—
Do g'd to choice	20	@	—
Do Giltedged	—	@	30
Do Creamery	26	@	—
Do do Giltedge	—	@	32½
Eastern, lad'e	12½	@	—
Cal. Pickled	20	@	—
Cal. Keg	20	@	24
East'n Cr'am'y	25	@	—
CHEESE.			
Cal. choice cream	9½	@	—
Do fair to good	8	@	—
Do Giltedged	—	@	12
Do Skim	5	@	6½
Young America	—	@	12
EGGS.			
Cal. "as is," doz	25	@	—
Do shaky	20	@	—
Do candled	35	@	—
Do choice	40	@	—
Do fresh laid	—	@	42½
Do do sl'cd white	—	@	45
Eastern "as is"	20	@	—
Do candled	25	@	—
Do selected	30	@	—

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.			
Bran ton	14 00	@ 15	00
Feedmeal	26 00	@ 27	00
Gr'd Barley	19 00	@ 20	50
Middlings	21 00	@ 23	00
Oil Cake Meal	—	—@ 35	00
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets		@ 8	00
HAY.			
Wheat, per ton	8 50	@	—
Do choice	—	@ 14	00
Wheat and oats	8 00	@ 12	50
Wild Oats	7 00	@ 10	00
Cultivated do	6 00	@ 9	00
Barley	6 50	@ 9	50
Alfalfa	8 00	@ 9	50
Clover	8 00	@ 10	00
Straw, bale	30	@	50
GRAIN, ETC.			
Barley, feed, ctl	82½	@	—
Do good	86½	@	—
Do choice	90	@	—
Do brewing	92½	@	—
Do do choice	96½	@	—
Do do Giltedge	1 00	@	—
Do Chevalier	1 00	@	—
Do do Giltedge	1 15	@	—
Buckwheat	2 25	@	—
Corn, white	1 20	@ 1	25
Yellow, large	1 07½	@ 1	10
Do small	1 12½	@ 1	15
Oats, milling	1 37½	@	—
Feed, choice	1 35	@	—
Do good	1 30	@	—
Do fair	1 25	@	—
Do common	1 17½	@	—
Surprise	1 45	@	—
Black Cal	1 10	@ 1	25
Do Oregon	—	@	—
Gray	1 30	@	—
Rye	1 12½	@ 1	17½
*Wheat, milling Gilt edged	1 35	@	—
Do choice	1 33½	@	—
Do fair to good	1 32½	@	—
Shipping, choice	1 33½	@	—
Do good	1 31½	@	—
Do fair	1 28½	@	—
Common	1 26½	@	—
Sonora	1 25	@ 1	30
HOPS.			
1892, fair	18	@	—
Good	20	@	—
Choice	21	@	—
FLOUR.			
Extra, city mills	3 90	@	—
Do country m'ls	3 90	@	—
Superfine	2 50	@	3 00
NUTS—JOBBING.			
Walnuts, Cal. lb	8	@	—
Do choice	10	@	—
Do paper-shell	11	@	—
Almonds, soft sh'l	12	@	—
Paper shell	13½	@	—
Hard shell	6	@	—
Brazil	8	@	—
Pecans, small	8	@	10
Do large	14	@	16
Peanuts	3½	@	4½
Filberts	10	@	—
Hickory	7	@	8
Chestnuts	18	@	20
ONIONS.			
Silverskin	40	@	60
POTATOES.			
River Reds	40	@	50
Early Rose, ctl	40	@	50
Peerless	60	@	70
Garnet Chilies	60	@	70
Burbank S-ed's	40	@	60
Do do Salinas	85	@ 1	15
Sweet	50	@ 1	00

Extra choice sell for more money

POULTRY.			
Hens, doz	5 00	@ 6	00
Roosters, old	5 00	@ 5	50
Do young	4 50	@ 5	50
Broilers, small	2 50	@ 3	00
Do large	3 50	@ 4	00
Fryers	4 00	@ 4	50
Ducks	4 00	@ 4	50
Do large	4 50	@ 5	00
Do extra large	—	@ 6	00
Geese, pair	1 50	@ 1	75
Turkeys, gob'r	15	@	16
Turkeys, hens	13	@	14

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	—	@11	50
GAME			
Quail, per doz	1 00	@ 1	25
Ducks	—	@	—
Do Mal'd ₱ doz	4 00	@ 5	50
Do Sprig	2 25	@ 3	00
Do Teal	1 50	@	—
Do Widgeon	1 50	@ 2	00
Do small	1 00	@ 1	50
Geese	—	@	—
Do gray ₱ doz	2 00	@ 2	50
Do White	1 00	@ 1	50
Do Brant	1 00	@ 1	50
Snipe	—	@	—
Do English, doz	1 50	@ 2	00
Do Jack, per doz	75	@	—
Hare, per doz	1 00	@ 1	50
Rabbits, large	1 25	@ 1	50
Do small	1 00	@ 1	25
PROVISIONS.			
Cal. bacon, heavy, per lb	12	@	—
Medium	13	@	—
Light	14	@	—
Lard	8½	@	12
Cal sm'k'd beef	11	@	—
Hams, Cal salt'd	13	@	—
Do Eastern	14	@	—
SEEDS.			
Alfalfa	10	@	—
Clover, Red	14	@	—
White	28	@	—
Flaxseed	2 25	@	—
Hemp	4½	@	—
Mustard, yellow	5½	@	6½
Do brown	4	@	—
WOOL.			
FALL, 1892.			
S Joaquin, plain	6½	@	10
Do mountain	10	@	12
Do lamb	8	@	10
Northern Choice	14	@	—
Do Defective	11	@	—
Do Lamb	10	@	14
HONEY—1892 CROP.			
White comb, 2-lb frame	9	@	12½
Do do 1-lb frame	11½	@	14½
White extracted	7½	@	—
Amber do	6½	@	—
Dark do	6½	@	—
Beeswax, lb	23	@	—

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified, are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES—1892.			
Sun-dried, ½'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½	@	4
Do do prime	4	@	4½
Do do choice	4½	@	5½
Evap. bl., ri g, 50-lb. bx	8	@	9
Fancy, higher.			
APRICOTS—1892.			
Sun-dried, unbl. com.	4½	@	5½
Do do prime	6½	@	8
Do do choice	9	@	10
Do bleached, prime	12½	@	—
Do do choice	13½	@	—
Do do fancy	14½	@	16
Evap choice, in boxes	15	@	16
Do fancy, do	15½	@	17
FIGS—1892.			
Sun-dried, black	4	@	—
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—
GRAPES—1892.			
Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	8	@	9
Do Evap., in boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—
PEACHES—1892.			
Sun-dried, unpeeled	7	@	7½
Do do prime, bl'ched	10	@	—
Do do choice, do	11	@	—
Do do fancy	12	@	—
Sun-dr., pl'd, bl'ched	—	@	—
Do do prime	14	@	—
Do do choice	—	@15	
Do do fancy	—	@16	
Evap., peeled, in boxes choice	17½	@	—
Do do fancy	20	@	—
PEARS—1892.			
Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap., slic'd, in b'xes	7	@	8
Do ring do	9	@	10
Unp'led, q'rt'd, bl'ch'd	10	@	11
PLUMS—1892.			
Pitted, sun-dr.ed	10	@	10½
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpitted	4	@	5
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	12

Fancy sell for more money.

RAISINS—1892.			
London Layers, cluster per box	1 90	@	2 00
Do choicest do	1 60	@	1 70
Do prime pr bx	1 40	@	1 45
Loose Muscatels, common, pr bx	—	@	—
Do choice do	1 25	@	1 30
Do fancy do	—	@	—
Unstem'ed Muscatels in sks pr lb	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
Do do pr 20-lb. bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bl'ched in bxs	—	@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manilla Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grapevine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manilla, 3 yarns, heavy	10½	Duplex Hop in balls, tar'd.	9½
Pure Manilla, 3 & 4 yarns	12	Do, Grapevine, in balls or coils	10½
Do, 2 yarns, light	12½		

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal., in cellar lots 12 @20

Auction Sales of California Fruits.

At New York.

Oct. 27.—Two carloads: Tokay Grapes, double crates, $3 65@5.05; average, $4.20; single crates, $1 80@2.60; average $1.85; Cornichon Grapes, double crates, averaged $4 30; single crates, $2.15.

Oct. 27.—One carload: Tokay Grapes, double crates, $4@4.62; Tokay Grapes, single crates, $1.55@1 60; Emperor Grapes, single crates, $1.70@1.75; Muscat Grapes, single crates, $1.65; Black Ferrara Grapes, single crates, $1.55; Bilyeau's Late Peaches, $1.80@2.25; Cling Peaches, $1.20@1 45.

Oct. 28.—Three carloads: Tokay Grapes, double crates, $2.85@4 80; single crates, $1.25@2.25; Cornichon Grapes, double crates, $3.65@4; single crates, $1.45@2.35; Emperor Grapes, single crates, $1 55; Black Morocco Grapes, single crates, $1.45; Ferrara Grapes, single crates, $1.35@1.60.

Oct. 29.—One carload: Tokay Grapes, $3.25@4 80; single crates, $1.25@2.10; Cornichon Grapes, $3.60@4 95; single crates, $1.45@2.35; Ferrara Grapes, $1 55; Morocco Grapes, $1.45@1.70; Muscat Grapes, $2.50@3.50.

Oct. 31.—Two carloads. Tokay Grapes, double crates, $3.55@5.30; single crates, $1.50@2.45; Cornichon Grapes, double crates, $3.90; single crates, $1.75@1.95; Coe's Late Red Plums, $3.45; Easter Beurre Pears, $3.25.

Nov. 1.—Three carloads: Winter Nelis Pears, $3.50 ₱ box, Tokay Grapes, double crates, $3 65@4 90; single crates, $1.85@2 60; Cornichon, double crates, $3.70@4.25; single crates, $2 25; Lady Washington, single crates, $1.40.

At Chicago.

Oct 27.—Four carloads: Coe's Late Red Plums, $2.05; Glout Morceau Pears, $2.85; Doyenne Pears, $2 05; Tokay Grapes, single crates, $1 10@1.30; Cornichon Grapes, single crates, $1@1.30; Emperor Grapes, single crates, $1.25; Muscat Grapes, single crates, 80c@$1 15; Purple Damascus Grapes, single crates, 95c; Black Ferrara Grapes, single crates, 90c; Quinces, $1.15.

Oct. 27—Two carloads: Peaches, $1@2 20; Pears, boxes, $1.70@1.80; Pears, in crates, $1.05; Easter Beurre Pears, boxes, $2.20@2.45; Easter Beurre Pears, in crates, 70c@$1.65; Muscat Grapes, double crates, $2@2 60; Muscat Grapes, single crates, $1.20; Tokay Grapes, double crates, $2.75@3.50; Tokay Grapes, single crates, 95c@$1.55; Cornichon Grapes, double crates, $2.50; single crates, $1 40; Emperor Grapes, bad order, 50c; Malaga Grapes, 50@95c.

Oct. 28.—One carload: Tokay Grapes, single crates, 95c@$1.50; Tokay Grapes, double crates, $3.35; Peaches, 85@90c; Pears, $1.05@2 20.

Oct. 28.—Two carloads: Tokay Grapes, double crates, $2.85@3.45; single crates, $1 30@1 60; Cornichon Grapes, double crates, $2 60; single crates, $1.15; Muscat Grapes, double crates, $2.30; single crates, $1.10@1.20; Pears, $2.10.

Oct. 29.—Three carloads: Tokay Grapes, single crates, $1@1.35; Cornichon Grapes, $1.30; Emperor Grapes, $1 30; Coe's Late Red Plums, $2; Glout Morceau Pears, $2.10; Lawrence Pears, $2.05; Easter Beurre Pears, $2.

Oct. 31.—Two carloads: Tokay Grapes, double crates, $2.50@2.90; single crates, $1@1.50; Cornichon Grapes, double crates, $2.25; single crates, $1@1.15; Muscat Grapes, single crates, 95c@$1.10; Rose de Peru Grapes, double crates, $1.20; Quinces, $1.10.

Nov. 1.—Three carloads: Glout Morceau Pears, $2 90; Winter Nelis Pears, $2 20; Pound Pears, $1.60; Coe's Late Red Plums, $2; Bilyeau's Late Peaches, $1.60; Bonanza Peaches, $1 40; Cornichon Grapes, single crates, $1.25; Emperor, single crates, $1.20; Tokay, single crates, $1@1.25; Purple Damascus, single crates, 80c; Black Ferrera, single crates, 85c; Quinces, $1@1.05.

How They Moved Obelisks.

The obelisks of the Pharaohs are made of red granite called syenite, says the writer of "Cleopatra's Needle." In the quarries at Syene may yet be seen an unfinished obelisk, still adhering to the native rock, with traces of workmen's tools so clearly seen on its surface that one might suppose they had been suddenly called away and intended soon to return and finish their work. This unfinished obelisk shows the mode in which the ancients separated these immense monoliths from the native rock. In a sharply-cut groove marking the boundary of the stone are holes, evidently designed for wooden wedges. After these had been firmly driven into the holes, the groove was filled with water. The wedges, gradually absorbing the water, swelled and cracked the granite throughout the length of the groove. The block, once detached from the rock, was pushed forward upon rollers made of the stems of palm trees from the quarries to the edge of the Nile, where it was surrounded by a large timber raft. It lay by the river side until the next inundation of the Nile, when the rising waters floated the raft and conveyed the obelisk down the stream to the city where it was to be put up. Thousands of willing hands pushed it on rollers up an inclined plane to the front of the temple where it was designed to stand. The pedestal had previously been placed in position and a firm causeway of sand covered with planks led to the top of it. Then, by means of rollers, levers and ropes made of the date palm, the obelisk was gradually hoisted into an upright position. It speaks much for the mechanical accuracy of the Egyptian masons that, so true was the level of the top of the base and the bottom of the long shaft, in no single instance has the obelisk been found to be out of the true perpendicular.

THE United States gold dollar contains 25.8 troy grains. The ordinary pound, avoirdupois, contains 7000 grains, therefore $1,000,000 in gold coin weigh 3686.4 pounds avoirdupois, or over a ton and a half. The standard silver dollar weighs 412.5 troy grains, and $1,000,000 in the United States silver coinage will weigh 56,931 pounds, or nearly 28¼ tons.

TO MAKE a glue that will resist the action of water, boil one pound of glue with two quarts of skimmed milk.

Two Live Granges.

SACRAMENTO, Oct. 31.

American River Grange celebrated its anniversary Oct. 27th by an all-day meeting. The fourth degree was conferred on a class of four, followed by a harvest feast. The afternoon session was an open one and numerous candidates for county offices appeared and made their appeals to voters. Sacramento, Enterprise and Florin Granges were well represented. The affair concluded with a grand ball in the evening.

An entertainment will be given by this Grange at Christmas time, the proceeds to be given to the Grange Temple fund.

Sacramento County Pomona Grange, No. 2, held a meeting Oct. 29th at Sacramento, and decided to call a meeting on Wednesday, Nov. 30th, at 1 o'clock P. M., when the county exhibit committee will be expected to report.

On motion of Sister S. H. Jackman, the Grange appropriated $25 of the National Temple of Ceres fund.

A committe was appointed to appear before the Board of Supervisors and ask for the appointment of a horticultural commission.

A committee was also appointed to obtain information relative to the holding of a Farmers' Institute.

Bro. S. H. Jackman presented a resolution in reference to the State school text books, which was unanimously adopted and ordered sent to each Pomona and subordinate Grange in the State. The resolution reads as follows:

WHEREAS, It has come to the knowledge of this body that interested parties are seeking, through Teachers' Institutes and through paid articles which appear in newspapers under the guise of voluntary contributions, and in other ways, to undermine and break down the present system of school books in this State; and whereas, we deprecate a return to the system formerly in vogue, with its train of corrupting influences; and whereas, notwithstanding specious and seductive influences to the contrary, it is evident to us that the present system possesses large economic advantages; and whereas, we have confidence in the integrity and ability of the State Board of Education, and in the administration of the State Printing Office; therefore,

Resolved, That we request our State Legislature and our State Administration to discountenance all attempts to abolish the present system and to do all in their power for its maintenance, perfection and efficiency.

H. S. J.

A PETRIFIED FOREST.—F. B. Schemerhorn, Geologist of the Idaho World's Fair Bureau, who recently discovered the great glaciers in Idaho county, has found a fossil forest in the center of Custer county. In the same locality he has discovered the petrified bones of a now extinct race of men and animals, which will be sent to Chicago. The forest covers an area of four square miles and the condition of the ground shows that at one time an enormous flow of clay which worked in from the northwest has buried the tree trunks to a great depth. This clay has turned to stone and no one can ascertain its true depth without going to great expense. All the trees in this forest have their tops broken off and stand from 10 to 40 feet above the ground, averaging about 28 to the acre. Schemerhorn took the exact measurement of some of the trees and found them to average 12 feet in diameter on top and 16 feet in diameter at the surface of the ground. How far the trunk reached through the clay stone to the soil he had no means of ascertaining. A branch which had become detached from a tree and was lying about 16 feet from it was three feet in diameter. From the size of the trees and their branches Mr. Schemerhorn thinks they are a species of redwood such as is found in California and attributes their fossilization to the clay, which, bearing a large part of mineral and presumably coming from some volcano, soon turned the living trees into monuments of stone.

MISS BRIGHT (of the Hub)—Why, her books are simply delightful! Indeed, she is really the most liberal writer I know.

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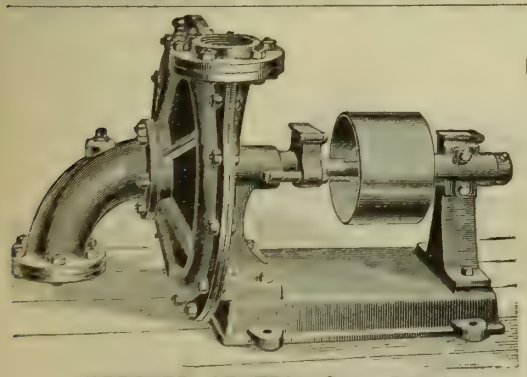
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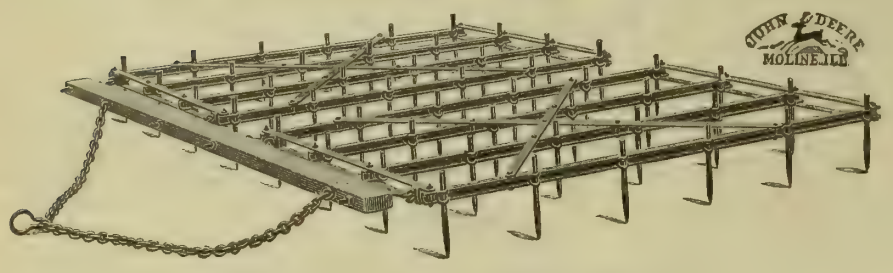
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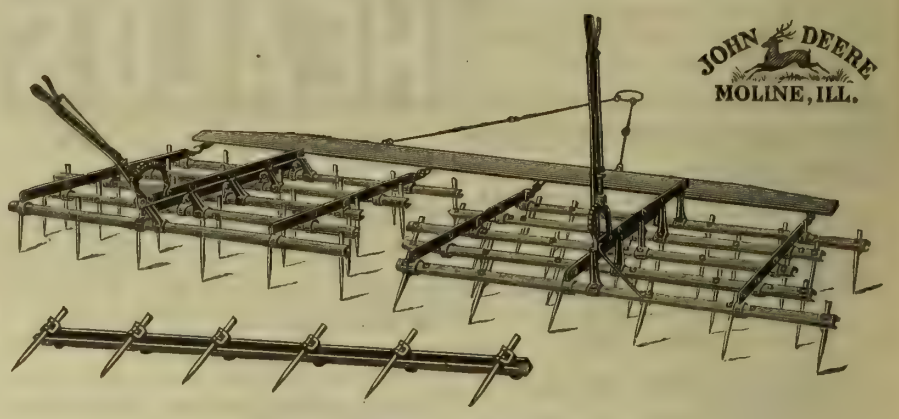
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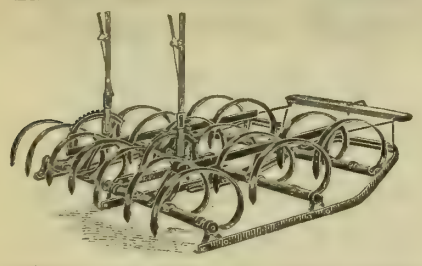
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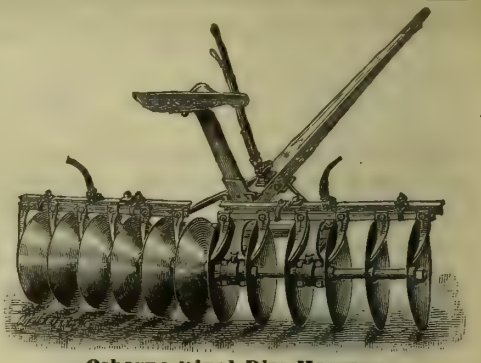
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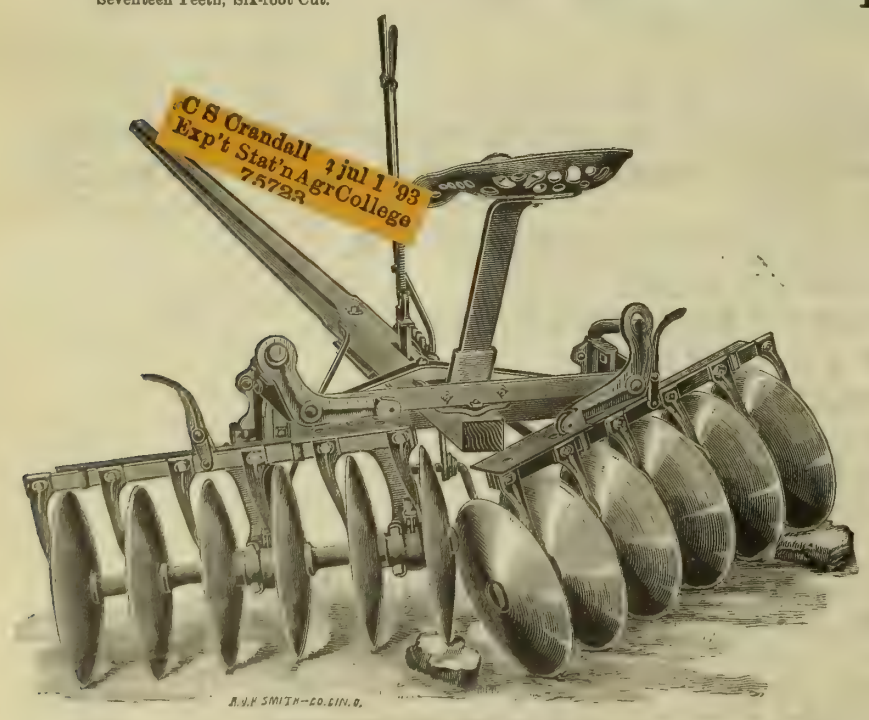
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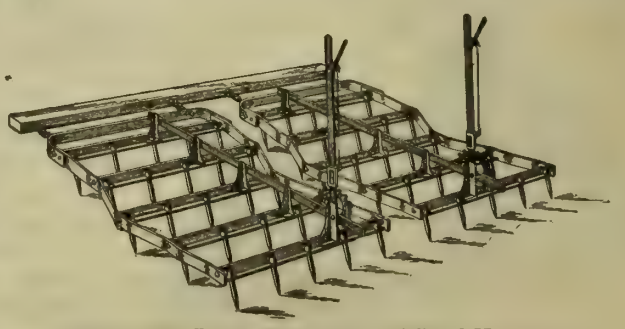
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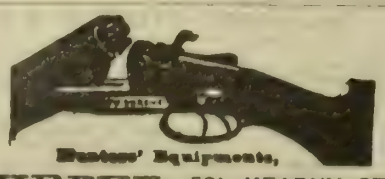
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PACIFIC RURAL PRESS

Vol. XLIV. No. 20. SAN FRANCISCO, SATURDAY, NOVEMBER 12, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

The State Flower Show.

The grand floral exhibition in the Mechanics' pavilion in this city, to which we alluded in last week's RURAL, was continued until the evening of November 4th and proved in every respect successful and satisfactory. As a display for plant-lovers alone and not winning patronage by either social or charitable annexes, it did not, of course, command the patronage which such elements secure. The exhibition did, however, demonstrate that the State Floral Society can command attention and patronage from the purely floricultural interests to enable it to employ the largest floor-space in San Francisco for its display, to pay the premiums which it offers and the other expenses of the undertaking which are considerable. This fact must be looked upon as significant by many RURAL readers who are directly interested in the popularization of the higher floricultural arts and education of the people to appreciate and desire to possess floral treasures which are the best of their kind.

The State Floral Society has done a very important thing also in having had in practical operation during two great competitions a system of judging which is far in advance of anything practiced in this State hitherto. The judges have acted independently and without consultation; in fact, no judge knew what other individuals were acting upon the same exhibits. Each had a separate view of the competing displays (which had numbers instead of exhibitors' names) and each marked in his own book the percentage of each entry. These percentages were afterward averaged by the committee and the awards made accordingly. By this system it was impossible to make awards by favoritism, and the division of the awards so as to give all exhibitors something was impossible. Another progressive movement of the society was to award no first premiums to displays which did not secure from the judges an average of 85 per cent. Because of this rule several classes had no first premiums. It was decided also to award no premiums at all to objects which did not score more than 60 per cent. The idea is to induce all exhibitors to strive for ideal perfection in their flowers and plants. Simply being best of the exhibits will not carry the first award unless the material is in itself of the highest grade.

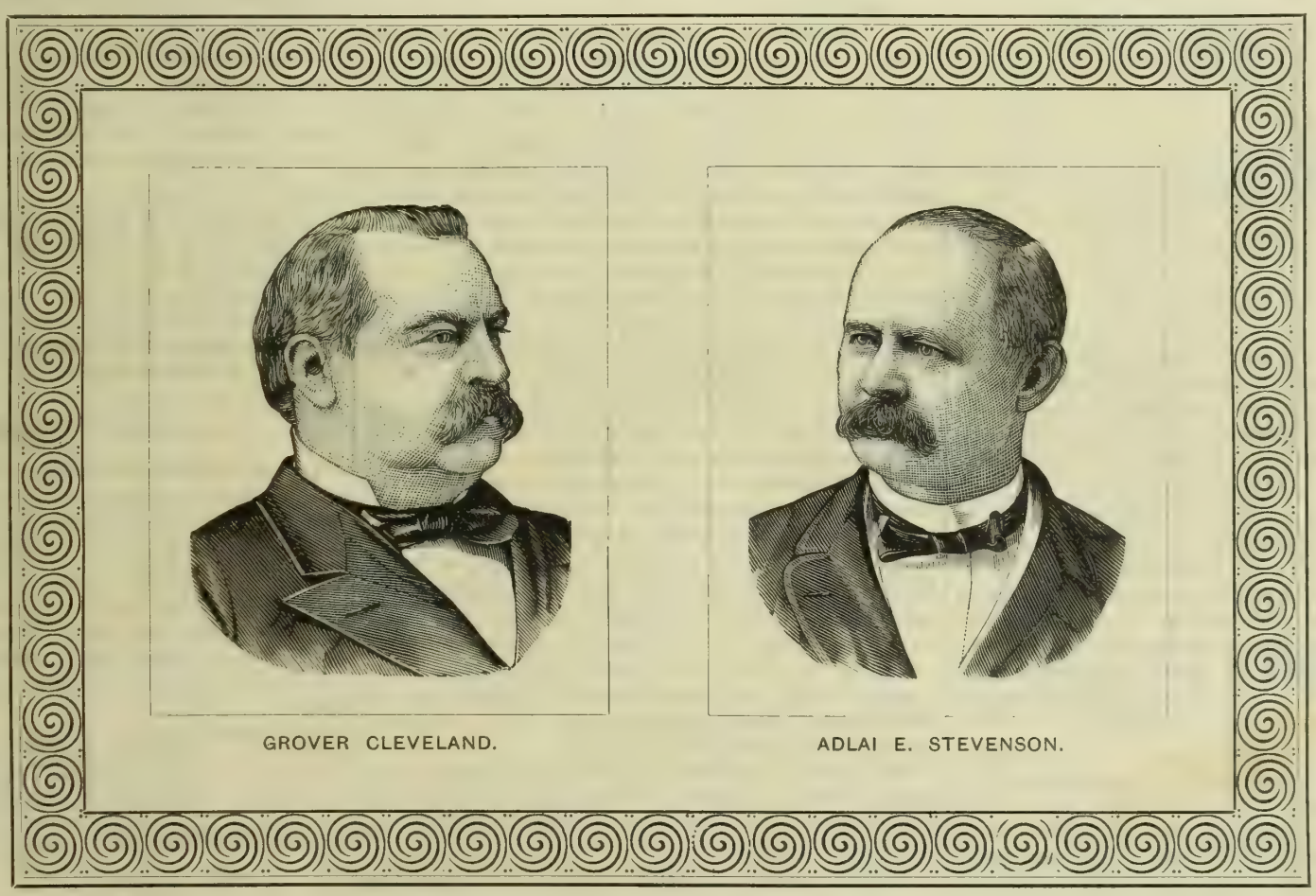
This fall's show drew its attendance and its exhibits from a considerable area of the State. Every one praised the excellence and extent of the exhibition. No words can adequately describe the gorgeousness and perfection of some of the chrysanthemum displays. The groups of palms and foliage plants were the property of more growers than ever before competed. This stimulation and widening of interest at the center should cheer and encourage floral societies in all parts of the State.

Town Endowments.

All honor those who honor their native or adopted towns with portions of their surplus wealth. The erection of creditable town buildings, the furnishing of hospitals, libraries, etc., is certainly a line of public-spirited generosity which all rich people should draw through their wills or follow during their lives. We are glad to see that the energetic and progressive town of Petaluma has found a generous friend in one of her oldest citizens. A very pleasant meeting was held in the city hall on the afternoon of November 5th, at which Harrison Meacham, who had already given the town a bronze fountain worth $1000, made a very earnest and feeling speech, and presented a deed to Petaluma of 1000 acres of land, worth $50 an acre. The deed is made to five trustees—two gentlemen and three ladies, all leading citizens of Petaluma, and their successors in trust for the city, and the proceeds are to be used for charitable purposes. The audience, by a rising and unanimous vote, expressed its thanks to the public-spirited donor.

Mr. Meacham's money thus bestowed will relieve suffering and prevent distress so long as property rights prevail. How much better thus to bestow wealth than to bestow it in immoderate amounts upon those who are more injured than benefited by the bestowal.

THE Supreme Court of Missouri has decided that official notices published in Sunday papers are not legal.



GROVER CLEVELAND. ADLAI E. STEVENSON.

THE PRESIDENT AND VICE-PRESIDENT ELECT.

Cleveland and Stevenson.

On another page we give a summary of returns from Tuesday's election, which named Grover Cleveland as President elect and Adlai E. Stevenson Vice-President elect of the United States. On this page we give portraits, reproduced from photographs, which are said to be correct and excellent likenesses.

The general facts concerning Mr. Cleveland are well known. He was born in Essex county, New Jersey, in 1837, his father being a Presbyterian clergyman located at Calwell in that county. The boyhood of Mr. Cleveland was like that of most American youths of moderate fortune. He was a grocer's clerk at 14, a law student at 18, a lawyer in responsible practice at Buffalo, New York, at 25, subsequently Sheriff of the county, Mayor of the city and Governor of New York. He was elected to each office on a reform platform and was chosen President of the United States in 1884 by a combination of old-line Democrats and protesting Republicans. His administration of the office is recent history and need not be rehearsed. In 1888 Mr. Cleveland was again a candidate for the Presidency, but was beaten by Benjamin Harrison. This year he returns the compliment by beating Mr. Harrison, whom he will succeed on the fourth of next March. Mr. Cleveland, as his picture represents, is a man of large frame and robust habit, in the prime of manhood and in perfect health. He will bring to the duties of the President experience in office, prime physical and mental capacities, a courage which no one questions and an integrity which commands the admiration and respect of the country.

Mr. Stevenson was born in Kentucky on the 23d of October, 1835. His father and mother were both natives of North Carolina, so he is both by birth and descent a Southern man. Early in life he removed to Bloomington, Ill., where he has lived for over 30 years. Mr. Stevenson has served in the lower house of Congress and was First Assistant of the Postoffice Department of the Government during Mr. Cleveland's first term. He is a lawyer by profession and is considered by his neighbors and those who know him best to be both an able and an honest man. To the country at large he is scarcely known at all, his nomination having been due less to personal reasons than to motives of policy. In appearance Mr. Stevenson is less imposing than Mr. Cleveland, but looks what he is, a plain, substantial, hard-working professional man.

QUARANTINE precautions at Boston are to be continued.

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By The Dewey Publishing Co.

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Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

Our latest forms go to press Wednesday evening.

ALFRED HOLMAN.....General Manager

San Francisco, November 12, 1892.

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Plows—Oliver Chilled Plow Co.
Seeders—Baker & Hamilton.
Agricultural Machinery—Byron Jackson.
Saws—Henry Disston & Sons, Philadelphia, Pa.
Chickens—C. Blom, St. Helena, Cal.
Nursery Stock—H. C. Graves & Sons, Lee's Summit, Mo.
St. Jacobs' Oil—The Chas. A. Vogeler & Co., Baltimore, Md.

See Advertising Columns.

The Week.

The all-engrossing topic of the week is the election, to which due attention is given in other columns. Beside the results of this great issue other matters are hardly of secondary importance; in fact, as we write on Wednesday, people almost refuse to speak or even to think of anything else. It will take several days for the populace to arrive at anything like its normal state of mind.

The season advances gently, and prophets who walk in the November sunshine mop their foreheads and predict a winter of old-time salubrity. November is shaping, so far as can now be judged, for one of its low records in rainfall. Grass which had temerity to start upon the slight moisture brought by the early rains is already in doubt as to the wisdom of its sprouting, for there have been several days of very dry air and drying winds, and there is very little left to maintain growth.

The season's needs are for a generous wetting down. The last fruit harvest in some parts showed a deficiency of bottom water, and surface wetting will not answer this year. It is true that this can be had without heavy early rains, but it is comforting and in many cases very accommodating to get several inches of rain into the ground before Christmas. We hope it will come this year.

Next Tuesday the great convention of fruitgrowers, to which we have made full allusion, will open in San Jose and hold through the week. Go early and stay through; it will be an occasion of much interest and profit!

A Flour-Mill Pest.—It is not welcome news that a serious pest of flour-mills has found access to some California mills. At the meeting of the California Entomological Society last week, Mr. W. G. Johnson of Stanford University read an essay upon the so called Mediterranean flour moth, which has been recently introduced into the State from the East. This moth is a very troublesome and destructive pest, as it not only destroys the bolting cloth, but also feeds upon flour and oatmeal, through which it burrows, leaving silken tunnels and thereby damaging the flour. The pupæ fill up the elevator shafts and otherwise the machinery. This pest was introduced into Canada a few years ago, and the Government took hold of the matter and had the mill thoroughly disinfected with steam and sulphur fumes. By these measures it was effectually stamped out.

In 1861 the famous Languedoc canal was completed. This gave France an artificial waterway 148 miles in length, with a summit level of 600 feet above the sea, and including upward of 100 locks and 50 aqueducts.

Olive Oil Machinery at the State University.

In view of the constantly increasing importance olive culture is attaining in California, it was decided during last year to establish, in connection with the Agricultural Experiment Station of the State University, experiments in oil-making with the different varieties of olives grown in the State. For this purpose the best machinery, representing the latest and most approved methods of the olive countries of southern Europe, has been secured, and experimental work would have been pursued this season if it had been possible to get a proper supply of olives. Offers to purchase olives were sent to a score or more of growers, but it was found that, on account of poor crops due to the unfavorable season, none of the newer varieties of olives could be secured in sufficient quantity for the series of experiments proposed. The Experiment Station will, therefore, confine its efforts for this season to the testing of the machines, which it is hoped will be set up in a separate new building to start experimental work next year. The olive oil experimentation, under the supervision of the director of the station, is entrusted to the personal care of Mr. L. Paparelli, whose studies of the olive industry while connected with governmental institutions in his native Italy gave him excellent standing in this regard. The Rural is indebted to Mr. Paparelli for the interesting description of the appliances and the outline of investigations which will be made.

The machines that are now to be seen at the Experiment Station in Berkeley are three: 1. Pitter. 2. Crusher. 3. Press. The first two were bought in Spain from the manufacturer, and the third one was built in San Francisco, Cal., to suit the requirements of experimental work, by Toulouse & Delorieux, who submitted the lowest bid.

1. The Pitter.—It has been known for a long time that an extra quality of the oil is obtained from the flesh of the olive without the pit. Such oil is superior both for its delicacy and for its resistance to rancidity. Palladius recommended the practice of pitting to the old Greeks, and Pliny to the Latins. The old Romans also had the same conviction, as has been confirmed from the old oil-mill found at Stabia. Sieuve and Stanchowich, at the beginning of this century, had the same opinion, and ordered special apparatus for the purpose, but it has been only in these latter years that great attention has been given to this matter. Several competition prizes were established by the governments and societies for southern European countries for the manufacture of olive-pitters. At present it seems that the best pitter is that devised by Mr. Salvatella, of Tortosa, Spain, one of which has been purchased for the work at the University.

Salvatella's pitter has a hopper which distributes the olives to the cylinders in the interior of the machine. These cylinders, by a special arrangement, separate the flesh entirely from the pit without breaking the latter. Flesh and pits of the olives thus obtained are gently pressed to extract the virgin, the best quality of oil of the fruit, and afterward the pomace is introduced in the "crusher" mentioned below, in which it is converted into a very fine mash, from which, being pressed again, we obtain the rest of the oil contained in the fruit. Of course this oil is of a second quality.

The pitter may be worked by hand, by horse or steam power. When horsepower is used, the pitter works 45 gallons of olives per hour. The same power is sufficient to operate two machines.

The importance of this machine is such that it should be recommended to all those who want to economize capital and labor, while obtaining a product of high quality, commanding the highest prices on the market.

2. The Crusher.—This machine, manufactured also by Salvatella, crushes the olives between two grooved cylinders either in the fresh or in the dry state. Both flesh and pits are reduced in a short time into a very fine paste. It has, in one side, two adjusting screws for the cylinders, in order to regulate the fineness of the paste. When the machine is in operation, a vibrating cleaner separates the largest part of residues of stems and leaves, sand and other impurities that may be with the olives.

Like the pitter, the work with the crusher is very easy. It occupies a space of about three square feet and weighs about 660 pounds. It may be operated by hand, by horse or steam power. Its work is at the rate of about 45 gallons of olives per hour. The same power may do for two crushers, thus saving much time and money.

If only a second quality of oil is desired, the crusher is sufficient without the pitter. The frames of both the pitter and the crusher are of iron.

3. The press.—This has been made by Toulouse and Delorieux as above stated, and is a good specimen of the best type of screw-presses now used in olive-growing countries. It is small, but possesses a fair working capacity. It covers barely two feet square space and is said to weigh about 1500 pounds, the working mechanism included. With such a compact and comparatively light construction one would naturally class it among presses of low power, yet it is estimated that, owing to a clever combination of levers with which it is provided, one man using a lever-handle of two-feet stroke can obtain with it a pressure of 40 tons, which is sufficient for our purpose. The body of the press merely comprises a cast-iron base, two posts rising from opposite sides thereof, and a crosspiece uniting these posts at their upper end. In the center of the base which stands about a foot high, is placed a sheet-iron basket with perforated sides (that can be opened in two halves) into which the product from the pitter or from the crusher is put for pressing, and all around this is a deep groove through which the expressed oil flows out to spouts or discharge-openings to be found on opposite sides midway between the posts. The pressing is done by means of a follower entering the perforated basket from above and carried by a vertically-movable screw fitted in a nut or threaded sleeve formed in the central part of the crosspiece which joins the posts together. The screw, and consequently the follower, is moved to effect the pressing through the medium of a mortise-wheel firmly keyed to its upper end and a slotted collar having cotter-keys or gravitating catches adapted to successively engage the mortises in this wheel. Movement is imparted to this mechanism by a short lever formed integral with the collar and swung back and forth. Below this lever is another one adapted to work in connection with it and multiply the power. This second lever is pivoted to a short bracket projecting from the upper crosspiece of the press. The two levers, when used together, are coupled by a frictional pin seated in the lower lever and playing within a slot in the upper. The press has thus movements of two powers, one produced by a single lever acting directly upon the collar and through it and the gravitating catches upon the mortise-wheel carried by the screw, the other by the same mechanism actuated by two levers coupled by a frictional pin. The speeed, of course, is in inverse ratio to the power developed. If rapid movement is wanted, the single lever is used, if power is the object, both levers are called into action.

The above are the machines that have thus far been provided, but the accessories, such as filters, vessels and other utensils, will be selected among the best of the modern industry, hoping that the crop of olives in the next year will be good, and that it may be possible to get the proper amount of the different varieties cultivated in the State, to start experiments.

Agreed Raisin Prices.

If raisin-producers did not reach everything they aimed at this year, they have certainly succeeded in putting themselves into a far more commanding position than they ever before occupied, and bid fair to find their future trade more satisfactory. One of the most hopeful features of the movement is that both dealers and growers agree to maintain a fair rate. The latest agreement, in which practically all concur, fixes the minimum prices, f. o. b. at the point of shipment, according to the schedule, as follows:

20-lb boxes raisins (clusters)	$2 00
" " " 3 crown choice London layers	1 65
" " " 3 crown standard London layers	1 45
" " " 3 crown choice loose Muscats, faced	1 35
" " " 3 crown choice loose Muscats, unfaced	1 30
" " " 3 crown standard loose Muscats, unfaced	1 15
" " " Seedless Muscats, fancy	1 25
Sacks loose Muscats, 4 crown	5
" " " 3 "	4½
" " " 2 "	3½
" " " 3d grade	3
" " " seedless	4
" " " "	4
" " " " fancy	5

If something like the above can be maintained, and they are certainly as low as the goods should sell, the raisin production will be freed from much of the anxiety and loss which have recently vexed those who have their money invested in this line.

The Pierce Grape.—We are indebted to the California Nursery Co., of Niles, for a liberal sample of the Pierce grape, or Isabella Regia, as it was first called by its originator. It is a glorified Isabella, a marked improvement on the old variety from which it is a sport. Recognizing its character, after adequate trial the grape has been largely propagated by the California Nursery Co., and plants are obtainable from them.

Profitable Physic.—The subjects of Great Britain are the most tremendous patent-medicine swallowers on the globe. During the past year the revenue derived from the three-half-penny stamp upon patent medicines amounted to $1,200,000. Licenses for the sale of patent medicines have increased 1340 in England and 111 in Scotland.

The result of the Presidential election in the United States was received in Italy with the greatest satisfaction.

Cleveland Carries the Country.

The Presidency, the Senate and the House of Representatives Go to the Democrats.

Cleveland has swept the country. Besides the solid South, he has carried New York, Illinois, Connecticut, New Jersey, Wisconsin, and probably Indiana, Ohio, Wyoming and California. Involved in this success is the next Congress, which will be Democratic by from 65 to 100, and the next Senate, which will be Democratic by a majority of from five to ten. In those States which remain steadfast for the Republican party, the majorities are everywhere reduced. It is, in fact, a tremendous landslide, an overwhelming defeat for the Repuqlican party.

Colorado, Kansas and Nevada will cast their electoral votes for Weaver, but in Oregon and North Dakota, where he was supposed to be strong, the adverse vote was decisive. As yet (we write Thursday A. M.), we have only general reports from the several States and cannot, therefore, give definite figures.

In California the count is not yet complete. In the hope of giving definite returns, our last forms have been held back fourteen hours, but the result is still uncertain. At 9 A. M. Thursday (the hour we write), 1477 precincts report 99,738 votes for Cleveland, 97,869 for Harrison and 17,805 for Weaver. The Prohibition vote is not given. It is probable that Cleveland has carried by a plurality of from four to five thousand. In the First Congressional District, Geary (Democrat) is elected to Congress over Davis (Republican). There are as yet no returns from Modoc county, but exclusive of this county the district gives Geary 10,539, Davis 6955 and the People's Party candidate 475. In the Second District Caminetti (Democrat) is elected. Incomplete returns give him 15,715 to 13,012 for Davis (Republi can), and 23 for the People's Party candidate. In the Third District, English (Democrat) has 11,232 while Hilborn (Republican) has 11,172, while Lyon (People's Party) has 2,785. A partial count in the Fourth District (San Francisco) gives Maguire (Democrat) 11,385, Alexander (Republican) 10,186, Burman (People's Party) 1,295. Incomplete returns from the Fifth District indicate the election of Loud (Republican) by a narrow majority. In the Sixth District, Cannon running as the candidate of the Democrats and of the People's Party carries the district by nearly 5,000 majority. In the Sixth District, Bowers (Republican) is elected by a narrow plurality. It is still too early to estimate the complexion of the Legislature, but it is probably Democratic, and will therefore elect a Democrat to succeed Felton in the United States Senate.

In San Francisco the count is very tedious, but the indications are that Ellert, the Non-Partisan candidate, for mayor is elected by a narrow plurality. Scratching was universal among residents of the city, and the result is so mixed that neither party will be able to claim the administration. The Democratic vote was broken up and scattered among a multitude of candidates, but on those names where it was united it showed a majority over all of about 7000.

For the first time the Australian Ballot System was used in this State and with very general satisfaction. While it puts the voter to some little inconvenience, it is a bulwark of defense against fraud and bribery. It is perhaps natural in view of this fact that those whose interest lies in the corruption of politics should inaugurate a savage warfare against it.

The bearing of Mr. Cleveland in victory and of Mr. Harrison in defeat has been alike dignified and in perfect taste. In response to congratulations the President elect has spoken briefly and modestly, while Mr. Harrison has gone about his official business as if nothing unusual had happened. There was no trace of disappointment in his appearance or speech. He has already declared his purpose of returning to Indiana after his official term, but will, perhaps, spend some months in Boston as the guest of his daughter, immediately after leaving the White House.

Milk Solids Called Butter.

For many years men have been traveling in the East and selling a secret process by which it was claimed that more than twice the usual amount of butter could be made from cream by the addition of a harmless and inexpensive chemical. It seems that the South Australian Dairymen's Association has been investigating something of this kind. The Prairie Farmer says that Hon. Carl Wertz presented a paper claiming that cream churned with a small addition of "black pepsin" would make more than twice the butter and that the product would be more healthful, look better, taste better, keep better and sell better than ordinary butter. Upon his request a committee of three, one of which was an official chemist, were appointed to make a thirty days' test with twenty ordinary cows. The cream was thoroughly mixed and half was churned with pepsin, one teaspoonful to the gallon, and half without.

The cream made 348 lbs., 12 ounces and the half treated with pepsin made 884 lbs, eight ounces. The pepsin cost $4, and the increased value, reckoning both samples at 28 cents per pound, was $150.

The chemist's analysis showed that the cream contained 12 per cent butter, 10 per cent cheese, 13 per cent sugar, and four per cent other salts, making 39 per cent solids. In ordinary churning 15 per cent of these entered into the butter and the balance went with the buttermilk. By using the pepsin 37 per cent entered into the butter and two per cent into the buttermilk. Then the committee goes on to argue that, whereas cheese that contains all the butter in cream is more healthful than skimmilk cheese, and, whereas nature has designed milk as the most perfect food for animal life, therefore that product made from milk which contains the original elements in most exact proportions is the most wholesome food. It is claimed that "black pepsin" is a harmless salt; that it simply unites all the solids of milk; that it combines cheese and sugar with the butter; that it violates no law; that it produces more than double the yield of better quality without additional expense. Samples of each churning were exhibited by the committee to the association. Upon the evidence of the exhibit and their tests they made the above claims.

We publish this report with the hope that it may save our enterprising readers the expense of the recipe. They will know more about the validity of the claims set forth when they have given it a thorough and careful trial. For ourselves, we do not think anybody could mix butter, cheese and sugar so skillfully as to make us think it was butter. Still it might be good. We think it should sell on its merits as "pepsin butter," "Australian butter" or "combination butter." Let us hear from all those who try it. Remember that only *black* pepsin will do, and use a teaspoonful to the gallon. Parties are working this country, selling a recipe something like that announced from Australia. In fact, it is not a new thing in this country.

Destructive Dogs.

LARIBEE, HUMBOLDT CO.

TO THE EDITOR:—One of the worst plagues of sheep raising is the dog that will kill sheep. It may be an easy matter for a man with a few sheep that stay around home, and at night sleep near the house and barn, to keep away stray dogs; but where the band runs up into the thousands it is quite another matter.

If you can catch a sheep-killer when he first starts out and is still fresh at his business, then you fix him, though as soon as he becomes up to the tricks of his business, you will have to lie out many a cold night to catch him. When wild animals prey on sheep they often move onto another bedding ground and for a time they are not generally disturbed. It is useless for a band of sheep to move around to escape the ravages of dogs.

Where the rub comes, the damage is invariably done by a lot of worthless curs that are of no use to their owners or any one else. I have in my mind a man who for years has been credited with a sheep killer, and as he is on bad terms with a neighbor who runs sheep, it is claimed that he lately made his brags that he would keep a dog that he knew killed sheep, to even up accounts with his neighbor. Most people do not care to go to law to settle a small dispute, and as I said before, dogs get so sharp that it is next to impossible to get sufficient proof to warrant you to begin proceedings for damages.

This dog question is one of the few disagreeables that stockmen have to face. Some solve it by keeping out poison on their ranges the greater part of the year; many more rely on catching a dog in mischief and then kill him, if you can get the chance, and if you don't get the chance, insist on the owner taking care of the killer. In dealing with this, as in everything else, a person wants to be able to judge men, and if he finds a man willing to take care of his dogs, be lenient with him and try to be friendly, but always remember that charity begins at home and try and protect the old ewe that nurses the twin lambs with fleeces as white as snow. ED. ROBERTSON.

Letter from Mr. J. V. Webster.

CRESTON, CAL., NOV. 1, 1892.

TO THE EDITOR:—In the issue of your paper under dates of the 22d and 29th of October, there appear editorial comments "From an Independent Standpoint," that are worthy of the highest commendation. So rare, indeed, do we find able and independent criticism on the living issues of the day, unbiased by subserviency or partisan prejudice, that it is refreshing wherever found.

The fact is generally recognized, and the conviction growing continually deeper, that social and political reforms never come through the influence of a subsidized, timid or halting press; and, since the conditions, financial and otherwise, controlling the direction of the average organ are so embarrassing or degrading, the occasion is most rare when commendation can justly be conferred.

I am conscious that it is a most uncommon occurrence to find a rural paper with an ambition higher than dissertations on the best methods of producing pigs and potatoes; yet, while recognizing the necessity of this department, you had as well expect the farmer to be satisfied with sauerkrout diet the year round, as in reading nothing but matter referring to theories and experiences in vegetable and animal production. 'Tis true there *was* a time when nothing more could be expected of the farmer's paper, because the impression generally prevailed that he had no mind above the contents of a turnip.

But the conception is beginning to dawn on the people of other trades and callings that the tiller of the soil is something more than "a clod-hopper," and that without his influence and progeny the cities of the land would rot and disappear in the midst of their excesses and seminal weakness, engendered by voluptuous living, love of ease and a consequent indisposition on the part of the *refined and affluent of the softer sex to assume the duties and responsibilities of maternity.* This fact being recognized by every thoughtful mind, there is a general tendency toward a greater intellectual development among the rural people, as the chief source whence must come and sustain the life-giving principle of republican institutions.

It is therefore encouraging to find journals like the RURAL PRESS recognizing these facts, and therefore deprecating partisan bias and political methods that tend to warp the very soul out of every honest, patriotic conception, and would sacrifice every principle of honor in order gain partisan ends.

I fully appreciate the embarrassments that surround the liberal work you have undertaken. It means the loss of patronage on which most publications largely live. Partisans, trusts and corporations will not subsidize the RURAL when it speaks from an "Independent Standpoint," as it did on the 22d and 29th inst. It requires ability, transcendent nerve and the courage of deep conviction to face these powerful elements which are dragging the life of the nation down into the dust of humility.

Having been so often deceived, farmers have grown seriously suspicious of every fulsome advocate which arises among them; consequently their confidence cannot be regained by plausible fallacies or spasmodic efforts that carry not with them truth and continuity of purpose.

No jumping at conclusions without profound deliberation will endure. The farmers of the State and nation are looking for advocates who have the ability and integrity to lead them out of the ruts and quagmires into which they have in a measure fallen, to the end that unanimity of sentiment may prevail among them in all things pertaining to the welfare of the nation, coupled with their own advancement, intellectually, socially and financially.

Now, Mr. Editor, if you have fully made up your mind to really cast your fortunes with us in all things that pertain to the welfare of the farmer, with that intelligent continuity of purpose necessary to accomplish anything great or enduring, you will find the toilers of the nation moving to your standard as move the meandering streamlets into the broad bosom of the ever-enduring river.

With my experience in conducting the *California Patron* for five years, I am fully conscious of the sacrifices you must make in meeting these urgent demands of the farmer; but from the liberal and painstaking work to which reference has been made, you have manifestly resolved to make the RURAL PRESS the independent exponent of the farm and in harmony with all intelligent farmers.

If this conception is faithfully adhered to, with deep solicitude to be always right and liberal in your counsel, the RURAL will ultimately reach a field of usefulness and prosperity uncommon in this age of the world. J. V. WEBSTER.

Vine Planting.

GLEN ELLEN, NOV. 1, 1892.

TO THE EDITOR:—I would like to have the benefit of the experience of some of your readers relative to the best method of laying out a vineyard for wine grapes. Some recommend 7x7 feet, others 12x4 feet, etc., etc. If 12x4 is considered best, should the rows be easterly and westerly or northerly and southerly? From personal observation, in vines planted close together, say 7x7 feet, the outside rows facing the west generally bore the heaviest crop, which seems to be in favor of the 12x4 feet rows. Please invite opinions on the above. GRAPEGROWER.

[These are timely subjects for discussion. A very valuable general essay on vine planting will be found on another page of this issue.—ED. PRESS.]

A RECENT Fresno dispatch reads: "A report from a majority of the vineyards says that the raisins are drying very well in spite of clouds and threatened rain. In some vineyards the precaution has been taken once or twice to stack the trays on account of the lowering condition of the heavens, but in each case it proved an unnecessary precaution. The raisins are rather surpassing expectations. They are not only of a quality better than had been expected, but in most vineyards the yield is above the calculations earlier in the season. The shipping of large quantities of the second crop north for brandy will furnish a profitable way to dispose of that product and at the same time will tend to lessen the total output of the raisin industry of this county, thereby helping to strengthen prices.

CHARLES BEAN, Mrs. Jessie G. Olin and Henry Hart, property-owners on the Mabury road, have filed a notice of intention to form an irrigating ditch company to conduct waters from the Penetencia creek, Santa Clara county, southerly to Mabury road, where they will be divided and distributed along the line of the signers' property.

Among the Orchards of Contra Costa.

MARTINEZ, Nov. 7, 1892.

TO THE EDITOR:—As there are almost 4000 acres of fruit in this county, located near the great cities; as it has frequent trains running through valleys where at least ten times as much more fruit might be planted with good results; as its attractions of climate supplement its advantages of location, it is well worthy of more attention than it has received.

Stopping at Martinez, during a recent visit to the county, the first object of interest was Duane Bros.' nursery. The founder ran away from school when a boy of eight because he loved to work at trees so well. After three whippings his father told him to work until he had enough of it, and although he has been eight years in California since he grew to be six and a half feet high, he has not enough of it yet. He was so delighted to find some one interested in fruit that he drove me all day among the orchards. The valleys of Contra Costa are small but very fertile, as they receive the wash from the hills, are generally well drained by deep gullies and there seems to be a good supply of moisture not too far from the surface. The climate varies with the protection that the hills afford to the winds from the bay. It should be classed among the coast climates. Results show that many locations are specially favorable to almonds.

At Danville there is, back of Webster's store, a Languedoc about 30 years old, two feet in diameter, 40 feet across the top and more than 40 feet high. Many lower limbs have been cut away, yet there were enough nuts for every one that passed to knock down a pocket full; for the owner to gather 100 pounds and leave at least ten pounds now on the tree.

Rev. Mr. Burgess, of the same place, gathered a little more than nine pounds each from his four-year-old trees. J. D. Smith had 4000 pounds on less than an acre of seven-year-old trees, and a seven-year-old tree in Concord bore 70 pounds of nuts. These have sold at prices ranging from 12 to 14 cents. Heavy rains two years since showed the necessity of good drainage for the almond.

The pear stands next as a favorite, especially the Winter Nelis, which matures well and ripens so late as to be in great demand. The soil of Contra Costa is generally heavy and specially well adapted to the pear. Six hundred acres are planted to this fruit. Apricots generally do well and the trees show a fine growth, save in a few instances where poor cultivation and crops raised between the trees have rendered success almost impossible. The Blenheim is a favorite variety in Contra Costa. Duane Bros. have a tested variety of great excellence to put upon the market next year. There are 287 acres of apricot trees.

There are 160 acres planted to olives, but few are in bearing yet. At Mr. Busby's orchard near Concord we saw 77 acres of the very finest Mission trees I ever saw. They say that the olive is of slow growth, but here is a grove of four-year-old trees that will average nearly six inches in diameter. Its owner, the glove-manufacturer on Market street, near Sansome, is so proud of the grove that he would hurry out by the next train if he heard that a grasshopper or a scale had appeared. Adjoining his ranch is another, belonging to Mr. Sutton, which is equally attractive and largely planted to almonds and apricots. These two places, of 102 acres each, were planted and cared for mainly by Duane Bros., and they have reason to feel proud of as good results, thus far, as I remember to have seen anywhere in travels through most of the orchards of California. As correspondents often want to know price for planting and care of trees, it might not be out of place to say that work is done in Contra Costa at $20 to $30 per acre for furnishing and planting deciduous trees, and $10 per acre, annually, for first-class care, on heavy ground. At the estate of the late Dr. Strentzel, in Alhambra valley, we found its present proprietor, John Muir, the famous author, located in a country home of ideal beauty, upon a knoll, resembling the work of some ancient moundbuilders, now transformed into a flower-garden surrounded by a valley covered with trees and vines. Shipping grapes are a specialty. Certain localities in this valley are specially noted for the high color and fine quality of their shipping grapes.

John Swett, so many years a popular public-school principal and at present superintendent of San Francisco schools, has a place in which he takes great pride. The boys say that whenever he comes out from the city they get nearly worn out trying to keep up with him. He rushes over the hills just as schoolboys do when let loose to play.

One of the famous Hatch orchards and a large planting belonging to Mr. Hemme of Hemme & Long are located at Alamo, on the railroad that runs up San Ramon valley. Mr. Hatch is reported to have said that he considered that intrinsically the best land that he farmed.

Both A. L. and H. H. Bancroft have fine large places in Nassau valley. Near Danville Messrs. Baldwin & Stone have a fine nursery stock on soil specially well adapted to the purpose. They have more than 20 tons per acre of pumpkins on the land they will plant to nursery next spring.

This county offers great attractions to San Francisco business men who desire to own orchard property in the country, and will largely settle up with such.

In some parts of the county they have not recovered from the idea that the new railroad opened up the only really desirable country in California, and that people must have it at any price they choose to ask. The consequence has been that some very desirable settlers who were willing to give liberal prices have been unable to buy.

When one sees how things are working in San Ramon valley, he cannot blame a railroad very much for attempting to control land where they enter a valley so narrow that they must have some better paying freight than hay or grain to earn interest on their capital.

Hon. Chas. Wood has a good example of mixed farming that they say cannot be made to pay in California. He has 700 acres embracing almost all grades of hill and valley land, and produces fruit, grain and stock, with the dairy and poultry as auxiliaries. While fine chickens are colonized from one end of the orchard to the other, the aristocrats among them have special quarters where many separate yards are inclosed by wire netting. He finds that early pullets of such breeds as White Leghorn and some others will "earn a dollar before others turn a wheel." That is to say, they will have laid two to three dozen high-priced eggs in fall or early winter while others will not report for duty until spring.

A creek from Mt. Diablo has cut a deep gully through his place, and a very small stream runs through all summer. He has taken advantage of this by building a strong dam that raises the water nearly to the surface to benefit his orchard and supplies a ram that furnishes all the farm buildings with water. It has needed in repairs only one leather valve during ten years' constant work.

Their system of grain-farming on the adobe hills is to run a heavy cultivator around the hills, then seed and cross-cultivate in a direction as nearly opposite as possible. This they do soon after the first rains while they can stir all the moist soil. By seeding one year and pasturing the next, they get an average of a ton per acre without perceptible exhaustion of the land. Many of these wheat-fields have never been plowed, and whenever they are not sowed to grain, produce a heavy growth of wild oats and burr-clover.

Two miles' walk over the hills takes us to Oakwood Park Stock Farm, where the famous Steinway and his family of fast ones are kept. There are six thousand acres in the farm, and besides large numbers of work horses and 300 trotters. Mr. Boyd has one hundred Angus-Aberdeen cattle, a hundred Devons and sixty Shorthorns. They are expecting to make a fine exhibit at the next State Fair for the first time in many years.

It was a great disappointment to all on the farm that Billy Woods should have broken on the homestretch after having made the half at Stockton at a 2:03 gait, but they have confidence that he will break the record before the season is over.

Through many changes of ownership, Mr. Geo. A. Wiley has had the management since the farm was started, and we never saw another where they seemed to have been so favored with all the money they needed to do anything they chose.

It is understood that Mr. Boyd, the present owner, intends to make it headquarters for scientific breeding, and we shall expect to hear a great deal of it through our columns. Many of the buildings and animals would make fine illustrations.

As Martinez is the nearest railroad point to the great orchards of the San Joaquin where deep-water vessels can be loaded, and it has rail communication also with the orchards of Contra Costa, it is a surprise that they have not a large cannery located there.

Reports of the State Board of Horticulture show that there are 3910 acres of fruit trees planted in the county, of which more than one-half are of bearing age. A cannery would have all the advantages of a supply of fish and vegetables in season and a great fruit country to draw upon. The climate is desirable for residence, and with such an enterprise, its schools would be largely attended.

F. S. C.

THE DAIRY.

Scientific Dairying as Practiced in California.

[Second Paper.]

Written for the RURAL PRESS.

The Babcock tester should show that not over one-tenth of one per cent of the butter fat goes out with the skimmed milk, and that less than three-tenths of one per cent is in the buttermilk.

The large-size De Laval centrifugal separator keeps up with 12 or 14 milkers and separates 1200 pounds or more per hour. It is very satisfactory. The ordinary farmer would be astounded should he discover the per cent of his gross income thrown away in skimmilk and buttermilk. A creamery man, who gathered cream of 5000 cows in Iowa and had experience in several sections, estimated that one-third the butter went out in the skimmilk under the gravity process as practiced there. Under proper conditions the gravity process makes almost a perfect separation, but people were careless enough to suffer this loss. In hot weather the Babcock tester will often show 20 per cent of the fat in the buttermilk as it ordinarily comes from the farm churn.

Until within the past two years, this was an unsettled question of frequent discussion in the dairy papers, "Why do we lose so large a per cent of the butter in hot weather?" It is a mystery no longer. Whenever cream cannot be ripened at a lower temperature than 47° there is a great loss of butter fat. Such problems are solved by the careful experiment and scientific study devoted to the subject at dairy schools. Such an institution is one of the great needs of California dairymen. We can hardly hope to compete with scientific methods unless we enjoy similar advantages.

The proper curing of cream is a very important factor of success. Mr. Steele finds best results when ripening at so low a temperature that the cream will not reach the first stage of acidity in less than 36 hours.

Separation can be made most perfectly by the extractor if milk can be reduced to 45° temperature, and Mr. Steele thinks the method would be the most desirable for our mountain counties and other sections that depend upon marketing packed butter. He thinks such would keep the best, because most free from any foreign substance.

The care of calves is one to which Mr. Steele devotes considerable attention. He feeds whole milk for a few days, gradually reducing with a percentage of skimmed milk, and adding jelly or blubber made from cooking flax-seed to take the place of the cream removed. Then he adds bran, shorts, meal, oats, etc., to the milk and keeps both hay, grain and salt where they can have access to it at any time. By this system, calves at six to eight months of age are often good beef.

Mr. Steele speaks very highly of a veterinary surgeon's instrument that has been of great service to him with barren cows.

Prices of cows he regulates by their performance. If record shows that the milk given by a cow, multiplied by the per cent of butter, gives her three pounds daily, her price would be as much as $200; and if she made one pound or less, he might let her go for $30, as he did a handsome young thoroughbred Jersey the other day. From his herd of 500 to 600 cows, he sells many for beef every year that do not come up to his dairy standard.

Instead of competitive trials of dairy cows on the fair ground, the Ohio plan, indorsed by *Hoard's Dairyman* and warmly commended by Mr. Steele, is to have an authorized representative of the society visit each of the competing dairies to make and report tests and to base the milk and butter records upon the year's yield of milk verified by sworn statements of all principals and employes engaged in conducting the test. Hardly any cow can do herself justice when under the strain produced by excitement and change of feed. Under this system, the exhibitor pays for the inspector's time and the State for his expenses. When Holsteins giving 62 pounds daily took first prize at Sacramento, Mr. Steele had one giving 96 and another 102½ pounds of milk.

At this time of the year, when feed has suffered in quality both from grass and rain, and in many instances cows are drinking from stagnant pools, there is not sufficient acidity to neutralize the alkali in the stomach, and the gall overflows, causing inflammation of the manifold or bladder. This has been a malady so serious that 20 cows have been lost from some dairies in a single night. The dairyman should watch the condition of his cows and their feed closely, and whenever there is a tendency in this direction, meet it at the door with a change of feed. At this point, Mr. Steele finds one of the great advantages of ensilage. It supplies that particular want better than any food available under such conditions.

Owing to a mistake in directions, one of the men fed Artis Carissa nine pounds of oilmeal, instead of three, at one time during her test, and it took a long time to get her in condition again. As it was, she came only 40 pounds short of the second butter record of the world. With his cows strong in Aaggie and Netherland strains, Mr. Steele proposes to couple a bull of the Pauline Paul and Pietertye families, expecting to develop a world beater from some of their produce. These families have averaged upward of 22 pounds per week for several generations, and Pauline Paul holds the world's record with 1153 15-16 pounds to her credit in one year.

He is adding one modern improvement to another in his dairy buildings. The floor of bituminous rock is quite an important feature, with its facilities for perfect cleanliness and saving of manure. The cows can drink without leaving their stanchions, and get plenty of clear water at any time. Tracks connect the silo and hay-barn with the feed-stables. When the buildings are complete we hope to have them illustrated in the paper.

It is an ambition of Mr. Steele to reduce dairying to an exact science in San Luis Obispo county, and he offers liberal premiums, besides those given by the county, to stimulate emulation among his neighbors. He makes a large exhibit, but does not enter for competition. Perhaps he may soon compete at the State Fair, and if Stanford, Hall, and Burke enter the lists at the same time, we may look for a Holstein exhibit in which every Californian can take just pride.

Those who have followed these papers carefully will note that the cows go dry while feed is dry, and so come in milk when in good condition, but without liability to milk fever common to such great yielders. They begin giving milk when butter is high and he gets best pay for the extra feed. Their ration is so regulated as to produce most butter and develop the best animal. The milk is handled to secure the best percentage of cream and save the skimmilk in perfect condition for the calf. The cream is ripened, butter made and marketed in a way to secure best results. At present a 26 ounce roll is selling for 70 cents wholesale in Los Angeles. The land is so managed as to produce a well-balanced ration at minimum cost. The whole business is managed and information so freely imparted as to show that Mr. Steele is living up to the ideal that the prosperity of the individual depends upon that of the community to which he belongs.

Fresno Farmers' Institute.

Attendance at Fresno Co. Farmers' Institute, held recently at Selma, was limited to 60 in the afternoon and 100 in the evening by conditions of the weather which compelled most farmers to stay at home and care for their raisins. There was animated discussion of the West Side irrigation question, the problem of farm dairying and plant diseases.

Prof. C. W. Woodworth of the State University, Berkeley, favored the audience with a very scholarly illustrated lecture upon plant diseases as proceeding from minute vegetable organisms. He was consulted regarding several specimens of diseased plants, and gave valuable advice as to treatment and prevention of several diseases concerning which he was questioned.

Discussion was very animated and a lively interest was shown in the questions and answers.

The next meeting will take place in January at some town in Fresno county yet to be chosen. Indications are that the meeting will be very lively and instructive.

SACRAMENTO CITY is spending between $20,000 and $25,000 this year in strengthening and raising its levees.

The Vineyard.

Winter Work in the Vineyard.

NAPA, October, 1892.

TO THE EDITOR:—Work in the vineyard extends over the whole year and is of so manifold a nature that it cannot be outlined in a paper of a page or two, even if handled in the most concise manner. I will therefore confine myself to winter operations, which include choice of location, planting of new vineyards, pruning, plowing and grafting, although the last named may be continued into the summer months.

SELECTING A LOCATION AND SOIL.

This is very important, as too many vineyards have been planted already without due regard to this. Quality and quantity of fruit should be our aim and both can be attained by proper selection. The soil should be loose and naturally well-drained, it need not be very rich, but still be rich enough to secure a good growth, deep and mellow, so that it will retain sufficient moisture, if properly cultivated; and if on hillsides not too steep. Avoid alkali and stiff adobe lands; the first is not fit for grapes in any shape, the latter too difficult to work properly, though generally fertile enough, if kept well pulverized. I prefer, in this State, an exposure from east to northwest to those sloping south or southwest. The latter are too much exposed to our afternoon sun, which is apt to scorch the foliage and fruit. The soil should be at least two feet deep above bedrock so that the roots can have ample space. Hardpan should be avoided, also lowlands subject to late frosts in spring, or early frosts in fall.

PREPARING THE SOIL AND LAYING OFF.

Commence with this as soon as the soil has been moistened to a sufficient depth by fall rains. The cheapest way is to take a good strong plow, with three good horses, plow a furrow as deep as they can pull it, the deeper the better, and follow this with a subsoil stirrer and another good team, which will simply loosen the soil without reversing it. If it can be stirred to the depth of 18 inches all the better. The more tenacious the soil, the more important that it be well and deeply prepared. If it can be plowed a second time, just before planting, all the better; but it should be done when the ground is dry enough to pulverize well. Do not plant too early, as the soil should be somewhat warm, especially where cuttings are planted. Level off with clod-crusher or roller. For laying off we want markers, small stakes about 14 inches long and ¼ to ½ inch thick; three lines, two to reach the full length of the block, and one to reach across. Four men can do the work most expeditiously and correctly. As to the proper distance opinions differ. I believe that most of our vineyards have been planted too close and I am planting now 6 x 10, perhaps 6 x 12 would still be better, in blocks of 2½ acres, the blocks being half as broad as long. I like this better than the old system 7 x 7, or 8 x 8, for several reasons. The roots of the vine have ample space to spread in the wide rows; it gives freer circulation of air, and even admits of hauling between the rows, either with wagons or sleds, which facilitates manuring, gathering the fruit, etc., while it admits of cross-plowing, even in the narrow rows, and more work can be done with a double team than by the old square system.

Commence by laying off the avenues first, making the central one on the most accessible ground. Establish the outside rows by measuring around the block at right angles and putting down your markers. When the outside lines are established, draw your lines from the next marker in the crossrow at each side of the block. Then let two men take your short line across the block, stretch it well, while one man is at each side of the block with the markers. The markers are put down right where the long lines and the short one cross each other, and as soon as this is done, move to the next marker, thus staking off two rows at the same time. Repeat this with the next two rows until the block is finished. Four active men can thus stake off a large lot in a day, and if they are precise and careful, they will have straight rows at equal distances.

WHAT AND HOW TO PLANT.

After the terrible destruction by phylloxera in our best districts, there ought to be but one answer to the first, and that is, "Plant resistant stocks!" Of these, the Riparia seems to have been most successful everywhere, and, as it is also very easy to propagate, the most available and cheapest, though the Lenoir and other aestivalis varieties have also done well. The Rupestris does not seem to succeed so well, suckers badly, and hardly takes the graft as well. The Californica, although a good grower on moist land, is not altogether resistant nor adapted to dry soils. Rooted vines of Riparia can now be had for $10 to $15 per 1000 and cuttings at from $2 to $3 per 1000, and I would advise to take the first, as they are sure to make a good and even stand. If they cannot be obtained, cuttings may be used, but I would then put two cuttings with each stake, putting the lower ends of the cuttings six inches apart. If both grow, one can be taken out the next fall to fill vacancies, or make new plantations.

We will suppose the ground in good order for planting, well pulverized and not too wet, so that the soil can easily be worked in among the roots. Now let one man make the holes with a spade, fronting or toward the hillside, by putting his spade down just above the marker, as perpendicular as he can, throwing the soil above the hole just made, making the hole about 10 to 12 inches deep. Another follows, with the roots or cuttings in a pail of water, placing the lower end of the vine from 10 to 12 inches deep, spreading the roots evenly, and then drawing in well-pulverized, fine soil among and over them with a hoe. As soon as the roots are well-covered, firm the ground around them with a pressure of the foot and then fill up entirely with loose soil. It is very material that the roots should not be exposed to drying winds at any time while out of the ground, and that the upper end of the vine should be right at the stake; hence the necessity to keep them in a pail of water. Plants of this kind will make healthier vines than those planted much deeper. If the ground is well pulverized below, the roots will penetrate and seep it instead of being crammed down into the cold subsoil, away from atmospheric influences.

PRUNING, STAKING AND TYING.

Where resistant vines are planted, it will not be necessary, before they are grafted, to prune systematically, and as I am not in favor of very early grafting, we will at once suppose the vine to be sufficiently established to bear at least a partial crop. The young vines may be cut back some to facilitate working among them and to obtain the wood for cuttings, but this is all that is necessary.

There are two systems of pruning in vogue in this State which are adapted with most varieties, but can be modified somewhat to suit the habits of each variety. The one is the so-called stool or goblet pruning, which is adapted to heavy bearers, such as Zinfandel, Green Hungaria, Palomino, Burger, etc. The vines when once established by this method, although they should be staked the first few years, will need only stakes about 2½ feet long, and can dispense with them altogether after a few years. The other method, which may be called the cane and renewal training, is better adapted to varieties that do not bear so abundantly or do not fruit so readily from the lower buds. The Riesling, Chauche Gris, Petit Syrah or Cyrene, Semillion, Sauvignon Vert and many others require this training and stakes from 5 to 6 feet long.

Let us suppose the vine fairly established, with three or four strong canes and a head from 12 to 16 inches above the ground. We can commence pruning as soon as the leaves have dropped in fall. For stool pruning our object is to form an open and well-balanced head. Supposing the canes to have started from one-year-old wood, we will find them opposite each other alternately—the upper one on one side, the next one opposite to it on the other side, the third one below the first, the fourth below the second. Each of these we cut back with a sloping cut, above the second or third head. We can vary the number of buds on each vine according to its strength, for the best results are only obtained by a nice balancing of the powers of the vine. If we prune a weak vine too long, we will overload it, and the result will be feeble growth and imperfect fruit. If a vigorous vine is pruned too short, it will make a coarse, weak growth, will be more subject to mildew, coulure and other diseases, stagnation of sap and consequent black knot; the fruit is also more succulent and watery. By pruning each cane alternately to a right or left bud, we also distribute the young growth from these buds more evenly to all sides, and thereby balance the vine.

In pruning to canes, the head or stool of the vine is established in the same way and at same height; but instead of spurs, we have say three canes of from 18 inches to two feet in height, according to the strength of the vine, and these in a triangular shape opposite each other.

If the vines have not been staked already the season before, it ought to be done now after the brush and trimmings have been picked up. This is also the time, just after pruning, to select wood for grafting and cuttings. For grafting, select the best short-jointed and firmest wood of the size of a common lead pencil or even somewhat larger, and as straight as can be had. Cut in lengths of 18 to 20 inches, tie in even bundles and bury them in a cool place, with the upper buds downward, and covered entirely to exclude the air. This retards the upper buds from starting, and they can thus be kept until the middle of May, if necessary.

Drive your stakes as close to the vines as practicable and on that side which is most exposed to the prevailing winds. Drive them down firmly with a wooden mallet, so that the winds cannot blow them down in summer. Nothing is more detrimental to the vine than to be blown over in midsummer with all its tender fruit suddenly exposed to the scorching sun. The best tying material I have used yet is No. 16 annealed wire, cut into proper lengths, with a cold chisel. This is passed around the canes and stake, and with a simple twist of both hands, both ends are hooked into each other. By untwisting and stretching them in fall, they can be used again, and pruning and tying can be done at the same time. These wires will last for five or six years. The next best material are the leaves of the dragon-tree (*Dracena Draco*) as well as the leaves of nearly all the species of Dracena or Yucca. The *Formium Tenax* or New Zealand flax is also fine material, but rather difficult to grow, and not so easily obtained. These leaves, when soaked in boiling water, can be torn into strips, and are much more pliable and stronger than the so-called grape twine. Only the dry leaves are used, and one tree furnishes an immense quantity. The tie should be made just below the upper bud, so that the cane cannot bend over. With a little attention, the canes can be pruned a uniform length, so that one tie will do for all.

The following seasons this pruning can be varied, according to the strength of the vine, by cutting the old spurs back to the lowest shoot or cane, or, if the vine is strong enough, leave the double number of spurs, or even treble in some cases. With the long cane varieties the old canes are cut off, and then new ones of last season's growth take their place, with as many additional spurs near the head of the vine as may be deemed advisable. Always bear in mind a two fold object: First, to balance the vine by an equal distribution of fruit and foliage on all sides and to admit as much air as possible. Second, to prune so as to produce the most perfect fruit, and the most thoroughly ripened and perfect, medium-sized wood for the next season's bearing.

PLOWING THE VINEYARD.

This can be done as soon as pruning is finished, and the brush picked up and burned. For the first plowing I think it advisable to plow from the vines, commencing in the middle by turning a furrow in the center with a two-horse plow, and returning throw the other furrow against this. Follow this up as far as practicable without coming too near the vines, then finish up with one horse and a vineyard plow, which will not leave more than six inches around the vines, which can either be stirred with a two-pronged hoe or spade around the vine. Then run a harrow over the plowed space, leveling and pulverizing the ground. The second plowing and cultivating properly belongs to the summer work.

The plowing need not be very deep, not over six inches, but much depends on its being done at the right time, when the soil is in the best condition to pulverize well. It should be neither too wet nor too dry.

Several gang plows have been invented to turn two or more furrows at a time. One of the best of these is made by Mr. H. Hortop, of Rutherford, Napa county. It is very compact, being not much longer than a common plow, with a small wheel in front in the center to regulate the depth. A strong two-horse team can do very good work with it on level land and loose soil.

GRAFTING THE VINE.

After a practice of 40 years in grafting the grape, and trying hard to find the best and safest method, I have arrived at a few principal rules, which give me the best results and the most satisfaction:

1. Wait until your stock is strong enough, say at least an inch to an inch and a half in diameter, so that it will firmly hold the graft without tying or bandage.

2. Select the very best wood for your scions, firm, well-ripened and close-jointed, not less than the size of a common lead pencil; if double the size for large stocks, all the better. This ought to be kept in a cool place in a dormant condition.

3. Graft not too early. The sap should be in rapid motion, so that the junction can take place immediately.

4. Use no bandages or wax of any kind. If you close the wound too tightly the graft is in danger of being drowned and soured.

5. The simplest methods are the best, if properly performed.

The objects to be gained by grafting:

First—Rapid propagation of new varieties.

Second—Early fruiting, as they will bear a few bunches the first season and a full crop the next.

Third—Changing worthless varieties into valuable ones.

Fourth and most important, changing nonresistant vines into resistants, by grafting on resistant roots, and increasing production.

Fifth—Increased fruitfulnes.

We will now come to the operation itself:

The best time I consider here to be the month of April, just after the first plowing, when the ground can easily be taken from around the roots. Of course this will vary in different sections of the State. I have had good success when the young growth on the vines was six inches long.

The tools used are: A sharp, thin-bladed knife to cut the scions, a sharp pair of pruning shears, or a saw where the stocks are very long, to cut the stock; a grafting chisel with a thin blade 2½ inches broad and a wedge at one end to hold open the cut, and a wooden mallet. These are the tools for the grafter. The work can be best divided thus: One man to dig around the stocks with a spade, the next to cut off the stocks, the third to cut the scions and insert them, the fourth to cover up. If the stocks are grafted above or near the surface one man may perform both the first and last operations.

If resistant stocks are to be grafted, either above or near the surface is the best, as the graft should not be allowed to make any roots. After the ground has been cleared away, select as smooth a place as you can find. Cut the stock about one and a half inches above a joint or node, to prevent its splitting too far; then, if the stock is not too large, make the slit or longitudinal cut also with the shears, keeping the blade where you intend to insert the scion, to prevent bruising. Take the scion, if the stock is strong enough, 18 inches long, cut to a long, sloping, smooth wedge, just below an eye, and push it firmly down into the cut, holding it open with the wedge of the grafting chisel if necessary. The success of the operation depends mainly upon the inner bark of the stock and the scion uniting, and as the outer bark of the stock is much thicker than of the scion, the scion ought to be set so much further in; the first bud of the scion should be about even with the surface of the stock. It needs nothing further than a little moist earth pressed on the cut and split, and the whole covered up with well pulverized earth to within the last two buds on the scion; this will make a false surface around the junction and prevent drying out.

If the operation is performed on large, old, vinefera stocks, simply to change them into something better, I prefer to go deeper, and insert two scions, one on each side. If both grow, the weakest may be cut off next spring.

By taking such long scions we equalize the force of the stock and scions, as six to nine buds will elaborate more sap than two to three, and besides, as the best growth will be from the upper buds, we establish the head where it ought to be, about a foot above the ground. The grafts should be staked just after grafting, and kept tied during the summer. All this being carefully done, there will be very few failures indeed.

VARIETIES TO GRAFT.

Their choice is rather difficult, as varieties which will do best in one locality will but poorly succeed in another. I will only name a few which I have found most successful for wine in this locality.

For red wine, in favored localities and hill land, Zinfandel, Mondcase, Petit Syrah or Cyrene, Petit Bouschet.

For white wine, Green Hungarian, Semillion, White Pinot, Sauvignon Vert, Palomino.

These will produce both quantity and quality. For raisins, Thompson's Seedless seems to combine, with proper pruning, both quantity and quality. It is a good bearer, dries easily and is superior in spiciness to the Sultana.

For table and market, the Flame Tokay is perhaps superior to any in keeping qualities and the price it brings,

though Black Ferrara, Emperor, Rose of Peru and even Malvoisie have their admirers.

Other operations belong to "summer treatment and cultivation." GEORGE HUSMANN.

HORTICULTURE.

Almonds and Varieties.

An essay read at the October meeting of the State Horticultural Society by Joseph C. Shinn, of Niles.

Since the last meeting of the Society I have picked up all the points that I could in regard to almond-culture and though I have not been able to spend as much time on it as I wished to do, still I have seen a number of the prominent growers in our county and learned mere or less of the history of the different kinds, and got the opinions of these gentlemen as to which are the best locations for almonds, what are the best kinds and what effect soil has on this nut. Our part of the country, i. e., Washington Township was one of the first localities in the State to attempt almond culture and a man named Mock, who was running a small nursery near Alvarado in the early 50s, brought out from Prince's Nursery in New York the so-called Prince's "Great Fruited" and another kind that was called later "Princes'" and then Languedoc.

This latter kind was propagated to some extent by W. W. Brier, but not in any very large numbers until B. D. T. Clough, of Niles, or Vallejo Mills as it was called then, started his Almond Nurseries. He grew many kinds and sold them all over the State under the name of Languedoc. In the later years he maintained that there were two kinds in our locality under the name of Languedoc and would use buds from certain trees only, saying that the others were poor bearers. This is still maintained by some as explaining the reason why certain orchards of L. do not bear and others near by do. My observations lead me to believe rather that there are slight variations, hardly enough to call varieties, owing largely to soil, location, etc., but more perhaps to a slight bud variation. I have failed to discover any fixed difference. One tree will have rather more of the thin, stringy-textured, flattish and wide-flanged, pointed nuts, while another has more of the short, thick, narrow flanged ones with thick, but porous shells. As they are both alike in failing to bear except under the very best of circumstances, this slight difference is of but little moment.

The Languedoc is the old standard variety, and it is not well to condemn it without inquiring into the reasons why, of its failure to bear regular crops. The favorite reason a few years ago was frost at the time of setting the fruit. Lately the idea that it is rain at this period is gaining more adherents. Then there are many who believe that this variety needs cross-fertilization, and many of the later orchards have every other row planted with other kinds that bloom at the same time as the L. Observations in my own locality suggest that another cause is perhaps the most important one in deciding whether any particular orchard of L. will bear well or not, i. e., the supply of water. Laying all the blame to the frost will not do, for they often fail in years when there is absolutely no frost after the time of blooming. I have thought that they usually failed in years when we had long, cold rains during blooming time, but they also fail for other reasons. Cross-fertilization will not fill the bill either, for, as far as my observations in this one season go, the neighborhood of different kinds has made absolutely no difference in crop. At the same time the best bearing orchard that I know of has a number of kinds mixed together all of which bear extremely well, owing, I think, not to the mixture, but to the fact that they are on a piece of land especially adapted to the growth of almonds. It is the somewhat elevated flood deposit at the mouth of a small canyon, and is deep, rich and mellow. It is moist, too, for it gets the underflow of a small stream that sinks at the mouth of the canyon and must also get some seepage from the hill above, still it can never be too wet as it lies on gravel. That there is abundant moisture is shown by almonds as well as other trees on this bench retaining their leaves very late and making fine growth, and it seems to me that this is the reason why this particular almond orchard seldom fails to have a full crop. There is abundant moisture to make plenty of good, healthy, new wood each year, and sap to ripen all buds whether on old or new wood in good shape and in the spring when the little nuts are set thick as gooseberries along the branches in this orchard, they have plenty of good, rich sap to carry them over this most difficult period, and while in other orchards they mostly fall off in this they nearly all stay on. This orchard has borne such regular and abundant crops that the trees have lost the erect growth of the L., being more or less bent over by the heavy loads of nuts.

The almond is a deep, strong-rooting tree and if on almond root is, in the nursery, at least, the deepest and strongest of any grown, and there is no reason to believe that it loses this characteristic when set in orchard form. This fact may explain the reason why almonds do well on seemingly dry soils. They are able to send their roots far and deep and if there is any moisture in the soil, no matter how deep, they will get it. The sudden drying out of strips of almonds on rich deep soil near Niles on the diversion of the Alameda creek showed that they were depending upon subterranean water supply that was cut off by that diversion. This was not shown except along the main stream or on what seemed to be old covered up channels that had probably carried a good flow until of late.

In trying to find cases where cross-fertilization could not have occurred I found trees that were long distances from any different kinds of almonds and, yet, where the trees were healthy and not too much exposed, they have good crops.

The custom of those who believe in cross-fertilization has been to plant hard-shell, paper-shell, or some of the Hatch seedling nuts for this purpose, but as all of these kinds bloom early and the Languedoc late, I do not see how they can be of any benefit.

I do not know whether the periods of bloom overlap at all, perhaps some one present can tell; at any rate if they do not overlap there can be no benefit.

Still, one gentleman assured me that he had carefully observed in his own orchard, and the row of L. next to his paper-shell were every year heavier than those a little way back, and another claimed that his IXL had the same effect on his L. Still another said that though there were a number of hard-shells scattered through his orchard with the idea of cross-fertilization, the trees near them bore no better than those far off, and he did not believe that the L. needed cross-fertilization (this on hills). The worst case of failure I could learn of was a few trees of L. on a ranch high up in the hills, and far from any other almond trees. I thought I had a plain case, but when I inquired further learned that peaches of all kinds were also a complete failure, though apples and pears did well.

Mr. Curtner, one of the oldest and the largest almond-growers in the county, takes no stock in the cross-fertilization idea, and thinks that lack of water is the cause of failure. He has for several years watered trees that formerly bore little, and now they bear well, much more than any in the orchard, although they are very old trees. He is making arrangements to irrigate all that he can of his large orchard this winter.

There are some things about the dropping of the L. and P. S. that look as if it were caused not by lack of fertilization but by frost, rain or lack of sap.

In most years both the L. and P. S. blossom very fully, the little nuts set well and stand as thickly as gooseberries, to quote a common expression, and all seems to be going well, when, after a week or so, a portion of them are seen to be growing rapidly and the rest standing still. When this occurs, you may be sure something is wrong, for soon those that are not growing drop, and you usually have little crop left. There is often a kind of second crop of blossoms coming out later than the rest on the new wood at the tops of the trees. These often set and stick well, and in many years form the bulk of the crop on the old trees.

The fact that these late blossoms often make nuts while those earlier do not, looks as if they did not need pollen from other kinds, for, by the time they are out, all other kinds are certainly out of bloom.

What is the trouble, then? Is there a frost or a spell of cold weather that checks the sap so that when these thousands of little nuts I spoke of call on the parent tree for nourishment it is not there to give, and only a few get enough to carry them through this trying period, or is it, as many believe, that the nuts are not really fertilized and drop off?

Early Pacific Coast Horticulture.

At the last meeting of the Oregon Horticultural Society, a paper was read by the pioneer horticulturist, Seth Lewelling, which will be noted with wide interest in this State:

Horticulture in Oregon began in Salem, Henry county, Iowa, in March, 1847, when my brother, Henderson Lewelling, planted an assortment of the principal fruits—apples, pears, peaches, plums and cherries—loaded them into two wagons and started with them across the plains to Oregon. He also planted a few black walnuts and shell-bark hickory nuts which sprouted and came up on the way. At our next meeting I hope to present the society with a gavel made from the wood of one of those historic hickories, which lately fell a victim to progress because it happened to be in the path of the East Side Electric Railway Company's line from Portland to Oregon City.

My hearers can imagine the labor of watering and caring for that nursery through that long wagon journey, from March to November, when it arrived at Milwaukee. He succeeded in bringing a single Isabella grape. He transplanted his nursery almost immediately from the boxes to the land now owned by Mr. J. H. Lambert, between Milwaukee and Sellwood, what was then the Meek donation claim.

These, I believe, were the first domestic fruit trees brought to this coast, except, perhaps, such citrus fruits as may have been introduced in California by the Mission Fathers. So highly were they appreciated that offers of $3 per tree were freely made when they arrived.

About this time my brother and William Meek formed a partnership in the business, but from the fall of 1848 to 1850 they sold very few trees. The great difficulty was to get stocks on which to graft. They tried the wild crab apple and thorn bush for seed fruits and the wild cherry for stone fruits, but with poor success.

In the fall of 1840 a Mr. Pugh brought from the States some seed of various kinds which Meek and Lewelling bought and planted, and from which in the fall of 1850 they had splendid stocks from two to four feet high. They grafted 18,000, which in the fall of 1851 averaged about four feet. The land on which this first really successful nursery was grown adjoins one of my orchards, and is now owned by Richard Scott and used for pasture. It was irrigated, and you may easily believe, very carefully cultivated.

The apple trees sold readily for $1 apiece, and plum, cherry, pear and peach for $1.50 each. In the fall of 1850 I arrived at Milwaukee, bringing with me quite a lot of fruit seed. From that time we had stocks for grafting, though not in great abundance. We still used the wild cherry, and in the winter of 1852 we pulled a great many wild cherry trees, my last day's work at it being 3000 trees, which brought me a felon and rest from tree-pulling.

In 1853, Meek, my brother and myself started branch nurseries, one at Salem, in charge of Alfred Stanton; one in Polk county, back of Spring Valley, in charge of Amos Harvey; another on the Long Tom, in the hands of Joseph Kelsey, and a fourth near Albany, managed by Mr. Knox. We put out about 100,000 grafts in the four nurseries, having kept 14 men shop-grafting in Milwaukee all the preceding winter. J. H. Lambert, Noah Hubler and myself are all who are left in Oregon, of that crowd, so far as I know. Philip Lewis, one of the founders of Seattle and the discoverer of coal there, was another.

Those were the days when we expected Milwaukee to attain the position in the commercial world which is now held by Portland, but like many another good naturalist, its advantages were more than neutralized by the greed of the land speculator. We got some fruit in 1851 and a little more the next year. In 1853 we got a good many apples. I helped pick one tree which bore 240 pounds, which Henderson took to San Francisco and sold for $1 per pound. In the fall of 1854 quite a number of small orchards came into bearing, and the price fell; in 1856 they had declined to 25 cents per pound, and from that time the price tended constantly downward. Henderson planted quite a large orchard where the racetrack now is, between Milwaukee and Sellwood, and in 1858 gathered from it 2800 bushels of apples.

Pears, peaches and plums began bearing nearly as early as apples, and sold for $1.50 per pound when apples sold for $1. In 1853, '54 and '55 much of the fruit was shipped to California, where, even then, very little of it sold for less than $1 per pound.

Henderson brought one gooseberry and a few current bushes, but no blackberries. In 1858 I sent East for the first blackberry of which I have any knowledge, though there was an abundance of wild varieties. My first sales of blackberry plants were in 1859 and 1860 for $3 per plant. We tried strawberries a good deal, and in 1851 Henderson went to the States and returned in 1852 bringing a few plants of Hovey's seedling, but it was a pistillate variety, and in spite of faithful work we got no berries until 1858, when I sent East for a stock of Wyan's Britisth Queen, and several other varieties. In 1859 I sold my strawberries for 75 cents per pound, but the demand was insignificant. It seemed that few people knew anything about the fruit, though, perhaps, that is not so strange, when we remember that its cultivation to any considerable extent, even in the States, dates from 1849. Up to 1860 I had no knowledge of another strawberry patch in the State for market, and the demand was so poor that I quit raising them.

The Royal Ann cherry was one that my brother brought across the plains in his wagon, and was the best we had. It was not until 1860 that we had any black Tartarian, though we had the black Bigarreau, black Murillo and May Duke. Neither were we the only nurserymen all this time, for I remember that in 1852 the Geer family, the father and Ralph and Fred Geer, had made a start, and took quite as active an interest as anyone in fruits and fruit trees.

In 1860 nurseries were becoming quite numerous. My brother quit the business and left Oregon in 1853, and in 1857 William Meek quit, leaving me the sole owner of the Milwaukee nurseries. In 1860 I raised the first black Republican seedling, which S. Libby Brown of Vancouver, George Walling of Oswego, and Mr. Hanson, of east Portland, agreed to graft and introduce, giving me half the proceeds of sales. My share was $500, and though I have since originated the Bing cherry, of which we sold the fruit in Saratoga Springs last summer for $1 a pound, and the Golden prune, yet, insignificant as the sum was, the black Republican paid me more than any new fruit tree I have introduced.

To close this reminiscence of the past, I must tell you of the phenomenal yield of a single blackberry I grew when that fruit was new in our State. I grafted 200 on our wild roots and one grew. I gave that careful cultivation, and in its first season the cane grew five feet high and grew side branches of five feet. I carefully kept it from sun-burning, and picked 23 pounds from that one bush. I had one side photographed which carried 12 berries, averaging one and a half inches in the long diameter and nearly as long in the shortest diameter. This was at the rate of nearly 25 tons per acre, and shows what is possible to the future nurseryman who makes a commercial success of grafting our domestic cane on the vigorous wild roots. The life of horticulture has but begun, and I predict that in later years the science of fruit-growing will successfully destroy all pests, which have been bred by ignorance and carelessness.

THE FIELD.

Sugar Beets in Sonoma County.

TRENTON, Sonoma Co., Nov. 1, 1892.

TO THE EDITOR:—The following, to those who have looked a little into sugar beet culture, explains itself:

"UNIVERSITY OF CALIFORNIA, COLLEGE OF AGRICULTURE, Agricultural Experiment Station, Berkeley, Oct. 24, 1892.

Report of analysis of sugar beets from Trenton, Sonoma Co., Cal. Sample sent by D. B. Wier:

Condition of beets	Good.
Average weight in grains	330=11 ounces.
Specific gravity of juice	1.0665
Solid contents, by spindle, of juice	16.00
Cane sugar, per cent	14.1
Purity coefficient	88.3
Saline coefficient	16.6
Ash, per cent	

This is a very high-class beet; the sugar contents and *purity* coefficients being excellent, and the ash below the average. The weight of the beets meets with the requirements of the factories. The analysis is highly satisfactory in every way for a first-class working sugar beet. M. E. JAFFA."

This result leaves little more to be said, and is exactly what I expected, and coincides perfectly with what I wrote three years ago, to wit, that the many thousand acres of sandy loam of southwest Sonoma county are among the very best sugar beet soils of the world. For the purpose, they cannot be surpassed anywhere. The soil is perfect in tilth, *i. e.* ease of culture. The climate most certainly is

unsurpassable for economy in manufacturing sugar from the beets. The summer and autumn climate is hardly approachable for comfort in the labor of growing and harvesting the crop. No expensive storehouses are needed to shelter the beets from frost, and, best of all, no water has to be bought for irrigation, for none is needed. There is pure water in plenty for a factory. With a factory rightly located, there need be no heavy hauling of heavy beets, for the hauling would all be down hill, and the near-by dairies could most profitably use all the pomace. Two Rock valley has the best of soil in plenty to run a factory of the first class; Blucher valley another, Sebastopol another, and still another factory could be furnished at Trenton, and another at Tomales. Sebastopol should have the first factory, she having railroad communication *and a bank*, for both beets and sugar are heavy to haul.

I say the factories should be in the valleys, yet the beets should be grown on uplands—on the more level uplands. Valleys (except high lands in them—Mt. Olivet would be fine) *are not* the places to grow good sugar beets in, except the higher portions of valleys in arid regions of well-drained sandy loam. Honey Lake valley, Lassen county, would be as good as the best in every particular, climate and all. But it is a fact that our southwest Sonoma lands cannot be beat in the wide, wide world for net profits in sugar beet-growing. It has an absolutely perfect climate and water for the manufacture of sugar. Petaluma having tide-water navigation, has transcendent advantages of course over all other points.

It is not necessary for me here to go into the subject further at the present time, therefore I will close by saying that any one should know that California and Arizona "have the call" in sugar beet culture over any and all of the Eastern States, or any points or portions of Europe, most prominent in their climates. Here in Sonoma the beet crop will be absolutely sure without irrigation, and in the arid regions irrigation makes the crops sure; and, best of all, in their long season of growth, giving a long run to the factory, with no expensive protection from frost.

As to the profits to the farmer, the State has had experience enough, during the lowest sugar prices ever known or that can reasonably be expected, to show that they are good. The returns range, by many reports, from $60 to $90 an acre, with an average of about $75 an acre.

There is somewhat of *ipse dixit* in all of this I am well aware, yet all obscure points are easily explainable, and especially those in regard to suitable soils. D. B. WIER.

Growing Onion Seed in Oregon.

We have a good many onion-seed growers in this State, and they may be interested in reading how the work is done in Oregon, as described by John Henry of Beaverton at the last meeting of the Oregon Horticultural Society:

The onion is an important crop in Washington county, and a few remarks about growing the seed may be interesting to this society.

As is well known, the onion is a biennial, requiring two seasons to complete its career; that is to say, it is one season from seed to bulb, and another from bulb to seed. Well-drained, rich, mellow soil is necessary for the production of a good crop. After plowing in spring, as soon as the ground is in good workable condition, it is harrowed and then laid off into furrows three feet apart, using a one-horse plow and making two trips to a furrow. The ground is now ready for planting, and the onions are hauled to the field in sacks and distributed at convenient distances for dropping. In dropping, a workman takes a sack on his shoulder, and, moving along the ridge between two furrows, lets the onions drop out of the sack at such a rate that, when placed in position for growing, they will be six to eight inches apart. Other workers follow, and taking each onion separately, place it top up in the bottom of the furrow pressing it slightly into the bottom of the soil in doing so. After the onions are planted, they may be lightly covered immediately or they may be left uncovered for a week or two, but in either case, the first soil is drawn into the furrows with hoes; but after that, as much of the work as practicable is done with horse labor. After covering, nothing is required until harvesting time, except to keep the ground clear of weeds and well stirred.

Harvesting begins about the first of September, and is a tedious job. Each head is cut off separately and let fall into a pan, basket or pail; and when these are full, they are emptied into sacks, that are placed, upright and open, at suitable distances apart. When the sacks are filled, they are conveyed to the drying-sheds. Here the heads are spread thinly upon platforms, that rest, one upon another, six or seven high. On these platforms the heads remain a week or two, according to the weather, or until they are nearly dry. They are now taken out of the sheds, into the sunshine, and spread upon large cloths. A few hours in the sunshine completes the drying process and makes the crop ready for threshing.

The threshing is done in various ways, but I think no way surpasses the action of two bare-footed horses upon a well-constructed floor. With some if not most growers, the fanmill only is used for cleaning the seed. With others, the writer among them, the seed is also washed, for the purpose of removing all seeds that are lighter than water. This washing is done by putting the nearly clean seed into water and stirring; then the light seed floats and is skimmed off and thrown away. The heavy seed which sank is now taken out and dried quickly to prevent sprouting. One more fanning, and the seed is ready for market. In this way only, can the heaviest seed be obtained in a perfectly clean condition.

The yield of onion-seed varies greatly with the soil, the season, and the presence or absence of mildew, the only disease for which the crop is subject. In a general way, it may be stated that an acre will yield 500 pounds, and that, to plant an acre, 50 centals of bulbs will be required.

The only kind of seed grown or used here in the great onion region is the acclimated or Oregon yellow. It originated more than 40 years ago with the late A. Fauno, who was the most successful grower of onions in the State, and whose sons now are. It is by far the best keeper known, in our climate, and so hardy that it will bear a temperature of zero without injury.

I know of only two persons in Oregon who grow this seed in quantity for the trade. One is O. Dickinson, of Salem, and the other is myself. Mr. Dickinson is a dealer in onion seed as well as a grower, while I restrict myself so far as practicable to growing on contract for the Portland seed firms.

I would estimate the total quantity of this seed grown in Oregon in 1892 at five tons, but a good deal of this is produced by onion-growers for their own use.

The Indian Wheat Crop.

WASHINGTON, Oct. 21, 1892.—The latest report of the Statistician of the Department of Agriculture gives an interesting summary of the final report of the Indian Government on the wheat crop of 1892. The total crop is put at 5,442,000 tons, or 203,168,000 bushels of 60 pounds. This marks it as the smallest crop harvested in any year since annual estimates were inaugurated in 1884. In the final report of last year the crop of 1891 was stated at 6,842 000 tons, or 255,434,667 bushels, but the present return changes the estimate for 1891 to 6 876,000 tons, or 256,704,000 bushels. On the basis of this revised estimate, the crop of the present year shows a falling off from that of 1891 of 53,536,000 bushels, or 21 per cent. The area is returned at 24 088,000 acres, against the revised estimate of 26 576,000 acres harvested in 1891. The normal or average area under wheat is placed at 26 544,000 acres, showing a falling off of acreage in 1892 from the average of 2,456 000 acres. The figures indicate a yield per acre of 8 4 bushels for 1892, against 9 8 bushels last year, and an average, calculated from the normal area and outturn as given, of 9.5 bushels.

Mr. Dodge, the Statistician, comments as follows:

"The average production for the nine years for which official data are available is 248,957,586 bushels. But once in four years past has this average been reached. The average of the last four years is 231,496,533 bushels, while that for the preceding four years was 265,735,316 bushels, a decline in the last period of 34,238,783 bushels, or 13 per cent. This justifies the opinion positively expressed in these reports at the time of highest production that there was little present probability of continued increase in wheat production, notwithstanding the fears entertained in this country of a loss by foreign competition of our market for surplus wheat.

"It appears that the amount exported in the last fiscal year equals 22 per cent of the crop of the previous year, but it is quite certain that it did not all come from the crop of 1891. The ordinary reserves were freely drawn upon on account of the extraordinary demand. So completely were some districts drained that famine threatened, although wheat is not the bread grain of the Indian population. The increase in exports from India during the past decade has apparently had but little effect upon the area devoted to wheat. In fact, during the period for which official estimates are available there appears to have been an actual decline in the acreage, the area being reported in 1885 at 28,228,740 acres, while the normal or average acreage is now calculated at 26,544,000. The increased exportation does not represent an increased production so much as it does a surplus, which has always existed and now made more available by improved facilities for transportation and handling. The reserve, which was once pitted in years of plenty for use in years of famine, now enters commercial channels, the railways being largely depended upon to so facilitate local interchange as to obviate the likelihood of serious want in any section of the country."

FRUIT PRESERVATION.

Oregon Evaporators.

At the recent meeting of the Oregon Horticultural Society, the first paper of the day was read by Aaron Bray, of Dundee, on "How I Would Construct an Evaporator." He began by saying that fruit must be dried by hot air and the length of time required to dry fruit will be governed by the degree of heat and the speed of its passage through the fruit to carry away the extra moisture. The model evaporator is one in which the degree of heat and circulation of air are the same in all its parts. The air which has passed through green fruit and absorbed a large amount of moisture should be allowed to pass out of the evaporator without being compelled to pass through partially dried fruit. The evaporator should be so constructed that the fruit can be easily inspected. Upon these depends the success of any evaporator. The evaporator should never be less than 18 feet 8 inches long, 8 feet 8 inches wide, and longer is better. The air should be delivered through heavy iron pipes not less than 10 inches in diameter, which should start from one side and discharge near the other, and for regulation should be supplied with adjustable caps. The foundation should be constructed of brick, 8 inches in width, with a brick wall running through the center, and the arch should run through the whole length. The sills should be 2x8 and the cross-pieces 8 feet 8 inches, with division of one inch clear lumber. Each section should be entirely separate from the other sections. Nail pieces 1½x3 inches extending 2 to 4 feet above the top of the drier, and ceil both sides, the outside one extending to the top. With the uprights ceiled it forms two complete ventilators. The crates should be exactly 3 feet square so there would be no trouble in putting them in or taking out, and should be placed about 6 inches apart, depending on circumstances. The rests for the trays should be 1½x3 inches, with the inner end about 5 inches the higher, to allow trays to be taken out easily. Above the trays should be bored 1-inch auger holes from 2½ to 3 inches apart, and covered with a thin board to regulate the heat. The whole should be covered with a flat roof, so that all heat must go to the center to the elevator shaft, thus causing it to pass over the fruit, as it is a well-known fact that heat always goes where it finds the least resistance. The trays should be 6 or 8 feet above the top of the furnace.

After Mr. Bray had finished, Mr. A. H. Carson, the evaporator man from southern Oregon, was called upon and described his Redland evaporator. He said that Mr. Bray's theory of hot air going where it found the least resistance was correct. Wherever the air is forced rapidly over the fruit the question of successful drying is solved. He had never had any success until he began with the Redland. He thought 3 feet above the furnace was near enough for the first trays. The air is admitted into his drier by 4 inch pipes, 10 pipes in 18 feet. All air must pass over the furnace. After the temperature has reached 180° it is kept steady until finishing, when it is run up as high as 210°, the object of which is to give the fruit the proper color. Most of the fruit in the country is overdried. Trays 3 feet square are too large if a man has to handle them all day; 3x2½ is large enough. The fruit to be dried right should all be of the same ripeness. In order to get the same amount of heat on each tray, the passage-way of exit is made smaller as the trays extend toward the top, the lower one having a crack above it, full length, one inch wide, and decreased in width one-twelfth of an inch for each succeeding tray. One of these evaporators will cost when completed about $225, and for size they should not be over 18 feet long, because there is too much money and risk in a large machine. It is better to have several small ones and carry your own insurance, which is about $4 on the $100. If one large machine should burn just at the beginning of season, it would be a serious loss to a man; but if he had several small ones the loss would not be great, as he could go right along drying with the others. A drier should never be left a minute without some one to watch it while in operation, as there is always danger of fire; and if a man is around he can easily save the others, or stop the one catching.

FOR the last six months the Southern Pacific Railroad Company has been concentrating all of its broken-down, worn-out, superannuated engines at the yards in West Oakland. There were engines of all sorts and conditions, of every make and of various degrees of beauty. Some looked as though they were as good as any that now make regular trips. Others were ramshackle, rusty-looking affairs that seemed to have come from the bottom of the sea. In all, nearly 100 were gotten together and were placed on various sidetracks in the yards, wherever there was room and where they would be out of the way. Every one was absolutely worthless, so far as the purpose for which they were originally built was concerned. One day last week a gang of men went to work on the old engines and blew them up, one by one, with dynamite, in order to get the old iron and brass in salable shape.

THE contract for the construction work on the S. P. railroad between Santa Margarita and San Luis Obispo has been let to Geo. Stone & Co. of San Francisco for $1,500,000. This includes some 8000 feet of tunneling, and it is estimated it will require 15 months to complete the contract. The rest of the gap from San Luis to Ellwood will be comparatively easy work, and nothing will be done on this part until the tunnels are almost completed. The largest tunnel is at the summit of the Santa Lucia range and is 3700 feet long. Seventy-pound steel rails will be used in the construction of this road, and when completed it is to be used as the great overland tourist route of the Southern Pacific. Camps have been established and work actually commenced at all the tunnels. As large a force as can be conveniently managed will be kept constantly at work until the road is completed.

M. P. PALMER, who is engaged in the building of the San Joaquin water ditch, reports rapid progress in that grand enterprise. He says that he has eighteen men at work, and has already completed about two miles and a quarter of the work, leaving a mile and three-quarters yet to complete, which will be accomplished in about five weeks. The ditch has a carrying capacity of 5000 inches, which it is calculated will irrigate about 3000 acres. Next year Mr. Irvine proposes to build a dam in Santiago canyon that will contain a large body of water—about a mile and a half long by half a mile wide.

THE engineers of the San Francisco and Great Salt Lake have completed their surveys to the State line. It is said that satisfactory grades have been established on the Sierras and also over the Alameda county hills. The profile work remains to be done and then the cross-sectioning preparatory to actual grading will be undertaken. It is now known that the 200 acres of land on the Contra Costa shore purchased in September last and transferred by Thomas B. Bishop to E. L. G. Steele are intended for the terminal facilities of the new road on the east side of the bay.

THE Chino sugar factory closed its second season's run October 29th, having been in operation since July 1st. Nearly 28,000 tons of beets were worked up, for which the factory paid the farmers $112,000. The total output of crude sugar is 7,903 541 pounds, on which the government bounty is nearly $150,000, making about 200 carloads of sugar. Over 500 hands have been employed in the factory and beetfields, and $150,000 were paid in wages.

A SPECIAL train of 20 cars of walnuts has been shipped from Los Angeles. Nearly 20,000 pounds of walnuts were placed in each car, and the estimated value of each carload is about $2000. This is the first train of this character which has been shipped across the continent, and the occasion is an interesting one to shippers of California products. The nuts are the products of the Los Nietos orchards.

The Home Circle.

The Homeless Thoughts.

Under the wild November sky
Blackbirds in eddying circles fly;
The woods their glittering robes throw by
And plain to heaven unceasingly.

Dark to the hilltop stoops the cloud;
Bold is the blast that shakes the proud;
Now loud, now low; now low, now loud,
The wanderer's call comes down to me.

Like these wild squadrons tossed on high,
Scattered, confused, they know not why,
My thoughts, a homeless myriad, fly,
And beat the winds continually.

All that of nature's stamp she wore
Whose bosom housed their wings of yore,
Rotting in earth, is mine no more;
May heaven restore her soul to me!
—Dora Read Goodale.

Pavement Pictures.

Wild storm this languid summer night,
Clashed o'er the city an hour ago;
But now, released in heaven's blue height,
A moon has brought her sorrowing glow,
To flood the massed roofs' dimness dense
With pale celestial penitence.

The breeze wakes rich in soothing damps;
Faint spires loom silvered; and one sees
In street or square, by rain-splashed lamps,
The wet leaves flickering on stray trees;
While black fantastic shapes of dream
Bold from the drying pavements gleam.

Chance moods of moisture's random change
The dumb stone flaunts their blots grotesque,
Where freaks of spectral traceries range
Through many an elfin arabesque—
Till the huge town's vice, crime, despair,
Seems devilishly pictured there!
—Edgar Fawcett.

A Spinster Gossip.

Written for the RURAL PRESS by KATHARINE BRYANT NOLAN.

"No! the heart that has truly loved never forgets,
But as truly loves on to the close
As the sunflower, turns on her god, when he sets,
The same look which she turned when he rose."

"My goodness gracious me! There's Cicely Stebbins! I wonder what Cicely has 'on the brain' now?"

Jessie Milliman spoke softly, and her delicate face flushed rosy-red as she beheld Cicely's advance, with flying ribbons and breezy-looking white skirts, like a yacht under full sail.

"How-dy, Jess,' Cicely screamed. Falsetto was one of Miss Cicely's charms.

"I am very well, I thank you," Jess replied in low and even tones. "How are you getting on, Miss Cicely?" The latter remark was spoken in a freezing tone of politeness. Cicely ignored the *politesse* and said precipitately:

"Mary Ann Butterfield says that Ray Bancroft is a-payin' attentions to Flo' Hinckley. I've seen her a-makin' eyes at him myself, an' of course she's mighty stylish an' has a good chance bein' in the store all day, an' under his very nose. Likely 'nough he has got to be kinder sociable with her jest for politenesses sake. I told Mary Ann so, but I thought you ought ter know that folks was a-talkin' an' I made up *my* mind to tell ye the very first time I saw ye. Sarah Connelly says that he goes up that way real often, an' some one went home with Flo' the very last thunder shower we had, an' Sarah, she sticks it out that it was Ray Bancroft who was with her, an' Sarah says that Ray was awful kind of loverlike, an' Flo' seemed as tickled as the little dorg with two tails that Uncle Zeke's always and forever a-tellin-about." Cicely broke off suddenly. "Uncle Zeke says he seen that dorg with his own eyes," she said meditatively.

"Dorg!" Jess echoed, scornfully. "You do yourself small credit, Cicely. With all the schooling you have had your carelessness of speech is reprehensible. To call a dog 'a dorg' is perfectly odious."

Cicely looked abashed and made a little movement that fluttered the breezy pennants of her gown.

"Well, good-bye, Jess. I thought you'd ought to know how folks was a-goin' on, an' bein' your friend, I made bold to tell ye. I don't expect any thanks, but if I stood in your shoes, I should thank the one who told me," this young gossip retorted. "But I'm awful sorry I said anything now."

"*Au revoir*," Miss Milliman answered shortly.

Ray Bancroft and Jessie Milliman met at the corner of Maple and Elm streets, named for the beautiful, wide-spreading trees of their respective avenues, and when he lifted his hat gallantly, passing into the store of Bancroft & Gifford, she had tossed back his troth to him as if it was a gewgaw that she had grown quite tired of wearing. The gentleman looked stunned and somewhat amazed, but he did not linger for any explanations.

The birds sang discordant notes, and the stars came out one by one, in a sorrowful way, as Miss Milliman continued her lonely walk toward home.

Mrs. Milliman was watching anxiously for the one child so tenderly reared, and the tea-table covered in snowy damask glittered with quaint silver and old-fashioned china, under the silken shade of the handsomely-ornamented lamp, when Jess entered the dining-room. There was no reference to Cicely's dreadful gossip or the hastily-broken engagement. When Jess laid her head on her pillow, she sighed:

"It's a little cloud no larger than a man's hand. The first breath of heaven will waft it out of sight. It will then be forgotten."

But Ray Bancroft failed to appear. The small cloud was not wafted upon its journey. It loomed in the horizon darkly and hung threateningly over the smiling landscape.

Cicely hastened up the garden-walk, bordered with narrow rows of dwarf-box, on the morning of the third day. The double hollyhocks on either side guarded the way like grim sentinels uniformed in crimson splendor, and there was evidence of excitement in Cicely's manner. She had obviously determined to do her full duty as a friend of the Milliman's, and was undoubtedly the bearer of some fresh, newsy item. Jess armed herself with a steely resistance, resolving to stand to her guns like a grim trooper, and spoke no word of welcome, as she met the girl in the wide, roomy hallway.

"Ray's sold out his share 'n the store an' he's gone away, Jess. How-dy, Mis' Milliman?" Mrs. Milliman stood in the background, polishing her gold-bowed glasses carefully with a snowy handkerchief, as the girl spoke.

"How-dy, Cicely?" she answered.

"Folks say that Ray'll never step foot in Glenwood again. I s'pose Flo' Hinckley's at the bottom of the trouble. They say now that Flo' is a born flirt, an' she has led Ray on an' thrown him over for Judge Sawyer. The Judge is worth a pile of money. Uncle Zeke says there's always a woman at the bottom of any kind of a fuss, an' I reckon it's Flo' this time."

"Sakes alive, how folks talk!" Mrs. Milliman exclaimed, putting on her glasses, as she glanced sharply at Jessie's impassive face. She scrutinized Cicely's attire minutely. "There's a caterpillar a-crawlin' up your shoulder, Cicely."

"Pick him off, will ye, Mis' Stebbins? I don't see where he come from. Yes, an' folks wonders why he wanted to go quarrel with a fine, likely girl like Jess." Cicely referred to Ray in this gossipy assertion, although she might have been supposed to allude to the worm. "Everybody s'posed he an' Jess was sure to hev each other," she continued, hurriedly, "but things come out dreadful curus nowadays."

"Yes, they do, Cicely." Mrs. Milliman snapped the grub out-doors and then continued: Your skirts are dreadful kind of short, Cicely. You've got such spindle-shanks of legs, you see."

Mrs. Milliman spoke with an anxious hypercritical punctilio.

"Ma's a-goin' to let 'em down," the girl answered.

"I should think ye'd do that sort of work yourself, Cicely," Jess observed.

"Well, good-by; I'm in a hurry this mornin' or I'd spend the day with ye. You come over to our house soon's ye can; ma wants to see ye real bad. She thinks a lot of ye both.' Cicely went away in an amiable frame of mind, to entertain the gossips of the town, while Jess explained the case to her mother briefly, making light of her disappointment.

Five years afterward, Jessie Milliman left the old homestead as the bride of her cousin John Saunders. Mrs. Milliman favored John, and Jessie adored her widowed mother, so she entered into the preparations for her wedding docilely.

Cicely walked miles to find the beautiful maidenhair ferns, nestling amongst the pink roses, in the stately best parlor, simply because she knew Jess liked them. It was a sort of an atonement. Cicely understood how that quarrel between Ray and Miss Milliman had been formulated, and Cicely's conscience was an uneasy one.

Jess would willingly have arrayed Miss Stebbins in the ashes-of-roses bridal gown at the last moment, since Cicely was fond of John; but this was an impossibility, for the reason that she had grown slenderer, while the youthful gossip had grown stout. Cicely's embonpoint ballasted her and rendered the scheme a failure; so the wedding went on quietly, as arranged for.

The bride rode away amid the traditional shower of rice. Cicely made a frantic search for an old shoe at the last moment, but this precursor was powerless to prevent the catastrophe that fate had in store for John Saunders and his wife.

The honeymoon was spent in an old-fashioned tavern, that was wedged in between two groves of trees, facing a broad and lovely valley. The wind sighed softly through the pines, and the robins sang sweet vespers and matins as if life was all sunshine and holy calm; yet, within two year's time, there were two freshly made graves in the grass-grown cemetery in Glenwood. One of these mounds was a tiny one; the other was heaped over the fair and placid face of Mrs. Milliman.

The great square rooms of the ancestral Milliman residence seemed very gloomy and lonely after these providential visitations, and Jessie wandered about, looking more delicate than ever in her plain black dresses. It was difficult to accustom herself to the loss of her mother's voice and the child's wail.

John Saunders' coat hung limply from the rafters of the garret. There was a distinct impression of his personality in its lines, and something drew Mrs. Saunder's toward it during one of her uneasy rambles. There was a glimpse of the cemetery from the window in the gable. Passing her hand over the shaggy surface of the garment, she said:

"It's wicked! There you hang idly, when many a poor soul is suffering with cold. Suddenly she put her hand through a rent in the pocket and drew forth a letter. Jess Saunders looked at the superscription with startled eyes. It was in Ray Bancroft's fine, flourishing hand, and it was directed to herself. Tearing it open, she fairly devoured its contents. The letter read:

My Dear Jess: I am called away suddenly by the illness of Uncle Frothingham. I can hardly believe that you meant what you said the other night, but if you did and never wish to see me again, the way seems to have opened in favor of it. Write to me at Dayton in the care of Cyril Frothingham. I shall then fly to you, my beloved; but I cannot face the possibility of hearing you repeat those cold, hard words again. You are the only girl that I have ever cared for or ever shall care for. I will dispatch this letter by John Saunders to ensure its speedy delivery. Write quickly, my dear.

Very truly yours, RAY ALCOTT BANCROFT.

"Yes, an' Mr. and Mis' Saunders live right along in the same house together, an' never speak no more'n as if they wuz both dead an' buried. Folks say that they had a dredful fallin' out, but John Saunders got hold of all the property when ole Miss Milliman died; so Jess couldn't do nothin' but live along with him. John Saunders is a shrewd one," Cicely averred to the new minister's wife. Miss Stebbins spoke with the gossipy air belonging to confirmed spinsterhood, and the parson's spouse gazed pensively toward the sphinx-like face of Jess Milliman Saunders, as she heard a sigh of compassion.

False Impressions of the Press on Farm Life.

Paper read by MRS. MARY WESTCOTT, Swanton, Neb., before Farmers' Institute.

It is false to say the farm is a dreary place to live. It is a libel on truth to call its labors drudgery. It is a scandal to say its women work harder, know less, dress shabbier, and have fewer liberties than other women. It is a sin to cast slurring remarks on the intelligence of the girls who live beyond the allurements of city evils, and a positive crime to establish the idea that the country boy has neither pride, common sense, nor sensitiveness.

The press of our country is as wonderful in the success of its false education as it is renowned for the progressive development that is carried on its pages. Its false tuition on farm life is one of the chief links in the chain of evils of concentrated financial power, the magna charta of which will place another Runnymede on the surface of human history.

"Put in just as little time at labor and as little labor into the time as possible, and shirk wherever you can."

"The employer has no rights you are bound to respect. Society has no claims on you that you need defer to."

"Your first duty is money, money. The way of getting it is nothing. Got, it is everything."

"If the proprietor suggests in your hearing that the property is his, leave him. Teach him to respect labor and give the laborer his due."

"If anyone attempts to point out the errors in the newspapers you publish or the public measures you sustain, call him names. If the English dictionaries do not contain epithets of sufficient venom, search other dictionaries; compile them; boil them down together until the amount of venom is extracted you think necessary to drive into oblivion those who presume to differ with you on any question of public or social interests."

These are a few of the fatal maxims being fed to the young people of this country.

"Conditions have changed, you must remember," says the defender of these things. So they have; but the lessons in the downfall of Babylons are just as strong and efficacious in one age of the world as in another.

The civil war, more than any agency, opened the way for an outburst of long-pent-up intellect. The pen was heralded among us as being mightier than the sword, wisely lauded to its eminence after the flash of the sword had ceased to mark its mission of death on the field of battle. Foolish people began to write that no bright, spirited boy would stay in such a "humdrum, drudging place as a farm;" no capable, ambitious girl would be content to live all her life as the the wife of a farmer, and foolish editors indorsed the sentiments. Sermons were published in many of the Monday morning dailies, calling on the Most High to witness how the farm parents dwarfed and wronged their children with the poorest food the farm produced, that they might keep the best for market. One eminent minister of Chicago presiding over an aristocratic congregation had intermittent outbreaks of this kind, never forgetting to piously score the farm mothers who kept the preserves and cream from the children that something could be had on the table for appearance sake when the visitors came.

The inauguration of home departments in every paper gave women an opportunity to ventilate their mental commodities, and what in all the wide world needed weekly lecturing so much as the farm home? Unlike the preverted ministry that religiously trounced the farmers for not allowing their children enough to eat, the woman's lecture harp was thrummed at them for eating too much. Men and women had grown stalwart in physical vigor and renowned as intrepid leaders in every branch of our American history, living all their long, useful lives on the boiled dinners and "pie-crust made of hog's lard, filled an inch deep with rich fruits or richer mincemeats," of the country belongings; but the new lecture bureau saw physical decay for the Republic in every dish cooked for the farm table; and cake of molasses and lard—shades of mercy, what stuff for children! As no one else was sure they had the genuine lard the criminality in that kind of cake must be properly borne by the farm kitchen.

Then the general lecture field outside the home department opened upon us and we were pounded into the earth we owned for compelling "delicate childhood to eat fried salt pork." Attempting facetiousness the gentleman orator would say: "Of course, a man vulgar enough to raise a hog is vulgar enough to eat a hog, but lard save his children"

Retorts were sent sharply back from the farms that the most voracious eaters at the country tables were the town visitors fortunately invited to sit down at them, but the fusillade against "country coarseness" was not one bit abated. Nature says the youngest chick in the woods shall end its slumbers an hour before sunrise. The new lecture field knew a great deal more than the Creator about morning hours and the farms were the forts of stupidity to be bombarded with this knowledge. Wise old heads protested, but the repeated doses of poison had taken effect on the younger ones who were "not going to stay where they had to get up before sunrise to be ready to go to work in season, nor stay where people lived on fried hog and boiled cabbage and no more style about them than the cattle in the feed-yards." And there were numerous editors who reported and indorsed all these foolish sayings as "eloquent pleas for humanity in the rural districts." Story-writers seeking to portray a man running over with animal greed, who could not speak two words correctly in any sentence and habitually defrauded his children of the profit of their labor, took a well-to-do farmer for the character and his wife bungled language and counted pennies closer than he did. If she did not cram herself quite so full of boiled pork and cabbage as he made a practice of doing her shortcomings as an intelligent human being were rounded up with a general all-around ignorance and silly superstitions. Even now with our country homes full of papers and books of all educational descriptions the funny columns find nothing so brilliantly witty to the owners of them as the farmboy who is never smart enough to walk down a flight of stairs without instructive assistance in visiting city relatives, and could not spell his name if asked to register at a country hotel. The farmer himself is always pictured by these brilliant wits as an awkward half-baked specimen of human clay dressed in overalls, four sizes too wide, six inches too

short, shirt as much too small for him, excepting the sleeves, as the overalls are too large, an abnormally wide-brimmed, abnormally pointed-crowned straw hat, an impossible murderer of the English language and an impossible fool.

In December, 1879, Miss Mollie Morley, of Sauk Co., Wis., won the sweepstakes premium on butter at the International Dairy Fair in New York city. She was a farmer's daughter, earned a teacher's position, then left it to take charge of her father's dairy of 70 cows. Beyond the routine mention of the awards, nothing more would have been heard of Miss Morley had it not been for the advertising interests of the factory gentlemen in whose churn the prize butter had been made. Had Miss Morley churned a few pounds of butter, set it on ice until solid, taken a few cedar splinters and a ladle and molded the image of a child's head upon it, every women's newspaper column in the world would have told and retold the achievement and used it as a cudgel on the general obduracy of mankind in "keeping feminine ability in subjection." Miss Morley was beautified with good sense, good taste and the ease of self-reliance. Hardly out of her teens she won on merit alone a prize equally coveted by the best butter makers of Europe and the best dairymen of our own country. She was a benefactor to every person who either eats or makes a pound of butter, but she was "drudging away on a farm," so the talent that brought perseverance and integrity to such a successful issue was morally lost on the character of our country girls and the appreciation due such skill. So long as the Miss Morleys have to hold a fourth-rate place in the scale of womanhood the cities and towns will have to eat whatever the corporation creamery sets before them as butter, with no choice in the hands that wash the milk-cans from which the cream is gathered by some stock yard man hired by the month to perform the delicate service of skimming the milk of a 10-mile route, and who shocks the little cannibals at the farmhouses by telling them he "is not paid for picking flies out of the cream," if they happen to fall into it while the new skimming process is going on. "They strain 'em out at the factory," he says.

Some one else aching for notoriety wants the farmers to build small cottages so the hired man can keep his wife on the place. This is the beginning of European peasantry and serfdom, but the women editors are the first to urge its consummation, "as it will take so much dirt and drudging off the farm-owners' wife," and if no one objects the European plan will be disgracing our agricultural customs before we realize what is going on. Once fastened upon us the boy who does not get married as soon as he is able to do a day's work in the field, will be expected to board himself in the "hired man's cottage," so as not to place himself in the way on a level at the table of the owners of the farm, or annoy the "lady of the farmhouse."

Ouida, the famous English novelist, says the cause of the decay of France and the depressing unrest of England is this modern doctrine that women shall perform no labor about a farm, and men and boys as little of it as possible.

Another one of our citizens, overflowing with the ambition to be known as a reformer, is trying to induce farmers to "villagize" themselves by building their homes close together for social pleasure, leaving their farms "out in the country." The last the writer heard of him he was coming to Nebraska on his "farm-village" mission. An indignant populace should meet such a mission-carrier as an arch enemy of the farm and nation. The leadership that learns its first lessons of independence in the unmovable farmhome in learning that the most difficult task can be performed without waiting for others to voluntarily make it easy, and that the day's work can be done with no other company than the sustaining thought of well-doing, is growing less each year among the sons of our American-born parentage, so much so that one of our poets was recently moved to petition heaven to "send a statesman to this nation, who can see other than himself."

Our farms are going into the hands of foreigners and short-term occupancy of renters in small holdings, because reliable help is becoming more difficult each year to obtain, and the boys and girls are allured away from them as soon as they are old enough to work at anything; and now comes the beseeching cry from the source that sent to our farmhood the scorn of its occupation: "Don't come to the city—we are overcrowded, underfed, doubly taxed in our charities. We can't help you, we don't need you, we won't have you." The woman moralist berates the city employer for the starvation wages the competition of freezing, hungering women compels him to yield to, and that they will willingly accept and endure, rather than live in the "dreary, drudging" place these same social reformers have pictured our bountiful, busy farms to be; and the masculine solver of strikes and combinations is often no better situated on the balance-bar of consistency than his sister reformer.

When the pen of this writer has protested to the women editors that the "dreary drudging" they accredited to the farm was not only untrue but wilfully wicked, it has been set down as a pen not more than half friendly to "woman's emancipation from serfdom." When it has sent reminders to the political editors that the farmers were no less intelligent and no more "fringed with hay seed" when following their own political inclinations than when traveling the political route prescribed for them by party managers anywhere else, it has been rated as an enemy of the partisans likely to lose the most from the independent action of the farming citizenship. When returning to the contest with either of these editors to assure them that this is not only a country of the free speech of accusation, but a country equally as free in the speech of defense, it has usually found itself most effectually suppressed.

The children of our American farm parentage have been disseized of their inheritance of independence and soundness of character through the false impressions made upon their minds by foolish writers and lecturers through the medium of the general press. The commercial diamonds of individual success thus thrown away, being gathered up by enterprising, sagacious men, form some of the strongest component elements of some of the corporation power that is taxing our mental energies to the utmost to find release from. Our agricultural journals have made heroic effort to counteract the force of this bad education that costs the public nothing in the beginning but the willingness to listen approvingly. When other journals have attempted to render our farm editors assistance in this matter they have almost, without exception, treated the subject so apologetically that the false educators have had full benefit of whatever doubt the cross-firing might have created in the minds of the young. We have allowed the counter-currents to be planted that make the storm. The only way of safety open to us is a common-sense treatment of the facts that have been blown into our faces and stand challenged before our eyes.

As this paper deals exclusively with "false impressions of the press," those who have done good work anywhere in behalf of true impressions on farm life have no part in it but the unlimited gratitude they merit, whether in pulpit, press or common life.

Young Folks' Column.

The Linnet and the Canary.

Written for the Rural Press by M. Pulsifer.

The creatures we call dumb are just as capable of making themselves understood by us as are the foreigners who come to us ignorant of our language, and thus obliged, by our ignorance of theirs, to often express themselves wholly in pantomime in making their wants known. Birds and animals employ this method quite as effectually, as we should all learn if we gave them the same attention as is bestowed upon the foreigner. Our so-called dumb pets, friends and servants, are not given credit by the generality of persons for half the sense and intelligence they are endowed with, otherwise, I believe they would all receive more kindly treatment from their owners and captors.

I have had many and various pets, and I think none of them displayed more human sagacity than did my several canaries, the last one of which is the subject of this truthful narrative, and will, I hope, please the young readers of the Rural Press.

His name was Robin, and he could imitate one very perfectly—in fact he had a medley of songs, any one of which he seemed to prefer to the one of his own kindred. He was not an affectionate bird, but friendly to all and afraid of nothing but hats and bonnets, which articles, on or off the heads of their wearers, would almost frighten the little creature to death. He was very neat and particular and proud, and knew precisely how much I had to do mornings before I could put his house in order for him.

To test the correctness of his observation, I would sometimes sit down to my day's work without cleaning his cage. He never failed to remind me, and most vehemently. He would be very indignant and scold me roundly for my supposed carelessness, something he never did when all went on in proper order.

He knew when any request was made in his behalf, as I proved many a time. Whenever I returned after any absence, he expected something, like a child. He would scream to call my attention; then he would hop down and search all over the floor of his cage and pick at nothing; fly upon the perch, turn his head sidewise, scanning again the sanded floor, crying very pitifully the while. If I did not finally humor him, he would sit moodily all day, the most choice offering of food failing to conciliate him. On the other hand, the least thing given him at those times would satisfy his whim. He seemed simply to want to be remembered. It would require many columns to tell the things this bird did, all showing a high order of intelligence, but I will omit all that and proceed with the story.

One evening in early October my mother saw a small object moving along slowly toward the open door of the woodhouse she had gone out to lock. Stooping and looking more closely, she saw it was a bird, which she hastily picked up and brought into the house to show sister and myself. It was a Linnet, just escaped from the cruel captivity to which some thoughtless boy consigned it, and was seeking safe refuge for the night as best it could. Its condition showed it had been kept in a box and feed on soft food, its body being glued over with the same; its tail and wing feathers were gone. A great ball of the miserable provender given had accumulated and hardened upon its upper beak, adding much to the grotesque appearance of the little refugee. It was a mere skeleton, and very hungry, and, as was natural under those conditions, very tame, but was quite well.

What could I do with or for it? Nothing better, much, than it had been accustomed to, unless Robin would receive the poor thing into his house and give it hospitality. This, to the surprise of all, he did, and with every demonstration of pity. He immediately showed the Linnet the seed and water, to which he lost no time in helping himself, Robin standing close by him all the time, talking very softly and inspecting the sorry plight of his dress. He succeeded in picking off much of the dried food from the Linnet's coat, and seemed to feel very much concerned about the lump that so disfigured his countenance and never lost an opportunity of tapping a stout peck at the same so long as he could see.

As darkness came on I asked Robin if he was cold, whereupon he turned himself into a fluffy ball, with only his tail and tip of beak to show that he was really a bird. That transformation meant "yes," so I set the cage in its usual place and covered it partly over, when Robin crowded close up to the dirty, and perhaps lousy, Linnet and went to sleep.

Next morning all was harmony in the birdhouse, and I was very glad to think the Linnet would have a good home and better company until he should again be able to take care of himself in the great world outside. I did not, however, exactly realize this expectation. Robin seemed more impatient for his bath than usual, or so I thought; but it was for his guest he was anxious about the bath.

I always took the cage from its bottom and set it over a big saucer of water, for the common bathing dish for canaries is a miserable thing, being so narrow as to break the feathers and often injure the wing itself. Some birds, once hurt in this way, will not take a full bath for weeks, but just wash their heads in their drinking cups.

It was evident that Robin thought Linnet needed a bath, and doubted not that he would plunge in at once. Linnet did no such thing, nor did he manifest the least intention of doing so. Robin was getting uneasy and put in the time testing the temperature of the bath and washing his pretty face, very likely thinking of the unsightly lump on Linnet's nose. Tired by long-waiting, he began sternly lecturing the dirty stranger. This not having the desired effect, he went after him and tried to push him in, in which effort he once succeeded, Linnet falling plump into the water, to Robin's great delight; but Linnet did not feel that way and quickly scrabbled out.

Then it occurred to Robin that perhaps he did not understand the process of bathing, so he went in and called loudly for Linnet to look and see how it was done. Linnet paying no attention whatever, he looked up at me and implored my aid; finding me quite as stupid as the stranger bird, he very plainly told us to go to Halifax, and proceeded in sullen silence with his own ablution.

Half an hour later, when Robin's coat was dry and the cage put back upon the dry cage-floor, some unexpected fun began.

Robin was wholly and bitterly disappointed in the character of his unbidden guest, and had determined he should remain no longer under his roof.

The minute the cage was in place he flew at the Linnet and fought him furiously, the assailed only trying to save himself by crouching in corners or climbing to the housetop. I could not permit this abuse of the defenseless Linnet, so I got a stick, thinking to frighten Robin and thus distract his attention from the poor, tired bird; but it had no terrors for him, so I opened the cage, hoping Linnet would come out, but out flew Robin instead, and, before I could scarcely realize it, dived at my face as fiercely as he had at the Linnet, screaming with rage and fury. Before I could get hold of the little savage he was in the cage again, determined to get the obnoxious Linnet out at any cost. In a few seconds he was in my face again, but not this time being taken by surprise I closed the door on him and Robin was himself evicted.

Then he fairly danced and stamped with anger, as naughty children do sometimes, flying at me to emphasize his very intelligible actions, which translated into human speech would be this:

"You brought to my door an escaped and starving prisoner, to whom I most kindly gave food and shelter from the cold damp night; the beautiful day with warm sunshine has come once more, and I offer him the greatest of all luxuries, a bath, which the dirty, ill-bred creature most indifferently refuses, and therefore I will no longer tolerate him in my house! Now take him out or I'll kill him!"

The only lack of sense shown by Robin in this affair, in human estimation, would be that he seemed not to understand it was quite impossible for Linnet to bathe, having no wings; but I firmly believe Robin knew enough to have bathed the bird himself, if it would only have stayed in the water.

Next day another cage was procured for Mr. Linnet. When Robin was again permitted to enter his home, he did so with great exultation over his victory, strutting up and down his perch just like any other lord of creation who had worsted an opponent; but he was in a very rumpled condition, and knew it, and in a few minutes demanded another bath to wash off the contamination received in his efforts to drive the Linnet from his domicile. He talked the whole matter over as he sat pluming his feathers, and chuckled with contentment.

One beautiful morning six weeks later, when Linnet had grown a sleek warm coat, I opened the door of his cage, from which he darted out like an arrow and with such a sweet, joyous song that it gladdened my heart, for no sound had he made in all the time I had him in charge.

Both birds were happy once, Robin in the solitary possession of his cage, which he loved, and Linnet in the regained freedom to which he was born.

A year ago, Planter Wolf, of Knoxville, Ark., had an arm pulled off while showing a negro how to operate a cotton gin. Yesterday he was instructing another negro, and lost his other arm. Mr. Wolf's instruction is now at an end, as he is out at the arms. But then Mr. Wolf's way of operating cotton gins was not a good one.



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PATRONS OF HUSBANDRY.

Does the Grange Pay?

We answer, yes. It pays in many ways. The Grange has developed new life among our farmers. It has set them to reading and thinking for themselves. The Grange has been a school for mutual instruction. The frequent meeting together to compare notes has been found to be wonderfully beneficial. Many a farmer has learned in the Grange how to best cultivate his land so as to enable him to obtain the largest product at the least expense. He has learned in the Grange and by reading his Grange paper, which, perhaps, formerly he did not take, the best mode of rearing stock and improving their breed. He has learned from the Grange debates the distinction between true and false economy, and to practice the former and avoid the latter. The Grange instructions have directly benefited the farmers of the country to the value of many hundreds of thousands of dollars in developing the hidden resources of their lands, in systematizing farmwork and in putting more thought and brains into the crops.

The benefits derived from the Grange, however, are not confined altogether to dollars and cents. That view alone of its benefits would be very narrow and sordid. The Grange has developed a new life among the farmers all over the land. Its benefits in that direction have been seen and recognized in at least twenty-six different States in which it is now flourishing. The social features of this organization have wrought wonders in thousands of our farm homes all over the country. More books, more music and more papers are now found in our farmhouses, and the boys and girls, who have heretofore found farm life irksome, are not leaving the old homestead, as they formerly did, to seek the more dangerous attractions of city life.

"Great, indeed," as some one has said, "are the changes which the Grange has introduced in the way of improved social intercourse and intellectual effort among farmers." This change has astonished the nation, and is fast bringing to the front men of strong minds and great intellect, and who are, in many ways, taking the lead in social, political and economic progress. The day has passed, never to return, when farmers were not expected to think for themselves. They are now doing a large amount of thinking, and, what is better still, giving others who needed such prodding, occasion to do much thinking in a direction quite different from their heretofore lines of thought.

"The industrial and producing elements of city and town and country are joining hands in the great revival of human rights, and in the onward march of material, social and political progress." These are some of the ways in which the Grange is made to pay.

THE SOLID CORNER STONE OF THE GRANGE should be mutual trust, mutual sympathy and mutual helpfulness. Patrons should know each other better and trust each other more. They should be men of worth and integrity, free from selfishness and distrust. The Grange organization in its tone, aims and purposes, seeks to correct evils of every kind, to encourage and build up everything that is good and enduring. The good Patron must be a man of integrity. He must be patriotic and seek ever to promote the public good, in doing which he will also find his own interest advanced. He should be a man of thought and reflection, else he will not know how to direct his own industry to profit. Without well-directed industry and wise and prudent economy no farmer can prosper. A good Patron will not be boastful of his knowledge. He must be too wise to be vain and self-conceited. Vanity and self conceit in any one are disgusting and odious to others, and infallible proofs of a weak intellect and corrupt heart.

THE GRANGE AND THE MIDDLEMAN. The middleman occupies a central position between the two extreme classes of the people—the producer and the consumer. He is sometimes a necessary evil; oftener a needless one. His presence is due mainly to the unthrifty or neglectful habits of the producers, who too often neglect to make proper arrangements for the distribution of their products. The middleman is shrewd and has a keen scent for the best end of a trade. Like the railroad-man, who is also a middleman, he generally charges for distribution all the traffic will bear. He knows a good thing for himself when he sees it, and he generally sees everything, in his particular line, that is worth seeing. It is one of the leading objects of the Grange to dispense, as far as possible, with the services of the middleman. Various means are employed to accomplish this end, one of which is to secure the most competent and faithful persons for such service, and to concentrate as much business as possible in the hands of one person or firm. Another method is to substitute for the ordinary middlemen those whose interests are made identical with those of the producers. Already much saving has thus accrued both in distributing produce and in purchasing supplies. Of course such advantages accrue only to those who come within the circle of such as make this thing a matter of study and business. It would be better if farmers could be more generally induced to put themselves in the way of the more thorough cooperation and education as practiced and enjoyed by members of the Grange. Farmers who are not Patrons would do well to consider these things more carefully and act upon their convictions.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

SEVENTH DEGREE CERTIFICATES.—We learn from N. G. Sec'y Trimble that he expects to be prepared to issue certificates for seventh degree about the middle of November. We believe this will be the first instance in which certificates for that degree have been issued.

STATE GRANGE FINANCIAL STATEMENT.—Receipts during October, of general fund, $338.43; disbursements, $367.65; balance on hand and in the treasury, $797.54. Receipts of lecturers' fund, $153.95; disbursements, $64.80; balance, $1869.63. Total balance in both funds, $2666.82.

DRIVE AHEAD.

Since the State Grange session very few Granges have reported progress. At that meeting, receiving reports of State officers and having a general conference among Patrons from all over the State, representatives and visiting members, it would seem, should have returned and begun the work of the new year with enthusiasm. We trust that the election excitement has only temporarily smothered the glowing flames that are alive in every Grange in the State, ready to burst forth in renewed energy in the next few weeks.

THE WORTHY LECTURER can do his fellow-Patrons a favor by communicating at least a short lecture on the late session and future lines of work for his constituents, through the columns of the PRESS. Give us some suggestions and advice for the laborers of your jurisdiction, W. L.

WHAT will be the work of the National Grange at Concord? These are stirring, progressive times. The Grange may be denominated the first leader in starting the great battle of progress and reform that is now waging in favor of producers and laborers. Certainly the coming session should be one of great moment, thoughtful, earnest, progressive, and fully up to, if not just a little ahead of the times. The annual address of Worthy Master Brigham and the expressed sentiments of his supporters from nearly every State in the Union are now looked for with interest.

THE PRESIDENT has set Thursday, Nov. 24th, as Thanksgiving Day. Let every Grange hold a juvenile session and make a pleasant season in our new Grange year, especially for the youth and the aged. Then the middle-aged cannot but enjoy it.

GENERAL DEPUTIES SHOULD PUSH THE WORK.

Until the worthy master appoints his new general, county and district deputy lecturers, the old ones are in full standing and expected to push the work. Let those who attended the State Grange at San Jose visit every Grange and report the same, advise and assist in the planning of an active year's work. During the last days of official duties, let each one try and make them the brightest and most effective of all.

ALL State officers and deputies are invited to send items of information for this department to the secretary of the State Grange, those for the P. of H. Department in general to the editor of the RURAL PRESS. Write often for one or both.

OFFICIAL ADVOCATE.—While the appointing of an official medium of communication is of great importance to the Order, it is of still greater importance that the officers and members of the Order send information to the Grange advocate for publication. It is the only way that the paper can be made of efficient value. Do not forget this, officers and lecturers.

WE should like to see the National Grange invited to hold its next session on our Pacific coast. Notwithstanding the great pleasure enjoyed by the National Grange on their visitation to California, we believe that they would be equally well gratified by holding a session in Oregon and becoming acquainted with its grand scenery and vast and wonderfully varied and productive lands. Certainly Washington and California State Granges would do their best to help Oregon entertain the National Grange, could it be induced to hold its session at Salem, the capital city of our neighboring State.

VISITING OREGON.—Mrs. Nettie Jones Bramman, of Temescal Grange, is now on a visit to Oregon, and we hope soon to hear some good Grange news from that jurisdiction.

A SACRAMENTO COUNTY FARMERS' INSTITUTE. Sacramento County Pomona Grange has appointed Mrs. Hattie S. Jones of Sacramento a committee to obtain the necessary information in regard to successfully holding a Farmers' Institute at the Capital City in the near future, and we have been requested to send such information as we can conveniently obtain for that object, which request we shall cheerfully comply with. In the meantime, we ask other Patrons and friends to forward Sister Jones any hints or information they can to help the cause along. Sacramento county should certainly hold yearly two or more profitable sessions of a County Farmers' Institute. We cannot too strongly urge all farmers and citizens who are fond of the farm and rural homes, the advancement of country life and prosperity of rural citizens, to join heartily in this undertaking. It is quite meet and proper that Pomona Grange of Sacramento should take the lead and hold the first meeting with as little delay as feasible.

FOR the benefit of those who may wish to communicate with members of the Committee on Women's Work, we publish the following list recently furnished the chairman: Mrs. Hattie S. Jones, chairman, Cor. 21st and Y streets, Sacramento; Mrs. E. Z. Roache, Watsonville; Mrs. Amos Adams, San Jose; Mrs. A. Smith, Vacaville; Mrs. Mary E. Saxton, Santa Rosa; Mrs. S. J. Cross, East Oakland; Mrs. S. H. Dewey, 1304 Franklin St., Oakland; Mrs. Bates De Hart, Hollister; Mrs. Mary E. Merrill, Stockton; Mrs. H. C. Raap, Martinez; Mrs. Mary E. Donaldson, Pleasant Grove; Mrs. W. W. Kilgore, Grimes; Mrs. Maggie D. Brainard, San Jose.

WHAT GRANGES will decide to hold Thanksgiving reunions? Every Grange can give the children a thankful, jolly occasion once a year at least. It ought to be a good time for starting Juvenile Granges under the National Grange plan and ritual where the same can be inaugurated successfully. Sister Mary Pinkerton of Jolon is making a laudable effort for the establishment of a Juvenile Grange in connection with San Antonio Grange. We hope that her efforts may be crowned with success, although we hear very little of results coming from the effort of the National Grange to establish Juvenile Granges. Perhaps it would be a good plan to appoint a committee on entertainment for the children of every Grange, and at a recess held once a month, introduce them within the gates to listen to such exercises as can be appreciated by them when it is not feasible to make juveniles entertainers with the older members of the Grange.

THE *Farmers' Friend* says: We desire to emphasize the fact that the Grange is a nonpartisan organization, and that questions of a purely political character (we use the term in its ordinary acceptation and not in its technical sense) are not debatable at a Grange meeting. But we would state with equal positiveness that admission into the Order does not disfranchise a man. He remains a citizen, charged with all the duties and responsibilities of citizenship, and has as much right as any one else to stand and defend his political preferences. In doing this, however, he should subordinate party fealty to the general good, and especially to the advancement of the cause of agriculture and the interests of the farmers, who are the mainstay of our country.

ELEVATE THEIR LIVES.—Mrs. S. C. Mudge at Williams' Grove Picnic, Pa., said: "Sisters, what will it matter by and by that you have kept your homes in faultless order if you have neglected the culture of your own and your children's minds? You will be remembered only as a drudge that was born, that worked and died, by your children. They cannot remember you in any other sense, for they never knew you in any other; and if their education is neglected, they must go through life on the same level. But give them simple surroundings and an education if you cannot give them both, and you give them a higher life, a broader view of life, a purer life that is unknown to the uncultured mind."

THE NATIONAL GRANGE has taken a stand. It is not a political machine. But it goes boldly before legislatures and courts and the general public, to assert the needs and the rights of the farmer. It does this temperately and firmly, and knows no such word as fail. Its achievements in the past are the best guarantee for its succes in the future. Meanwhile it is carrying into the scattered and often isolated farmhouses of the nation a sense of brotherhood and social fellowship, an atmosphere of sound morality, and high regard for religion, which comforts the hearts of thousands of men, women and children, and makes farm life better, purer and nobler. God bless the Grange.—John Trimble.

A CAREFUL study of the methods pursued by other organizations to increase their power and influence will help Patrons in the accomplishment of the same purpose. It is not enough that the principles we advocate are just and right. We must lead others to the same conclusion, and induce those who are engaged in the same pursuit to unite with us. Careful inquiry discloses a vast amount of ignorance, even in farming communities, concerning the intents and purposes of the Grange. Now, the way to get these men to join us is to familiarize them with the views we hold, and get them interested in the work that most intimately concerns them. There are only two ways of doing this—by personal visitation and by diffusing among them Grange literature. The first is, at best, often inconvenient and impracticable. The second can always be made available at comparatively little cost. One or the other of these methods must be adopted if we wish to succeed. Other organizations are pursuing a similar plan, with gratifying results to themselves. Remember, a good officer studies carefully the tactics of his enemy, and it will do Patrons no harm to do likewise.—Farmers' Friend.

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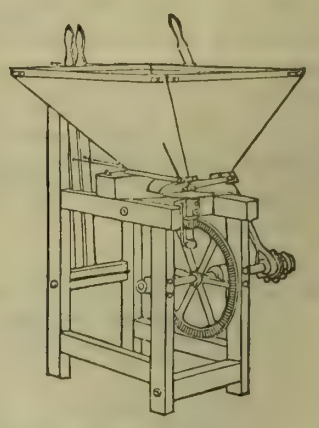
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The home of the peach, French prune, pear and raisin grape.

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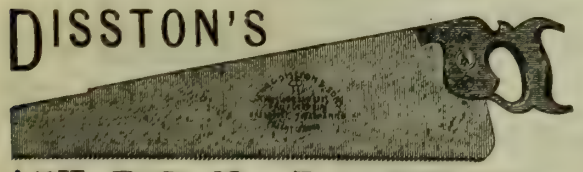
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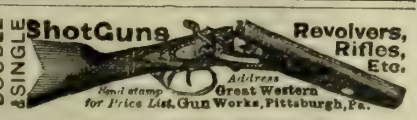
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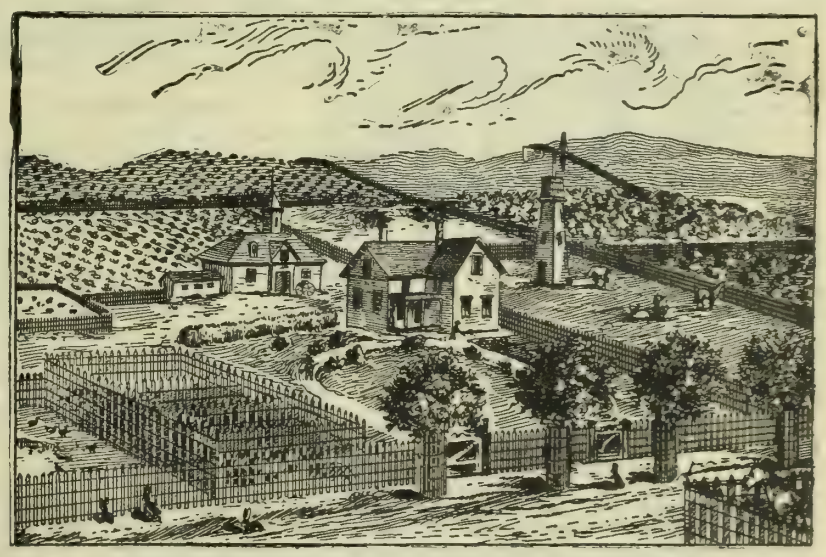


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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

EARLY-RIPENING OLIVES.—Oroville *Register:* Dr. W. E. Mack has a large number of olive-trees growing at Paradise in this county, and as the altitude of that place is nearly 2000 feet, he has been anxious to know whether the fruit would ripen there as early as in the valley and amid the low foothills. Greatly to his surprise, when the olives turned black this fall—the first fruit borne upon his trees—he found that they were a week or ten days earlier than any in the lower portions of the county. He feels greatly pleased with the result of his experimenting, and will this winter add another thousand to the four thousand trees that he now has on his land.

Fresno.

VALLEY APPLES.—Reedley *Exponent:* Rev. T. J. Bauder has brought to this office some of the finest apples we have ever seen in this State. They are of the White Winter Pair Main variety and measure 12¼ inches in circumference. These apples are grown from three-year-old trees. An idea prevails, and it may be to a certain extent true, that apples grown in the valleys of California lack in a certain degree that flavor which they possess when grown in a higher altitude or colder climate, but there are certainly exceptions to this rule, as specimens raised here such as above referred to fully attest. When proper care is used as to variety, with proper irrigation, apples can be and are raised here that are good enough for any mortal to eat. A more wonderful and luxuriant growth of vines and trees cannot be shown in the State than that seen on Mr. Bauder's place adjoining town, and in brief we say it is wonderful. Seeing is believing, and to see it simply silences criticism and dispels every doubt as to fruit culture in this vicinity.

Inyo.

A HIGH FRUIT ORCHARD.—Homer *Index:* J. L. C. Sherwin, the altitudinous professor of horticulture and pomology, of Round Valley, was here this week with a load of his produce, which was good, though raised at an elevation of 6700 feet above sea level—the highest fruit farm on the whole continent.

Kern.

LARGE OWNERS OF LIVESTOCK.—Bakersfield *Californian:* Miller & Lux have at this time on their great ranch 28,000 sheep, 35,000 cattle, 6000 hogs, 12,000 tons of alfalfa hay, 28,000 sacks of barley, 12 000 sacks of wheat, 5000 sacks of oats; also 3000 acres of Egyptian corn, which will produce nearly 6000 tons of this cereal food. Messrs. Haggin & Tevis' lands also show up 60,000 head of cattle, 5000 horses and 24,000 tons of hay.

Lake.

LARGE STOCK RANCH.—Klamath Falls *Express:* John D. and John S. Carr have leased for five years the big "A. L." ranch, near Silver lake, Lake county, belonging to the Sharon estate and also the extensive grazing lands in Sycan, and during the next month will drive 3500 head of steers from this county to their new possessions. John S. Carr, who was in town Monday, says that G. H. Hayes will superintend affairs there and will build 20 miles of wire fence and make other improvements. "We won't have to feed much this winter," said Mr. Carr, "as the bunch grass is already ten inches high in that vicinity." The Carrs have already turned off 1600 head of cattle this fall, and 1500 more will soon be driven to Gazelle.

Los Angeles.

MEETING OF THE HORTICULTURAL COMMISSIONERS OF THE SIX SOUTHERN COUNTIES.—L. A. *Times:* The Association of the Horticultural Commissioners for the six southern counties met in the rooms of the Chamber of Commerce. There were present Commissioners John Scott of Los Angeles, H. Hamilton and A. Rafferty of Orange, N. H. Claflin and N. E. Collins of San Bernardino J. H. Jones of San Diego, J. E. McIntyre and H. T. Snow of Ventura. Prof. Coquillett, who has just returned from an extended trip of investigation, at the order of the Pomological Department at Washington, to determine the good result, if any, which has been brought about by the recently imported Australian parasites, was present and made a report to the commissioners. In all his visit through Alameda, Santa Clara, Santa Barbara, Orange and Los Angeles counties, where the bugs had been placed, the professor said there was but one place in which he found the beetles alive, and that was Santa Barbara, where 300 or 400 colonies had been placed. A committee of one from each county was then appointed as follows: H. Hamilton, Orange; J. H. Jones, San Diego; W. E. Collins, San Bernardino; John Scott, Los Angeles; J. H. McIntyre, Ventura, and Mr. Eustis of Santa Barbara, to collect facts in relation to some of the charges which have appeared in matter emanating from the office of the State Board of Horticulture, reflecting upon the conduct of the commissioners of southern California in the course adopted by them in the parasite matter. Much of the discussion brought up was upon the matter of the fumigation of trees to kill the red and yellow scale and other insect pests, and it was also urged upon the growers to continue with their work by this process, as the parasite had been found to be entirely worthless as a destroyer of such pests.

Nevada.

GOOD GRAZING.—Grass Valley *Telegraph:* The feed for stock in the lower foothills is just now splendid. Mr. John Davis, who was in town yesterday, informed us that he has been all over the foothill ranges and he never saw the grass better nor as good before at this time of the year. All the cattle are fat and then, too, there are more cattle and horses in the foothills than heretofore. The farmers are increasing their stock and at the same time inproving it. In a very few years Nevada county will be able to compete with any county in the State for the quality of its livestock.

Orange.

PAMPAS PLUMES FOR GERMANY.—Santa Ana Cor. Los Angeles *Times:* The cultivation of pampas plumes has proved a profitable undertaking for a number of Orange county gentlemen. Max Nebelung, of Anaheim, his shipped his crop of plumes, numbering 160,000, to Hamburg, Germany. This one crop alone filled two cars and was shipped to New York, from which point it went by ship to its destination.

A FINE ORANGE GROVE.—Orange *Post:* One of the finest-appearing orange groves in the vicinity of the northeast part of this city is the property of Prof. M. Manley. The location of the orchard is considered an exceedingly good one, being at a convenient distance from the foothills on one side, and not too far from the Santiago creek on the other; the soil is naturally adapted to the growth of the orange, and has been further improved by liberal quantities of fertilizers and has otherwise been well cared for. Under these favorable conditions the trees are strong and vigorous and have made a wonderful growth, the dark green color of the foliage, so satisfactory to the eye of the orchardist, is in pleasing contrast with the distant hills and pastures which still retain a coat of brown. At the present time the trees are heavily loaded with fruit, which is apparently without a blemish. In consequence of this enormous crop, it has become necessary to prop the over-laden branches and many thousands of poles are being used for this purpose. We are informed the orchard consists of some nine acres and it is expected that the yield of oranges will be about 5000 boxes.

San Bernardino.

THE SUGAR OUTPUT.—Chino *Champion:* On October 28th the sugar factory completed its work for the season, having made the last of its syrups into sugar, which has all been shipped. And now, again, the great factory is still and echoes the tread of the intruder. The entire output of sugar for the year is as follows:

From syrups held from 1891, lbs	518,000
From beets in July	780 391
From beets in August	2 415 406
From beets in September	2,934 646
From beets in October	949 598
From syrups of 1892	305 500
Total output, lbs	7,903,541

BEET LAND-RENTING.—*Champion:* We are informed by Mr. White that there have been rented for beets next year over 2000 acres of the Chino land. This is nearly all by the farmers who raised beets this year. Almost all who raised beets this year have applied for from two to four times the amount for next year. From the way applications are coming in, the present residents will undoubtedly rent about 3000 acres for next year. Then inquiries are being received by mail almost daily for beet land and information on beet-raising, profits, etc., which would indicate that this winter will see a large influx of farmers in this valley to engage in the profitable work of raising beets. From present indications, we may expect the rentals to reach nearly 4000 acres. This year the rentals were but about 1500 acres altogether, so that already this early in the season that is increased over 500 acres.

Santa Barbara.

FARM ORCHARDS AT PINE GROVE.—Cor. Santa Maria *Times:* The farmers of this section have been improving the prevailing fine weather by gathering corn, digging spuds and housing other perishable crops. The corn crop is very good here this year and potatoes are fair, but hardly up to the average. A good deal of brush land is being cleared in this neighborhood for the purpose of planting to fruit and nut trees the coming season. Jones & Maulsby are gathering their winter apples and pears, pruning trees and preparing land for planting an apricot orchard. Tyler Bros. are bent on more almonds and will plant 20 acres or more. Jerome Cash and C. H. Glines are talking orchard. S. B. Schauer will plant more trees. F. C. Twitchell is stuck on blue-gums. J. R. Norris advocates walnuts and will plant largely the coming season. The new buildings on the Fleisher place are about completed and they are still hunting for water. Mr. Patterson is clearing up his brush ranch with a view to preparing it for orchard purposes. The many orchards of this section will go into winter quarters in fine condition, with splendid prospects for a big crop of fruit next year.

Santa Cruz.

LARGE APPLE CROP.—Watsonville *Pajaronian,* It is now estimated that the apple crop of the Pajaro valley this year will not fall short of half a million boxes. Orchards have been overrunning estimates, and boxes have been in such great demand that it has been impossible to get an order filled right away either in this place, Aptos or San Jose. As it takes 500 boxes of apples to fill a car, it can be seen that the apple crop of this valley will be about 1000 carloads. That amount is nearly equal in carloads to the orange crop of the famous Riverside district this year. The Pajaro valley is now the leading apple district of the Pacific coast.

TREE-PLANTING.—*Pajaronian:* If the season is at all favorable for tree-planting this winter, there will be a large increase made in the acreage of young orchards in this valley. The good prices which fruit has brought the past season will be a great stimulus to increased tree-planting.

MORE BERRY FIELDS.—*Pajaronian:* It is very evident that there is to be considerable acreage of new berry fields in this valley before another season. Good berry land is in demand. When the reclamation of the slough country has been further advanced there will be lots of berry land in this district.

INCREASED SUGAR-BEET CROP.—*Pajaronian:* About 25,000 tons of beets have been crushed to date, which is an amount considerably in excess of the entire run of any previous season. There is a tonnage yet to deliver that will equal the amount crushed to date.

Shasta.

PAID OUT FOR FRUIT.—Anderson *News:* About $20,000 was paid for green fruit shipped from Anderson this season. If next year proves a good one for fruit, this amount will more than be doubled.

Sutter.

ADAPTABILITY OF SOIL.—Colusa *Sun:* A day or so ago we saw Mr. Nall, of District No. 70, drive up to Mazet's with a load of the finest-colored Tokay grapes we ever saw. We asked him if he could doctor them up like some dairymen doctor their butter. He said it was the soil. He is over on Butte slough, and gets his Tokays finely colored, but a couple of miles from him, on the river, they will not color. The large black grape called the Bishop, he says, are the same. They have a splendid blue-black with him, while on the river half the grape sometimes remains of a green color. The raisin grape, however, does much better on the river. Every fruit has its peculiar soil that it likes, and to make fruit-growing profitable the grower must find it.

Tulare.

DRIERS PAY.—Hanford *Journal,* Nov. 1: The past week has been anything but propitious for the raisin man. Light falls of rain fell on Wednesday night and on Sunday morning, and the weather has been continuously damp and rather cold. Nearly the entire second crop of raisins is now on the trays, but as most of the raisins have been turned once, they are in good condition for the driers, which are now running in full blast all over the Lucerne valley. Now is the time when those who have no drier wish they had one, and every raisin-grower wishes that there was a distillery or some other manufactory here to which he could dispose of part or the whole of his second, and all his third crop of raisins, which must go for hog feed or remain on the vines to rot away part of the raisin-growers' profits.

Ventura.

THE ESTIMATE OF DAMAGE TO BEANS.—Ventura *Free Press:* The rain in the Santa Clara valley closed down the bean-threshing. In the extremely sandy district it is estimated that one-half of the beans were threshed out by the "elements." Fully one-half of the little white and lima beans were destroyed by east winds, and from a man who has worked 32 days on a thresher, it is learned that in 17 places at least one-half of the beans had been threshed and left on the ground by the wind or covered by sand. It is safe to say that beans will go up in price within a month.

Gas Machine.

The new improved AUTOMATIC GAS MACHINES stand unequaled on the whole Pacific Coast for lighting country homes, suburban residences, hotels, etc. The light produced by these machines is Bright, Clean and Steady, but soft and soothing to the eye. **Emitting No Smoke** and being uniform, it has no equal for reading by. The cost is more than One-Half Less than coal gas anywhere, it being but **$1 per 1000 cubic feet** These Machines are sold at **reduced rates, but every one is guaranteed to give entire satisfaction.** Before purchasing elsewhere, call and examine them or send for illustrated catalogue at Nos. 43-45 Stevenson Street, San Francisco, California.

JACOB SCHREIBER, Manager.

WANTED.
25 Bags Peach Pits.
Address, stating price,
Box 91, Templeton, Cal.

ALL THE SAME, ALWAYS.

SPRAINS.
MT. PLEASANT, TEXAS, June 20, 1888.
Suffered 8 months with strain of back; could not walk straight; used two bottles of **St. Jacobs Oil,** was cured. No pain in 18 months.
M. J. WALLACE.



BRUISES.
PITTSBURG, PA., 302 Wylie Ave., Jan. 29, '87
One of my workmen fell from a ladder, he sprained and bruised his arm very badly. He used **St. Jacobs Oil** and was cured in four days.
FRANZ X. GOELZ.

A PROMPT AND PERMANENT CURE.

SALE OF THOROUGHBREDS.



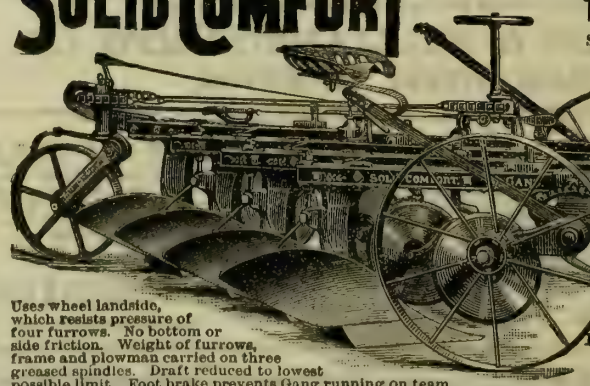
PROPERTY OF HON. L. U. SHIPPEE,
COMPRISING IN PART
STALLIONS By the noted sires LONGFELLOW, Imp. KING BAN, Imp. PRINCE CHARLIE (sire of Salvator) and MONDAY.
BROODMARES, The get of such celebrated sires as GLENELG, LUKE BLACKBURN, Imp. GLENGARRY, HINDOO, TEN BROECK, NORFOLK, JOE HOOKER, BULLION, KYRLE DALY, etc.



TWO-YEAR-OLDS and YEARLINGS By ST. SAVIOUR, WILDIDLE, Imp. GREENBACK, Imp. FRIAR TUCK, JOE HOOKER, FELLOWCHARM, MAJOR BAN and JOHN A.

TO BE HELD AT
OAKLAND TROTTING PARK,
(SHELL MOUND STATION)
At 11 A. M., WEENESDAY, NOVEMBER 16, 1892.
KILLIP & CO., Live Stock Auctioneers,
22 Montgomery St., San Francisco, Cal.

SOLID COMFORT
THE "WONDER ON WHEELS"
TONGUELESS, Self Guiding.
SIX OR EIGHT HORSES,
depending on size of plows and kind of work.



12 ACRES A DAY Instead of three.
ONE MAN Instead of four.
Especially adapted to Traction Engine.

Uses wheel landside, which resists pressure of four furrows. No bottom or side friction. Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit. Foot brake prevents Gang running on team. Levers and turning device within easy reach. **LIGHTER DRAFT** than any Gang in America. Easier Driving, Straighter Furrows, and Adjustable frames—can be narrowed or widened at will. Made with stubble, sod and stubble, or breaker bottoms. Ten or twelve inch cut.

ECONOMIST PLOW CO., So. Bend, Ind., or Stanton, Thomson & Co., Sacramento.
☞ Special prices and time for trial given on first orders from points where we have no agents.
Our book, "FUN ON THE FARM," sent Free to all.

Gas or Gasoline Engines for Road Motors.

The increase of homes adjacent to cities has set inventive genius to work on the problem of safe and cheap motive power to propel cars on railway lines which extend in a radius of from five to ten miles around our cities and towns. A convenient and cheap motor is the gas vapor or gasoline engine. A practical application of this form of motive power to street car lines has been made by Mr. Daniel Best, of San Leandro, Alameda county. Some time in last January a railway line was projected from the terminus of the electric car line at San Jose to run out to Alum Rock Park, eight miles from San Jose, at the foot of Mt. Hamilton. This line has been completed for four miles and is now being built the entire distance. The Best gasoline engine is the motive power for conveying passenger and construction cars over this line.

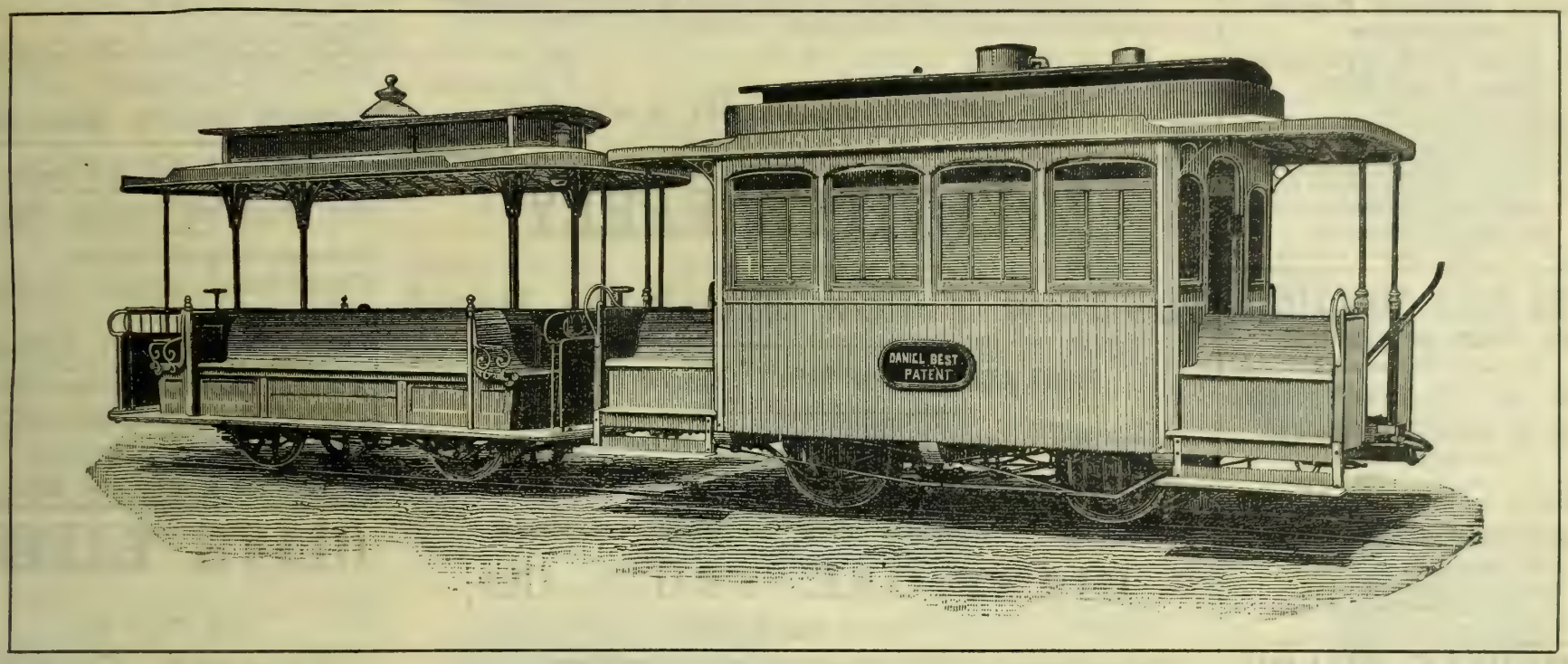
The Best vapor engine as applied on this line is a double-ender, the piston of each cylinder being connected with the main shaft. Each connects direct with the forward car axle by an endless chain. The number of revolutions per minute are 200 of the engine, and of the wheels of the car 100 per minute. The wheels are 30 inches in diameter; this gives a speed of 12 miles per hour. The speed of the engine can be varied at the will of the operator from 75 to 250 revolutions per minute. The engine is geared to the axle of the car direct from the crank-shaft, and at one side there is an intermediate gear which drives one set of wheels in the opposite direction from the crank-shaft. There is but one pair of wheels working at a time; one pair run one way and the other the opposite way.

The cost of operation is stated to be as follows: 9 gallons gasoline, at 14 cents per gallon, $1.26; 1 quart lubricating oil, at 10 cents, 10 cents; total, $1.36 per day.

The gas is all consumed and consequently there is no need of using any disinfectant, as there is no offensive smell whatever.

Mr. G. W. Dolly, the present engineer, who has been continuously in charge for the last three months, says: "We usually run eight miles an hour and from 10 to 14 hours per day, part of the time being consumed in hauling out the construction train loaded with gravel. In a cut on quite a sharp hill toward the mountain the up grade is four per cent; consequently, on the down grade, as you see, I throw off the current and move along at any speed I wish by natural gravitation."

There is no noise caused by the explosion of the gas that can be heard on the rear car, and the rumbling of car wheels is all of the noise that can be distinguished outside of the car containing the motor. The motor runs smoothly, without jerk or jar, and there is no inconvenience to passengers from smoke or disagreeable smell. On Sundays and holidays two passenger cars are attached to the motor car and from 70 to 100 passengers are carried at one load. The brakes are so constructed that the car can be stopped under full motion within five feet. The size of the car is 7x11 feet. Other suburban railway lines have been projected, but it seems that the problem of cheap transportation in this field has been settled by the improved Best gas or gasoline engine or motor. The cut shown on this page is made from a photograph recently taken and is an exact copy of the motor car and passenger car as it appears at the end of the line. We shall watch with interest the progress made in this new line of industry and from time to time shall note the progress, improvements and success attending the new feature in suburban railway lines.



BEST'S GAS OR GASOLINE STREET-CAR MOTOR.

THE buildings for the new meat-packing establishment at Rodeo are ready for the machinery, which will be placed by December. The big reservoir, which has a capacity of one billion, one hundred million gallons of water, is also constructed and being filled with mountain water. The packing houses and town of Rodeo will be supplied from this source.

A PERFECT SUCCESS.



"Keystone" Corn Husker AND Fodder Cutter.

Husks the corn and cuts the stalks into the best fodder known.

Much Improved for 1892.

Send for our FREE book, "The Great Leak on the Farm."

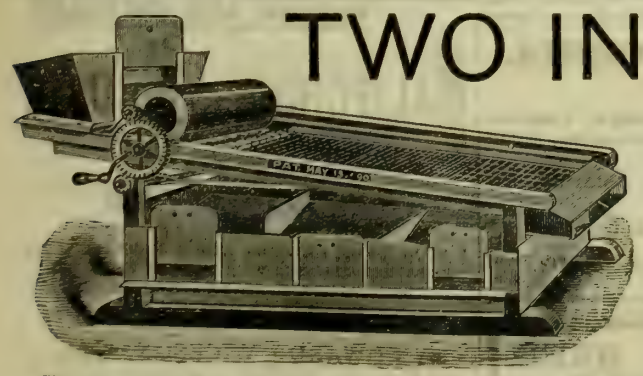
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The only machine that will grade with equal facility both green and dried fruits. It is desirable to grade prunes both before they are dried and absolutely necessary after.

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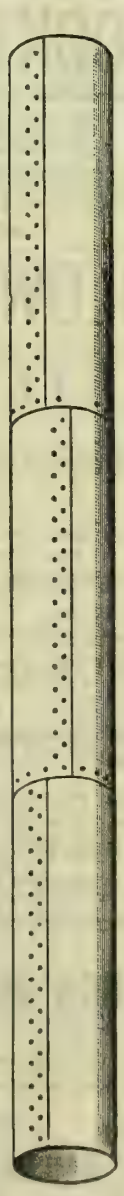
It is the best economy to have one machine which you can use for both green and dried fruit, saving time money and valuable space. No complicated machinery to get out of order and do imperfect work.

VERY SPEEDY.

No machine compares with this in speed. Will grade apricots for drying, also walnuts and pecans.

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SHEET IRON AND STEEL PIPE,

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For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

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In the manufacture of this Pipe, we use only a high grade o annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300° Farenheit. It thus receives a thorough coating, both inside and outside, rendering it impervious to the alkalies of the earth, rust, etc., and is practically indestructible.



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On Myrobolan Stocks, at Low Rates.

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Owing to age and poor health, I will sell my place and business at a bargain. Place consists of 250 acres of land, good buildings, 50 acres in orchard, and a large Nursery Stock, together with horses, wagons and implements, complete, for carrying on the business. A good opportunity for enterprising men with capital to step into a good-paying business. For further particulars address, as above.

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Orange, Lemon, Lime, Olive, Japan Persimmon, and all kinds of Nut-Bearing Trees Shade and Ornamental Trees, Shrubs, Etc.

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RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.

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FRENCH PRUNES on Myrobolan, Peach and Almond Roots.

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All first class and best of material used, f. o. b.

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Every Facility for Breaking Colts Properly.
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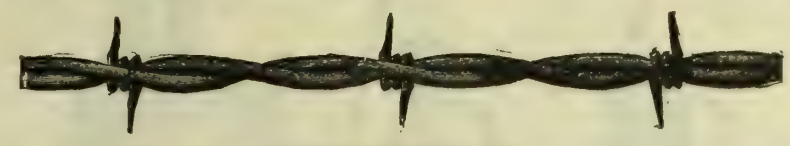
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A number of pure-bred Angora Goats in lots to suit. This is the stock of goats formerly owned by Julius Weyand and will be sold cheap for cash. Address
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GLIDDEN STEEL BARBED WIRE.



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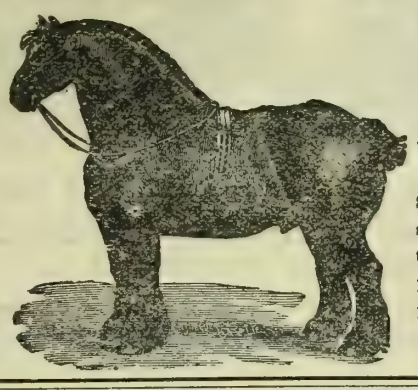
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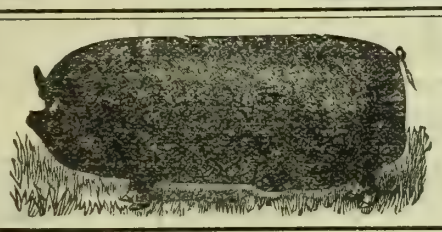
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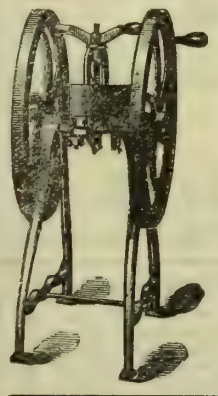


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JERSEYS,
Of the Coomassie, Alphea and other choice strains.
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POULTRY—Nearly all Varieties.
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FOR POULTRY FOOD.

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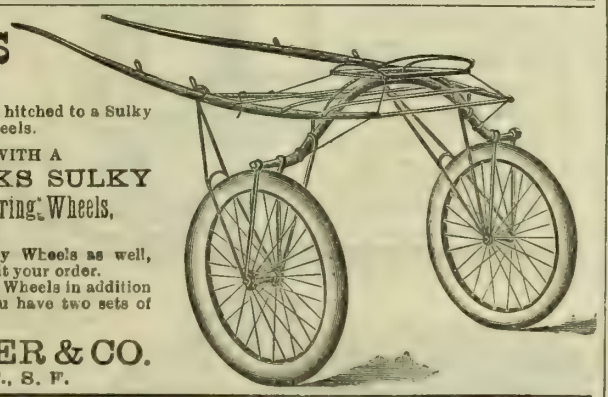
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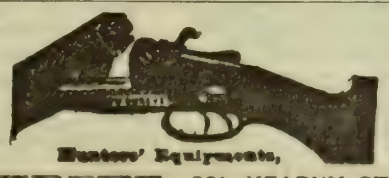
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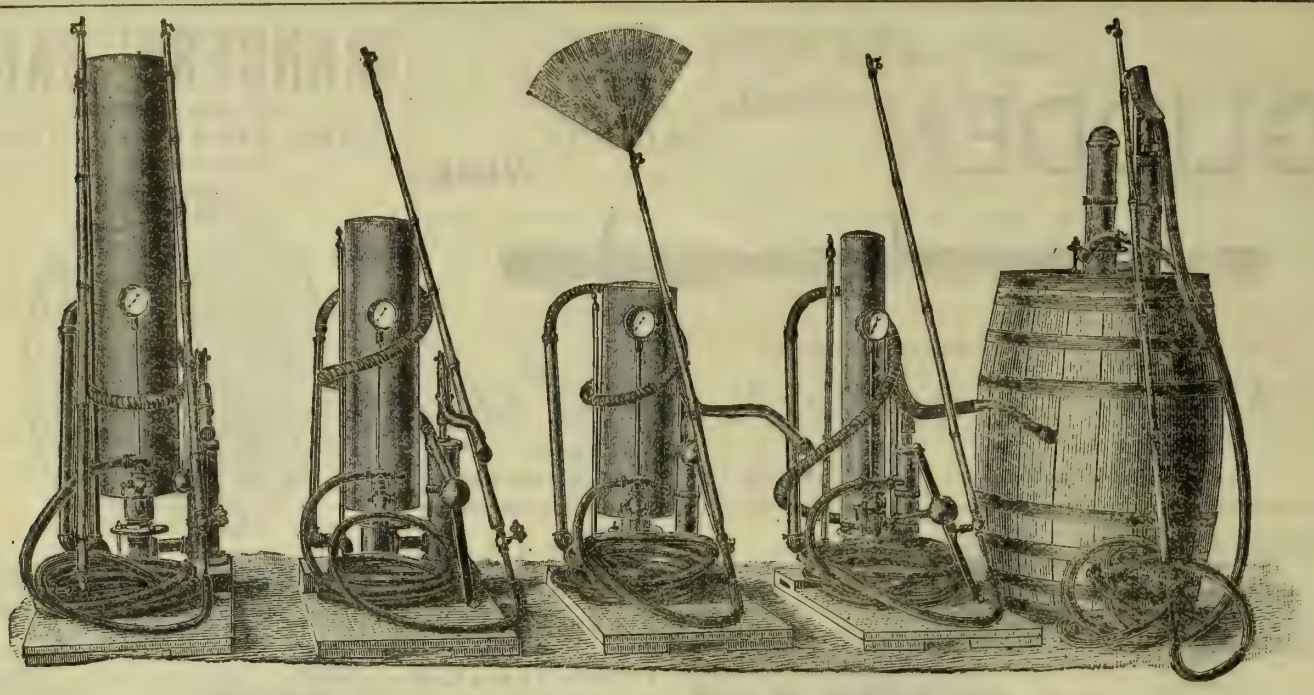


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Send Stamp for Circular

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They are made of the Very Best Material. Corrosive Washes DO NOT injure the valves, plunger-packing or cylinder.

Your neighbor will tell you that he can spray MORE TREES IN A DAY with the Bean Pump than with any other.

DO NOT FAIL TO USE THEIR NOZZLES.

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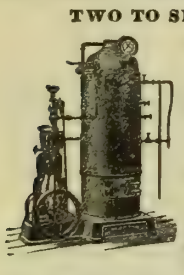
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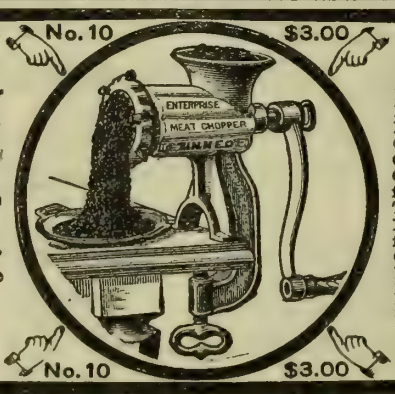
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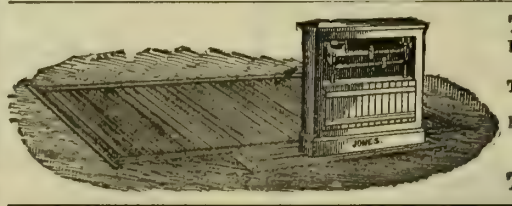
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No. 530 California Street,

Telephone No. 1746. SAN FRANCISCO, CAL.

S. F. Market Report

Market Review.

SAN FRANCISCO, Nov. 9, 1892.

The past week was broken to such an extent by national and State elections as to virtually cause general trade in merchandise and farm products to be at a standstill. Now that it has passed and the results virtually known, it will be only a question of a few days before trade will resume its normal condition. The only thing which is liable to be a disturbing factor is the tariff, but as this will not probably receive attention for fully one year, trade will have, by that time, adjusted itself to the probable changes.

Wheat the past week held to fairly firm prices in all markets, at home and abroad. The opinion is gaining ground that the extraordinary movement of wheat to market has led to a large short-selling at home and abroad, and with strong holding by farmers, which usually obtains toward the close of the year at the East and in Europe, ought to bring about much higher prices before winter passes.

The local wheat market has ruled quiet but steady, with a strong undertone. The holdings are drifting more and more into strong hands, and with weak holders once eliminated, much better prices can be looked for with a certain degree of confidence. This opinion is based on the large tonnage (engaged and disengaged) in port; the strong statistical position of the cereal in the demand and supply markets of the world and a steady falling off in farmers' deliveries. Barley has held to firm prices, with slight fluctuations reported. Receipts the past week were quite free, but this was offset by a good demand from both consumers and the short interest on Call. The receipts of oats were quite free, but the bulk came to strong parties, which caused the improved prices to be fully maintained. It is reported that about all the surplus in Washington is under the control of one firm. If this proves to be correct, we can look with a certain degree of confidence for a strong market the remainder of the season. Corn has held barely steady. The demand is rather offish, and had receipts shown any material increase, lower prices would have followed. While rye and buckwheat have been more or less inactive, a firm tone appeared to have obtained throughout the week.

Bran has come in quite freely, and with an offish demand prices were rather in buyer's favor. Middlings have ruled barely steady. Free receipts of screenings from up north have been against the market. Roll barley has met with a continued free consumptive demand in the country. Both feedmeal and cracked corn have been only moderately dealt in. Hay has moved off fairly well, particularly the more choice grades. Owing to a steady improvement in pasture in the more favored sections of the State, range stock and dairy cows are not fed so much hay, which has lessened the call for stock hay.

Butter has continued on the down grade, and as sellers press the market buyers show a corresponding offishness. Receipts have been quite free, and with a restricted demand, lower prices and a weak market have resulted. It now looks as if those who persisted in closing their eyes to the the statistical position and surroundings in the State will be heavy losers. The RURAL PRESS, editorially and also in this department, gave from time to time facts on which to form a correct basis for operation, and those who have followed the course outlined have no cause for regret. Cheese has held fairly firm. The supply is not large, while the demand has been steady. Eggs have sold higher. The higher prices are increasing shipments from points east of the Rocky mountains to this State. If it were not for these receipts, prices would be out of the reach of all. It is said that several parties in the interior are buying eastern eggs and, shipping them to their place of business, repack them and return them to this city as California eggs. In this way they make a handsome profit.

Garden truck has not shown any material change. Onions have held to fairly steady prices. The receipts of potatoes have continued heavy, but the market has held strong for the more choice good-keepers. Defective, diseased and otherwise poor potatoes have met with an indifferent demand, with sales largely in buyer's favor.

The green-fruit market has shown no material change the past week. The election largely interfered with trade, and only the more choice and good-keeping grapes, apples and pears met with much of an inquiry. The market is being cleaned up of trashy apples, and as supplies lessen the market strengthens. Good-keeping grapes were in more favor.

The dried-fruit market has held to fairly steady prices for the more choice of each kind, but all below choice ruled in buyers' favor. Prunes, apricots and plums have held to firm prices, but peaches have been largely in buyers' favor. The eastern market is shaping into a better position for holders. All present information points to much better prices in the spring months than have obtained for several years. Foreign advices indicate better prices, which ought to favorably affect ours in the near future.

Raisins are steady, with a continued free outward movement. All present advices indicate that the markets at the East will hold up, if not advance, in the spring months of 1893. There is a continued strong bear pressure, owing to packers acting together, but this must eventually give way before lessened supplies, strong holding and a free consumption. Foreign raisins at the East are in light supply and higher, as are old-crop California raisins.

Markets by Telegraph.

Dried Fruit Steady.

NEW YORK, Nov. 6.—Apricots are steady at 11½@17c. Dried wine grapes are not wanted. Unpeeled peaches in bags still range at 12½@16c spot. Prunes are moving only for trade wants. Spot prices for single sizes are lower, because the first selections of late arrivals have been absorbed. Forties are quoted at 13c; fifties at 12½c; sixties at 12c; seventies, 11½c; eighties, 11c; nineties, 10½c.

There is a good demand for coast soft-shell almonds. Quotations are 15@16¼c per pound.

Choice Beans are Firm. Honey is Scarce.

NEW YORK, Nov. 6.—Honey is scarce and wanted. Lima beans—Offers to shade rates for delivery of new by Pacific Mail have not really broken our market. Undergrades sag a little, but all good are firmly held at $2@2.05 per spot bushel.

Better Tone in Hops.

NEW YORK, Nov. 6.—Receipts are liberal, but closely taken up for export and a rather better brewers' demand. Last week's prices close full and firm, with selected Pacifics touching 24½c. A sale of California olds was made at 8c. With steadier London advices the market looks brighter. Exports for the two weeks are 40,542 bales.

Raisins Selling Wide Range.

NEW YORK, Nov. 6.—With a larger offering of boxes, prices have a wider range. Layers are quoted at $1.70@2; loose, $1.70@1.85. Bags are offered at 6c for three-crown and 4½@5c for common to good two-crown. A line of fancy bags from El Cajon brought 7@8c. Steamer receipts for the week for New England are 5031 boxes and 3996 bags; for New York, 11,197 boxes and 2868 bags.

Wool Shows Signs of Advancing.

NEW YORK, Nov. 6.—The disposal of a big volume of domestic wool is the feature of the week. Manufacturers are disposed to collect reserves while prices are where they are, and lines have been taken to an extent that forestalls the outside speculative feeling which more or less attends the situation of diminished stocks and certainly safe figures. In New England there is a growing speculative sentiment among sellers who have faith in an eventful upward turn to prices, but their policy is to let any present weighty surplus go into a course of assured consumption, and are consequently indifferent to the approaches of outside capital. California and kindred unwashed wools have sold promptly up to the extreme of late current rates. This is substantially an improvement, as during the active business of the season many top qualities have been carried off, to the promotion of next good grades. Sales at New York: 68,000 pounds of spring California, 230,000 pounds of fall Texas, 18,000 pounds of scoured California, and 512,000 pounds of other domestic, and 272,000 pounds of foreign on private terms. Sales at Boston: 3,902,000 pounds of domestic; also 616,100 foreign, of which 466,000 were Australian. Philadelphia reports a favorably active market.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.	April
Thursday....	5s09½d	5s10½d	5s11½d	6s00 d	6s01 d	6s01⅞d
Friday.....	5s10 d	5s11½d	5s11½d	6s01 d	6s02 d	6s02½ d
Saturday....	5s09½d	5s11⅞d	5s11½d	6s00½d	6s0 ½d	6s02⅛d
Monday.....	5s09 d	5s10½d	5s11½d	6s0½d	6s01½d	6s02⅛d
Tuesday.....	.....	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday...	33s	32s9½d	32s9d	Rather more inquiry.
Friday.....	33s	33s	33s	Steady
Saturday..	33s	33s	33s	Firm but not active.
Monday.....	32s9d	33s	32s9d	Quiet.
Tuesday.....	....	....	33s0d	

To-day's cablegram is as follows:

LIVERPOOL, Nov. 9. Wheat—Firmly held and more disposition to buy. California spot lots, 6s 9d; off coast, 33; just shipped, 33s 3d; nearly due, 33s; cargoes off coast, steady; on passage, firm but not active; Mark Lane wheat, quiet; French country markets, quiet.

San Francisco.

WHEAT.

	Seller '92.	Buyer Dec.	Buyer Jan.	May
Thursday, highest	....	134	....	13 ⅞
" lowest	....	133⅝	....	136⅛
Friday, highest	132	134¼	....	136⅜
" lowest	132	133⅝	....	136½
Saturday, highest	....	....	133⅞	136⅜
" lowest	....	....	133⅝	136½
Monday, highest	....	133⅞	....	137
" lowest	....	133⅝	....	136⅜
Tuesday, highest	....	....	....	....
" lowest	....	....	....	....

BARLEY.

	Seller '92.	Dec.	Jan.	May
Thursday, highest	89½	*92	90½	95
" lowest	89	92	90½	95
Friday, highest	....	*91½	*92	....
" lowest	....	91½	92	....
Saturday, highest	....	*92½	91⅞	95⅛
" lowest	....	92	91½	95⅛
Monday, highest	....	*92½	....	....
" lowest	....	92⅜	....	....
Tuesday, highest	....	....	....	....
" lowest	....	....	....	....

*Buyer option.

Eastern Markets.

The following shows the closing prices of wheat for the past week at

New York.

Day.	Nov.	Dec.	Jan.	March.	May.
Thursday	124⅞	126⅞	129½	134½	138⅛
Friday	....	127	129½	135	138⅛
Saturday	124½	126	129	134	138
Monday	125	127	129½	135	140
Tuesday	....	....	....	....	....

The following is to-day's telegram:

NEW YORK, Nov. 9.—Wheat—76¾c for December, 77¾c for January, 79c for February and 84c for May.

Chicago.

Day.	Nov.	Dec.	May
Thursday	117½	120	129⅝
Friday	117	119½	129
Saturday	117	120	130
Monday	120	120¼	130
Tuesday	....	....	....

The following is to-day's telegram:

CHICAGO, Nov. 9.—Wheat—73⅛c for December and 79c for May.

General Remarks and Statistics.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Nov. 8, '92, were as follows:

Flour, qr. sks	168 889	Bran, sks	15,682
Wheat, ctls	227,268	Buckwheat "	548
Barley, "	79,306	Middlings "	2,478
Rye, "	732	Chicory, bbls	55
Oats, "	15,538	Hops, "	687
Corn, "	4,650	Wool, "	687
*Butter, "	192	Hay, ton	1,878
do bxs	596	Straw, "	174
do bbls	97	Wine, gals	237,230
do kegs	274	Brandy, "	9,800
do tubs	....	Raisins, bxs	15,140
do ½ bxs	124	Honey, cs	14
†Cheese, ctls	618	Peanuts, sks	502
do bxs	91	Walnuts "	1,253
Eggs, doz	10,952	Almonds "	890
do " Eastern	72,300	Mustard "	....
Beans, sks	26,941	Flax "	800
Potatoes, sks	30,241	Popcorn "	....
Onions, "	2,840	Broom corn, bbls	117

*Overl'd, 212 ctls. †Overland, 269 ctls.

Exports by Sea from San Francisco from July 1 to Nov. 1.

	1892-93	1891-92
Wheat, ctls	3,945,877	5,527,377
Flour, bbls	429,257	423,258
Barley, ctls	955,110	682,501

Tonnage Movement.

From reliable advices up to Nov. 8, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	252,437	408,667	*167,817	124,289
San Diego	11,784	24,157	8,651	.....
San Pedro	11,193	8,990	.....	45,718
Oregon	40,812	38,826	28,750	
Puget Sound	19,238	28,569	.....	
Totals	335,464	509,259	205,218	170,007

*Engaged for wheat, 1892, 51,781; 1891, 108,788.

Cereals.

The exports of wheat from Russia from January 1st to October 1st have been 16,395,000 bushels, against 72,706,000 bushels last year. Rye, 693,000 bushels, against 37,078,000 bushels. Barley, 17,336,000 bushels, against 22,444,000 bushels. Oats, 12,262,000 bushels, against 37,753,000 bushels, and on corn, 7,000,000 bushels, against 11,613,000 bushels.

In connection with the estimates of the English wheat crop the yearly statement of Sir John E Lawes, in regard to the experiments on his farm at Rothamsted, is interesting. These experiments have now extended over a period of 49 years, with crops grown yearly on the same plot under the same conditions from year to year. These experiments show conclusively the value of fertilizers He believes that the entire result in the United Kingdom is less favorable than on his ground, but makes his estimate on his own averages as follows: Crop, 59,387,846 bushels; amount available less seed, 54,774,996 bushels. The average population of the United Kingdom is put at 38⅓ millions, and the consumption is six bushels per capita, or 230,000,000 bushels. After deducting the home supply, the requirements of foreign wheat will be 175,000,000 bushels. If a lower estimate of 2.2 bushels per acre is accepted for the United Kingdom, the requirements will be 184,000,000 bushels. After making allowances for the large stocks of wheat on hand at the first of this cereal year, it is believed that the requirements for the ensuing year will be in the neighborhood of 160,000,000 bushels.

The editor of the *Northwestern Miller* says that from his personal observation it is sure that the wheat crop of the rich-producing districts along the Volga in Russia was in a very bad condition this summer as late as July, and that there can be no other result than a repetition of the great scarcity which was seen a year ago. Although there is no indication yet of a repetition of the prohibition of exports, there is no denying the fact that another famine will follow in the wake of the last. This statement was based on no casual reports, but on a number of private letters from parties who last year were engaged in relieving distress. He quotes such statements as: "This is another bad year for Russia. People are suffering even more than last year. Then, at least, they had a little oats; now there is nothing to feed the cattle on." Again: "Fuel and fodder are both scarcer than last year." Again: "The condition of many villages in our neighborhood this year promises to be, if possible, even worse than last." Another correspondent says: "Even the oats have been burnt up this year, and, in a word, there is a state of most complete destitution." In the northern part of Samara the crops have again failed, owing to the repetition of drough. The *Miller* thinks that there is a likelihood of being a repetition of the prohibition of exports, providing there are large exports this year, but at present, owing to the severe loss of last year, merchants are indifferent and the peasants have nothing to sell, which accounts for the poor business.

To-day was largely consumed in discussing politics and therefore business suffered.

On Call, wheat futures were higher, but spot parcels were reported to us strong at unchanged quotations. While no higher quotations were reported to us, yet it was said that an advance was offered for a straight parcel of shipping.

Barley was in good demand, and for a straight parcel of feed a slight advance was obtainable, provided it was favorably situated.

Oats were offered sparingly, which was offset by an offish demand.

Corn, rye and buckwheat were essentially unchanged.

Feedstuff.

The market was heavy for bran, but firm for both ground and roll barley. Other ground feed was steady.

Hay was weak and easy at current quotations. Compressed hay sells at $10@10.50 for giltedged.

Wheat hay, wire baling, sold to-day at $10.

Dairy Produce.

Dealers report giltedged butter slightly steadier to-day. The demand was reported fair. The lower quotations appear to be attracting outside orders. Cheese was steady.

Eggs moved off freely to-day. Choice, fresh-laid Californian sold at 47½ cents, and selected at 50 cts. Eastern fresh-laid in 25 and 50 box parcels sold at 26@26½ cts., and cold-storage at 21@22 cts.

The receipts of butter, cheese and eggs at San Francisco in October were as follows:

Source.	Butter, Lbs.	Cheese, Lbs.	Eggs, Dozen.
California	1,209,100	412,000	65,341
Oregon	78,100	34,300	780
Eastern	370,200	213,500	341,340
Totals	1,657,400	695,800	408,461
January	502,200	476,900	420,345
February	622,550	313,500	200,245
March	1,188,700	574,200	358,756
April	1,793,050	802,900	590,068
May	1,713,100	715,300	536,170
June	1,811,200	634,100	603,735
July	1,157,700	789,100	374,211
August	1,376,300	694,800	447,325
September	1,560,300	786,900	408,461
Ten months	13,562,500	6,448,100	4,449,116

During the first ten months of 1891 the receipts were 11,903,000 lbs butter and 5,861,300 lbs cheese, 4,314,042 dozen eggs.

Vegetables.

Garden truck was essentially unchanged. The supply and demand appeared to have been about equal.

Onions were strong. There was no difficulty in placing choice good-keepers.

River red potatoes were dull and hard to sell to-day. Sales were made at 40@50 cts. per sack on the wharf. Salinas Burbanks, if choice, sold readily. All other kinds were slow.

Sweet potatoes were dull and heavy to-day. Sales of river were made on the wharf at 50@75 cts., latter for the best.

Fruit.

Grapes were in fair offering at unchanged quotations. Apples were slow at steady prices. Peaches are out of the market. Quinces and pears sold lower. Wine-grapes were firmer for choice, good keepers.

The dried-fruit market was dull and weak for all kinds below good, but choice to gilt-edged were firm. Apples are moving with some degree of firmness

At a meeting of the California State Raisin-Growers' Association, the following minimum prices were agreed upon: Clusters, 20 lbs., per box, $2; choice 3-crown London layers per box, $1.65; standard 3-crown London layers per box, $1 45; 3-crown London layers per box, $1.30; 3-crown choice loose, unfaced, per box, $1 30; 3-crown fancy loose, faced, per box, $1 35; 4-crown loose, sacked, per lb., 5c; 3-crown loose, sacked, per lb., 4½c; 2-crown loose, sacked, per lb., 3½c; standard 4-crown loose, boxed, per box $1.15; seedless Muscats, per lb., 4c; seedless Muscats, fancy, per lb., 5c; seedless Muscats, boxes, per box, $1.25; third-grade seedless Muscats, sacks, per lb., 3c. It is understood that this is to take immediate effect, and that we, under no consideration, deviate from the above prices. All prices to be f. o. b. from point of departure.

Live Stock.

The market for bullocks and calves appears to be firmer for the more choice. Mutton sheep and hogs have held to fairly firm prices. The consumption of fresh meat is said to be enlarging.

Miscellaneous.

The poultry market has been more or less demoralized throughout the week, with at times much difficulty met in selling. At the close the tone appears to be steadying, and unless more eastern comes in, the market ought to do better. Turkeys sold higher.

Beans were essentially unchanged the past week. It is said that considerable quantities were damaged by rain.

Hops have held to fairly firm prices, notwithstanding buyers trying to get prices lower.

Wool has moved off fairly free, considering it was election week. For a choice, desirable clip a slight advance was reported to have been made.

Mustard seed is under strong control. The market is firm. Alfalfa has a wide range, but choice sells at our quotations.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

NOVEMBER 9, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 30	@	2 40
Butter	2 75	@	3 00
Pea	2 65	@	2 75
Red	2 40	@	2 50
Pink	2 10	@	2 15
Small White	2 50	@	2 65
Large White	2 45	@	2 50
Lima	3 00	@	3 15
Eld Peas, blk eye	1 60	@	—
Do green	2 20	@	—
Do Niles	1 40	@	—
Split	4 50	@	5 50
BUTTER.			
Cal., poor to fair, lb	12½	@	—
Do g'd to choice	20	@	—
Do Giltedged	—	@	30
Do Creamery	26	@	—
Do do Giltedge	—	@	32½
East rn, lad e	12½	@	—
Cal. Pickled	20	@	—
Cal. Keg	20	@	24
East'rn Cr am'y	25	@	—
CHEESE.			
Cal. choice cream	9½	@	—
Do fair to good	8	@	—
Do Giltedged	—	@	12
Do Skim	5	@	6½
Young America	—	@	12
EGGS.			
Cal. "as is," doz	27½	@	—
Do shaky	20	@	—
Do candled	37½	@	—
Do choice	45	@	—
Do fresh laid	—	@	47½
Do do s'ted white	—	@	50
Eastern "as is"	21	@	—
Do candled	26	@	—
Do selected	27	@	—

Outs de prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.			
Bran, ton	14 00	@	15 00
Feedmeal	26 0	@	27 00
Gr'd Barley	19 00	@	20 50
Middlings	21 00	@	23 00
Oil Cake Meal	—	@	35 00
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	—	@	8 00
HAY.			
Compressed	—	@	10 50
Wheat, per ton	8 50	@	—
Do choice	—	@	14 00
Wheat and oats	8 00	@	12 50
Wild Oats	7 00	@	10 00
Cultivated do	6 00	@	9 00
Barley	6 50	@	9 50
Alfalfa	8 00	@	9 50
Clover	8 00	@	10 00
Straw, bale	30	@	50
GRAIN, ETC.			
Barley, feed, ctl	82½	@	—
Do good	86½	@	—
Do choice	90	@	—
Do brewing	92½	@	—
Do do choice	96½	@	—
Do do Giltedge	1 00	@	—
Do Chevalier	1 00	@	—
Do do Gi tedge	1 15	@	—
Buckwheat	2 25	@	—
Corn, white	1 15	@	1 20
Yellow, large	1 05	@	1 07½
Do small	1 12½	@	1 15
Oats milling	1 37½	@	—
Feed, choice	1 35	@	—
Do good	1 30	@	—
Do fair	1 25	@	—
Do common	1 17½	@	—
Surprise	1 45	@	—
Black Cal	1 10	@	1 25
Do Oregon	—	@	—
Gray	1 30	@	—
Rye	1 12½	@	1 17½
*Wheat, milling Gi tedged	1 35	@	—
Do choice	1 33¼	@	—
Do fair to good	1 32½	@	—
Shipping, choice	1 33¼	@	—
Do good	1 31¼	@	—
Do fair	1 28¾	@	—
Common	1 26¼	@	—
Sonora	1 25	@	1 30
HOPS.			
1892, fair	18	@	—
Good	20	@	—
Choice	21	@	—
FLOUR.			
Extra, city mills	3 90	@	—
Do country m'ls	3 90	@	—
Superfine	2 50	@	3 00
NUTS—JOBBING.			
Walnuts, Cal. lb	8	@	—
Do choice	10	@	—
Do paper-shell	11	@	—
Almonds, soft sh'l	12	@	—
Paper shell	13½	@	—
Hard shell	6	@	—
Brazil	8	@	—
Pecans, small	8	@	10
Do large	14	@	16
Peanuts	3½	@	4½
Filberts	10	@	—
Hickory	7	@	8
Chestnuts	18	@	20
ONIONS.			
Silverskin	50	@	75
POTATOES.			
River Reds	30	@	45
Early Rose, ctl	40	@	50
Peerless	60	@	70
Garnet Chilies	60	@	70
Burbank Sed's	40	@	60
Do do Salinas	90	@	1 25
Sweet	50	@	1 00

Extra choice sell for more money

POULTRY.			
Hens, doz	5 00	@	6 00
Roosters, old	5 0	@	5 50
Do young	4 50	@	5 50
Broilers, small	2 50	@	3 50
Do large	3 50	@	4 00
Fryers	4 00	@	4 50
Ducks	4 00	@	4 50
Do large	4 50	@	5 00
Do extra large	—	@	6 00
Geese, pair	1 50	@	1 75
Turkeys, gob'rs	15	@	18
Turkeys, hens	15	@	17

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	—	@	11 50
GAME			
Quail, per doz	75	@	1 25
Ducks	—	@	—
Do Mal'd ♀ doz	4 00	@	5 50
Do Sprig	2 25	@	3 00
Do Teal	1 50	@	—
Do Widgeon	1 50	@	2 00
Do small	1 00	@	1 50
Geese	—	@	—
Do gray ♀ doz	2 00	@	2 50
Do White	1 00	@	1 50
Do Brant	1 00	@	1 50
Snipe	—	@	—
Do English, doz	1 50	@	2 00
Do Jack, per doz	75	@	1 00
Hare, per doz	1 00	@	1 50
Rabbits, large	75	@	1 25
Do small	1 00	@	1 25
PROVISIONS.			
Cal. bacon, heavy, per lb	12	@	—
Medium	13	@	—
Light	14	@	—
Lard	8½	@	12
Cal sm'k'd beef	11	@	—
Hams, Cal salt'd	13	@	—
Do Eastern	14	@	—
SEEDS.			
Alfalfa	10	@	—
Clover, Red	14	@	—
White	28	@	—
Flaxseed	2 25	@	—
Hemp	4½	@	—
Mustard, yellow	5½	@	6½
Do brown	4	@	—
WOOL.			
FALL, 1892.			
S Joaquin, plain	6½	@	10
Do mountain	10	@	12
Do lamb	8	@	10
Northern Choice	14	@	—
Do Defective	11	@	—
Do Lamb	10	@	14
HONEY—1892 CROP.			
White comb, 2-lb frame	9½	@	12½
Do do 1-lb frame	11½	@	14½
White extracted	7½	@	—
Amber do	6½	@	—
Dark do	6½	@	—
Beeswax, lb	23	@	—

Live Stock.

BEEF.			
Stall fed	6	@	—
Grass fed, extra	5½	@	—
First quality	5½	@	—
Second quality	4½	@	—
Third quality	3	@	—
Bulls and thin Cows	2	@	3
VEAL.			
Range, heavy	5	@	—
Do light	6	@	—
Dairy	7	@	8½
MUTTON.			
Wethers	6½	@	—
Ewes	6	@	—
Do Spring	7½	@	—
HOGS.			
Light, ♀ lb, cents	4½	@	—
Medium	4½	@	—
Heavy	4½	@	—
Soft	4	@	—
Feeders	3½	@	—
Stock Hogs	3½	@	—

Twine and Baling Rope.

BALE ROPE.	
Sisal, 3 yarns	9
Do, 2 yarns, light	9½
Duplex, 3 yarns	9
Manilla, 3 yarns, heavy	10½
Pure Manilla, 3 & 4 yarns	12
Do, 2 yarns, light	12½
TWINE.	
Pure Manilla Hop, in balls, tarred	11½
Do, Grapevine, in balls or coils	12
Do, Spring	16
Duplex Hop in balls, tar'd	9½
Do, Grapevine, in balls or coils	10½

Continued on next page.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

NOVEMBER 9, 1892.

Limes, Mex	3 00	@	3 50
Do Cal	—	@	—
Lemons, box	6 00	@	8 00
Do Sicily choice	7 00	@	8 50
Strawberries, pr chest	5 00	@	9 00
Apples	30	@	60
Do Choice	75	@	1 00
o Extra choice	1 00	@	1 25
Canteloupes, pr crate	—	@	—
Grapes, pr bx –			
Do White	35	@	50
Do Black	30	@	60
Do Muscats	25	@	60
Do T kays	35	@	60
Do Royal Isabel	1 00	@	1 25
Do Cornichon	50	@	65
Wine Grapes, Zinf'nd'l, pr tn	—	@	17 00
Mission	10 00	@	12 00
White	8 00	@	10 00
Pears	25	@	75
do Winter Nelis	75	@	1 00
Quinces pr bx	75	@	1 00

Extra choice fruit for special purposes sells at an advance on outside quotations

Beets, sk	—	@	50
Carrots, sk	30	@	50
Okra, dry, lb	8	@	10
Parsnips, ctl	1 00	@	1 50
Peppers, drv. lb	7	@	9
Do grn Chili, bx	40	@	60
Do do Bells	40	@	60
Turnips, ctl	—	@	10
Cabbage, 100 lbs	35	@	50
Garlic, lb	2	@	2½
Tomatoes	25	@	60
String Beans, lb.	3	@	4
Lima Beans	4	@	4½
Cucumbers, box	50	@	75
Mushrooms	—	@	—
Egg Plant, bx	25	@	50
Marfat Squash, ₱ ton	8 00	@	10 00
Cauliflower	50	@	65
Celery	50	@	75

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ½ to 1c per lb.

APPLES 1892.

Sun-dried, ¼'s, com'on	2½	@	3½
Do do prime	3½	@	4
Do do choice	4	@	4½
Do sliced, common	3½		4
Do do prime	4	@	4
Do do choice	4½	@	5½
Evap. bl., ri g, 50-lb. bx	8	@	9
Fancy, higher			

APRICOTS—1892.

Sun-dri d, unbl. com.	4½	@	5½
Do do prime	6½	@	8
Do do choice	9	@	1
Do bleached, prime	12½	@	—
Do do choice	15½	@	—
Do do fancy	14½	@	16
Evap choice, in boxes	15	@	16
Do fancy do	15½	@	17

FIGS—1892.

Sun-dried, black	4	@	—
Do white	3½	@	—
Do do washed	—	@	—
Do do fancy	—	@	—
Do do pressed	—	@	—
Smyrna boxes	—	@	—
Do sacks	—	@	—

GRAPES—1892.

Sun-dried, stemless	3½	@	—
Do unstemmed	1½	@	2

NECTARINES—1892.

Red, sun-dried	8	@	9
Do Evap., i boxes	—	@	—
White, sun-dried	9½	@	11
Do evaporated	—	@	—

PEACHES—1892.

Sun-dried, unpeeled	7	@	7½
Do do prime, bl ched	10	@	—
Do do choice, do	11	@	—
Do do fancy	12	@	—
Sun-dr., pl'd, bl'ched		@	—
Do do prime	14	@	—
Do do choice	—	@	15
Do do fancy	—	@	16
Evap., pee ed, in boxes choice	17½	@	—
Do do fancy	20	@	—

PEARS—1892.

Sun-dried, quarters	—	@	3
Do sliced	4	@	5
Evap., sliced, in b'xes	7	@	8
Do ring do	9	@	10
Unpeeled, q't'd, bl'ch'd	10	@	11

PLUMS—1892.

Pitted, sun-dried	10	@	10½
Do evap. boxes, choice	—	@	—
Do do do fancy	—	@	—
Unpeeled	4	@	5

PRUNES—1892.

Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	8½	@	9
Do do 40 to 60	11	@	2

Fancy sell for more money.

RAISINS 1892.

London Layers, cluster per box	1 90	@	2 00
Do choicest do	1 60	@	1 70
Do prime or bx	1 40	@	1 45
Loose Muscatels, common, pr bx	—	@	—
Do choice do	1 25	@	1 30
Do fancy do	—	@	—
Unstem'ed Muscatels in sks pr lb.	4	@	5½
Stemmed do do	—	@	—
Seedless do do	—	@	—
do do pr 20-lb. bx	—	@	—
Sultanas, unbl, bxs	—	@	—
Do bl'ched in bxs		@	—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal., in cellar lots.....12 @20
1892 vintage in cellar lots.....10 @15

Auction Sales of California Fruits.

At New York.

Nov. 3.—Three carloads: Tokay Grapes, double crates, $3.80@4 90; single crates, $1.90@2.25; Cornichon Grapes double crates $4 05; single crates, $2 15; Winter Nelis Pears, $3 80; Pomegranates, $1.45.

Nov. 4.—One carload: Tokay Grapes, double crates, $4.10@4 60; single crates, $1 90@2.35; Cornichon Grapes, double crates, $4 20; single crates, $1.95@2.20.

Nov. 5.—One carload: Tokay grapes averaged $1 40 per single crate.

Nov. 7.—One carload: Tokay Grapes, half-crates, $1.40@1.55.

Nov. 7.—Two carloads: Tokay Grapes, double crates, $3.35@4.50; single crates, $1.50@2.55; Cornichon, double crates, $3 25@4; single crates, $1.55@1.80; Black Morocco, $1.60@2; Emperor, $1.50.

At Chicago.

Nov. 3.—Two carloads: Glout Morceau Pears, $2.60@2.75; Duchess Pears, $2 40; Winter Nelis Pears, $2.35; Vicar Pears, $1.75; Pound Pears, $1.75; single crates Muscat Grapes, $1.35; single crates Tokay Grapes, $1 25. Some Grapes arrived in a damaged condition and sold for less.

Nov. 4.—Two carloads: Tokay Grapes, double crates, $2.75@3 10; single crates, $1.65; Muscat Grapes, double crates, $1.65@2; single crates, 75c@$1.10; Emperor Grapes, single crates, $1@1.40; Pound Pears, $1.90.

Nov. 5.—One carload: Muscat Grapes ranged from 90c to $ .15 per single crate; average, $1.10.

Nov. 7.—One carload: Tokay Grapes, full crates, $2 90@3.30; half-crates, $1@1.40; full crates Emperor, $2.10@2 15; Glout Morceau Pears, $3.25.

Nov. 7.—One carload: Tokay Grapes, double crates, $3.50@3 55; single crates, $1.10@1.70; Cornichon, double crates, $2.35; Muscat, $1.80@1.85; single crates, 75c@$1.10.

At Boston.

Nov. 4.—One carload: Tokay Grapes, double crates, $1@6 50; average, $5.10; single crates, $1.50@3.25; average, $2.10; Emperor Grapes, single crates, averaged $2.

Nov. 7.—One carload: Double crates Tokay Grapes brought $4.10@5.20; single crates, $1.60@2.50; Cornichon, $2.45@3 15.

AN ingenious grocer, who had in vain devised all manner of methods for clearing his store from the nuisance of flies, has shown himself to be well up with the times by starting an electrical fly trap. This is driven by an electric motor, and consists of a band smeared with some sweet substance on which the flies alight, and on which they are carried along and swept into a wire trap The new trap has been so successful that many grocers' shops in England are now supplied with it, and it is also installed in many shop windows, where it serves the double purpose of a unique fly-catcher and a novel advertisement.

THE plan of making trunks with round tops is now abandoned by the best trunk-makers. The fact that the "strength of anything is its weakest point" seems to have been forgetten when so much labor and expense was put into the cover only. Trunks are now made with flat tops, but strong all all over alike.

The Grangers' Bank.

The Bank Commissioners completed last week their customary examination of the Grangers' Bank, and reported its condition as follows:

RESOURCES.

Real estate	$ 119,357 52
Invested in stocks, bonds, warrants	15,595 50
Loans and discounts	1,922,185 44
Cash balance on hand	136,241 26
Due from banks and bankers	12,156 12
Furniture and fixtures	6 074 00
Expenses and taxes	26 871 10
Other assets	4,020 65
Total resources	$2,242,507 59

LIABILITIES.

Capital paid in coin	$ 854,980 00
Reserve fund	48,743 23
Due depositors	465,828 23
Due banks and bankers	819,987 44
Interest collected	52,617 82
Rents and exchange	485 07
Dividends unpaid	415 80
Total liabilities	$2 242,507 59

This report is very satisfactory. It shows that nearly two million dollars has been placed as loans chiefly upon farm crops in warehouses, and this must prove a great accommodation to producers. This policy has prevailed from the foundation of the bank, as is shown by the following extract from the by-laws adopted at the incorporation of the bank April 27, 1874:

This bank has been organized for the purpose of enabling the Patrons of California to secure to themselves such advantages in obtaining money for use in the agricultural portions of the State upon as favorable terms as it can be obtained in the city for commercial purposes, believing that the land and securities of the agriculturist are equal to, if not better than city property as a basis of credit, and at the same time giving people of every class an opportunity of safely and profitably investing their money.

This provision has been faithfully carried through as far as practicable. Seven-eighths of the stockholders of the bank are farmers, and out of eleven directors only one is of the city. The bank has accommodated thousands of farmers throughout the State since its organization, and it has had a beneficial influence and acted as a check to high rate of interest that farmers might otherwise have had to pay. The bank has also shown that its policy is a good one, for it has been very prosperous, never speculating in any way, but doing a strictly legitimate and conservative business.

Albert Montpellier, the cashier and treasurer, has been connected with the bank from the first day it opened its doors for business, over 18 years ago, and undoubtedly much of the high standing and confidence the bank enjoys both in the city and country is largely due to his financial ability and honorable dealing. He has enjoyed continually the support and confidence of the Board of Directors. The high standing the bank now occupies should be a matter of congratulation to all interested.

WHERE THE GOLD HAD FLOWN.—"Gold," says a mintmaster, "melts at 2016 Fahrenheit; but it evaporates and passes off at a much lower temperature than melting heat, and also if it be maintained in a molten state for any considerable time before it is passed into an ingot." Ignorance of this metallurgical law once caused consternation to temporarily reign in the hearts of the staff of an American coinage factory. Soon after the San Francisco Mint commenced operations, an inspector visited it to take stock, and discovered a shortage of about $160,000. The employes expressed amazement, which quickly developed into dire alarm when arrests for theft were threatened. But before it was deemed necessary to adopt such stern measures some one suggested that evaporation had caused the deficiency, and that the missing metal had gone up the chimney. Acting upon this hint, a daring individual ascended the flue, and, to his own and his comrade's great relief, he found the lost gold on the roof, where it had condensed as it came in contact with the air. The slates were taken off the mint building, and the tiles of a church and other contiguous edifices were also removed. This argillitic collection was ground to a powder, and the gold was recovered. The brickwork of the furnaces and chimneys of the mint was similarly treated; and after the San Francisco authorities had regained as much gold as they could with the appliances which they possessed, the dust was sent to the Philadelphia Mint and worked over more closely. Finally the triturated material was sold to French chemists, who intended, it was understood, to subject it to a still more careful manipulation. In this way more than one-half of the original deficit was eventually covered.

LAST MONTH

THE JUDSON FRUIT COMPANY

Solicited consignments from the Fruit and Produce growers of California. The Consignments Came, and we believe that shippers are satisfied. It is our aim to handle all goods placed in our hands in such a manner as to secure the confidence of consignors.

Packing for long distance shipping a specialty.
Good Storage. Good Local Trade.

ADDRESS THE JUDSON FRUIT COMPANY,
308 & 310 Washington St., San Francisco, Cal.

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R. G BAILEY—San Francisco.
F. D. HOLMAN—California.
GEO. WILSON—Sacramento, Cal.
SAMUEL B. CLIFF—Creston, Cal.
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W. H. MURRAY—California.
E. H. SCHAEFFLE—El Dorado and Amador Co's.
C. E. ROBERTSON—Humboldt Co.
CHAS. E. TOWNSEND—Placer and Yuba Co's,

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to other s

Take Care of the
NICKLES
and the
DOLLARS
Will Take Care of Themselves.

If you only save one or two Nickles on each Fifty-cent purchase

You will be many Dollars ahead at the end of the year.

Send for our catalogue of

RUBBER GOODS.

Pacific Coast Home Supply Association

Mention this paper. 132 MARKET ST., S. F.

FOR $19.00

We can send you one of our

SPECIALTY SINGLE BUGGY HARNESS,

Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

Just the Harness for an Elegant Turnout.

They sell here for $25.00, and harness not as good is often sold for $35.00 in retail shops. If harness is not as represented, money will be refunded.

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110 McAllister St., San Francisco.

Collar and Hames, instead of Breast Collar, $2 00 extra.

Please state if you want single strap Harness, or folded style Harness, with traces double throughout.

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APIARIAN SUPPLIES Golden Italian Queens. Tested, $2.00 each; untested, $1.00 each. L Hives, $1.90 each. Root's V groove sections, $5.00 per 1000. Dadant's comb foundation, 58c and 65c a pound. Smokers, $1.00 each. Globe veils, $1.00 each, etc. WM. STYAN & SON, San Mateo, Cal.

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The Greatest of all Musical Instruments.

THE IDEA

In inventing the Æolian was to make an instrument that would do away with the years of practice made necessary by the piano and organ and at the same time have music

IN NO WAY MECHANICAL,

But capable of the most delicate shading in expression and time, entirely at the will of the performer.

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A marvellous little instrument equal to an Organ for family use. Plays all classes of music; no skill required. Price $25.

Send for catalogues and terms to

KOHLER & CHASE,

26 28-30 O'Farrell St, San Francisco.

BARGAINS!! BARGAINS!!

$5.500—Choice Fruit Tract near Haywards; 10 acres bearing trees. This is a good purchase.

$7,000—40 acres in Ingomar, Merced County. highly improved, good house and barn, 20 acres of which are Muscat raisin grapes in full bearing, 5 acres in orchard, 10 acres in alfalfa; plenty of water.

$10,000—Twenty-five (25) acres Belmont, San Mateo Co., 12 acres in fruit.

$200 Lots (50x300), Town of Belmont. $50 down, balance on time.

$2,500—Lots (4) in City of Fresno; exceptionally well located and cheap; will exchange.

$12,000—A very desirable Residence and Lot (140x150), 19th Ave. and E. 17th St., Oakland; fine view; easy of access; will subdivide.

$3,000—Fine 20-acre Tract four miles from Fresno (Woltors Colony) partly improved.

These are fine properties and are to be sold. Write particulars at once.

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No. 42 Market Street, San Francisco.

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A FULL LINE OF

Standard Fruits, Shade Trees, Shrubs and Ornamentals,

ALMONDS, APRICOTS,
CHERRIES, PEARS,
PRUNES, PEACHES,

No Irrigation. Free from Pests.

Write for prices and catalogue to

DUANE BROS, Martinez, Cal.

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IMPROVED EXCELSIOR INCUBATOR



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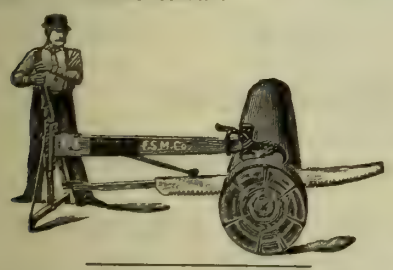
THE NEW CHIVALRY.—Be a knight, be a lady, of the New Chivalry! The essence of chivalry is to look out for the little ones. We often talk of it as if it were a reverence due peculiarly to women; and some fear that, should women enjoy political equality with men, chivalry would disappear. It would rather grow than disappear, even if that were all it meant,—reverence of man for woman; for it is a deepening reverence, deeper far than the mediæval sentiment, that underlies and prompts our modern movement in behalf of woman's rights; and that which begins in a deepening feeling is not likely to endanger the expression of the feeling. But chivalry means far more than reverence of man for woman. It means reverence of strength for weakness wheresoever found. Men often need more of it *from* a woman than they can possibly give *to* her. Chivalry is that in me to which every one whom I have power to injure can appeal in virtue of that fact with the unspoken plea, "You must use your power to bless!" Wherever a child can be helped, wherever a stranger can be guided, or a friend who is shy be set at ease, wherever a weak brother can be saved from falling and its shame, wherever an old man's step can be made easy, wherever a servan't position can be dignified in his eyes,—is the chance for chivalry to show itself.—Rev. Wm. C. Gannett.

A Chance to Make Money.

Dwellers in the country are daily reminded of the disadvan ages they labor under in the matter of purchasing supplies as compared with those who live in large distributing centers like San Francisco. To do away, in a large measure, with these disadvantages, and as a fair business proposition to all concerned, a few active and experienced business men, about three years ago, organized what has become known far and wide throughout the States of California, Oregon and Washington as the "Pacific Coast Home Supply Association." As the name implies, this association acts as a purchasing agent for all who see fit to avail themselves of its services. The immense trade that it is now handling, its rapid growth in popular favor, and its daily increasing territory, would indicate that it has gained the confidence of large numbers of people. This could only have been accomplished to such an extent, and in so short a time, through absolutely fair and conservative business methods. The convenience, satisfaction and actual saving of dollars and cents realized by those who patronize this concern is amply manifested by the many letters received from all parts of the country. The same care and attention that is given to large orders is also given to small ones, and owing to the large nature of the aggregate transactions of the association, and also to the strictly cash basis upon which its business is conducted, the buyer reaps not only the benefit and convenience of being able to place an order for a large variety of goods in one place, but also the advantage of lower prices than he could obtain were he to go to the expense of travel and loss of time incident to a visit to the city. It goes without saying that the life and success of the association depends upon its own fair dealing with its members. A letter addressed to the Pacific Coast Home Supply Association, No. 132 Market St., San Francisco, will bring catalogues and any particulars desired.

A Labor-Saving Machine.

The cut below represents a Folding Sawing Machine. The advertisers claim for this device that with it one man can saw as much wood as two men could, in same length of time, with the old-style crosscut saw. They have numerous testimonials to back up this claim, and invite thorough investigation. See advertisement of Folding Sawing Machine Co. in another column.



LARROGUE holds that he has demonstrated, by a series of experiments, that water liberated by evaporating from chemical combinations is electric; that water evaporated from the ocean is equally electric; and that the vapors from this source are, ordinarily, positively electric. This theory he applies very plausibly to account for electric displays in thunder storms.

THE devil, like the quack doctor, charges nothing for advice, but makes you pay dearly if you follow it.

COLORADO FRUITS.

An English Fruitgrower's Opinion of the Recent Fruit Show.

OCTOBER 10, 1892

To the Rocky Mountain News

Notwithstanding the high encomiums passed by many of the people of Denver on the exhibition of fruit which has just been held in the Equitable building, it is possible that but few of them fully realize what the fruit so exhibited means for Colorado. Having been a fruitgrower in England, and the secretary of several horticultural shows in that country, and having also traveled considerably in America and thereby become personally acquainted with American fruit, the writer ventures to publish his opinion as to the future of horticulture in Colorado as indicated by the show just closed.

Considering that the first fruit-trees (apples) were planted in Colorado so recently as 1863, as I am informed, the stock having to be hauled over 700 miles across the plains from Iowa, because there was no railroad then in existence, it is at first difficult to realize that Colorado has 30,000 acres planted in fruit, 25 per cent of which area was planted in the spring of the present year. The cause of this wonderful development must be from the fact that the combination of soil and climate in Colorado has been practically demonstrated to be preeminently adapted for fruit culture. Moreover, there seems no immediate probability of the local supply overtaking the local demand. While the local supply has already considerably diminished the imports of fresh fruit from California and other States, large quantities are still imported, in addition to which I understand there is a large local consumption of canned and evaporated or dried fruits, which will eventually come from Colorado orchards and factories. The local market therefore seems likely for a long time to keep far ahead of the supply.

Colorado horticulture also demonstrates the advantages of cultivation by artificial irrigation as against natural rainfall.

As to the exhibit itself, while the counties of Arapahoe Jefferson, Boulder, Larimer, El Paso, Fremont and others lying to the east of the Rocky mountains, made a significant display of fruit, the honors of the exhibition for the tender varieties, such as grapes, peaches, etc., certainly belonged to the counties of Mesa, Delta and Montrose. At no point in the United States, and certainly not in England, could the exhibits from those counties be duplicated for their combination of variety, size, color and flavor of fruits grown in the open air. For instance, the apples and peaches surpassed in quality those of California, while the grapes, pears and plums were fully equal to the products of the Pacific coast.

On the other hand, the apples, pears and peaches surpassed those of New York and other States east of the Missouri, while foreign varieties of grapes, such as the Black Hamburg, Tokay, Muscat, Cornichon, Saltana and many others cannot be grown in the open air in those States as they are in western Colorado. It will readily be seen, therefore, that Colorado occupies a somewhat unique and very superior position as a horticultural State and the future development in this line is certain to be great. I am not surprised to learn that the matter has begun to attract the attention of eastern capitalists and that one New York gentleman has planted 80 acres of pears in Mesa county, mostly Bartletts while in the same vicinity are two 80-acre peach orchards.

It would require too much space to at all particularize the 2000 plates of fruit exhibited, comprising as they did about 70 varieties of apples, 25 of pears, 20 of plums, 20 of foreign grapes, 40 of American grapes, 20 of peaches, 15 of apricots and three of nectarines, but one matter may be mentioned, viz, that the varieties well known in the eastern States, such as, in apples, Ben Davis, Maiden Blush, Jonathan, Wolfe River, Missouri Pippin, Fameuse and others, attain a much larger size in Colorado and are finer in color, in fact, have a higher market value. The same remark applies to other fruits.

The Colorado State Bureau of Horticulture has had a number of specimens of Colorado fruit reproduced in wax exact counterparts as to size, shape and color, for exhibition at the World's Fair in Chicago next year. I saw the original fruits and the wax copies and know them to be correct, but feel convinced the wax models will be regarded as gross exaggerations by many of the eastern and foreign visitors to Chicago.

I am not directly or indirectly interested in any fruit-growing district in Colorado, so feel at liberty to make the following general remarks: There must be very many enterprising young men in the eastern States, with some experience in horticulture, who possess a little capital, and who are ambitious to make more than a way for themselves than seems to lie before them where they are. Such young men, if they knew of it, would do well to write to Dr. Alexander Shaw, Secretary of the State Bureau of Horticulture, Denver, for a copy of volume VI of the annual reports of the bureau, which contains much practical, reliable and official information as to horticulture in Colorado. They could then come to Colorado, personally visit each fruit-growing district, consult practical fruitgrowers, work at least one season for a fruitgrower before purchasing land, and then use their own best judgment. This is the suggestion I shall make to young Englishmen of my acquaintance. I am certain that the right sort of young men, following such a course, would finally have reason to bless the day they came to Colorado.

AN ENGLISH FRUITGROWER.

—Denver *Rocky Mountain News.*

WANTED.

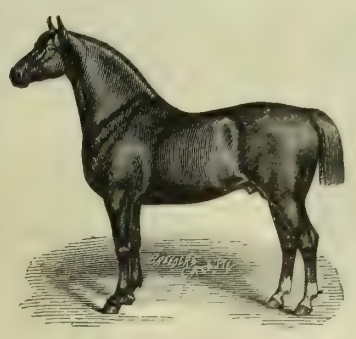
A FOREMAN who is competent to manage a large fruit and raisin ranch. Address, giving reference,

BOX L, Fresno, Cal.

HIGH BRED TROTTING HORSES

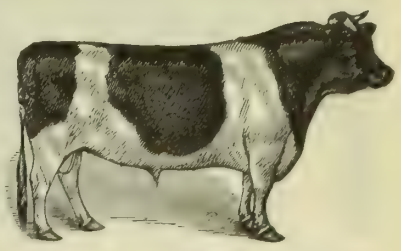
—AND—

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J. H. WHITE, Esq.,

Lakeville Stock Farm, Lakeville, Sonoma Co., Cal.

AT PUBLIC AUCTION,

Wednesday, December 30th, 1892,

AT 11 O'CLOCK, A. M., SHARP

AT SALESYARD, CORNER VAN NESS AVENUE AND MARKET STS., SAN FRANCISCO.

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The following San Francisco Firms ana Individuals Received the Highest Awards of the State Agricultural Society at the late State Fair.

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For BEST WINDMILL—Four in competition.

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FAVORITE POWER CORN SHELLERS.
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BEST PLOW FOR ALL PURPOSES, THE "BENICIA."
BENICIA SPRING WAGON.

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One gallon, mixed with 60 gallons of cold water, will dip thoroughly 180 sheep, at a cost of one cent each. Easily applied; a nourisher of wool; a certain cure for SCAB. Little's dip is put up in red, iron drums containing 5 English or 6¼ American gallons, and is sold to the trade by the English gallon. For the convenience of our many customers it is also put up in one-gallon packages, for which we make no extra charge. Each drum and package bears the label of "Little's Dip."

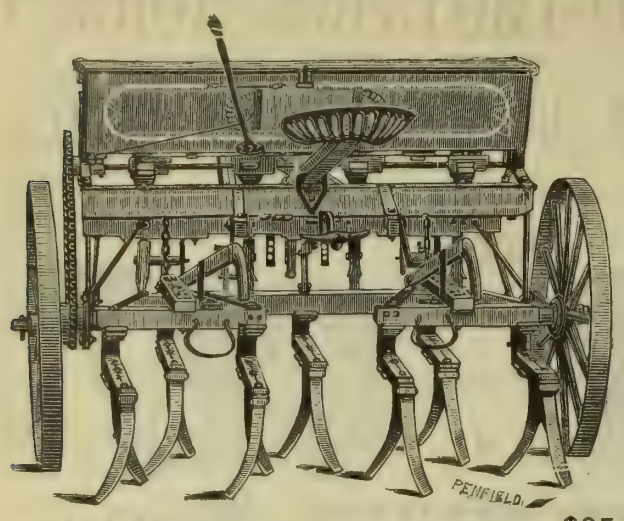
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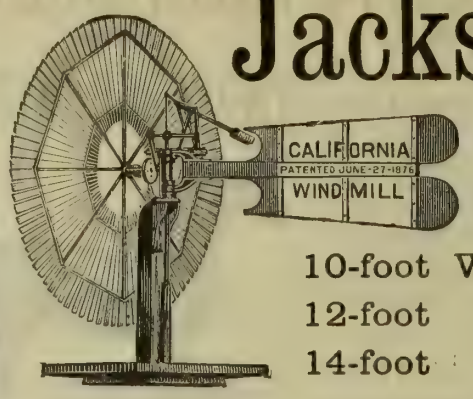
INVENTORS on the Pacific Coast will find it greatly to their advantage to consult this old, experienced, first-class Agency. We have able and trustworthy Associates and Agents in Washington and the capital cities of the principal nations of the world. In connection with our editorial, scientific and Patent Law Library, and record of original cases in our office, we have other advantages far beyond those which can be offered home inventors by other agencies. the information accumulated through long and careful practice before the Office, and the frequent examination of patents already granted, for the purpose of determining the patentability of inventions brought before us, enables us often to give advice which will save inventors the expense of applying for Patents upon inventions which are not few. Circulars of advice sent free on receipt of postage. Address DEWEY & CO., Patent Agents, San Francisco.



No. 3 "Bull Dog" Harrow, with Seeder attached, $35

(Cut does not show recent improvements; has 9 sets of teeth, as shown in cut below.)

Jackson's Windmills.



NOTE THESE PRICES:

10-foot	Wheel, weight, 650 lbs.	- -	$35 00
12-foot	" " 700 "	- -	45 00
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Superior Windmill Pumps at Equally Low Prices.

I MAKE A SPECIALTY OF

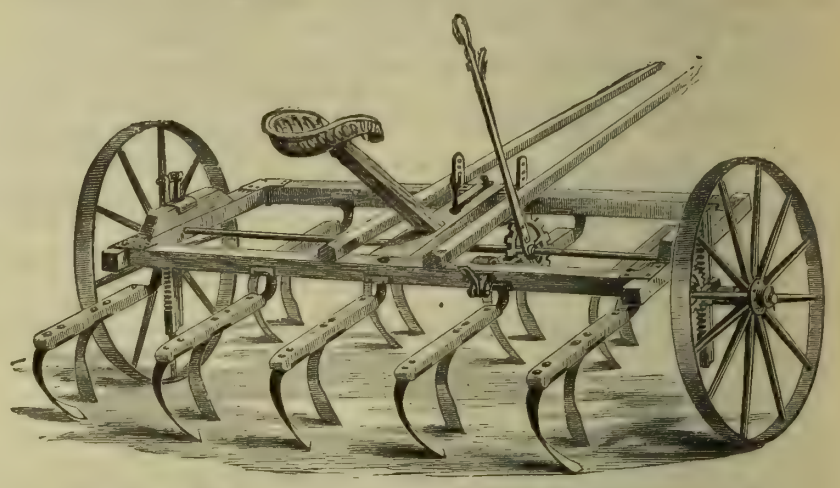
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BYRON JACKSON

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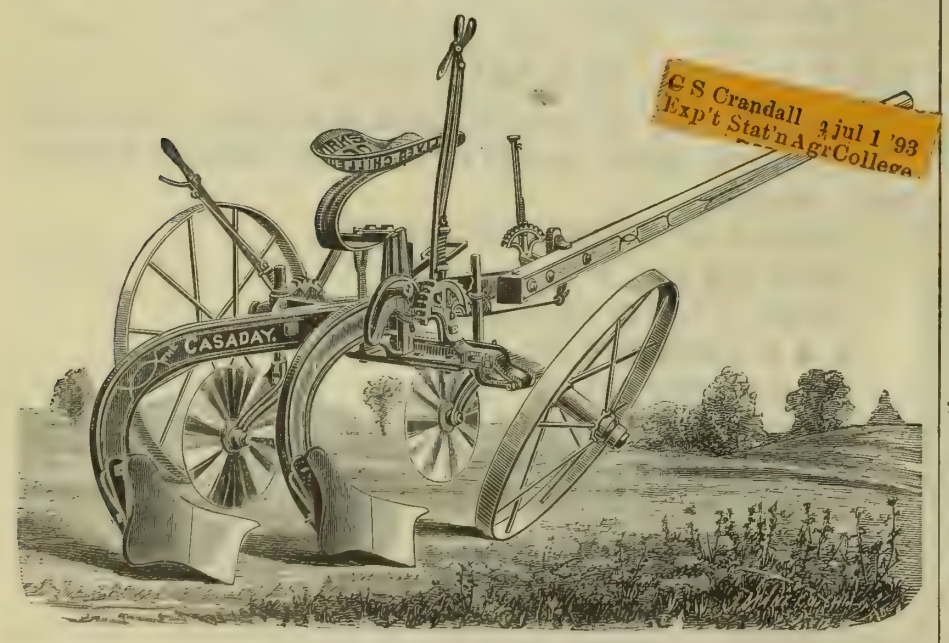
No. 3 "Bull Dog" 6-foot Riding Harrow.

"BULL DOG" RIDING HARROW, $25.00.

This tool is best adapted for hard, rough, stony, rooty, or boggy ground; is also excellent for c vating summer fallow or fall plowing, when the ground is to be prepared for the seed.

It cuts 6 feet in width, has 18 teeth. and is recommended for the most obstinate soils, as, being economical machine, which will do the work where no other harrow can be used.

KING OF GANG PLOWS.



C S Crandall 3 jul 1 '93
Exp't Stat'n Agr College

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EQUALED BY NONE.

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Over 200 samples from 2 of the largest mills in Europe, mostly knit or fancy woven, for stylish Evening Wear, $1.50 to $8.00. You save over half by buying these—**READ.**

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Ladies' ¾ Coats, say 32-in. long; Sizes, 32 to 44; Black Navy, Light Tan—all pretty, serviceable and cheap, $3.75, $4.75, $6.50, $7.50, $10.00. Girl's Coats, long, $3.50 to $5.00.

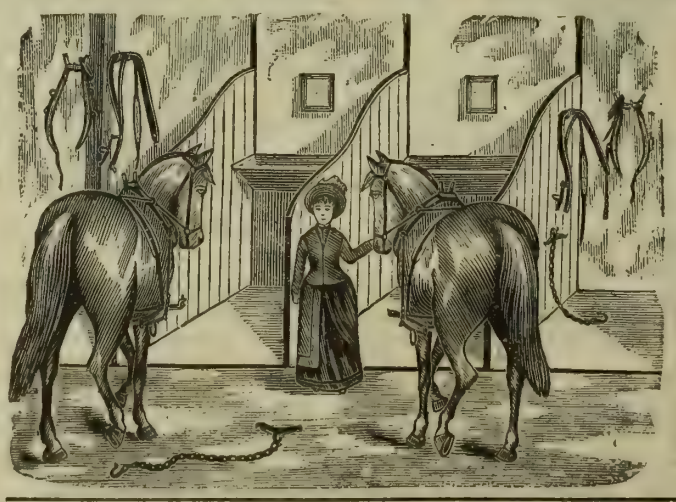
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Closing over 60; sizes, 34 to 42; dark and medium colors; long coats; last year's style; worth $9 to $14; now closing, $4.50 to $7.00. Be quick with orders.

On any of the above goods send full description with price, and we will forward subject to approval, to be returned if not O. K., at our expense, and money refunded.—Send for full list.

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DEERFIELD Steel Harness!

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AND HOW TO GROW THEM By Prof. Edward J. Wickson.

A practical, explicit and comprehensive book embodyin the experience and methods of hundreds of successfu growers, and constituting a trustworthy guide by which the inexperienced may successfully produce the fruits for which California is famous. 600 pages. Fully illustrated. Price $3. postpaid. Send for circular. DEWEY PUBLISHING CO. publishers 220 Market Street, San Francisco, Cal.

PACIFIC RURAL PRESS

Vol. XLIV. No. 21. SAN FRANCISCO, SATURDAY, NOVEMBER 19, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

Fighting Frost with Fire.

Californians have succeeded, to a certain extent, in fighting frost with smoke. The vineyards in the small coast valleys have often been saved from killing frost by filling the valleys from hill to hill with a dense smudge from burning piles of rubbish anointed with coal tar. Even on the broad San Joaquin, apricot orchards have been sometimes rescued by the same means. But smoke is a dull weapon for California warfare, and this winter something keener will be tried. We have already alluded in general terms to the proposed method. One feature was to locate small furnaces, hewn from discarded coaloil cans, at short intervals through the orange orchard, and, by having them previously loaded with combustibles, a hundred or a thousand fires could be speedily kindled and fire belching from so many throats would speedily warm the old face of the midwinter sky.

This rude proposition seems to have suggested a more perfect arrangement to H. B. Everest of Riverside, who is said to own the largest-bearing orchard of the Navel variety in the world, and whose losses by frost about Christmas time last year are reported to have been about $20,000. Mr. Everest, who was formerly engaged in manufacturing petroleum oils, has been experimenting for several months with other materials for burning in place of tar and brush and has perfected an apparatus which, it is claimed, will prevent the frosting of fruit even when the temperature falls as low as 18 or 20 and remains there for several hours. This heating apparatus has been placed throughout Mr. Everest's 80-acre grove at a cost of over $2000, and is being adopted by several other growers. It will not be patented and is a simple device that any horticulturist may prepare. Briefly described, the contrivance consists of a 100 gallon iron cask on each acre, filled with oil, from which two pipes run along between the rows of trees, with half a dozen elbows to the acre, 20 feet apart, over which are flat sheet-iron pans, into which oil spatters and burns as it vaporizes. Burning at the rate of one gallon per burner every hour, an intensely hot flame is made, which rises several feet and creates also a dense smoke which acts as a smudge. The cost of the plant is about $25 per acre, and the oil should not cost over $7 an acre in the coldest winter.

This is a proposition quite worthy of California dash and enterprise. Fortunately, we have vast stores of petroleum and can cheaply warm all that is out of doors with it. Mr. Everest's experiment will be watched with the keenest interest, and, if found practicable, will be of wide applicability.

AERIAL TUBERS.—In a recent talk before the California Botanical Club, Mrs. T. S. Brandegee is said to have given an interesting talk upon a new kind of potato lately originated at Santa Rosa. The specimens shown were small and greenish, but veritable tubers. They grew from a potato-plant grafted upon a tomato stalk. The tubers did not grow near the root nor under ground, as in the ordinary fashion, but high upon the plant, generally in the axils of the leaves. On some of the little potatoes tiny leaflets were starting out in place of eyes. The statement attributed to Mrs. Brandegee may be correct and yet aerial tubers are not uncommon and do not require any tomato grafting on the potato-plant.

WORLD'S FAIR SHOWS.—There seems to be full interest manifested both in the preliminary World's Fair display, to be held in the Mechanics' Pavilion in this city in January, and in the California World's Fair building in Chicago. In both undertakings, the available space seems to be well covered by the applications, though all who have something good should still apply, for probably room will be found for all. The success of both undertakings seems, however, well assured, and that is gratifying. For the California building, it is said, the applications cover four times the available space in the building, and some scaling down will be necessary.



THE OLD MISSION SAN ANTONIO DEL PADUA, AT SAN DIEGO.

An Old Mission.

The choice of the Mission style of architecture for the buildings of the Stanford University, and more recently for the California World's Fair building at Chicago, has served as a sort of revival of this style of construction. It does not strike us as a revival likely to go far, for there is certainly little in the style to commend it, aside from its historical associations. These may be to a degree in sympathy with the quiet and dignity of a seat of learning and therefore the style may be well placed at Menlo Park. The choice in Chicago was surely made wholly because of the uniqueness of such construction amid American surroundings, and because California could claim the most of the nation's possessions in this line. But there are some who claim that this point of view does not satisfy and that California could have chosen better models than those of the *padres*. Probably, however, the general verdict will be that California contributed more to the architectural features of the World's Fair by her peculiar building than she could have done by the choice of any other style.

We apprehend that the revival of the Mission style will not go farther than it has at present. It is decidedly out of harmony with modern spirit and activity. It has not been pursued even in religious structures by those who can be supposed to have most reverence for it. It belongs to a unique period of our history, and there it will probably rest for all time. Still, there is undoubtedly more interest in the Mission style and more discussion of its features now than there has been since American occupation. In view of this fact, it will be timely to present herewith a sketch by a well known local artist of the first Mission built in California, San Antonio del Padua, founded by Junipero Serra in San Diego in 1769. The view shows that a portion of it has a modern roof, while other parts still have the tiles. On the posts of the gateway are wooden figures which certainly have a grotesqueness not in harmony with their environment. They are said to have been taken from the wreck of a ship of which they were figure-heads, and it is surmised that they were set up to work a spell upon the savage mind.

THE Transcontinental Association is trying to hold a meeting in Chicago.

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ALFRED HOLMAN.....General Manager

San Francisco, November 19, 1892.

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Agricultural Implements—Allison, Neff & Co.
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Pacific Hospital—Dr. Asa Clark, Stockton.
Money to Loan—Holcom & Howe.

See Advertising Columns.

The Week.

Delightful autumn days continue in unbroken series. The north winds have been replaced by those of a more westerly origin and cooler nights have resulted. The midday sunshine has also a harder contest with low temperatures, but still heavy clothing is a burden. The weather favors field work but the absence of rain prevents any considerable ground breaking or progressive undertaking. The days are excellently adapted for putting things to rights, for fence building and repairing, for renewal of roofs and for painting and whitening of everything. Surely, if the farm does not get a thorough brushing up and refreshing during these favoring leisure days it will not be the fault of the weather.

The days also invite all to the highways. Let the visits which have been deferred during the long busy summer now be paid. Let the home workers have the reinvigoration which comes from long rides in clear, bright air and the renewal of valued friendships and acquaintance. The longer the rains delay the greater will be the rush of work when they do come. Prepare then for this, not by aimless idling, but by recreation which strengthens and fits for extra labor.

This week the fruitgrowers are assembled in convention in San Jose. Early tidings speak of large assemblages and active interest in the proceedings. Not only this State, but our neighboring States are largely represented. The occasion will be one of great importance and value, and for those who could not attend, our columns during coming weeks will reflect transactions of greatest interest and moment.

And again comes Thanksgiving! By proclamation of the President, Thursday, Nov. 24th, will be the day. To all families through whose gates the Rural comes we extend our best wishes for a day full of joy and sincere thanksgiving.

Beautifying London.—The city of London is growing civilized. Time was, and within the memory of London citizens of middle age, when trees were very rare about the streets of the city or its suburbs. Now, as appears from answers to systematic inquiries, there are but three out of the seventeen districts where the search was prosecuted, that are absolutely without trees. In the remaining fourteen, 14,700 trees are found on the public highways, of which 5158 were planted by order of the various branches of the city government and 5323 by builders and other citizens.

Agricultural Produce and the Tariff.

There is naturally much anxiety among Californians interested in the new lines of production which are being pursued in this State, as to how their industries will be affected by the industrial revolution which is expected to begin as soon as a Congress assembles under Mr. Cleveland's administration. It is a foregone conclusion that tariff changes, more or less radical, will be made. It seems the clear desire of the people that shall be the case. The ax must fall and naturally there is concern as to whose industrial neck shall be on the block.

It is not very comforting to one who has labored to build up a producing interest under the protection of a tariff to contemplate the throwing down of the barriers against foreign cheap labor and ignoble living. There is not much consolation in the view that compensation for the hardship or ruin will come in some way and in some form. The theory of free trade and unrestricted competition with all kinds of people, willing to exist in all kinds of ways, may be very beautiful as a theory; but it is hard for those whose money and livelihood is vested in what must now be considered menaced interests, to be patient with any merely theoretical view of the case.

It is of course possible, and we hope even probable, that the hardship and losses which now seem imminent may prove less than anticipated. It may be that we can do something with a newer, richer soil and a more energetic and inventive people to carry our products against the work of older, drowsier nations. Unquestionably, every possible effort will be made in that direction, but how much will it avail? None can foresee, and there is therefore the anxiety and concern of which we speak.

It is possible, also, that the changes which, upon sober reflection and after congressional discussion, will be made, will not trench so closely upon the peculiar and new industries of California as now seems probable. This, too, cannot be foreseen, and this only substitutes another form of uncertainty for the confidence under which our leading industries have recently advanced.

In view of the new discussion which will spring up as to the effects of a wide-reaching tariff revision, it seems desirable to restate the existing duties upon the leading articles of agricultural produce. The following statement from a contemporary, we suppose, is substantially correct:

The duty on wheat is 25 cents per bushel, on barley 30, oats 15, corn 15, buckwheat 15, rye 10, beans 40, onions 40, green peas 40, potatoes 25, castor beans 50, hops 15 per pound. Tobacco for cigar wrappers, if not stemmed, $2 per pound, and if stemmed $2.75. All other tobacco in leaf 35 cents.

All garden and agricultural seeds not otherwise provided for, 20 per cent ad valorem. Vegetables of all kinds preserved or pickled, 45 per cent ad valorem. Vegetables in their natural state not otherwise provided for in the Act, 20 per cent ad valorem. Cabbages, 3 cents each. Hay, $4 per ton; straw, 36 per cent ad valorem. Honey, 20 cents per gallon.

Butter and all substitutes therefor, 6 cents per pound; cheese, 6 cents per pound; fresh milk, 5 cents per gallon, and milk preserved 3 cents per pound.

Apples, green or ripe, 25 cents a bushel; dried in any form, 2 cents per pound. Grapes, 60 cents per barrel of three cubic feet. Plums, 2 cents per pound, prunes 2, figs 2½, raisins 2½. Fruits preserved in their own juices, 30 per cent ad valorem, and if preserved in sugar, syrups or spirits and jellies of all kinds, 35 per cent ad valorem. Oranges, lemons and limes in packages of 1½ cubic feet or less, 13 cents per package, and in about the same proportion for larger packages; in bulk, $1.50 per 1000, and in all cases ad valorem duty of 30 per cent upon the boxes or barrels in which this fruit is imported.

Almonds, not shelled, 5 cents a pound; shelled, 7½. Filberts and walnuts of all kinds not shelled, 3 cents per pound and 6 cents shelled. Nuts of all kinds, shelled or unshelled, not otherwise provided for, 1½.

Bacon and hams, 5 cents per pound; beef, mutton and pork, 2; lard 2, tallow 1. Meats of all kinds not otherwise provided for, including prepared or preserved, 25 per cent ad valorem. Poultry, live, 3 cents per pound; dressed, 5. Horses and mules, $30 per head, except that those animals valued at $150 and over per head, $30 per cent ad valorem. Cattle more than one year old, $10 per head; one year or less, $2. Hogs, $1.50. Sheep one year old or over, $1.50 per head, and under one 75 cents. All other animals not provided for in the Act, 20 per cent ad valorem.

The list is not complete, but it gives an outline and shows clearly how many products, for the success of which we are now striving in California, are affected by the danger of removal of protection. Others not mentioned are just as seriously menaced.

It has been pointed out that in the above list, there are only five farm products of which we are exporting more than we import. These are wheat, corn, oats, cotton and meat. On the other hand, we import more horses, wool, barley, hay, hops, flax, hemp, sugar, rice, fruit, beans, peas, potatoes, eggs, poultry and a whole long list of vegetables than we export. It is this large list of articles which it was hoped the country under the protective system would produce for itself.

The present situation is one which calls for the closest vigilance and the fullest weight of influence on the part of producers. No doubt many things can be measurably saved from anything like a sweeping reduction by clear statements of the injury which such legislation would work. It is too soon to declare, but it is just the right time for producers to study and confer on these subjects as they have never done before.

Australian Lemons.

About 1000 boxes of Australian lemons have arrived in this market recently, and it is reported that they have been quickly and satisfactorily disposed of. The commission merchant who received them has rather an ambitious project in view, which he thus describes:

I would make San Francisco the distributing center, and while many persons may think that such a plan could never be carried out, there is nothing difficult about the undertaking, and our positions can easily be explained. We are in a position to receive goods that are as good as those that come from Spain or Italy. We can receive them in much shorter time from Australia than they can be sent from Messina, Catania and other parts of Italy. The price is grea ly lessened. What must follow?

As soon as a steamer arrives, at once dispatch the lemons to any point in the United States, and it will not be long before San Francisco will become the distributing point. When you can receive goods quickly and in first-class shape, and dispatch them promptly at a price considerably below what was heretofore paid for an article that is no better, success must follow.

The merchant's idea seems to be that a vast quantity of Australian fruit can be brought in here and sold without interference with the California lemon product, for he says: "When California's supply gives out, as it did a short time ago, there would be no necessity for depending on the shipments from Italy and Spain."

The weak point in the merchant's proposition and the injury which such a project as his may work to our own producers may be seen when one recognizes the fact that the supply of California lemons need not give out as it now does and that in the future it will not give out. It is quite possible, by the new methods of curing and storing lemons which our own producers have developed, to market the California product continuously and to furnish the fruit at any time of the year that it is needed. Of course, at present the product of these fine lemons is small and the supply is exhausted, but when the lemon orchards recently planted and those now being projected come into bearing there will be no call for lemons from Sicily, Australia, or any outside region, and the distribution of lemons will be from California and of the California product. San Francisco will not be the center of such trade, but that does not matter, the profit from the business will build up the whole State, and that is a higher aim.

The Alameda County Flower Show.—The increasing interest in popular contests for floral eminence can be seen in the qualifying success of the first fall show held last week at Oakland by the Alameda Floral Society. It was held during the closing days of election week and had, therefore, many distractions to contend with, but in spite of these the patronage was good. From the exhibition standpoint the affair was a great success. The ground floor of the Mills Tabernacle, the largest auditorium in Oakland, was fairly crowded with exhibits. The display of out-door roses was much greater than the State Society's show in this city the previous week; the show of chrysanthemums and of ornamental and foliage plants was naturally less than at the great display in this city. The success of the first effort in Oakland will lead to continued effort in the same direction. It should also stimulate to similar undertakings in all towns of considerable population with suburban gardens and greenhouses.

A Mole Which Ate Vegetables.—We have had much of late about ground pests. A few weeks ago we published Prof. Washburn's interesting essay on gophers and moles, in which the latter's disregard of vegetables was reaffirmed. An Oregon lady, Miss Talbot, dissented from this old tenet and proposed to demonstrate the contrary. At the last fair of the Portland Mechanics' Institute, Miss Talbot had a vegetable-fed mole on exhibition, and of her experiment a Portland exchange says:

Miss Talbot trapped a mole, caged it and put it on a vegetable diet, which seemed to suit it admirably from the start, and now, after months of an exclusively vegetable diet, it appears hearty and healthy and eats readily almost any kind of vegetables, but is especially fond of peas. Miss Talbot's investigations in this matter have resulted in a valuable addition to the public stock of knowledge about moles.

Personal.—Emory E. Smith, Assistant Professor of Horticulture at the Stanford University, has returned from his first summer's observations and studies abroad. He made a very interesting *extempore* address on sights in foreign lands at the meeting of the Floral Society last Friday.

The convention for the advancement of women met in Memphis, Tenn., recently. The session will continue for several days.

From an Independent Standpoint.

The brief outline of election news given in last week's RURAL is in the main confirmed by later reports. Not only has the fact of Mr. Cleveland's success been confirmed, but his majority is even greater than was suspected. He carried all the Southern States with Connecticut, Illinois, Indiana, New York, New Jersey and Wisconsin. His majority in Connecticut is 4500; in Indiana, 11,000; in Illinois, 30,000; in New Jersey, 16,000; in New York, 45,000; and in Wisconsin, 12,000. Ohio is in doubt, and it will require the official count to determine whether its vote will be given to Harrison or Cleveland. Analysis of the popular vote demonstrates that he has a half a million pluralty over Harrison and a majority of between 400,000 and 500,000 over Harrison and Weaver together. If all four of the so-called doubtful States had cast their votes for Harrison, Cleveland's gains in the States heretofore deemed surely Republican would have given him the victory. Mr. Cleveland, therefore, is not only elected, but is elected by the Northern vote. The Populist success was limited to the four States of Colorado, Kansas, Idaho and Nevada. Of these four, Colorado, Idaho and Nevada gave Weaver their votes with almost single reference to the silver question and as a protest against the anti-silver attitude of the Republicans. In Kansas it was a square Populist victory by a majority of 6000. The House of Representatives will be Democratic by about 100 majority and the winter returns to the Senate will give that body also to the Democrats by a very narrow majority. Thus, next March, for the first time since the war, the Democratic party will find itself in complete control of all the departments of the Government.

California's electoral vote will go to Harrison by a majority not yet officially reported, but in the neighborhood of 4000. The Legislature, however, is Democratic and will choose a Democrat to succeed Senator Felton, whose term expires in March. Of the Congressional candidates, Geary (Democrat) is elected in the First District; Caminetti (Democrat) is elected in the Second District; English (Democrat) is elected from the Third; Maguire (Democrat) is elected in the Fourth; Loud (Republican) is elected in the Fifth; Cannon (Democrat and Populist) is elected in the Sixth, and Bowers (Republican) is elected in the Seventh. The Populist vote in the State at large is about 24,000. In San Francisco, Cleveland's majority is about 7000, but the city was so split up in factions that no party can claim a triumph in the municipal voting. Ellert, Non-Partisan candidate for Mayor, representing specially the anti-De Young sentiment, was elected by about 4000, his closest opponent being the notorious Dr. O'Donnell, an all-round political crank, who stood as an independent candidate. The voting in the city was almost altogether outside of party lines and resulted in the election of a mixed Board of Aldermen and of a miscellaneous assortment of Democrats, Republicans, Non-Partisans and Independents in the several executive departments of the city government.

On the eve of the election both of the National parties professed entire confidence of success, but it would be difficult to determine which was in fact more surprised by the actual result. The Republicans were simply stunned by the completeness of their rout and the Democrats were scarcely less seriously affected by the completeness of their triumph. Probably nobody expected such a radical change in the political complexion of the country. In all parts of the Union leading men have, during the past week, been trying to get their reckonings and give some intelligible explanation of the event. Mr. Whitelaw Reid attributes it wholly to the tariff policy of the Republicans. Mr. Harrison attributes it to the candidacy of Mr. Whitelaw Reid, to the incapacity of Chairman Carter and to the fact that his advice was not followed in certain aspects of the campaign. Mr. Depew thinks it was due to his being limited to speech-making and having no part in the planning. If Mr. Wanamaker has any definite ideas, he failed to make them clear in the statement of a half column in length—and so on. There are explanations upon explanations by men public and private and by newspapers of the country, the general verdict being that the election turned wholly on the question of the tariff. Unquestionably the tariff was chief among the causes of the landslide, but we venture to suggest a cause which none of the great men of the country seem to have discovered, namely: profound disgust on the part of the Republican masses, growing out of mismanagement of the party and of the fact that unworthy men have been allowed to lead it away from the principles upon which it was founded and upon which it claims the popular support. Many Republicans, who usually stand with the party for patriotic rather than partisan motives, voted either for Cleveland or for the Populist candidate because they would not follow Mr. Clarkson, Mr. Platt, Mr. Quay, et al. In our judgment, disgust with the self-appointed leadership of the party, combined with disgust at its failure to take up the labor question, the immigration question, the currency question and other vital issues of the time, lost to the Republican party a sufficient number of voters to have carried the election. As we look at it, the Republican party has been defeated through resentment at its failure to cast off its offensive leaders and take up the new questions with the old courage. The tariff unquestionably cut a figure, probably the the largest figure in the fight, but it was less on account of the tariff than dissatisfaction with the management of the party and its attitude toward the new issees.

For example, California elected a Democratic legislature, which in turn will elect a Democratic Senator, and its Republican vote was cut down nearly 20,000. What was the cause of this? Surely not the tariff, for, in a local sense, California profits by the tariff. It was chiefly because nearly 20,000 of those who have been Republicans had lost faith in their party. They resented the domination of corporation attorneys in the party conventions; they resented the election of Mr. Stanford (chief among railroad men) to the Senate; they resented the failure of the last Republican legislature to enact laws in the interest of the people at large because there was opposition from the corporation and monied interest; they resented the general rottenness of that same legislature, and they resented most bitterly the consequences and sum of all these degradations, the candidacy of M. H. DeYoung for the United States Senate. These, in brief, are the reasons why nearly 20,000 California voters who have heretofore acted with the Republican party, deserted its standard and voted either for Weaver or for the Democratic candidates. These voters, who have taken the bit in their teeth, are just as devoted as they ever were to the old principles, and will return to the party when the party returns to itself, but they have learned the lesson of independence and can never again be counted on to support the party unless the party is right.

Mr. Cleveland has discreetly kept his mouth shut since the election, but his friends and enemies are doing a great deal of talking for him. Yesterday (Tuesday) it was reported that he had declared his independence of Tammany. He was quoted as having said in private conversation: "I am under no obligations to Tammany Hall or any other organization for my election, and I do not propose to be dictated to by anybody. New York State did not choose me to be President of the United States, hence I can get along well without any further advice from that quarter. Now that I am President it is my intention to be the head of this nation in reality, and I will not permit any dictation as to my future actions." The authority for this report is shadowy. It is reported on the other hand this (Wednesday) morning by the N. Y. *World* and other Democratic papers that the whole of the Government patronage in New York is to be turned over to the Tammany organization to be dispensed by its chief boss, Dick Croker; that there will be a clean sweep of all Government employees in New York not directly under the protection of the civil service laws. It is further said that Mr. Grace, formerly Mayor of New York and the leader of a large faction, will be allowed to name the ministers to Chile and Peru, where he holds large commercial interests. We suspect that one of these reports (which we find in the morning's *Chronicle*) is about as true as the other (which we find in the morning's *Examiner*). It illustrates the general confusion respecting Mr. Cleveland's plans and the general unreliability of so-called political newspapers.

Mr. Cleveland's position is in one sense an exceptionally hard one. He was elected by a combination of three political elements—by the old line Democrats, the Tammanyites and the Mugwumps. Between these several political forces there are no points of sympathy or affinity. They are as wide apart in views, motives, habits and tastes as the Hindo castes. They hate each other with a holy hatred. Elements divided like these may sometimes be organized for a political fight, but they can never be brought into cordial and continual support of an administration. If Mr. Cleveland shall administer his office on reform lines, he will please his Mugwump friends, but will antagonize the bulk of his support who are quite of another color. If, on the other hand, he shall undertake to satisfy Tammany, he will offend the Mugwumps and disgust the country. There is no middle road. Mr. Cleveland must choose either one or the other horn of the dilemma, and in either event he is certain to have a fight on his hands. He faces, therefore, the most serious problem which has confronted any President since Lincoln, without the strength which a united party support would give him. It will be no small job to carry out the pledges of the Democratic platform, and it would not be surprising if Mr. Cleveland should break down in the attempt.

It is too early to tell just where the election leaves the new People's party. As yet its vote in the several States has not been reported in detail. On the Pacific coast it has certainly made a strong stand. Idaho and Nevada are its own; Oregon gave it one-third of its vote; Washington gave it a vote described as "notable" but not yet reported, and California gave it about 24 000. It is clearly in the field to stay, and it is, in our view, likely to swallow up one or the other of the old parties. It has what both of them lack, a courageous, progressive policy based upon moral as well as material issues. It is not afraid of the questions of the day, but addresses itself boldly to them. It has in its boldness, in its conviction and in its moral force the germs of a great and successful party. The RURAL does not seek to conceal its dissent from the more advanced positions of the People's party; but it is not blind to the fact that the party has in it more good than bad. If it will temper its earnestness with wisdom, make itself a *national* instead of a *class* party, and adjust itself to *reform* instead of *revolution*, it will be in a stronger position than either the Republican or Democratic parties. But to accomplish this, to put itself in a position to command the support of moderate and conservative forces of the country, it must find new leaders. Men ignorant alike of history and economics, and whose whole claim to attention is a loose flood of irresponsible and vehement talk, never yet organized a successful campaign or led a party to victory.

Mr. Cleveland's cabinet-makers have struck one piece of sound timber, and Californians will be on the *qui vive* to see whether the great party of reform can rise above "political considerations" and put a great department of the Government in the hands of a man who is not a politician, but is perhaps the foremost man of the country in knowledge of agricultural industry, its needs, the scientific principles which underlie its practices, and in grasp of the means by which the agricultural interest may be advanced and made more prosperous. That such a choice is contemplated is shown by a Washington dispatch to the San Francisco *Examiner* of Tuesday morning which says:

> The hope is freely expressed that something may be done to lift the Department of Agriculture out of the rut of politics and humbug in which it has been traveling ever since it has been created, and make it what it ought to be—the great scientific branch of the Government. Representative Hatch of Missouri has been spoken of for Secretary of Agriculture. * * * Ex-Governor J. Sterling Morton of Nebraska is spoken of as a man of the right kind, and Professor E. W. Hilgard of California is another. * * * It is needless to describe Professor Hilgard's attainments to Californians. He was proposed for Commissioner of Agriculture before the office was raised to the Cabinet rank, and he is fully qualified to manage the department, no matter what the title of its head may be.

This estimate of Prof. Hilgard's abilities and fitness for the place is eminently correct. His appreciation by the California people is also pronounced, and undoubtedly the new administration could do nothing better calculated to enlist the interest and sympathy of Californians than to call Professor Hilgard to a place in the Cabinet. His knowledge of agricultural science is profound, and its soundness, point and value are the greater from the fact that he never forgets that agricultural practice and science are indissolubly associated. Through the quickness of his perceptions, the accuracy of his scientific deductions and the warm geniality of his nature, he has drawn nearer to the needs and closer to the affections of the agriculturists of this country than an agricultural teacher has ever approached before. In the recent wonderful advancement which the United States has made in agricultural experimentation, Professor Hilgard was a pioneer, and has always been counted a moving force. In the recent advancement in agricultural meteorology, and in the problem of the utilization of the expanses of arid lands, every publication outholds Professor Hilgard's investigations and deductions as authority for progressive movements. In the newer industries for the newer States' soils and climates, the terms "California" and "Hilgard" become almost synonyms. It is not surprising that the Washington governmental experts should fasten upon his name in their earliest suggestions to Mr. Cleveland, nor will it be surprising if Mr. Cleveland accepts such spontaneous advice. As our readers know, Professor Hilgard is now in Europe for a year's rest and observation. Californians expect him to return to his work here refreshed and reinvigorated. There is a score of years of usefulness for him before California can think of putting him on the retired list. Nothing but the greater needs of the whole country could reconcile us to his withdrawal even for the duration of a presidential administration.

THERE is a lively contest between Mendocino towns to secure one of the two high schools the people have voted to build. Ukiah will undoubtedly have one.

Southern Pomological Meeting.

The following is the program of the autumn meeting of the Pomological Society of southern California, to be held on Tuesday and Wednesday, Nov. 22d and 23d, in the Board of Trade room in Pomona, beginning at 10:15 A. M. The following subjects will be presented:

Address of welcome, by J. E. Packard of Pomona; response by President L. M. Holt of Riverside; reading minutes of the previous meeting by the Secretary, E. Edson Smith of Santa Ana; admission of new members; reports of officers and committees, etc.

Experience with Ten Acres in California, by D. Edson Smith of Santa Ana.

Orange Culture, by M. Baldridge of Pomona.

How Can We Make the Most Money Out of Our Deciduous Fruits, by W. H. Holabird of Claremont.

A Talk about Farmers, by C. M. Heintz of Los Angeles.

At 3:30 o'clock a carriage ride to points of interest will be tendered to the members of the society by the Pomona Board of Trade.

At the evening session, 7:30 o'clock: Successful Methods of Curing Lemons, by E. W. Holmes, editor of the Riverside *Press*.

On the second day, morning session, 9 o'clock: Taxation of Fruit Trees, by Judge Franklin Blades of Pomona.

Olive Culture, by John S. Calkins of Pomona.

Green Manuring of Orchards, by Prof. E. J. Wickson of the University of California, Berkeley.

At the afternoon session, 1 o'clock: Destroying Insect Pests on Citrus Trees by Fumigation, Dr. J. H. Dunn of Pomona.

Almond Culture, by Percy W. Treat of Davisville.

Trapping Gophers.

FILLMORE, VENTURA CO., NOV. 11, 1892.

TO THE EDITOR:—I see a good piece in the last RURAL pertaining to gophers, but the writer did not exactly describe the kind of trap he uses. I have used some half-dozen different kinds, and I give the preference, decidedly, to a small steel trap, not over two inches across the jaws when set. Find a hole into the runway if possible, I sometimes use a small iron rod, dig to it, disturbing it as little as may be; shove the trap some inches either way into the runway, stake the trap, and pile up clods carefully to stop the hole you made, and, at the same time, leave the runway clear, so the gopher can pass and repass, and, if well and carefully done, you are almost sure of your gopher.

If you cannot find the main runway, this trap is no better than any other, as, half the time, he will push it to one side or cover it with dirt. If there was a call for them, these small traps could be made for 10 or 15 cents each. A blacksmith could make them, but he would dislike the job. My son Eugene, of Santa Barbara, makes them for 25 cents each. The spring need not be strong; a gopher will scarcely ever pull out of them.

The farmers on the Sespe have their work mostly done, and are waiting with smiling faces and happy, thankful hearts for the coming rains. Raisins are made; beans are threshed and housed; some little dry plowing is being done. The season, though rather dry, has not been an unproductive one, and we hear very little complaint. Money is rather scarce; still, we do fairly well. S. P. SNOW.

The Anaheim Vine Disease.

SANTA ANA, CAL., Nov. 15, 1892.

TO THE EDITOR:—Our preliminary bulletin on the "California Vine Disease" is about to appear from the Government press. Wishing it to reach those who would be most interested in the same, it would give me pleasure to forward such names as you may think proper to recommend for copies in your region. The edition is limited, and an early reply will be necessary to insure the names reaching the Department in time. The report will probably be out of press in a few weeks or sooner. A discreet selection of those who would be most benefited by the bulletin is desired. NEWTON B. PIERCE, Special Agent.

[It seems to us the best way to get this report into the hands of those who really desire and would be profited by it, will be to advise our readers who are interested to make immediate application to Mr. Pierce at Santa Ana.—ED. PRESS.

Prof. Coquillett Dissents.

LOS ANGELES, CAL., Nov. 12, 1892.

TO THE EDITOR:—I am sorry to find that on page 408 of the issue of the RURAL PRESS for Nov. 12 the erroneous account contained in the *Times* of this city, relating to the late meeting of the Horticultural Commissioners, is republished without noticing the correction which I gave in the *Times* of Nov. 6. I give herewith a clipping from the *Times* making this correction:

D. W. Coquillett writes to the *Times* that he was not present at the recent meeting of the Horticultural Commissioners, and did not render a report. as stated in the published proceedings, He says he found the newly imported ladybirds breeding in Alameda, as well as at Santa Barbara. Four hundred insects, not colonies, were sent to Santa Barbarba.

I regret very much that the original account of this meeting was republished, since it comes so wide of the truth.

D. W. COQUILLETT.

Botanical Notes.

SAN JOSE, Nov. 14, 1892.

TO THE EDITOR:—Our native red-flowering currant, known to botanists as *Ribes sanguineum*, or the blood-stained currant, is now in full bloom near Los Gatos. Laurel trees there have been in bloom for some time. The scarlet berries of toyon are now ready for the Thanksgiving and Christmas week harvests. By-the-way, it will be too bad if the very inappropriate name holly becomes fastened to this shrub. It is no relative of holly and does not look at all like it. Since its botanical name, *Heteromeles*, is rather cumbersome, why not retain the much older Indian name, *toyon* (pronounced *tow-ey-own*—both o's long). The spelling is Spanish, to be sure; but it ought to be, since the Mexicans spelled it first. The name *Christmas berries* is no name, for holly and mistletoe are also Christmas berries. Toyon berries often remain on the bushes (or small trees) until the last of May, or fully six months.

V. R.

TRACK AND FARM.

An Orange County Race, Again

SANTA ANA, Nov. 9, 1892.

TO THE EDITOR:—Does not much the same world which "dearly loves a lover" love the horse also—the horse, his intelligence, grace, speed, susceptibility to improvement? I think so—much the same world. And it is a pretty sizable world, I'm a-thinking, even when the "roughs," "toughs," and gambling, tricky "sports" are counted out.

Surely it is a pure, innocent love, disinterested, tenderly appreciative, among worthy souls, from Job down. Why should the wicked, the coarse, the reckless, gambling fools, have the pleasure of seeing a good race, a well-trained horse in swiftest action, all to themselves? I protest.

The RURAL, which Oct. 8th last published my account of the Orange County Fair, and so kindly editorialized upon it, did not perhaps know that therein, for the first time in my life, I reported a horserace. Yes, and for the first time went to one. But I imagine most masculine readers guessed as much. Ah! Mr. Editor, you would have laughed to hear my son's (he is old enough to vote) comments thereon. With that *fin de-siècle* air, so awe-inspiring to the maternal heart, he pished and shamed over my little mistakes in race-course talk and pool-room phrases.

But I know better now. I shall not say "jockeying" when I mean "scoring" again. And I have learned that the men who bet on horses "never talk fractions." I have learned a good deal more than this, too. Alas! yes. Something of the seamy, tricky, conscienceless side of the many, perhaps the most who professionally make money racing horses. But I am not going to love a good horse or enjoy a good race any the less. Not I. Rather more; admiring the integrity and firmness which makes, any where, the last possible.

To-day, on our nice race-track here in Santa Ana, our "Silkwood" raced with "Our Dick." The challenge came of the race last month, wherein Silkwood was beaten by Our Dick. And Silkwood won in "three straight heats." Time, 2:08¾, 2:11¼, 2:13. But I am not going to tell of the jubilation, the roars of applause, 'rahs and tigers (why, one little woman, who sat sewing at an open window a mile and a half away, said she could tell Silkwood was winning by the noise); nor of the flutter of yellow, and the local pride and pleasure so naively expressed, at our winning in "the greatest harness horserace which has ever taken place in the State."

What I must tell, is how we treated Tom Keating when he came to town—rival and victor over our horse as his Our Dick had been. He was met by a welcoming band and delegation, escorted "with flying colors" through town to the best hotel, where he was kept all the week before the race as the guest of the association.

"I tell you what," exclaimed a citizen from another county, cognizant of it all. "I tell you what, the directors of the Orange County Fair Association are white men, no mistake!"

Our neighbors say it is all, or nearly all, owing to J. E. Pleasants, president of the association and judge at the racetrack. Reporters who came here are loud in his praises. One, who has reported races for 20 years, could hardly say enough in Mr. Pleasants' praise; said he was the model judge he had been looking for all these years. Surely, with so dignified and courteous a presiding judge, one of the best tracks in the State, and "our" Silkwood, Santa Ana races will become famous, even outside of California.

I have heard more than one word from my amateurish report. Not the least interesting of these words was of one of the stateliest, demurest, dearest of "old maids" in the far east, who read my account with pleasure, and who, I learned thereby, reads about all the fast horses and is wonderfully fond of hearing about races. And thus my idea of the size of the world which loves horses and a good race was enlarged.

And so, too, the other day, I was not quite so much paralyzed when I read of a Californian who paid $150,000 for the great thoroughbred, Ormonde.

"Approximations to the goal
The philosophic mind contents"—

So we will be glad of a place where, at its best possible in this "sinful world," gentlemen and ladies can enjoy a good horserace, a place where pool-selling is not too conspicuous, and gambling "sharps" and "fools" are in the minority.

As for these last, how amusing to the feminine mind are the vagaries of the masculine mind, when it would a-betting go—specially on horses. Really, some of them might as well open their wallets and say to the crowd around, "Here, help yourselves," as "plunge" the way they do—if Dame Rumor speaks the truth. One is reminded of a saying, once most aptly quoted: In a certain church, where was a charity box, the children were instructed, as they dropped their eleemosynary coins, to say a few appropriate words, presumably a text from scripture. There, one day, a little tot, as she deposited her penny, was overheard to say, with serious, uplifted eyes, "The fool and his money are soon parted." Nor could the surprised, amused bystanders discover of her where she learned her text. But it is to be recommended to the better at horse races.

AUGUSTA E. TOWNER.

THE APIARY.

Does Beekeeping Pay?

SAN MATEO, Nov. 5, 1892.

TO THE EDITOR:—Quoting from Mr. W. A. Webster's letter in your issue of Nov. 5th, that gentleman says: "To the often recurring question, 'Does beekeeping pay?' the writer would say yes; but would qualify this assertion by stating that success is quite as dependent upon environment as that of any occupation with which we are familiar. The unhappy apiarist is the toy of the elements, in which a slight variation from normal means failure. There are some locations, I believe, both east and west, where, with combination of skill, a good measure of success is obtained year after year."

The above question is one which I am often asked, and my answer is invariably "Yes! if the business is thoroughly learned and properly attended to." I agree with Mr. Webster that some localities are much better than others, but of course when a person wishes to go into beekeeping as a business he must, naturally, first of all find a suitable location.

To become a successful apiarist it is absolutely necessary in the first place to learn the business, for (like stock-raising and poultry-keeping) the business must be thoroughly understood befor you can expect to make it pay.

You must hive your bees into frame hives of the most approved pattern. You must learn the most approved modern methods for the production of comb and extracted honey (a great deal may be learned by reading some good work on beekeeping, and I know of no better book for this purpose than Root's "A B C of Bee-Culture.") Study the honey flows and have your stocks strong at the right time. Your honey must also be put up in the most attractive form for market.

One of the most approved patterns in hives is the dovetailed hive. It is dovetailed at the corners and, being very simple in construction, is easily put together. It is generally conceded that this hive is the best for the production of comb honey and is equal to any other hive for the production of extracted honey. It has received the hearty indorsement of many large and experienced beekeepers, alike for its simplicity, strength, durability and cheapness. In a future issue I hope to give a full description of this hive, with cuts showing the different parts.

Many apiarists lose quite a large amount of honey by not putting on their top story or "super" soon enough in the season. Last March we were visited by a well known apiarist, who has 500 colonies of bees a few miles south of us, and he was surprised to see that we had already got on our "supers" and several colonies had stored 24 pounds each of nice white comb honey in one pound frames. Our friend had never heard of such a thing and did not know it was possible to get any surplus honey so early in the season. The result was we had 30 to 50 pounds of comb honey to each hive before our friend had ordered any sections from his supply dealer. This was simply the result of watching the honey flow and having the hives full of bees at the right time.

To give an idea of the honey resources of southern California, I will give a few extracts from Mr. J. H. Martin's letter in *Gleanings* for October, and if friend Webster is determined to seek fresh fields and pastures new, we would strongly recommend him not to go east, or west, but to "go south, young man! go south!" Mr. Martin (speaking of beekeeping around Jurupa mountain) says:

To give some idea of the honey resources of this little range of rocks, with the aid of Mr. Clark on one side and Mr. Wilder's broncho on the other, I obtained some notes and snap shots from the saddle. Setting out from the Rambler's cabin and following down the north side of the range, after a mile of travel we find the apiary of Mr. Choate. Here are 100 colonies, and though the stocks were very weak in the spring, the surplus amounted to 2500 pounds. * * * * * * We now proceed nearly a mile farther, and in front of the broad and level Cucamonga valley we find the 200-acre ranch of Mr. W. E. Clark, with cattle, horses, poultry and fruit trees, and 170 colonies of bees. While Mr. Clark operates the ranch, Mrs. Clark operates the bees and proves to be a skillful operator. This apiary was started six years ago, from the colonies that were dug from the rocks above the ranch. Being novices in the business, the bees were first put into various nondescript hives, but learning of the better management in movable-frame hives, the swarms were properly transfered. After an increase of 75 swarms from 17, and considerable honey in one season, the bee enthusiasm increased, and the apiary now numbers 170, and the product this poor season was 10,800 pounds. Of course they believe beekeeping pays, even in a poor season. The nearest neighbors are two miles away, and one of these, a Mr. Button, with a poor season before him, commenced with 25 colonies, increased them to 50, sold some stocks, and secured 2000 pounds of honey, a few colonies "giving down" at the rate of 200 pounds each. Down toward the west end of the range we find the apiary of Mr. Langton, an Englishman who came to California with barely a hope of saving his life from the serious inroads of consumption, but the climate has given him a measure of good health and hope for many years on this terrestrial ball. We found Mr. L. very busy hanging out the family washing. Mr. L., during this very poor season, has increased his bees from 33 to 62 and secured 5400 pounds of honey. * * * * We now pass around the mountain and work our way up the south side, and a young man, Mr. Rance, from 25 colonies in the spring, increased to 50 and secured 3120 pounds of honey, which is not bad for a young man during this poor season. Another hitch along the base of the mountains and we enter a very rocky and cup-shaped canyon; in fact it is almost an amphitheater, with its abrupt, rocky walls on three sides. Here is an apiary of 115 colonies, owned by our friend Wilder. In this rocky retreat Mr. W. has, in this season of uncertainty, taken 9120 pounds of honey and seems to have no appearance of the blues. * * * * The nearest apiary to Riverside, on this range, is owned by Mr. Parks. His hives are among great rocks just above his ranch, and he has the reputation of securing the largest yields of any beekeeper in the vicinity. This very poor season his yield from 65 colonies is only 6000 pounds. Three years ago he had a good season and his 75 colonies gave him 33,000 pounds, or on an average of 440 to the swarm.

The above illustrations show what can be done with bees in California in a poor season. What think you, reader? Does beekeeping pay?

WM. STYAN.

POULTRY YARD.

Incubation.

LODI, Cal., Nov. 9, 1892.

TO THE EDITOR:—Now is the time when all who have incubators, and who desire to have young roosters and large broilers to sell when prices are at the highest, should get them out and set them in operation. True, eggs are at a price which seems to say that it is much wiser to realize on them at once than to take the chances of hatching and raising with the added risk and expense connected with it at this season of the year. The young chicks then will need the greatest care to keep them warm, and this necessitates a room prepared with special reference to it and furnished with a stove or hot water pipes with which to keep an even temperature that the chicks may not be chilled and their growth partially, if not entirely, checked. If this occurs, they become very nearly, if not entirely, worthless and might as well be disposed of at once, as they either linger along a longer or shorter time according to their degree of strength and the power of resistance their constitution enables them to offer to the consequences of the injury done them by the chilling. Injury may also be due to the close-heated atmosphere of an imperfectly-ventilated room which lacks a sufficient supply of fresh air of the proper temperature to insure the well-being and healthy growth of the chicks. There is a much greater percentage of loss in chicks at this season of the year, however careful one may be, than in the bright, warm springtime, which nature seems to say is the proper time for the hatching of young chicks when the temperature is warm and even and tender young grass and insects and worms are abundant. At this season these must be artificially supplied, nor can it be done in as complete and satisfactory a way as nature at the proper season will do it.

However, the high price which one gets during April, May and June, and sometimes as late as the middle or even the last of July, compensates one for all the loss, added expense and extra care and high price of eggs at time of hatching in the fall. It is just the difference between from $4 50 to $6 and $13 to $15 per dozen. You may count ordinarily on raising to marketable young roosterhood condition a little less than one-half your hatch during the fall months, unless the weather should be more than ordinarily favorable, as it seems inclined to be this year, for both days and nights are warm and tender green grass and shoots are abundant. In the springtime, as it ordinarily is, the loss does not exceed one-half of the hatch under proper conditions of management, and is oftener less.

True, the eggs in the fall are not to be relied on as fertile as in the springtime, and there is the difference in price per dozen between 40 or perhaps 45 cents now and 15 or 20 cents in the spring; but to offset all this is the great difference in the price of the fowls marketed from the fall-hatching and the price of those hatched in the spring. The former is more than double, possibly three times as much, and this excess I think amply reimburses one his added expense and care and a handsome balance besides, if he does not rate the extra care and annoyance at losses at too high a figure.

This figuring applies more properly to the young roosters one raises than to the pullets perhaps, but then to offset the apparent lack of equal value of the pullets, one must bear in mind that the pullets hatched and raised during the fall and winter months are ready to go to laying in the early spring and at from four to five months old, while those hatched and raised during the spring and summer months, one must carry until the next springtime without income from them, which is a consideration, particularly when feed is high and you do not raise your own.

Many object to using incubators, and for various reasons, such as, for instance, the uncertainty of the operation and the lack of vitality in the chicks hatched in this manner, or that it is much less work to hatch with hens and the belief that they are sure to get more and better chicks. Some claim also that the chicks artificially hatched can never become laying hens. All these ideas, as far as my experience and observation go, are mistaken, for with properly-constructed incubators and knowledge and care in operating them, you may count on 90 per cent of your fertile eggs hatching and turning out good, strong and healthy chicks which will as surely become layers as they surely become hens of the proper age to lay. This I know because I have not had until this season fowls that were hatched in any other manner, and would not have had any other kind this year only that I wished to try the experiment of buying grown pullets in order to learn, by testing both methods, which was the better and least expensive of the two. My present stock then consists about equally of artificially hatched and hatched by natural process.

The result of the experiment seems to be that, leaving out of question the matter of skunks and sparrow-hawks, I much prefer raising my own artificially hatched chicks. Skunks and sparrow-hawks in this locality enter largely into the consideration of the question, as for the past two seasons they have been very abundant and destructive in spite of all care and watchfulness. However watchful one may be, the nimble and business-like sparrow-hawks will destroy numbers of them, and being so rapid and wary in their swoop and flight, it is almost impossible to shoot them. Skunks one may more nearly provide against by the use of wire netting in the manufacture of the coops in which the chicks are kept at night, and floors should be provided as well to the coops or the pests will dig under, and then good-bye to the brood, be they many or few. I had a lot of 140 fine young Brown Leghorns destroyed in a single night by one miserable little weasel-skunk, which found an entrance where I did not think even a large-sized mouse could get in, and I suppose that he was not more than ten minutes in killing the lot, biting each one through the heart. One may see then that the utmost care is necessary in localities where such pests abound, and even then a loophole seems to be sometimes overlooked and mischief done.

With regard to the egg-producing qualities of the two kinds—the artificially-hatched and those hatched by natural process—I can see no difference, one kind being as good layers as the other, and for years I had only incubator fowls.

With regard to the uncertainty of a full hatch of good, strong chicks by incubation, as I have already said, with a standard incubator such as the Petaluma, the Golden Gate, the Halstead or the Pacific (and perhaps many others as well), and with watchfulness and care for details, however small and unimportant they may seem to be, a full hatch of strong, healthy chicks may be counted upon. If, however, one is careless, and the thermometer indicates one temperature one day and another the next, varying, perhaps, many degrees, then your chicks, if indeed you hatch any, will lack constitution and be worthless.

The temperature of your egg-chamber should be kept as nearly as possible at 104° and the eggs carefully and certainly turned each morning and evening and a proper degree of moisture secured to the eggs, which in some machines is provided for by the use of sand moistened with warm water each time that the eggs are turned, and in others by the use of cups of water or moistened sponges. The moist sand I think is preferable.

The matter of testing the eggs, in order to remove all that are not fertile, should be attended to on the third and fifth days, and all infertile ones removed, as with the heat they become spoiled and infect the others.

But the matter of successful incubation and brooding of chicks cannot be thoroughly treated of in one short article, and as this one I am afraid may be found long enough, I will defer what remains to be said to another opportunity, wishing to say, however, before closing that I wish some one who knows would take up the matter of sickness and disease in fowls which, in this locality and, so far as I can learn, in other parts of the State, appears to be unusually prevalent and fatal.

T. B. GEFFROY.

THE DAIRY.

Dairying and Milk Yields.

Written for the RURAL PRESS.

As a consumer of the products of the farm, the well-managed milch cow is the most profitable animal that can be kept. She will give six or eight times her own weight in milk each year, supposing her to be a cow of 1000 pounds in weight; hence the necessity of good appetite, digestion and constitution. All these must be good, or the cow cannot be either a good milker or a long laster.

When we consider that each 1000 pounds of milk contains something like 130 pounds of dry matter, we find that the cow giving 8000 pounds, or eight times her own weight in milk, returns in that product dry matter alone about equal to her own weight, which, again, is fully double the weight of dry matter contained in the flesh gained by a well-fed steer during the year, that has consumed food about equal in value to that eaten by the milch cow.

The comparison made is between the best class of milch cows and the best class of fattening steers, which latter, when we compare in the same way against the average milch cow of say 4000 pounds per annum, has no advantage over her in the matter of obtaining from land an amount of food useful to man.

While 4000 pounds of milk a year is undoubtedly above the average yield of the whole of the cows of this country, we may safely assume that it would be under, rather than over, if they were all as well fed during the milking season as are fattening steers when being prepared for the butcher. If we put the best class of cows as giving an average of 6000 pounds of milk per annum, it will readily be seen, as set forth by the above facts, that ten cows, with the above average, will yield a larger profit than 15 cows giving only the same quantity during the year as the ten best cows—each lot giving a total of 60,000 pounds of milk.

It is more than probable that the average quantity of milk given by the whole of the cows on farms in the United States, where either butter or cheese is made (exclusive of milk-selling dairies), does not exceed 3500 pounds per cow. There is therefore room for great improvement being made in the average dairy cow of the country, and it behooves all dairymen to lose no time in making a beginning in the improvement of their respective herds, where they have not already done so. The various products of the dairy do not bring as good prices as they did a few years ago, a fact which makes it imperative, from a financial standpoint, to keep only good cows, the largest producers being, as a rule, the most profitable ones to have. The unprofitable ones ought to be found out and weeded out without mercy, letting them go their own way; that is, to the shambles.

AVERAGE MILK YIELDS OF GREAT BRITAIN.

A short time ago a paper was read by Mr. R. Henry Rew before the Royal Statistical Society, entitled "An Inquiry into the Statistics of the Production and the Consumption of Milk and Milk Products in Great Britain."

In the production of this paper Mr. Rew has endeavored, through correspondence and careful estimates, to get at the average annual yield of milk per cow, which, as nearly as can be come at, after careful deductions, is 4000 pounds.

He says: "As regards the proportion of cows in a herd actually in milk at a given date, I gather from statements made by a few of my correspondents that it might be reckoned at something like 80 per cent." The whole number of milk-producing cows is 3 544,575, which, at 400 imperial gallons (of ten pounds per gallon) per cow, makes the total annual milk production in the year 1890 to be 1,417,000,000 gallons.

Mr. Rew then proceeds to show how the milk is used, and says: "We may reckon it to be consumed as follows: Milk, 570,000,000 gallons; butter, 617,000,000 (representing 105,000 tons of butter); cheese, 224,000,000 gallons (representing 100,000 tons of cheese); miscellaneous (condensed milk, etc.), 6,000,000 gallons.

The consumption of imported butter, cheese and condensed milk, represents a quantity of milk equal to 1,129,000,000 gallons, while the home production of the same articles only represents a milk product of 847,000,000 gallons.

The above quantities of milk are calculated on a basis of one gallon (ten pounds) of milk to one pound of cheese, and 21 pints (262 pounds) of milk to one pound of butter, "collected from a number of records from various sources—English and foreign—which go to justify in their average results the adoption of this standard."

AN INTERESTING MILK REGISTER.

In an appendix to his able paper, Mr. Rew gave the following interesting copy of the milk record of the St. Albans dairy herd of pure-bred Shorthorns, showing the weight of milk given by each cow and the number of days in milk after each calf. We make an abbreviation of the table by omitting the names of 30 cows and give the numbers only:

	First Calf.		Second Calf.		Third Calf.		Fourth Calf		Fifth Calf.		Sixth Calf.	
	Days in Milk.	Pounds of Milk Yielded.	Days in Milk.	Pounds of Milk Yielded.	Days in Milk.	Pounds of Milk Yielded.	Days in Milk.	Pounds of Milk Yielded.	Days in Milk	Pounds of Milk Yielded	Days in Milk.	Pounds of Milk Yielded.
1	266	4 723	236	5,002	389	7 190	275	6,670	273	7,00[illegible]	266	7 237
2	197	2,467	176	1,936	235	5,032	268	5,596	220	2,573	.....	.....
3	280	3,614	350	3,890	300	4,513	26[illegible]	3,8[illegible]3	22[illegible]	3,09	.....	.....
4	279	4,[illegible]81	33[illegible]	5 812	246	4,574	334	9 273	.....	.....	.....	.....
5	263	4,041	251	4 102	248	4, 65	272	4,853	.....	.....	.....	.....
6	386	5,414	319	4,221	270	3 771	316	4 512	.....	.....	.....	.....
7	327	3 947	271	4 688	244	4,333	219	4.053	.....	.....	.....	.....
8	363	5 349	308	5 973	269	4,473	251	5 784	.....	.....	.....	.....
9	3 0	4,210	367	5,434	267	5 197	379	5 944	.....	.....	.....	.....
10	266	4 566	263	5,02[illegible]	270	4,593	.....	.....	.....	.....	.....	.....
11	248	3,795	249	3,848	25[illegible]	4.120	.....	.....	.....	.....	.....	.....
12	432	4 8[illegible]4	32[illegible]	5,79[illegible]	.....	.....	.....	.....	.....	.....	.....	.....
13	326	4,1 3	284	5.358	.....	.....	.....	.....	.....	.....	.....	.....
14	400	4 129	21[illegible]	3,705	.....	.....	.....	.....	.....	.....	.....	.....
15	277	3,36[illegible]	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
16	.....	.....	252	6,180	33	5,264	280	6,140	237	6,17	314	7,815
17	.....	.....	.....	.....	229	5,371	332	6.157	329	5,73[illegible]	4 9	11,162
18	.....	.....	.....	.....	308	5,998	281	5,[illegible]97	47[illegible]	8,481	37[illegible]	10.010
19	.....	.....	.....	.....	.....	.....	196	4 [illegible]97	30[illegible]	6 68[illegible]	112	2 215
20	.....	.....	.....	.....	.....	.....	289	5 578	28	3 6 8	140	1,458
21	.....	.....	.....	.....	.....	.....	230	7,753	28	7 99	280	7 [illegible]88
22	.....	.....	.....	.....	.....	.....	.....	.....	202	6 349	238	5,878
23	.....	.....	.....	.....	.....	.....	.....	.....	168	3 05[illegible]	25[illegible]	5 591
24	.....	.....	.....	.....	.....	.....	.....	.....	224	4 04[illegible]	220	5,357
25	.....	.....	.....	.....	.....	.....	.....	.....	423	10,82[illegible]	.....	.....
26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	251	6,087
27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	311	9.170
28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	254	4,371
29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Av.	308	4,177	279	4.781	275	4 92[illegible]	282	6.757	279	5,41[illegible]	270	6.453

Numbers 1 to 15 inclusive are home-bred cows, all of which are included as in the original table. Numbers 16 to 30 are bought cows, those after the sixth calf being left out.

The are 10 in the seventh calf column, which have an average of 5868 pounds of milk, with an average time of 267 days in milk, the best of which gives 8950 pounds in 345 days. The three columns for cows with 8th, 9th and 10th calves have records of eight cows that average a little over 6000 pounds of milk, one of the cows having been in milk only 186 days and another 196 days.

The record for the bought cows only covers the time they were in the herd, consequently many of them did not have a full season in some years.

For the home-bred animals the record covers the life of the cow and shows that

SHORTHORNS ARE ABOVE AVERAGE MILKERS.

By those who study the above table it will be observed that 15 heifers with first calf average 4177 pounds of milk, with an average time of 308 days in milk. The weight of milk given by these is above the average of that of the whole of the cows of the country.

There is a yearly average increase up to the fourth calf, when the cows may be supposed to have been six or seven years old, which is generally the most profitable period in the life of a milch cow. One home-bred cow with her fourth calf has a record of 9273 pounds in 334 days, being an average of 27.76 per day.

The table, upon the whole, affords satisfactory proof that there are still good milkers among Shorthorn cows, but, with few exceptions, only where the habit of giving milk has been cultivated by breeding for its development and *milking* the cows. Cows that are allowed to habitually suckle their calves are more liable to deteriorate in their milking qualities than otherwise.

Cream from Dairy Exchanges.

A scrub cow is a scrub because there are scrub notions behind her. (Gov. Hoard.)

Second-hand experience is the cheapest kind if you only choose such as fits your conditions.

Every one who makes good butter increases consumption, as every one who eats that kind wants more.

A leading factor in successful dairying is to be made right, careful, neat, patient, thrifty, intelligent, kind, progressive.

A strong argument is made in favor of compelling makers of imitation butter to refrain from using the coloring that often deceives the consumer.

Poor feed causes poor butter in the fall. Look out or you will injure your reputation for good butter unless your cows have something better than weeds and frost-bitten feed to eat.

A dairy editor lately visited a farm whose owner was trying to print something as white as lard, but supposed to be butter. Rotten cream had been churned at too high a temperature for too long a time. The man was smoking a dirty pipe where milk was setting in shallow pans. Behind the door were two sacks of apples, half a sack of

onions, two mattocks, a spade and a butter-box. Nothing in dairying.

Twenty-two farmers constituting a farmers' club in Vermont milk 361 cows that average 253 2 lbs. butter per year. The best herd averaged 332.5 lbs. and the poorest, 200 lbs.

A good writer holds that the physical endowments necessary for the highest production of beef and butter are so contrary that both cannot exist in an eminent degree in the same animal.

Dairy-schools are making great progress. They started ten years since, "headless and helpless," with little means and no experience. Now they are rapidly reducing dairying to an exact science. They are able to trace and locate losses of butter-fat down to one-tenth of one per cent. When shall we have one in California?

The nutty flavor in butter is caused by formation of butyric acid (a volatile oil) and the ferment of the casein in the butter. If this takes place too soon or there is too much present, the butter becomes rancid. If the butter is washed very clean and all buttermilk taken, this action is delayed, the nutty flavor comes later, and keeping qualities are much improved.

John Gould says that the way to granulate butter is to add about two quarts of water at 62° to an ordinary churning. A spoonful of salt will do no harm. When the cream shows signs of breaking, add a little strong, cold brine; and when the buttermilk shows nicely, add at least two gallons of cold brine to the churn; revolve slowly a few times, and let it stand a few minutes before washing.

Recent tests to show comparative value of sweet and ripened cream in butter-making indicated:

1. Equal keeping qualities.
2. A limited market for sweet-cream butter; in some cases at fancy prices.
3. A yield of three per cent in favor of ripened cream.
4. A prospect that a more thorough understanding of methods of handling sweet cream and the introduction of the extractor may result in extensive and important changes.

The day of the average butter-maker whose ambition ends at the knowledge of the mechanical part of the trade is past, and the future has nothing in store for him better than low wages and unsteady employment. He must understand value of foods, nature of animals, as well as care and handling of milk under various conditions. He must be a man of sufficient tact and address to retain the good-will of patrons while correcting errors. He must be engineer, book-keeper, buyer and salesman. The day of concentration in creamery work is at hand. Competition is close. In the near future only the best will have good places, and the average man must drop out.

At a famous English dairy contest the following scale of points was agreed upon:

One point for every ten days since calving after the first twenty.

One point for each pound of milk per day.

Twenty points for each pound of butter fat.

Four points for each pound of solids other than fat in the milk, deducting ten points in cases where butter-fat amounts to less than three per cent.

Upon the above scale an Aberdeen-Angus cow, although not included in the dairy breeds, not only made the best record among 49 entries, but the best ever made at the show.

The Field.

Advantages of Baling Hay.

J. W. Clark, of Placer county, Cal., writes the *Country Gentleman* as follows:

A few days ago I met two teams—one of four horses, the other with six—with loads of baled hay for Forest Hill, 40 miles distant, in the foothills, and I inquired as to the weight of same. The four-horse load was 50 cwt., or 2½ tons; the six-horse load, 70 cwt., or 3½ tons; both loads in bales of about 200 pounds each. The loads were about six feet higher than the sides of the wagon-boxes, but no wider, in either load. The bales were all of the same size and laid to fit close together and bear the swinging and racking of the rough, narrow mountain roads, without getting out of place or lop-sided, as often happens with unbaled hay on road passing over slanting ground. Indeed, loose or unbaled hay could not be on a wagon on the rough, narrow mountain roads without high, narrow racks, bolted tight to the running-gear.

The only places loose hay can be seen in here is in cocks or winrows before it is heaped or baled. Every day various-sized loads of baled hay, from one to two bales on a buckboard to 60 to 70 cwt., are driven into the city, the owners of single horses and buckboards drawing them in small loads of one to four bales as they require renewed supplies from the ranches. In loading small loads, say up to a ton, which may be carried in a good-sized lumber wagon box one man can load the bales easily, and when several tons are put in one load for drawing to mountain towns, no other hand is required, as the teamster loads, the keeper of the hay store shoving the bales to the edge of the platform, which is high enough to load baled hay from. If a wagon or axle breaks on the way, a load of bales can be walled up on the side of any road, in half an hour or less, and covered with a piece of sail cloth, or a stack of bales in the field can be closely laid up and similarly covered.

Of course bales of dry hay will draw dampness from the ground if placed on bare soil; but any danger from such cause is easily prevented by placing a layer of dry straw or old boards under the bales. As to the hay spoiling from dampness in bales, as was alleged two years ago by a correspondent, any damage from such a cause ought to be purely imaginary, as hay can always be dried as much as required for long keeping in California climates. Only yesterday I saw the fourth crop of alfalfa curing in winrows, ready for baling. Alfalfa is generally baled here and keeps well, being used commonly for cow feed, while oat, wheat and barley hay make up the general horse feed, and it is rare to see a damaged bale.

Considering these facts, it seems to me that there is a vast amount of unnecessary labor and cost in making hay-stacks 20 feet high, as done with machine pitchers, horses, hoisting works, rakes, carriers and pulleys, and also with hay-loaders; and if hay is wanted to keep dry in winter or summer on your side of the Sierras, four times as much can be housed or otherwise securely gathered and protected from damage by rain when baled as when stacked loose, and with much less cost of machinery, labor and time. I write with some emphasis on this subject, because I have had 50 years' experience in various modes of making hay, including the old hand-methods and the modern use of machinery, and am of opinion that four-ton stacks, the hay drawn around them with a horse-rake and the stacks protected with waterproof caps, form an economical method of stacking hay for baling, as one man can make a three or four ton stack while a boy draws the loose hay to it with a horse-rake, leaving it on any side convenient for pitching on the stack. If the weather is threatening, a small stack can be made in an hour or two without wagons or costly machinery, and if the hay is a little damp, it will sweat in the small stacks without material damage, and get ready for baling. I am credibly informed that building small stacks in meadows distant from the homestead to get the hay slightly sweated is customary in the meadows of the River Severn valley, thus securing the hay in good order as soon as it is ready to stack before drawing it several miles in large loads to the homestead. By stacking in small stacks with few men and little machinery, except horse-rakes, much drawing and time are saved—as experience taught me long ago—and the baling-machine can be moved from one small stack to another while a single load of hay could be drawn and pitched on a large stack. Again, if rain threatens, a small stack can be quickly made or rounded up, and secured with a water-proof cap without damage. Hay can probably be secured in the field as suggested at less than half the cost of putting in large stacks with costly machinery, and the barns or hay-lofts will contain three or four times as much hay in bales as could be put into them loose, making saving in storage space as well as drawing twice as much at a load in bales without any hay-racks.

Again, the convenience of bales for feeding is worth considering. The hay is taken from the end of the bale with the hands when the baling-wire is cut, in a layer only a few inches thick, the hay left in the bale remaining close as the press left it, and so on till the bale is all used, the wires being easily cut. Use from the bale a few pounds at a time; the hay retains its fresh color and quality far better than when loose.

Furthermore, if other work is pressing, the hay can remain in small stacks till light frosts occur, when the baling can be done without hindering plowing or any other urgent work. Waterproof caps for small stacks or cocks can be obtained at little cost, or made on the farm in a short time. In Iowa, huge hay-stacks 20 feet high are made, requiring four or five men with teams and wagons, or hay-pitching and loading machines, which makes business and profits for machine manufacturers, but whether this expensive system makes much profit for farmers is an open question. Let them figure out the cost of each method and compare.

J. W. Clarke.

Sorghum Syrup in California.

Mr. James Linforth of San Francisco, agent for sorghum cane machinery, has received the following interesting letter on sorghum syrup manufacture in El Dorado county:

Dear Sir:—We made but little syrup this year, as the cane was badly damaged by the storm of May 15th. The quality this year is far superior to any we have made in previous years. The syrup is the color of gold and this year is free from the wild taste that usually goes with sorghum syrup. The average per acre, in Missouri and other States of the South, is reported at 150 gallons per acre. I have been under the impression that cane here, while producing a clearer and finer article, would not produce as much per acre as in the States, but I have reason to change my mind. One of my neighbors planted a piece of cane 130 feet long by 24 feet wide—total, 3120 square feet. From this he had 20 gallons of extra thick syrup. Had the syrup been made of ordinary thickness there would have been 25 gallons.

We are going to send a specimen of the syrup to the U. S. Agricultural Department, with a challenge open to any country to beat it from sorghum cane. I frequently get letters from people wanting to know if I am "still experimenting in raising cane for syrup." No, I am not experimenting. I am raising what I want, the same as any other crop, and I believe there is no surer crop for this country.

John Blackiston.

Arizona Notes.

Tempe, Nov. 5, 1892.

To the Editor:—Inasmuch as the Rural has given its readers an occasional extract from our papers, I have not thought it best to write for some time, lest some one might think we were trying to turn the correspondent's column into an advertisement to gain notoriety.

While some parts of our Territory have suffered from drouth, we of this valley have it about the same in our irrigating canals. Two years ago, when our river deluged our neighboring towns, we had sunshine here all the while. Away off in the eastern part of the Territory, in the White mountains, is our hope of getting water supply. When Jupiter or some other force kicks up a storm there, we of this valley find it out in due time in the swelling of our canals.

Our honey crop was a little short this year, but this was owing to our alfalfa being greatly pastured, as more cattle were crowded in here from the out ranges. Our farmers have been able to get the price of hay (in the stack) up to $5 per ton in October. Some are expecting fancy prices for hay in March, but cattlemen are pushing off their cattle as rapidly as possible, and there is a great deal of hay in our valley at this time.

Our canal schemes have been noticed by the Rural, and so far as I can observe, even more than has been stated by the Rural will be brought into completion in the near future. But, O my! what litigation and legislation we will have bye and bye over our canals and water service.

At our district fair (just as in old Sonoma away back in the fifties) we fell out over the racehorse, and the racehorse part of it goes, just the same, but— Well, it ain't my fight, so I can't help the matter out any. I guess our bees may gather honey next year just as well.

Our North and South Railroad is reported as nearing its completion rapidly, and two or three others are being surveyed and talked up. Our real estate agents have a great deal to say about having a shorter haul east to market, but they are quoting geographical miles and not actual freight rates of Arizona.

Geo. Kay Miller.

Horticulture.

Olive-Growing and the Manufacture of Olive Oil.

An Essay by Frank A. Kimball of National City, San Diego County, California, at the last meeting of the American Pomological Society.

As a matter of convenience the subject will be discussed in what to us seems to be its natural order, viz: The ancient history of this most remarkable as well as most useful tree—manner of distribution and methods of propagation—planting in orchards and mode of cultivation, products of fruit for preserving, known in commerce as "Pickled Olives," and for oil, expressed from the fruit and known as "Olive" or "Sweet Oil," and last but not least, its wood, which in ancient times was considered little less than sacred. This will lead us, later on, to consider the steady advance made in the cultivation of the olive as a productive industry in its relation to the range of latitude and climatic conditions adapted to its profitable cultivation.

We need not inquire in regard to the origin of the olive tree, for the people of western Asia, who wrote our oldest history, found it in vast forests on the mountains; so at this point its written history begins, and here, in all probability, nature concentrated her forces and created the first olive tree.

It was slowly carried by the merchant as he followed or opened the channels of trade; by the emigrant it was carried as one of his choicest treasures, in fact as one of his "household gods;" and with and by him was planted on the verge of civilization, only to be again advanced from the place, where for centuries perhaps it had ministered to the comforts and necessities of those who were again to move forward in the van of civilization.

These certain methods of distribution carried it to southern Europe and northern Africa, and later on to South and North America, by priests of the Catholic church who knew so well its value as a food-producing plant; and its oil furnished an ever ready medicine of such universal application that to be without it was to find themselves handicapped. These Franciscan Fathers founds it to be a most important adjunct in their efforts to hold supreme influence over the wild men whom they sought to raise to the dignity of civilized beings.

In San Diego county, California, and within 20 miles of the extreme southwestern limit of the United States, Father Junipero Serra, the most renowned and honored of all the Franciscan Fathers who came to the western shore of North America during the last century, planted the first olive trees, or possibly olive pits, but more probably cuttings taken from trees which he knew were good for producing both food and medicine; from this plantation, without doubt, all the "Mission" olive orchards have descended, and now, after 122 years have elapsed, the trees of this *old* orchard are infants in age, and a thousand years hence might not have reached their prime, had careless soldiers and vandal stockmen left them undisturbed.

PROPAGATION.

The various methods of propagating the olive are by seed, or more properly "pit;" this can only be done successfully by freeing it from oil, which prevents both air and moisture from penetrating to the kernel. This may be done by a bath of caustic soda, which readily combines with the oil, or by breaking the pits and removing the kernels, which, if carefully handled and properly planted, will readily produce trees—but they will be as various in description as apple trees will be when grown from seed. This is an unsatisfactory process, for only about seven or eight pits in 100 contain kernels, consequently more than nine-tenths of the time required in preparing seed from pits is absolutely wasted.

To produce trees which will bear the desired kind of fruit, take limbs of any size, cut from the trees during the winter months, and, before the new growth starts, cut in pieces six to ten inches long and plant (either in nursery or orchard) in a vertical or oblique position, and nearly or quite cover them with earth, well-packed around the cutting from top to bottom, or the limbs may be laid in trenches (for nursery-planting) and covered about three inches deep. These will send up canes all along the cutting, in some cases not more than six inches apart; after the canes have reached a height of two feet (if at the proper season) remove the earth between the canes and saw the cutting off, giving to each cane a short section of wood, or with a sharp gouge remove the cane with all its roots, which secures an entirely independent tree with a large mass of fibrous roots, and of the variety desired and many years quicker than from "*seed*" to a bearing tree.

The cutting may be allowed to remain in the ground and

the year following another set of canes will be produced from dormant eyes which failed to start the first year, and this process may still be repeated.

With artificial heat it is easy to secure a vast number of trees by taking the growing tips of twigs, three or four inches long, and planting them in moist sand; oftentimes these herbaceous cuttings will produce 90 per cent of trees suitable to plant in nursery. And still another mode; take a gouge and carefully remove the spherical protuberances which are formed either just above or below the collar of large trees. These may be planted in nursery or orchard and will make beautiful trees. Olive trees grown from pits may be changed to any variety desired by grafting or budding, which may be done in many ways, all of which are illustrated in a small pamphlet published by the California State Board of Horticulture, in which are also illustrated all of the most desirable sorts of olives now produced in the State.

PLANTING.

From the nursery where olive trees are generally allowed to stand two years they are planted in orchard at distances varying from 20x20 to 30x30 feet in squares, or on the "triangular" plan with same distances on each angle which largely increases the number of trees to the acre, and properly distributes them over the area planted. The roots of an olive tree should never be allowed to get dry, between the time of digging and planting, and no tree requires greater care in planting.

PRUNING.

When the tree is taken from the nursery the trunk should be cut off to the height determined on for branching, say two feet, and all the lateral branches should be cut back to balance the loss of roots necessarily destroyed in removing the tree. Future pruning may all be done with thumb and finger, or a very small pair of pruning shears. The olive tree should never be allowed to grow tall, there being no compensation for the increased cost of picking the fruit and for thinning out the top to admit air and light.

CULTIVATION.

I need not say to any horticulturist that cultivation cannot be too thorough; good tilth is an exhibition of "Faith and Works" which comes very near being an absolute guaranty of success. But even this will not in *all* places succeed without another artificial help, viz, *water*, for it is the exception and not the rule where olive trees will do their best without irrigation; and wherever nearly perfect conditions do not naturally exist and irrigation is resorted to to establish such conditions, it has become nearly or quite an established fact that for each dollar so expended at least ten dollars may be expected in increased growth and quantity of fruit.

When taken from the nursery (at two years from planting of cutting), planted in orchard and properly cared for, the olive tree should pay all expenses of cultivation the third year. There are instances on record where *cuttings* planted in orchard have produced sufficient fruit the third year to pay all expenses of cultivation for that year, but this is not a safe basis for calculation, for it is only with *large* cuttings, taken from vigorous trees planted in a voluptuous soil and under the most favorable conditions, that such a result may be obtained.

In selecting a location for an olive plantation, great care should be taken to secure a well-drained tract, for there is no one thing which will so militate against success as a close, clayey soil with imperfect drainage.

Exposure also cuts an important figure in the profits to be derived from an olive orchard. A southern exposure hastens maturity of the fruit, and it must always be kept in mind that when the olive approaches ripeness it must be gathered, if first quality of oil is expected; true, the quantity of oil is much less, but the quality is much finer than that pressed from fully-matured fruit.

A northerly exposure will prolong the period of ripening many weeks, so by selecting land having both a northerly and southerly exposure a person, by his own labor, can harvest at least one-half more fruit than if either one of the exposures was selected. It is often said that any kind of soil is good enough for olive trees—and inferentially the poorer the soil the more profitable the crop; if this be so, it is contrary to all other efforts of nature of which I have any knowledge—but it is *not* so. But it *is* a substantial fact, however, that an olive orchard which has long been cropped, poorly cultivated and not fertilized, will make a record of unprofitableness which the owner may not long disregard; in such cases, generous fertilizing and good cultivation will cause a response which cannot be mistaken. Good location and good soil are two elements which will act as large factors in successful olive-growing.

Few, and perhaps none, of these suggestions need be made to the practical horticulturist; but there may be some one before me who has very little knowledge of horticulture, who may desire to plant an olive orchard—to him they may be of service. Nor should I stop here, but should further allude to the peculiar conditions under which we labor in California. As a rule, we do not care to see a drop of rain from the first of May to the first of December. During what is termed the "rainy season," and after any considerable fall of rain, the ground should be thoroughly "cultivated," or plowed and harrowed, and after the "rainy season" is over, the surface of the ground should be well-stirred at least once each month, so that it may be in perfect condition to absorb atmospheric moisture during the "dry season," and be all ready for the first rain of the succeeding "rainy season." Two purposes are thus accomplished; the land is kept in good tilth and no weeds can raise their unsightly and unprofitable heads.

TIMBER.

The first historians, on almost the first page of history, record the value of the olive tree for timber. Are not the trees now growing on the Mount of Olives the same which were there 2000 years ago? And can any one tell who planted them, or how many centuries they had been planted at that date? Were not the doors of the tabernacle of King Solomon's temple made of olive wood? Do we not find dovetailed blocks of olive wood now holding together, as they have done for more than 4000 years, the great blocks of porphyry of which the pyramids were made? Do not the tombs and temples, built "time out of mind," still contain solid and sound olive wood which, during the intervening ages, has resisted the "tooth of time?" To its durability add its beauty, and one can readily understand why dealers in antique furniture place such value on the timber of the olive tree; truly, it is a delight to the cabinet-maker.

AS A FOOD.

The olive, as a food, has a value not usually accorded to it, for it is only immediately around the Mediterranean and Red seas that it is used as such. In the districts named, the olive is picked when fully ripe, dried and eaten with the black bread of the country, and nearly or quite occupying the *place* and fully doing the service of *meat*. In certain of the Mediterranean countries the lower classes of the people *may* taste meat 12 times during the year; but it is not *certain* they will, but it *is* certain that many of them consider it an annual luxury. The olive constitutes by far the larger part of their food.

It is quite possible that a majority of persons present are not personally familiar with olive-eating people and cannot fully appreciate its absolute necessity in supplying their daily recurring wants. From the highest to the lowest, all people are included. Only three things are said to be necessary for a Spanish soldier to take with him as a ration on a long and fatiguing march, viz, olives, bread and onions. The olive is a good flesh producer and (if I may be allowed to use a homely expression) has the invaluable quality of "standing by;" the onion is not only a food, but it is a stimulant and fully takes the place of wine. This ration is considered adapted to the soldier, as it contains all the elements required for nourishment.

The olives, to which reference is made, are not the green olives of commerce, such as are seen in every grocery and are found on the tables of every hotel and restaurant, and are almost as indigestible as the cork of the bottle in which they were bought. These unripe, unwholesome things will keep indefinitely and with much less care than the mature olive, but there is no comparison between the two products as food. The olive, properly prepared, will yet be regarded equal in value, pound for pound, with meat and far more healthy, and, from experiments often made, appears to be a natural food for man, for I have never yet seen a child, too young to walk or even stand on its feet, which would not eat ripe pickled olives when placed in its way, nor have I ever seen a child made sick from eating them.

During the early years of olive culture by Americans in California, the fruit was prepared like the ordinary olive of commerce; fruit picked perfectly green, processed to remove its intensely bitter taste, packed in salt brine and in two or three days was ready for the table, and was eaten only as an appetizer or relish. Pickled olives have the peculiar property of removing all taste from the mouth and restoring it as though nothing had been tasted, and are universally used by experts employed to determine the value and quality of teas, wines, etc., and these purposes are invaluable, as no other known substance contains such qualities in equal degree. The preparation of green olives has almost been abandoned in California, as the fruit thus prepared is in no sense a food. Nor should it be forgotten that production of food in one form or another has become a large factor in the world's political economy, and that the nation or country which produces the largest quantity and most comprehensive variety of food has a handicap on all other nations or countries less favored, either by nature's benefactions or the persistent efforts of its people.

From the early planting of the olive in California—prior to the year 1800 and down to 1867—I do not know of a single olive tree having been planted in southern California. From the last date to the present time, large areas have been planted, so that where in 1867 there was one tree in the State there are now a thousand, and the area now ready to be planted is probably nearly equal to that already planted.

The well-known thrift of the "Yankee," which seems to be an inherent virtue in the species, soon discovered to him that there was a great waste of labor and raw material in preparing a substance which had no value as a food, and that the purchaser of it had thrown his money away. Experience soon developed the fact that ripe olives, prepared by the same general process as the green ones, were not only toothsome, but from their intrinsic value as a food product would be a counterbalance to the price of meat. This led to many experiments in their preparation, and the process which has been most generally adopted is as follows:

The olives are carefully picked (and must be handled without being bruised) when quite red and before they begin to turn purple, and immediately *covered* with a solution of concentrated lye, in proportion of two ounces of lye to each gallon of olives, great care being taken that every olive is completely covered. A portion of the solution should be frequently drawn off and poured on top, to keep the solution of equal strength. After 12 hours examine them to see how far the lye has penetrated, and when it has penetrated nearly to the pit (which is easily determined by breaking open some of the olives) draw off the lye and replace with soft water, which may be changed once or twice each day till no trace of lye is left in the olives. This is best determined by testing with litmus paper. Then add salt to taste, provided the olives are to be used immediately; if to be kept for future use the brine must be made of same strength as for salting meat, and when required for use they may be freshened to taste, using cold water for the purpose.

Perfectly ripe olives prepared in same manner are far more delicious, be must be picked and handled with extreme care so that not an olive is bruised, nor will they keep nearly as long as those not so near maturity. During the process of pickling the olives must not be exposed to light or air. It is important that only one size of olives should be processed at the same time, else the smaller ones will be spoiled before the larger ones are "done," and it is absolutely essential that everything used in processing olives should be perfectly "sweet," as any offensive odor will be absorbed and the olives be made not only worthless but positively offensive.

EXPRESSING THE OIL.

The mode of extracting oil from the olive, which was practiced thousands of years ago, still obtains, but with machinery better adapted for economical work, steam being substituted for the labor of men and animals. To be able to obtain the largest quantity of oil possible from the olives, they must be left on the trees till *ripe* and shriveled—but quantity is at the expense of quality. The finest grade of oil can only be obtained by gathering the fruit while it is yet hard, but sufficiently ripe to allow the pit to be squeezed out without carrying any of the flesh with it. Early in the season the olive may become quite black before this condition is reached, but later in the season, when the weather gets cooler, the olive may be "ripe" when perfectly "green."

Immediately after being gathered they are spread, one or two inches deep, on trays or racks, which may be placed one above another, leaving space for circulation of air, great care being exercised to prevent them from heating (in which case the oil is spoiled for table use), and when a sufficient quantity of moisture has been evaporated they are ready for the

CRUSHING MILL,

which, with its appurtenances, must be made of materials which cannot absorb odors—metal and stone, as much as possible, being used and the same care and cleanliness exercised in *making* the oil must be continued till it is in the bottle. After the olives are crushed (which is done under stone or iron rollers that are made to revolve in a large stone or iron basin in which about 350 pounds of olives are placed and which constitutes a "charge") the pulp is placed in a tub of proper size, made of very narrow staves placed a little distance apart and bound with strong steel hoops which are hinged so that on being opened the pomace may be easily removed, and a light pressure brought to bear on it, and oil of first quality, or "Virgin Olive Oil," is produced. The pomace is then removed and recrushed and again subjected to pressure sufficient to secure a second grade of oil. It may be again crushed, at the same time adding hot water to assist in liberating the remainder of the oil, when a still greater pressure is used. This gives an inferior grade, which is used for light or lubrication. There yet remains some oil in the pomace, which may all be utilized by the soapmaker in the manufacture of castile soap. The residuum is applied as a fertilizer.

In the process of pressing the pulp, the fruit juice and oil, with a considerable quantity of pulp, runs from the presses into large tin tanks; the oil gradually rises to the top and is skimmed off and poured into the settling tanks, where it must remain for from 60 to 90 days, when a natural precipitation will have thrown down nearly or quite all foreign matter, and the oil is ready to pass through a filter, which is made by lining a conical bag, made of heavy filtering felt, with several thicknesses of white cotton-batting. It is again filtered through druggists' filtering mats, after which it is ready for bottling. Care for olive oil does not cease when it is transferred from the filter to the bottle. It is exceedingly important that *light* be excluded and that it be stored where an even and reasonably cool temperature is secured, and when offered for sale only "sample" bottles should be shown, and these are *not* to be sold, and a purchaser should decline to take a bottle of oil which has been placed where the sun's rays or even light has been allowed to reach it, and when transferred to the kitchen the bottle should *never* be left uncorked and should be kept in a cool place and in the dark.

REASONS FOR UNIVERSAL CONSUMPTION.

The constant and universal use of olive oil seems in a considerable degree governed or perhaps influenced by latitude, and within certain limits it should supplant all kinds of fats, including butter and lard,—both of which may and probably should be used in the higher latitudes and at high altitudes, but are unquestionably productive of disease in the regions adapted to production of olive oil.

The attention and influence of physicians and political economists should be directed to the general instruction in, and constant use of, olive oil by all classes of people, from the fact of its wonderfully nutritious character, whether taken into the stomach as food, or applied to the surface of the body for the same purpose, and also that it is not only healthy, but at the same time is agreeable to the palate.

History records the fact of the wonderful strength and agility of the soldiers of ancient Rome, with powers of endurence equalled by no people of more northern latitudes. One of the chief causes leading up to this result was the constant use of olive oil and dried or preserved olives.

The dread enemy of English-speaking people is dyspepsia, a disease almost unknown among the people whose diet is largely composed of the products of the olive tree, olives and olive oil.

Inquiry among educated people of Spain, Italy, Greece, France, North Africa, Syria, and in fact of all countries where like conditions exist, will develop the fact that dyspepsia is only known by its name. It goes without saying, among medical men, that oils, particularly of the olive, when properly used, not only do *not* interrupt or impede digestion, but are actual aids in promoting both digestion and assimilation.

In diseases of children, whether it be applied internally or externally, there is no remedy to take the place of olive oil.

Out of 41 cases of yellow fever in Barcelona, where the only remedy was olive oil, only *two patients died.*

For removal of "Gall Stones" it is an absolute specific, a fact which should be and perhaps is known to every physician in the land. The value of the products of the olive tree should be published far more extensively than it is, so that hundreds of thousands of people now crowded together in our large cities may be induced to occupy the millions of acres of land adapted to olive culture now lying idle in the State of California.

The Home Circle.

Love's Victory.

When I am dead, dear love, if thou shouldst feel
  Thy loneliness too hard a load to bear,
And that another could thy wound anneal
  With gentle tenderness and loving care,
My spirit hovering near thee would not chide,
E'en shouldst thou smile on a beloved bride,
  When I am dead!

I only ask she be not like to me—
  As I was dark, let her be fresh and fair;
Instead of brown locks waving wild and free,
  Close to her head coil round the golden hair;
And may she tower stately, grand and tall—
I shall not mind that I was frail and small,
  When I am dead!

So that *she* come not nestling to thy side,
  Nor climb up to the level of thy heart,
And lavish kisses without stint or pride,
  Or beg sweet pity for some pain or smart,
As I was wont; nor Love's expression crave
To be, as I, Love's gladly-fettered slave—
  When I am dead!

Nay, love her as thou wilt, and as she will,
  With fullest meed, and with a conscience clear,
E'en though thy memory hold my memory still,
  In quiet corner garnered, close and dear.
If a true heart should give thee of its best,
As I did once, I shall the happier rest—
  When I am dead!

—H. Anne Patchett Martin.

An American Hymn.

God save our native land,
And make her strong to stand
  For truth and right.
Long may her banner wave,
Flag of the free and brave!
Thou who alone canst save,
  Grant her thy might.

Ever from sea to sea
May law and liberty
  O'er all prevail.
Where'er the rivers flow,
Where'er the breezes blow,
May love and justice grow,
  And never fail.

In living unity
May all her people be
  Kept evermore.
From hence on every side
May freedom's swelling tide
Roll grandly, far and wide,
  To every shore.

O God! to Thee we raise
Our grateful song of praise
  For this glad land.
Thou didst our fathers lead,
Thou wilt their children heed,
Supplying all their need
  From Thy full hand.

—Julius H. Seelye.

Ballast.

Written for the Rural Press by Mary E. Bamford.

"Take the best of men, you get tired of them sometimes. I expect if I'd had the President, I'd get tired of him sometimes."

Virgie did not answer.

"The woman that gets Dolph," continued her mother, "will have to be holding him back all her life. I wouldn't want to always have to be ballast for a balloon."

"Yes," said Virgie, slowly.

She took the broom and went out to sweep the front steps. Mrs. Twicker, left alone, took soap and water and began to scrub the zinc beneath the stove.

"I don't know so very much about him except what Virgie's told me," soliloquized the woman, "but I can tell something by that. He's one of these sloppy, sweet-appearing men. Most women never have common sense about such. I don't know whether Virgie has or not; but *I* didn't get that kind of a man. I got a man who could earn his living at least."

Mrs. Twicker scrubbed vehemently at a black spot on the zinc.

"Men are kind of undependable," she asserted to herself, her mind still on Dolph's instability. "Men ain't substantial, though there's a difference in them, too. I couldn't have done any better work than to look after pa."

She gazed sorrowfully at her pan of soapsuds. She had thought a great deal of Mr. Twicker, with whom she had lived most happily till his death five years before.

Out of doors, Virgie had swept the steps and stood on the last one, looking over the gate, down the hill. Virgie herself had always had a feeling that Dolph was not a man to take hold of the practical side of life. She had tried to put away that feeling. It was delight enough to be with him, to see him smile. Her heart beat a little faster now as she remembered how he had leaned over the gate and talked the evening before. Dolph could always talk about himself for great lengths of time.

Virgie believed she could earn a living herself. She wondered if it were very hard work for a woman to earn a living for herself and her husband, too.

"Maybe Dolph would suggest that we take boarders and I support us cooking for them," she thought. "That's what that man who was going to marry Fannie Torsney wanted her to do. Fannie said that as soon as he asked her to earn the living for them both, she didn't want to marry him any more. He'd better have kept still till after they were married. He was just as able to work as she was."

Virgie ran into the house, but her questionings and surmisings did not leave her.

Mrs. Twicker was much worried over Dolph and Virgie in these days.

"He smiles a good deal," observed Mrs. Twicker in one of her many moments of reflection on Dolph's character. "You'd think he was real good-natured. But you can't tell. I've seen some of the smilingest kind of dispositions the meanest."

At last, however, Virgie put an end to her mother's fears by dismissing Dolph, who, after a few unsuccessful attempts at reconciliation, consoled himself by paying attention to one of Virgie's former schoolmates.

Virgie had always liked Lida. After having actually decided to give up Dolph, it was easier that Lida should have him than that any one else should. And when the two were married, Dolph really seemed to have some care about providing for Lida, and came down from his visions for a few months at least. After that, the two moved to another part of the city, and Virgie and her mother saw them less and less frequently.

The Twickers had heard nothing from Dolph and Lida for over a year when, one morning, a neighbor called.

"One of the folks you knew's dead," announced Mrs. Winfree. "You heard about her?"

"No," said Mrs. Twicker. "Who is it?"

"My niece told me last night," answered Mrs. Winfree. "It's that Lida that Virgie used to go with so much. I heard it pretty straight. My niece works in the next store to where Lida did, only it's upstairs. Lida was downstairs, where I wouldn't let one of my relatives risk their health, and my niece said she heard yesterday that Lida was dead. She's been sick and hasn't been in the store for four or five days. Lida hasn't. Did you hear what I said, Virgie?"

Virgie had just come in.

"I heard you say something about Lida," she answered.

"She's dead," repeated Mrs. Winfree. "Been working in a store and got pneumonia. My niece told me that Lida worked too hard. I never liked Dolph myself. First time I see him I said, 'He looks as if his name was William Henry.' Flat name, *I* think, William Henry."

Mrs. Winfree departed with decision.

"I'm going to hunt up the place, and find if it's true," determined Mrs. Twicker. "We'll go right off to-day. I guess we can find the house some way."

"I don't believe I want to go," objected Virgie.

"You come right along," commanded her mother. "'Twon't hurt you, and if Lida's alive and sick, some one ought to look after her, and if she's dead, some one ought to go to the funeral."

But it took long searching to find the section of the city outskirts in which Lida and Dolph had lived.

At last the travelers arrived at an uncrowded portion of the suburbs near the water. A little girl came running along the unfrequented road, and Mrs. Twicker asked her the way. The child said her name was "Baby," though she was ten.

"How soft the road is," commented Virgie, thinking compassionately of the white-faced wife who must have traveled it so often and so wearily.

"It bees awful muddy when it rains," explained Baby.

The child pointed toward a little slate-colored house on the low land near the water, and ran away, leaving Virgie and Mrs. Twicker near their destination. The path the two were following seemed to lead to the back of the little house instead of the front. The back door was partly open, and they could see that the room inside was very small. A man was bending over a sewing-machine. He was a tailor, evidently. Two women sat sewing on some heavy, dark-colored goods.

One of the women put down her work, and rose. She was Mrs. Henderson, she said.

"Yes, this 's the place," she acknowledged, "but the funeral isn't till to-morrow. She's laid out in our front room, that side. Did you know him and her?"

"Yes," answered Mrs. Twicker, and Mrs. Henderson went before them toward the front room.

"You want to see her, I suppose?" she said.

It was very dark in the windowless little entry, and the two visitors could at first but dimly see the door that Mrs. Henderson opened before them into the room where Lida lay. Mrs. Henderson drew the sheet from the face of the dead woman, and little by little, as the eyes of the visitors became accustomed to the dusk, they saw how thin and worn the silent sleeper was.

"She used to sew with us and for other folks," observed Mrs. Henderson. "She sewed till she thought she couldn't stand it to set still so many hours a day, and then she went into the store about three months ago, and that was just the end of her. It always seems to me, if you see your husband working hard every day, it makes you feel as if you was goin' to lift and help, too, all you can. But if he's lazy, it's too hard for a woman. That's what ailed her."

She motioned toward the white face in the dusk.

"Didn't he help any?" demanded Mrs Twicker sternly.

"I don't know," responded Mrs. Henderson grimly. "He was always thinking. He'd be off trying to talk politics to somebody, like's not, and he dug all over one yard trying to find some money that he believed an old bachelor buried there once. He never found no money anywhere that *I* know of, only in his wife's purse. He always seemed to think he had a right to go there for it. And he'd be that sweet and smiling and easy-going you'd never have thought he owed a debt. And he didn't. She paid them. He wouldn't be held down to work."

"She looks as if she'd had a hard time," sighed Mrs. Twicker softly.

"She does so," answered the other woman. "The toy-shop was in a basement. No one could help that, and they couldn't help the last rains coming down the stairs from the sidewalk above, till the floor of the basement was all wet and damp. It wasn't a fit place for a woman to be, and Lida caught an awful cold walking on the damp boards of the basement for a day or two, till things were some drier. And she died, and no wonder."

The grim lines about the woman's mouth softened a little as she looked at poor Lida.

"We tried to help her some, but she always seemed to scringe from being helped," added Mrs. Henderson, replacing the sheet.

Virgie and her mother went toward the door, but Mrs. Henderson stopped to pull one of the curtains more closely down.

"If that husband of hers had had a speck of grit, he'd never let her go into that basement to work, well man that he is," stated Mrs. Henderson with accentuated distinctness. But she'd do it, she'd do it. I tell you she never ought to have married him. But I suppose she thought she loved him, and I hain't no doubt she did. But love ain't everything. I remember how folks used to talk when I was young. 'Love's everything,' they'd say. They used to teach that too much, sometimes. If you loved a man, you must marry him anyway, no matter whether he was fit or not. Well, love's a great thing. It's the *greatest* thing. It's miserable to marry without love. It's wicked. But love *ain't* everything. A man ought to be a God-fearing, decent worker, and then if a woman loves him and has to scrimp when she's his wife, it's all right. I was brought up on the scrimp, but it wasn't through shiftlessness."

They had come out of the cold room into the little dark hall, and Mrs. Twicker inquired after Dolph.

"He's around somewhere. He's cried like anything," returned Mrs. Henderson indifferently, "but it's no matter. It's that baby girl of his *I* pity. Men like him always feel awful bad at first. Cry fit to break your heart, if you didn't know their'n would get cured soon enough. Of course he thought a sight of her, but love that will let a woman slave herself to death, and never lift a finger to help, isn't worth much He will find somebody else, I ain't a doubt."

Mrs. Twicker and Virgie rode home on the train. As it began to cross the water, Virgie turned in her seat and looked back. The tide was out, and away over farther yet was the little slate-colored house with its two yellow-curtained windows, behind which Lida lay.

It began to rain toward evening. At home, during supper, Virgie ate her toast and looked at the evening's paper, reading items now and then to her mother. Mrs. Twicker regarded her somewhat anxiously, but Virgie did not voluntarily begin to talk about the visit, and her mother said to herself that she hoped Virgie had some sense.

It rained hard out of doors. The two beside the fire after supper could hear the splashing on the windows.

"I'm glad the house doesn't leak," Mrs. Twicker said comfortably. "'Twon't drip anywhere."

It was nine o'clock before they knew it. The rain was still pouring heavily when Virgie started upstairs to bed.

"I'm coming in a minute," promised Mrs. Twicker. "I want to see to this fire."

Virgie climbed the stairs and went to the bureau in the dark. She lit a candle. Then see stood looking at it and its reflection in the mirror. Something that her mother had once said came back to the girl.

"The ballast gets thrown overboard, always," Virgie thought slowly. "I don't suppose the balloon misses it much. It isn't dragged down any more."

Below stairs, Mrs. Twicker carefully poked the coals through the grate, preparatory to putting the blower on the stove for the night. Mrs. Twicker gave a bright coal a final energetic punch. She was thinking of Lida.

"I'm thankful it wasn't Virgie," she said to herself. "There! I don't believe a man has any business to get married who hasn't any trade, nor any gumption, nor any mind to work. I haven't any great authority for it, but I believe it's the Lord's sentiments as well as mine."

One Woman's Life.

When she was a little girl her mother died. That was the end of love in her life. Her father was a strange, sullen man, who had a quarrel with the universe and its Creator, and had never settled it.

This one shy little girl was all the child that had ever slipped into his life, and her he scarcely noticed except occasionally in reproof.

After her mother's death, the child's life crept along with broken wings, but it did pass somehow, and the little girl was growing into a shy and timid woman, with creeping, apologetic ways, when her father died. She was no more alone than she had been for years, but there was a difference in the loneliness. It is better to have some one who is a care to you than to have no one at all.

She never had a lover. She was neither pretty nor bright, nor vivacious nor clever. She was quite colorless and dreary and monotonous. But she was a woman, and she used to look wistfully at a light-hearted pair of lovers that passed her at night on her way home from work. But it never occurred to her to wish for a lover herself.

With the running years she grew no more faded and colorless and dreary, and perhaps no more hopeless, but she grew older, and the hopelessness of middle life is harder to bear than the hopelessness of youth. It has an element of conviction in it.

Just when the first thought of it came to her she did not know. Perhaps it was the night when, so tired in body and brain that her head reeled and her knees shook under her, she opened the little cupboard at the side of her tiny bed and saw the bottle. The skull and crossbones on the label didn't suggest the pitiful thing they were intended to.

Instead of the horrible leer, the skull seemed to smile a greeting and a friendly invitation. Her hand shook a little as she shoved the bottle impatiently aside in her search for a special one; but her fingers had closed over it for an instant nevertheless.

The next night, when she reached the foot of the four long flights that led the way to her cold room up in the dark, she stood still a minute wondering how she ever could lift herself all that long way, and go on breathing to the top; and the going on with life after she got to the top was just as much of a strugle as the getting there.

"Why must I go on?" she murmured to herself; and then she saw the skull on the label again, smiling at her out of the dark. Again there was no suggestion of terror. Step by step she crept up the long way, pausing at each landing to catch a few minutes of panting, distressed breathing. Then on again until the top was reached and the door that led into the closet-like room. She passed in and turned toward the square hole in the wall and crept close to it. What a substitute for the glowing vitality of a rich, leaping flame! Yet it was all she had ever known in her life.

To-night it refused to warm her, so she moved heavily about the room, still keeping on her wraps. Her supper was in a paper in her hand, and by and by she laid it out upon the table. There was bread and a bit of smoked fish and cheese, which she tried to eat, and then set away with a sigh.

When she opened the cupboard the bottle stood directly before her eyes. "Strange!" she thought, in a dull, disjointed way. "I am sure I set that bottle to one side last night."

She took it out and looked closely at it.

It was half filled with a white liquid. What would not a few drops of it do for her! Here was pain, cold, weariness, misunderstanding, utter isolation. There was—what? But just sleep would be passing sweet.

She set the bottle back again and went back to the hole in the wall and sat down. She leaned her head against the wall and thought a few minutes. "It would be so easy. There is no no one to know," she was saying to herself a few minutes later. "There are only the bottle and I to guess, and I could put the bottle where it would never tell."

She was thinking along quite as if she were planning a delightful journey for some one else. The horrible end of the thing she was doing had no part in her thought. The thought of sin never crept in her mind for an instant, and yet she was a devout soul and had prayed her way clear in every hardship heretofore in her life. There was not one feeling in her soul but that of fascination; but one thought—that of rest. She was drawn on and on.

"First I should wash the label off the bottle and throw the little wet wad out of the window. Then I should pour out a few drops into a cup of water and throw the rest away and wash the bottle clean. I would put my room in order—I should wish to give them as little trouble as possible—then I should undress myself and put on my very best nightdress. Then I should drink the water in the cup and wash that, and put myself in bed quietly and peacefully. In the morning they would come—but no one would guess the truth, so there would be no shock. No one cares enough to make a single inquiry. And there is money enough in my drawer to bury me decently."

That would be all. But not to her. To her it meant blessed rest and peace and perhaps—a mother's love again.

A smile that no one but her mother had ever seen came over her face. She sat still a long time with her head against the cold wall, then rose and walked to her window.

The darkness outside was pierced through and through with the shine of friendly lights and full of the far off hum of human voices and the beat of human feet. Then she rose, the last light of that smile still on her face, and walked quietly toward the cupboard.

Are You Bashful?

The first chief cause of bashfulness consists in a man's attention being directed to himself. The man who is quite at ease in his office—bashfulness is most often an attribute of the male sex—becomes self-conscious in the drawing-room and very shy.

Although capable of joining in the conversation, his witty remark is forestalled, because he is too slow in giving utterance to it, or too timid to hear his own voice. The ordinary action of his brain is inhibited by his self-consciousness.

The second cause is emotion. The extreme bashfulness of many men when they are in love is proverbial, and the surprisingly few married men who suffer from bashfulness is noteworthy.

These causes are, however, usually insufficient to produce bashfulness, but there must be some further necessary condition. Many conditions predispose to it, *e g.*, a highly nervous temperament, deficient moral courage, with which is associated lack of self-assertion. These may be regarded as constitutional causes.

Another predisposing cause is defective education. The general education may have been neglected, or the want of opportunities of acquiring self-confidence in society may have been experienced.

Bashfulness is natural to youth. "Modesty is the graceful, calm virtue of maturity; bashfulness the charm of vivacious youth," and unless a young man takes advantage of opportunities of entering society, he will retain "an air of bashfulness, which is in reality the want of habitual intercourse with the world." (Waverly.)

As long as 1570 Ascham wrote that "if a young gentleman be bashful and soon blush, they call him a babishe and ill-brought-up thing." Deficient social education is therefore a cause of bashfulness.

Habit also predisposes to it. A mere indisposition to exert one's self, indulged in for too long a time, may eventually result in confirmed bashfulness.

This indifference may be due to a want of sympathy with the surroundings, or may have its origin in unalloyed selfishness—for many bashful men are extremely selfish—or may be due to vanity.—Cassell's Magazine.

TEACHER: "Now, Johnny, see if you can't give me an example of a sentence." Johnny: "Ten dollars or ten days."

Young Folks' Column.

My Baby Girl and Little Boy Blue.

My table is spread for luncheon—
Whom think you will lunch with me?
Why, my little Boy Blue, whose work is o'er,
Whose sheep lie asleep on the nursery floor—
Whose herd through the newly tasseled corn,
He homeward led by his flute-like horn.
Then he fell asleep in my easy chair,
And dreamed 'twas a haystack full and fair.
But now he's awake and wants his tea;
My little Boy Blue shall lunch with me.

And another, his sister, did you not know
That he had a sister some time ago?
With rosy cheeks and floss-like curls.
To us the dearest, best of girls.
A dainty lass to love and kiss—
To fill our hearts and home with bliss,
Many caresses to her befall,
But little Boy Blue gives most of all.

Ever bonny and winsome, fresh and sweet,
From her shining head to her dimpled feet,
She sits by my side in her tall high chair,
Like a graceful lily, pure and fair—
Yes, Baby Erma, of summers three—
And little Boy Blue shall lunch with me.

Ah! the years may pass as the years before,
And many a guest pass through my door,
And pause at my board for lunch and tea,
But none will be ever so dear to me,
Or fill my life with such joy as you,
My Baby Girl and little Boy Blue.

—Good Housekeeping.

How Joe Earned His New Suit.

"If you're so turrible anxious to have a new suit, why don't you go earn the money for it? I've a dozen uses for every red cent I have." The scolding voice ceased as Aunt Pheezy plunged the big ladle deeper in the boiling soap kettle, sending out a cloud of unsavory steam that filled the old kitchen and drove Joe out in a hurry.

"There is no hope of school for me this winter, that's certain," sighed the lame boy to himself as he glanced down ruefully at his miserable clothes, only held together by the numerous patches.

Like a swarm of tormenting imps his troubles rushed over him. How much he had suffered in the long, long years since his father died, leaving the little cripple dependent on Aunt Pheezy! The loveless life, the skimpy fare, the endless chores, and the old woman's nagging tongue, had been bitter, but this last trial was worst of all. To hear all "the fellows" talking of studying with the new teacher from York, when he must stay away on account of his wretchedly thin clothing, was more than he could bear; and he could not possibly find work now, for the farmers near by did not like to employ a lame boy. Even in summer he had seldom found a chance to earn a quarter weeding or picking fruit.

From force of habit he found himself wandering down the hill to the beach. The sun was setting in a blaze of glory. His last rosy beams danced in a broad pathway across the water and lighted up the picturesque confusion of the old shipyards, the rickety sheds and weather-beaten boats hauled up on the railways for repairs. The carpenters, quick to heed the 6 o'clock whistles, were reaching for the coats and dinner-palls hanging on the low pollard willows. One or two were collecting armfuls of clean bits of pine to kindle the good wife's fire at home. Merry, chaffing remarks passed from one to the other as they disappeared up the well-worn pathway. One tall young man marched gayly, shouting a popular song at the top of his lungs.

Swedish Jan was still busy, outlining a name on the stern of a small sloop. A tiny shaving curled away from the slender tool he held in his hand. As Joe stood watching, the name Eleanor appeared, each letter surrounded by a cleanly cut groove.

"There! that's all ready to be gilded tomorrow," said the man. Turning to replace the tool in his box, he saw Joe at his elbow. "What brings ye here to-night, lad?"

Joe, encouraged by the kindly tone, poured out his troubles and begged for work.

"Nay, laddie, 'tis too hard for ye here," looking pityingly at the crooked little figure. "Stay! I've an idea. Here's the parting-tool ye saw me using just now. Ye're clever at whittling and can draw. Can't ye manage to do a bit of carving that would sell up at the village? I've got an old V tool here that I'll make ye a present of. It's worn down till it's most too short for my big fingers, but it will fit yours first rate. See, you must push it through the wood in this way. let it cut out the pencil mark quite evenly. Here's a smooth, square piece of pine that will just do for a table top. Take it home with you, draw a few ivy leaves on it, cut them out neatly, and bring it back again to me."

"Oh, thank you, Jan; you are the only real friend I have," cried the boy, as he hurried home with his treasures. All that evening, by the light of the kitchen fire, he practiced cutting lines on an old starch-box cover. At first it was difficult to push the parting-tool across the grain; he found it necessary to sharpen the steel often on his little oilstone; but his fingers soon learned the knack of cutting a fine, even line.

The next morning he toiled like a small steam-engine, feeding chickens, drawing water and chipping kindling, until Aunt Pheezy's eye could see no task left undone. Then he plucked a branch from the ivy that overran the side of the old house, and betook himself to a sunny corner of the woodshed. Laying the ivy gracefully on his board, he fastened it down flat with a few pins and traced each leaf and stem on the clean, white wood with a lead-pencil. It took him all the rest of the day to cut out his pencil marks, but late in the afternoon he carried it down to Jan.

"Well done, laddie; that looks nice. Now I will mix a little of this walnut stain with turpentine in this old can, and you may paint over all your design inside the lines with this little brush. See; the fine groove that you have cut prevents the brown from spreading beyond it. When you get through stand it up under the shed to dry.

The next day at noontime Joe went again to the shore, for he knew that Jan would then have a few minutes to spare for talking. Mr. Brown, the "boss," as the men called him, never allowed idlers about the yard to hinder his men during working hours.

Jan was eating his dinner, carelessly balancing himself, meanwhile, on the end of the long, horizontal beam to which the horse was attached when it was necessary to draw a vessel out of the water on one of the railways.

"There are two bottles for you, Joe, up yonder on the shelf. Bring them here with your table-top, and I'll show you how to polish it. See, I put just a little of this shellac varnish on this piece of Canton flannel and rub it on well with a circular motion. It absorbs it very fast at first, as this pine is so porous. Now it is getting rather sticky. I must dip my finger in the oil and touch the wood. That will help to spread the varnish smoothly."

"How beautifully it brings out the grain of the wood and the colors!" said Joe, admiringly. "It looks exactly like a wreath of walnut inlaid in the yellow pine."

"Yes, a good bit of what folks call inlaying is done in this same way. Now leave your board to dry until to-morrow where no dust can fall on it, then varnish it two or three times again. There's the whistle! I must get to my work again."

The next morning Joe rubbed his board lightly with sandpaper until it was quite smooth, then gave it three vigorous rubbings with the varnish, touching the surface with oil as it became sticky. He allowed half an hour between each rubbing for the varnish to dry.

When he carried the brightly-polished table-top to show Jan at midday, the man exhibited it to Mr. Brown, telling him at the same time something of the boy's story.

"Needs money, does he? Why, this table will just suit my daughter's parlor. I will give it to her for a birthday present, that is, if you can contrive legs for it in time. Here's a dollar for the lad. Tell him he is welcome to work at the little bench in the shop and he may help himself to anything he can find in the heap of odds and ends in the corner."

Overjoyed at this kind treatment from Mr. Brown, Joe set to work with redoubled ardor. When the table was presented to Miss Brown, she shared her father's interest in the boy, and secured several orders for him among her friends.

The first thing he made was a blotting-book, the covers of which were formed of two pieces of cedar ten inches wide and twelve long. On each he cut three irregular chrysanthemums. After the boards were varnished, he glued to them a piece of light blue felt twenty inches wide and twelve long for a lining, forming a book. Leaves of blotting-paper were then tied in with blue satin ribbon to match, the ribbon ending in a bow at the back. The reddish-brown of the cedar with its dark chrysanthemums formed a pretty contrast to the pale blue. He made several blotters of different designs—two of fine white pine were decorated, one with violets, the other with wild roses. Both were varnished with bleached shellac to keep the wood light in color. One was lined with violet cloth, the other with pink.

Good-natured Jan sawed out a dozen photograph-frames for him one evening. Joe sand-papered them nicely, and decorated them in the same way. These found a ready sale, and Joe earned enough money before school began to buy not only a pretty blue suit, but a heavy overcoat and shoes.

The first day he appeared in them at school was the beginning of a new era for the boy. The eager interest he took in his studies soon attracted the attention of the new teacher, himself a young man just past boyhood and fresh from college. With many a long talk out of school hours, and many an inspiring look, he encouraged the little cripple.

The boy still continued to do his simple carving, for finger-work did not interfere with brain-work, so problems and picture frames, grammar and glove-boxes were finished at the same time in the long winter evenings.

His first bit of decoration was a marvelous tobacco-box for Jan, covered with an ingenious tracery surrounding mermaids, dragons and all sorts of queer beasts, copied from one of Mr. Smithers's books.

The teacher's high opinion of Joe's talent prompted him to send one of the boy's graceful designs—a panel over which trailed a riotous Virginia creeper—to a friend who was engaged in decorating the interior of houses in the city. He employed many skilled workmen in the various branches of his business, and often lamented the necessity of giving the best work into the hands of foreigners.

"Why cannot some of our bright American boys perfect themselves in a trade as these Italians and Frenchmen do?" he would often say. "Here's our good gold going into their pockets, while our young men are half-starving themselves behind counters in order that they may be dressed up like gentlemen, with nice, white hands."

In this strain he wrote to Mr. Smithers, offering at the same time to give Joe a year's course at a school for manual training if his health permitted. So it came to pass that when the teacher departed for his city home Joe went with him. Aunt Pheezy, when it was revealed to her that she was about to lose her willing little slave, was full of doleful prophecies. Even Mr. Smithers felt many misgivings as to the boy's powers of endurance, but, to every one's surprise, he soon began to grow stronger. Newly roused ambition whispered to him that even a little cripple might do something to make the world richer and more beautiful. He has now been working busily for many months at the training school. His lameness will not allow of his undertaking all of the branches, but he excels in designing, modeling and his favorite wood-carving. Visitors to the school look with admiration at the rich garlands, the birds and cherubic faces which grow under his small, but skillful fingers. His keen-edged chisel often rests a moment as he dreams of the happy time when, his course finished, he will be free to follow his own fancy and produce wonderful pieces of furniture and charming panelings and balustrades rivaling the masterpieces treasured in European palaces.—Kate Cotheal Budd, in Harper's Young People.

LITTLE MABEL: "If you don't stop I'll tell mamma and she'll tell papa, and then papa will whip you." Little Johnny: "Then I'll cry, and then grandma will give me some candy, and I won't give you any."

JOHNNY BELLOWS: "Papa, buy me a dog, won't you?" Papa: "Perhaps." "Do please, papa. I've got a can and string."



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

QUANTITY OF ORANGES.—Oroville *Register:* We have been trying to get an estimate concerning the quantity of oranges that will be marketed in this vicinity this winter. W. A. Rogers, who has grown oranges for many years in southern California and here for several years, estimates that the four-year-old budded trees will average ten oranges each. This will give 1000 oranges per acre. In Thermalito, outside of the Citrus Association grove, he estimates 70 acres, or 70,000 oranges, which will be about one and two-thirds of a carload. Henry Bird will have another hundred boxes, making in all two carloads outside of the oranges from the Infirmary and the Citrus Association, which will amount to three carloads more, making five in all. We interviewed half a dozen or more Palermo growers and estimate for that colony between five and six carloads. Wm. Dunstone, of Wyandotte, has 30 seedling trees, and from these he picked last year 10,000 oranges, and will gather more this year. When we add the oranges of Gardella, Seconi and those produced in Oroville, to those raised in the colonies, we ought to have fully 12 carloads in this section.

THE TURKEY CROP.—Gridley *Herald:* The past season has been extremely unfavorable for turkey-raising, and the result is a scarcity of that bird in comparison to previous seasons, and the outlook bespeaks good prices. Representatives of commission houses in San Francisco visited this section this week seeking turkeys for holiday trade, and they report a scarcity of that fowl in all parts of the State over which they have traveled. In the region around the Sutter Buttes, where many turkeys are raised each year and large bands roam hills and dales, there is this season one-third of the usual number. The insect crop also was scarce, and the poor turkeys suffered in consequence, while disease thinned their broods. In Tulare and adjacent counties the crop is about one-third, while in Tehama and Butte one-half a crop is reported. Some few bands of 1000 and over were seen in the northern part of the State, and around Sites, Colusa county, and vicinity large numbers were found; but, as a whole, the turkey crop is small and prices should be good, unless Eastern shipments flood our markets, and the World's Fair at Chicago will necessitate a vastly increased number there, so it appears as if the markets would not be overstocked.

Orange.

CITRUS FRUITS.—Santa Ana *Blade:* Citrus fruits require a great deal more attention than any other fruit grown in southern California, but in return are the most profitable. In the cultivation and production of the orange the first consideration is the proper conditions. It is time and money thrown away to plant an orange orchard in a locality where the soil is unsuited to its growth, or the land too damp or too sandy. An orange orchard with the proper conditions and at an age of bearing is a source of revenue for life to its owner. The orange-tree is the longest-lived fruit-tree known. It is reported to have attained the age of 200 years, and at the old Missions of southern California there are trees that have borne fruit for nearly a hundred years. No fruit-tree will grow and produce fruit so well under rough treatment. An orchard properly cared for will produce a profitable crop the fourth year from the bud, and from that time on increases in its yield of fruit. The early growth of the orange is very rapid, which continues until the tree is 10 or 12 years old. There are orange orchards in the Santa Ana valley, ranging in size from five to 20 acres, ten years old, that yield an immensely profitable income to the owners. This valley claims some of the finest orange orchards in the State, but, as before stated, to succeed in producing this valuable fruit, the proper conditions must be had.

Humboldt.

THE PEA CROP.—W. Sutherland, of Alton, in Eureka *Watchman:* Have found peas to be one of my most profitable crops. In December and January I begin my preparation by plowing my ground. Break it again in March. Sow broadcast from first of May to June and plow in about four inches in depth. It generally pays to raise and thresh, as they produce from 1½ to 2 tons of peas to the acre, worth from $20 to $25 per ton. Usually it pays better to feed to hogs than to sell. As the first sowing begins to ripen, fence and turn the hogs in. When this portion of the field is well-eaten, I change them to the next sowing. It is difficult to get the hogs fat enough in the field for good, heavy bacon, therefore, to obtain this result, I gather peas and finish feeding in pens. Green peas are also a most excellent feed to continue a flow of milk in cows.

NEW CREAMERIES.—Eureka *Standard:* C F. Bunker says that the Diamond Springs Creamery at Swauger's station will be ready for business on Feb. 1st instead of April 1st, as has been stated. The main building will be 48x72 feet in size and two stories high. The power-room will be 20x30 feet. The lower floors and basements will be of solid concrete and the whole building will be put upon the latest and best designs and will be the largest and best in the State. The machinery will all be of the latest and best patents and in fact nothing will be omitted which will add to the efficacy and cleanliness of the establishment. One great advantage in the location chosen is the unlimited supply of pure, cold water from the springs. The creamery will turn out cheese, as well as butter, thus utilizing the milk after the cream is extracted from it. This will effect a great saving, as the profit in cheese will be much larger than the profit in raising pork. The upper floor will be used as a curing-room for the cheese. The creamery will start in business with the milk from 2000 cows, amounting to 20 tons per day. This may not be the case for the first week, but that amount will be coming in daily shortly after work begins. As is well-known, creamery butter commands the top price in the San Francisco market, and this county's product takes the lead. This is the only section in the State or the country where creameries run the year round. When other States are frozen up in winter, our cows are at their best—up to their hocks in the rich, luscious grasses of evergreen pastures. When other counties of this State are dried up and the cows must be fed hay or grain, our cows have the rich grasses, nourished and kept green by the fogs and mists of old ocean. Every creamery erected adds to the wealth of our farmers, and that this county will erect many more in the next few years is assured by the success of those already running. The farmers of the island are to meet and organize a company to erect a creamery on the plans of the Diamond Springs establishment. As a source of wealth, creameries are the farmers' friends and many farms in this county will be given up to the feeding of cows, and the creamery will be the "goose of golden eggs" which our dairymen will take good care not to kill.

San Bernardino.

GRAPE JUICE. — Redlands *Citrograph:* The Stillman ranch has condensed the juice from 70 tons of grapes at its winery this year, securing a product of four carloads, which has been shipped East. The juice is boiled and treated chemically to keep it from fermenting. It is used as fruit juice for flavoring extracts and communion purposes. There is a car of raisins being packed at the ranch for shipment, and probably ten cars of raisins and dried grapes will be shipped before the season is over. The yield this year is the largest ever secured on this ranch. They are realizing a fancy price, nearly seven cents a pound, for their raisins, which are of a superior quality.

Santa Clara.

A SOURCE OF REVENUE FOR WINE-MAKERS.—S. J. *Mercury*: The vineyardist can come nearer consuming his entire product than any other class of men who depend upon the soil for a livelihood, or at least such has been his experience in Santa Clara county for the past two seasons, since the establishment of the California Cream of Tartar Works. He not only expresses the juice from his grapes for the various varieties of wines which make this valley famous, but he even sells the stems, seeds and other refuse for the manufacture of cream of tartar, receiving good money for what he formerly threw away—in fact for what he always had to pay out money to have carried away from the premises. The business has become a most important addition to the industries of the county, as, besides furnishing a market for the pomace from the wineries, which formerly went to waste, it disburses over $20,000 annually in this city. The price paid for the pomace is $1.50 per ton, and good wages are paid to the 30 or more men who are employed continuously during the season, which extends from October to March. The original cost of the plant was about $10,000, but extensive additions have been made during the past season, amounting to $7000, and the distillation of alcohol has been added to the cream of tartar business. Mr. De Latour kindly showed a *Mercury* representative through the works and explained the simple process of converting grape pomace into cream of tartar. The pomace is first boiled in tanks on the upper floor, then lowered into a press on the second floor. Here the liquor is pressed out and run into large copper tanks, where it is crystallized by cooling and becomes crude cream of tartar. Very little machinery is required for these operations, and the odor about the works is only such as is incidental to any winery. Physicians who examined the works shortly after their establishment declared the business a healthy one, and hoped that it would prove profitable to its owners, as it is a material benefit to this city and county.

Solano.

FARM AND LEVEE WORK. — Barnhardt Cor. Dixon *Tribune:* Since half the teams left for San Joaquin time have been a little dull here, but the work of preparing the ground for next season's crop continues steadily. We will finish about Thursday, when we will have 2000 acres in grain, leaving 1000 acres to be summer-fallowed. As soon as the farmwork is finished for the season, work will again begin on the levees. Two scrapers have been at work continuously, and when the remainder are started, an immense amount of work will be accomplished before the rains set in.

Sonoma.

FARM NOTES.—W. H. Murray, Santa Rosa, Nov. 8, writes: I. C. Peterson, hop-grower on the Santa Rosa creek, harvested 12 tons of hops from his 15-acre farm. One farmer says he has made as high as $100 per acre from pumpkins, but this year he will not get over $60. Orchardists plant pumpkins between trees in their young orchards. All have hogs to feed the surplus to. Wine crushing is going on quite extensively. The roads are lined with wagons hauling to the wineries.

Stanislaus.

YOSEMITE FRUIT FARM. — Oakdale *Leader:* There is an orchard near here which has just recently claimed the attention of horticulturists—the Yosemite orchard. Very little attention has heretofore been extended to this place for the reason that only a year ago it had only a few acres in bearing trees, and on the south of these there was a vast stretch of level land extending along the river, so thickly covered with sunflowers that the orchard was almost inaccessible. The farm consists of 235 acres of beautiful bottom land, situated in a romantic spot on the north bank of the Stanislaus river about a mile direct from Oakdale. It was formerly owned by a man by the name of Campodonica. He came into possession of the place about six years ago, and immediately after his purchase he sorely regretted his bargain and offered to dispose of it at exactly the same price he paid for it. Being unsuccessful, he went to work and set out about 15 acres in fruit trees in a low basin which was many years ago the bed of the Stanislaus river. The trees prospered and are to-day healthy and productive. About a year ago W. G. Williams and H. G. Howell, two experienced men from San Francisco, purchased the place and set about to transform the sunflower patch into a modern fruit farm, and how well they have thus far succeeded may be seen by a visit to the place. The sunflowers were cleared away and in their stead now stands a beautiful young orchard of about 100 acres, in trees all set out last March. The growth of the trees has been marvelous, some of which have attained a height of seven feet. The varieties set out last spring are principally Crawford, Muir, Salway and McDevitt peaches; Tragedy prunes, and French apricots. Besides these there are about 12 acres of four and six-year old trees and vines which bear heavily. From these trees Mr. Howell shipped five carloads of fruit this season. Probably next year the owner will erect a drying-house and cannery.

Sutter.

CLEANING WHEAT.—Yuba City *Farmer:* The Best Bros. have been utilizing their steam traction engine for stationary purposes, and this fall cleaned and bluestoned all their seed wheat by power from the same. This method was a great labor-saving device and about 500 sacks per day could be cleaned and run through the bluestoner.

NURSERY STOCK IN DEMAND.—*Farmer:* The nurseries in this county have already contracted for the sale of the greater portion of their stock, and the demand seems to be brisk. The principal varieties of trees in demand are peach, plum and apricot. Last season the apricot was rather off and the pear prominent, but the demand is reversed this season. Peach being the great fruit of this valley, there is always a large amount of planting done in that fruit. There is also a rush for almonds and a favorable demand for some varieties of apples and plums.

Yuba.

WINE-GRAPES USED.—Sutter Co. *Farmer:* Over 2000 tons of grapes have been used at the Marysville winery this season, which represents 200,000 gallons of wines and brandies.

NEVADA.

CATTLE NOTES.—Reno *Gazette:* G. S. Pyles shipped twelve cars of cattle Nov. 2d from Shoshone, Nev., to S. Silverberg, San Francisco, and E. Odell shipped five cars of cattle from Elko consigned to Grayson, Owen & Co., stockyards. Oct. 29th, Miller & Lux made a shipment of nine carloads of cattle, purchased in Fish Lake valley, from Basalt station to Wabuska. They will ship about 30 carloads more next week. These cattle will be fattened in Mason Valley.

The *New Era*, Lovelock, says: D. C. Wheeler is to feed at least 5000 head of sheep on the Marker farm, and may possibly increase the number to 10,000. Miller & Lux have just shipped from Winnemucca 1300 head of cattle, and have en route to the same shipping-point three bands, numbering 1600 head—a total of 2900. The Arizona cattle shipped to the Dunphy range in the eastern part of the State a little over a year ago, are sleek and fat, and from emaciated little runts have developed into fine beef cattle of nearly the size of our native steers. The importing of these animals at a cost of $13 to $15 per head must be a paying undertaking.

Virginia *Enterprise*, Nov. 10: F. E. Cook, foreman for the Sutherland Land and Cattle Co., was in from Willow Creek the first of the week. He says his company is receiving 3000 head of Arizona cattle; Land and Bruce will pasture 3000 head of Arizona steers on the Meacham ranch near Humboldt House; and Col. Hardin has 2000 head en route to Winnemucca. Five trainloads of the stock have passed here since Sunday.

WASHINGTON.

CRANBERRY CULTURE.—Portland (Or.), Nov. 3: Pacific county cranberries are beginning to be an important crop. Last year, 2000 barrels were marketed, valued at $16,000, and this season the crop will be much larger. The berries are equal in quality to the Cape Cod product. The owners of the marsh live in Oakland, Cal., and have been cultivating the berry in Pacific county for over ten years.

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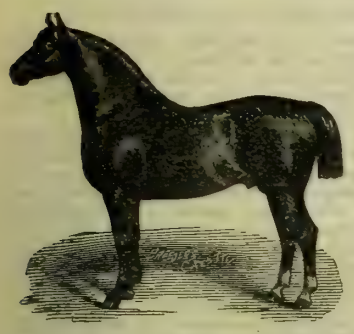
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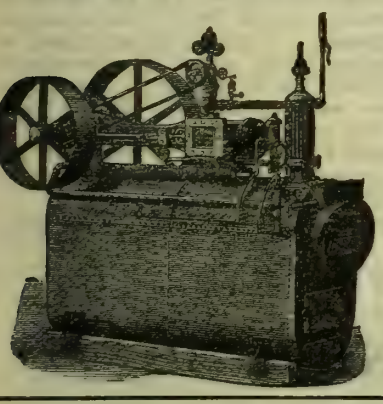
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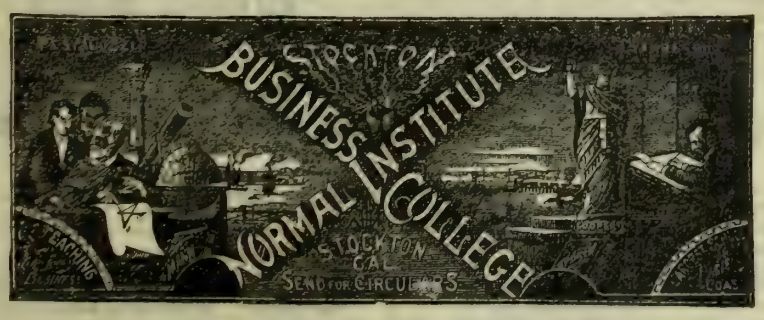
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ORCHARD, Choice Eastern; ORCHARD, Choice Australian; RED TOP GRASS.
KENTUCKY BLUE GRASS, Extra Clean; RYE GRASS, Perennial English.
RYE GRASS, Perennial, Australian; RYE GRASS, Italian; JOHNSON GRASS, or Evergreen Millet.
MILLET GRASS SEED, ONION SETS, TOP ONIONS.

SEND FOR OUR CATALOGUE OF GARDEN, FLOWER AND TREE SEEDS.

We sell the **Highest Grade of Grass and Clover Seeds that is offered in this country.** The difference in price between choice, clean seed and second or third quality is from one to two cents per pound. **Be sure and get in our samples and prices before you buy elsewhere.** We are always in the market to buy Alfalfa, Clover and Timothy Seeds.

McKEVITT'S EARLY.

The New Yellow Freestone Peach.

FIRST AND BEST OF EARLY YELLOW PEACHES.

RIPENS IMMEDIATELY AFTER THE ALEXANDER (White Cling), which is the earliest peach in market.
Fruit is round, of medium size, **VERY HIGHLY COLORED,** flesh firm and sweet.
THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.
Tree healthy, strong grower, and heavy bearer, never having missed a crop.
A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

GIANT OAK FRUIT CO.,

VACAVILLE, CAL.

Tulare County customers can obtain stock from above Company at Farmersville, Tulare Co.

CENTRAL NURSERY CO.

For the season of 1892-93 we are prepared to furnish a complete line of **Fruit** and **Ornamental Trees, Vines, Figs, Small Fruits,** etc,, on short notice and at reasonable living prices. Our stock is free from insect pests, and for strength and health of root growth is not excelled, as we give this special attention.

Nurseries are at Acampo on Stockton R. R., and we have an office and tree yard in Sacramento from the 1st of December to the 15th of April. **VAN GELDER & WYLIE, Prop's,**

(SEND FOR CATALOGUE.)

FRUIT TREES!

ALMONDS! I. X. L., COMMERCIAL AND NE PLUS ULTRA.

EARLY CRAWFORD, FOSTER MUIR AND ORANGE CLING **PEACHES!**

FRENCH PRUNES on Myrobolan, Peach and Almond Roots.

BARTLETT PEARS, Apricots, Cherries, Olives, Walnuts, Etc.

Correspondence Respectfully Solicited.

TRUMBULL & BEEBE,

GROWERS OF FRUIT AND ORNAMENTAL TREES, VEGETABLE, FLOWER AND FARM SEEDS,
419-421 SANSOME STREET, SAN FRANCISCO, CAL.

STOCKTON NURSERIES,

ESTABLISHED 1853.

FRUIT TREES. FRUIT TREES.

GRAPE VINES.

Also Fine Stock of Shade and Ornamental Trees, Shrubs, Palms, Roses and Carnations.

PLANTS IN GREAT VARIETY.

Correspondence Solicited.

E. C. CLOWES, STOCKTON, CAL.

OLIVE NURSERY, POMONA, CALIFORNIA.

C. F. LOOP & SON,

VARIETIES FOR OIL—Razza, Grossaia, Rossalina, Bellmonte, Olivastra, Leccino, Piengente, Morinello, Uvaria, Corregiola, Infrantoia, Rubra, Atrovialacea, True Picholine

VARIETIES FOR PICKLING—Regalis, Grossaia, Hispania, Santa Catarina, St. Agostino, Ascolana (White Olive of Ascoli).

PRICE, 50 Cts. Each, $40 per 100, $350 per $1000; Ascolana, $1 each.

Terms of sale, Cash on delivery at the railroad station. Time for transplanting, January and February. Trees offered for sale are two years old, propagated from imported stocks.

Seeds, Plants, Etc., Continued on Page 435

PATRONS OF HUSBANDRY.

The Evolution of the Grange.

The Grange in its incipiency was a child of necessity. The organization, in its now mature age, is none the less needed by the farming community than it was in the beginning. It has become one of the most useful institutions in the land, and its influence for good is felt wherever the flag of the Union floats. It is not a political machine, neither is it a religious institution; yet it exerts a powerful and healthy influence in both directions.

The necessity for some such organization had long been felt, and some crude efforts, on a limited scale, had been made to meet the want; but not until what is now known as the Grange took form and shape did the farmers of the land feel assured that their great want had materialized. When they became assured of that fact, they rallied under its banner with much enthusiasm. But with some, the expectations of great and immediate results were not realized. Many that were too enthusiastic, over-sanguine and selfish withal—unreasonable persons who expected through the Grange to accomplish business impossibilities—became dissatisfied and gradually dropped out; but their places were soon filled by more reasonable and more substantial members. With such the organization has moved along quietly, building firmly as it grew, until it has become a giant in the land, with a history and with an influence that is felt throughout all our industrial, social and political relations.

The Grange has always been progressive in character and potential in energy. It has been gradually evolved from the needs of the times and from the hearts of honest men. Those men have built well—better, indeed, than they knew—as the noble fabric which they have erected most amply proves.

For many centuries, other callings have had organizations devoted to their special interests. The farmers, though last to move, have made rapid strides. Their leaders have been practical and sagacious. They have demanded nothing unreasonable, nothing but what should commend itself to all right-minded men as proper and practical steps in aid of a great industry.

The Grange will be in the future, as it has been in the past, ever ready to espouse the right and oppose the wrong. It will ever be found on the side of progress and opposed to sloth and delay; with intelligence as against ignorance; with the honest and against the dishonest.

The work of the Grange has but just commenced. There are possibilities in the future, which will be evolved as broader conceptions of the economies and true relationships of individuals and industries are better understood. The conditions that surround us afford broad fields of labor and demand that every man and every woman should give the best possible effort to advance and elevate the Order. Let the work go on. Let our numbers be increased. Let every officer and every member of the Grange do his or her part with increased energy and enthusiasm.

The Grange Thanksgiving.

The Puritan Thanksgiving, now recognized as national both as a religious festival and a family reunion, is one of those institutions that has been potent in fostering the love of home and of country, and developing a high standard of citizenship.

As a nonpartisan and nonsectarian institution there are many communities where the Grange best represents the home. Its social features can well be exemplified to the community by an appropriate address, to be followed by literary and musical exercises and by customary dinner and social diversions to suit the company. Invited guests would feel themselves honored upon such an occasion.

Where church services were held these might follow, and where they were not, such exercises could take their place.

Most of our committees differ too widely in opinion to unite in the promotion of any creed. In the Grange, Protestant and Catholic, Democrat and Republican, Jew and Gentile, doubter and devotee, can unite in that love to the common Father which shines forth in charity to our brother man. We stand upon a wide platform, and such a one needed to harmonize the good and repress evil and selfishness.

In those times that tried men's souls, when heavy burdens and grievous afflictions darkened the past, and terror and uncertainty hung like clouds over the future, we found many things to be thankful for, and in the presence of the Father of mercies, we consecrated ourselves anew each year to the cause that was so near our hearts. Shall we be less grateful in this the hour of prosperity?

Faded uniforms of blue and gray awaken distant memories of heroic sacrifices and desperate struggles between those who are brothers now and rivals in devotion to the one flag. Factories are busy; farms productive; inventions the wonder of the world, and our flag never protected its citizens as it does to-day.

Our boundless resources, commanding position, and reputation for valor and loyalty, give to us the safety from assault that European nations seek in vain from armies that drain the lifeblood of the people.

In addition to many national blessings, each State, community and Grange has special cause for gratitude. It makes us better to think and speak of such things.

Let us make it an annual custom of the Order to exemplify to our friends and neighbors on this day the social features of the Grange.

A Visit to Danville Grange.

Last Saturday the representative of the RURAL who attended Danville Grange was greatly interested in a very animated discussion of the Constitutional amendments.

There were more than 20 in attendance, many of whom helped to build their fine hall and have been constant workers since the Grange movement first began in California. They have not grown careless regarding forms nor lost their interest in the proceedings. Perhaps the permanency of this Grange may be partly accounted for by the text which says, "Where the treasure is, there will the heart be also."

Almost their first move was to build a fine, large hall, by private subscription, which has been headquarters for everything of a social nature ever since. There are 80 paying members on the roll.

Near the close of the session a short time was devoted to discussion of more systematic educational works, calculated to interest the young by Chatauqua methods and the community in general by farm institute work. These subjects will come up for more extended discussion at next meeting. Chatauqua methods will enable such as desire to study at home to avail themselves of the experience and guidance of those who make a specialty of the study that they wish to pursue. All feel that it is very desirable to interest the young.

A Chatauqua class where they could meet under direction of a competent leader every two weeks for examination of work, comparison of specimens collected, and plans for work of next meeting, would seem to promise great usefulness. Bro. Burgess, the pastor of the Presbyterian church and owner of a very fine fruit ranch, showed considerable interest in this plan, and we hope that he may be able to organize a class of six or eight to pursue some such study as entomology.

The Odd Fellows have lately had a very successful public meeting, addressed by W. H. Barnes, and members of the Grange seem to recognize the wisdom of their methods.

The farm institute movement may be made to effect, in a similar manner, the interests of the Grange. Let a topic of present interest be chosen; speakers of reputation in that specialty invited; and those who have been successful in the community asked to prepare themselves to lead the discussion on the various topics. Advertise and prepare for the meeting as for a circus or fair; and it will act upon interests of the Order as a public meeting of the Grange.

While both universities have shown the utmost liberality in cooperating with this movement, they realize that it is easier to lead a horse to water than to make him drink, and they heartily welcome such demands for work in this line as come from the people, accompanied by exertion on their part to make it successful.

Prof. E. J. Wickson, of Berkeley, will assist in arrangement of program, securing speakers, etc., in behalf of State University, which assigned the care of that work to him on request of the State Grange.

It was expected and desired that subordinate Granges would assume the work of local organization, drawing out audiences, taking part in discussions, etc. In view of its age and standing as a social and educational Order, it was not expected that they would allow so much younger an institution as the Alliance to be more zealous or efficient in this good work.

Several of the members of Danvllle Grange have had experience at the State capitol, and they are very well posted on politics.

In lengthy interviews after the session, one brother called attention to all the failures resulting from Grange enterprises, and figured up how much better some other course might have been, while another dwelt upon the substantial benefits realized, but often forgotten. Both are earnest advocates of the principles of the Order and honestly zealous for the cause, although they propose to differ wherever there is room for an argument. Perhaps both might agree that the cause will be best promoted by renewed activity along the social and educational lines where it has proven most successful.

It seems that there is room for some better system of securing that hearty cooperation between State and subordinate Granges that is so desirable for the prosperity of both.

The cordial welcome and hospitality by which members of the Order meet as strangers and part as friends endear one to a society that we all love because it makes men better.

From the State Lecturer.

LODI, Nov. 13, 1892.

EDITOR GRANGE DEPARTMENT: — Our election has just passed and the people have made their choice for President for the succeeding four years, and we hope for the fulfillment of the promise of a new era, and of better times for all, and the producers in particular. We, as Patrons, should now begin to look around us in our several subordinate Granges for the best one for our leader the coming year as master and secretary, and, not least by any means, the lecturer, the better to carry out the recommendations of the lecturer of the National Grange, and, if we do, I am sure there will be a large increase of the roll of each subordinate Grange the coming year.

We have had a trial of the reform ballot law, and it has proved a reform and a good law. The action of the Supreme Court concerning the form of the ballot was a commendable act. I did not see the boss marching his subjects up to the ballot-box; quite a change from former elections. There was only one rejected ballot in the precinct where I voted in a total poll of 198 votes; therefore the argument of many journals heretofore, that half of the voters would or could not cast a ballot under this system correctly, and that they would lose their votes, is entirely refuted. But I find there are a few changes that it seems to me are desirable and would be beneficial.

First, in the country and where a municipal election is not held at the same time, seven persons are sufficient for an election board; second, the Story count is not applicable since the Supreme Court decision; and third, making the duties of the election board more explicit. But in the main it is a good ballot system. Fraternally,

J. D. HUFFMAN, L.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

FOR FREE MAIL DELIVERY.—The Legislative Committee of the State Grange to whom was referred portions of the Worthy Master's address, supported his recommendations and its report was adopted, containing the following: In that portion referring to legislation we fully concur in the suggestions of the W. M. that the chief reason for our failure in some instances, in legislation sought is because farmers choose some one not of their own or kindred calling to represent them.

Under the head of National Grange, he speaks feelingly and truthfully of the important work done by that body in supporting and upholding the dignity and influence of the Order, and of the preparations made for establishing headquarters of our Order at the World's Fair at Chicago in 1893.

In the matter of free rural mail delivery your committee fully concurs in the sentiments of the Worthy Master, and believes if an earnest effort should be made on the part of the members of this Order in conjunction with the known endeavors of the Postmaster General in this direction, we can secure through Congressional action at the next session of that body, authority for undertaking at least a partial system of this kind, looking for its general adoption ultimately.

ELECTION OF OFFICERS.

The Constitution provides that the officers of subordinate Granges shall be elected at the first regular meeting in December, It is, therefore, time that every good Patron should consider the subject well as to who can best serve the cause in the different offices of the Grange. Every one is important in its special sphere. Try to get the right persons in the right places. First of all, as far as possible, use diligence to secure full meetings from now on, until the all-important duty of election of officers is performed. Patrons, if you love the Order, if you desire to be useful to the Order, or even loyal to our noble fraternity, attend your meetings and lose no opportunity in getting the best leaders to the front. The services of every true Patron are needed to forward, or even maintain, the already important position the Order now holds.

THIS is one of the best seasons of the year to enliven up the interest of lukewarm Granges and to put forth efforts to revive dormant Granges. Let the members of Granges that are thrifty reach out a helping hand to any faltering neighbors. A little neighborly help in that way often does an immense amount of good.

DECEMBER 4TH should be remembered and celebrated by every Grange as the 22d birthday of the Order. Wherever convenient, let several Granges join in commemorating that good day and make it a happy and inspiring one for the future usefulness of our Order.

AMENDMENT TO CONSTITUTION.

It was voted at the last State Grange that the following proposed amendment, by J. D. Huffman, W. L., be immediately submitted for consideration by subordinate Granges, final action to be had at the next session of the State Grange:

That Art. II, Sec. 1, of the S. G. Constitution be amended to read as follows: The membership of the State Grange shall consist of masters of the subordinate Granges and their wives, if matrons, and where the wife is the master of a subordinate Grange, her husband, if a fourth-degree member in good standing, shall be a voting member in the State Grange. Past masters and their wives, when matrons, are honorary members and are eligible to hold office, but not entitled to vote.

Another proposed amendment, in order to make further provision against the possible abridgment of or misunderstanding as to representation of subordinate Granges, namely: 2d. Proposed Amendment. To insert in Art. II, Section 1, of the Constitution of the S. G., next preceding the words "Past Masters," the following: Two alternates, termed first and second alternates, shall be elected by ballot by each subordinate Grange during the two months preceding the annual session of the State Grange, and shall act respectively as numbered, for the master and wife or husband of the master if absent, or in lieu of the wife or husband if the master has no wife nor husband who is a fourth-degree member.

FRATERNAL ACTION.

Sec'y Geo. Harris, of Sebastopol Grange, writes, Nov. 10th: "Our Grange is fairly prosperous; a class of four is to join at our next meeting." He also incloses the following, dated Nov. 5th, which tenders Petaluma Grange a hearty support;

Resolved, That Sebastopol Grange will, in such ways as we can, assist Petaluma Grange—in case the next session of California State Grange shall be held at Petaluma—in entertaining the same.

NOTE FROM SACRAMENTO GRANGE.—Sacramento Grange, No. 12, will celebrate anniversary day on Dec. 3d in an appropriate manner. The resolutions in favor of State school-books, and of the amendment of the Civil Code in relation to community property were unanimously adopted Nov. 12th. The petitions accompanying the latter resolution, a copy of which is enclosed, are being promptly circulated by the Woman's Work committee.—H. L. J.

Take Care of the

NICKLES

and the

DOLLARS

Will Take Care of Themselves.

If you only save one or two Nickles on each Fifty-cent purchase

You will be many Dollars ahead at the end of the year.

Send for our catalogue of

RUBBER GOODS.

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Mention this paper. 132 MARKET ST., S. F.

Gas Machine.

The new improved AUTOMATIC GAS MACHINES stand unequaled on the whole Pacific Coast for lighting country homes, suburban residences, hotels, etc. The light produced by these machines is Bright, Clean and Steady, but soft and soothing to the eye. Emitting No Smoke and being uniform, it has no equal for reading by. The cost is more than One-Half Less than coal gas anywhere, it being but $1 per 1000 cubic feet These Machines are sold at reduced rates, but every one is guaranteed to give entire satisfaction. Before purchasing elsewhere, call and examine them or send for illustrated catalogue at Nos. 43-45 Stevenson Street, San Francisco, California.

JACOB SCHREIBER, Manager.

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

KERN COUNTY LAND COMPANY.

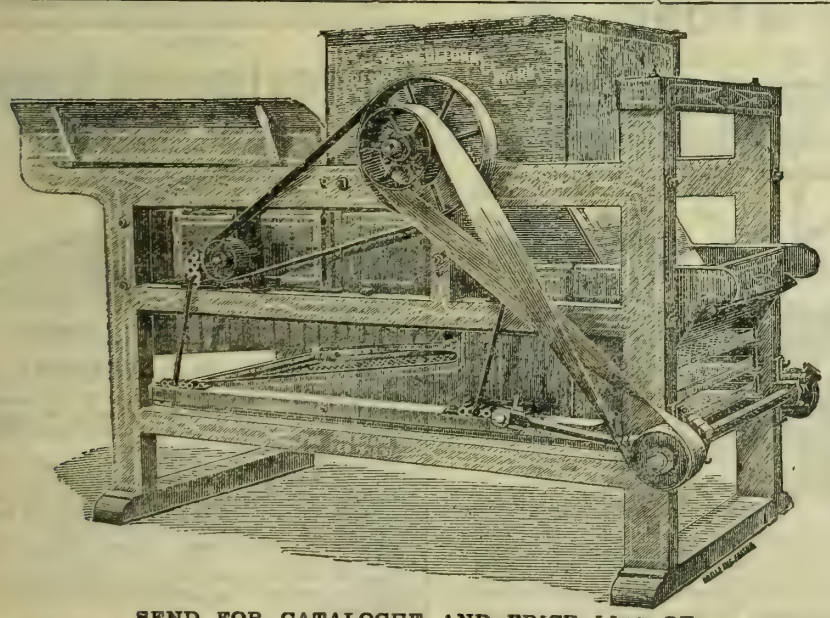
S. W. FERGUSSON,
Bakersfield, - - - California.

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.



SEND FOR CATALOGUE AND PRICE LIST OF

Raisin Machinery,

FRESNO AGRICULTURAL WORKS, - - FRESNO, CAL.

THE ROCHESTER STEEL FRAME ORCHARD and VINYEARD GANG.

LIGHT WEIGHT, EASY DRAFT, AMPLE STRENGTH.

STEEL FRAME OUTSIDE OF WHEEL

Prevents Injury During Close Cultivation.

LEVER ADJUSTS DEPTH WHILE PLOWING.



A simple adjustment permits plow nearest vines or trees to make shallow furrow, say two inches, thus avoiding danger to the roots, the others plowing required depth.

Weight of Three-Gang 7-inch only 200 pounds, and amply strong for hard soils. Price complete, $38.00.

The only implement with advantages of both Plow and Cultivator, thus satisfying the advocates of either.

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STATE FAIR, 1892.





The following San Francisco Firms ana Individuals Received the Highest Awards of the State Agricultural Society at the late State Fair.

BAKER & HAMILTON,

BEST DISPLAY OF AGRICULTURAL MACHINERY, CALIFORNIA MANUFACTURE, GOODS MANUFACTURED BY BENICIA AGRICULTURAL WORKS.

BUFFALO-PITTS THRESHING MACHINE.
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BUCKEYE REAPERS.
HALLECK POTATO DIGGER.
BENICIA SIDE-HILL PLOWS.
EUREKA SULKY PLOWS.
BENICIA SOD PLOW.
BEST PLOW FOR ALL PURPOSES, THE "BENICIA."
BENICIA SPRING WAGON.

J. W. GRACE & CO.

CANNON'S SHEEP DIP—Three in competition.

PARAFFINE PAINT CO.

BEST PREPARED PAINT (P. & B.).
SAMPLES OF PAINT, CAL. MANUFACTURE (P. & B.).

The Width of Wheel-Tires in Cities.

The subject of the width of wheel-tires as compared with loads carried on omnibuses, heavy drays, etc., moving over the paved streets, says the *Engineering News*, is brought to the attention of the city authorities of Philadelphia, by Mr. James H. Windrim, Director of Public Works, and Mr. Windrim details some bits of practical experience in this line that will be of interest to municipal officers elsewhere. He says that the omnibuses running on Broad street, in Philadelphia, have an average tire of only 2½ in. During the repaving of Broad street, at an expense of $204,643 in 1892, this omnibus traffic was diverted to side streets with lighter pavements. The result was that in 14 days damage to the amount of $6000 was done in displacing paving, broken crossing-stones, sewer manholes and stop-boxes for gas and water. This all happened in an area of 16,635 sq. yds. of street pavement.

It is altogether probable that the damaged side street referred to was of the more antiquated type of street-paving in that city and was stone-laid on an earth foundation. But undue concentration of load should also be avoided in the traffic over a modern pavement with a concrete base, and its greater first cost is only an argument for its better preservation. We pay altogether too little attention to the subject of tire-width, both in our cities and in the country, and it is time that we were putting into practice regulations that have long existed in other countries. We have failed to find any specific American city ordinances on this head, and the late road-law of the State of Michigan, simply providing that users of wide tires are entitled to a rebate of half their road tax, is a rare exception in State legislation of this character.

English road-laws provide that where the load per wheel is from one-half to three-quarters of a ton, the width of tire shall not be less than 3 in.; where the load ranges from three-quarters to one ton, minimum width shall be 4 in., and from one ton to one and one-half tons per wheel, the tire must be at least 6 in. wide. Vehicles with springs may reduce this tire-width 1 in. This law practically coincides with German and French regulations on this subject. To meet this English law the Broad-street omnibuses complained of should have had tires 5 in. wide instead of 2½ in.

The effect of narrow tires, with a heavy load, upon modern street-paving has not yet been carefully studied and reported upon. But it needs no special study to convince an observer that present practice imposes heavier duty upon such pavement than is necessary, in the face of possible municipal legislation. In the case of stone blocks a broad tire may distribute the imposed load over the base of two blocks instead of one, and in the case of an asphalt pavement ruts are much less likely to occur than with the narrow wheel.

But as the change of wheels would be a costly operation in the aggregate, the salient question is, how can this be done with the least damage to individuals? There is no doubt that a compulsory law could be framed and, if need be, enforced. But the better plan would probably be to directly tax the user of narrow tires under heavy loads, and to free from all tax the men who conform to established regulations. Such an arrangement would give time for the change and yet contain an inducement for as rapid a change as possible. This is practically the same principle that now induces the owners of certain newly-built country roads to remit tolls on such vehicles as conform to published tire requirements. Broad tires are certainly better for use on soft or yielding roads; and on paved or well-built macadam roads the tractive force is independent of the width of tire, provided this width exceeds 3 or 4 in. To the objection that English wheels are clumsy and we will not have them, it can be answered that if broad tires are made the law, wagon-builders will soon eliminate the clumsy features. In the majority of our cities, the same street conditions exist that caused the marked failure in Philadelphia; and in suuh cases, at least, it is conclusively proved that some law of this kind is necessary and that its enforcement would be economical to the community. It seems a bit unwise to adopt modern street-paving methods, and yet to refuse to use every reasonable precaution for the better preservation of costly pavements.

Unitarian Literature

Sent free by the CHANNING AUXILIARY of the First Unitarian Church, cor. Geary and Franklin Sts., San Francisco. Address Miss S. A Hobe, as above.

$500,000

TO LOAN IN ANY AMOUNT AT THE VERY LOWEST MARKET rate of interest on approved security in Farming Lands. A. MUELLER, Room 8, 420 California Street, San Francisco.

HER POINT OF VIEW.—"Men laugh at us for having senseless notions and doing things for which we can give no good reason," said a woman recently. "I wish some man would explain to me why he carries unimportant papers about him for months, wearing them out in so doing. I've often watched my husband carefully change the contents of coat or trousers pockets from one suit of clothes to another. Soiled, worn envelopes and folded papers are tenderly transferred, and for a long time I was impressed with the importance of the operation and drew an instinctive breath of relief when it was safely over. One day my curiosity got the better of me and I begged for a sight of those mysterious documents guarded with such jealous care. To please me my husband went through them. He found several unreceipted bills, some that had been paid and receipts filed, a note from a friend dated three months back, regretting that he didn't find him in his office when he called; one or two business cards of firms he had no recollection of knowing, several advertisement circulars, a playbill of last season's performance, preserved for some forgotten temporary reason, and perhaps three really important papers among the whole lot. And I honestly believe, if I had not prompted the investigation, Mr. —— would be treasuring those worthless bits of paper to this day.—New York Times.

FACTS A—Absolutely. B—Best. C—Cure for Pain.
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FIGURES 1—A Prompt Cure. 2—A Permanent Cure. 3—A Perfect Cure.

Shawls Over 200 samples from 2 of the largest mills in Europe, mostly knit or fancy woven, for stylish Evening Wear, $1.50 to $8.00. You save over half by buying these—**READ.**

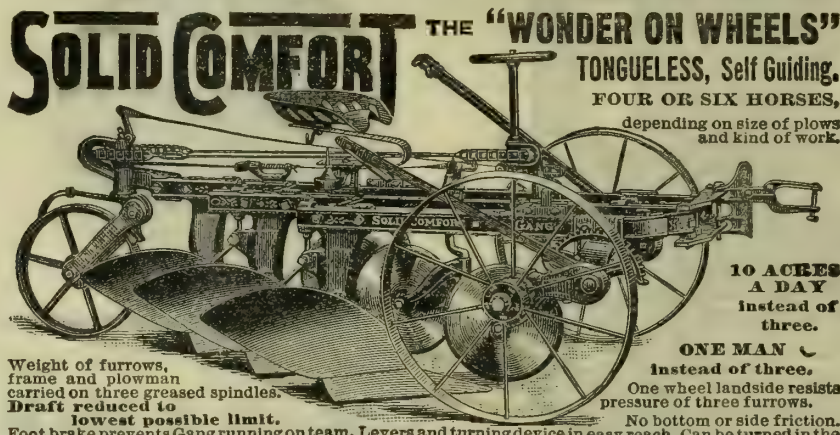
Coats Ladies' ¾ Coats, say 32-in. long; Sizes, 32 to 44; Black Navy, Light Tan—all pretty, serviceable and cheap, $3.75, $4.75, $6.50, $7.50, $10.00. Girl's Coats, long, $3.50 to $5.00.

Newmarkets Closing over 60; sizes, 34 to 42; dark and medium colors; long coats; last year's style; worth $9 to $14; now closing, $4.50 to $7.00. Be quick with orders.

On any of the above goods send full description with price, and we will forward subject to approval, to be returned if not O. K., at our expense, and money refunded.—Send for full list.

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414, 416, 418 Front Street, S. F., Cal.

SOLID COMFORT THE "WONDER ON WHEELS"
TONGUELESS, Self Guiding.
FOUR OR SIX HORSES, depending on size of plows and kind of work.



10 ACRES A DAY instead of three.
ONE MAN instead of three.
Weight of furrows, frame and plowman carried on three greased spindles. Draft reduced to lowest possible limit.
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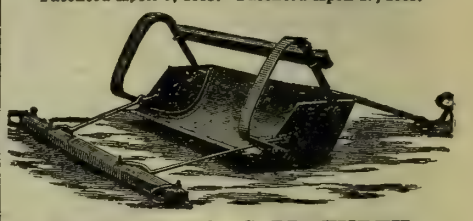
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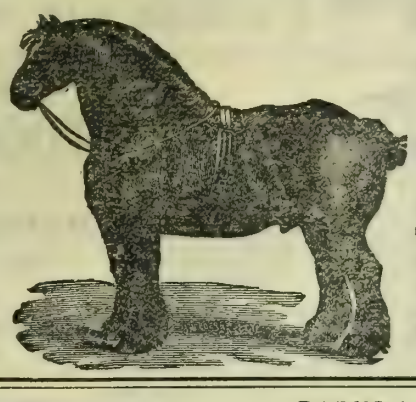
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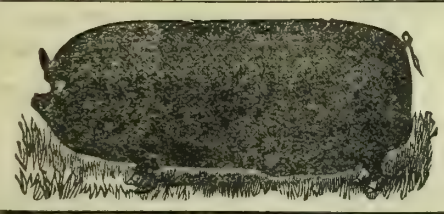
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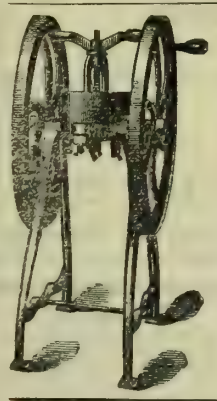
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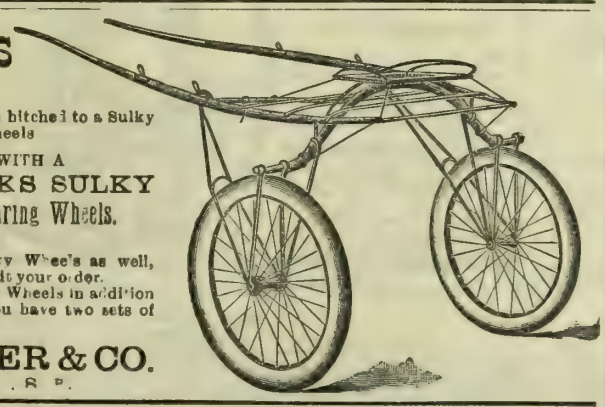
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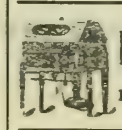
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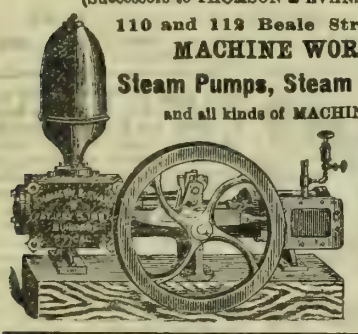
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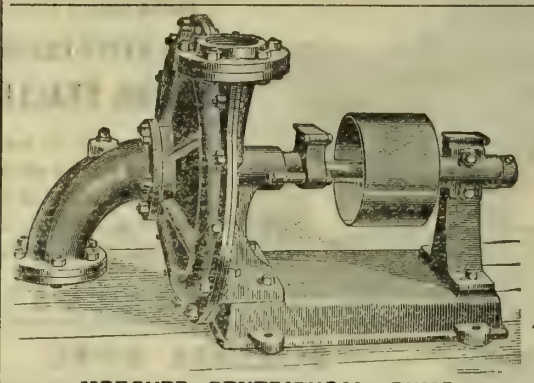
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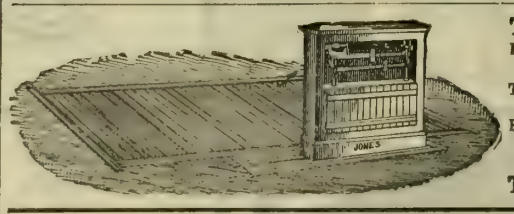
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S. F. Market Report

Market Review.

San Francisco, Nov. 16, 1892.

General trade in farm products has been light in all lines except those adapted to the holiday trade. There is a growing conviction that much better times are near at hand, and that the year 1893 will witness general prosperity in all branches of trade which will be favorably felt in all kinds of farm produce. The money market is essentially unchanged.

Cereals.

Wheat the past few days has been unduly depressed at home and abroad. This depression, it is said by well-informed operators, is part of the program outlined by the moneyed syndicate which is manipulating the leading markets of the world. It goes without saying that the syndicate is materially assisted by the unusual movement of wheat in this country and also by the large ly increased, visible supply the world over. The large movement and heavy supplies have invited short selling, even at the phenomenally low prices of the past few weeks; which has been taken advantage of by the syndicate It is said that the markets of the world are largely oversold, and that only a favorable opportunity is wanting to advance prices. Operators in this country have evidently forgotten that so far this season the weather has been exceptionally favorable to farmers delivering and therefore the reserve in the farmers' hands is light; besides, there is a large increase in the number of elevators and warehouses reporting stock of grain. The local wheat market has held firm throughout the week. Shippers and millers, when forced into the market, had to pay full quotations with, at times, an advance; but a seller, when forced into the market, had to make concessions to induce buying. The large tonnage in port, and unfavorable weather cause a strong holding by farmers. Two dry winters make a wet winter a necessity to insure a good yield, but at this writing it looks very much as if we will have a very similar winter to the last two. From Oregon we learn that the season east of the Cascades has been favorable to the fall-sown, and that the crop promises to be larger next year than it was this year.

Australian advices report that the outlook is favorable for a la ge crop. European mail advices report light buying by the continental countries.

Barley the past week was depressed on Call so as to buy actual grain on more favorable terms. Cold weather the past few days has caused more feeding. The strong market for hogs is causing more liberal feeding in several localities for pork. This feeding is emphasized by the favorable statistical position of hog product at the East and a steadily advancing market for live hogs. The market to-day was fairly firm for spot, with a fair inquiry reported.

The receipts of oats the past week were exceptionally large, yet the market held fairly firm. The strength of the market is largely due to strong holding and a report current that available supplies up north are well in hand. The local demand is reported fair for the season of the year. The market for seed oats is said to be strong.

Corn has held to steady prices. A confirmation of the crop in this State being short has created a better feeling, as has the knowledge that there has been an increased feeding to stock. Eastern mail advices report that there has been, and still is, a heavy feeding to hogs, owing to the latter fetching more money, with a strong possibility that still higher prices will range in the near future.

Rye and buckwheat have met with only a fair degree of attention the past week.

Feedstuff.

Bran and middlings have held to fairly steady prices, but toward the close there appears to be a firmer feeling, owing to cold weather and a belief that frosts have nipped the green feed. Roll barley has been in fair demand at steady prices. Toward the close, it is said, there is more inquiry.

Hay has ruled weak, but so far as we can learn, buyers had to pay full quotations when forced into the market; but when not pressed by requirements, they tried to get concessions. It is quite generally believed that the present cold weather will create an enlarged demand for hay, which, if realized, ought to cause better prices. The dry weather causes stronger holding.

Dairy Produce.

The butter market has been in about as unsatisfactory a condition for the selling interest as it generally gets. The depression has been brought about by the trade generally having an unusually heavy supply of pickled and solid and a continued free receipt, for the season, of fresh roll. The stock of pickled, in this city, is fully 75 per cent more than at the corresponding time last year: Keg, about 80 per cent; California fresh roll, about 65 per cent; but of eastern there is all of 20 per cent less. In the hands of the retail trade, it is said, the supply of pickled is largely in excess of any former season. The continued cold weather may possibly soon steady the market.

Cheese has held to steady prices, notwithstanding the large stock in hand. The visible stock in this city is largely in excess of that at the corresponding time in 1891. The demand is fair for the better grades of mild.

The receipts of eastern eggs have been quite free, but as the quality has been generally good, better prices were secured. The most of the retail trade sell selected packs of fresh eastern for Californian, which tends to weaken the latter. Consumers are also going largely to eastern, owing to the difference in prices. China and baker eggs are now mixed in with "as is."

Vegetables.

Cold, frosty mornings the past week nipped the few straggling summer vines, and consequently we can soon look for the total absence of cucumbers, etc., from our market. The general market has been more or less featureless. The absence of liberal supplies restricts the demand for perishable vegetables. There is a fair demand for roots and cabbages.

Onions have made another advance under lessening supplies and a fair demand. The more choice good-keeping are meeting with a fair shipping demand.

The market for potatoes has had a wide range. While choice, free from worms or disease, good keepers have met with a good demand, poor keepers and otherwise inferior have crowded the market and sold at the best prices obtainable. The general feeling is that while choice, good keepers will find ready sale, and perhaps advance, poor stuff will meet with an offish demand at low prices.

Fruit.

The market is well supplied with persimmons. The quality shows an improvement. Table grapes have been in oversupply, and as the quality was poor to fair, the market suffered, owing to holders forcing sales; These forced sales make it difficult to quote correctly. Choice good-keeping grapes meet with a fair demand. Apples clean up fairly well. The supply of something very choice is still light, and, when found, sell at an advance on quotations, provided they are full-sized boxes. Considerable quantities of the more choice apples have come in under-sized boxes, and of course they are sold just so much less than if they were full-sized.

Nuts are meeting with a good holiday call, both from this coast and at the East.

Mexican oranges are in fair supply. They do not meet with general favor. Contracts are being made for California oranges, but the contract prices we are not able to get.

Raisins are moving quite freely to distributive points. Choice to fancy meet with quick sales, but poor are slow.

The market continues to clean up, with odds and ends taken at less than quoted, but full lines of choice to fancy are in request at full quotations Choice peaches, prunes, apricots and apples are moving off quickly.

Live Stock.

The market for bullocks has held fairly firm, with an advance paid for those that cut up with small wastage. Mutton sheep are steady, with a slightly firmer tone reported. Hogs are in better demand, with a slight advance paid for desirable sizes for packing.

Miscellaneous.

The poultry market was beginning to work into better shape when in come another car of eastern. The bulk of Californian is poor and scrubby, which causes "rejects" and makes it anything but pleasant for the selling interest. Dealers are expecting a letup to the strong flow of fowls to this market. Turkeys have fluctuated. Poor to fair fowls are hard to sell, but choice to something gilt-edged sell readily.

Hops are quiet, but fairly steady. The major portion of the crop of this coast has been placed. English mail advices report a strong market in England, but depressed markets on the continent.

Wool has met with an indifferent demand. Eastern mail advices report an active market at gradually strengthening prices.

The receipts of beans have been free. The large bulk coming to hand is under contract, and goes forward to the East. The market is barely steady at quotations.

Honey is in moderate supply. The market is firm.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Nov. 15, '92, were as follows:

Flour, qr. sks	92,669	Bran, sks	4,582
Wheat, ctls	407,281	Buckwheat "	470
Barley, "	71,489	Middlings "	1,234
Rye, "	1,244	Chicory, bbls	45
Oats, "	33,257	Hops, "	336
Corn, "	5,934	Wool, "	756
*Butter, "	778	Hay, ton	1,894
do bxs	252	Straw, "	206
do bbls	33	Wine, gals	232,351
do kegs	176	Brandy, "	13,240
do tubs	20	Raisins, bxs	14,592
do ½ bxs	....	Honey, cs	24
†Cheese, ctls	588	Peanuts,sks	583
do bxs	54	Walnuts "	954
Eggs, doz	15,12	Almonds "	608
do " Eastern	83,340	Mustard "	318
Beans, sks	2,256	Flax "	5
Potatoes, sks	35,700	Popcorn "	....
Onions, "	2,470	Broom corn, bbls	206

*Overl'd, ... ctls. †Overland, 242 ctls.

Exports by Sea from San Francisco from July 1 to Nov. 8.

	1892-93	1891-92
Wheat, ctls	4,263,316	6,011,368
Flour, bbls	473,578	428,624
Barley, ctls	737,682	568,814

Tonnage Movement.

From reliable advices up to Nov. 15, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	244,457	393,836	*162,555	123,311
San Diego	11,784	24,517	1,465	.....
San Pedro	9,674	9,890	.....	32,791
Oregon	40,758	67,817	23,582	
Puget Sound	25,638	28,594	.....	
Totals	331,611	524,754	187,602	156,102

*Engaged for wheat, 1892, 4,589; 1891, 111,469.

Markets by Telegraph.

Visible Supply of Wheat.

New York, Nov. 12.—Special cable advices show that available supplies of wheat afloat for Europe, and those in Europe, the United States and Canada on November 1st, aggregate 154,272,000 bushels—the heaviest ever held at a like date. This exceeds the supply one year ago by 20,631,000 bushels; two years ago by 63,112,000 bushels; and three years ago by 45,000,000.

California Figs, Raisins and Prunes.

New York, Nov. 13.—A feature of the week has been the exhibit of dried figs. They are bright, clean, of good size and uncommonly free from sweat, and are selling at 8½ cents a pound. This new venture was a complete surprise to dealers in foreign fruit, and none of them were delighted at the innovation, which is reasonable when events are considered. It is little more than twenty years since your correspondent saw the first few boxes of raisins sent here from the coast. They were small, dry, sugarly, unmerchantable-looking little things, and no one thought they could be made to compete with Valencia in quantity or grade, yet their prime quality has become commercially recognized, and the last five years has shown a product in pounds almost equal to all foreign imports. Then came prunes. The first imperfect samples were sneered at with the remark: "Well, there are prunes and there are prunes." To-day full lines and brands of Fresno can be found which maintain a precedence over the famous product of Bordeaux. So it is within the scope of possibility that the specialty of Smyrna may also be invaded by Pacific enterprise.

Market for Dried Fruit Is Improving.

New York, Nov. 13.—With decided accounts of shortened supplies of prunes, peaches and apricots, buyers are paying full late rates for all these dried goods without hesitation, and selections may soon be held for more money.

The Raisin Market.

New York, Nov. 13 —Raisins obtain a fair share of local trade. Bags turn out more or less damp, but the weather is cool and their condition is not hurt for prompt use, especially when prices are attractive. Three Crowns sold at 5½@6 ; Two Crowns, 4½c; Three Crown boxes loose, $1.60@1 75; Layers, $1.70@2. Reports reach New York of Three Crowns selling at $1.20 free on board on the coast. This, if so, is regarded here as a mistake. Our market is not yet bad enough to warrant the sacrifice of good goods. Receipts by the Sunset route for the season to date are 29,293 boxes and 20 666 bags for New York, and 34,767 boxes and 13,292 bags for New England.

Miscellaneous Produce.

New York, Nov. 13 —Honey—California sells readily at 8½@9 for light amber.

Lima beans are quiet at $2 per bushel. Spot, in a small way $2.05.

Mustard Seed—Yellow California is firm at 7 cents and tending higher. The recent large arrival by Pacific Mail was absorbed in previous sales.

Hops—A pause in the export movement has caused a larger release of interior prime State and the market closes weaker and unsettled; 24 cents for any choice, including Pacific, is rare and outside.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar	April
Thursday	5s10½d	5s10½d	6 00¾d	6s01½d	6s02½d	6s02½d
Friday	5s10 d	5s11 d	5s11½d	6s00¾d	6s02 d	6s02½d
Saturday	5s10½d	5s11½d	6s00¾d	6s01¾d	6s02½d	6s02½d
Monday	5s10½d	5s11½d	6s01¼d	6s01¾d	6s02½d	6s02½d
Tuesday	5s09½d	5s10½d	5s11½d	6s00¾d	6s01½d	6s02½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S
Thursday	33s	33s3½	33s	Steadily held.
Friday	33s	33s3d	33s	Higher prices asked.
Saturday	33s	33s	33s	Quiet but steady.
Monday	32s9d	33s	32s9d	Quiet but steady
Tuesday	....	....	32s8d	Quiet but steady.

To-day's cablegram is as follows:

Liverpool, Nov. 16.—Wheat—More demand at the decline. California spot lots, 6s 8d; off coast, 32s 9d; just shipped, 32s 8d; nearly due, 32s 9d; cargoes off coast, nothing offering; on passage, rather easier; Mark Lane wheat, weaker; French country markets, inactive.

San Francisco.

WHEAT.

	Seller '92.	Buyer Dec	Jan.	May
Thursday, high st	....	131⅜	....	137½
" lowest	....	134⅜	....	137½
Friday, highest	....	135	....	138¼
" lowest	....	135	....	138½
Saturday, highest	....	134	....	137⅝
" lowest	....	133⅝	....	136⅞
Monday, highest	....	134	....	137⅜
" lowest	....	133⅜	....	137⅞
Tuesday, highest	131	133⅜	132½	136½
" lowest	131	132½	132	136

The following are to-day's recorded sales on Call:

Wheat — Morning — Informal: May—1000 tons, $1 38½; 300, $1 38⅜; 600, $1 36⅜; 500, $1 36½. Buyer December—700 tons, $1.33½; 200, $1 3 ; 1300, $1.32½. Seller 1892 100 tons, $1.31½; 100, $1.31½; 100, $1.31 per ctl. Afternoon: May—100 tons, $1.36½; 700, $1.36⅜ per ctl.

BARLEY.

	Seller '92.	Dec.	Jan.	May
Thursday, highest	....	*92	....	....
" lowest	....	91½	....	....
Friday, highest	....	91½	90½	94½
" lowest	....	89½	90⅜	94⅛
Saturday, highest	....	*9 2	9 2	94½
" lowest	....	9(½	9(½	94⅛
Monday, highest	....	*9(½	90½	....
" lowest	....	9 ½	90½	....
Tuesday, highest	....	*89⅜	89½	93½
" lowest	....	89½	89⅜	93¼

*Buyer option.

The following are to-day's recorded sales on Call:

Barley—Regular session: January—100 tons, 89½c; 400, 89⅜c; 300, 8 ⅜c May—200 tons, 93½c December—100 tons, 88⅜c per ctl. Afternoon: December—100 tons, 83½c; 100, 88½c; 200, 88⅜c; 200, 89c; 100, 89½c. Buyer December—200 tons, 30½c; 200, 90¼c, May—500 tons, 93½c; 300, 93⅜c per ctl.

Eastern Markets.

The following shows the closing prices per cental of wheat for the past week at

New York.

Day.	Nov.	Dec.	Jan.	March.	May.
Thursday	....	128	130	....	139½
Friday	127⅞	129½	132	138	141
Saturday	127	128⅝	131	136½	140½
Monday	....	128¼	131	136	140
Tuesday	126	125	129½	134⅝	138½

The following is to-day's telegram—per bushel:

New York, Nov. 16.—Wheat—78½c for December, 77⅞c for January, 81c for March, and 83⅜c for May.

Chicago.

Day.	Nov.	Dec.	May
Thursday	....	121	131
Friday	121⅝	123½	132⅝
Saturday	121	122⅝	132
Monday	120½	122	131
Tuesday	118½	120	130½

The following is to-day's telegram—per bushel:

Chicago, Nov. 16.—Wheat—72⅝c for December, and 78½c for May.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

November 16, 1892.

Limes, Mex	3 00 @ 3 50	Huckleberries lb	4 @ 6
Do Cal	— @ —	Extra choice fruit for special purposes sells at an advance on outside quotations	
Lemons, box	6 00 @ 8 00		
Do Sicily choice	7 00 @ 8 50		
Strawberries, pr chest	5 00 @ 8 00	Beets, sk	— @ 50
Apples	30 @ 60	Carrots, sk	30 @ 50
Do Choice	75 @ 1 00	Okra, dry, lb	8 @ 10
Do Extra choice	— @ 1 25	Parsnips, ctl	1 00 @ 1 50
Grapes, pr bx—		Peppers, dry, lb	7 @ 9
Do White	25 @ 40	Do grn Chili, bx	40 @ 60
Do Black	25 @ 40	Do do Bells	40 @ 60
Do Muscats	25 @ 50	Turnips, ctl	— @ 60
Do Tokays	35 @ 50	Cabbage, 100 lbs	35 @ 50
Do Royal Isabel	1 00 @ 1 25	Garlic, lb	2 @ 2½
Do Cornichon	50 @ 75	Tomatoes	25 @ 60
Wine Grapes,		String Beans, lb	3 @ 4
Zinf'nd'l, pr tn	— @17 00	Lima Beans	4 @ 4½
Mission	12 00 @15 00	Cucumbers, box	50 @ 75
White	9 00 @12 00	Mushrooms	— @ —
Pears	25 @ 75	Egg Plant, bx	25 @ 50
do Winter Nelis	75 @ 1 25	Marfat Squash, ₰ ton	8 00 @10 00
Quinces pr bx	75 @ 1 00	Cauliflower	50 @ 65
Persimmons	1 00 @ 1 50	Celery	50 @ 75
Pomegranates, lb	2 @ 4		

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES 1892.

Sun-dried, ¼'s, prime	3½@ 4
Do do choice	4 @ 4½
Do sliced, prime	4 @ 4½
Do do choice	4½@ 5
Evap. bl.,ri g. 50-lb.bx	8 @ 9
Fancy, higher.	

APRICOTS—1892.

Do bleached	15½@—
Do do fancy	15 @16
Evap choice, in boxes	15 @16
Do fancy, do	15½@17

FIGS—1892.

Sun-dried, black	4 @—
Do white	3½@—

GRAPES—1892.

Sun-dried, stemless	3 @—
Do unstemmed	1½@ 2

NECTARINES—1892.

Red, sun-dried	7 @ 8
Do Evap., i boxes	—@—
White, sun-dried	9½@11
Do evaporated	—@—

PEACHES—1892.

Sun-dried, unpeeled	7 @ 7½
Do do prime, bl ched	10 @—
Do do choice, do	11 @—
Do do fancy	11½@—
Sun-dr., pl'd, bl'ched	@—
Do do prime	14 @—
Do do choice	—@15
Do do fancy	—@16
Evap., peeled, in boxes choice	17½@—
Do do fancy	20 @—

PEARS—1892.

Sun-dried, quarters	—@ 3
Do sliced	4 @ 5
Evap., slic'd, in b'xes	7 @ 8
Do ring do	9 @10
Unp'led, q'rt'd, bl'ch'd	6 @ 7

PLUMS—1892.

Pitted, sun-dr ed	10 @10½
Do evap. boxes, choice	—@—
Do do do fancy	—@—
Unpitted	4 @ 5

PRUNES—1892.

Cal. French, ungraded	7½@ 8
Do graded, 60 to 100	8½@ 9
Do do 40 to 60	11 @12
Fancy sell for more money.	

RAISINS - 1892.

London Layers, cluster per box	1 90 @2 00
Do choicest do	1 60 @1 70
Do prime or bx	1 40 @1 45
Loose Muscatels, common, pr bx	— @1 00
Do choice do	1 25 @1 30
Do fancy do	1 40 @—
Unstem'ed Muscatels in sks pr lb	4 @ 5½
Stemmed do do	— @—
Seedless do do	— @—
do do pr 20-lb. bx	— @—
Sultanas, unbl. bxs	— @—
Do bl'ched in bxs	@—

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

November 16, 1892.

BEANS AND PEAS.

Bayo, ctl	2 30 @ 2 35
Butter	2 75 @ 3 00
Pea	2 50 @ 2 60
Red	2 40 @ 2 50
Pink	2 00 @ 2 10
Small White	2 45 @ 2 55
Large White	2 25 @ 2 35
Lima	2 75 @ 3 00
Fld Peas, blk eye	1 60 @—
Do green	2 20 @—
Do Niles	1 40 @—
Split	4 50 @ 5 50

BUTTER.

Cal., poor to fair, lb	12½@—
Do g'd to choice	20 @—
Do Giltedged	— @ 30
Do Creamery	26 @—
Do do Giltedge	— @ 32½
Eastern, lad e	12½@—
Cal. Pickled	20 @—
Cal. Keg	20 @ 24
East'n Cr eam'y	25 @—

CHEESE.

Cal. choice cream	9½@—
Do fair to good	8 @—
Do Giltedged	— @ 12
Do Skim	5 @ 6½
Young America	— @ 12

EGGS.

Cal. "as is," doz	27½@—
Do shaky	20 @—
Do candled	37½@—
Do choice	45 @—
Do fresh laid	— @ 47½
Do do s'led white	— @ 50
Eastern cold-storage	21 @—
Do fresh	26 @—
Do selected	— @ 35

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.

Bran, ton	14 00@ 15 00
Feedmeal	26 00@ 27 00
Gr'd Barley	19 50@ 20 50
Middlings	21 00@ 23 00
Oil Cake Meal	—@ 35 00
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00

HAY.

Compressed	— @10 50
Wheat, per ton	8 50@—
Do choice	—@ 14 00
Wheat and oats	8 00@ 12 50
Wild Oats	7 00@ 10 00
Cultivated do	6 00@ 9 00
Barley	6 50@ 9 00
Alfalfa	8 00@ 9 50
Clover	8 00@ 10 00
Straw, bale	30@ 40

GRAIN, ETC.

Barley, feed, ctl	80 @—
Do good	85 @—
Do choice	87½@—
Do brewing	92½@—
Do do choice	96½@—
Do do Giltedge	1 00 @—
Do Chevalier	1 00 @—
Do do Gi tedge	1 15 @—
Buckwheat	2 25 @—
Corn, white	1 15 @ 1 20
Yellow, large	1 05 @ 1 07½
Do small	1 12½@ 1 15
Oats, milling	1 37½@—
Feed, choice	1 35 @—
Do good	1 30 @—
Do fair	1 25 @—
Do common	1 17½@—
Surprise	1 45 @—
Black Cal	1 10 @ 1 25
Do Oregon	— @—
Gray	1 30 @—
Rye	1 12½@ 1 17½
*Wheat, milling Gi tedged	1 35 @—
Do choice	1 33½@—
Do fair to good	1 32½@—
Shipping, choice	1 33½@—
Do good	1 31½@—
Do fair	1 28½@—
Common	1 26½@—
Sonora	1 25 @ 1 30

HOPS.

1892, fair	18 @—
Good	20 @—
Choice	21 @—

FLOUR.

Extra, city mills	3 90 @—
Do country m'ls	3 90 @—
Superfine	2 50 @ 3 00

NUTS—Jobbing.

Walnuts, Cal. lb	8 @—
Do choice	10 @—
Do paper-shell	11 @—
Almonds, soft sh'l	12 @—
Paper shell	13½@—
Hard shell	6 @—
Brazil	8 @—
Pecans, small	8 @ 10
Do large	14 @ 16
Peanuts	3½@ 4½
Filberts	10 @—
Hickory	7 @ 8
Chestnuts	18 @ 20

ONIONS.

Silverskin	50 @ 75

POTATOES.

River Reds	30 @ 40
Early Rose, ctl	40 @ 50
Peerless	60 @ 70
Garnet Chilies	60 @ 70
Burbank Seed'g	40 @ 60
Do do Salinas	90 @ 1 25
Sweet	50 @ 1 00

Extra choice sell for more money

POULTRY.

Hens, doz	5 50 @—
Roosters, old	5 50 @ 6 50
Do young	5 00 @ 6 00
Broilers, small	3 00 @ 3 50
Do large	3 50 @ 4 50
Fryers	4 00 @ 5 00
Ducks	4 00 @ 4 50
Do large	4 50 @ 5 50
Do extra large	— @ 7 00
Geese, pair	1 50 @ 1 75
Turkeys, gobbl'r	15 @ 18
Turkeys, hens	15 @ 17
Do dressed	16 @ 19

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets — @11 50

GAME

Quail, per doz	1 00 @ 1 25
Ducks	—@—
Do Mal'd ₰ doz	4 00 @ 5 50
Do Sprig	2 25 @ 3 00
Do Teal	1 50 @—
Do Widgeon	1 50 @ 2 00
Do small	1 00 @ 1 50
Geese	—@—
Do gray ₰ doz	2 00 @ 2 50
Do White	1 00 @ 1 50
Do Brant	1 00 @ 1 50
Snipe	—@—
Do English, doz	1 50 @ 2 00
Do Jack, per doz	75 @ 1 00
Hare, per doz	1 00 @ 1 25
Rabbits, large	1 25 @ 1 50
Do small	1 00 @ 1 25

PROVISIONS.

Cal. bacon, heavy, per lb	12 @—
Medium	13 @—
Light	14 @—
Lard	8½@ 12
Cal sm'k'd beef	11 @—
Hams, Cal salt'd	13 @—
Do Eastern	14 @—

SEEDS.

Alfalfa	10 @—
Clover, Red	14 @—
White	23 @—
Flaxseed	2 25 @—
Hemp	4½@—
Mustard, yellow	5½@ 6½
Do brown	4 @—

WOOL.

FALL, 1892.

S Joaquin, plain	6½@ 10
Do mountain	10 @ 12
Do lamb	8 @ 10
Northern Choice	14 @—
Do Detective	11 @—
Do Lamb	10 @ 14

HONEY—1892 Crop.

White comb, 2-lb frame	9½@ 12½
Do do 1-lb frame	11½@ 14½
White extracted	7½@—
Amber do	6½@—
Dark do	6½@—
Beeswax, lb	23 @—

Live Stock.

BEEF.

Stall fed	6 @—
Grass fed, extra	5½@—
First quality	5½@—
Second quality	4½@—
Third quality	3 @—
Bulls and thin Cows	2 @—

VEAL.

Range, heavy	5 @—
Do light	6 @—
Dairy	7 @8½

MUTTON.

Wethers	6½@—
Ewes	6 @—
Do Spring	7½@—

HOGS.

Light, ₰ lb, cents	5 @—
Medium	4½@—
Heavy	5 @—
Soft	4½@—
Feeders	3½@—
Stock Hogs	4 @—

Twine and Baling Rope.

BALE ROPE.

Sisal, 3 yarns	9
Do, 2 yarns, light	9½
Duplex, 3 yarns	9
Manilla, 3 yarns, heavy	10½
Pure Manilla, 3 & 4 yarns	12
Do, 2 yarns, light	12½

TWINE.

Pure Manilla Hop, in balls, tarred	11½
Do, Grapevine, in balls or coils	12
Do, Spring	16
Duplex Hop in balls, tar'd	9½
Do, Grapevine, in balls or coils	10½

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal., in cellar lots — 12 @20

1892 vintage in cellar lots — 10 @15

Auction Sales of California Fruits.

At New York.

Nov. 9.—Two carloads: Tokay Grapes, double crates, $3.20@4 65; Tokay Grapes, single crates, $1 60@2.35; Cornichon Grapes, single crates, $1.50@2 30; Cornichon Grapes, double crates, $3 75@3.90; Morocco Grapes, single crates, $1.90@2.25; Muscat Grapes, single crates, $1.25; Black Prince Grapes, single crates, $1.35; Easter Beurre Pears, $3@3.85.

Two carloads: Tokay and assorted Grapes, $1.90@2.10 for single crates, and Winter Nelis Pears at $3.40.

Nov. 10.—Two carloads: Tokay Grapes, double crates, $3.40@4 80; do, single crates, $1.40@2.45; Cornichon Grapes, single crates, $1.60@2 75; do, double crates, $3 90@3.95; Emperor Grapes, single crates, $1.35; Black Prince Grapes, single crates, 85c; Muscat Grapes, single crates, $1.30; Winter Nelis Pears, $3.70.

Nov. 10.—One carload; Tokay Grapes, double crates, $3.25@4 65; single crates, $1.20@2.60; Cornichon Grapes, double crates, $3 90; single crates, $1 35@2; Emperor Grapes, single crates, $1.35; Black Ferrara Grapes, single crates, $1.05.

Nov. 11.—Two carloads; Ferrara, Muscat, Emperor, and Cornichon Grapes in single crates brought 80c@$1.70; and Winter Nelis, Glout Morceau and fancy P. Barry Pears, $3.50@4.50.

Nov. 12.—One carload: Tokay Grapes, double

crates, $3.00@6 10; do, single crates, $1.80@2 85; Cornichon Grapes, single crates, $2 25@2.45; do, double crates, $4.50; Easter Beurre Pears, $3 85. The demand for grapes and pears is good and prices firm.

Nov. 12.—One carload: Tokay Grapes, double crates, $3.35@6.10; single crates, $1.70@2 85; Cornichon Grapes, double crates $1 50; single crates, $2.45; Black Ferrara Grapes, single crates, $1.

Nov. 14.—Three carloads; Tokay Grapes, double crates, $3 05@6 50; do, single crates, $1.85@3.10; Cornichon Grapes, double crates, $3.80@6 25; do, single crates, $1.60@3.45; Morocco Grapes, single crates, $1 50@2.20; Emperor, do, $1.20@1.75; Black Prince, do, 80c; Verdell, do, 65c@80c; Muscat, do, 65c; Quinces, per box, $1 55; Winter Nelis Pears, $2.20@2.95; Easter Beurre Pears, $2.65@2.95.

Nov. 12.—Three carloads: Black Ferrara, Tokay and Cornichon Grapes at 75c@$1.25 for single crates and $2.60@3.50 for double crates.

At Chicago.

Nov. 9.—Two carloads: Emperor Grapes, double crates, $4 10; single crates, $1.50; Black Ferrara Grapes, single crates, $1 15; Muscat Grapes, single crates, 90c @$1.05; Malaga Grapes, single crates, 95c; Winter Nelis Pears, $2 50@2.80. Some Grapes which arrived in bad order sold for less.

Nov. 10.—One carload: Muscat Grapes in single crates at prices ranging from 65 c to $1.10.

Nov. 12.—One carload: Muscat Grapes in single crates at prices ranging from 80c to $1.10.

Nov. 14.—Two carloads: Tokay Grapes, single crates, $1 45; double crates, $1 80@2.75; Cornichon Grapes, double crates, $2.85; Muscat Grapes, single crates, 65c@80; double crates, $1.35@1.40.

At Boston.

Nov. 14.—Two carloads: Cornichon Grapes, double crates, $3 90; Tokay Grapes, double crates, $2@5.20; single crates, $1.85@2.

A Great Auction Sale of Holstein Cattle and Standard-bred Horses.

The noted herd of Holstein-Friesian cattle belonging to Mr. J. H. White of Lakeville, Sonoma Co., will be sold at public auction at the yards of Killip & Co., corner of Market St. and Van Ness Ave., San Francisco, on Wednesday, November 30th. This herd of cattle was picked from the most noted families in North Holland, and was selected by Mr. Theodore Koch from such noted sources as Jacobus, Leegwater, Pieter and Simon herds.

There are 62 head of cattle, that will be sold at auction, bred on the best blood lines and registered in the Holstein-Friesian Herd-book. At the head of the herd is the six year-old bull Huachuca (90); weight, 2000 lbs; sire, Prince of Haarlem; dam, Hoffnung.

Prince of Haarlem by Jacobson (251); dam, Krouwer; milk record, 70 2-5 lbs.; grandam, Krouwer; milk record, 74 4-5 lbs.

Hoffnung by District Bull of Beemster; dam, Treyn I; milk record, 79 1-5 lbs.; grandam, Saar; milk record, 74 4-5 lbs.

The following are his associates among the bulls:

Loris, six years old; dam, Loowarda; sire, Jacobus.

Oakland, three years old; sire, Williard W.; dam, Annollye.

Ontongs Ourang, two years old; sire, Halbert; dam, Ontong.

Olinkas Orick, two years old; sire, Huachuca; dam, Olinka.

Oleander Jouquel, one year old.

Among the cows are Muttertrue, Brinhilda and Annemie; also Dagodine, which latter has been illustrated in the RURAL PRESS.

Annemie, whose photo-engraving was published in the *Holstein-Friesian Journal*, was bred by P. Koppes, Haarlemmermeer, North Holland; sire, Bismarck; dam, Wietske; milk record, 70 2-5 lbs

Wietske by Graaf; dam, Anna; milk record, 74 4-5 lbs.

Mr. White's herd as it now stands has been sired by 24 different bulls. The dam of one of these bulls has a record of 82 lbs. of milk in 24 hours; of another, 70 lbs.; of another, 71 lbs.; of four, 68 lbs.; of one, 66 lbs.; and of two, 61 lbs. The dams of the herd have, on grass alone, given as much as 80 lbs. of milk a day. There are four with records of 79 lbs.; ten with daily records of over 75 lbs.; twelve with 70 lbs. and over; twelve with 65 lbs. and over; ten with 60 lbs. and over; and three with 55 lbs. and over.

Educated judges of Holstein cattle pronounce this herd, in point of excellence, the best in the State.

Mr. White's cattle have won wide fame by their presence at the District and State Fairs, and are often described by expert beholders, taking into account both the quality of the animals and the evident intelligent care which they have enjoyed, as the cleanest, neatest lot of Holsteins to be seen anywhere.

Our reporter made a flying trip to this great breeding establishment, and reports the cattle in fine condition. There is much regret expressed that this herd, which has been selected with so much care from representatives of famous deep-milking herds, should be disbanded.

Mr. H. Mecham, the well-known stock-breeder, informed our reporter that there was but one herd of Holsteins in the United States that were the equal of Mr. White's herd.

Parties wishing to make an examination of this herd can do so from Saturday, 26th inst., until the day of sale at the stockyards of Killip & Co., corner of Market St. and Van Ness Ave., San Francisco.

STANDARD-BRED HORSES.

At the same date 40 head of standard-bred horses will be sold at auction. This stud represents the most fashionable blood lines and producers in the United States, among which are the get of Director, Electioneer and Stamboul, from mares with pedigrees running back to McClellan, Bellfounder and Membrino.

A full description of this stud will be found in the *Breeder and Sportsman* of even date with this issue. Catalogues of cattle and horses are now ready and can be had by addressing Killip & Co., 26 Montgomery street, or office of RURAL PRESS.

It is the purpose of Mr. White to make this a closing out sale, as he has changed his residence from Lakeville to Alameda. We can but emphasize the importance of this sale to buyers, as, in connection with the cattle, it will be the most noted sale ever held in this State.

A Notable Wedding.

On Saturday last, November 12th, at Vallejo, SCIPIO CRAIG, the well-known newspaper man and editorial prophet of southern California, was joined in the bands of wedlock to Mrs. Mary Lynde Hoffman, one of the literary lights of San Francisco. The interesting ceremony was performed in the pretty little Church of the Ascension, by Rev. Mr. Ballard, rector of the church.

Mr. Craig is editor and proprietor of the *Citrograph* of Redlands, San Bernardino county; president of the Editorial Association of southern California; vice-president of the Press Association of northern California, and a member of the Republican State Central Committee.

Mrs. Hoffman, now Mrs. Craig, is a lady well-known in the literary and social circles of this city. She is historian of the Law Club and of the Daughters of the American Revolution. She is also alternate delegate of the Pacific Coast Woman's Press Association to the Woman's World's Congress, which meets at Chicago in June next. Mrs. Craig, for the past year and a half, has kept pace with the graduates of Harvard as a member of the Law College of the University of California, in which institution she proposes to complete the full course, leading up to the degree of L. L. B. In June last, when 11 men dropped out of the Law College, having failed to pass the examination from junior to middle year's work, Mrs. Craig successfully passed the ordeal.

Well might our bride and groom look happy, as they did, since each had secured for a life companion a friend, an ardent lover and an enthusiastic and earnest literary worker.

The ceremony was supplemented by an elegant repast at the rectory, in a quiet, queenly way, by the rector's wife, whose *facile* and trenchant pen has illumined the pages of numerous papers and magazines from the Atlantic to the Pacific.

The happy party was small and select—warm friends of the bride and groom—and each recorded his or her name in a beautiful souvenir of a book, bound in white and gold, containing a copy of the marriage service and certificate.

The happy pair have each a home—the one amid the beautiful orange groves of Redlands, the other in this city, and they propose to divide their time in alternating from the one to the other. Mr. and Mrs. Craig left the city by the Monday afternoon train for a tour through southern California, hoping to reach their Redlands' home in time for Christmas greetings.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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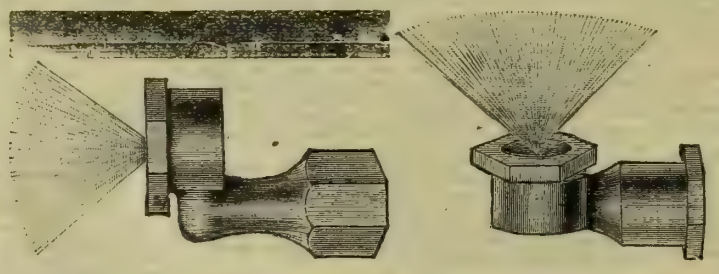
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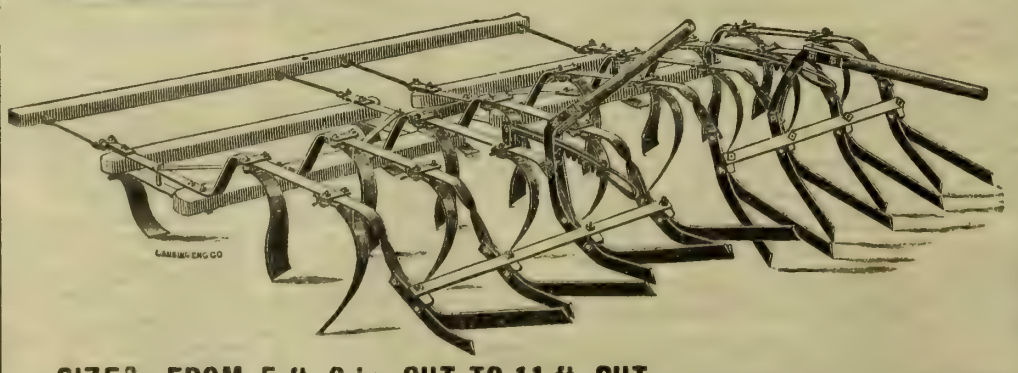




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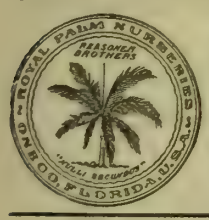
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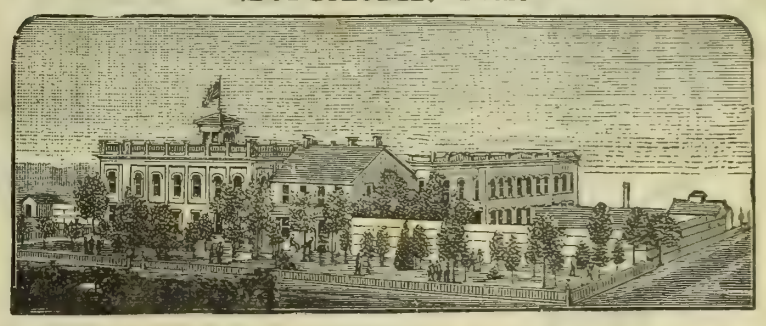
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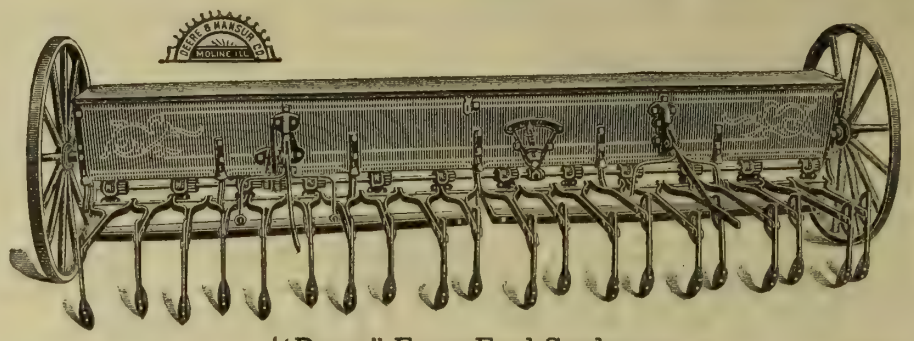
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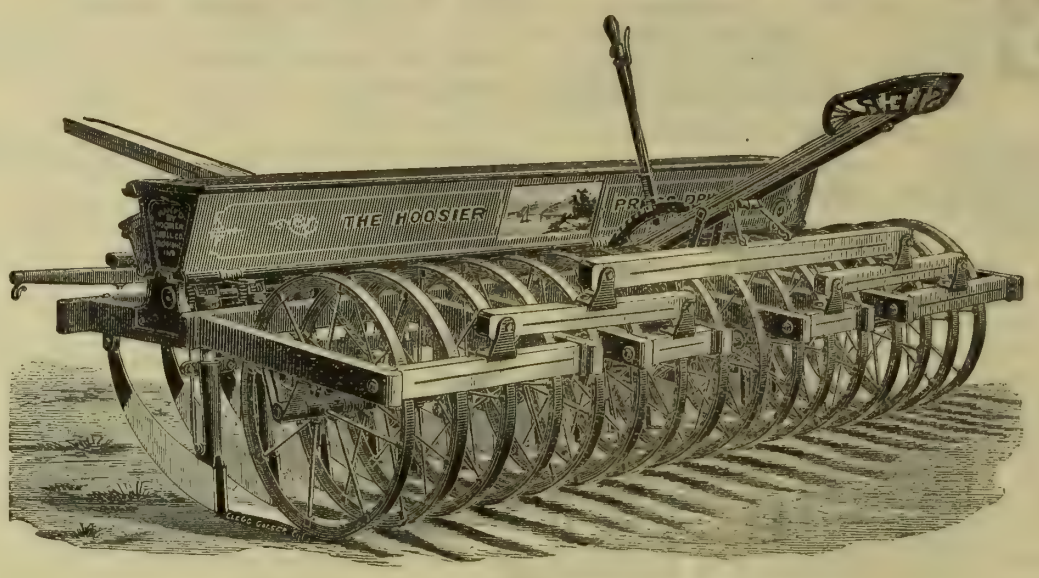
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3d. **For Stumpy, Rooty or Stony Ground,** drop the frame down to last or second hole, this will allow the teeth to let go without danger of breaking, and still do good work. *It has no equal for rough ground.*

4th. **As a Fallow Cultivator** it is the best in use, as it leaves all the trash taken out on top, where it withers and dies out.

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6th. **As a Seeder** it is the best now in use It has a positive force feed, sows all kinds of grain, peas and flax seed, and covers perfectly as you seed.

Lastly, but not least, it is a **Potato Digger.** Remove four teeth from each side, leaving seven teeth in center; drop the frame clear down, bring the lever clear back, and then dig alternate rows; after picking up the potatoes, cross harrow the ground, and it will be left smooth and level.

Will Seed and Cover Forty Acres per Day. Two No. 4's or No. 8's coupled together on three wheels, produce a machine that adjusts itself to uneven ground.

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Gentlemen:—I think the Gale Harrow and Seeder the best I have ever used or seen used. A farmer can get a better stand with less seed with a Gale than with either the Gorham, Gem or Cahoon, and sows more regular. It will save the price of itself every thousand acres. I have sown altogether about 3000 acres.

Very truly yours, J. C. WILKINS.

No. 8	5½ feet Gale Harrow, with Seeder, 15 teeth	Price, $73 50
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No. 11	11 feet Gale Harrow, with Seeder, 30 teeth	147 00
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The No 11 is two No. 8's coupled and is two complete machines.
The No. 13 is two No. 4's coupled and is two complete machines.

PACIFIC RURAL PRESS

Vol. XLIV. No. 22. SAN FRANCISCO, SATURDAY, NOVEMBER 26, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

An African Arrival.

An interesting increment of population has just come to Stockton, consisting of the whole membership of the Washington Street Baptist Church, of Memphis, Tenn., with their pastor at their head as leader of the expedition. Exact numbers are not given, but it is said that the procession covered a block as they proceeded to the African church in Stockton, where they were welcomed by the local colored population. Emigration by churches seems to be the way it is done and another Memphis church is expected to arrive next week in Lodi. When questioned the immigrants stated that they would live together as one family. Each, upon obtaining employment, would either find quarters elsewhere or live with the rest of the party as circumstances might dictate. Among the party there are a few elderly people, but most of them are of middle age. There are only six men. After the arrival of the lot which is expected next week, no more will come until January, when 100 will arrive. Those who are going into the Lodi region have clubbed together and purchased a few small tracts of land which they will farm.

GRAPE SYRUP.—There is already something of a grape-syrup product in this State, and we apprehend that in the face of cheap cane-sugar syrups, it will be easy to reduce the price below a profitable mark. Still, it is desirable to have the subject investigated and we are interested to know that Secretary Scott of the Viticultural Commission has been studying the problem of determining the best method of making syrup from grapes. There is an immense quantity of Muscat grapes not suited for making good raisins, and some believe it can be advantageously put into syrup manufacture. Mr. Scott has been ordered by the commission to prepare an exhaustive essay on the subject, and he says he will have it ready on the first of next month. It will be a full 25-page pamphlet, and will furnish important information to vineyardists and merchants. The syrup from the Muscat grapes has a pleasant flavor and is as distinctive in its character as maple syrup. It is reported that grape syrup has been received favorably in the Eastern markets and also on this coast. The vacuum process and the open pan-process of manufacture will be discussed by Secretary Scott, and the information will be of general interest, though investment should be cautiously made and with as full forecast as possible of the market.

A CANADIAN cheese weighing over 22,000 pounds will be on exhibition at the World's Fair next year.

PERSIMMON PROFITS.—We alluded recently to the reported profits of a Louisiana grower of the native persimmon. A Florida exchange seems to mildly doubt the statement. As California growers seem sometimes to have a little trouble to make Japanese persimmons go profitably, they may be interested in reports of Florida sales. The *Agriculturist* says: We were shown by Mr. J. L. Nuckols, of DeLand, returns for the fruit averaging about $3 per half-box. Mr. D. W. Adams, of Tangerine, has forwarded us account of sales for six boxes of persimmons at $5 per box." We don't know just what weight Florida growers put in their boxes, but making a guess at fair weight and the prices seem good—not less probably than 10 cents per pound. Sales have been made as high as that in this State sometimes, but not often.

TWENTY-ONE DECEMBERS.—The local office of the Weather Service sends us a circular which combines the December observations of 21 years as follows: Greatest rainfall, 14.36 inches, in 1871; least, no rain, in 1876; average December rainfall, 5 13 inches. The warmest December was in 1885, with average temperature of 53.5°; the coldest in 1879, with average 49.4°. Highest temperature on any December day was Dec. 20, 1869, at 69°; lowest Dec. 24th, 34°. From these points our readers can figure out what they are likely to undergo next month.

INSECTICIDES PREVAIL.—At the San Jose convention, both President Cooper and entomologist Koebele took the ground in their addresses, that parasitic and predaceous insects could be expected to exterminate injurious insects. The convention looked upon this as likely to be made a pretext by the shiftless fruitgrower to neglect tree cleansing, and so it was voted to strike such hopeful statements out of the records. The convention evidently believed that fruitgrowers must still work for the life and health of their trees.

Rejoice and Be Glad.

It is seldom that compliance with this old scriptural injunction is more plainly written upon the human countenance than upon upon the faces of this group of mountain boys which the expert amateur photographer, W. H. Londen, drew up in front of his lenses during a ramble in Sierra county. Modern artists have furnished pansies by the yard and the population has gone into ecstacies over the bright faces they discern on the petals of the flowers, but what is a yard of pansy faces as compared with the full rod of Thanksgiving thus drawn up by the roadside. It is a skillful joymaker who can bring a smile to half the faces he meets, but here is a case in which every countenance is open with delight, and some of the openings are vast—especially upon the left of the picture. Even the central chap, who is too bashful to face the music, has his smile with the rest. The picture is worth study and its effect is irresistible. Even if the reader can find little to rejoice over in his year's work and life, even if his Thanksgiving dinner is a burden we defy him to look from face to face along this gladsome line without getting into a comfortable frame of mind. In fact it is much easier to roar with laughter than to repress a smile. We commend the picture as a Thanksgiving sermon when other prescriptions fail.



THOUGHTS OF THANKSGIVING.—*Photo by Lowden in Sierra County.*

It will surpass all the exercises of the laughter school curriculum.

A PROMISING NEW ROSE.—At the Oakland flower show, noticed in last week's RURAL, M. E. Gill the well known Oakland nurseryman and florist, showed a new seedling rose which he has named Sarah Isabella Gill. It is a deep yellow like Perle des Jardins, and has a bud showing something of the Mermet unfolding. It has plenty of substance, and the open rose is a glorious yellow. The bloom is good-sized and apparently comes from a strong growing variety. It seems to us that this new sort will be worth watching, and we shall keep an eye on it. We are not aware whether Mr. Gill has prepared a stock for sale or has it still on trial.

A STATE RAILWAY.—At the San Jose convention Mr. A. Black of Santa Clara urged that we seek the passage of a Constitutional Amendment permitting the State to bond itself for the construction of a railroad system. He argued that 2 per cent of the assessed valuation would be ample for the purpose. Personally, he would cheerfully contribute his share. He thinks a proposition for the State to issue 3 per cent construction bonds would be a more popular measure.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

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Half inch (1 square)	1.00	2.50	6.50	22.00
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Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

Our latest forms go to press Wednesday evening.

Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

San Francisco, November 26, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Spraying Outfits—Woodin & Little.
Agricultural Implements—Byron Jackson.
Agricultural Implements—Baker & Hamilton.
Agricultural Implements—G. G. Wickson & Co.
Orchard Spraying—Fruit Pest Exterminating Co., San Jose.
Fruit Trees—F. Ludemann.
Olive Trees—John S. Calkins, Pomona.
Pianos—Knabe Piano Co., New York.

See Advertising Columns.

The Week.

Unless the clouds get all the water squeezed out of them at the north we are now in for a wet Thanksgiving. There have been unusual rains in Washington—great enough in volume to lift the lake levels, swell the streams to flood-breadth, wash away habitations, roads, bridges and railway tracks, arresting travel and bringing considerable losses in some towns and rural regions. When such a storm strikes the north at this time of the year, there is usuaully enough to give California a share of it, and present indications are good for it.

Probably no dispensation could better conduce to thanksgiving than a good drenching of the State. Plowing, seeding, tree and vine-planting are all waiting for soil soaking. Trade, too, always loiters along until spurred on by rural activity and the confidence begotten of a crop prospect. Then merchandise orders are given, implement men shorten up their drooping countenances and lengthen their advertisements, nursery and seedsmen are in their harvest fervor and there is activity everywhere. Such a change the coming storm may work upon rural and urban scenes.

To make way for a day of leisure for our employes the Rural closes its forms earlier than usual this week and will reach readers a day ahead of time. May its early call be welcome.

The World's Fair in August.—California horticulturists who will go to the World's Fair may find August the best month to be there, or at least to include the last half of August and thenceforward while the Eastern autumn fruits come in. August is the month set for the great horticultural gatherings. The World's Horticultural Congress will begin August 16th and hold four days. The Society of American Florists and the American Seed Trade Association and the American Pomological Society will hold their annual meetings during the same month. Therefore the largest possible attendance of horticulturists is anticipated at that time, and Californians can meet their confreres from all the world.

Flowers for the East.—If we have not yet learned to ship flowers to the East, the Easterners may teach us by coming for them. It is reported that Mrs. George M. Pullman and one of her daughters made a flying trip to Oakland from Chicago last week in one of the finest private cars that ever came to the coast. They are said to have purchased $500 worth of flowers in that city and returned with them to the East. Going 2000 miles and back for a nosegay is something the ancients never even dared to attribute to their goddesses. Verily the world moves.

Local Centers of Horticultural Authority.

The most noticeable feature of the recent convention of fruitgrowers at San Jose was a pronounced sentiment against centralization of horticultural authority and influence. This sentiment, in some of its manifestations, was more personal in its drift than we wish it had been. In some of its activity it waged warfare against an individual State officer who has faults, as have other men, but whose course on the whole, has been commendable, and whose services have been valuable. His mistakes and shortcomings should have beem more gently treated in view of the fact that he has labored devotedly and to the extent of his abilities, with good purpose and, in most of his undertakings, with commendable results. We conceive, however, that this element of personal warfare was only incidental, and that the significance of the week's experience was in fact the lesson that conditions now require a wider relegation of power and prerogative to local centers upon which the fruitgrowers can exercise more direct influence in accordance with what they clearly see to be their local needs and local conditions.

California is a great State. Upon geographical considerations alone it is desireable that there should be a tendency now to build up local centers of authority and influence and in minor executive and legislative undertakings, to feel both the responsibility and the stimulus which promote success. Beyond this there lies the fact that generalizations covering too wide ground, either convey local hardships or are too mild to accomplish anything; they either have too great a precentage of misfits or they are too loose to serve the purpose of clothing at all. This is owing to the fact that in different regions different problems arise, different sentiments and dispositions inhere in the people, the problems requiring different solutions, and the people different policies and methods. All these things needful, can be best meted out by local authorities.

There is of course just as great need of central sources of influence aud information and central agencies with powers adequate to action on general propositions. In leading matters of quarantine, in determining the adequacy of general enactments, in publication of facts of general applicability and in instructive digest of the results of local undertakings for the general benefit, there is still full need of central authority and this authority does not become less nor inferior because of the individual activity in local centers. Rather should there be a tendency to elevate the influence and work of the central body. The best of local workers require the highest expert authority to aid them in difficult matters which arisei n their work. We do not see in the disposition to vest more power in the counties any necessary menace to the State Board of Horticulture. It seems to us it should rather stimulate the State Board to higher work, to devote more attention to investigation and experimentation and less to compilation. It has rendered great value in that direction hitherto but the State is advancing in this special knowlege and the call now is for advanced work, new facts about obscure matters which underlie success but which the local executive officers cannot penetrate.

It may be claimed that local regulation of pest destruction cannot be relied upon; that counties have refused to act though the need was great; that county boards of supervisors can be influenced by ignorant Silurians or penurians to withhold funds and thus thwart the work which should go forward with equal pace in all parts of the State. We appreciate the force of this objection, but still are of the opinion that intelligence has advanced so far that the examples of counties which are doing most in pest regulation will be more clearly recognized than formerly, and that if this state of mind has not been reached it will soon come upon the heels of diseased trees and unmerchantable fruit, the significance of which even the most short-sighted must appreciate. In any event, the general sentiment, as disclosed by the discussions and action of the local county officers massed at San Jose, seems to be overwhelmingly in favor of a departure from the method of appointment and central responsibility which has existed during the last two years.

Another clear indication in favor of local centers of action and power is seen in the disposition which was made of the proposition for a central selling institution for dried fruit in San Francisco. The objection was not urged against the symmetry and logic of the plan so much as against the centralization idea, which seems to us clearly impracticable. Local cooperation at the foundation, with such superstructure of conference and uniformity of action toward certain specific ends which are generally desirable, seems to us the method in which we are likely to advance toward a more satisfactory marketing of our fruits. Our people will not delegate their property-rights and freedom of action to any distant authority. They may relegate such rights and freedom to a local board whom they personally know, and for certain purpose, like the fixing of a minimum, as the Fresno raisingrowers did, but we have no hope of any wide adherence to any central system of marketing, no matter how skillfully and logically drawn.

Even though the disposition of the growers as shown at San Jose may seem inharmonious and rebellious against the methods which some of our most devoted and prominent fruitmen have labored to build up, still it must be taken as significant that the people generally are taking more and more interest in the affairs which deeply concern their industrial success, and this is unquestionably a hopeful condition, the beneficial results of which must, perhaps, be patiently awaited.

A Black Sheep and Black Pepsin.

Our readers who have been attracted by the tale of black pepsin, which recently appeared in the Rural, will be interested in the following, which we find in the *Country Gentleman* of last week:

We published last week an exposure of attempted fraud in the matter of a so-called "black pepsin" method of increasing the yield of butter. Information has since reached us that the author of the scheme is one James A. Bain of Ohio, who has been up to tricks of a similar kind heretofore, notably of a swindle in the spring of 1882, in which he signed himself as secretary of a bogus "North American Poultry Association," and offered valuable information about incubators which proved to be worthless. Our correspondent states that Bain has been in State's prison for offenses of the kind, but this we do not know to be a fact. The "black pepsin" stuff was to be obtained for so many stamps of "The Concord Chemical Co.," New York, but it is found on inquiry that no such company exists in that city, and that the postmaster of New York has been requested to forward letters directed to the company to the same postoffice in Ohio which was Bain's location in 1882, on the excuse that a contemplated removal of the company from there to New York had been temporarily postponed.

We supposed that we could recognize this Ohio fraud in any of his works, but though our notice in the Rural of November 12th showed that we had no confidence in any such manipulation of milk being satisfactory in its results, we have to acknowledge that the fabrication of a South Australian dairy society's report to float the stuff was too distant for our near-sighted vision to penetrate. Bain's success seems to be in reclothing old frauds in such new dress that they will pass inspection even by acquaintances. We supposed he had done enough mischief with his "California Cold Process Fruit Preserver" to keep him in funds for a year, but his invention seems exuberant. He is now working several swindles a year and, if reports be true, his old cell in the State's prison must soon welcome him again. Black seems, fittingly enough, a favorite color with him. He blackened salicylic acid in his fruit compound and now he probably blackens common rennet powder and calls it "black pepsin."

As we stated before, it is not new to treat milk with an agent which coagulates the curd in such a way that part of it which should go in the buttermilk is massed with the butter, and the product may be edible and wholesome enough, but it is not butter, nor will it keep like butter. Therefore the dodge has in it some fact and truth, but in the way it is presented it is a snare and a fraud.

There always seems to be plenty of credulous people who will accept agencies for this sort of bogus traffic. At the same time that we were exposing the fraud of the "California Cold Process of Fruit Preservation," as advertised in Eastern papers, there were agents peddling recipes from house to house in San Francisco. Satan seems to gain points in his old age.

A Dairy Conference.—The dairymen of Marin and Sonoma counties have done well to secure audience with their newly elected member of Congress, and State Senator, concerning the influence false products are exerting upon legitimate dairy products. As we go to press, a meeting is being held at the Court House in San Rafael, of which we hope to have a report in a later issue. The Marin *Tocsin* states that Congressman Geary has been considering the details of an act that will put the most stringent checks possible on the sale of oleomargine under the guise of pure butter, with provisions that will guarantee its rigorous enforcement. State Senator Eliot McAllister is also prepared to invoke the powers of the State and will introduce a bill to provide for a Board of Inspection to examine the markets, hotels, etc. and prosecute all who may be found disobeying the existing law. This a wise movement, for there is no doubt that considerable quantities are now being disposed of to an ignorant public, in direct voilation of existing laws.

Oregon Farmers' Institutes.—Farmers' Institutes will be held under the auspices of the Oregon State Agricultural College, this winter, at Salem, Newberg, Milton, Siuslaw, Dallas and Brownsville.

The first meeting is being held this week at Newberg.

The experiments in raising tobacco in Georgia this year have proved very sucessful.

From an Independent Standpoint.

The public intelligence is so habitually befogged by the misrepresentations and false assumptions of partisan newspapers that it is difficult to escape wrong impressions, however honestly one may try to bear the truth in mind. The triumphant Democratic party is just now the victim of a flood of irresponsible talk. The extreme partisan opposing press would have the country believe that the Democrats are pledged to free trade, and that either the party must fail to keep its promises or involve us in the industrial confusion which would follow a radical and immediate change in our tariff policy. A few days ago, at a dinner given in his honor, Mr. Cleveland said: "I am willing that the Democratic party should only succeed by meeting the situation fairly and squarely; by being absolutely and patriotically true to its principles and professions. This is the assured guarantee of success. I know of no other." This has been eagerly accepted as a declaration by the soon-to-be-president that he intends to "go in hot for radical free trade;" and already Mr. Cleveland's critics have arranged for him a scheme involving an extra session of Congress to follow immediately upon his assumption of office, repeal of the existing tariff laws and the substitution of the free-trade principle in the policy of the Government. Now, as a matter of fact, neither the Democratic platform nor any utterance of its candidates puts upon the party any obligation even faintly resembling the plan arranged by the opposing party press. We have read and re-read the tariff plank adopted by the Chicago Convention, and we fail to find any cause for immediate alarm even on the part of those whose interests are bound up in our present tariff policy, excepting possibly a few who are affected by the new and extreme provisions of the McKinley act. Happily no California interest (if we leave out of reckoning the already broken-backed tin-mining enterprise at Temescal) is included in this exception, so that our prune-growers, hop-growers, raisin-packers and others who look to the tariff for protection may rest easy for the present at least. In any event, their interests will be among the last from which the tariff will be removed. The wool-growers stand probably in greater hazard. To permit the readers of the RURAL to refresh their intelligence with the "documents in the case," we re-print in full the tariff plank adopted by the convention which nominated Mr. Cleveland, and which includes all the tariff "promises" to which he has just given renewed assent. The plank is as follows:

We reiterate the oft-repeated doctrines of the Democratic party that the necessity of the Government is the only justification for taxation, and that whenever a tax is unnecessary it is unjustifiable; that when custom-house taxation is levied upon articles of any other kind than those produced in this country, the difference between the cost of labor here and labor abroad, when such a difference exists, fully measures any possible benefits to labor, and that the enormous additional impositions of the existing tariff fall with crushing force upon our farmers and workingmen, and, for the mere advantage of the few whom it enriches, exact from labor a grossly unjust share of the expenses of the Government; and we demand such revision of the tariff laws as will remove their iniquitous inequalities, lighten their impositions and put them on a constitutional and equitable basis.

But in making a reduction of taxes it is not proposed to injure any domestic industries, but rather to promote their healthy growth. From the foundation of the Government the taxes collected at the custom-house have been the chief source of Federal revenue. Such they must continue to be. Moreover, many industries have come to rely upon legislation for their successful continuance, so that any change in the law must be at every step regardful of the labor and capital thus involved. The process of reform must be subject in its execution to this plain dictate of justice.

We denounce the McKinley law as the culminating atrocity of class legislation; we indorse the efforts of the Democrats of the present Congress to modify its most oppressive features in the direction of free raw materials and cheaper manufactured goods that enter into general consumption, and we promise its repeal as one of the beneficent results that will follow the action of the people in entrusting power to the Democratic party. Since the McKinley tariff went into operation there have been ten reductions of the wages of laboring men to one increase, and we point to the dullness and distress, the wage-reductions and strikes in the iron trade as the best evidence that no such prosperity as is claimed has resulted from the McKinley act.

We call the attention of thoughtful Americans to the fact that in 30 years of restrictive taxes against the importation of foreign wealth in exchange for our agricultural surplus the homes and farms of the country have become burdened with real estate mortgages of over $2,500,000,000, exclusive of all other forms of indebtedness; that in one of the chief agricultural States of the West there appear real estate mortgages averaging $165 per capita for the total population, and that similar conditions are shown to exist in other agricultural exporting States. We denounce a policy which fosters no industry so much as it does that of the Sheriff.

In this, surely, there is no promise of immediate and sweeping change—of a change so radical as to revolutionize the industrial system of the country.

As a matter of fact, free trade, or anything very nearly approaching it, is a thing impossible in the present conditions of the Government. The ordinary expenses of the Government are between $350,000,000 and $400,000,000 per year, and the present protective tariff provides about $225,000,000, the rest coming from internal revenue taxes and miscellaneous sources. To enforce free trade, it would be necessary to repeal all the present duties on articles of common and necessary use, retaining only those on the luxuries of the rich, which are properly revenue duties, though they may be incidentally protective. The value of our dutiable imports in 1891 was nearly $500,000,000, of of which a little more than $100,000,000 were articles of luxury and voluntary use. The rest are classified as food products, crude articles, partly manufactured articles, and articles completely manufactured and ready for use. Duties on all these classes of imports must come off, to carry out the free trade idea, to reduce price of articles of common use by a tariff for revenue only. The duty on luxuries is higher than that on other articles, and the $100,000,000 of luxuries imported may yield $75,000,000 of revenue. Retaining these duties, the loss of revenue by taking duty off competitive articles of common use, that price to the consumer may be reduced by foreign competition, will amount to about $150,000,000. This loss, if it should be brought about by change of tariff policy, would leave a deficit in the ordinary expenses of the Government. There is no way to make this up except by an income tax or a re-imposition of duties on sugar or other articles which now come in free. It is safe to say that there will be no haste to substitute a sugar-tax and an income-tax for the tariff-tax.

The RURAL does not seek to make itself an apologist for the Democractic party—it wishes, simply, to give the facts as they stand and to correct if possible the false impressions which, through the pernicious industry of party newspapers and party speakers, appear to have infected the country. On the 4th of next March the Democratic party will find itself in complete control of the country, and it will be its purpose to *modify* the tariff policy. It is pledged to do this; but it is *not* pledged (ten thousand partisan newspapers, to the contrary, notwithstanding) to sweep away the whole tariff scheme and to involve the country in an industrial revolution. It is a serious mistake to confound *promises* and *tendencies*. Of its free trade *tendencies*, protectionists have, indeed, some reason to be concerned. There will, unquestionably, be a strong free-trade element in Congress. There will be an effort on the part of this element to go to extremes; but it is not likely to succeed. The *promises* of the party do not demand free trade or anything like it; the conditions of the country make it an unsafe and an unwise policy at this stage of our development; the sentiment of the country would kill any such project before it could take the form of law. What we may expect is the lopping off of the extreme provisions of the McKinley bill, the placement of timber, coal and (we fear) wool on the free list and a general scaling down of duties where they protect industries which have outgrown their infancy. Saving and excepting the proposition as to wool, we see no reason to regret the prospect. But we should most seriously regret and resent any proposition that, leaving the manufacturer and merchant free to exact protected prices, would condemn the producing farmer and orchardist to forego the small advantage which the tariff gives him.

The arguments for an extra session of Congress to follow immediately upon Mr. Cleveland's assumption of office, rest upon the idea that the tariff policy is to be the object of immediate and determined assault. It is urged that if matters are left to their normal course, Congress will not meet till the December following Mr. Cleveland's inauguration; that it will take six to nine months to frame a new tariff measure, and that it could not go into effect before September or October of 1894, or nearly two years after the party had gotten into power. Furthermore, the new legislation would come into effect just before a general congressional election, upon whose result it might have disastrous effect From the standpoint of the extreme Democratic free traders, this is certainly sound sense; but there is good evidence that Mr. Cleveland does not look at matters from this standpoint in his discouragement of all propositions of a special session. A few days ago the New York *Sun* contained an editorial announcement, from which the following is extracted: "The *Sun* is permitted to announce that it is the present determination of ex-President Cleveland not to call an extra session of Congress after his inauguration March 4th next. It is further announced that in the estimation, at present, of Mr. Cleveland, and his closest friends, that an extra session would turn out to be a profitless proceeding. His friends say that Mr. Cleveland must have time after his inauguration to look over the ground. There is a natural objection also to the assembling of Congress immediately after the inauguration on the ground that it would have more or less of an unsettling influence on the business of the country." To the RURAL it seems that, taking all things together, there can be no doubt that Mr. Cleveland will decline to call an extra session; and, further, that there can be no doubt that he will resolutely oppose any course that will have a tendency to unsettle the business of the country.

It is easy to see that Mr. Cleveland will have to fight the radical free trade element in his party. It goes without question that he will have a great fight on his hands in the matter of adjusting the official patronage of the Government. And to these sources of annoyance there will unquestionably be added a contention within the Democratic party upon the silver question. Mr. Cleveland is a gold-standardist, and his influence imposed upon the Chicago convention a "straddle" on the silver issue; but it is not to be doubted that a vast majority of the party favor free silver without regard to the platform. In the last Ohio State election silver was the main issue with the Democratic party on a square free-coinage platform. Whoever recalls the discussions of the time not only in Ohio, but throughout the country, knows that Democratic sentiment was largely for free silver. Mr. Cleveland checked this sentiment and forced it to silence; but he did not kill it, and it is sure to rise to contest with him the domination of the triumphant party. We see already signs of preparation by the silver men for a direct assault. Repeal of the Sherman act is one of the "promises" which must be fulfilled, and when it comes to a substitute for it there will be music in the air.

The more we study the situation the more difficult Mr. Cleveland's position appears. Elected by political elements totally adverse to each other; having to meet and adjust the conflicting claims of hostile factions for official recognition; subjected to the duty of revolutionizing the administrative organization of the country; under the necessity of carrying out specific promises of reform; exposed to the danger of excessive zeal on the part of his own partisans; face to face with problems which our century of constitutional government has not been able to solve; with enemies not only in front but behind him—thus situated and thus confronted, Grover Cleveland has before him the most difficult duty ever laid upon a President-elect—save alone Abraham Lincoln. It is essentially unfair, ungenerous and un-American to pounce upon a man thus situated and to add to his difficulties by misrepresentation and misconstruction. Fair-minded people, no matter of what political faith, will be willing to give him a chance, reserving their criticism at least until something has been done to merit it.

It will interest many of our readers to know what Gen. Weaver thinks of the result of the national election. In an interview at Des Moines, Iowa, last week, he said:

The populists succeeded in the late election far beyond their expectations, and have demonstrated their strength as a political factor in American politics. We have carried almost as many States as the Republican party has carried, and have been defeated in a half dozen States by very slim margins, which amounts to a practical victory. We hold the balance of power in a large majority of the States of the Union, and, better still, hold the balance of power in the Senate of the United States. This will enable us to act as a breakwater against vicious legislation, and to force the great economic issues to the front. The Republican party is as dead as the Whig party was after the Scott campaign of 1852, and from this forward will rapidly diminish in strength in every State in the Union, and can never make another national campaign. All their great leaders have been killed off, including Depew and McKinley. It was our vote that defeated Harrison in Illinois and sidetracked McKinley in Ohio. The populists will now commence a vigorous campaign and will push the work of organization in every county of the Union. Its organization is now national, extends into every county in the Union, from sea to sea, and from the lakes to the gulf. A conference of leaders will doubtless soon be held at some central point for the purpose of thoroughly marshaling the forces of the new party throughout the country.

The official count in this State is most provokingly slow. It will probably take another week to complete it. Harrison's plurality will probably be a little the rise of 6000. The legislature is surely Democratic. The constitutional amendment extending the legislative session to one hundred days has been beaten ten to one. The amendment allowing cities or towns of 3500 population to make their own charters has been carried. The amendment extending the terms of city and county bonds from 20 to 40 years has been carried. The amendment providing ways and means for State officers to increase their deficiencies has been beaten. The proposition to refund the State debt has been beaten. The proposition for a popular vote for United States Senators has carried by an almost unanimous vote. The San Francisco depot act is probably carried by a narrow majority. The proposition for an educational qualification for voters has been carried.

The Vineyard.

Sonoma County Notes.

SANTA ROSA, Nov. 21, 1892.

TO THE EDITOR:—The wine product of California should be recognized as a staple article of commerce as wheat is but few merchants or manufacturers seem to want to trade in it. Why not! If it involves the aging and treating of the wine, then why not have cooperation in the wine districts. If a few San Francisco houses can make large profits so that they can build large warehouses valued in the thousands of dollars, why cannot our vinegrowers club together, get cooperage to hold the wine, and not allow all of the wine product to be rushed in on the wine cellars at one time. The farmers could get the experienced help required to take charge of the wine while it is going through the process of aging. Wine is always low when every one has grapes to sell, but when wine has the age, the same should command a very handsome return for the investment. The vinegrower wants the merchants, both wholesale and retail, to help sell the California product whenever consumers can be induced to take it. It is to be hoped, now that a better price is paid for best grapes, that good wine will only be placed on the Eastern market, and the day will not be far distant when wine will be dealt in, the same as wheat and iron, by all tradesmen.

GRAPE SYRUP.

While visiting Cloverdale, I called at the Moulton Hill vineyard. It is a large establishment and is producing grape syrup. They will produce 10,000 gallons this season. The manufacture was established four years since, and is a most important industry for the grapegrower. Mr. F. Albertz has a patent evaporator, in which he can boil down 4000 gallons of grape juice to 1000 gallons of the syrup in 18 hours. Afterward it is rectified, and filtered, and placed in one-gallon cans and, sold for table use. A large demand has sprung up in the East. The syrup has a pleasant flavor and is as distinctive in its character as maple syrup.

MUST-CONDENSING.

One mile from Geyserville, Sonoma county, a factory is making condensed must from the grapes for shipment. The output in 1891 was 200 tons of must, and in 1892 will be 300 tons, or 1000 barrels of 50 gallons each; the lot being 600 pounds each. I am told that six tons of grapes will produce one ton of must and give also 50 gallons of good brandy—all the refuse being used to bring about this result. The San Francisco office is at 500 California St., S. F., where samples of this new product can be seen.

At Petaluma a starch factory will be established at an early day. The people will give one block of land and have offered to give potatoes valued at $1000 free to help establish such an industry.

A fruitgrower suggests that all the rotten apples or fruit be taken up, or have hogs run in and feed on it. If the waste fruit is not consumed, then the worm will surely come out in due time and go up the tree. W. H. M.

[This is one of the oldest methods known to reduce the number of worms. The trouble is that only a part of them can be reached in this way, for a large part of the worms crawl out of the fruit and hide themselves before the fruit drops from the tree.—ED. PRESS.]

A Cordial Invitation.

EVERGREEN, near San Jose, Nov. 19, 1892.

TO THE EDITOR:—If "Grapegrower" from Glen Ellen thinks it prudent to join an army of half, or whole, bankrupted grapegrowers, he can see, on a visit to my place, many different ways of planting the vine—7x7, 14x3½ ft., 14x14, etc., and I will be glad to explain the advantages and disadvantages of the various systems.

WILLIAM WEHNER.

VITICULTURAL REPORT.—The report of the State Board of Viticulture for 1891-2 is already out, a volume of 280 pages. Any grapegrower or winemaker who desires it should send seven cents postage to "Secretary Vit. Com. 317 Pine St., San Francisco, Cal." Appendix "A" is bound separately, and relates to brandy distilling. It can be secured for four cents postage. The other appendices, some of them translated from the French and German are included in the report and are very valuable. All grapegrowers should apply for these documents.

Correction on Dairy Information.

In our issue of Nov. 12th, page 400, in the third paragraph, the printer makes us say: "Whenever cream cannot be ripened at a lower temperature than 47° there is a great loss of butter-fat." It should have read 67° for ripened cream and 47° or less for sweet cream Any good butter-maker knows that cream would hardly ripen at so low a temperature as 47°, and we very greatly regret the mistake as tending to throw discredit upon the excellent information given by Mr. Steele upon the RURAL and upon scientific dairying in general. We intend to be very careful upon all such points, in view of the fact that so many are disposed to attach more weight to a condemnation of one such error than to commendation of a great mass of valuable information.

A NEW METHOD OF PEELING PEACHES.—A recipe comes to us which says: "Sulphur them about as long as fruit is sulphured, then the peel can be pulled off with a knife." It is suggested that the above plan might be made profitable by using it only for first grade well-ripened peaches, to be first pitted then sulphured, peeled and lightly sulphured a second time. By very careful handling this would make a fancy article.

THE FRUIT GROWERS' CONVENTION.

A "Rural" Reporter Runs Over the Discussions and Gives His Impressions.

The whole meeting bristled with points of practical, dollar-winning wisdom like an Iowa farm house just fitted with lightning rods.

To give a close detail of this great meeting would be out of the question and perhaps our readers will be best pleased with such thoughts as impressed the writer. Let us call such as ran over the grader, winnowed thoughts.

In the address of welcome one is impressed by the remarkable Providence that went on for centuries to form the bed of an inland sea into a vast garden, and later on to bring for its development a race of men who study every element affecting public prosperity from the infusorial life that acts as a cause of fungoid disease in the smallest plant, to the laws of trade and nations that move the commerce of the world, and those higher laws upon which those of man are founded and by which the universe is ruled. Truly nothing that interests mankind escapes the notice of Santa Clara people. They dwell in one great orchard, exploit every market and promise to supply the world with prunes.

THE BATTLE OF THE PARASITES AND INSECTICIDES.

Members of the Convention are divided in opinion as to trusting to the parasites which have been colonized in California, or depending upon the washes and gases that have proven so effective in the past. This difference of opinion existing in the meeting is found all through the country and makes it very hard to promote any uniform policy of destroying insect pests. All agree that some effective means of protection is vital to the welfare of the industry.

In their enthusiasm over the discovery of Australian parasites which keep so many enemies of plant life, at the antipodes, in check, Commissioner Koebele and President Cooper were understood to have expressed the conviction that our troubles are ended in harmony with that law of nature which controls life by the universal edict of "Live and let live." In other words, they claim that we have now discovered many hundred varieties of insects that destroy the enemies of plant life, and it is only a question of development of this idea and successful colonization until all varieties of scale, aphis, codling moth, etc., shall be under control.

On the other hand the advocates of insecticides claim that we know for a certainty that the scale can be kept in check upon deciduous and the smaller citrus trees by washes, and upon the larger citrus trees by fumigation with hydrocyanide gas.

At Riverside, for instance, the city has purchased a complete fumigating outfit, and so soon as the commissioner notifies the authorities that the pest has made its appearance they order a thorough disinfection at once, at the owner's expense. By this plan they have only a very few cases each year.

From the discussion it appeared that there was no question but that the vedalia had been of immense benefit in destroying the scale, but that it was probable that they had not taken the time to catch the last one, nor have they any means to prevent other scales from coming in after the vedalia has finished its work and moved on to to pastures new. One gentlemen reported that a colony of the latest fashion of steel-blue ladybirds, imported from Australia, had disappeared, and that he thought they had been destroyed by a small bird that he saw upon the tree. We hope he may correspond with Mr. Koebele and find out whether they have similar trouble with these little birds in their Australian home. In a science so new to us as entomology we are in danger of generalizing from too few premises and thus fall into error.

Mr. Block of San Jose says that he has observed that it is easy to find these ladybirds at some times and impossible at others. He thinks it is their habit to spend a part of their life where they are hard to find, and it may be that the ladybirds may still be there.

The general sentiment of the convention was that we need very exact and careful knowledge upon the habits of friendly and injurious insects, and then some means of enforcing compliance by all with such means of prevention as seem most economical and effective.

CONFLICT OF AUTHORITY.

To accomplish the protection needed it seems that general harmony and concert of action are necessary. Where the Board of Horticulture is appointed by the Governor and the Horticultural Commissioners are named by supervisors, it does not appear how that essential harmony is to be gained, especially if each is jealous of his own authority. Between counties and State there is liable to arise similar differences to those between State and Federal authority that caused us so much trouble. If civil service rules prevail anywhere, it should be in these offices where science is so closely related to industry. The Horticultural Commissioner who renders service for a nominal stipend, often grudgingly voted by a Board with little conception of the responsibilty of the office, can hardly be expected to give his days and nights to such close study that he may never recommend an injurious or useless wash—that he may always detect at once the advent of any insect enemy, and promote by every means in human power, the increase of insect and feathered friends. Supervisors should regard this appointment as pioneers would have regarded the appointment of a captain who was to organize and command them in protecting their homes against surrounding savages, and choose their brightest citizen who had most interest in the fruit industry. He should be paid as though his services were important, and afforded every facility for acquiring the best and latest information.

Whenever in doubt as to the proper course of action, there should be some standard authority to which he can refer. At both our universities we have bright professors who are devoting their lives to the special study of insect and plant life, and in case the owner whose trees are quarantined or ordered disinfected feels himself aggrieved, the law should designate some one by whom the matter should be decided. There would be little danger of unfair rulings, as scientific men have too high a regard for reputation. Such a course would relieve many hardships and reduce friction in enforcing law.

The Board of Horticulture and Commissioners should be in that thorough sympathy indicated by the text of scripture, "In honor preferring one another."

OVERPRODUCTION.

In Mr. Gordon's able and exhaustive essay entitled "Don't," there seemed to be little left for us but to buy some first-class land in Santa Clara county, at $100 or certainly not more than $150 per acre, give it the best possible care in every detail of planting and developing a prune orchard, and then expect that prunes will be produced so far beyond the world's demand that we can hardly expect to sell them at all. He is one among 10,000, who will ever succeed in carrying out all of Mr. Gordon's excellent directions, and even then it does not look as though there was much left for him to hope for, except to starve, especially if he should neglect the important one of buying first-class Santa Clara land at $100 per acre.

Overproduction is an old story to all of us that we have heard since childhood, and we never yet saw the time when the prophets of evil could not marshal an apalling array of figures. Those opposing the introduction of machinery can paralyze us with the specter of black Ruin coming on a white horse to trample down the last vestige of happiness. Some pioneers have told the writer that in early days they ran their horses to Marysville to spend their gold-dust, fearing that gold would soon be as cheap as iron. When their value as food and cost of production are considered, it will be a cold day for producers of other fruit when French prunes raised in the Santa Clara valley are sold below cost of production. How is the grand-dame who picks up a few windfall apples every day through the fall, and dries them on strings against the south end of the house, ever going to get the money to buy her calico dress when we reach the point where the California prunegrower cannot make a living? Seriously, this is the source of the most severe competition that we have to meet, and if our figures on prospects of fruit-market give unexpected results, it will often be found that we omitted to calculate whether the apple crop was large or small over the country that year.

Now, we have always had an overproduction of the "Don'ts," viz., those who don't serve their fellow-men either by thought or action, and don't forget that the world owes them a living. Tramps don't work and don't want to—a great overproduction. So it is with every line of business requiring little skill, capital or labor. In all the little retail places in the city, we find so great an overproduction that four are waiting to do one man's work, and it is only by hook and crook that the mass of them make a living. There is an overproduction of commissionmen, that drives many a man who would do a square business, under favorable circumstances, into ways that are dark when the wolf stands at the door.

In short, an urban population that comprises half the numbers of a country almost without manufactures shows a great overproduction of nonproducers. If our trades-unions keep on shutting out their own boys from a chance to learn how to make a living, we shall see many of them swelling the army of those who don't stay out of State's prison.

The most dangerous overproduction is of that class who produce nothing. So long as Santa Clara can give us prunes; Marin, butter; Colusa, wheat; Riverside, oranges; Fresno, raisins; and all the others follow with like gifts, our brothers in the East and our cousins across the water will be glad to send us carpets and carriages, coats and dresses, paintings and pianos.

Hopkins, in his Moral Science, says that "supreme happiness consists in the highest activity of the highest powers." Now, if Santa Clara can produce the best prunes in the world; if they are the cheapest and best of all cured fruits from the standpoint of producer and consumer; if they have the best methods and the most intelligent operators in the world; then we think that a bright and industrious man may still hope to make the world pay him a living for raising prunes in Santa Clara by Mr. Gordon's methods. We shall keep on hearing this cry of overproduction so long as we live, but those urging this argument against going into prunes often tell us in the next breath that the business produces a net income all the way from $100 to $1000 per acre.

A STATISTICIAN.

The fact that canners received advices of conditions upon which value of fruit crop rested, so far in advance of the public that they were able to go out and contract fruit at prices that afterward proved hundreds of thousands of dollars below actual value of fruit; that commission-men

received advices so far in advance that a buyer was able to secure most of the Ventura apricots at $15 per ton when Santa Clara people, by a little better knowledge of market conditions, generally realized $30 for similar fruit; and many other instances of like character, impressed upon the convention the importance of taking some measures to secure more complete and accurate information than is now available to the public. It was thought that this might be obtained by some one well-skilled in knowledge of conditions that fix prices, who should regularly correspond with Consuls in the principal producing sections of Spain, France, Italy and other foreign countries that come in competition with our product, also with representatives of our Government and leading dealers in all countries where we hope to find markets; and by cooperating with the Agricultural Department at Washington to secure early, and on some occasions telegraphic advices, of conditions of fruit crops in the East. Such information would be news that the daily papers would eagerly circulate. The State Board of Trade has already done some work of this nature in seeking a European market for fruit products. The difficulty of maintaining any continued and systematic public service by voluntary subscriptions, and the importance of this work to the fruit industry, led them to seek some means of having it done by the State.

DRIED FRUIT EXCHANGE.

To the elaborate plan of Mr. A. L. Bancroft—published elsewhere—it was objected:

1st—That it was in the interest of building up a commercial center rather than the towns where the fruit was produced.

2d—That it placed another agency between producers and consumers, when there are too many barriers already.

3d—That it took the goods out of owner's control for at least six months, while it left buyers free to gather in outside lots and break the market.

4th—That it would be next to impossible to secure a general adoption of this plan by proceeding to organize from the top down, as would be contemplated by starting with a State organization.

LOCAL COOPERATION.

Col. Hersey and others gave careful and detailed statements of two of the most successful and best managed cooperative enterprises that have ever been brought to public notice. A great many members of the convention visited the West Side and Campbell fruit-drying plants, where operations have just been closed for the season, to see how it was done. Mr. E. F. Adams, of Wrights, is energetically at work organizing other enterprises of a similar nature, and they have in mind to manage the general interests very much as the butter business is managed at Elgin. By this means San Jose may hope to retain her prestige and fix the price of prunes as Elgin fixes that of butter. It is equally desirable that similar enterprises be organized in other places. They are needed in Vacaville, Winters, Suisun, Woodland, Marysville, Chico, Gridley, Petaluma, Santa Rosa, Sacramento (and while they are doing pretty well with their organization in Fresno), something is needed in Hanford, Visalia, Tulare and Bakersfield. When cooperative enterprises are organized in these sections and the many others that need them, all can unite in a State organization to secure market information. Col. Hersey says that their success in marketing this year was due largely to information obtained at a cost of $3000 by joining with five commission men of San Francisco. He did not say whether it was the total expense or only their part, but we presumed it represented $500 each for the six interests represented, as he said he personally could well afford and would gladly give $100 annually for such information. We don't think of anything likely to interest our readers—especially such as have been trained by Grange and Alliance to cooperative ideas—more than a careful plan for local fruit exchanges. We are thinking of such a plan as would be matured by a committee like Col. Philo Hersey, Col. R. P. McGlincy, Mr. E. F. Adams and Mr. F. M. Righter as the result of their successful experience.

Nothing will do more to promote development and increase prosperity in sections just engaging in fruit culture. That such committee was not appointed and the convention more thoroughly impressed with the methods and advantages of forming similar exchanges, seems to us unfinished business of the session, and we hope it will be taken up at once. We cannot afford to wait till next year. When such exchanges have formed a State organization it can do something to extend markets in England and can so regulate trade that our cured fruits will be thoroughly advertised, properly graded, and sold in groceries throughout the country as *staples*, on a basis of profit similar to that charged on flour, sugar, etc. They will soon inaugurate the system of shipping direct in carload lots to every dealer in the country who can handle that quantity. A statistician employed by the State could only advise regarding supply and demand, and investigate conditions which regulate markets. A State Exchange could do that and supply many conditions that regulate markets in their products. Among other things, they could establish standard grades so that the buyer of cured fruit would have a guarantee of quality similar to that existing in well-known brands of sugar or flour. That is one among the needed improvements for extending our markets, especially in England.

THE RAILROAD QUESTION.

The president's address was very strong in its recommendation of Government railroads. The committee to whom it was referred reported that since it is not the established policy of our Government to engage in such enterprise, the prospect of its accomplishment is too remote to warrant a recommendation from this body for legislative action. It took the ground that railroads were subject by law to the control of the people and it would be wiser for them to exercise that right than to venture upon a field of doubtful expediency. Although there were several who held very strong grounds in opposition to this report, it seemed to embody the general sentiment of the convention. It was generally agreed that schedule time and wider distribution were questions even more important to shippers of green fruit than rates.

It was expected that the inability of the company to supply the cars needed to make their expedited service effective would have been considered, and that some representative would have advised the convention regarding plans for improved service next year. It was also expected that a plan for private ownership and control of fruitcars, similar to the system of the great wholesale butchers, would be discussed. They have been able to concentrate that line of business at Chicago, Omaha and Kansas City, and control it mainly by use of refrigerator cars.

In our case, the Riverside and Vacaville men might unite in ownership of a line that would accommodate the one section in summer and the other in winter.

Again, it was hoped that the opinion of the convention might be drawn out as to the expediency of distributing fruit direct to towns whose trade would not warrant them in ordering carload lots. This was an important feature of Mr. Mills' address, which was distributed through the hall. The committee appointed to consider the subject asked for further time, and their report will probably be made through the press. It was a misfortune to the convention that Mr. Mills was prevented by illness from sharing in its deliberations.

To develop the possibilities of our State, we need a vast increase of population that we cannot conscientiously or successfully invite, save, as we can point out to them promising fields of labor. As fruit is that basis of industry for which our soil and climate gives us greatest advantage, the production and distribution of this crop are questions most intimately connected with our future prospects.

THE NICARAGUA CANAL.

A revolution urging the policy of immediate action by the General Government looking to its construction and depicting dangers, likely to arise from private control, was thought by some to be among the most vital interests affecting growers of fruit. Although the plan seemed to meet approval in a general way, only a few members of the Convention seemed to have considered the subject, in all its bearings to the extent that they were willing to put themselves upon record. It is a very broad question, and with many of us the battle of the man and the morfgage will be decided before it can be completed. Those who had discussed the question from the platform of the People's Party, seemed quite positive in their views of its expediency.

FORESTRY.

Attention was called to the importance of preserving our forests, by reference to famine arising from drought in Russia, since forests have been denuded, also from calamities in many other parts of the world arising from a similar cause. It was another point of unfinished business that the body only discussed the question in a general way, and failed to formulate any plan looking to definite action. The writer has driven through many of the forests of the Sierras and the coast durlng the past year and thinks it should be the Government policy to sell stumpage, rather than timber land, so that the trees might be allowed to grow up again after the ground had once been cut over, and so preserve the water sheds upon which the productiveness of our great valleys depend. If it would be good public policy to build mountain reservoirs in all such places as the Big Meadows of Plumas County how much better to provide that the trees and undergrowth, that attract and conserve that moisture, should be protected. Again, the interest on the money that the land brings would be but a trifle of the revenue that stumpage would yield. Let us settle the rich valley lands that are already cleared and keep the trees where they will supply them with the moisture that is as essential as soil or sunshine.

RETAIL DISTRIBUTION.

The necessity for improvement in this regard was touched upon, but scarcely discussed. It appears that so many are engaged in the retail trade that the most of the price paid by the consumer goes for rent and service, while waiting for custom. So long as three men are competing for the trade that one might easily handle, and all must live, it is hardly practical for them to reduce prices. Yet the $2.50 of the $3 00 that a 50 cent box of pears now brings when sold at retail, goes as far to check consumption, as though it was paid to the producer or the railroad company.

If by adopting a system of distribution similar to that of milk dealers, a part of the retailers could do the whole business, and the balance join the company of producers, the community as a whole would have that much more to divide. Some would go to producers, some to consumers. The dealers displaced would find a better occupation and and all be gainers. Things have not improved, much along this line in our home markets since early days, and we may grow very weary waiting for the natural laws of trade to accomplish desired results.

THE WORLD'S FAIR.

Prof. E. E. Smith of Palo Alto and Prof. George Hussman of Napa, had both visited Chicago recently and interviewed Chief Samuels of the Horticultural Department. They all realize the importance of making a creditable exhibit of our resources, especially in the line of fruit, which is becoming generally recognized as our basis industry.

It seems that there is a deplorable lack of interest, more especially in Northern California, and that counties and individual enterprise must be relied on to furnish exhibits, as the State can do little more than to furnish space, transportation and care for such as are shown in the State Building.

As our attention has been chiefly directed to that it seems that we are likely to suffer in the Department Building where our goods come in competition with other sections for prizes.

After our liberal appropriation it would be humiliating indeed to see such a State as Arkansas carry off the bulk of the gold medals with two or three wagon loads of carefully selected specimens. In the Department building, where fruits are entered for competition, they want small quantities of the very finest fruit we can produce.

Besides what has already been preserved in glass it may be possible to strongly reenforce our exhibit next June and July with specimens forwarded from here and put in jars there, in time for the Horticultural Congress, to be held early in August. It will be important to see that space is provided if we think of entering the lists at that late day against those who have already been a year or two engaged in pruning and fertilizing the trees from which they expect the prize fruits.

In the California building the two plans of county and classified exhibits call for duplicate samples. For instance, Fresno wants to show by her classified raisin exhibit the precedence taken by her county in that industry, and yet raisins will be a leading feature of her county exhibit, although wheat still leads in acres and struggles for the lead in dollars, even in Fresno. Most of the fruitgrowers learned for the first time that they were depended on for an exhibit in triplicate, one for the county and another for the classified in the State building and a third for competition in the Department building.

Mr. C. M. Wells, from Los Angeles, the Horticultural Officer, made a very interesting explanation of the matter.

FERTILIZATION.

This subject was discussed in a way that shows that the idea that our soil and climate can produce fruit without limit, forever, and suffer no exhaustion, is being consigned to "innocuous desuetude," as one must say now that the author has returned to power. No one spoke of having tried any fertilizer without very satisfactory results. Some have used nitrates; some phosphates; some stable manure; some had cut their grape cuttings into short lengths and returned them to the soil; some had returned the pits to the soil on the theory that as the pit, and not the pulp, draws on the vitality of the plant, and the strength of the soil, it should be returned to the soil whenever possible,—but never burned.

W. H Aiken of Wrights had excellent results frow plowing under one or two crops of wild oats and alfileria every spring, and this year had harvested the largest yield of prunes received anywhere in his section from ground that has been treated for several years in this way. Geo. M. Gray of Chico had tried to follow his recommendation, but rain hindered his plowing, and the grass grew so strong that it almost held up the mules, and it was impossible to get the land in condition at all that year.

It is evident that there is a demand for the services of some expert intensely practical in his advice as to the most economical method of producing best results in each case. The average farmer has too many questions to strictly give the scientific attention necessary to determine what his soil needs and the cheapest way to get it, as one who made it his special study might. It seems that there should have been more discussion as to methods of determining the value of commercial fertilizers. They already use great quantities with highly satisfactory results in Southern California, and the business is destined to assume great proportions among our orchards.

PRUNING.

Although there were some radical departures advised by those who related individual experiences; the majority were quite willing that the promoters should have exclusive benefit of most of them, being content to abide by the old and well-established systems of pruning for low heads, stocky trunks, and in the case of most fruits the goblet system, upon which most of the Vacaville orchards have been trained under advice of Mr. Smith, as often described in these columns, and carefully illustrated in "California Fruit." A new point was brought out which seemed worthy of trial, viz:

In case of trees that have become apparently dormant so far as producing wood or fruit is concerned, it has been found good practice to cut off the fruit buds for one season and has resulted in a satisfactory growth of wood and a good crop of fruit the second year.

The general practice seemed quite opposed to shortening in prunes, pears and apples, as is advised with peaches and apricots. Instead, let branches be trimmed to prevent chafing upon one another, or the fruit being too much shaded. Where two branches fork at one acute angle, and it is desired to remove one, Col. Hersey advised removing the lower, and made the point that by following the usual course of removing the upper, with a view of spreading the tree, the branch is liable to break down. When loaded with fruit, pruning should be very carefully and systematically performed upon a well matured pear designed to develop vigor, fruitfulness and symmetry, and varied with the needs of the individual plant.

THINNING.

The importance of thorough work in this direction, especially with peaches, was generally recognized. Some advised pruning so short as to avoid the necessity of extensive thinning; but the general opinion was that it was well to do the work after the pit had formed and before it had hardened, and thin so thoroughly as to insure large size. Small peaches are of little value, and the vitality of the tree is drawn upon in proportion to the number rather than the weight of peaches. Mr. McWilliams, who has extensive fruit interests near Colusa, gave it as his rule to leave four peaches for every pound that the tree ought to bear. Perhaps this was the most heroic, and probably the most judicious, thinning recommended. With the apricot the case is very similar. It is a great deal of work to thin fruit, but nothing pays better.

GRADING.

This was an important subject, whose discussion was conspicuous by its omission. This is much to be regretted, as all varieties of graders are in general use in San Jose, and the importance of the process is thoroughly understood. Again, it is probable San Jose growers are the most thoroughly impressed with the necessity of placing well-known brands of standard quality upon the market, and it would

have been very interesting to members from other sections to have heard the question well discussed. It should be considered unfinished business.

IRRIGATION.

As the prune crop was nearly 50 per cent short in San Jose this year, and the past two seasons have been characterized by light rainfalls, many are convinced of the necessity of a limited amount of irrigation, even in the valley which boasts so proudly that irrigation is unnecessary. The paper of Mr. Brainard was a very able presentation of the irrigation problem in Santa Clara valley, but the question did not excite the interest nor elicit the information that so important a subject should draw out from so distinguished an audience. Perhaps nothing is destined to become so important a factor in horticulture as irrigation. Probably it will be more thoroughly discussed next year at Los Angeles, where the wonderful development at Riverside and Redlands came as the result of irrigation.

COULURE.

Mr. N. W. Motheral of Tulare read a paper showing that the dropping of the fruit in the San Joaquin raisin districts was caused by the deposit on the leaves of some salt contained in the sap. The discussion developed the fact that instead of being a specific disease, coulure is a general name for the dropping of fruit from whatever cause. Anything which prevents the fertilization of the flower produces this result. It affects the white grapes, especially the Muscat, and the Black Ferrara. Dr. Blowers of Woodland, who is one of the closest observers in horticultural matters that the State ever produced, spoke of spending hours and days among the vines, watching the action of the thrip, the north wind and other causes that produce coulure. Next year at Los Angeles we hope to hear more suggestions as to remedies. The destruction of the thrip and the correction of the alkali causing so much coulure in the San Joaquin, are promising fields for scientific investigation. Mildew is a fourth cause of coulure.

ROOT KNOT.

This disease upon the root has lately caused wide destruction among young peach trees, especially those in the San Joaquin valley that have been planted upon soil previously cropped in alfalfa. Some benefit has resulted from paring roots and applying salt. For some years the trees thus affected have borne well, unless the knot encircled the crown of the root. In this case the knot seems to smother the plant. Here is another of the questions upon which we want light.

BLIGHT.

This was not much discussed in open meeting, but from fireside discussions at the hotel the writer thought that there was an amount of ignorance upon this subject that was liable to do more damage to our fruit interests than the blight itself. Prof. Woodworth of Berkeley has made it a microscopic study and can explain the peculiar bacteria in trees thus affected. It would be a good thing if he would contribute an article to the RURAL on this point and prevent our experts from driving us into hysterics whenever they see a black leaf or an injured strip of bark.

ARSENITES.

The same professor read a paper on insecticides in which arsenic is the active ingredient. Their value depends mainly upon insolubility. Paris green, a copper arsenite, is best and most costly. London purple, a lime arsenite, comes next. White arsenic is most soluble. Such preparations should be kept thoroughly stirred and deposited in a fine mist until leaves begin to drip, for the destruction of such insects as feed upon leaves or fruit. The professor proposes a series of experiments with spray pumps at Berkeley. His idea is that we might secure better and more economical results with less force and a finer spray. For fungoid and unknown diseases he recommends the Bordeaux mixture of bluestone and lime.

WOMAN'S WORK.

Mrs. Theodosia B. Shephard of Santa Barbara read a very interesting paper showing how a woman of energy built up a business, by her own exertions, from small beginnings, that bids fair to become a very important industry. Her specialties are flower seeds and bulbs, and she finds no part of the business so difficult as judicious advertising. She engaged in the business upon the advice of Peter Henderson and thinks California will become the seed garden of the world.

Mrs. McBride gave a very interesting account of her experience with her four young sons in what seems to be so nearly a model orchard as to assure women that horticulture is a calling in which they can bope to rival their brothers, and that it is both attractive and profitable.

Mrs. Maggie Downing Brainard favored the audience with an essay relating an experience in Mississippi very similar to that of Mrs. Shephard in Santa Barbara. In another essay she gave us a charming picture of home adornment.

Mrs. Hattie Jones of Sacramento was called upon for an extempore account of her orchard experience, which was very favorable and encourages perseverance.

THE NORMAL SCHOOL.

Nearly one hundred of us visited the school and listened to the six hundred students solemnly chanting the Lord's Prayer. Later they sang America and the Star Spangled Banner. All exercises were impressively rendered in a manner that brought out the distinct sound of every word and the voices seemed so modulated as to exactly fill the room.

The training school department, where teachers receive several months practice under critic teachers before graduating, was a very interesting room, also the kindergarten. The new costume for ladies may be briefly described as Zouave pants with overskirt, which is removed during gymnastic exercise. A part of the girls and the teacher had adopted the new costume, and when called upon to stand up they seemed the most attractive girls in the crowd, besides their movements are more free, as there is nothing to impede action. It is to be hoped that they will all prove enthusiastic advocates of this sensible dress reform.

In the Manual Labor Department each student was making a telescope. These cost $1 75 for materials and Prof. Barnard says that they will answer the purpose of a student for the first two years as well as one that would cost $65. Teachers are taught to make such apparatus as is commonly required for experiments in the public school. One of our party had it fixed up that the girls were expecting to teach school long enough to buy a bill of lumber and then make it into a house.

INSPECTION OF THE VALLEY.

Our party was driven twenty-five miles, passing El Quito Olive Farm, Los Gatos, and the West Side Cooperative Fruit Drying Establishment. At El Quito we were treated to red and white wine, grapes and oil. Mr. Goodrich's new varieties of the olives, most appreciated in Tuscany, are just coming into bearing, and we had the pleasure of comparing the oil with that of the Misslon. The writer is an expert judge of butter, and following out similar rules he would say that the difference in flavor represented $2 00 per gallon in favor of the oil made from the Corragiolio and Grossai's olives.

Mr. Goodrich says there is little choice between them, but thinks both are better than the Mission, aside from the quality of the oil.

Signor Barzelotti, who was educated as a scientific agriculturist in Italy and is an expert on oil and wine, says that we have at least six varieties among the 250 in Italy that are known here as the Mission. Among these is the Rubra, that is held in very high esteem in the old country. Probably the Fathers brought a few of the staple varieties of their day and propagated from them.

An experiment of Signor Barzelloti with red wine seemed quite as promising as that of the introduction of the new olives. It is certainly to be hoped we have gained another point in establishing a better foundation for the reputation of our wine. Such confidence is felt that Mr. Goodrich and other friends have joined with Signor Barzelotti in the purchase of an extensive tract at Morgan Hill that they are preparing for a vineyard, in spite of the doleful Jeremiad that the writer heard at a late meeting of wine growers at San Jose.

To hear them talk one would think that any one who had a wine vineyard would do better to grub it up and turn it into a sheep pasture rather than continue the business.

ENTERTAINMENT.

One evening was devoted to an excellent musical entertainment and social converse with the people of San Jose. In the meantime a very interesting discussion was going on in a committee-room, where they were telling their experience with hydrocyanide gas and with various washes in fumigating and cleaning citrus trees.

It seemed that washes would do very well for small trees, and were only about half the expense of fumigation, but must be done twice as often. For large trees, anything short of fumigation was hardly worth considering.

The writer was very sorry that he could not attend meetings of the commissioners and the convention at the same time, and thus compile a fair review of the information developed. He was obliged to slight one meeting or the other.

It is a great advantage to a presiding officer at such a meeting, not only to have a good general knowledge of parliamentary law, but also of all subjects under discussion, and such an acquaintance with members as to know who is in possession of most accurate information upon any subject of inquiry that may arise. It would be a good plan, in giving introductions at such places, if the custom should be established of using such words as indicate the line of information to be expected from each of the parties introduced. Conversation would naturally turn to those topics, and we should learn much more rapidly where to seek information.

It is a good lawer who knows where to find the law, and one of the main reasons why Governor Hoard of Wisconsin is so successful in presiding at dairy meetings is because he keeps fully abreast of the latest improvements in all branches of the industry and a very exact knowledge of the specialty of each member in attendance. When a point of information is called for, he knows the right man to call out, and is very careful not to allow a question to be passed without appropriate action.

In arranging the program he knows about the time that will be required by each discussion, something of the manner in which it will be opened and is very careful to see that it is lively and that information is drawn out.

A man may be bubbling over with information and still keep it to himself through diffidence unless called out. Those best qualified are by no means the most ready to speak.

The program of the conventions there is made attractive by giving points to be discussed on each subject and two or three lines by way of introducing the essayist, who is to lead the discussion. Dairy institutes and dairy exchanges have revolutionized that industry in the Northwest. Let us not admit that a more intelligent body of farmers assemble in the United States than composes the Fruitgrowers' Convention of California, but let us avail ourselves of every suggestion we can draw from the experience of others.

In arranging for the next convention let us not forget the bead knot and coulure; plans for distribution to interior Eastern points, more economical retailing, better regulated transportation, a standard authority for disputed questions on insects and plant diseases, plans for local and general fruit exchanges, quarantine regulations and improved methods of drawing out attendance, securing complete information and crystallizing it in shape for appropriate action.

The Attendance.

Following is a list of persons registered as visitors (and participants) in the convention:

R. P. McGlincy, Campbell.
A. M. McGlincy, Campbell.
Wm. Beauchamp, San Jose.
C. Sawtelle, Healdsburg.
M. Wingate, Campbell.
Mrs. A. C. Wingate, Campbell.
Miss A. H. Phelps, Campbell.
Hattie B Wells, Campbell.
J. R. Totman, Colusa.
Ed. F Adams, Wright.
D. B. Wier, San Francisco.
E. W, Maslin, " "
Henry D. Brainard, San Jose.
F. B. A. Lewis, San Jose.
Ed. Berwick, Monterey.
G. W. Wood, Visalia.
T. W. Rich, Visalia.
Levi Matthewson, Visalia.
L. F. Sanderson, San Jose.
J. M. Knight, Los Gatos.
J. S. Frost, Lawrence.
A. Block, Santa Clara.
Hiram Cornell, Lodi.
J. H. Thomas, Visalia.
J. H. Birge, San Jose.
W. H Aiken, Santa Cruz.
Mrs. W. H. Aiken, Santa Cruz.
A. M. Henkle, San Francisco.
Lawrence Russell, Saratoga.
G. W. Hutchins, Marysville.
A. P. Stratton, Walnut Height.
Irvin E. Pomeroy, Santa Clara.
B. C. Anderson, Visalia.
Geo. A. Meeker, Yuba City.
D. R. Shafer, Orosi, Tulare Co.
Enoch Gates, Napa.
A. F. White, Santa Rosa.
B. F. Walton, Yuba City.
Thos. B. Hutchins, Gridley.
J, B. Cory, Lodi.
Sam'l I. Haines, Santa Clara
G. H. Hills, Sommerville, Mass,
W. M. Herrold, San Jose.
Mrs, G. F. Starr, Yuba City.
Mrs. T. B. Hutchins, Gridley.
L. B. Walton, Yuba City.
E B. Starr, Yuba City.
E. T. Pettit, San Jose.
Fred C. Miles, Perryn.
C. E. Mack, Sacramento.
Wm. E Barker, Jr; Yuba City.
G. W. Tarleton, San Jose.
V. P. Richards, College Park.
Dora Kells, Yuba City.
Mrs. Hattie S. Jones, Sacramento.
Mrs. R. C. Kells, Yuba City.
C A. Kohner, Santa Clara.
R. Wheeler, San Francisco.
Wm. Berry, Alameda
Wm. Weaver, Anderson.
I. B. Quigley, Sacramento.
G. W Worthen, San Jose.
Jonas J. Morrison, San Francisco.
T. Archibald, Los Gatos.
W. H. Buck, Vacaville.
J. L. Mosher, San Jose.
J. A. McCune, Watsonville.
Dr. N. H. Claflin, Riverside.
Mrs. N. H. Claflin, Riverside.
Mrs. A. W. Parks, Marysville.
G. A. Parks, Marysville.
Harold O. H. Shelley, Berryessa.
B. O. Curry, Los Gatos.
C. L. Hanson, Chino
N. Wagenseller, Ukiah.
E. Leedhan, Arroyo Grande.
T G. Bahlender, Chico.
G. W. Rogers, Santa Rosa.
W. D. White, Ukiah.
J. A. Scholefield, Hollister.
Ernest A. Gammon, Cortland.
Frank E. Mitchell, Gubserville.
T. W. Mitchell, Los Gatos.
P. D Green, Cortland.
Mrs P. D. Green. Cortland.
D. J. Parneele, Vacaville
Alex Gordon, Fresno.
Mrs. S. J. Runyon, Cortland.
Miss Ora Runyon. Cortland.
Jno. Crofton, Cortland.
Mrs. Jno. Crofton, Cortland.
Samuel Stewart, Suisun.
M. Madge, Walnut Grove.
D. J. Hawkins, Arderson
A. P. Heuning, Cottonwood.
J. A. Branstatt, Yuba City.
Amy Brandstatt, Yuba City.
Daniel Flint, Sacramento.
H. C. Hogg, San Jose.
G. A. Watertown, Barlow, England.
A. L. Bancroft, San Francisco.
W. B. Baker, San Jose.
T. E. Gibson, San Jose.
C. M. Heintz, Los Angeles.
I. B. Jonson, San Jose.
F. W. Crandall, Los Gatos.
W. H. Gilmore, San Jose.
J. A. Kleiser, Cloverdale.
J. B. Waterman, Los Gatos.
W. W. Chamberlain, Suisol.
Isaac M. Coe, San Jose.
Ed. M. Ehrhorn, Mountain View.
Chas. W. Chapin, Mountain View.
J. L. Blair, Sierra Madre.
J. A. Webster, Vacaville.
G. W. Wagner, Yuba City.
F. M. Ensign, Yuba City.
J. W. Mills, Marysville.
W. S. Edwards, Los Gatos
J A. Eveleth, Santa Rosa.
Mrs. M R. Cole, San Jose
L. Weity, Farmington
Jos. Schupp, San Jose.
T. L. Gates, Vacaville.
W. D Davis, Santa Rosa
Mrs. W. D. Davis, Santa Rosa.
Miss Davis, Santa Rosa.
N. H. Wood, Napa.
Mrs. Wood, Napa.
R. W. Rice, Fresno.
John Duncan, Campbell.
S. M. Locke, Santa Cruz.
G. T. Duncan, Camobell
Chas. Spreckelsen. Santa Cruz.
R. N. Rowley, San Francisco.
Emory E. Smith, Palo Alto.
W. E. Collins, Ontario.
H. W. Hall, Camp Grant.
M. F. Bishop, San Jose.
Maj. C. J. Berry, Visalia.
Jno. Scott, Duarte
Eben Boalt, Palermo.
Lewis T. Corwin, Fresno.
Noah G. Rogers, Los Gatos.
Geo. M. Gray, Chico
Hiram Hamilton, Orange.
O B Shaw, Sonoma.
R. C. Kellls, Yuba City.
J. B J. Portal, San Jose.
A. M. Matthewson, Visalia.
C. F. Adams, Newcastle.
A. A. Hyatt, Vacaville.
Geo. H. Start, San Jose.
W. H. Atkinson, Napa.
F. H. Cook, Napa.
Leonard Coates, Napa.
A. S. McWilliams, San Jose.
D. O. Anderson, Bakersfield.
M. J. Worthen, San Jose
F. A. Kimball, National City.
F. B. Crosier, El Cajon.
A. Walider Crow, San Francisco.
C. S Aiken, San Francisco.
Miss F. C. Aiken, Berkeley.
C. W. Brett, San Jose.
Mrs. H A. Brainard, San Jose.
Jos. Marshall, Vacaville.
Mrs. Jos Marshall, Vacaville.
M. Milzner, Vacaville.
Jno. Flack, Healdsburg.
John A. Flack, Healdsburg.
Wm. Johnston, Cortland.
H. A. Gear, Cortland.
R. B. Blowers, Woodland.
T. H. Ryder, Woodland.
Robt. Williamson. Sacramento.
Edward Berwick, Monterey.
Mrs. Edward Berwick, Monterey.
Miss Mabel Berwick, Monterey.
Miss Ella Berwick, Monterey.
C. A. Stowe, Laurel.
E. J. Stowe, Laurel.
Mrs. R. C. Holland, Evergreen.
J. P. Onstott, Yuba ity,
Jas. E. Gordon, Saratoga.
C. W. Reed, Sacramento.
A. D. Cutts, Marysville.
H. J. Langdon, Oroville.
Geo. Deitzler, Biggs.
Geo. C. Rosdiog, Fresno.
Geo. W. Harney, Marysville.
P. C. Scott, Red Bluff.
Chas. H. Allen, San Jose.
N. M. P. Close, Tustin.
D. C. Crummey, Los Gatos.
L. U. McCann, Santa Cruz.
Geo. Hussmann, Napa.
A. S. Atchley, San Jose.
N. W. Motheral, Hanford.
A. W. Crow, Lawrence.
Leigh Overman, Hanford.
Fred. Hauss, Yuba City.
J C. Gray, Yuba City.
L. D. Green, Walnut Grove.
Mrs. L. D. Green, Walnut Grove.
D. Browning, Los Gatos.
T. H. Ramsey, Woodside.
J. F. Gilman, San Jose.
Mrs. C. Rogers, Modesto.
B. M. Leloog, San Francisco.
Mrs. B. Leloog, San Francisco.
F. P. Sheldon, San Francisco.
O. McHenry, Modesto.
J. M. Alexander, Oakland.
J. H. Summer, Happy Valley.
Jonathan Hague, Antioch.
M. C. Parkinson, Antioch.
H. M. Alexander, Anderson.
H. W. Cate, San Jose.
B. W. Cortlant, Los Gatos.
Mrs A. V. Huntling, Los Gatos.
F. Von Dorsten, San Jose.
O. F Von Dorsten, San Jose.
E. T. Huntling, Los Gatos
C W. Proctor, Cupertino.
V. T. Dunlap, Hanford.
F. A. Ring, Oakland.
D H. Towne, Hanford.
Mrs. C. L. White, Santa Rosa.
O. U. Maulsby and fam, Santa Maria.
Mrs. Georgie McBride, San Jose.
N. A. Sanders, San Jose.
Geo. A. Daggett, Santa Clara.
Chas H. Neitzel, Suisun.
J. Powell, San Jose.
A. A. Hibbard, Chico.
R. W. Bell, Santa Rosa.
Peter Engel, Marysville.
J. F. Meeks, San Francisco.
J. M. Kerlinger, San Jose.
A. C. May, San Jose.
F. M. Righter, Campbell.
M. Braughler, Santa Rosa.
Mrs. Jas. E. Gordon, San Jose.
Gen. N. P. Chipman, Red Bluff.
T. B. Hull, Sutter Co.
M. N. Williamson, Sacramento.
W. W. Gillett, Palermo.
Thos. Derby, New Almaden.
J. Howard Derby. San Jose.
Theo. Deming, Sacramento.
Wm. H. Robinson, Stockton.
Jos. Hale, Stockton.
Irving Blowers, Woodland.
M. Smith, San Jose.
F. L. Tileston, San Jose.
Geo. Thresher, Gridley.
L. Walker, Ventura.
A. Vollmar, Los Gatos.
Geo. A. Freeman. San Juan.
Mrs. Geo. A. Freeman, San Juan.
J A. Clayton, San Jose.
Mrs. L M. Norris, San Jose.
Mrs. S. P. Stewart, Inyo Co.
Mrs. A. M Russell, ———
Mrs. E S Dennison, Oakland.
Miss Lulu Dennison, Oakland.
Miss Ollie Dennison, Oakland.
Mrs N. M. Fraser, Oakland.
H. Hotchkiss, Gubserville.
J. M. Haskins, San Jose.
F M Tenney, San Jose.
S. P. Sanders, San Jose.
Mrs. S P. Sanders, San Jose.
Jas Huston, Santa Maria.
M Van Gelder, Acampo.
H. C. Blake, Vacaville.
H. H. Hunting, San Jose.
J. Blaine, San Jose.
C. S Brolly, Saratoga.
W. E. Ward, San Jose.
P. H. Blanchard, San Jose.
W. R. Strong, Sacramento.
F. H. Newell, Washington, D. C.
Wm. Eckels, Lincoln, Neb.
Franklin Dexter, Saratoga.
E. M. Thomas, San Jose.
Alice Charey Waterman, New Mexico.
A. Bettmake San Jose.
G. W. Dodge, Winters.
W. F. Bracker, Santa Clara.
Geo. E. Hyde, Gubserville.
Warren E Hyde, Gubserville.
S. J Stabler, Oakland.
Alice E. Stabler, Oakland.
Mrs. Mary S. Smith, Sutter Co.
Norman Dunbar, Cupertino.
D. H. Gonzales, West Side.
C. W. Woodworth, Berkeley.
F. G. Jefferds, San Jose.
F. Ceschi, Corralitos.
Cyrus Jones, San Jose.
H. R. Hines, San Jose.
J. R. Latta, San Jose.
J W. Badger, San Jose.
W. Windsor, Los Gatos.
Mrs. Mary E. Holtum, San Jose.
R. Besant, San Jose.
John C. Duff, Napa.
H. Spencer Black, San Jose.
L. Lee, San Jose.
Chas. L Mann, San Francisco.
Mrs. L. J. Watkins, San Jose.
Mrs E F Adams, Wright.
Elmer C. Zane, Yolo.
J. A. Harrington, Agnews.
A. C. Butcher, Lawrence.
J. J Crathers, San Jose.
Wm. B. Gester, Newcastle.
Geo. H. Holt, El Cajon.
G. A. Penniman, San Jose.
E. M. Shearer, San Jose.
C. M. Wells, Los Angeles.
Frank S. Chapin, Tulare.

HORTICULTURE.

Opening Addresses at the San Jose Convention.

Words of Welcome by S. F. Lieb.

Mr. President, ladies and gentlemen: I feel myself inadequate to give you a description of this valley. Originally it was a sea—this was before there was a Golden Gate. The geologist tells us that in those times this inland sea covered not only this valley, but what is now the great valleys of Sacramento and San Joaquin. Into it flowed the waters of the Sacramento, San Joaquin and other rivers, and it found its outlet through the southern end of this valley and thence on through the Pajaro valley to the ocean. Just how near the water stood to the top of the lowest gap of the coast range opposite the present bay of San Francisco we cannot even surmise, but eventually it became high enough to pour through this gap and Golden Gate was probably then soon made. Large tracts of land were thereby drained and made dry. The rich soil of our surrounding mountains was washed into the basin where the water had been and made this valley what it is. This is proven by the further fact that in boring our artesian wells we frequently find redwood trees hundreds of feet below the surface. When I came here nearly a quarter of a century ago, Santa Clara valley was one vast grain field. I cannot recollect of then seeing an orchard having in its limits as much as ten acres. Now behold the change. Where are those vast grain fields? Even you who were in attendance at the convention of this society held here some eight or ten years ago will be astonished at the changes since even then. As an illustration of this I may state that I had just planted an orchard in the western edge of this valley on what is known as the Stevens' creek road. That road is eight miles long and as straight as an arrow. Not a single orchard then fronted on this road but my own. Now, there is not one-quarter of a mile of it all told that has not an orchard or vineyard fronting on one or the other side of it and generally on both sides. I had occasion last spring to drive an Eastern friend around a portion of this valley, and we agreed before starting to keep account of all portions of the road that had no orchard or vineyard fronting on one or both of its sides. That drive extended between 25 and 30 miles, and at its close we found that there was much less than one mile in all not fringed by orchards or vineyards. Last year we shipped over 1000 carloads, counting ten acres to a carload, of dried prunes alone, from the San Jose depot. Should we have a full crop next year, we will ship 2500 such carloads of that fruit from that depot. Colonel Hersey, a very intelligent fruitgrower, makes a conservative estimate that from the trees now planted in this county we will produce annually over 200,000,000 pounds of dried prunes. Some idea of the enormous extent of that particular industry in this valley may be obtained when we remember that the annual consumption of prunes by the United States is only from 50,000,000 to 60,000,000 pounds and has never yet reached 100,000,000 pounds, even the years when they were very cheap. And yet, second only to our prune industry, is that of our apricots, our peaches, our pears, our cherries, and various other fruits. I have said this much of our valley, not in vaunting praise, but that you may see that we are a community of fruitgrowers, and hence that you have come to a community of friends. In such a community it goes without saying that you are more than welcome. We welcome you most heartily and unreservedly, and we mean every word of it. We go beyond that, and extend to you our most heartfelt gratitude for holding your convention here where so many of us can profit by your wise deliberations. In conclusion, we assure you that nothing will give us more pleasure than to feel that you have enjoyed your stay while sojourning with us.

Address by President Ellwood Cooper.

This will be the sixteenth State Fruitgrowers' Convention, and the twelfth held under the auspices of the State Board of Horticulture. These meetings form an important part of my life, and I must express to you my gratitude for the privilege of meeting you and feeling that we are friends united in our efforts to promote the best interests of horticulture. While our special purpose is to interchange ideas and discuss the fruit problem, we are developing other interests and effecting more important results even than the successful culture of fruits. The harmony and unity of feeling and purpose, always present, has governed our deliberations, is creating a public sentiment, and on our maintaining the same unselfish interest in the general welfare will eventually become a controlling interest in State affairs.

In reviewing the proceedings of the last convention, we find an increasing and deeper interest manifested. It will be appropriate in this place to mention that we had hoped to have our report for 1892 ready for distribution at this convention. We have succeeded in getting only a few partial copies, which are present, merely to show the character of the work.

At this meeting I will briefly mention some of the subjects for discussion presented in the program, and refer you more particularly to the address of our vice-president at the opening of our last convention held one year ago. The subject of canned fruits, false labels on worthless fruits and a system of inspection, besides other important questions, were brought to the notice of the convention, all of which still concern our success.

Regarding the appropriation of $5000 for the purpose of searching out predaceous insects to destroy insect pests, I should like to say here that Albert Koebele has to the best of his ability performed this service, and with very encouraging results. His report will be presented to the convention. It is my opinion that the beginning of the end has dawned and that devastation by insects will soon be a thing of the past, as far as those insects are concerned that are now here and troubling us. If we are cautious and determined in not letting any new insects establish themselves, we would be saved from further spraying and expensive remedies. This method of counteracting the depredations of insect pests is new. It has not been practiced at any period in the world's history, and if we carry out the project to its full completion, the fruitgrowers of California will be credited with one of the wisest measures ever encouraged or instituted. Its importance will be lasting through all future civilization. No measure so strongly recommends itself to the intelligent legislator as this, and it is to be hoped that at the coming session such aid will be granted as will permit the State Board to carry out the plans they have projected, so that the final solution may be reached.

Five thousand dollars a year for the next four years would be a sufficient sum to keep Mr. Albert Koebele constantly at work. I am confident that a parasite for every noxious insect will yet be found and colonized in California. I recommend that a committee be appointed to urge this matter in the coming Legislature. In Lee's report of 1890, there does not appear to be any doubt but that the insect, *Bracon Capitata*, would prove an effectual remedy to the devastation caused by the raids of grasshoppers. It is our duty to search for and introduce this parasite. It has also been stated by Charles Nanchin that the Pigmy owl of France is an effectual enemy to the excessive multiplication of the European sparrow; also that the great owl, *stryx bubo*, is the special enemy of rabbits. I would suggest that these birds be procured, and also the wildcat, as an enemy to the rabbit.

The present methods of disposing of fruits are very imperfect, resulting unsatisfactorily to the producers as well as to the consumers. They have not improved as was anticipated.

On previous occasions I have called attention to the forest culture. The regions of the mighty rivers, the Don, the Volga and Dneiper, were formerly fringed with widespreading forests along their whole upper and middle courses, which sheltered their sources and tributaries from evaporation throughout the year. These forests have now for the most part disappeared. Mile after mile the traveler sees nothing but low shrubs and melancholy stumps in unbroken succession. The Government of Russia had been warned 42 years ago and commanded to protect the forest, and unless these forests are protected the Don and Volga will disappear. More fatal even than the closing up of the streams is the cessation of the spring and summer rains. Now, my fellow citizens, will we permit this devastation to go on in our own country, which brings with it like devastation? I recommend the passage of resolutions urging the United States Congress to pass Senator Paddock's bill, "to provide for the establishment, protection and administration of public forest reservations and for other purposes."

At a convention held in San Francisco July 21st a committee was appointed on legislation, to obtain, if possible, such amendments to the Pharmacy Act and the Olive Oil Act as would secure the enforcement of these laws. I recommend that the convention ratify the appointment of this committee, or appoint a separate committee to act jointly with them.

Again, our vagrant law has not been effective. It could not be expected that a farmer or fruitgrower would follow a vagrant 10, 15 or 20 miles to a Police Court to identify him and have him punished, nor that each farm should have a deputized officer clothed with the power to make arrests. The law should be so amended that the local officers in every district could be empowered and compelled to arrest every wanderer who had no visible means of support.

At the Marysville convention a committee was appointed with power to act as an advisory committee to the World's Fair State Commission. In regard to this, I feel that we should take some action at this convention to impress upon the fruitgrowers the importance of making our greatest efforts on this occasion. The reissue of the State Board's reports is desirable for several reasons. A number are wanted for reference in the schools; the increased number of fruitgrowers desire the information contained in them, and a number should be on hand for distribution at the Columbian Exposition. It is as important as literature on any other subject, for it represents our intelligence in horticultural work. I recommend that a committee be appointed to bring the matter of publishing these documents before the Legislature.

THE TRANSPORTATION PROBLEM.

Simon Sterne, one of the best writers on railway service said: "Of all the factors that have contributed during this century to the growth of wealth, to the increase of material comfort, and to the diffusion of information and knowledge, the railway plays the most prominent part. * * * It is not, however, an unmixed good. It causes cities to become overcrowded; it takes away the independence of the individual workman; it makes the handicraftsman part of a huge machine, and compels the workman to give his time more and more to smaller and smaller parts of the whole operation necessary to produce a given result."

Every country which has allowed the railway to be built by private enterprise has fostered a class of unscrupulous operators, furnishing them the means of achieving great fortunes. Absence of governmental supervision in the stock capital of railways has caused the placing on the money markets of the world of a vast quantity of fictitious values not representing actual construction in money value. At the very outset of railway development, Stephenson, who was as wise a statesman as he was an engineer, insisted that railways should be taken in hand and operated by the Government, claiming that, from its nature and character, it was a highway which would in time become more important than the ordinary road. In terse language, he expressed before a committee of Parliament his opinion that competition would not be the means of producing in this case, as it does in others, the cheapest and best results for the community, because, said he, where combination is possible, competition is excluded.

James Morrison, in a speech delivered before the British Parliament, said, regarding the rates of toll, that he would determine the rate in every case by the sum at which the particular line of railway could now be constructed. The public are not bound to inquire what the line has really cost, but merely to ascertain the sum for which it could at the present time be constructed, and the railway proprietors ought to be compelled to carry the public and their goods for such fare as would yield a fair profit upon such outlay.

THE SYSTEM IN EUROPE.

In Belgium all concessions for constructing railways are granted by the Minister of the Interior, subject to the ratification of the Chamber of Deputies and of the King. The expected corporators offer a plan, giving the line of the route, estimates of its revenue, and the probable expense of the undertaking, together with a tariff of tolls for passengers and freight traffic. This is submitted to competent engineers and all verifications of the calculated costs of the projectors are made at the expense of the latter. Then for a period varying from one to three months, the whole plan is advertised. After these reports a hearing is had, at which the engineering work, the guarantees for its execution, the rate of charges by the company, the time for which they may be demanded, and the time within which the work is to be commenced and finished, are specified. After all these questions have been settled, the whole matter is then submitted to the Chamber and Senate and the King, any one of whom can alter it before it becomes a law. All the main lines are owned and operated by the Government. In 1850 the Government owned 64 per cent and private individuals only 36 per cent of the roads. The Government may at any time, if a line becomes profitable, buy it up, as under the terms of every concession, the road is subject to purchase by the State for the benefit of the commonwealth. The purchase-price is the net receipts for the last seven years of the company's working, from which the receipts of two most profitable years are deducted. It is needless to state that this system resulted in giving to Belgium the best and in every way the most efficient network of railway service on the face of the globe.

In France the Government advanced large sums of money to the railways upon the condition that at the end of 90 years all the lines should become State property, the State to take the rolling stock at a low valuation. All the rates of charges for both passengers and freight are regulated with the utmost minuteness. At any time before the 90 years expire, the Government can purchase the whole at a capitalization of an average of 15 years' income, after disregarding the two worst years, and taking as the minimum figure of the capitalization the lowest year immediately preceding the purchase. Every tariff of charges must be submitted to the Government for the purpose of receiving its sanction, and a month's notice must be given of any proposed change. Every passenger time-table is submitted to the Government for approval. No one interested in the stock of the railway, or in its direction, is permitted to make any contracts with the railway for supplies.

In North Germany all concessions are made by the Minister of Commerce. Since the formation of the German Empire, the separate States have agreed to concede to the Empire the power of expropriation, and the new lines are to be constructed under the Empire.

In Prussia all tariffs both for freight and passenger traffic must be submitted to the Government and receive its assent. At the close of the war with France, the Iron-Chancellor, Bismarck, had determined that the railways should become the property of the State, so that in 1882, 9500 miles belonged to the State, 1320 miles private lines under State management, and 2400 miles under private management.

Austria followed the course of France by making concessions for a period of 90 years to the railways. Its system of supervision as to the tariff of both passenger and freight traffic is complete.

Italy possesses a large majority of the mileage of rail within its territory. Switzerland has an extremely effectual system of supervising the tariff of charges, which must exist on all her roads.

In all these countries, therefore, the railway has never been regarded wholly as a matter of private enterprise.

An investigating committee appointed in New York State in 1879 made an exhaustive report. On alluding to watered stock, they referred to the fact that it was proved before them that $40,000,000 was probably the whole value of the property and equipment of the Erie Railway Company, and that $25,000,000 more would cover the additional value of the road as represented by stock and bonds and interests in other corporations, while it was capitalized at about $155,000,000. The construction account covered in 1873 an item of "legal expenses" of $891,000. The watering of the stock was estimated by the committee to be not less than $70,000,000. From 1868 to 1870, by the consolidation of the New York Central and Hudson River Railroads $44,000,000 were added to the combined capital of both. The fictitious capitalization of the railroads in the United States is a very difficult problem to deal with. There is no question but that the system is entirely vicious and caused by the public treating them as private enterprises, instead of public ones.

The aggregate capital of all the railways reaches something like $8,000,000,000, or eight times the public debt. A considerable portion is in the hands, or largely under the control of, less than 100 men. In any contest, therefore, between the Government and the railways, it is clear that so far as mere pecuniary interests are concerned, the railway enterprises largely preponderate. On account of the concentration of the railway power in comparatively few hands, the extent to which they can corrupt the commonwealth is practically limited only by their will.

We have heard, also, considerable discussion about the burden of taxation in the last political contest. The greater portion of the time of two Congressional sessions was taken up in discussing this subject: one with the Mills Tariff bill; the other, with the McKinley Tariff bill; yet the whole amount of revenue resulting from the present tariff is not more than one-half the tax levied on railroad

transportation, and, while the people throughout the country are conversant with all the arguments in support of one or the other methods, and have a voice in determining the adoption of the one or the other, they have no knowledge nor voice in the greater and more burdensome railroad taxation. There has been in New York city a small number of men, any one of whom could invite the others privately to his house, where by common agreement they would secretly raise the railroad tax 10 per cent, secretly telegraph it throughout the country without the knowledge of any one excepting the various railroad companies, have it enforced and levied upon the industries of the country. There is no government, either republican or autocratic, on the face of the globe that could accept this evil in times of peace without bringing on a revolution. No community can safely pursue its course of happiness and well-being before such an insidious power. The citizens of the United States are, therefore, called upon to meet this question. There are two ways, one by civil law, the other by revolution.

As to the laws governing a common carrier, a franchise to a common carrier, is not a local or a Sate question. It should be limited entirely to the Government of the whole people. Every citizen in the country who uses a common carrier, and all do, should have a voice in its creation and in its management. A citizen residing in Maine or Minnesota may use the California railroads to a greater extent than even Californians. It is a question belonging to the Government, just as much as the national defense or the postoffice. Therefore no franchise to a common carrier, at least to a main line of travel, should be granted except by the Government, and it should be guarded by such conditions that would protect the rights of every citizen, be for the public good, and be controlled by the whole people.

Monopoly breeds monopoly, hence the formation of trusts and syndicates, and, like their parent model, they have their foundation in fraud, by fictitious capitalization, taxing the public to reap a reasonable interest on fictitious values, furthermore acquiring power to govern prices, causing lower prices to the producers of the raw material, higher prices to the consumers for the manufactured goods and larger profits and accumulations to themselves. The machinery of the State governments is amply sufficient for dealing with this evil. By amending our corporate laws no incorporation should be granted unless restricted to the extent that it could not transact on a fictitious valuation. The purposes of the projects should be set out in their petition of application as to the extent of their business with a limit to the profits to be derived therefrom, and unless it could be shown that by such unity of operators economy would accrue to the general public, the petition should not be granted. The books of the corporation and the business management should be open to the inspection of legalized State authority.

It will not be many years before our fruit shipments will be ten times as great as at present. The two questions of all-absorbing interest, therefore, are first, how to dispose of the fruit, and second, the rates of transportation. The present methods of disposing of the fruits will not answer, because the commission merchants in the various localities have no direct interest in the property of the fruitgrowers. Their interest is a selfish one, based upon the probable commissions they will receive for the time being, and not upon the ultimate result which must effect every possible consumer seeking markets everywhere, that there may be no oversupplies or waste. An employed interest directed by the fruitgrowers can alone secure this. We must sell our own fruits, otherwise serious losses can arise at any time from improper distribution. Rates of transportation must be fixed upon the basis as indicated in what I have outlined, that is on the actual cost of transportation, with a reasonable interest on the capital invested, that is, on the actual cost of a system, adequate to the demands, capable of transporting the fruits without delays, and not upon the fictitious valuations of the various superfluous systems.

FRUIT MARKETING.

Cooperative Marketing Discussed at the San Jose Convention.

After the opening addresses at the San Jose convention, which are published in other columns, the first paper was presented by A. L. Bancroft, of San Francisco, on a plan for establishing a Fruit Exchange in San Francisco. Mr. Bancroft said:

The basis of this paper is the plan for a State Dried Fruit Exchange which has already been presented to the fruitgrowers of the State. Study has been put upon the subject and a few modifications have been made.

We hope at this time to advance further toward obtaining the desired results of effecting an organization than we have as yet done, and to leave matters in such a shape that work will proceed without interruption until either the organization is consummated, or it is clearly demonstrated that it cannot be accomplished.

No plan has been presented as an improvement upon the one herein outlined, or as a substitute for it. If nothing is ready now to be offered, is it not in order to consider whether or not this one has sufficient merit to justify an earnest effort to establish it?

A California Dried Fruit Exchange; an organization in the interest of the producer. The object is to furnish a medium through which to market California's product of dried fruit, figs, raisins, almonds, nuts, etc.

To limit the market places and concentrate the marketing at San Francisco in the place of having it sold at different places within the State and consigned for sale to places outside of the State.

To do away with the competition of one county or section of the State with those of another, and also with the competition between individuals of the same locality.

To assist members in buying supplies of all kinds, such as lye, sulphur, trays, ladders, implements, etc.

To establish the best methods of packing, shipping, etc., and perhaps grades and brands.

To gather and disseminate valuable information among the fruitgrowers.

Board of Directors.—To have a board of seven directors which shall be selected, as far as practicable, so as to have each prominent fruit-producing section of the State represented.

Compensation to each member of the board, a fee of $20 for each regular meeting attended, provided he is strictly on time and attends to the duties assigned him; also milage of 5 cents a mile each way from the country and return for each regular and special meeting attended, if strictly on time. No additional fee for attendance at special meetings. Their compensation to be paid only out of the net earnings or surplus of the Exchange.

To have the management and control of the affairs of the Exchange; to fix salaries of all except themselves; to employ all of the assistants required and to discharge them at their pleasure.

To establish uniform grades of dried fruit, etc.

To serve seven years, and to go out of office one at a time. The length of the first term to be decided by lot. Vacancies in the board to be filled, until the first election, by the board itself.

Regular Monthly Meetings.—Special meetings on call of president or manager.

The board of directors should be elected by ballot by the selling members, each $100 of sales made during the preceding season to be entitled to one vote. The election should be held April 1st of each year.

The first board should be elected by those who pledge themselves to sell their product through the Exchange the following season or year of 1893, each producer to have one vote.

The board of directors should elect the officers: President, vice-president, executive committee, manager and assistants. The management of the Exchange should fall upon the executive committee, it being all the time subordinate to the board of directors.

Executive Committee—To have an executive committee of three, to be elected by the board of directors from among its members. Weekly meetings from June 15th for six months, and biweekly meetings for the remaining six months, or say 40 meetings in the course of the year. Compensation, $20 to each member for each meeting attended, and mileage, if strictly on time and if he attend to his duties. A record to be kept of their transactions by the secretary. Where the members are not unanimous upon any point, it may be dropped or referred to the board of directors for action.

A manager, to devote his entire business time to the interests of the Exchange; to be secretary and ex-officio member of both board of directors and executive committee, but to have no vote in either body; compensation, $200 per month, to be paid out of the net surplus or earnings; two assistants, one at $50 per month and one at $25. The members of the Exchange to be of two classes, selling members and buying members; the selling members to pay a fee for the season of $5, the buying members to pay a fee for the season of $10; the Exchange to locate in rooms as near to the State Board of Horticulture as practicable; rent probably about $75 per month.

The Exchange to receive samples of dried fruits, etc., grade them, and to sell by sample, charging to the seller and buyer each a commission of 1½ per cent, making 3 per cent in all to the Exchange. The commissions, or part of them, to perhaps be deposited with the Exchange in advance, or the seller to be responsible for all, he to collect from the buyer at the time of sale. The Exchange to effect sales by correspondence as well as in their rooms, charging the same commissions; the seller to furnish samples and the purchaser to pay transportation on them. No sample to be accepted by the Exchange except from parties who contract to sell their entire product for the entire season through the Exchange. No one to be admitted as a seller for any season if he shall have made any sales previous to applying for membership. No dealer in dried fruits to be admitted as a selling member. The Exchange to assume no responsibility as to goods agreeing with samples; that must be arranged for between buyer and seller. No goods to be consigned by the Exchange. The selling prices to be determined from time to time by the executive committee. The "lots" of samples to be numbered; the buyer to pay his 1½ per cent commission before receiving a card or certificate of the Exchange, showing that he has bought the "lot" and is given the name and address of the seller.

Should the goods not agree with the sample, or the buyer be not satisfied with them and not take them, the Exchange to refund the commission paid; the seller to pay to the Exchange this 1½ per cent as soon as the sale is consummated. The Exchange to issue bulletins to the seller weekly from July 1st to January 1st, and biweekly from January 1st to July 1st, giving statistics of sales made, goods unsold and market rates of dried fruits, etc., all over the world; the bulletins to be mailed in sealed envelopes. Accompanying the bulletins once a month shall be a blank form of report and ballot—on a postal card—perhaps to be numbered for the seller to fill out, showing the quantity of dried fruit he may have on hand and the prices at which he is in favor of offering it, but the prices at which it is to be held are to be finally determined by the executive committee. Lots of goods offered shall be listed at the Exchange in the order accepted, and shall be offered to the buying members in the same order; perhaps make a separate list for each variety of fruit. If goods remain with the Exchange for a period of six months unsold, the selling member is to be allowed to apply for and receive permission to offer them at private sale at any price he may desire, and, if so sold, the Exchange shall be notified, but the Exchange shall not be entitled to any commission upon them. The Exchange to make the most favorable arrangements possible for the storage of goods while awaiting a purchaser, and also for the obtainlng of loans upon them.

At the members' meetings, only selling members shall be present or be represented by proxy. Buying members shall have no part in the management of affairs of the Exchange. Buying members shall not hold proxies of selling members. Proxies may be voted at members' meetings, but no person shall hold or vote at one time more proxies than those of one member. The Exchange should organize at once and commence preparations. Applications for selling memberships to be solicited at once, conditioned upon business amounting to an estimated amount of not less than $250,000 for the season, to be obtained before they shall be considered binding. Requests should be made in each notice published that producers send their names and addresses to the Exchange in order that circular matter may be sent to them. Advertisements to the same end should be inserted in the trade papers.

ESTIMATES OF RECEIPTS AND EXPENDITURES.

RECEIPTS.

Commission on $250,000 sales at 3 per cent	$ 7,500
Fees from 500 selling members at $5	2,500
Fees from 25 buying members at $10	250
Total	$10,250

EXPENDITURES.

Board of Directors—12 meetings at $100	$ 1,200
Executive Committee—40 meetings at $60	2,400
Manager and secretary	2,400
Assistants	900
Rent	900
Stationery, printing, postage, fuel, lights, etc	2,000
Sundries, extras or surplus	450
Total	$10,250

The $250 000 worth of goods to be sold by the Exchange would be about one-eighth or one-tenth of the apricots, peaches and prunes alone, to say nothing whatever of figs, raisins, grapes, almonds, nuts, etc. How much business it would be reasonable to expect might be done by the Exchange the first year, it would be difficult to say. If the sales were materially in excess of the amount named, the commission to the selling members should be reduced or be cut off entirely, or they should have a drawback at the end of the year which would materially reduce or wipe them out. The commission to the buying members should not be reduced.

Upon the basis of five directors, the estimated expenses were $10,250, as above.

With seven directors and a more pushing policy, say that the expenses should reach $15,000, $18,000 or even $20,000 a year. The 1½ per cent of the buying members alone on a business of $1,500,000 would more than cover it all.

Subscriptions should be started at once to a fund to guarantee the expenses of attempting an organization. If the attempt is successful, the expenses would be met in the ordinary way; if not successful, they would be divided pro rata among the subscribers.

If an enterprise of this kind bids fair to succeed, there will be danger that the middlemen will try to find some way to strangle it in order to protect their own interests. The possibilities of such an attempt resulting successfully should be very carefully guarded.

A COMMITTEE REPORTS A DIFFERENT PLAN.

Mr. President and Gentlemen of the Convention: Your committee to whom was referred the paper of A. L. Bancroft relating to the formation of a State Dried Fruit Exchange, have had the same under consideration and beg leave to report as follows: The thanks of the convention are due to Mr. Bancroft for the thought and labor which have resulted in the carefully detailed outline of the plan submitted, and while we find ourselves unable to entirely agree with him as to the method to be pursued, we do most cordially unite with him in saying that a State organization of the dried-fruit interest should be formed, conducted by competent men, paid to attend to their duties.

The points upon which your committee are unable to agree with Mr. Bancroft are as follows:

First—The plan of Mr. Bancroft contemplates that each grower shall contract to place his entire product for the season at the disposal of the Exchange, to be sold when and at such prices as the Exchange may determine or find feasible. Your committee do not believe that any considerable number of growers can be found who will make such engagement; we know that large numbers are compelled to realize on their output very promptly, and would not be able to make such contract; the Exchange does not propose any definite plan for assisting such growers by advances, nor would any such action be possible while the growers retained control of their fruit; this the plan proposes that they should do, and, in fact, they would have to retain control of it, unless the Exchange should provide warehouses, for which there is to be no money. It might be best that growers should put the control of their product into the hands of the ablest and wisest among them, but we are sure they will not do it, and we cannot recommend effort to attain the impossible.

Second—Mr. Bancroft's plan contemplates the shifting of the market places from the vicinity of the various terminal railroad points, where the products now change hands, and concentrating all transactions in San Francisco. Your committee believes that this would immediately cause powerful and bitter antagonism in every locality now enjoying this trade, in the face of which the Exchange would be entirelely helpless. No locality will surrender any portion of its business without a fight. It is not proposed to remove the fruit itself to San Francisco, which, of course, would be foolish as involving useless local freight and more expensive storage, and we believe that no power on earth can prevent the bulk of the transactions from taking place where the bulk of the fruit is; buyers will not buy by sample when they can see the fruit in bulk. If the concentration of this business at San Francisco had been commercially economical, it would have long since been established there. We shall have enough to do in securing the re-

forms which we desire without attempting to make unnecessary changes in the natural channels of trade.

In view of these conclusions which we have reached, and after further consideration which we have given the subject, your committee report that in their opinion the end sought by Mr. Bancroft can be much more certainly reached by local associations at the important shipping centers, co-operating through a central Exchange, with such powers and duties as the local Exchange, when organized, shall find it possible and expedient to commit to it.

In seeking to outline some definite plan for such associations to report for the consideration of the convention, the attention of your committee has been called to the work of the Santa Clara County Fruit Exchange which was incorporated last June and is now actively engaged in preparing for the business of 1893.

The history of this organization is properly this: Some time in April or May of this year, some 20 or 30 representative men of this county united in a call for a convention of all interested in the fruit industry, to be held in this hall to consider how far they could cooperate in marketing fruit. The resulting meeting was large and enthusiastic and was followed by others, the outcome of which was the organization and incorporation of the Santa Clara County Fruit Exchange, with Colonel Philo Hersey as president; Edward F. Adams, vice-president and manager; W. H. Wright, secretary; with a board of nine directors, a majority of whom, by the by-laws, must have larger interests as growers, than as driers or canners. Growers, driers and canners alone are eligible as stockholders, and no one can own stock in excess of $1000.

This corporation is empowered, under its articles, to take the green fruit as it comes from the tree and do everything needful to be done for it, until it reaches the consumer. The original expectation was that it should take the fruit green, when desired, dry, pack and sell it in carload lots to any purchasers who appeared, charging for such services the actual expense thereof, and interest on the necessary capital. The idea of drying, however, was soon abandoned, or at least postponed, as it was believed that this work could be more economically done by the cooperation of small growers securing drying grounds and plant in the midst of their orchards, leaving to the Exchange only the duty of marketing and of grading and otherwise preparing for market the dried product of those who desired it.

The capital required is the sum necessary to buy a lot, build and equip a warehouse, and a small working capital besides. For advances on fruit, which will be made if desired, it is deemed best to borrow as required, as it is not economical to raise capital to be idle eight months for the sake of using it four months.

The plan of operation, as it now exists in the minds of the directors, consists of two entirely separate and distinct functions:

1. A salesroom in the business center, rented for the season, in charge of a paid employe, open to buyers and sellers, whether stockholders or not, upon season tickets sold at a rate to cover expenses. In this room the Exchange will offer what fruit it has to sell, and all others being ticket-holders can meet there, buying from the Exchange or each other in the manner common in other produce exchanges.

2. A warehouse, with grading and boxing machinery, to prepare the fruit of small growers for the market. The business of the warehouse will be conducted on the plan of doing for each stockholder whatever he may deem profitable to have done by the Exchange and nothing more, the directors believing that if they do the business wisely and profitably all will desire to share their advantages, while if they cannot so transact the business it is better they should not be entrusted with it. They wish for no waste of material owned or the markets established by any of the stockholders, but rather to maintain all that has been thus gained and supply the same or better advantages to the smaller grower.

The following have been suggested as the principal rules which will govern the business, and most of them are involved in resolutions passed at various times by the directors, but they have never been actually adopted in due form, and on one or two points they touch matters not yet considered by the directors, but they indicate quite closely the present opinion among them:

1. Separate charges shall be made for each class of service, to cover the possible cost thereof, including interest on paid-up capital and insurance, and any excess shall be returned to the proper person when the actual average cost shall be ascertained at the close of the season. All fruit received shall be charged with insurance.

2. In addition to insurance the following are the services which the Exchange shall perform and for which separate charges shall be made: Storing, grading, inspecting, dipping, boxing, selling.

3. Any stockholder may have any fruit inspected, with or without any one or more of the above services, as he may order. No service shall be given except upon the written order of the owner, and no service shall be charged when actually ordered and rendered. No fruit shall be handled by the Exchange or sold under its brand unless inspected.

4. All prunes received, when graded, shall be binned together and transferable warehouse receipts given therefor, less — per cent to cover shrinkage. When all receipts shall have been honored any excess shall be sold for account of the Exchange and the proceeds divided, pro rata, among the consignors. All other fruits, so far as possible, shall be treated in the same manner. Fruit insufficiently dried shall not be receipted for until in proper condition. Inferior fruit, at the option of the Exchange, shall be kept in original sacks and sold only by sample. Any fruit, at the owner's option, may be handled in the same manner, subject to charge for any additional expense.

5. Advances, when desired, shall be made by the Exchange on all fruit subject to its control, at current rates of interest, up to the limit of sound banking, and fruit so pledged may continue subject to sale by the Exchange, the owner or any agent, at the owner's option.

6. The Exchange shall guarantee sellers under its inspection against all claims for rebate.

7. All sales by the Exchange shall be for spot cash F. O. B., San Jose. In case of complaint by non-resident buyers in regard to weight and quality the same shall be promptly arbitrated, and if sustained the rebate adjudged shall be promptly paid by the Exchange.

The above, as before stated, indicates about what is proposed. The plan of inspection and guaranty against rebate would require an inspector's fee to be sufficiently above the actual cost of inspection to cover insurance against occasional inevitable errors of inspector. It should be added that the plan of inspection has not yet been worked out, but it must be based on exact definitions of what the Exchange means by "Standard," "Extra" and other brands of the different fruits. The Directors have gone far enough with it to convince them that such definitions are possible.

It will be noted that the Exchange requires its brand to be placed on all packages. It is intended that the inspector's label shall be so attached to the package as to be destroyed in opening. The Exchange brand is not be the exclusion of private brands which it is desired to have also appear on each package.

The expectation of success is based on the belief that wise and prudent management will secure it, and upon the plan of uniting growers, buyers and driers in an effort to secure the utmost economy in all movements and manipulations of the fruit for the purpose of reducing cost. The Exchange expects to save some commissions, but not all.

The relation of such an Exchange to a State Exchange might be indicated by the following resolution adopted by the Santa Clara Exchange, and which expresses the opinion of that body:

Resolved. That it be announced as the policy of the Exchange to induce the formation of Exchanges similar to our own in all prominent fruit districts of the State; and that when such Exchanges shall be formed, we will favor the formation of a State Association of Exchanges, the Directors of which shall be selected from the local directories, and whose functions shall be the gathering and distribution of information, the opening of new markets, the care of our exhibits at important industrial expositions, the detection and exposure of fraudulent practices calulated to injure honorable growers of and dealers in California fruits, and mutual conference in regard to prices.

This report is already too long to permit us to indicate what modifications of detail might be required to adopt the Santa Clara plan to other localities, where the leading products are different from those of the Santa Clara valley. The plan as worked out is the result of the careful study of nine competent men, five of whom are growers and four driers or canners for the past six months. It seems to us the most promising attempt yet made in this direction, and as such we commend it to the consideration of this convention. Respectfully submitted.

N. W. MOTHERAL,
G. M. GRAY,
ALEX. GORDON,
EDWARD F. ADAMS.

After discussion, the report of the committe was unanimously adopted.

THE DAIRY.

The London Dairy Show.

Written for the RURAL PRESS.

This show was held in the month of October, 1892, when 33 cows of different breeds came forward for the milking trial and testing of the milk.

A short time ago we gave the scale of points on which premiums are awarded at this show, but it will not be out of place if given again in connection with the results obtained in the milking trials of this year.

The milk of two days, or four milkings, is first weighed and analyzed, and from these data the points are calculated. "One point is given for every ten days since calving, deducting the first 20, and making 18 the maximum; one point for each pound of milk yielded per day; 20 points for each pound of fat; four points for each pound of solids other than fat in the milk; with ten points deducted in cases where the butter-fat amounts to less than three per cent."

The following table, from the *Agricultural Gazette*, shows at a glance the comparative merits of the prizewinners in the different breeds.

	Points.
SHORTHORNS.	
1 and Thorley's, Mr. Errington's Lily	132.3
2, Mr. Hornby's Pride of Finchley	129.8
r and Errington's, Messrs. Rumball & Son's Lily	120.0
JERSEYS.	
1, Mr. Baxendale's Chestnut 2d	93.3
2 and Thorley's, Mr. Bratton's Fairy Elf	89.0
r, Miss Standish's Beauty	83.1
GUERNSEYS.	
1, Mr. Christie-Miller's Mountain Maid 2d	125.8
r, Express Dairy Company's Ladybird 2d	75.2
AYRSHIRES.	
1, Mr. Holm's Snowdrop	99.8
r, Mr. Holm's Rosie	78.9
KERRIES.	
1, Express Dairy Company's Killarney	88.2
2, Lord Ashburton's Mavourneen	82 5
r, Mr. Roumieu's Topsy	50.1
MIXED CLASS.	
1 and Thorley's, Mr. Spencer's Aberdeen-Angus, Black Bess	140.8
2, Mr. Spencer's Dorothy	131.3
r, Mr. Spencer's Modesty 2d	122.8

The letter *r* means reserve number, which entitles an animal to the second premium in case the one to which it has been awarded, or its owner, does not fulfill all the conditions of entry, etc., required by the society. "Thorley's" is an extra prize given to cattle fed in part on Thorley's cattle-food.

It will be noticed that the cow with the greatest number of points to her credit is a polled Aberdeen-Angus, but whether pure-bred or not is not stated. The breed is not, and never has been, noted for its dairy or milk-giving qualities; consequently, the fact that the highest merit should have been won by a cow of this breed is a surprise to most people.

The morning's milk of this cow, taking the average of two days' milk, was 32 pounds, with 4.32 per cent fat and 8.80 other solids; evening's milk, 28 3 pounds, with 5.66 per cent fat and 8.70 per cent other solids; the total butter-fat for one day being 2.98 pounds, equal to more than three pounds of butter.

The next best cow is a Shorthorn, that gave 30.4 pounds of milk in the morning, with 4.45 per cent fat and 9.25 per cent solids other than fat; evening's milk, 29.1 pounds; fat, 4.16 per cent; and other solids, 8.96 per cent; the total butter fat given by this cow being equal to 2.56 pounds in the 24 hours, say 2¾ pounds of butter a day; while the second best Shorthorn cow gave 2.3 pounds butter-fat in same time, which is equal to about 2½ pounds of butter a day, from 60.6 pounds of milk.

The milk and butter produced by either of these two cows, so far as we are aware, is above that of any cow which has competed, in any State, for the premiums given by the American Shorthorn Breeders' Association; a cow with a record of 4.2 pounds of butter-fat for two days being the best, unless beat this year.

It now remains to be seen whether the very liberal additions to the World's Fair premiums made by that association will draw out a better array of milking Shorthorns than this country has yet seen brought before the public.

The best Guernsey cow, with 125.8 points, gave 51.6 pounds of milk in one day, which contained 2.59 pounds of butter-fat, being second in quantity of butter-fat to the Aberdeen-Angus cow.

The English Jersey Cattle Society's butter test is made at this show. They get at the results by the churn, on which the *Agricultural Gazette* remarks: "A gratifying feature of the trials this year is the fact that in the Jersey test—conducted by Mr. Ashcroft and Mr. Weetman—the result of the actual churning corresponded with the chemist's analysis in every case."

The first-prize Jersey cow, also first in the Dairy Show, had been in milk 120 days. At a previous show this year her milk in one day made 2 lbs. 14 ozs. of butter. She gave 29 lbs. 14½ ozs. of milk in one day, which made 2 lbs. 6½ ozs. of butter at the London Dairy Show, equal to 1 pound of butter from 12.42 pounds of milk, her milk having an average of 7.7 per cent butter-fat. The second-prize cow gave 31 lbs. 1½ ozs. milk and 1 lb. 11 ozs. butter, 121 days after calving, and the third-prize cow 28¾ lbs. of milk, which made 1 lb. 10¾ ozs. of butter, 55 days after calving.

The cow that takes second prize in the class for "other breeds and crosses," is entered as a Dutch cow. She has the third greatest number of points of any cow in the show, and gave 61.8 lbs. of milk, containing 2.36 lbs. of butter-fat in one day. The best Ayrshire cow gave 46.2 lbs. of milk, containing 1.87 lbs. of butter-fat, equal to about 2 lbs. of butter a day.

The above results show cows of five different breeds that made records of two to three pounds of butter a day. All these breeds, except one, the Aberdeen-Angus, are of recognized dairy breeds, among any or all of which a proportion of good cows may be found, according to the way in which they have been selected, bred and fed for the development of dairy qualities.

We would caution those who own Aberdeen-Angus cattle against warranting too high a dairy standard in the animals they sell, for fear their customers might meet with disappointment. One swallow does not make a summer, and however good the black polled cattle may be for beef, they cannot be depended on in the dairy business. Like a good many of the Shorthorns, they have not been bred that way.

That Extended Butter.

OAKLAND, Nov. 18, 1892.

TO THE EDITOR:—I am the owner of two fine cows from which I am making some 15 pounds of butter per week, which I have no trouble in selling at 40 cents per pound to my neighbors, who also take most of the buttermilk.

When I read in last week's RURAL that by adding one teaspoonful of "black pepsin" to the gallon of cream I could recover as *butter* some 37 per cent of the solids, I saw a small fortune before me. The more I thought about it, the more it impressed me as a "good thing." It excited me and I became extravagant. Colonel Sellers' eye-water scheme was nowhere. I could buy up all the cream in my county, convert it into butter and clear 100 per cent daily on the transaction. In two years I could start a bank and would name it the "Pepsin Bank of Oakland." People would wonder at the name and there would be a rush of deposits. I mentioned the matter to my wife and she became more excited than I had been, and more extravagant also.

I sent my boy into the drug-store with an order for one pound of "black pepsin." He came back and said: "Pop, there ain't no sich stuff ter be had." My dreams of wealth have vanished and I won't be extravagant again, pepsin or no pepsin. GRANGER.

[Our correspondent is right to abandon his high-flying anticipations of stretching his butter product beyond the limits set by old-fashioned notions of butter. To coagulate a part of the curd and work it into a mess with the butter-fat may be legitimate cookery, but it is not legitimate butter-making. So far as we can now learn, "black pepsin" is a term which some one has used to cover a preparation of which he hopes to maintain control. If we get fuller information we will give it later.—ED. PRESS.

The Home Circle.

Lost.

We are so courteous and kind, we two,
  There is not a thing in life
One would not do, as the other's due,
  In the crisis of the strife;
We would fight each other's battles still,
  We would stake our trust and truth
On what each averred, as when hearts were stirred,
  In the glory and glow of youth.
Yet I never forgot how you went away,
  Smiling and careless, that April day.

We keep the sweet old forms, we two;
  We treasure each dear old phrase
We made when the dream of love was new,
  In the golden summer days;
We would not let one trifle slip,
  Of the beautiful, fanciful thing,
Which hope and youth once set to truth
  For love's happy lips to sing;
Yet, smile and speak and act as we may,
I never forget that April day!

So we are drifting apart, we two,
  And you struck the link in twain;
I well believe that you never knew,
  Nor suffered the swift, strange pain;
Vaguely you think there is something gone
  From the old relationship;
Though the lovely ghost of the fair thing lost
  Still glances from eye and lip.
I knew the death pang that April day,
But I held my peace, and you went away.

—All the Year Round.

The Transitory Tramp.

Miss Eliza Brown was alone. She sat on her front porch, and now and again cooled her cheek by a nervous jerk of her palm-leaf fan. The rockers of her chair gave forth a dismal squeak, as her small but weighty person swayed forward and back. She was much discontented and very nervous—unstrung, she would have said—and her flushed face and aggrieved eye proved her no liar.

Miss Eliza's character included two very opposite qualities—a quick, high temper and great timidity. We see this combination in men very often, but in women it is rare, Miss Eliza had the arched nose and valiant coloring of England's Virgin Queen, contradicted by a mild eye, an insignificant mouth and a double chin. Her height was not much to speak of, and her figure was of the down-cushion order—soft and puffy.

Her thoughts just now were troublesome. They hovered persistently about a conversation she had listened to the night before, while taking tea with a neighbor. The subjects of this conversation, instead of remaining decently buried in oblivion, haunted her. They were rather a ghastly lot, taking them altogether. The first was set going by a girl who said that there had been more tramps hanging round this summer than ever before as far's she knew. Then followed stories of the bad behavior of these horny-footed and light-fingered gentlemen, tales of the evil deeds of gypsies, thieves and murderers, of the villany of Italians and the wily ways of the peddling Jew-man, till every one's flesh began to creep, and the younger girls giggled hysterically; till Miss Eliza's crimson cheeks faded to a faint heliotrope, and Miss Eliza's niece, who was present, trembled with delicious excitement. After it was over these two found their way home through the gathering gloom, the one with boldness of speech and an eye that shunned shadowy corners, the other thrilling at every rustling leaf and inwardly thirsting for adventure.

Now Miss Eliza was alone. "The girl," Miss Eliza's helpmeet, had gone to visit her mother, and Pauline, Miss Eliza's niece, was spending the afternoon with a friend about half a mile down the road. The house seemed very empty and isolated, just the place in which to enact a tragedy of the deepest dye. Miss Eliza reflected that in all tales told the night before, the bloodiest misfortunes ever befell the lone woman who lived a half-mile down the road, and could there be a fitter subject for such horrors than herself? She thought, too, that Pauline was not likely to return before sunset, for she had refused to let her take part in some amateur theatricals, and there was a coolness between them.

Miss Eliza rocked uneasily and scanned timorously the dusty road which ran past the garden gate. After a half-hour of this watching and fearing, she calmed a little and went into the house for her sewing. What was her dismay, when she stepped forth again upon the porch, to see a very ragged tramp come toward her up the gravel path and mount the steps. He stopped when he reached the step below her and smiled.

He was a young man, not over twenty-two or three, maybe younger, and rather handsome, but his black brows were very sharply marked, and there were deep shadows under his eyes, which gave him a deadly look, and the smile which now lifted the corners of his mouth brought to Miss Eliza only a more lively idea of how he would look as he gloated over her mangled remains. He stood, silent and smiling, and Miss Eliza felt she must say something. She gave a furtive glance down the road to see if any one were coming, then she raised herself on tiptoe, pointed a fat forefinger to the gate, and said:

"Go away."

She wished to trumpet this command in high, peremptory tones, but instead it came forth feebly and with a tremulous nasal twang.

The tramp shook a little, as though with suppressed laughter, then said in a deep and hollow voice:

"I'd rather stay here, ma'am, if it's all the same to you."

The voice suited his cadaverous eyes, but there was something incongruous and ghastly in the silent laughter that took hold of him and shook him at intervals.

Miss Eliza took a step backward. What do you want?" she demanded.

"If yer don't mind sittin' down and listenin' to me for a few minutes, I'll tell yer."

Miss Eliza, being scarcely able to stand, did as was suggested. The tramp also took a chair. He folded his legs and clasped his hands about his knee. His hands were small and well shaped, but very dirty; his feet were exceedingly large. Somehow the look of those smooth, soft fingers gave Miss Eliza a creepy feeling round the throat. The tramp began to speak in a rather affable manner, but with the same hollow voice.

"Yer ask me, ma'am, what do I want, and I'm a-goin' to tell yer. First, I want the silver spoons and candlesticks and the teaset what's in the dinin'-room; then I want the stuffed hummin'-birds in the front parlor and the silver cake-basket what stands on the corner table. After that I want yer gold watch and chain and that hair-brooch yer a-wearin', and all the other trinkets, ornaments and jewels what yer keep in the under drawer of yer washstand; and last, but not least, I want all the pie and cake yer was makin' this mornin' and all the gooseberry jam on the top shelf of yer storeroom. And if yer don't care to give it to me," the tramp winked slowly and made a motion as though to draw a revolver from his breast, then repented and went on:

"Yer see I have pervided myself with a place to stow 'em in," and he brought forth from under his coat a large and rather gaudy calico bag. He spread this out before him, then fell to shaking again with his horrid, suppressed laughter.

Miss Eliza was stupefied with terror. As this young but awful man laid bare his sinful plan, and enumerated her dearest household treasures, the blood left her cheeks drop by drop, and her round blue eyes opened too wide for tears. When he finished, she could only gasp feebly. Then she found voice to murmur:

"Please, won't you leave the cake-basket?"

The tramp ceased to laugh and looked solemnly at her.

"Why, ma'am," he said, "how can you ask it?" His voice had a disagreeable way of running up into the falsetto. "No, I will leave nothin'." He got up and pulled his hat farther over his eyes. "My time is yours, ma'am, so come along. Sooner or later, it's all the same."

Miss Eliza could not summon sufficient strength to move, but when the tramp winked at her slowly, then covered his mouth with one of those dreadful little hands of his, and indulged in silent laughter, she jumped to her feet with nervous haste and led the way into the house with rapid though tremulous movements. They went from dining-room to parlor. She shut her eyes as the silver teaspoons, candlesticks, tea set and cake-basket were placed in the recesses of the calico bag, and it was scarcely cheering to be told that the "hummin'-birds had best be saved till later, and would do to ornament the top." The paper-cutter in the parlor and the silver salt cellars were also swallowed up. Then the two wended their way up the narrow stairs.

The tramp became every moment more jubilant, and Miss Eliza more wretched. Miss Eliza fully expected to be elaborately murdered when they reached the second floor. This tramp, with his smiling mouth and hollow eyes, with the smooth, small fingers, the convulsive laughter and the cavernous voice, was sure the kind to torture one to death, and hug himself ecstatically at the sight of one's dying agonies. Wherefore she went up the stairs one step at a time, till the tramp snapped his fingers and begged her to step a little lively. Poor Miss Eliza! in all her plump and peaceful life she had never dreamed of such hideous excitement.

At the head of the stairs was the door that opened into Pauline's room, and to this the tramp motioned her. They entered. It was a pretty place. The sunlight filtered through the apple trees and the ruffled curtains, and lay cool and shining on the neat matting and the little white bed that stood in the corner. Water-color sketches were stuck up in every direction, and on the opposite wall hung a picture of Pauline, done by herself. It was not very good, and for a moment or two the tramp paid no attention to it. Then it caught his eye. He took a long stride forward, and stopped as though spellbound with admiration. Then, clutching at his breast convulsively, and with eyes still riveted upon the picture, he said in hollow tones:

"Lord! who may yon angel be?"

Miss Eliza had a moment's hope that all this was but a dream, for the tramp's every movement seemed to grow more unreal and like a nightmare. Then her fears redoubled, and she weakly whispered:

"My niece, Pauline."

"Pauline!" repeated the tramp in dreamy ecstacy, and again, "Pauline!" Then he let go the bag, fell on one knee, clasped his hands and raised them toward the picture.

"O pure and lovely angel!" he exclaimed. "What goodness and what beauty shine from thy heavenly face! How sadly those holy eyes look into my sinful soul!"

Miss Eliza's jaw dropped weakly. Perhaps this was the most astonishing of all the past half-hour's experiences. To be sure, Pauline was a pretty girl, but there had never, as far as Miss Eliza knew, been any marked holiness in her expression or conduct.

The tramp now got upon his feet.

"Ma'am," he said, "I am converted, and 'tis all the work of that angelic creature. I am a-goin' to give up my evil life, and you will be the first of the many new leaves I am about to turn over. But remember, it is all *her* doin'! You will have to thank *her* that the cake-basket remains in the family, and that yer still a-wearin' that hair-brooch. Only, there is one condition that I make;" his voice grew more hollow and he laid his hand on his hidden revolver. "Swear that you will treat her like an angel; that you will refuse nothin' she may ask of yer. Swear! or—"

Miss Eliza swore.

"Farewell, Pauline," said the tramp, with another long gaze at the picture. "I'm a-goin', but I'm carryin' yer image with me in my heart."

He left the room, and Miss Eliza heard his footsteps down the stairs, down the gravel walk, and down the road, till they died away in silence; then she fell down upon her knees, and clasped her desecrated household gods to her ample bosom, murmuring broken thanks.

* * * * * * * * *

Half an hour later, and half a mile down the road, two girls were together in an upper room. One, who was small and fair, was sitting on the floor, both feet curled under her, her chin between her hands and her elbows on her knees—an attitude showing enthusiatic interest. The other, who was tall and had fine eyes, stood before the glass. Her hair was a good deal tumbled, and her hands were dirty; she was busy rubbing burnt cork off her cheeks and eyebrows.

"Do you really think, Polly, she will let you do it now?" asked the little one.

Pauline turned about.

"I am sure of it," she said.

Then, as the last traces of burnt cork disappeared, she leaned toward the glass.

"And it's all the doin' of this angelic creature," she laughed.—Harvard Advocate.

"Footprints in the Sands of Time."

Quarrymen operating in the Portland sandstone quarries in the Connecticut valley, recently blasted out a block 130 feet beneath the earth's surface that was spotted with very interesting and curious marks. The marks, according to scientific men, are footprints of the *anisichnus deweyanus*, which was very common in the valley several million years ago, the beast being a combination crocodile-bird.

It is the opinion of Prof. William North Rice of Wesleyan University, to whom the fossil slab was sold for $100, that at the time the *deweyanus* flourished there was no Connecticut river, but in place of it a bay that was 15 miles wide, extending from the sound to the border of Massachusetts. In that epoch, a good many million years since, this crocodile-bird used to bathe in the bay, then come out of it, shake himself and gambol awhile on the plastic micaceous sand, then on top of the earth; and so he left his mark on it.—Stone.

The Boon of Silence.

And so Peter Martin reluctantly came to the conclusion that he would have to consult a physician. He had never been to a physician in his long life. and to have to go now was bitter to him. It was a luxury. He felt he couldn't afford it. A man who keeps a $10-a-week family on $8 has a hard time of it in this world. For 30 years the roar of the city had been in his ears, and he had had no vacations. So it was just his luck to stumble into the office of the most expensive doctor in the metropolis. If the servant had seen him he would not have gone into the presence of the great doctor, but Martin knowing nothing of how a man whose time is worth $10 a minute is hedged in, and happening to come when the last patient was undergoing examination, walked right from the street, and by good luck, to the infinite astonishment of doctor and patient, stumbled into the consulting room.

"There is something wrong with me" he said, fumbling with his hat. "I don't know just what it is, so I thought I should see a doctor. Which of you is it?"

The patient waived his hand toward the great specialist, and Martin turned his pathetic, appealing glance toward him.

"See what's wrong with him," said the patient in a whisper, who was evidently impressed with the humor of the situation. He thought it funny that so evidently poor a man should consult a physician whose fees amounted into the hundreds.

The doctor asked many questions, and examined his new patient carefully. Then he stood away and looked at him for a moment.

"There is nothing radically wrong with you. What you need is absolute quiet. Medicine will not do you any good. Get out of the roar of the city for a couple of weeks or a month, if possible. Go into the country, to some farmhouse. That's all you need."

Peter Martin sat down with a sigh of exhaustion.

"I cannot get away," he said;" I would lose my place, and, besides, I can't afford it. I get only $8 a week."

"Ah, I am sorry for you," said the doctor, "we have no prescription for poverty."

The wealthy patient put his hand into his pocket and drew out some money.

"Here," he said, "that will help you to a little vacation."

Peter shook his head. He was too nervous and shaky to draw himself up indignantly, as perhaps he should have done.

"I have never taken any money that I did not earn," he said, "and I am too old to begin. How much is your fee?" he asked, looking at the specialist.

"I usually get 25 cents," answered the great man; "that is, of course, where I don't give any medicine."

"Of course," said Peter, simply, drawing out his lean purse and paying over the coin.

"Good morning, gentlemen." And with that, Martin tremulously departed.

"You did that nicely," said the patient, rising. "I must follow him and try to smooth over my blunder."

"Are you going to experiment with him?"

"Perhaps."

Martin, as he walked slowly down the

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street, felt a touch on his shoulder. He turned and saw the man who had been with the doctor.

"If you come with me, I think I can help you. Will you step into my carriage?"

Somewhat reluctantly, Peter did so. He did not like the man, but there was something in his dark glance that compelled obedience. When the carriage stopped, Martin was taken into a house that was luxuriously furnished.

"Sit down," said the stranger. "Now let me understand thoroughly about your occupation."

Martin told him all about it, and the stranger listened patiently.

"If I understand you, then, your hearing is of no use to you in your business—that is, it depends on your sight only. If you were deaf, you could still hold your place. Am I right?"

"Quite right," answered Peter.

"Well, then, I want to try an experiment on you. I think it will help you; in any case, it will do you no harm. Do you consent?"

"If it will help me."

"I think it will. Now fix your eyes and attention on this."

The machine referred to was a small box with a thin, upright rod, on which were two horizontal arms, each with a small, round, shining mirror at the end. The dark man touched a string and the mirrors rapidly revolved. Peter looked at the whirling mirrors intently for a moment, then leaned sightly forward with his eyes widely opened.

The stranger, watching him keenly for a few moments, at last stopped the machine. Peter's eyes remained gazing fixedly at nothing.

"You are asleep," said the man, quietly, passing his hand over Peter's face.

The eyelids closed and Peter answered not.

"When you awake you will be stone deaf; you will hear absolutely nothing. You will have to be very careful at the street-crossings and wherever there is danger. Now wake up."

A shiver ran over Martin's body, and he looked around wildly for a moment.

"What have you been doing to me?" he asked.

"Can you hear me speak?" said the man, loudly.

"What have you done to me?" repeated Peter. "Everything seems unnaturally quiet."

The dark man drew a writing-pad toward him and wrote on it, handing the result to Peter. He read the words:

"You are stone deaf. Try the effects for two weeks and then come back and see me. If, at any time before, you wish to have your hearing restored, come to this address. Try the effect for two weeks if you can stand it."

Here followed the man's name and address. Peter folded the paper in a dazed sort of way and put it into his pocket. He went out into the street. The traffic was as busy as ever, but an awful silence was over the city. There was something unearthly in the appearance of bustle and the absence of all sound. He was in a city of phantoms, and it frightened him at first, but finally there seemed to come over him a sweet peace, because noise did not exist.

When he went home that night his good wife received him as she had done these many years.

"Now you old good-for-nothing, what's kept you? Here I am toiling and moiling and getting something to eat for an old fool that doesn't know enough to come home for it before it's cold. Nice sort of a family man you are, you doddering old—say! what are you looking at me like that for? What's the matter with you? Been drinking again?"

Now Peter neither drank nor smoked, which no one knew better than Mrs. Sally Martin. He couldn't afford either, but, as he always winced when she accused him of it, she accordingly flung it at him.

"Sally," he said quietly, "I'm deaf. I suppose you are speaking to me, but I cannot hear a word. You'll have to write it down."

"Write it down!" cried the good woman aghast.

She had some idea that he was shamming, but as she watched him she saw that this was serious. She broke out occasionally in wrath, but quickly subsided and murmured: "Oh, Lor'!"

And Peter Martin spent the first evening of peace at his own fireside for twenty years.

In two weeks Peter Martin called on the dark man in the fine house. He was looking very much better in health than he had done when he left that place a fortnight before. The far-away look of the deaf was already beginning to appear in his eyes. A sweet serenity sat upon his countenance.

"I am pleased to see you look so—" Then the man remembered and drew his writing-pad toward him.

"If you will sit down in the chair, I will take away your deafness," he wrote.

Peter read it with a smile.

"I merely came to thank you," he said. "I will not sit down."—Detroit Free Press.

YOUNG FOLKS' COLUMN.

A Second Trial.

It was commencement at G—— College. The people were pouring into church as I entered it, rather tardy. Finding the choice seats in the center of the audience-room already taken, I pressed onward, looking to the right and to the left for a vacancy. On the very front row of the seats I found one.

Here a little girl moved along to make room for me, looking into my face with large, gray eyes, whose brightness was softened by very long lashes. Her face was open and fresh as a newly-blown rose before sunrise. Again and again I found my eyes turning to the rose-like face, and each time the gray eyes moved, half-smiling, to meet mine. Evidently the child was ready to "make up" with me. And when, with a bright smile, she returned my dropped handkerchief, we seemed fairly introduced. Other persons, now coming into the seat, crowded me quite close up against the little girl, so that we soon felt very well acquainted.

"There's going to be a great crowd," she said to me.

"Yes," I replied; "people always like to see how schoolboys are made into men."

Her face beamed with pleasure and pride as she said:

"My brother's going to graduate; he's going to speak; I've brought these flowers to throw to him."

They were not greenhouse favorites; just old-fashioned domestic flowers, such as we associate with the dear grandmothers; "but," I thought, "they will seem sweet and beautiful to him for his little sister's sake."

"That is my brother," she went on, pointing with her nosegay.

"The one with the light hair?" I asked.

"O, no," she said, smiling and shaking her head in innocent reproof; "not that homely one with red hair; that handsome one with brown, wavy hair. His eyes look brown, too; but they are not—they are dark blue. There! he's got his hand up to his head now. You see him, don't you?"

In an eager way she looked from me to him, as if some important fate depended upon my identifying her brother.

"I see him," I said; "he's a very good-looking brother."

"Yes, he's beautiful," she said with artless delight, "and he's good, and he studies so hard. He has taken care of me ever since mamma died. Here is his name on the program. He is not the valedictorian, but he has an honor for all that."

I saw the little creature's familiarity with these technical college terms that she had closely identified herself with her brother's studies, hopes and successes.

"He thought at first," she continued, "that he would write on 'The Romance of Monastic Life.'"

What a strange sound these long words had whispered from her childish lips! Her interest in her brother's work had stamped them on the child's memory and to her they were ordinary things.

"But then," she went on, "he decided that he would rather write on 'Historical Parallels,' and he's got a real good oration, and he says it beautifully. He has said it to me a great many times. I 'most know by heart. O! it begins so pretty and so grand. This is the way it begins," she added, encouraged by the interest she must have seen in my face: "Amid the permutations and combinations of the actors, and the forces which make up the great kaleidoscope of history, we often find a turn of Destiny's hand."

"Why, bless the baby!" I thought, looking down into her proud face. I can't describe how very odd and elfish it did seem to have those sonorous words rolling out of the smiling infantile mouth.

The band, striking up, put an end to the quotation and to the confidences.

As the exercises progressed, and approached nearer and nearer the effort on which all her interest was concentrated, my little friend became excited and restless. Her eyes grew larger and brighter, two deep red spots glowed on her cheeks. She touched up the flowers, manifestly making the offering ready for the shrine.

"Now it's his turn," she said, turning to me a face in which pride and delight and anxiety seemed equally mingled. But when the overture was played through and his name was called, the child seemed in her eagerness to forget me and all the earth beside him. She rose to her feet and leaned forward for a better view of her beloved as he mounted to the speaker's stand. I knew by her deep breathing that her heart was throbbing in her throat. I knew, too, by the way her brother came to the front that he was trembling. The hands hung limp; his face was pallid and the lips blue, as with cold. I felt anxious. The child, too, seemed to discern that things were not well with him. Something like fear showed in her face.

He made an automatic bow; then a bewildered, struggling look came into his face, then a helpless look, and then he stood staring vacantly, like a somnambulist, at the waiting audience. The moments of painful suspense went by, as still he stood as if struck dumb. I saw how it was, he had been seized with stage fright.

Alas! little sister! She turned her large dismayed eyes upon me. "He's forgotten it," she said. Then a swift change came into her face, a strong, determined look, and on the funeral-like silence of the room broke the sweet child voice.

"'Amid the permutations and combinations of the actors and the forces that make up the great kaleidoscope of history, we often find a turn of Destiny's hand'—"

Everybody about us turned and looked. The breathless silence, the sweet childish voice, the childish face, the long, unchildlike words produced a weird effect.

But the help had come too late, the unhappy brother was already staggering in humiliation from the stage. The band quickly struck up, and waves of lively music were rolled out to cover the defeat.

I gave the sister a glance in which I meant to show the intense sympathy which I felt, but she did not see. Her eyes, swimming with tears, were on her brother's face. I put my arm around her. She was too absorbed to feel the caress, and before I could appreciate her purpose she was on her way to the shame-stricken young man, sitting with a face like a statue's.

When he saw her by his side the set face relaxed and a quick mist came into his eyes. The young men got closer together to make room for her. She sat down beside him, laid her flowers on his knee and slipped her hand in his.

I could not keep my eyes from her sweet, pitying face. I saw her whisper to him, he bending a little to catch her words. Later, I found out she was asking him if he knew his "piece" now, and that he answered yes.

When the young man next on the list had spoken, and while the band was playing, the child, to the brother's great surprise, made her way up the stage steps, and pressed through the throng of professors and trustees and distinguished visitors, up to the college president.

"If you please, sir," she said with a little courtesy, "will you and the trustees let my brother try again? He knows his 'piece' now."

For a moment the president stared at her through his gold-bowed spectacles, and then, appreciating the child's petition, he smiled on her and went down and spoke to the young man who had failed.

So it had happened that when the band had again ceased playing, it was briefly announced that Mr. —— would now deliver his oration—"Historic Parallels."

"'Amid the permutations and combinations of the actors and the forces which'"—This the little sister whispered to him as he rose to answer the summons.

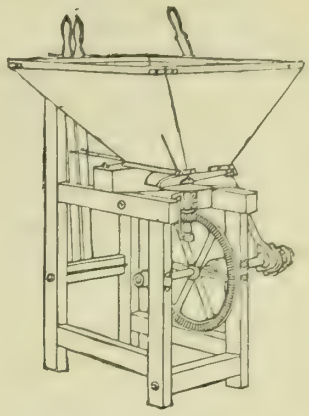
A ripple of heightened and expectant interest passed over the audience, and then all sat stone-still, as though fearing to breathe lest the speaker should again take fright. No danger. The hero in the youth was aroused. He went at his "piece" with a set purpose to conquer, to redeem himself, and to bring back the smile into the child's tear-stained face. I watched the face during the speaking. The wide eyes, the parted lips, the whole rapt being said that the breathless audience was forgotten, that her spirit was moving with his.

And when the address was ended, with the ardent abandon of one who catches enthusiasm in the realization that he is fighting down a wrong judgment and conquering a sympathy, the effect was really thrilling. That dignified audience broke into raptuous applause; bouquets, intended for the valedictorian, rained like a tempest. And the child who had helped to save the day—that one beaming little face, in its pride and gladness, is something to be forever remembered.—Our Dumb Animals.

MIKE: "It's like owld times to see you again, Pat. Why did you niver wroite me a latther since last we mit?" Pat: "Oi didn't know yer address, Moike." Mike: "Thin why in the name o'sense did ye not wroite for it?"

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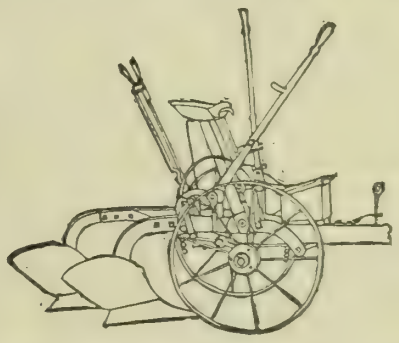
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AGRICULTURAL NOTES.

CALIFORNIA.

Fresno.

PACKING GRAPES AND MARKETING. — J. W. Myer in *Expositor:* The trouble heretofore is that the grapes have not been properly packed in the crates for shipment. The custom has been to throw them into boxes and crowd them down, and this results in breaking many of the grapes loose from the stems and causes them to spoil, or at least it damages them greatly. The proper way is to pack the grapes and not put them into the boxes at once, but let them lie a few days until the stems wither and then they can be packed in the crates without any of the individual grapes breaking from the stems. By allowing stems to wither they become soft and yielding, and in putting them into the crates they are not injured. This is the secret of the success. People don't like to buy grapes when a large part of them are broken from the stems, and by allowing them to become in the right condition they can be taken to market and sold to advantage. There are large quanties of grapes in Fresno county that the people in the East would be glad to eat and would willingly pay for. But, on the whole, it cannot be said that the success in sending grapes East has been always encouraging. Many a man has sent them and did not get enough out of the returns to pay the freight. Sometimes, in fact, no buyer could be found at all; and it does not require many experiences like this to disgust an ordinary son of Adam. For this reason the business of sending grapes to markets beyond the Rocky mountains is not in great favor at the present time among the vineyardists of Fresno. Many of them prefer to get $7.50 for them, sold to the wineries, or to the distilleries, where they are made into brandy. This season many tons have been sold at these figures, and in some instances a large acreage has been sold at smaller prices. It may be that one remedy for this will be found in the suggestion that the grapes be not packed in too great a hurry. Let the stems have time to wither and become pliant. When this is done, no doubt many a carload of grapes will be sold from the Fresno vineyards where now scarcely a ton is sold. The object in the grape industry, as in so many others, is to extend the demand. The best commodity in the world would have comparatively little value if nobody would buy it; and it is a truth proved by experience that few people buy an article that is not presented in the proper manner. Two things are, therefore, necessary in order to sell what is grown. One is to grow something that people want, and the next is to present it in good condition in the markets.

CALIFORNIA VEGETABLES.—*Expositor*: J. W. Myer, in speaking of the shipment of vegetables from California to the East, says it may be news to some people to learn that potatoes and cabbage are shipped to the Mississippi valley from the San Joaquin valley. Yet such is the case. This year the crop of these vegetables has been very short in the States beyond the Rocky mountains, and California has been called upon to supply what is needed. So far, it has met all demands of this sort, and many a carload of potatoes and many a gondola of cabbage has gone over the road toward the East upon that long pilgrimage from which no cabbage returns.

Humboldt.

ANOTHER CREAMERY.—Eureka *Standard*: The Occidental Creamery Company has been organized on the island and a plant will be put in place immediately. The plant will be on the same plan as the Diamond Springs creamery, and those two establishments will be the finest and largest in the country. We cannot have too many of them and we are glad to see our farmers taking hold of the business.

CLOVER ON TABLE LAND.—G. W. Griffin of Table Bluff in *Watchman:* I often hear it asserted that clover cannot be successfully grown on table land. My views and experience prove to me that the fault lies more in the sower than in the soil. Grass and clover usually are sown with other crops. These shade them until harvest, when, spindling and the life choked out of them, they are thrown out unprotected, in a soil already exhausted of strength and moisture, to make the desperate struggle for existence as the dry weather sets in that has ripened the crop just gathered. With such most unfavorable conditions, should the clover rally with the early rains, and produce a top to start the root, stock is turned in to graze the life out of the roots. With great assurance, such persons now claim that it will start all right but will not last. Others sow only half enough seed, and it takes years to get a good stand, and we have a discouraging report from them that it does not pay to wait for it to become a profitable yield. Now let us give this product all the favorable conditions, before accepting an opinion based on such faulty experiments and passing sentence of condemnation upon it. The ground should be prepared with reference to its growth, as we do for any crop that we expect to yield a profit. In this preparation there is one suggestion I should like to present for consideration, especially on the closer soils, that we turn under a coating of dried vegetation and follow the breaking plow with a shovel plow. This furnishes a drain and a reservoir of moist earth beneath, where it is not disturbed by the next plowing, and to supply the roots of clover with moisture during the dry season. Sow plenty of seed without any other crop on the ground. Before the dry weather sets in, allow the crop to get large enough to stimulate and keep the roots growing, and thus draw the moisture from the bottom of the shovel-plow furrow, and, ere long, a different conclusion will be reached than the one so generally accepted.

Orange.

THE CORN CROP.—Santa Ana *Blade*: G. W. Moore says: Last year we shipped about 4000 sacks, averaging over a dollar a sack. This year we will ship considerably more than last. Prices, however, are a little lower than the same time last year. There is no foreign demand for our corn this year, probably due to the fact that there are good crops elsewhere. The entire corn crop shipped from Santa Ana is at least 20,000 sacks. The crop this year is lighter than usual, but there will be more than 20,000 sacks of corn shipped out of this city this season.

THE SUGAR REFINERY.— Anaheim *Gazette*: The board of directors of the sugar refinery met in session with the board of directors of the Sugar Beet and Land Co. for the purpose of hastening the work of deeding the lands of the latter corporation into the refinery. There are from 800 to 1000 shares held in town which have not yet been deeded in, but which will probably be deeded in a few days. The farmers of this section have already deeded in 1600 acres, and with the number of acres to be deeded by the people of this city and the 500 acres to come from the Stearns' Ranchos Co., a sufficient acreage will have been secured to start operations going. It is the intention of the directors of the first-named corporation to apply for a license to make sugar immediately, and also to order beet-seed and make contracts for the refinery buildings. There are good grounds for believing that these three important items will be consummated within the next two weeks. The refinery is an assured fact, and the recent newspaper reports about the probable "collapse" of the enterprise on account of Cleveland's election are entirely without foundation.

Placer.

CITRUS NOTES.—Auburn *Republican:* The oranges in and about Auburn are beginning to take on a yellow tint, and soon the gold spheres with their background of rich ever green foliage, will be a beautiful sight to look upon. Placer county has 60 acres of oranges in bearing, and young orchards which make a total of 55 acres more. The trees this season are well filled with the golden fruit. Lemon culture in this county is not very extensive, as there are at present but six acres in bearing with 13 acres of young orchards.

San Bernardino.

EXTENSIVE STOCK YARDS AT THE SUGAR FACTORY.—*Champion:* A visit to the stock yards east of the sugar factory shows preparations for fattening stock on quite an extensive scale. Mr. Gird has added eight new yards, with a capacity of about 600 head of cattle. This makes 36 yards, with a total capacity of about 1600 head of cattle. Several weeks ago, Mr. Merrill, of Santa Monica, placed 63 head of Texan cattle here to be fattened on beet pulp, and they are now about ready for market. They took to the pulp kindly, began to gain flesh at once, and are now in prime condition. Mr. Gird has at present 338 head of cattle and 400 head of sheep in the yards. These cattle are mostly of the lot recently brought from Arizona, and are already beginning to have an appetite for their new feed. Beet pulp is best fed with hay, and Mr. Gird has stacked at the yards probably about 200 tons of choice hay. This, with the 10 000 tons of pulp on hand in the great silo, will furnish forage for quite a large herd of cattle while they are putting on marketable flesh. A line of railway is run into each side of the silo below the yards, and the tram-cars are loaded in the bed of the silo itself, then run up between the two rows of yards and emptied into the feed troughs where it is mixed with hay. Mr. Gird will, in a day or two, add some 300 head more to those feeding, and will probably add others from time to time to the capacity of the yads, as he has enough cattle on the ranch now to keep the yards full of fattening stock. The sheep being fed on pulp are right "at home," and are fattening remarkably fast. The pulp is without doubt one of the very best articles for stall-feeding that has ever been used, and the quality of the meat produced is first class.

San Diego.

OTAY IRRIGATION.—San Diegan *Sun*: The Highland Irrigation and Pumping Co. is pushing the construction of its well, near the head of the Otay valley. It is about one mile northeast of Nestor and one-half mile east of the Otay wells on the sand flats. The lands tributary to the well are all under cultivation, either in grain, beets or fruit. The excavation was begun about two weeks ago, and now the well is 42x18, to be curbed. The depth is 14 feet. Water was found in the gravel and bowlders. On Friday morning a force of ten carpenters, under J. A. Landis, began to construct the wooden curb. The company expects to put in a Worthington steam pump with a capacity of 1,000,000 gallons daily. The reservoir's capacity is to be 2,000,000 gallons. The 20 ranchers have the utmost faith in this scheme, and their spirits are brightened by the assurances of the many residents that it will be a success. Another irrigation enterprise is that of W. W. Johnston, Cyrus Johnston and J. J. Johnson, who together began, about two months and a half ago, to sink a well in the Otay river-bed on the ranch of Cyrus Johnston. The location is on a line with the Babcock well, about a quarter of a mile southeast. It was first made with a frame curbing so that a circular brick wall could be run up with an inferior diameter of 15 feet. The pump is operated by six horses and has a capacity of about 20,000 gallons an hour. An engine will be put in next spring. With the present apparatus, the three ranches can be irrigated easily by wooden troughs. Next season the three ranchers will set out more fruit trees and improve their lands as rapidly as possible now that they have the water question settled.

Tulare.

VINEYARD NOTES.—C. J. Berry in Visalia *Times:* There is not one man in ten in the vineyard business who knows how, or comprehends the proper way, to prune his vines to get the best result. The Mussel slough country is to a great extent a very fine producing locality. Scarcely in these United States, or the world for that matter, can one find a better country than that one. Only one exception—and that is our own district of Visalia. The writer has produced here raisins that in quality cannot be equalled in any district. In broad daylight, with no cover on them, no preparation, pound for pound, neither the Hanford, Tulare City, Traver, or Fresno county products can approach them. The quality is not only superior, but the quantity—yield per acre—is far ahead of anything that any other raisin-growing country can produce, that I have ever heard or read about. On 16 acres of Muscat vines that were planted 2½ years ago, the yield is 23 tons of raisins, of which more than 50 per cent of the first crop is layers, choice ones, and the entire second crop is all layers. This case is not exceptional. There are several of our citizens who are growing grapes in our district and the yield of their vines is equally phenomenal. Lands that will give such returns ought not go a begging for purchasers, and when a customer is found who has some little inclination to buy, one almost has to force the acres down into his breeches pocket and the price he gets for it is a mere song. We have got plenty of such lands about Visalia and we are looking for buyers; but, Mr. Editor, our citizens themselves don't blow their own horns enough. Now that politics are about done with for a time, for which let us all pray and give thanks, let us Visalians put our shoulders to the wheel and bring our district to the front. It is the best in the State. The soil is more productive and the quality produced—raisins and fruit—is better than any other part of our own State can show up. I mean peaches as well as raisins, lemons well as prunes, and our lands are dirt cheap.

Yuba.

MOUNTAIN HOPS.—Sacramento *News:* Hop-growing in the vicinity of Brownsville was an experiment with W. H. Becker and John A. Logan, who put out and poled about six acres this season. The yard is located in a canyon 3000 feet above the sea level. The sample shows small, well-colored catkins, rich with lupuline. The field weight was 3½ pounds per pound of the dried article, which is one-half pound less than the valley-hops run, showing a greater amount of the brewing elements. The crop turned off 24 bales. Mr. Becker thinks that, under favorable circumstances, a ton to the acre can be raised. This season a frost occurred June 17th—something very unusual—and a great many of the arms were bitten, which prevented the possibility of an average yield. It is well known that the best and richest hop in the world is produced in elevated regions, an instance being that of the Schwartz mountains in Bohemia. Doubtless the growing of hops in the small but rich mountain valleys of California will develop the fact that eqally good hops can be grown here as in Bohemia. Mr. Becker has been offered 18 cents for his crop but has refused it.

ARIZONA.

CATTLE NOTES.— Mesa *Free Press:* W. E. Pomeroy about two weeks ago brought down from Verde ranges 132 head of cattle. A few days ago his men brought down 175 more, and the majority of them is in fine condition. They were rounded up in the Verde mountains, near Camp creek. The boys left again Tuesday morning for the range for another lot.

TUCSON *Citizen*, Nov. 16: Many of the cattle of the Interocean Cattle Co. have been driven on to the south side of Mt. Lemon, and are grazing 9000 feet above sea level. The snow at this point at one time last winter was over six feet deep. It is estimated that over 50 per cent of the cattle of the San Pedro river will perish within four months from starvation. Ranges that were formerly rich with alfilerilla, bunch grass, mesa grass, mesquite grass and gramma, are now as devoid of feed as the streets of Tucson.

NEVADA.

CATTLE NOTES.—Reno *Gazette*, Nov. 17: The following stock was shipped on this morning's west-bound freight train: Six cars of sheep from D. Biggs, Reno, to J. G. Johnson & Son, San Francisco; two cars of calves from Mr. Griffin, Carlin, were consigned to Horn & Chapman, San Francisco; and fourteen cars of cattle from S. F. Estrado to Horn & Chapman, San Francisco.

Elko *Free Press*, Nov. 19: Barney Horn has been purchasing a large number of beef cattle in this neighborhood during the past week or two. Tuesday he shipped 14 carloads, including two cars of calves from Carlin. On the 21st he will ship 21 carloads from Iron Point, and on the 25th he will ship 25 carloads from Carlin.

Winnemucca *Silver State*, Nov. 19: More than 4500 head of cattle are feeding on the Big Meadows of the Humboldt, and the number will likely be increased by 500 from eastern Oregon. Then there are two bands of 5000 and 2500 sheep pasturing and being fed.

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They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

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The 400,000-acre territory of the Kern County Land Company is the pick of the county.

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The home of the peach, French prune, pear and raisin grape.

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A failure of crops is unknown on irrigated lands.

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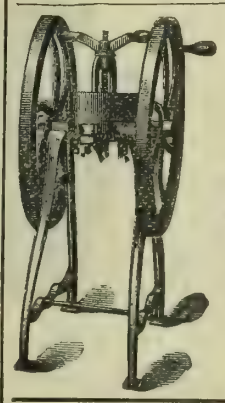
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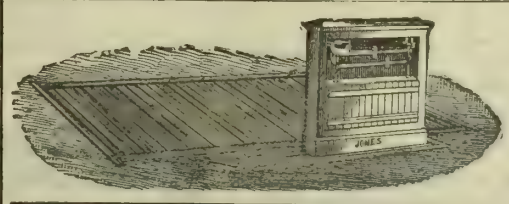
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Cement Walks.

A correspondent writes and asks the *Operative Builder* to publish some rules or methods for making a cement walk for lawn or garden. As he lives in one of the central States, where the frost is not very severe, perhaps the following method may not only answer his purpose, but may also be of service to others of our readers :

This has been furnished the *Builder* by a practical worker in this department : First, remove all loose earth, and with a heavy earth rammer get the bottom well beaten, having a slight fall to the lowest general point. Then provide the best filling the locality can supply, such as brick rubbish, broken stones, or coarse gravel solidly packed to a sufficient depth from the finished surface required. Coat over this rough ground with a mixture of sharp coarse sand or gravel, six measures of same to one Portland cement. This I get a laboring man to lay on with his shovel, and roughly level. I use a garden syringe to spray over the ground before I lay on. This helps to make it go together compact. I also give to the earth a good ramming. Having my rough prepared thus, I find the level for my finished surface and set two wooden rules about five feet apart. Their upper edge must be straight, and set level to height of floor required. I then fill in a mixture of four parts sharp clean gravel to one Portland cement between the rules, and with a straight edge I get a good level surface by rubbing same to and fro, taking down all mixture that stands over rules. This course I also beat gently to a solid body. If a medium finish is required, I merely hand-float, having a mixture of a finer kind to lay on for leveling up any hollows. I also at this point remove my inside or first rule and fill in its space. If a fine finish is required, I then coat over with neat cement, and trowel to a smooth surface. I always finish complete in one body any portion commenced on rough ground. If I cannot complete floor or path, I continue shifting wooden rules, as described, till I get to the finish. Be very careful at each joining to blend with old and new together by roughing up, then sprinkle with water, drudge in cement, and give a rub of stock brush. The strength or thickness of a floor is to be calculated by the traffic or weight it has to undergo. A great deal depends on the solidity of the bottom earth and packing. I have made very good paths and floors, as described, at four inches deep, including the coating of filling materials, the cost to be calculated by the locality where the work has to be done. I have often tested the weight of a cubic foot of cement as emptied out of the bags. On the average, I find it equal to 90 pounds; likewise coarse washed gravel at 99 pounds, four cubic feet of gravel and one cubic foot of cement, when mixed and packed in floors, will reduce to three and a half cubic feet. Knowing the price of these on sight, the quantity required will give the cost plus the labor. I make an allowance of five per cent for waste. The essential point is to have the gravel, sand, or any other mixture clean and free from dust. I generally wash all the sand I use with cement; bring it to a shallow running stream, throw it in, and turn till the water runs clear. In mixing, I lay down rough boards and form a floor. I then get any suitable old box, knock the bottom out and nail two pieces on each side as handles, have my washed sand close by, place the box on floor, and fill water measure, lift box with ease, the sand remains on floor. If a mixture of broken stones is to be added, I level the sand, place box on same, and measure as I did the sand. I then level over the stones and have the proportion of cement spread over evenly—a very handy tool for doing this is a coarse broom, by drawing it toward the workman. I then turn and mix till the cement is evenly distributed. I then wet with a large watering can having a good large rose. I do not mean this as instruction for professional men in towns, but as a hint to poor fellows like myself isolated in a country village.

ABOUT the last logging that will be done in Michigan, Wisconsin and other lumbering States, according to the *Woodworker*, will be that of reclaiming the millions of feet of sunken logs which now lie in the streams of those States.

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Exterminating Mosquitoes Around a Country House.

A writer on the subject of the extermination of the mosquito tells of an experiment he made with kerosene as the destroying agency in the Catskills. Noticing a few mosquitoes about the porch of his cottage on July 5th last, he made a search for their breeding place and found it in a rain-water pool, having a surface area of 60 square feet, in the neighborhood. Eggs had been deposited freely on the water, and it was very plain that the cottager was destined to be annoyed by innumerable mosquitoes unless a remedy was applied at once. He determined to apply kerosene, and sprinkled four ounces of it over the surface of the pool. At the end of ten days it was covered with dead insects, which the writer estimates at 7400. Most of them were gnats, but there were 371 female mosquitoes and many males. The number may appear trifling enough, but on that score the experimenter has this to say: "Now, the average number of eggs laid by a female mosquito is 300, and the destruction of these 371 specimens prevented the development of 111,300 individuals of the next generation. Moreover, certain females flew away after touching the surface of the water and undoubtedly died at some distance from the pool, so that the effect of the application was even greater than these figures indicate. In fact, the capacity of the remedy was only limited by the number of the mosquitoes seeking the surface of the pool for egg-laying purposes, and in a locality of greater mosquito abundance the estimates of the potentiality of the remedy would have been enormous. And now as to the question of expense. This experiment proves that at this rate of application one barrel of kerosene costing $4.50 (and the cheapest of oil is preferable to the more expensive) will successfully treat 96,000 square feet of water surface. It is probable that there are many mosquito-ridden neighborhoods where the total area of the breeding places does not exceed this figure, and where at the slight expense mentioned, provided the application be made early in June, so as to head off the first generation, the numbers of the biting pest may be reduced to a minimum.—N. Y. Evening Post.

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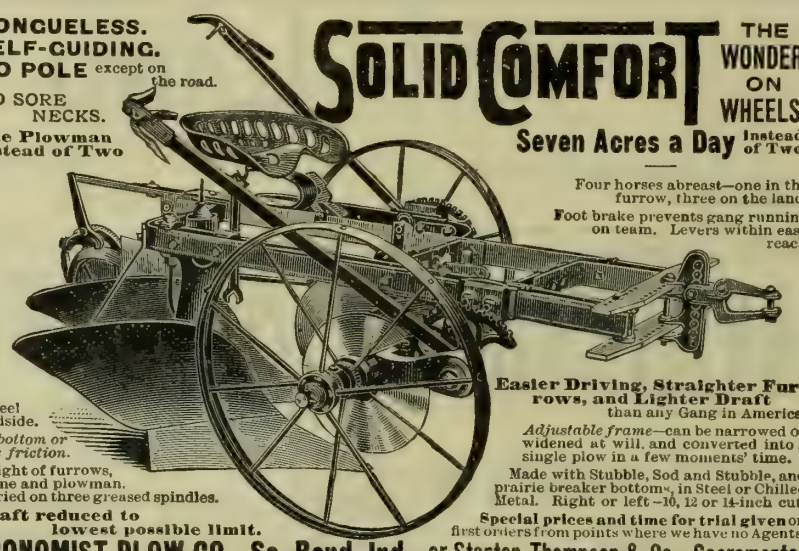


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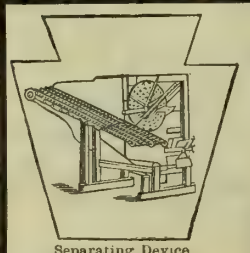
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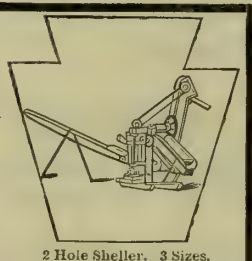
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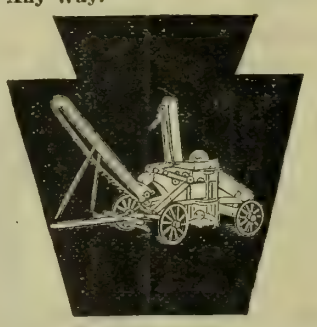
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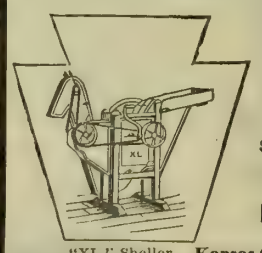
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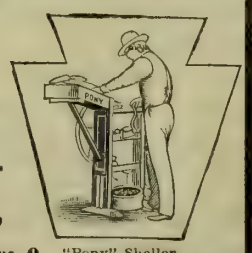
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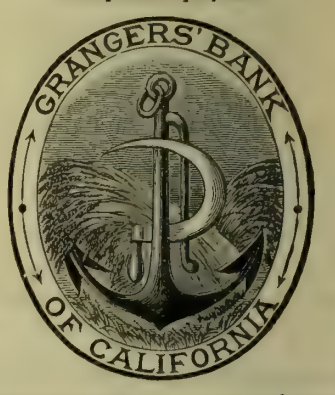
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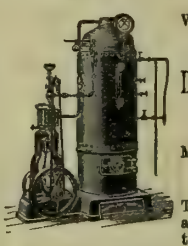
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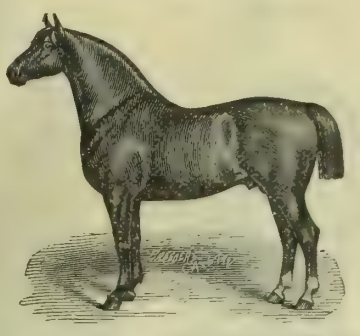
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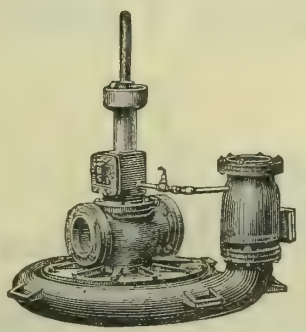
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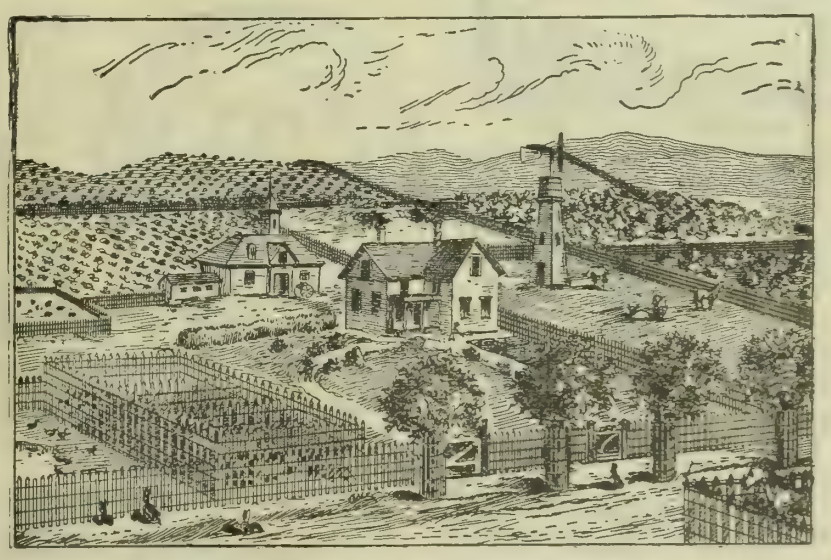
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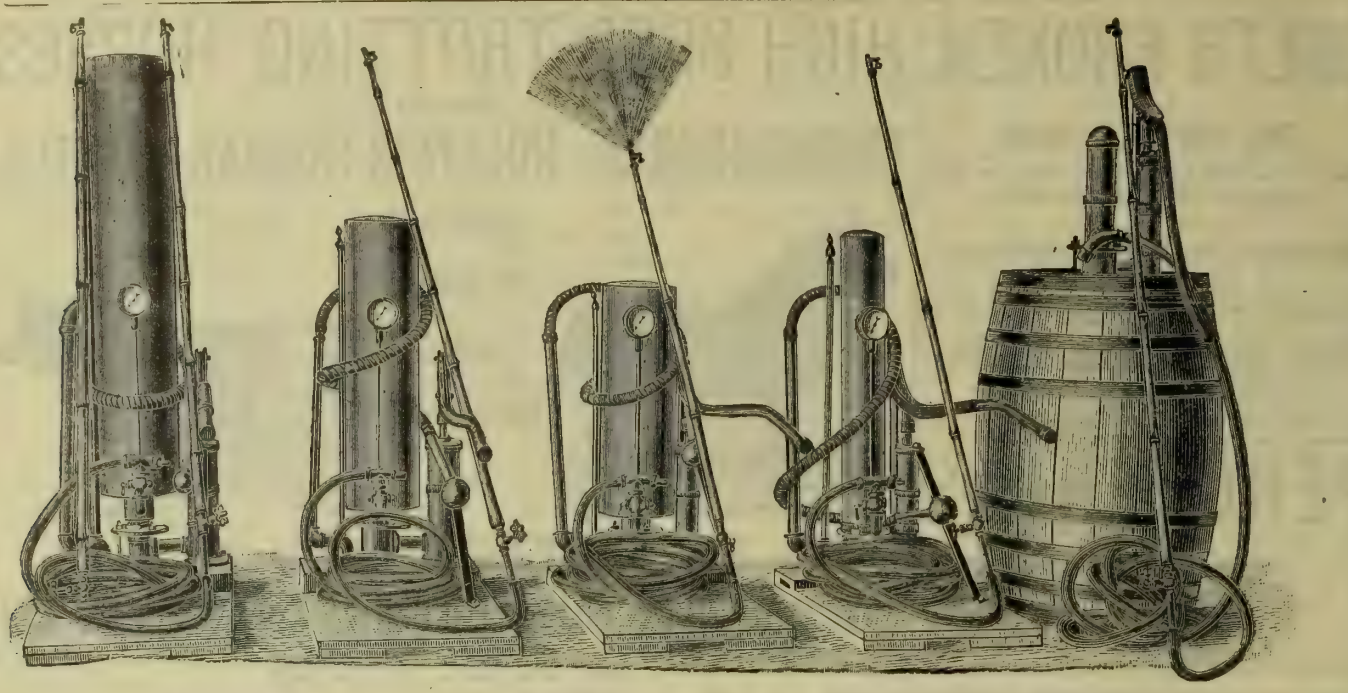
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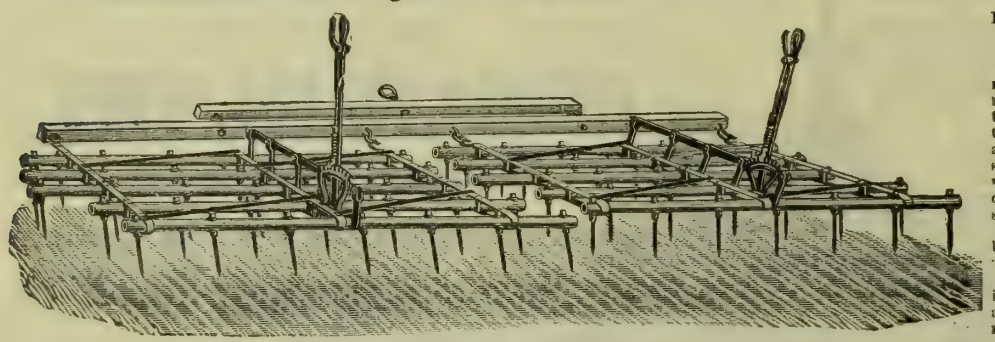
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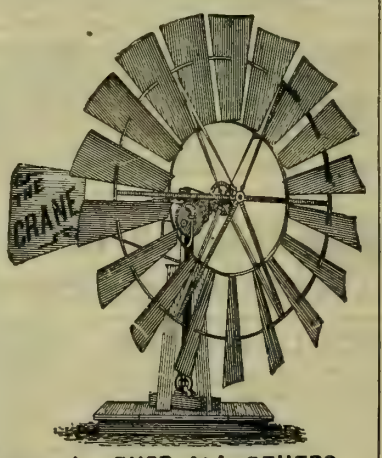
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S. F. Market Report

Market Review.

San Francisco, Nov. 22, 1892.

General trade the past week in farm produce has been confined largely to holiday requirements. The market has held to fairly steady prices, for only in isolated cases did prices fluctuate. There is a general impression that very few changes in the market price of leading articles of the farm will take place until after next month. The absence of rain is having considerable influence in creating a bullish feeling with holders of grain, yet this feeling is not likely to be very pronounced until we have entered well into next month. Rains in Wasington and threatening weather towards the close in this State cause the weatherwise to expect rains soon. There is no use of trying to deny the fact that the lands in all parts of the State want good soaking rains to insure, even with favorable spring weather in 1893, good crops.

The local money market does not exhibit any material change. Exchange on New York is wanted and for which good rates are offered. This is accepted as proof that large incorporated (railroad and others) companies doing business in this State are free remitters to the East, so as to meet interest and dividends which will have to be paid out there. Merchants, grain dealers and the farming community requirements are not urgent. As a rule they are payers rather than borrowers.

Cereals.

During the past week wheat has held to fairly steady prices abroad. The foreign markets appear to be favorably influenced by a falling off in the European stocks, which were about 19,000,000 bushels less, at last advices, than were held at the corresponding time in 1891. While the smaller stocks abroad exert a favorable influence, the large increase, about 35 000,000 bushels, in the stocks in the United States and Canada, over that held at the like date in 1891, is unfavorable; for, with such a large supply to draw from, bull operators abroad will hardly dare operate largely, even at present low prices. The exports from the United States, during the first nine months in this year compared with the corresponding time in 1891 are as follows: 1892, 91,466,112 bushels; 1891, 83,812 096 bushels. These exceptionally heavy shipments must necessarily tell heavily on our reserve later on in the present season, particularly with the crop in this country over 110,000,000 bushels less than was that of 1891. Not only have the exports of wheat been very heavy, but those of wheat flour show up large. During the nine months ending with September, the exports aggregate 12,540,728 bbls. in 1892 and 9,117,493 bbls. in 1891. The local wheat market has held to fairly firm prices, although futures fluctuated slightly. The export movement has been fairly free. Buyers claim that they are able to meet all their requirements without bidding up, except large parcels for special purposes. While they claim they are able to meet current requirements without bidding up, yet they have not been successful in breaking spot or cash wheat, as they had confidently expected.

Barley has held fairly firm for spot or cash parcels, but for futures lower ranges have obtained. The export movements were light and promise to continue so until probably after the turn of the year, when it is expected that a renewed brewing demand will set in. In this State, it is said, the consumption continues large, although in many localities there has been a falling off, owing to improved pastures, but unless we have generous rains soon the pastures will give out in a majority of localities. Receipts of barley from up north have so far in this season been very light.

The receipts of oats have been light, but the market did not respond, owing to buyers fighting against an advance. Any advanced pretensions on the part of holders, turn consumers to roll or grain barley. The supply in this State and up north is said to be considerably less than it was at this time in 1891. The light supply ought to be favorable to holders.

Corn has held to barely steady prices. The receipts have been only fair, as has the demand. The Government report in this month gives the crop this year at over 400,000,000 bushels less than was the crop in 1891, while the exports out of the country have held up well. For the nine months ending with September, the exports compare as follows: 1892, 65,274.289 bushels; 1891, 19,264,161 bushels.

Rye and buckwheat have been in only moderate demand.

Feedstuff.

Ground feed has met with a fair inquiry at fairly steady prices. The tendency of the market does not indicate that there will be any material change until the probable character of the winter is more fully determined.

Although the receipts of hay have been light, yet the market shaded off under stronger selling and buyers being offish. Improved pasture in the more favored localities is said to have cut off quite a demand, which is severely felt.

Dairy Produce.

Butter has held weak up to the close when a steadier tone appears to have set in. Cold and dry weather caused buyers to operate more freely and at the same time induced more buying by the retail trade. Receipts have been light and under the freer movement, stocks have run down. The lower prices which have ruled for fresh butter, caused consumers to turn from pickle to fresh, but with much of an advance in the latter pickle will be in demand again. The Eastern markets are strong and high.

Cheese has not changed materially. Receipts are about equal to the demand.

California eggs are selling for less money. The decline is not so much from an increase in receipts as it is from Eastern fresh-laid selling for Californian. The trade has been running largely on Eastern, which, when fresh and well selected, equal the more choice fresh-laid Californian.

Vegetables.

In garden truck the market has ruled at around last week's quotations. The supply is limited almost entirely to winter varieties.

Potatoes have not changed materially the past week. The low prices ruling for Riversides are inducing speculative buying. Choice, good-keeping Burbanks hold firm under a fair demand. Sweet potatoes are barely steady at 50@75c on the wharf, and 70c@$1 from the store.

Fruit.

Dry weather the past week caused quite an improvement in most of the grapes coming in, yet the general run is poor and has to be sold on receipt. It is the latter that keeps the market in buyers favor. Winter Nelis pears are in fair demand, but poor pears are slow. Apples are meeting with a good demand, but it is hard to get over $1.25 for best high-colored. Raisins are slow. Buyers are offish. It is hard to get a satisfactory report on the market owing to a pronounced bear feeling. Eastern advices report that dealers continue conservative and do not buy beyond nearby wants, preferring to let sellers hold the goods. As far as we can learn, holders of choice raisins do not express any anxiety over the situation, claiming that it is only a question of time when the demand will be improved. This opinion is grounded on the general impression that there will be a large increase in the consumption during the World's Fair.

In dried fruit there is a strong market at full prices for pitted plums, choice apricots and prunes. The supply of these is light. Peaches, pears and apples are hard to move, except at concessions. Eastern advices report buyers holding off in expectation of lower prices when the consignments are put on the market. It is said that the consignments were so freely distributed it is hard for sellers to act in consort.

Live Stock.

The bulk of our supply of bullocks continues to come from Nevada and from the more favored sections in this State. The market has ruled fairly steady. Mutton sheep are essentially unchanged. Hogs continue to rule firm under a fair demand for the block and for packing.

Miscellaneous.

Receipts the past week were about equal to the demand, which kept the market fairly steady. Today there were heavy receipts of dressed turkeys and more choice fowls. Dressed turkeys, when in good condition and not too long kept, sold up to 22 cts. for the very best. Choice, well-conditioned hens and roosters sold fairly well to-day. Some Eastern came in.

White and pea beans are firm, but colored as a rule are barely steady.

There is a good demand for nuts for the holidays. The market is oversupplied with poor almonds and walnuts which sell slow. Peanuts are steady.

Hops are reported weaker from the buyer's point of view, but so far as we can learn holders are not disposed to make concessions, claiming that with 1893 better prices are liable to obtain.

Wool has come in only fairly free. The market is reported essentially unchanged.

Hay product is higher with a strong market ruling at the advance.

Mustard seed is wanted and where found commands good prices, provided the grades are good.

Produce Receipts.

Receipts of produce from all sources at this port for 6 days ending Nov. 21 '92, were as follows:

Flour, qr. sks	57,679	Bran, sks	12,030
Wheat, ctls	161,344	Buckwheat "	73
Barley, "	18,148	Middlings "	1,260
Rye, "	....	Chicory, bbls	45
Oats, "	4,724	Hops, "	305
Corn, "	5,490	Wool, "	186
*Butter, "	425	Hay, ton	1,314
do bxs	462	Straw, "	70
do bbls	..	Wine, gals	188,520
do kegs	174	Brandy, "	19,840
do tubs	..	Raisins, bxs	7,910
do ½ bxs	....	Honey, cs	135
†Cheese, ctls	425	Peanuts, sks	449
do bxs	51	Walnuts "	601
Eggs, doz	11,248	Almonds "	322
do " Eastern	11,690	Mustard "	618
Beans, sks	11,043	Flax "	205
Potatoes, sks	20,327	Popcorn "	....
Onions, "	2,467	Broom corn, bbls	....

*Overl'd, 220 ctls. †Overland, 234 ctls.

Exports by Sea from San Francisco from July 1 to Nov. 16.

	1892-93	1891-92
Wheat, ctls	4,602,783	3,862,911
Flour, bbls	515,562	407,623
Barley, ctls	822,468	570,008

Tonnage Movement.

From reliable advices up to Nov. 22, the following summary tonnage movement is compiled:

	On the way		In port	
	1892.	1891.	1892.	1891.
San Francisco	251,186	361,922	*159,925	135,268
San Diego	11,784	24,613	1,465	.....
San Pedro	8,201	5,110	.....	
Oregon	49,354	66,905	23,582	34,371
Puget Sound	22,352	31,747	.....	
Totals	342,877	490,297	184,972	169,639

*Engaged for wheat, 1892, 40,981; 1891, 107.161.

Markets by Telegraph.

Dried Fruit is Improving.

New York, Nov. 20.—The four sizes of prunes were quoted at the close at 11c, but there is no large offering at the figure. Evaporated peeled peaches brought in a small way 21@23c. Since the suspension of Meinrath Bros., dried fruits have been more or less disturbed, but the interruption will not prove formidable. Buyers of unpeeled peaches have deserted the market for the time being, needlessly fearing, it is said, the unloading of numerous spot holdings on this market. Apricots are stronger and steadily clearing up. Sacks, 15½c; boxes, 16½@17½c, spot.

Wool is Strongly Held.

New York, Nov. 19.—Wool.—The week has ruled quiet at all eastern points since the election. There have been attempts to break the market, but sellers are unwavering and respond to forebodings that the depleted supply will cost buyers more before it will less. This is as much the outlook now as before, with the known needs of mills, while the stiff condition of foreign prices reflects with advantage here. Sales at New York: 446,000 pounds of domestic and 282.000 pounds of foreign. Sales at Boston: 1,973,500 pounds of domestic. The sales were mainly in small lots with little California; also 215,000 Australian and 160,000 carpet.

California Wine and Brandy.

New York, Nov. 20.—Based upon the present rate of orders, dealers in California wine expect there will be an unusually brisk holiday demand. Sherry is scarce for trade wants; and shipments are urged if they can be made promptly.

Brandy gives more satisfaction than formerly; even the young lots do not depend so exclusively upon druggists wants as has been the case.

Good Raisins Wanted.

New York, Nov. 20.—There is a good demand for good quality, but the market is irregular and slow for imperfect grades. Many parcels that have hung fire are now pressed for sale. In fact, dealers will make a price for three-crown boxes for a customer rather than let him go. In this way, useful marks have sold at $1.55, and there have been numerous intermediate rates between that price and last week's extreme. Fancy four-crown bags, 7c; choice, 6c; ordinary, but sound, 5½c; two-crown, 4½c; layers, $1.60@2, as to mark.

California Mustard Seed Sells High.

New York, Nov. 20.—California mustard seed has attained the distinction of being quoted right up to the best English. A large sale of yellow is reported at 7½@8c.

Hops are Quiet but Steady.

New York, Nov. 20.—The spot market is tame and featureless, still owners have given brewers useful new at 21@22c, and quote export selections at 23@25c for spot Pacific, and still 24c continues extreme. Exports for the week are 938 bales.

Foreign Wheat Market.

London, Nov. 21.—Mark Lane *Express* says: Deliveries of English wheat from general quality are very low, though during the last few days the condition slightly improved. There was an advance of 2d in Mark Lane, where small business was done, centering chiefly on best foreign wheats, and embracing nearly all Pacific Coast wheat. The price of foreign wheats, however, was kept down owing to large exports from Russia. Wild weather led to a decline in barley to 24s, oats 13s, corn 16s. To-day English wheats are firm; American, 6d higher, with a few sales at an advance of 3d. Foreign wheats unchanged. Good American flour 3d dearer. Little sale for barley, oats, corn.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar	April.
Thursday	6s09½d	6s10½d	5 11½d	6s00½d	6s01½d	6s02½d
Friday	6s09½d	6s10½d	5s11½d	6s00½d	6s01½d	6s02½d
Saturday	5s11½d	5s11½d	6s01½d	6s01½d	6s02½d	6s03 d
Monday	5s10 d	5s10½d	5s11½d	6s01½d	6s02 d	6s02½d
Tuesday	.....	.....	.....	.....	.....	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	32s9d	32s9 1	33s9d	Steadily held.
Friday	32s9d	32s9d	32s9d	Quiet but steady.
Saturday	33s	33s	33s	Held higher.
Monday	32s9d	33s9d	32s9d	Quiet but steady.
Tuesday	....	....	....	

To-day's cablegram is as follows

Liverpool, Nov. 22.—Wheat—Quiet but steady. California spot lots, 6s 8d; off coast, 32s 9d; just shipped, 32s 9d; nearly due, 32s 9d; cargoes off coast, slow; on passage, rather easier; wheat on passage to continent, 967,000 qrs.; wheat and flour on passage to U. K., 2,632,000 qrs.

San Francisco.

WHEAT.

	Seller '92.	Buyer Dec.	Jan.	May
Thursday, highest	131	132½	133½	136⅝
" lowest	131	132⅝	133	136⅝
Friday, highest	....	132½	....	136⅝
" lowest	....	132½	....	136½
Saturday, highest	....	132⅝	....	136⅝
" lowest	....	132½	....	136½
Monday, highest	....	132⅝	....	136½
" lowest	....	132⅝	....	136⅝
Tuesday, highest	....	....	....	....
" lowest	....	....	....	....

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal: Buyer December—200 tons, $1.32; 300, $1.32½. May—100 tons $1.35½ per ctl. Regular session: May—200 tons, $1.35½; 300, $1.35⅝; 100, $1.35¾; 200, $1.35½. Buyer December—700 tons, $1.32½; 900, $1.32 per ctl. Afternoon: Buyer May—200 tons, $1.36. May—700 tons, $1.35½. Buyer December—100 tons, $1.31½ per ctl.

BARLEY.

	Seller '92.	Dec.	Jan.	May
Thursday, highest	....	88½	....	93⅝
" lowest	....	88½	....	93⅝
Friday, highest	....	88½	89½	....
" lowest	....	88½	89½	....
Saturday, highest	....	*89	89½	....
" lowest	....	89½	89½	....
Monday, highest	....	88½	88⅝	93½
" lowest	....	88½	88½	93½
Tuesday, highest	....	....	....	....
" lowest	....	....	....	....

*Buyer option.

The following are to-day's recorded sales on Call:

Barley—Regular session: May—100 tons, 92½c; 100, 92½c; 100, 92c per ctl. Afternoon: May—200 tons, 91½c; 400, 91¾c; 500, 91½c. December—300 tons, 87½c; 400, 87⅞c per ctl.

Eastern Markets.

The following shows the closing prices per cental of wheat for the past week at

New York.

Day.	Nov.	Dec.	Jan.	March.	May.
Thursday	....	127⅞	130½	135½	139
Friday	....	130	132½	137¼	141
Saturday	128¼	128	132	137	140¼
Monday	127⅞	128¼	131	136	139½
Tuesday	....	....	....	....	....

The following is to-day's telegram—per bushel:

New York, Nov. 22.—Wheat—76⅞c for December, 78¼c for January, 81½c for March, and 83¾ for May.

Chicago.

Day.	Nov.	Dec.	May
Thursday	119½	121	131
Friday	...	122⅝	133
Saturday	119⅝	121	132
Monday	119⅝	121	131
Tuesday	....	....	....

The following is to-day's telegram—per bushel:

Chicago, Nov. 22.—Wheat—72¼c for December, and 78¼c for May.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower notations.

November 22, 1892.

Limes, Mex	3 00 @ 4 00	Huckleberries, lb	4 @ 6
Do Cal	2 50 @ 4 00	Extra choice fruit for special purposes sells at an advance on outside quotations	
Lemons, box	5 00 @ 6 00		
Do Sicily choice	6 00 @ 7 50		
Strawberries, pr chest	10 00 @12 00	Beets, sk	— @ 50
Apples	30 @ 60	Carrots, sk	30 @ 50
Do Choice	75 @ 1 00	Okra, dry, lb	8 @ 10
Do Extra choice	— @ 1 25	Parsnips, ctl	1 00 @ 1 50
Grapes, pr bx—		Peppers, dry, lb	7 @ 8
Do White	25 @ 50	Do grn Chili, bx	50 @ 75
Do Black	25 @ 50	Do do Bells	50 @ 75
Do Muscats	25 @ 50	Turnips, ctl	— @ 70
Do Tokays	35 @ 60	Cabbage, 100 lbs	50 @ 60
Do Royal Isabel	1 00 @ 1 25	Garlic, lb	1½ @ —
Do Cornichon	50 @ 75	Tomatoes,	25 @ 60
Wine Grapes, Zinf'nd'l, pr tn	— @18 00	String Beans, lb	3 @ 4
Mission	12 00 @15 00	Lima Beans	2 @ 4
White	9 00 @12 00	Cucumbers, box	50 @ 85
Pears	25 @ 75	Mushrooms	— @ —
do Winter Nelis	75 @ 1 25	Egg Plant, bx	60 @ 75
Quinces pr bx	75 @ 1 00	Mar'fat Squash, ₱ ton	4 00 @ 8 00
Persimmons	1 00 @ 1 50	Cauliflower	50 @ 65
Pomegranates, lb	2 @ 4	Celery	50 @ 75

Live Stock.

BEEF.		MUTTON.	
Stall fed	6 @—	Wethers	6½@—
Grass fed, extra	5½@—	Ewes	6 @—
First quality	5½@—	Do Spring	7½@—
Second quality	4½@—	HOGS.	
Third quality	3 @—	Light, ₱ lb, cents	5½@—
Bulls and thin Cows	2 @—	Medium	5½@—
VEAL.		Heavy	5½@—
Range, heavy	5 @—	Soft	4½@—
Do light	6 @—	Feeders	4½@—
Dairy	7 @8½	Stock Hogs	4½@—
		Dressed	7 @ 8

Twine and Baling Rope.

BALE ROPE.		TWINE.	
Sisal, 3 yarns	9	Pure Manilla Hop, in balls, tarred	11½
Do, 2 yarns, light	9½	Do, Grapevine, in balls or coils	12
Duplex, 3 yarns	9	Do, Spring	16
Manilla, 3 yarns, heavy	10½	Duplex Hop in balls, tar'd	9½
Pure Manilla, 3 & 4 yarns	12	Do, Grapevine, in balls or coils	10½
Do, 2 yarns, light	12½		

Wine.

Red and White Wine from bay counties, vintage of 1891, per gal., in cellar lots	12 @20
1892 vintage in cellar lots	10 @15

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

November 22, 1892.

BEANS AND PEAS.		Do country m'ls	3 90 @ —
Bayo, ctl	2 25 @ 2 35	Superfine	2 50 @ 3 00
Butter	2 75 @ 3 00	NUTS—Jobbing.	
Pea	2 50 @ 2 60	Walnuts, hard shell, Cal. lb	6 @ 8
Red	2 40 @ 2 50	Do soft shell	8 @ 9½
Pink	2 00 @ 2 10	Do paper-shell	9 @ 11
Small White	2 45 @ 2 55	Almonds, soft shl	12 @ 13½
Large White	2 25 @ 2 35	Paper shell	13 @ 15
Lima	2 75 @ 3 00	Hard shell	6 @ —
Fld Peas, blk eye	1 60 @ —	Brazil	8 @ —
Do green	1 75 @ 2 00	Pecans, small	8 @ 10
Do Niles	1 60 @ 1 75	Do large	14 @ 16
Split	4 50 @ 5 50	Peanuts	3½@ 4½
BUTTER.		Filberts	10 @ —
Cal., poor to fair, lb	12½ @ —	Hickory	7 @ 8
Do g'd to choice	20 @ —	Chestnuts	18 @ 20
Do Giltedged	— @ 30	ONIONS.	
Do Creamery	26 @ —	Silverskin	50 @ 75
Do do Giltedge	— @ 32½	POTATOES.	
Eastern, lad'e	12½@ —	River Reds	35 @ 45
Cal. Pickled	20 @ —	Early Rose, ctl	40 @ 55
Cal. Keg	20 @ 24	Peerless	60 @ 65
East'n Cr'am'y	25 @ —	Garnet Chilies	60 @ 70
CHEESE.		Burbank Seed's	40 @ 65
Cal. choice cream	9½@ —	Do do Salinas	90 @ 1 20
Do fair to good	8 @ —	Sweet	50 @ 1 00
Do Giltedged	— @ 12	Extra choice sell for more money	
Do Skim	5 @ 6½	POULTRY.	
Young America	— @ 12	Hens, doz	5 50 @ 7 00
EGGS.		Roosters, old	5 50 @ 6 50
Cal. "as is," doz	25 @ —	Do young	5 00 @ 7 00
Do shaky	20 @ —	Broilers, small	3 00 @ 3 75
Do candled	37½ @ —	Do large	3 75 @ 4 50
Do choice	42½@ —	Fryers	4 00 @ 5 00
Do fresh laid	— @ 45	Ducks	4 00 @ 4 50
Do do s'led white	— @ 47½	Do large	4 50 @ 5 50
Eastern cold-storage	21 @ —	Do extra large	— @ 7 00
Do fresh	25 @ —	Geese, pair	1 50 @ 1 75
Do selected	— @ 32½	Turkeys, gobl'r	15 @ 18
Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.		Turkeys, hens	15 @ 17
		Do dressed	19 @ 22
		All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.	
FEED.			
Bran, ton	14 00@ 15 00		
Feedmeal	26 00@ 27 00		
Gr'd Barley	19 50@ 20 50		
Middlings	20 00@ 22 50		
Oil Cake Meal	— @ 35 00		
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50		
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00		
HAY.			
Compressed	8 00 @11 00		
Wheat, per ton	8 50@ —		
Do choice	— @ 13 00		
Wheat and oats	8 00@ 11 50		
Wild Oats	7 00@ 10 00		
Cultivated do	6 00@ 9 00		
Barley	6 50@ 9 00		
Alfalfa	8 00@ 10 00		
Clover	8 00@ 10 00		
Straw, bale	35@ 50		
GRAIN, ETC.			
Barley, feed, ctl	80 @— —		
Do good	85 @— —		
Do choice	87½@— —		
Do brewing	92½@— —		
Do do choice	96½@— —		
Do do Giltedge	1 00 @— —		
Do Chevalier	1 00 @— —		
Do do Giltedge	1 15 @— —		
Buckwheat	2 25 @— —		
Corn, white	1 15 @ 1 20		
Yellow, large	1 05 @ 1 07½		
Do small	1 12½@ 1 15		
Oats, milling	1 37½@— —		
Oats, choice	1 35 @— —		
Do good	1 30 @— —		
Do fair	1 25 @— —		
Do common	1 17½@— —		
Surprise	1 45 @— —		
Black Cal	1 10 @ 1 25		
Do Oregon	— @— —		
Gray	1 30 @— —		
Rye	1 12½@ 1 17½		
*Wheat, milling	1 35 @— —		
Gi tedged	1 33½@— —		
Do choice	1 32½@— —		
Do fair to good	1 31½@— —		
Shipping, choice	1 33½@— —		
Do good	1 31½@— —		
Do fair	1 28½@— —		
Common	1 26½@— —		
Sonora	1 25 @ 1 30		
HOPS.			
1892, fair	18 @—		
Good	20 @—		
Choice	21 @—		
FLOUR.			
Extra, city mills	3 90 @—		

Do country m'ls	3 90 @ —		
Superfine	2 50 @ 3 00		
NUTS—Jobbing.			
Walnuts, hard shell, Cal. lb	6 @ 8		
Do soft shell	8 @ 9½		
Do paper-shell	9 @ 11		
Almonds, soft shl	12 @ 13½		
Paper shell	13 @ 15		
Hard shell	6 @ —		
Brazil	8 @ —		
Pecans, small	8 @ 10		
Do large	14 @ 16		
Peanuts	3½@ 4½		
Filberts	10 @ —		
Hickory	7 @ 8		
Chestnuts	18 @ 20		
ONIONS.			
Silverskin	50 @ 75		
POTATOES.			
River Reds	35 @ 45		
Early Rose, ctl	40 @ 55		
Peerless	60 @ 65		
Garnet Chilies	60 @ 70		
Burbank Seed's	40 @ 65		
Do do Salinas	90 @ 1 20		
Sweet	50 @ 1 00		
Extra choice sell for more money			
POULTRY.			
Hens, doz	5 50 @ 7 00		
Roosters, old	5 50 @ 6 50		
Do young	5 00 @ 7 00		
Broilers, small	3 00 @ 3 75		
Do large	3 75 @ 4 50		
Fryers	4 00 @ 5 00		
Ducks	4 00 @ 4 50		
Do large	4 50 @ 5 50		
Do extra large	— @ 7 00		
Geese, pair	1 50 @ 1 75		
Turkeys, gobl'r	15 @ 18		
Turkeys, hens	15 @ 17		
Do dressed	19 @ 22		
All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.			
Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50		
GAME			
Quail, per doz	1 00 @ 1 25		
Ducks	— @ —		
Do Mal'd ₱ doz	3 50 @ 5 00		
Do Sprig	2 00 @ 2 50		
Do Teal	1 50 @ —		
Do Widgeon	1 50 @ 2 00		
Do small	1 00 @ 1 50		
Geese	— @ —		
Do gray ₱ doz	2 00 @ 2 50		
Do White	1 00 @ 1 50		
Do Brant	1 00 @ 1 50		
Snipe	— @ —		
Do English, doz	1 50 @ 2 00		
Do Jack, per doz	75 @ 1 00		
Hare, per doz	1 00 @ 1 25		
Rabbits, large	1 25 @ 1 50		
Do small	1 00 @ 1 25		
PROVISIONS.			
Cal. bacon, heavy, per lb	12 @ —		
Medium	13 @ —		
Light	14 @ —		
Lard	9½@ 12½		
Cal sm'k'd beef	11 @ —		
Hams, Cal salt'd	13 @ —		
Do Eastern	14 @ —		
SEEDS.			
Alfalfa	10 @ —		
Clover, Red	14 @ —		
White	28 @ —		
Flaxseed	2 25 @ —		
Hemp	4½@ —		
Mustard, yellow	5½@ 6¾		
Do brown	4 @ —		
WOOL.			
FALL, 1892.			
S Joaquin, plain	6½@ 10		
Do mountain	10 @ 12		
Do lamb	8 @ 10		
Northern Choice	14 @ —		
Do Defective	11 @ —		
Do Lamb	10 @ 14		
HONEY—1892 Crop.			
White comb, 2-lb frame	9½@ 12½		
Do do 1-lb frame	11½@ 14½		
White extracted	7½@ —		
Amber do	6½@ —		
Dark do	6½@ —		
Beeswax, lb	23 @ —		

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES—1892.		PEARS—1892.	
Sun-dried, ¼'s, prime	3½@ 4	Sun-dried, quarters	— @ 3
Do do choice	4 @ 4½	Do sliced	4 @ 5
Do sliced, prime	4 @ 4½	Evap., sl'c'd, in b'xes	7 @ 8
Do do choice	4½@ 5	Do do choice	9 @10
Evap. bl., ri g, 50-lb. bx	7½@ 9	Do ring do	9 @10
Fancy, higher.		Dup'led, q'rt'd, bl'ch'd	6 @ 7
APRICOTS—1892.		PLUMS—1892.	
Do bleached	15½@—	Pitted, sun-dr ed	10 @10½
Do do fancy	15 @16	Do evap. boxes, choice	— —
Evap. choice, in boxes	15 @16	Do do do fancy	— @ —
Do fancy, do	15½@17	Unpitted	4 @ 5
FIGS—1892.		PRUNES—1892.	
Sun-dried, black	4 @—	Cal. French, ungraded	7½@ 8
Do white	3½@—	Do graded, 60 to 100	8½@ 9
GRAPES—1892.		Do do 40 to 60	11 @12
Sun-dried, stemless	3 @—	Fancy sell for more money.	
Do unstemmed	1½@ 2	RAISINS—1892.	
NECTARINES—1892.		London Layers, cluster per box	1 90 @2 00
Red, sun-dried	7 @ 8	Do choicest do	1 50 @1 60
Do Evap., in boxes	— @—	Do prime pr bx	1 25 @1 40
White, sun-dried	9½@11	Loose Muscatels, 2-crown, pr bx	— @1 00
Do evaporated	— @—	Do 3-crown do	1 15 @1 25
PEACHES—1892.		Do do do faced	1 30 @1 35
Sun-dried, unpeeled	7 @ 7½	Unstem'ed Muscatels in sks pr lb.	2½@ 3
Do do prime, bl'ched	9 @10	Stem'ed 2-crown	3 @ 3½
Do do choice, do	11 @—	Stem'ed 3-crown	3½@ 4½
Do do fancy	11½@—	Se'dl's Muscat'l sks	4 @ 5
Sun-dr., pl'd, bl'ched	@—	Do do in bxs	— @1 00
Do do prime	14 @—	Do Sultanas, sks	— @ 7
Do do choice	— @15	Do do bxs	— @1 50
Do do fancy	— @16	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	
Evap., peeled, in boxes choice	17½@—		
Do do fancy	20 @—		

KNABE PIANOS

The Recognized Standard of Modern Piano Manufacture.

BALTIMORE. 22 & 24 E Baltimore St, NEW YORK, 148 Fifth Avenue.

WASHINGTON, 817 Pennsylvania Ave.

PATRONS OF HUSBANDRY.

Hon. D. A. Ostrom for Senator.

LODI, Nov. 20, 1892.

TO THE EDITOR:—It appears now without a doubt that the next legislature of this State will be Democratic, and will reform some of the evils of which the producers of this golden State have been laboring under for so many years, particularly the oppression of the monopolies; and while the members of the coming legislature are thinking of some one for United State Senator, I desire to suggest the name of Hon. D. A. Ostrom of Yuba county, as one whom I have known at all times and under all influences and temptations, as being with the people and for the people's interest. I feel that when we have found a man so devoted to the interest of the producers we should put him forward and thereby follow out the Grange doctrine, "the office should seek the man, and not the man the office." Hon. D. A. Ostrom is a true and tried Granger. J. D. HUFFMAN.

The Schoolbook Question.

LODI, Nov. 20, 1892.

TO THE EDITOR:—At the regular meeting of the Pomona Grange of San Joaquin county, held Nov. 17th, the subject of the discontinuance of the present system of schoolbooks in this State was taken up; and it further appearing that there is a ring in this State at this time using every effort to have the present system set aside, they unanimously passed the following:

WHEREAS, Notwithstanding specious and seductive influences to the contrary, it is evident to us that the present system possesses large economic advantages; and

Whereas, We deprecate a return to the system formerly in vogue, with its train of corrupting influences; therefore

Resolved, That we request our State Legislature and the State administration to discountenance all attempts to abolish the present system, and do all in their power for its maintenance, perfection and efficiency.

J. D. HUFFMAN, Secretary.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

FORM OF PETITION.

A form of blank petition for adoption by subordinate Granges and the following petition for the signatures of brothers and sisters accompany the foregoing appeal:

To the Honorable the Senate and Assembly of the State of California: The undersigned, citizens of your State, believing that in the matter of succession to community property, on the death of either husband or wife, both spouses should have the same rights, respectfully petition your honorable bodies that an Act be passed substantially as follows:

AN ACT to amend the Civil Code in relation to community property, and to the succession thereto in case of the death of either spouse. *The People of the State of California, represented in Senate and Assembly, do enact as follows:* SECTION 1. Section 1401 of the Civil Code is hereby amended to read as follows: SECTION 1401. Upon the death of the husband or wife the entire community property, without administration, belongs to the survivor. SEC. 2. Section 1402 of the Civil Code is is hereby repealed. [Signatures.]

The following petition, which we believe will be popularly indorsed by our subordinate Granges, came from the same committee:

STATE SCHOOL BOOKS.

To the Legislature of California:

——Grange, No. ——, Patrons of Husbandry, of the State of California, has unanimously adopted the following preamble and resolution:

WHEREAS, It has come to the knowledge of this body that interested parties are seeking, through Teachers' Institutes and through paid articles which appear in newspapers under the guise of voluntary contributions, and in other ways, to undermine and break down the present system of schoolbooks in this State; and

Whereas, We deprecate a return to the system formerly in vogue, with its train of corrupting influences; and

Whereas, Notwithstanding specious and seductive influences to the contrary, it is evident to us that the present system possesses large economic advantages; and

Whereas, We have confidence in the integrity and ability of the State Board of Education and in the administration of the State Printing Office; therefore,

Resolved, That we request our State Legislature and our State administration to discountenance all attempts to abolish the present system, and to do all in their power for its maintenance, perfection and efficiency. By order of the Grange. Very respectfully, [To be signed by W. M. and Sec'y with seal.]

We hope each Grange will give the above-mentioned matters full discussion and consideration. As to donating money for building a "Temple," every Patron should act for himself or herself, and contribute according to their own minds and means. Those not able or moved to donate should not discourage those who are able and willing to support so patriotic an enterprise.

NATIONAL GRANGE.

The 26th Annual Session of the National Grange opened at Concord, N. H., on Wednesday of last week. By Associated Press dispatches we learn that Worthy Master Brigham expressed some plain views on the money and other questions which we shall be able to furnish later, after having time to hear from our worthy California representatives, Bro. and Sister Davis.

Bro. Brigham is reported as saying that the financial condition of the Grange was good and the reports from the State Granges show increasing numerical strength. The speaker outlined the benefits accruing to the farmer from the organization and advocated renewed efforts to secure the early passage of the antioption bill. He said: "All that our Order will ask of the new administration is that the same consideration given to other interests be accorded agriculture." The speaker deprecated at this time the movement to induce the Government to spend large sums in the irrigation of the dry lands of the West, and passed on to lengthy discussion of the financial question, advocating honest money.

STATE GRANGE REPORT AND RESOLUTION.

The following report on the Master's address, by the Legislative Committee was adopted at the late S. G. Session:

In that portion referring to legislation, we fully concur in the suggestion of the W. M. that the chief reason for our failure in some instances to procure legislation sought, is because farmers choose some one not of their their own, or a kindred calling to represent them.

Under the head of National Grange, he speaks feelingly and truthfully of the important work done by that body in sustaining and upholding the dignity and influence of the Order; and of the preparations made and to be made in the establishing headquarters for our Order at the World's Fair at Chicago in 1893.

In the matter of Free Rural Mail Delivery, your committee fully concurs in the sentiments of the W. M., and believes if an earnest effort would be made on the part of members of this Order in conjunction with the known endeavors of the P. M. General in this direction, we can secure through congressional action at the next session of that body, authority for the undertaking of at least a partial system of this kind; looking for its general adoption ultimately.

The following by I. C. Steele was also adopted.

Resolved: That the Legislative Committee of this State Grange prepare a memorial to be presented in both Houses of the coming Legislature for the purpose of memorializing Congress to remove the present duty on grain bags, that they may be admitted free.

GRANGE ANNIVERSARY.—So far, we learn of only three or four Granges that have announced their determination to commemorate the birthday of the P. of H. We trust, however, there are many that will have a joyous gathering Saturday, Dec. 3d, the anniversary falling on Sunday this year.

TEMESCAL GRANGE was visited last Saturday by our able Sisters C. E. Kinney and S. J. Cross. The Grange voted to have a "basket lunch" on Saturday, Dec. 3d. Exercises appropriate to the birthday of the Order will be held, opening at 10 A. M. All Patrons are invited.

TULARE GRANGE requests the attendance of some State officer or lecturer, Dec. 3d, when the Patrons of Tulare and their friends will no doubt have a good old-fashioned anniversary celebration. We hope to announce the speakers in our next issue.

A JOINT INVITATION.—It should be understood that Two Rock and Petaluma Granges together invite the State Grange to hold its next annual meeting in Petaluma.



SHROPSHIRES FOR SALE.

30 to 40 Thoroughbred and High-Grade Shropshire Rams Ready for Service.

This stock is the Best in the State, having been selected from the famous flock of the late Andrew Smith, of Redwood City

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LAST MONTH

THE JUDSON FRUIT COMPANY

Solicited consignments from the Fruit and Produce growers of California. The Consignments Came, and we believe that shippers are satisfied. It is our aim to handle all goods placed in our hands in such a manner as to secure the confidence of consignors.

Packing for long distance shipping a specialty.

Good Storage. Good Local Trade.

ADDRESS THE JUDSON FRUIT COMPANY,

308 & 310 Washington St., San Francisco. Cal.

AUNT JEMIMA'S QUILTING PARTY. WERE YOU THERE? EVERYBODY WAS THERE. All the Goods used came from

SMITH'S CASH STORE

414-416-418 Front Street, San Francsico.

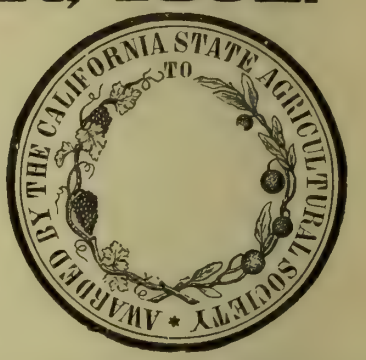
Everybody said, "How pretty, how wide, how suitable, *how cheap!*" There were
Bright red Bedfords, in black polka dot and pretty figure; 30 in.; worth 20c.; cost only 8c.
Cream ground Mandarins, 1 yard wide, large figure; for linings; worth 15c.; cost 8c.
Springtide Buntings, 30 colors; 34 in. wide or more; so nice; worth 10c.....cost 7c.
Common Ecru Cheese-cloth; some use it; not recommended; 36 in.....4, 5c.
Heavy Twilled Calico, bright colors; large figure; 20 kinds; called Cretonne.....8c.
Other quilting styles of Calico; large figure; various qualities.....5, 6, 7c.
Pacific Challis, all light or medium; standard width; worth 8c.....now 3½c.
Common Prints, such as you get anywhere; not worn or very good.....4½, 5c.
Various articles for quilting in Cashmere finish; wide and narrow.....5, 6, 8, 10c.
Cotton Bats 20 per cent. cheaper than anywhere; 1 lb. rolls; 3 grades.....12½, 15, 20c.
Common colored Wool (shoddy), for common quilts or lounges.....6¼c.
Tieyarn, Cotton; all colors; 5c. ball Zephyr; odd colors.....30 hanks for $1.00
Other yarns for tyeing quilts and for knitting things; all kinds and prices. See list.

And the things they had to Eat came from SMITH'S, too.

When you decide to start housekeeping, after "seeing Nellie home," remember the CHEAPEST place in the world to get things is SMITH'S.

STATE FAIR, 1892.





The following San Francisco Firms ana Indiviauals Received the Highest Awards of the State Agricultural Society at the late State Fair.

BAKER & HAMILTON,

BEST DISPLAY OF AGRICULTURAL MACHINERY, CALIFORNIA MANUFACTURE, GOODS MANUFACTURED BY BENICIA AGRICULTURAL WORKS.

BUFFALO-PITTS THRESHING MACHINE.
TIGER HAY RAKES.
FAVORITE POWER CORN SHELLERS
B. & H. LAWN MOWERS.
BUCKEYE REAPERS.
HALLECK POTATO DIGGER.
BENICIA SIDE-HILL PLOWS.
EUREKA SULKY PLOWS.
BENICIA SOD PLOW.
BEST PLOW FOR ALL PURPOSES, THE "BENICIA."
BENICIA SPRING WAGON.

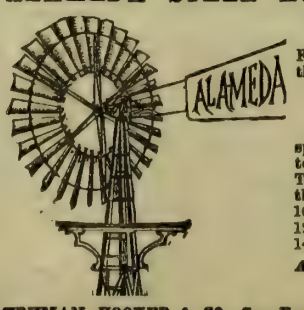
J. W. GRACE & CO.

CANNON'S SHEEP DIP—Three in competition.

PARAFFINE PAINT CO.

BEST PREPARED PAINT (P. & B.).
SAMPLES OF PAINT, CAL. MANUFACTURE (P. & B.).

ALAMEDA STEEL WIND MILL.



10, 12 and 14 ft. Cheaper than any First-Class Mill in the market.

Every One Guaranteed.

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A Large and Extra Choice Stock of

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PEARS, APPLES, WALNUTS AND SHADE TREES in Surplus.

A BIG STOCK OF FINE

Prunes, Cherries, Olives,

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The Best Peach Known for Early Shipment East.

Reasonable prices to dealers and canvassers. For particulars apply to

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Standard Fruits, Shade Trees, Shrubs and Ornamentals,

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No Irrigation. **Free from Pests.**

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BARTLETT PEAR TREES.

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Fruit is round, of medium size, **VERY HIGHLY COLORED,** flesh firm and sweet.
THIS PEACH HAS BEEN SUCCESSFULLY SHIPPED EAST FOR FIVE YEARS and is no new, untried variety.
Tree healthy, strong grower, and heavy bearer, never having missed a crop.
A limited number of yearling trees for sale this season. Apply early before stock is exhausted.

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County customers can obtain stock from above Company at Farmersville, Tulare Co.

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(SEND FOR CATALOGUE.)

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FRENCH PRUNES on Myrobolan, Peach and Almond Roots.

BARTLETT PEARS, Apricots, Cherries, Olives, Walnuts, Etc.

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FRUIT TREES. FRUIT TREES.

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VARIETIES FOR OIL—Razza, Grossaia, Rossalina, Bellmonte, Olivastra, Leccino, Piengente, Morinello, Uvaria, Corregiola, Infrantoia, Rubra, Atrovialacea, True Picholine

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PRICE, 50 Cts. Each, $40 per 100, $350 per $1000; Ascolana, $1 each.

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Robe de Sargent Prunes,
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Pears, Peaches and Apricots,
Leading Varieties, in large quantities.
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All our stock is grown without irrigation and is guaranteed Drop us a "Card," and we will send you our price list.

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Eleven years experience has taught me how to **PROPERLY** root the Olive. No artificial heat used. Address

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APPLE TREES

for Nurserymen, dealers, or commercial planters, in car loads or box lots.
See our prices before buying. They are **very low.**

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Apple Grafts at **$3.50** per thousand.
Prune Grafts (on Mariana Stocks) at **$9** per m.
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All first class and best of material used, f. o. b.

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No. 1, graded 3-16th, and all up at **$4.10** per m; and Pear Stocks, same grade, at **$7.50** per m, f.o.b. Free of disease. We are strictly wholesalers, and grow nothing but the above stock. Our trade has grown to immense proportions (second to none) through the merits of our goods.
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I will guarantee every tree true to label and free from insect pests.

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We Have on Hand and For Sale

FRENCH PRUNES on Peach and Myrobolan, 1 Year Old. CHERRIES, PEACHES and APPLES 1 and 2 Years Old. Also a very Large and Complete Stock of SHADE AND ORNAMENTAL TREES. The Finest Stock of ROSES in California. Write for Prices. E. GIRL,

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OF SANTA CLARA COUNTY.

CAPITAL STOCK.....$10,000 PAID UP.

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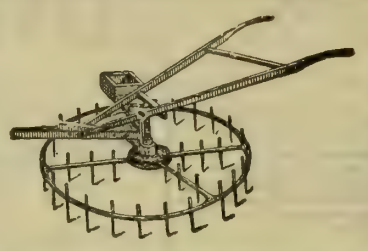
This Company is Sole Agent in this county for **PROF. W. H. BROWN'S INSECT EXTERMINATOR**, and is prepared to contract for the pruning and spraying of orchards. WARRANTED TO KILL all kinds of Scale, Woolly, Green, Plum and Hop Aphis, Cherry and Pear Slug, Cankerworm and Caterpillars, and in fact all insects injurious to the Trees, Shrubs, Plants or Vines, WITHOUT INJURY TO THE FOLIAGE ON TREES. **Indorsed by the State Board of Horticulture of Oregon.**

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Jackson's Rotary Vineyard or Orchard Harrow.

PRICE (five feet diameter), $25.

It has half-inch steel teeth, and is made to rotate either way by simply changing the cast-iron weight from one side to the other. The Harrow weighs 170 lbs., and can be taken down and packed closely for shipment.



The Jackson Vineyard Harrow rotates either way, at the will of the driver, and by driving the slow side next to the vine or tree there is no danger of hurting it, as the Harrow will roll gently around the tree or vine.

THE JACKSON VINEYARD HARROW was designed especially for vineyards and orchards, where very thorough and careful work is required. It was introduced to the orchardists in 1881, and perfected during that season. It is made of gas-pipe, bent round like a wheel, and made perfectly smooth on the outer rim, and presents no sharp corners to the trees or vines to injure them as it revolves. It is provided with handles, so the operator can hold it to or from the row. Every farmer should have one for his garden, and to level any uneven land, or fill up dead furrows. Every vineyardist or orchard owner should have a sufficient number to go over the whole ground in a short time. When the surface is just in proper condition, one day's work is worth a week's out of season. The Jackson Rotary Harrow is a perfect pulverizer, leveler, clod-crusher and weed-killer. It leaves the weeds on top of the ground—thoroughly shaken—to die.

BYRON JACKSON, 625 Sixth St., San Francisco, Cal.



CHAMPION SPRAY PUMP.

The above cut illustrates our new spraying pump, the "Champion," and its adaptability to the work for which it has been especially designed.

After ten years experience in the spraying pump business, and the wants of orchardists therein, we have built this pump, as being best suited to their requirements. Before putting it on the market we submitted the model to several prominent fruit growers, and as the design met with their unqualified approval also, we have no hesitation in declaring it to be the best spray pump ever made, and justly entitled to be named "Champion."

As will be seen from the illustration, the pump is very compact and strong. It is perfectly double-acting and has a brass-lined cylinder. The motion of the piston is horizontal. The handle is so arranged that the leverage is very powerful, and the movement is easy and natural. The air chamber is unusually large, admitting of the continuous and even discharge necessary for good and thorough spraying.

The valves are metal and have metal seats. They all lie directly beneath the air chamber and are readily exposed on loosening four bolts, and without touching the cylinder.

The pump has a double suction and a double discharge, one each on either side. The above cut shows the pump in operation with four lines of discharge hose. It can be readily arranged for a less number if desired. With this pump one man can easily keep four men busy spraying, as well as attend to the team and stirring of the liquid. We believe the pumps supply a long felt want, as, for service, convenience, easiness of operation and durability, they are far superior to any other in use.

Our BAMBOO EXTENSION is an admirable invention. The operator of the pump, by the use of this extension, can get to all parts of the tree while on the ground, also saving himself from getting his hands and face burnt from the solution. As a rule, the man who does the driving of the team does the pumping, and the party who has charge of the Bamboo Extension does the spraying. This is the very best pump made, without any exception.

NOTICE.

We also carry a full line of other Spray Pumps—**GOULDS, STAR, EUREKA**; also full line of Spray Nozzles, Spray Hose and everything connected with the Spray Pump Outfits.

SEND FOR SPECIAL CATALOGUE—Mailed Free.

WOODIN & LITTLE,

312 and 314 Market Street, Junction of Bush San Francisco, Cal.

IRON PIPE SHEET IRON PIPE



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ALL SIZES, FOR GAS, STEAM AND WATER.

— WE MANUFACTURE —

SHEET IRON AND STEEL PIPE,

ALL SIZES,

For Water Supply, Mining, Irrigating Purposes, Stock Ranches, Etc.

Made in Lengths Desired from 16 to 30 feet.

The Cut shows a Section of Three Joints

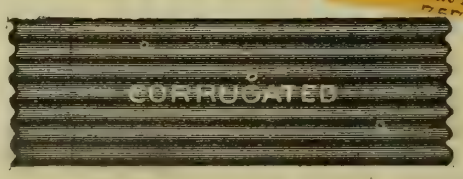
DOUBLE RIVETED SHEET IRON PIPE.

In the manufacture of this Pipe, we use only a **high grade** of annealed Charcoal Iron of great tensile strength.

The weight or thickness of metal used, is graded according to service required, and pressure to which the Pipe will be subjected.

FOR ALL UNDERGROUND PURPOSES, we immerse the Pipe in a bath containing a special mixture of **ASPHALTUM, PITCH and PETROLEUM, at a Temperature of 300 Fahrenheit.** It thus receives a thorough coating, both inside and outside, to the alkalies of the earth, rust, etc., and is practi...

C S Crandall 4 jul 1 '93
Exp't Stat'n Agr College



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Black, Painted and Galvanized, for Roof and Sides of

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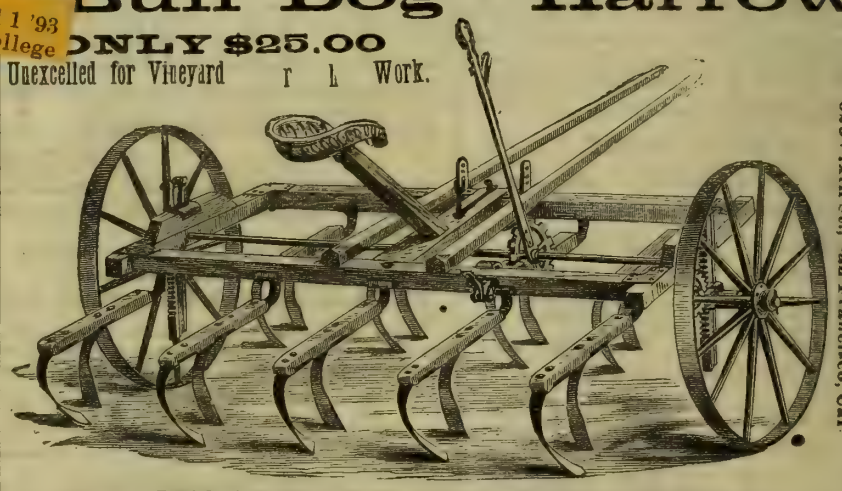
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SAN FRANCISCO—SAN JOSE—LOS ANGELES.

"Bull Dog" Harrows.

ONLY $25.00

Unexcelled for Vineyard [illegible] Work.



BYRON JACKSON, 625 Sixth St., San Francisco, Cal.

NO. 3 "BULL DOG" 6-FOOT RIDING HARROW—**$25.00**

Instead of a single tooth, drawing straight through the ground, the teeth are attached in pairs (which have a spread of seven inches) to a short beam. Every tooth has a quarter turn (to the right or left respectively), thus presenting a cutting edge to the ground, and giving to each the position and appearance of a moldboard of a plow, or the shovel to a cultivator. This form of tooth, together with the relative positions assumed by the teeth to each other, gives to them the power of cutting and pulverizing tough soils, and hard, baked ground, which is possessed by no other form of tooth yet invented. By this peculiar disposition of the teeth, they have the advantage also, that one acts as a brace or landside to the other, and so prevents their clogging, which is a serious fault existing in all spring tooth harrows whose teeth are made of one long, continuous spring. In the "BULL DOG" HARROWS the short beam which holds each pair of twisted teeth is attached by a stiff spring to the main framework of the tool. Thus these implements have the combined elasticity which exists in the teeth themselves, and in the spring which attaches the short beam to the cultivator frame. Hence the harrow retains all the vibration necessary for the successful working and cleaning of the machine, whilst it is also stiff enough to be held down to its work in the most obstinate soils without difficulty.

SHAPE OF TEETH.—As the teeth present to the soil a shear or cutting edge, they are enabled to do the most thorough work in hard ground, and, in fact, the peculiar construction all through of the "Bull Dog" Harrows adapts them for successful working in soils where no other tools of the kind can be used.

BUY THE GENUINE

GLIDDEN STEEL BARBED WIRE.



MANUFACTURED BY

WASHBURN & MOEN M'F'G CO.,

SAN FRANCISCO: 8 & 10 Pine Street.

SACRAMENTO. 205 & 207 J Street.

ASK YOUR DEALER FOR DISSTON'S "HUMBOLDT" CROSS-CUT SAW.



MADE OF BEST QUALITY CRUCIBLE STEEL and ground even gauge on the teeth from end to end. Will retain the set longer and do more work without filing than any other saws. Send for "Hand Book of Saws," mailed free. **HENRY DISSTON & SONS, Inc., Philadelphia, Pa.**

DEWEY & CO. {220 MARKET ST., S. F. Elevator, 12 Front.} PATENT AGENTS.

PACIFIC RURAL PRESS

Vol. XLIV. No. 23. SAN FRANCISCO, SATURDAY, DECEMBER 3, 1892. THE DEWEY PUBLISHING CO Office, 220 Market St.

Indians of the North.

Hop-picking on Puget Sound, the season for which has recently closed, attracts from Alaska, British Columbia and many parts of Washington large numbers of Indians, who migrate to the Sound for the purpose of spending a month or more in the fields, thus earning considerable sums of money. The journey from the north is made on the ocean in canoes which travel in fleets and which contain Indian families and often whole villages and tribes, with their entire camp, clothing and cooking outfits and belongings. Arriving at Seattle about September 1st, they leave their canoes in the harbor and then go out to the Puyallup, White River and other valleys, and remain during the hop-picking season. Men, women and children engage in picking, and the sums realized to the families are often quite respectable.

When the season is at an end, the Indians owning horses have a great "meet" to test the comparative merits of their animals; and a very unique and interesting gathering it is. Large sums of money are often wagered on the result, and often an Indian who has worked through the hop season faithfully goes home with pockets as empty as when he came. One of these meets is represented in the engraving in to-day's RURAL PRESS, used by permission of the *Overland Monthly*.

Perhaps the most celebrated Indian on Puget Sound—one who, by the way, does not descend to the "menial" pursuit of hop-picking, because of her royal ancestry—is Princess Angeline, of Seattle. Angeline is daughter of old Chief Seattle, for whom the city is named, and she is an object of continued consideration and even admiration, by the people of Seattle. It is said that once on a time Angeline, by a perilous night journey, warned the village of Seattle, then a frontier settlement, of a threatened Indian invasion, thereby winning their everlasting gratitude and esteem. To tell the truth, Angeline, in her personal appearance, is a very commonplace squaw. She is a familiar object about Seattle, and can often be seen seated in doorways or wandering barefooted along the streets in quest of some friendly person who will give her food and raiment. The people of Seattle, however, invest Angeline with a halo of romance, and, if she would allow them, would provide her a better manner of living and a decent habitation. She declines these, however, but makes reprisals on her white friends for whatever is absolutely necessary to keep body and soul together. The engraving of Angeline in this week's RURAL PRESS is from the *Overland Monthly*.



THE DAUGHTER OF SEATTLE.



INDIANS HORSE RACING AFTER HOP-PICKING.

THE California Starch Company was organized at Petaluma last week. The capital stock is $200,000, divided into 2000 shares at $100 a share. The directors outside of Petaluma are: John M. Streining, Edwin C. Austin, John Burkart, Henry J. Summer, and Hayes and W. J. Adams, all of San Francisco. The proposed factory will be of inestimable value to the producers around Petaluma. Potatoes are grown in great abundance in Sonoma county, and a ready market is assured the farmers. After the potatoes have passed through the factory a pulp remains which is good for cattle food.

SAN JOAQUIN VALLEY CITRUS FAIR.—The horticultural society of the district including Fresno, Tulare and Kern met at Porterville and decided to give a citrus fair at that place on December 29th. Porterville is the center of the citrus belt in the upper San Joaquin, from the fact that the people in that locality have paid greater attention to orange culture than those at other points along the foothills of the Sierra Nevadas.

THE people of Vallejo, by more than a two-thirds vote, have decided to issue bonds to the sum of $250,000 to build new waterworks.

Fruit vs. Wheat.

We increase our pages to make room for notable essays which we are glad to send to our readers in the midst of a great storm, for dripping skies and sodden soil put the agriculturist into the finest humor for careful and earnest reading. Draw up to the warm fire and beneath the bright lamp, and profit by the many important matters which our pages this week contain.

We would call special attention to the essay prepared for the San Jose Convention by Gen. N. P. Chipman of Red Bluff. Gen. Chipman is most painstaking and diligent in his studies of California industrial affairs, wise in his deductions, and singularly skillful in presenting them. Four years ago he presented a careful paper upon the relative importance of wheat and fruit-growing in the development of our State, and his later essay on the same subject is in the nature of a sober, second thought—all the more forcible because it affirms the conclusions at first attained. We do not desire to abstract the essay; we prefer to present it in its entirety, so that its facts and its logic may be apparent to all. The conclusion from all the data presented is irresistible—not that we should stop growing wheat, but that all lands which can be successfully used for fruit should be thus devoted, wisely and upon a practical basis, and there would follow a subdivision of lands and increase of population which are the secrets of our future growth and development as a State. The profit in fruit plantations wisely made and properly maintained is perhaps the most clearly demonstrated fact in California industry.

We are also glad to present in the same issue of the RURAL the paper by James E. Gordon on the prune industry. It is conservative in tone, and may possibly be too narrow in its sketch of regions adapted to the special fruit considered, but its influence will be excellent in restraining people from rushing into fruit investments upon speculative considerations and without surety that the investment will be properly handled. General Chipman proceeds of course upon the fair basis that fruit-growing must be well done to merit consideration at all. Mr. Gordon shows how many ways can be followed to reach failure or at least to endanger success. We hardly see how the reader can peruse these two papers without learning many things which will show him how to make money and how to avoid losing money. We are gratified at being able to present in one issue of the RURAL so many important practical considerations.

NEW ORANGES. — Oranges are in from Oroville, and the southern crop is just at hand. The first car left Riverside Nov. 27, which they claim was the earliest shipping date in the State. That point may have to be decided by comparisons. The Riverside crop is said to be ripening rapidly.

ANTHRAX IN LOS ANGELES COUNTY.—It is telegraphed from Los Angeles that Dr. Morrison has reported to the Supervisors that anthrax had appeared in cattle on a ranch on the Verdugo road owned by Mr. Nelson. The Supervisors directed him to quarantine the place.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

ADVERTISING RATES.

	1 Week.	1 Month.	3 Months.	1 Year.
Per Line (agate)	$ .25	$ .50	$ 1.20	$ 4.00
Half inch (1 square)	1.00	2.50	6.50	22.00
One inch	1.50	5.00	13.00	42.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type, or in particular parts of the paper, at special rates. Four insertions are rated in a month.

Registered at S. F. Post Office as second-class mail matter.

ALFRED HOLMAN.....General Manager

San Francisco, December 3, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

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Pruning Shears—Baker & Hamilton.
Pulverizers—Truman, Hooker & Co.
Fruit Trees—Felix Gillet, Nevada City.
Rattan Chairs—California Rattan Co.
Watches, Jewelry, Etc.—Pacific Coast Home Supply Association.
Fruit Trees, Seeds, Etc.—Thos. Meherin.
Fruit Trees—Oroville Citrus Association, Oroville.
Situation Wanted—A. G.
Oil Picture—Demorest Family Magazine, New York.
Barb Wire—Washburn & Moen Manufacturing Co.
Olives—Frank Kunz, Sacramento.

☞ *See Advertising Columns.*

The Week.

The rain has washed every other topic from the public mind. Never perhaps has there swept over California so great a storm so early in the season: in fact if all the injuries and all the inches of water accomplished by the storm which, as we write on Wednesday evening, is still in high feather, are collected at its close, it may be that California never had so strong a conflict of the elements. San Francisco and vicinity lost several frame houses, and parts of houses beyond number. Telegraph lines have been floored, wharves on the Alameda side washed out and blown out, and confusion in general has resulted. Travel and transportation have been somewhat interfered with. In spite of all these the storm has in no sense been a disaster, and the most disgruntled find time to declare that the rain is a good thing for the country, and the forecast of a very promising producing season.

The whole State has been covered by the storm, and even in the arid regions there have been flowing streams and washed out roadways.

This rain, as we promised last week, will prove a wonder awakener of activity and business. It comes early enough to give a long working season, and it is heavy enough to prevent a holiday drouth. On the whole it is very good.

California Chrysanthemums.

There is every reason why we should succeed in bringing out notable new chrysanthemums. Our climate certainly favors seeding of the plant and the strength of the parent should foreshadow excellent offspring. This theoretical forecast of the situation has also been affirmed by instances of California seedlings which have won local fame. How far such California varieties might advance in the face of the storms of high-class novelties at the East and abroad is a question of which the fainthearted have usually taken the negative. There is perhaps no flower of which so many new varieties are pressing for recognition and in which so many distant growers are intimately interested, and it might seem that there was little room for California work. But all such apprehensions disappear in the face of facts and the position secured by California seedlings at the show in New York city last month, is most encouraging. In its report of this Madison avenue display, the new Chicago semimonthly entitled *Gardening*, introduces the decision of one of the best-known New York growers in these words: "My greatest surprise this year was the California seedlings. I tried only a few of them this year, for to tell you the the truth, in face of what we have in the East here I did not think we could get much, if anything better, or as good, from California. But see what I've got! Aren't they beauties? Rest assured I will send for every seedling they send out in California this season."

These seedlings are so notable that *Gardening* gives engravings of eight of them with the following names and descriptions:

Mrs. Senator Hearst—Pure white. A full, flowing flower; petals spreading, a little twisted and irregular, and of different shapes and sizes, many thread-like ones being intermixed among the large ribbons.

Dr. Callandreau—Creamy yellow shading to white; petals very large, broad, and inclined to incurve. A very beautiful blossom.

Mount Whitney—An exceedingly large, pure white flower, quilled, and of somewhat spreading, flat disposition. Splendid.

Golden Gate—Golden bronze. A very large, bold flower, with spreading petals; habit, robust; stem, stiff; foliage, fine.

Harvest Moon—Clear, bright yellow; petals flowing and somewhat twisted; foliage clean and plentiful. A very beautiful variety.

C. Cruger—A handsome, well-headed flower; color, a pleasing purplish, and yellowish silvery reverse.

Carmen Byron—Good sized flowers; brilliant red, reverse bright yellow; petals broad and incurved. A strikingly beautiful flower, but it shows a conspicuous eye, and, altogether, is considered as the least worthy of the set.

Lilian Cross—Clear yellow; petals broad and reflexed to intertwisted. A pretty variety.

We have seen some of these, and certainly they are deserving of the distinction they have won and the credit they bring to the State. We wish we could give the originator in all cases. Perhaps some reader will supply this lack, so that individual credit may be placed where it belongs.

At the last fair of the California Floral Society in this city there were other notable seedlings exhibited. There was a fine group from Santa Cruz, and another very interesting exhibit of volunteer seedlings from a garden near Haywards, in which the offspring was shown in connection with the bloom from the parent plants. The chrysanthemum is the great floral fancy at present, and evidently California is in the swim.

The Raisins Will Wait.

The cooperative organization of raisin producers and dealers is now called upon to put forth an act which clearly demonstrates its right to exist. The shipments of raisins thus far made are more than the Eastern market can immediately handle. Without concerted action among those in the local consumption and trade, the old story would have been repeated, shipments would have continued, prices would have been forced down by Eastern speculators and the goods they thus slaughtered would have been held by them for subsequent sales at large profits. This is just the trap the California producer fell into last year, and nothing but the organization referred to stands in the way of another walk into the same snare.

Last week the raisin-growers met at Fresno and adopted the following declaration of fact and purpose:

First—That the packers and producers of raisins in the State of California be notified by the secretary of this association that the stock of raisins now on hand in the eastern markets is sufficient to supply the consumptive demand for the next six weeks; this meeting, consisting of the executive committee of the association and the representative packers of the State for themselves, agree, and advise absent packers to agree, that no further consignments of raisins be made to the East until after the new year.

Second—The better grades of raisins are about all shipped out of the State; there are now no clusters of London layers here to ship. This, together with the large amount of raisin grapes which have this year been sold green to the wineries, and the shortage of the crop, will tend to make a good active demand later; the crop, when all shipped, will be found to be not over three-fourths of that of last year's shipment.

Third—This meeting is of opinion that such action as advised will result in much higher prices, particularly as there is no more than enough raisins to supply the demand, and can all be sold at the combination price, if marked with due regard to the supply and demand.

The above policy was unanimously agreed to by the San Joaquin valley producers who were present, and adherence was also given by the Riverside organization in writing. It is a particularly encouraging instance of what producers can do in their own behalf by acting together toward honorable commercial ends.

Added to this self-evident proposition comes the testimony of those in the trade that similar influence is discernible from their point of view. A leading dealer at the East is reported to have said that had it not been for the action of Californians in the raisin interest "there would have been positively no market for raisins this season. The same tactics would have been observed that were observed last year, when raisins could not be sold at any price." Another dealer claims that the "action of the association had increased the price of raisins on the 200 carloads that he had already sold, at certainly not less than one cent a pound, and probably one and one-half."

The next movement which is already under way is to place all brokers under $20,000 bonds not to undersell the minimum prices fixed by the association, and no goods will be furnished to brokers who do not bind themselves to uphold the work of the producers and packers. This accomplishment, within six months of organizatisn, is, as we have said, peculiarly significant.

From an Independent Standpoint.

It is a shameful fact that up to the present time, (we write on Tuesday, Nov. 29th), the results of the voting in this State on the 8th inst. are not yet definitely ascertained. Through one pretext or another, the returns are delayed, and we are apparently no nearer to accurate knowledge than we were two weeks ago. In last week's issue we blundered in reporting that Harrison had carried California, whereas it is now demonstrated that Cleveland carries the State, although by a very narrow plurality,—probably not more than four hundred. Generally speaking, the results of the election are as we have heretofore reported them. The Legislature will be Democratic by a working majority, and will unquestionably choose a Democrat to succeed Mr. Felton in the Senate. The three leading aspirants for Mr. Felton's place are W. W. Foote, Stephen M. White and Jeremiah Lynch. Mr. Foote is a lawyer of this city, engaged mainly in probate and criminal practice. He is a public speaker of some ability, and has done a good deal of stumping in this State from time to time. Several years ago he was a member of the Board of Railroad Commissioners, and made a record of being one member of that Commission who could not be controlled by the railroad corporations. His standing in this connection will be his principal claim for the Senate. Mr. Foote was opposed to the nomination of Cleveland and was in favor of Hill, but went to the Democratic National Convention under instructions for Cleveland. After the convention he visited Cleveland in New York, and it is understood that he made his peace satisfactorily. Mr. White has a wide reputation as an orator, and was selected by his party during the recent campaign to represent it in joint debate with M. M. Estee. He is a resident of Southern California, but is familiar with the State from one end to the other. The local politicians are not generally favorable to his candidacy, because they fear a large share of the Federal patronage will go south instead of remaining in San Francisco. Mr. White has been employed as attorney by the Southern Pacific on occasion, but in other respects has an anti-monopoly record. He is perhaps the best known of the three candidates named. Jeremiah Lynch lives in San Francisco, and his title to political preferment is based chiefly upon excellent work done as foreman of the San Francisco Grand Jury. He is a writer of ability and a man of large means.

The Rural observes with satisfaction that the non-partisan movement in San Francisco, which resulted in the election of the mayor and of a fair proportion of the other city officials, is not to be abandoned. Its leaders, the integrity of whose motives is beyond question, announce their purpose to maintain the organization and to carry on the fight next year on lines substantially similar to those of the campaign just past. They recognize the fact that the purification of San Francisco politics is an enterprise not be accomplished by a single successful fight, and they propose to stay by it until there shall be aroused here a moral sentiment sufficiently courageous and active to demand respectable nominations and to secure respectable elections. A similar movement is on foot in Oakland. A non-partisan league, whose purpose is the political regeneration of Alameda county, has been organized and plans are being laid already for the next general election. It is only by this kind of vigilance that good local government can be secured or maintained. There are probably few other counties in the State where change is so much needed as in the counties of San Francisco and Alameda, but it would certainly do no harm and it might do a great deal of good in every county, for those who are interested in good government to come together into permanent organization. Too long we have permitted irrelevant opinions as to national policies to control political action in home affairs. It is a custom utterly absurd, and the sooner it passes away and is succeeded by the better custom of voting independently of party for the best man, the better it will be for the country, both materially and morally.

One result of the national election which is alike satisfactory to Democrats and Republicans of the better sort, is the elimination of New York from the great national chess-board. Heretofore, that State has been indispensable to party succes, and there, naturally, party effort has been concentrated. Concentration of effort in New York means simply a contest between the parties for the purchasable and largely foreign vote of New York city. When a few thousand voters in a single city hold the key to the situation, and when they are clearly awaiting the highest bidder, the temptation is certainly very great, and neither party for the past fifteen years has been able entirely to resist it. The methods by which both Republicans and Democrats have sought to gain the support of the corrupt and foreign element of New York city is a chapter in our politics so infamous that we trust it will never

be written. But in the last election, New York happily cut no more figure than New Jersey. The successful candidate could have gotten along quite as well without the one State as without the other. And what is true of New York is quite as true of that other great, and heretofore doubtful State, Indiana, which has shared with New York in the infamies of extreme partisan politics. Hereafter, neither of them is likely to be deemed so necessary to success as to prompt such outrageous and indecent methods as have in the past characterized their campaigns.

It does not appear to be generally known that nearly one-half of the $400,000,000 annually expended by the United States Government goes to pay pensions. This item of expenditure grew from one hundred and seven millions in 1890 to one hundred and twenty-four millions in 1891, to about one hundred and fifty millions is 1892, promises to exceed one hundred and eighty millions for the fiscal year ending June, 1893, and will reach the amount of two hundred millions in the year ending June, 1894. Nobody familiar with the methods by which pensions have been secured can doubt for one moment that a very large proportion of the pensioners of the country have no real title to Government aid. We believe that a careful investigation of the pension list would result in cutting off from ten to twenty per cent of the whole number of pensioners and in an annual saving of from twenty to fifty millions of dollars to the Government. The dominant political party which will soon be in charge of the Government owes it to the country to redeem its pledge of looking into this business and reducing the pension list to something like a legitimate and respectable basis. We do not question either the policy or the justice of reasonable aid to those who fought to preserve the Government, but nobody will claim that there is any reason or justice in taxing the people of the United States annually four dollars per capita to give pensions to a vast multitude of people, of whom not one in five stands actually in need. It is a fact unquestionable that our pension rolls contain the names of a vast number of men who are quite able to pay their way in the world. Under the pension laws, a rich man can easily establish a technical right to a pension for wounds in battle or inability through age or infirmity, but, viewed from the standpoint of a gentleman or patriot, it is neither proper nor dignified for a man of independent means to accept a pension from the Government. The same felling of honor that would prompt a well-to-do gentleman to refuse money or other gifts for saving a fellow creature from drowning ought to prompt a veteran who is not poor to refuse a money pension from the Government in reward for patriotic services. There are many kinds of service that cannot be paid for; there are some favors that no money can buy and for which no money can be proffered or accepted without loss of self-respect. The *Post-Intelligencer* of Seattle, speaking of this subject, finely says:

> Patriotism in purple and fine linen, that is never weary of holding out its hand for the pauper's penny and the obolus of Belisarius, blind and a beggar at our gates, is a kind of patriotism that resembles the virtue of the small boy who demands a seed cake at bedtime because he has neither told a lie or sworn an oath the entire day. A true soldier does not desire to receive from the Government a pension to which he cannot show a moral title of poverty or disability that compels dependency. Only those soldiers who are incapacitated from earning a livelihood deserve to be pensioned, and it ought to be a social stigma upon a rich veteran to accept a pension when he is amply able to support himself and his family.

There will be very many to agree with ex-Senator Edmunds who, when asked recently, "What is the most vital question confronting the people of the United States?" answered promptly, "The immigration problem." Among other things, Mr. Edmunds, in discussing the immigration problem said:

> According to the prevailing system, the class of people whom European nations do not require have been shipped over the seas to New York. These aliens do not readily assimilate with American ideas and customs, although, it may be said, they acquire our vices more readily than our virtues. They constitute distinct nationalities, with their own home prejudices, superstitions, personal habits and mode of life, at the same time enjoying all the privileges of American citizenship acquired in a brief period. You and I served our twenty-one years' apprenticeship before we obtained those rights, during which time we were educated to an understanding of the principles of a republican form of government. We should welcome the industrious, honest immigrant, who leaves his home in overcrowded Europe to improve his condition and to become identified with the land of his adoption. A large proportion of the country people of France and Germany would become useful citizens. The urban immigrants are apt to be undesirable. There is no reason why Russia, in her desire to get rid of a certain number of sectarians, should send them to America, where they are undesirable. A change should be made at once, and a large proportion of the class of immigrants who have landed should be denied admission in the future. The salvation of the republic, as it exists, according to the principles of its founders, hinges on a cessation of the abnormal influx of undesirable immigrants:

All of which is gospel truth. If the dominant party has the courage to take up this great question and to apply such regulations as will protect America from the hordes of degraded and ignorant emigrants now flocking to our shores, it will earn the gratitude of the people and do much to establish itself in permanent authority.

If the San Jose *Phœnix* would read the RURAL PRESS more carefully, it would not fall into the blunder of charging it with attempts to "fool the working people" in the matter of the tariff. The RURAL is not blind to the fact that California gains certain advantages through the protective tariff. Nobody with his senses about him can deny or doubt this fact so long as prunes, oranges, wool, raisins and miscellaneous dried fruits—not to mention a hundred other articles of domestic production—are on the tariff list. We have never taken stand as a tariff organ, or any other kind of organ, for that matter, and have never maintained that a protective tariff protects the working people as distinct from the producer. On the contrary, we have pointed out on more than one occasion that a weak point in the protective system is that it gives no protection to the laborer, but allows floods of foreign immigration to pour into our country, to disperse over the land and to compete with and cheapen the price of labor. We had supposed that whoever took sufficient interest in the RURAL PRESS to read it at all, could not fail to be informed of its position on this point.

Among the dwellers in the North Bend, up in the State of Washington, is one R. H. Pickerell, who has a habit of lingering long at the tavern and going home in a besotted condition to make it pleasant for his family. On last Tuesday night he appeared at his own door about midnight, and, being irritated with the peace and quiet which reigned there, proceeded to liven matters up a little. He drove his wife and children out of doors, hurled pieces of furniture, a loaded gun, a lighted lamp, a canary bird and the family cat through the window after them, accompanying this demonstration with maudlin roars. The whole community was aroused, and it took but little time to organize a vigilance committee. A long strong rope was first procured, and about forty of the best people in town took hold of it. They went to Pickerell's house, and, making due apologies for interrupting him in his pleasantries, tied the rope around his neck and dragged him to the swift mountain torrent a few yards distant. Pickerell's natural antipathy to water caused him to make desperate exertions at first and finally to plead for mercy. But the sentence of public opinion was upon him. Into the swirling waters the trembling wretch was hurled, and the current swiftly carried him the full length of the rope. Nearer dead than alive, he was pulled back to shore. The operation was repeated several times, until the prisoner made the most solemn oath ever taken by a drunkard that he would never touch another drop of liquor. That he might not forget this good resolution, he was informed that the next time he cut up any such tantrums he would be tethered in the middle of the stream for a time sufficient to relieve his family of any further annoyance on his account. As we have often stated, the RURAL does not believe in punishments outside of the law, but it lays aside its principles long enough to commend the people of North Bend. We cannot repress the judgment that they have done a monstrous fine thing.

Undoubtedly great pressure will be brought to bear upon Mr. Cleveland in the matter of a special Congressional session. A poll of the members of the next Congress shows a distinct majority favorable to a special session, and the list includes Speaker Crisp, Mr. Springer of Illinois and many other leaders of the party. Mr. Mills has not yet spoken, but it is expected that he will be among those who will strongly urge Mr. Cleveland to call Congress together immediately after his assumption of office. Indeed, it looks as if Mr. Cleveland's fight with his party would begin before he actually takes the Presidential chair, for it is not more certain that the party at large desires a special session than that Mr. Cleveland does not desire it. Bearing in mind the "bull-dog" element in Mr. Cleveland's character, there seems to us small prospect that he will yield in this matter. He knows, probably that if Congress should come together in March, it would plunge headlong into tariff revision, probably upon a plan that would disturb the industry of the country, confuse—if not destroy—business, and thus array the country at large against the party. Mr. Cleveland has already expressed a desire to go slow, and the surest way to go slow is to let Congress assemble at its regular time, thus allowing something more than a year between the day of victory and the actual assumption of power. During this year there will be time for consultation and for maturing plans, and the chances of well-considered legislation will be much better than if Congress were to come together immediately following Mr. Cleveland's inauguration.

The Silver Congress proposed by the United States some months ago assembled last week at Brussels, and at this writing (Wednesday, November 30th) is in the midst of its deliberations. The American delegates, who with a single exception are pronounced silver advocates, have made a proposition to the conference embodying what they call the "American policy" as to silver. It is, in brief, a suggestion that all the nations in the Alliance open their mints to the coinage of silver just as they are now open to gold, upon a ratio to be determined by the present Congress—preferably sixteen to one. Delegate Rothschild representing Great Britain, presented an English proposision on Monday, to the effect that America shall continue for a period of five years to buy 4,500,000 ounces of silver per month, and that the several European powers shall, during the same period, buy $25,000,000 worth of silver each year. If the price should rise above 43d per oz. (87 cents in American money), purchases are immediately to be suspended. The presumption is that this plan, carried into effect, would hold silver to its present value (or thereabout) for the period of five years which the agreement would cover. In other words, it is designed to maintain a *statu quo*. Rothschild's proposition is a distinct abandonment of English policy, and is therefore a surprise to the financial world, which has all along prophesied that England would not only stick to the gold standard, but would do nothing toward helping to hold up the price of silver. This change of policy is due clearly to the fear that if the conference should adjourn without doing something to relieve the silver market a panic would follow. In presenting his plan, Mr. Rothschild remarked that if the conference adjourned "without accomplishing any definite result it would cause a fall of silver frightful to contemplate; it would cause a monetary panic of which it was impossible to tell the far-spreading effects." The general feeling is that Mr. Rothschild's plan or some other substantially similar to it will be accepted. A dispatch from Brussels published this morning states that—

> The American delegates have strong reason to be satisfied with the recognition of the advocates of monometallism and the seriousness of the dangers arising from further fall in silver. They are disposed to support Rothchild's proposals on the principle that half a loaf is better than no bread. The Indian delegates are also pleased with the proposals, as they will assist the conclusions of the Indian currency commission, and their acceptance will free India from fear of a large fall in silver. The American delegates believe that the continuous absorption of 30,000,000 ounces of silver by the European powers would bring about artificially a condition of the silver market which international bimetallism could establish permanently and scientifically for life.

United States Agriculture.

WASHINGTON, Nov. 20.—The annual report of the Secretary of Agriculture begins with a comparison of the export trade the past fiscal year with former years, and emphasizes the fact that of the more than one billion dollars representing the exports of domestic products the past year, nearly 80 per cent consists of agricultural products, thus not only making the United States the creditor of the world for a sum exceeding two hundred million dollars—the excess of our exports over the imports—but relieving the home markets from the surplus product, which would otherwise reduce the prices to a point below the cost of production.

In regard to the imports, the Secretary finds encouragement for the farmers in the fact that, while in the fiscal year ended in 1889, 54 per cent of the imports were competing with American agriculture, only 44 per cent of the imports for the past fiscal year did so compete. He nevertheless regards the imports competing with the products of our own soil still far too great.

Since the last report, prohibitions against American pork products were withdrawn in all the countries where they existed, and 40,000,000 pounds of inspected pork, which, without inspection, could not have found a market abroad, were exported. He compared the prices for September, 1892, with those of September, 1890, the year before pork inspection was adopted, and shows an increase of 80 cents per 100 pounds in favor of this year—an average of $2 per head on every hogshead.

Referring to the proclamation declaring this country free from pleuro-pneumonia, he emphasizes that precautions were taken before the proclamation was issued, and thoroughly satisfactory grounds were existing for the declaration of our immunity for the control and prevention of Texas fever. He concluded with a declaration that they saved three times as much money to cattle-growers yearly as was required to run the whole department. He says the inspection laws restored the confidence of foreigners in the healthfulness of our cattle. The live cattle exports in 1889 amounted to 205,000 head, whereas in 1892 we exported 394,000 at an increase in value averaging $8 per head.

The Secretary says of the work of his Indian-corn agents in Germany that one result is the maintenance of the price of corn in the face of the largely-increased exports, conditions which heretofore always accompanied a great depreciation in price.

Secretary Rusk says one of the gratifying features of our agricultural industry during the past year has been the marked reduction in the cotton area throughout the cotton States. In connection with this subject, he calls attention to the great increase which has taken place in late years in our imports of raw cotton—imports which but a few years

ago were hardly known. "With a view to checking the imports of foreign cottons, especially Egyptian," says the Secretary, "I have taken measures to undertake, with the cooperation of some experiment stations in the cotton States, experiments with a view to producing cotton of home growth which shall serve as an efficient substitute for the Egyptian. I trust in this we may be successful before the import cotton trade increases to such an extent as to seriously affect our own cotton-growers."

With reference to our cereals, he attributes the excessive anticipations formed regarding the price for wheat throughout the crop year to the failure to appreciate the changed conditions now surrounding the production and marketing of the world's wheat crop. Hence the American farmer can justly reduce the wheat acreage and so bring productions down to the normal demand. Of barley, he says: "The domestic market, which heretofore absorbed ten million bushels of foreign barley, is now reserved for the domestic product, and our acreage and production have increased and been disposed of at good prices."

The experience of the department in the domestic-sugar industry for the past year confirms his former reports, and shows that domestic sugar can be produced with profit to the grower of the crop and to the manufacturer, provided the conditions of culture and manufacture insisted upon by the department are secured.

The rainfall experiments, he says, are being made as Congress directed, but the facts in his possession do not, in his opinion, justify the anticipations formed by believers in the methods of artificial rain-making.

He emphasizes the need for new and suitable buildings to accommodate the department.

Secretary Rusk suggests important changes in regard to the future organization of the department, by which all the divisions' work should be grouped with reference to character into bureaus, following the organization adopted in other departments of the Government. He insists upon the necessity of universal inspection of all animal-food products, applicable not only to products intended for interstate or export trade, but entering into domestic consumption everywhere. He also points out that there are many reasons for making a national standard of grain highly desirable, and concludes that some system of national inspection and grading must be established in the interest of grain-growers, under control of the Secretary of Agriculture.

The Secretary then reviews in detail the work of the several other divisions of the department, office experiment stations and weather bureaus, concluding with a detailed statement of the extent and variety of the contributions planned from the Department of Agriculture to the World's Fair. He concluded by declaring that the work of the department had hitherto been but the foundation of the work, and says he will be quite satisfied if in the future his share of credit in the history of the department will be that he was instrumental in laying a broad and lasting foundation.

Holstein Friesian Sale Postponed.

The sale of J. H. White's horses, in spite of the storm, was a success, and very satisfactory prices attained. It was, however, found necessary to postpone the sale of the fine Holstein Friesian herd until December 7, at 2 P. M., at sales yard, corner Van Ness avenue and Market street. All bidders should note this rare opportunity to bid on these desirable animals.

SHERWOOD HALL NURSERIES.—The handsomest seed catalogue we have ever seen has just been issued by the Sherwood Hall Nursery Co., whose seed depot is at the corner of Clay and Sansome streets, in this city, and whose nurseries and seed-farm are at Menlo Park. Timothy Hopkins, well known for his horticultural tastes and achievements, as well as for his wealth, is the chief owner and James Sproule is manager. The establishment is a strong one financially, and their policy seems to be a generous one to secure patronage. The catalogue is replete with all kinds of garden, forest and field seeds, nursery stock, plants and flower seeds, in which Sherwood Hall has already marked out several characteristic and honorable lines. The catalogue is handsome enough for a library table ornament, and is a credit to California horticulture.

FANCHER CREEK NURSERIES.—Mr. George C. Roeding has continued this year his enterprising efforts to introduce the fig blastophaga from Smyrna. He has received no less than ten consignments by mail, only one of which brought the insects through in good lively condition. But even when thus arriving in good order they refused to install themselves in the capri fig, although Mr. Roeding gave them every opportunity to do so. He now thinks they must be brought in hibernating condition, and then possibly they will be satisfied to begin their life cycle here as they do in Asia Minor. Fancher Creek nurseries have a good stock of fruit trees for this season's trade, which is beginning actively with them.

WINE EXHIBITORS' MEETING.—All who intend to show wine at the World's Fair should write to C. J. Wetmore, chief executive officer of the Viticultural Commission, 317 Pine St., S. F., for a copy of a circular which he has specially prepared for the information of wine exhibitors. All who intend such efforts should, if possible, attend a convention of exhibitors which has been called for Tuesday, Dec. 6, 1892, to be held at 317 Pine St., at 11 A. M. All interested should make it a point to be present, for matters regarding allotment of space, the expense of all exhibits, and other important details are to be decided at this meeting.

CLOVERDALE RAINFALL.—J. G. Heald sends us the Cloverdale rainfall up to the morning of Nov. 29th as 12.92 inches, of which over 10 inches fell in four days. And this report came long before the storm was over!

THE FIELD.

The First Year of the Sugar Bounty.

In the November *American Agriculturist* we find a review of the Government's experience the first year in paying the sugar bounty. This will be of much interest in California, in view of our present and prospective beet-sugar interests. We quote as follows:

The tariff act of October 1, 1890, abolished the duty on sugar of 1 2 5 up to 2½ cents on all grades of raw sugar not above No. 16 Dutch standard, and in lieu of the former duty offered a bounty of two cents per pound on all sugar of domestic production, if such sugar tested 90 degrees, or more, by the polariscope, and one and one-half cents if between 80 and 90 degrees. The first year's operation of this law ended June 30, 1892, and covered the cane, sorghum and beet crops of 1891 and the maple sugar product of 1891–2.

There were 4980 producers who applied for the bounty, of whom 727 manufactured sugar from sugar-cane, seven from beets, six from sorghum, and 4240 from maple-sap. The cane-sugar producers were in the States of Louisiana, Texas, Florida and Mississippi. There were two beet-sugar manufactories in Nebraska, one in Utah, and one in California. There were three sorghum factories in Kansas, and applicants for the maple-sugar bounty were all in New York, Ohio, Pennsylvania, and Massachusetts. The amount actually paid out in bounties, up to June 30th, was $7,342,077, of which $7,077,316 went to the producers of cane sugar, $240,098 for beet sugar, and $22,197 for sorghum sugar.

Only $2465 was paid as bounty for maple sugar. A large part of the maple-sugar producers who were licensed made no claims for bounty, and most of the claims which have been presented were not filed in time to be paid before the close of the last fiscal year. The total quantity of maple sugar, upon which the bounty is claimed, is over 3,500,000 pounds, and the bounty to be paid thereon will be $60,000.

The following table shows the proportion of bounty paid in each State, the producers and the material from which the sugar was made:

States.	Producers.	Tons of 2000 lbs.	Bounty paid
Louisiana, cane	619	172,065	$6,882,590
Texas, cane	14	4 408	176 302
Florida, cane	11	456	18,234
Mississippi, cane	1	5	191
California, beet	3	4.088	163,511
Nebraska, beet	1	1,367	54,690
Utah, beet	1	548	21,898
Kansas, sorghum	3	555	22,407
Massachusetts	5	Maple	122
New York	51	"	1,151
Pennsylvania	8	"	142
Ohio	30	"	1,051
Totals	757		$7,342,079

Total importations of raw sugar free of duty this year, from January 1st up to August 31st, were 2,630,930,633 pounds, as compared with 2,087,660,745 pounds in the corresponding period last year. The importations of dutiable sugar, above No. 16 Dutch standard, during the same period, were 7,318,845 pounds, as compared with 7,817,936 last year. Exports of refined sugar this year up to August 31st, were 9,297,607 pounds, as compared with 70,564,547 pounds during the corresponding period of last year. Out of the decrease of 61,000,000 pounds, there are 53,000,000 accounted for by the nonshipment of refined sugar to the United Kingdom last year. This is due to the absence of competition among American refiners, who, when prices were cut, found it more profitable to ship abroad, obtaining the regular drawback of duty, rather than to sell in this country at a loss. There was also a decrease of nearly 7,000,000 pounds in our shipments of sugar to Australasia and other countries in Oceanica and Asia, besides a small falling off in our shipments to Africa. The following table is of interest, as showing what countries receive a portion of their refined sugar supplies from the United States:

Lbs. Exported to Eight Months Ending	Aug. 31, '92.	Aug. 31, '91.
United Kingdom	1,802	51,951,802
Germany	35,887	53 995
Other European	309,988	212,948
British North America	1,964 615	2,899.948
Mexico	474.537	376,454
Central America and Honduras	743.446	666,637
Puerto Rico	9.290	11,185
Santo Domingo	126,325	132 261
Other West Indies and Bermuda	2,964,831	3,150,619
Colombia	1,294,421	1,258,895
Other South America	340,173	138,859
Australasia	4,607	2,726 408
Oceanica and Asia	559,311	4.712,792
Africa	278,029	922,100
Other Countries	190,445	349.644
Totals	9,297,707	70,564 547

The total distribution of sugar in this country, from January 1st this year to September 30th, has been 1,102,461 long tons, as compared with 1,197,703 tons last year. This decrease is partly due to the cessation in our shipments to the United Kingdom, and still more so owing to the small fruit-crop this year, causing a lesser demand for sugar for canning purposes.

A report from Havana anticipates a sugar-crop for Cuba 20 per cent less than last year. Owing to unfavorable weather, which has interfered with the growth of the seed cane, it has prevented the exhausted plants from being replaced by new ones. It is, however, somewhat early to make predictions concerning this crop.

Louisiana reports a good average sugar-cane crop, which, with the increased acreage, promises a yield 20 per cent larger than last year. The beet-sugar product of 1892 will probably be twice as large as last year, but no material increase in the sorghum-sugar output is anticipated.

THE STABLE.

Stamboul's Fast Mile.

The Great Stallion Reduces the Record to 2:07½ at the Stockton Kite-Shaped Track.

The performance of Stamboul, the famous stallion, in trotting a mile at Stockton, last Wednesday, in 2:07½, breaking all previous stallion records, was one of the most notable racing events of the year. The record was made under the most adverse circumstances, and the fact that it was on a kite-shaped track should not rob it of any of its merit. The morning of Wednesday was cold and raw, and there appeared to be slight prospect that fast time could be made. At 10 o'clock, however, it was decided to make the trial, and driver Maben had just time enough to give the gallant stallion a working mile when the rain began to descend. A runner, Pinte John, was sent around the track to press Stamboul to his best. The first quarter was made in 0:31, and the second quarter 0:31½, making the half in 1:02½, with Maben scarcely urging the trotter. The third quarter was made in 0:32½, and the rain was beginning to come down in big drops, that were thrown by the north wind squarely into Stamboul's face.

The slight rain just before the start had dampened the track just enough, and these additional drops made it what the horsemen term a little slippery, but Stamboul did not seem to mind. He pushed forward at a merciless pace, with the runner unable to keep up the killing clip.

Maben never touched the animal with the whip, but in this last quarter he urged him to the utmost with his voice. The last quarter was made in 0:32½ and the mile in 2:07½. At the finish a dozen watches agreed.

Stamboul's performance is within 3½ seconds of Nancy Hanks' record of 2:04, made at Terre Haute, Ind., in the fall. The development of the trotting stallion has kept pace with the growing speed of trotting horses, and has always been close to the best records of the latter. In 34 years the record has been lowered from 2:28 (Ethar Allen, in 1858) to 2:07½ by Stamboul. In 1858, George M. Patchen, by Cassius M. Clay, lowered the record to 2:26½. In 1860, in a race with Flora Temple, at Union course, L. I., he again lowered the record to 2:23¼, though, strangely enough, Flora Temple won three of four heats and the race.

On July 29, 1868, at Buffalo, N. Y., the chestnut stallion Fearnaught cut the record to 2:23¼. He made his record in a race for a purse of $10,000, and won in the first, third and fourth heats in 2:23¼, 2:24¾ and 2:26¼. George Palmer won the second heat in the slow time of 2:28, and Colonel Maynard, American Girl, J. J. Bradley, Myron Perry, Victor Hugo and Molly were the other starters.

Less than three months later the greatest speed-producing stallion of the age (except his own sire), George Wilkes, won the crown by making a record of 2:22. He was entered in a $2,000 purse at Providence, R. I., October 13, 1868, and met Rhode Island and Draco Prince, the latter winning the first heat in 2:24½. George Wilkes won the next three heats in 2:22, 2:24½ and 2:25. Although the mighty Dexter in 1867 had placed the regular trotting record at 2:17½, no stallion beat George Wilkes' record of 2:22 till August 7, 1872, when Jay Gould made his mark of 2:22½, though a year previously he tied it in 2:22 Thus another son of Hambletonian succeeded Georges Wilkes. He won a purse of $5,000 in straight heats, defeating William H. Allen and Huntress in 2:27, 2:23½ and 2:21½.

Two years later, at the same track, the mighty Smuggler won the stallion throne, which he held, with the exception of two months, for nearly ten years. the longest reign of any of the stallion kings. On August 5, 1874, at Buffalo, the royal son of Blanco made a record of 2:20¾. He won the first and second heats in a $10,000 purse in 2:22½ and 2:20¾, Thomas Jefferson winning the race. The other starters were Mambrino Gift, Joe Brown and Pilot Temple. At Rochester, August 13th, Mambrino Gift, by Mambrino Pilot, dam by Pilot Jr., won the first money in the 2:26 class in straight heats in 2:21, 2:20 and 2:23, with a field of five behind him. He did not long retain his honors, however, as on September 15th, at Mystic Park, Boston, Smuggler tied him in 2:20, winning the $10,000 stallion champion purse. In this race he defeated Phil Sheridan, Henry W. Genet, Commonwealth, Mambrino Gift and Vermont Abdallah. July 15, 1876 at Belmont Park, Philadelphia, he defeated Judge Fullerton in 2:17¼, 2:17 and 2:20. His fastest record of 2:15¼ was made August 31, 1876, at Hartford, in the race won by Goldsmith Maid. Smuggler won the first and second heats in 2:15¼ and 2:17, and trotted a dead heat with the Maid in the third in 2:16¾. The other starters were Judge Fullerton and Bodine.

Phallas is the last of the stallion kings who obtained his champion record in a race and the first of the grandsons of Hambletonian to attain that honor. July 14, 1884, at Chicago, Ill., he defeated those three great campaigning mares, Catchfly, Clemmie G. and Fanny Witherspoon, in 2:15¾, 2:16¾ and 2:13¾. After a lapse of eight years, the record was then reduced from 2:15¼ to 2:13¾.

Maxey Cobb, 2:13¼, Axtell, 2:12, Nelson, 2:10, Allerton, 2:09¾, Palo Alto, 2:08½, Stamboul, 2:08, and Kremlin, 2:07¾, the champions in succession from 1884 to the present date, have all made their records against time Axtell has a race record of 2:14, Nelson of 2:13, Allerton of 2:13¼, Palo Alto of 2:13, Kremlin of 2:11½, and Stamboul of 2:15, though in justice to the latter it must be said that had he had any race opportunities during the last three years he would have had a far faster race record. Stamboul has now in turn defeated Kremlin's record against time and is the champion.

The Stock Yard.

Beet Pulp—Its Value for Feeding Purposes.

The following paper, prepared by RICHARD GIRD, was read before the Farmers' Institute at Santa Ana.

It is hardly possible for me, at this early day, to give an intelligent and accurate statement of my experiment in feeding beet pulp this year, as I did not commence feeding my siloed pulp until a few weeks since, and have not data from which to make comparative statements of sufficient accuracy to be of material value; still, I will give some ideas and my new experience in the matter that may call others' attention to the further experimenting, as well as myself.

The economical use of the waste pulp from the beet-sugar factories in Europe has long since been determined by the most scientific methods, as far as feeding cattle for beef is concerned. The plans there adopted are for the beetraisers to purchase poor cattle in the spring, use them as work animals during the season of plowing, cultivating and harvesting the beets, then feed them on the siloed pulp in the winter to fit them for the market in the spring. The quality of the beef is said to be excellent, and bears about the same relation to the European market that our stall or corn-fed beef does here; it has a beautiful marbled appearance, with the fat white and hard. In this manner the beet farmers not only get the benefit of the work from the animals to cultivate their crops, but with that same crop prepare these cattle for the market in the most economical and successful way.

I am now following the same process of fattening, only that I bring my steers from Arizona and feed them on the siloed pulp in connection with chopped hay, in the ratio of about five pounds of chopped hay to 60 or 70 pounds of siloed pulp.

The beet pulp should never be fed until it has been siloed at least 60 days, as the nutritive qualities are very much increased, and its feed value in proportion.

During the beet campaign, about the 20th of September, there came along a wandering Texas cattleman with the remains of a herd of about 50 or 60 head, who had heard that beet pulp was good to fatten cattle with. I permitted him to bring in his cattle, gave him my pens to put them in, and he commenced feeding, as above stated, on the 20th of September. His cattle were then in as poor condition as cattle could be and manage to move around the country—thin and scrawny as possible. There are now, at this writing, many of them fit for the block, and all doing as fine as any cattle I ever saw. At first they were fed on the raw pulp, and later on the siloed pulp, when the fresh pulp was all out at the end of the campaign; they commenced doing much better on the siloed material than on the fresh, and ate it with apparently more relish.

This party purchased all his pulp at 50 cents per ton, and has since been importuning me for the privilege of bringing more cattle to feed.

This we can consider absolute proof of what the feeding of beet pulp for beef-producing purposes will do.

I have, I believe, made some new experiments with sheep that I find no record of in the books, and I believe it has never been successfully tried before; I find it certainly, either in the crude state as it comes from the factory or after it is siloed, the best sheep-feed I have ever heard of. With a very small amount of roughness, such as whole straw or hay, and the beet pulp, the sheep fatten astonishingly quick, and their meat is very fine. Six weeks is sufficient to make sheep fat, profitable and agreeable to use as mutton; and the trouble of feeding them is very little, as it is only necessary to put the pulp in the trough twice a day and a little hay once a day, and they take care of themselves for the balance.

Another use for which it is destined to be of great importance in this country is for dairy cows. I am now feeding, I calculate, about 60 pounds of siloed beet pulp per cow; and although in the fall of the year, with cows by no means fresh, still they are doing as well as they would in the spring season on the best of green grass, and the butter is of a fine quality, naturally hard and not the least bit oily, as is the case with butter from alfalfa-fed cows; in fact, the butter is of a superior quality to any I have made from other classes of feed.

We must not lose sight, also, of the fact that the sugar made from the sugar-beet takes absolutely nothing from the soil, and, by feeding the pulp and mixing it with certain proportions of solid food, the manure thus made, if returned to the soil, continues to enrich it to a by far greater degree than by any other crop that can be grown out of the ground. This is so well understood in Europe that lands adapted to beet-growing have become very valuable, not only for the profits of the beet crop itself, but for the benefits the land derives from the constant increase in richness and resultant increase in value for other crops.

The cattle (about 1000) that I have in pens and feeding as above stated are doing finely, and take to the feed in the course of a week, when they seem to eat it with more relish than anything that can be placed before them. I think it important to chop the hay and intimately mix it with the pulp in order to get the best results. I am using cornstalks, and, by mixing with the pulp in this manner, they eat every particle and nothing is wasted.

I have weighed into my silo pens all the cattle I have put in to fatten this season, and, when they are ready for market, shall weigh them out again, which will give me the the exact result of the profits of the feeding this year.

My silo is 500 feet long, 60 wide and 10 deep; the pulp is delivered into it from cars run overhead on trestles, and taken out of it on two tracks laid down on the bottom of the silo on each side of the trestle, which I find a very convenient plan. I calculate that I have from 10,000 to 12,000 tons of pulp in the silo, which is now in magnificent condition, and after having, through drains and other appliances, been freed of most of its moisture, is about the consistency of old cheese.

Too much importance cannot be placed on the necessity of siloing the beet pulp, even if it were for as long as five or six months.

My expectations are to feed my steers during the winter and be able to market them on the high prices of the spring months, which would be a very profitable undertaking.

When southern California is dotted over with beet sugar factories, as it will be before many years, the feeding of the beet pulp will be of great economic importance in saving to the community a large portion of the money that now goes out for beef, as well as giving us a much better quality.

In conclusion, I will say that the beet-sugar campaign just ended on the Chino ranch has been most decidedly successful, and has demonstrated (with an output of 7,903,000 pounds of sugar) beyond question the adaptability of our climate and soils for this most important industry, which, more than any other of which I have any knowledge, is adapted to that class of cooperation which enables the farmer to divide with the capitalistic manufacturer the profits of his agricultural labors.

Appended is an analysis of dry pulp, which is beginning to be used very satisfactorily in Europe, but which, on account of the expense of drying, will probably not come into use in this country for some time to come. My own experiments in this direction this year, in sun-drying, were not satisfactory, as it was too expensive and occupied too much time.

Water	11 6
Ash	7.1
Crude protein, of which digestible 4.1 per cent	6.6
Fiber, of which digestible 16 per cent	19.3
Nonnitrogen matters, digestible 45.9 per cent	54.8
Fats, of which digestible 6 per cent	.6

The dried pulp furnishes a food which is preserved indefinitely without alteration, provided it is put in a dry place.

Farmers' Institutes.

Deciduous Fruit Trees from Nursery to Orchard.

An essay by JOHN BURR, of San Fernando, read at the Southern California Farmers' Institute at Santa Ana.

This is a subject which, to embrace the general varieties of deciduous fruit trees in detail, would require a very lengthy paper; consequently, I will only treat of the pear and apple, the prune, apricot and peach, the general mode in their propagation, their transplanting from the nursery to the orchard, pruning and general management until they are in full bearing.

THE PEAR AND APPLE.—Pear and apple seed should be bedded from the first to the middle of February. Prepare the beds in the usual manner by laying them off four feet wide, leaving an alleyway from one foot to 18 inches between each bed. After the beds are marked off, remove the dirt about three inches deep, putting half to each side in the alleyway, then turn in some water, and while it is running take the back of the rake and move the dirt where it is necessary to do so until the water, while running, covers the entire surface, then turn the water off and allow the surface of the bed to dry sufficiently to be raked over. Now sow and cover your seed about 1½ inches deep. If the soil is heavy sand should be mixed with it, so as to prevent baking. After the seed is sown, do not allow the beds to get dry; sprinkle lightly every afternoon if the weather is dry; if cloudy or wet, it will not be necessary. The seeds will germinate in about four weeks, after which the plants should be handled just the same as any other seedling. In my experience, I find it much better to buy French seedlings through some responsible importers sufficiently early so that they can be handled while the sap is still dormant; no perceptible loss need be sustained in transportation. If stock is imported, on receipt of same unpack and heel in where it will be protected from the direct rays of the sun until you are ready to plant in the nursery. While it is heeled in, give it a good soaking of water, as the sap will commence running.

NURSERY.—Prepare the land thoroughly by plowing at least nine inches deep, and if inclined to be stiff or heavy, it ought to be leveled so that it can be irrigated, as it is economy to prepare land for irrigation, where it is practiced or necessary, before anything is planted on the land. After the land is plowed, subsoil if desirable or necessary. When harrowed and smoothed over, mark off the rows 3½ feet apart by stakes; then a very light furrow may be run, or a line stretched. I prefer marking by a very light furrow, and if the ground has become solid by rains or other causes, to run a subsoil plow in the furrow where I am to plant; by doing so, the planting can be done much quicker and better. The furrow being slightly depressed, unless the roots are very large, the planting can be done with a common garden trowel, pressing the soil firmly about the roots and running water down the furrow to solidify the soil as before. As the same treatment is necessary for the different stock in nursery rows before budding or grafting, I will proceed to treat on Myrobolan and peach stocks for stone fruits.

I consider it cheaper to import the Myrobolan roots than to raise them. I buy mine from Mr. Kelsey of New York, agent for the Colombo nurseries. The treatment I have described for the imported pear stock is also adapted to the Myrobolan roots.

PEACH ROOTS.—I prefer the seedling peach pits for seed, if they can be had; if not, I prefer the cling to the freestone. On receipt of the pits from the cannery, they should be buried in sand until about the middle of December, at which time they should be put in beds, similary prepared as described for the seed. From the middle to the end of February they will begin sprouting. As soon as they appear well started, they should be dug up carefully and planted in nursery rows. More care will be necessary in handling the peach than the pear, as the growth, if started much, will be very tender, consequently they will have to be carefully handled, keeping them shaded until they are planted. As soon as they are planted in the nursery rows, irrigate at once to settle and pack the soil around them. As soon as the ground is in condition, cultivate. The only care necessary during the summer will be to irrigate, cultivate and keep them in good growing condition. By the month of September they should be from a half to three-quarters of an inch in diameter and ready for budding. I prefer fall budding for all varieties of nursery stock for the following reasons: The growth of the stock is very soft and spongy in June, so that when cut down they will sometimes bleed to death; again, if only broke over, nothing can be applied on the wounds to prevent bleeding, and the results are that they will be of little account to sell. June budding is more succesful in the northern part of the State, where it is somewhat cooler. In fall budding, the stocks should be gone over and prepared for budding by removing all the suckers and lateral shoots about three weeks before budding, and if growing on irrigated land give them a good watering; then in about another ten days give another, and about September 15th they should be in fine condition to bud.

BUDDING.—Prepare your buds carefully, selecting well-ripened wood and cutting off the leaves as you cut the sticks from the trees, keeping them in a damp sack. It is, in my opinion, useless to go into the process of budding minutely, as this subject has been written up so often by thoroughly practical men that the subject is threadbare. Suffice it to say the tools necessary are budding-knife, stone, strap, and a small box to hold the buds and twine. Cut in lengths from six inches to one foot, according to the size of stock, and if there is any likelihood of dust or dirt on the stocks, use a brush or cloth to rub them off. In making the cut, do not make the perpendicular cut long, as the bark will hold the bud more firmly in position until tied. In tying, draw the line tightly, but not hard enough to cut the bark. In about three weeks it will be necessary to cut the strings; then, if desired, the failures can be rebudded. Do not give too much water during the rest of the season to encourage the buds to start. About the month of January the tops can be cut off; then, when the buds start, if any are found to be dead, as soon as the sap is in action they can be grafted. If the stocks are large, cleft-grafting is the best, but if small I prefer the tongue or whip grafting. Keep the grafts and buds clear of suckers during their season of growth, and the result will be, with good land and a reasonable supply of moisture, nice, straight trees, from four to six feet in height.

REMOVING THE TREES FROM NURSERY TO ORCHARD.—Having selected the land for the orchard, if there is any portion of it heavier than the rest, select the heavy land for the peach and apple, then the prune, then the apricot, and then the peach. In removing the trees from the nursery rows, run a plow down on one side, then dig down and cut the roots and pry them out, unless it is convenient to use a tree-digger; if so, care must be taken not to cut the roots too short. As soon as dug they should be heeled in trenches about four feet wide, with depth enough to cover the roots well until they are planted out, which may be done any time after January 1st.

In preparing the orchard, the ground should be plowed thoroughly after the first rains, and if in a district where it is desired or necessary to irrigate, if the ground after plowing is found to be uneven, it should be leveled; then, before planting, cross-plow or run a smoother over it, then it is ready for staking out.

Unless the soil is very strong, I think 20 feet is about the right distance. I prefer the triangular or quincunx system. Dig good-sized holes, unless it is very loose soil. In planting, cut off all bruised or broken roots with a knife or sharp shears. Pack in the soil around the small roots, and, where possible to do so, I would advise running a stream of water on them right after planting, for the purpose of solidifying the soil with the roots. When the planting is finished, I would advise cutting back to about 2½ feet.

When the buds are about to break in growth, if any of the trees look backward, I would advise giving them some water, as this is the most critical period of their growth. If it is not convenient or desired to irrigate, I would mulch them with some rotten straw; it keeps the ground cool around the roots, and keeps the moisture from evaporating.

Keep the ground clear of weeds and well cultivated to insure a good growth the first year. Keep the shoots rubbed off the stems to about 18 inches up, and at the end of the first year they will have formed a fine, uniform growth.

SECOND YEAR PEAR AND APPLE.—Select about six of the most uniform shoots to form your permanent top, and cut back all the surplus shoots, leaving them about two inches long to form fruit spurs, and cut back the main shoots to about 18 inches, cutting them to a bud leading in a direction it is desired to have the shoots go. During the summer growth, if possible, pinch off or cut back any shoot that may be growing more vigorously than the rest; by that means a great deal of winter pruning may be avoided. Treatment of peach trees the second year should be somewhat different after selecting the main branches as advised. For the others, thin out any surplus stock, instead of cutting back to form fruit spurs, and keep the ground well cultivated.

THIRD YEAR PEAR AND APPLE.—Pruning should be done as soon as the leaves commence turning, with enough sap in the limbs to fill out and fully develop the fruit buds, which will now be formed on the peach and apricot. There should now be a top on the trees of considerable size. Where the limbs were cut the second year there will no doubt be several shoots; selecting the best to continue the top of your tree in its uniform condition, and where there is room for side limbs, allow some of the lateral shoots to remain for fruiting wood on the peach and apricot, cutting back the points of the shoot and also the main limbs, leaving about two feet of this year's growth. Again, cut to a bud, if possible, on the upper side, as the limbs will now

bend down. Thin out the lateral, leaving shoots showing fruit buds when not too thick.

PEARS, APPLES AND PRUNES, ETC, THIRD YEAR.—Cut back the main limbs to a bud, leading in the direction desired, leaving about two feet of growth; then cut back the side and lateral roots to about two buds to form fruit spurs. What was cut on the second year's wood will have buds all around. Some may have gone to wood, but where that is the case, shorten back, unless there is plenty of room to allow other limbs to grow; then shorten them back, and handle as in the main limbs.

FOURTH YEAR.—I would now advise less pruning, as peach and apricot will now be bearing, and the fruit will exhaust a good deal of the sap, consequently there will be less growth, and unless it is desired to throw more vigor into any portion of the tree, I would advise less pruning, merely thinning out, regulating the branches as in the peach, leaving plenty of young wood.

Pears, prunes and apples will also require less pruning, merely shortening back main branches and cutting the side shoots to form fruit spurs, keeping the spurs close in to the limbs. The same course will have to be pursued from year to year, keeping the trees well balanced, and thinning out when too thick. In my opinion, a great deal of thinning might be saved by judicious pruning.

HORTICULTURE.

Prune Culture from a Commercial Standpoint.

An essay read at the San Jose Fruitgrowers' Convention by JAMES E. GORDON, of Miramonte, Santa Clara county.

Many years ago a humorist with a world-wide reputation, being asked for his advice to those contemplating matrimony, boiled down his answer to the one word *don't*, and my advice to the grand army who are about to enter the ranks of the prunegrowers in search of a fortune, is equally brief and sententious—*don't*. The humorist's advice has not been heeded, and men and women are constantly entering into the bonds of matrimony, notwithstanding the fact that the newspapers tell us that marriage is a failure and a lottery. The fact that it is a lottery seems to be one of its chief attractions, and the same fact is equally true of the prune business in all its stages, from its inception in California's sunny nurseries until it reaches its grave in the stomachs of some of our eastern brethren. My sincere advice, therefore, to nine out of ten who would forsake their present vocations to enter into this untried field is, briefly, *don't*; but to the tenth, who may possess all the qualifications necessary to insure success, the following facts may be of value: In the first place, don't enter our ranks under the impression that we are lonely. On the contrary, the fruit industry, of which the prune is an important element, now numbers, assuming 40 acres to be an average orchard, 500,000 producers, to say nothing of the thousands of distributors; and it has pssed our gold and grain production and become the leading industry of the State. Eight years ago, when the writer entered the business, California's prune product was hardly a million pounds. Last year he handled over a million pounds himself, which was scarcely a thirtieth of the whole.

Don't engage in this business unless your heart is in it, are fitted for it and prepared to stay by it. Don't listen to the oily tongue that would assure you that you can live in San Diego or Alaska and run an orchard in the Santa Clara valley, because it cannot be done successfully. It is worthy of and needs your undivided personal attention. Don't go into the business unless you have ample capital to buy a healthy, bearing orchard, or wait for a new one to come into bearing. The trials, losses and disappointments of the multitudes who have tried to raise an orchard without the means to do it properly is too sad a picture to portray, and we will pass it with the simple reminder, don't go and do likewise. The writer came here eight years ago seeking rest from the excitement of a wholesale mercantile business in San Francisco, not knowing a prune tree from an apricot, and bought the highest-priced bearing orchard in the county. It was an orchard set out by business men on business principles, and under proper conditions, and has always paid a good interest on $1000 per acre, and he has never regretted the act, and to those who are able to do so this is a practical solution of the prune problem. Now, as to the capital required, it will depend, of course, on the scale upon which you wish to operate. Land in this county near the railroad is held at $200 per acre; five to ten miles back, at $100. The highest priced is not necessarily the best, often the reverse, and under no circumstances should you pay to exceed $150 per acre for level valley land, because the future of the industry will not warrant it. Cost of trees, planting and cultivation, first year, $30, or say $180.

Five years must elapse before a crop can be obtained at an annual cost for cultivation of $10, taxes $2, interest $20, sundries $3, or say $175 plus $180, making $355 per acre, besides cost of living, and provided your trees all grow and have no setbacks. Having a love for the business and the necessary capital the most important consideration will be choice of location. Don't be led away by the idea that you can raise as good prunes in one part of the State as you can in another, because you cannot. Every green-fruit shipper in the State knows that the best pears come from one district, the best cherries from another, and our own San Jose canners know that when we would compete for the best peach trade we must seek the fruit outside of our own county. For the same reason, it is a notorious fact that the best prunes in the world are produced in the Santa Clara valley, and particularly in that part near Los Gatos, Saratoga and Cupertino, known as the West Side. Every intelligent horticulturist must admit that foothill prunes grown without irrigation are much superior to those grown in the valley, whether irrigated or not, on account of their greater percentage of sugar and fruity flavor. When our driers buy prunes grown in adjoining counties and mix them with our own their inferiority is so marked that they rarely repeat the experiment. The loss by shrinkage is much greater, and the flavor so insipid that it does not pay to handle them. This is equally true of the irrigated valleys of southern California. Ten years hence the prune-grower of Los Angeles will wish that he had stuck to his orange groves, and the residents of Tulare will realize that the very conditions which render it the natural home of the raisin make it equally unprofitable for the prune. There is no personal feeling in this statement, because although the writer's home is in Santa Clara county, he has large interests in Tulare county, and has unbounded faith in its resources, but not as a prune center. Herein lies a source of great danger to the prune industry, because thousands of orchards are being planted in unsuitable locations which in a few years will be producing millions of pounds of inferior fruit, which will bring down our good fruit to a price leaving but a very small margin of profit.

We must then cease to sell our product as California prunes, but under a name which the markets of the world will then have recognized as a type of the highest excellence—that of "Santa Clara" prunes.

Having decided to locate in Santa Clara county, don't buy a piece of land because it is widely advertised. While judicious advertising is both proper and profitable, yet we all know that the greatest humbugs are always the most widely advertised, and this is particularly true in land deals. Don't be in a hurry; carefully examine the soil and characteristics of each piece submitted, compare the growth and condition of adjoining orchards with others you know to be good. If there are no adjoining orchards, let it alone unless you can afford to experiment in untried fields for your country's good. Over 50,000 prune trees were replanted this spring near Hanford, Tulare Co., to replace those dying from too much alkali. What a world of toil and trouble might have been saved had they been planted in this valley! Don't pay a high price because it is near a railroad, because your crop is not perishable and is not sold green, or to a cannery, but will be sold to the nearest drier or dried yourself, and a few miles' haul is not an offset to a high price for your land, particularly if the price of fruit be low. The price named—$150 per acre—is high enough; $100 would be better, and good land can be had at that figure.

In choosing a location, climate is a potent factor, second only to the character of the soil, and only when the two are properly united can we secure a perfect prune. Prunes will grow all over California, so they do all over Europe, but we all know the marked difference between Austrian and Turkish on the one hand and French on the other. As the finest prunes have always been produced in the valley of the Lot in southern France, so we find the same conditions in the contour of our Santa Clara valley, its distance from the ocean being such as to aid in producing that long, even temperature and slow ripening which is all-important in developing the saccharine and imparting the flavor so essential in a first-class prune. The greater rainfall in the extreme north of California, Oregon and Washington, and the excessive moisture, causing the fruit to split and crack, shrivel and lose its flavor, renders these parts unfit for the cultivation of the prune. The same remark applies to such parts of southern California where excessive irrigation is practiced, and refers to the French prune of commerce only. Italian and perhaps Silver may be grown under such conditions, but these are not under consideration. Oregon and Washington can never compete with us for another reason. They are obliged to use driers, while we can cure in the open air by the direct heat of the sun, which imparts an aroma or bouquet which no artificial means can equal. Having bought a suitable piece of land, don't think all you have to do is to scoop out holes 20 feet apart and stick in a tree, but plow. Plow the whole tract—the deeper the better. It may cost you $5 or even $6 per acre, but it will come back to you in fruit a hundred-fold. If you can raise a crop of corn or grain before planting, all the better; but don't plant any crop between the trees to deprive them of nourishment, particularly hay or grain. Corn is least harmful, and shades the trees.

Don't be so foolish as to buy cheap trees. Of all follies this is the greatest Don't buy Eastern, or Oregon, or other outlandish trees, but go to a reliable California nurseryman or some neighboring orchardist, many of whom raise a few thousand every year for sale. Don't buy two year olds, but wait until you can get one year olds. Don't make the mistake of planting them 15 feet apart, because you can get nearly 200 to the acre, while at 20 feet you can get but little over 100; an acre will not support 200 trees and they must necessarily die young; 20 feet is near enough, 25 feet is better.

Don't plant your trees until you know if the stock and soil are adapted to each other. Prune, budded or grafted on peach stock in a light, warm, sandy soil, will do well and are the usual conditions, while on damp, clay ground only the myrobolan or wild plum stock has so far been successful. On heavy, dark, alluvial loam, slightly gravelly, almond stock is better—bitter almond, if possible—and is the best of all for our foothills, where deep, gravelly and sandy soil abounds. Irrigation is not necessary and the almond root reaches down to moisture and thrives where the peach root would die.

Don't be induced to try German, Italian, Silver, or other varieties, for which there is no market, especially the Silver prune, which came to us from Oregon and to which, by all means, let it return. The prune of commerce known as D'Agen was planted near San Jose by Louis Pellier in 1856. The first orchard of same to attract attention was the Bradley orchard near San Jose, and the next and perhaps better known was the O'Banion and Kent orchard near Saratoga, now owned by the writer under the name of Miramonte. There is a variety of this prune improperly called Robe de Sargeant, which is but a synonym of D'Agen. The real name is D'Ente and it is known by its dark color when dried, its glossy surface requiring but little dipping, and its slight acidity, which, like the German, causes it to be preferred by many. The prune-growing district of France is a little larger than our Santa Clara valley, but has six times the population. Agen is the town from which most of the prunes are exported and corresponds to San Jose in this country. There are no commercial orchards as we have here; one acre is a good-size farm and the prunes are carried to market by the women in baskets on their heads, and sold to dealers who pack and ship the medium and small sizes, retaining the large ones for home trade. Their net profit varies from $30 to $60 per acre, the larger returns being always from the foothill farms, as in our own case.

One reason of the superiority of our prunes is that we always propagate from seedlings, while in France the rule is to propagate from suckers, the very worst system possible. Under these unfavorable circumstances and their exhausted soils, the life of a prune tree is 25 to 50 years, so the croakers who think our oldest orchards 15 or 20 years old are ready to die, will probably die themselves before their predictions are verified.

Don't believe machine drummers who assure you that the latest patent cultivators will keep your orchard in perfect condition. They are usually nuisances, soon finding their way to the junkshop. Stick to your plow, plow every year, not every other year, then harrow and clod-mash, and you will have done a job to be proud of. Nothing has yet been invented to beat the old reliable plow and harrow.

Don't allow any weeds to grow, and keep your soil so thoroughly pulverized that when the ripe fruit drops it will not bruise. Such thorough cultivation renders irrigation unnecessary, except in a year of light rainfall one good wetting down during winter will be of benefit, but summer irrigation is but of little value.

Don't get rattled on the subject of pruning, which has proved a most prolific breeder of cranks—no two alike. Prune, prune when the trees are young, prune when they are old, never of course to excess, but until you have a stout, stocky trunk capable of sustaining large crops without bending or splitting, and not liable to die easily, then keep on pruning and you will never regret it. A magnificent tree, with its branches sprawling all over the ground and splitting and cracking under its load, is a scene so shiftless and degrading that we will not dwell on it.

Don't get scared about pests. Like the measles, you are sure to have them sooner or later, but prunes are less troubled this way than any other fruit. Considerable capital is invested in drugs and spray pumps, but nothing has yet been found to equal nature's remedy, the parasite known as *Chilicorus Bivulneris*. If you must spray, don't buy any patent mixtures from unknown advertisers, but buy pure drugs at wholesale, and do your own mixing.

Don't get excited and think you are ruined when the prunes begin to drop in the spring. Let them drop; get in and help them drop some more. It is nature saving you the expense of thinning, and what are left will be larger and better for it.

Don't listen to tree agent's statements that the demand for prunes is practically unlimited and will tax the entire prune-growing area to its fullest extent to supply. Give me the product of the Santa Clara valley and I will supply the whole world. It has a tillable area of a quarter-million acres, which, at one ton to the acre, would produce 500,000,000 pounds, nearly ten times the present consumption of the United States.

Don't spend too much time ascertaining the condition of the crops in France or Turkey; the American apple crop is the true barometer of our prune market. When there is a good supply of dried apples, our Eastern sisters in their marketing don't care if our prunes are five or ten cents per pound, but when there are no apples they must have prunes, and as we have always compelled them to pay a round price, it is not surprising that they are not more popular, because ten cents to us means 12½ cents to the wholesaler, 15 to the retailer and 20 to 25 cents to the consumers, and they can not and will not stand it when they can get a substitute. The French crop of 1890 was the largest for nearly 20 years—40,000,000 pounds—while the average for that period was only 20,000,000, or about the present California average; and, after trying during the last two years to retain their hold on American markets by mixing their product with ours and imitating our packages and labels, they have practically surrendered and are seeking other markets. During the season of 1888 the writer took an active part in a well-concerted movement to bear the market for the purpose of securing a wider distribution, and succeeded in arousing the enmity of many, who snubbed him by saying they wanted no five-cent fellows coming around. The result was a success. Prunes sold at four to five cents per pound; were sold East far below any former price; found their way into the mouths of thousands who had never tasted one before, and caused such a demand that the foreign were driven out and the large yield of 1891 readily marketed, and those five-cent fellows had more to do with the present condition of the prune market than the much-talked-of tariff.

Don't expect a crop in three or four years and when you do get one don't expect a thousand pounds to the tree. We read of such things down south, but overwork a three-year-old colt and you will have a horse fit only for the boneyard. Apply the same principal to a prune tree and you will soon have an excellent quality of firewood. It stands to reason that life cannot be maintained under such a strain.

Don't be deceived by the report that Jones of Napa or Brown of San Bernardino sold his crop at the rate of $500 per acre or over; he may have had but one acre, or under unusual circumstances secured that price one year for a few acres, but don't go to figuring out ten acres at $500 and expect $5000 per year off every ten-acre plot in bearing, or you will come to grief, and deservedly so. A properly trained and cultivated orchard after its sixth year can be expected to produce annually an average of 100 pounds per tree, or five tons per acre; average price last five years $40 per ton, or $200 per acre. A liberal deduction for cost of production, including taxes and interest, is $75, or $125 per acre profit, being 10 per cent net on $1250 per acre, or 30 per cent on actual cost. Don't flatter yourself, however, that this state of affairs is to continue. On the contrary the average the next five

years will not be over $20 per ton, or $100 per acre, while the expenses may be kept at $60, or say $40 per acre profit, or 10 per cent net on actual cost. This is better than most mercantile ventures and should satisfy any reasonable man, but it can be obtained only under the favorable conditions herein set forth. Thousands of acres have been, and will be planted, that through ignorance and bad management will never produce a paying crop, and it will be in this as in every other department of life, a survival of the fittest. Those who understand the business and attend to it are likely to make money out of their superior goods, even at the very low prices that are likely to rule in the future. When your crop is ready to harvest you will find but one way to handle it, viz: To dry it. It can be canned, but is not salable in that form, and there is no demand for the fresh fruit. Don't be in a hurry to harvest your crop.

PICKING AND DRYING.

Men have been known to knock off the fruit with sticks and clubs, and shake the trees to the very roots; such prunes when dried would pass for shoe leather. Let the fruit remain upon the trees until ripe enough to fall of its own weight, or by a very slight jar. Don't dry your own fruit. Don't listen to your neighbor who dried ten tons and sold for ten cents, when he could only get two cents green. Take the last five years, or since we have had prunes to sell, and the grower who has persistently sold his crop green to the nearest drier and balanced his books in September, is way ahead of the speculator who wants every cent there is in it, and won't give the other fellow a show. We are born speculators and the same spirit which induces us to take our chances in the great California lottery of prune-growing makes us hold our crop to take the chances of the market. I never knew an intelligent farmer who did not admit that prompt sales of any produce when ready for market netted the best results, and prunes are no exception to the rule.

When the farmer or grower passes out of his domain to enter that of the commission merchant, he usually comes to grief. The driers have been the best friends the growers ever had or will have. They were our friends and neighbors, risking their all; at all times paying the highest prices, and with one or two exceptions paying promptly and fully, and what have they met in return? Not even common courtesy, but abuse and misrepresentation, causing many to fail outright and many more to remove their business to Tulare and other newer fields, where, let us trust, they may be better appreciated. The result will be that we will be brought nearer to the consumer—one middleman less—but the one we can least afford to lose. The Eastern buyers and their agents will build stately warehouses along our railroad tracks, at our expense, fix the price they will pay, and divide the crop between them. This they can readily do, because if every man is to dry his own crop, there will be no uniformity, the lowest price paid to all, and the buyer gets all the benefit of the careful grower's extra quality. They will then lay down the law after this fashion: One cent per pound green pays you a profit, three pounds will make one of dried and cover all expenses; therefore we will pay you three cents for your dried prunes. Where will our friends be then who have been sitting up nights figuring out their fortunes on a basis of 10 cents per pound.

A partial remedy for this condition of affairs lies in co-operation—a combination of 10 or 20 growers for the purpose of drying and marketing their crop. But this relief is only temporary—only while good prices can be had. Let one or two poor years ensue, and the managers will be accused of every crime under the sun and be glad to retire in favor of others, probably less competent, who will soon wreck the association. It is a saying that when a man makes a failure of everything else, he opens a real-estate office, and accounts for the prejudice so many entertain against such dealers, and the same remark can be applied with greater truth to fruit-growing. The percentage of intelligent growers who attend our conventions keep posted and understand the needs of the business is small, and it is not surprising that such heterogeneous elements cannot be brought into one harmonious whole. A better solution of the difficulty lies in an exchange, such as the Santa Clara County Fruit Exchange. It ought to be an easy matter to convince one hundred men, each having ten tons of prunes to market, that it is better to allow the exchange to offer 1000 tons for sale and sustain the market rather than have 100 men with a pocketful of samples wear the life out of the limited number of buyers and break the market all to pieces in their anxiety to realize. A plan of such an exchange is before the growers of this valley, and the only comment necessary is that it meets the approval of all practical business-men who have investigated it.

The advice not to dry your own fruit is, therefore, well-founded when applied to the majority of growers owning from 10 to 30 acres; but some of us have 100 acres or more, in which case we must be prepared to do our own drying, and, even a step further, be our own salesmen. Under these circumstances, a few directions as to the drying may not be amiss. Don't economize as to necessary modern implements. Don't, I beseech you, dip your prunes in an old iron pot where the mud is so thick that you can almost cut it with a knife. I have seen this done even this very year in an establishment that claimed to produce first-class prunes, and I do not know who I pitied the most, the proprietor or his customers. Have some regard for the latter and use plenty of flowing water. The best machine for this purpose is the Cunningham dipper, which has two compartments, the first containing boiling lye, which must be kept boiling by means of steam coils. The prunes drop through a hopper on to a draper, which carries them up and over into the next compartment filled with cold water, and out of that drops them on trays 3x8, holding about 80 pounds to the tray, which can be handled by two men and are more economical than 2x3 handled by one man.

The drying is facilitated by grading into three or four sizes as they come in from the field; but this grading should not prevent grading after they are dried, as buyers are getting very captious and insist on exact grading, the slightest variation being seized upon as a pretext for rejections and reclamations except in years of scarcity, when everything goes. Chicago has been our largest customer and at the same time the most unprincipled, going to extremes in this matter which no other city has dreamed of. Slow drying, like slow ripening, is essential to quality. A prune that takes a week to cure is far superior to one that cures in two days—another objection to prune culture in our hot valleys of the interior. A climate free from fog is also desirable, so that the trays need not be stacked every night. They are sufficiently dried as soon as the water is all evaporated, but should be soft and pliable and not rattle, unless you are going to ship them to Chicago, where they want them dry as gravel stones, so they can turn the waters of Lake Michigan on them, to their great advantage.

MARKETING.

You now, having escaped the Scylla of the business, stand confronted by the Charybdis, a monster that would rob us of all the benefits we have secured up to this point and give them to the middleman, and that is, the kind of package in which to ship. Don't make the fatal error of shipping in bags; it is a device of the devil, concocted in Chicago, compared to which the tariff scare sinks into insignificance. You cannot look to the commission merchant for help in this strait; he will stand by the buyer because his commission is easier earned by that course than by working hard for a better price for a better article. Any fool can sell a man what he wants by cutting the price, but it takes a smart man to sell him an extra quality, well-packed, and such men are very scarce in that business. By selling in bags you lose your identity; the dirty, dusty bags with juice oozing out of them are no addition to a well-kept store, are cut open and thrown away, while an attractive box and label is a perpetual advertisement of your name and locality. By selling in bags you open the door to frauds in grades, weights, etc., after they have passed out of your control, which is not possible when packed in 25-pound boxes. By selling in bags you lose any advantage in quality your prunes may possess, for in that shape a prune is a prune, and the skins and pits of irrigated districts, raised at one-half the cost of yours, are mixed and sold as California prunes, which may thereby in time sink to the level of Turkish prunes. The sole object of buying in bags is to adulterate with inferior California and foreign prunes, and secondly to soak them with all the water they will hold, that the increased weight may cover cost of boxing in packages that may advertise their business, not ours.

Last year the writer was offered a high price for his entire pack in bags by a French firm, who wished to pack same under French labels, but the offer was declined for that reason only. At least 90 per cent of the product of a first-class orchard should range from 50 to 90 to the pound, and should be carefully packed in 25 pound boxes, under an attractive trademark; the balance may be sold in bags. If your commission merchant cannot sell them in boxes, find one who can, or, if necessary, be your own commission merchant, which the size of your business will warrant. I do not wish to detract from the value of the commission merchants as such; on the contrary, I believe in employing them, and very cheerfully pay the 5 per cent they charge, which includes guaranty of all sales and relieves you of the detail of distribution, which you cannot do for 5 per cent. But let the service end here. When you undertake to make them your bankers, you commit a fatal error. As you value your life, your liberty and your property, don't let any commission merchant own you. Get what advances you need from your banker, and if you cannot, better sell out to some one who can—you will never regret it.

In seeking a market for boxed goods, waste no time on Chicago. You can do better in New York, Boston, or Philadelphia. Go East yourself and become familiar with the wants of your customers by personal contact. One such visit is worth years of correspondence. Don't be in a hurry to ship your fruit in September; such fruit is not cured fruit, and reflects no credit on grower or seller. It should lay in your packing-house several weeks to go through the sweating or equalizing process, and the latter part of October is soon enough to ship, if quality be an object, and if you wish to avoid the danger of rejections which are sure to follow such shipments.

It is argued that our prunes are too sweet; but this is a good fault and really makes them a very economical article, because the consumer in buying his fruit gets the sugar with it. It is a common saying that prunes are the poor man's fruit, owing to the low price at which they are sold; but were it not for the sugar they contain they would be the dearest. Take for instance this year's price—nine cents. One pound soaked and cooked equals three, or say three cents per pound, while one pound of peaches or apricots at 14 cents, or if cooked, seven pounds, equals two cents per pound. Very few, probably have figured this out this way. We find, then, that foreign prunes are inferior to ours, because they are largely propagated from suckers, while we use seedlings; raised on soil worn out a hundred years ago, while ours is practically virgin soil; cured during the rainy season in ovens and driers, cooking same, while ours are dried in the open air by the sun's rays and have to be cooked but once. It is not surprising, therefore, that we have secured the home market, and are likely to retain it, tariff or no tariff.

Now that the election is over, a Republican may be able to state that the tariff is of but secondary importance to the prunegrower without being called a traitor. If the two-cent duty be so vital, how can we consistently explain the columns of reports of $500 to $600 profits realized all over the State? If the duty were removed entirely, which I hope will not occur, we can still make money under proper conditions, if we get but $20 per ton instead of $40 to $60, as has been the case for several years. The California State Board of Trade, through its chairman, Gen. N. P. Chipman, has sent forth the statement that we can raise fruit cheaper in California than any place in the world, and the reasons have just been stated, and, although we have no export trade now, the time may come when we can send our coals to Newcastle, even with the duties levied by France and Turkey, and then let reciprocity take the place of tariff and California will hold her own in the markets of the world and get rich at it.

The greatest danger lies in the continual reckless planting of more trees, when enough—in fact, too many—are already planted. There are about 20,000,000 growing deciduous fruit trees in California of which at least 5,000,000 are prunes, which at the very moderate estimate of 100 pounds per tree, will produce 200,000,000 pounds of dried prunes. Now, what are we to do with them; they are not a luxury, but by no means a necessity; even the growers themselves rarely have them on their tables. Their mildly laxative and slightly acid qualities aid in keeping our system in good order, but only a limited quantity is purchased by any one family, say one 25-pound box to each. The population of the United States during the last decade has averaged 60,000,000. The usual average of five persons to each family will give us 12,000,000, each consuming 25 pounds, or say 300,000,000. But we cannot count on this, because millions of families do not care for and never buy them. What we do absolutely know from the National Bureau of Statistics is that for 20 years prior to the advent of California prunes the total consumption was about 30,000,000 pounds per annum, which, through the popularity of the California prunes, we have increased during the last eight years to 70,000,000 pounds, or a little over one pound per capita. Our population is increasing at the rate of 1,500,000 yearly, which ten years hence would give us say 80,000,000 population and at the same rate require 15,000,000 pounds more, or say 85,000,000 pounds of prunes. But asuming that we so push matters as to quintuple this normal increase, we would then require 145,000,000 pounds, while we now have enough planted to give us 200,000,000 in less than five years. Surely it is time to call a halt in this wild boom and turn our thoughts to other fruits now neglected but equally as profitable. Our only consolation in case of such a glut is that prunes make excellent hog feed, and one acre of prunes will produce more pork than one acre of grain. From the same Bureau of Statistics we learn that the average price of imported prunes for 25 years has been five cents, which, if maintained, would mean to us four cents when the rail freight is reduced to one cent which it will be soon. As already stated, four cents will give us all a very fair bank account, so we have not so much to fear in the way of price if we can stop further planting. Of course thousands of trees that have been improperly planted will die or be abandoned, but they will not offset the additional planting that will certainly continue year after year in spite of statistics. It is said that children and fools always tell the truth. If so, the gray hairs produced by the vicissitudes of the business would indicate to what division the writer belongs. Truer maxims, however, are "Truth is mighty and must prevail," and "Truth crushed to earth will rise again," and though he be crushed beneath the avalanche of land-sellers and tree-sellers, he will lay aside his pen with the consciousness of a duty done and that future conventions in recalling the records of this one will say: "Well done, good and faithful servant."

Olive Culture in California.

Paper read at the meeting of the Southern California Pomological Society, November, 1892, by JOHN S. CALKINS, of Pomona, Cal.

A NEW METHOD OF PROPAGATING THE OLIVE TREE.—In treating of olive culture in California, I will first notice a new method of propagating the trees, which has come into use within a few years, and so far as I know is not practiced outside of this State. I use cuttings of mature wood some three inches long, with two leaves near the top; these are planted during autumn and winter in glass-covered houses provided with bottom heat; a portion of the cuttings will usually produce roots in the course of four to eight months, but often nearly all of them lose their leaves and decay; vigorous trees with excellent roots are grown by this method; trees so raised have produced olives in four years from the time of planting the cuttings in the house; the cuttings in the houses require constant attention, and even the most careful propagators often meet with total loss; probably in no other branch of the nursery business is success so uncertain. The rooted cuttings are planted out in nursery rows from March to December; those planted early in the season attain a growth of one to two feet the first year; trees of this size may be successfully transplanted, and by many are preferred to those of any other age for orchard planting.

TRANSPLANTING AND PRUNING.—In transplanting olive trees from the nursery to the orchard, the roots should be carefully protected from the sun and wind, and the tops, too, as much as possible; the work should not be done when a dry wind is prevailing; they should be taken up in as dormant a condition as possible; they are usually in this state in January and February; if it is not convenient to plant them then they may be taken up before they commence to grow, and heeled in and set out later in the season; at the time of planting, the soil should be settled around the roots with water. The olive tree is very tenacious of life, and may be successfully transplanted at one year of age up to the size of large, bearing trees, this having been often done. Although most varieties are apt to grow unshapely in the nursery, they become symmetrical after being out in the orchard two or three years. As some of the roots are cut off in digging, a portion of the branches should be removed at the time of planting; after that but little pruning will be necessary till they begin to bear. Mr. Goodrich, who has a bearing orchard near Santa Clara, trims his trees in the form of a goblet, the center of the tree well hollowed out to admit the rays of the sun, leaving sufficient wood for the next two year's crops.

THE DISTANCE APART TO PLANT OLIVE TREES.—The distance apart to plant so as to get the best results has been determined by Ellwood Cooper, an experienced olive-grower. He planted an orchard in 1872, 20 feet apart,

but some 15 years after he found it necessary to thin out; he removed every other diagonal row, the remaining trees then being about 28 feet apart; if it is necessary to thin out again, he recommends the removal of every other alternate straight row, the remaining trees will then be 40 feet apart. As he still favors this plan after years of experience, planters may safely follow his example; this appears to be better than to plant the trees farther apart at first with some short-lived trees or vines between them, as is sometimes recommended. The trees which are removed may be reset into a new orchard where they will again come into profitable bearing.

SOIL AND CLIMATE.—As to the kind of soil in which the olive succeeds, the same authority says that "he has trees growing without irrigation in black adobe; on stony hillsides; on adobe hillsides; on table land with clay subsoil; in sandy lands made from the wash of the mountains, with no difference in the bearing of the trees or the oil made." They are known to succeed where peach, apricot and nectarine trees have been destroyed by the black alkali; and also in land so rocky and steep that it cannot be plowed. Our virgin soils of California are rich in lime and potash, two of the chief constituents required by the olive tree. Prof. Hilgard has stated that the substance of olive oil is taken entirely from the air, and that if the crop is made into oil and the pomace and all other offal returned to the land from the outset, it needs no other manure, if the soil is a fairly good one; it does not wear out the soil; but if the fruit is pickled, returns should be made to the soil and then potash and nitrogen are especially called for. The olive tree flourishes under varied climatic conditions; it will withstand a temperature of 14 degrees above zero; it succeeds in the dry interior valleys of the State where the mercury during summer often ranges from 100 to 120 degrees in the shade; along the coast and on the high foothills of our mountain ranges. In Algeria, latitude 35, it thrives at an elevation of 4800 feet above the level of the sea; in Italy at a height of 3200 feet, and there is a bearing orchard in about the latitude of Pomona, situated upward of 3000 feet above the sea.

IRRIGATION.—The olive is a deep-rooted tree flourishing in arid countries, and if properly treated from its first planting, requires but little water in most locations, other than the usual rainfall; there are many bearing trees in different parts of the State that are not irrigated. While there are localities that will give the best results without irrigation, there are, no doubt, other locations that need it, but in most of such lands careful tillage, and in absence of better means, hauling water to them when needed will be time well spent, if the rewards of an olive orchard may thus be secured; but while the trees will do fairly well under conditions in which any other fruit tree would perish, it pays to give them generous culture.

FOR THE STREET.—The olive is coming into favor as a street tree, combining several good qualities outside of its profitableness; it is not apt to be blown down by hard wind storms; it does not litter the ground with fallen leaves; its branches do not droop and obstruct the walk, if properly trimmed; is not subject to have its fruit stolen by persons passing; requires little or no irrigation, and is generally regarded as a very suitable tree for the purpose wherever it has been tested.

INSECT PESTS AND METHODS OF DESTROYING THEM. The only insect pest that infests the olive tree in this part of the State is the black scale, which attacks it in locations near the coast, about the time it begins to bear; it is not infested with it in the interior; even the olive tree is unable to bear a full crop of fruit and a full crop of black scale at the same time; perhaps nothing has retarded the olive industry in this State more than the sorry appearance of the neglected, scale-infested trees in certain sections, which by proper care might have been kept in a profitable condition; any other fruit tree would have been dead and out of sight long ago under the same neglect. Lately improved methods of dealing with the pests have come into use, and they may now be destroyed at comparatively small expense by spraying the trees with the following mixture during autumn, when the insects are all out of their scales: five pounds caustic soda (70 per cent); 25 pounds resin; 3 pints fish oil; boil the soda, resin and oil in 20 gallons of water for three or four hours; when done the mixture should dissolve readily, like milk in water without being ropy; add enough water to make 100 gallons; in case the resin, after cooking, does not cut well, add a little more water. A treatment of the trees with hydrocyanic acid gas in autumn once in two years is also found to be an effective remedy; parties here contract to rid trees of the pests by either method at 20 to 25 cents per tree, furnishing everything. Mr. Goodrich, before alluded to, says his "system of pruning (which he adopted three years ago), and the aid of the twice-stabbed ladybird, has reduced the black scale in his orchard to such a degree as to justify the belief of practical eradication, or at least control." Fruitraisers in California have insect pests to combat, and so have olive-growers located near the coast; happily, by the above methods they may be subdued at a cost so low as to justify the expenditure.

OLIVE OIL AND OLIVE PICKLES.

In the year 1890 there was imported into this country 893,984 gallons of alleged olive oil; this State produced the same year 5202 gallons of pure olive oil, and in the year 1891, 11420 gallons. California olive oil has the distinction of winning prizes at the Paris World's Fair, and its superiority over imported oil is conceded. We have it from reliable authority that at least four-fifths of the olives used in Europe for oil, contain a worm, which is ground up and pressed with the pomace in oil-making. From the Consular reports we learn that it is a common practice abroad to mix cotton-seed oil with the olives while being ground for oil; vast quantities of this oil go to Europe from this country for the purpose of adulterating olive oil; the process of refining cotton-seed oil is said to be such as to render its use as food deleterious to health, and even dangerous to life. The department of agriculture at Washington caused tests to be made of some 66 different brands of imported oil labeled pure olive oil; not one brand was found to be pure, and several did not contain any olive oil; but California producers are determined that the home oil shall be put upon the market pure and unadulterated; to this end they have procured the passage of an act to prevent the manufacture and sale in the State of impure oil, and have organized to aid in its enforcement, and have lately taken measures to have it so amended as to render it more efficient in its operation. Large quantities of foreign pickled olives come to the United States and to this State; they are sold here in small bottles at the rate of about $4 per gallon; they are put up while the olive is green and are unfit for food, while the home olives are put up ripe, or nearly so, and are a wholesome and nutritious food vastly superior to the foreign article. The last crop sold in the stores at $1.20 per gallon; dealers paid the growers from 65 cents to $1 per gallon. They are put up in Pomona by the following method: for six gallons of olives dissolve one pound of G. S. Lewis' concentrated lye in six gallons of water, add four pounds of salt; soak the berries in this mixture two days, then draw off and replace it with same kind for two days longer, drawing the mixture off several times daily, and pouring it over the olives. Now draw off the mixture again and immerse the olives in water from five to eight days, then draw off the water and put on a brine of three pounds of salt to six gallons of water for two days, or until the least trace of lye is removed; finally cover them with new brine of three pounds of salt to 4½ gallons of water.

VARIETIES.—According to an Italian authority there are 300 varieties of olives. I have upward of 50 new varieties in course of propagation in my nurseries; many of these are in bearing in different parts of the State, and have proved valuable acquisitions. By careful observation the different sorts may be distinguished from each other in the nursery by their appearance, which will greatly assist the nurseryman in correctly labeling his trees.

THE OUTLOOK FOR THE OLIVE INDUSTY IN CALIFORNIA.

In discussing the profits of fruit-raising it is customary to cite citrus orchards that have returned from $500 to more than $1000 per acre, and deciduous fruit trees that have yielded from $100 to more than $300 per acre in a single year, so we may here give the record of some olive trees:

Ellwood Cooper of Santa Barbara states that he tested one of his orchards seven years old from the cutting which yielded ten large bottles of oil to the tree; $1 per bottle is the present wholesale market price for California oil; this would give $1080 per acre of 108 trees. Frank Kimball of National City, San Diego county, states that he paid a neighbor $200 per acre for his olives from trees less than four years old from the cutting; that he had taken 23 gallons from a tree less than six years old; these, if made into pickles, and sold for 75 cents per gallon, would bring $1863 per acre for that year; that he had picked from a tree, at the old San Diego mission, 192 gallons of olives in a single year; that tree was probably 100 years old. Dr. B. B. Briggs of Crescentia, Los Angeles county, has a tree that bore one year, when the tree was 13 years old, 50 gallons of olives; if made into pickles and sold at 75 cents per gallon, they would bring $37.50. Major L. H. Utt of Redlands has an orchard at Pala, San Diego county, of 100 trees that when 16 years old averaged 80 gallons of olives per tree that year. Mr. G. F. Havens of Santa Ana, writes that he has an orchard in Orange county, 15 miles from the coast at an elevation of 1500 feet, planted at the foot of an adobe hill; trees have never been irrigated and have never been infested with black scale; they bore a little fruit the third year from the cutting, the fourth year they bore from one to four gallons per tree. At the age of seven years some of them bore 20 gallons for the year. Thus it will be seen that the trees will show a little fruit the third year from planting, and yield returns the fourth year. The crop will increase from year to year for 30 years, and they will bear up to the age of 100 years. I do not believe the figures given above as the yield of olive trees can be safely relied upon every year, nor that olive orchards in general of like age will come up to those figures one year with another any more than can the amounts given above as the returns of citrus and deciduous orchards be uniformly realized every year, but if the enormous returns of the olive trees mentioned are even divided by four, the results would show the olive industry to be a most profitable one.

There has always been a ready market for all the olives produced here in Pomona. Last year there were more orders sent to this market than could be filled, and orders for the crop of the ensuing season are coming in. Olive-growers in this section have generally prepared their own fruit ready for use, but now there are a number of firms in the field who propose to buy the fruit as it comes from the trees, and prepare it for market. The prospects for a good market in the future are encouraging. The increase in the consumption of California pickled olives in this State within a year or two has been immense. The people are beginning to find out their value, and in the near future they will come into general use. California olive oil is rapidly growing into favor as an article of food and as a medicine, and a heavy demand for it is assured.

The foreign sardine industry is on the wane, owing to the use of impure olive oil and cotton-seed oil in which they are now put up. It may be assumed that the industry will be inaugurated in this State as soon as a supply of olive oil can be had in which to pack them, as our shores teem with sardines of excellent quality.

Considering the superiority of our pickled olives and their cheapness, and the purity of our oil, it is safe to say that they will entirely displace the foreign article in the markets of this country as soon as they are produced in quantity sufficient to supply the demand. While our various fruits are seeking markets in the East, competing with some of the fruits raised there, this State is a large importer of the products of the olive tree, our scanty production as yet hardly making an impression on our local markets.

During my residence in this county, since 1878 I have watched the fruit business from the standpoint of a nurseryman, and have seen it grow from a small beginning to its present large proportions. I know something of the obstacles which have been overcome, and the necessary efforts to secure a market, and it is gratifying to know how much better the business pays with a larger supply and wider markets. The olive is unique in this respect, the output as yet is insufficient to meet the local demand only in a small degree.

Olive culture is in its infancy here, and there is much yet to learn before it is brought to its highest possibilities, but enough is known about it to wrrrant the prediction that it is destined to become one of the most profitable industries of this commmonwealth.

Pruning Fruit Trees.

An essay by FRANKLIN COGSWELL, read at the Santa Ana Farmers' Institute.

My remarks on pruning will apply only to the principal varieties of deciduous fruit trees in southern California.

1.—As to time. If the pruning is severe and the object is to gain a new growth which will develop fruit buds for a crop of fruit the following year, it cannot be done too soon after the crop is off the tree. This can only be done with apricots and early peaches; it is questionable even with them, as the fruit is usually inferior. Best results are obtained by waiting until the tree is fully dormant, but before the sap starts in the spring. Except in the case of large limbs, but few horticulturists take the trouble to protect the cut ends with either wax or paint. But as I intend only to get the matter before you for discussion, I will proceed to the more important point, viz, the manner of pruning.

Much has been said and written about suppressing the scale, the linnets and other enemies of fruit trees; but little has been said about suppressing, in some orchards, their worst enemy—their owners. If this can be done, fruit-raising will be a much greater success. If the said owners could be taken sick during pruning time and their orchards thereby escape the saw and knife, there can be no doubt but the trees would bear enough fruit to pay all doctor bills, and still leave a balance. The object of a fruit tree is, or ought to be, to produce fruit; but many owners keep their orchards so constantly busy trying to repair damages that they have little or no time to bear fruit. It has been my observation that when a tree is severely pruned the remaining fruit-buds, instead of producing large, luscious fruit as we might expect, are most of them blasted, and the whole attention of the tree is turned toward growth. Are trees possessed of intelligence? They seem to be. The remaining parts seem to sympathize with the mutilated members, and refuse to take nourishment away from them for the mere purpose of producing fruit. When a person loses one eye the chief concern of the physician is to save the other eye, which is often lost through sympathy.

2. There is another important point. The orchardist I have in mind wonders why a limb loaded with fruit splits off from the body, if, by some mischance, he has allowed it to produce fruit. Did he ever split wood and come to a knot? If so, he has had trouble. That knot reaches clear into the heart and could never be torn from its mooring, but if the limb which grew from it was cut off close to the tree a sucker sprout comes out to take its place, but is never so firmly joined to the body as the original limb, and is never anything but a sucker limb. Perhaps the worst possible damage is done when the tree is first set out. It has become quite the fashion to destroy all that the tree has done so well in anchoring its limbs in its very heart and leave nothing but a bare stalk two or three feet high.

Mutilated and depressed, some yield up the ghost at once; others make a struggle for existence, put out sucker limbs, joined more or less to the outside of the tree, sure to split off when any great strain comes upon them. This usually comes from wind, if at all, as the owners of such trees seldom give them a chance to load with fruit. I bought some peach trees of a nurseryman. In pruning the lower limbs the year before he had not only cut close to the body but actually in it. There was a swollen limb around the cut, but it had not healed over, neither has the bark grown over it as it should. The best peach orchard in my neighborhood is one where the entire top of the young trees, as they came from the nursery, was let alone. Trim the lower limbs fairly close to the body, but not into it. For two or three years little need be done in pruning. Cut back sparingly, thin out an occasional interfering limb, paying due regard to balance and more attention to gophers which may be gnawing away at the bottom while you are doing the same at the top; cultivate thoroughly, and you will have fruit. I have never known any limb to make two long growths two years in succession. Young prune trees will put out slender limbs 10 feet long in a single season; let them alone. The following season they will branch out, but not grow up too far, but if cut back of course they will put up new shoots and start again, and they and their owners can keep it up in that way for the term of their natural lives, the trees trying to get ready to bear fruit, and the owners to stop it—but the latter being more powerful and having better weapons, often succeed.

CAMPBELL HORTICULTURAL SOCIETY.—This Society meets at Campbell, Santa Clara County, on the second Saturday night of each month. At the last meeting officers were elected for the ensuing year, as follows: F. M. Righter, president; Jos. Bohnott, vice-president; S. G. Rodock, secretary; Dr. C. N. Cooper, treasurer.

CALIFORNIA NURSERY COMPANY.—This well-known establishment at Niles, under the management of John Rock, has just issued its new price list No. 3, including fruit and ornamental trees, small fruits, roses, etc. The lists in all of these classes are very complete, and will gratify planters. Among ornamentals the California Nursery Company pays special attention to roses, and has the largest area devoted to them of all our coast growers. In orchard fruits of course, the selection is large and of high standing.

FRUIT vs. WHEAT.

A Discussion of the Relative Importance of Wheat-Growing and Fruit-Growing in California.

The following paper was read before the State Horticultural Convention at San Jose by Gen. N. P. Chipman of Red Bluff, Cal.:

At your annual convention held at Chico, in November, 1888, I read a paper entitled "Wheat vs. Fruit," in which I undertook to point out to the California agriculturist the increasing importance of fruit-growing in this State, and why we should grow more fruit and less wheat. I am now requested to reexamine the relative importance of the two industries in the light of later experience and more complete data. Whether we narrow the question to the simple inquiry as to which is the more profitable on a given number of acres, or take the broader view as to their relative influence on the future greatness and prosperity of the State, I think we shall easily reach the conclusion for which intelligent horticulturists of California have long contended.

The evolution of California has presented a series of surprises from the day when Marshall turned up the glittering nuggets in Sutter's mill-race and set the world ablaze with his discovery of gold. The growing of the cereals, and later of fruits, was as much a discovery as the finding of gold; and people were even more incredulous about the practicability and profitableness of tilling the soil than they were about making quick fortunes with the pick and shovel and rocker in the mountain gorges. Here and there, however, in the north and in the south, in the early forties, were to be found unmistakable evidences of what our climate and soil would do; but our people seemed not to admit the logic of facts or their own senses, and so they went on for years importing flour from Boston and New York, and fruits from Mexico and the islands of the sea.

Wheat-growing took root at last in the fifties, but our eyes were not really opened to the possibilities of fruit-growing until the profound movement began which has made southern California a veritable Eden, and has incidentally uncovered new and untold wealth in the north in her fruit products. We had a surpassingly favorable climate, but we did not know its commercial value, nor its true relation to the soil. And we are still unwilling to subject these two combined forces to their highest uses, as we evidence by keeping right on planting wheat that can be better grown in the icy regions of the Northwest; and we do this in face of the fact that we send 70 or 80 per cent of it 15,000 miles to market, in competition with the whole world, and especially with our brothers of the Northwest, who only need to seek a foreign market for about 20 or 25 per cent. And, withal, California only exports about one-tenth of our total exports.

DIVERSIFICATION A NECESSITY.

I hold it to be a perversion of nature's gifts to use them contrary to their obviously higher and better purposes. In the old agricultural countries the farmer makes a careful study of the adaptability of soil and climate to the growth of particular products. He selects his land for wheat, for corn, for oats, for barley, rye, grasses, and he rotates these crops as necessity requires. He plants the fruits and vegetables suitable to the climate and soil, and if he is intelligent he always plants that which promises the highest returns. If he is in Dakota he plants wheat; if in Kansas or Iowa, corn and wheat; if in North Carolina, rice and cotton; if in Louisiana, sugar-cane; in France he grows prunes; in Spain, raisins, and in Italy, olives. He diversifies largely everywhere, but his staple is determined by the conditions of soil and climate.

Now, no one in the face of the facts will say that California is peculiarly adapted to wheat-growing. A study of the productiveness of the wheat-growing regions of the Union will show that many States produce more to the acre than we do. The average gross yield per acre of wheat in California is less than 13 bushels, of the value of $12.34 per acre, which was the result obtained in 1891—one of our best years.

VALUE OF WHEAT LANDS.

The average value of our best wheat land is not less than $50. When we deduct from the gross product the cost of production, we have left less than an average of $2.50 per annum per acre, out of which must be paid taxes and the repairs of implements and the farm kept up. Now, this is a summer-fallow crop of which we get one in two years, and an added occasional winter crop once in three years. In exceptional cases, much better returns are shown; but we must deal with general rather than exceptional results with wheat, as with fruit. I am authorized to say to you by one of the best farmers in this State, who owns one of our best and largest wheat ranches, that his wheat land does not pay over five per cent per annum on the assessed value of $50 per acre for the land.

I pointed out to you four years ago some of the disadvantages of wheat-growing in California. Let me restate some of them briefly, with one or two added: We have a much smaller home market than our competitors in the wheat-growing States east of the Rocky mountains. The United States exports about 25 per cent of all wheat grown; California exports fully 75 per cent of her wheat. Our surplus travels farther to market, and hence at greater cost, than any other wheat grown, except that of Oregon and Washington. We have no one advantage over our competitors to compensate this disadvantage. The water rates on wheat from Chicago to Liverpool are about $3 50 per ton. The average rates for a period of years from San Francisco to Liverpool will not vary much from $10 per ton. Assuming that the cost to Lake ports is about the same as to San Francisco from the farm, we have a difference in favor of the wheat-grower of the West on his exported wheat of over $6 per ton, or nearly 20 cents a bushel. But the wheat-farmer near the centers of consumption gets a home market price larger than the export price, while our home price is the Liverpool price less cost of carriage.

THE WHEAT AREA UNLIMITED.

The *California Fruit Grower*, one of the ablest trade and fruit journals in the State, recently pointed out, and fully proved, the statement that the wheat area of the United States can be expanded to meet any probable requirements for many years. It demonstrated what I have verified by examination of the reports of the Bureau of Statistics, that many of our western States have curtailed their wheat acreage and devoted it to corn and other products found to be more profitable; but they can easily shift to wheat when required. For example, Iowa had in 1891 in wheat 1,800,000 acres, while in 1875 she had 3,000,000 acres; Illinois had 3 600,000 acres planted in 1880, and only 1,900,000 in 1891. On the other hand, the capacity to rapidly increase production of wheat is shown in Kansas, where the acreage in 1891 ran up to 3,500,000, as against 1,600,000 in 1889, and 2,000,000 acres in 1890; the Dakotas have increased steadily from 1,000,000 acres in 1883 to 4,800,000 acres in 1891.

I see no evidence of a decrease of wheat areas either in the United States or in competing foreign countries, so that the wheat-grower need not look for better prices through any falling off in production, save in years of crop failures, unless the land is given over to other cereals, which is not likely to happen; and if it should happen, it can be given back to wheat when needed.

MORE WHEAT PER CAPITA THAN EVER.

Mr. J. R. Dodge, Statistician of the Agricultural Department, in the report of that department for 1891, has furnished valuable facts and opinions resulting from his researches. In speaking of wheat, he calls attention to the fact that the population of the country is between three and four times as large as in 1840; the wheat crop of 1891 was seven times as large as in 1840, or four and one-third bushels for each unit of population then, and nine and one-fifth bushels now. He says further:

"There has been much written for 20 years past, the result of crude generalizing from agricultural data, to the effect that wheat-growing is declining, moving westward, abandoned in the old States and precociously developing in the new. * * * A little thoughtful review of the whole field of fact will show the kaleidescopic changes incident to the work of diversifying and moulding our primitive agriculture. Western New York produces as much wheat as ever, and fruit and vegetable and other products of tenfold greater aggregate value. So do Ohio and Michigan."

He then shows how the yield of wheat may be largely increased by better methods; he cites the larger yields in the sands of Holland and the gravelly clays of England, and says that if our better soil were brought to the average yield of those countries, we would produce on the same area as we now plant a thousand million bushels. He then takes up the question of reserve and shows that the tendency is to underestimate; that the surplus of two or three years, held in remote regions not easy of access—in Russia and India and elsewhere—have been collected through improved commercial facilities and poured into the centers of trade, to the surprise of both consumers and producers, to the equalization of prices and the maintaining of relatively low rates throughout the world.

SINGLE CROPS RESPONSIBLE.

In speaking of the depressed prices, he refers the condition to the baneful influence of the single-crop idea.

Upon the question of the permanency of agricultural production, he presents some striking and valuable facts. He points out that Europe, with four times our population, produces nearly enough subsistence for its own use; that all eastern Europe has a surplus, and that Italy's exports equal her imports; that the Netherlands, with only two and one-half acres to each inhabitant, require only a few million dollars worth of agricultural imports in excess of agricultural exports; that France, with a population nine times as dense as ours, requires only about seven per cent of her consumption; that even insular and factory-studded Great Britain feeds half her population from her own soil, through the labor of one-eighth of her population, and the other half could be fed if the game preserves and pleasure grounds were utilized for agriculture; that it requires four times as much area here to feed one person as it does there, which it would be absurd to claim as a necessity.

He then shows by incontestable proofs, that even in the States east of the Mississippi river land actually farmed is only partially utilized.

Upon the question of surplus he shows how easily possible it is to largely increase the output as the markets may demand, and that our wheat possibility is one of price and profit, and not of land and labor. He then submits tables to show that wheat-growing in Europe is not declining. In his conclusions upon the subject he says:

"This country has not reached the limit of agricultural production; it has not even approached it. It is not true that the wheat of the world is declining. It is not difficult to prove the existence of 2,300,000,000 bushels as an average, and there is no prospect of decrease.

"The United States will continue to produce a surplus for export until the wheat culture of the United States shall have given place to more varied and profitable culture, and increasing numbers of non-agricultural population shall require for breadstuffs the entire crop." He adds:

"It is proper to say that the tendency is toward a better distribution of crops and to higher prices and better profits. The proportion of agricultural labor will decrease, nonagricultural labor will increase, agricultural products will be more varied, rural intelligence and skill will advance, and the farmer will be in a better position to demand and secure an equitable share in the net proceeds of national industries."

If there is one lingering doubt in the mind of a California farmer, after reading carefully the report of the Department of Agriculture for 1891, as to the plain path for him, I confess inability to reason from known data.

SMALL WHEAT FARMERS DRIVEN TO THE WALL.

It has come to pass in California that the more prosperous wheatgrower must own or till large areas, and use steam and horse-power, and dispense with men. The combined harvester has reversed the law of labor-saving machinery and is depopulating the State. It came at the wrong time for California, and proved a boon to the large land-holder, but a bane to the State.

I showed you, in my former discussion of the subject, by incontestable evidence, that our wheat lands are not yielding so much per acre as they formerly did, and the four years have added strength to that point; that prices have gradually declined, while rates of transportation do not decline to meet the fall in prices, and this point still stands good; that the price is not likely to come back to former figures, because of the large wheat areas of the globe; that wheat-growing cannot populate the State or increase its prestige and importance or add to its wealth and this point is more than verified by the fact that our wheat-growing regions are still sparsely settled; that we have reached the maximum of production; that many lands devoted to wheat are not profitable by reason of nonadaptability to that plant; and that much of the lands in wheat are specially adapted to fruit, and others are not, and should continue to be planted to wheat.

I showed that an intelligent application of ordinary sound judgment, in the light of facts everywhere apparent, should lead our farmers to devote their lands to wheat culture only where more profitable crops could not be grown, and that our output of other crops should be increased and our wheat brought down to the necessities of our home market and those markets that can be reached with profit. I must be permitted to refer to the arguments then made and facts adduced, rather than to repeat them here.

NOT WHAT IT USED TO BE.

I need not encumber this paper with further additional proofs to show that wheat-growing is not what it once was here, and that it is no longer an attraction to the home-seeker of the East who is looking toward California. We cannot sell our lands for wheat-growing, at their true value, to western wheatgrowers, who would have to exchange two or three acres for one, and leave more favorable conditions than exist here for their pursuit. We who believe in fruit talked to deaf ears when the farmer was getting two cents a pound for his wheat and was growing 25 bushels or more to the acre. Now, however, we ask him to look at his ledger and see if he cannot do better. He bought his land for five to twenty dollars per acre. Our fruit industry has given it high value, and we want him to yield up his rich acres to the demand for higher and better uses.

President Andrews, of Brown University, says, in the *North American Review* for November: "Only about one-sixth of the cultivable land of the globe is yet occupied."

Let our wheatgrower remember that whea is the product of all lands and climes. Wherever man can live wheat will grow. Not so of the orange, the lemon, the fig, the prune, the olive, the raisin grape, the almond, the apricot, or even the pear or the peach—all distinctively California fruits. France obtains 25 per cent more wheat to the acre than we do, and English farmers obtain more than twice as much as we do. France reports 110,000,000 hectolitres, or over 300,000,000 bushels, grown this year, which is about three-fifths as much as the entire crop of the United States.

SOMETHING WRONG IN FARMING.

It is not my province to criticise our methods, but there is something wrong in our farming, when France, with an area only about one-fourth larger than that of California, can, with all her other products, turn out three-fifths as much wheat as the entire United States. It looks as though we were misusing the term *poor* when we talk about the *poor* farmer. We use it as an adjective of commisseration when it should properly apply to him as adjective of reprobation. They have been growing wheat in France and England for centuries, and the land does not give out for the reason that it is well farmed and kept replenished. We grow wheat till we exhaust the soil, and then move to a new region. I have a wheat-growing neighbor who the other day sold a thousand loads of manure for ten cents a wagonload—the accumulation of years—and yet he told me, with tears in his eyes, that he would have to sell out because his land would not raise wheat like it used to. I need hardly add that it was an intelligent orchardist who bought the manure.

The point remains that we have in the United States the fertility of soil, with good farming, to immensely increase our yield of wheat whenever it is needed.

OUR SUPERIOR CLIMATE AND SOIL.

What is it that gives value to California land? It is not richness of soil alone, for Kansas and the great Northwest have the fattest land in the world. It is not in the profitableness of our cereal crops, for our grain farmers will testify that they are not making money. What then is it? It is the adaptability of climate and soil to the production of the most profitable fruits of the earth.

But California is not to be built up by her climate alone, for mankind cannot exist on climate. The State is not to be built up by the richness of soil alone, for men will not go thousands of miles and pay more for land than equally fertile will cost near home.

The solution of California's future greatness lies in the success of the efforts which this State Horticultural Society has been so patrioticaliy making for the past ten or fifteen years. The day will come when all Californians will honor above all others the men who founded this society and who have so faithfully promoted the growth of horticulture through its efforts.

CALIFORNIA'S EXTENSIVE CAPABILITIES.

And this brings me to the easy and pleasing duty of showing what has lifted California to her high plane of promise, and why California to-day offers such unexampled inducements to the home-seeker, and why fruit is more profitable than wheat.

For nearly or quite 700 hundred miles, from Shasta to San Diego, and wherever the elevation is not greater than 1500 feet (and in places even 2500) lies a great empire, with all the gifts of nature that the Giver of all good has so bountifully bestowed upon France, Italy and Spain. The

lines of equal temperature that sixteen years of daily official observations of the Signal Service Bureau, and later the Weather Bureau of the United States, have traced upon the map, are incontestable records of our wonderful climate. The line marking 35 deg. above zero, minimum temperature of the year, starts on the Pacific Coast near Cape Mendocino, and runs through the valleys, near Los Angeles, down to San Diego, and disappears in Mexico and emerges on the Atlantic coast, at Cedar Keys, Florida, 600 miles farther south than where it started.

The zero line starts on the Atlantic coast, near New Haven, Conn., runs through St. Louis, Santa Fe, Prescott, Arizona, and then turns north and enters British Columbia east of Spokane, in Washington.

The lines of 5 deg., 10 deg., 15 deg., and even 20 deg. above zero, starting at various points on the Atlantic, from about Sandy Hook down to Hatteras, run across the continent and into British Columbia, without reaching any of our low altitude valleys from Shasta to San Diego. The minimum line of 25 deg. above zero passes east of Red Bluff, a little east of Visalia and Riverside, runs into Mexico, and appears again at Wilmington, N. C.

While we are pruning, planting and working in our orchards and putting in our winter-sown grain in January, the thermometer marks 14 deg. below zero in Chicago, 31 deg. below at St. Paul and 39 deg. below at Bismarck, Dakota. While we are shipping our late green fruits in November, the thermometer is playing with zero at the points named in the West.

These are striking differences, and they are what give the high value to California homes and California agriculture.

INCREDIBLE RANGE OF PRODUCTS.

The region to which I have referred, lying west of the Sierras, embraces 20,000,000 acres, where may be grown every product known to the map of all Europe. The range of products that lies between the date palm and the hardy apple is prodigious. It exists nowhere in any one country on God's footstool except in California; within that range lies greater wealth than it has yet entered into our minds to conceive.

WEALTH IN OLIVES.

Consider that precious fruit, the olive. The most accomplished agronomists accord to California all the favorable conditions existing in Italy for the growth of this valuable fruit.

Italy produces annually 70,000,000 gallons of olive oil. The market value of this oil, in Italy, is not less than $120,000,000, and that is more money than the value of all the wheat exports of the United States for 1891.

The precocity and fecundity of California soil and climate are exhibited in the olive. I am told that it takes 10 or 15 years to bring the olive into profitable bearing in Italy. Our distinguished president, Mr. Elwood Cooper, obtains ten bottles of oil from seven-year old trees, and every bottle worth a dollar.

So wise and far-seeing a man as the senior Senator from California is quoted as saying that olive culture has been killed by the substitution of cotton-seed oil for the genuine article. I must doubt the authority of any one to commit Governor Stanford to that statement. I would as soon expect the opinion from him that oleomargarine would kill the dairy business, or that effervescing cider would displace champagne. We eat the cotton-seed oil because we cannot get pure olive oil, and not because of its cheapness or because it is satisfactory. When our olive orchards are able to supply the demand, and we compel the cotton-seed oil to put on the brand of its ignoble origin and take off the lie which sells it, we shall see very few people dressing salads with the spurious article.

The possibilities of the olive in California are little appreciated. So much is already known of our citrus and our deciduous fruits that I must be pardoned if I emphasize the importance of greater attention to the olive.

Happily we have the highest and most conclusive evidence in the archives of our society, albeit they have been overlooked in the mass of other valuable matter that enriches our annual reports. When the olive was under discussion at one of your conventions (see report of 1887–8), Mr. Elwood Cooper took the witness stand. His testimony will be accepted with the same faith that would be accorded to the evidence of our most eminent citizen. I quote:

"I have growing on my place olive trees on the black adobe, in deep bottom land, in sandy land made from the wash of the mountains, in stony hillsides and adobe hillsides, and in table land where the subsoil is probably 20 feet deep, dark clay; and, so far as I have known, there is no difference in the bearing of these trees or in the oil made." As to quantity produced, he says: "The only test I have ever made as to the quantities borne by an orchard—that is, taking all the trees—showed 122 pounds of olives throughout the orchard—large trees and small—seven years old *from the cuttings*. The best results in making oil has been 10½ pounds in one large bottle; the poorest result was 12½ pounds. We have for the tree seven years old at least ten bottles of oil; and those bottles will sell readily anywhere and everywhere at one dollar apiece. I was compelled to put up the price to two dollars—$24 a case—to keep my customers from quarreling about it; and I am sorry to say they quarreled about it just the same. As soon as I have enough I shall put it back to $12 a case. One dollar for a large bottle of oil is profit enough for an olive orchard."

At the convention held at Chico the Hon. Chas. Dondero, of San Francisco, a consular representative of Italy, presented a most valuable paper upon the subject. He was born among olive groves, and brought with him to his new home a love for this precious tree, amounting almost to adoration. I quote from his admirable and exhaustive address before the Chico Horticultural Convention, November 22, 1888. He says:

"There are no two countries in the world so similar in topographical conformation, position, climate and agricultural products as Italy and California. The olive is justly considered the Providence of Italy. It was undoubtedly cultivated there before Cassandra's prediction on the fate of Troy—before Homer had immortalized the wrath of Achilles. According to history, the great olive trees yet seen around Tivoli, whose gigantic forms rival the majestic sequoias of the Sierra, were already old when Romulus traced with a plow the walls of Rome. Since then mighty rulers, powerful empires, bright and barbarous civilizations, have arisen and disappeared; but the olive giants, untouched by all vandalic invaders, respected by hurricanes of 30 centuries, are there, covering nearly an acre of ground each, vigorous and productive as in the days of Christ. The average duration of this tree, however, is considered 250 years—long enough for us all! Its production increases until the age of 40 or 50. It remains then about the same from year to year, if properly managed, with a perceptible improvement in the quality of the oil.

"Italy," he says, "produces more olive oil than all other countries combined; France, 1,250,000 gallons; Portugal, Algeria, Tripoli, Egypt, Greece, Dalmatia and some other countries, 18,000,000; Spain, 15,000,000; Italy, 70,000,000 gallons."

THE OLIVE IN ITALY.

Speaking of Italy, Mr. Dondero says:

"An olive-grove in that country constitutes the luxury of the wealthy, the resource of the poor, the blessing of all. Polenta (a cornmeal mush) with olive oil and wine is the most substantial noon meal of millions of hard-working Italians. It is due to the providential olive oil that Italy never had to suffer during the appalling pestilences and barbarous invasions of the Dark Ages, or at any other ancient or modern period, such fearful famines as other countries had. Garibaldi and his fearless followers would not have won the desperate battle of Milazzo, and broken the chains of tyranny to eleven millions of people, if the providential oil had not saved them from starvation. It lingers yet in my memory a saying of my grandmother, at the time when the rapacious legions of the first Napoleon on one side, and the cruel Austrian hordes on the other, were desolating her home and olive plantation: 'Children, as long as we have in the wall-pit a sack of bran and a jar of oil, God is with us and our country.'"

It is difficult to conceive how great would be the increase of wealth to our State by the cultivation of this fruit alone. Assuming Mr. Cooper's results to be obtainable, one acre out of every 500 acres adapted to olive culture in this State would produce more in value than all our wheat exports.

VALUE OF THE ORANGE.

How long is it since we found commercial value in the orange? It seems but yesterday; and yet southern California has been enriched by the discovery. In 1891 they received $1,796,000 for oranges alone, and this from a comparatively small acreage. Riverside shipped 15 carloads in 1880-81, and in 1889-90 she shipped 1500 carloads. Both olives and oranges are now grown in commercial quantities at points 600 miles apart north and south. In Tehama and Butte counties—latitude corresponding with New York City; and in San Diego—in latitude corresponding with Charleston, South Carolina—these fruits are found. Practically, parallels of latitude are nonexistent, as indicating temperature.

RAISINS AND PRUNES.

Our raisin and prune industries are examples of what may be done in California fruit-growing. The rapid growth and development of Fresno county is directly traceable to the raisin. In 1880 her population was 9478; in 1890 it was 32,026. In 1880 Fresno City had a population of 1112; in 1890 it had increased to 10,818, or 872 per cent. Fruit-growing did this. Would this magic-like transformation have happened if fruit trees and vines had not been planted? Would this all have happened if fruit-growing had not been profitable? Fresno is an interior city about ten hours by cars from San Francisco, and has no water communication. There was nothing especially attractive in soil or climate above a hundred other places in northern California. Nothing but the logic of rich rewards to the horticulturist gave Fresno her prestige, and nothing now can ever rob her of it. Her destiny is assured. But this is only a type of California's productiveness to be found elsewhere in the State.

After the fruit crop of 1890 had all gone into market, I undertook to verify the belief of fruitgrowers that their exports equaled in value the exports of wheat. The claim was ridiculed as preposterous. The wheat-grower felt himself aggrieved and his occupation belittled. He never stopped to think that we had gone along with our pottering business without taking away his wheatlands from him, and had added wealth to the State without taking away a dollar, and that he could afford to be just to us if he did pity our folly.

And so I set about gathering the facts which I afterward embodied in a detailed report to the State Board of Trade. The result was an unexpected victory for fruit, and showed that our fruit and wine exports for that year reached $19,857,826, while wheat and flour exports fell short $530,660.

ENORMOUS VALUE OF FRUIT PRODUCTS.

It is due to the completeness of our records that the comparison should be given in this paper. It is as follows:

Green deciduous fruits, 69,084,124 lbs, at 2½c	$1,702,103
Dried deciduous fruits, 64,536,181 lbs, at 12½c	8,074,397
Raisins, 41,120,333 lbs, at 6¼c	2,570,020
Nuts, 1,574,230 lbs, at 10c	157,423
Canned fruits, 80,121,850 lbs, at 3c	2,403,658
Oranges, 1,028,700 boxes at $1 75	1,796,025
Grapes, in wine, 18,000,000 gallons at 15c	2,700,000
Grapes, in brandy, 1,000,000 gallons at 45c	450,000
Total values	$19 857,826
Wheat exports: Wheat, 21,699,683 bushels; Flour, 5,910,565 bushels of wheat. Total, 27,610,238 bushels at 70c	$19,327,166
Excess value of fruit	$ 530,660

Let us turn back a decade. In 1880 we exported 3,141,500 pounds of green fruit and 412,480 pounds of dried fruit, besides our raisins and canned fruit. Little wonder is it that that the contemptuous beginning of 1880 had moved the wheatgrowers to pity for the misguided fruitgrower. And yet in ten years we added twenty millions of dollars annually to the wealth of the State, without diminishing the possibilities of wheat-growing by so much as a bushel. Indeed, our wheat output for 1891 has never been but once before equaled.

NORTHERN AND SOUTHERN PRODUCTS.

In that same report was another instructive table that deserves an incidental place in our records. It shows what part of that fruit went from northern California and what from the south. It is as follows:

North.	
Dried, 38,524,900 lbs	$4,815,613
Green, 67,030 334 lbs	1,672.771
Raisins, 25,595,330 lbs	1,599,705
Canned, 77,413,020 lbs	2,322,390
Nuts, 356,510 lbs	35,651
Oranges	4,200
Wine, 16,000,000 gals	2,400,000
Brandy, 800,000 gals	360,000
Total, North	$13,213,333
South.	
Dried, 26,027,281 lbs	$3,258,785
Green, 1,053,290 lbs	26,332
Raisins, 15,525,000 lbs	970,312
Canned, 2,708,930 lbs	81,267
Nuts, 1,217,730 lbs	121,772
Oranges	1,796,025
Wine, 2,000,000 gals	300,000
Brandy, 200,000 gals	70,000
Total, South	$6,644,493

DIFFERENCES IN THE REGIONS.

Some deductions drawn are worthy of repetition.

"It will be noted that green deciduous fruits are nearly all shipped from the north; that shipments of dried fruit from the north exceed those from the south over eleven million pounds; that five-eighths of the raisins go from the north; that nearly all the canned goods go from the north; that of the wine and brandy, eight-ninths go from the north; that nearly all the nuts, and, practically, all the oranges, go from the south. It will also be noted that the green deciduous fruits exported from the State about equal the value of oranges; that the dried fruits are more than four times the value of oranges; that our raisins have a value of nearly one million dollars more than oranges, and our canned goods more than half a million more than oranges; that our wines and brandies have a value to the producer of one and a quarter million dollars more than oranges. Also, that the exports of deciduous fruits and nuts exceed exports of oranges by seventeen millions of dollars. It will also be noted that the value of the dried fruit shipped from the south is about double the value of her oranges; that the raisins of the south equal half the value of the oranges, and that the orange crop of the south is only about one-fourth in value of her whole fruit crop."

I have tried by every mental process at my command, and on many occasions, to emphasize and make clear the great value and attractions of our developed fruit regions. I never weary of this effort, for I feel my conscience as clear in helping to establish new homes in California as the most zealous missionary ever felt in leading the benighted heathen into the New Jerusalem.

The one thing that I cannot understand is, that we have not five million population, instead of one and a quarter million.

VALUE OF SANTA CLARA VALLEY.

Did you ever try to figure out what the Santa Clara valley would sell for, if it could be picked up and set down with all its advantages of climate and soil, as we know them, within, say, one hundred miles of the city of Chicago? The Happy Valley of Rasselas, the Vale of Cashmere, the home of the Peri, and all the other poetic conceptions of all the centuries, have never pictured anything more charming or more valuable than that would be. Every acre would be worth a small fortune. And yet I can conduct you to a hundred places in northern California equally attractive, where the owners are blindly misusing the soil and squeezing out the last remaining elements of fertility to grow a crop that barely pays cost of production. To my mind it is not less senseless than would be the miner who would clean up his sluice-boxes and save the pebbles and let the gold go down the gulch.

If you agree with me that the beautiful Santa Clara valley set down in Illinois would have incalculable value, tell me why it has not approximately that same value here, only four days' ride from Chicago?

WORTH $1000 AN ACRE.

If Mr. A. T. Hatch's Suisun orchard could be set down in Iowa, with all its delightful surroundings and all its exuberance and wealth of fruits, would anybody hesitate to pay $1000 an acre for it? Can you give me a satisfactory reason why it may not be nearly as valuable here—not for wheat-growing, but for prunes and peaches and almonds and pears; in short, for California fruits?

FRUIT-GROWING SUPREME.

I am endeavoring not to depart from my purpose, which is to exalt fruit-growing to its well-earned supremacy. If I appear to diverge, it will be seen that it is only to give you a fresh view point. What the fruit-grower has unselfishly labored for in all these years has been, and is, to build up a great and powerful commonwealth, by planting industrious families on many of these unpopulated, monotonous, dreary and unprofitable wheat-fields and waste places, and convince their owners that when the Creator selected California as the only place on His footstool where every fruit of every zone might be grown, He intended that we should supply the wants of the teeming millions who were to dwell on the American continent, and He did not mean that these matchless gifts were to be prostituted to ignoble and profitless uses.

FRUIT VERSUS WHEAT.

The RURAL PRESS, one of the most watchful guardians of our agricultural and fruit interests, in a recent issue endeavored to console the wheatgrower with the hope of getting $1.50 for his wheat if he would hold a little longer, basing the argument upon the narrow margin of reserves now in store. That very able financier and public-spirited citizen, Mr. Albert Montpelier was called to the witness stand to support the hypothesis. I hope they are right, and I wish the wheat-grower could get $2 for his wheat. But would Professor Wickson or Mr. Montpelier counsel wheat growing as against fruit-growing in California? Certainly not; and for the obvious reason that they both fully realize how vastly more important and more profitable fruit-growing is than wheat-growing.

Indeed, it may be conceded that wheat may be grown here at a profit, but the fact remains that fruit is more profitable than wheat can possibly be under any conceivable conditions.

But what evidences have we that these twenty millions of dollars received from fruit

in 1890 produced more profit to the fruit-grower than the wheatgrower got for his wheat, and what evidence that fruit-growing is doing what we claim for the State?

There are many ways to prove this. One very effective means is to take localities where fruit-growing has become a leading industry and compare them with those localities where the change to fruit has not become marked.

I need not refer to all the counties where the evidence exists; a few will serve the purpose. The proof rests upon the concurrence of two facts; namely, increase in assessed valuation and increase in the population.

I will take five counties in which fruit-growing is a distinctive feature.

County.	Pop. 1880.	Pop. 1890.	Ass. Val. 1880.	Ass. Val. 1890.
Los Angeles	33,381	101,454	$16,368,649	$39,475,025
San Bernardino	7, 86	25,497	2,676,973	22,410,440
San Diego	8,518	34,937	3,525,258	30,118,503
Fresno	9,478	32,026	6,354,596	36,110,343
Santa Clara	35,039	48,005	27,603,240	53,193,579

In population Los Angeles gained 203 per cent; San Bernardino, 227 per cent; San Diego, 305 per cent; Fresno, 237 per cent; and Santa Clara, 37 per cent; and the increase in valuation ran along *pari passu*.

Now, let us consider four wheat counties.

County.	Pop. 1880.	Pop. 1890.	Ass. Val. 1880.	Ass. Val. 1890.
Colusa	13,118	14,640	$12,440,380	$10,659,809
Butte	18,721	17,939	10,713 426	15,839 385
Tehama	9,301	9,916	4,199,998	9,121,975
San Joaquin	24,349	28,629	17,377,129	32,080,117

Colusa gained in population 11 per cent; Butte lost; Tehama gained six per cent; and San Joaquin gained 17 per cent.

WHEAT A POOR ATTRACTION.

It is the proud boast of Colusa that she is the largest wheat-producing county in the world. She has gained 1522 people in ten years. But what profiteth it the State that she has broad acres of wheat and no growth of population?

Compare San Joaquin and Fresno. The former is a great wheat-growing county, and has not yet developed fruit distinctively. Fresno raises a large amount of wheat also, but has developed fruit largely. Of the two counties, San Joaquin is the more favorably situated as to transportation facilities, and in all respects is equal to Fresno, and they lie near each other with much the same conditions of soil and climate.

Fresno has increased 230 per cent in population, and San Joaquin only 17 per cent. San Joaquin has added less than 4000 population in ten years, while Fresno has added over 22,000.

If you will study the drift of population in the valley regions of the State, you will find it has gone to the fruit-growing counties almost entirely; and thus confirms what we say, that fruit and not wheat is to build up California.

I take no pleasure in pointing out to you another remarkable contrast between these two imperial counties. But we are after the truth, and often nothing but the truth will awaken and must be spoken however unpleasant.

SAN JOAQUIN COUNTY.

San Joaquin county in 1880 had residing in towns and in the city of Stockton 11,822 inhabitants. In 1890 she had increased her urban population to 17,730 inhabitants, a gain of 5908.

The total gain in ten years for the whole county was 4280, which is 1628 less than the gain in the towns and cities; and this means that there is an actual loss of rural population of 1628 in ten years, when there ought to have been a gain, and would have been, in my belief, a gain of eight or ten thousand if water had been brought on to the parched wheatfields, and the land surrendered in greater part to fruit. Stockton alone has received four-fifths of this gain, and is a lusty and very promising city, but how much stronger it would be with ten thousand more people pouring their wealth into her coffers.

Now, turn to Fresno county. In 1880 there resided in the towns 1417 inhabitants. In 1890 they had increased to 13,635—a gain of 12,218. The total gain in ten years for the whole county was 22,548, which is 10,330 more than the gain in the towns, and this means 10,330 added to the rural population. Fresno added in ten years to her rural population more people than were in the county in 1880, while San Joaquin went back and lost 1628.

Precisely the same thing has happened in Colusa and Butte and Tehama and other counties where wheat is the staple; the rural population has fallen off.

This emphasizes in the strongest possible manner the point I am making, and should awaken the solicitude of our people.

IF NOT FRUIT, THEN BABIES, ETC.

I must not be blamed for this diagnosis. I may be wrong in my remedy, but I am right as to the disease. Let me say to San Joaquin in all truth and soberness, as I am constantly saying to my own county, there is something wrong. Your broad, rich and beautiful acres should have more people instead of less after ten years that have added nearly forty per cent increase to the rest of the State. If you won't take our advice and plant more fruit, at least try and raise more babies.

But I am not through with the wheatgrower. It will be observed as a mark of prosperity among fruitgrowers, compared with the conditions present among many of the wheat-ranches, that an atmosphere of thrift and comfort and even luxury surrounds the orchard regions, while the wheatgrower is content with the same roof that sheltered him twenty years ago, and his hired men continue to roost in the hay-mows or migrate after the harvest and disappear with the meadow larks to reappear from God knows where the following season.

LAZY MEN NEED NOT APPLY.

A slothful, or lazy, or unambitious man, has no business with an orchard. He must be observant, industrious, intelligent, a reading man, and he must have to some extent the mercantile faculty. The wheatgrower cannot make his market; it is made for him. The fruitgrower can make his market, by superior cultivation and care of his orchard and handling his product. His calling develops his higher faculties and makes him a superior citizen.

Again, the products of the orchard will bear all rail transportation to the centers of consumption, while wheat can go only by water. Our fruit may be shipped green or dried, and still yield profit, and it is a question in which form it is the more profitable. We thus have the markets of the world, while our wheat has but one point of consignment, and that 15,000 miles away. Our green and dried fruit may now be placed in Liverpool in 15 days, while our wheat takes four months; and the farmer must bear all the cost of this delay in reaching the consumer. And this item alone means half a year's interest on all his crop. Again, there is more certainty in the fruit crop than in the wheat crop, while prices are at least equally stable. Again, a family can be well-supported on ten acres of fruit, and upon less invested capital than in wheat culture. A family can produce more in pounds and in value on ten acres of fruit than on one hundred and fifty acres in wheat. This is easily demonstrable.

Ten thousand pounds of green prunes per acre, or 3330 pounds of dried, is a conservative estimate. Twenty bushels of wheat, or 1200 pounds, is a large estimate per acre. The farm value of the prunes this year is $330. The farm value of the wheat is $15. Our peach orchards will show as many pounds green as of prunes, with half the dried product of prunes worth this year $200 per acre.

We have low prices for fruit at times, but never down to cost of production. There never has been a time when good fruit, well-handled and cured, did not bring a good profit.

There is, in fact, but one question that admits of discussion bearing upon the fruit industry of California. We have advanced beyond the experimental stage in all fruit products of the State from Shasta to San Diego. Oranges, lemons, figs, almonds and other nuts, prunes, cherries, apples, peaches, apricots, pears, plums, nectarines, olives and foreign grapes, are all grown in commercial quantities for 700 miles north and south. Our trees come into bearing quickly, are prolific bearers, are long-lived and healthy. The fruit is large and bears shipment green for long distances, and retains much of its lusciousness and flavor and attractive appearance.

NO DANGER OF OVERPRODUCTION.

The sole factor that has not passed beyond dispute relates to the question of overproduction and consequent loss of market. We had this confronting us in 1880, when we exported by rail only 546 carloads, and we had it in 1891, when we shipped 20,706 carloads, including shipments by sea. Strangely enough, there are fewer persons who doubt the market than there were in 1880, although we export 40 pounds now where we shipped one then.

There is one very convincing fact to my mind that the danger of overproduction is imaginary. It is this: Our horticulturists are deeply interested in the question; they are, as a class, reflective and intelligent—I think I may truthfully say, a very superior body of men. Their interest and success are deeply involved in knowing the truth of the matter; they are not land agents, and few of them have land for sale. Every personal consideration would lead them to discourage planting, if they thought there was any danger of overproduction. But they not only do not discourage, but are doing all they can to encourage it, and are extending their own plantings where they can.

Mr. W. H. Mills, a high authority upon the question of distribution, has recently pointed out the fact that our fruits do not reach over 5,000,000 of our citizens out of the 65,000,000 who will buy them if they can get them.

We shipped by rail to the East in 1891 of green fruit less than three pounds per capita of our population; of dried fruit, one pound per capita; of raisins, about two-thirds of a pound per capita, and of canned fruits about three-fourths of a pound per capita—about five and one-half pounds per capita of all kinds.

It must be obvious to all that this is only tasting fruit, not eating it. But our population is increasing at the rate of over one and a half million people annually. It will take a thousand acres of new orchards every year to keep pace with this increase alone at the present small per capita consumption. If, however, our fruit is consumed by five million people, they must buy one hundred pounds per capita, which shows our utter inability to overproduce when we shall have reached all the consumers.

OUR MARKET GROWING.

President Andrews, already quoted, says: "Our own country, adding to its numbers by nearly three per cent a year, bids fair to approach 90 millions by 1900."

Think of 30 million people to be added in eight years; it is simply apalling; and California must supply them with fruit. Does it not seem more of a problem whether we can do it, even by our rapid planting, than whether we can find purchasers?

But we must not overlook another important fact, that this increase of human beings will not gather along the Atlantic coast. They will push into the great West. The center of population is moving steadily westward. The census of 1890 shows that nearly one-half of the increase since 1880 has been west of the Mississippi river. We read the large figures of shipments of our green fruits and think them phenomenal, and hence conclude that we must necessarily glut the market shortly. You will be surprised to know how small a figure our green fruit cuts at the East. A copy of the proceedings of the Western New York Horticultural Society for 1886 came into my hands. Nineteen counties were represented, but only nine gave data from which I could calculate shipments of fruit for 1885.

I found, however, that the nine counties had shipped 387,558,820 pounds of apples that year to a market near home.

Now, California has never sent out in any one year more than half this number of pounds of green deciduous fruits and oranges; indeed, our entire export of green, dried and canned fruit by rail and by sea in 1891 fell short of the number of pounds shipped from nine counties in the State of New York in 1885. The total yield of apples from this region in a good year would probably reach 40,000 carloads.

DON'T HAVE TO WAIT LONG YEARS.

Let me tell you another thing which may comfort those who doubt the profitableness of fruit-growing. Orchardists in western New York claim to make a net profit of $200 to $300 per acre. A four-acre orchard planted in 1833 was reported as yielding $400 per acre. Another orchard bore its first good crop after twenty years. In Monroe county an orchard nineteen years old reported $400 to the acre. And yet our Eastern brethren accuse us of violating the ninth commandment when we tell them we get two or three hundred dollars per acre from our orchards, while the fact is we suppress the truth, which is that we often get twice that; and we don't have to wait twenty, or ten, or even six years.

At the risk of pushing the argument beyond reasonable limits (for the question of our ability to sell our fruit is certainly an important one), I must give you another illustration. I have carefully inquired to learn the consumption of fruit by a family of five here in California, and I find that it consumes, throughout the year, in all forms, an average of one pound per day, or 75 pounds per capita for the year. California now consumes 25 per cent of all we grow, and our State only contains about one fiftieth of the population of the Union. We consume, per capita—and we pay good prices for it—75 pounds of our fruit, while we are selling without the State only 5½ pounds per capita of all kinds. I am utterly unable to turn the light upon this question from any direction without seeing a practically unlimited market.

The *California Fruit Grower* of November 5th publishes an extract from a letter written to the *Southern Cultivator* relating to the Georgia peach. The claim is made that the Georgia peachgrowers realize a profit of $150 to $300 per acre, and some valuable facts are given to justify the claim.

They pack in cases of six one-gallon baskets, weighing about 40 pounds in each case, 500 cases to a carload. The freight to New York is 35 cents per case, or $175 per car; refrigeration, 18 cents; making 53 cents per case in all, or $265 per car. The cases are set down as costing 24 cents made up; picking, packing and hauling to the railroad, about 10 cents more, making 35 cents f. o. b. cars. The correspondent further states that a carload of good peaches usually nets the grower about $1000. He further reports sales of 480 cases by Snow & Co. of Boston, in August, when Delaware and California peaches were in the market at $1721.75 gross. Allowing usual commissions, it will be seen that $1000 per car net to the grower was an inside estimate.

We ought not to be obliged to make affidavits about our profits when the New York applegrower and the Georgia peachgrower claim an unchallenged profit of two to four hundred dollars per acre. You will observe that the transportation cost from Georgia to New York is greater than ours from here to New York.

No one can doubt the superiority of the California fruit orchard for certainty of crop, quantity and quality of fruit. Why, then, should any one doubt the profitableness of the industry?

Mr. Mortimer Whitehead, special agent in charge of Division B of Agriculture of the Eleventh Census, which includes horticulture, at a meeting of the American Pomological Society in 1891, stated that the peach acreage in the United States was found to be 597,736; the value of the product, $76,160,400; and that over $90,000,000 were invested in peach-growing in the census year of 1889.

Here is evidence that the American people expend about $1.25 per capita per annum for peaches alone. It is also evidence showing that the peach orchards as a whole yielded about $130 per acre. Large as is the peach industry, it is less than one-tenth of the whole fruit industries. Mr. Whitehead stated that the investment in horticultural pursuits will be shown to be more than $1,000,000,000.

Surely, the humble fruitgrower may now claim the right to stand beside the noble army of agricultural toilers whose mission has been to supply the world with articles of food necessary to human existence, and whose calling has been the theme of poets, the care of statesmen, the solicitude of governments, and always will be, as it always has been regarded as the basis of human progress and human happiness.

THE REAL PROBLEM.

The truth is that the problem with us is one of transportation and distribution. And this involves the problem of bringing the producer and consumer nearer to each other. We are content with one and a half cents a pound for almost any of our green fruit. It will afford a good profit at one cent. And one and a half cents for carriage, and two cents to the middlemen and for packing, and we have California fruits in the hands of consumers at five cents per pound, and this means a three-ounce peach for a cent or a dozen apricots for a nickle, or three large Bartletts for ten cents, or a nice dish of fruit for a family for a quarter. We all know that people will eat fruit in quantities at reasonable prices. The whole solution of the question rests with us in improving and cheapening transportation costs, and not giving the lion's share to the middlemen.

FIFTEEN DAYS TO LONDON.

A new and important factor has been introduced in the demonstration that our green fruit can be laid down in good condition in London and Paris and Hamburg in 15 days. Our dried and canned fruits are also being well received abroad, and this will add immensely to our markets. I think I need not pursue this point further. Many are deterred from engaging in fruit culture, because of the time consumed in building an orchard, because of unfamiliarity with the occupation, and because of the cost.

Now, let us look at these objections a moment. Given the land (which can be bought from $25 to $200 an acre, and if you are content to start in newly developing regions the cheaper land will be found just as good as the dear)—I say, given the land, you can have a paying peach, or almond, or apricot orchard by omitting one summer-fallow crop of wheat—in other words, in four years; in five, a paying prune orchard, and in six, a paying pear orchard. You will get fruit sooner, and considerable of it. From this time each year adds to the value.

NO MYSTERY IN FRUIT GROWING.

As to your unfamiliarity with the business, you have only to study the methods of suc-

cessful growers around you and apply the ordinary rules of soil tillage and your good common sense, and nothing more. There is no mystery in the art of fruit-growing.

As to the cost, you must consider your investment and its character and value. You sow wheat, and put seven or eight dollars into the ground, and in two years take away twelve or fifteen at most, and must then repeat the process. Every planting is a new investment and a new venture.

You plant an acre of trees, and they will cost you at the end of the first year $30, which you can reduce to $25 by your own labor. At the end of the second year you will have paid out $10 more per acre, the third $12.50, and the fourth $15—in four years $67.50. If you have had some bad luck you may add enough to make $75 per acre, or possibly $80.

The fifth year of apricots, peaches or almonds you should have a gross income of $150 per acre, at least half of which should be profit.

The same acre in wheat would have given you two crops in the four years, yielding you a profit of $15, which is far more than the average, and you would probably get one volunteer crop, making $20 in all. But at the end of the fourth year you have nothing but the land, less productive.

In the case of the orchard, you have built a permanent plant that needs only care and tillage, with an increasing income, and greatly disproportionate to the income from wheat.

Viewing the matter from the standpoint of interest on the investment, and there is increasing advantage in the orchard.

I think fruitgrowers will corroborate my statement that I have underestimated the orchard and overstated the wheatfield.

DO NOT ABANDON WHEAT GROWING.

I leave the subject with one or two observations. As fruitgrowers, we do not counsel the abandonment of wheat-growing in California, by any means. We only say that much of the wheat land should be subdivided and placed in the hands of more people, and subjected to higher and more profitable uses; that our soil and climate are adapted to the growth and production of many valuable fruits that cannot be elsewhere grown in the United States, and that we can find a much more remunerative market than our wheat can ever find; that profitable fruit-growing means small holdings and increased population and a better home market for wheat; that one acre in fruit will yield more profit than 15 acres in wheat; that fruit-growing is a higher order of agriculture, develops a more thoughtful and intelligent man, and conduces to better citizenship by reason of this higher intelligence; that it will tend to hold our children away from the cities by making rural life more attractive. In short, it will add to the happiness of the people, and wealth and power and prestige to the State.

PATRONS OF HUSBANDRY.

National Grange, P. of H.

Twenty-Sixth Annual Session at Concord, N. H.—Full Attendance.—Items by the Wayside.

CONCORD, N. H., Nov. 20, 1892.

TO THE EDITOR:—California to New Hampshire in seven days, with six hours for rest at Chicago, was the time required for our trip. The trip was a delightfully pleasant one, without rain, mud, dust, cold or hot weather. Between Chicago and Montreal a trifle of snow had fallen, but not enough to make one feel cold, or to prevent farmers from plowing. As we came through the States of Kansas, Nebraska, Iowa, Illinois and Indiana, evidences of a fruitful crop-year were everywhere, along the line of the railroad, evident. Coming, as we did, through Canada, a good opportunity was offered to observe the manner of farming in our neighboring country. To the credit of the Canadian farmer be it said, he is well equipped, systematic and progressive. Good teams, improved machinery, stable and convenient buildings, and fences in ship-shape, all foretell his industry and thrift. Most of the buildings, both city and country, are built of brick or stone. Roads are well graded and macadamized and evidences of permanence are everywhere observable.

Interviews with many Canadian farmers all led to to the conclusion that they expect to get direct benefit from the legislation of the 53d Congress of the United States of America, from which body they expect the repeal of the McKinley bill.

On arriving at Concord, we found the city beautifully ornamented with flags, bunting, banners, streamers, mottoes and other devices of friendship. Brothers Past Masters Stinson and McDaniel of New Hampshire State Grange, assisted by Bro. Batchelder, the efficient worthy master, and his able corps of officers and members were on hand to welcome the Patrons. And the welcome was warm, hearty and fraternal.

The 26th annual session of the National Grange was opened at 11 A. M. Wednesday, November 16th, 1892, in Representatives' hall of the Capitol building, Concord, New Hampshire, by Worthy Master J. H. Brigham. All officers were present except Worthy Gate Keeper, Bro. W. H. Nelson of Tennessee, and Worthy Ceres, Sister J. H. Brigham of Ohio, both of whom were too sick to attend. Twenty-six States were represented at the first roll call, and the number has since been increased to 28. Four States which are entitled to representation are not represented, owing to the sickness of the representatives. The attendance of visiting Patrons has not been so large for many years past.

The usual routine business has been transacted, with the ordinary dispatch. Several important subjects have been introduced and referred to the proper committees. Lively debates are sure to follow when the subjects are reported back for final action by the National Grange. Reports of masters of State Granges show the Order to be in a prosperous condition. Reports of officers of National Grange show the financial condition of that body to be satisfactory. The executive committee have not yet submitted their report. The public reception tendered the National Grange Thursday P. M. at the Opera House was a brilliant affair. An immense crowd was present and some eloquent speeches were made. Friday afternoon and evening were devoted to degree work. At 2 P. M. the sixth degree was conferred on a class of 882. At 4 P. M. the seventh degree was conferred on a class of 869, and at 8 P. M. the same degree was conferred on 500, making 1369 in all. This is the largest number of Patrons upon whom the degrees were ever conferred at any one session of the National Grange.

Saturday the National Grange went on an excursion to the White Mountains, the guests of the Concord Commercial Club. Sunday all went to church in the morning. At 3 P. M. memorial exercises were held by the National Grange in memory of Bro. Wm. M. Ireland, one of the seven founders of the Order of Patrons of Husbandry, and Bro. W. G. Wayne, Past Master of New York State Grange.

NOTES.

Brother John Trimble, the obliging and efficient secretary of the National Grange, sends his love to all California friends, among whom, he says, he knows the sisters predominate. Bro. W. R. Williams of North Carolina feels exactly as does the worthy secretary on this proposition.

Colorado, Indiana, Massachusetts, New Hampshire and Oregon are represented by new faces at this session.

Wisconsin's new representatives are not present.

A member of the executive committee will be chosen, vice Brother Leonard Rhone, whose term expires by limitation.

It is yet doubtful where the next session will be held.

The World's Fair, the savings and loan scheme, and the Temple to Ceres, are subjects that will probably provoke a lively discussion.

The weather is lovely.

Hotel accommodations splendid. New England hospitality unbounded.

The session will probably continue for the week.

Have met many who have friends in California.

Everybody at the National Grange sends kindest regards.

The Order in New England is prosperous.

More anon. E. W. D.

The Annual Address.

The Master's address was, by special vote, given in an open meeting. It consisted of an able and comprehensive statement of the condition of the Order, and suggestions as to the duties of the Grange to the country and to itself, as the representative of the social and financial interests of the greatest leading industry of the nation. We are unable, from lack of space to give the address in full, but condense as follows: After expressing in a few warm words, a fraternal greeting and a saddened remembrance of those who were present, so full of love and life, at the last New England meeting, seven years ago, but who will meet with them no more until all shall awaken in the light of the "eternal morning," he said: "Our members come and go, but the good work which we have commenced will go on forever."

The condition of the Order and the financial standing of the National Grange is good, for "we pay as we go." The reports show increasing numbers, careful observance of principles, a conservative spirit in all things, increased influence of the Order and no entangling alliances with other associations.

In agriculture there is much to be thankful for; but there is important work to do. The true husbandman asks for no change in God's decree of work for bread, but he does ask for "an honest share for wife and home, of what the harvest yields." How to obtain that share is one of the problems which the Order seeks to solve.

"Surrounded as we are, by thoroughly organized forces in the professions, as well as in every department of business, we feel that there is no sure way of securing our own, except through intelligent cooperation on the part of the farmers.

"If commerce and trade exact too much for the service rendered, we can successfully resist such exactions. If agriculture is unequally taxed we can enforce equality. If officials are careless or extravagant in managing the affairs of Government, we can retire them and make better selections.

"The evils and hardships of which we complain are but the results of our negligence. If we wish reforms we must reform our own methods. The people must resume the control of the Government and fully protect in all their rights, the toiling millions whose labor produces the wealth of the nation. In all real reforms our Order will not be found wanting. Much has been accomplished already."

Among the results of the efforts of the Grange up to the present time, the master enumerated the following: "The elevation of the Department of Agriculture; the oleomargarine law; the interstate commerce law; the establishment and maintenance of agricultural experiment stations; the meat inspection law; the adaptation of the weather service to the needs of the farmer; the increased protection secured to the farmers in the late revision of the tariff laws; the opening of the markets of other countries to the products of agriculture; the increased interest in agriculture manifested by the management of agricultural and mechanical colleges; and ballot reforms."

In accomplishing these results it is claimed that the Grange has set in motion, agencies which will be of incalculable value to the farmer and also to the country at large. It must be the future work of the Grange to keep watch and guard over this legislation, as there are interests in the country which bring about efforts antagonistic toward it.

In regard to the Antioption bill, which failed to pass the last Congress, the master said: "I believe that we should redouble our efforts to secure the early passage of the Washburn-Hatch Antioption bill at the next session of Congress. It may be possible that we will be disappointed in the results; but if so we shall have tested one of the methods proposed for the relief of agriculture. The effect of gambling in farm products can never be known until it ceases and trade resumes its normal proportions."

The educational influence of the Grange is the great central object of our Order, and it should be its purpose to teach better methods in all branches of work including all that pertains to good citizenship. In this, great progress has already been made. One of the most important factors in this work is the Grange press, and special efforts should be made to extend it.

Woman's work in the Grange has already accomplished much and demonstrated the wisdom of continuing and extending it.

The free delivery of mail matter to the rural population was urged as a duty of the Government. The Grange has already taken a decided stand in the matter. The only possible objection to it is its cost, and when that is properly considered it will be seen that it will prove a great saving to all outside of the larger towns and no increase to their burdens. It will do much in the way of educating the people of the country and make them more contented to remain in their rural homes.

In regard to capital and labor, the farmers are deeply interested in the relations which exist between the employer and employe, and the Grange views with apprehension the disagreements which are too frequent, and against the real interests of all. We believe the "laborer is worthy of his hire, and that steady work and fair wages are of vital importance, not only to the laborer, but to the people as well. We believe that employers can better afford to accept losses which result from temporary causes than to provoke a conflict with men whose labor has in previous time brought great profit to the employer. We have no sympathy with capital organized to destroy labor organizations formed to promote the interests of workingmen. The right to organize for proper ends must be maintained. But when labor organizations make unjust and unreasonable demands they must not expect the support of conservative people; and when they resort to violence to enforce their unjust demands, they must expect to meet the united opposition of all law-abiding citizens. Conservative demands and respect for the rights of all concerned will give to labor the moral support of all good citizens. Labor unions are not alone in making unjust and unreasonable demands. Capital is too often selfish, cold and merciless, and is sometimes used to corrupt legislators and even courts. The Grange has no sympathy to waste upon "soulless corporations."

The people should rule, and all legislation should reflect the views of the people and carry out their views as expressed at the ballot-box. This system, if properly carried out, should afford perfect justice and security to all. Four years ago the verdict of the people was in favor of a protective tariff. In the campaign just closed the people were emphatically against a tariff. No one should question the right of the people to change front on this question; and it now becomes the duty of our legislators to enact laws in conformity with this last popular expression.

In continuing this discussion the master says: "It is probably a misfortune that the opposite policy was not accorded sufficient time in which to test fully the working of a law framed to protect all American interests. But the right to change front is one which the people must not surrender. All our Order will ask of the new administration is that the same consideration given to other interests be accorded to agriculture.

"If the producer on the farm must compete with cheap labor, let the producer in the factory and mine do the same—this is but justice to the farmer.

"Protection has been advocated in the name of labor, and the returns indicate that it is labor employed in manufacturing which has declared against it. Let the decision be regarded. Let the cleaver of free trade descend upon every protected industry and not alone upon agriculture. The farmers have become accustomed to neglect and unequal legislation, but they are not wholly indifferent to it, and they may at some future time reach a point where partisan associations and prejudice may not be strong enough to prevent them from resenting unjust discrimination against the agricultural interest."

In regard to the arid land question, objection is made against the expenditure of large sums by the Government in that direction, for the reason we still have an abundance of land for newcomers that does not need irrigation; when that is exhausted, it will be time enough for Government to take up the question of expending money to render arid lands fit for cultivation.

The financial situation of the country is referred to at considerable length. The master says: "It is not the province of our Order to interfere with the freedom of, or dictate what any member shall believe upon any economic question, but rather to encourage investigation and thought, while at the same time we counsel conservative action when important changes are proposed. 'It is oftimes better to endure the ills we suffer rather than fly to those we know not of.'

"The farmers are vitally interested in all questions relating to the circulating medium of the country, and full and free discussion of everything pertaining thereto is desirable. We should avoid all reflections upon the patriotism or integrity of those who differ with our views, recognizing the right of every man to his own opinions. We should urge all, however, to investigate for themselves rather than adopt the opinions of others."

The remarks made by Worthy Master Adams before the National Grange 17 years ago were referred to and commended to the thoughtful consideration of all. The years that have elapsed since that address was made bear testimony to the truths then enunciated, which were to the effect that for many years men have been torturing their brains to devise some plan whose talismanic power might transmute bits of paper into countless millions of actual money, which should go directly into the pockets of the poor and needy; but all such efforts have proven a veritable "will o'the wisp," which ever evades the clutches of those who would secure it.

In order to bridge over the immense destruction of values brought about by our civil war, Government issued a large volume of irredeemable paper money, which served for a time to conceal our poverty, but by its use values became still more confused, and we drifted far away from the world's standard. It brought us an inheritance of debt, extravagant habits and a distorted judgment of values. Out of this trouble no royal road has been found. Only so far as we have returned to habits of industry and economy, guided by intelligence, have we regained our wealth and removed our burden of debt.

From the above and the general experience of the world, Worthy Master Brigham infers that gold and silver are the two commodities best adapted for the measure of value. Congress may determine the number of grains in a coin, but a higher law steps in and fixes the value. If the coins are unequal in value, the one of higher value will be hoarded, and the lowest will find its way into most general circulation. No legislation can prevent it. There must, of course, be convenient representations of money, and experience has shown that Government notes are the best. Care, however, must be taken in the issue of such notes, and they must be kept interchangeable for coin.

The subject of practical work—the reduction of theory to practice, to give substantial aid to members of the Order—is urged. Much in that line has already been done, but it is thought that other and further help may be given. A committee has been appointed by the master to take this matter into careful consideration and report at an early day. Commendatory allusion is made to the work of the lecturer and secretary of the National Grange.

The master concludes his address with the hope there will be a general participa-

tion in the discussions and that everything will be done in a careful and harmonious manner.

The open session was closed after the delivery of the address, and the Grange was immediately opened in the fourth degree for the transaction of business.

The report of the overseer, Hiram Hawkins of Alabama, was called for and especial reference made to the accomplished and prospective work of the Grange on the Pacific coast.

This was followed by the reading of the reports of the steward, E. W. Davis of California; Pomona, Mrs. M. J. Thompson of Illinois; and the treasurer, F. M. McDowell of New York.

That of the steward was general in character, being a review of the conditions of agriculture and the effect upon it of the work of the Grange.

The report of Pomona was in the nature of an essay upon the domain of woman, having direct reference to the position she fills in the Grange, and representing the Goddess of Fruit.

The treasurer's report showed that the total amount of receipts for the year was $23,242.43; expenditures, $23,701.37. The total amount of deposits was $50,000.

The lecturer, chaplain and assistant steward asked for an extension of time upon their reports, which was granted.

The roll of States was then called for the introduction of business without debate, and a resolution was introduced by E. W. Davis of California, which favors the prosecution of the Nicaragua canal scheme.

During the evening session, the reports of the masters of the State Granges were read and considered. These reports related chiefly to Grange-work in the several States. A resolution, introduced by State Master E. W. Davis of California, was read and adopted, calling for an address by Prof. Dodge of the U. S. Agricultural Department as a special order for Friday.

Probably the most interesting event of the session was the open meeting held on Thursday, arranged for the purpose of extending to the Grange a formal welcome from the State, the city and the State Grange. National Master Brigham presided, and after stating that the meeting was held upon the invitation of the New Hampshire State Grange, the master of that Grange, N. J. Bachelder, was called upon to extend the invitation of his Grange to the National Grange, which he did in most fitting words, to which a brief but eloquent response was made by S. L. Wilson, master of the Mississippi State Grange.

Hiram A. Tuttle, Governor of New Hampshire, was next called upon to welcome the Grange in behalf of the State. He remarked that it gave him heartfelt pleasure to welcome to the State and to the hearts of its people the representatives of an Order which had done so much to elevate and improve the great industry which it represented, and he was especially happy to be able to state that three-fourths of the delegates to Congress from New Hampshire were members of the Grange.

Master Brigham replied in eloquent terms, as he voiced the thanks of the Grange for the reception so heartily tendered by New Hampshire's Governor.

Mayor H. W. Clapp was next introduced and tendered a brief but hearty welcome in behalf of the city, to which response was made by Mortimer Whitehead of New Jersey, the lecturer of the Grange.

A welcome was also tendered in behalf of New England, which was followed by several other addresses by distinguished men in and out of the Grange, and from various parts of the country, the meeting being concluded by the singing of "America" by the entire assembly.

The special order for Friday morning was an address from Prof. J. R. Dodge, Statistician of the Agricultural Department at Washington. Prof. Dodge is a pioneer in the Order and a member of Potomac Grange, No. 1, the first ever organized. The address was replete with information and suggestions as to the proper ways and methods to be taken up by the Order, and the great amount of good that might be accomplished. The speaker concluded with the assertion that the Grange rests on a basis of granite, and not on sand; hence it will be perpetuated with increasing honors and influence. We shall refer to this speech more fully in a future issue.

Following the address of Prof. Dodge, Alpha Messer, chairman of the committee on agriculture, made a very exhaustive and able report on the separation of agricultural and mechanical colleges from classical colleges, and 5000 extra copies of the report were ordered printed. So great was the crowd in attendance, that to accommodate the hundreds that could not get into the opera house, a public meeting was held in Phenix hall, at which addresses were made by many prominent members of the Order.

On Tuesday, previous to the first meeting of the Grange on Wednesday, the executive committee audited the accounts of the treasurer, which were found most satisfactory, there being a balance on hand of $74,000. McDowell, the treasurer, was one of the founders of the order and has held his office 26 years, during which time upwards of $2,000,000 have passed through his hands. The committees for the session were appointed by the worthy master. We notice that E. W. Davis, Master of California State Grange and Steward of the National Grange, has an appointment upon three committees—those of publication, the ritual and a special committee on investment and loan association. Mrs. Davis has a place upon the committee on foreign relations and on mileage and per diem. Mr. D. L. Russel of Washington was placed upon the committee on order of business and Mrs. Russel on that of Woman's Work in the Grange. Judge R. P. Boise of Oregon upon committees on the good of the Order and on constitution and by-laws.

The Secretary's Column.

By A. T. Dewey, Secretary State Grange of California.

Bro. John Touhy has been elected master of Tulare Gragne. Bro. T. is one of the solid men of the Order. We shall look for continued prosperity for Tulare Grange. The record of Bro. E. C. Shoemaker as a dutiful master will be hard to beat. He has attended every meeting during his mastership of two years, traveling 24 miles in going and returning.

Election of Officers.—Every Patron should feel interested in the election of officers for the ensuing year. Be present and use your best judgment in voting impartially. This is a good season to revive or increase interest in your own Grange. Try and make a good start for 1893.

Secretaries are requested to make early returns of Grange elections on the blanks recently forwarded from this office.

Wanted.—The address of Mrs. Caroline Schaper, whose sixth degree certificate we have been unable to deliver. She took the degree in October, 1889, at Sacramento.

A Timely Letter.

Sacramento, Nov. 26th, 1892.

To Grange Correspondents:—In a recent circular to the Committees on Woman's Work, attention was called to the advisability of having a correspondent in each subordinate Grange, and a few words may not be amiss as to what is desired for publication in the Press.

There are many occurrences

, but send only such as will be of interest to members of the Order generally, and write them as concisely as possible. In reports of your meetings, note the ideas expressed, and the work planned or accomplished, rather than the social features, the plan of entertainment, rather than a list of participants. If your Grange unfortunately loses a member by death, make a note of it in your report, but remember that while memorial resolutions are eminently proper and appropriate, they should be confined to the records of your Grange, and to publication in local journals. Only essays or papers of pronounced merit should be sent to the Grange paper; it costs just as much to print a poor one as a good one, and the editor should not be expected to publish in the Grange columns, matter that would be excluded from other pages.

The Rural Press is a first-class journal, filled with excellent reading matter, and we cannot afford to have the Grange fall below the standard adopted for other departments; while we desire it to advocate the Grange cause, we must bear in mind the fact that it is a journal in the hands of hundreds of readers who are not members of the Order, but who are eligible to membership, and we should advocate that cause ourselves by the character and quality of the articles we furnish for our department. Write our motto "Excelsior" and then put forth our best efforts, and we shall not regret the labor, that the Grange may reap benefit. Fraternally,

Hattie S. Jones,
Chairman State Committee Woman's Work.

Note from Past Master Steele.

Past Master I. C. Steele writes to the editor from Pescadero, under date of Nov. 26th, as follows:

The Grange department of the Rural Press is always of interest to me, and I certainly wish the Rural Press, as well as the Grange, all the success it deserves. It comes to me as an old and valued friend. I am happy to commend the candor and fairness shown in the discussion of public questions, and men in the midst of political excitement. To agree to disagree is a principle held in high esteem among Patrons of Husbandry.

But little of general interest in Grange circles has occurred here since the State Grange meeting. Pescadero Grange holds regular meeting twice a month (the 1st and 2d Saturdays). The meetings are fairly well attended and interesting to those who attend. The second meeting in October I was unable to attend. A class of two has been initiated in the fourth degree in November.

Arrangements are in progress for a suitable observance of our Grange anniversary on the 3d of December. All Patrons are cordially invited to meet with us at 12 M. on that day.

San Jose Grange.

What this Live Grange is Doing.—Its Plans for the Winter.

San Jose, Nov. 28, 1892.

To the Editor:—I have been requested to answer the following questions for publication in the Rural Press: "What is your Grange doing?" and "What are the members of San Jose Grange planning for the coming year?"

In answer to the first question will say, we are holding weekly meetings, and out of a membership of 150 the attendance is from 45 to 65, but on extra occasions from 80 to 100 are present, composed of as active, energetic and able, intellectually (the writer excepted), set of men and women as can be found in any deliberative assembly in the country.

They endeavor to keep abreast of the times by discussing the live issues of the day, not ignoring finance, politics or religion, always avoiding anything that savors of partisanship or sectarianism.

The members of San Jose Grange are built on broad-gauge principle and do not feel aggrieved if political or religious sentiments are given utterance to, that conflict with their preconceived ideas of what is right. Being earnest seekers after truth, they do not hesitate to follow it, though it lead them into the enemy's camp.

The widest latitude is given to the discussions of all questions brought before the Grange. These discussions are not always monopolized by the gentlemen, for the ladies often take part in them, and the result is many of them are becoming ready and able speakers.

Original papers are frequently read, each possessing considerable merit. Among the leading ones, as the writer recalls them from from memory, are: "The Granges and their Relation to Class Legislation," "The Political Possibilities of the Farmers," "The Grange from an Individual Standpoint," "The Experience of a Disembodied Soul in Search of God," "Capital and Labor," "A Description of the Garden of the Gods," and "A Description of the Passion Play," given by one who witnessed its performance by the simple-minded but intensely religious people in the mountains of Bavaria.

Many persons know, but all do not, that the "Passion Play" is the portrayal in real life of the arrest, trial and conviction of Jesus of Nazareth before Pontius Pilate, of the "Last Supper," of the betrayal of Jesus by Judas Iscariot, Jesus is seen in the Garden of the Gethsemane, in the attitude of prayer. A hooting and jeering rabble follows Him as He is bearing the cross to Mount Calvary; His crucifixion; the placing of His body in a sepulcher, guarded by Roman centurions; Its mysterious disappearance; Jesus appears to His apostles in an open chamber; and his final ascension.

The paper was so graphic in style and true to life that the listeners could almost imagine they could see all that was described. There were many others of equal merit.

Under the head of the "Good of the Order," the Grange is placed in charge of the worthy lecturer, which is the signal for the commencement of the literary and musical exercises, which always forms an important and pleasing feature of our meetings.

We have in the Grange the Young Ladies' Auxiliary to the Fruit and Flower Mission, to whom has been assigned an hour or an hour and a half of the first meeting in each month, during which a recess is taken and outsiders are invited in, and all are richly entertained with readings, recitations, vocal and instrumental music, making it a very enjoyable affair.

The young ladies of the auxiliary do not confine their energies to giving literary and musical entertainment in the Grange, but are often engaged in collecting clothing, bedding, provisions, literature, fruits and flowers, and distributing them to the inmates of the eleemosynary institutions and to the needy poor outside of these institutions.

The members of the auxiliary have abundant reason to know that they have gladdened the hearts of many poor sufferers with their timely offerings.

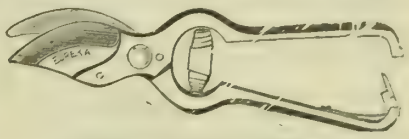
Among the most interesting meetings of our Grange are those questions relating to fruit culture, its preparation for market, time and manner of disposing of it, fruit pests, and remedies for the same. All questions relating to the fruit industry are intelligently discussed by men and women who have made a specialty of those branches of industry for years. The amateur fruitgrower can gain enough solid information at one of these meetings, if reduced to dollars and cents, to pay his dues to the Grange for the next 50 years.

To the second question: "What are the members of the San Jose Grange planning for the coming year?" As a Grange, they have formulated none. It is now circulating a petition to the legislature to change the law so that the widow will come into possession and ownership of all community property at the death of the husband. The following questions will probably receive the further consideration of the Grange: 1st. The two per cent land-loan bill. 2d. The Nicaragua canal to be controlled by the Government. 3d. The subject of a more diversified farming. 4th. In the future, as at the last local election, will pay more attention in selecting good men than to the success of the party which makes the nominations. San Jose Grange will undoubtedly pay its respects to the "nickel in the slot" scheme, said to emanate from the executive committee of the National Grange, advising farmers to "organize mortgage banks and borrow money from the Government, charging the farmer 2 or 3 per cent on loans and paying the Government half the amount received. If the Government is to loan on farm mortgages, why not loan direct to the farmer and let him have the benefit of the 1 or 1½ per cent? It is quite probable that many of those who are and have been connected with the National Grange for years have grown too far away from the farmer and should be relegated back to the people, that new men and new blood may be infused into the National Grange. Very respectfully,

Amos Adams.

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EUREKA and DEFIANCE.



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EUREKA SHEARS
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NOT WARRANTED.

PACIFIC.



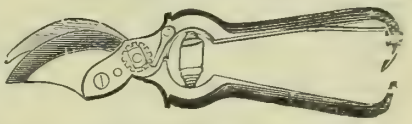
STEEL CLOCK SPRING.
RATCHET NUT. EXTRA BLADE.
H GH GRADE. WARRANTED.

PERFECT.



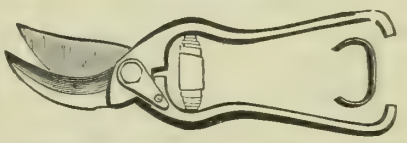
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DOUBLE FLAT BRASS SPRINGS,
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HIGH GRADE. WARRANTED.

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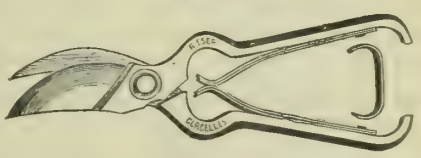
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DOUBLE FLAT BRASS SPRINGS.
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WARRANTED TO BE WITHOUT EQUAL.
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All dealers carry the above brands.

If they decline to get them f r you, we will send direct.

BAKER & HAMILTON,

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The Home Circle.

In Memory of John Greenleaf Whittier.

Dec. 17, 1897—Sept. 7, 1892.

Thou, too, hast left us. While with heads bowed low,
And sorrowing hearts, we mourned our Summer's dead,
The flying season bent its Parthian bow,
And yet again our mingling tears were shed.

Was heaven impatient that it could not wait
The blast of Winter for earth's fruits to fall?
Were angels crowding round the open gate
To greet the spirits coming at their call?

Nay, let not fancies, born of old beliefs,
Play with the heart-beats that are throbbing still,
And waste their outworn phrases on the griefs,
The silent griefs that words can only chill.

For thee, dear friend, there needs no high-wrought lay,
To shed its aureole round thy cherished name—
Thou whose plain home-born speech of *Yea* and *Nay*
Thy truthful nature ever best became.

Death reaches not a spirit such as thine,
It can but steal the robe that hid thy wings;
Though thy warm breathing presence we resign,
Still in our hearts its loving semblance clings.

Peaceful thy message, yet for struggling right,
When Slavery's gauntlet in our face was flung,
While timid weaklings watched the dubious fight
No herald's challenge more defiant rung.

Yet was thy spirit tuned to gentle themes
Sought in the haunts thy humble youth had known,
Our stern New England's hills and vales and streams,
Thy tuneful idyls made them all their own.

The wildflowers springing from thy native sod
Lent all their charms thy new-world song to fill,
Gave thee the mayflower and the golden-rod
To match the daisy and the daffodil.

In the brave records of our earlier time
A hero's deed thy generous soul inspired,
And many a legend, told in ringing rhyme,
The youthful soul with high resolve has fired.

Not thine to lean on priesthood's broken reed;
No barriers caged thee in a bigot's fold;
Did zealots ask to syllable thy creed,
Thou saidst "Our Father," and thy creed was told.

Best loved and saintliest of our singing train,
Earth's noblest tributes to thy name belong,
A lifelong record closed without a stain,
A blameless memory shrined in deathless song.

Lift from its quarried ledge a flawless stone;
Smooth the green turf and bid the tablet rise,
And on its snow-white surface carve alone
These words—he needs no more—Here Whittier lies.

—Oliver Wendell Holmes, in the November Atlantic.

The White Lady of Borax Lake.

A Ghost Story.

Written for the Rural Press by Lillian H. Shuey.

Two young men in a camp-wagon drove to the edge of a bluff, and stopped to look at the strange scene before them. The road descended there and entered a small valley, which was bounded on the left by abrupt, brushy heights, on the right narrowing to a wooded canyon. The road crossed the little valley to a grade on the bluffs beyond, and appeared, a white track of dust, on the tableland above.

A large white house was indistinctly seen among the large oak trees on the tablelands. The left end of the valley was a sheet of dark lusterless water, and its shore in front was covered with a wide strip of some chalky-white substance.

Long points of white ran out into the water, and many little, white islands appeared all through the lake. In the center of the valley stood the remains of a house that had evidently once been a comfortable home; the wings were falling away, and the house seemed to have been deserted many years.

The ghostly lake and decaying house were wierdly melancholy in appearance, but the surrounding scenery was full of charm and beauty.

The mountains, the canyon, the bluffs, the yellow stubble-fields of the valley, the fine oaks on the tableland, all combined to make a bright and varied frame to a strikingly sad picture.

Close by the young men, nailed on a dwarf oak, was a rickety old signboard on which was scrawled in white letters "Borax Lake."

"Dick, what do you say to camping down there in that ghost hole?" said one of the young men.

"Good enough, Tom, if we can get water," said the one addressed, removing a pair of sun-glasses from his thoughtful and now sunburnt countenance.

The travelers drove down and investigated. The old house was too ruinous to enter, but the barn was in good condition, full of hay and padlocked. There was an old well with a rickety windlass; by tying their ropes ogethe r they let down a pail and brought up some very good water. They observed that the stubble was light and sweet, with much dry grass underneath, so they decided to look up the owner of the place and get the privilege of stopping there awhile to rest and pasture their horses.

Noticing a road going up the canyon, Tom took the team and drove off, while Dick sat down on the veranda of the house to wait.

Dick, or professionally Richard Fielding, attorney at law, was a blond young man of athletic build, frank in his ways and sometimes abstracted in manner. He was rising in his profession and overwork for a year had caused his physician to order him to the mountains. His companion, Tom Dermont, was an all-round good friend and chum, firmer in build and darker in skin than his friend, with merry gray eyes and a brown mustache. Professionally, he was a student in Fielding's law office, but being the son of a rich Fresno raisin-grower, his law studies were with him more an amusement than a business.

The two had furnished a wagon with all the conveniences of camping and hunting, and had started for the deer regions north of San Francisco, and they were ready for anything that was adventure or amusement.

Presently Dermont came back, bringing on the seat beside him a grizzled old farmer, gaunt in figure and shrewd in countenance.

"Want to camp here?" he exclaimed; "this ain't no place to camp. Come up to the house, now, where the old woman will look out for you."

But the boys said they wanted to live a wild sort of life and sleep in the open air.

"Wall, its curus taste, but you can stay here if you want to. Turn your horses in the field there. I'll unlock the barn and you can pay for the hay and grain you use. They's slathers of deer about six mile from here. We can take them nags of yours and start off before daylight, and I'll show you all the deer you want. But I reckon you won't camp here by this old house long."

"Why?"

"Hanted!"

The boys looked dubiously around.

"Well, you'll find out." The farmer climbed stiffly out of the wagon. "I hain't done my chores yit. I'll see you later."

He hurried away, and the young men made their preparations for the night.

They pitched their tent by a cluster of great, untrained rosebushes, and made their fire at the foot of a tall blue-gum tree. They took from their provision-box rolls, cake, chops and fruits, which they had purchased at Ridgetown several miles below. A table was unlashed from the wagon and legs screwed in, folding chairs were unroped and dusted, and a roomy tent stretched, with a wide canopy in front.

"I say," said Tom after supper, when they were smoking fragrant cigars before the smoldering fire, "this isn't a bad place. Let's have our mail come to Ridgetown and stay here awhile. I wonder who lives in that white house up there above the bluff."

"Trust you to find," answered Dick sarcastically, "if there are any girls there."

"Wall, how ye makin' it?" sounded from the rear, and the old farmer, a clay pipe in his mouth, and "dressed up" in a white shirt, came under the canopy.

"Fine, fine," said Tom; "have a seat."

Comfortably seated in an easy folding chair, his eyes taking in the expensive outfit, he soon began to spin out the story he was aching to tell.

"Long about fifteen year ago, a man named Marcy owned all this land. He started in to wheat and cattle like the rest of us, but his cousin Phil Marcy and another thunderin' big fool come along and made him think he could make money out of that old lake.

"Marcy had a wife, pretty as a picture, but rather too high toned for these parts. Phil Marcy was the living image of his cousin Tom, and more to the liking of the woman, I reckon, for folks say that she was driving around the country half the time with Phil, while the other Marcy was down in the lake driving piles. Phil had a new buggy and two fine horses, and he made himself to home generally. When they found there was no market on top of the earth for borax, things began to get mixed generally. Tom Marcy took to the plow again, and they say Phil stayed in the house and helped the woman cook.

"Then there come on a terrible winter. It didn't do nothing but rain and rain for about three months.

"Well, the rest of the story is just as I heard it. One day a tramp came along with a raging fever. Them Marcys was sort of clever that way, and they took that tramp into that room off the porch, and took care of him.

"One day Phil Marcy and the woman and a little gal about five year old was seen driving like mad through the rain to Ridgetown, where they took the stage, all wrapped up like dummies, and went to San Francisco. The neighbors had been suspecting all along that they'd elope, and nobody was surprised. Tom Marcy went to Ridgetown that night and sold his place to Judge Holt, the new notary public, for five thousand, and then notified the doctor that there was a man sick out on his place with smallpox. One of the doctors, also a new man in these parts, went out there. It kept on raining like cats and dogs. The doctor said Marcy gave him $500 and asked him to stay there till he took down, and so he did.

"The tramp got well, but Marcy died, and the doctor buried him in the field yonder. The two Marcys in the city died in the pesthouse, Phil Marcy passing himself off all the time for Tom. Mrs. Marcy had a rich brother come out from the East, and he took the little gal. He come up here in the spring, but the place was deeded fair and square to Holt, and that was the end of it. He had given a check for four thousand and the rest in cash. The doctor got five hundred, but nobody could ever find sign of the rest nor the check. Holt hung out that the check had been sold, and the uncle got wind of the scandal and went off. Four thousand warn't nothin' to him, no how, bein' so rich. The doctor said he saw a box with money and diamonds in it, but he thought the tramp must have got away with it. But they say the uncle brung the gal up in fine style. Holt owns this land yet and rents it out. I farm this bottom land, and nobody ain't ever lived in the house. I reckon nobody wants to."

"I suppose the Marcys that eloped come back and hold high carnival once in awhile," said Dick.

"Always in the summer; see the light myself."

"Ghosts with a light!" cried Tom.

"Yes; and there's the White Lady who walks on the lake. They say that's Mrs. Marcy a visiting her husband's grave. That's what they call the White Lady of Borax Lake."

"What about the deer?" said Dick. "What are you going to charge us to take us up to your famous deer lick?"

"O, that's all right," said the old man. "Be sure you're up to the house with your nags by three o'clock anyway."

II.

In the white house among the oaks lived a wealthy farmer—Oscar Graves.

His daughter Marian, who spent her winters in San Francisco, had as her guest at this time Florence Earl, who, although she had known Marian Graves but a short time, was rejoiced to be invited to the country-home of her charming friend.

Florence was a tall blonde, and, although she was usually very gay in society, yet her fine face with its crown of fluffy hair showed in repose a trace of gentle sadness.

Marian was a pretty little brunette, full of animation and quick wit.

The day after the arrival of Florence, the two girls were lounging in the shade of a vine-covered porch—Florence in the hammock and Marian in a great wicker chair. To amuse her friend, Marian told her the story of Borax Lake, dwelling with strong words on the frailty of the woman who had eloped with her lover, leaving her own husband probably to die.

"I don't wonder her spirit haunts the lake, do you, Florence?" she said, spiritedly.

"Do you believe in ghosts?" asked Florence, sadly.

Marian turned to her friend.

"O, Florence, are you ill?" she cried.

Florence had risen pale and trembling, and was holding by the hammock-ropes to guide herself away.

"My dear, let me help you."

"No, no!"

Miss Earl moved falteringly to the hall door, then hurried up to her room. Shortly, she came back and apologized for going away with only a little headache. But her face was very pale yet, and Marian ran and made her a cup of tea in the old adobe kitchen.

About the same hour by a deep pool in a shaded canyon several miles away, the attorney-at-law and his companion were having an earnest conversation, while their lines hung idly in the ripples and their patent flies washed against the rocks.

"It seems to me," urged Dermont, "we might have a little fun as long as it is so handy."

"What's this but fun?" said Fielding.

"Well, then, pleasure—social delectation."

"It's no use," replied Fielding, firmly, "all the bonds in San Francisco couldn't hire me to face those girls with these old togs on."

"Old!" cried Tom Dermont. "That was a new hunting-coat when we left."

"Rags now."

"O, pshaw! Miss Earl and Miss Graves won't mind; they're like old friends." Fielding laughed.

"Old friends, indeed! Two months' acquaintance!"

Dermont whistled aloud.

"Then you go pretty fast for two months! You met them at the White reception and you've had Miss Earl to two balls and three concerts and to all the new plays, and I don't know to how many other places."

"Well, then," returned Fielding, "I wouldn't insult her by going to see her with a two weeks' beard on my face and my hands as black as an office towel."

Fielding was growing firmer, and Tom looked at him ruefully.

"Well, then, have you any objection to my going over for an evening?"

"Don't tell them I'm with you," returned Fielding. "Tell them it's a sick old man."

Tom laughed.

"That will be the truth," he said. "That's what I'll tell them."

The evening when Dermont made his first call, Florence helped to entertain him. She expressed neighborly sympathy for the "sick old man" and made herself as agreeable as possible. Both Tom and Marian pressed her to play, and when she had played several long selections and they still asked for more, she concluded that they probably only wanted to keep her busy, so she gracefully excused herself from the room.

Dermont, however, stayed but a few moments after this, and Marian, not wishing Florence to know that she had not herself had sufficient attraction to keep him, went softly to her own room and went to bed.

The next day it was Florence's ill luck to receive a letter from a San Francisco friend who mentioned incidentally that Dick Fielding and Tom Dermont had gone together on a hunting trip. Fortunately, she was alone in her room when she read the letter. She was glad Marian was not there to see her catch her breath and tear the letter in a passion.

"A sick old man, indeed," she said to herself. "He deliberately insults me; he contemns me, scorns me; he shows no respect for me. In some way he has found out everything, and I am nobody in his eyes. O, this is so hard!" But there was no resentment in her heart; it was a burden she must bear alone, so she wept helplessly.

When Marian came to call her to lunch, she found her really ill, feverish and prostrated. So she brought lunch to her room, with fruit and flowers, and read to her all the afternoon from new magazines.

But Florence did not tell her friend what she had learned. By the next day she was herself again, and they went for a long horseback ride all around the pretty valley to the north. Marian thought it strange that Florence would not appear again when Dermont called, and she never went to Florence's room when he had gone away, for she did not wish her friend to know how late he dared to remain, so that Florence had to depend on herself for her evening amusements.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

Royal Baking Powder Co., 106 Wall St., N. Y

Mr. and Mrs. Graves retired so early that they were not much company.

Florence liked to go down to the old adobe kitchen and talk to Mary, the old Indian cook, and beg biscuits to feed the ranch dogs that hung about the door.

Concluded next week.

Isabella of Castile.

Born April 23, 1451.

In that strange, steadfast light which men call fame,
That backward through the halls of time doth flow,
Piercing the shadows of the past to show
The splendid ghosts of glory and of shame,
One figure shines resplendent; the white flame
Of centuries crowns the regal brow we know,
The hands outstretched with jewels, and the glow
That rests for aye on Isabella's name.
Lo! where she waits; with high, prophetic glance
Bent like a star above the stormy main,
The queenliest queen that dwells in old romance,
The proudest gem that decks the crown of Spain;
Whose lustre over sea and land hath flown
To this new world which she did make her own.

Around her move the dull and restless throng
Of narrow lives; the fierce and sordid race,
With visions lowered from that loftier space
Which makes the earth more glad than light or song;
The poor ambitions and the might of wrong;
The craven fear that doubts the future's grace,
While she, as one uplifted for a space,
Stands like a vision, beautiful and strong.
Dear doth man hold her for the zeal inspired
That sped Columbus to his happy goal.
But dearer that the might of virtue fired
With such hot flame her pure and noble soul,
That in its light the fairest life is shown
Her sex, her country, and her faith have known.

—Mary Elizabeth Blake.

Raising Haux.

SANTA ROSA, Nov. 25.

TO THE EDITOR:—Up here in the country we sometimes have debating clubs on a small scale to discuss many topics in relation to the farm, the orchard, and dairy. Here is a short speech, which I have tried to report as delivered, about which is most profitable:

THE CHICKEN OR HOG.

I said to him, "William, which you think best to raise,
Chickens, or hogs, our ranches to graze?"
He said, "I tinks haux, 'cause dey roots up de grounts
And live on de tings of which nature abounts,
Dey live on de grass und dey live on de roots,
As dey dig, dig, dig, dig mit dere head on dere snoots.
De haug is de fellow, makes mighty good meat,
As he goes true de veat fields some stubbles to eat.
But de shickens dey eats corn und dey eats veat,
Und dey dig up de flowers mit dere bills und dere feet;
Dey eat up mine cabbage I raised to make kraut,
Yes, shickens vas de hungriest bird ever vas out!
You may raise schickens, but I told you de Dutch
All like to raise haux, 'cause dey don't *eat me so much.*"

A. T. DAVIDSON.

Always Dying.

Life, indeed, consists of a series of changes of tissue and the human economy is simply, as far as its material part is concerned, a machine, and primarily depends on food as the most important factor in keeping it in working order. When it is said that we commence to die as soon as we are born, it of course means that certain parts of the body immediately begin to perish; their existence is ephemeral, they come and go, are replenished and decay. They are the dying parts of that system of life, which may last a little while, but which must eventually yield to the inexorable law of nature. The nails, the hair, etc., are observable as an instance of this decay. The same rule applies to every other organ and tissue of the body, though it is not palpable to the naked eye. The skin is always peeling. The food that is taken in the one hour nourishes the system and ejects that which was taken the hour before. Perfect health and condition, at whatever time of life we may apply the term, from infancy to old age, depends upon the proper assimilation of the food taken, and its natural elimination when it is done with, by the different organs that have to deal with it. Of course, heredity and a few other circumstances must also be taken into consideration in estimating the chances of life. If the exact amount of food necessary to nourish each tissue of the body were taken daily, having regard to work and other circumstances, and if the economy were kept properly employed, it would mean that the individual would be in the most perfect health and condition, and ought to live to the age of a hundred years or more. But how seldom does this occur. From some cause or other more is taken than is necessary to supply constitutional requirements, and the result is that the surplus remains stored, and in some way or other acts prejudicially. If it does not cause absolute illness, it impedes vigor and elasticity, and leads to a feeling of malaise and disinclination for work, making one's ordinary occupation a burden. We are tempted to eat when we are not hungry and drink when we are not thirsty, and if we do we must pay the penalty. More than this, in this life, at all events, the sins of the father are visited on the children, and the old port drank by the grandfather yields a crop of gout in the grandson. Stimulant taken to excess in the father transmits the curse to the progeny, and they start in the struggle of life, handicapped from the first hour, and, like a racehorse with no stamina, fall early in the race.—The Gentleman's Magazine.

A Trip to a Fixed Star.

Dr. David Gill, lecturing recently on "Fixed Stars," hit upon the following adroit method to illustrate the distance to Centauri. The doctor said, as reported in the Boston *Globe:* "We shall suppose that some wealthy directors, for want of outlet for their energy and capital, construct a railway to Centauri. We shall neglect for the present the engineering difficulties—a mere detail—and suppose them overcome and the railway open for traffic. We shall go further, and suppose that the directors have found the construction of such a railway to have been peculiarly easy, and that the proprietors of interstellar space had not been exorbitant in their terms for right of way.

"Therefore, with a view to encourage traffic, the directors had made the fare exceedingly moderate, viz., first-class at two cents per 100 miles. Desiring to take advantage of these facilities, a gentleman, by way of providing himself with small change for the journey, buys up the national debt of England and a few other countries, and presenting himself at the office, demands a first-class single to Centauri. For this he tenders in payment the scrip of the national debt of England, which just covers the cost of his ticket; but at this time the national debt from little wars had been run up from $3,500,000,000 to $5,500,000,000. Having taken his seat, it occurred to him to ask: 'At what rate do you travel?' 'Sixty miles an hour, sir, including stoppages,' is the answer. 'Then when shall we reach Centauri?' 'In 48,663,000 years, sir.'"

YOUNG FOLKS' COLUMN.

Aunt Rose's Tea and Coffee.

There came a day during the civil war period when neither coffee nor tea could be bought for love or money. Our supply had given out and we were likely to be deprived of our refreshing draughts for an indefinite period.

Alas for the slaves to the tea and coffee habit! Cold water and milk must suffice them, unless skillful Aunties Rose and Vi'let could invent a substitute for the dearly loved beverages in substances independent of the blockade.

Grandma DeMar, a frail old lady of 70, wanted her tea in the afternoon. Miss Millicent DeMar was not herself until refreshed by a cup of coffee in the morning.

Aunty Rose brewed peppermint, sage, pennyroyal, spearmint, ditney, catnip, thyme, lemon balm and grated pennyroot.

She creamed the liquid temptingly and served it in the prettiest cups. She mixed flavors in the vain hope of inventing a perfect imitation of the best gunpowder tea. When grandma drained the cup, aunty's face beamed with delight.

"I'm gwine to car' ole Miss a cup o' tea," said Aunt Rose one sultry afternoon.

"Yo' gwine ter kill ole Miss wif yo' dosin' an' yo' mixin' yarbs. Yo' aigs her on to drink dem slops when hits onpleasant ter smell dar pecooliar odor," said Aunt Vi'let sniffing contemptuously the aroma arising from the sage and peppermint combination.

"Missus," queried Rose as she arranged grandma's dainty lunch, "does yo' enjoy yo' tea?"

"I—I—well I—"

"Hush, honey! Don't say nuffin' mo'. Dis cup o' tea am slops an' nuffin' else. 'Pears laik I can't fin' any yarb dat has de gunpowder tea taste. Perhaps I'll hab better luck wid coffee."

Corn bread, rye and wheat bread crusts were carefully scorched, ground and steeped in boiling water. Aunt Rose groaned over the lack of taste in crust coffee. Parched sweet potatoes did not prove satisfactory. Parched peas were not a success. Burned rye was a tolerable substitute for Rio coffee berries. Rice, corn, hominy, grits and barley were given a trial. A soldier friend smuggled to Miss Millicent several packages of coffee essence, a black substance guaranteed to add to any of the substances the real coffee aroma, if used according to directions.

The first experiment was encouraging. Aunt Rose was warm in its praises and elated at the prospect of surprising the members of the Ladies' Aid Society, which met weekly at DeMar place, with a treat of "'lasses poun' cake, an' coffee that mos' had the Mocha taste."

The ladies came upon the appointed afternoon. The lunch table was prettily decorated. The 'lasses cake and Johnny bread reposed in silver baskets.

Aunty Rose proudly displayed her pot of hot coffee, urging the ladies to drink "mo'n one cup," as her "imitation coffee was mos, as good as de gennywine."

Truly the amber liquid did resemble the Mocha served in the days of peace and plenty. White hands were eagerly extended for the cups containing the delicious draught.

Alas! one sip was a great sufficiency.

"Rose! Rose!" called Aunt Vi'let from the kitchen. "Git dem cups quick."

"Ooo me! Oooo me!" groaned Aunt Rose. "You'll hab to gedder up dem cups. I can't face de ladies an' tell 'em 'bout a cake o' soap gittin' in de coffee b'iler. Ooo-oo me! It's a jedgment sent on me for bein' proud ob dat coffee."

"Wash out de b'iler an' make 'em some fresh coffe," advised Aunt Vi'let. The second experiment was warmly praised by the ladies, and Aunt Rose was happy.

John Liked Fun.

John was tricky. Those who thought him a "beauty," smart and obedient, knew that he was mischievous and full of his "jokes."

John certainly did have a love of fun in his "make-up," which made him a jolly companion for four boys, who in turn did like to "plague the poor old chap," the family horse.

John was black-coated, strong and intelligent. He never kicked, balked nor ran away, being sober and well-conducted when driven or ridden by the senior member of the family.

He had a fondness of his master, who petted him a great deal. The women could drive him. He brought them home in just the same condition they started out. It was only with the boys of the family that John ventured to "joke."

There were four of them, Ernest, Walter, Henry and Albert, bright young fellows, who delighted to tickle John's nose with a fragrant-smelling apple, snatching it away when he prepared to enjoy it.

John was a pig in his love for mellow, ripe apples. The boys thought it fun to tease him a little, and make him anxious to get it before giving it up to him.

They really did teach him to play "hide and seek" with them.

One of his tricks was to sigh and swell up his body when being saddled, if one of the little boys was about to ride him.

Of course, the saddle was invariably turned after he had ridden a little distance.

Another trick was snatching a cap from their heads and galloping away with it to the farthest corner, whinnying defiance to the capless youngster.

One May afternoon, as I sat beside a window, some boyish voices called, "we are going to ride out to Muddy Fork. John is lazy; don't have enough to do."

John looked at me, and I plainly saw fun in his eyes. He made a nip at an apple geranium, and then went along as sober as judges are said to be.

His expression plainly said to me: "These four boys seated upon my back are hunting for fun, I'll help find it.'

Ernest and Albert whistled gayly. Henry and Walter urged "lazy bones" along.

"Such a good horse as he is. It isn't every one that would carry such a load of restless boys," was my thought, as John slowly crept along, head down, apparently meditating deeply.

In an hour four boys, wet and muddy, walked in at the gate, angry and ready to "have it out with the sly old horse."

"What has he done?" I inquired.

"Done?" chorused the indignant quartette of boyish voices. "He poked all along, as if he was almost asleep, until we got into the water. All at once he lay down, spilled us off his back and just galloped back home."

"He did it on purpose, of course he did. He thinks he can play tricks on us little boys. He don't dare try 'em with men."

"I'd like to pound his back," said one.

We went to the back gate and saw him standing there, looking meek and subdued, only—I detected a twinkle in his eyes.

He received a scolding, which he did not heed. A few minutes afterward I saw him in the stableyard with four boys perched upon his back.—The Prairie Farmer.

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Extra mountain-grown, ranch packed choicest Cal. extra Table Fruit, assorted, doz., $2.10.
Extra grated Pine Apple, Bahama, dozen, $2.50.
French Sardines, key opener, Racing Club, dozen, $2.00.
Extra new Sugar Corn, dozen, $1.30, 1.40, 1.50, 1.75.

DEPARTMENT R

Raisins, new, loose, Muscatel, 1lb., 5c.
Eastern Dried Blackberries, 1lb., 12½c.
New Leghorn Citron, 1lb., 25c.
Lemon and Orangepeel, 1lb., 20c.
Zanti Currants, 7 lbs., 50c.
New Cal. Prunes, 1lb., 7c, 10c.
Finest Silver Prunes, 1lb., 13c.
Figs, new Cal. black, 1lb. 5c.
Fancy new Dried Peaches, 1lb., 12c.
New paper shell Walnuts, 1lb., 12½c.
New paper shell Almonds, 1lb., 18c.
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

OLIVES ON VOLCANIC LAND.—Oroville *Register:* Joseph Curtis, of Pentz, brought to town with him on Tuesday a branch of olives cut from a four-year-old tree of the Razzo variety. The olives are of medium size, smaller than the Mission but larger than the Picholine, and are round and plump. Some oil made from the same shows very clear and bright. The trees are growing on a very high rocky plateau where the soil is of volcanic formation and the young trees are very strong and vigorous. Mr. Curtis has 500 trees and most of them are of this variety, though he has some Mission and Picholine trees. We are told by parties who recently visited the locality that the olive plantation is one of the finest for its size there is in the county. The little trees when planted four years ago were only ten inches high.

OLIVE YIELD.—*Mercury:* Fogg & McLaughlin will soon have a bonanza in the magnificent 40-acre olive grove in Thermalito. Some of the older trees are just beginning to bear, and this year the yield is estimated at about 1500 gallons. About 400 gallons have been gathered, and Mr. Fogg is putting them through the cold-water process preparatory to pickling them. In the center of the grove he has a number of troughs with a hydrant at each. The water is changed daily. It requires 30 or 40 days to soak out and then the olives will be pickled. In a few years more that grove will yield its owners a princely income.

A GOOD YIELD OF ORANGES.—Oroville *Mercury:* Joe Gardella has less than two acres in bearing orange trees and many of these trees are just beginning to bear fruit. Yet he will have about 400 boxes of fine oranges, which he has sold at $1.40 a box on the trees. He has perhaps one acre in good bearing seedlings. Here we have $560 from less than two acres of young trees.

Orange.

SHIPMENTS OF FRUIT.—Santa Ana *Blade:* As an evidence of what this valley can and does do in the production of deciduous fruits, a statement of the shipments made of dried fruits during the season will be sufficient to convince the most skeptical that we have a grand country, and yet a beginning has hardly been made in the development of its resources. During the season just passed there have been shipped from this valley, by the several fruit-drying companies, the following: Apricots, 33 cars, containing 10 tons each, valued at $2200 per car. Peaches, 7 cars, 10 tons each, valued at $3000 per car. Prunes, 4 cars, 10 tons each, valued at $2200 per car. And to-day a carload of raisins was shipped to Chicago by the Earl Fruit Company, the first since the vine disease destroyed the old vineyards.

Sacramento.

SHORTAGE IN TREES.—Sacramento *News:* "We have already received orders for over 400,000 fruit-trees," said C. W. Reed. "Instead of the order for hundreds of trees which came during this season in former years, they are now coming in by the thousands. It is quite astonishing, the rapidity with which California's broad acres are being turned into orchards. Notwithstanding the fact that the nursery stock which will go upon the market this season is larger by almost 50 per cent than ever before, there will be a shortage of trees. The prospects are that the leading varieties for large plantings will be gone before half the season is over. The popular demand has a wide range this year, including prunes, peaches, pears, apricots and many other varieties. This last fact is interpreted by nurserymen as a favorable indication, as it prevents fruitgrowers from running to one variety and overfilling the markets with that fruit. It also proves that the experience of the orchardist has convinced him that there is money in almost any kind of fruit. The demand indicates a normal condition of the orchard business on the coast, and that growers are looking not only to the shipping business, but drying and canning fruits. Mr. Reed said that while there was not an unusually large demand for vineyard stock, the inquiry for nut-bearing trees was quite astonishing. The almond will be planted largely in the Sacramento valley this winter. Near Sacramento City, Florin and Elk Grove, there will be an increased acreage of berries the coming season. The soil is well adapted to the growth of small fruits, and the past year has demonstrated that handsome profits can be realized.

San Bernardino.

ORANGE PURCHASES.—Redlands *Fact:* The Haight Fruit Company has received orders for several cars of oranges for the holiday trade from California cities. The shipments will be made from the 10th to 15th of December. The same company is sending out from three to four cars of raisins a week.

San Luis Obispo.

DAIRYING AT OIL CREEK.—Cor. S. L. O. *Tribune:* Dairying has commenced very slowly this season. Mr. Buffington has about 15 fresh cows; Mr. Mables about 20.

Santa Clara.

READY FOR PLOWING.—Gilroy *Gazette:* The farmers had good cause for thanksgiving yesterday in the shape of a copious rain, enough to enable them to set the plows at work. The hills around us are already putting on a spring like look, and those trees along the railway appear ever so much invigorated by the timely moisture.

San Mateo.

APPLES AROUND PESCADERO.—Cor. Redwood *Times-Gazette:* Apple-gathering is now about finished. The quality is fair, but hardly up to the usual standard of quantity. Much fruit seemed to drop off before being fully matured. The reason does not seem to be well understood, and constitutes a problem for the best orchardists. When in the neighborhood of San Jose lately, we found the same condition of things had been felt there to some extent. All fruit-raisers seemed to feel the importance of this. Whoever can explain and prescribe a remedy will be a benefactor to his fellows.

Sonoma.

STARCH FACTORY AND CREAMERY.—Petaluma *Courier:* J. M. Striening, the projector and prospective manager of the starch factory and creamery which will soon be built in this city, contracted with J. Cavanagh for the necessary lumber, and within two weeks the buildings will be started. Thenceforth operations will be prosecuted with the utmost energy and dispatch and hurried to completion. The main building will be a two-story structure 50x100 feet, and there will be besides a boiler and engine-room, a dryhouse (two stories) 25x50 feet, warehouses and outbuildings.

Stanislaus.

BEARING LIME TREES.—Modesto *Herald:* On J. H. Hardesty's premises, on the west side of the railroad track, is to be seen a novelty for this section in the shape of three lime trees, bearing ripening fruit and blooms at the same time. The trees are eight years old and are the only trees of the kind in the city, as far as we can learn. This is the first year that they have borne fruit. To all appearances, the product is equal to any to be found in our stores, being large, sound and free from blemish. With the completion of the irrigation works, Stanislaus is sure to take high rank as a stockraising, agricultural and horticultural county. In fact, we are confident that with her soil and climate irrigation will eventually render her the foremost county in the State in these respects, and the citrus fruit industry will not be an unimportant one. With orange and lime trees flourishing in this city and yielding an excellent quality of fruit, it stands to reason that with proper attention the cultivation of this industry can be made a profitable source of occupation and investment.

Tulare.

A MARKET FOR HORSES.—Hanford *Sentinel:* The stockraisers of this part of the county could furnish the stock for loading several carloads of horses for shipment. The attempt to find a market in some State beyond the Rocky mountains should be made. No country on earth can raise horses cheaper than this. Our pastures will feed more per acre and it costs but little for shelter. What is needed is a market where the horses can be disposed of and give breeders room for further breeding. Some sort of organization should be formed to seek and find a market.

Yolo.

THE PLANTING SEASON.—Woodland *Democrat:* The nurserymen have received large orders for trees to be delivered this season. The rapidity with which the grain-fields are being converted into orchards is astonishing. The almond and other nut-bearing trees will be planted largely in this valley. The acreage of berries will also probably be increased. The popular demand has a wide range this year, including prunes, peaches, pears, apricots and many other varieties.

ARIZONA.

RIPE ORANGES.—Yuma *Times*, Nov. 16: Yuma is entitled to the credit of the first ripe oranges this year. In the yard of John Gandolfo can be seen a Navel tree with fruit fully colored and in good marketable condition. This is far ahead of anything in California. Oranges there are perhaps just beginning to show color at this time and will be passably good at Christmas. For the holiday trade the fruit usually commands $5 and $6 per box in San Francisco. There is no doubt that Yuma can furnish fully ripe fruit a month earlier than that for Thanksgiving tables. Just at this time of year fresh fruit is nearly all gone, and heretofore there has been nothing until oranges ripened. The blank will be supplied by Yuma. Here is the home of the orange and lemon. There is no doubt that when Yuma's fruit becomes a factor in the market, it will have no competition. The fruit of no other section will be ready, and the gilt-edge prices go to the first in market.

NEVADA.

HONEY SHIPMENTS.—Reno *Gazette:* Mr. Ball recently shipped East a carload of honey, from which he will realize $3000, clear of freight charges. Messrs. Frey, Sherman and Little clubbed together and loaded another car for the same market, from which they will net $2700. The sum of $5700 is not bad medicine to take for the proceeds of the industry of the busy bees on four ranches, all of which are in the immediate vicinity of Reno.

NEVADA COMB HONEY.—Reno *Gazette:* W. K. Ball, who recently shipped a car of comb honey from Reno to Medina, Ohio, received the following complimentary notice in a journal published at that place: "Relative to our car of comb honey just received, we desire to say that it is the finest lot of comb honey we ever set eyes on, and you do not have to credit our eyes alone for this assertion. All who have seen it add a like testimony. J. A. Buchanan of Holliday's Cove, W. Va., who handles many tons of honey every year, and is a good judge, writes, in remitting for 18 cases received: 'This is the finest lot of honey we have had for years. It came in perfect condition.' Some brokers in Cleveland wrote, inquiring prices, and when they found our prices one to three cents higher than they had been paying for good, white honey, they thought they could not do anything with it; but after seeing it, they changed their minds, as the orders are coming in freely from them."

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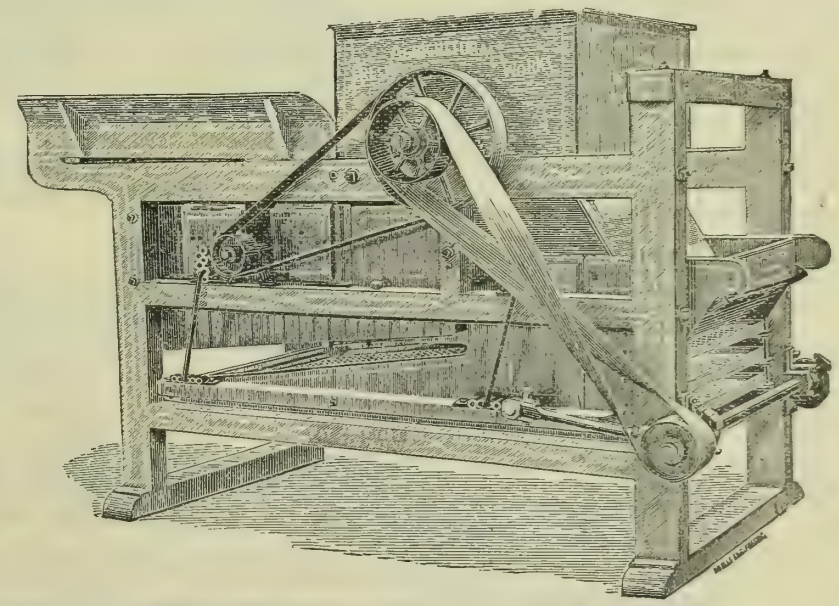
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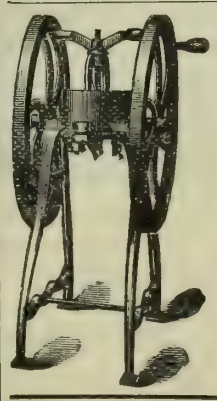
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Mann's Green Bone Cutter

FOR POULTRY FOOD.

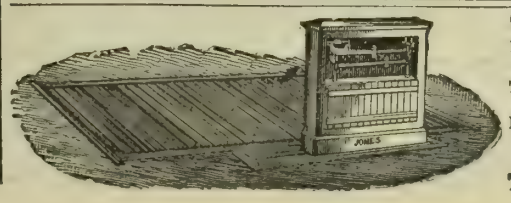
Patented June 15, 1886; August 20, 1889. Canada Patent, June 12, 1890.

WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

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Horses Should Wear Light Shoes.

Horses are commonly made to carry too heavy shoes. The shoe is designed merely to protect the hoof, and the lighter it can be made and still serve its purpose, the better for the horse. Horses that are devoted to farm work, and on land where there are few or no stones, may dispense with shoes, except while the ground is frozen. This would be of great advantage to the horse, to say nothing of the saving in the horseshoer's bill. But most horses require shoeing, and the shoes worn are heavy iron ones. Steel shoes can be made lighter, will wear longer, and the first cost is not so much more that it need prevent their being used. Light horses and driving horses should always use them. For horses of 1,100 pounds weight, and with well shaped, upright feet, the fore shoes should weigh about one pound each, and the hind ones twelve ounces. If four ounces are added to each shoe, let us see what a difference it will make. In plowing, cultivating, mowing reaping and many other farm operations, a horse will walk from ten to twenty miles a day, and advances about four feet at a step. At each step the horse lifts half a pound extra on its two feet, or six hundred and sixty-six pounds in every mile. In a day's work of fifteen miles the horse would lift nine thousand nine hundred pounds extra, or nearly five tons. If the force required to lift this five tons of iron could be expended in the work the horse is doing, much more could be accomplished. In the light of these facts, is it any wonder that when young horses begin to wear shoes they soon become leg-weary, have their step shortened and acquire a slower walking gait?—American Agricuturist.

Steamers of the World.

The new list of the merchant marine compiled by the Bureau Veritas, which is now in press, gives some interesting statistics concerning the great ocean steamship companies of the world.

Some people will be surprised to learn that the transatlantic lines are not the leading ones in aggregate tonnage or number of vessels. The British India of Glasgow and the British India Steam Navigation Company and the British India Associated Steamers, all one concern, head the list with 103 steamships. Their aggregate measurement is 293,635 tons.

Next stands the Peninsular and Oriental Steamship Company with 36 steamships, representing 216,887 tons. Next in order comes the Compagnie des Messageries Maritimes with 61 vessels, whose aggregate tonnage is 202,522. The fourth on the list is the Norddeutscher Lloyd of Bremen, some of whose vessels ply to this port. This company has 66 steamers, measuring in all 197,169 tons.

Other important lines are the Navigazione Generale Italiana, 106 steamers, 170,755 tons; the Compagnie Generale Transatlantique, 66 steamers, 167,487 tons; the Hamburg-American Packet Company, 56 steamers, 165 442 tons; the Wilson Line, 86 steamers, 158,089 tons; the Austrian Lloyd, 73 steamers, 128,359 tons; the Allan Line, 39 steamers, 123 038 tons; the Spanish Compania Transatlantica, 34 steamers, 94,163 tons; the White Star, 20 steamers, 95,370 tons, and the Cunard, 26 steamers, 85,913 tons.

DECORATIVE GLASS.—The use of decorative glass in modern buildings is becoming more and more widespread every day. Stained glass is used not only in transoms and dome lights, but the ordinary clear glass used in windows, doors and partitions is either embossed by an acid process or etched by a sand blast, creating a new world of decorations. There is the ordinary ground glass on which one can write with a pencil, but this method of decoration has been superseded by the silver embossed process, which renders the glass at once obscure and translucent, and which will not receive pencil marks or finger stains. The decoration consists of scroll, diamond, square and circular repeats, decorated borders, monograms and numbering and lettering of all kinds for commercial purposes. A panel of chipped glass that seems to be sliced from the irregular face of a crystal rock is a brilliant accompaniment to its decorative surroundings.

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IN experiments on the influence of food and surroundings on the color of animals, Mr. E. B. Poulton reared caterpillars of the pepper moth under different conditions. Those confined among green leaves and twigs become green, those having black or brown twigs mingled with their food were brown or black, and others were turned light-colored by white pepper. With artificial colors, red and blue tended to produce a dark coloration, though, very strangely. painted twigs had not the same effect as those with the same natural tints.

THE year of greatest growth in boys is the 17th; in girls the 14th. While girls reach full height in their 15 h year, they acquire full weight at the age of 20. Boys are stronger than girls from birth to the 11th year; then girls become physically superior until the 17th year, when the tables are again turned, and remain so. From November to April children grow very little and gain no weight; from April to July they gain in height but lose in weight, and from July to November they increase greatly in weight, but not in height.

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SAINT JACOBS OIL TRY IT

RHEUMATISM.

Mr. Willet F. Cook, Canajoharie, N. Y., writes: "Awoke one morning with excruciating pains in my shoulder. Tried various reliefs for sudden pains without effect; went to my office; the pain became insufferable; went home at 11 o'clock and used ST. JACOBS OIL; effect magical, pain ceased, and at 1 o'clock went to work; cure permanent."

NEURALGIA.

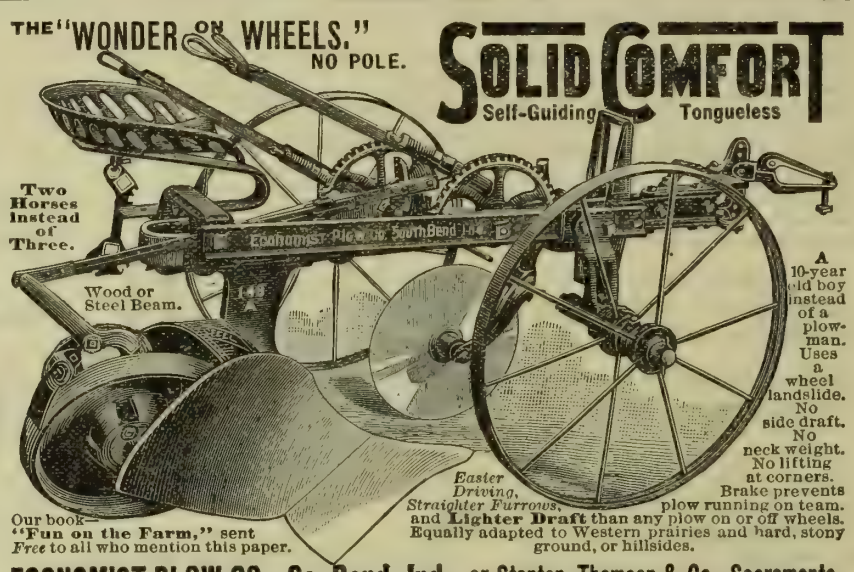
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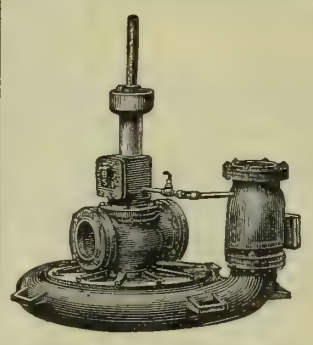
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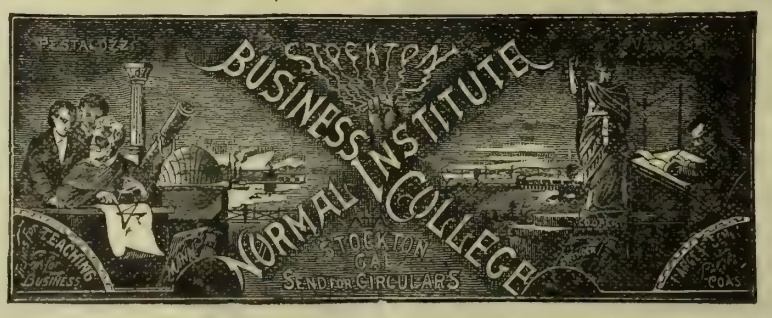
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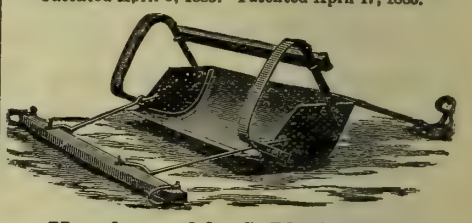
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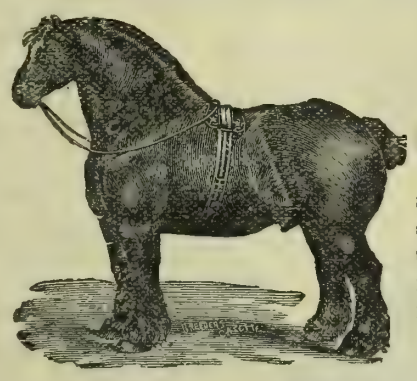
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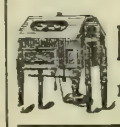


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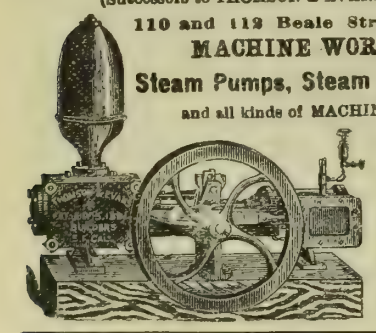
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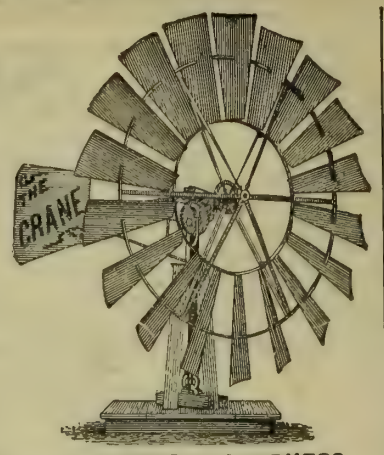
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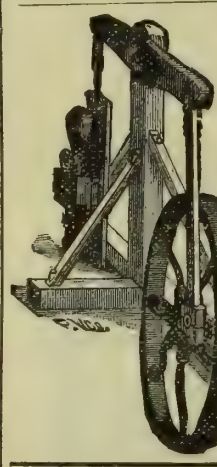
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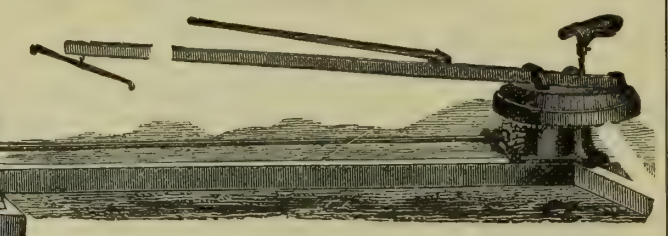
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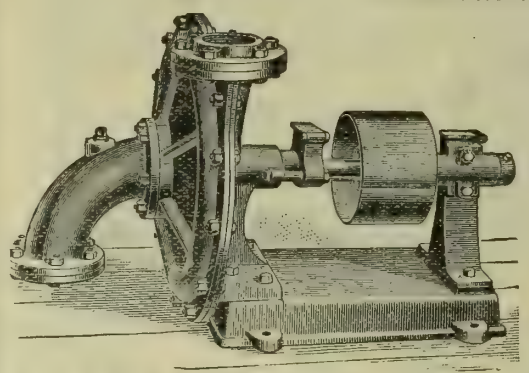
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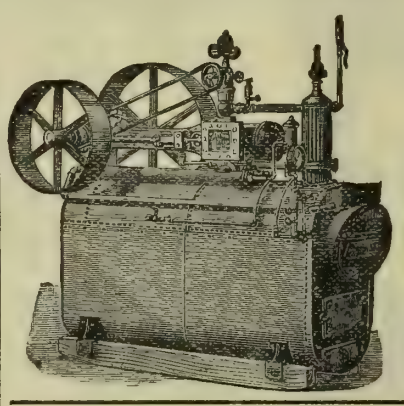
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S. F. Market Report

Market Review.

SAN FRANCISCO, Nov. 30, 1892.

General trade the past week has been interrupted by heavy storms. While temporarily interfering with traffic, yet the generous downpour and well-distributed rains are received with unmistakable signs of relief; for, up to a week ago, fears were quite generally expressed that we would have a dry winter, which, following the two past dry winters, would prove disastrous to crops in many localities. It is said by nurserymen that in some localities trees made this year a poor growth, owing to a lack of moisture in the ground. The present rainstorms, following the light storms in October and also in the fore part of this month, are giving the ground a good soaking, which will afford a reservoir of moisture that will insure crops for one or two dry winters. Mr. Van Every, of the Grangers' Business Association, says that, previous to the present rains, in dry land in the Santa Clara valley, he dug down and found the ground moist for a foot deep. With the present rains the moisture must be considerably deeper in that valley and elsewhere. The rains have interrupted, to a large extent, trading in farm produce, particularly grain and feedstuff; but with clear skies, large buying should be the order. The local money market is fairly easy for the season of the year. It is said that the present rains will tend to untie funds which were locked up against a dry-winter scare. With returned confidence, that we are to have large crops and an abundant supply of water for mining, money ought to be in more liberal supply and gilt-edged paper be sought.

Cereals.

The foreign wheat markets have settled to lower figures. This decline, it is said, is largely due to foreign manipulation. In discussing the situation the Mark Lane *Express*, Nov. 14th, says that English farmers will make another struggle, and, while the acreage which will be devoted to the grain will be less in 1893 than it was in 1892, yet they think that better prices will obtain. The impression that higher prices will rule is based on the favorable outlook for bimetallism. On this subject the *Express* says: "The unanimous decision of the Central Chamber of Agriculture in favor of bimetallism, and the enthusiasm with which Mr. Balfour's leadership in the same direction has been accepted by the great industrial centers of Lancashire, indicate, however, a growing impatience with the existing state of affairs. Into all the recondite issues of currency questions it is not likely that farmers will ever care to go, but a rise in the price of silver would be the first outcome of bimetallism being legalized, and a rise in silver means a reduction in Indian and Russian wheat shipments to the United Kingdom. Of the wheat on passage at the present moment, it will be seen from the figures that we give lower down that 15 per cent is coming from the two silver countries, while during the cereal year ended August 31st last, the estimated excess of imports over requirements was 14 per cent. Thus the cessation of Indian and Russian competition on our markets would presumably bring about of itself an equilibrium in value. The exact prices likely to prevail when supply and demand were almost exactly balanced cannot be prophesied with safety, but a year ago, when Russia ceased shipping, Calcutta wheat rose to 40 shillings, or 5s. above the previous November. If India as well as Russia ceased to ship, the rise would probably be double 5 shillings; in other words, the red winter American wheat now pressed on sale at 28s. per qr. would admit of being held for 38s., and, as the competition of the foreigner decreased to this extent, there would be a natural recovery on English wheat values. Bimetallism, on the whole, might be expected to give us a fairly steady 40s. average for English wheat, but there would be a corresponding and coincident rise in all products from the silver countries, such as feeding barley, oats and petroleum from Russia, and oilseeds, opium and tea from our Indian dominions." At this writing the proceedings of the Monetary Conference warrant the assertion it will result in pointing the way to an international agreement to rehabilitate silver. In our local market wheat has been dead. The rains have made it impossible to load vessels, and when this obtains export buyers withdraw from the market in expectation of lower prices. As yet large holders do not manifest any uneasiness, believing that after the turn of 1893 better prices will rule.

Barley has fluctuated on Call for futures, closing weak, but in the sample market, while the tone is weak, yet no lower quotations are reported. Commission merchants say that a parcel forced on the market would have to be sold at lower prices. The rough weather will stop receipts. It is said that with the starting of plows and cultivators there will be a large demand for roll barley. The Hawaiian Islands are drawing quite freely.

Oats have held to fairly firm prices throughout the week. Receipts are only fair, with the bulk coming in held by strong parties. Oregon has light supplies to draw from. There is a fair demand for black for seed.

Corn has ruled weak and in buyers' favor, with a weak and easy tone at the close. There is only a moderate demand for local consumption and very little for export. To-morrow (December 1st) the old Mexican duties will go into effect, which will operate against shipments to that country.

Rye and buckwheat have held fairly firm throughout the week.

Feedstuff.

Owing to heavy rains the demand for ground feed for the moment is slack, and consequently parcels forced on the market are met by lower bids from buyers. It is quite generally claimed that after the rains, with clearing skies, a free demand will set in for roll and ground feed.

Hay at this writing is weak, with buyers bidding down. The weaker feeling is due to a growing impression that pastures will afford feed for range stock and also a fair supply for dairy cows. Of course this opinion is largely predicated on growing weather following the rains.

Dairy Produce.

Butter is very weak, and only in exceptional cases can outside quotations be secured; even thus it is in a jobbing way. Fresh milch cows are coming in at several of the dairies, and if warm weather follows the present rains we can reasonably look for a liberal increase in the production of butter. The stock of pickle is large and pressing the market.

The market for cheese is steady, but no higher. It is difficult to get over 11½ cents for gilt-edged mild new. Filled cheese move off fairly well to cheap restaurants and cheap dealers.

Eggs are weak. Although it is said that in box-jobbing lots a slight advance over quotations is obtained, yet higher quotations would be misleading. The market closes weak, with a tendency to lower figures.

Vegetables.

Rains the past week have made it possible for gardening to be pushed with vigor as soon as the skies clear to admit of outdoor work. The first consignment of asparagus sold at 75 cents per pound. It came from the Sacramento river. The crop, it is said, promises to be large.

Tomatoes and all vine vegetables are going out, and any free from frost fetch good prices.

Onions are moving off fairly free. The forepart of the week under review, choice sold up to $1, but afterwards shaded off under free receipts.

The speculative movement in potatoes, reported in our issue of two weeks ago, has brought about higher prices in all varieties. There has been, and continues to be, a large shipping demand for the more choice. This demand we predicted fully two months ago. Sweet potatoes are steady.

Fruit.

Poor apples are in over supply and are moved with difficulty. Choice apples are wanted, with something extra scarce. Poor pears are slow, but choice are quick. Persimmons have slow sale.

The first consignment of ripe Washington Navels was received by the Judson Fruit Company on November 3d. They sold at $7.50 per box. The consignment consisted of seven boxes and was sent in by E. B. Ward from Oroville. Messrs. Wetmore Bros. received a large consignment from Riverside, which, it was said, was split and poor. Other consignments of green came in. They were hard to sell. The Mandarin oranges this season are poor and hard to sell.

Contracts have been made for regular delivery of Butte county oranges to consumers December 10th.

The dried fruit market is slow. Buyers appear to be confining their purchases largely to parcels which are forced on the market. The impression prevails that after the turn of 1893 quite an improvement in the demand can be reasonably looked for, but at present forced offerings are met by low bids.

The raisin market is essentially unchanged. Choice goods are well maintained. Our telegraphic advices give a fair idea of the situation at the East. Eastern buyers look for forced sales before long, for which they appear to be holding back. Large operators look for a freer demand next spring than has obtained for several years.

Live Stock.

For bullocks the live stock market appears to be tending up, owing to the cattle being too poor in the southern part of the State to admit of marketing, and as the supply has to come chiefly from Nevada and stall-fed localities in this State, stockmen will naturally ask more money. The roads may interrupt deliveries. Mutton sheep are stronger. Hogs are steady.

Miscellaneous.

The receipts of Wool are light. The market is quiet, with only little business doing, owing to light business and broker's assortment.

Hops are quiet. Buyers are bearish and trying to get lower prices than English advices warrant. The supply of homegrown in England is about all sold, which has turned brewers largely to Pacific Coast hops. At last mail advices the tone of both the English and German markets was strong.

There is a more active demand for garden seed, alfalfa and grass or pasture seed.

Poultry held weak up to Monday, when under speculative buying, prices were advanced. Yesterday and to-day the market was very strong.

Rains have made the roads so bad that farmers' deliveries are slow, and as there are few on the way from the East, stiff prices are expected to rule.

Beans are weak but no lower. Receipts are only fair. To force a consignment on the market a slight concession would be necessary to effect a sale.

Honey is steady. Receipts are light.

There is a light call for nuts, but holders expect a freer call for the home holiday trade.

Produce Receipts.

Receipts of produce from all sources at this port for 8 days ending Nov. 29 '92, were as follows:

Flour, qr. sks	217,326	Bran, sks	16,015
Wheat, ctls	282,228	Buckwheat "	1,988
Barley, "	21,817	Middlings "	8,825
Rye, "	945	Chicory, bbls	288
Oats, "	15,990	Hops, "	212
Corn, "	4,048	Wool, "	291
*Butter, "	505	Hay, ton	2,312
do bxs	324	Straw, "	68
do bbls	2	Wine, gals	271,600
do kegs	8	Brandy, "	44,020
do tubs	...	Raisins, bxs	21,440
do ½ bxs	39	Honey, cs	....
†Cheese, ctls	625	Peanuts, sks	60
do bxs	9	Walnuts "	452
Eggs, doz	15,410	Almonds "	388
do " Eastern	99,600	Mustard "	69
Beans, sks	8,834	Flax "	260
Potatoes, sks	35,171	Popcorn "	....
Onions, "	4,101	Broom corn, bbls	120

*Overl'd, ... ctls. †Overland, 389 ctls.

Markets by Telegraph.

Wool Quiet but Firm.

NEW YORK, Nov. 25.—Bradstreet's says: In the wool markets the demand is light and sales small. There is no speculative feeling noted, and manufacturers are buying only enough wool to meet immediate requirements. Goods markets are being watched more closely, and it is reported that every means will be employed to prevent overproduction. The demand for woolen goods has been unusually strong and the outlook is favorable. The increasing importation of goods has been the subject of comment. Wool prices remain as they were two weeks ago, when they had reached what the dealers considered the "bottom." The demand for fleeces is still fairly strong, but the supply is so light that only a few first-class lots can be found. Fall Texas wools are being taken quite freely compared with the way other grades are selling. Territories are moving slowly. Pulled wools are quiet. Australian wools are firm, owing to the advance in foreign markets. Carpet wools are quiet, but dealers are looking for a better trade, as there are indications of a better movement in carpets. Prices of ingrain carpets have been advanced 5 per cent.

NEW YORK, Nov. 25.—The market has lost none of its former solid position, while confidence is increasing in unwashed clips. There is a strong indication that an advance will attend the sale of Colonial wools to open this week. Sales at New York were 242,000 lbs of domestic, also 151,000 lbs of foreign. Sales at Boston—1,709,500 lbs of domestic and 362,700 lbs of foreign.

Hops Are Quiet but Steady.

NEW YORK, Nov. 28. — Primal State districts continue to control a large share of the business. This, with liberal exportations, mostly consigned, prevents material spot accumulations. Prices range as before; in fact there is no stimulating feature. Regular export buyers are waiting to learn the result of lots gone forward and brewers can obtain good bargains here or in the interior at 20@21c. Export State are held at 23@25c. Pacifics have made full spot figures and good round lots of olds have been placed. Exports for the week, 2616 bales.

Grapes Selling High.

NEW YORK, Nov. 27.—Grapes wind up at big prices. Tokays, single crates, $1.70 to $3.65; double sold at $4.35, $6.80 to $9.10. Cornichons, double crates, $4.15 @4 80; half crates, $2@2 65; Muscat, $1.60@1.90; Emperor, $1.55@2.80; double, $4.10@4.65. Scientific cold storage is to desirably extend our use of California grapes. Experiments this year prove the Cornichon to be an elegant keeper, and we shall eventually have what has long been needed, Pacific grapes for New Year tables. The steamship Ethelwood from Florida to England took 9566 boxes of oranges.

Choice Raisins Moving Off Well.

NEW YORK, Nov. 28 —The market for Californias is in only fair shape. There is a sessionable depression of activity, but sellers have to shade prices to keep it alive. We are feeling the loss of much of the early trade that was snapped up by cheap Valencias this fall, and now there has to be considerable drumming for business. This, of course, operates against firm prices. Perfect lines and guaranteed samples move well, but a perplexing feature just now is the undue disparagement given by buyers to many lots only slightly off in quality. Three-crown loose bags bring 5@5½c; two-crown, 4c; three-crown boxes, prime, $1.60@1.65; the lower price for the greyhound brand and the other for prime faced. Twos of useful merit are quoted at $1.25@1.35. Layers ranged at $1.60.

LAST MONTH

THE JUDSON FRUIT COMPANY

Solicited consignments from the Fruit and Produce growers of California. The Consignments Came, and we believe that shippers are satisfied. It is our aim to handle all goods placed in our hands in such a manner as to secure the confidence of consignors.

Packing for long distance shipping a specialty.

Good Storage. Good Local Trade.

ADDRESS THE *JUDSON FRUIT COMPANY*,

308 & 310 Washington St., San Francisco, Cal.

Dried Apricots Strong; Other Lines Steady.

NEW YORK, Nov. 28.—Apricots—The market is decidedly strong. Buyers have reappeared, paying 15 @15½c for sacks and 16@16½c for boxes. Prunes are slow of sale, the trade running towards goods of a more holiday character. Sacks are quoted: Spot, four sizes, 10½@11c; boxes, 11½@12c. Unpeeled peaches hold their own. No outside lots have yet appeared on the market. Fair to best marks are quoted at 13@16c spot.

California Wheat Depressing the English Market.

LONDON, Nov. 28.—*Mark Lane Express:* Farmers are selling little wheat. They refuse to take under 28s., and rather than accept less they say they will feed their grain to stock. There has been an average decline of 6d. Foreign wheat is continually arriving and pushes the stocks of foreign flour into rural markets. Minnesota flour has been offered in small country towns at a guinea a sack of 280 pounds. The present depression is largely attributed to excessive shipments of California. Barley is 6d. lower. Oats and corn 2d. lower. To-day's English wheat was dull; American firm. Flour 6d. lower. Oats steady and in excessive supply.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Nov.	Dec.	Jan.	Feb.	Mar.	April.
Thursday	....	....	....	....	....	....
Friday	5s09¾d	5s10 d	5s11 d	6s00¼d	6s01 d	6s02 d
Saturday	5s10 d	5s10½d	5s11½d	6s00½d	6s01½d	6s02½d
Monday	5s09¾d	5s09½d	5s10½d	6s0 0 d	6s01 d	6s02 d
Tuesday	5s09½d	5s09½d	5s11¼d	5s11½d	6s00½d	6s01½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	....	....	....	....
Friday	32s9d	32s9d	32s6d	Very quiet.
Saturday	32s6d	32s6d	32s6d	Rather firmer.
Monday	32s6d	33s6d	32s6d	Quiet but steady
Tuesday	32s6d	32s6d	32s6d	Quiet.

San Francisco.

WHEAT.

	Seller '92.	Dec.	Jan.	May
Thursday, highest	....	....	....	....
" lowest	....	....	....	....
Friday, highest	....	131⅞	....	135½
" lowest	....	130¾	....	135
Saturday, highest	....	130¾	....	135½
" lowest	....	130½	....	135½
Monday, highest	129	130½	129⅝	134⅜
" lowest	129	129⅝	129⅛	134⅜
Tuesday, highest	....	129⅛	....	134½
" lowest	....	129	....	133⅞

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal: May—100 tons, $1.33⅜ per ctl. Regular session: May—700 tons, $1.33½; 1200, $1.33⅜ per ctl. Afternoon: May—900 tons, $1.33⅜; 200, $1.33⅛; 600, $1.32½. Buyer December—100 tons, $1.28⅜; 600, $1.28½ per ctl.

BARLEY.

	Seller '92.	Dec.	Jan.	May
Thursday, highest	....	....	....	....
" lowest	....	....	....	....
Friday, highest	....	87½	....	90⅞
" lowest	....	87	....	90⅜
Saturday, highest	....	*90⅞	89⅞	92⅛
" lowest	....	90	89⅛	91⅜
Monday, highest	....	*91	90⅜	92½
" lowest	....	91	90	92
Tuesday, highest	....	89	....	91½
" lowest	....	88	....	90⅜

*Buyer option.

The following are to-day's recorded sales on Call:

Barley—Regular session: May—100 tons, 90½c; 300, 90⅜c; 400, 91c; 100, 91½c; 300 91½c. January—200 tons, 89½c; 100, 89c. Buyer December—100 tons, 90c; 200, 90½c. December—100 tons, 88½c; 200, 88c per ctl. Afternoon: May—600 tons, 91½c; 400, 91½c. December—100 tons, 88½c. Buyer December—300 tons, 90c; 100, 90½c per ctl.

Eastern Markets.

The following shows the closing prices per cental of wheat for the past week at

New York.

Day.	Nov.	Dec.	Jan.	March.	May.
Thursday	....	....	....	....	....
Friday	127⅝	128½	131	136	139⅜
Saturday	128	128⅝	129	136	139½
Monday	128	128⅜	131	136	139½
Tuesday	127	127	130	134⅝	138⅜

Chicago.

Day.	Nov.	Dec.	May
Thursday	....	....	....
Friday	120	120½	131⅝
Saturday	119¼	120	131
Monday	120	120½	132
Tuesday	....	119⅛	131½

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations. NOVEMBER 30, 1892.

Limes, Mex	2 50 @ 3 50	Beets, sk	— @ 50
Do Cal	— @ —	Carrots, sk	30 @ 50
Lemons, box	— @ —	Okra, dry, lb	8 @ 10
Do Sicily choice	6 50 @ 8 00	Parsnips, ctl	1 00 @ 1 50
Apples	40 @ 65	Peppers, dry, lb	7 @ 8
Do Choice	75 @ 1 25	Do grn Chili, bx	50 @ 75
Do Extra choice	— @ 1 50	Do do Bells	50 @ 75
Grapes, pr bx—		Turnips, ctl	— @ 70
Do White	25 @ 50	Cabbage, 100 lbs	60 @ 70
Do Black	50 @ 1 25	Garlic, lb	1½@ —
Do Tokays	50 @ 1 25	String Beans, lb	6 @ 7
Do Cornichon	50 @ 1 25	Lima Beans	2 @ 4½
Pears	25 @ 75	Mushrooms	— @ —
do Winter Nelis	1 00 @ 1 75	Egg Plant, bx	50 @ 75
Persimmons	1 00 @ 1 50	Mar'fat Squash, ₱ ton	5 00 @10 00
Pomegranates, lb	2 @ 4	Cauliflower	50 @ 65
Huckleberries, lb	4 @ 6	Celery	50 @ 75

Extra choice fruit for special purposes sells at an advance on outside quotations

General Produce

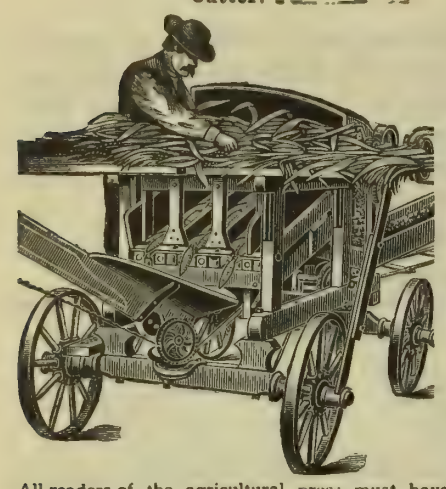
BEANS AND PEAS.		Do country m'ls	3 90 @ —
Bayo, ctl	2 30 @ 2 35	Superfine	2 50 @ 3 00
Butter	2 50 @ 3 00	**NUTS—JOBBING.**	
Pea	2 50 @ 2 60	Walnuts, hard shell, Cal. lb	6 @ 8
Red	2 40 @ 2 50	Do soft shell	8 @ 9½
Pink	2 00 @ 2 10	Do paper-shell	9 @ 1
Small White	2 45 @ 2 55	Almonds, soft sh'l	12 @ 13½
Large White	2 25 @ 2 35	Paper shell	13 @ 15
Lima	2 75 @ 3 00	Hard shell	6 @ —
Fld Peas, blk eye	1 60 @ —	Brazil	8 @ —
Do green	1 75 @ 2 00	Pecans, small	8 @ 10
Do Niles	1 60 @ 1 75	Do large	14 @ 16
Split	4 50 @ 5 50	Peanuts	3½@ 4
BUTTER.		Filberts	10 @ —
Cal., poor to fair, lb	12½@ —	Hickory	7 @ 8
Do g'd to choice	20 @ —	Chestnuts	18 @ 20
Do Giltedged	— @ 30	**ONIONS.**	
Do Creamery	26 @ —	Silverskin	70 @ 85
Do do Giltedge	— @ 32½	**POTATOES.**	
Eastern, lad e	12½@ —	River Reds	40 @ 50
Cal. Pickled	20 @ —	Early Rose, ctl	50 @ 60
Cal. Keg	20 @ 24	Peerless	60 @ 75
East'n Cream'y	25 @ —	Garnet Chilies	65 @ 85
CHEESE.		Burbank Seed's	60 @ 75
Cal. choice cream	9½@ —	Do do Salinas	1 00 @ 1 30
Do fair to good	8 @ —	Sweet	50 @ 1 00
Do Giltedged	— @ 11½	Extra choice sell for more money	
Do Skim	5 @ 6½	**POULTRY.**	
Young America	— @ 11½	Hens, doz	6 00 @ 7 00
EGGS.		Roosters, old	6 00 @ 6 50
Cal. "as is," doz	22½@ —	Do young	5 50 @ 7 50
Do shaky	17½ @ —	Broilers, small	3 00 @ 4 00
Do candled	35 @ —	Do large	4 00 @ 5 25
Do choice	40 @ —	Fryers	5 00 @ 6 00
Do fresh laid	— @ 42½	Ducks	4 00 @ 4 50
Do do s'led white	— @ 45	Do large	4 50 @ 5 50
Eastern cold-storage	20 @ —	Do extra large	— @ 7 00
Do fresh	25 @ —	Geese, pair	1 50 @ 2 25
Do selected	— @ 32½	Turkeys, gobbl'r	18 @ 21
Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.		Turkeys, hens	17 @ 19
FEED.		Do dressed	19 @ 23
Bran, ton	13 50@ 14 50	All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.	
Feedmeal	26 00@ 27 00		
Gr'd Barley	19 50@ 20 50		
Middlings	20 00@ 22 50		
Oil Cake Meal	— —@ 35 00		
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00	Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50
HAY.		**GAME**	
Compressed	8 00 @11 00	Quail, per doz	1 00 @ 1 25
Wheat, per ton	8 50@ —	Ducks	— @ —
Do choice	— @ 13 00	Do Mal'd ₱ doz	4 00 @ 4 50
Wheat and oats	8 00@ 11 50	Do Sprig	2 00 @ 2 50
Wild Oats	7 00@ 10 00	Do Teal	1 50 @ —
Cultivated do	6 00@ 9 00	Do Widgeon	1 50 @ 2 00
Barley	6 50@ 9 00	Do small	1 00 @ 1 50
Alfalfa	8 00@ 10 00	Geese	— @ —
Clover	8 00@ 10 00	Do gray ₱ doz	2 00 @ 2 50
Straw, bale	35@ 50	Do White	1 00 @ 1 50
GRAIN, ETC.		Do Brant	1 00 @ 1 50
Barley, feed, ctl	80 @ — —	Snipe	— @ —
Do good	85 @ — —	Do English, doz	1 50 @ 2 00
Do choice	87½@ — —	Do Jack, per doz	75 @ 1 00
Do brewing	92½@ — —	Hare, per doz	1 00 @ 1 25
Do do choice	96½@ — —	Rabbits, large	1 25 @ 1 50
Do do Giltedge	1 00 @ — —	Do small	1 00 @ 1 25
Do Chevalier	1 00 @ — —	**PROVISIONS.**	
Do do Giltedge	1 15 @ — —	Cal. bacon, heavy, per lb	12 @ —
Buckwheat	2 25 @ — —	Medium	13 @ —
Corn, white	1 15 @ 1 20	Light	14 @ —
Yellow, large	1 02½@ 1 05	Lard	9½@ 12½
Do small	1 12½@ 1 15	Cal sm'k'd beef	11½@ —
Oats, milling	1 36½@ — —	Hams, Cal salt'd	13 @ —
Feed, choice	1 33½@ — —	Do Eastern	14 @ —
Do good	1 30 @ — —	**SEEDS.**	
Do fair	1 20 @ — —	Alfalfa	9½@ —
Do common	1 10 @ — —	Clover, Red	14 @ —
Surprise	1 45 @ — —	White	28 @ —
Black feed	1 05 @ 1 15	Flaxseed	2 25 @ —
Do seed	1 17½@ 1 30	Hemp	4½@ —
Gray	1 30 @ — —	Mustard, yellow	5½@ 6½
Rye	1 12½@ 1 17½	Do brown	4 @ —
*Wheat, milling Gi tedged	1 35 @ — —	**WOOL.**	
Do choice	1 33½@ — —	**FALL, 1892.**	
Do fair to good	1 31½@ — —	S Joaquin, plain	6½@ 10
Shipping, choice	1 32½@ — —	Do mountain	10 @ 12
Do good	1 30 @ — —	Do lamb	8 @ 10
Do fair	1 27½@ — —	Northern Choice	14 @ —
Common	1 25 @ — —	Do Defective	11 @ —
Sonora	1 25 @ 1 30	Do Lamb	10 @ 14
HOPS.		**HONEY—1892 CROP.**	
1892, fair	18 @ —	White comb, 2-lb frame	9½@ 12½
Good	20 @ —	Do do 1-lb frame	11½@ 14½
Choice	21 @ —	White extracted	7½@ —
FLOUR.		Amber do	6½@ —
Extra, city mills	3 90 @ —	Dark do	6½@ —
		Beeswax, lb	23 @ —

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¼ to 1c per lb.

APPLES 1892.		**PEARS—1892.**	
Sun-dried, ¼'s, prime	3½@ 4	Sun-dried, quarters	— @ 3
Do do choice	4 @ 4½	Do sliced	4 @ 5
Do sliced, prime	4 @ 4½	Evap., slic'd, in b'xes	7 @ 8
Do do choice	4½@ 5	Do ring do	9 @10
Evap. bl., ri g, 50-lb. bx	7½@ 9	Unp'led, q'rt'd, bl'ch'd	6 @ 7
Fancy, higher.		**PLUMS—1892.**	
APRICOTS—1892.		Pitted, sun-dr.ed	10 @10½
Do bleached	13½@—	Do evap. boxes, choice	@—
Do do fancy	15 @16	Do do do fancy	— @—
Evap. choice, in boxes	15 @16	Unpitted	4 @ 5
Do fancy, do	15½@17	**PRUNES—1892.**	
FIGS—1892.		Cal. French, ungraded	7½@ 8
Sun-dried, black	4 @—	Do graded, 60 to 100	8½@ 9
Do white	3½@—	Do do 40 to 60	11 @12
GRAPES—1892.		Fancy sell for more money.	
Sun-dried, stemless	3 @—	**RAISINS—1892.**	
Do unstemmed	1½@ 2	London Layers, cluster per box	1 90 @2 00
NECTARINES—1892.		Do choicest do	1 50 @1 60
Red, sun-dried	7 @ 8	Do prime pr bx	1 25 @1 40
Do Evap., in boxes	— @—	Loose Muscatels, 2-crown, pr bx	75 @1 00
White, sun-dried	9½@11	Do 3-crown do	1 15 @1 25
Do evaporated	— @—	Do do faced	1 30 @1 35
PEACHES—1892.		Unstem'ed Muscatels in sks pr lb	2½@ 3
Sun-dried, unpeeled	7 @ 7½	Stem'ed 2-crown	3 @ 3½
Do do prime, bl'ched	9 @10	Stem'ed 3-crown	3½ @ 4½
Do do choice, do	11 @—	Se'd'l's M'sc't'l sks	4 @ 5
Do do fancy	11½@—	Do do in bxs	@1 00
Sun-dr., pl'd, bl'ched	@—	Do Sultanas, sks	6 @ 7
Do do prime	14 @—	Do do bxs	— @1 50
Do do choice	— @15	Halves, quarters and	
Do do fancy	— @16	25, 50 and 75 cents higher respectively than whole boxes.	
Evap., peeled, in boxes, choice	17½@—		
Do do fancy	20 @—		

Keystone Corn Husker and Fodder Cutter.



All readers of the agricultural press must have noticed the interest that is being manifested in the subject of saving, handling and using the corn crop. By "corn crop" we mean the whole crop, and not the grain alone. It is certain that nearly 40 per cent of the corn is in the fodder, and some place the percentage still higher. Can you afford to throw away 40 per cent of your product? Where cattle are turned into the standing stalks, nearly 30 per cent of the value of the entire crop is still lost, besides injuring many animals and injuring the fields.

Of Corn Harvesters we will write some other day, but to-day the process of husking the corn and preparing the fodder, as done by the "Keystone Corn Husker and Fodder Cutter," is before us. This machine is now in its fifth year and has been a success from the start. It has many valuable improvements for the present season: Chain drives for the husking rolls, and for both the ear-corn and cut-fodder elevators have been substituted for the pinions and the shafts formerly used, thus lessening the chances of breakage and wear and requiring less power to drive. A cylinder head, similar to the cylinder of threshing machines, can now be furnished, as well as the knife-head. The cylinder shreds the stalks nicely, for the feed rolls hold the stalks firmly while the cylinder does the work. Fodder thus prepared is both crushed and shredded, and has no sharp edges to injure the mouths of stock.

The cut fodder from the machine has been baled in the ordinary hay press and sold in the markets the same as hay, quite largely, but the shredded fodder can be baled even better.

The corn stalks are fed to the machine butt first, and pass between two feed rollers, which crush the stalks and pass them to the knives or shredder, where they are cut up and dropped to the fodder elevator to be delivered to the mow of the barn, or the shed, or stack. The feed rollers snap off the ears of corn, which fall to the husking rollers beneath, where they are husked cleaner than is usually done by hand, and delivered to the ear corn elevator for the wagon or crib.

The husking pins can be raised or lowered to suit the condition of the corn, and the incline of the husking rollers can be increased or lessened as the conditions may require.

The machine gets every ear of corn from the largest ear to the smallest nubbin. Many cases are reported where parties having had the corn husked by hand had the fodder cut by the machine, and got enough corn by so doing to pay for all the work, ears that the men had missed in hand husking.

There is just lots of valuable information about corn fodder and about this machine which is revolutionizing corn raising to be had from the pamphlet, "The Great Leak on the Farm," which will be sent free to all who mention this paper, by sending a postal card request to the KEYSTONE MFG. CO., Sterling, Ill.

A Tree Wash that Kills the Pests.

A company has recently been organized in San Jose, known as the "Fruit Pest Exterminating Company," with a capital stock of $10,000. Directors are W. E. Ward, G. W. Sill, J. R. Roberts, Henry Singleton, Henry Booksin, Jr., A. Miller and F. C. Struvy.

The purpose of the company is to manufacture and sell Prof. W. H. Brown's Insect Exterminator. This preparation for spraying trees and plants has been tried by careful and practical orchardists in many places, and under various circumstances. Judging from the numerous testimonials (one or two of which are annexed), this pest killer has succeeded where others have failed.

SANTA CLARA, CAL., July 1, 1892.

I hereby certify that Prof. W. H. Brown sprayed a prune-tree that was badly infested with brown apricot scale, hatched and on the leaves. His spray, whatever it might be, began to show its effects as soon as dry. After three days, I have this day examined many leaves and do not find a live scale. One twig on another tree, all of which was affected with live scale on the leaf, was sprayed and the same results found on the leaves of that twig. The woolly and rose aphis immediately yielded to his treatment. Very respectfully, etc.,

PHILO HERSEY,
President West Side Fruit Growers Association, Santa Clara Valley.

SAN JOSE, CAL., August 4, 1892.

TO WHOM IT MAY CONCERN:

This is to certify that yesterday I had various tender plants and hardy evergreens, such as assorted palms, oleanders and coleus, treated with Prof. W. H. Brown's Insect Exterminator, and to-day all injurious insect life is destroyed, and without injury to any of the plants whatever. R. D. FOX,
Proprietor Santa Clara Valley Nurseries.

The company's office is at 33 Fountain St., San Jose. For particulars address Henry Booksin, Jr., manager.

Letter From Alfred Grunfeld.

TRANSLATED FROM THE GERMAN.

WM. KNABE & CO.:

During my six months' concert tour through the United States of America, I have used exclusively the Knabe Pianos, and am pleased to be able to state, with fullest sincerity, that I consider them *the best instruments of our times.*

In particular, is the action *absolutely incomparable*, enabling the rendering of effects which I considered heretofore impossible.

I congratulate Wm. Knabe & Co. heartily to their superb instruments, and feel convinced that most of my colleagues will join me in my judgment.

ALFRED GRUNFELD,
Imperial and Royal Austrian Court Pianist, and Royal Prussian Court Pianist.

New York, April 1, 1892.

Rattan Chair Factory.

If you do not object to buying at a factory, we can SAVE YOU

40 Per Cent

On Rattan Chairs. Over Two Hundred Styles to show you.

CALIFORNIA RATTAN COMPANY,

MANUFACTURERS OF

High Grade Rattan and Bamboo Furniture.

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SAN FRANCISCO, - - - - - CAL.



AN OLD STYLE PULVERIZER.

Especially adapted to pulverizing "bottoms"—one man and a small boy can operate it.

THE LATEST STYLE

PULVERIZER!

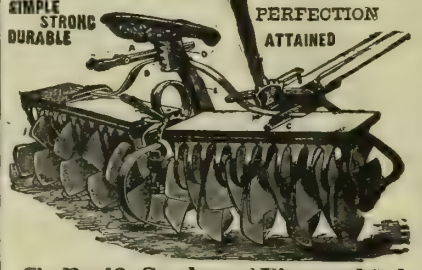
— THE —

PACIFIC SPADER!

Operated by one small Boy. No Man requised.

SOMETHING NEW! FINEST IMPLEMENT IN THE MARKET.

SIMPLE STRONG DURABLE PERFECTION ATTAINED



The **Pacific Spader** and **Vineyard Cultivator.** Does more work in one stroke than a Disc Harrow in ten. Sizes, 5½ to 12 feet.

TRUMAN, HOOKER & CO.
SAN FRANCISCO and FRESNO.

— SIZES: —

No 5D—	5½	foot	Spader	16-inch	Blades
No. 6D—	7	"	"	16	" "
No. 10D—	5½	"	"	20	" "
No. 14D—	7	"	"	20	" "
No. 16D—	8	"	"	20	" "
No. 20D—	10	"	"	20	" "
No. 24D—	12	"	"	20	" "

Linden, Cal., Nov. 26, 1892.

Messrs. Truman, Hooker & Co.,
San Francisco, Cal.

Gentlemen:—I was induced by your agent, Mr. I. O. Fowler, to purchase one of your PACIFIC SPADERS, which I have tested on some very hard land and must say it does its work to perfection. I will say to all who contemplate purchasing a Cultivator to take the Pacific Spader every time. I remain

Yours very truly,

C. V. Webb.

STATE FAIR, 1892.





The following San Francisco Firms ana Individuals Received the Highest Awards of the State Agricultural Society at the late State Fair.

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BEST DISPLAY OF AGRICULTURAL MACHINERY, CALIFORNIA MANUFACTURE, GOODS MANUFACTURED BY BENICIA AGRICULTURAL WORKS.

BUFFALO-PITTS THRESHING MACHINE.
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BEST PREPARED PAINT (P. & B.).
SAMPLES OF PAINT, CAL. MANUFACTURE (P. & B.).

THE FRUIT PEST EXTERMINATING CO.

OF SANTA CLARA COUNTY.

CAPITAL STOCK.....$10,000 PAID UP.

TELEPHONE 181.

W. E. WARD.....President
H. BOOKSIN, Jr.....Manager
J. R. ROBERTS.....Secretary

This Company is Sole Agent in this county for **PROF. W. H. BROWN'S INSECT EXTERMINATOR**, and is prepared to contract for the pruning and spraying of orchards. WARRANTED TO KILL all kinds of Scale, Woolly, Green, Plum and Hop Aphis, Cherry and Pear Slug, Cankerworm and Caterpillars, and in fact all insects injurious to the Trees, Shrubs, Plants or Vines, WITHOUT INJURY TO THE FOLIAGE ON TREES. **Indorsed by the State Board of Horticulture of Oregon.**

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Seeds, Plants, Etc.

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SPECIALTIES:

NUTS, PRUNES & GRAPES.

The Largest and Best Collection of "Nut-Bearing Trees to be found in the United States, and Excelled Nowhere in Europe.

24 Varieties of French Walnuts, hardy, productive, perfect bloomers, regular soft shell varieties, including the Mayette, Franquette, Cluster, Vourey, Parisienne, Præparturiens (4 varieties), Alpine or Wonder of the Alps, Chaberte, Barthere, Mammoth or Jauge, Meylan, Laciniated or Ash-leaved (highly ornamental), Weeping (with limbs bending gracefully down like those of the Weeping Willow), and 11 other varieties, 4 of which are of California origin.

Our Seedling Trees are guaranteed to be "Second Generation" Trees, being grown from nuts borne on the original or on trees grafted from the original.

Our Grafted Trees are all **grafted from the original** and therefore **absolutely true.**

10 Varieties of French Chestnuts or "Marrons", solely propagated by grafting; the finest, largest and sweetest.

9 Varieties of Filberts (Avelines, Cobnuts and Round Filberts). See chapter on "How to Train Filberts to Make them Bear Abundantly," in catalogue.

11 Varieties of Prunes, including five different "types" of the Prune d' Ente or Robe de Sargent or French Prune, all synonyms; what is wrongly called in California Robe de Sargent we call "Loire D'Ente", as it is found only in the nurseries of the Loire valley in France, and not in those of the true Robe De Sergent's home in the valley of the Lot.

241 Varieties of Grapes, divided into Extra Early, Early, Medium and Late Varieties. The largest and choicest collection to be found in California.

APRIL CHERRIES, the very earliest kinds ever introduced in this country.

Pears, Apples, Plums, Apricots, etc.

Small Fruits of all sorts

Portugal Orange, fine and smooth thin skin and sweet.

Corsica Lemon, a superb Lemon, the equal of the Sicily.

General Descriptive Catalogue, with essay on "GRAFTING THE WALNUT,
And How to Redeem Large, Unproductive, Delicate, Defective or Hard-shell Walnut Trees by Grafting."
Illustrated with 8 cuts on Walnut Grafting.
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IMPERIAL PEACH.

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A. T. FOSTER, Dixon,
Or, I. H. THOMAS & SON, Visalia.

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Fruit, Shade and Evergreen Trees and Flowering Shrubs.

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The Largest and Best Stock of Camellias, Azaleas and Rhododendrons, consisting of the Best European Sorts.

Nurseries at Millbrae. Greenhouses and Office and Salesyard at Baker and Lombard Sts., San Francisco.

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Send for Price List.

OROVILLE NURSERIES,

W. W. WILL, Proprietor

OROVILLE, - - - BUTTE CO., CAL.

Trees at Wholesale and Retail.

I have to offer the coming planting season the following stock:

PEACHES, BARTLETT PEARS, ALMONDS, FRENCH AND OTHER PRUNES, APRICOTS, ORANGES, LEMONS, OLIVES, SHADE & ORNAMENTAL TREES, Etc.

My trees are warranted Free from Insect Pests of any kind, and are raised on well-drained foothill soil by myself. Correspondence solicited.

SANTA ROSA NURSEIRES.

R. W. BELL.

(Successor to LUTHER BURBANK.)

PEARS, APPLES, WALNUTS AND SHADE TREES in Surplus.

A BIG STOCK OF FINE

Prunes, Cherries, Olives,

& EVERYTHING IN NURSERY LINE.

No Bugs.
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In Variety.

Prices and a Pamphlet on Olive Culture in California Mailed Free.

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CHERRIES, PEACHES and APPLES 1 and 2 Years Old.
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500,000 FRUIT TREES!

Orange, Lemon, Lime, Olive, Japan Persimmon, and all kinds of Nut-Bearing Trees Shade and Ornamental Trees, Shrubs, Etc.

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Bartlett Pear Trees and French Prunes

On Myrobolan Stocks, at Low Rates.

Also, a general assortment of Apple, Pear, Peach, Nectarine, Plum, Cherry, Quince, etc., grown in sandy loam, without irrigation, which gives a fine proportion of roots. I offer no trees but what are grown in my own grounds and known to be true to label and free from scale bugs. Address: W. H. PEPPER,
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Owing to age and poor health, I will sell my place and business at a bargain. Place consists of 250 acres of land, good buildings, 50 acres in orchard, and a large Nursery Stock, together with horses, wagons and implements, complete, for carrying on the business. A good opportunity for enterprising men with capital to step into a good-paying business. For further particulars address, as above.

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CHERRIES,	PEARS,
PRUNES,	PEACHES,

No Irrigation. **Free from Pests.**

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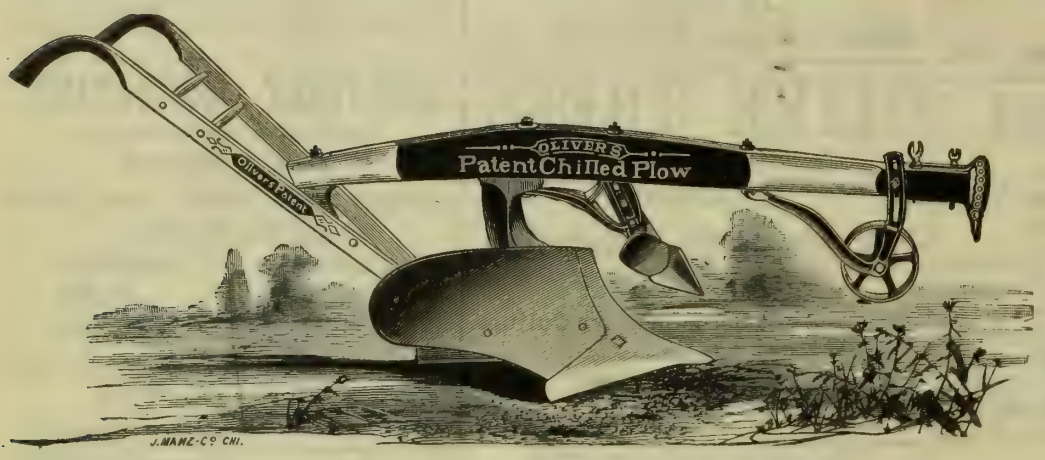
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PACIFIC RURAL PRESS

Vol. XLIV. No. 24. SAN FRANCISCO, SATURDAY, DECEMBER 10, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

What a California Fruit Farm Will Do.

Pages of description and columns of inventory prebably would not so forcibly impress upon the mind of the distant reader the excellence and variety of the products of a single California fruit-farm as well as a glance at the engraving herewith presented. Such testimony from a photographic camera cannot be gainsaid, and we present the evidence with all the more confidence because the display is not exceptional or isolated, but is characteristic of the State, and can be reproduced wherever industry and intelligence join forces with soil and climate. But though the material is thus within the reach of all, the presentation of it in an object lesson such as the engraving carries is striking and significant, and in the production of the engraving we have a twofold object: first to show the products of the farm, second to give a lesson in the display of such products for public examination and enjoyment. The first reflects credit upon both farm and owner; the second bespeaks the taste and enterprise of the owner.



PRODUCTS OF THE VINE HILL FRUIT FARM OF W. W. WATERMAN, SANTA CRUZ.

The exhibit shown in the engraving was made by W. W. Waterman at the recent fair in Santa Cruz county, and the material was produced upon his fruit-farm in the region known as Vine Hill, adjacent to the city of Santa Cruz. The farm is rather an old one, and has been well improved and planted in great variety, as the exhibit shows. There were shown 18 varieties of table grapes, seven of wine grapes, 12 of orchard fruits, eight of garden vegetables, 15 of sun-dried fruits, 16 of canned fruits, 25 of jellies, 11 of preserved fruits, eight of wine, etc.

These products were not produced in variety for exhibition. If that were the case, the varieties could have easily reached hundreds. The display is merely of products which enter into the business of the farm and are for the most part income-yielding supplies. As such they are, of course, of great significance, and illustrate the way in which the owner of a comparatively small piece of ground may make a livelihood by giving attention to diversified production, which will well employ his time and afford opportunity for the exercise of whatever of art and ingenuity he can command in his productive enterprise. Of course we are not declaring that under all circumstances such diversity of products is best. It is often, in fact, best not to attempt such a variety, and yet in many situations pleasant and prosperous homes are established upon such a basis.

THE CABBAGE CROP.—California can easily grow cabbage enough for the whole Eastern slope, and if the product should only come coincident with an Eastern scarcity there would be money enough in it to make all Californians rich. The trouble has been hitherto that only occasionally would low freights and high Eastern values connect in such a way that cabbage could be profitably shipped, and then, of course, California would only have a moderate surplus to spare. Another of the instances of millions in cabbage, if we only had millions of cabbage, is just present. An Eastern paper says:

Cabbage is a scarce and high-priced article in Chicago this season; scarcer and higher in price than for twenty-five years. The usually bountiful crop raised in the vicinity of that city is almost a complete failure. The only available surplus is in Minnesota. It, too, is limited, and the price has already gone up to $16 a ton for Chicago. The cabbage-growers of Michigan, Wisconsin, Iowa, Indiana, Ohio and other parts of Illinois have suffered the same as the farmers and gardeners adjacent to Chicago. It is predicted by Chicago dealers that the price will go as high as $40 a ton before the holidays are over. This figure will make a medium-sized head cost 25 cents at the retail grocers. The price of the same size head was five cents last year.

Suppose, then, we put in a vast acreage of cabbage for Eastern sale. Eastern vegetable-growers will naturally do the same thing, and California cabbage will not be worth the freight. President Harrison is right; the farmer would be better off if he could grow crops to order.

THE CITRUS FAIR.—The northern citrus fair will be held in the hall of the Mechanics' Institute, San Francisco, beginning January 10th and continuing until February 11, 1893. The various citrus fruit counties in northern California are manifesting an unusual degree of interest in the event, and the prospect is that the exhibit will be large and complete. Suitable money prizes have been offered and the competition between the exhibitors bids fair to be spirited.

Pickling Ripe Olives.

It seems that there are still people who do not know the superiority of the pickled ripe olive over the green, but fortunately when the lesson is learned it is not forgotten. An English traveler is reported to have recently visited Oroville and to have been introduced to the black pickled olive and to have thus expressed himself: "He had traveled extensively through Italy, Spain, Greece, Sardinia and France, the great olive region of Europe, and had eaten olives in all the cities of those countries, but had never eaten any that were sweeter or more palatable than those put up here. He expressed his surprise that California had led off in this idea of pickling the ripe olive, for it is the European plan to pickle the olives while they are yet green.

It seems to us there must be something wrong either with the reporter or with the English traveler, for it is not true that the natives of the European countries named pickle the ripe olive for their own use and the green for export? If this is the case, the traveler must have been served with fruit which he, as a foreigner, was supposed to enjoy rather than the product for home use. California, as we understand it, does not claim any originality in pickling ripe olives, but does claim to be getting at a proper understanding of the olive as it is understood in its ancestral homes in southern Europe.

MR. FULTON G. BERRY, near Centerville, Fresno county, has a tree bearing 4000 oranges. An enthusiastic calculator estimates that the crop on an acre of such trees would be worth $4500. No doubt it would. But Mr. Berry has not an acre, nor has any other producer. If he had, the inducements for all inhabitants of the State to abandon their present pursuits and engage in orange-raising would be so enormous that California would become one vast orange orchard, and the market might suffer somewhat from overproduction. Mr. Berry's is a remarkable tree, which has no doubt had special care and unusual advantages of soil, irrigation and location, and, in the nature of things, it is not likely that even the prolific county of Fresno could produce many such. We congratulate Mr. Berry on its possession, and hope its shadow may never grow less.

FRUITGROWERS in southern California are discussing the question of what is the best lemon. The *Orange Belt* quotes several prominent growers in favor of the Lisbon.

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ALFRED HOLMAN.....General Manager

San Francisco, December 10, 1892.

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[NEW THIS ISSUE.]

Seeds—E. J. Bowen.
Situation Wanted—"W. V.", Box A.
Nursery Stock—D. Turner, Phoenix, Arizona.
Harrows—Deere Implement Company.
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Agricultural Implements—Allison & Neff.
Nursery Stock—C. W. Reed, Sacramento.
Planet Drills—S. L. Allen & Co., Philadelphia, Pa.
Jack for Sale—Dr. G. W. Leek.
Cream Separators—A. J. Van Drake.
Scotch Collie Pup for sale—"R. B" this office.
Nursery Stock—A. P. Henning, Cottonwood, Cal.
See Advertising Columns.

The Week.

The storm has passed, and now all reports which come to us from end to end of the State are of quickly springing grass, the green mantle covering the whole landscape beneath the warm welcome of an unclouded sun. Most localities report ten times or more rain this year than last to this date; the soil almost everywhere being soaked beneath the sole of the plow so that all sorts of seasonable fieldwork proceeds unrestrictedly.

There will be a vast area plowed and seeded before Christmas, and another respectable area prepared for tree-planting, for the most earnest activity is manifested in efforts to extend the orchards of the State. The last summer's experience with fruit prices warrants this. There will also be a considerable planting of citrus fruits in places new and old, for there has been nothing for several years to discourage the pioneers in the new thermal belts. May they always be thus favored.

At the South there is a promise of a very satisfactory orange crop, and this means a winter of activity and a large money inflow. Surely business must respond to the favoring conditions which the interior enjoys.

A Drawback to Agriculture.

In his current message to Congress, President Harrison makes the following succinct reference to a matter that all agriculturists experience and appreciate:

It is one of the unfavorable incidents of agriculture that the farmer cannot produce upon orders. He must sow and reap in ignorance of the aggregate production of the year, and is peculiarly subject to the depression which follows overproduction. But while the fact I have stated is true as to the crops I have mentioned, the general average of prices has been such as to give to agriculture a fair participation in the general prosperity. The value of our total farm products has increased from $1,363,646,866 in 1860 to $4,500,000,000 in 1891, as estimated by statisticians, an increase of 230 per cent. The number of hogs in the country on January 1, 1891, was 50,525,106, and their value was $210,193,925. On January 1, 1892, the number was 52,398,019, and their value was $241,931,415. On January 1, 1891, the number of cattle was 36,875,648, and the value $544,127,908. On January 1, 1892, the number was 37,651,239, and their value $570,749,155.

The President also says:

It may be, I think, said without challenge that in no corresponding period has so much been done as during the last four years for the benefit of American agriculture.

Second Crop Raisin Grapes.

The most interesting topic at the present time among growers of raisin grapes is the disposition of the second crop—the grapes which are borne upon the later wood-growth of the vine and are naturally later in ripening than the fruit which first appears nearer to the old wood. When raisin-making was new in this State, the second crop was not undesirable. Though the clusters are small, the berries are of unusual size, and the pioneer raisin-makers used to display their immense second-crop raisins with pride, and used also to get large prices for them. As the industry has grown and the product has increased, necessitating far greater system and economy in handling it, the second crop has become either an embarrassment or a positive detriment, as different growers are disposed to look upon it. It is an embarrassment when its lateness brings it into a rainstorm and its raisin product is poor, and it is a direct detriment because the growth of second-crop clusters takes sap which should make better first-crop clusters.

The question then is, what can be profitably done with the second crop, or how can the second crop be prevented? Answers to the first are being diligently sought, and special meetings of grapegrowers are being held in the San Joaquin valley to discuss by-products. At the same time much attention is being given to methods of pruning by which the whole strength of the vine can be thrown into the yield of one crop. This latter phase of the subject was considered by the State Horticultural Society at its last meeting, and Mr. E. W. Maslin proposed the Guyot system of pruning as fitted to give the vine an opportunity to make its top growth more commensurate with its root system, to prevent the growth of laterals from buds which should supply strong canes for the next season's fruit-bearing, and to prevent the second crop of grapes because the vine has better opportunity for strong wood growth.

As this subject is of such wide interest, and as some vineyards in the raisin regions are already adopting methods of longer pruning, we will state briefly in what consists the Guyot system, which has been found of great value upon some of the richer low-land districts of France. The vines are brought to the third year by the usual system of pruning, and the third year a single cane is trained to form a head at about ten inches from the ground and all the growth trained to a five-foot stake. At the next year one cane is pruned long, say with ten buds; another is pruned to two buds, all other canes being removed. After the winter cultivation, the long cane is bent down, horizontally, and attached to the lower wire of a two-wire trellis, which is formed by stretching two wires from stake to stake across the field. During the following summer the laterals are allowed to grow from the fruiting-cane and are tied to the upper wire and topped off. Bunches of fruit will then be formed on the fruiting-branch, and as there is considerable length to that cane, it will allow for sufficient fruiting of first crop. At the same time, two shoots which come from the short spur are allowed to grow upright and are tied to the high stake. Their growth is not interfered with at all; they have all the extension they desire. The result is that the lower buds are fully formed but do not project laterals.

At the next winter-pruning, the cane which has fruited is removed entirely. One of the two canes on the high stake is cut back to two buds; the other is turned down and fastened to the wire for the next summer's fruiting. As this process is repeated from year to year, it will be seen that each summer the vine is permitted to grow two long canes and to have wood for a good fruiting of first crop. Each winter the old fruiting-cane is cut away. One new long cane is cut back; the other long cane is bent down for fruiting, etc. The method is exceedingly simple, and ordinary workmen can easily be taught it. The objections which will be urged are the cost and inconvenience of trellising; the impossibility of plowing and cultivating both ways unless some arrangement for removing in the fall and subsequent replacing of the wires in the spring can be found available. It might possibly be arranged to have a folding-arm to the high stake or some other simple contrivance.

Of course, it is possible to apply other methods of longer pruning and of allowing the vine greater opportunity for exercising its vegetative energy. However it may be done, this seems to be a way to prevent the second crop, and possibly to free the vine from some diseases which now affect it and may be due to the unceasing repression of its growth.

It will be a good idea to have a more general trial this year of longer pruning of our vines. All reports of which we know have indicated a greater grape yield on longer-pruned vines. Is the increase commensurate with the greater trouble and outlay? Will the longer-pruned vines prove more vigorous, and will they devote their full force to one crop instead of undertaking the second setting of fruit? These questions are old, but if each vinegrower will experiment this year on a few vines he will get results which may be very significant, and in which he will have confidence.

Great Sires of 1892.

The trotting season for 1892 is practically at an end, and it is possible to summarize results, so that it may be seen what strains have been most successful in making fast records and in winning races. It appears that thirty-eight stallions have had five or more of their get become standard by performance this season, and are now classed in the 2:30 list, having made a mile in 2:30 or better, or, if pacers, 2:25 or better. So steady has been the advancement in the matter of intelligent breeding, that this achievement is looked upon as a matter of course. The greatest sire of the year appears to be Red Wilkes, son of George Wilkes, 2:22. Although the technical record of Red Wilkes is 2:40, it is known that he made two separate miles in better time than 2:30—one of them in 2:27—when in his four-year-old form. Other sires in the subjoined list are in the same position as Red Wilkes, having actually exceeded 2:30, among them Mambrino King, Young Jim, Dictator, Bourbon Wilkes and Electioneer. But, leaving out of the question all speculation as to what these sires were able to do, the fact remains that the large proportion which have had five or more of their produce in the 2.30 or 2:25 lists, are developed trotters and no less than ten of them have records better than 2:20.

Electioneer is a close second to Red Wilkes (who has 22) with 15 to his credit, and then come Nutwood and Onward.

The list, compiled by the *Breeders' Gazette*, is as follows, the last column being the number in the 2:30 list from each stallion named:

Red Wilkes	2:40	22	Young Wilkes	2:28¼	7
Electioneer	—	17	Ben Franklin	2.29	6
Guy Wilkes	2:15¼	15	Bourbon Wilkes	—	6
Nutwood	2:18¼	14	Cyclone	2:23½	6
Onward	2:25¼	13	Egbert	—	6
Alcantara	2:23	11	Hambrino	2:21¼	6
Dexter Prince	—	11	Sable Wilkes	2:18	6
Happy Medium	2:32½	10	Santa Claus	2:17½	6
Jay Bird	2:31¾	10	Victor Bismark	—	6
Ambassador	2:21¼	9	Alcyone	2:27	5
Gambetta Wilkes	2:22½	9	Almont (Hamlin's)	2:26	5
Mambrino King	—	9	Altamont	2:26¾	5
Pilot Medium	—	9	Brown Hal (p.)	2:12½	5
Young Jim	—	9	Egmont	—	5
C. F. Clay	2:18	8	Madrid	—	5
Phallas	2:13¾	8	Phallamont	—	5
Robert McGregor	2:17½	8	St. Bel	2:24½	5
Baron Wilkes	2:18	7	Simmons	2:28	5
Dictator	—	7	Sprague (Round's)	2:24½	5
Wilton	2:19¼	7			

The New Road Law.

Important changes in the road laws of the State occur on January 1, 1893, in accordance with the provisions of the new law passed by the last legislature. In brief, the provisions of the new law are as follows:

It provides that each supervisor district shall constitute a road district; that the supervisor shall be ex-officio road commissioner; that sealed proposals shall be received for keeping in order and repair roads, culverts, etc.; that for the purpose of watering roads in any part of the county, the supervisors may erect and maintain water works, and for such purposes may purchase or lease real estate or personal property, the cost of such work and the watering of the roads to be charged to the general county fund, or to the district fund of the district or districts benefited; that the road commissioner shall inspect the work done on the roads of his district and make written reports to the board in January, April, July and October of each year; that the road commissioner shall receive for his service as such 20 cents per mile, one way, for all distance he travels in performance of his duties, with the understanding that in any one year he shall not receive to exceed $300—the present limit upon roadmasters; that in their discretion the supervisors may appoint a road inspector for the whole county, who shall receive not to exceed the total compensation of the road commissioners; that all contracts for building and repairing roads shall be let to the lowest bidder.

It will be observed that a leading provision of the law relates to the watering of roads. The supervisors are vested with large powers in this particular, water being considered an indispensable agent in the maintenance of good roads.

The new law is not received with favor in all parts of the State, but there is a general disposition to give it a fair trial.

The Fresno County World's Fair Commissioners have decided to place 5000 oranges and 1000 lemons in the county exhibit at the World's Fair. Donations of the fruit are not asked, but the commissioners have decided to pay for it at the rate of $30 per thousand, or $180 in all. Contracts have already been made.

It is proposed to establish cordage or rope works at the State Prison at Folsom, when the water power from the American river will be utilized. The cordage of the United States is practically under one immense trust, the National Cordage Association.

From an Independent Standpoint.

Jay Gould, the notorious Wall-street operator, died on Saturday of last week of pulmonary consumption. His death was the culmination of an illness of three years' standing, and had been constantly imminent for many months. Gould was the son of a New York farmer, and his early life was not unlike that of most country boys. He milked cows, drove them to pasture and "chored" around generally, till, at the age of ten, he begged and obtained permission to go to school. There was no school in his neighborhood, so he entered into an engagement with the blacksmith of a village some fifteen miles away to work out of school hours for board and lodging. At the age of fourteen he obtained employment in a country store, and while thus engaged studied surveying. Between the years of eighteen and twenty he worked as a surveyor's assistant, paying for his board and lodging as he traveled about the country by making noon-marks for farmers' wives. The young man was industrious and temperate to frugality, and had soon amassed a snug little fortune of $5000. With this capital he entered upon a career of speculation, which ended only with his death. In thirty-five years he turned his five thousand dollars into a hundred millions. Gould has for many years been a widower. He leaves five children—four sons and a daughter. All are well grown up, two of the sons being married. As yet the will has not been made public.

The methods by which Mr. Gould's personal fortune grew from nothing to one hundred millions of dollars made his name infamous. In every art which has ever been applied successfully to the manipulation of stock and money markets Gould was an adept, and he stood above all rival American capitalists in the ability to wield vast capital to the largest advantage. He was absolutely without conscience or mercy, and in his code anything that was within the letter of the law was legitimate. Considerations of right as distinct from might, never affected his plans. He valued his honor as little as he did any other moral consideration, and could stab a friend as easily as an enemy. In business, Gould was in turn everything that was infamous—a liar, a thief, a false ally and a pirate. For twenty years he has been the evil genius of the American business world. One-half of the schemes by which corporations and stock jobbers habitually fleece the country are of his invention, and he played them for all they were worth, and with preeminent success. Some years ago, when brought before the bar of a congressional committee to give testimony concerning some of his methods, he boldly justified them, charging that the fault was not with him, but with the laws. Apparently he was not even able to conceive a moral obligation as distinct from the black and white of statute. But while professing respect for the law, he treated it with calculated contempt. A bribed judiciary in New York was an element of his vast engine of power, and his whole course was directed with as little actual regard for law as for morals.

There is wide distinction between a man like Gould, even though he appear occasionally as an organizer and administrator of large public enterprises, and a man like Senator Stanford of our own State. Men of the latter sort, though very often subject to grave criticism, do much good to a country in certain stages of its development. They use their vast gifts of foresight, organization and administration in ways which fertilize and water the land. If not all that they do may be commended, much at least is profitable to the country in which they operate. But Gould and those who imitate him are scourges who carry pestilence and destruction in their wake. The processes through which they find their own profit are exhaustive to every field in which they operate. Let anybody who is curious about these processes read "A Chapter on Erie," by Charles Francis Adams, printed in the *North American Review* more than twenty years ago; then let them read the tale of his robbing and wrecking of Toledo & Wabash, as set forth in the hearing before United States District Judge Gresham, who threw Gould and his rascally confederates out of court. His talons have been fixed into every great enterprise in the country, and he has generally picked the bird clean of meat down to the bone, so long as God allowed him health and strength to continue his predatory career.

The worst of Gould, as of every other grossly selfish and dishonest man, was his example. To destroy the material fortunes of men, serious as it may be, is a small wrong as compared with the destruction of their characters. The effect of Gould's methods was to lead his associates and rivals into the practice of them; while his extraordinary success gave them a sort of respectability. Unfortunately great success, especially in money-making, is usually made to justify the methods by which it had been achieved; and it ought not, perhaps, to be surprising that some really good men—among them even grave ministers of God—seek to gloss over the infamies of Jay Gould's career. They point to his abstemious life, to his domestic habits, to his fondness for his family, as if these private virtues, many of which he shared with the tiger and the savage, could wipe out the iniquity of his business life. They forget that these very virtues, along with his great success, deepen the evil of his example. It was Jay Gould above all other men who debauched the business system of New York city. He made stock-jobbery, railroad-wrecking, judicial bribery, and the whole train of evils which accompany these operations, the common practice in the great financial center of the country. He was the father of the new school of business-men whose pernicious activity has established the "trust" or the "pool" as the highest commercial achievement. Gould first taught the method, and then by the example of his great success made infamy almost respectable. The evil of Gould's life is a sort that lives after him. It is seen in a general "let down" in the moral tone of the business world. Business honor is not what it used to be. The jobber in stocks, the trickster of the "street," the usurer and the business sharper have a new standing in the commercial world which may be traced to the degrading example and the infamous success of Jay Gould.

That Gould was able throughout his whole career to operate for selfish advantage in violation of the interests and rights of others, to outrage public and private morals and *still keep within the law*, is the strongest possible demonstration of the insufficiency of the law. There is radical vice in a system which cannot protect the people from the practices by which Gould got together his millions. *What is illegitimate ought to be unlawful.* We have no prejudice against wealth, provided it be fairly acquired, but we doubt seriously if it be possible for any man in the brief period of one working life to mass a hundred millions or any large part of that sum by fair and honest means. Such vast sums cannot be acquired by ordinary or even extraordinary earning power, or in any way other than by the management for private gain of conditions related to universal necessity. How far such management may be legitimate—that is, consistent with the general rights and not in disregard of public policy—is a question worth careful study. There are advanced thinkers who hold that a government organized like our own cannot permit such huge accumulations of capital, with the centralization of power which goes with capital, without putting in peril its very existence. The point is at least worth considering. But certain it is that no nation dependent for life and character upon the public virtue and patriotism, can afford to allow the methods of Gould to become established as the business code of its people.

Congress met on Monday, and on Tuesday received the last annual message of President Harrison. It is long, but not longer than is necessary for a careful and business-like statement of the general facts connected with the administration of the Government. It deals more with details of government than with great political questions. Concerning the currency, President Harrison says that "the public confidence in the purposes and ability of the Government to maintain the parity of all our money issue, whether coin or paper, must remain unshaken." He calls attention to the unusual demand for gold in Europe, caused by the efforts of the European Governments to increase their gold reserves and remarks, not very definitely, that "these efforts must be met by appropriate action upon our part." "Appropriate action" may mean one thing or another, just as different persons may construe it. The importance of the Nicaragua canal is emphasized, but the President keeps entirely away from the question whether or not the Government should aid in its construction. Concerning the protective system, the President is positive. He regards it as a "mighty instrument for the development of our national wealth and a most powerful agency in protecting the homes of our workingmen from the invasion of want." The result of the election, he says, "must be accepted as having introduced a new policy. We must assume that the present tariff, constructed upon the lines of protection, is to be repealed, and that there is to be substituted for it a tariff law constructed solely for revenue; that no duty is to be higher because the increase will keep open an American mill or keep up the wages of an American workman, but that in every case such a rate of duty is to be imposed as will bring the Treasury of the United States the largest returns of revenue. The contention has not been between schedules, but between principles, and it would be offensive to suggest that the prevailing party will not carry into legislation the principles advocated by it and the pledges given to the people." Evidently, in writing this paragraph, Mr. Harrison forgot for the moment that it was not his duty to outline the policy of Mr. Cleveland's administration. It was certainly unnecessary, and as surely in exceeding bad taste, for Mr. Harrison to run in a campaign document as a feature of his retiring message. The rest of the message is plain and business-like, but not notable in any respect. The President seems to have purposely avoided any mention of the issues raised before the country by the new People's Party. In fact, the only really vital issue upon which he ventures a positive expression is the tariff. Some expression concerning the newer political issues was expected from Mr. Harrison. The immigration question, the questions developed by the Homestead affair, the new issues raised by the Farmers' Alliance—these were worth the President's attention, and there will, we imagine, be general disappointment that he has chosen to pass them by.

The session will be a short one—ending the third of March—and it is not likely that anything in the way of new business will be attempted. There is quite enough on the calendar to occupy all the time. Perhaps, of all the measures pending, the anti-option bill is of the widest general interest and importance. Its purpose is to stop the business of gambling in "futures" representing agricultural commodities which do not exist; a practice iniquitous in itself and seriously damaging in its effect upon the prices of farm products. The bill passed the House of Representatives last session and now awaits the action of the Senate. This measure is the first serious assault of an outraged public upon the demoralizing practices of the stock market, and if it shall be successful in suppressing gambling in "futures," it will be followed by assaults upon associate evils. Naturally the whole political power of Wall street will be arrayed against it, for it is seen that one success will lead to another, and that the whole system by which "the street" fattens at the cost of the producers of the country is in peril of being brought under review. Both the material interests and the higher moral interests of the country are involved in the fight on this anti-option measure.

The Silver Conference at Brussels has gotten far enough along to demonstrate its inability to do anything for the relief of silver. The Rothschild plan, proposing by a series of heavy purchases to maintain silver at its present status during the next five years, has been withdrawn, and the delegates are now precisely where they were at the beginning. The European nations will follow the lead of England, and England, the creditor nation of the world, will insist upon the gold standard. The Conference will probably drag along for some weeks, but it is not now believed that it is possible for it to afford any relief in the currency situation. If silver is to be maintained as a money metal, the experiment will have to be made by the United States alone, and it is a plunge before which our statesmen do well to pause and reflect. That something must be done is evident. Gold grows steadily, if slowly, dearer, and as its price advances the price of every other commodity decreases. The question "What to do" is the great puzzle of the time.

Breeders' Association Meets.

The Pacific Coast Breeders' Association held its annual meeting in San Francisco, Monday, and elected the following directors for 1893: Joseph Cairn Simpson, Oakland; John F. Boyd, Danville; F. H. Burke, Menlo Park; G. Tompkins, San Leandro; Wilfred Page, Penn's Grove; A. B. Spreckels, San Francisco; George W. Woodard, Yolo; E. P. Heald, San Francisco; D. J. Murphy, San Jose; A. T. Hatch, San Francisco; R. S. Brown, Petaluma; F. C. Talbot, San Francisco; J. H. White, Alameda; L. H. McIntosh, Chico. F. W. Loeber was the only director of the old board who held over.

There was some discussion relative to the introduction of the dash system in the races instead of heats. No definite action was taken.

The association is in a prosperous condition, having about $500 in the treasury. After the annual meeting a directors' meeting was held, when the following officers were elected: President, Joseph Cairn Simpson; vice-presidents, F. H. Burke and F. W. Loeber; treasurer, N. T. Smith; secretary, F. W. Kelley.

THE SECOND CROP OF GRAPES.—At its meeting Monday, December 12th, the Lucerne Horticultural Society will discuss the subject of the best way of disposing of the second crop of grapes—whether it should be made up into jelly or syrup, or distilled into brandy, etc., and what is best for the farmers to plant in 1893.

PASADENA is making ample preparation for its coming rose tournament, and the *Star* promises that it will be more brilliant than ever, "and still have flowers enough and enterprise enough left to show strangers what may be done in the spring in the line of a floral exhibition."

Try an Institute this Winter.

CAMPBELL, SANTA CLARA CO., Nov. 26, 1892.

TO THE EDITOR:—The winter season is again upon us, and it seems to me that it is an opportune time for the holding of Farmers' Institutes in this State. No one is so busy but what he can spare a day or two from his work to attend such institutes as may be held in his locality. I presume there are none who will doubt the beneficial results arising from such gatherings, especially if the leaders make them what they can and ought to be. The eastern States are preparing for this work more extensively than ever before, especially in Missouri, where 48 county institutes are to be held this winter. Wisconsin, the pioneer State in this work, will hold the usual number, while Iowa, Illinois, Minnesota, Michigan, Indiana, Ohio and other States will not neglect to hold their full quota of meetings.

California ought to be up and doing in this matter, for it is a well-known fact that all of us, no matter how well posted we may be in our calling, can learn something from our neighbors, and if we can better our condition in any particular we should be willing to do so. None of us know it all. Then, too, we may know something that will be of benefit to our neighbor, and we should be willing to impart to him, recognizing that what helps our neighbor will also help us in a measure.

While in other States legislative aid has been voted to help along Farmers' Institutes, we need not be deterred from holding them because we have no such aid. The expense of such gatherings need not be very large; and surely any community can raise the amount necessary to insure a good, profitable meeting.

One of the important features of a profitable institute is a good chairman who can help draw out discussions. Have brief, pointed essays, on such subjects as the people are most interested in, followed by discussions. This will bring out a wonderful amount of information, and all will feel interested. Be sure and get the young people to attend the meetings. Arrange to have plenty of music, so that if the meeting shows signs of dragging, the people can be roused up. Music will be found to be a great help. As it is almost impossible to provide essays for all subjects, have a question-box, so that if any desire to ask questions they can be written out and then read. Some one present will no doubt be able to answer.

Among fruitgrowers, the matter of cooperation as carried on by the Campbell Fruitgrowers' Union and the West Side Fruitgrowers' Association, both located in Santa Clara county, is an important one which all would like to know about and have fully explained, so that if there is any benefit in the system others can receive it. In each locality, the topics most important will suggest themselves to those who attempt to get up the institute, and better than a stranger could. The latter could only go upon general principles, and might not hit the subject most needed at all. Each locality should depend largely upon its own people for the success of the meeting, and very often it will be found unnecessary to "import" any talent whatever.

I have seen such good results grow out of Farmers' Institutes in other States, that I feel impelled to urge my brother farmers of California to go and do likewise, for I feel sure they will be benefited.

Let the PRESS lend its aid and urge upon farmers the importance of such meetings, remembering that, as a rule, farmers are more isolated than those engaged in any other calling, and by meeting together and getting acquainted with each other, they will be the gainers by it. The Granges, too, can help the matter along in their localities. I was pleased to see, in a late issue of the PRESS, that Sacramento Grange was about to set the machinery in motion for an institute, and others can do the same. Let the work be pushed forward now. R. P. MCGLINCY.

[As most of our readers know, the State University is participating in this effort, and will send speakers without charge to conduct meetings and otherwise contribute to their success. Information as to methods of proceeding to awaken local interest and insure success of meetings can be had by addressing Prof. E. J. Wickson, State University, Berkeley, Cal.—ED.]

Pulling Out Pear Stumps.

LAMANDA PARK, LOS ANGELES CO., CAL., Nov. 22.

TO THE EDITOR:—Pears are unprofitable here and I have chopped off four or five hundred trees—they were ten years old. Our soil is a wash soil—washed from the mountains—loose granite and earth. How can I pull these pear stumps up? They are from four to five inches in diameter. Can I rig anything to do it, and how?

E. A. BONINE.

[Who can advise our correspondent? We shall be pleased to publish information on this subject. We have published handy arrangements for pulling out vines, but it will take something stronger to draw out ten-year-old pear trees, we imagine.—ED.]

P. C. W. P. A.

Written for the RURAL PRESS by MAUDE S. PEASLEE.

On the afternoon of Monday, November 28th, a social meeting was held at Union-Square Hall by the Pacific Coast Women's Press Association.

A very critical paper on "California Literature" was read by Miss Knapp of the San Francisco *Call*, who claimed that there existed no such thing as California literature.

Musical and elocutionary numbers were followed by an address from Edmund Russell, the Delsartean. Commencing with the childhood of Delsarte, he covered in brief and well-chosen words the life and work of his master.

They Will Not Exhibit.

Written for the RURAL PRESS.

The Holstein-Friesian Association, it appears, withdraws from the six months' exhibit in the dairy department of the World's Columbian Exposition. This is unfortunate, as it is important to the furtherance of public interests that there be a full exhibit of all the breeds of dairy cattle.

The Holsteins have made such a record in regard to the large quantity of milk they are capable of producing, and in some instances of butter also, that the public, more especially that portion of it which is interested in matters pertaining to dairy cows, will almost imagine that they are being deprived of a portion of their just rights. At all events, there will be disappointment all round, and for this state of affairs the only excuse set forth is that the committee appointed for the purpose has (after visiting the breeders of 18 States) "been unable to obtain the requisite number of cows for this six months' exhibit, many breeders refusing absolutely to send their valuable animals to Chicago to remain for so long a time as six months." Truly, a patriotic set of breeders, to the breed, the owners of the "black and whites" must be! Perhaps they are enthusiastic in showing forth the merits of their cattle through private tests, but in such cases the enthusiasm points rather toward money-making ideas than to the advancement of the traits peculiar to the breed in question, such as are best made known to the public through public tests.

In view of the fact that the Columbian Dairy Association has made elaborate preparations for handling and testing milk in all its various phases of management, during the six months' trial, besides appropriating liberal sums of money for the payment of cash premiums, it looks as if the owners of high-testing cows ought to be prepared to make some sacrifice, if any is called upon to be made, which, all things considered, is doubtful.

Their failure to meet rival breeds in open contest will undoubtedly call forth unfavorable comments from the public at large, whether justifiable or not.

The question then is, whether breeders of Holstein cattle cannot better afford to send a number of their best cows to the great dairy show and prove the "world-beating" qualities that have been claimed for the breed, rather than not come forward and meet their rivals on such an occasion.

The World's Fair committee of the Holstein-Friesian Association of America, after resolving that no exhibit be made by the association, also pass the following resolution:

Resolved, That this committee will recommend the offering of liberal cash premiums for Holstein-Friesian cattle in the Live-Stock Department of said Exposition, the duration of this exhibit not to exceed 30 days.

To exhibit under such a rule would not admit of a fair comparison with the merits of such other breeds as complied with all the rules of the Columbian Dairy Association.

Warning to Millers and Flour Dealers.

Notes on the Mediterranean Flour Moth (*Ephestia kuhniella*), Zeller, from the Dept. of Entomology, Leland Stanford Junior University, Palo Alto, California.

PALO ALTO, CAL., Dec. 1, 1892.

TO THE EDITOR: This moth was first observed by Prof. Kulm, of the Agricultural Institute of Halle, Germany, in a flourmill, during 1877. Specimens were sent to Prof. Zeller, of Grunhof, and were found to be an undescribed species of the genus *ephestia*. The insect was named by Prof. Zeller, *kuhniella*, after its first observer.

The moth was little known until 1884 and 1885, when it appeared in some mills in Belgium and did much damage. Several articles appeared in English periodicals in 1887, concerning its ravages in Europe. It caused a great deal of trouble, and in many cases the mills were closed.

Very little was known about the pest in this country until 1889, when it broke out in Ontario, Canada. Much damage was done; mills were closed and some even abandoned; in one case the loss was estimated at £1000.

The fact that such an unwelcome pest has established itself on this coast is to be regretted; and the announcement that it is in our midst should be a signal of alarm to every miller and graindealer on this coast. Notwithstanding its comparatively recent appearance, it has caused much trouble to millers and flour-dealers. Every possible means should be taken to eradicate this ravenous pest from our midst. Not only are our mills in danger, but our commerce is at stake, and public health imperiled.

Any information regarding this pest will be gladly furnished by the Department of Entomology mentioned above. W. G. J.

The Olive Discussson.

REDWOOD CITY, Cal., Nov. 26, 1892.

TO THE EDITOR: Seeing rather a lively discussion on olives between Mr. Hayne and Mr. Flamant, which is very interesting, at least to me, I venture to give you my opinion for what it is worth.

There is no doubt to my mind that the Mission will hold a first-class place for a long time to come in California. It is fine for oil, for pickling delicious, and a good grower by fair cultivation. The last mentioned characteristic is also true of the picholine, which is rather a more rapid grower, but only fit for grafting. May patience attend the man who waits for a remunerative return of oil from picholines. But for grafting it is by far superior, because the graft takes so easily, easier than any other sort I am acquainted with.

About growing olives from cuttings, never take big, long sticks; especially avoid side shoots. You will find by taking the young, vigorous wood they will be at least from two to three years sooner in bearing. Nature itself teaches never to use an old, worn-out thing for a vigorous, healthy offspring. Let us have some more of this interesting subject. WM. SICKERT.

More Gopher Lore.

FULTON, SONORA CO, Nov. 25, 1892.

TO THE EDITOR:—In a late issue of your paper, November 3d, C. D. S. gives a very valuable article on "The Gopher and How to Get Rid of Him." In the main his advice is excellent, but he is in error when he says "Each burrow is occupied by a single gopher, and when one is trapped, it is well to tightly close up the opening, as no more gophers will be found in the runway." A friend of mine caught two gophers at once in a "Jolly" gopher-trap, and the late Christian Bagge told me of catching five gophers in quick succession, in the same burrow, in an ordinary steel trap.

The greatest slaughter of gophers that the writer ever assisted at was effected by shooting, in an alfalfa field. Apparently from some peculiarity in the season, the gophers were very bold in coming out of their holes to feed during the sunny hours of the day in November and December. With a double breech-loading shotgun it was easy to shoot from 20 to 50 in a day. Some boys were enlisted, at five cents per gopher, and made big wages. An overflow from Mark West creek drove the pests out of their burrows one day, and about 80 were killed with sticks in a few hours. A large part of the gophers in that field were at least eight inches long, and heavy in proportion. Many of them had an irregular white stripe on the under-side of the body. In about six weeks 1750 of them were tallied as "good gophers," mainly by the shotgun method.

We thought we had a very respectable gopher story until some one in Kern county flooded his alfalfa field, and, with the help of his boy, gathered in 1750 gophers in a few hours.

There is no excuse but indifference for being overrun by gophers. In shooting or trapping, a bounty is very efficient in sharpening the wits of a boy, who will soon become very expert in taking this sort of game. It is well to increase the bounty with the number killed in a given time. Thus, if very abundant, give four cents per head for the first 25, and five cents per head for all over 25 in one day. When the pests have been reduced to a few, it should be the rule of the owner and foreman of the farm never to pass a fresh burrow without putting a trap or a dose of poison in it. A raisin with a trifle of strychnine in it is the deadliest dose that we know of for the gopher. A few such doses can easily be carried in the pocket in a match-case, and, with the aid of a garden-trowel worn at the the hip instead of a revolver, the needs of the gopher can be supplied with little trouble. C. H. DWINELLE.

Notes from Santa Barbara.

CARPENTERIA, Santa Barbara Co., Nov. 28, 1892.

TO THE EDITOR:—Yesterday the rain began falling slowly, with a steady east wind which portends a storm here. Nearly all night the wind came briskly along. At 10 A. M. to-day we had 2¾ inches of water which, with ¼ inch in two or three light rains, makes us 3 inches so far for the season.

Some few have dry-sown grain to make hay, but now plowing and seeding will begin in earnest. We have not had rain enough heretofore to start grass much, but now, if the weather is warm and favorable, the country will put on her robe of green in a short time. Most of the season's crops are gathered and a part gone to the market. Some corn remains yet to be husked.

The walnut crop was much less than an average and much more work was required to gather and fit for the market, as many of the "shucks" stuck to the nuts, which colored them more or less; so the cost of harvesting and fitting for market was very heavy, at least twice as much per ton as in ordinary seasons. We never have irrigated our walnut trees, but trusted almost solely to nature for moisture; but this time we failed to get rain enough to make the best of crops of anything.

The bean crop is light, but there is the best of weather for harvesting, so the crop was saved in good condition. Corn is a light crop. Fruits are not up to the average. So, all along the line we have a shortage in quantity, but prices have been fair to good, so there is little reason for complaint.

As yet I have not learned what our farmers propose mostly to raise the next year, but presume Lima beans will take the lead.

The Crocker lemon-curing establishment in Montecito is nearing completion, and is an imposing structure from the public road. There is report that the proprietors intend putting in machinery for the manufacture of olive oil.

Many small groves of lemon trees are being planted and there seems to be considerable interest taken in lemon culture, and we hope it will be a profitable venture.

O. N. CADWELL.

MR. WHITE'S HOLSTEIN SALE.—The auction sale of Holstein-Friesian cattle belonging to J. H. White of Lakeville, Sonoma county, took place on Wednesday, the 7th inst. The attendance was pretty good, and considering the low prices cattle are generally bringing, the public expressed the opinion that fair value was received for those sold. Not so, however, with Mr. White, who, after about 40 head had been sold, stopped the sale, leaving about 20 head of the youngest of the heifers that were not offered. The three highest-priced cows brought $100 each. The highest-priced animal was a two-year-old heifer that sold for $107.50. The average price of 40 animals sold was about $57 each.

CONTRACTS for the new passenger and freight depot at Baden were let last week, and the work is now well under way. All the material for the structure has been delivered. The new depot, which is about 120 feet long, will answer the purpose until the completion of the new bayshore line, when a much finer structure will be erected.

The Apiary.

The Dovetailed Hive.

SAN MATEO, Dec. 1, 1892.

TO THE EDITOR:—According to promise, in my letter of Nov. 5th, I herewith append a description of Mr. A. I. Root's dovetailed hive. I have used a great variety of hives, but have never yet met with one which can be compared with this hive for simplicity of construction and ingenuity, and I have come to the conclusion that it is impossible to find a hive that is better adapted for the production of either comb or extracted honey.

The beginner in bee-keeping should first consider what kind of hive he will adopt, and whichever style he decides upon he should be sure it is one which will allow of the standard-size frame being used. This frame is known as the Langstroth and measures 9⅛x17⅝ inches; top bar 19 inches, and all his hives and appliances should be adapted to that sized frame.

There are many reasons why this should be done. One very good reason is that the user of an odd-sized hive is obliged to pay from 10 to 25 per cent more for supplies. Two-thirds of the beekeepers who are using any other than the regular Langstroth frame would be glad to change if they could do so without so much trouble and expense. Another good reason is, that if you wish to sell out you can get a much better price for your bees if they are on the regular L frame than you can if they are on any other sized frame.

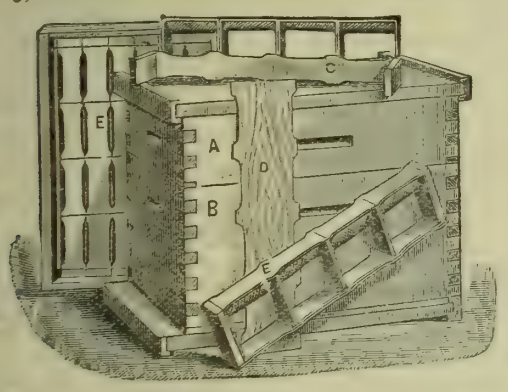
At one time I used and recommended the ten-frame L hive, but I find the bees will not work in the supers so early in the season in a ten-frame hive as they will in an eight-frame hive. Mr. Root is perfectly right in saying: "The queen will seldom lay in more than eight frames in the brood-nest. If her brooding capacity extends beyond this, unless restrained, she will go into the top story. In the ten-frame hive, Italians especially will fill eight frames with brood, and the outside ones full of honey, and this quantity of stores in the brood-nest is apt to make them quite loth to enter the super. If the lower eight frames are filled with brood just at the beginning of the harvest, and there are no more frames below, just as soon as the flow of nectar begins the bees are obliged to put it just where we want it—that is, in the upper story or supers, and hence we recommend all beginning beekeepers, who can do so, to purchase the eight frame hive. There are those who prefer the ten-frame, but it is a safe rule usually for beginners to follow in the wake of the majority."

The dovetailed hive has a flat cover, which does away with the use of quilts, enamel cloth, or the old-style honey-board.

As I fear my letter may exceed the bounds alloted the apiarian column, I will now proceed to give a description of the hive as we find it among Mr. Root's "Implements in Bee-Culture."

DESCRIPTION.

The hive consists of a plain box (*B* in cut) of ⅞ inch pine 13⅞x20 inches outside measure, 9½ inches deep, with

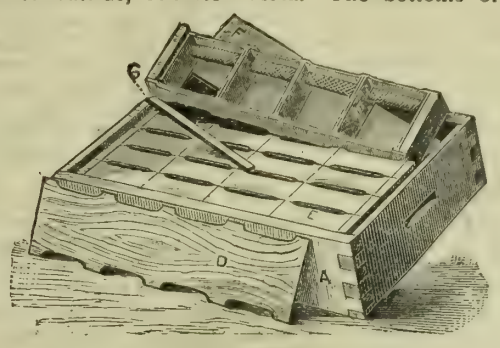


hand-holes, and rabbeted 9 16x13 16 for frames to rest; eight improved Hoffman self-spacing frames and plain division board hang in this hive, with a bee-space above and none below. The cover and bottom boards are both 14x21 inches, the cover being a good sound board with a grooved cleat on each end that prevents it from warping and keeps it in place on the hive. The bottom has a similar cleat at the back, while the one in front is leveled down even with the board to form an entrance, and on each side a strip ⅜x⅞ is nailed. The hive sits on these strips and the back cleat, forming a bee-space below the frames, leaving an entrance in front with an alighting-board two inches wide. By this means the hive is not cut to form an entrance, and the upper and lower stories are interchangeable, This bottom may be used as a cover in an emergency, or may be fastened permanently to the hive, if desirable, by two wood screws.

The supers (*A*) are the same size as the hive-body and just half the depth, 4¾ inches. They are formed by ripping a body in two, and, if desired, two supers may be used as a full body for brood or extracting frames. The special feature that gives the hive its name is the fact that it is dovetailed together at the corners, thus giving it great strength and durability, as well as simplicity of construction. If put together true, the bodies will always remain so, and when piled one upon the other the joints will be tight—a feature that will be appreciated by practical apiarists. Another great advantage of this dovetailing is the saving in freight and boxing for shipment. There is not a pound of crating used in the putting up of five of these hives and inside furniture, and on large orders this saves freight charges.

DOVETAIL SUPER WITH SECTION-HOLDERS, FOLLOWER AND WEDGE

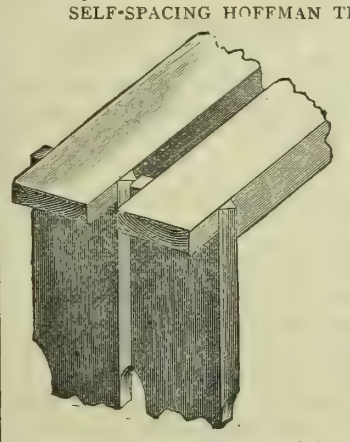
These are simply wide frames having no top-bars, but with thick end bars and bottom-bars 1⅞ inches wide, with insets corresponding to the openings of the sections. Such a holder, unlike ordinary wide frames, can be filled and emptied easily, and, like wide frames, can be shifted from center to outside, and vice versa. The bottoms of the



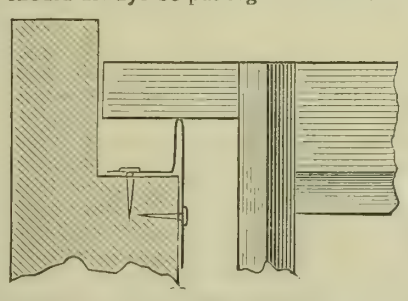
section-holders are made one-fourth inch thick, and there is a one fourth inch bee-space above the sections in the super. This is the surplus arrangement that we recommend. Wood separators are now much preferred to those of tin. They are warmer and the bees can crawl up and down on them, which they cannot do readily on tin. This, of course, saves much "travel stain" to the fine white cappings of the honey. These wood separators (*D* in cut) are slotted out and are wide enough to cover the entire length of the upright edges of the sections, as well as the horizontal edges not scored out in the sections and bottom-slats where they come in contact. When the whole is keyed up with the follower and wedge, all cracks are closed up by the wide separators, and little, if any, propolis is daubed on the edges of the sections.

In the above cuts *A* is the super, *B* the body of hive, *C* the empty section-holder, *D* the separator, *E* the sections, *F* the follower, and *G* the wedge for tightening the sections up.

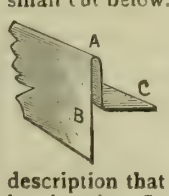
SELF-SPACING HOFFMAN THICK TOP FRAMES.



Fixed or self-spacing frames, in some form or other, are rapidly growing into favor among progressive beekeepers. After much study and experimentation on a large scale, the very excellent Hoffman frame has been adopted for the dovetailed hive. They are always ready for hauling over good or poor roads, without any special preparation in fastening the frames. Beginners do not make the blundering work in spacing them in the hive; the combs are straighter, and, with those who are expert in their use, they can be handled in less time. This frame is suspended on a tin rabbet (as shown below). The end-bars touch on each side only 2½ inches, one side being V'd to a blunt knife edge, and the other is left square as shown in the cut above. This prevents the bees from sticking the frames too much with propolis, and at the same time prevents bee-killing to a very large extent, even when the frames are handled carelessly. When the frames are handled properly, and smoke is blown down between the frames when the end bars come in contact, few if any bees will be killed. The top-bar is molded so as to leave a comb-guide in relief; it is five-eighths inch deep at the sides (seven-eighths to the bottom of the comb-guide) and is 1 1-16 inches wide. It is, therefore, when there is a bee-space of one-fourth inch above it, practically free from burr-combs, those pests that hinder the manipulation of old-style frames. The bottom bar is ⅜x½ inch. To such a comb-guide bees build their combs down better. This frame may be used in any standard L hive having tin rabbets. In putting frames together, the V'd edges on the end-bars should come on diagonally opposite sides, and should always be put together the same way.



The dovetailed hive is made for tin rabbets; but these, unlike the old style, are very much improved. They are stronger, and instead of having a knife edge that cuts the fingers, creases the top-bars and bends over, are made (as shown in the corresponding cross-section above) with a folded edge on which the frames rest. The shape of the rabbet apart from the hive is shown more clearly in the small cut below. *A* is the point on which the frames rest, and *B* and *C* are where the nails secure it to the hive, as shown in the larger cross-section. With the Hoffman, there should be a free lateral sliding motion when the frames are manipulated, and this the new rabbet permits.



Should there be anything in the above description that is not quite understood by any beginner in bee-keeping, I shall be happy to make it quite plain to him in a future letter. WM STYAN.

ON the Miner Ranch, near Lafayette, Contra Costa Co., they are boring for oil, with favorable indications. Oil has been found in the 200-foot well, but as yet not in sufficient quantity to pay.

A PROMINENT Omaha firm has sent an inquiry to several Tacoma and Seattle firms for 500 carloads of cedar shingles for spring delivery.

Horticulture.

Lemon Growing and Curing at Riverside.

Mr. E W. Holmes of Riverside gave an address at the Pomona meeting of the Southern California Pomological Society on lemon growing and curing, which will be read with interest by all who are developing the lemon industry of the State:

At the first citrus fair, held many years ago in Riverside, I read a paper upon the lemon, and the confident opinion I then expressed regarding the desirability of pushing this branch of horticulture seems at last fully warranted by the results.

We have had many things to learn regarding varieties, stock, and the treatment of the trees, and have gained knowledge on these points through an experience that has been expensive. We have found, when at last we have grown a perfect lemon, that it is a fruit that requires a radically different treatment from that given the orange. Many that have owned small orchards have become disgusted, during these tentative years, over their failure to market the crop profitably, and have rooted out their trees and rebudded to some favorite variety of the orange. Others have found that they had undesirable varieties, or that those which were satisfactory were budded upon stock that was short-lived and yielded to disease when the tree reached a bearing age. These experiences have disheartened many, but it is through these practical demonstrations that we at last are upon the right road in lemon culture.

It has taken years to convince the mass of growers that the chance seedling, however fair in appearance, cannot be depended upon to compete with the imported fruit, and that the first step to secure profit is to grow only those lemons that possess certain essential characteristics. These are possessed by an extremely limited number of the varieties thus far available for propagation, and, though it is well that experiments with chance seedlings be made, no sensible horticulturist will to-day plant varieties whose superiority is not generally acknowledged.

It is well to consider at this point just what are the absolutely requisite characteristics of a perfect commercial lemon. It seems to me that there are three points, the absence of either one of which would put the lemon out of the desirable list. First, the appearance and texture must be fine; the size and shape as nearly as possible uniform, and the color high. Second, there must be plenty of juice with a high percentage of citric acid. Third, there must be an almost total absence of bitterness in the pulp, so that it can stand the test of cooking. It is on this latter point that many otherwise excellent varieties will fail when put to a careful test; but in my opinion freedom from bitterness is the one essential quality of a commercial lemon. Want of color and uniformity of size and shape, even a low percentage of acid, are not so objectionable as the bitter quality so common to the ordinary lemon.

While it is possible, by careful picking at the right stage of its growth, to cure a common lemon so that its keeping qualities are improved, experience justifies the assertion that it is only with the fine-textured budded varieties that the best keeping qualities are found.

There is no variety which in so many respects comes so near being the ideal lemon as that known as the Lisbon. The original tree, imported by Mr. D. H. Burnham of Riverside, has furnished the stock from which the best orchards in that section have been propagated. Unfortunately, many inferior lemons have been planted under that name, and it is somewhat due to this fact that this variety has been less popular with orchardists in certain sections than the Eureka.

The Eureka is, however, one of our best lemons, though the tenderness of this variety and its tendency to bitterness hardly entitle it to equality with its most prominent rival.

The Villa Franca will stand a far more severe test than the Eureka, is nearly seedless, strong in acid, and stands frost like the Lisbon, its only objectionable quality being its dark yellow color, and a tendency to take shapes like the Eureka.

It is not, however, the province of this paper to discuss the question of varieties, or I might refer to others which I believe are well worthy of propagation. I have made this reference in order to impress the need of securing a true lemon before one wastes time and money in preparing for the market.

Owing to the fact that the lemon ripens its heaviest crop in the fall, when the demand for it is at its minimum, many methods have been tried to cure and hold the crop until spring, when the condition of the markets would warrant shipping. Until within a few years the success of these efforts has not been great, and many have concluded that lemon-growing would never prove profitable in southern California, because there appeared to be something at fault either in the time of ripening of our fruit, or in the fruit itself. I have long been convinced that this conclusion was a mistake. No better lemons are produced in the world than right here, and I believe we shall demonstrate that we can ship just as good keeping fruit as the growers of Italy and Spain. Indeed, some of our growers have already furnished the proof of this, and when their methods are followed the trade will find nothing to object to in the California lemon.

To cure lemons perfectly they must be picked and handled as carefully as eggs. Failure in this respect nullifies all subsequent efforts. The degree of success one attains in his work is dependent more largely upon this point than upon any other.

Some of the most successful Riverside shippers have heretofore picked their lemons when just changing color and of suitable size. After being kept a short time in boxes more or less exposed, for the purpose of shrinking the skin a little, they have been either stored in trays in a dark, cool lemon-house, or else have been wrapped carefully

ly and stored in raisin sweat-boxes, which then were stacked in open sheds or barns. Treated in this way, the fruit has been kept from six to eight months, with no heavy percentage of loss, and has been sold at good prices.

Mr. Garcelon, with his double-walled lemon-house, has doubtless been more successful than most growers, but his methods have been explained at length in print and I will not describe them here. Neither will I give my own experience, but will briefly explain the plan used by D. H. Burnham of Riverside, which I must confess seems to have been superior to my own.

Mr. Burnham grows the Lisbon exclusively. He has found, like some other growers, that the best results are obtained by picking the lemon when it is of proper size, regardless of color. He picked last November all of his crop that was of suitable size, and again in December made another picking. Instead of exposing the lemons for a short time to shrink the skin, as has been the general custom, he wrapped them immediately in strong lemon paper. The boxes in which they were packed were lined with stout manilla paper so as to exclude the air, and between each layer was placed a sheet of the same paper. Over each box was laid another sheet, and then the boxes were stacked 14 high, completely filled with the green wrapped lemons. They were stored in a high shed open to the east, which was protected from the sun's rays by large trees. Here they remained all through the winter, untouched until opened for packing from six to eight months from picking. The percentage of loss was smaller than I have ever known.

One carload of these, packed about eight months after they were clipped from the trees, arrived at its destination in the East at a time when the market was not in the best condition by reason of the presence of foreign lemons in quantity. The agent wired to inquire if he should sell at less price than fixed, or hold them. Mr. Burnham was so confident of the quality of his fruit that he ordered it held, and though it was nearly ten months from the date of picking before the last were sold, there was not a box lost by repacking. In the face of such an experience, who shall dare to say that perfect fruit, intelligently handled, cannot meet the best foreign product on equal terms?

In view of the recent reversal of the tariff policy of the nation, it does not appear that we may look for any relief from the competition of the Italian and Spanish lemon-grower, and that we cannot, therefore, expect to obtain the fancy prices we have anticipated; but it will pay to grow the lemon even at the rates fixed by the importer, and it is our duty to prove the excellence of our goods by the use of careful and honest methods. That we shall yet demonstrate in the markets and against the strongest foreign competition the real value of our product, I am thoroughly convinced.

The Dairy.

The Dairymen's Conference with the Congressmen.

In the RURAL of November 27th we alluded to a meeting set for San Rafael at which dairymen were invited to confer with newly-elected lawmakers concerning oleomargarine legislation. The meeting was duly held and reported by the San Rafael *Tocsin*, and we condense therefrom as follows:

A number of the leading dairymen of the vicinity assembled and were met by Congressman Geary, Senator McAllister, and Assemblyman Taylor. Jas. Tunstead called the meeting to order and W. S. Pierce and L. Tomasini were appointed respectively president and vice-president.

Mr. L. Tomasini made a few remarks, saying that the competition of oleomargarine and butterine had reached such a point that dairymen could plainly see ahead to the time, now near at hand, when their industry would be driven to the wall.

To give an idea of the kind of competition that is forced on the legitimate business, Mr. Tomasini stated that at the price now paid by creameries for milk, it costs 30 cents to make a pound of butter. At this very time Mr. Armour is selling his Kansas city compounds as pure butter, for 15 cents a pound, and making a princely profit out of it. Of course, what dairymen desire would be the passage of a law prohibiting the manufacture of the article altogether, but as that was out of the question the next best thing would be the passage of stringent enactments against the sale of the spurious article in any disguised form. He believed that if oleomargarine were compelled to stand on its own merits and if the consumers were duly informed of the character of the goods set before them, the worst feature of the present disastrous competition could be removed.

Congressman Geary said that he and his fellow legislators were on hand to hear any suggestions that might be offered to the law-making department of Government. They all honestly desired to be of service to the dairymen of California in their struggle against a great wrong. They wished to be informed of what was needed in the way of laws and they would then spare no pains to secure their enactment.

Senator McAllister, who has been reading up on the oleomargarine question extensively, was called on and gave a highly interesting summary of the laws of other States relating to bogus butter, which he had compiled with great care. He drew attention to strong features in the laws of Iowa, New York, Masssachusetts and Indiana and showed that by a union of the provisions of those States a cast-iron law could be enacted. He was confident that a Dairy Commission, armed with the ample powers that the States elsewhere conferred, would absolutely put a stop to the sale of oleomargarine as pure butter. Senator McAllister specially commended the Iowa law as being particularly direct and to the point.

Assemblyman Taylor thought better results would follow from a general law against food adulteration than from a specific law against oleomargarine. He doubted whether a bill directed against one form of food adulteration could be passed, whereas a general pure-food bill would command an almost universal sympathy.

Mr. Geary differed with Mr. Taylor. He advised the dairymen to confine their efforts to their own case and not try to legislate for other people's grievances. A general bill against adulteration might command a little general sympathy, but nothing more. On the other hand, it would inevitably invite a kind of opposition that would prove fatal to any bill in the present condition of political morals. Moreover, Mr. Geary thought it a big mistake to imagine that the cows didn't have plenty of friends. The dairy interests of the State were widespread, far-reaching and powerful. In his congressional district there was not a single senator or assemblyman elect who did not have a number of constituents interested in or dependent on the butter-making industry, which they would not dare to antagonize. The dairymen, he believed, would have no difficulty in passing any laws within reason for their protection against spurious compounds without dragging in any outside issues to bolster up their case.

Various suggestions were being made as to the details of proposed legislation when Mr. Hollis Hitchcock arose and said that while the meeting had been profitable and interesting, he did not think it would be able, off-hand, to settle the many intricate questions involved. He suggested that a committee of leading dairymen be appointed to prepare drafts of laws, State and national, to meet the situation and present the same to their representatives. Some discussion followed on the proper number to constitute this body and it was finally determined that a committtee of five be appointed by the chair, this to send an invitation to each of the dairy counties to send three representatives to join in their deliberations.

On motion, the following were appointed as the committee: Hollis Hitchcock of Bodega, P. J. Shafter of Olema, W. S. Pierce of Petaluma, Joseph Bloom of Olema and Wilfred Page of Penn's Grove.

Among the prominent dairymen present were W. S. Pierce, Hollis Hitchcock, L. Tomasini, J. Martella, J. Bloom, J. Silacci, A. G. Scown, B. T. Miller, A. F. Pacheco, Dr. B. F. Lyford and many others. There was an earnestness and spirit throughout the meeting that argued well for this formal declaration of legal war against bogus butter.

A Model Dairy Barn in Humboldt County.

Dairy readers will be interested in a description of one of the most complete dairy barns we have ever seen. While it is built to shelter and feed 40 cows, yet on a smaller scale could be used with equal advantage. The barn has just been built by C. M. Peterson, president of our County Alliance, on his home ranch near Ferndale. The hay barn is 62 feet in length, 24 in width and 24 high on the sides, with a center hip-elevation 10 feet high and 3 wide for working a derrick hay fork. The hip-elevation is supported by posts from the sills, and from their top the track for the hay fork is hung on level bearings. The ventilators in the top can be open or shut by ropes reaching to the floor. Between this and the cattle barn, on each side of a 14-foot driveway, are storage-rooms for roots. To their rear are stalls 10x14—on one side for the male, the other for sick cows. The cow barn is 70 feet long by 42 wide. It has a driveway through it, length 14 feet wide and passes between the storage-rooms and across the hay barn, giving a straight driveway of 104 feet through the barn. This driveway on the north from the hay-barn opens into a field; on the south, from the cattle-barn toward the public road, opens into a yard 32x50 that has a tight floor two inches thick up off the ground but on solid foundation. Through the front gate of this yard by residence to the road a side gate leads to a small pasture for the mules; from another gate is an incline-plankroad 100 feet long to an elevation of 6 feet for the dumping-yard. On the other side, the gate leads to the cow pastures. The drain behind the cows is seven inches lower at the south end, and they are connected with a plank underdrain that carries all the liquids into the field.

As all the floors are water-tight, underneath, inside, and the surroundings of the barn are free from the filth and moisture that are such prolific sources of disease to cattle. The cow stable is divided into double stalls seven feet wide, and each stall has a plank 2x6 inches set edgewise in the center to prevent one cow from laying down in the space allotted to the other. The outside partition to each stall is 4 feet high and 4 inches thick, made by double boards on each side of a two-inch upright. The tie-up for each cow is a clevis 20 inches long with a ring swivel, and held by bolts at each end that pass through the upright. The chain that goes around the cow's neck is tied in the center to the swivel by a small rope that can be cut in case of fire or trouble with the cow. The ring in the clevis slipping up and down, allows the cow to lie down or get up, and the swivel prevents the chain from twisting. On one end of the chain is a ring, the other a tee. Each cow finds her own stall, and Mr. Peterson claims he can tie the 40 cows in four minutes. A nail is driven in the upright 18 inches above the clevis, and the ring end of the chain is hung on it when the cows are loosened to hold the chain convenient for use.

The manger is two feet wide; elevation next to the cow is a 2x8 plank set edgeways. It cannot be any higher or it will interfere with the cow getting up. The farther side first has a plank the same as front, but from its top two feet wide is the back of manger sloping into the driveway, the top being 2 feet 4 inches above the floor. Above the manger is a swinging panel or gate that can be fastened in the stall to lengthen or shorten it, which allows the hay or roots to slide into the manger and prevents the cow passing into the driveway, but can be turned over and out of the way. The floor from the manger to the drain is 5 feet 6 inches for large cows; for three years old, 5 feet 2 inches; for two years old, 5 feet, and making the drain six inches wider at its lower end. The drain at the upper end is 20 inches wide and six inches lower than floor of stall. On the other side of the drain is a four-foot wide passway, four inches above the drain. In the wall by the side of each passway are two milk closets for large cans that hold the night's milk. These closets have open lattice floors and a hole in the top of the door. They are opposite the ventilators in the top of the barn. The heated air from the cows passing up through the ventilators creates a current of cold air rushing in from the bottom of the closets around the milkcan. Any description must give an imperfect impression, therefore to those intending to build, we think it would pay them well to see the barn for themselves.—W. F. HARRIS in Eureka Watchman.

Dairy Practice in the Sacramento Valley.

The Butte *Register* has the following notes on dairy methods and appliances in the upper Sacramento valley:

B. F. Walton, of Sutter county, is one of the most successful dairymen in the upper part of the State. He owns 80 cows, 60 of which are continuously in milk. He pastures them, but feeds in addition grain-hay, pumpkins, and in winter chopped alfalfa. His stock is Jersey and Durham crossed, and he is confident these breeds cannot be excelled as butter-makers. Two men do the entire work connected with his dairy, including the milking, butter-making, feeding of hogs, etc. His cows average three-fourths of a pound of butter per day, and for this he obtains from 25 to 40 cents a pound, according to the season. His milkhouse is constructed of brick, and outside of the brick wall is a space, then a board wall, then a second space, and lastly the outside wall. The building is thus rendered cool even in the heat of summer. The floor is cemented, with an inclination to it so a hose can be freely used, and the water will quickly run out from the room. Mr. Walton found by dehorning the cows that the flow of milk was largely increased. He attributes this increase to the fact that the cows were no longer afraid of being hooked, and would all eat and drink together, and all would seek shelter from storms by huddling together like sheep. All the cows soon increased in flesh after the horns were removed, and he recommends the practice to all dairymen. While economy must be exercised, yet money can be made if the owner will learn the work thoroughly and pay careful attention to it.

The famous Rancho Chico dairy is the largest in Butte, and from Col. C. C. Royce we have obtained the following data that will be read with interest: "We milk about 135 cows. They are of Shorthorn, Durham, and graded Holstein, one-half to three-quarters. The product of milk for the past year was 95 375 gallons, 26,200 gallons of which was sold in Chico, and the balance was run through a separator at the dairy where the cream was separated from the milk; 1853 gallons of that cream were sold in Chico, the balance made into butter, producing 2293 pounds. This butter was sold in Chico at the rate of 30 cents per pound in summer and 35 cents in winter. The cows are milked in the barn and are fed twice a day bran and cut hay, at the rate of 6 pounds of bran and about 18 pounds of hay per cow. The hay is cut in a feed cutter, which is run by a six-horse power engine. It is then placed in a large box and mixed with the bran and then thoroughly soaked with water, after which the box is closed and the feed is then steamed, from the engine, and in four to six hours is ready for use. We also feed in the pasture about four tons of pumpkins daily and a liberal quantity of beets, which are scattered over the ground and the cows are allowed to eat all they desire. At night the cows are driven into a large shed with racks filled with good wheat and oat-hay. The calves are separated from their mothers as soon as born, and are tied in a shady place and given their mother's milk for two weeks; after that time they are fed on skimmed milk from the separator, coupled with about one-quarter of a pound of oil-cake meal daily, together with three-quarters of a pound of dry bran and what hay they want. The water given to the cows is pumped from the well by steampower, so they can have good, cool water to drink when dry. Salt is placed in boxes where the cows can have what they want at all times."

Progressive Dairying.

EDNA P. O. Nov. 22, 1892.

TO THE EDITOR:—I am much pleased to see the RURAL PRESS entering a little more into the dairying interest. The English Record of the Durham herd published last week was very interesting to me, and will be to any intelligent dairyman, and is withal a comparatively new field of experimental stations, bulletins and advanced dairymen's reports in this respect: Records have not been exactly stated, but only more general reports. The report you printed is worth a hundred general average reports to me, especially as this report is supposed to show more than average yields. It makes me, however, pat myself on the back. Why, you will see when I send you a tabulated report of my Holstein herd, which I intend to do soon. In the meantime, let me assure you that "creme de la creme" of dairy literature is in that article, and the dairyman who cannot learn by such means is indeed a silurian.

E. W. STEELE.

SPRUCE (or Washington pine, as it is sometimes called) will in the near future become one of our most valuable woods. Some day the clearings in the forest will be full of woodenware factories. Spruce is especially valuable to the manufacturers of tubs and pails, because it does not communicate taste or odor of the wood to the contents. This fact is especially pleasing to butter makers, as butter very easily absorbs the flavor and odor of the utensils in which it is packed. The same is true of nearly every article of food packed in tubs, pails and boxes.

Track and Farm.

Old and New Breeding Farms at the South.

The breeding of thoroughbred race-horses in California is in its infancy, although the Maltese-cross jacket of "Lucky" Baldwin has been a familiar sight upon the Eastern race-courses for the past ten years. His breeding-farm at Santa Anita has been so frequently described by Eastern visitors in the journals of the Atlantic seaboard that any reference to it now would seem superfluous. Hence the writer will pass on from Mr. Baldwin to other parties.

Hon. L. J. Rose, in 1890, undertook the establishment of a stud of thoroughbred horses at Rosemeade, near the San Gabriel mission; and he did not lack for good material in doing so, either. He met with so many reverses in the very outset of his career, having lost over $50,000 worth of horses by death alone in the short space of 20 months, that he concluded to dispose of everything at auction and retire from the unequal struggle. Among those which died was a yearling colt by Sir Modred, which cost him $5000 in New York; and a full brother to the famous Flambeau, the premier stallion at Palo Alto, for which he paid $6000. Added to these were sisters to the noted Australian horses, Sheet Anchor (Melbourne cup of 1885, two miles in 3:29¼) and Prince Imperial (Hawkesbury handicap of 1884, one and a half miles in 2:35), both of which died at sea after less than 20 hours' illness. With such disheartening rebuffs coming in so short a space of time, the only wonder is that the genial Master of Rosemeade did not abandon his new undertaking sooner than he actually did.

At the same time there is good money in breeding thoroughbred horses for racing purposes and selling them at auction as yearlings. The great profit in racing lies in the sweepstakes for horses of two and three years old, as may be seen from the following table of winnings made in 1891 by various owners of horses, confined entirely to horses of those ages. The rapid increase of sweepstake races at the East compels us to omit 66 races below the value of $5000 and give only the stakes of a value above that sum:

THREE-YEAR-OLD EVENTS.

Realization, Coney Island	$ 30,580
Omnibus, Long Branch	19,810
American Derby, Chicago	18,610
Hickory, Morris Park	18,020
Lorillard, Long Branch	17,255
Stockton, Long Branch	5,970
Tidal, Coney Island	5,770
Brooklyn Derby, Brooklyn	5,270
Jerome, Jerome Park	5,250
Belmont, Jerome Park	5,070
Stevens, Long Branch	5,040
Total	$131,475

TWO YEAR-OLD EVENTS.

Futurity, Coney Island	$ 61,675
Great Eclipse, Coney Island	24,353
Junior Chmp., Long Branch	23,800
Great Trial, Brooklyn	22,095
Great American, Morris Park	16,650
Nursery, Jerome Park	13,880
Hyde Park, Chicago	10,550
Great Eastern, Coney Island	8,663
Carteret (hdp.), Long Branch	8,645
Juvenile, Jerome Park	8,260
Expectation, Morris Park	7,300
White Plains, Morris Park	6,900
Dunmow, Morris Park	5,990
Criterion, Long Branch	5,490
Hopeful, Long Branch	5,325
Total	$229,576

The foregoing tables go to show that there is nearly twice as much money in a good two year-old as in a good three-year-old; and even beyond this the tables go to show that out of 41 sweepstakes worth over $4000 and less than $5000, there were 28 won by two-year-olds. The returns for 1892 will not be complete till January, 1893, but they will show that the value of these juvenile events has increased about eight per cent in the past year. The reason for disposing of thoroughbred colts at auction is that the breeder gets the advantage of competition in every instance; and the reason for selling as yearlings is that the sweepstakes close at that age, thus throwing the expense of training and development upon the purchaser rather than the seller. In other words, it obliges the gambler to advertise the breeder's stock. Col. Harry Thornton of San Francisco sold 11 head last year at an average of $404 50, the best price yet realized within the State, but Mr. Haggin has more than doubled those figures on half a dozen occasions, after mixing in with his valuable Sir Modred and Darebin colts a precious lot of weeds got by such outcasts as Warwick, Milner and John Happy.

Mr. Baldwin has announced that he will not race next year, but will sell his yearlings at auction in Chicago or New York, but the writer does not take much stock in the story. In the ten years that he has raced at the east there have been but two years that his balance was on the wrong side of the ledger; and on two occasions his winnings in purses and stakes were in excess of $80,000. So that the writer does not believe the host of Santa Anita will relinquish the sport so easily; and whatever else may be said against Mr. Baldwin, his horses were always "out for the money" when he was present in person.

Two small breeders in this neighborhood (any person is called a small breeder with less than 20 mares) have started with fair chance for profit. One of these is Mr. W. J. Thompson, agent of the Santa Fe railway at Glendora. He has a very handsome old horse in the person of Conveth, who took the first premium here at the late district fair. Conveth is 15 years old, and bred on royal lines, being by Favonius, winner of the Derby of 1873, out of Cachucha by Voltigeur, Derby and St. Leger of 1850, from Ayacanora (dam of Camelia, that ran the dead heat for the Oaks with the French mare Enguerrande) by Irish Birdcatcher, from Pocahontas (dam of Stockwell, Rataplan and King Tom) by Glencoe. This gentleman has five thoroughbred mares of various ages, two of them being by John W. Norton, a worthy son of Bonnie Scotland.

The other one to which we refer is Mrs. Susan B. Wolfskill of Santa Monica. This lady's love for thoroughbred horses comes to her as a legitimate inheritance, as her father, James Moore, of Woodland, Yolo county, brought the first thoroughbred mare that ever crossed the plains. This was in 1852, and the old gray mare was called Ada Byron when she left the East. But just at that time San Francisco was having a craze over Lola Montez, and Col. Jack Gambill leased the racing qualities of the mare and named her after the fairy of the footlights. She won the first race of three-mile heats ever run on this coast, and the race took place on a Sunday. The famous old gelding Wake-up-Jake, then masquerading as Aleck Hensley, was second in the race. From this old mare are descended quite a number of clever performers, Hotspur and Jim Douglass being the best. The former horse holds the world's record for one and three-quarters miles.

Mrs. Wolfskill and her genial husband (who disclaims any ownership in the horses) reside upon a beautifully wooded knoll about four miles this side of Santa Monica. There she has nine head of thoroughbred mares, the oldest being Yoline, 24 years, the dam of Jim Douglass and granddam of Hotspur. About 18 months ago she purchased from Samuel Gardiner of Bundoora park, near Melbourne, the four-year-old stallion Plenty, by Suwarrow (the fastest three-year-old of his time), out of the famous New Zealand mare Lurline, which was also the dam of Mr. Haggin's famous horse Darebin. With such a start, Mrs. Wolfskill (who is to California what the Duchess of Montrose is to England) will be sure to succeed if she will only sell her yearlings, confine herself to breeding operations and let the purchasers do the betting. The sales of the Belle Meade farm (Tennessee) averaged something over $1800 per head for 82 yearlings disposed of at auction last June.

The alfalfa of Southern California is a godsend to the breeders of high-class horses for either gait. A crusade was made, several years ago, against this valuable herbage plant, but I am glad to say it has nearly reached its quietus. Stamboul, the king of trotting stallions, was brought up on alfalfa, and so was his handsome lttle half-brother, Alcazar. Frank Reynolds of Tocal, N. S. W., has bred several of the finest horses ever foaled south of the equator (notably Melos, Arsenal and Cardigan), and has never used anything but alfalfa for his pasturage and hay-food since his visit to California in 1882. People who doubt the excellence of alfalfa should consult the records of Mr. Reynolds' gallopers and of Mr. Rose's trotters. They will be found interesting reading to those who have sought, in years past, to decry the excellence of this superb herbage plant, whose nutritive powers have aided in the development of so many horses in this State. Alfalfa is a great source of wealth to southern California, and the breeding operations of the future will go far to establish its excellence, if it be not already confirmed by the "logic of events."—Hidalgo in Los Angeles Herald.

Poultry Yard.

A Petaluma Poultry Yard.

Recently, a representative of the Petaluma *Courier* happened to be passing a model poultry farm in the environs of that city, and being charmed by the air of neatness and completeness, of system and order about everything on the premises, seized the opportunity to converse with the intelligent proprietor concerning his methods and experience and, so far as he was willing to disclose them, the results. In reference to these matters, there was no desire for concealment, and the *Courier* gives the following description:

The premises are attractive. Fronting on the main road—perhaps 200 feet distant from it—is a neat modern cottage, of good architectural design, well-finished and commodious. In front of it is a fine flower garden, surrounded by a well-trimmed quick-set hedge. Here and there are palms, cypress trees and a couple of vine-clad arbors. Back of the house is a bright barn and other outhouses and a windmill and tank of improved pattern. Adjoining the flower garden is a plat of a few acres in vegetables, principally kale for poultry feed. On the knolls in the rear are coops, hen-houses, brooders, etc., all kept freshly whitewashed and perfectly clean. At convenient intervals are watering-cans, all connected with the windmill tank and constantly supplied with pure water; automatic feed-boxes; abundance of sand, gravel and pounded bones and oyster shells (for which purpose a small mining rock-breaker run by waterpower is used), and here and there are deposits of wood-ashes, covered and sheltered from the rain.

Mr. Burdick, the proprietor, is a widower with three children—two boys aged 12 and 14 respectively and a daughter of 17. He and his family, with the assistance of one hired man, "run the ranch." He is a subscriber to several standard poultry journals, is wide-awake to every improvement, keeps a strict account of receipts and expenditures, and conducts his business on scientific principles, not only as to the selection of stock, but also in the matter of feeding, tending and the utilization of waste.

For instance, in the latter particular: Having bought beef-heads and other scraps from the slaughter-houses, to provide animal food for his poultry, the surplus bones are worked in around the roots of his grapevines, of which he has a goodly number, and the effect on the crop they bear, and the quality of the grapes, is marvelous.

He has four Petaluma incubators of 300-egg capacity and a number of smaller ones. His stock averages about 600 hens. He hatches more or less eggs throughout the year, but on the largest scale from November to May. His receipts during the present year have been as follows: In January he sold 53 dozen broilers, for which he realized $218.75, and 458 dozen eggs for $136.20, which, with a few hens and cockerels, ran his receipts for the month up to $370.50. In February his receipts were $312.25; in March, $340.20; in April, $318.60; in May, $406.75; in June, $414 80; in July, $302; in August, $288.70; in September, $315.30; in October, $243.60. Total for the ten months, $3312.70. Total expenses—wages, feed, transportation and living—$1446.30. Net profit, $1866.40. His place embraces 70 acres. Next year he expects to carry an average stock of 900 hens—all White and Brown Leghorns—though he has an idea of putting a colony of Brahmas on an adjoining tract. He does not consider them equal to the Leghorns as layers and foragers, but thinks that the larger body and consequent higher price for broilers will more than compensate for these points of inferiority. In this matter, however, he will make a prudent experiment on a limited scale to begin with.

The poultry business as conducted by this gentleman (and he is only one among many in this vicinity) is safe, pleasant and fairly lucrative. He started in 1886 with less than $1000 of capital.

Management of Poultry.

Poultry should not be crowded; they require room both in the house and the yard. Thorough cleanliness is indispensable for health. Buttermilk from a creamery at five cents a gallon, with wheat, oats and bran, is an excellent food; the solid articles may be mixed with the milk, or the milk will be taken as drink with avidity. A house for 50 fowls should be 24 feet long and 10 feet wide, the height at front 8 feet and at rear 6 feet. The floor is best of earth, and the nest boxes may be shallow and 16 inches square; three inches is deep enough. A good inclosure for fowls is wire netting, or a fence made of laths two tiers high if small fowls are kept. Fowls will eat a large quantity of grass, and should have a good run where they can get this.

Avoid any food, however cheap, if musty or spoiling.

Choose lean meat for the chicks or hens when buying.

Separate the sexes during the moulting season when it can conveniently be done.

A little tincture of iron in the drinking water is an excellent thing for moulting fowls.

Give the young stock good care and keep them growing steadily and fast with proper feeding.

Wire Fences in Winter.

It cannot be denied that by the introduction of wire netting for fencing, the cost of confining poultry has been greatly reduced, for the wire fence is not only durable, but can be easily constructed. During the winter season the usefulness of the wire fence depends upon how it is arranged. When the cold winds come from the north and west the hens must remain inside the poultry-house or be terribly exposed, as the open wire does not serve in any manner as a protection. When erecting a fence this fact must not be overlooked, as much of the usefulness of the hens in the winter depends upon warmth and protection from high winds. Wind-breaks are always serviceable, but they are not easily made or grown. When wire is placed in position, let it be above two feet of boards. That is, when making the fence, use two feet of boards at the bottom, not only as a protection against winds, but also to prevent the birds from pecking each other. The boards also make the fence higher and stronger, thus preventing flyers from going over it, as well as keeping dogs from breaking through.—The Farm and Fireside.

VEGETABLES FOR POULTRY.—The hens will be benefited if given ensilage or cooked roots as a portion of their diet. Such foods assist in keeping them in condition and promote the appetite. One of the causes of failure to get eggs in winter is the sameness of diet. The hens like a change, and show their appreciation by their egg production. All kinds of vegetables will be highly relished by them, and will lessen the cost of the feed.

CORN FODDER FOR DUCKS.—Take the blades of corn fodder, cut them fine with a fodder-cutter, scald them, and leave them in the tub all night. In the morning sprinkle the mess with bran and corn-meal, moisten with warm water again, and feed the mess to your ducks. The result will be a cheap food that will be highly relished by them.

TURKEYS IN TREES.—If your turkeys insist on selecting trees, the trees should be on the south side of a house, or some other wind-break, as they will have roup if exposed to the winds. It is better to confine them in a shed for a few days and nights, providing roosts, in order to teach them to seek shelter, instead of roosting in trees.

FROM the statement made by one of the surveyors connected with the San Francisco and Great Salt Lake Railroad, that concern intends to commence active operations about the first of the year. The branch line between Fruitvale and Stockton has been surveyed, and the new line will be shorter by twenty miles than by the present line. On the first of the month the field surveyors completed their work to Reno, Nev. The route is outlined to commence at Bay Point. It will then run to Suisun bay, which it will cross at Benicia. The survey then skirts the Sacramento river to the capital city. Marysville and Oroville will be the next points touched at. The route then runs up the canyon of the North Fork of the Feather river. At the end of this it will run over the Sierras and thence to Reno, Nev. The Stockton branch has been surveyed over the Moraga rancho, and will enter through a tunnel about two miles above Mills' Seminary. The surveying party has been ordered to report for duty on the 2d of January.

The Home Circle.

The Good Old Times.

What easy times our fathers had! They lived a natural way.
To earn a half a dollar then they had the whole long day;
Some fourteen hours did they have this meager sum to win,
The whole long, blessed day, to earn a half a dollar in.

How light their lot compared with ours! We have to spurt and spin,
We who are granted but six hours to earn twelve dollars in.
Two hundred dollars in a year was all they had to earn,
But we must earn five thousand—will those old days ne'er return?

And they had twelve months to earn it, fourteen hours to the day;
But we have to have vacations which steal half our time away;
We've only six hours in the day and eight months in the year
In which to earn five thousand—ah, too great the strain, I fear!

They had long to earn so little, but our hard life is such
That we have little time to work in order to earn much.
How rich our fathers were—in time—how prodigal and rash!
What vast amounts of time they gave for small amounts in cash.

And how we sigh for those old days of moderate events,
When one had fourteen hours in which to earn his fifty cents;
But now we work like galley slaves, and wreck and waste our powers
For sixty cents in sixty seconds–ah, what a life is ours.

—S. W. Foss.

The White Lady of Borax Lake.

Written for the RURAL PRESS by LILLIAN H. SHUEY.

(*Concluded from last issue.*)

III.

Meanwhile Richard Fielding had had more time than he needed to regret his undue sensibility about his appearance.

The long evenings at the camp alone were becoming tiresome. He minded it less when Tom reported that he saw nothing of Miss Earl, and he said revengefully that he thought a woman of taste and fashion would not care to spend her evenings with a wild man of the woods. Tom stood it, for he thought Dick's repentance was plain enough. He had sent to town for a shaving outfit, and had employed the farmer's wife to clean and mend his coat. But the fatal error could not be mended, and Tom still went whistling over the bluff and Dick staid alone at the camp.

But he was getting a great deal of rest out of it. His mind was in a quiescent state; it had at last become easy to forget his cases and his books.

He found it very pleasant to lie in the hammock in the moonlight, and think over the few pleasures his hard work had been allowing him. And all such thoughts brought to mind the face of Florence Earl—at the opera so fair and thoughtful, at the dinner so gay and bright, at the reception so proud, and at Dr. Stebbins' church so pensive and spirituelle. At times when with him she had seemed so happy and trustful, again so cold and reserved.

He was running over such thoughts one evening, while lying motionless, looking over the white lake shore and scanning the brushy outlines of the bluff above.

Suddenly he sat up and tried to rub a cloud out of his eyes. Then he tried his eyes again, and rubbed again. But it proved not to be one of his tired-brain symptoms. It was really a white mist or spot on the lake shore. As he watched it attentively, the spot or shape moved on, following a long white path that ran nearly across the lake.

At the extreme point it stopped, and as it stood by the dark background of the water it seemed to take on the form of a slender woman. For several minutes it stood definitely outlined, and then, losing its shape again, it retraced the white path, followed the white shore northward, and disappeared by the bluff. Fielding concluded later that it had been some kind of an optical illusion, but the next night he saw the same phenomenon for the same length of time. Then he knew he was being treated to the best attraction the neighborhood had to offer—the genuine White Lady of the Lake.

He decided at once to distinguish himself by solving the mystery—it might be found that the sinning Mrs. Marcy never died. He had once been a good runner, and he now started at full speed, his mind intent upon taking possession of the place where the person or spirit made its exit from the long white path to the shore. But the Lady of the Lake seemed at once to become aware of this audacious advance on her solitude, and began to run or glide as swiftly toward her usual point of egress. Fielding had ceased to think, his sole object being to head off something that was fleeing, white and phantom-like, before him. He accomplished his object—he stood directly in the path of escape. The White Lady attempted to push by, but he threw out his arm and stopped her. Then the White Lady, with a trembling and indignant voice, said:

"Sir, don't you touch me; I have help at hand."

The white skirts she had been holding up fell about her feet, the white zephyr shawl fell from her head and, tall, beautiful and angry before him stood Florence Earl.

"Oh, pardon me, pardon me," cried the astounded Dick. "Forgive me on any terms. I thought it was some trick of Dermont's, that is, at the last, when I stopped you."

Florence understood, but was silent.

"Won't you speak to me, Miss Earl? I am so sorry. Did I frighten you?"

But she seemed to be overcome with emotion or fatigue.

"I will go home," she said. "They are at the top of the bluff."

"Who?"

"Mary, the old Indian cook, and all the ranch dogs. They come with me every night."

He took her arm deferentially, feeling like a criminal, and walked with her to the foot of the bluff. He would have let her go without a word, he had made such a fool of himself.

But she hesitated, then turned nervously to him.

"I did not come down here to attract your attention, Mr. Fielding; being all in white, I thought you would not see me." Then with an indignant ring in her voice, "but I suppose you won't believe me, you already think so ill of me. But I am sure I think ill enough of a man who will mistreat a girl in a place like this, just because you have found out my private history."

Fielding was astounded.

"Mistreated you, Miss Earl; Florence, what do you mean?"

Her voice trembled. "You refused to come where I was with your friend! 'A sick old man,' indeed! You know my sad story and you showed me that you despised me." She dropped her face in her hands, sobbing.

"Dear, dear girl, what can you mean?" he said. "Why, I was too dirty and rough to come, don't you know; and when I got ready I had no invitation. What could I do? I have been waiting for Miss Graves to ask me to her house. Nothing was further from my thoughts than offending you. Why, Florence, I—I, why, you know I love you. Darling, don't cry. Mistreat, despise you! Never! Florence, I adore you. Look up, and promise to be my wife."

He had ventured to take her hand and gently encircle her waist with his arm.

She had ceased to sob, but in a moment she drew away.

"You are very generous and noble," she said, "but I cannot let you ask me to be your wife. I cannot become any one's wife; I am too proud. You know the shadow that is on my name. You know about the story of Borax Lake. That was my mother. I am unhappy Florence Marcy. Mr. Earl is my uncle. O, it is dreadful, what I have suffered. My uncle told me only a few months ago. I always supposed it was my father who died in the city. Marian does not know at all. But I came up here just to see these sad scenes, and I came down here by night to think it over alone."

She was gathering more strength to speak of it now.

"You know about the box, they claim the tramp stole? I think I know where it is. My father used to take me in a canoe out to the rock under the bluff, and he had a place in the rock where he kept a box; I think it must have been an iron box, a small one. It has all come back to me since I came here. I wish I could get it. There might be some clue in it. I can't believe my mother was wholly to blame, and for her sake I cannot become the wife of any one. No, Mr. Fielding, do not speak of it again. Listen, what is that?"

"Miss Flo! Miss Flo!" sounded from the bluff. It is old Mary calling me. I must go now."

She snatched a long, black, circular cloak from the brush and fled up the bluff road before Fielding could protest.

IV.

The next day was a miserable one to the two young men. Fielding accused Dermont of not wishing him to go up to the farmhouse, and Dermont retorted by asking him how he could get an invitation for a sick old man. Then Fielding lay in the hammock and complained of headache; he said it was too warm to hunt or fish, but he was willing to go out on the lake and shoot birds. Dermont said there were no birds there. Toward night Dermont proposed that they go to Ridgetown on horseback for the late papers. He then passed over Fielding's protestations and groomed and saddled the horses.

The truth was, Marian and Tom had grown tired of the awkward condition of things and had determined to bring about a meeting between Fielding and the two girls and risk the consequences. The plot was laid in Ridgetown.

Marian also had had a restless day with her companion. Florence, sad and silent one hour, the next would dash into a perfect whirlwind of gaiety. When Marian proposed an evening horseback ride, Florence was delighted.

Mr. and Mrs. Graves, Mary and all the ranch-dogs were present to see them mount the two stock-herding ponies just home from the stock ranch.

Marian had several calls to make in town, coaxing Florence from one house to another till she was tired. Then they went to the parlor of the hotel and Marian ordered the ponies brought around. Florence was in gay humor, and favored the passers-by outside with dashes of lively playing at the tiny piano. She became aware that some one had entered the room, and turned from her seat to find herself face to face with Dermont, who had piloted Fielding in also on some flimsy excuse.

Dermont and Marian were both amazed at the curious result of their plot. Florence gave the tips of her fingers to Dermont and a look of scorn and passed on to Fielding. A word or two passed between them, and they went out of the room.

Dermont and Marian could only follow wondering, mount their horses, and go clickety-clack after them down the stony street and out of town.

The ride was glorious. The moon was rising in their faces, and the slopes and hills around were just softening their outlines in the brightness. As the first couple came to an abrupt rise, their horses slowed to a walk, and Fielding turned to his companion, whose sweet pale face was clearly outlined over her black habit.

"Florence," he said, "now tell me at once that you are going to reverse your cruel decision of last evening."

She drooped slightly in the saddle and turned away her face.

"No, no," she said, "I cannot."

"Not for love, Florence?"

"Not as I love you, I cannot. I know I have brought sorrow already to my uncle, whom I love."

"Florence, Florence," he cried, "it shall not be so. You must be mine."

She threw his hand from her arm, and her horse bounded up the hill. He could see that she was plying the whip to get away from him. He fell back angry with himself for his impetuosity. By the sound of her galloping horse he knew that she had taken the road to Borax Lake.

When he came in sight of the south bluff, he saw her on the edge motionless on her horse looking down into the valley.

When Tom and Marian came up after a time, leisurely, two mounted figures were looking silently down. They were looking intently at something, so the newcomers rode quietly up to see. There was a dim light in one of the windows of the old Marcy house!

When Fielding saw that Florence was silently weeping, he slipped from his horse and stood by her.

It was Tom who spoke first. "If that's a ghost's light, I'm going to see."

"Hold on, I will go, too," said Fielding.

The girls drew nearer each other and clasped hands while the young men reconnoitered in the valley.

It seemed ages before Tom returned. "Dick says, come down," he said, "we have found some one."

The three went down on horseback.

"Dick says you must come in," urged Tom, assisting the girls to dismount, and tying the horses.

They followed him into the large front room of the desolate house. It was furnished with the wrecked dust-covered remains of the Marcy furniture.

On a ragged lounge lay an old man in a state of collapse and exhaustion, and Fielding was giving him whisky from a spoon.

"Stand back, please," he said, "give him air."

Shortly, he began to revive; he opened his eyes and looked at Fielding intelligently.

"It's all up," he whispered, huskily "You'd better send me to the poorhouse. It won't do me no good if I do find it. It's hard to give it up. I've been back every summer for years to look, and now I'm so old and so blamed weak and sick."

"He's out of his head, poor fellow!" said Tom.

"What is it, my good man," urged Fielding; "what do you want to find? Perhaps we can help you."

The old man groaned, but grew stronger.

"A little more of that whisky, sir. No, you bet I don't want no help. But you've found me out, and its all up now. So long as folks thought it wuz a ghost, I was all right."

"I'll help you anyway," said Fielding, pouring down more whisky.

"And divvy?"

"Yes, of course."

"Well, it's that Marcy box, full of diamonds and money. I'm the old cuss, you know, that had the smallpox here. One night Marcy come home from town, and I saw him put money and things in it. And I hollered out, says I: 'Look out, young fel, I'll git that.' 'No you don't,' says he. 'Well,' says I, 'it's as much mine as yours. It belongs to that little gal and her pa and ma that's skinned out.'"

Then Florence screamed and ran forward and knelt down before the tramp.

"My father and mother," she cried, "did they run away together? O, did they?"

The old man looked into her eager face. "Why, you dear little gal, you're the very one. Of course your pa and ma run off, scared to death, both of 'em. They didn't die, did they? I never asked no one. I just snooped around here nights."

Florence bent over him anxiously.

"Are you sure my father went away?"

"Well, I guess I knowed them apart. It was Tom Marcy; I'll swear to it."

If you can prove it, my poor man," said Fielding, "I will reward you."

"Well, then, I reckon I can do it. Anybody would have found it out, if they'd a rummaged this old trap as much as I have. In that room there, there's an old desk, and a little drawer round on the side. I read the letter that's in there wrapped up in a silk handkerchief."

Taking the camp lantern, the four young people stood before the old, decrepit desk, and Florence reverently took the letter from its yellow covering. But her hand trembled and her eyes were full of tears, so Marian took it and read it aloud:

To My Daughter Florence, if I Die: If my little girl should be saved, I want her to have this letter, for I know she will be turned against me. There has been an awful scene here. Tom's cousin thought I would flee with him from this sick man, and because I would not he has turned against me. He says, when we are gone, he will blacken my name and pass as Tom himself. I know he can and will do it. And I leave this statement for my girl if she lives. We are all exposed to the awful disease, and we cannot tell, for they would not let us travel. My dear child, your papa and I will leave in this driving storm, and you will be asleep in my arms. Your mother, ROSE MARCY.

Florence was now in Fielding's arms.

The young men took good care of the tramp, and, when he was able, he went to town and made an affidavit of all he knew. The people accepted his story with delight, and many now affirmed that they had thought of that before. Attorney Holt, without a word, deeded the land back to Flor-



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

ROYAL BAKING POWDER CO., 106 Wall St., N. Y.

ence, who gave him in return the old yellow check, which she and Fielding found safe in the iron box under the bluff.

Florence tore away the old Marcy house and built a summer cottage there; for she intended to be married, she said, in her mother's home. She drove around in her rich, white summer costumes, and certain people said that the other "White Lady," having been justified, would never be seen again. Except that on the wedding day there were two white ladies, Florence and Marian.

Useful Things to Know.

Don't forget that canned meats, which may keep perfectly for a year or two, after that time deteriorate and often become unwholesome. It is always wiser to purchase such food at the most reliable place.

Never put away food in tin plates. Fully one-half the cases of poison from the use of canned goods is because the article was left or put in the can after using. China, earthenware or glass is the only safe receptacle for food "left over."

Beeswax and salt will make rusty flatirons as clean and smooth as glass. Tie a lump of wax in a rag and keep it for that purpose. When the irons are hot rub them first with the wax rag, then scour with a paper or cloth sprinkled with salt.

Soft water is better than hard for boiling vegetables, as the hard water toughens them. When cooking, always keep the kettle boiling; then, if meat, vegetables or anything you may be boiling needs more water, you can add it without stopping the boiling process.

Thorough ventilation is necessary where milk is kept in cellars or it will become injured by mold or foul odors. This is more often the cause of poor summer butter than any other. The butter is tainted before it goes to the churn, and no possible after-care can make it good or keep it fit to eat until winter.

A good cement for mending china is made in the following manner: Make a very thick solution of gum arabic and warm water and stir in a sufficient quantity of plaster of Paris to make a thick paste; then with a small brush apply the paste very carefully to fractured edges of the china, pressing them tightly together, and leave the mended dish untouched for two or three days.

No medicine should ever be given in the dark. Always shake before opening the bottle. It is often important and always harmless. Medicines should be kept in a dry, cool and dark closet. Only a few should be kept on hand, each in small quantity, for, as a rule, they do not keep well. It is poor economy to buy drugs where they are the cheapest, as they are almost sure to be adulterated. Get them from a reliable apothecary.

Turpentine has almost as many uses in the house as borax. It is good for rheumatism, and, mixed with camphorated oil and rubbed on the chest, one of the best of remedies for bronchial colds. It is an excellent preventive against moths, although naptha is preferable, the odor leaving much sooner. It will drive away ants and roaches if sprinkled about the shelves and closets. A spoonful of it to a pail of warm water cleans paint excellently, and a little in the boiler on washing day whitens the clothes.

Humorous.

THE man who has confidence in himself is often taken in by just that kind of a game.—Truth.

IT generally makes a self-righteous man feel like kicking the first boy he sees to be called a hypocrite.—Ram's Horn.

A WOMAN'S RETORT: Mrs. Brady (proudly)—"Me Mary Ann has a pianny." Mrs. McNally (a rival)—"Och! Yez needn't t'ink yez can droive me frim th' neigbyhood wid her outlandish n'ises.

DOCTOR (to patient who has come two miles to the doctor's office in order to save the extra cost of a visiting fee): "Good gracious, man, you are not fit to be out of the house! Go home at once and I will call in a couple of hours and prescribe for you."—N. Y. Life.

HOW it gets in. Mrs. Bleeker—"Are the ordinary nursery stories told to Boston children?" Mrs. Emerson—"Only 'Jack and the Bean Stalk,' and that solely out of consideration for the bean."—Puck.

DEACON MEDDERS.—"Skipps, the cashier of the Onderdonk County Bank, ran away last night. They say he has been robbing the bank for more than a year." Mrs. Medders—"They might have known that he was living beyond his means. Why Josiah, his folks actually used to sit in their parlor every night!"

YOUNG FOLKS' COLUMN.

Before the Toy-Shop Window.

I knows it's mighty weak in me to cry
'N blubber like a baby, sir, but I
Kaint help them tears.
I'm old enough, I s'pose, to put away
Sech childish things; I've known the light o' day
Some sixty years.

It's this way, sir: 'Bout thirty years ago
I had a little baby home named Joe—
Named after me—
For Joe's mamma afore she came to die
Ast me to name him that ar way, and I
Just did, you see.

Small Joe—well, he was three weeks old that day,
When she—she—kind o' sighed 'n' passed away.
'N' me and Joe
Was left to help each other on—for me
To keep the little fellow goin'; he
To soothe my woe.

He did it, too, Joe did—he did a heap.
'Twas mighty comfortin' to watch him sleep,
'N' coo, and smile.
I seemed to see her smile when Joe looked glad,
'N' then I kind o' didn't feel so sad
A little while.

'N' then Joe went! I had to go to town,
'N' Joe while I was gone crept off—to drown—
Fell in a dam;
'N' down in town I'd bought a little toy
To bring it home, y' know, to give the boy—
A woolly lamb.

'N' when I got back home some feller said,
As kindly as he could, that Joe was dead—
My little Joe.
'N' then we put him by his mamma's side,
'N' with him was that woolly lamb that I'd
Brought home, y' know.

'N' now to-day's the first I've cried since then—
Cried like a baby in the sight o' men—
But 'taint no whim.
Why, in the winder o' that shop there sat
A little woolly lamb, sir, just like that
I got for him!

'N' for a minute my old heart felt glad.
I sorter thought to see the little lad
Still at my side.
'N' then remembrance came—that ne'er again
I'd see him smile 'n' hear his laugh 'n' then,
Why, then, I cried!

—John Kendrick Bangs
in the December Ladies Home Journal.

Herbert's Revenge.

"You'll be sorry for this some day!" said Herbert, angrily.

"Sorry nothing!" retorted Dwight Hardy. "And, if you don't want your head punched, you had better leave my sister alone. She doesn't need your help. Charlie and I can give her all the toboggan rides she wants. Can't we, Charley?"

"I guess we can," replied Dwight's younger brother; "and, anyhow, I don't believe May wants to ride with a fellow whose father has been in State prison."

The boys had arrayed themselves in bathing suits, and stood waiting for some of the more courageous girls of the Hilltop Sunday-school picnic party, who had promised to venture upon the water toboggan at the shore. Herbert had suggested to May Hardy's brothers that he take May on his toboggan if she were willing. Mr. Harding was a very wealthy man, and Dwight and Charley were more conscious of their father's and their importance than any boy should be. They therefore rather curtly declined Herbert's polite offer, although they were notoriously neglectful of their sister; and when Herbert showed his resentment at the slight, the talk became decidedly animated. Finally, when Herbert heard the words "State prison," he sprang forward to punish the boy who had dared to insult his father's good name. To Herbert's discomfiture, Mr. Thorp, the boy's Sunday-school teacher, appeared just then.

"The girl's are ready, Mr. Thorp began. "Why, boys, what's the matter? Fighting, Herbert?"

Herbert retired, abashed. He could not explain that, although his father had been in prison, his innocence had been fully established by the death-bed confession of the real criminal. He did not wish to say that his father had died in middle life, broken in spirit and fortune, nor that his mother and himself had removed to Hilltop hoping that the story of their misfortunes would not follow them. In spite of the hard luck which Herbert had faced in his 15 year's experience with the world, he was rarely unhappy. Perhaps the reason was that he knew what real troubles were, and trifles did not affect him; but the knowledge that his and his mother's secret had been found out was too much for his peace of mind. He cared even less on his own account than for his gentle mother, whose sorrows had already made her old, and who was at that moment sitting alone at home thinking only of her boy.

On the appearance of their teacher, all the children, except Herbert, ran to the toboggan slide, and were soon riding swiftly down the incline, and splashing merrily about in the water at its foot.

"Come on, Herbert," said one or two of the boys. "Don't mind those Hardy's. Nobody cares what they say."

But Herbert's pleasure was spoiled, and he refused to be comforted. He stood at the top of the slide in a very resentful mood, watching the fun as the bathers sped swiftly down and toiled up to the top of the incline again. Suddenly the desire for revenge shot through his mind, but how to accomplish his desire he could not decide. At length he decided to ride down the slide a few times, just to get his bearings and hit upon a plan for punishing the Hardys.

Even with nobody to share his toboggan, the ride was glorious, and Herbert climbed up to the starting-point with less bitterness of spirit than when he went down. He lost still more of it on the second trip, and after he had ridden half a dozen times, he was ready to admit that, after all, life without the Hardy's might be worth living even to a boy whose father had been imprisoned for another man's crime.

Suddenly, as he reached the top of the slide, and turned to place his toboggan in position to descend again, he heard a scream from May Hardy and shouts for help from her brothers. Herbert's opportunity for revenge had come. Should he take it?

The toboggan carrying the three Hardy's had sailed out into deeper water than usual, and May Hardy, who was already tired with swimming and climbing, became frightened and sank. As she went down she clutched wildly at Dwight, who struggled violently to free himself, and finally sank out of sight with his sister. Meanwhile Charlie Hardy was floundering widly about attempting to help, but unable to do so, and becoming more terror-stricken every second. Nobody was near, and the only boat in sight was two hundred feet away.

With a run and a spring the boy started down the incline at a speed which promised to take him within reach of the struggling children. But alas for the mistakes of human calculations! His toboggan buried its nose in water at the foot of the slide and sank, while Herbert went heels over head. He rose to the surface of the water almost immediately and struck out toward the three Hardys, propelling his toboggan. He reached Charley first, and pushing the toboggan toward the shrieking lad, commanded him to grab it and go ashore. Charlie obeyed, and ran swiftly for the boat. Herbert did not pause an instant, but seizing the Hardy's toboggan, swam to the spot where Dwight and May were sinking and reappearing, the girl almost fainting and the boy struggling desperately to keep both their heads above water.

"Here, Dwight!" said Herbert, as he reached them, "you get ashore with the help of the toboggan, and I can save your sister! Leave her to me, will you?"

Dwight grasped the toboggan and managed to shake himself free from his now unconscious sister, while Herbert seized her by the hair, and keeping her nose and mouth above the surface of the water, began to swim toward the shore. None of the children had been far beyond his depth, and Herbert was soon able to touch the bottom with his feet. By that time plenty of help was at hand, and May was carried quickly into a hotel near by and there revived.

"That was very bravely done, my boy," said Mr. Thorp to Herbert.

"It wasn't much," replied Herbert, who thought with shame of his plan of revenge. "Anybody could have done it if he hadn't been frightened. The water was hardly over their heads."

"That's just the point," said the teacher. "The ability to keep your head above water at times of danger is about as important as anything I know."

Herbert was confused by the praise far more than by the danger he had faced, and when he found words to protest that he had done nothing extraordinary, Mr. Thorp was walking toward the hotel.

But Herbert's triumph came when Dwight extended his hand in the presence of the other boys and said:

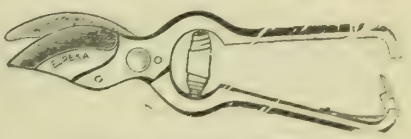
"Herbert, you're a brick, and I've been an awful cad. I'm ashamed for the way I acted, and I hope you and the other fellows won't lay it up against me."

"That's all right," said Herbert, after the awkward fashion of all boys, who hate scenes of "making up," "that's all right. You'd have done the same thing if you had been in my place. You were a little rattled in the water, that's all, and we won't say anything more about the—the other."

Nothing more was said about "the other," and none of Herbert's playmates, except the Hardys, have ever yet heard the reason why he and his mother came to Hilltop to live.—Harper's Young People.

PRUNING SHEARS.

EUREKA and DEFIANCE.

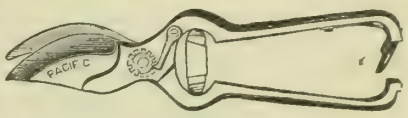


STEEL CLOCK SPRING.

DEFIANCE SHEARS.
LOW GRADE. LOW PRICE.

EUREKA SHEARS.
MEDIUM GRADE AND PRICE.
NOT WARRANTED.

PACIFIC.



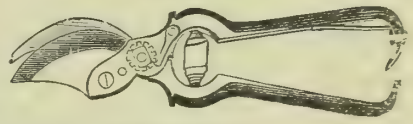
STEEL CLOCK SPRING.
RATCHET NUT. EXTRA BLADE.
H GH GRADE. WARRANTED.

PERFECT.



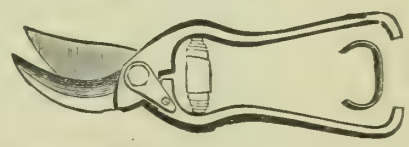
SAME PATTERN AS RIESER.
DOUBLE FLAT BRASS SPRINGS,
RATCHET NUT. EXTRA BLADE.
HIGH GRADE. WARRANTED.

SONOMA.



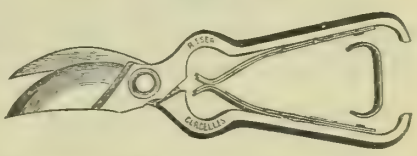
STEEL CLOCK SPRING.
RATCHET NUT.
HIGH GRADE WARRANTED.

FRESNO.



DOUBLE CUT.
STEEL CLOCK SPRING.
HIGH GRADE. WARRANTED.

GENUINE CORCELLES RIESER.



DOUBLE FLAT BRASS SPRINGS.
RATCHET NUT AND EXTRA BLADE.
WARRANTED TO BE WITHOUT EQUAL.
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PATRONS OF HUSBANDRY.

From Worthy Master Davis.

Doings of the National Grange.—Observations and Suggestions.—Work Done and to be Done.

BOSTON, Nov. 28th, 1892.

TO THE EDITOR:—The National Grange closed its 26th annual session at 11 o'clock P. M., Friday night, November 25, 1892, after ten days and (almost) nights of hard work. There was no lack of interest from the first to the last moment. All were intent on seeing the work of the session finished in such a way that the good of the Order would be best subserved. The debates on some of the reports (notably that of the worthy lecturer, and the minority report of the executive committee, submitted by Bros. Rhone and Charters) were long, exciting and very argumentative. These reports involved, not only the question of the farmers' social and financial condition, but also the question of a cheaper money to be furnished by the Government on real estate mortgages, and, of course, the debates were warm and aggressive. Nearly every voting member of the National Grange spoke, and the roll was called times almost without number. All efforts to change the *ritualistic* work failed, and but few changes were made in the digest. The fee of $5 for each *new* Grange organized, and of $2.50 for each old Grange reorganized, was continued for another year.

Headquarters at the World's Fair were ordered established and maintained, with a suitable patron in charge, to give information, to keep a roster for each State, etc., all to be in charge of the executive committee of the National Grange during the entire session; *provided*, the expense to the National Grange shall not exceed the sum of $1000, which sum was appropriated, with a *proviso* that any unexpended balance shall be returned to the treasury.

A national committee on Woman's Work was appointed as follows, viz., Sister J. J. Woodman, Paw Paw, Mich., chairman; Sister G. A. Bowen, Woodstock, Conn., and Sister E. W. Davis, Santa Rosa, Cal.

"The Temple to Agriculture" is still waiting for funds. Several plans were suggested, but no definite plan was adopted. The subject was again placed in charge of the executive committee. Can't some member of the Order in California devise a way by which an Order with so many members can raise the necessary funds for building a "National Home" for the grandest farmers' organization the world has ever known?

Bro. Leonard Rhone of Pa. was reelected a member of the executive committee. The place at which the next session will be held was left for the executive committee to determine. The question of lecture work in the several States was fully discussed by the executive committee, who determined that now is the time, in many States, to push the work of organization and of reorganization. The committee on "Dormant" also urged aggressive work in the same direction. An attempt to change the time for holding elections in subordinate Granges failed, so that the law, as now in force, is to be observed. In this connection, let me say that I hope all Granges in California will *elect* and *install* officers as early as possible, so that they may have the *new annual word*, and also that they may begin early in the year an aggressive campaign for the Grange. It is the desire of the master, if the executive committee of California State Grange concur, to make a most vigorous effort to replace the Grange in several counties where it is not now to be found. This can be successfully done if all our members will but put the shoulder to the wheel and by word and deed stand boldly for the Grange.

On our way west we thought to make a short stop at Boston ("The Hub") to see the crooked, narrow streets, the fine buildings, the magnificent show-windows, the overcrowded streetcars, the hurrying crowds of anxious people, Bunker Hill, the famous Boston Commons, Cambridge and its historic surroundings, the poet Longfellow's home, where, in days agone, he wrote Hiawatha, Evangeline, Miles Standish and the legion of sweet Lyrics, which, long ago, immortalized him. From Boston we go to New York, where we hope to see some of its many wonders; thence to the Quaker City; then to the nation's capital, about the time Congress convenes; then down to Richmond and across to St. Louis, from which latter city we go direct to California *via* A., T. & S. F. R. R.

The worthy master acknowledges, with thanks, invitations to visit State Granges, to-wit: Illinois, Indiana, Missouri, Kansas, Nebraska, Massachusetts, Vermont, New Hampshire, New Jersey and Delaware, which had to be declined, owing to the wintry weather. There have been many observations made during the trip. About them, something may be written during the new year, which is already knocking at the door. We have had a fine trip, but the most exacting work of any session of the National Grange held for many years. On this, all agree. Some days we had 13 hours of actual session, leaving but 11 hours for meals, rest and committee work. But we all survive. More anon.

E. W. D.

Against Coyote Bounty.

At a meeting of Merced Grange, P. of H., held Dec. 3, 1892, the following resolution was unanimously passed:

Resolved, That this Grange is opposed to the repeal of the bounty of $5 on coyote scalps, and respectfully requests the Legislative Committee of P. of H. to use all honorable means to prevent the repeal of said law.

L. H. APPLEGATE, Master. NETTIE BROUSE, Sec'y.

Notes.

Sacramento County Pomona Grange will meet Dec. 31st for election of officers; and on that evening Sacramento Grange will give a social, to which members of the Order are cordially invited.

Letter From Past Master Webster.

What the Grangers and Farmers of San Luis Obispo County are Talking About.

TO THE EDITOR:—In answer to your favor of the 22d inst., making inquiry relative to "what is going on and what is being talked about among Grangers in your district," I have to say that the term "Granger" is largely superseded in this section by Alliance advocates and People's party clubs.

For the last year Grange work south of San Jose has been fitful and halting to such an extent that it has been found impossible to maintain regular meetings in the interest of the Order anywhere, with the exception of San Antonio, San Lucas and Arroyo Grande. The cause of the decline of legitimate Grange work here is that "Old Hayseed" sowed a large stock of reform notions among the uninitiated last spring, and the result is a development out of all proportion to the yield of our wheat or early potato crops.

The derisive jeers of McKinley converts and tariff reformers are no longer heard in all the land. Political lightning has struck the former and the latter are beginning to realize that they have caught a white elephant that is likely to land them all in the gutter before the next general election, while the People's party advocates sit back and grin at the discomfiture of their opponents. Just now, for the first time in the history of the movement, it is quite respectable to belong to the new party organization. San Luis Obispo is the banner county of the State in the new movement as it is the only one that has elected any considerable part of the county ticket unaided by any other organization. The local results of the recent election are so encouraging to the new party promoters that there is already an active demand for further and more effective organization on substantially the same lines on which the recent contest was made.

Counter to the conception that appears to possess all Cleveland advocates, the farmers of this county do not believe that it was the tariff reform slogan of the Democrats which won their party the signal victory of November 8th, but that it was largely and chiefly due to vicious legislation and policies other than the McKinley tariff.

The conviction is growing continually deeper among the labor element of the nation that class legislation and court decisions favor the few as against the many, and that a poor man has no rights that wealthy individuals, corporations, trusts and syndicates are bound to respect. This conviction, which is certainly spreading among the masses of our people, may be considered dangerous, unrepublican and tending toward physical revolution; but who will say that these conceptions and tendencies are not justified by the conditions which surround us?

The general impression regarding the recent contest between the Democratic and Republican parties is that it was like unto a sick man bedridden and purple-hipped who turns from one sore side to the other with the hope of some relief from the waste and torments which beset him.

The fear is that the Democratic party will not recognize this fact, but rather be led by Mr. Cleveland in his raid on the McKinley bill as the source of all our trouble and embarassments. While conceding that a proper adjustment of the subjects on which tariff duties should be laid would afford some relief in certain directions, nevertheless, it would be as reasonable to suppose that a cancer could be removed by the application of a bread poultice as to suppose that our financial distress can be relieved, and the curse of the nation, in the form of great corporations, trusts and pooling transportation companies, can be regulated and controlled by removing the duty from imported wool, tin and cotton ties.

It was declared by the ancient Greeks that the gods first made mad those whom they would destroy.

Manifestly Cleveland and his more zealous followers have gone mad over the McKinley tariff, and if it were not for the consequent embarassments which are likely to overtake the country, the wage-workers of the nation could look complacently on the hollow show, consoled by the certainty of a civil revolution four years hence which will give the reins of government into their hands.

Conscious of this ultimate result, the farmers of the nation propose to make advances all along the line, strengthen every outpost, intrench their forces as they advance to a more comprehensive understanding of their duties and responsibilities to the Republic. To this end the largest and most liberal-minded men in the movement are to be entrusted with the leadership, control and direction of our periodicals and other means of information designed for the better understanding of all farmers as to the vital issues involved in this great controversy.

Farmers in this section have reached the conclusion that there is but little merit in a name. Call it Grange, Alliance or People's party, it matters not, so we reach the same conclusions and unity of action in their development. Purpose and resolution to meet every emergency and to stand together in all things pertaining to the prosperity and advancement of our calling is the drift of sentiment among the farmers of this county, so that the Grange, Alliance, People's party and every other organization among them will be used in the future as a means to a common end in view.

J. V. WEBSTER.

Anniversary Celebration at Sacramento.

SACRAMENTO, Dec. 4, 1892.

TO THE EDITOR:—The 3d of December dawned inauspiciously for the success of the anniversary celebration planned by Sacramento Grange No. 12, P. of H.; but despite the threatened storm, a goodly number of members and visitors from neighboring Granges were in attendance. No exercises were held in the forenoon, but after the banquet, the gavel fell and Worthy Master S. H. Jackman reviewed the history of the Order from its inception, pointing out the advancement made by, and the benefit accruing to farmers through the opportunities it had afforded.

W. H. V. Raymond followed with remarks on the advantage possessed by farmers over other classes of business-men for self-improvement; on the former dearth of social companionship for dwellers on the farm, and that the Grange had obviated this drawback to farm life, and commented favorably on the broad principle of equality of the sexes as taught by the Order.

E. Greer gave an outline of the work of the County World's Fair Committee, and that it contemplated taking the exhibit, which received the first premium at the State Fair, to the dress rehearsal at the Mechanics' Fair in San Francisco next month.

G. W. Hancock, who has recently returned from a trip to Mexico, gave a glowing account of the prospects for agricultural and mining enterprises in the land of the Montezumas.

Songs were rendered by the Grange choir, and vocal solos, piano and violin duets, and the "Ghost of Crooked Lane," excellently personated, added greatly to the day's pleasure; and thus does the Grange cement the fetters which bind in willing fealty its subjects.

E. GREER.

Committee on Woman's Work.

The State Grange Committee on Woman's work in the Grange is up to business, and fires the first gun since the annual session at San Jose in sending to each subordinate Grange committee the following:

To the Local Committee on Woman's Work.—DEAR SISTERS: Again the State Committee sends greeting to you who have been diligent, and, through you, to your faithful colaborers.

From reports received it is shown that through your efforts interest in the Grange has been stimulated; and we hope you will press onward, through the coming year with renewed courage.

In addition to the duties which have fallen to your care in the past, we desire to direct your attention especially to certain work which the State Committee deem it expedient to take up at this time.

GRANGE TEMPLE.

The Order in California, should, ere the close of another year, contribute at least twenty-five hundred dollars to the Grange Temple Fund. Other States are moving in this matter, and each individual member of every Grange in this State should feel a personal pride in assisting to raise the amount of money necessary to assure the erection of that building.

This Order has come to be one of the permanent organizations of our country; and, through it and its influence, agriculture is no longer the butt of idle jest and sneer, but is respected as a calling; and the members of its profession are taking high positions—not as men who spent their youth upon the farm, but as men who are practical farmers. Each Grange can and should give at least one entertainment during the year, the proceeds to be devoted to this purpose. Talk it up in the Grange; call upon every member to assist, remembering that it is not much we ask from each one, but that the result of combined effort will be a sum total gratifying, not only to us, but to you; and that we may all justly be joint owners in a Grange headquarters that will reflect credit upon the Patrons of Husbandry and the art of agriculture.

GRANGE ADVOCATE.

The PACIFIC RURAL PRESS is recognized as the official organ and Grange Advocate. It is a bright, clean journal, devoted to the diversified interests of the farm, and we hope you will do all you can to increase its field of usefulness. Give it your hearty support, and induce others to do so. Make it the means of communication between the Granges by securing a PRESS correspondent, whose duty it will be to furnish concise accounts of your Grange meetings, and items of general interest.

COMMUNITY PROPERTY.

The State Grange has again instructed its legislative committee to urge the legislature to so amend the Civil Code as "to give to the wife the same rights in the disposition of the community property, after the death of the husband, as are enjoyed by the husband after the death of the wife."

The object of the proposed amendment is to make the wife independent of wills or deeds, by giving her as absolute control of the community property in the event of the husband's death, as the husband now has upon the death of his wife.

The justice of the proposition is self-evident, and needs no defense. Why should the wife, when the summons comes, and the husband follows the silent messenger, be subjected to a routine of court proceedings, every step of which is attended with the payment of costs, and which necessitates the employment of an attorney with fee relatively as large as the property in course of probate? Why should not the property which would be solely his at her death, be as legally hers at his decease, without will or deed, or the intervention of a probate court?

It may be urged that women are unused to business, and the loss will be as great one way as the other; but it has been proven that, give women the opportunity, and they will rise equal to the responsibility.

It is said that the children's interest needs protection, but who will care for them better than the mother who bore them? For them she has been down into the valley of the shadow of death, even to the verge of the dark river; for them she has endured privation and self-denial; for them she has planned and economized—toiled early and late, with the husband of her choice, for the creation of a home and the education of the family.

Sisters, this subject may not concern you personally to-day, or ever; and yet to-morrow may bring you to a stern realization of the injustice of the present law. It comes every day to some toil-worn wife and mother; and, at a time when she needs to concentrate all her energies upon the conduct of her business she finds herself confronted with the onerous and excessive costs, which are oppressive and unjust. As a measure designed to educate women, give us your assistance. Circulate the accompanying petition for signatures among the members of your Grange and in your community; and return it to the Chairman of the State Committee, for the purpose of assisting the Legislative Committee in its efforts to secure the desired amendment, by giving evidence that their request is an appeal from the people of this State for such change in the law.

Fraternally,
HATTIE S. JONES, Chairman.

Sacramento, Cal., Nov., 1892.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

FIFTH AND SIXTH DEGREE INITIATES.

The following are the names of Patrons who took the fifth degree at the State Grange in San Jose: D. M. Winans, Miss Mary Kelsey, C. D. Grover, Miss Matilda Smith, Mrs. S. L. Root, Geo. Hamilton, Miss Varah M. Roache, Glen G. Harter, Mrs. Laura Raap, Mrs. Harriet De Golia, Mrs. David Harrison, Mrs. Harriet Barrow, Mrs. Johanna Lachman, Mrs. Ella Nelson, Henry Grupe, G. W. Worthen, R. P. McGlincy, Miss Elizabeth Lawton, Mrs. D. M. Winans, Mrs. Mary Kelsey, Mrs. C. D. Grover, F. D. Walton, Mrs. Nathaniel Root, Mrs. Lydia Daniels, Mrs. Bertie Bowman, Mrs. Esther Mould, Miss Bessie Alling, Geo. Klinger, Mrs. Mary W. Webb, Mrs. A. Brackett, Albert Nelson, Miss Myra Parish, D. Litchfield, Mrs. Ada McGlincy, Hattie B. Wells, Mrs. Ellen Smith. Total No. 36.

The following received the Sixth Degree: W. C. Kingsbury, Mrs. W. C. Kingsbury, D. M. Winans, Mrs. D. M. Winans, Mrs. Mary Kelsey, Miss Mary Kelsey, C. D. Grover, Mrs. C. D. Grover, Mrs. Matilda Smith, F. D. Walton, P. L. Bunce, Miss Varah M. Roache, Geo. Hamilton, Mrs. Lydia Daniels, Mrs. Berite Bowman, Glen G. Harter, Mrs. Esther Mould, H. C. Raap, Mrs. Laura Raap, Miss Bessie Alling, Geo. Klinger, O. N. Caldwell, Mrs. David Harrison, Mrs. W. Webb, Mrs. Harriet Barrow, Mrs. Jennie Starr, Mrs. A. Brackett, Mrs. Johanna Lachman, Mrs. Albert Nelson, Mrs. Ella Nelson, Miss Myra Parish, Herman Sturcke, Henry Grupe, W. A. Overhiser, Hattie B. Wells, R. P. McGlincy, G. W. Worthen, Mrs. Ellen Smith, Mrs. Mary Pinkerton. Total number, 40.

If errors or omissions have occurred in the above list please inform this office at once. The Sixth Degree names were duly forwarded to the Secretary of the National Grange, and we now learn through Worthy Master Davis that certificates have been issued and are now in transit to this office. Brother Davis expects to reach home by the 20th of December, when the certificates will be duly signed, sealed and forwarded. They will be addressed to the secretary when there is more than one to a subordinate Grange.

STATE GRANGE FINANCIAL STATEMENT. Receipts during November, of general fund, $11.75; disbursements, $85; balance on hand and in treasury, $723.94. Receipts of lecturers' fund, $4.10; no disbursements; balance, $1873.73. Total balance in both funds, $2597.67.

TWO ROCK GRANGE has a class of nine applicants for initiation and is reported in a flourishing condition by Secretary Gaston.

THE STATE GRANGE REPORT for 1892 will be issued soon; also a new edition of the constitution and by-laws, including any changes that may have been made at the session of the National Grange just closed.

ELECTION REPORT.

[Secretaries are requested to send us as early reports as possible for publication under this head.]

TWO ROCK, DEC. 1.—John R. Denman, M.; W. D. Houx, O.; A. P. Martin, L.; Chas. Hunt, S.; Walter Church, A. S.; S. Q. Barlow, C.; Geo. W. Gaston, Sec.; Henry Schwobeda, G. K.; Mrs. A. Linebaugh, Ceres; Sisters Mrs. A. P. Martin, P.; Mrs. M. Mitchell, F.; Mrs. R. Andrews, L. A. S. Installation Jan. 5th. Reported by Geo. W. Gaston, Sec'y.

MERCED, DEC. 3—A. Bickford, M.; J. A. Perry, O.; E. L. Spinks, L.; Miss Eliza Atwater, S.; H. C. Healy, A. S.; Mrs. J. T. Lander, C.; M. D. Atwater, T.; Miss L. Archibald, Sec.; Miss Mattie Perry, G. K.; Mrs. A. J. Morley, Ceres; Miss Belle Clark, P.; Miss Addie Peck, F.; Mrs. L. J. Brouse, L. A. S.; L. H. Applegate, Trustee. Date of installation, Jan. 7, 1893. Reported by Nettie Brouse, Sec.

AN EXPERIENCED HORTICULTURIST WANTS A Situation as foreman on a vineyard and fruit ranch or in a nursery. First-class references. Address, A. G., P. O. Box, 1904, San Francisco, Cal.

KNABE PIANOS

The Recognized Standard of Modern Piano Manufacture.

BALTIMORE. 22 & 24 E. Baltimore St, NEW YORK, 148 Fifth Avenue, WASHINGTON, 817 Pennsylvania Ave.

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

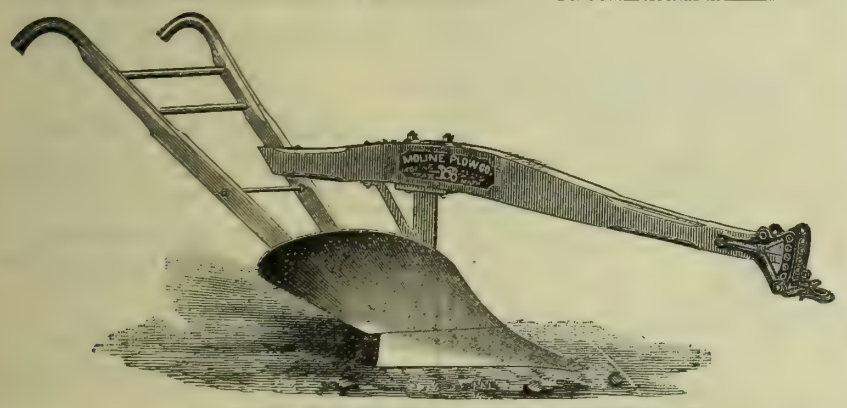
Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY.

S. W. FERGUSSON,
Bakersfield, - - - California.



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THE ORIGINAL AND GENUINE

MOLINE PLOWS.

Lightest in Weight and Draft; Finest in Finish; made of the Best Material; Most Durable; Easiest Handled; Scour in All Kinds of Soil.

GARDEN AND VINEYARD PLOWS,
TURF AND STUBBLE PLOWS,
HIGH AND LOW LANDSIDE PLOWS,
SCOTCH CLIPPER PLOWS,
ADJUSTABLE BEAM PLOWS,
FLYING DUTCHMAN SULKY PLOWS.
FLYING DUTCHMAN RIDING AND WALKING GANG PLOWS,

ALL EQUIPPED WITH MODERN IMPROVEMENTS.

SOUTH BEND CHILLED PLOWS.

OLD, RELIABLE AND WELL KNOWN.

The name SOUTH BEND, applied to Plows, is a household word among the farming community. SOUTH BEND PLOWS have been used with unvarying success for 20 years, and with the assistance of appreciative friends among the farmers we have built up a large trade.

For two-horse Plows our Nos. 3a, 4a and 10a are unapproachable. They were never known to disappoint a farmer.

HARROWS: We have all sizes of Tubular Steel and Wood Bar Lever HARROWS, Dakota Harrows, Scotch Harrows, Clark's Cutaway Disk Harrows, etc.

WRITE FOR CATALOGUE AND PRICES. MENTION THIS PAPER.

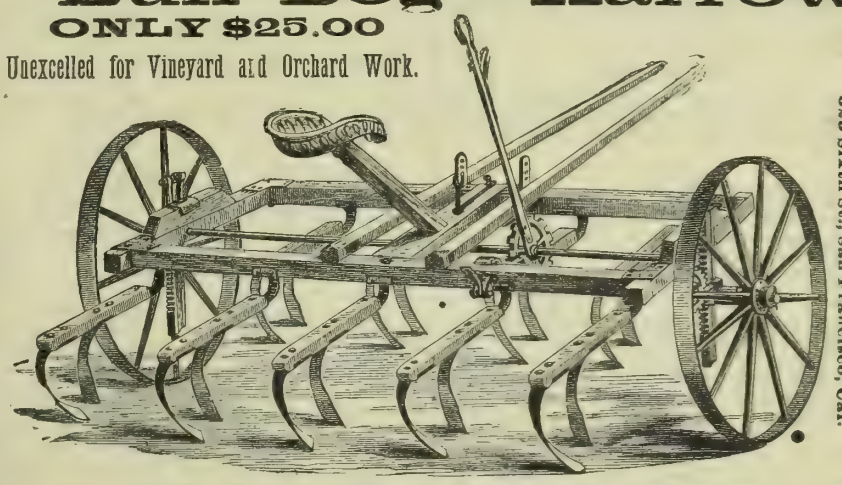
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"Bull Dog" Harrows.

ONLY $25.00

Unexcelled for Vineyard and Orchard Work.



BYRON JACKSON,
625 Sixth St., San Francisco, Cal.

NO. 8 "BULL DOG" 6-FOOT RIDING HARROW—**$25.00**

Instead of a single tooth, drawing straight through the ground, the teeth are attached in pairs (which have a spread of seven inches) to a short beam. Every tooth has a quarter turn (to the right or left respectively), thus presenting a cutting edge to the ground, and giving to each the position and appearance of a moldboard of a plow, or the shovel to a cultivator. This form of tooth, together with the relative positions assumed by the teeth to each other, gives to them the power of cutting and pulverizing tough soils, and hard, baked ground, which is possessed by no other form of tooth yet invented. By this peculiar disposition of the teeth, they have the advantage also, that one acts as a brace or landside to the other, and so prevents their clogging, which is a serious fault existing in all spring tooth harrows whose teeth are made of one long, continuous spring. In the "BULL DOG" HARROWS the short beam which holds each pair of twisted teeth is attached by a stiff spring to the main framework of the tool, Thus these implements have the combined elasticity which exists in the teeth themselves, and in the spring which attaches the short beam to the cultivator frame. Hence the harrow retains all the vibration necessary for the successful working and cleaning of the machine, whilst it is also stiff enough to be held down to its work in the most obstinate soils without difficulty.

SHAPE OF TEETH.—As the teeth present to the soil a shear or cutting edge, they are enabled to do the most thorough work in hard ground, and, in fact, the peculiar construction all through of the "Bull Dog" Harrows adapts them for successful working in soils where no other tools of the kind can be used.

The Stockton Reversible Gang Plow

Is the BEST in the Market for all alluvial soils and is also the Cheapest.

ALL SIZES.

We make Iron Frame Gangs, Single Plows, Superior Channel Iron and Wood Frame Harrows, Disc Harrows, Warehouse Trucks, Wheelbarrows, etc., etc.

Our various shops are well equipped and we do all kinds of jobbing in Planing and Woodworking, Blacksmithing, Foundry and Machine Work.

A leading item of our numerous manufactures is the Celebrated Harvester, the "**HARVEST PRINCE.**" Thoroughly tested this season and proven without a peer in its line. Two first prizes at the fairs of 1892 (wherever exhibited). We also make the Stockton Chief Header, which is not surpassed by any.

MATTESON & WILLIAMSON MFG. CO.,

370 MAIN STREET, STOCKTON.

DEWEY & CO. {220 MARKET ST., S. F. Elevator, 12 Front.} **PATENT AGENTS.**

AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

TREE-PLANTING. — Livermore *Herald:* The vines on the Chapen property, formerly the Howard Black place, have all been dug up and trees will be planted in their place. There are some 60 acres. J. D. Smith has the contract for planting the place to trees. About half will be planted to almonds and the other half to apricots.

Butte.

OLIVES AT PARADISE.—Oroville *Register:* The success attending olive culture on the hills and plateaus of Butte is attracting much attention in the county. It is but four years since the first olive tree was planted at Paradise, elevation 2000 feet, and now Mrs. Jenkins, Dr. W. E. Mack, John Hedge and Rev. Mr. Wallace have fine and thrifty plantations, the smallest being 600 and the largest 4000 trees. The trees were quite small when set out, being not more than 20 inches high, yet they now stand 8 or 10 feet in height and have large and handsome tops. This year several of the trees on Mrs. Jenkins' land had berries and the fruit showed good size and early ripening. Mr. Hedge has been exceedingly successful and his trees show the finest growth of any at Paradise, yet he informs us that he has irrigated the trees but twice this season. Olive-growing will yet assume gigantic proportions in Butte, for we already have 75,000 trees and a large additional number will be set out this winter.

IRRIGATED FRUIT.—Oroville *Register*: Robert Williamson, of the firm of W. R. Strong & Co. of Sacramento, was in Oroville on Saturday, and in reply to a question said that his firm would this winter set out 20 acres of fruit on its land below Oroville, which would make 420 in the orchard.

VALUABLE FRUIT ORCHARD.—Biggs *Argus*: The great crop of almonds on 325 acres of trees of Hatch & Rock this year produced about 66 tons of fruit, which will bring the company over $10,000. Alexander Hammon offered the Rio Bonito Colony Company $175 an acre for 40 acres in orchard on the lower part of the tract last week. Twenty acres of peaches on Rio Bonito, the trees four years old, brought the owners this year $2700, or $136 an acre.

ANOTHER COLONY OF EASTERN ORCHARDISTS.—Biggs *Argus:* Col. H. B. Scott, of Burlington, Iowa, late purchaser of 650 acres of the R. A. Moore ranch, has employed County Surveyor McCoy to subdivide the same into 10 and 20-acre lots for colonization purposes. Avenues are to be laid out throughout the entire tract, so that every lot will have an opening on one of the avenues. In this, Colonel Scott is doing what every large land-holder should do. The rich alluvial soil in the above tract, and every foot is first class, is the most productive of California lands and every ten-acre tract is ample to make a home of plenty for a good sized family. The land will raise to a high degree of perfection all varieties of fruit, berries and vegetables.

Contra Costa.

DUCKS GALORE.—Brentwood *Herald*: Ducks by the thousands visit the grain fields at night, coming out after dark and leaving at peep of day.

Fresno.

W. A. COWAN, of East avenue, Fresno, has been awarded the first premium by the World's Fair Commission Committee for the finest 50-pound cluster of raisins. Jorgen Hanson got second prize of $10, the first being $25.

FRESNO *Republican*: Mr. Zetz made a shipment of oranges to San Francisco the other day of seedlings from John Burn's orchard at Orange Dale, in this county, and he has received a letter from his commission merchant announcing that they were the first shipment of this season's crop received in San Francisco from any part of California. Mr. Berry has somewhere in the vicinity of 7000 trees in his orchard near the Kings river. This is the first season of bearing, the trees having been set out four years ago. There are 13 trees in his grove 17 years old, and it was their prolific bearing and general thriftiness that induced Mr. Berry to go to the great expense of setting out an orange grove. These old trees are so full of fruit that they are propped to prevent the branches from breaking.

Humboldt.

NEW CREAMERY.—Arcata *Journal and Herald*: The new creamery and cheese factory which is to be built on Eel River island will be one of the largest and finest institutions of the kind in the United States. The cold-storage process will be used and the butter will be packed in hardwood tubs and shipped to Eastern markets. The capital stock of the company has been increased to $30,000.

LARGE ACREAGE TO BERRIES.—Arcata *Journal and Herald*: Nearly 100 acres in this section will be set out to berries and small fruit. The cannery is the cause of it.

Los Angeles.

ANTHRAX REPORTED.—L. A. *Express:* Dr. W. E. D. Morrison this morning reported to the supervisors that anthrax had appeared in cattle on a ranch on the Verdugo owned by a man named Nelson. The supervisors directed him to quarantine the place and take all necessary measures to prevent the disease from spreading. The doctor stated that the disease had been developed on the ranch.

CITRUS FRUIT IN CAHUENGA VALLEY.—Cor. L. A. *Express*: The orange trees, in the absence of irrigation, show need of water more than ever before; but where irrigated, the fruit is nearly full size and promises well. The lemon tree needs less water than the orange, and an excellent crop is now being gathered. The age at which citrus trees begin to bear in this valley is quite phenomenal. In a couple of years after planting, they yield a good paying crop, and after that, abundantly. This is owing to absence of frost and of too great heat. Frost, in most other places, cuts the young trees, back and too great heat interferes with the growing fruit.

ORANGES FROM POMONA. — *Progress*: A few boxes of oranges have been shipped from Pomona, and $3.25 a box paid to the grower. There never was a better lot of olives pickled for market than those put up in Pomona this season.

ORANGE AND LEMON NOTES.—Pomona *Progress*: The Pomona orange crop is ripening very fast these mild, clear days, and at this rate will be ready for market a few weeks earlier than usual. Some of the fruit dealers expect to have a small quantity of the oranges ready for shipment in about four weeks, but there will be no carload lots sent from here before February anyhow, and perhaps not until March. We are informed by S. P. Judson that there are 30 lemon-trees (eight years old) on his place near Duarte that have yielded an average of four boxes of fruit to the tree since last January. He cured the lemons with care and kept them in a cellar until August and September, when the crop was eagerly sought for at prices ranging from $4.75 to $7 a box. His total receipts from the crop were $742, or an average of $24.73 from each tree. But think of $742 from less than half an acre of fruit! Think of $24 annually in cash for the product of a tree eight years after it has been set out at a cost of about $2 for the tree and the labor upon it! Commissioner John Scott tells us that he knows of several large lemon trees in the San Gabriel valley that have borne fruit which sold, when cured, at the rate of $30 and $36 a tree. G. W. Garcelon of Riverside says that since he learned how to get his lemons ready for market, he has made as high as $1800 an acre from his product.

AN IRRIGATION PROJECT.—L. A. *Express*: Mr. Spillman, an experienced developer of water, has purchased 100 acres of land at Verdugo, where engineers have thoroughly examined and report that water can be developed there in very large quantities by excavation. It is proposed to conduct this water supply by a sinuous course through the hills north of the city, to the fertile lands of the Cahuenga valley, especially about Hollywood. Preliminary surveys have already been made for the irrigating ditch and it is expected to deliver water sufficient for the irrigation of 4000 acres of land. It is understood Mr. Spillman is backed by the State Loan and Trust Company and this gives assurance of ample facilities for pushing the enterprise to early completion.

San Diego.

RICH SOUTHERN SOIL.—Perris *New Era*: As an evidence of the fecundity of Perris soil, A. J. Timmons' fruit orchard, north of Perris, stands a silent but incontrovertible witness. What a little more than a year ago was as barren as a barn-floor, is to-day a paradise of beauty. Mr. Timmons put out at that time about 800 prune trees, none of which have died, and they are now progressing finely. Grape-vines fill the space between the trees, and in one corner of the field is a large alfalfa patch, from which a number of crops have been cut.

San Joaquin.

ARTESIAN WELL.—Lodi *Sentinel:* There is an artesian well on Dr. F. R. Clark's farm in the Sargent tract seven miles west of Lodi. The doctor is farming a large piece of land there, and consequently had to keep a large number of horses. The stock could not be prevailed upon to drink surface water, and considerable trouble was experienced in hauling water several miles. It was finally decided to bore a well deep enough to get good water. The borers sunk 290 feet, using a two-inch pipe for casing. At this depth they experienced some difficulty in the work, and, thinking they had failed to find good water, gave up the project in disgust and left. The next morning the foreman of the place was surprised to find water running by the house. Upon investigation he found the water came from the well and was flowing from the pipe in quite a stream. When the reporter visited the well, a pump had been fitted on and a trough had been pumped full of water, which the stock drank readily. The foreman removed the pump, and the water poured forth in quite a stream. Gas in a steady flow came from the well so rapidly that it would ignite as it bubbled up through the water, which had a decided taste of salt and sulphur. The fact that the flow was struck at so small a depth would tend to prove the likelihood of a much greater flow if a larger and deeper well were sunk.

DISEASED CATTLE.—Madera *Mercury:* J. M. Gaston, a farmer living not far from Raymond, was in Madera Wednesday. Mr. Gaston brings the information that the cattle in his neighborhood are affected with some kind of disease that in most instances is fatal. During last week he says at least 20 head of fine milch cows have died from the effect of the strange malady. Mr. Gaston is of the opinion that the disease which attacked the cattle on the Hazelton ranch near Sanger is about the same as that which is being so fatal with stock in his neighborhood.

DEXTER PRINCE COLTS IN DEMAND.— Lodi *Enterprise*; Dan (plug-hat) McCarthy, the purchaser of the celebrated stallion Dexter Prince, formerly owned by L. M. Morse, was in Lodi the fore part of the week. He came here to look up some of his stallion's progeny, and purchased from Senator Langford a promising four-year-old Dexter Prince colt, "Senator L," dam by Bays Water, with a record of 2:29, paying therefor $3000. He sold to the Senator a 16-month's-old Dexter Prince colt out of a Nutwood mare, paying $5000 for the youngster.

Santa Barbara.

A BIG BEAN RANCH.—Cor. Redwood *Times-Gazette:* A great and staple crop is beans; this is, in fact, the ideal bean country. One of the landmarks of the adjoining county is a bean ranch, the property of Mr. D. W. Thompson, familiarly known as Dixie Thompson. In one field, as level as a floor, almost, was 1300 acres, and ten teams of six-horse plows were preparing it for the next crop. The farm contains 2600 acres, and this year he had 100 carloads, 30,000 sacks of lima beans. He has his own steam thresher, his own sidetrack, immense barns and warehouses, and uses about 150 horses to put in and harvest his crop. Mr. Thompson is one of the genial men one sometimes meets and regrets to leave. He is worth much to his community.

Santa Cruz

SUGAR BEET PULP AS CATTLE FEED.—Watsonville *Rustler*: The pulp from the Watsonville beet-sugar factory is being used with successful results as a feed for cattle. Pulp that was siloed 13 months ago is now being fed to cattle on the Moro Cojo ranch, and the cattle will leave any kind of feed to take the siloed pulp. As the pulp is uncovered in the silo, it is found to be quite firm and has to be cut with a sharp shovel. It is fresh and firm, and is certainly a taking and fattening feed for cattle. The silo trenches used at the ranch are planked on the sides and bottom, with a drainage-box beneath, and when the trenches are filled they are covered with straw.

Sonoma.

WINE NOTE. — Santa Rosa *Farmer:* Geo. Dohn, our well-known winemaker, has made this season about 70,000 gallons of wine, 30,000 gallons of which have already been sold and shipped to San Francisco dealers.

Tulare.

IRRIGATING STONE FRUITS.—C. J. Berry, in Visalia *Times:* While our particular district of Visalia is, in most places, peculiarly adapted to the raising of stone fruits without any irrigation, their are many localities in our county where irrigation is required. My observations are that very few individuals engaged in fruit-growing in such localities use water in the right way. They use it at all times and under all conditions of their trees, never taking into consideration what those conditions are. One of the proper times to irrigate trees or vines is early in the spring before the sap starts to flow, but after that begins with your trees or vines do not use any more water until the sleep season comes on in midsummer. By the "sleep season" I mean that part of our summer from about the last of July to the middle of August. If you will use the water then, you will benefit your orchards and vineyards. If you use water while your trees and vines are growing vigorously, you will surely injure them. Now, at that season of the year the weather is very hot and the surface of the ground becomes heated so that in pouring water on it the water becomes very warm, and if irrigation is pursued in the daytime you will injure your trees. It is therefore imperative that you irrigate during that time at night for the best and safest results. After you have picked your crop of fruit is the next proper time to irrigate. The last irrigation of the season helps the trees to develop their fruit buds for the next year's product. With vines, it is unnecessary to use water on them in the early fall. Our vines are so very vigorous that they don't often need it, but if your ground is very dry and they do need irrigation, that is the proper time to do it, as well as to our deciduous trees. If these suggestions are accepted and adhered to by those growing fruits and grapes in our county, I will assure them that they will be very much benefited.

ALMONDS COMING INTO FAVOR.—Visalia *Register*: A few years ago it was almost given up that almonds could not be grown to advantage in Tulare county, but recently people here and there are meeting with better success. On the Chapin fruit-farm, just out of town to the north and east, there are about a thousand trees which yielded their first crop this season. They are only four years old, and it is not supposed that almonds will yield a paying crop until after they are five years old, and yet 3100 pounds of hulled almonds were gathered this year. The price (12 cents per pound at depot) was satisfactory, though the cost of gathering from trees thinly loaded was about as expensive as from those loaded more heavily. The cost of hulling was two cents per pound, bringing the whole cost of marketing up to about five cents, leaving seven cents per pound to go to the credit of the trees. In regard to making a business of growing almonds, E. D. Lake, manager of the Chapin fruit-farm, advises that growers should plant the three varieties, IXL, Nonpareil and Ne Plus Ultra, in alternate rows, so that the pollen of the kinds may mix as freely as possible, thus fructifying what would otherwise be sterile blossoms. This has been the difficulty with most growers heretofore, no doubt. While almonds cannot be regarded as a dead-sure crop, as late frosts may catch them, they are sure enough to warrant every grower having a few acres, or at least a row of them around his fence.

ARIZONA.

EXPERIMENTING IN COTTON-GROWING.—Yuma *Times:* Reference was made a couple of weeks ago to the cotton plants on the Sumner place near Yuma, which grew from seed planted five years ago, and have never died. The General brought in last Monday samples of cotton from the bud to the ripened fruit, so to speak. There were some buds not opened, some just blooming, others in full bloom, bolls not open, bolls open, and, lastly, bolls of ripened cotton ready to pick, all from the same plant. People who have seen Southern cotton say the cotton from the Sumner place is equal to any grown in the South. Cotton may never be a profitable thing to raise here, owing to lack of cheap labor; but this ought to be offset by not having to replant every year. The third crop of grapes is also ripening on the Sumner place.

ALMONDS.—Phœnix *Herald:* We learn that the almond-trees in all parts of our valley are in a very flourishing condition, and that quite a number of new varieties will be set out the coming season.

NEVADA.

WASHOE CHEESE.—Reno *Gazette:* Theodore Winters has, during the last year, manufactured 60 tons of cheese at his ranch in Washoe valley. Formerly he has suspended operations in that line during the winter months, but he has now made arrangements by which he will continue the business all the year round. The sale of the product of his creamery has been confined exclusively to the counties in the western part of the State, as the exorbitant charges and discrimination of the Central Pacific have precluded shipment east or west on that line. With a competing railroad he would increase the manufacture to twice or three times its present limit.

SALE OF A SHEEP.—Reno *Gazette:* Yesterday D. C. Wheeler received by express a Persian buck from C. P. Bailey of San Jose, who is distributing for the Secretary of the Interior a number among Pacific coast sheepraisers for experimental purposes. The sheep has dark brown wool. It is chiefly remarkable for the size and shape of its caudle appendage, which, instead of being like the stumpy tail of other sheep, is about six inches long and nearly a foot wide, forming an oddly-shaped apron for its hindquarters.

OREGON.

LOW PRICES FOR CATTLE.—Pendleton *Tribune:* The price of cattle in Umatilla county, and, in fact, throughout eastern Oregon, is outrageously low, and some action ought to be taken by the stockmen, not only of this section, but of the eastern Oregon ranges, to protect themselves from the beef combine that has been formed throughout the country. Beef cattle ought to sell for three cents to-day, yet it is reported that good beef has been recently selling for $1.75.

WASHINGTON.

CROPS IN THE PALOUSE.—Spokane *Chronicle:* The grain crop of the Palouse country is still being worked off in immense quantities, and bids fair to aggregate 10,000,000 bushels of wheat and nearly 800,000 bushels of barley. The bountiful yield of the past two seasons has placed the farmers in such a condition, financially, that they have not been obliged to dispose of their grain at the low prices now ruling; and to this fact may be attributed the absence of anything of the nature of a wheat blockade.

A PUGET SOUND ranch has 100,000 chickens.

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The Greatest of all Musical Instruments.

THE IDEA

In Inventing the Æolian was to make an instrumen t that would do away with the years of practice made necessary by the piano and organ and at the same time have music

IN NO WAY MECHANICAL,

But capable of the most delicate shading in expression and time, entirely at the will of the performer.

The CELESTINA!

A marvellous little instrument **equal to an Organ for family use.** Plays all classes of music; no skill required. **Price $25.**

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KOHLER & CHASE,

26-28-30 O'Farrell St., San Francisco.

FOR $19.00

We can send you one of our

SPECIALTY SINGLE BUGGY HARNESS,

Which is the result of years of figuring to make the best harness ever known for the money. It is made from oak stock, hand stitched and finished by skillful mechanics, handsome full nickel or Davis hard rubber trimmings.

Just the Harness for an Elegant Turnout.

They sell here for $25.00, and harness not as good is often sold for $35.00 in retail shops. If harness is not as represented, money will be refunded.

Liebold Harness Co.

110 McAllister St., San Francisco.

Collar and Hames, instead of Breast Collar, $2.00 extra.

Please state if you want single strap Harness, or folded style Harness, with traces double throughout.

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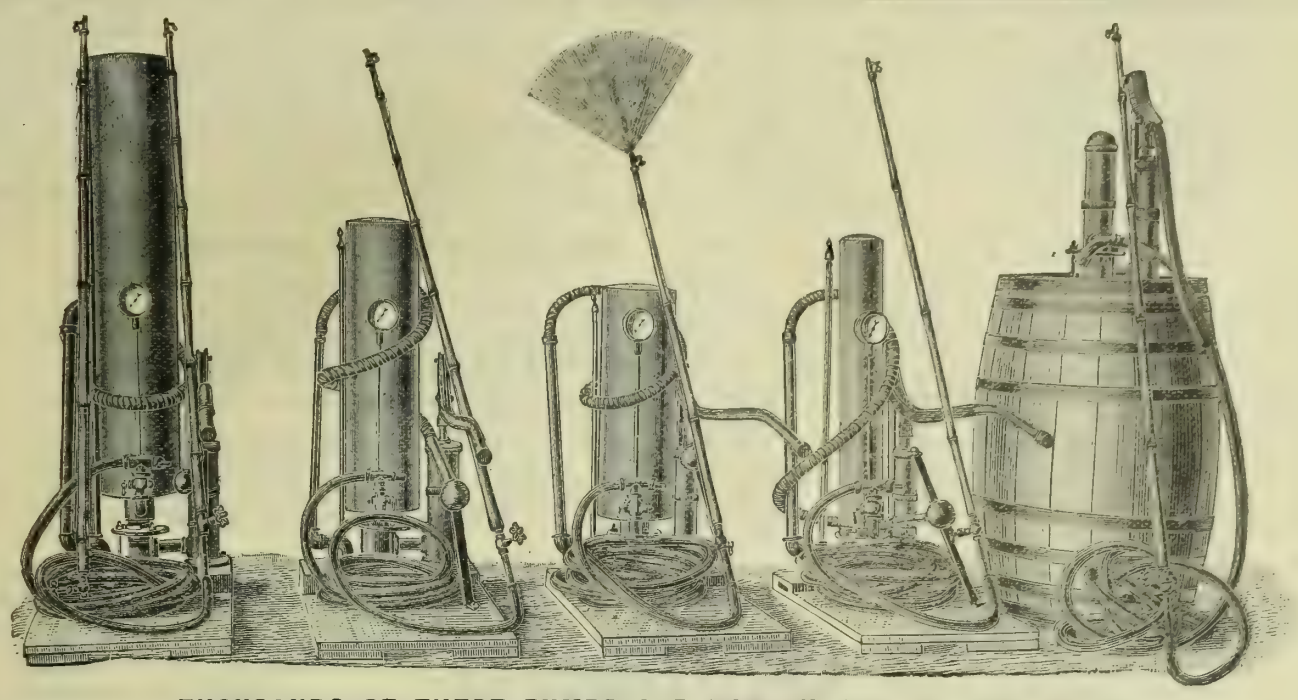
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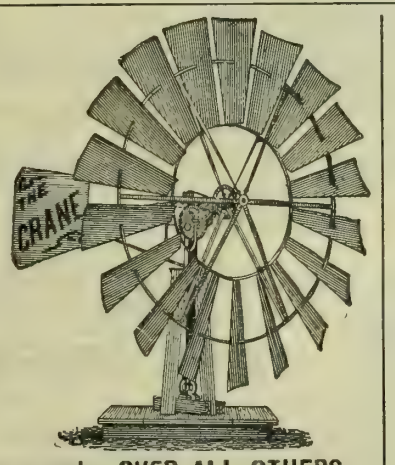
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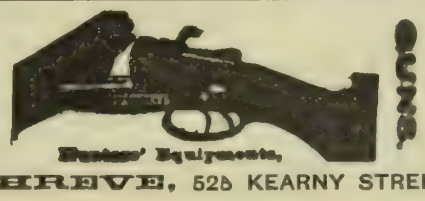
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GEO. W. SHREVE, 525 KEARNY STREET, SAN FRANCISCO.

Domestic Economy.

Squash Muffins.

PESCADERO, Nov. 6, 1892.

TO THE EDITOR:—This tea-cake tastes so nicely I'm anxious the RURAL should have it:

SQUASH MUFFINS.—One and a half pints nice boiled squash, three tablespoonfuls sweet milk or cream, three teaspoonfuls lard, two heaping teaspoonfuls sugar, one cupful salted yeast and a little flour. Stir and let it rise till light, then add one-half teaspoonful soda and enough flour to thicken it, stirring it down as it rises. About two hours before supper knead, and cut it out as for biscuit; let it rise till it be light and bake in small tins—"good as gold!" K. S. B.

OX-TAIL SOUP.—Two medium-sized ox-tails, two carrots, an onion, a stalk of celery, a few leaves of parsley and a slice of salt pork. Cut the skinned ox-tails apart at the joints, slice the vegetables and chop up the pork. Place the pork in a stew pan, and when hot add the onions, brown them a little before adding the ox-tails; allow all to fry a little while, then remove the whole to a soup kettle and add four or five quarts of cold water. When it comes to a boil, take off the scum as it rises, set it back where it will just simmer for three or four hours; then add the vegetables and a few whole cloves. Boil enough longer to cook the vegetables very soft. Then skim out the joints and strain through a soup sieve or colander. Return it to the fire and bring to a boil again, when it is ready to serve. The bone joints can be served with the soup if preferred, and most people like to pick off and eat any tender bits of meat remaining on them.

SAUSAGE OMELET.—Take six eggs, one cup of milk, one small teaspoonful of cornstarch, one cup of cold, cooked sausage, chopped very fine. Beat the whites and yolk of the eggs separately, until each is as light as it can be made. Stir together until they are tolerably well mingled, add the milk in which the cornstarch has been dissolved, and pour the whole into an omelet pan, containing a tablespoonful of sweet lard boiling hot. It must not have been allowed to brown. Tip the pan from side to side that the mixture may not burn, and with a knife loosen the edges when they show signs of sticking. When it begins to grow firm in the middle, sprinkle over it the chopped sausage, cook a moment longer, double one-half of the omelet on the other with the knife, and slip from the pan to a hot dish. Serve at once.

COFFEE CAKE.—For this cake take one-half cupful of butter, one-half cupful of brown sugar, one-half cupful of molasses, two cupfuls of flour, one cupful of strong coffee, one egg, one cupful of raisins, two teaspoonfuls of cinnamon, one of allspice, a small teaspoonful of cloves and one level teaspoonful of soda—this last to be put into the molasses. Cream the butter and sugar together, stir in the molasses and spices, then the egg well beaten, the coffee, and lastly the flour.

Just What Is Wanted.

Business is alive to a great coming event, and preparations of all sorts for the Columbian Exposition of 1893 are active and earnest. Just what is wanted of a unique kind has happily already made its appearance, and we have before us "THE OFFICIAL PORTFOLIO OF THE WORLD'S COLUMBIAN EXPOSITION," illustrated from Water Color Drawings.

This Portfolio is a rare and beautiful exponent of the main architectural features of the Great Exposition at Chicago in 1893. The fourteen magnificent structures are faithfully exhibited, while the Bird's-eye View gives a realistic glance at the lay of the grounds, with their principal buildings, lagoons, etc. The illustrations are exact reproductions, in water-color effects, of the original drawings, made especially for this purpose from the official plans, by America's best known water-color artist, Charles Graham.

A copy of this exceptionally fine production will be be sent to any address upon receipt of 10 cents in postage stamps, by the Charles A, Vogeler Co, Baltimore, Md.

Carbolineum Avenarius.

This very excellent wood preservative, to which we have already several times directed the attention of our readers, is giving great satisfaction to those who have given it a trial, and, like other good things which stand the test of practical application, it is finding a rapidly increasing market. See advertisement on page 499.

ARRESTING BY SUBSTITUTE. First detective—"We can't find who murdered the old man, but I'll tell you what we can do." Second detective—"What?" First detective—"We can arrest all his daughters and clap them in jail."—Judge.

The Steamers of the World.

The new list of the merchant marine compiled by the Bureau Veritas, which is now in press, gives some interesting statistics concerning the great ocean steamship companies of the world.

Some people will be surprised to learn that the transatlantic lines are not the leading ones in aggregate tonnage or number of vessels. The British India of Glasgow and the British India Steam Navigation Company and the British India Associated Steamers—all one concern—head the list with 103 steamships. Their aggregate measurement is 239,635 tons.

Next stands the Peninsular and Oriental Steamship Company, with 36 steamships, representing 216,887 tons. Next in order comes the Compagnie des Messageries Maritimes, with 61 vessels, whose aggregate tonnage is 202,522. The fourth on the list is the Norddeutscher Lloyd of Bremen, some of whose vessels ply to this port. This company has 66 steamers, measuring in all 197,169 tons.

Other important lines are the Navigazione Generale Italiana, 106 steamers, 170,755 tons; the Compagnie Generale Transatlantique, 66 steamers, 167,487 tons; the Hamburg-American Packet Company, 56 steamers, 165,442 tons; the Wilson Line, 86 steamers, 158,089 tons; the Austrian Lloyd, 73 steamers, 128,359 tons; the Allan Line, 39 steamers, 123,038 tons; the Spanish Compania Transatlantica, 34 steamers, 94,163 tons; the White Star, 20 steamers, 95,370 tons; and the Cunard, 26 steamers, 85,913 tons.

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COMPLETELY CURED."

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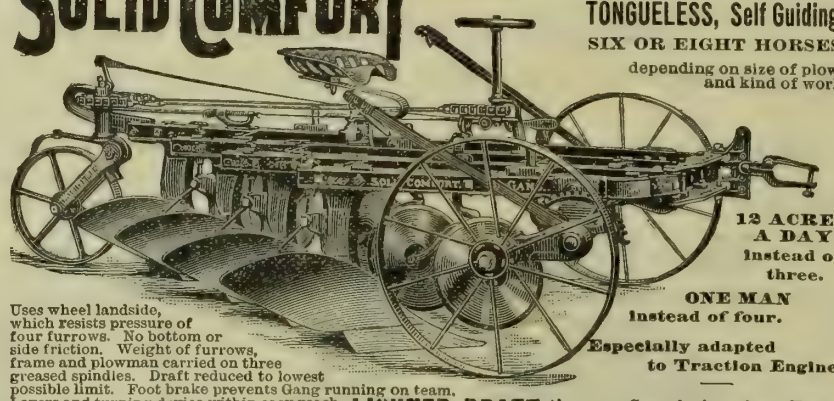
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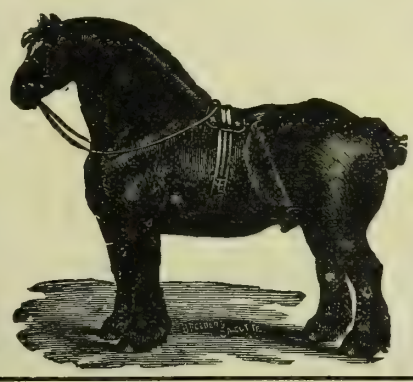
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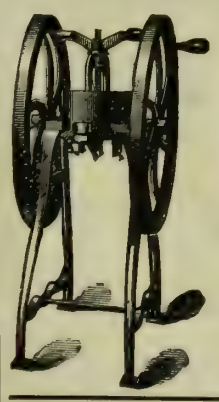


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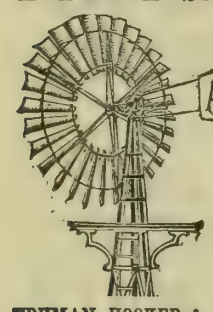
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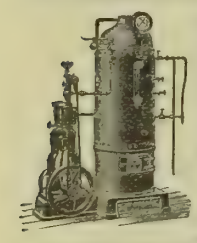
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After ten years experience in the spraying pump business, and the wants of orchardists therein, we have built this pump, as being best suited to their requirements. Before putting it on the market we submitted the model to several prominent fruit growers, and as the design met with their unqualified approval also, we have no hesitation in declaring it to be the best spray pump ever made, and justly entitled to be named "Champion."

As will be seen from the illustration, the pump is very compact and strong. It is perfectly double-acting and has a brass-lined cylinder. The motion of the piston is horizontal. The handle is so arranged that the leverage is very powerful, and the movement is easy and natural. The air chamber is unusually large, admitting of the continuous and even discharge necessary for good and thorough spraying.

The valves are metal and have metal seats. They all lie directly beneath the air chamber and are readily exposed on loosening four bolts, and without touching the cylinder.

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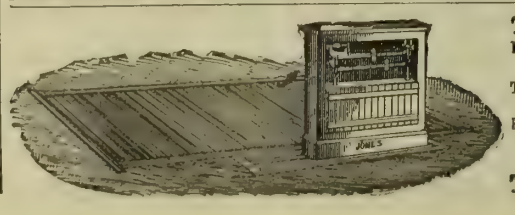
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Telephone No. 1746. SAN FRANCISCO, CAL.

S. F. Market Report

Market Review.

SAN FRANCISCO, Dec. 7, 1892.

Trade in general produce was interrupted by rains during the forepart of the week under review, and toward the close by a feeling of uncertainty largely generated by fears regarding the outcome of the International Monetary Conference. A drop, during the week, in the price of silver strengthened the views of the bears on the grain market, that the conference will prove a failure, and that, if it is a failure, then much lower prices will rule for silver. Lower prices for the white metal means lower prices for wheat and other articles of the farm exported by India and other silver-using countries. Even the faith of the bulls in a higher market is somewhat shaken. By referring to files of the RURAL PRESS, it will be noted that fully two months ago we stated that operators in this market for the moneyed syndicate which is operating at home and abroad in wheat, gave out that seller 1892 wheat would go to $1 25 before the close of the year. Yesterday the price was $1.25¾ It is said by parties in position to know whereof they speak, that, before the spring months of 1893, the wheat markets of the world will again be quite high. The local money market is essentially unchanged. The decline in silver and the unsettled condition of the market for that metal cause more or less uneasiness and a more pronounced feeling on the part of outside capitalists not to place funds until the future is more clearly defined. The banks are still accommodating regular customers, although the paper offered is more closely scrutinized.

Cereals.

Rains the last of November and the first few days in December have given the land in all directions a good soaking. In many localities where the land was only wet to a depth of a few inches in the winter of 1891–92, it is already wet down to 20 inches and more. This good soaking so early in the season, it is claimed, will give us good crops in 1893, provided the general average of spring seasons obtains.

Wheat futures have been hammered by the bears to very low figures—lower for the month of December than was ever before known. In the sample or cash market, prices have not shaded off much, although buyers bid lower. Sales are only made by holders when forced to let go. It is contended by some that the sending of wheat futures down will uncover the margin on large quantities of wheat against which advances were made. If this should prove to be correct, then we can reasonably expect wheat which cannot be secured to be thrown on the market. Probably it is in the realization of this expectation that buyers have been holding off and doing all in their power to depress values. The silver question is used by the bears for all that it is worth in depressing the market at home and abroad. The stock of grain in Call Board warehouses is fully one-fifth smaller now than at the corresponding date in 1891. The stock in Oregon and Washington is also smaller. Wheat charters are lower and weak at the decline. Iron vessels have been secured at 22s 6d, with favorable options to charterers. The *Bourse Gazette* of Petersburg reports that Russia's surplus available on November 1st was 104,000,000 bushels.

Barley futures have shaded off under a strong bear pressure and heavy rain influences. For sample or cash parcels buyers bid lower, which holders are slow to accept. Two vessels are under charter to load feed for Chile. At the lower prices quoted, export buyers are in the market for brewing grades. The strong markets at the East and in England for the more choice grades make shipments look like a profitable venture. The demand in this city from dealers is said to be light. Starting the plows and cultivators in the agricultural districts has called for more feeding, but this is largely offset by a falling off in the call from the dairy sections

Oats, although in moderate receipt and light stock, are weak, with buyers trying to secure further concessions. The demand is only fair, being confined largely to immediate requirements. The supply in Oregon, it is said, is not sufficient to meet requirements up to another season. Seed oats are in active demand and, when of extra grade, fetch an advance over outside quotations.

Corn is weak and slow, notwithstanding light receipts and the smaller crop. The limited outlet for the grain is against it. Dealers express the belief that better prices will obtain before the close of the season. This opinion is grounded on the supposition that the supply in this State is hardly sufficient to meet requirements.

Rye is dull and any pressure to sell is met by lower bids.

Feedstuff.

Ground feed is lower. Improved pasture and stronger selling of bran are against the market. The consumption is said to be falling off, and is liable to fall off still more as pasture improves.

Hay is coming in sparingly, but light as receipts are the market does not improve, owing to a falling off in the demand. Buyers purchase only in a hand-to-mouth way. While the market is not expected to go much, if any, lower, yet higher prices are not looked for unless we have very severe weather within the next two months; at present, the weather is not in favor of holders

Fruit.

Common white apples are a drug, but choice sell fairly well. Choice, good-keeping greenings are being taken for home and shipping. High-colored, choice apples sell at $1.50 to $1.75, with Oregon buying. Poor pears are neglected, but choice move off fairly free. Winter Nelis have a fairly free movement, with something very choice selling as high as $2. Persimmons drag.

In the dried-fruit market the situation is virtually unchanged. Apricots, pitted plums and nectarines are scarce, as are choice grades of prunes. Grapes are lower. Choice grades of evaporated apples have a fair sale, with Oregon and Washington buying. Poor apples, pears and other varieties of dried fruit are hard to move. Figs are unchanged.

Choice to gilt-edged raisins are in light offering, but poorer grades are weak and in good supply. The demand is largely of a jobbing character. Dealers appear confident that prices will not only be no lower next spring than now rule, but there is a strong probability of seeing higher ranges.

Live Stock.

The market for bullocks and mutton sheep is in better position for sellers. For something very choice for holiday display an advance is obtainable. Hogs are firm as are calves. Dairy calves will soon be offering more freely. The yards at Baden were formally opened on yesterday. The opinion prevails that the establishing of this enterprise will prove of great advantage to the live stock interests of this coast.

Vegetables.

Garden truck is in poor assortment, being confined to weather varieties. Gardening is being prosecuted in all directions, and it is said that in 1893 there will be a large increase in the outturn. Cabbages, cauliflower and celery are firm.

Onions have been coming in moderately, and as the demand has been fair, better prices obtained. For something choice outside figures are readily secured.

The market for potatoes, after advancing slightly (above five cents) higher than quoted, closes barely steady. The advance in the market has caused shippers to hold off, and with any selling pressure lower prices would obtain. Receipts from Oregon have been quite free.

Dairy Produce.

The receipts of butter, cheese and eggs at San Francisco in November were as follows:

Source.	Butter, Lbs.	Cheese, Lbs.	Eggs, Dozen.
California	646,800	318,300	62,532
Oregon	23,800	21,100	150
Eastern	22,300	210,400	471,360
Totals	692,900	599,800	480,062
January	502,200	476 900	420,315
February	622,550	313 5 0	200,245
March	1,188,700	574,200	358,756
April	1,793 050	802,900	590,068
May	1,713,100	715,300	536,170
June	1,811,200	634,100	6 3,735
July	1,157,700	789,100	374,211
August	1,376,300	694,800	447,325
September	1,569,300	786,900	4 8,461
October	1,657,400	695,800	480,062
Eleven months	14,255,400	7,047,900	4,929,178

During the first eleven months of 1891 the receipts were 12,498,800 lbs. butter, 6,288,000 lbs. cheese and 4,733,615 dozen eggs.

The butter market for pickled, solid packed and for eastern creamery is in buyer's favor. Choice to gilt-edged creamery and dairy are scarce and higher owing to bad roads and rough weather in last week interrupting receipts. Consignees are selling on receipt, fearing that, with improved pastures and more milch cows coming in, the production will increase quite rapidly.

Old cheese is in heavy supply and weak, but mild new is in light supply and held at full figures. In a jobbing way, as high as 12½ cents is secured for gilt-edged mild new.

Owing to consumers having turned largely to eastern eggs, Californian are weak, and to effect quick sales concessions are in order. Receipts of eastern continue free.

Miscellaneous.

Turkeys have moved down under free receipts and buyers being offish. Choice dressed with empty crops are going into cold storage but those with full crops are hard to sell. The writer saw at Stephen Harding's a box of very choice large-sized young bronze turkeys (dressed) which had to be sold low owing to full crops. They would with empty crops have sold well. Free receipts of eastern this week have weakened the market, yet for choice stock it is fairly firm. Ducks are higher.

Hops are quiet but firm. Considerable good to choice are going forward to the central States, which confirms the reports of a light yield of the better grades. English advices report a strong market for the better grades.

The receipts of wool are light. Light stocks and broken assortments are against sellers. The market movements at the East indicate better prices in next season,

Beans are steady. There is a fairly good coast movement.

Honey continues scarce and firm.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Dec. 5 '92, were as follows:

Flour, qr. sks	50,079	Bran, sks	9,636
Wheat, ctls	168,799	Buckwheat "	....
Barley, "	24,100	Middlings "	2,026
Rye, "	1,326	Chicory, bbls	75
Oats, "	8,06.	Hops, "	27
Corn, "	2,503	Wool, "	180
*Butter, "	306	Hay, ton	565
do bxs	356	Straw, "	1
do bbls	12	Wine, gals	160,500
do kegs	116	Brandy, "	18,920
do tubs	38	Raisins, bxs	13,269
do ½ bxs	51	Honey, cs	75
†Cheese, ctls	357	Peanuts, sks	42
do bxs	59	Walnuts "	376
Eggs, doz	11,730	Almonds "	129
do " Eastern	86,460	Mustard "	....
Beans, sks	4,695	Flax "	....
Potatoes, sks	22,932	Popcorn "	....
Onions, "	900	Broom corn, bbls	....

*Overl'd, 15 ctls. † Overland, 12 ctls.

Tonnage Movement.

From reliable advices up to Nov. 29, the following summary tonnage movement is compiled:

	On the way 1892.	On the way 1891.	In port 1892.	In port 1891.
San Francisco	257,985	314,739	*187,387	161,713
San Diego	11,205	20,419	7,188	.....
San Pedro	8,536	2,331	1,670	
Oregon	43,367	64,725	18,847	41,705
Puget Sound	23,125	29,552	.....	
Totals	344,228	431,766	215,092	203,418

*Engaged for wheat, 1892, 29,937; 1891, 102,806.

Markets by Telegraph.

Successful Fight Against a Freight Combine.

NEW YORK, Dec. 4.—A telegram from Jackson, Fla., of Nov. 30th says: "By to-day's decision by Judge Swayne, in the United States District Court, a rebate of five cents per box is ordered to be paid to all eastern shippers of fruit since November, 1890. This will aggregate $200,000 for the two years, and nearly $25,000 on fruit shipped so far this season." In November, 1890, all the railway and steamship lines made a combine, raising the freight rate to 40 cents. An appeal was taken to the Interstate Commission, which some months ago rendered a decision establishing the rate at 35 cents to New York, and proportionate rates to other eastern points. This success is due to persistent and intelligent efforts on the part of the Florida Fruit Exchange, and should stimulate the coast fruitgrowers to organization that will bear upon the cheapening of freight on their products so that larger consumption will follow.

Dried Fruits.

NEW YORK, Dec. 4.—There is more demand for prunes, but with the recent enlargement of the supply the last rate of 11 cents for four sizes is very full. Prime fifties for window show are quoted at 12 cents. Unpeeled peaches are easier for under grades; good quality in large lots, 12 to 13 cents; 500 bags of choice sold at 16 cents. Apricots are steady at 15½@17½ cents.

Lima Beans Active, Hops Steady.

NEW YORK, Dec. 4.—Lima beans are active for 100-bag lots at the late decline, quoted at $1 90 spot per bushel. The spot market for hops remains a nominal one. Best new State and Pacific are quoted at 23½@24c; good to prime, 21@23c; 91s range 18@20c; selected, 22c; olds, 5@10c; about 700 interior State sold at 21@23½c, for brewers' use; some fancy are held at 25c. Exports for the week, 30,887 bales.

Nuts Are Active.

NEW YORK, Dec. 4.—Nuts are active. Arrivals of almonds are quoted at 15½@20c, the latter for tissue shells; walnuts, 11¼@11¾c. Both are working into trade well at the moment.

Good Demand for Wine.

NEW YORK, DEC. 4.—The demand for wine is good, but buyers are not inclined to meet the advanced coast rates for some marks.

Raisins are Irregular.

NEW YORK, Dec. 4.—For the ordinary run of California raisins, buyers have to be met in values, and as before, prices are variable. Goods that pass close inspection and compare in every way favorably with Valencia are quoted as follows: Best three-crown, loose boxes, $1.35@1.40. Off styles are down to $1.75. Three-crown bags, 5 cents; four-crown, 4 cents; wet threes, 4@4¼ cents; layers, $1.55@1.80 for boxes. Apart from these, Forsyths or lots of No 1 merit, layers have touched $2.25, and fancy loose $1.75

Wheat Exports.

NEW YORK, Dec. 4.—The wheat exports the past week from both coasts (flour included) are the heaviest for three months, amounting to 4,533,000 bushels, against 3,465,000 bushels a week ago and 5,662,000 bushels in the same week a year ago.

Wool Firm and Active.

NEW YORK, Dec. 4.—Wool is firm at all eastern points, and as holders do not part with stock discriminately in the light condition of supplies, the market may be called active. Manufacturers try to get shadings on the mixing grade they require, because they fear considerable marking up on their foreign needs; but as it is, it is open information that New Orleans has appeared for clothing fabrics, and sellers will not recede a fraction for any fine lines. Foreign markets are higher. It is feared Australia will fall off in quality this clip. The season was dry and shearings thus far show thin hair and short growth. Sales at New York, 325,000 pounds of domestic and 154,000 pounds of foreign. Sales at Boston, 2,351,200 pounds of domestic, none of which was California; 450,000 pounds of Australia and 505,500 other foreign. It is announced that on December 15th, on wool freights from Chicago, the special tariff adopted last spring will be canceled, and the full classified rate restored.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar	April.	May.
Thursday	5s09 d	5s10 d	5s11½d	6·00½d	6s01½d	6s02½d
Friday	5s09½d	5s10½d	5s11½d	6 00½d	6s 01½d	6s02½ d
Saturday	5s.9 d	5s10 d	5 11½d	6s0. ½d	6s00½d	6s02½d
Monday	5s08½d	5s09½d	5s11 d	6s 0 d	6s00 d	6s02 d
Tuesday	5s08½d	5s09½d	5s11½d	5s11½d	6s0 ½d	6s01½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S.
Thursday	32s3d	32s3d	32s3d	Quiet.
Friday	32s3d	32s3d	32s3d	Steadier.
Saturday	32s3d	32s3d	32s3d	Quieter.
Monday	32s0d	3 s3d	32s0d	Quiet but steady
Tuesday	31s9d	32s0d	31s9d	Weaker.

To-day s cablegram is as follows

LIVERPOOL, Dec. 7.—Dull. California spot lots, 6s 6d; off coast, 31s 6d@31s 9d; just shipped, 31s 9d; nearly due, 31s 6d; cargoes off coast, very quiet; on passage, slow; Mark Lane wheat, quiet.

San Francisco.

WHEAT.

	Buyer Dec	Jan.	May
Thursday, high st	128⅜	....	133½
" lowest	128⅜	....	133½
Friday, highest	128	....	133½
" lowest	128	....	133½
Saturday, highest	127½	....	133⅜
" lowest	127⅜	....	132⅜
Monday, highest	128⅜	....	133⅜
" lowest	127⅜	....	132⅜
Tuesday, highest	127	....	132½
" lowest	127⅜	....	131

The following are to-day's recorded sales on Call:

Wheat—Morning–Informal–May, 100 tons, $1 30½; 500, $1.31; 200, $1 31½. Buyer December, 200 tons, $1.26; 200, $1.26½ per ctl. Regular Session—May, 1200 to s, $1.31½; 300, $1.31⅜; 3800, $1.31½; 500, $1.31⅜; 100, $1.3 ⅜. Buyer June, 100 tons, $1.33½ Buyer December, 100 tons, $1.26; 200, $1.26½ per ctl. Afternoon–May, 100 tons, $1.3 ⅜; 200, $1.32½; 1300, $1.31⅜; 1800, $1.31½. Buyer December, 100 tons, $1.26½; 100, $1.26½ per ctl.

BARLEY.

	Dec.	Jan.	May
Thursday, highest	....	....	91⅜
" lowest	....	....	9.½
Friday, highest	*89½	88⅜	91½
" lowest	89½	88½	91½
Saturday, highest	89	88½	90⅝
" lowest	89	88½	90⅝
Monday, highest	89	88⅜	91⅜
" lowest	87	88	90
Tuesday, highest	85	8.⅞	89⅜
" lowest	84½	84½	89⅜

*Buyer option.

The following are to-day's recorded sales on Call:

Barley–Informal–May, 500 tons, 89½c per ctl. Regular Session–May, 1000 tons, 89½c per ctl. Afternoon–Buyer December, 500 tons, 85c; 100, 85½c. January, 100 tons, 85½c; 400, 85½c. May, 200 tons, 89c per ctl.

Eastern Markets.

The following shows the closing prices per cental of wheat for the past week at

New York.

Day.	Dec.	Jan.	March.	May.
Thursday	128	130	135½	138⅜
Friday	128	130	134⅜	138
Saturday	128	129⅜	134½	138
Monday	128½	130	134½	138
Tuesday	127⅜	129½	134	137½

The following is to-day's telegram—per bushel:

NEW YORK, Dec. 7.—Wheat—76½c for December; 77½c for January; 80c for March; 82½c for May; and 83c for July.

Chicago.

Day.	Dec.	June.	May.	July
Thursday	118⅜	121⅜	131	....
Friday	119	121⅜	131	....
Saturday	118⅜	121	130	129⅜
Monday	119½	121⅜	132	130
Tuesday	118⅜	121	13 ⅛	129½

The following is to-day's telegram—per bushel:

CHICAGO, Dec. 7.—Wheat 71½c for December and 78½c for May.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

DECEMBER 7, 1892.

Limes, Mex	3 00 @ 4 00	Beets, sk	— @ 50
Do Cal	— @ —	Carrots, sk	30 @ 50
Lemons, box	4 00 @ 5 00	Okra, dry, lb	8 @ 10
Do Sicily choice	6 50 @ 8 00	Parsnips, ctl	1 00 @ 1 50
Apples	40 @ 65	Peppers, dry, lb	7 @ 8
Do Choice	75 @ 1 25	Turnips, ctl	— @ 50
Do Extra choice	1 50 @ 1 75	Cabbage, 100 lbs	40 @ 50
Grapes, pr bx	75 @ 1 50	Garlic, lb	2 @ 2½
Pears	25 @ 75	String Beans, lb.	5 @ 7
do Winter Nelis	1 00 @ 1 75	Lima Beans	3 @ 4
Persimmons	1 00 @ 1 50	Mushrooms	— @ —
Oranges, pr box		Marfat Squash, ₰ ton	5 00 @10 00
Navels, River'de	3 50 @ 4 50	Cauliflower	50 @ 65
Do, Butte Co	— @ —	Celery	50 @ 75
Seedl'g, River'de	2 00 @ 2 75	Asparagus	20 @ 25
Do, Fresno	2 75 @ 3 00	Rhubarb	10 @ 12½
Do, Butte Co	2 75 @ 3 00	Mushrooms, ₰ lb	
Extra choice fruit for special purposes sells at an advance on outside quotations		Do, Common	8 @ 15
		Do, Button	17½@ 20

Live Stock.

BEEF.		MUTTON.	
Stall fed	6½@—	Wethers	6½@—
Grass fed, extra	6 @—	Ewes	6 @—
First quality	5½@—	Do Spring	7½@—
Second quality	4½@—	HOGS.	
Third quality	3 @—	Light, ₰ lb, cents	5 @—
Bulls and thin Cows	2 @—	Medium	5 @—
VEAL.		Heavy	4½@—
Range, heavy	5 @—	Soft	4½@—
Do light	6 @—	Feeders	4½@—
Dairy	7 @8½	Stock Hogs	4½@—
		Dressed	7 @

General Produce

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

DECEMBER 7. 1892.

BEANS AND PEAS.		Do country m'ls	3 90 @ —
Bayo, ctl	2 30 @ 2 35	Superfine	2 50 @ 3 00
Butter	2 50 @ 3 00	NUTS—JOBBING.	
Pea	2 50 @ 2 65	Walnuts, hard shell, Cal. lb	6 @ 8
Red	2 40 @ 2 50	Do soft shell	8 @ 9½
Pink	2 00 @ 2 10	Do paper-shell	9 @ 1
Small White	2 45 @ 2 55	Almonds, soft sh'l	12 @ 13½
Large White	2 25 @ 2 35	Paper shell	13 @ 15
Lima	2 75 @ 3 00	Hard shell	6 @ —
Fld Peas, blk eye	1 60 @ —	Brazil	8 @ —
Do green	1 75 @ 2 00	Pecans, small	8 @ 10
Do Niles	1 60 @ 1 75	Do large	14 @ 16
Split	4 50 @ 5 50	Peanuts	3½@ 4
BUTTER.		Filberts	10 @ —
Cal., poor to fair, lb	15 @ —	Hickory	7 @ 8
Do g'd to choice	22½@ —	Chestnuts	18 @ 20
Do Giltedged	— @ 3 ½	ONIONS.	
Do Creamery	27½ @ —	Silverskin	75 @ 90
Do do Giltedge	— @ 35	POTATOES.	
Eastern, lad e	12½@ —	River Reds	50 @ 60
Cal. Pickled	20 @ —	Early Rose, ctl	60 @ 70
Cal. Keg	20 @ —	Peerless	65 @ 80
East'n Cr'am'y	25 @ —	Garnet Chilies	65 @ 85
CHEESE.		Burbank Seed's	70 @ 80
Cal. choice cream	9½@ —	Do do Salinas	1 10 @ 1 35
Do fair to good	8 @ —	Do do Oregon	1 10 @ 1 25
Do Giltedged	— @ 11	Sweet	50 @ 75
Do Skim	5 @ 6½	Extra choice sell for more money	
Young America	— @ 11½	POULTRY.	
EGGS.		Hens, doz	6 00 @ 7 00
Cal. "as is," doz	20 @ —	Roosters, old	6 00 @ 6 50
Do shaky	15 @ —	Do young	5 50 @ 7 00
Do candled	30 @ —	Broilers, small	3 00 @ 4 00
Do choice	32½@ —	Do large	4 00 @ 5 00
Do fresh laid	— @ 35	Fryers	4 50 @ 5 50
Do do s'ted white	— @ 37½	Ducks	4 50 @ 5 00
Eastern cold-storage	20 @ —	Do large	5 50 @ 6 50
Do fresh	25 @ —	Do extra large	6 50 @ 8 00
Do selected	— @ 32½	Geese, pair	1 50 @ 2 25
Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.		Turkeys, gob'r	14 @ 16
		Turkeys, hens	15 @ 17
		Do dressed	17 @ 20
		All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.	
FEED.			
Bran, ton	13 00@ 14 00		
Feedmeal	25 00@ 26 00		
Gr'd Barley	18 50@ 19 50		
Middlings	— @ 21 00		
Oil Cake Meal	— @ 35 00		
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00		
HAY.			
Compressed	8 00 @11 00		
Wheat, per ton	8 50@ —		
Do choice	— @ 13 00		
Wheat and oats	8 00@ 11 50		
Wild Oats	7 00@ 10 00		
Cultivated do	6 00@ 9 00		
Barley	6 50@ 9 00		
Alfalfa	8 00@ 10 00		
Clover	8 00@ 10 00		
Straw, bale	35@ 50		
GRAIN, ETC.			
Barley, feed, ctl	80 @ — —		
Do good	85 @ — —		
Do choice	87½@ — —		
Do brewing	92½@ — —		
Do do choice	96½@ — —		
Do do Giltedge	1 00 @ — —		
Do Chevalier	1 00 @ — —		
Do do Gi tedge	1 15 @ — —		
Buckwheat	2 25 @ — —		
Corn, white	1 07½@ 1 10		
Yellow, large	1 00 @ — —		
Do small	1 07½@ 1 10		
Oats, milling	1 36½@ — —		
Feed, choice	1 32½@ — —		
Do good	1 30 @ — —		
Do fair	1 20 @ — —		
Do common	1 10 @ — —		
Surprise	1 45 @ — —		
Black feed	1 05 @ 1 15		
Do seed	1 17½@ 1 30		
Gray	1 30 @ — —		
Rye	1 12½@ 1 17½		
*Wheat, milling Giltedged	1 33¾@ — —		
Do choice	1 32½@ — —		
Do fair to good	1 30 @ — —		
Shipping, choice	1 30 @ — —		
Do good	1 27½@ — —		
Do fair	1 25 @ — —		
Common	1 20 @ — —		
Sonora	1 20 @ 1 30		
HOPS.			
1892, fair	18 @ —		
Good	20 @ —		
Choice	21 @ —		
FLOUR.			
Extra, city mills	3 90 @ —		

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50		
GAME			
Quail, per doz	1 25 @ 1 37½		
Ducks	— @ —		
Do Mal'd ₰ doz	5 00 @ 6 50		
Do Sprig	3 00 @ 3 75		
Do Teal	1 75 @ —		
Do Widgeon	2 00 @ —		
Do small	1 25 @ —		
Geese	— @ —		
Do gray ₰ doz	2 00 @ 2 50		
Do White	1 00 @ 1 50		
Do Brant	1 00 @ 1 50		
Snipe	— @ —		
Do English, doz	1 50 @ 2 00		
Do Jack, per doz	75 @ 1 00		
Hare, per doz	1 00 @ 1 25		
Rabbits, large	1 25 @ 1 50		
Do small	1 00 @ 1 25		
PROVISIONS.			
Cal. bacon, heavy, per lb	12 @ —		
Medium	13 @ —		
Light	14 @ —		
Lard	9½@ 12½		
Cal sm'k'd beef	11 @ —		
Hams, Cal salt'd	13 @ —		
Do Eastern	14 @ —		
SEEDS.			
Alfalfa	9½@ 10		
Clover, Red	15 @ —		
White	30 @ —		
Flaxseed	2 25 @ —		
Hemp	4½@ —		
Mustard, yellow	5½@ 6¾		
Do brown	4 @ —		
WOOL.			
FALL, 1892.			
S Joaquin, plain	6½@ 10		
Do mountain	10 @ 12		
Do lamb	8 @ 10		
Northern Choice	14 @ —		
Do Defective	11 @ —		
Do Lamb	10 @ 14		
HONEY—1892 CROP.			
White comb, 2-lb frame	9 @ 12½		
Do do 1-lb frame	11½@ 14½		
White extracted	7½@ —		
Amber do	6½@ —		
Dark do	6½@ —		
Beeswax, lb	23 @ —		

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES—1892.		PEARS—1892.	
Sun-dried, ¼'s, prime	3½@ 4	Sun-dried, quarters	— @ 3
Do do choice	4 @ 4½	Do do sliced	4 @ 5
Do sliced, prime	4 @ 4½	Evap., slic'd, in b'xes	7 @ 8
Do do choice	4½@ 5	Unp'led, q'rt'd, bl'ch'd	5 @ 8
Evap. bl., ri g, 50-lb. bx	7½@ 9	PLUMS—1892.	
Fancy, higher.		Pitted, sun-dr ed	10 @10½
APRICOTS—1892.		Do evap. boxes, choice	— @ —
Do bleached	15½@—	Do do do fancy	— @ —
Do do fancy	15 @16	Unpitted	4 @ 5
Evap choice, in boxes	15 @16	PRUNES—1892.	
Do fancy, do	15½@17	Cal. French, ungraded	7½@ 8
FIGS—1892.		Do graded, 60 to 100	9½@—
Sun-dried, black	4 @—	Do do 40 to 60	11 @12
Do white	3½@—	Fancy sell for more money.	
GRAPES—1892.		RAISINS—1892.	
Sun-dried, stemless	3 @—	London Layers, cluster per box	1 90 @2 00
Do unstemmed	1½@ 2	Do choicest do	1 50 @1 60
NECTARINES—1892.		Do prime pr bx	1 25 @1 40
Red, sun-dried	7 @ 8	Loose Muscatels, 2-crown, pr bx	75 @1 00
Do Evap., in boxes	— @—	Do 3-crown do	1 10 @1 20
White, sun-dried	9½@11	Do do do faced	1 20 @1 25
Do evaporated	— @—	Unstem'ed Muscatels in sks pr lb.	2½@ 3
PEACHES—1892.		Stem'ed 2-crown	2½@ 3
Sun-dried, unpeeled	7 @ 7½	Stem'ed 3-crown	3½@ 4½
Do do prime, bl'ched	9 @10	Se'dl's M'sc't'l sks	4 @ 5
Do do choice, do	11 @—	Do do in bxs	— @1 00
Do do fancy	11½@—	Do Sultanas, sks	6 @ 7
Sun-dr., pl'd, bl'ched	@—	Do do bxs	— @1 40
Do do prime	14 @—	Evap., peeled, in boxes choice	17½@—
Do do choice	— @15	Do do fancy	20 @—
Do do fancy	— @16	Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	

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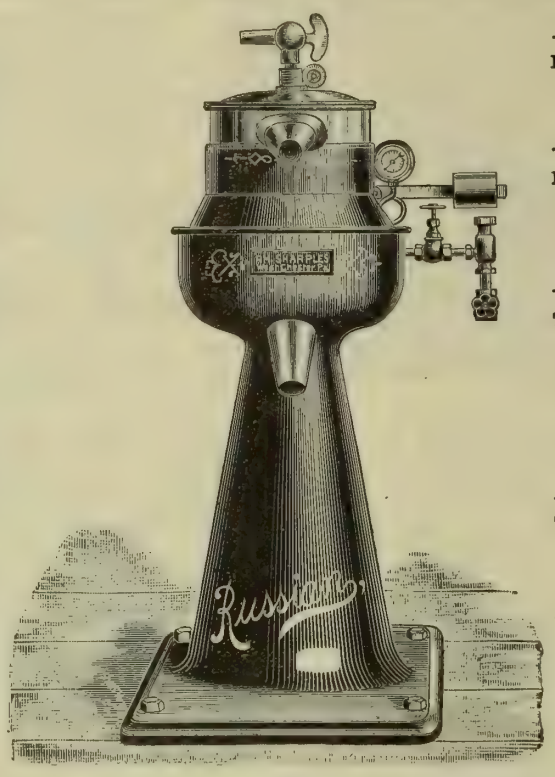
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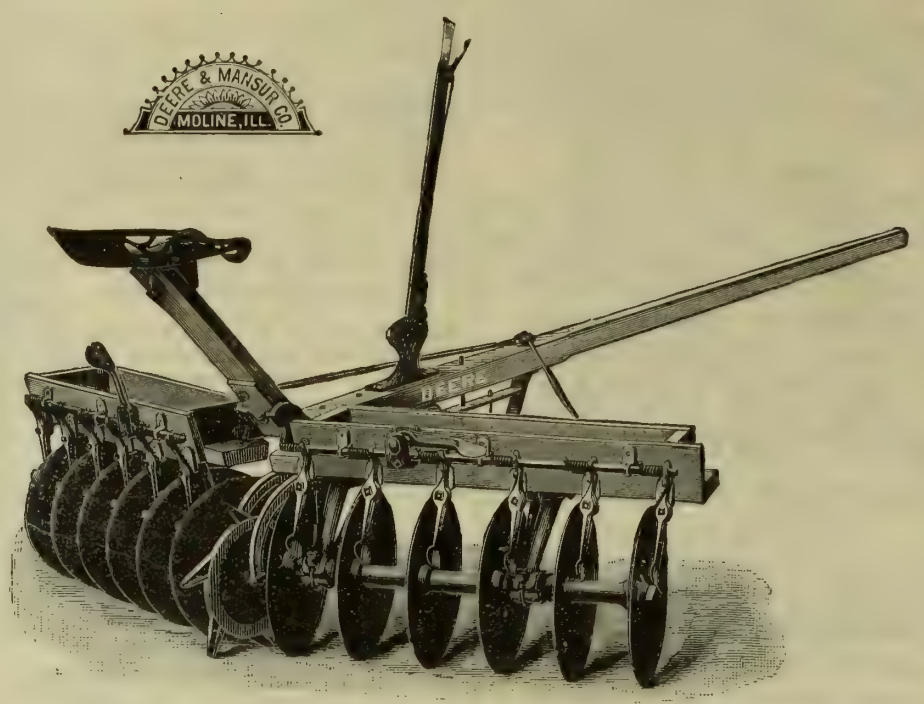
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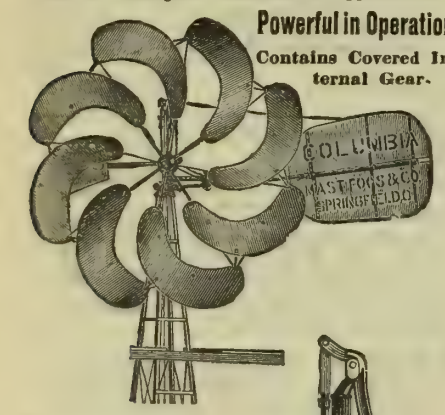
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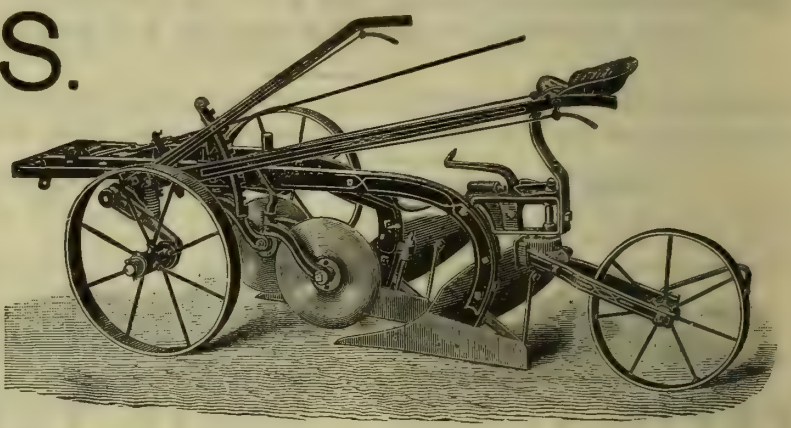
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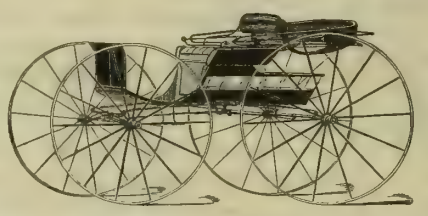
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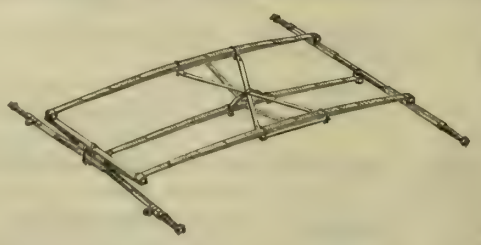
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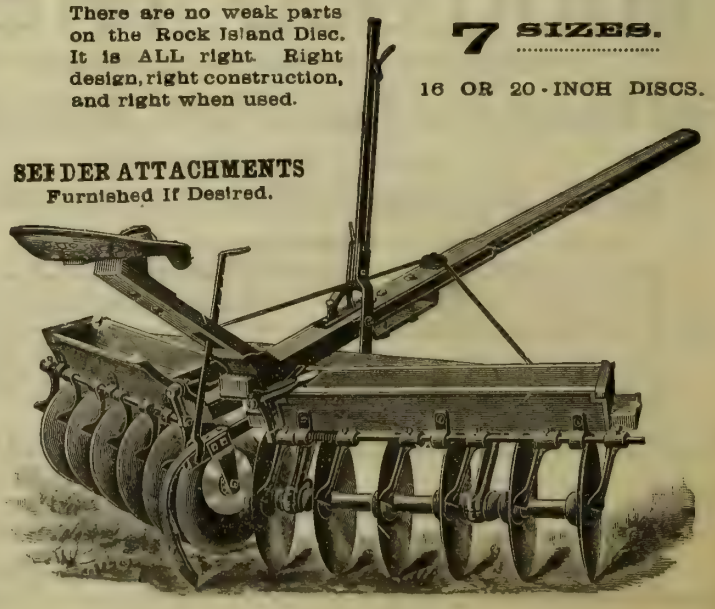
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PACIFIC RURAL PRESS

Vol. XLIV. No. 25. SAN FRANCISCO, SATURDAY, DECEMBER 17, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St.

Grain Stocks and Wheat Outlook.

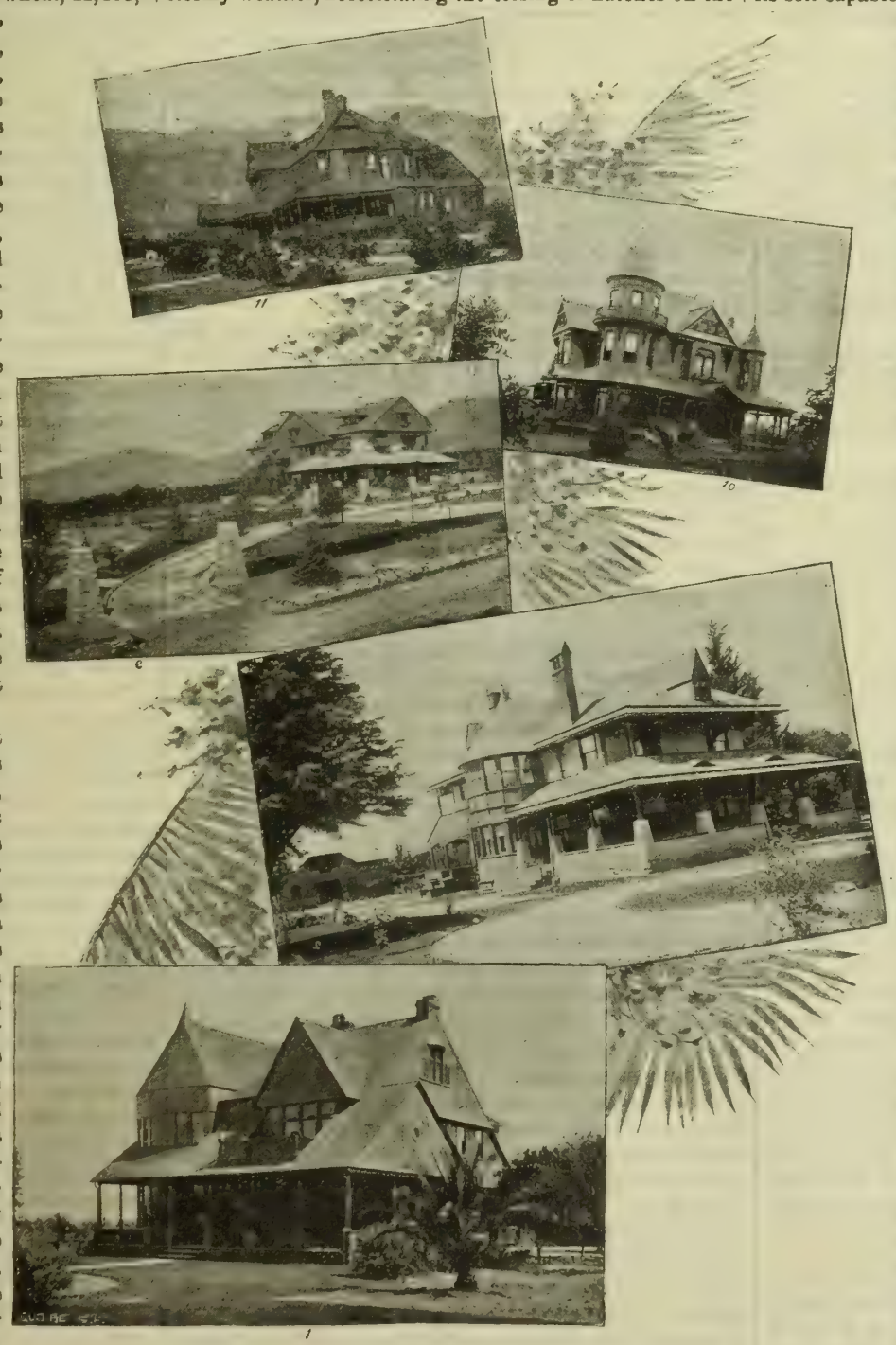
The stocks of grain reported in the State on December 1st by the San Francisco Produce Exchange compare as follows with the stocks held at the corresponding date in 1891: Flour, 92,024 bbls. against 140,043; wheat, 12,153,772 ctls. against 9,964,575 ctls.; barley, 3,797,654 ctls. against 2,883,602 ctls.; Oats, 263,243 ctls. against 168,404 ctls.; rye, 57,988 ctls. against 39,545 ctls. The large increase in the visible supply this year has been used as a hammer by the bears operating on call to beat prices to lower levels than before recorded. In this they have been the more successful owing to low, dragging wheat markets at the East and abroad. According to the best reputed authorities, the unfavorable condition of the markets of the world is not so much the result of supplies—for there was a shortage in crops this year in comparison with 1891—as the condition of the money markets at home and abroad. Under the discussion of bimetallism and a generally accepted opinion that the leading powers in Europe are hoarding gold, the feeling has been engendered that a financial panic can be precipitated at any time by an overt act of any one nation in its effort to acquire a large holding of gold. With fears of a panic, it is hardly reasonable to suppose that the bulls will take on courage and fight for higher ranges of values.

Aside from the markets of the world, it looks very much as if the situation in this State were favorable to the selling interest, and that the effects of a financial panic have been discounted. At present ranges of values, the cost of producing and marketing wheat are barely covered, and it has been the history of trade that when such a condition obtains "the staff of life" becomes a safe investment; but looking at it from another point of view, and the situation becomes still more favorable. Seemingly authentic advices from European countries concur in the statement that there has been a decided falling off in the acreage seeded this fall, and the outlook favorable for a corresponding decrease in the spring acreage. In this country reports are conflicting, and, while untrustworthy, yet they point to a less acreage of winter, with no increase looked for in the spring seeding. Accepting as approximately correct the general reports of falling off in the winter and spring seeding, it is reasonable to conclude that the outturn, taking all countries as a whole, will be less in 1893 than it was in 1892.

Semiofficial and official data at hand give a decided increase in consumption of wheat both at home and abroad, owing to its relative cheapness in comparison with other articles of food. Aside from this, it is reported that in parts of Europe, and in this country also, considerable wheat is being fed to stock. These are important factors and should not be ignored, for with their continuance, the supply, visible and invisible, in the world will be at the end of the season less than ever before known.

PETALUMA is shipping pickles East, and the *Courier* says it is all because of the superior quality of the product. Merit wins.

FLORIDA ORANGES ABROAD.—Florida oranges have recently been shipped direct to London, and advices are that the experiment is a success. The oranges for the most part arrived in sound condition, though many were decayed. This condition was brought about in large part by stormy weather, necessitating the closing of hatches on the steamer by which the shipment was made. Twenty-six hundred boxes of sound fruit brought $2.45 to $3.50 for bright varieties, $1.50 to $2 for russets.



PASADENA HOMES.

1—Residence of H. M. Singer (Chicago). 2—C. S. Christy (Buffalo). 9—Hon. Joseph Medill(Chicago *Tribune*). 10—A. A. Libby (Chicago). 11—Dr. G. G. Green.

UP to date, about nineteen counties have applied for separate space in which to make exhibits in the California State Building at the World's Fair. There is still ample room for the remaining thirty-five counties, which are holding back with a great deal of alacrity.

THE fruitgrowers of Franklin district, Santa Clara county, are the latest to meet for the purpose of forming a cooperative association and selling their fruits through the Santa Clara County Fruit Exchange.

A City of Homes.

Pasadena, nine miles from Los Angeles, Cal., is known throughout the United States as an ideal location for homes. Its climate is mild, healthful, and equable and its soil capable of producing astonishing varieties of fruits and flowers. It shares with other California locations freedom from the usual rigors of winter or visitations of severe weather of any kind, excepting occasional winds of short duration, and these, of course, visit other places as well. It is within easy access of the mountains on the one hand, and the ocean on the other. It is not far removed from the centers of business, but it is far enough to be measurably free from the atmosphere of restlessness, discontent and avarice that is ever present in the great commercial centers. Its scenic surroundings are of especial beauty. It has every facility, natural and artificial, for an existence of tranquillity and satisfaction.

Surrounded by every resource for enjoyment, it is not remarkable that Pasadena has attracted from all parts of the United States people who come to make beautiful homes. In the accompanying illustration are shown several of the more prominent residences belonging mostly to wealthy Eastern people who make their winter homes in Pasadena. The surroundings of these homes are, without exception, beautiful and esthetic in the extreme. Native and exotic flowers bloom in the open all the year round, and the walks and drives are often floral bowers of loveliness, the lawns marked by evergreen growths of all kinds, and—one might say—of all climates.

The orange groves, the regular, well-kept streets and public buildings are not among the least attractions of Pasadena. It is altogether a lovely place, well worthy the attention of the many tourists who visit it and the invalids who often find health and strength there.

The residence of Hon. Joseph Medill, shown in the cut, was totally destroyed by fire in November. Another fine one is to be erected in its place.

AT a meeting of orange packers and shippers last week, in Riverside, the prices reached in the agreement was confirmed and a motion put by Mr. Earl that the regular size of navels be 96 to 176, inclusive, with a reduction of 50 cents on 80's and 200's, and $1 on size smaller than 200's or larger than 80's; also regular sizes on seedlings be 128 to 226, inclusive, with a reduction of 50 cents on sizes larger and smaller than 128's or 226's. The motion was carried unanimously.

SOUTHERN CITRUS FAIR.—The Southern Citrus Fair will be held at Colton. There has been a lively contest between that city and Los Angeles, but the State Board of Agriculture Monday decided in favor of the former. Preparations are already being made at Colton on a large scale for the event.

A FARMER in the State of Washington recently tried the experiment of feeding his hogs arsenic to kill kidney worms. The experiment was more than a success, the worms being completely destroyed—also the hogs.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.*; *Elevator*, 12 *Front St.*, *San Francisco.*, *Cal.*

Annual Subscription Rate Three Dollars a year. While this notice appears, all subscribers paying $3 in advance will receive 15 months' (one year and 13 weeks) credit. For $2 in advance, 10 months. For $1 in advance, five months. Trial subscriptions for three months, paid in advance, each 60 cents.

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Half inch (1 square	1.00	2.50	6.50	22.00
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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

San Francisco, December 17, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Commission Merchants—W. C. Price & Co.
Books—Henry Carey Baird & Co., Philadelphia, Pa.
School—Bowen's Academy, Berkeley.
Seeds—D M. Ferry & Co., Detroit, Mich.
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Harrows—Byron Jackson.

See Advertising Columns.

The Week.

The elements have faced squarely about this week and a better run of weather for field work could hardly have been made to order. The result has been the greatest activity in all lines of plowing and sowing. Reports are from the bay region at least, that work is well advanced for the season. While this is an advantage, the farmer who has grain and hay to sell, bemoans the outlook for pastures, which will make the stock-feeder's purchases of feeds very small and consequently depresses prices. Even the dairyman, who glories in the grass, cannot forget that his quickened yield of butter will meet low prices. No one is quite happy, for every blessing brings its negative.

But we mistake; fortunately there is one completely happy element in our population. The children are fairly glowing with Christmas anticipations. The glorious weather invites all to the toy shops, and, judging from present indications, the children of California will have the grandest Christmas which has ever fallen to their lot. So mote it be.

A New Orange Fungus.—A new disease has made its appearance in the navel oranges in San Bernardino county. On cutting open the orange, a black spot, from a half to one inch in size, appears. It is said by Prof. Pierce, special agent of the national agricultural department, to be black rot. He recommends spraying with ammoniacal copper carbonate, of which the formula is: Copper carbonate, 5 oz.; aqua ammonia (26°) 3 pints; water, 45 gallons. Prof. Pierce estimates the loss to the navel crop from black rot at five per cent, but growers say the estimate is too high. No serious trouble from the rot is feared at present.

Phylloxera Experiments.—C. J. Wetmore of the Viticultural Commission makes a progressive report on his plan to test resistant vines in various parts of the State. Plats will be set out in Napa, Los Gullicos, Stockton and Santa Clara valleys, for the purpose of experimenting with the class of vines that are not affected by phylloxera.

Hints for the Planting Season.

Soils deeply moistened, skies clear and sunshine warm, all exhort the tree and vine-planter to betake himself to preparations for planting.

He who has thought his plans out well, probably already has his preparations well advanced. If he began last winter with deep and thorough tillage of the soil, and either kept his field in well-worked fallow or raised a "hoed crop" during the summer, he has his land in better form for planting than if raw land or new stubble is to be brought now into good condition. The man who has thus prepared his soil in advance probably also gave the nurseryman an early order and will get an early shipment of the best trees of just the kinds he wishes—that is, barring accidents which are, alas, too frequent.

The planter who plans in advance in horticulture has just the same advantage that blesses the foresighted in any other pursuit. The business man who orders goods at the time when he ought to be selling them; the lawyer who studies his case while his associate is arguing for a postponement; the preacher who prepares his sermon when he ought to be resting for its delivery—all these are brethren of the man who leaves his preparations for planting until the days when new roots should be growing in his young orchard.

Few of us, however, attain our ideals, and yet all should have them. Fortunately, the California winter is such that there is a very wide margin of time within which things may be done. He who begins now his work upon the soil, and his correspondence with the nurseryman, can still do planting which will bring him success and satisfaction. Let the plow sink deep into the mellow soil. Break up all hardpan which has perhaps been formed by years of shallow culture for grain or by the tramp of grazing animals. Turn the furrow neatly. Follow the plow with a subsoiler, which loosens the lower strata, but does not bring them to the surface. Harrow well to reduce the whole field to good tilth.

If the plowing has been well and deeply done, the preparation of holes for the trees need not be such an undertaking as some make it. In most cases, the excavation of a cistern in which to plant a tree is not only an expensive, but a dangerous thing. In well and deeply-cultivated soil the hole need be but large enough to contain the roots without cramping or twisting. Set the tree on ordinary soils, so that when the ground settles it shall stand with reference to the surface about as it did in the nursery. In light, sandy soils it may be set a little deeper, but guard against deep planting; it is the cause of many losses.

If you have a good force of men, it is better to dig holes and plant trees simultaneously, dividing the work, of course, so that the diggers and planters may proceed evenly. To dig a lot of holes to dry out, and to distribute a lot of trees to dry up, is not a good division of labor. There has been great advancement made recently in planting orchards cheaply and speedily and it is wonderful with what precision it can be done, with proper men, animals and tools, in the kind of soils which are preferable for orchards. These operations are chiefly confined to those who plant by contract. The man who plants his own trees with his own farm hands cannot acquire such speed, but by putting his brain at work, and with the aid of a manual on the subject, he can do excellently. There are, however, a few unfortunate things which are often thoughtlessly done, and possibly we can help some new planter by hasty reference to them.

Do not allow the tree bundles to lie at the railway station until you are ready to plant the trees. Some men work a week getting a field into the best condition, while the trees are getting into the worst possible condition by lying in the bundles on the platform of the railway station or in the corner of the field. A few days of dry wind may kill or seriously weaken the best trees in the world. Haul the trees to the ranch at once, open the bundles, "heel in" or temporarily plant the trees in a trench and then considerable delay will work no injury. Many a nurseryman is upbraided for trees which have been killed at the railway station or in the fence-corner.

When the tree is being planted, be sure the soil is brought into close contact with the roots. No matter how carefully the roots are cleared of bruised portions and arranged in the hole, if they are left in soil loosely shoveled upon them their chance of life is small unless a rain comes immediately to firm the soil around the roots. When, then, the roots are placed and covered with mellow soil, tramp well the soil around the roots, leaving only the last three inches loose. And the other extreme is only less dangerous. Some one has advised against planting a tree as one would a gate-post, ramming the soil to the top of the hole. This should never be done.

Having the tree well set, cut back at once lest this important work be forgotten. If the tree be a yearling switch, cut back to a good bud at the height the head should be formed, and this height varies with the locality and the taste of the planter, always remembering that *low* is the rule, and it is only different degrees of low which should be considered. If the tree be a June bud, which is a tree now preferred in some parts of the State, especially in the foothills, take out the leader at the height for a low head, shorten the laterals needed to start a well-balanced head and remove the others. If a "dormant bud" is planted, cut back to a few inches above the bud, and, after the growth has well started, remove the stub.

After the trees are well planted, the planter can await with satisfaction the later rains, using the plow or cultivator as needed, to prevent the weeds from getting beyond his control, and continuing his later cultivation to keep the surface of the soil loose for the retention of moisture.

On ordinary lands, in localities of adequate rainfall, an orchard thus started will proceed satisfactorily the first year. If irrigation is needed, let the water flow just before the tree shows distress, and cultivate or mulch to prevent baking of the ground around the tender plant.

Death to the Quail.

The enormous number of quail continually sent into the San Francisco and other California markets gives rise to a strong and apparently well-founded suspicion that wholesale capture of this species of game, by trapping, has been going on, in direct defiance of law and of sportsmanlike methods of their slaughter. It has been estimated that 12,000 quail per week are received at Sacramento, thence in great part to be forwarded to this city. Most of the game gives no evidence of having been shot—a method not at this time unlawful—and it is even said that, to avoid the appearance of engaging in an illicit traffic, the trappers tie up a number of quail in a bag and then fire into them with small shot.

There is a law in this State against trapping of game, but it is practically a dead letter, the legislature having failed to make it the special duty of any officer to secure its enforcement. The quail trappers have, therefore, no obstacle in the pursuit of their illegitimate pursuit; and, around Sacramento, the woods are full of traps and the markets of game.

If this sort of thing is allowed to go on unchecked, it can be only a short time until quail are altogether exterminated. The fruitgrower ought, of course, to have the right to protect his fields against invasion by these birds, and no charge should lie against him for thus protecting his crop during the closed season, but this guerilla warfare is a nefarious pursuit and should be stopped.

Opening of the Baden Stock Yards.

The new stockyards at South San Francisco, San Mateo county, were formally opened on Thursday, the 8th inst. A special train was run from Third and Townsend streets to Baden, thence over the new branch line, by which a number of invited guests were conveyed direct to the new abattoir, where they were met by the managing director, Mr. Smith, and others, who immediately proceeded to the business of showing the visitors through the building, meanwhile explaining details of all the various branches of industry connected with the immensely large establishment, as suggested by divers questions asked by one or other of the several visitors.

About 180 to 200 head of cattle a day are now being killed, besides sheep. No hogs had then been received, but we understood that they would be ready for them in a few days. Immediately after the carcasses are dressed, they are run on elevated carriers into the cooling-room, and after remaining there a sufficient length of time, are passed on to the drying-room, both of these being kept at a temperature of about 36 degrees, where they can remain for an indefinite time.

Preparations are made for putting all of the offal to some useful purpose, down to the making of fertilizing materials for the land.

Wheat for Idle Land.

Anent the recent very able address of Gen. N. P. Chipman on "Fruit vs. Wheat," the Kern county *Echo* has this to say:

This does not militate against what the *Echo* has been saying, namely, that we ought to have more grain-farming in this county. Its the idle land which we want to see planted to grain. This should be done, for the double reason that, in the nature of things, all our idle lands cannot at once be planted to fruit, and it should not be if it could. The opinion is universal here that it is not profitable to plant new land to trees or vines, but in all cases such lands should be irrigated and cultivated for one or two years anyhow, before planting to fruit. Fruit in the end, but begin with grain, seems to be the best rule to adopt.

Large preparations are being made for the poultry and pet stock exhibition at Petaluma Jan. 10th to Jan. 14th. The premiums aggregate $1100.

From an Independent Standpoint.

The statement of the Pension Commissioner that the pension charge would reach its high-water-mark in 1894 and that it would that year call for two hundred millions of dollars, is disputed by the Secretary of the Treasury, who admits that in a brief time the pension list will call for two hundred and fifty millions. During the past year 311,000 pensions were granted and 300,000 cases are now on the docket to be heard from. Every day sees hundreds of new applications and it is evident that the maximum number of pensioners and the maximum of the annual pension charge is some years ahead. Already this charge is something above three dollars per head for every man, woman and child in the land; next year it will be over four dollars and, according to Mr. Foster's estimate, it will in 1894 be between five and six dollars. Thus at the present time a household of six persons contributes about twenty dollars per year to the pension fund and three years from now will contribute double that amount, or forty dollars per year. That the tax is indirect does not alter the fact of its existence—it is represented in the prices of general domestic supplies and is as surely a tax as if it had to be paid to the sheriff at a stated time in a lump sum of coined dollars. If the large sums paid out annually in the form of pensions represent assistance to actually disabled veterans there is small reason to complain. The loyal people of the nation will, in that case, bear the burden without murmuring; but if they represent forty per cent of fraud, as has been declared, that is a very different thing.

The suggestion has often been made that the entire list of army and navy pensioners be published, but for some unexplained reason it has never been done. A new demand is now being made by the Springfield *Republican*, and it ought to be supported by the united sentiment of the country. Publication of the list could do no harm and it might, as the *Republican* points out, do good in several ways. There are undoubtedly many names upon the rolls that have no place there, even under our recklessly liberal legislation and loose administration. It is matter of common admission that rigid scrutiny of the pension rolls would strike from it as fraudulent hundreds of thousands of names. The very act of publishing the list of pensioners would subject them to a popular scrutiny, in many ways more effective than that of examining boards. Publication would cause cases of fraud and abuse to become the subject of popular and newspaper discussion so pointed that official notice would follow as a matter of course, and they would be stricken from the rolls. Millions of dollars would probably be saved the Government by this simple, almost automatic purging of the pension list.

Publication of the list would in all likelihood purge the rolls in another way. Many men in no wise needing assistance, but who, on the contrary, are rich or well-to-do, are drawing pensions to which they have a perfect legal right, but which they ought to be ashamed to take. Another shameful abuse of the generosity of the Government is pointed out by the Washington correspondent of the Boston *Transcript*. "Here in Washington," he says, "the spectacle is witnessed of a number of men, probably reaching into the thousands, drawing pensions from the Government and handsome salaries at the same time—that is, drawing two salaries at once, in defiance of the Constitution. Cleveland's Commissioner of Pensions, General Black, was drawing a large pension during his term of office, for 'general disability,' and a $4000 Government salary besides. Harrison's first commissioner, Corporal Tanner, drew $100 a month also for general disability when he was at the head of the Bureau. It was the same way with Colonel W. W. Dudley, when he, in his 'general disability,' drew the $4000 salary attached to the pension commissionership. 'As soon as a man gets a pension,' says this correspondent, 'he at once applies for a Government place, and the number of men drawing salaries of $2000 and $3000 and $4000, while at the same time they are swearing to their 'disability' and drawing a big pension, would be startling if a list were made.' These proceedings are not illegal, but they are so far immoral that their beneficiaries shrink from publicity. This is the very reason why publicity should be given them."

We believe that the sentiment of the country not only approves but demands that worthy veterans who need assistance shall be liberally provided for; but it is an outrage upon this generous sentiment to load up the pension rolls with names of the unworthy and the well-to-do, and thus add to the burden of the tax-payers.

Jay Gould's will, which has been filed for probate at New York, disposes of property alleged to be worth $72,000,000 but which at present quotations is in reality worth one-third more. Conservative estimates based on actual market values confirm the earlier report that Gould died a hundred-millionaire. The will gives $25,000 to each of his surviving brothers and sisters, with a small annuity to each, but nothing to persons not of his own blood and nothing in the way of benevolence. The eldest son is given $5,000,000 as payment for past services as manager of his father's business, and the remainder—the vast bulk of the estate—is given to this son and his five brothers and sisters, share and share alike. But while the estate is thus given to all of Gould's children, it is expressly directed that it shall not be divided. It is to be kept together in the form of a trust to managed in accordance with the single will of the elder brother, who has been trained to his father's methods. Thus, while the property of six persons, this vast estate is to be held together and wielded by a single hand. It is provided that if any one of the heirs shall marry without the approval of the others he or she shall forfeit one-half of his or her portion, the forfeited interest to be added in equal shares to the portions of the remaining heirs.

This will is being severely criticized chiefly because it makes no provision for charity; but to the RURAL this seems its smallest demerit. We are rather pleased, in fact, that no opportunity is afforded to thoughtless persons to gloss over the iniquities of a bad life by pointing to a deed of melodramatic benevolence at its close. If Gould had left the one-hundredth part of his ill-gotten fortune to charity, there would not have been lacking persons of more sentiment than sense to make the act appear as a justification or paliation of his vicious career. It is undoubtedly better that there should be no post-mortem whitewash of Gould's character; that it should stand in all its real blackness—a thing to which nobody can point with excuse or apology. The gift of one million or fifty millions, or the whole of the estate for that matter, to good purposes, would not have made the faults of Gould's methods one whit less infamous, and it is well that in death, as in life, his selfishness should be the most prominent fact in view.

But another and more practical view of this disposition of a great estate, quite independent of the means by which it was accumulated, is worth the attention of the American people. Here is the point: Is it in accord with correct principles of public policy to permit a very rich man to so tie up his estate that it can be used as an engine of destructive power after his death? Admitting for the sake of discussion what we doubt as a fact—namely, that any man can have a just title to one hundred millions of dollars worth of property—is it good policy to allow him to control that property not only during his life, but after his death? By his will, under the protection of law, Jay Gould dead is permitted to carry on the ruthless predatory career of Jay Gould living. Is this not contrary to public policy? We think it is. Ought it not to be impossible? We think it ought. In failing to enact laws to compel the breaking up of vast estates upon the death of the owners, are not the American people permitting to be nullified a great principle won by their forefathers and implied in enactments against primogeniture? We think they are. In dividing his estate Gould has done what others of his class are doing—perpetuating a money concentration which in our judgment is dangerous to the interests of the American people.

Next to nothing has been done in Congress during the past week. On both sides, the members are too much taken up with politics to come down to business easily, and it is not expected that anything will be accomplished till after the holiday recess. Then, probably, the Nicaragua Canal proposition and the anti-option measure will be fought to a finish. Discussion of the anti-option bill has already begun in the Senate, and while no notable arguments have yet been presented, it is certain that the very best talent of the chamber will be brought into the discussion. There seems to be very general misapprehension as to the scope of this measure, and it is opposed by many who might be expected to favor it, on the ground that it forbids all speculation in farm products; that under its provisions the farmer could not sell for future delivery, and that the manufacturer could not buy for future delivery. Those who thus construe the measure utterly misconceive its meaning and effect. As a matter of fact, the framers of the bill recognized to the full the advantage of selling actual products for future delivery. The farmer may sell his crop before it is planted; the manufacturer may buy his supplies a whole year before he needs them. The merchant may with perfect freedom buy of the one and sell to the other. There is no restriction upon buying and selling, except where a man sells what he does not own, or buys what he does not expect to own. It is merely the betting on prices that is prohibited. The opposition to this comes (except in the case of those who misunderstand it) only from the "street"—that is, from those who make "futures" the basis of gambling operations. If the effects of these operations were limited to the "street" there would be no reason to complain; but, as a matter of fact, they utterly confound legitimate values and thus play havoc in the markets where farm products are actually sold. The Grange, the Farmers' Alliance, the Peoples' party, and all the unselfish and moral elements of the country support this measure. It is opposed by the whole speculative interest of the great cities, and every means at the command of unscrupulous capital will be brought into the fight against it. The House of Representatives has already spoken and the final determination of the matter rests with the Senate.

The official count of votes cast in this State at the last election was completed on the 8th inst.—one month and two days after the poll. The figures for presidential electors are as follows:

Cleveland	117,908
Harrison	117,756
Weaver	25,226
Bidwell	7,989
Entire vote cast	260,000

Thomas R. Bard, Republican elector, was the only one elected on the Republican ticket, defeating J. F. Thompson, who received the lowest vote on the Democratic ticket. The Prohibition party failed to poll enough votes necessary to have the names of its candidates placed on the ballots hereafter.

The International Financial Conference is still in session at Brussels, but there are no indications that it will reach a conclusion in accord with American desires. It becomes more and more evident that the several continental nations will follow the lead of England; and the policy of England, as one of her representatives bluntly declared last week, is and must continue to be that of a single gold standard. The injustice of this policy to debtor nations is being strongly presented before the Conference, but hope of a solution of the problem is no longer cherished. In all likelihood, the question will be thrown back upon the United States in precisely the form it has presented during the past two years.

Value of Institutes.

Tulare Grange, Patrons of Husbandry, has decided to form a Farmers' Institute, and the movement appears to be making progress throughout the State. Agriculturists, horticulturists and all engaged in productive pursuits are beginning to understand the value and importance of comparison of views and experiences in their several occupations. They correctly believe that they do not know all there is to learn, and that they may profit by knowledge of what others have done and are doing. Discussion is certain to bring out the best approved methods of cultivation, as well as knowledge of market conditions.

The Bakersfield *Californian* narrates an incident that sufficiently illustrates the profit that might have been derived if a producer had been in possession of such information as a Farmers' Institute would have been certain to give him. It says:

A gentleman in the vicinity of Pomona has a splendid prune orchard, which yielded immensely this season. Prunes had been selling the previous season at from $20 to $25 per ton, the latter price being for the prime article. Just before the prunes were ready for market, a gentleman representing a fruit-packing company visited Pomona. At the time the market had gone up to $35 and $40 per ton, and the fruit was in great demand, but this producer did not belong to any society nor read the papers. Going home in his buggy he invited the agent to ride out with him and examine his crop, of which he was proud, and on the way the agent asked him how much he would take for his crop. He hesitated at first, but remembering last year's prices, he said: "I'm afraid you cannot purchase my crop, for they are extra fine, and I expect to get $30 per ton for them." After arriving at the orchard and examining the fruit, the agent remarked: "These are about as fine as I ever saw, and, in order to secure them, I will give you $35 per ton for them." The old man did not wait for any further information, but took the money, and the next day he went to town and was crowing over his good bargain when he was told that the price of good prunes had gone up to $50 per ton.

The moral is obvious.

GASHED.—In the last report of the American Pomological Society, we find the remarks of a Californian (speaking of scale-infested orange-trees) given in these words: "The tree must be gashed," etc. Evidently the Eastern mind has not risen to the gas treatment, and the declaration that the tree must be gased is therefore given the murderous phrase. Californians have something of a bloodthirsty reputation, and this report will confirm it.

CORN FETE.—Petaluma has lately been enjoying a "corn fete"—not of the painful kind that requires the careful attention of the chiropodist—but a sort of a fair in which the succulent tamale played a prominent role. It is said to have been a very pleasant affair.

FLORICULTURE.

Some Good Roses.

At the regular monthly meeting of the California State Floral Society, Friday, December 9th, the following essay, by Mr. Horace G. Pratt, of Fruitvale, was read:

It is not my purpose in this paper to attempt the impossible task of giving a list of the best dozen, or 25, or 50, roses. Some time since I made the attempt, but at once discovered that, in the nature of things, it could not be done. The primary qualification of a good rose is beauty, and what is beautiful and what is not, is largely a matter of taste. To illustrate: Some prefer the classic and dignified formality of Baroness Rothschild to the somewhat irregular but graceful freedom of Madame Gabriel Luizet, and others the reverse. Others again put much stress on odor. To them a rose is not a rose if it has no sweetness. With still others, floriferousness, keeping qualities and sturdiness of growth go a long way in determining a choice, and then, again, use and location are important in solving the problem. But it is easy to give a list of *good* roses with something of their peculiarities, and the people can choose to their liking, with the assurance of not going far wrong in the matter.

That class of roses known as Hybrid Perpetuals or Remontants (*Rosa Damascena Hybrida*), so popular in the East, must here yield the first place to the ever-blooming sorts, for though beautiful and desirable and almost indispensable, they are not perpetual bloomers, as the name would seem to imply, giving in reality but one good crop of flowers in the spring and a few only in summer and autumn; and besides they are, for the most part, subject to the attacks of a fungus resembling yellow rust, that causes the leaves to fall off quite early in the season. For this there has yet been found no sufficient remedy. The best we can do for them is to give plenty of rich food and good cultivation. To dig up and burn those affected, as is recommended by most writers, would be folly unless we should desire to rid our gardens of them almost entirely, for very few sorts would remain, and those not of the best.

The list that follows embraces some of the best sorts. Others may be, and no doubt are, as good, but these may be relied upon in this locality at least.

Paul Neyron is the largest rose grown, sometimes attaining a diameter of seven inches. Six inches is not uncommon. The form is apt to be a little irregular, and its texture coarse. It is sweet and keeps well after cutting. Color, rose. The wood and leaves are light green and almost free from thorns. Does not often rust. Good grower.

Magna Charta is another large rose and a stalwart, clean grower. It never seems to have anything the matter with it. The flower is more regular than Paul Neyron; a clear rose or deep pink in color, and often five and a half inches across. The calyx has tufts of small foliage which surround the opening bud, giving a very pretty effect. A growth of seven feet in a season is not unusual for the new shoots to make.

Baroness Rothschild is a rose of the aristocratic sort, perfect in form and pure in color, which is a deep pink or light rose. It is the shape of a shallow cup, and every petal is disposed with almost mathematical precision. Many think it the most beautiful rose grown, while others regard its formality as an objection. Its weak points are lack of odor and poor keeping qualities. Being difficult to propagate, it is always scarce and high in the market, and so is not so extensively grown as it would otherwise be.

Another superb rose of the same color is Madame Gabriel Luizet. The flowers are somewhat irregular in shape and the petals disposed with conspicuous informality, and yet with a peculiar grace that is really bewitching. To me there is no rose in this class more beautiful than this when grown at its best. Like the Baroness, it does not strike readily from cuttings, and hence is little grown—less than it deserves to be.

A good old rose is General Jacqueminot, so well known for its beautiful crimson buds and lovely open flower that little need be said in its praise. Everybody has or should have it in a rose-garden ever so small.

Fisher Holmes is not so well known, yet little if at all inferior to General Jacqueminot. The buds are not quite so fine, but the open flower is better, barring the color, which is just a little less brilliant, but it is more lasting. The plant is an excellent grower. It's a fine sort.

Gloire de Margott n is among our more recent acquisitions in the way of brilliant crimsons, and promises to rank first class. It is good in bud and in half-open and open flower, very sweet and productive. Its fault is lack of sufficient strength in the flower-stems to bear aloft their beautiful burden, and they droop. As a tall standard, this variety would be unexcelled.

Alfred Colomb is a light crimson rose, very double, very sweet and very perfect in form, not quite so formal as Baroness Rothschild, but none the worse for that. It is a fairly good bloomer, and grows well in most places if well cared for. This variety and Marshall P. Wilder and also Marie Baumann resemble each other so closely that the owner of a small collection having one would not need either of the others.

Few crimson roses are possessed of more real loveliness than Ulrich Brunner. It is a child of Paul Neyron. The plant is a close duplicate of the parent, but the flower, while quite large, has none of the coarseness of Neyron, but is chaste, refined and exceedingly fair to look upon.

Of a somewhat deeper shade of crimson are S. Reynolds Hole and Jean Lelievre, two beautiful creations for which we ought to be thankful if we are not. The former does well with us, but others complain that it seems always ailing. The latter is robust and as beautiful as it is strong.

Roses of a dark maroon are apt to burn in the sun and become a dull black. They should consequently occupy positions of at least partial protection. Baron de Bonstetten, Abel Carriere, Jean Liabaud and Prince Camille de Rohan are all good sorts. A little lighter in color and less liable to injury in the sun are Earl Dufferin, a new sort, and Duc de Cazes, which has the peculiarity of being dark in the middle of the flower while a few of the outer rows of petals are of a distinctly lighter shade.

The most satisfactory roses for the Pacific coast are those of the ever-blooming family, of which the teas (*Rosa Indica Odorata*) form the most important division. This group, now the most extensive in cultivation, owes its origin to two varieties—the Blush Tea and Yellow Tea, introduced into England from China in the early part of this century. The common name comes from the resemblance of the odor of the flowers to that of a fine quality of tea. Unlike the Hybrid Perpetuals that run up through all the shades of red to the most intense crimson and maroon with no yellows, the teas, in their purity, have no crimsons, the nearest approach being a tawny pink or bronze rose such as is found in Comtesse Riza du Parc, Madame Lambard and Baron de St. Triviers. True, several roses have been sent out as teas like Papa Gontier, a light crimson, and Princess Sagan, a most intense and brilliant maroon; but these are beyond question hybrids, with some of the crimson Bengals as pollen parents. Yellows and pinks are the prevailing colors of the teas.

Madam Lambard is one of the best known teas, of a tawny rose color usually, though sometimes it comes a light pink. It is fine both in bud and open flower, a good, healthy grower and every way desirable.

Comtesse Riza du Parc is a stalwart grower and very good in spring and autumn. In summer its somewhat irregular flowers, much the color of Madame Lambard, are apt to burn and become abortive. A fine bunch of Riza du Parc, with its shining bronzy foliage, is a buoquet fit for a queen.

Baron de St. Triviers, in color a little lighter than the foregoing and similar in manner of growth, is one of the roses that always gives satisfaction. It is particularly good in bud and in the spring the open flowers are full and exceedingly fine, but in summer and autumn they are but semidouble. It blooms with great freedom and almost continuously.

One of the very best roses of any sort is Catherine Mermet. The color is a peculiarly beautiful shade of pink, and the form of the bud and half open flower is beautiful beyond description. It must be seen in its integrity to be fully appreciated. As a grower it is fairly vigorous and healthy. It is apt to bloom in crops, resting between.

Bougere is a fine old rose, a good deal in the way of Mermet, but it is little disparagement to say that it is also a good deal inferior. Bougere is a very profuse bloomer early in the season but rather shy in summer and autumn. The flowers are borne on long stems fine for cutting.

There is a considerable section of the teas, pink of various shades in color, and in shape nearly globular. Being but semidouble they are at their best in the bud or half open state. Of this section Duchesse de Brabant (known as Comtesse de la Barthe) may be taken as the type. They are all good growers and all beautiful and desirable.

Some are finer than the Duchesse but none bloom so freely and continuously, unless it be Madame Joseph Schwartz, one of her children, which, by the way, is usually described as a white rose, but at its best there is always present shadings of pink. In addition to the foregoing we place in this section Charles Rovolli, Souvenir de Madame Pernet, Sunrise (local name) and President (known also as Adam). Somewhat resembling this group, but of more spreading form of flower, are Souvenir d'un Ami and Madame Jure. The latter has rather too loose a flower, but is very chaste and pretty and blooms with a freedom and continuity unexcelled by any. It deserves to be better known.

Laurette is the most stalwart bush rose of which I have any knowledge. It may easily be trained into tree form and will make a bush eight feet high with a stem two and a half or three inches in diameter in four or five years from planting. It is a good bloomer too, and its flowers are fully up to the average in quality. The color is creamy white with pink edgings and sometimes mottlings on the petals. Splendid for a lawn.

Rubens is a rose exceedingly fine in bud and good in open flower, but is rather shy of her charms after the spring blooming. The color is a very light shade of pink.

Marie Van Houtte is a rose that never fails to please and satisfy. The buds are light yellow—almost white—with crimson shadings, and the fully-developed flower somewhat cupped in shape, the petals being gracefully but not formally disposed. In the center it is pale yellow or salmon, shading up to crimson at the outer edge. This sort, by being grown in partial shade, readily develops into a climber.

Somewhat in the way of Marie Van Houtte are Princess of Wales and Susanna Schultheis. The former is fuller in flower but not so free in bloom, and the latter more nearly single, but a profuse producer of very fine buds, making it good for commercial purposes especially. Of the three, in a small collection, Marie Van Houtte is to be preferred.

Madame Cusin is fine when grown under glass, its pearly petals being edged with purest crimson, but it is not so satisfactory out of doors. The same may be said of Madame de Watteville, and yet, under favorable outdoor conditions they are both ravishing in their beauty.

A somewhat fancy rose is Marquise de Viviens. The flower is loose and informal, but half-way down the petals reach a shade of pink that began at the outer extremity of each with crimson. The center being white and the shading very pure in color, the effect is delightful. A bunch of Marquise roses is hard to excel in real artistic beauty.

There are not many white teas of real excellence. However, we have in The Bride the best white of any sort. It is a sport from Catherine Mermet and is a close copy in all but color. Sometimes it comes pure white, but usually pinks a little on the extremities of the petals, not to its injury in appearance, but only to its quality as a white rose.

Miss Edith Gifford would be a good white only that it has a pink or buff tinge in the center; and Cornelia Cook would be another only for a tinge of green and a confirmed disposition to perish in the bud. Marcelin Roda is better, though a little green also. Bella is white and fairly good. Madame Joseph Schwartz is very good, but is a very light pink instead of white. Best of all, next to Bride, however, is Niphetos. The full-blown flower is too open but the buds cannot be excelled by even The Bride. Devoniensis should have been mentioned before. It is a real beauty but rather poor as a grower, and a shy bloomer. The climber's variety is particularly excellent—when you get it. It may be well to say here that Marie Guillot, a rose of much repute elsewhere, is of no value here. The buds are poor, and not one in fifty can be induced to open.

(*Concluded next week.*)

Petals of a Chrysanthemum.

At the last regular meeting of the California State Floral Society, the Sherwood Hall Nursery Company reported the result of the chrysanthemum guessing contest, at the recent fall exhibition, in which two prizes of $50 and $25 were offered to the person guessing nearest the number of petals in a large "prince" bloom. Says the report:

"There were 3786 ballots cast. The estimates of petals ranged all the way from 126 to 40,000. The actual number of petals was 512. Guesses above 2000 were very numerous, and those below 600 were greatly in the minority. Well-known florists who tried their hand showed a depressing familiarity. Mrs. M. B Russ, 6 Columbia square, Mrs. C. E. Sparrowe, 531 Alvarado street, Mr. C. Redecher, 612 Bush street, and Master Willie Bennett, Protestant Orphan Asylum, were the successful contestants. The $50 prize was divided among the three first named, and the $25 prize went to Master Bennett. Not the least noteworthy result of the contest was the information that 376 guesses gave that they possessed gardens. Of this number, 265 are in this city, and 111 in the suburbs. Doubtless there were many who failed to state the fact, probably as many more, so it is reasonable to suppose that certainly from 700 to 1000 visitors to your exhibition not only possess gardens, but, judging from their interest in visiting the show, are themselves workers in their gardens and lovers of floriculture and horticulture."

The Viticultural Exhibit.

The State Viticultural Commission held its semi-annual meeting in San Francisco Monday, and decided to oppose the passage of what is known as the Raines bill, now before Congress, and, if necessary, to send a representative on to Washington for that purpose. The commissioners contend that, should the bill be passed by Congress, the country will be flooded with cheap and impure wines. One of the sections of the bill provides that any sweet-wine maker can fortify his wines with brandy free of the internal revenue tax, provided that not more than four per cent of sugar is contained therein, and also that when the wine is fortified it does not contain more than 24 per cent of alcohol.

The commissioners also addressed an open letter to the California World's Fair Commissioners, calling them severely to account for allotting the viticulturists only 728 square feet of space, out of a total of 60,000 in the California building, in which to make an exhibit. The viticulturists had asked for one-fifth the available space, representing that the wine industry is one of the most important in the State, and that viticulturists pay a total of one-fifth the taxes. The commission intimated that unless very much larger space were granted, no wine exhibit would be made at the fair.

A Handy Vine Puller.

PENRYN, Dec. 10 1892.

TO THE EDITOR:—I notice that in your last number you state that you have published handy arrangements for pulling out vines. I do not remember them, and perhaps others would like to have them repeated. ALFRED BENHAM.

The following, described by R. E. Wood of Napa county, seems well suited to the purpose: It is nothing more than the back running-gear of a common lumber wagon, including the reach, for a lever, and two short pieces of log-chain, say about two feet in length, with hook in one end and ring in the other. Lightly nail or tie a strip of inch board on top of the bolster, and another on the outside to protect the paint, then loop one piece of the chain about the reach inside the axletree, bring the loose end over to hang behind. One man now raises up the front end of the reach, another loops the ring of short chain No. 2 over the the stump of the vine to be taken out, and places the hook in the link of the chain on the wagon, high up as possible. Bring down the lever and hook up the chain two or three times and the job is done. I saw vines taken out at the rate of more than one a minute by this simple process.

Reported Deal in Lima Beans.

NEW YORK, Dec. 12.—For about a week or ten days past there have been signs of something in the nature of a "big deal" in dried California Lima beans. As the story goes, three different combinations were quietly laying their pipes, with the majority calculating upon doing something out of the ordinary line before the first of February. The minority, in which a live Californian and a wide-awake New York broker figure as the leading spirits, seem to have taken time by the forelock and outgeneraled the majority. In any event, a certain amount of substantial fact and considerable strong circumstantial evidence go to show that a large percentage of the crop of the season of 1892 has been placed under contract, and nearly all the beans involved in the deal will pass directly into the hands of distributers well acquainted with the position of the market from the visible supply to the almost certain outlets during the next ten months. The facts picked up do not warrant the statement that the market is "cornered," nor does it appear that there is any intention of making a gold mine out of a bean deal, but that the supplies have been pretty well concentrated is more than a vague possibility.

FAIR AT PORTERVILLE.—The Horticultural Society, comprising the district of Fresno, Tulare and Kern counties, has decided to hold a citrus fair at Porterville, beginning December 29th. It is the first attempt of the society to hold such a fair. Much interest has been manifested, and it seems certain that the fair will be an entire success, as it ought to be.

HORTICULTURE.

Strawberries and Their Cultivation.

GRIZZLY FLATS, CAL., NOV. 30, 1892.

TO THE EDITOR:—Before planting a new patch of strawberries, the ground should be well enriched, with a good application of manure, or some good fertilizer, and thoroughly plowed and harrowed. The rows should be about four feet apart; plants set about 18 inches apart; the ground should be thoroughly pressed around each plant, and plants should be set down in the earth, even with their crowns. If you live in a country where irrigation is not practiced, and intend setting out a large field, the ground should be well rolled with a good roller after the plants are set out; but if irrigation is practiced, the plants should be trenched in, so that they can be irrigated. If plants are received from a distance, unwrap them, and if there are too many plants to be set out in a day, puddle the roots in a mixture of very thick mud and water, and then place away in the cellar, and they will keep safely for several days. Never dump plants that have been sent from a distance, into a tub of water when you receive them, as it will invariably kill them. Follow the above method and you will be all right.

When your strawberry plants get to growing, look out for weeds; keep them out as much as possible; let all the first runners take hold and form young plants until the rows are about 12 inches wide. After they pass that limit they should always be cut off, unless you wish to raise a new lot of plants. If you plant the leading varieties of strawberries, have every fifth row a staminate sort, or perfect flowering. Many of the most valuable kinds of strawberries are pistillate sorts, and require a staminate sort near at hand to fertilize their blossoms. Staminate sorts are always self-fertilizing. About all the Alpine strawberries are perfect-flowering, and several superior varieties of the large strawberries are perfect-flowering, such as the Oregon Everbearing, Cumberland, Triumph, Capt. Jack, etc. Strawberries, where they can be irrigated, should have floods of water during their fruiting season.

In regard to the time of planting I should prefer spring planting, although strawberries in this climate can be safely transplanted any day of the year. In the hottest months they may be started successfully, if they are shaded and well watered for a short time—shaded for a couple of days and watered for about four hours. Many persons prefer August set plants, because the next season there is a crop of fruit; but there are many varieties of strawberries that commence blooming in a few weeks from the time of planting, and furnish part of a crop, even if planted in May, June or July. Of course, the climate has most to do with this; possibly in an eastern climate such a thing could not be done.

The varieties of strawberries determine the renewing of the beds. Thus, Alpine strawberries are good for several years, while the large varieties should be renewed every two or three years, that is, after two or three fruiting seasons. The first season is not generally counted. Nine-tenths of the people in America could raise strawberries if they only tried, and there is no other fruit that succeeds in such a diversity of soils and climates.

Strawberries are a better-paying crop than many varieties of larger fruits. According to the varieties planted, you can raise from 500 to 2000 quarts to the acre; and in California there are soils, climates and possibilities, that suggest that even 3000 quarts could be raised of the new and improved kinds.

The varieties mentioned below are not strictly new, but are the varieties that I think will pay best:

Haverland, a pistillate variety, an immense yielder, splendid shipper, well-colored, good size and fine flavor. This is the variety of strawberry that no person has given a bad report of. I should think it would do well in many portions of California.

Warfield No 2, a pistillate variety, is a very productive strawberry, and leads most all tried varieties. The fruit is a very beautiful, glossy red, long, conical in shape, a splendid flavor and good shipper; said to be the finest variety shipped to Chicago in any quantity last year. Seems to succeed well in all places. This variety of strawberry runs an even size, which is a great point in its favor. The plants are very vigorous in growth.

Gaudy—This is a very superior, late variety, a very large berry and large plant. The berries are somewhat conical in shape, are possessed of a delicious flavor and delicate aroma, said to be suggestive of both peaches and strawberries; is fairly productive and a perfect-flowering variety.

Parker Earle ranks first among all late varieties; berries highly colored with yellow seeds, berries very large and quality good; very productive. A staminate sort.

Oregon Everbearing is a splendid variety; succeeds best on clayey soil; furnishes an abundance of berries from May until the frost; berries large, deliciously flavored and a great shipper. This plant stands great extremes of heat and moisture. A staminate variety.

Honey strawberry, (Red Alpine) is an everbearing variety and furnishes an abundance of fruit all season long. Berries are a glowing red in color, exceedingly sweet and delicious in flavor; small to medium in size, for table use unrivalled.

Mill City, a California, wild Alpine strawberry; plant very vigorous; an everbearing variety; fruit very beautiful and highly colored, small to medium size; the finest flavored of all strawberries.

Unknown Variety, a wonderful strawberry cultivated in this country; it is a vigorous, powerful grower, with immense leaves and blossoms; the fruit is deliciously flavored and of very large size. It is oblong in shape, very firm, and would be an excellent shipper. It is an everbearing variety, and yields its immense berries until the frost comes, and would possibly yield all winter if the frost did not injure it. I shall send several plants to the experiment stations and have it thoroughly tested.

Red Bush Alpine and White Bush Alpine are strawberries destitute of runners. They are immensely prolific and fine flavored; a splendid variety for family use.

In raising strawberries by the acre for canneries and city markets, your pistillate varieties should predominate, and to insure direct pollenizing, you should plant some good staminate sort every fourth or fifth row. The Oregon Everbearing would be very good as a fertilizer.

S. L. WATKINS.

Premiums for the Citrus Fair.

The following is the complete premium list for the State Citrus Fair, to be held in the Mechanics' Pavilion, San Francisco, from January 10 to February 11, 1893:

CLASS I—COUNTY EXHIBIT.

Best display of citrus fruits.

First premium	$250 00
Second premium	200 00
Third premium	150 00
Fourth premium	100 00
Fifth premium	50 00
Total	$750 00

CLASS II—BUDDED ORANGES.

Best general display by producer.

First premium	$200 00
Second premium	150 00
Third premium	100 00
Fourth premium	75 00
Fifth premium	50 00
Sixth premium	40 00
Seventh premium	30 00
Eighth premium	20 00
Ninth premium	10 00
Tenth premium	5 00
Total	$680 00

CLASS III—BUDDED ORANGES.

Best 12 budded oranges grown by exhibitor.

First premium	$10 00
Second premium	9 00
Third premium	8 00
Fourth premium	7 00
Fifth premium	6 00
Sixth premium	5 00
Seventh premium	4 00
Eighth premium	3 00
Ninth premium	2 00
Tenth premium	1 00
Total	$55 00

CLASS IV—BUDDED ORANGES.

Best display standard boxes packed for market. Not less than five boxes.

First premium	$25 00
Second premium	20 00
Third premium	15 00
Total	$60 00

CLASS V—SEEDLING ORANGES.

Best general display by producer.

First premium	$150 00
Second premium	100 00
Third premium	75 00
Fourth premium	60 00
Fifth premium	40 00
Sixth premium	30 00
Seventh premium	25 00
Eighth premium	20 00
Ninth premium	10 00
Tenth premium	5 00
Total	$515 00

CLASS VI—SEEDLING ORANGES.

Best 12 seedling oranges grown by exhibitor.

First premium	$10 00
Second premium	9 00
Third premium	8 00
Fourth premium	7 00
Fifth premium	6 00
Sixth premium	5 00
Seventh premium	4 00
Eighth premium	3 00
Ninth premium	2 00
Tenth premium	1 00
Total	$55 00

CLASS VII—SEEDLING ORANGES.

Best display standard boxes packed for market.

First premium	$25 00
Second premium	20 00
Third premium	15 00
Total	$60 00

CLASS VIII—LEMONS.

Best display by producer.

First premium	$50 00
Second premium	35 00
Third premium	25 00
Fourth premium	15 00
Fifth premium	10 00
Total	$135 00

THE FIELD.

The Hop Market.

A Santa Rosa *Republican* reporter had an interview with one of Sonoma county's leading hop-producers, recently, The hop market, prevailing prices, the outlook for better figures, shipping, etc., were discussed at considerable length. The gentleman is well up in his business, and, being assured that his name would not be divulged, talked with reservation.

"The prevailing price for hops here, if it can be said there is any such a thing," said he, "is about 20 cents per pound, but the newspaper quotations hardly justify that figure; and it takes a good article to bring that. For some reason the market is devoid of much life this year."

In regard to a report that the hopbuyers here had combined, pooled, or are "standing in," the gentlemen said he could not say that the report was true, but there is certainly ground upon which to construct such a suspicion. The fact that the buyers do not bid against each other gives rise to such an apprehension. It would only be in harmony with the spirit of the times to suspect such a condition of affairs.

The question was asked if it does not pay to ship hops direct to the London market. The hopgrower said that from what he had learned from those who had recently shipped there, he thinks it must pay and pay very well. One grower who lives here shipped 66 bales to London through the agency of Flint of Sacramento, and the hops there sold for 29 cents per pound, and they were not of the very finest quality, either. They would have brought about 20 cents per pound had they been sold here.

In regard to whether it is safe to ship to London as a general thing, the gentleman said he could not say. The hopbuyers here tell us that the reason they cannot pay more here for the crop is on account of the uncertainty of selling they encounter in shipping to London. For instance, it is claimed that they cannot afford to pay 25 cents here, lest by the time the hops get to London the buyers there may not want them at figures that will pay for shipping, or may not want them at all. Buyers there, they say, prefer to buy on sight, and would rather do that than buy on future delivery. There is no doubt, said the gentleman, that it pays to ship to London, if one can sell the hops when they get there. One man, who had an inferior quality of hops, for which he could not get more than 18 cents per pound for them here, in London received 23 cents per pound for them. He says that growers here hesitated to ship there before, but that they will ship in large quantities from this on. They are shipped by rail to New York and from there go to England in the big Atlantic steamships.

Alfalfa in Hay Fork Valley, Trinity County.

LARRIBEE, HUMBOLDT CO., Dec. 5, 1862.

TO THE EDITOR:—Hay Fork is an old mining town situated on the north side of a valley of the same name. Just below the town the river forks, so that in high water the valley is quite badly overflowed.

There is a gristmill in the place, and as the freight on all the flour hauled there is $30 per ton, Hay Fork flour commands a ready sale at home.

All the fertile bottom land in this section is sown in grain, and is either cut for hay or threshed. This leaves the upper foothill land on the ranchers' hands. This section is all cut up with mining ditches and huge caves in the side of the mountain where the hardy miner dug for gold. In many places the mines have ceased to pay, leaving the water ditches still in good order. The miner turned farmer; from hydraulicking he became an irrigationist.

One has to see this section to form a good idea of the barrenness of the side hills; where it is not a solid mass of rocks, it looks as though there is not soil enough to grow anything profitably. Where I thought no vegetation would prosper, I found fine fields of alfalfa, and irrigated by water formerly used to seek the precious metal.

About 20 pounds of seed is used to sow an acre of alfalfa, and as the weather becomes very hot here in summer, vast quantities of water are licked up by the hot ground and nearly famished alfalfa stalks. This alfalfa is no better than in many places where it is sown on rich valley bottoms, though nearly as much is being cut per acre as any I have ever seen; but see the difficulties they work under. They grow a good crop on ground that in a fertile section one would hardly pay taxes on for the privilege of pasturing, let alone cultivating. The day of free grass is nearly a thing of the past for California, and there is many a stock-ranch that is running on the same as before the land was surveyed. Something must be done to conform with the change of value in the lands; and many a locality can take a profitable lesson from the farmers of Hay Fork, who are making the most of their opportunities.

ED ROBERTSON.

MRS. HARRIET W. R. STRONG has made quite a financial success raising pampas plumes on her ranch in Whittier, Los Angeles county. Here she has a place of 220 acres, of which 150 acres are set out in walnut trees. Between the rows of these the pampas plumes are grown. Before Mrs. Strong went into the business the plumes which were sold throughout the world came from South America, and while people admired their graceful beauty they were very unsatisfactory for ornamental purposes, owing to the fact that the feathery plumage soon dropped off. It was not until Mrs. Strong began raising them on a large scale that a successful effort was made to find some means of obviating this. To Mrs. Joseph Sexton of Santa Barbara is due the credit of first discovering the curing and preserving process which is now in successful use. As it is now, when the plumes leave Mrs. Strong's curing establishment they have been so treated that they may be handled, practically without danger or injury. From the very beginning of her operations Mrs. Strong has been very successful in finding a market for her wares in Europe, and the special object of her efforts just at present is to increase the American demand. In this she is meeting with encouraging success. Last year Mrs. Strong raised 2,000,000 plumes, the crop during the present season being 1,750,000. Of these 100,000 were sold in this country for use during the campaign, and 650,000 were disposed of in Europe. The remaining 1,000,000 were reserved for use at the World's Fair, 10,000 being needed for the interior decoration of the California building alone.

The Dairy.

A California Holstein-Friesian Record.

EDNA, SAN LUIS OBISPO COUNTY, Nov. 29.

TO THE EDITOR:—Enclosed find a schedule from the record of my Holstein herd, made up after the form of the English Shorthorn herd published in the RURAL PRESS of Nov. 19. The first six numbers were imported from Holland in calf and dropped their first calves on my ranch. The others I either bought at the Underhill dispersion sale or raised. All are thoroughbred and registered except No. 23. She was from the Coots herd and claimed to be thoroughbred. I wish to call your attention particularly to the record of this cow, as an illustration of what feeding will do for a cow four years old when the feeding was commenced. Also to the records of Nos. 6 and 4 in two-year-old form; and of No. 21.

MILK REGISTER OF HOLSTEIN-FRIESIAN COWS OWNED BY E. W. STEELE OF SAN LUIS OBISPO COUNTY.

Number.	First Calf. Days.	First Calf. Lbs. Milk.	Second Calf. Days.	Second Calf. Lbs. Milk.	Third Calf. Days.	Third Calf. Lbs. Milk.	Fourth Calf. Days.	Fourth Calf. Lbs. Milk.	Fifth Calf. Days.	Fifth Calf. Lbs. Milk.	Sixth Calf. Days.	Sixth Calf. Lbs. Milk	Seventh Calf. Days.	Seventh Calf. Lbs. Milk.	Name.
1	318	7,956½	299	13,133¼	293	12,480½	276	14,288½	470	19,628	305	16,035½	.....	.....	Mable of Pacific, 625 H. B., 990 A. R.
2	344	9,840	338	13,480	260	11,702½	255	10,678	288	11,055¼	304	10,982½	.....	.....	Katie of Pacific, 624 H. F., 989 A. R.
3	323	9,300½	297	11,461	304	12,587	260	8,050	270	9,844	314	11,074	.....	.....	Alice of Pacific, 621 H. F., 991 A. R.
4	358	10,223¾	442	12,504	307	12,224½	274	10,722	65	2,648½	335	9,378½	.....	.....	Lucy of Pacific, 623 H. F., 988 A. R.
5	301	9,890	381	15,772	289	15,142	264	11,976½	269	13,170*	272	14,776	.....	.....	Bell of Pacific, 627 H. F., 986 A. R.
6	461	14,708½	366	18,104	365	18,170¼	328	13,845	263	12,074	.....	.....	.....	.....	Queen of Pacific, 626 H. F., 987 A. R.
7	378	8,650½	256	8,146	327	9,355½	286	10,108	.....	.....	.....	.....	.....	.....	Lucy of Corral de Piedra, 6,703 H. F.
8	396	6,056½	300	7,336½	325	7,359	394	10,905	.....	.....	.....	.....	.....	.....	Queen of Corral de Piedra, 5 956 H. F.
9	268	6,689½	386	7,609½	229	6,788½	247	6,184½	.....	.....	.....	.....	.....	.....	Chrystina, 4,021 H. F.
10	241	5,669	337	8,110	283	6,639½	349	7,777½	.....	.....	.....	.....	.....	.....	Oulane Bell, 3,110 H. F.
11	276	8,351	337	10,454	307	12,069½	221	4,550½	.....	.....	.....	.....	.....	.....	Wisahickon, 4,016 H. F.
12	391	8,155½	263	7,181½	247	7,212½	.....	.....	.....	.....	.....	.....	.....	.....	Domingo's Mable of Pacific, 13,668 H. F.
13	377	7,084	246	5,085	390	10,599½	.....	.....	.....	.....	.....	.....	.....	.....	Paterson's Lucy of Pacific, 13,666 H.F.
14	447	12,350	268	8,633	220	10,629	.....	.....	.....	.....	.....	.....	.....	.....	Brunette of Pacific, 628 H. F.
15	296	4,637½	358	8,408½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lakeside's Pet Idaline, 13,670 H. F.
16	320	6,885	545	13,268½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Domingo's Mable, 13,671 H. F.
17	391	9,281½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Omaha's Lucy of Pacific, 13,674 H. F.
18	417	13,426	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Omaha's Domingo's Mable, 16,890 H. F.
19	402	10,271½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Duke of Obispo's Mable of Pac. 16,891 H.F.
20	248	5,234½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Artis Carisa's Lady, 16,892 H. F.
21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Artis Carisa, 7,798 H.
22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lakeside Pet, 9993 H.
23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	From Coots' herd.
24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Posneo's Matilda of Pacific, 6,881 H. F.
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Omaha's Chrystina, 13 672 H. F.
Averages..	355	8,940	355	10 433	291	10,731	289	10 183	301	13,092	340	13,218	270	10,211	

Nearly all the balance of these cows have been examined and have made the necessary record for advanced registry.

Where are the English cows beside this showing?

E. W. STEELE.

What Is a Good Cow Worth?

The cow, says *Hoard's Dairyman*, that makes 500 pounds of butter in a year is worth fully $500 as an investment; for her calf, if well-sired, is worth all it costs to keep the mother a year.

On the above the *National Stockman* comments as follows: At first glance it might seem that this is not true, but when we to inquire into the business we find that it is true, that as a business investment a cow that will make 500 pounds of butter in a year is worth $500. The butter at the low average price of 25 cents a pound would be worth $125, or at 30 cents it would be worth $150. Five hundred pounds is about the yield of four scrub cows, and you have only one cow to feed, milk and care for generally. Of course she will eat a lot of feed, but that is no objection at all; in dairying we use cows to convert food into milk. As there is just so much butter in a bushel of feed, if we can get it out more profitably by feeding it to one cow instead of three or four, we make that much gain, because in one case we have only one cow to supply with the life ration, while in the other we have three or four.

And there is one other point to which we wish to call attention, that if we had a few extra good cows instead of a large lot of average ones, the risk of loss is less by the various diseases to which cows are subject. If we only have ten good cows the losses would in all probability be less in proportion than if we have 20 or 30 average cows, for we could—and no doubt would—give the ten good cows more personal attention than the larger lot of the others; it holds good in all cases that we give better care to that which pays us best.

To go back; while we would not advise the purchase of cows for dairy work at $500 per head (though a 500-pound cow is worth it), yet we would advise the purchase of extra good cows at an extra price rather than to buy average cows at an average price.

The Stock Yard.

"Who Has a White Bull?"

Written for the RURAL PRESS.

Such is the heading of an editorial in the *Breeders' Gazette*, which says: "This is such an extraordinary 'want' in this country that we give it this prominence in the hope that a calf or young bull of good form and of the much-despised color can be found."

Has it then come to this that the puerile practice of breeding for all-red animals has been carried to such an extent that an animal of a well-recognized and original color in Shorthorns is so hard to find that one of the leading papers of America, devoted to the interests of breeding, should think it worth while to devote a half column of its most valuable space to the subject in order to call the attention of its readers to such an "extraordinary want?"

Is not the craze for using nothing but *red bulls*, by which so much harm has been done in almost countless herds, on the wane yet? If not, it ought to be by this time—at any rate, by all breeders who take an interest in the general welfare and improvement of Shorthorns, and through them, the beef cattle of almost the whole country. All who have taken an interest in the reports of cattle at the different State Fairs throughout the country cannot but have noticed that the principal winners of the best prizes were *roans*, more so, however, in England than in America; and where were your roans without the white?

The white bull wanted, it is true, if found, is to cross upon black-polled cows, with a view to producing a superior class of beef animals—a cross which stands second to none in the production of such. and in regard to which the *Gazette* says: "We are sufficiently interested in the idea to do the necessary advertising in the matter, and in this public way, simply because it brings forward a point in cattle-breeding that we have often thought might be well worth serious consideration at the hands of our readers. 'It's all well enough to talk about it,' one may say, 'but where is your white bull?' If there are any good ones in the country to which the knife has not been applied, we shall be pleased to hear about them."

Well, there are three or four that we know of in California; and what is more, at least two of them are by a roan bull and out of white cows, sired by a white bull that was well-known, locally, as a good stock-getter and for the improvement he made in the herd in which he was used for several years.

The above-named cows are not by any means "despised" on account of their color; but, as if in spite of it, being of of a useful sort, are much esteemed by their present owners for their real worth, both as regular and good breeders and for the milk they give.

Progressive Breeding.

Written for the RURAL PRESS.

There never was a time when the difference in price between choice steers and common beef cattle was greater, if so great as at the present time, or the proportion of choice cattle to scrubs so small, and the worst of it is, the gap is continually widening, so that the great centers of trade are literally flooded with scrub stock.

The fact is easily accounted for. Cattle have been comparatively low for a number of years, and for that reason the majority of breeders of either beef or dairy cattle have not thought it worth their while to invest the little extra money required to make the difference between buying a good bull and a scrub.

They have thus been breeding down instead of breeding up, forgetful of the fact that well-bred animals make a more profitable use of food consumed than do the scrubs.

When the latter class come to market, generally an overcrowded one, the seller is at the mercy of the buyer, in a great measure, while of the choice and choicest classes there is seldom enough to supply the demand, so that, within reasonable bounds, the seller who has the "tops" is in a position to make the price.

The same applies to dairy stock. Let any one start out to buy 20 or 30 head of choice milch cows and he will soon find that they are very scarce, and, when found, they are worth twice the price of the average class of fresh cows that come to the city markets.

In breeding good cattle there is a double gain, as compared with the common sorts. They make a greater number of pounds of beef on the same feed, and the beef brings a better price—more pounds and more cents per pound is what it comes to; therefore, all who are breeding cattle should interest themselves in breeding up, keep better cattle, if fewer of them, and thus each one can help to stop the downward course which is so easily followed.

There is no such thing as a standstill in breeding. Either the cattle are growing better or they are growing worse. Let each one pause and ask, Am I breeding up, or breeding down? Are my cattle getting better or worse? It is one or the other. If worse, stop it now, and take the first step forward by weeding out and getting rid of the scalawags—every one of them, at any price they will bring—then use good bulls on the best cows, raise the calves well and keep on raising them well as long as they will grow. Feed up as well as breed up and success is assured. Breed without feed does not improve a man's cattle. The two must go together.

There is more truth than most people give credit for in the saying that "feed is half the breed," else how come the early maturity, the heavy weights as compared with age; also, the large yields of milk and butter that are produced by single animals, in all of which *feed* must be the moving power, as it were.

The man who is a judge of cattle, a good feeder and manager, can, to a certain extent, make light of pedigree, for at all times his good feeding will bring out his well-selected steers in such shape that they will command top prices in the market. Or, if a dairyman, he will so breed and feed that his cows will be in profit for the greater part of the year, producing all they can be reasonably made to give in milk, which, in turn, will be disposed of to the best advantage. Such a man would be successful as a breeder of thoroughbreds and make good cattle, not altogether by his good feeding, but through that, added to good breeding, would leave far behind the poor feeder, though he might have the best bred cattle in the world. These, for want of good feeding, would lack proper development of the finer and more valuable parts, and in consequence would become unfitted for transmitting to posterity those valuable qualities most sought after by all breeders of useful and profitable cattle, with or without pedigrees. Pedigree of itself does not make cattle valuable. To be valuable they must be good. Pure-bred cattle neglected and poorly fed will, like any others so treated, swiftly come to naught. They stand in the way of progress.

A Government Cattle Book.

A report on Diseases of Cattle, prepared under the direction of Dr. D. E. Salmon, chief of the Bureau of Animal Industry, of the U. S. Department of Agriculture, is about ready to issue from the press. It contains 19 chapters, and like the horse book, is made up of articles prepared by the leading members of the veterinary profession in this country, including many of those who contributed to the report on Diseases of the Horse. Among those contributing to the present volume are Drs. Murray, Harbaugh, Lowe, Law, Trumbower, Salmon and Smith, and Prof. W. A. Henry, of Wisconsin. Among the contributions there are also articles by the late Drs. William Dickson and V. T. Atkinson.

Dr. Law's contributions cover diseases of the urinary organs and the generative organs, also diseases following parturition, and the diseases of young calves. Drs. Salmon and Smith have a report on infectious diseases, while Prof. Henry is represented by an article upon the the feeding and management of cattle. Other chapters treat of the administering of medicines, of diseases of the digestive organs, poisons and poisoning, diseases of the heart and blood vessels, noncontagious diseases of the organs of respiration and diseases of the nervous system, bone diseases and accidents, surgical operations, tumors, diseases of the skin, of the foot, and of the eye and ear.

The general design of the work is to fill the same place with reference to cattle that the report on the Diseases of the Horse does in regard to horses. The volume consists of 496 pages and contains 44 full-page illustrations. Our stockmen should apply at once for a copy, addressing Hon J. M. Rusk, Secretary of Agriculture, Washington, D. C.

Sheep and Wool.

First Sheep in Humboldt County.

LARRIBEE, Dec. 8, 1892.

TO THE EDITOR:—The first sheep were driven to this country by Mr. G. W. Jackson and H. C. Houson. Both had been engaged in the sheep business on shares in Sacramento valley, and during the dry season of 1864 they both started for Humboldt, where the grass was midside to a horse. Mr. Jackson had 2000 head, owning 700, the balance on shares, while Mr. Houson had 2700 head. They took them to the south side of Van Duzen river, at a place where Fort Baker was shortly after built. Thus was started the Fort Baker ranch now owned by Messrs. Russ & Porter. Mr. Houson, now a resident of Hydesville, retired several years ago. Mr. Jackson bought a squatter right to a range at Spruce Grove, and took his sheep there. Spruce Grove is high land, being the watershed between main Eel river and South fork of Eel river, and now the locality is known as Harris' P. O. on the overland road.

Jackson's sheep were sheared in Sacramento valley in March, and as there was no way to pack or haul out the wool, they were not shorn that fall. The feed was up midside to a horse, all over the range, and it was reported that the snow did not lie to any depth. That winter, it was a stem-winder, the snow lying deep all over the ground. The sheep were driven down to Woodman's ranch on Eel river at Fort Seward, and there they cut browse and lost very few sheep during a heavy snow storm, as the sheep kept fat. Then there came a heavy, continued rain, and the wet and weighty fleeces were too much for them, and out of the 2000 head, Mr. Jackson returned to Sacramento valley the

following August with 1200. Since then nearly every one has been shorn twice a year in this county. These sheep were shorn three months earlier the spring before being taken over here, than the usual spring shearing, and the extra hard winter, and the sheep not being acclimated all combined to augment the loss.

This was the beginning of the sheep business here, for cattle were grazed nearly exclusively at first, then sheep took their places, and during the last three or four years the number of ranges devoted to cattle is slowly increasing, but there are some signs of a reaction in favor of sheep again, but so far there has been only an expression of opinion. Several advocate the idea, but none seem to be willing to back their own judgment, and sell off a part or all their cattle and invest in sheep. Now that the election is a thing of the past and the platform of the winning party has a tendency to admitting wool from Australia to compete with the wool grown here, there is an impression that there will be enough wool sent here with only the freight added over the original cost in Australia, and of a quality that does not compete with any wool grown here. The Democrats' idea is, as I understand it, "two qualities of wool are required by manufacturers; one our people can produce, the other we cannot; by admitting that needed quality of wool which we cannot produce in the United States free of duty, the manufacturer is put on an equal footing, as far as raw material is concerned," and Yankee ingenuity will make up the gap between what is paid factory hands here and in competing countries.

The minority hold that in the price of wool as in the price of most everything else, the rule that competition lessens the selling price still holds good.

When sheep were first taken to this county, the price of wool was very high and the price of mutton fair. The price of wool has been decreasing from time to time, though there has not been any great change in mutton.

But then a squatter's right held a range, and this right was only worth a few hundred dollars more than the cost of improvements. Now the land has long been surveyed, and the rancher has to obtain a title for the same or give up sheep-raising. It is the amount of money that has now to be invested in the stock business that has cut down the profits.

If as much stock could now be controlled with the same amount of capital, and "free grass" was again a reality, the rancher of northern California would again coin money.

ED. ROBERTSON.

Sheep Shearings.

Especially when on dry feed, sheep need a good supply of water.

To keep sheep healthy they require a frequent change of food.

Care should be taken to clean out the mangers of feed-racks frequently.

Look over the flock and sell the sheep that show the least improvement.

Inferior sheep are often a drug when good sheep sell readily at good prices.

Never allow sheep to be frightened or run by a dog, or in any way be disturbed.

If any of the ewes have poor teeth, it will always pay to feed them ground feed.

A sheep kept thrifty will shear a heavier and better fleece than one poorly kept.

In commencing to feed grain to sheep, feed a small quantity at first and gradually increase.

The farmer that is too careless to give sheep good care will do better with some other class of stock.

The days are for feeding and the nights are for refuse, and with no stock is this more the case than with sheep.

Sheep of different ages and conditions should be sorted into different lots and the weaker ones have a little better feed.

With comfortable surroundings, which implies dry, warm shelter and regular feeding, a small amount of grain can be made to count.

Wide sliding-doors are better for the sheepsheds, as it lessens the risks of slamming on them or of their injuring themselves by crowding in.—Live Stock Indicator.

THE APIARY.

Notes from the Oak Leaf Apiary.

GRIZZLY FLATS, CAL., Nov. 22, 1892.

TO THE EDITOR:—Our honeyflow from honeydew continued up to Nov. 21st, and now a heavy storm has commenced and may last many days. I think the honeyflow is now ended, and bees will cease work for two or three months.

Melissa, the oldest recognized honey plant in the world, does well here at Grizzly Flats. I have only a few plants, and could not state the quality of honey that it secretes; it is still blooming. To make a specialty of planting honey-producing plants, where the natural range is limited and sparse, I do not think will pay, unless it is a large field of alfalfa or clover. It is best to select a natural range, with enough indigenous nectar-secreting plants to make bee-keeping profitable.

I have a pretty fair range, but I like to try honey plants from different sections. All beekeepers should have a bed of spider flowers (*Cleome integrifolia*). It is a marvelously beautiful plant, with clear-cut foliage, with showy, brilliant, red flowers; each little flowerlet in early morning has a crystal drop of honey depending from it. This plant yields honey only early in the morning.

Prof. G. J. Cook, of the Michigan Agricultural College, in a late number of the *Bee Keepers' Review*, gave some interesting facts in regard to feeding pure cane sugar to produce honey. It seems that the best chemists cannot detect the difference between sugar honey and the natural product, and rank sugar honey, as equaling the best linden or clover honey, and at the same time call it honey. In the course of Prof. Cook's article, he states: "If, then, honey from this source is entirely wholesome, of which there can be no doubt, if it is so excellent that 40 persons engaged in the study of honey pronounce it honey, and excellent in quality, and if our best chemists class it with the best of honey from the choicest honey plants, does it not stand to reason that it can be, may be, and shall we say ought to be, a product with no tarnished fame or reputation? If, upon further investigation, it proves to be insipid and inferior, then it will be for the interest of beekeepers and the ones who produce it to see to it that no such article is produced and put into the market. If, as some of our best beekeepers believe, it is superior as a food for bees, may we not, from parity of reason, conclude that it ranks high as a table commodity?"

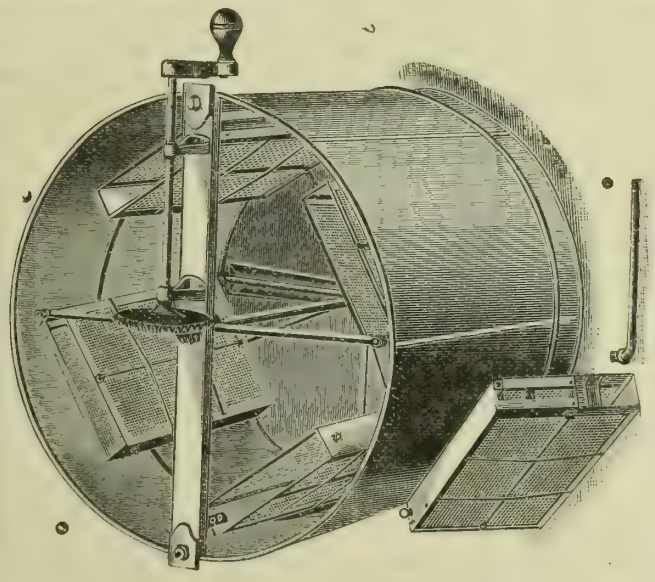
In answer, I will state that I think that there is no danger of cane-sugar honey gaining any ground in the honey market. I do not approve of feeding bees artificial food, and then selling such. For wintering bees, to keep them from starving, it is very advisable to feed sugar. Superior qualities of honey are produced in California cheaper than sugar can be bought, therefore California apiarists will never raise sugar honey.

Prof. Cook mentions the source from which many kinds of honey is gathered, such as the nectar from flowers, sweets from fungi; the different sources of honeydew, maple sap, etc., and states correctly that sugar honey is preferable and superior to many of these varieties of honey gathered from natural sources.

All admitted; but sugar honey raised for market would, I think, do more damage than good. If an apiarist raises sugar honey, sells it, and states to his customers that it is raised or produced rather by feeding bees pure cane sugar, there will be a number of unthinking and unreasonable persons who will cry fraud, adulteration, etc., and thus ruin the market for the pure article. I am not an alarmist by any means, but I think such would be the case.

The Government chemists seem to be considerably off the track, when they cannot detect sugar honey from that gathered from the natural source. When certain Government chemists tested several grades of honey, that they obtained of Chas. F. Muth, the Cincinnati honey merchant, and pronounced it adulterated, I think it was a mistake on the chemists' part in analyzing it. When it comes to adulterated honey, I don't think that there is as much on the market as a disinterested person would think.

The illustration below represents the Goold reversible honey-extractor; it will take either two or four frames. It has a positive motion, and all baskets are started at once. When one basket is reversed all are reversed.



GOOLD'S REVERSIBLE HONEY EXTRACTOR.

There are several styles of reversible honey-extractors on the market, and the trouble with most extractors is that they are too poorly made to give general satisfaction. The principle of a great many is all right, but the material that they are constructed of soon gives way and the machine is no good. A good and well-made honey-extractor ought to last 25 or 30 years. The Goold extractor shown above is pronounced a splendid machine.

Beesmokers: what kind is the best? Well, really I do not know, but I can tell you what one I like the best. I have tried several kinds, but I think the Hill beesmoker is the best of all. It has a swinging nozzle, and the draft is perfect. It is very easily lit, and easily agitated with one hand. It burns hardwood chunks without any special preparation. It is a smoker that will produce smoke, in vast quantities, at the right time. Still, I think that there is room for improvement upon the Hill smoker, even if I do think that it is the best on the American market. The Crane smoker, I believe, is a smoker combining the good principles of a hot and cold blast smoker. I learn that our friend Geo. W. Broadbeck, of Los Angeles, has lately patented a smoker. His principle is, "to produce a smoker of superior convenience and efficiency of operation, and which is interchangeably a hot and cold blast smoker."

I should be pleased to read or receive a report of the golden Italians and fine-banded Italian bees. What person in California has given them a thorough trial? Is not the common black bee as good as these light-colored Italians, or even better?

DURING the last three months, from within a radius of five miles of Whittier, Los Angeles Co., 2,000,000 pounds of English walnuts have been shipped, yielding an average of eight cents. The trees are all young and are not half bearing.

TRACK AND FARM.

Racing of Two-Year-Olds.

The racing of the two-year-olds is very deceptive. Last year there was no colt in America of that age that could pick up 115 pounds and exercise His Highness. He won the great Futurity stakes in a canter, carrying 130 pounds and conceding 12 pounds to Huron, 15 to Yorkville Belle, 22 to Dagonet, 15 to Anna B. and three to Tammany. This year he starts out second choice for the Suburban and finishes nowhere. In all his stake engagements he runs like a butcher's hack, while Tammany, who never could beat him last year, turns out to be the crack of the season, and wins $107,000 in five races.

Hence I say to new turf beginners, do not base too much upon two-year-old performances. Tournament was only a fair colt at that age, but, in the following year, he was set down as the best of the season and had $84 000 to his credit. At two years old Luke Blackburn was a moderately good colt, but at three he could give every colt of his age in America ten pounds and a walloping. Mr. Ten Broeck's colt Umpire, by Lecompte out of the dam of Lexington, won three important two-year-old events, his owner pulling off about $85,000 on him besides the stakes. This made him the all-winter favorite for the Derby of 1860. When that race came off, Thormanby won, with the Wizard second and Umpire nowhere. The great American colt led for a mile, was in trouble at nine furlongs and died away completely at a mile and a quarter. This is only one of many cases that I could cite.

On the other hand, suppose young Mr. Miller, who is a very pleasant and affable gentleman, by the way, should sell his mare for $10,000, which is supposed to be nearly eight times what he gave for her—what would he do with the money? Could he go out and buy anything that has so far equaled her on public form? Not to my idea. He could probably take that amount of money and go out into the breeding farms and buy 12 to 15 handsome and well-bred yearlings for that sum; and then not have a single one of the dozen that could win from Charmion with 12 pounds' concession of weight. But when one is not a Haggin, a Belmont or a Macdonough, it is often safe to sell. Horses frequently die, but $20 pieces never throw out a curb.

So, just what Master Dan will do about it I cannot say. He may sell his mare for a big price, and he may hold on to her himself. She is his exclusive property and he can do as he likes. I believe it was Lord Londesborough who sold a good mare at a comparatively low price and was taken to task by some friends for having done so. His Lordship replied: "Well, I sold my mare and am sorry for it. At the same time it is better to sell a horse and be sorry than to keep a horse and be sorry." If every good two-year-old was a good performer at three, Mr. Miller's course would be very plain sailing. —Hidalgo in Los Angeles Herald.

Ignorance in Driving Horses.

A liveryman once told me that he would rather hire a certain horse to almost anyone than to a well-known minister of the gospel. The minister, he said, would not under any circumstances intentionally abuse the horse, yet in his ignorance of how a horse should be driven, and his absent-mindedness, he "took more starch out" of the animal than almost anyone who drove him. The horse, when driven by this man, invariably came in tired and nervous, worried more by the manner of driving than by the distance he had gone. Driving is an art that should be cultivated. Carelessness or ignorance is very destructive to the value of a horse. A young horse that has been driven any way—allowed to "slop" along in his own style—can with difficulty be made into a good, straight driver. A horse worried and made nervous and unsteady every time he is taken out can never be a first-class driving animal. Last summer I drove a nervy mare which had belonged to a young man who wanted to "get away" in great style, and who would use the whip and then hold the mare in to make her seem more "gay." Result is, for the first mile or so she nearly pulls your arms off, unless you want to go off at a lively clip and let her tire herself at the beginning of the ride! This summer I drove her again, and she had the same fault, and she always will have. I think that a practical lecture on the subject of driving, by an experienced and competent driver, would be a good feature in our institute work this coming winter. There are lots of people who need instruction in this line.—Exchange.

Horse Notes.

The trotting season in England has been very successful this year, and the interest in trotting races is increasing and will probably become the fashionable sport of that country, says the London *Sporting Life*. The pneumatic-tire sulky made its first appearance Sept. 16 h, and English drivers consider it far superior to the old-style sulky.

A novelty in the trotting line was introduced at the Lexington (Ky.) meeting. It was a race of nine furlongs, which was won by Honest George in 2:31¼. Dash races should become popular with owners and drivers, as the earning capacity of a horse is increased and his chances for breaking down less liable than where it takes five to seven heats to decide a race.

A remarkable feat has been accomplished by a horse in south Australia. He weighed 1100 pounds and drew a load weighing 17,025 pounds. He not only started the load from a standstill, but stopped once or twice to "blow out" and then started again. The road was not level, there being a rise of one foot in 153 which he had to go up. The

width of the wagon-tire on which this load was drawn was six inches.

Red Wilkes has now 87 standard performers, which places him at the head of all living sires. Nutwood is a close second with 85.

The two-mile record was broken by Nightingale by Mambrino King at Nashville. She made the distance in 4:32¼, lowering the record of 4:33 made by Fanny Witherspoon in 1885.

Nancy Hanks trotted a mile in 2:05 at the Nashville (Tenn.) meeting.

The stallion trotting records now stand as follows: Yearling, Athadon 2:27; two-year-old, Arion, 2:10¾; three-year-old, Arion 2:10½; four-year-old, Moquette 2:10; five-year-old, Kremlin 2:07¾. All except Arion and Kremlin belong to the Wilkes branch of the Hambletonian family.

The blinders or blinkers are the most useless and abominable parts of the harness. Why any one should want to cover up the most expressive and beautiful feature of a fine horse is hard to say. Where colts are properly trained there is no need for blinders, and, in fact, nearly all horses could go without them, and to good advantage.

The value of London carhorses is said to be greater per head than those in any city in the United States. They are bought at about $300 each, and sold at $50 to $60 each after five years' work. No company will buy a horse over seven years old.

Palo Alto's Roll of Honor.

The following is a complete list of all the horses, says the *Breeder and Sportsman*, that have entered the 2:30 list or lowered their records since Superintendent Frank Covey, John Phippen, James Nolan, Wm. Houser and John Cool have taken charge. The list is a most creditable one, considering the fact that all of the horses were sick, and many of them dangerously so, until the middle of August. Orrin A. Hickok, with the plough-horse Azote, achieved wonders, for that was the only one of the stock from Palo Alto that was not developed and given his record here:

2:30 PERFORMERS, 1892.

Azote, 6	2:14¼	Rowena, 2	2:17
Nenox, 4	2:27¾	Sweet Rose, 1	2:25¾
Vina Bella, 3	2:29	Orphina, 3	2:19
Liska, 3	2:28¼	Bonnibel, 2	2:24½
Anselma, 7	2:29½	Sweetwater, 2	2:26
Wavelet, 7	2:28	Marie, 3	2:25
Paola, 5	2:28¾	Lilac, 3	2:29¼
Wild Bee, 4	2:29	Lent, 2	2:28
Advance, 3	2:22½	Ameer, 2	2:27
Monaco, 3	2:19½	Slight, 6	2:22½
Alfred, 12	2:25	Elma Sontag, 2	2:29
Elwina, 2	2:27½	Bessie Belle, 2	2:29¾
Peko, 3	2:24	Athena, 2	2:26¼
Elden, 3	2:19½	Loraneer, 2	2:36½
Donchka, 2	2:24	Cobwebs, 4	2:30
Avena, 2	2:19½		

2:20 AND 2:15 PERFORMERS.

Azote, 6	2:14¼	2:14¼	Elden, 3	2:19½	
Bernal, 5	2:17		Monaco, 3	2:19½	
Coral, 5	2:18½		Rowena, 2	2:17	
Truman, 4	2:12	2:12	Avena, 2	2:19½	
Orphina, 3	2:19				

RECORDS REDUCED, 1892.

Wild Bee, 4	2:30¼	2:29	Coral, 5	2.25	2:18½
Elleneer, 5	2:18¾	2:21½	Rowena, 2	2:37	2:17
Helena, 3	2:29¾	2:21	Paola, 5	2:30	2:28¾
Bernal, 5	2:24	2:17	Langton, 5	2:26½	2:21¾
Truman, 4	2:22	2:12	Belle Bird, 2	2:26¼	2:22

AN IMPROVED HORSE STALL.—The following is a description of an improved horse stall, the merit of which consists in its simplicity. In the center of the stall—a large boxstall—a pit is dug 18 inches in diameter and three feet deep. Into this is put cobblestones three to five inches in diameter, until they reach the top. Three large, flat stones are placed over them, which just fill the top of the pit. A load of ground limestone is then spread around the outer edge of the stall and raked toward the center, giving it a gentle slope in this direction. Over this is spread two inches of yellow clay, which is well tamped. The stall when thus completed is like an oval dish, and carries all the urine to the center and into the pit, where it gradually soaks away. There being no opening in the bottom of the pit, no bad odor comes back into the stable, as so often is done when a drainpipe is used to carry off the urine. Another advantage of this stall is the shape, which more nearly fits the horse while lying down and requires less straw for bedding.

POULTRY YARD

A Remarkable Bird.

The following story, from the Bakersfield *Californian*, is given for what it is worth:

On the border of Tejon ranch, near the foothills, lives honest old Tim Hopkins, who cultivates a small piece of land, raises a few chickens and a number of hogs. Mr. Hopkins, a few days ago, killed several hogs, salting some and smoking others, and otherwise preparing his winter supplies.

For some time past he had been annoyed by the disappearance of a large number of his fowls during the night, but as the henhouse was always closed and no tracks of any animal to be seen in the vicinity, and the door of the house showed no signs of having been tampered with, he was sorely perplexed.

On Thanksgiving night he was aroused by a terrible commotion in the henhouse, and upon going to the door he was surprised and alarmed to see a large-winged creature rise up and soar away sky-high with a chicken in each claw.

"It was a devilish-looking thing, anyway," said Mr. Hopkins, "with a head like a snake and a long neck that wiggled through the air like a veritable serpent of sin, and the noise it made in rising from the ground sounded as if the winds of the earth were turned loose in that spot."

Early the following morning farmer Hopkins visited the henhouse and found the floor covered with broken eggs, and, as he remarked, "every blessed hen on the roosts had broken the record that night, and each hen had laid an egg and some roosters, too."

Being something of a philosopher, farmer Hopkins formed an idea that his hens had laid their last egg and straightway bundled them into the Bakersfield market, where he disposed of them at the regular market prices. Upon his return home, what was his amazement to find his smokehouse demolished and a large number of big rocks lying in the debris, but no sign of a smoked ham.

He retired to the house to ponder over the cause of his misfortune and devise some means to capture and kill the ungodly creature.

Full of these religious sentiments, he retired to his couch for a much-needed rest, which was rudely disturbed in the night by a terrible crash and the shaking of the cabin.

The bird had dropped a rock which crashed through the roof onto the kitchen stove, which broke into a thousand pieces.

Mr. Hopkins never stopped to seek further to estimate the amount of damage done, but struck out for John O. Miller's, where he arrived at daybreak, with his heart bowed down with troubles he soon made known to his friends, who have organized a plan to capture this bird at all hazards.

EXPERIMENTS IN KEEPING EGGS.—The eggs were all wiped when fresh with a rag saturated with some antiseptic and packed tightly in salt, bran, etc. Eggs packed during April and May in salt, and which had been wiped with cottonseed oil to which had been added boracic acid, kept from four to five months with a loss of nearly one-third, the quality of those saved not being good. Eggs packed in bran, after the same preliminary handling, were all spoiled after four months. Eggs packed in salt during March and April, after wiping with vaseline, to which salicylic acid had been added, kept four and five months without loss, the quality after four months being much superior to ordinary limed eggs. These packed eggs were all kept in the barn cellar, the ordinary temperature of each box varying little from 66° Fahrenheit, and each box was turned over once every two days. Little difference was observed in the keeping of the fertile or the unfertile eggs, and no difference was noticeable in the keeping qualities of eggs from different fowls or from those on different rations.—Report of New York Experiment Station.

REGULAR FEEDING FOR POULTRY.—Early feeding is one of the most important rules on a poultry farm, especially with young stock. The best time to give breakfast to both old and young is just after break of day. Especially is this important during the winter season. A young chicken, above all other young stock, needs early food for protection. It comes into this world with little or no protection from the cold, and must depend upon food for comfort and support. The food secretes the requisite supply for feathers as well as for bone and muscle, and when the young are fledging is when good and frequent feeding is of vital importance. For them to fast until eight or nine o'clock in the morning is too great a strain upon them, and they show it in their growth and health. Feed the old stock next, and then throw open the doors and windows and let in the pure, fresh air. Where it is impossible to feed the youngsters shortly after sunrise, it is a good plan to put a quantity of cracked grain in their house at night, so that they can get it themselves the first thing in the morning.—Mirror and Farm.

FLOOR THE HEN HOUSE.—We are often requested to state which kind of a floor is best for a poultry-house. This depends on circumstances. If rats are numerous, a concrete or cement floor is best. In fact, the kind of a floor is not so important as the material to be used on the floor. If the floor is kept covered to a depth of four inches with leaves, cut straw, cut hay, or any other suitable material, it will matter but little how the floor is made. The hens will occupy themselves with litter and keep themselves busy, and all hard foods should be thrown in the litter during cold or wet weather, or at times when the hens cannot enjoy themselves outside. The litter will keep the floor dry, make it more comfortable by shutting off draughts, and render the work of cleaning out the house less difficult. Litter must not be allowed to become filthy, but should be renewed frequently, so as to avoid dampness and disease, and also retain warmth and dryness.—Farm and Fireside.

A DISEASE, NOT A VICE.—The theory that eating broken shells superinduces the habit of hen's breaking and eating their own eggs is absurd. The effect is in the opposite direction—by satisfying cravings for shell-making food. No hen ever learns to break her eggs from eating broken shells, but having broken an egg in the nest by treading upon it or in tumbling it around, she easily learns how to break another. The feeding of more shells and other shell-making food is the best, and, so far as I know, the only remedy for the habit of breaking eggs. Egg-eating is really a disease and not a vice.—J. W. CAUGHEY.

PUMPKINS boiled, cut up fine and mixed with cornmeal, make a capital food for a morning meal for a flock of hens. In winter hens need something warm. As they lose their vigor the egg passage lacks the real life it has in warm weather, hence it fails to act and as a result eggs are scarce fruit when you long for plenty. Do not expect eggs from a flock that has not the comforts of a snug house as well as plenty of warm, cooked food.

CURIOUS ANIMALS.—This was a school-board boy's essay on poultry: "Hens is curious animals. They don't have no nose, nor no teeth, nor no ears. They swallow their vittles whole, and chew it up in their crops inside of them."

NEVER keep hens more than two seasons unless they are valuable for their special strain of breeding.

MISCELLANEOUS.

A LARGE water-storage project is that on the Arizona canal, nine miles from Phœnix. Work will begin at once to put an embankment on the west side of the canal at the distance of three miles, which will form a lake of that length and 20 feet deep. Water will be let in from the Arizona canal during the rainy season.

MILLER & LUX, says the San Benito *Advance*, have at this time on their great ranch in Kern county, 28,000 sheep, 35,000 cattle, 6000 hogs, 12,000 tons of alfalfa-hay, 28,000 sacks of barley, 12,000 sacks of wheat, 5000 sacks of oats. Also 3000 acres of Egyptian corn, which will produce yearly 6000 tons of cereal food.

J. F. BERGIN, president of the San Francisco and North Pacific Railroad, F. S. Chadbourne, W. D. Sanborn, Al Wieland, Fred Yungling, H. N. Gray and General McMutrie, and other San Franciscans, have been at Ukiah, Mendocino county, looking up the prospects for building a railroad from Ukiah to Round valley, 60 miles distant, where a large body of coal is said to lie undeveloped. The storm interfered with the trip.

THE Must-Condensing Company of Geyserville is anxious to remove its plant to Healdsburg, providing the citizens of that place will give it some inducement in the way of a bonus. Baron Schilling, one of the biggest stockholders of the Must-Condensing Company, was in Healdsburg last week, and all the citizens he had spoken to in regard to the scheme gave him much encouragement. Healdsburg needs a few more manufactories.

THE Pine Ridge flume has been completed sufficiently to turn the water into Dry creek from Stephenson creek, 12 miles beyond. Water is brought in sufficient quantity to irrigate 50,000 acres of land in Fresno county, which have never yet been under a canal. This flume is the largest in California, and the first 12 miles were completed last summer. It will be extended to Fresno next year for the purpose of floating lumber in addition to its irrigation facilities. Additional arrangements are being made to build the flume still farther into the mountains to tap the upper tributary of the San Joaquin river.

A NEW irrigation canal is being surveyed from Lake Tulare northward to the San Joaquin river, near Mendota. A corps of engineers are at work and have the preliminary survey about done. It is not understood what company is at the head of the enterprise further than that the Sunset Irrigation Co. has nothing to do with it. The canal will be about 80 miles long. It will follow northward along the center of the valley. Water will probably be stored in Lake Tulare in the winter and used in the dry season. It is also said that waste water from another canal will be led to this canal and used for irrigation the second time. The eastern side of the valley slopes gradually toward this new canal, and in many places there are streams of considerable size flowing from old canals as waste and superfluous water.

AT the last meeting of the State Board of Prison Directors, an order was made looking to the establishment of a cordage factory at Folsom prison. The warden was directed to get estimates of the cost of machinery for the manufacture of cordage, to the end that the directors might make a recommendation upon the subject to the Governor and the legislature. The State has just constructed at Folsom, at a cost of more than $100,000, a powerhouse to utilize the water of the American river. This building contains seven Leffell wheels, capable of producing 700-horse power. The water will be turned on at these works some time next month, and the directors of the prison are casting about to utilize the power. Mr. Sontag is decidedly in favor of establishing a cordage factory, and a bill will be introduced in the legislature to that end. It is probable, however, that there will be opposition to the plan, as many people dislike to see convict labor come into opposition with free labor. In the matter of jute bags, the needed amount cannot be supplied by factories in this State, but in the matter of rope it is different. The cordage factories now running here can supply all the demand.

A Model Country Place.

SERENA, Santa Barbara County.

TO THE EDITOR: One of your regular patrons—James A. Blood, who resides at Carpinteria, Cal., is ranked among the first-class farmers on the southern Pacific coast. He has erected on an elevated site the best farmhouse that I ever entered. It is perfectly planned in every respect, and I would advise others who desire to build convenient and comfortable homes in this State to look his premises well over. Not only the family dwelling, but the piggery and other accommodations are worthy of inspection by those who seek examples of fine construction and good, common sense abroad. Mr. Blood's English walnuts cover a wide field, systematically arranged in rows, numbering over 1000 trees, and now he holds in store over 140 sacks, in one pile, of fresh fruit that contain; each sack, over two baskets of nuts.

SOLOMON W. JEWETT.

BARREN HILL NURSERY.—Felix Gillett of Nevada City has just issued his new catalogue and price-list in his usual tasteful style. He lists the choice varieties of prunes and nuts of various kinds, to which he has given many years of attention, and which have made great progress under his careful trial and energetic promotion. We are sorry to see that he cannot yet receive orders for the famous large prune which he has not yet named, and which is of such great size that it has startled all who have seen it. Mr. Gillet's catalogue also presents in form for reference the excellent essay on walnut-grafting which he prepared for the October meeting of the State Horticultural Society.

A STUDY OF THE CENSUS.

A Notable Paper on California's Population by Gen. N. P. Chipman.

The following paper on the distribution of the population in California was read by Gen. N. P. Chipman at a meeting of the State Board of Trade last Tuesday:

Hon. Eugene J. Gregory, President State Board of Trade.—SIR: The growth of the great West has been marked by a large increase of rural population. Large cities and prosperous towns have grown up with its development, but the strength and power of the West have resulted from the rapid increase of the farming population. Wherever agriculture has been the basis of wealth, the lands have been first occupied in small holdings and the towns built up later or *pari passu*. There is no reason why this law should have been, or still should be, reversed in this State. The wealth of California lies in her soil and its capabilities, under our strikingly favorable climatic influences.

The Census Bulletin No. 134, issued by the Government, gave us a table of the counties of the State, whose population was enumerated. It compared 1880 with 1890, showing increase and decrease in the several counties and total increase for the decade. It also gave in detail the population in townships and towns and cities; but no attempt was made to trace the people to their homes, or to show by arranged data the relative increase or decrease in town and country, nor to bring into comparison the drift of population in respect of the different localities of the State.

I have undertaken to separate the tables and rearrange the data so as to show the relative increase in town and country, my purpose being to discover where the increase has gone and what deductions may be drawn from the facts.

The analysis which I shall give will show that we have gained of rural population in ten years only 78,113, while the towns and cities have gained 265,323, or over 77 per cent. More than one-third of the entire increase has gone into the three cities of San Francisco, Los Angeles and Oakland.

GAINS AND LOSSES FOR A DECADE.

The following table gives the distribution of our population as shown by the census of 1890, compared with 1880, and locates the increase for the decade:

County.	1890.	1880.	Gain or Loss in County.	Gain in Towns.	Gain or Loss in Country.
Alameda	93,864	62,976	30,888	30,888	.....
Alpine	667	539	128	69	59
Amador	10 320	11,384	a 1,064	.....	.....
Butte	17,939	18,721	a 782	.....	.....
Calaveras	8 882	9 094	a 212	.....	.....
Colusa	14,640	13,118	1,522	1,173	349
Contra Costa	13,515	12,525	990	495	495
Del Norte	2 592	2,584	8	4	4
El Dorado	9 23	10,683	a 1,451	.....	.....
Fresno	32 0.6	9 478	22,543	12,218	10 330
Humboldt	23 469	15 512	7,957	3,731	4,226
Inyo	3 544	2 928	616	308	308
Kern	9,808	5 601	4,207	2,861	1.346
Lake	7 101	6 596	505	916	b 411
Lassen	4,239	3,340	899	266	663
Los Angeles	101,454	24 892	76,6 2	56.572	20,080
Orange	13,589	8,579	5 010	3,544	1,466
Marin	13,072	11,324	1,748	1 872	b 1 4
Mariposa	3,787	4,339	a 552	.....	.....
Mendocino	17,612	12,800	4,812	4,035	777
Merced	8,085	5,6 6	2,429	563	1,866
Modoc	4,986	4 399	587	293	294
Mono	2 002	7,499	a 5.497	.....	.....
Monterey	18 687	11,302	7,335	2,665	4 670
Napa	16 411	13,235	3,175	1.005	2,171
Nevada	17,369	20 823	a 3,454	.....	.....
Placer	15.101	14 232	869	1,160	b 291
Plumas	4,913	6,180	a 1 247	.....	.....
Sacramento	40,339	34 390	5 919	5,079	870
San Bernardino	25,497	7,786	17,711	11,204	6,507
San Benito	6,412	5,584	828	177	651
San Diego	34 987	8,618	26 369	15,829	10,540
San Francisco	298,997	233 959	65,038	65 038	.....
San Joaquin	28 649	24,349	4 280	5,942	b 1.612
San Luis Obispo	16,072	9,142	6.930	3,314	3.616
San Mateo	10,087	8,669	1 418	226	1,193
Santa Barbara	15,754	9,518	6 24	3,401	2,837
Santa Clara	48 005	35,039	12 966	7,138	5 828
Santa Cruz	19 276	12 802	6 46	2,796	3 672
Shasta	12,133	9 492	2,641	2,077	564
Siskiyou	12,163	8,610	3 553	1,023	2,530
Sierra	5,051	6,623	a 1,572	.....	.....
Solano	20 916	18,475	2,471	2 424	47
Sonoma	32 721	25 936	6,795	3 412	3,383
Stanislaus	10,040	5 751	1.289	2 193	b 904
Sutter	5 469	5 159	31	155	155
Tehama	9 916	9 301	615	751	b 136
Trinity	3,719	4,999	a 1,280	.....	.....
Tulare	24, 74	11,281	13,293	5,426	7,867
Tuolumne	6 082	7,848	a 1,766	.....	.....
Ventura	10,071	5,073	4,998	2,271	2,727
Yolo	12 684	11,772	912	832	80
Yuba	9,636	11,284	a 1 648	.....	.....
Total	1,208,130	864,691	363 96	265,323	102.146
Total Loss	.....	.....	a20,625	.....	b 3,508
Net Gain	.....	.....	343,436	.....	.....

NOTES.—*a*, Counties showing loss;
b, Lost in country where gain in county.

I find no evidence of any great increase of rural growth in Alameda, and as the subdivisions are not clearly noted, I treat the increase as practically all in the towns and cities.

Six counties of small increase I could not compare, as the data were incomplete; and I divided the increase equally between town and country. With these exceptions, the tables are practically accurate and reliable.

SMALL INCREASE IN THE COUNTRY.

Certain localities, by thoughtfully considering these results, will find ample cause to bestir themselves, while other localities will find full justification for all they have done in the way of promoting development.

The unpleasant fact will appear that the net increase of 343 436 for the whole State can be found in only a few of the counties, while some—the richest in natural resources and advantages—have gained but little or not at all. Of this increase, 195,965 have gone into cities and towns of over 3000 inhabitants and many more into the smaller villages.

The result of the tables is, that while we have added 345 436 to the mass of our population, we have added since 1880 to the towns 265,323, which leaves only 78,113 added to the country population.

In some counties there has been an increase in the population of the towns, but the county as a whole has decreased. Butte county is an example. The town of Chico has gained 1237, while the county as a whole has lost 782. Amador has 1064 less population than in 1880, but her towns have increased 1093.

It will appear also that in some cases the counties have gained in population, but the gain has all and more gone into the towns, showing an actual loss to the country of rural population. San Joaquin county is an example. The towns in that county have gained 5922, while the country has lost 1642. That is, the difference between the gain in the whole county and the gain in the towns shows an actual loss in the country.

The two columns of actual gain in towns and gain in rural population together aggregate 367,469, which number, as shown in my tables exceeds the actual gain in the whole State by 24,033. Twelve counties, shown by the tables, lost 20,525 of these, and six counties fell off in rural population 3508, while gaining in the towns that number more than the total gain in the counties; and this accounts for the apparent excess in the column of rural increase.

Twelve counties have lost an aggregate of 20,525 population. Some of these have doubtless left the State; but the larger part have gone to the other counties, and reappear as new population there. It was the closing down of the mining industries that largely caused this hegira.

The tables show a large disproportionate gain in the cities and towns. The country has gained only 22.7 per cent, while the cities and towns have gained 77-3 per cent. Anyone familiar with the conditions existing in California will see that this is an unhealthy distribution of our increase.

CONFINED TO FEW COUNTIES.

Looking more in detail, we find that a few counties have received nearly all this increase of rural population.

The following list shows that 96,860 of the rural population have gone into 19 counties, and 5286 have gone into 14 counties, making 102,146 in all for 33 counties. The actual increase of rural population for the whole State, however, was only 78,113; and this means that 24,033 have shifted, leaving their former homes, going into other counties, or have left the State and been replaced by new people who have settled in the growing counties. The table is as follows:

COUNTIES GAINING RURAL POPULATION.

County.	Over 1,000	County.	Less Than 1,000.
Fresno	10,330	Alpine	59
Humboldt	4 226	Colusa	349
Kern	1,346	Contra Costa	495
Los Angeles	20,080	Del Norte	4
Merced	1,866	Inyo	308
Monterey	4.670	Mendocino	777
Napa	2,171	Lassen	683
Orange	1 466	Modoc	294
San Bernardino	6,507	Sacramento	870
San Diego	10,540	San Benito	651
San Luis Obispo	3.616	Shasta	564
San Mateo	1.198	Solano	47
Santa Barbara	2.837	Sutter	165
Santa Clara	5 828	Yolo	80
Santa Cruz	3 672		
Sonoma	3,383		
Siskiyou	2 530		
Tulare	7,867		
Ventura	2,727		
Total gain	96,860	Total gain	5,286

Some interesting regional groups may be made that teach some obvious lessons. Bear in mind, I am dealing only with increased rural population.

Group 1.

SOUTHERN CALIFORNIA—SOUTH OF TEHACHAPI.

Los Angeles	20,080
Orange	1.466
San Bernardino	6,507
San Diego	10,540
San Luis Obispo	3.616
Santa Barbara	2.837
Ventura	2,727
Total	47,773

Group 2.

CENTRAL—A PART OF NORTHERN CALIFORNIA—COUNTIES NORTH TO SAN JOAQUIN.

Kern	1,346	
Tulare	7,867	
Fresno	10,330	
Merced	1,866	
San Joaquin valley—total		21,409
San Benito	651	
Monterey	4 670	
Santa Cruz	3 672	
San Mateo	1.198	
Santa Clara	5.828	
Coast south of San Francisco—total		16,019
Sonoma	3 828	
Napa	2,171	
Contra Costa	495	
Solano	47	
Around San Francisco bay—total		6,096
Total		43,524

Group 3.

NORTHERN CALIFORNIA—COUNTIES NORTH TO SHASTA.

Sacramento	870	
Yolo	80	
Colusa	349	
Sutter	155	
Shasta	564	
Sacramento valley—total		2,018
Mendocino	777	
Humboldt	4,226	
Del Norte	4	
Coast north of San Francisco—total		5 007
Total		7,025

Group 4.

SCATTERING.

Alpine	59	
Inyo	308	
Lassen	633	
Modoc	294	
Siskiyou	2,530	
Mountain counties—total		3,824
Total		3,824

These groups show that seven counties of southern California have received 61 per cent of the entire increase of rural population in the State—a very significant fact.

LOS ANGELES AND ORANGE.

My tables also correct an apparent error of the census table in treating Los Angeles county. Orange county was formed in 1889, and all the population there found was placed in the column of increase for that county in 1890. The fact is, that by consulting the census of 1880 we find 8579 of this increase for 1890 were in the same territory in 1880. In giving the increase for Los Angeles, the census bulletin treats this number, 8579, as in Los Angeles county in 1880; and thus diminishes the increase in the latter county. I have in my tables dealt with Orange fairly, but have deducted these 8579 from her apparent increase; thus correctly showing what has taken place in the territory comprising the two counties, and thus giving Los Angeles the full credit to which it is entitled.

The tables, however, enable one to see the exact status of each county, and it is also easy to arrive at certain deductions, which fact gives the tables their value.

A SPLENDID GROUP.

It will be noticed that group two embraces a region containing every attraction known to California—the charming valleys of Santa Clara, Napa, Sonoma, Salinas, all of the San Joaquin valley, the delightful suburban valleys around the bay of San Francisco, and the widely known watering places of Santa Cruz and Monterey; it embraces also the country where the bulk of the deciduous fruits and the cereals of the State are produced; a region, too, within the direct and immediate influence of our metropolis, and comprising an available area very much greater than that of southern California; and yet these 13 counties have added to their rural population 4249 less than the seven counties south of Tehachapi.

It is noticeable that some rich and attractive counties are not in the list and show no rural increase. San Joaquin and Stanislaus are conspicuous by their absence, when their high merit is considered.

A DISCOURAGING EXHIBIT.

Turning to group three we find a still more discouraging exhibit. Leaving out Mendocino, Del Norte and Humboldt counties, as situated on the coast and separated from the other counties of the group by a high mountain range, and we have an increase of rural population of the the entire Sacramento valley, only 2018.

And this result is reached by leaving out of consideration Yuba and Butte counties, whose aggregate loss in ten years was 2430, which would wipe out the gain I have shown for the whole valley. This, however, was a loss of miners, and hence I give the valley the benefit. Otherwise it would appear that the Sacramento valley has 402 less rural population than in 1880, and I suppose accurately speaking this is the true situation.

STAGNATION IN THE VALLEY.

There is much to encourage the counties in Group 2, but what can be said to explain the utter stagnation in the counties lying in the Sacramento valley? Sacramento, Yolo, Colusa, Glenn, Yuba, Sutter, Placer, Butte, Tehama and Shasta, counties possessing every attraction to the home-seeker that can be found elsewhere in the State, have not added one-third as many rural population as the single mountain county of Siskiyou.

Little Inyo, tucked away in the heart of the Sierras, and accessible by rail only by the way of Carson City, Nev., has grown more than Sutter and Yolo put together, and about as much as imperial Colusa, with all her boasted primacy as a wheat-producer.

Alpine, hedged in by mountain cliffs and reached by snowshoes in winter, with a total population of only 667, gained as much as Yolo, of whose county seat it is said that it contains the wealthiest per capita population of any town in the United States.

And yet in this group of laggards will be found the largest vineyard in the world and the largest orchards of deciduous fruit trees in the State. The orange groves of Marysville, Colmena, Palermo, Oroville and Placer attest a climate similar to that of famous Riverside. All that beauty of scenery and picturesqueness of landscape can add to a country fertile as the fattest lands of the State, is here present to invite intending settlers, but they have not and do not come. I claim the right to speak thus plainly of my own home.

WHAT ARE THE REASONS?

There is some reason why Fresno has gained 10,330 of population in ten years, and Tulare 7867, while San Joaquin and Stanislaus have gained none, and Merced only about one-tenth as many as Fresno—all lying side by side in the same great valley and surrounded by similar conditions of soil and climate.

There is some reason why the splendid counties of Sacramento, Yolo and Solano, through which every visitor to San Francisco from the North or East must pass, has added less than 1000 to their agricultural population in ten years.

I will not at this point attempt to give the reason, lest I break the force of the facts I am pressing upon public attention; those most concerned should search it out and apply the remedy, as should be done elsewhere as well.

The foregoing appears chiefly from the face of the census. Going outside and consulting facts known to us all, and we are able to make some further important deductions.

FRUIT THE ATTRACTION.

The rural or agricultural growth has gone where the fruit industry has developed or is being developed largely, and it has shunned the exclusively wheat-growing counties.

Turn back and consult the tables, and in every case, with a very few exceptions, where there has been substantial increase you will find a county where fruit is the distinctive attraction. The exceptions are cases not involving agricultural development; as, for example, Siskiyou and Humboldt counties, where the lumber interest brought the people in large part. In no instance will you find any growth worth mentioning in the rural districts where wheat-farming is the leading industry. Generally in such districts there is an actual loss of population and decadence of prosperity. The towns have grown in some counties, but the country has not.

GREAT GAINS IN SEVEN COUNTIES.

It will be seen, also, that while 61 per cent of our rural increase is in the seven counties south of the Tehachapi mountains; the balance is nearly all south of a line drawn east and west through the city of Sacramento.

It is worth our while to search out the reason for this. It does not lie in soil or climate; the conditions both of soil and climate are even more favorable north of this line than south of it, by reason of similar conditions generally, and with the added comparative cheapness of lands and increased rainfall north of the line which makes irrigation unnecessary to grow fruits successfully. What is the cause?

TWO CONTROLLING REASONS.

Primarily, I attribute it to large landholdings and a failure or unwillingness of the owners to subdivide and invite immigration.

Another potent cause is the absence of competition in transportation lines, by reason of which there has not been that stimulus on the part of carriers, so energizing in the south, to promote immigration and create new business.

Without the data, I cannot state more than my belief: but my belief is, that the agricultural tonnage has not increased in the Sacramento valley in the past ten years,

whereas it ought to have more than doubled. Leaving out the fruit shipments, I think there can be no doubt about the agricultural tonnage having fallen off, and this is a reproach to the people of the region as well as to transportation companies. But whether or not tonnage has decreased, the fact remains that the people do not increase, and without people we cannot have prosperity and growth.

THE PEOPLE ARE UNENTERPRISING.

Still another, and by no means the least important cause lies within the resident population itself which does practically nothing to improve upon existing conditions, or to show the capabilities of soil and climate. It has been demonstrated in this State that the genesis of every successful attempt to attract buyers and bring in settlers has been the local effort of citizens. In no instance have strangers alone come in advance and possessed the country and developed it. The local people have always made the first advancement and demonstrated their faith by their works. Fresno is a typical and honorable example of this fact. Southern California is a resplendent monument to the local enterprise of her people.

Scattered over the north are large plantings, but there has been no community of effort looking to immigration. General Bidwell at Chico has probably 1500 acres of orchards; Governor Stanford at Vina, 3500 acres of vines; Mr. A. T. Hatch and his associate, 1700 acres of orchards at Biggs, and 600 acres near Cottonwood, and 1000 at Suisun, besides other plantings. Other large orchards might be named, and many smaller ones; but trees do not grow people, and large orchards do not imply increased population.

While as a board we represent the whole State, and have always avoided the promotion, invidiously, of one section over another, is it not our plain duty when we see causes at work to retard any particular portion of the State, to point them out and lend our assistance to their removal?

ADVANTAGES OF THE NORTH.

The absolute truth about northern California is, that in some respects it offers greater inducements to the settler who desires to engage in our leading industry of fruit-growing than any other portion of the State at this time.

Lands are cheaper; the climate is favorable to the growth of all our fruits; irrigation is not a necessity; the region is healthful; the landscape surroundings are cheerful and picturesque; the country is well watered; river navigation is practicable to the upper end of the Sacramento valley; a railroad traverses the country on each side of the river; the lands are fertile and bring fruit trees rapidly into bearing; the valley has no disadvantage, save its heat in summer, which is no greater than in all our valleys remote from the sea, and this disadvantage only adds somewhat, but no great deal, to the discomfort of living for two or three months of the year, while having its compensation in growing and curing our fruits. Notwithstanding the large land-holdings to which I have alluded, there are many thousands of acres of excellent land for sale at low prices in almost every county.

I think we have a right to point out this condition, as we know it to exist; and while we would not divert a single person from other parts of the State, we may, with entire propriety, say, as a Board, that no reason exists why northern California should not receive a large population.

THE FACTS MUST BE FACED.

There is this to be said in justification for making the exhibit I have presented as graphic as possible. It brings the condition squarely before our people; it corrects false impressions and dispels false hopes; it answers the class which has claimed that we have been doing well enough—basing their opinions on unrelated data, and appropriating results attained by others. It will be a surprise to many to find how they have failed to attract any of our increase of population.

San Joaquin and Stanislaus will begin to inquire why the people have gone past their doors without even stopping to bid them good morning, and have settled down in Fresno and Tulare. The people of the Sacramento valley will ask why it is that 343,436 inhabitants have settled in the State during the past ten years, and only 2018 have cast their lot with them. If the germ of public spirit and patriotism and enterprise has not died out utterly, it will—or certainly should—awaken our slumbering energies and arouse our latent activities.

And withal, I maintain that this very expose will be a safe and true guide-board for the intending settler who is not able to pay high prices for land, but would prefer to go where his labor will not only give him the same returns as he would get elsewhere, but will give him the added value to his land that must come to him if he settles in the less undeveloped regions. In the favored counties land has reached a high figure, if not its maximum; in the counties referred to not yet developed, the settler will have the benefit of the rise in values that will surely attend rapid growth.

RAILROADS SHOULD HELP.

The facts brought out by these tables suggest some important considerations to the transportation companies. If it be true, as the foregoing would seem to demonstrate, that the fruit industry is destined to be the leading agricultural industry of the State; if it be true that to it is due largely the increase of our agricultural population, the plainest principles of business interest would require the railroad companies to promote this growing industry in every way consistent with fair returns for the service. And the relief and encouragement must come, not alone in lower rates, but rather in prompt and expedited service.

INCREASES OF A DECADE.

We shipped East by rail in 1880, 546 carloads of fruit; in 1891 it had increased to 17,738 carloads, excluding wine and brandy. This large addition to the business of carriers in shipping our fruit is but a part of the added traffic. It has brought with it increased passenger traffic and all the varied and profitable business of distribution of supplies to this army of fruitgrowers. We have but to study the evolution of southern California to see how enormously the freight and passenger business has grown under the direct and immediate influence of the fruit industry. It would seem to me that the plainest dictates of ordinary business sagacity would bring the fruitgrowers and the transportation companies into the most intimate and friendly relations, and that there should be no attempt on the part of one to overreach the other.

To say that the future successful development of fruit-growing depends upon its treatment by the railroad companies is only to repeat what is patent to us all. To say that they would deliberately enforce a policy detrimental to or destructive of the industry is to attribute a degree of ignorance to their managers which we know they do not possess. We therefore speak with the same plainness and frankness to the railroad companies as we do to ourselves when dealing with the lessons to be drawn from this study of the census. A common interest suggests certain obvious steps to be taken by railroad managers as well as by the people. Southern California and portions of central California have done well, and are doing well. Let us be thankful for that. Northern California needs the earnest, intelligent effort and best energies of her most influential citizens, and especially does it deed something more than the mere operation of trains on the part of the only railroad company we have; it needs its direct efforts to promote immigration.

There is no single sound reason why, with the mutual and zealous cooperation of these two forces (the people and the railroad company working to a common end) we should not rapidly add to our population, develop new business and increase the prosperity of this portion of the State.

I have been led, Mr. President, to lay this matter before this Board because it seems to be within the province of my committee, and because I am deeply impressed with the belief that there are causes at work to retard the growth of portions of the State that ought to be sought out and remedied.

PEOPLE SHOULD AROUSE THEMSELVES.

I think the facts should have the widest circulation among our own people, in order that they may be stimulated to search the remedy and apply it. It may not be pleasing to delinquent counties to see their shortcomings thus exposed, but the true friend of progress never fears the truth, but rather welcomes it. I have the same unshaken faith in northern California that has kept me there at work in my humble sphere for 16 years, proud of the development at the south and elsewhere, but always hopeful that the splendid resources of the north would have recognition.

I believe that there will soon be an awakening among the people of this region, and that we shall at no distant day enjoy the higher civilization that always attends the expansion and development of a country so intrinsically meritorious and so deservedly inviting as northern California.

Trusting that my labor—and it has been no easy task in thus presenting the results of immigration to the State for the past decade—may awaken inquiry, and that it may lead to greater effort where it now plainly appears it is most needed, this report is respectfully submitted.

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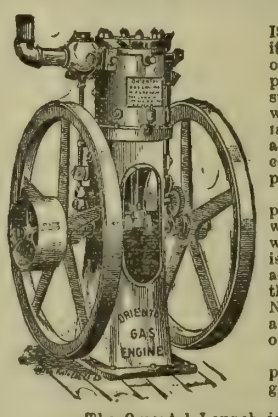
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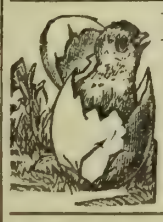
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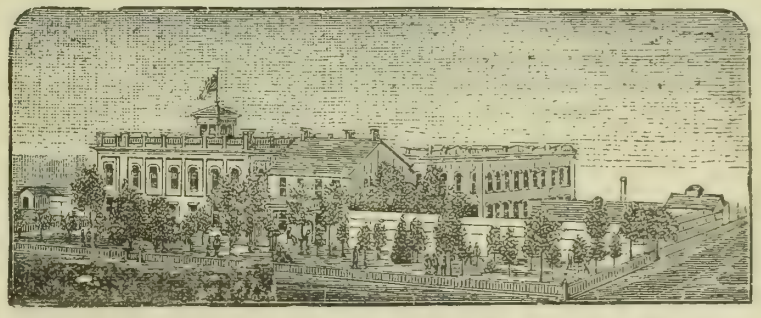
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The Home Circle.

The Storm King.

Written for the RURAL PRESS by LILLIAN H. SHUEY.

Hear the drum and the fife of the army of the South,
See the couriers riding fast!
See the cohorts riding past!
Hear the whistle of the fife in the Storm King's mouth.

Hear the sounding and the throbbing of the Storm King's drum,
Sobbing through the cloudy spaces,
Rolling on the bare hill places,
Hear it beating where the frightened forest birds are dumb.

Now the whistling fife is calling at the corner of the roof;
Calling up the lagging legions,
From some stormy, misty regions;
Hear it calling, calling with a plaintive, shrill reproof.

See the legions on the mountains rolling up the ranks of rain!
See the low, dark shadows coming,
While the wind with sonorous drumming
Keeps calling on the legions to the dry and dusty plain!

And the Storm King rides his chariot. 'Tis a snowy, sunlit cloud;
And his charger's feet are treading
Where the long, grey paths are spreading,
And his robe is trailing in a misty, dusky shroud.

O, the clouds that fill the valley! 'Tis the army of the South,
And the conquered peaks and passes
Lift the banners of the grasses.
O, the gladness of his coming!
Hear the south wind wildly drumming!
Hear the whistling of the fife in the Storm King's mouth!

The Two Scales.

Written for the RURAL PRESS by CHARLES P. NETTLETON.

I think this strange, sweet scale of sounds we know,
This wondrous swell from highest starlight roll
To lowest thunder-bass, is to God's whole
Vast music-realm as one short note, one glow
Of light from His great sun, whose wider flow
Shall for God's own voice be known by the soul.
Then shall no jarring note the rest control,
For discord dies with other earthly woe.

If but one note, fragmental thus for man,
So awfully can draw a soul confined,
What feels the soul when free?
Who can foretell?
Some mountain-tops of truths we may not scan
Till spirit sees but spirit, or if divined
In some wondrous hour, silence speaketh well.

Madame Savarra.

A football game was going at full blast. All the seats on both sides of the field were full, and inside the ropes was a straggling line of white and crimson substitutes, looking like great squatting ducks. At the moment when my story begins, every one in the tiers of seats had risen hastily to his feet and was vigorously clapping and stamping, as he strained his eyes to follow the Harvard back that sprinted with the ball through the dusty glare. Even the substitutes had got up and were running along the edge of the field half doubled up. The bottom row forgot to cry "Down in front," the crimson reporters wrote all crooked, and in the excitement an invasive small boy escaped from the pursuit of a desultory policeman.

While the interest was thus at its height, a sudden lull came in the applause of one section of seats. Some people deliberately stopped cheering, others paused to see what could be detracting attention from such football; all felt repaid for their momentary abstraction. The two women that had caused this stir of silence walked slowly before the spectators. One of them was such a person as we read about, and sometimes see. Tall, largely and well formed, and gracefully dignified, she wore a well-fitting, fashionable gown which was striking in cut and color, while it escaped being loud. All the correct appendages of hat, gloves and wrap she had in the latest style. Her face was pleasant and intelligent, and if there was a touch of rouge and of powder, it was applied with so practiced a hand as to escape notice. She did not look her 40 years. The other woman was dressed with equal taste, and more plainly, and looked older than the first one. Evidently she was a maid or companion.

By the time the two had found seats the touch-down was made. Everybody was sitting, and as the goal was kicked the flame of applause went out in a quick blaze of sound. Then every one was leaning forward to look at the strange arrivals, where they sat apparently unconscious of the effect of their appearance.

Henri Sherwood, a freshman, who sat behind them, spoke timidly to a sophomore that he did not know:

"Will you please tell me who she is?"

The sophomore half turned his head and said in a low, supercilious tone, "Why! Madame Savarra."

The freshman knew the name. He had read it in the papers, on the fences, and had heard it everywhere. It was a popular name of a successful woman, one of the few women of the day that had enough mind and soul to play Shakespeare. He looked at her keenly and decided to see her act that night.

Soon after this the first half was over. People got up and went down on the ground and walked about. Henri Sherwood stepped down from his place, and stood for a moment looking about him. Some one touched him on the shoulder, and said:

"Hello, Henri Sherwood."

The two fellows moved off together, and Sherwood did not see the quick, wondering glance that Madame Savarra gave him as he mixed with the crowd, although he had been staring at her a minute before. She spoke in a low tone to her companion, and the two women walked a little way among the people, but they soon reseated themselves, and waited for the second half. Sherwood did not see them again during the game.

There is, however, no doubt that they saw him, for at about six that evening Dick Roberts went into Henri's room and began:

"Say, do you know, Henri, that Savarra was talking about you? I heard her say to the other one, 'Sherwood; yes, I'm sure it was Henri Sherwood.' She talks with a kind of an accent. And then she caught sight of you and pointed you out, and got as excited as the devil. Do any of your folks know her?"

"Dick," said Henri, striving hard to be calm, but trembling, "I should think there is something up. That woman is my mother."

"*Mother!* Savarra?"

I believe that for a minute Dick thought that Henri was out of his senses, for he could see that there was no joke, but Henri soon convinced him of the truth of what he said. He showed him a note from Madame Savarra that he had found in his room after the game, and he told him the story of his parents. It is too common a story to be romantic—that of the married pair that cannot love, cannot even endure each other longer, so that some plea is found and the bond is dissolved. In this case there were unique points; the wife had been a young French woman, beautiful and accomplished, but inexperienced; her only child had been taken from her, she had departed from an inhospitable land, but where she had gone no one had cared to know. Henri could not remember his mother, but he had clung superstitiously to the name she had given him, and would never English its spelling, which was all he could do to show an inborn love for an unknown parent. His father had died years ago, and he had been brought up by his aunts and his uncles.

This is the story of which Henri now excitedly recounted the main points. He was a fellow with some romance, and had been silently used to worship his mother, as he vaguely imagined her to be; but this very romance had heretofore disinclined him to speak of its effects. Now, however, he surely had no reason to be reticent. The mother was found. Joy at the idea opened his heart and his mouth, and he poured out to his friend his happiness and his pride.

He gave Roberts the note to read, and watched him with an unconquerable smile of delight while he read it. The diction was not of that cold formality that a woman naturally uses in writing to a strange young man. The English was good, but had one or two European turns of expression, and the warmth of the style also seemed rather exotic. Although the language was involved, the note certainly presaged a joyful reunion of long-sundered ties; but this was not put in so poetical a form as to cause the request that came last to be an anticlimax. Madame Savarra wished Sherwood to call the next afternoon at the Hotel Vendome.

When Roberts finished reading, he said: "Well, let me congratulate you, old man. You ought to be a happy fellow."

Henri answered, "There are not many women on the stage a man could take for a mother and be proud of."

The next day Henri went to the Vendome and was taken to Madame Savarra's private parlor and told to wait a few minutes. He sat during these minutes in a state of tremulous excitement, trying to be calm, and yet asking himself why he should be so. He was there to be restored to his mother, from whom he had been parted for years, and whom he had loved with an innate love; and this mother was a woman admired and almost adored by thousands, a woman renowned for her beauty, her intellect, and her virtue.

The door opened, and as Sherwood arose Madame Savarra entered with an odor of violets. He had vaguely expected to throw himself into her wide-open arms, but such a course seemed highly inappropriate now, as the majestic figure advanced in her robe of swaying white; so Henri stood and held the arm of his chair, as she smiled graciously and slowly spoke in her sympathetic, effective voice:

"Henri Sherwood. Will you please to be seated."

However, they both remained standing, and she immediately went on, calmly, but giving no chance for reply.

"You of course know why I have sent for you."

She had a distinctly foreign accent, and spoke with vigor and with attention to point, as though she were giving some telling speech before a large audience; and occasionally she used a quiet, well-chosen gesture.

"The unexpected recognition of yesterday afternoon, and also this meeting of to-day, gives to me the greatest pleasure. It is not often that I have been so deeply interested in any event; and this is not only on account of the undivided happiness that such a joyous reunion must afford to even an unaffected observer, but equally because I am for so long aware of the merit of that worthy soul to whom this meeting gives already the most immense delight. To me that knows how long and earnestly the mother has hoped and prayed to see her dear child again—and this I know as no one else can—it is like an answer to the prayer. To you, who have your splendid feelings of the youth, it will not be needful to say anything in praise of that dear parent, but I cannot meet you without telling you how I appreciate her true value, which you yet have to learn. She is the faithfulest, the most trustable of women and the most patient. For all these years Madame Sherwood is always my most beloved friend; and I have never regarded her position as in the least menial, for she has been to me more as a sister than as a companion. And so I can share her happiness of regaining you. All this time, sir, your poor mother is waiting for me to bring her to you."

With a charming smile Madame Savarra turned and walked majestically to the door, while Henri Sherwood clung to the arm of the chair.—Louis How, in the Harvard Advocate.

A NEEDLE'S VALUE.—A recent traveler among the Eskimo lands speaks of the little sewing needle as a priceless treasure. He says: The conditions of life of these people, and the value in their eyes of articles which to us are so insignificant and common that we think no more of them than we do of breathing, are almost beyond our conception. Imagine, for example, one of these Eskimo women, whose duty it is to make the garments of her husband, herself, and her children—and an idea of the amount of work that this means may be obtained when I say that the birdskin shirt, an indispensable article of dress of every individual, young and old, is made up of from 70 to 100 birdskins, neatly sewed together—imagine, I say, a woman, situated like this, and having during her entire life-time but one opportunity to obtain a needle. When that one opportunity is offered, if it can be obtained in no other way, she gives for it all she possesses, and once the shining bit of steel is in her possession, an ivory case is made for it, and the case is immediately fastened permanently about the owner's neck. If she breaks the point of the needle, she searches perhaps for days until she finds a bit of stone fine enough and sharp enough to grind a new point on the needle. If she breaks the eye, the shank of the needle is laboriously etched and roughened with stones until she can attach the sinew which forms her thread in the same way that the shoemaker attaches his waxed thread to his bristle. And when the owner dies the precious article is handed down to her favorite daughter.

DAUGHTERS OF ISRAEL.—The Daughters of Israel is a society recently organized in Baltimore, modeled after the King's Daughters. Several hundred young ladies have been formed into bands of ten for the purpose of "doing little deeds of kindness" at home and in the neighborhood. Each member will wear a medallion or decoration with "Love thy neighbor as thyself" inscribed in Hebrew letters.

HABIT OF EXAGGERATION.—The habit of exaggeration is largely a fault with young people. It is better to admire too little than too much. Make your statements simple, concise and unaffected, and reach the point where your word can be relied on, and where your veracity and truth are unquestioned.

Life.

Two things there are we have no voice in choosing—
Our ancestors nor our existence here.
Fate's mandates here admit of no refusing
From prince or beggar, sinner, saint or seer!

Time leads us onward through the world's deep mazes;
No horoscope forecasts our end or way;
The keenest thought within the world that bla es
Cannot elucidate beyond to-day!

We see the footprints of those gone before us;
The heights attained; the ledge where some fell;
Anon we catch heaven's chimes, sweetly sonorous,
Or hear a plaint from sin's own citadel.

Our work goes on. We fancy we can fashion
A structure fair, and beautiful, and grand!
We often fail! God can but have compassion
Upon the heart that owns a feeble hand.

I can but think the rudest life work given
Has hidden in it one fair, polished stone;
Smooth, perfect, beautiful—as seen from heaven—
Though sunk in chaos, with rank weeds o'ergrown.

Enough, 'twould seem, if, with each gift extended,
We add our fraction to earth's highest good,
That we may whisper, when our life's expended,
Though poor my work, I did the best I could!

—Housekeeper.

San Francisco Fashion Notes.

Written for the RURAL PRESS.

DEAR KATIE:—The style of winter hat principally worn now is a felt of either light or dark shade, high-crowned, something the shape of a cone in fact, with trimmings brought mostly to the front. A fold of velvet is generally used for the crown trimming, it being brought from the back of the hat round to the front and fastened with an ornament—either a pretty buckle or a wide, fancy bow. The loops are shaped like the wings of a butterfly, which gives the hat a very pretty appearance. A person with a well-shaped head, with hair suitably dressed, looks very attractive in one of these hats.

Toques are also very fashionable, they being covered with velvet of different shades. The trimmings are brought to the front, and consist of loops of velvet or ribbon, with either an aigrette or wing to give the hat a finished appearance. Small hats are more worn for evening than the larger ones, but either style is very pretty for street wear. Buckles of all descriptions make pretty hat ornaments. The larger the buckle, the more fashionable it is.

Green or gray velvet makes a pretty trimming for black hats. The delicate shades of pink and green felt trim nicely with black velvet, having either wings or tips to match.

Shoulder capes have again come into fashion, although the style is not quite the same as was worn last winter. They are made of either light or dark material, and consist of three capes, with a narrow trimming of fur or beaver. Some have yokes of velvet, while others are V-shaped, with the trimmings coming from the back, over the shoulders, down the front. These are pretty and stylish. Another kind of cape which is quite neat and pretty is one made more the style of the circular. This cape is made in light tan or fawn shades, with a high standing collar of dark beaver. The edge of the cape is also trimmed with beaver.

Capes of this kind are becoming to slender people. Some people prefer capes made of the same material as the dress. Muffs and tippets will again be worn this winter. Light coats, three-quarter lengths, are also in great demand. Large buttons are much worn on these coats or jackets and set them off to great advantage. The standing collar still continues to be the rage, while the sleeve is made full on the shoulder.

The street costume is made plain and neat, the goods being generally of dark material trimmed either with silk or velvet. Narrow braid is also worn considerably. This gives the costume a neat finish. Many of the waists are made coat-shaped, having vests of silk gathered in plaits to the waist, where they are attached to a belt, either of the silk or dress material. Leather belts have been worn a great deal. The backs of the waists generally have long coat tails, reaching almost to the bottom of the skirt, rather in the redingote style. The dress-sleeves continue to be made very full from the shoulders to the elbow, where they are gathered in and attached to a deep cuff of velvet. Velvet sleeves have become fashionable again. These sleeves have a graceful effect, and give the wearer a stylish appearance. The bell skirt is still worn, but not so much as formerly. Trains for the street have entirely gone out of fashion. A very pretty street costume is one made of navy blue serge, or lady's cloth, trimmed with narrow braid some shade of red. The dress is completed with a silk vest the color of the braid. This makes a stylish combination. Plaids have quite come into fashion again, and it is the custom to blend

colors which were formerly considered incongruous. For instance, dark blue is combined with pale green, gray with brown, and dark red with yellow. The result is often more startling than pleasing to the eye.

Your friend, ELIZA.

Content.

All lands are fair to him who knows content,
All skies are sunny and all fields are green;
In dreamy mists with softest azure blent
Lie distant cloudlands tipped with silver sheen.

The wayside violet sheds her fragrance sweet,
For him the wildrose blushes are all spent;
Life's fullest gifts are poured about the feet
Of him within whose heart is found content.

—Selected.

Inexpensive Christmas Gifts.

A short time ago I wrote for the RURAL an article on Christmas presents. It has since occurred to me that directions for making a few simple things may not come amiss to many who have loving hearts and slender purses. One-half yard of scrim at 25 cents per yard makes a pretty scarf for a chair. Fold a narrow hem on the sides and a wide one at the ends and hemstitch. At one end pull four threads, then leave four, beginning about one inch from the hem. Run pink and blue daisy ribbon alternately in the places made, in three groups of three rows each.

Work diamonds of blue and yellow silk in the other end in two rows an inch apart, or better still, if you understand drawn work, do some simple pattern once across. Tie with one and one-half inch ribbon in blue or pink.

A pretty needle-book, the shape of a maple leaf, is made of plush lined with figured china silk and tied with narrow ribbon. Take small bits of bright-colored cashmere or flannel and buttonhole-stitch the edges for the inside. Put thick pasteboard in each cover so it will be very stiff. Another pretty needle-book is made in book-shape, in the same manner, except that the outside has a shirred satin pocket very handy for thimble, thread, etc.

Button bags are made of bits of silk or ribbon four by six inches. Make three bags of contrasting colors with four eyelet holes across the top of each, string together with silk cord and tassels or daisy ribbon. Paint or embroider on the first one: "Three little bags are we, all for buttons."

A pretty book-mark can be made from one yard of ribbon one-half inch wide. Crochet in buttonhole-stitch five brass rings, fold the ribbon twice, slip one of the rings to the middle and fasten, put the four remaining rings on the ends of the ribbon. Print some pretty scriptural text on the ribbons, and you have a pretty mark for the Bible. Another pretty book-mark is made by taking five-eighths of a yard of ribbon one and one-half inches wide, fringe one end and tie with daisy ribbon in some contrasting color; fold the other end to a point and fasten a tassel of the same color as the daisy ribbon.

A very dainty laundry-bag is made of cream-colored muslin, scrim or cheese cloth lined with pale-blue silesia; a hoop is run through the top, and around the outside is a band of blue ribbon with bow and ends. In the entire length of the seam, at the bottom, daisy ribbon is looped thickly in alternate loops of blue and white.

Large gingham aprons are very pretty worked in cross-stitch across the bottom; very pretty patterns can be found in almost any household paper.

Rope card-baskets are very unique, and can be made any size you wish. Take small rope and sew round and round till you have the bottom the size required, braid a piece for the sides, three strands, four ropes in a strand, and sew on; line with bright silk or satin shirred around the top and put bow of ribbon in two colors on the outside.

A very pretty tidy for a sofa or chair is made in the following way: Take 36 brass rings the size of a smallish finger ring and buttonhole-stitch with pink silk. Sew together in four groups of nine each. Take three-fourths of a yard of two-inch pink ribbon, cut in two pieces and cross, using the rings for each corner, making a square; full white Spanish lace three and one-half inches wide around the outside. It will take one and one-half yards.

A towel with an initial and vine worked at one end in wash silk makes a very pretty gift. A very pretty photograph case is made of plush. Take a piece seven inches wide and sixteen inches long and fold. Line with quilted satin in a contrasting color, fold back one corner and put ribbon bow on, the same color as the lining, or it can be made in bag shape with a bow at each side and ribbon to hang it by.

A very pretty ornament to put on the hanging-lamp is made by making balls of satin of contrasting colors stuffed with cotton and sachet powder. Sew little brass ornaments on the ends of daisy ribbon, which, if you have from five to seven balls, makes a perfect mass of the ribbon in different colors, giving a very pretty effect. A pretty chair rest is made by taking figured china silk; make two pieces twelve by sixteen inches and pad with wadding. Buttonhole-stitch brass rings and sew a row thickly on one side of each piece, tack together loosely with one-quarter-inch ribbon. Splashers, bureau scarfs, tray cloths and pillow shams can be bought in almost any store very reasonably, stamped ready for working. It is fashionable now to work such articles in colors, in wash silk.

I might continue indefinitely, but I think I have mentioned enough articles for this time and have aimed to choose the most inexpensive pretty articles that I have seen. MARGUERITE LYNDITH in Western Rural.

YOUNG FOLKS' COLUMN.

Banbury Town.

"Whither away, little maid in gray,
All in the sunshine, whither away?
Are you seeking flowers for a daisy chain—
Will you weave a crown of the golden grain,
A glittering golden crown to wear
All on the curls of your shining hair?

"Whither away, little maiden mine?
Would you pluck a posy of eglantine?
Do you seek for the fortunate shamrock leaf?
Do you come to gather an ample sheaf
Of bearded barley or stately wheat—
Dear little maid of the hurrying feet?"

"Nay, Sir, none of these things for me,
Though the flowers are many and fair to see—
Golden the grain, and cool the shade—
Pleasant the rivulet bed to wade,
But mine is a journey of high renown,
For I'm off and away to Banbury Town!

"Oh, Banbury Town is bright and gay;
Banbury folk are rich and great.
Want may walk with you all the way;
But it never can win through Banbury gate;
Only delight and joy are known
To those who dwell in Banbury Town."

"Stay, little maid, nor strive alone
To reach that wonderful far-off land;
Perhaps when life and its tasks are done
We shall enter its portals hand in hand.
And when the sun of our life goes down,
It may rise again on Banbury Town."

—Clothilde Balfour, in Longman's Magazine.

Which Are You.

I knew a jolly S-U-N
Who goes to bed when his day's work's done;
He never grumbles about a light
Or asks to stay on the streets at night.
Up in the morning so merrily
He wakes the sluggards who sleeping lie,
Drives the shadows from every place,
And says "Good morning" with beaming face.

I know another S-O-N
Who sits up late 'till the rest have gone;
He makes his mamma a deal of work,
Nor dreams he's growing a selfish shirk;
Morning comes, and he sleeps till late,
Bolts his nice breakfast at half-past eight,
And then is tardy. Tell me true,
Which one, if either, are Y O-U?

—LAURA SANDERSON.

Baby's Diary for One Day.

Waked up as usual at 3 o'clock in the morning, and cried until everybody else in the house was awakened. Then I went to sleep again.

Was aroused once more at 6 o'clock by a fly dancing on my face. I tried to hit him, and only succeeded in slapping myself so hard that I had to scream. I screamed until everybody decided to dress; and when they were ready for breakfast, half an hour before breakfast was ready for them, I fell asleep.

My breakfast was served at 8 o'clock. I don't think the cook can be much good, for I never had anything but milk for breakfast dinner, or any other meal since I can remember. After breakfast I saw my big brother playing with a jumping-jack. As I wanted it myself, I cried until nurse made brother give it up. Then brother began to cry, and because I was sorry for him I cried too.

Had lunch at 10 o'clock (same as breakfast). Went out riding afterward in my carriage, and cried all the way home because nurse wouldn't let me have a nice big black doggie to carry. He was a lovely doggie, and when I screamed he barked, so I screamed real hard lots of times. It was great fun.

Got so tired screaming that I went to sleep. At 12 o'clock waked and had dinner (same as breakfast and lunch).

Mamma played on the piano and sang to me. When I tried to sing she laughed, and as I don't like to be laughed at I cried. Nurse said I was a cry baby and cried all the time, at everything, but I don't agree with her. I never cry now at meal times, because I tried it once and found I couldn't eat and cry at the same time, so gave it up. I have all night to cry in if I want to, and I can't eat then.

Had lots of fun. Pulled nurse's hair, then pulled mamma's hair. It wasn't so much fun when I tried to pull brother's hair, for he slapped my hands. I didn't like that, so I cried. Then brother laughed, and I cried harder, and then brother was sent away. I cried harder than ever at this, for I wanted to play with brother.

Had supper at 3 o'clock (same as breakfast, lunch, and dinner.) Got mad and dropped the bottle, and cried because I couldn't have any more supper as the bottle was broken. I have discovered that bottles break. Hooray! Tried to tell nurse about my discovery, and nurse said, "Poor 'ittle sing." I wasn't a "sing," I'm not "'ittle," because there's no such word, and I will never be "poor," so I cried.

From four until five I made a new record. I generally cry at half past four every day, but to-day I didn't. I was asleep.

At half past 5 I had the last meal of the day, a new bottle having been procured. I don't know the name of this meal, but it doesn't make any difference for it was the same as breakfast, lunch, dinner and supper. I went to bed at 6 o'clock.

At 8 o'clock I waked up, and hearing company down stairs cried for some company myself. Mamma came up to me. Went to sleep.

Didn't wake up any more that night after I went to sleep the last time until the next morning.—Harpers Young People.

John Chinaman and His Children.

As a father, John idolizes his boys, but feels keenly the disgrace brought by the advent of a daughter. He does not consider her worthy of a name, but calls her No. 1, 2 or 3, as the case might be. He ignores her entirely in telling the number of his children, counting only the boys. He considers her as without mind or soul, and denies her the privilege of an education which her brother receives. As she grows up she is a slave in her own and her husband's house, and not until she is old does she receive love or reverence.

If a child is taken sick, both John and his wife think the soul has wandered away, and steps are taken to recall it. The mother calls at the open door, "Soul, come home!" The father goes out to seek it, usually searching about the nearest bridge. At his cry of "Coming, coming!" the mother looks carefully about her floor and secures the first thing of life she sees. This may be a flea or beetle, or other insect, but it is supposed to have within it the missing spirit. It is wrapped up and joyfully placed under the pillow of the sick one, who is now expected to recover forthwith. If death comes instead, the child is buried summarily and with scant ceremony. John considers his own coffin one of the most valued and most necessary pieces of furniture for his best room, and his highest ambition is to have an elaborate funeral. He and the older members of his household have this ambition gratified in proportion to their wealth and the number of their descendants.—St. Nicholas.

Humorous.

HOFFMAN HOWES: "I see by the papers that the Pwince of Wales started waising hosses five yeahs ago." Howell Gibbon: "Ya-as. And we must do everything the Pwince does." Hoffman Howes: "But how the dooce can we start waising hosses five yeahs ago?"

A THANKSGIVING CINCH.

We pulled the wishbone, Sue and I,
"I wish to kiss you!" my heart's sigh—
She won; but I've since understood
That she was wishing that I would! —Puck.

CONDUCTIVE TO GRACE. She (at the ball)—"Have you noticed Mr. Downton's remarkable deftness and grace? No matter how great the crowd he never bumps against anybody." He—"Y-e-s, I guess he gets his lunches in a stand-up restaurant, where every fellow holds his own coffee."—N. Y. Weekly.

THE WISE PIPER.

Oh, he was a piper both wise and great,
Who, though he much loved to toot,
Would never endeavor
To tempt his fate
Except on a noiseless flute.

SAFE BOTH WAYS. Maud—"I had a lovely bet with Tom!" Marie—"What were the conditions?" Maud—"If Harrison was elected I'd have to marry him, but Cleveland won, so he'll have to marry me!" —N. Y. Herald.

DOMESTIC ECONOMY.

Tested Recipes.

Written for the RURAL PRESS by ADA TAYLOR SEGRET.

Apple Tapioca Pudding.—Soak one teacup tapioca, in three cups warm water, five hours. Pare and core six juicy apples, put in a deep dish with a cup warm water and the center of each apple filled with sugar; cover and steam in the oven till tender; pour the soaked tapioca over the apples and bake one hour. Eat with a sweet sauce or cream.

Lemon Sauce.—One large cup sugar creamed with nearly one-half cup butter, add the beaten yolks of two eggs, and the juice of one lemon; beat for five minutes and add one teacup boiling water very slowly; keep hot, but not boil; just before serving add the beaten whites of the eggs.

Citron Pudding.—Beat two eggs very light and add one small cup powdered sugar, which has been beaten to a cream with one-half cup butter; flavor with lemon extract. Line a pieplate with crust, put in a layer of thinly-sliced citron, pour the mixture over and bake.

Sauce for Above.—Boil one cup of water and white sugar each, and one teaspoon butter, for 10 minutes, stirring well. Let it cool and beat in the whipped whites of two eggs; flavor with lemon.

Lemon Meringue Pudding.—Soak two cups bread crumbs in one quart milk; beat the yolks of three eggs with one cup sugar and one-half cup butter; mix all together with the juice and half the grated rind of one large lemon. Bake in a buttered dish, then cover with the whites beaten stiff, with one-half cup powdered sugar and a little lemon.

Strawberry Shortcake.—Make a rich crust with flour, shortening, baking powder, a little salt, and water enough to make a soft dough; divide in equal parts; roll out to fit a deep pie tin; pour melted butter over the first and sprinkle with sugar; then put the rest on top, with butter and sugar the same as first. When baked it is easily divided; spread between, mashed strawberries with sugar and cream; also, put some on top. Eat while warm. Bananas or oranges may be used instead of strawberries.

Veal Loaf.—Two pounds veal steak, quarter pound raw pork, chop fine; add one nutmeg, six crackers rolled, two beaten eggs, pepper, salt, and a little melted butter; bake in a loaf shape; keep water enough in pan to baste with.

Fritters.—Four eggs well-beaten, one quart flour, two teaspoons baking powder, salt, and milk to make a batter; fry in hot lard and sprinkle with sugar, or eat with syrup.

PEACHES A LA CONDE.—Peel and cut the peaches in two and stew them in clarified sugar syrup. Fill an oval mold with hot boiled rice; turn the form out on a dish, arrange the peaches around it, and decorate with preserved cherries or other small fruits from the confectioner's. Mix half a pint of the syrup with a gill each of sherry and marmalade, pour it over the dish, and serve hot.

GRAHAM MUFFINS.—One tablespoon of butter, two tablespoons of sugar, one egg, one cup of sweet milk, three teaspoons of baking powder, and flour to make a stiff batter. Drop in muffin rings.



A cream of tartar baking powder Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

ROYAL BAKING POWDER CO., 106 Wall St., N. Y.

PATRONS OF HUSBANDRY.

Return of Master Davis.

He Talks of His Trip and of the Proceedings of the National Grange.

Worthy Master Davis of the State Grange returned Thursday of last week from the East, where, as the readers of the RURAL know, he has been in attendance on the National Grange. Mr. Davis' arrival was a surprise, since, according to the program outlined by himself in last week's RURAL, he was not due until just before Christmas. He returned sooner than expected owing to the severe weather in the East, which rendered it impossible to carry out the plans he had made. "I found it," he said, "impracticable to go about, owing to the storms of snow and sleet, and so there seemed nothing else to do but to strike for home and sunshine. We found storms in Boston, storms in New York and storms still worse at St. Louis, and it was only when we struck the Arizona desert that we got a glimpse of the sun."

Speaking in general terms of the trip, Mr. Davis said: "The trip from here to Chicago was very pleasant. I want to recommend all my friends to travel on trains that do have dining cars, for it is not only economy of money but of time, to have them. The trip from Chicago through Canada to Concord, N. H., was one of the most enjoyable portions of the journey. We noticed with marked interest the stability of the farm buildings, of the roads made of stone or concrete, of the teams, and the general evidences of permanence, as compared with those of American farms, and especially with California farms. The farmhouses are built mostly of brick or stone, and the fences and culverts are largely of stone. The scenery is also inviting, even in the fall. We passed by Montreal and Toronto, arriving at Concord, N. H., on the 14th of November. The city was beautifully decorated and we were handsomely entertained. The session consisted of ten days—morning, afternoon and evening; the members were prompt and attentive to all of the business sessions. The 6th and 7th degrees were conferred on a class of over 1100, and were pronounced by two of the founders of the Order—F. M. McDowell and John Trimble—to have been better conferred than ever before in the history of the Order, this being its 26th session. The public receptions, excursions and entertainments attended by the people of Concord were perfect in every particular. The visit to the great manufacturing town of Manchester was both pleasant and instructive. The traveling members of the National Grange also visited the White Mountains and other points of interest.

"I find," continued Mr. Davis, "a general misapprehension as to the action of the National Grange concerning the financial question. The idea seems to be, so far as I can make it out, that the Grange took up a 'crank' financial scheme proposing to distribute the money of the Government on private loans all over the United States. As a matter of fact, propositions to this end were made but they were promptly voted down. It was in this connection that the most exciting and interesting debates of the session occurred. The question arose upon the report of the worthy lecturer and the supplemental minority report of the executive committee. Each of these documents contained a declaration to the effect that the farmers of the United States are in a deplorably mortgaged condition and that there is very little hope of their being able to redeem their land. The members of the National Grange considered these declarations, talked them over at great length, in fact, decided that there was entirely too much 'calamity' in them and threw them out.

The financial proposition was entirely distinct from the declaration above referred to. It was submitted by Brother Rhone of Pennsylvania, chairman of the executive committee of the National Grange, representing a minority of the committee. The plan would authorize farmers to go into the banking business somewhat on the plan of the national banking system, their money to come from the Government and secured by mortgages on land. These banks would be required to lend money upon land-mortgages at 2 per cent. The details involved in these propositions were not worked out, but many theories were advanced in the course of the discussion which was hot and heavy, bringing out the very best there was in the leading debaters of the session. The central idea was to get money from the National Treasury into the hands of the farmers of the country at a very low rate of interest. The report, bear in mind, was a minority report from the executive committee. It was completely dissected, and, before adoption, all its financial recommendations were thrown out.

Another important matter was in connection with the World's Fair. The National Grange appropriated the sum of one thousand dollars and has secured suitable and convenient headquarters for the reception, instruction and entertainment of its members. A competent person will be in charge of these headquarters during the session of the exhibition. The National Grange also, after a hot debate, went on record as opposing the opening of the Fair on Sundays.

The erection of a National Grange Temple received considerable attention and promising and encouraging reports were made from several States, but, owing to the desire of the National Grange to have headquarters at Chicago during the Fair of '93, further consideration of the matter was left to the next annual session.

The place for holding the next session was not determined. Leading candidates were Washington, D. C., Rochester, N. Y., and other places. The matter was left to the executive committee who are to notify the masters of the State Granges before the 1st of June, 1893.

Several attempts were made to amend the ritualistic work, and the constitution and by-laws, but every one of them failed.

Besides the old standbys familiar in all recent National Granges, there was a number of new men who took a prominent part. Among the more notable were Aaron Jones, of Indiana; D. W. Working, of Colorado, and E. B. Howe, of Massachusetts.

After ten days and nights of consecutive hard work the National Grange closed its 26th annual session, at 12 o'clock midnight, on Friday, November 25th, and most of the members hurried home in order to prepare their work for their several State Granges, some dozen or more of which meet December 13th.

Our return trip was hastened by the excessive winter weather, which set in on the 27th of November. At Boston we found the storm so severe that sightseeing was out of the question and all that could be done was to remain in a well-heated room and have meals sent in. The trip from Boston to New York was made on the famous Falls River Line, and the steamer "Pilgrim" creaked in every joint and tossed on the way from Fall River to New York. The route is a magnificent one, and the steamer is most elegant in all appointments and equipments. At New York we found the weather no more enticing, but, on the contrary, even more disagreeable than at Boston, and sightseeing here was entirely out of the question. The only time we left the hotel, except to get to the train, was to have our tickets countersigned for our return by way of St. Louis, at which point the weather was even worse than at Boston or New York, it being so dark and stormy in the middle of the day that one could not see to read without artificial light. To the Californian who has no knowledge of New England or New York weather, if he is willing to take our word for it, we will say it was the worst we ever saw. All the sunshine we saw after leaving Concord we found in California after crossing the Colorado river at the Needles on our return trip.

The hospitality of the New England people, the devotion they exhibit to home, and its well-earned reputation, is more than commendable. Never before in my life, nor with any people, have I seen such affection shown to the spot which each of us calls home. Many instances occurred where a person well advanced in years was the representative of the fourth generation, each of whom had been born in the New England homestead on which surviving members of the family yet lived.

The cause of the Grange in New England is prosperous, and is in the keeping of scholarly and devoted patrons. But with all the charms of New England and the hospitality of its people, their love of home, etc., ad infinitum, there is yet one thing lacking and that particular thing is California.

The representatives from California at the National Grange were on hand at every roll-call and represented the Order in this State to the very best of their ability."

Mr. Davis returns worn-out by his long journey, following as it did his political canvass. His plan is to spend the next three weeks at home in Santa Rosa, and he expects to begin his official duties early in January. It is expected that between this time and Christmas a meeting of the executive committee will be held in the office of the secretary in San Francisco.

The Farmer Taking the Lead.

Mr. Emerson, in his essay on farming, says that although men do not like hard work, they almost universally have a high respect and great fondness for tillage. He holds that this is a kind of heredity handed down as the original calling of the race. He says: "The men in cities, who are the centers of industry, the driving wheels of trade, politics or practical arts, and the women of beauty and genius, are the children or grandchildren of *farmers*, and are spending the energies which their fathers' hardy, silent life accumulated in frosty furrows."

Emerson spoke on this occasion, as he always did, from his best convictions. Although bred and bound to books and literary work from his childhood, his heart was ever in the garden, in the field or in the woods. Next to his friend and neighbor, Thoreau, he was one of the most ardent lovers of nature that ever lived. The happiest days of his life were those spent upon his little garden farm in Concord. This sentiment of Emerson is almost universal among reflecting minds. From the farm, somewhere along in the line of industry, all have sprung, and hence it is that farming has ever enlisted the love and respect of all thoughtful men in every line of profession or industry. In the industries of the world the farmer takes the lead, whether in number or importance.

The reading, intelligent farmer should be one of the happiest of men. Under the inspiration and teachings of his ancient and honored calling, he should feel the impulse of manhood, as nowhere else it can be felt. The obligations and privileges of freedom should be awakened in *his* mind more fully than in any other, and history tells us that such is the case. No pastoral or agricultural people were ever oppressors of others. As a class they have ever been found on the side of freedom, of right and of justice. They formed an important factor in the epoch, making discussions and actions which led to the establishment of this Republic. How long the commercial and industrial centers of the nation would prosper without the pure food, pure men and pure women provided by our farms and farmers' homes, is a question well worthy of consideration.

Heretofore, as a general thing, the farming community has been deprived of many of the amenities of life; but in this day, and especially in this country, this disability is fast being removed. A denser population, more facilities for education, and, above all, the flood of light and the volume of fresh and independent thought which is flowing in from that great fountain of intelligence and inquiry, the new "farmers' movement," is rapidly dispelling the darkness which has hitherto hung, as a pall, over the fireside of the farm. The entire farming community of the country is to-day "quivering with the energy of an awakened manliness," which is making itself felt in all our social, political and commercial relations. The voice of the farmer is now heard and listened to in our commercial marts and in our political assemblies, and the time is not far distant when he will occupy the full space to which he is entitled in our halls of legislation. When that time comes, it will be well for the entire country and all its vast industries and other concerns. With the farmer at the front, educated and strengthened by the lessons he is learning within the precincts of the Grange, he will be able to so grasp and appreciate the true relationships and economies of society as to sweep away the meaningless generalities of political demagogues and all the vicious legislation which they have heretofore sought to impose upon the people.

The Lesson of the Hour.

The National Grange, which—at Concord, N. H.—has just concluded its 26th annual session, was no ordinary representative body. It represented the largest and most diversified industry in the country. Its object was to lead to a higher civilization and to bring into union all the great industrial interests to work together for the greatest good of the whole country. A local paper, published near the place of meeting, says of this body:

"These men represent not the farm only, with its various operations, but they represent all that relates to the best interests of all who live upon the farm. They represent organized social intercourse among people naturally too much apart by reason of scattered population. They represent education, enlightenment, progress. They represent the first organized, persistent and successful effort to teach the farmer to improve his condition by improving himself—and back of them are 27,000 subordinate Granges, organized neighborhoods, working together intelligently for the common welfare. No other country in the world presents so sublime a spectacle. History offers no parallel to this grand work of intelligent, generous, non-partisan, organized effort at improvement of the rural population."

The extraordinary result of the recent general election has shown that a great unrest pervades the country—that the independent voter is abroad, and that the people are taking measures for the overthrow of parties and the establishment of a new order of things whereby measures shall be established and laws enacted to give more perfect protection to the toiling millions; to put a stop to the present great drift of wealth into the hands of the lordly few, and to the "ways that are dark and tricks that are vain," whereby the burthens of taxes are largely avoided by the more wealthy and thrown upon the shoulders of the comparatively poor. The efforts of the farmers to live and pay their debts on 50-cent wheat and 6-cent cotton in the great eastern and central States is not a success, and it is so confidently believed that such a condition is forced upon them by unjust financial legislation against the best interests of the masses, that a firm resolve seems to have been taken to make a change in governmental matters, either through a thorough reformation or a complete overthrow of parties. The result recorded in the recent election is but a premonition of events to come four years hence.

In bringing about such a radical change it will be the duty and desire of the Grange to guide this unrest into healthy and safe channels where good only and the best interests of the whole country will come of it.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

AN EXECUTIVE COMMITTEE MEETING will soon be held, although we cannot now name the date. Past Master Overhiser and Worthy Lecturer Huffman have expressed a desire to be present and confer with the committee on matters of interest to the Order. The appointment of a legislative committee or attendant, as recommended by the resolution of the State Grange, will likely be considered; also the matter of a farm-to-farm canvass for the organization of new and revival of dormant Granges. These, and other subjects likely to come up, will make the meeting, no doubt, an important one. Any suggestions from those who cannot be present should be forwarded immediately.

THE AUSTRALIAN BALLOT LAW, which has proved a power for good in its present form, needs important amendments, and we are glad to learn that Bro. Huffman and other earnest workers in securing the law are determined to use their best efforts to have it made as perfect as possible.

POTTER VALLEY GRANGE, we learn from Secretary W. V. Kilbourne, held a meeting in their hall, Dec. 3d, and celebrated the anniversary of the Order. Although the day was inclement, there was a good attendance. At noon, recess was taken, and the members, with their invited friends to the number of 50, partook of a bountiful repast, enlivened by the conversation of friends and neighbors and music by the young folks. Afterward, the Grange elected officers.

TEMESCAL GRANGE enjoyed a pleasant basket lunch at its regular meeting on the 3d. The anniversary exercises by the Grange consisted of short speeches by each member, somewhat in the manner of a Grange love feast. Nearly all participated, and the occasion was heartily enjoyed. The subject of continuing the publication and sale of schoolbooks by the State was the theme of a live discussion which ended in the adoption, by unanimous vote, of the resolution submitted to the subordinate Granges by Sacramento County Pomona Grange, in favor of continuing the system.

The subject of butter and cheese-making was introduced by Bro. L. Frink and discussed also by Bros. Renwick, Woodhams, Stevens and others. Bro. Frink gave his experience in setting milk in cans about two feet deep, holding about one-half barrel. He found that the cream rose better, produced good butter and more of it than when the milk was set in shallow pans. It kept cleaner also. By the system, one or two men would do as much work as three by the use of pans. He found that calves did well on the lobbered milk, without feeding them any new.

Bro. Frink has raised in his dooryard in Oakland, the tea used by his family for

years. He believes farmers could raise their own tea, as well as potatoes, in most parts of California. He scalds the leaves and then dries them, about as sage or other herbs are ordinarily cured. The large amount of work expended in China and Japan in rolling each leaf separately, is considered more a matter of fancy than necessity. Mr. Frink much information in regard to tea culture from his brother, who resided for a time in Japan.

ELECTION AND INSTALLATION OF OFFICERS.

December and January are two of the most important months of the year in Grange work. The selection of leaders in the promotion of the cause for the ensuing year should receive special attention of patrons from highest to lowest. All should be participants in this essential duty. No one should dodge the responsibility, or be lukewarm as to exercising their best judgment and efforts to place their Grange in the best possible working order for the coming twelve months. Having secured standard bearers for the coming year, they should be equally zealous in encouraging them onward and kindly and diligently support them in every laudable undertaking.

The ceremony of instaliation is a beautiful one. The inspiring lessons given in the services are pleasantly received by earnest patrons, though oft repeated. Patrons, no matter how indifferent and lukewarm may have been your attendance the past year, you can, if present, richly enjoy the installation meeting of your Order.

A sufficient number of Granges have already reported their election of officers to indicate that a lively interest prevails throughout the circle.

APPOINTMENTS OF DEPUTIES.

It is the desire of the W. M. to secure a more than usually live corps of deputy lecturers. The custom adopted some years ago, of having the masters of each county or district confer and recommend the appointment of some patron, has seemed to work very poorly. Some better and more effective method should be adopted to place deputies in the field who will give more time and attention to the work than the majority of those lately occupying the responsible position. Some have held the office so long as to seemingly become "worked out," or "tired" of the responsibilities. While ability in a deputy is a very desirable quality, it is equally, if not more essential that the one selected shall *work*, rather than be simply able to do so.

How would it do for each Grange to discuss this matter, and the master then informed of several brothers and sisters who, it is believed, would make good deputies?

WATERLOO GRANGE, writes sister Mary F. Merrill, is to discuss a pamphlet issued by the N. Y. Century Pub. Co., entitled "Cheap Money." The discussion is set for Saturday evening, Dec. 24th.

CREDIT DUE THE GRANGE.—The Grange was the first organized body to advocate the Australian ballot system in California. We think, also in Oregon. Both Grange and Grange papers were forward in this work from its first agitation until the law became an accomplished fact. The Federated Trades, and a number of earnest and talented advocates outside of the Order, did able and effective work as well as the Grange. Still, without the work done by the Grange and Patrons, it is clear we should not now be enjoying the benefits of the Australian ballot law. In our opinion, the full importance of the system is not yet realized or appreciated. It is the basis upon which other great reforms can, and no doubt will be, accomplished in the near future that could never be reached without its aid.

It is not so well known, however, that the State Constitutional Convention, which gave us our present improved Constitution, was called through Grange action. The Golden Gate Grange, which was organized in San Francisco and flourished but a few years, has that work to its credit. The subject was discussed at its meetings, and finally a committee was appointed, resolutions prepared and adopted and presented to the Legislature and supported by Grange representatives until the Act submitting to voters the question of calling a convention was framed and passed, and the people voted for a convention.

Through a non-partisan movement started at Haywards, mainly by earnest and active Patrons of Husbandry, a number of stanch and true representatives of the people's interests were elected to the convention, including Past Master J. V. Webster, Thomas McConnell and a number of other Patrons from different parts of the State.

These men cooperated with some of the labor representatives and other honest and independent members, and thus the present constitution was secured.

Golden Gate Grange, during its short existence, had many an excellent session. Pioneer Patrons who participated in those meetings will remember with pleasure the eloquent and stirring speeches that were wont to be made by Past Masters J. W. A. Wright and I. C. Steele and other able speakers of those early and enthusiastic Grange times.

GRANGE ELECTIONS.

[Secretaries are requested to send us as early reports as possible for publication under this head.]

The State Secretary has during the past week received reports of elections of officers from nine subordinate Granges as follows:

EDEN GRANGE.—Election Dec. 3d; officers chosen: H. V. Monsen, M.; C. Christensen, O.; Sister Christensen, L.; J. H. Driver, S.; H. P. Mohr, A. S.; Sister Perham, C.; Bertha Gading, T.; J. Sharai, Sec.; W. T. Christensen, G. K.; Sister S. Dennis, Ceres; Amelia Gading, P.; Kate Monsen, F.; J. Lachman, L. A. S.; Sister Mattie Driver, Trustee.

GLEN ELLEN GRANGE.—Election Dec. 10; officers chosen: C. H. W. Bruning, M.; L. Knight, O.; Mrs. Lucy Hendley, L.; Miss Emily Kurtz, S; F. M. Hunter, A. S.; Mrs. Mary Zane, C.; J. M. Zane, T.; Mrs. M. A. Miner, Sec.; Henry Chauvet, G. K.; Mrs. J. M. Whitaker, Ceres; Miss Minnie Bruning, P.; Miss Lottie Howard, F.; Miss Electa Bones, L. A. S.; F. M. Hunter, Trustee. Date of installation, Jan. 7, 1893.

LODI GRANGE.—Officers chosen: Sister Alida Allison, M.; B. P. Baird, O; Sister J. C. Shidy, L; S. F. Mathewson, S.; C. W. Norton, A. S.; Sister M. W. Shidy, C.; R. Pixley, T.; Sister Florence Huffman, Sec.; C. H. Wakefield, G. K.; Hannah Harney, Ceres; Mamie Mathewson, P.; Clara Kettleman, F.; Rebecca Kettleman, L. A. S.

POTTER VALLEY GRANGE. — Election Dec. 3; officers chosen: William Eddie, M.; Geo. W. Pickel, O.; Mrs. Fannie Thomas, L.; Jerry Lierly, S.; R. R. Burrows, A. S; H. P. McGee, C.; I. W. Grover, T.; W. V. Kilbourne, Sec.; L. D. Vann, G. K.; Mrs. Laura Lierly, Ceres; Miss Blythe Lierly, P.; Miss Minnie Spencer, F.; Miss May Eddie, L. A. S.; A. J. Thomas, Trustee. Date of installation, first Saturday of January, 1893.

WEST SAN JOAQUIN GRANGE.—Election Dec. 7; officers chosen: Simeon Higgins, M.; John Treanor, O.; Mrs. J. Chrisman, L.; Adam Parker, S.; Chas. P. Fox, A. S.; Mrs. W. Carroll, C.; A. P. Stocking, T.; W. von Sosten, Sec.; Adam Higgins, G. K; Miss May Wacksmuth, Ceres; Miss Lulu Pelton, P.; Miss Ruth Chrisman, F.; Mrs. L. J. Cox, L. A. S.; John Gardner, Trustee.

TULARE GRANGE.—Election Nov. 19th; officers chosen: John Tuohy, M.; Mrs. Nettie Merritt, O.; J. W. Mackie, L.; John Gill, S.; Albert Nelson, A. S.; Mrs. M. A. Trescolt, C; A. J. Woods, T.; Mrs. Bertha Ingham, Sec.; E. C. Shoemaker, Visalia, G. K.; Mrs. Madgeline Prenn, Ceres; Emilie Houghton, P.; Myra Parish, F.; M. Edith Maples, L. A. S.; A. P. Merritt, John Tuohy, M. Prenn, Trustees. Date of installation, Jan. 7, 1893.

TWO ROCK GRANGE.—Election Dec. 1st; officers chosen: John R. Denman, M; U. D. Houx, O.; A. P. Martin, L; Chas. Hunt, S.; Walter Church, A. S.; S. Q. Barlow, C.; C. Nisson, T.; Geo. W. Gaston, Sec.; Henry Schwobeda, G. K.; Mrs. A. Linebaugh, Ceres; Sister A. P. Martin, P.; Mrs. M. Mitchell, F.; Mrs. R. Andrews, L. A. S. Date of installation, Jan. 5, 1893.

WATERLOO GRANGE.—Election Dec. 10; officers chosen: L. A. Gremore, M.; T. B. Day, O.; Lizzie Anderson, L.; F. Long, S; Rollie Drullard, A. S.; T. J. Truscott, C.; J. R. Balkwill, T.; C. A. Merrill, Sec.; James Brumby, G. K.; Sister M. E. Balkwill, Ceres; Myrtie Macomber, P.; Daisie Brittsan, F.; Lora Osborn, L. A. S. Date of installation, probably Jan. 7 (evening), 1893.

YUBA CITY GRANGE.—Election Dec. 3; officers chosen: P. L. Bunce (reelected), M.; Fred. D. Walton (reelected), O.; Julia Littlejohn, L.; Edward Starr, S.; Glen G. Harter, A. S.; Josie M. Walton, C.; Josie R. Heddon (reelected), T.; Nellie Brophy, Sec.; Fred. Cooper, Jr., G. K.; Ella Meeker, Ceres; Belle Evans Greely, P.; Dora Kells, F.; Annie Cooper, L. A. S.; B. F. Walton, Trustee. Date of installation, Jan. 7, 1893.

Grange Anniversary.

PESCADERO, Dec. 5th.—At the close of the long storm a goodly number of the Patrons of Pescadero Grange and invited guests assembled in I. O. O. F. Hall Dec. 3d in honor of our Grange anniversary. Social, musical and intellectual enjoyment certainly contributed to the sum of human happiness, which if extended to every subordinate Grange would render the occasion an important event in the annals of our Order.

At the next regular meeting (the third Saturday in December) the election of officers will be the order of the day. The bountiful rain indicates a fruitful season; and I anticipate another prosperous year for Pescadero Grange. Fraternally,

I. C. STEELE.

Notes from Stockton Grange.

STOCKTON, December 10, 1892.

Headquarters at the World's Fair in charge of the Executive Committee of the National Grange! Just think of it! No going up twenty-one stories to dream among clouds of your mortal members being crushed by falling timbers, but a veritable home on the ground, with a fraternal director to tell you where to go to eat, sleep and buy. A thousand dollars expended for the comfort and guidance of toilers, who will deport themselves with a testifying sense of this protection and unity from the head of our Order.

Our Grange voted against the abolition of the State publication of text books. The State has the plant, and if imperfect, the series can be revised and improved at less cost than by a new ring. The State Superintendent, his aids and prominent teachers, originated and compiled the series, and other errors are likely to creep into another lot; besides, it is a hardship to parents to make an entire change. True, the necessity of paying an editor of the series $200 per month is not apparent.

The vote carried to give the wife the same right to dispose of community property as the husband after the death of the latter. One brother, who is authority on law for us, said the second husband was said to either kiss or beat the property away from the wife. Another has known it swept into a saloon. A third had seen it consumed by foolish bargains; but the majority signed the petition to change the civil code.

Some members think, as the National Grange has a balance of $74,000 on hand, it could build the "Temple of Ceres," for subordinate members would rarely see or use it.

Undoubtedly, Stockton Grange will hold an entertainment to raise funds for a temple to agriculture that would give permanence and character to our Patrons of Husbandry among other fraternal orders.

We are a unit for the government to take controlling shares in and push through the Nicaragua Canal.

Low prices for grain make us all feel poor. Never was there more cordial feeling in our membership, and good officers are just elected for a year of live business.—A. A.

Anniversary Celebration of Tulare Grange.

TULARE CITY, Cal., Dec. 6, 1892.

TO THE EDITOR:—Tulare Grange, No. 198, celebrated the 26th anniversary of the Order, Saturday, Dec. 3d. Owing to the storm, patrons from a distance were detained at home, but the program, consisting of music and recitations, was well carried out. Sister C. E. Kinney was with us and added much to the pleasures of the day by an address full of encouragement for the progress of the Order. The question of organizing a Farmers' Institute was discussed, and a committee appointed to agitate the matter and report at the next regular meeting; after which refreshments were served and all went home feeling that the occasion was a success in spite of the inclemency of the weather. MRS. BERTHA INGHAM,

Sec'y Tulare Grange.

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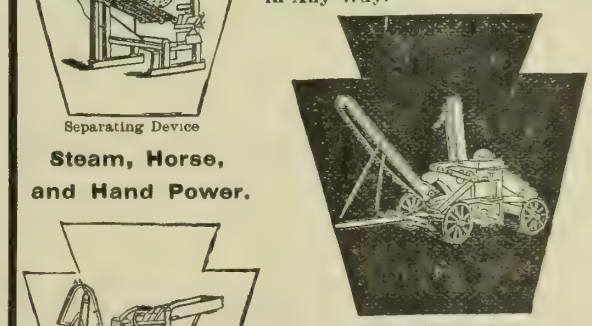
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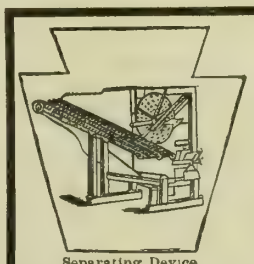
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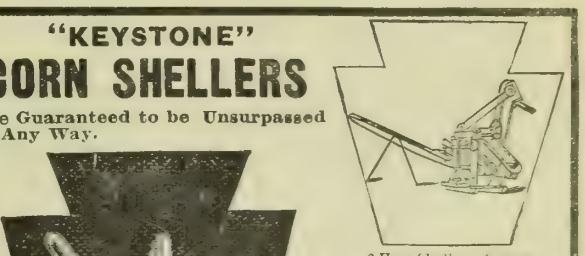
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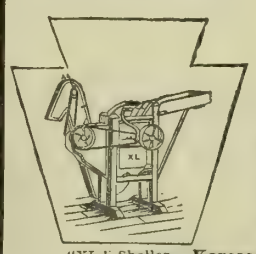
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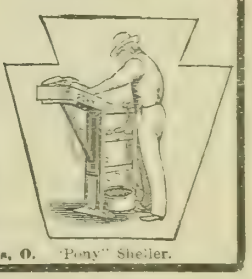


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AGRICULTURAL NOTES.

CALIFORNIA.

Alameda.

BAD FOR THE MOLES.—Livermore *Herald*: One day last week Mr. Bistorious' attention was attracted to a small island in his field. He started to wade out to it, but found the water too deep, but got near enough to it to see that it was almost covered with moles, they having been forced to take refuge on it on account of the high water on all sides. The high water caused a large number of squirrels and moles to perish on the Valensin ranch. Similar reports come in from other parts of the valley.

Butte.

FINE FIGS.—Oroville *Mercury:* Judge Gray has on exhibition a five-pound box of White Adriatic figs grown on his ranch east of town. They were cured and packed by his wife, and are beautiful specimens of fruit. They are of large size, light-colored and nearly transparent. The judge has 50 acres in these trees, and this is the first year any of them have borne. The trees are grown without irrigation on high, red soil, and strange to say, the largest trees are found on the dryest part of the land.

FINE DISPLAY OF GRAIN.—Oroville *Register*: Gen. John Bidwell of Chico has over one hundred samples of grain, and the World's Fair Commissioners of Butte are making every effort to induce the General to permit them to send these samples to Chicago. The grain was grown for Mrs. Bidwell, who desired to display the same; but as the commissioners were unable to procure samples in time, they are strongly in hopes that Mrs. Bidwell will kindly waive her ownership and allow the county to use these handsome samples of all the grains grown in the State.

THE PECAN TREE.—Oroville *Register*: Among the nut-bearing trees that do well in this part of California is the pecan tree. It is one of the most prolific bearers, its long branches often bending to the ground with their loads of nuts, producing in clusters from two to eight on the end of every tip. It is a species of hickory, and the wood is used for all purposes that hickory is used for. It is just as good for fuel, and when planted in open field, and not crowded by other trees, is naturally of a spreading habit, making one of the most beautiful and symmetrically formed shade trees in the world. It is as hardy as the osage, which, like the pecan, is a native of Texas, but will grow as far north as Iowa. A tree ten or twelve years of age will bear from six to ten bushels of nuts that are worth at least $5 a bushel. The nuts will keep without difficulty for a year, and often at the end of two years they are sweet and good. There are no less than 20 varieties of the pecan, and care should be taken to plant only the largest and earliest varieties. These trees grow readily on the foothill land.

Fresno.

A SHOWER OF MUD.—*Republican*: The phenomenon known as a mud shower was noticed in this city recently. People who were out in the rain wondered why their umbrellas and clothing were spattered with a light mud, but the matter was easily explained. A sandstorm had prevailed before the rain fell, and particles of light loam as fine as flour had been carried high up into the air. This was washed down by the rain, and every drop was a blot of mud.

Humboldt.

A LOVABLE BULL.—*Standard:* A good story comes from Newberg, told about Geo. Thompson and his partner Gus. They occupy a cabin together, and a few days ago an ancient bull, who was enjoying a holiday at pasture, entered the cabin in their absence, hooked the clothing from the wall and ate part of their bed. He was driven out, but a day later he watched his chance and entered the cabin again. This time he knocked over the stove, hooked the bed clothing into the corner, ate up the bed, and finally pulled George's overcoat down from the wall and plastered it securely to the floor.

Inyo.

HORSES GOING SOUTH.—*Independent*: Several bands of horses have started for Los Angeles this week. Wm. B. Hutchings started out last Monday with 18 head, Wm. Rowan and Felix Cardinal left yesterday with 120 head, and Chas. and Jas. Summers go to-day with 15 more. A band of over 200 head of Nevada horses is reported as passing down the valley several days ago, headed for the same market.

Kern.

GLANDERS PREVALENT.—Tehachapi Cor. *Californian*: Glanders are again reported to be prevalent among the horses in this vicinity. Several have already been killed, yet there is a grave doubt among many of the best horsemen here that the disease, as it now appears, is not the genuine glanders, and considerable complaint has accordingly been made against the action of the county veterinary in ordering them killed.

Los Angeles.

LARGE ORANGE YIELD.—Pasadena *Star*: Estimates that place this season's orange crop at 6000 carloads are doubtless too high, but it is certain that the yield will be a large one unless something unforeseen happens to prevent. Last year's crop amounted to but about 3500 cars.

FRUIT FOR THE WORLD'S FAIR.—*California Farmer*: C. M. Wells of this city, vice-president of Southern California World's Fair Commission, has sent to the State World's Fair Commission, at San Francisco, a statement of the fruit exhibit already gathered by San Diego, Orange, San Bernardino, Ventura, Los Angeles and Santa Barbara counties. There are 1386 [illegible] jars of jellies and jams, 2850 pounds of honey. Los Angeles county sends 6000 pounds of walnuts and Ventura 20,000 pounds of beans. Besides this, the association has 170 orange trees in boxes to be set out as an orange grove, and which will be in bearing during the fair. There are also 67 lemon and 11 olive trees boxed for shipment.

FRUIT FROM POMONA.—*Progress*: The shipments of green and dried fruits from Pomona this season have amounted to between 175 and 180 carloads. The dried fruits amounted to 90 carloads. Four years ago the total shipment of dried fruits from here in one season was 11 carloads.

Modoc.

BIG YIELD OF HONEY.—Alturas *Herald*: C. W. Williams of South Fork brought down about 7000 pounds of nice white honey last week, which he sold to merchants in town. Mr. W. has an extensive apiary.

Monterey.

BEET SHIPMENTS.—*Pajaronian:* Beet shipments have been made from the Salinas district this week, and, weather permitting, the narrow gauge will have lots of work in that section before the close of the week. Five hundred tons of sugar were shipped from the factory Tuesday morning, via Moss Landing. It took two trains of the narrow gauge to handle the saccharine load. * * * E. D. Leonard brought in yesterday a fine sample of coal from his place in Green Valley. He has a nine-foot vein, and there appears to be lots of it. It is a good quality, and Mr. Leonard proposes to develop the vein.

Orange.

BIG SHIPMENTS OF CELERY.—Santa Ana *Blade:* About 3000 pounds of celery have been shipped from Santa Ana this week by express. The garden is in the peat land, and large shipments will be made throughout this season.

Shasta.

OUR FRUIT IN FRANCE.—Anderson *News:* Mr. J. P. Wright has received a letter from a firm in Paris, France, offering to give any security asked, for a chance to handle the canned fruit of this season. A few samples were received by them and the superior quality was what attracted the attention of the firm.

Sacramento.

A PROMINENT nurseryman of Sacramento is quoted as saying that instead of receiving orders for hundreds of trees, as in former seasons, they now come in for thousands, and have already reached over 400,000 on his books.

THE GAME LAW.—*News:* Deputy Attorney-General Layson has rendered an opinion on the game law which provides that it is a misdemeanor to hunt, pursue, take, kill or destroy any quail, wild duck, grouse or partridge between March 1st and Oct. 1st of any year, or so deal with doves between January 1st and July 1st of any year; to have such birds in one's possession between such dates is a misdemeanor. There is an exception if the bird is used for food. Probably the Act is void in so far as it applies to birds or game coming from another State.

GRAIN STOLEN.—*Bee*: When Jacob Heintz, who lives on his ranch about 12 miles northeast of the city, woke up this morning and entered his barn, he found that during the night it had been ransacked by thieves, and no less than 600 grain bags stolen. In addition to this, a large quantity of grain was gone, and it was apparent that the thieves had deliberately driven to the barn and loaded a wagon with as much plunder as it could hold, and then driven off in the dark. Mr. Heintz has notified the police, but there is as yet no clue to the robbers.

San Bernardino.

THE Chino sugar factory has closed down, after manufacturing during the season 7,903,541 pounds of sugar.

CONTRACTS FOR IRRIGATION.—Riverside *Press:* The Bear Valley Irrigation Co. has let contracts for laying pipe. The first, for which James H. Todd, of Pomona, was the successful bidder, is for 4½ miles 20-inch steel pipe, known as the Lugonia line, near Redlands. The price paid is $30,000. The other was let to J. D. Hooker & Co., of Los Angeles, and was for putting in mains in a tract of about 75 acres at Moreno, the pipe to be 4, 5 and 6-inch. The Irrigation Co. has let contracts for laying pipe to the extent of nearly $100,000, the work to be all done this winter.

NURSERY SOLD.—Ontario *Observer:* J. W. McFatridge bought this week of Jordan & Son their entire nursery, comprising 11,000 orange and lemon trees.

BIG STALK OF CORN.—Ontario *Record*: Santa Ana district raised a stalk of corn this season that was 19 feet high, and to reach the base of the first ear would require a man five feet nine inches tall, standing on the shoulders of a six-footer, and with arm extended at full length. It was raised without irrigation.

San Diego.

THE FIRST PINEAPPLE.—*Sun:* The first pineapple to mature in this county this year is now ripe at Riley R. Morrison's garden. He says it is yellow as gold, and about 3½ inches in diameter by 5 in length. It is of the "smooth cayenne" variety. Another that will mature in about three weeks measures 6 by 7½ inches. There are a number out of blossom, but others will be blooming and ripening until next summer. The plants are all about two feet in height and in splendid condition, especially the winter varieties. By cultivation some have been made to blossom this fall, and others will do so this winter. The several hundred plants at South San Diego were set back last winter and will not blossom for a year yet.

MONEY IN APPLES.—Escondido *Advocate*: A Julian apple grower brought a four-horse load of apples to Escondido last week and shipped to Los Angeles. We understand that these apples brought the grower $1.25 a box in the orchard, or about 3½ cents a pound, yet we see by the Julian *Sentinel* that some of the mountain horticulturists fear that the apple industry is being overdone. There is more clear profit in growing apples in the mountain fruitbelt at that price than there is in growing oranges at Riverside. * * * On J. H. Hardesty's premises, on the west side of the railroad track, is to be seen a novelty for this section in the shape of three lime trees, bearing ripening fruit and blooms at the same time. The trees are eight years old and are the only trees of the kind in the city as far as we can learn. This is the first year they have borne fruit. To all appearances, the product is equal to any to be found in our stores, being large, sound and free from blemish.

San Luis Obispo.

VALUABLE ONION SEED.—Arroyo Grande *Herald*: A four-horse load of produce was brought into our depot on Wednesday that was probably more valuable than any similar load brought to a depot in the State. In round numbers its value approached $4000, and might have exceeded that amount. It was the crop of onion seed harvested by Mr. McClure on the Cienega.

A BIG CHRYSANTHEMUM.—Arroyo Grande *Herald*: John Rice has a chrysanthemum ten feet high, and the *Tribune* is advertising for some one to beat it.

Santa Clara.

THE PERSIMMON.—Los Gatos *News*: The last of all the fruits to ripen, the Japanese persimmon, now begins to show its brilliant colors. The leaves have fallen and the trees are fairly blazing with the ripening fruit. The Americans are slow to appreciate this, in the opinion of many, the best of all the fruits. One thing is against it. It is too tender to bear transportation, otherwise ere this it would be a fad among the wealthy. Placed when ripe in a silver cup, stem down, the blossom end cut off with a sharp thin knife, and a delicate silver dessert spoon to match the cup, it would be an offering fit for the queen of the fairies. Let it severely alone until it is of the consistency of custard. Those who have once eaten it in perfection will never forget its incomparably luscious flavor.

THE DAIRY.—A Gilroy correspondent in the San Jose *Mercury* says: The dairy business of Gilroy is one of her most important industries. The opinion is widespread that Gilroy lands are dry and unprofitable, hence we desire to call attention to the fact that 1 800.000 pounds of cheese are manufactured yearly by the gentlemen named below. None of these gentlemen irrigate their land, yet all raise abundance of alfalfa and rye grass. The names are: J. C. Zuck, 75 cows; A. W. Furlong, 120 cows; A. Fornii, 150 cows; Geo. E. Rea, 200 cows; Samuel Rea, 80 cows; J. P. Sargent, 100 cows; A. Watson, 50 cows; J. H. Ellis, 125 cows; M. T. Holsclaw, 25 cows; Dexter Bros., 40 cows; R. Eschurburg, 70 cows; E. A. Maze, 40 cows; A. Wilson, 75 cows; J. Murdock, 40 cows. This is a fair average of the size of the dairies here; at times they may run a few more.

Sonoma.

BIG OUTPUT OF BRANDY.—Sonoma *Tribune*: Between 1700 and 1800 tons of grapes were crushed at the Finlayson winery this year. That concern will produce this year about 35,000 gallons of brandy, and connoisseurs pronounce it a fine article.

THE Magnolia cannery at Healdsburg has shipped 20 carloads of fruits to the east within the past two weeks.

HOPS UNSOLD.—Sonoma *Democrat*: A prominent hopgrower informs us that there are about 2700 bales of hops remaining unsold in this county. Producers are holding for better prices, which they will probably get, if the number of hopbuyers in town is any criterion. There are about 12 representatives of leading San Francisco and London houses here looking out for bargains.

THE COTTONY SCALE.—Cloverdale *Reveille*: The acacia trees about Cloverdale are badly infected with the cottony scale, one of the most injurious pests to the citrus trees known. The acacia trees at the Catholic church are literally alive with the destructive little insect, and its work is already manifest in the number of dead branches seen. Some steps should be taken to cleanse these trees, or what is better, dig them up and burn them, for if it is neglected, all the orange trees will soon be infested and then the mischief will be to pay.

WINE IN SONOMA.—Santa Rosa *Democrat:* The Los Lomitos vineyard, on the Laguna, owned by John Bailiff, made this season 30,000 gallons of wine, which is 10,000 gallons more than heretofore made. The fermentation has been all that could be desired. The grapes were not as sweet as usual, which partly accounts for it. Mr. Bailiff made an addition to his cellar of 30x24, and put in a grape elevator with a considerable increase of cooperage. Most of the wine made was red Zinfandel, but there was a portion of it Reisling of very good quality. The wine from that section is especially fine in color. Mr. Bailiff is not afraid of the future of the wine business, and is getting his plant in first-class condition for the future. There is not the least indication of phylloxera in that portion of the country, and from its location it is not likely to take the disease.

Stanislaus.

PLOWS IN THE FIELDS.—Modesto *News*: The bright, sunny weather of this morning caused a great number of our farmers to start out with plow teams. If the clear weather continues a few days longer nearly all the lands in the county, except in the heaviest adobe lands, will be undergoing preparation for the next harvest.

Sutter.

BOUNTY ON COYOTES.—The supervisors of Sutter county have placed a bounty of $7.50 on every coyote scalp taken in that county, which, with the $5 additional offered by the State, should make coyote-hunting a remunerative business in that county. These animals are numerous and destructive on the sheep ranges in the Butte.

DROVE THEM TO HIGH GROUND.—*Sutter Farmer*: Oftentimes deer are reported on the river bottom, and are said to be on the increase. Near the junction of the Feather and Bear rivers there are quite a number, and the recent high water drove them out on the high ground. Several were noticed running up and down the levees, and the men who patrolled the levees are reported to have exterminated one or two to protect the embankment from the sharp hoofs of the animals.

Tulare.

WHOLESALE SLAUGHTER OF GAME.—The Tulare *Register* complains that "twelve to fifteen thousand quail are sent into the Sacramento markets weekly by hunters who are cleaning out the foothill country. These birds are trapped, it is said, as nobody could afford to hunt them down with guns and sell them at the prices they command. This is all in violation of law. Again, we are told that organized bands of hunters are killing deer in the mountains of Tulare and Fresno counties, which is another violation of law."

SECOND CROP RAISINS. — Hanford *Journal:* Two of the prominent citizens and raisin-growers of this vicinity—W. S. Porter of Martha's Vineyard and Dr. I. E. Felton of the Banner vineyard—are enthusiastic on the subject of establishing a large factory or factories in the Lucerne valley for the manufacture of the second crop of raisin grapes, much of which now goes to waste or is cured as second quality raisins, into syrup jellies, etc.

CHEAP WAY TO DRY RAISINS.—Hanford *Sentinel*: A cheap plan of drying raisins is being tested by N. W. Motheral with good success. He has an old house 20x24 in which he has put up two small heating stoves. He says it does the business fully as well as if he had a furnace underneath and an expensive system of heating pipes.

GRASS IN A TREE.—Visalia *Delta*: The capacity of Bermuda grass to grow is an old story. It will push it's way between bricks in a sidewalk. There is a dead locust tree in the courthouse yard that is attracting considerable attention from the fact that the Bermuda grass has grown up the trunk and is now covered by the bark. The grass has attained a height of four feet above the ground, and it can be seen in places where it has cracked the bark by its growth. There are tufts of it growing out of cracks in the bark.

THE OROSI COLONY.—Speaking of a flourishing community that has grown up in a few years, a writer in the Tulare *Times* says: "It is difficult to conceive of so great a change in so short a time. Vines and fruit-trees of all varieties have made a wonderful growth. Several hundred orange-trees have been planted and they are doing exceedingly well. One gentleman who has 500 orange-trees says he has never protected them from frost, and a good many of them are now bearing from one to a dozen as fine oranges as one would wish to see. The vines show no effect of frost, and the writer saw great quantities of the finest Muscat grapes yet on the vine. These are the third crop and have not been gathered on account of its being too late in the season to dry them."

A BIG EGG.—*Times*: An egg measuring 8x6½ inches was brought to the *Times* office Friday by M. J. Woodard, who resides east of Visalia in the Townsend neighborhood. Who can beat this?

Ventura.

LARGE TREE-PLANTING.—*Free Press*: F. A. Foster has just purchased 185 acres of land on the Simi of the Land Company, for which he paid $6075. He will set out 100 acres in prunes and apricots, 7500 of the former and 500 of the latter. He has 40 acres on the Wm. O'Harra place near Santa Paula, which he will set out to apricots.

FLOW OF NATURAL GAS.—*Free Press*: There is enough natural gas along the Ventura river bottom, on the property of the Ventura Land and Power Co., to furnish fuel enough to supply all the power the company can use. Edgar Orton, one of the electricians of the company, says that he has lighted the gas as it came from the ground, and it would burn for hours. No attempt has ever been made to bore for it or control it in a pipe.

ARIZONA.

MUCH LAND OCCUPIED.—Arizona *Gazette*: For the year ending Nov. 30, 1892, there were 181,818 acres of land filed on in the Tucson office. Of this amount 117 475 were taken up under the Desert Act. 52,629 acres under the Homestead Act, and 10,714 acres as cash entries This includes original and final entries. This, on a rough estimate, aggregates an area of land 50 miles long by 6 miles wide.

OREGON.

BIG BAND OF CATTLE.—Klamath *Express:* The largest band of cattle ever driven in one lot in the history of Klamath county, left Arthur Langell's fine ranch last Tuesday, bound for Silver lake, to be wintered on the desert. The cattle belonged to Carr & Hayes, and consisted of 3000 head, mostly steers ranging from two years and upward.

MONGOLIAN PHEASANTS.—Recently E. W. Langdon of Albany, Or., shipped ten Mongolian pheasants to some gentlemen in New York, who own large tracts of land there, where the birds are doing nicely.

WASHINGTON.

CRANBERRY OUTPUT.—South Bend *Journal*: The output of the Chabot cranberry farm on the Peninsula this year will be about 2500 barrels. The value per barrel is $8 on the place. The cultivated part of the farm is 40 acres in extent, and about 100 people are employed during picking time. Several thousand acres on the Peninsula are available for this industry.

THE HORSE MARKET.—Yakima *Herald:* The horse market is unusually dull, and evidently a hard winter is looked forward to, for at Cleveland, Klickitat county, a band of horses was sold under the hammer the other day, and some of them failed to bring more than $1.50 a head.

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY.

S. W. FERGUSSON,
Bakersfield, - - - California.

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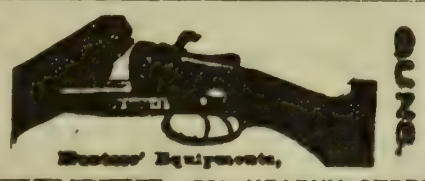
We make Iron Frame Gangs, Single Plows, Superior Channel Iron and Wood Frame Harrows, Disc Harrows, Warehouse Trucks, Wheelbarrows, etc., etc.

Our various shops are well equipped and we do all kinds of jobbing in Planing and Woodworking, Blacksmithing, Foundry and Machine Work.

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From 25 to 50 per cent cheaper than any other Scales of like quality. All sizes and kinds of Scales always in stock.

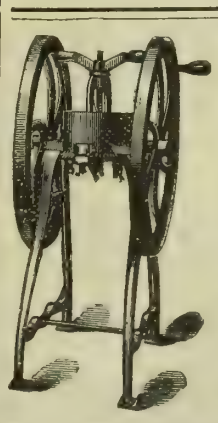
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Mann's Green Bone Cutter

FOR POULTRY FOOD.

Patented June 15, 1886; August 20, 1889. Canada Patent, June 12, 1890.

WE WARRANT this machine to cut Dry or Green Bones, meat, gristle and all, by Hand Power, without clog or difficulty, or MONEY REFUNDED.

GREEN CUT BONE WILL DOUBLE THE NUMBER OF EGGS, will make them 25 per cent more fertile, and increase the vigor of the whole flock. COST OF FEEDING MATERIALLY LESSENED.

These Cutters are endorsed by all the leading California poultrymen. Send for a Catalogue describing all sizes of Cutters and containing vaulable information in relation to feeding green cut bones.

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MANUFACTURERS OF

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FOR TOWN WATER WORKS.

Hydraulic, Irrigation and Power Plants, Well Pipe, Etc., all sizes.

NO. 130 BEALE STREET, SAN FRANCISCO, CAL.

Iron cut, punched and formed, for making pipe on ground where required. All kinds of Tools supplied for making Pipe. Estimates given when required. Are prepared for coating all sizes of Pipes with a composition of Coal Tar and Asphaltum.

Rain Table for Sacramento, Prepared to 1878 by the late Dr. T. M. Logan and the late Dr. F. W. Hatch, and since 1878 by U. S. Weather Observer J. A. Barwick, Director State Weather Service.

Arranged according to seasons, showing the amount in inches of each month, during forty-one years, and for each rainy season, to Nov. 1, 1892; also the quantity for every month, and the annual amount of rain.

MONTHS.	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892
September	0.250	0.000	1.000	0.003	0.000	sp'kle	sp'kle	sp'kle	0.000	sp'kle	0.025	0.063	0.000	0.000	0.003	0.004	0.080	0.000	0.006	0.000	0.000	2.120	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.290	0.000	0.000	0.300	0.570	0.900	0.800	0.090	0.000	0.820	0.560	0.000	0.800	0.100	0.180
October	1.500	0.000	0.180	0.000	0.005	1.010	0.000	0.195	0.655	3.010	0.000	0.914	sp'kle	sp'kle	0.355	0.000	0.120	0.480	0.001	0.000	0.000	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.483	2.630	0.970	2.010	0.020	0.680	0.000	0.000	8.000	sp'kle	0.100	0.070
November	2.250	sp'kle	2.140	6.000	1.500	4.320	0.750	0.651	2.406	0.147	6.485	0.181	2.170	0.005	1.490	6.718	2.427	2.426	3.806	0.774	0.850	0.584	1.220	1.930	1.210	3.801	6.206	0.320	1.120	0.415	1.400	0.000	1.720	3.220	0.610	0.000	11.340	0.210	0.450	4.280	3.150	0.000	0.480	.....
December	12.500	sp'kle	7.070	13.410	1.540	1.150	2.000	2.396	2.632	4.329	1.834	4.282	8.637	2.327	1.815	7.867	0.364	9.511	12.850	2.612	1.962	0.971	10.990	5.388	10.009	0.440	5.525	0.000	1.427	0.476	3.588	11.802	3.270	1.160	0.440	10.450	5.760	2.210	2.090	4.630	7.820	3.340	3.290	.....
MONTHS.	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	
January	4.500	0.650	0.580	3.000	3.250	2.670	4.919	1.375	2.444	0.964	2.310	2.668	15.036	1.733	1.077	4.776	7.699	3.440	6.036	4.790	1.371	2.075	4.040	1.230	5.200	8.705	4.790	2.770	9.475	3.769	1.519	5.980	1.380	2.210	3.480	2.160	7.950	1.120	4.810	0.150	6.620	0.530	1.780	.....
February	0.500	0.350	0.120	2.000	8.500	3.460	0.692	4.801	2.461	3.906	0.931	2.920	4.260	2.751	0.186	0.712	2.010	7.104	3.147	3.630	3.236	1.919	4.740	4.360	1.856	0.550	3.050	1.400	8.229	3.240	1.763	4.985	2.400	1.340	4.460	0.490	0.290	6.280	0.570	0.380	4.080	6.6	2.840	.....
March	10.000	1.880	6.400	7.000	3.250	4.200	1.403	0.675	2.878	1.637	5.110	3.320	2.800	2.360	1.303	0.491	2.018	1.010	4.318	2.942	1.642	0.690	1.936	0.551	3.050	0.800	4.160	0.560	3.223	4.877	2.125	1.217	3.750	3.540	8.140	0.080	2.650	0.940	3.040	6.250	3.000	1.750	3.020	.....
April	4.250	1.140	0.190	3.500	1.500	4.320	2.132	sp'kle	1.214	0.981	1.637	0.475	0.821	1.693	1.080	1.370	0.476	1.805	2.306	1.240	2.120	1.454	0.610	0.512	0.890	0.002	1.090	0.181	1.125	2.372	14.280	1.660	1.990	0.796	4.830	0.680	4.080	2.530	0.100	0.260	1.830	2.040	1.240	.....
May	0.250	0.690	0.300	1.450	0.210	1.150	1.841	sp'kle	0.203	1.037	2.491	0.590	1.808	0.355	0.742	0.460	2.252	0.008	0.270	0.648	0.270	0.756	0.280	0.000	0.370	0.040	0.190	0.640	0.160	1.318	0.805	0.000	0.350	2.900	0.060	sp'kle	0.070	sp'kle	0.400	3.350	1.800	0.60	3.780	.....
June	0.000	0.000	0.000	0.001	0.010	0.000	1.033	0.350	0.098	0.000	0.017	0.135	0.011	0.000	0.087	0.060	0.100	0.000	sp'kle	0.008	sp'kle	0.001	0.025	0.002	0.002	0.100	0.000	0.200	0.000	0.130	0.000	0.000	0.100	0.000	1.450	0.110	0.000	sp'kle	0.000	0.000	sp'kle	0.000	sp'kle	0.000	.....
July	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.030	0.630	0.000	0.000	0.000	0.000	0.004	0.018	0.000	0.000	sp'kle	sp'kle	0.000	0.015	0.001	0.000	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.....
August	0.000	0.000	0.000	0.000	sp'kle	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	sp'kle	0.000	0.000	0.020	0.000	0.000	sp'kle	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	.....
Total	36.000	4.710	17.980	36.365	20.065	18.620	13.770	10.443	14.991	16.041	22.707	15.548	36.549	11.579	7.868	22.512	17.924	25.305	32.769	16.644	13.572	8.470	24.052	14.208	22.698	17.697	25.631	9.325	25.449	17.272	26.749	26.134	16.280	18.300	24.780	16.580	32.270	13.970	11.560	19.690	33.800	15.810	.....	.....

Horse Power of Boilers.

It is a very common thing to hear men connected with steam plants speaking of the horsepower of their boilers, yet if they were asked to define what they meant by horsepower of boilers, there is no doubt but many of them would suddenly discover that it was somewhat difficult to define clearly just what they did mean, and for a very good reason. Strictly speaking, says the *Wool and Cotton Reporter*, there is no such thing as horsepower to a steam boiler, and in consequence the term horsepower of a boiler is a very vague expression. But as boilers have been found so far a necessity in driving steam engines, the same measure applied to steam engines has come to be universally applied to the boiler, and like a good many other such accidental definitions, cannot very well be discarded.

The unit of horsepower for boilers is not fixed except by arbitrary agreement among the parties concerned, the basis differing according to the nature of the work done by the steam. Many boilermakers rate the horsepower of the boilers by the number of square feet of heating surface contained in the boiler. Although this rule is followed by many, it is no criterion as between different styles of boilers—a square foot under some circumstances being many times as efficient as in others; but when the average rate of evaporation has been fixed upon by experiments in one boiler, there is no more convenient way of rating others of the same style. But by an outsider no exact rating of a boiler can be made from a knowledge of only its heating surface.

The following rules are observed in a good many boiler shops, and may be useful: For cylinder boilers nine square feet of heating surface per horsepower are allowed, for flue boilers 12 square feet, and for tubular boilers 15 square feet of heating surface per horsepower. Hence, if the total heating surface be known, divide it by 9, 12 or 15, according to the type of boiler, and the quotient will be the horsepower of the boiler. If a boiler is tested and a statement of its horsepower desired, without regard to whether it is to supply its steam to drive an engine or for other purposes, then it is agreed upon by the majority of experts to consider 30 pounds of water per hour, evaporated at 70 pounds pressure from 100 degrees, as a horsepower.

A standard was fixed by Watt at one cubic foot of water evaporated per hour from 212 degrees for each horsepower. This was at that time the requirement of the best engine in use. Most nations have a standard similar to and generally derived from Watt's horsepower, but owing to different standards of weights and measures, these are not identical, though the greatest differences amount to less than 1½ per cent.

The Care and Cleaning of Marble.

Marble, which is much less used than heretofore, has fallen somewhat into disfavor because of the difficulty of keeping it in order. It will become stained and spotted, and the average housekeeper seems not to understand how to put it in proper condition.

Grease spots are especially disfiguring, and stains are given up as hopeless. The first step in cleaning marble is to wash it thoroughly with clean water and a soft cloth. Every particle of dust, dirt or gumminess should be removed; then for the treatment of stains there are various methods. Some strong acids will remove such, but they are dangerous to use, as they will eat holes in the marble by dissolving the elements of which it is composed. Paint may be removed by pouring a quantity of chloroform over the spot and holding it in place by a thick cloth of linen or cotton.

It is said that blotting-paper saturated with chloroform laid over paint spots will absorb them, at least will so dissolve the ingredients that they may be washed out by sopping them up with the cloth and water. When the colored particles are taken out the oily portion is quite likely to come with it. If not cleaned, apply more chloroform.

Almost hopeless-looking paint stains have been entirely removed in this way without leaving a spot. If the marble is only ordinarily soiled or discolored, make a paste of common baking soda and water. Spread it thickly over the marble and allow it to stay for some hours, covering it with a damp cloth so that it will not dry too quickly. Leave it on over night; the next day wash thoroughly with clean water and polish with a bit of old wool-cloth or felt.

If marble is carefully washed once or twice in a month it rarely becomes dull or spotted unless by some accident, but when neglected it seems to grow spots, and becomes gray, and loses all of its brilliance and fine finish. —N. Y. Ledger.



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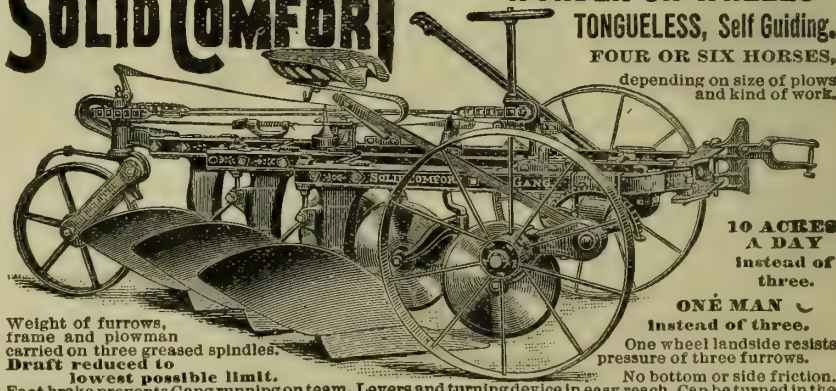
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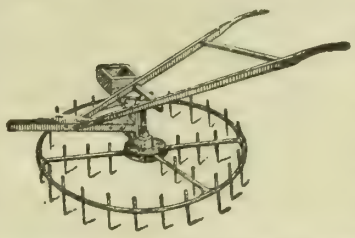
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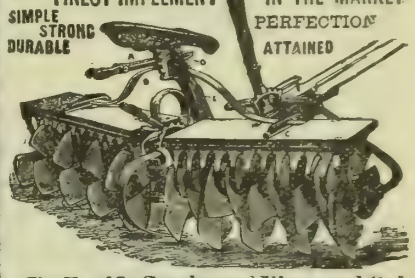
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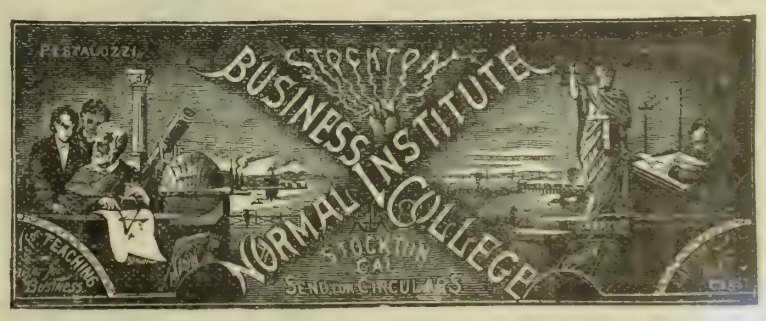
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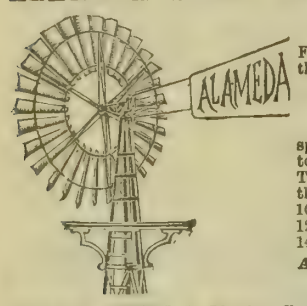
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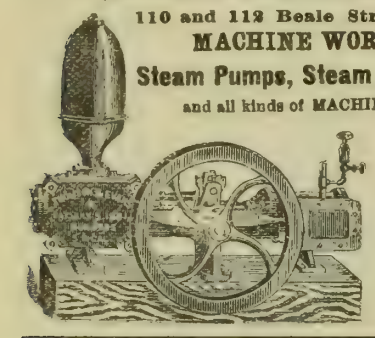
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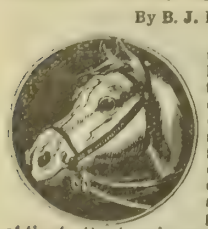
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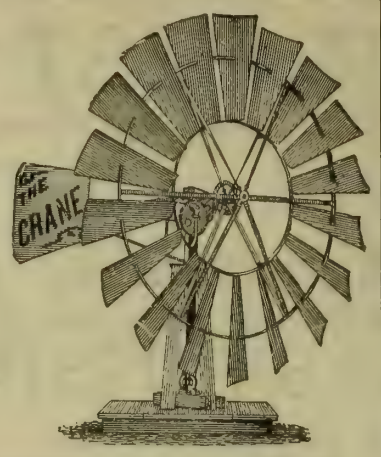
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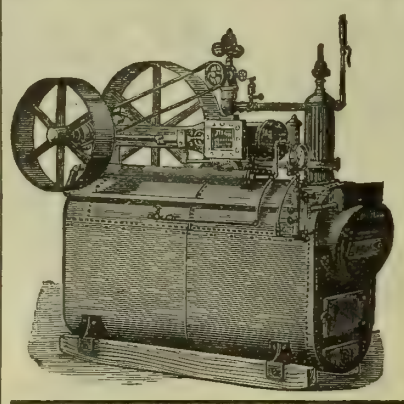
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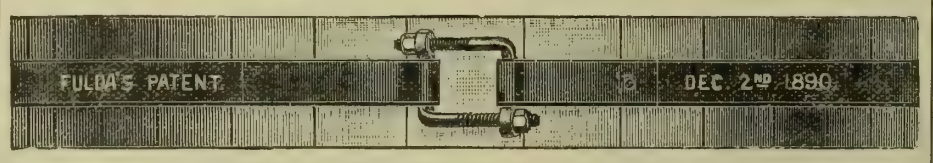
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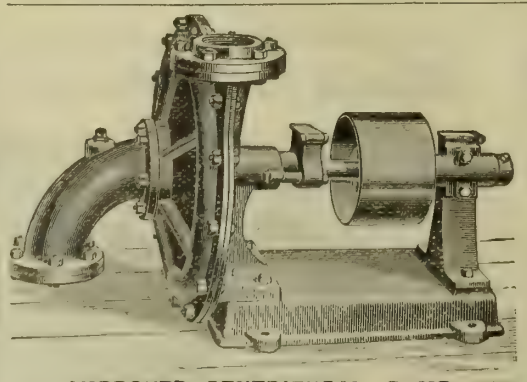
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No. 530 California Street,

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S. F. Market Report

Market Review.

SAN FRANCISCO, Dec. 14, 1892.

The weather has been all that could be desired for prosecuting outdoor work. So far as our information extends, plowing is being vigorously pushed in all grain-growing localities, while the cultivator is not in any way behind in the horticultural districts. If this weather holds for a few days longer, it now seems reasonable to assert that farmers will be well-advanced, and under favorable conditions, too, in their outdoor work. It is said that, as a rule, both plowing and cultivating is being done deeper and in a more systematic manner than ever before. If this is correct, it argues well for good returns in 1893. With strong competition in all directions, and the markets of the world in a strongly-depressed condition, only the best products will meet with quick sales and give fair returns; and it is only by thorough and the most scientific farming that farm products can be brought up to a high standard or grade.

General trade the past week in farm products has been quiet, with no new feature worthy of special notice. Trade has been confined largely to produce suitable for the holiday season, and, as is usually the case, grain, feed, etc., have been more or less neglected and only dealt in with the view of meeting daily or near-by requirements. The opening of the Baden stockyards has somewhat unsettled the fresh-meat market by ushering into the selling arena a most formidable competitor. From present appearances, it looks as if both stockmen and retail butchers will be benefited—the former through competition buying and the latter through competition selling.

The local money market is reported close, with collections slow. While this is the refrain among dealers, the banks report larger reserve funds than are usually held even in trying times. Although the reserves are large, yet there does not appear any disposition to let money out on term loans, but call or demand paper of a gilt-edged character is quickly taken. It is the fear and uncertainty regarding the future which cause this strong conservative feeling.

Cereals.

European mail advices report that the Russian wheat crop was less than had been estimated, yet this had no effect on the market owing to the depressed condition of trade the world over, and also the uncertainty regarding silver, which has a large bearing on the money markets of the world. From Australia, Hungary and Germany our advices report that winter seeding was done under favorable circumstances, and the plant had a good stand with which to withstand the rigor of a severe winter. While giving this information, yet it was conceded that the outlook promised a falling off in the acreage of winter and spring seeding, taking all countries as a whole. Eastern advices continue to report a large visible supply of wheat—the last report giving the quantity at over 75,000,000 bushels. It must not be forgotten that this season there has been a large increase in the number of elevators reporting stock; besides the roads were frozen and farmers' deliveries have been facilitated. For two years past the roads were, as a rule, in poor condition and therefore farmers' deliveries were light.

In the local market wheat has been dull, with buyers offish. It is said that there will be very little new business until after the holidays. This opinion is grounded on information that in Europe the Exchanges will soon adjourn for a week's vacation, and besides, during December foreign buyers do not like to operate. It is said that the mills in this State, or at least those belonging to the trust, are limiting their output of flour, and therefore are not in the market for wheat, and will not be until toward the middle of January. With exporters and millers out of market, the bears have it their own way, but their bids are too low.

Barley has been unduly depressed. The increased stock in this State is used to hammer futures down, and cash or spot parcels follow futures. There is a fairly steady consumption and shipping demand for the month of December. The opinion prevails that there will not be any material change in the situation before the turn of the year, and as values have sunk to very low levels, the change will probably be for the better. European and Eastern advices indicate good prices in the opening. Oregon and Washington are not sending us supplies this season.

The receipts of oats have been light, which caused the markets to retain a fair degree of steadiness. For seed purposes black are in good demand.

Corn has ruled weak, but holders did not appear to press sales, which kept values from sinking to lower figures. The supply in this State is light.

Rye and buckwheat are dull, but with no strong selling pressures, values have been maintained.

Feedstuff.

Although the output of bran and middlings is light, yet the market rules weak, particularly for the former. This is due to a falling off in the demand, owing to improved pastures. Rolled and ground barley is said to be meeting with a free consumption, owing to the comparatively low prices. Cracked and feed meal move slowly.

Choice grades of hay are in better demand, and as receipts are light, a slight advance is obtainable. Good grades, while stronger, are no higher. The poorer grades are barely steady. With an increased attention to outdoor work, the consumption has enlarged and stocks in the city are consequently smaller. The cold weather has called for freer feeding by stockmen and dairymen and others who are in the cold belt.

Dairy Produce.

Butter, after advancing slightly, appears to be again on the down grade. At the advance in the price of choice to gilt-edged dairy and creamery, dealers turned largely to pickled, owing to the wide difference in prices. With the retail trade buying pickled and the receipts of fresh roll showing an increase, holders began to press sales. The market closed weak, with buyers confining their purchases, as far as possible, fearing still lower prices. The output of the bay and lower coast counties is said to be increasing.

Cheese has held to fairly firm prices, with gilt-edged new mild still scarce. Sales in a small way are made at an advance over outside quotations, but consignment parcels are not readily placed higher. Old cheese is slow.

Eggs are irregularly firmer for more choice selected of both Californian. The receipts are larger, but this is met by an increasing demand for the holiday trade.

Vegetables.

Frosts have cut off the supply of string and Lima beans. Mushrooms are in light supply. Asparagus and rhubarb did not put in an appearance the past week. Cauliflower is higher, but other vegetables are essentially unchanged.

Onions have come in more freely. The demand is fair for both shipping and local.

Under heavy receipts potatoes shaded off, but at the close there appears to be a steadier tone, with some buying of Early Rose for storing. Poor, trashy stuff is hard to place, with quotations largely nominal, but choice to gilt-edged are moved more readily.

Fruit.

Apples are essentially unchanged. The more choice, high-colored Bishiyou Spitzenberg sell at from $2@2 25, but as these are outside figures they hardly form a basis for quotations. Lady apples sold up to $3 for something that was gilt-edged. Poor apples are a drag and hard to move, but choice to gilt-edged find ready buyers. Poor pears are low, but choice are wanted. Grapes are hard to move, as are persimmons.

In citrus fruits, the market is essentially unchanged for limes and lemons, but unripe oranges are low and hard to move. The supply of green oranges is very heavy, but of ripe, high-colored the market is bare, and when found they sell at an advance on quotations. No Fresno oranges are coming in owing to the prices they bring—$3 a box for seedling—so say Wetmore Bros. E. J. Baldwin is sending in seedlings from his grove at San Gabriel.

The market for dried fruit is reported by Rosenberg Bros. more active, with an advance obtainable for the more choice grades of apples, apricots, peaches and nectarines. From all the writer can learn, the buying prices of to-day were the asking prices of a week ago. Thomas Flint's up-put of apricots in 24-pound boxes was sold by the Granges' Business Association for 14 cts. They were not sulphured. Last year the same grade was sold at 5½ cts. Some good to choice black figs sold at from 90c @$1 a box. Raisins, unless choice to gilt-edged, are slow and largely in buyer's favor.

Live Stock.

The market for bullocks is firmer, with a slight advance obtainable. Mutton sheep are steady. Hogs are strong and in good request. Farmers in killing for this market should exercise considerable care in butchering, for often by an injudicious stab the price is depreciated fully one cent per pound. Dairy calves are firm and wanted.

Miscellaneous.

The market for poultry has gone from bad to worse under heavy receipts of both Eastern and Californian. This applies to everything, except ducks and geese. It is said that large quantities of dressed turkeys have gone into cold storage. The market is in poor shape for next week, unless receipts should fall off. W. C. Price & Co. received the past week a consignment of young gobler bronze turkeys from Mr. Strickler, of Bakersfield, Kern Co., that weighed dressed from 18 to 26 pounds each.

Soft and paper-shell almonds are doing better, as are Brazil nuts. Hard-shell walnuts are hard to move. Other nuts are unchanged.

There is a very strong bear pressure on hops, but the most reliable private advices received from England point to better prices after the turn of the year.

Wool is slow, with no assortments to draw from.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Dec. 13, '92, were as follows:

Flour, qr. sks	58,712	Bran, sks	4,143
Wheat, ctls	187,595	Buckwheat "	....
Barley, "	33,772	Middlings "	1,748
Rye, "	1,572	Chicory, bbls	25
Oats, "	3,162	Hops, "	199
Corn, "	4,696	Wool, "	73
*Butter, "	348	Hay, ton	1,198
do bxs	260	Straw, "	104
do bbls	....	Wine, gals	199,348
do kegs	42	Brandy, "	11,940
do tubs	...	Raisins, bxs	71,923
do ½ bxs	....	Honey, cs	40
†Cheese, ctls	437	Peanuts, sks	132
do bxs	65	Walnuts "	....
Eggs, doz	18,620	Almonds "	97
do " Eastern	73 680	Mustard "	....
Beans, sks	11,885	Flax "	....
Potatoes, sks	37,992	Popcorn "	....
Onions, "	2,333	Broom corn, bbls	....

*Overl'd, ... ctls. † Overland, 531 ctls.

Tonnage Movement.

From reliable advices up to Dec. 13, the following summary tonnage movement is compiled:

	On the way 1892	On the way 1891	In port 1892.	In port 1891.
San Francisco	261,874	310,963	*183,581	158,891
San Diego	9,297	19,608	7,126	.....
San Pedro	6,511	3,587	1,670	36,956
Oregon	38,908	63 179	13,938	
Puget Sound	19,078	27,543	.....	
Totals	335,968	424,880	205,315	195,847

*Engaged for wheat, 1892, 29,493; 1891, 113,912.

Exports by Sea from San Francisco from July 1 to Dec. 8.

	1892-93	1891-92
Wheat, ctls	5,259 465	7,332,182
Flour, bbls	589,576	511,524
Barley, ctls	893,114	754,703

Stocks of Grain.

The San Francisco Produce Exchange reports the following stocks of grain in this State on Dec. 1, 1892, in comparison with former stock-taking dates:

LOCATION.	Flour, bbls.	Wheat, ctls.	Barley, ctls.	Oats, ctls.	Beans, sks.	Corn, ctls.	Rye, ctls.
San Francisco and Oakland wharf, including grain and flour afloat in harbor and in transit, June 1, 1892	10,250	351,406	524,991	151,133	.....	.....	.....
Dec. 1, 1892	17,380	2,865 120	3 19,610	27,285	.....	.....	.....
Sonoma, Humboldt, Napa, Solano, Yolo, Colusa and Glenn Cos	22 939	1,653,982	159,175	14 225	.....	.....	.....
June 1, 1891	11 450	2,458,230	469,790	4,120	.....	.....	.....
Dec. 1, 1891	14,695	4,139,175	578,528	5,190	.....	.....	.....
Sacramento, Yuba, Sutter, Butte and Tehama Counties	8,760	496 850	993,460	60,220	.....	.....	.....
June 1, 1892	6,580	193,920	792,100	1,070	.....	.....	.....
Dec. 1, 1892	92,024	12,163,772	3,797 654	283,248	.....	.....	.....
June 1, 1891	120,517	2,100,149	913,049	48,786	128,189	92,837	5,831
Dec. 1, 1891	140,043	9 964,575	2,8-3 602	163,401	275,126	283,255	39 545
June 1, 1891	121,166	1,028 562	352,882	45 074	46,682	76 733	14,138
December 1, 1890	118,123	12,168 993	1,616,655	61,085	174 291	302,921	37,150
June 1, 1890	81,090	4,8 1,083	1,004,457	61,235	39,508	91,111	15,892
December 1, 1889	116,235	15,300 368	3,821,860	130 356	107,419	134,915	66,640
June 1, 1889	100,565	2,092,430	2,052,630	119,245	60,415	98,925	10,216
December 1, 1888	95,806	10,319,630	4,087 050	120,175	283,320	266,747	7,040
June 1, 1888	71 920	3,881,960	2,063,450	62,085	38,678	83,200	880
January 1, 1888	59,979	9,750,060	4,522,990	65,380	109,925	121,800	4,350
July 1, 1887	50,275	2,790,400	793,500	42,400	74,405	72,350	1,350

Markets by Telegraph.

Choice Raisins Are Firm.

NEW YORK, Dec. 11.—The market for raisins has ruled rather irregular, and outside prices are only obtainable for strictly perfect parcels. A round sale of Three Crowns in bags at 4⅛c did not help the week's tone any. At the close, selected Three Crown, big, sold at 4⅞@5c; Two Crown, good to best, 3⅛@4c; wets, 2@3c; boxes, Three Crown, $1.25@1.40; W grade and wet, $1 12@1.15; layers, prime, $1 55@1.60; fancy, $1.80@2.25. Supplies of California are materially under this date of last year, but their weight is intensified by the situation of easy-priced foreign. It is understood that coast shippers intend to regulate deliveries here for a time; this would be judicious until our market is in better shape for big blocks than now. The receipts of California raisins at New York this season equal 281,000 boxes for local trade and 845,000 for New England.

California Dried Fruit.

NEW YORK, Dec. 11.—Unpeeled peaches are low; 12c is paid for what has to be called choice, since the receipts have been so much overhauled; fancy brings 14@15c, and fine peeled in lots 22@24c. The offering of prunes is abundant for the moment, and prices are rather in buyer's favor; four sizes, 10¾@11c. Evaporated pears in bags, 12@14c for peeled, and 6@9c for unpeeled. These goods are never very popular here. Commercially canned and home-preserving about fill the bill. Apricots are about used up, selling for 15@17c.

Hop Holders Are Confident.

NEW YORK, Dec. 11.—The local market for hops is quiet; State country points absorb the export demand, and evidently make attractive terms for brewers. Spot holders, however, express no pressure to sell, as stocks are not unweildy, and they can undoubtedly make full current rates when winter transportation runs less smoothly. Last quotations cover all transactions with outside points less frequently named. Foreign imports to date are quite as free as last year. Exports, 670 bales.

Stocks of Wool Are Light.

NEW YORK, Dec. 11.—The wool market is quiet, but our assortments are down quite low and do not invite buyers. At Boston and Philadelphia, a pause is noted in the demand from large manufacturers, but it does not produce weakness in holders' views. Stocks at the seaboard are estimated something below this date last year. Little interior wool is visible, and mill wants are known to be of increased volume. This, and a firm tone in English markets, are favorable incidents for sellers. Sales at New York, 153,000 pounds of domestic and 239,000 pounds of foreign; sales at Boston, 2,191,500 pounds of domestic, and 766 000 pounds of foreign, of which 395,000 pounds was Australian and 50,000 English.

Unprecedented Low Price for Wheat.

LONDON, Dec. 12.—Mark Lane *Express* says: The record for the past week was no brighter. English wheat sells at 27s, a price unprecedented within the memory of English farmers. American and Russian wheats declined 1s and Indian 3d. Australian and Chilian wheats sell at previous prices, but stocks of spot grain from these sources are nearly exhausted. Stocks of foreign flour are estimated at 300,000 quarters. American wheat was offered in London at 23s, delivered, and it is difficult to see how exports can continue with this price ruling. Household flour in London sells for 25s, a decline of 10s on the year. The profit in flour has gone almost wholly to the bakers. On the 9th inst. Minnesota sold for 19s.

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar	April.	May.
Thursday	5s 8 d	5s08½d	5s09½d	5s10½d	5s11½d	6s0 ½d
Friday	5s08½d	5s08½d	5s0 ½d	5s10½d	5s11½d	6s0 ½d
Saturday	5s08½d	5s09 d	5 10 d	5s11½d	5s11½d	6s00½d
Monday	5s08½d	5s09 d	5s10 d	5s11½d	6s00 d	6s01 d
Tuesday	5s08 d	5s08½d	5s09½d	5s10½d	5s11½d	6s00½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S
Thursday	31s6d	31s9d	31s6d	Quiet
Friday	31s3d	31s6d	31s3d	Dull
Saturday	31s 'd	31s6d	31s6d	Steadier
Monday	31s3d	31s6d	31s3d	Higher prices asked
Tuesday	31s0d	31s3d	31s3d	Weaker

To-day's cablegram is as follows

LIVERPOOL, Dec 14.—Wheat—Buyers hold off, hoping to obtain some concessions. California spot lots, 6s 6d; off coast, 30s 6d@30s 9; just shipped, 3.s; nearly due; 30s 6d@3 s 9d; cargoes off coast, slow; on passage quieter, Mark Lane wheat, quiet.

San Francisco.

WHEAT.

	Buyer Dec	Jan.	May
Thursday, highest	1 26½	....	1 31½
" lowest	1 26	....	1 30½
Friday, highest	1 25½	....	1 31
" lowest	1 25½	....	1 30½
Saturday, highest	1 26½	....	1 31½
" lowest	1 25½	....	1 31½
Monday, highest	1 26½	....	1 31½
" lowest	1 26½	....	1 31½
Tuesday, highest	1 26½	....	1 31½
" lowest	1 25½	....	1 30½

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal: May, 100 tons, $1.30½; 1200, $1.30½. Buyer December—100 tons, $1.25⅞ ₩ ctl. Regular Session: May—100 tons, $1 30½; 100, $1.30⅜; 31 0, $1 30⅜. Buyer December—100 tons, $1.25½; 400, $1.25½; 300, $1.26 per ctl. Afternoon—Wheat—May 200 tons, $1.30½; 1400, $1.30⅜; 1200, $1.30½. Buyer December—200 tons, $1.26; 400, $1.26½ per ctl.

BARLEY.

	Dec.	Jan.	May
Thursday, highest	*83¾	84½	88½
" lowest	83	83½	87½
Friday, highest	82½	83⅝	8 ½
" lowest	81	81½	84½
Saturday, highest	....	81⅝	84⅝
" lowest	....	81⅜	84⅜
Monday, highest	....	....	*85
" lowest	....	....	*85
Tuesday, highest	*81½	81⅝	85½
" lowest	*81½	81⅜	8.½

*Buyer option.

The following are to-day's recorded sales on Call:

Barley—Regular Session: No sales. Barley—May: 100 tons, 85⅜ per ctl.

Eastern Markets.

The following shows the closing prices per cental of wheat for the past week at

New York.

Day.	Dec.	Jan.	March.	May.
Thursday	128½	129⅝	134	137
Friday	129	130	134½	137⅝
Saturday	128⅝	130	134½	137½
Monday	128½	129½	134	137
Tuesday	128	129	133	136

The following is to-day's telegram—per bushel:

NEW YORK, Dec. 14. Wheat, 76½c for December, 77c for January, 79½c for March and 81½c for May.

Chicago.

Day.	Dec.	Jan.	May.	July
Thursday	119½	122	131	129
Friday	120	122	131	129½
Saturday	121	122⅝	131	129½
Monday	120	122	131	129½
Tuesday	119½	121	13.½	128

The following is to-day's telegram—per bushel:

CHICAGO, Dec. 14.—Wheat, 71½c for December and 78½c for May.

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

DECEMBER 14, 1892.

BEANS AND PEAS.			
Bayo, ctl	2 25	@	2 35
Butter	2 50	@	3 00
Pea	2 50	@	2 60
Red	2 40	@	2 50
Pink	2 00	@	2 05
Small White	2 45	@	2 55
Large White	2 25	@	2 35
Lima	2 75	@	3 00
Fld Peas, blk eye	1 60	@	—
Do green	1 75	@	2 00
Do Niles	1 60	@	1 75
Split	4 50	@	5 50
BUTTER.			
Cal., poor to fair, lb	15	@	—
Do g'd to choice	22½	@	—
Do Giltedged	—	@	32½
Do Creamery	27½	@	—
Do do Giltedge	—	@	35
Eastern, lad e	12½	@	—
Cal. Pickled	20	@	—
Cal. Keg	20	@	—
East'n Cr eam'y	25	@	—
CHEESE.			
Cal. choice cream	9½	@	—
Do fair to good	8	@	—
Do Giltedged	—	@	11½
Do Skim	5	@	6½
Young America	—	@	11½
EGGS.			
Cal. "as is," doz	20	@	—
Do shaky	15	@	—
Do candled	30	@	—
Do choice	32½	@	—
Do fresh laid	—	@	35
Do do s'ed white	—	@	37½
Eastern cold-storage	20	@	—
Do fresh	25	@	—
Do selected	—	@	32½

Outs de prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.			
Bran, ton	13 00	@	14 00
Feedmeal	25 00	@	26 00
Gr'd Barley	19 00	@	19 50
Middlings	—	@	21 00
Oil Cake Meal	—	@	35 00
Manhattan Horse Food (Red Ball Brand) in 100-lb. Cabinets	—	@	8 00
HAY.			
Compressed	7 00	@	11 00
Wheat, per ton	8 50	@	—
Do choice	—	@	13 50
Wheat and oats	8 00	@	11 50
Wild Oats	7 00	@	10 00
Cultivated do	6 00	@	9 00
Barley	6 00	@	8 00
Alfalfa	8 00	@	10 00
Clover	8 00	@	10 00
Straw, bale	35	@	50
GRAIN, ETC.			
Barley, feed, ctl	75	@	—
Do good	80	@	—
Do choice	85	@	—
Do brewing	90	@	—
Do do choice	93½	@	—
Do do Giltedge	97½	@	—
Do Chevalier	80	@	—
Do do Gl.tedge	1 15	@	—
Buckwheat	2 25	@	—
Corn, white	1 07½	@	1 10
Yellow, large	1 00	@	—
Do small	1 07½	@	1 10
Oats, milling	1 37½	@	—
Feed, choice	1 33½	@	—
Do good	1 30	@	—
Do fair	1 20	@	—
Do common	1 10	@	—
Surprise	1 45	@	—
Black feed	1 05	@	1 15
Do seed	1 17½	@	1 30
Gray	1 30	@	—
Rye	1 12½	@	1 17½
*Wheat, milling			
Gi tedged	1 31½	@	—
Do choice	1 28½	@	—
Do fair to good	1 27½	@	—
Shipping, choice	1 27½	@	—
Do good	1 25	@	—
Do fair	1 22½	@	—
Common	1 20	@	—
Sonora	1 20	@	1 30
HOPS.			
1892, fair	17	@	—
Good	19	@	—
Choice	20	@	—
FLOUR.			
Extra, city mills	3 90	@	—
Do country m'ls	3 90	@	—
Superfine	2 50	@	3 00
NUTS—JOBBING.			
Walnuts, hard shell, Cal. lb	6	@	8
Do soft shell	8	@	9½
Do paper shell	10	@	12
Almonds, soft sh'l	12	@	13½
Paper shell	13	@	15
Hard shell	6	@	—
Brazil	11	@	12½
Pecans, small	8	@	10
Do large	14	@	16
Peanuts	3½	@	4
Filberts	10	@	—
Hickory	7	@	8
Chestnuts	13	@	14
ONIONS.			
Silverskin	75	@	90
POTATOES.			
River Reds	45	@	55
Early Rose, ctl	55	@	65
Peerless	60	@	70
Garnet Chilies	65	@	75
Burbank Seed's	50	@	70
Do do Salinas	90	@	1 30
Do do Oregon	80	@	1 10
Sweet	50	@	75

Extra choice sell for more money.

POULTRY.			
Hens, doz	5 00	@	6 00
Roosters, old	5 00	@	6 00
Do young	5 00	@	5 50
Broilers, small	2 00	@	3 00
Do large	3 00	@	4 00
Fryers	3 50	@	4 00
Ducks	4 50	@	5 00
Do large	5 50	@	6 50
Do extra large	6 50	@	8 00
Geese, pair	1 50	@	2 25
Turkeys, gobl'r	13	@	14
Turkeys, hens	13	@	14
Do dressed	14	@	17

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	—	@	11 50
GAME			
Quail, per doz	75	@	1 00
Ducks	—	@	—
Do Mal'd ₩ doz	3 50	@	4 00
Do Sprig	2 25	@	3 00
Do Teal	1 50	@	—
Do Widgeon	1 50	@	—
Do small	1 25	@	—
Geese	—	@	—
Do gray ₩ doz	2 00	@	3 00
Do White	1 00	@	1 50
Do Brant	1 25	@	1 75
Snipe	—	@	—
Do English, doz	1 50	@	2 00
Do Jack, per doz	75	@	1 25
Hare, per doz	1 25	@	1 50
Rabbits, large	1 25	@	1 50
Do small	1 00	@	1 25
PROVISIONS.			
Cal. bacon, heavy, per lb	12	@	—
Medium	13	@	—
Light	14	@	—
Lard	9½	@	12½
Cal sm'k'd beef	11	@	—
Hams, Cal salt'd	13	@	—
Do Eastern	14	@	—
SEEDS.			
Alfalfa	9½	@	10
Clover, Red	15	@	—
White	30	@	—
Flaxseed	2 25	@	—
Hemp	4½	@	—
Mustard, yellow	7	@	—
Do brown	4½	@	—
WOOL.			
FALL, 1892.			
S Joaquin, plain	6½	@	10
Do mountain	10	@	12
Do lamb	8	@	10
Northern Choice	14	@	—
Do Defective	11	@	—
Do Lamb	10	@	14
HONEY—1892 CROP.			
White comb, 2-lb frame	9	@	12½
Do do 1-lb frame	11½	@	14½
White extracted	7½	@	—
Amber do	6½	@	—
Dark do	6½	@	—
Beeswax, lb	23	@	—

Dried Fruits.

The quotations given below are for average prices ceived by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES—1892.			
Sun-dried, ¼'s	4½	@	—
Do sliced	4½	@	5
Evap. bl., ri g, 50-lb. bx	8	@	9
Fancy, higher.			
APRICOTS—1892.			
Do bleached	15½	@	—
Do do fancy	15	@	16
Evap choice, in boxes	15	@	16
Do fancy, do	15½	@	17
FIGS—1892.			
Sun-dried, black	4	@	—
Do white	3½	@	—
GRAPES—1892.			
Sun-dried, stemless	2½	@	3
Do unstemmed	1½	@	2
NECTARINES—1892.			
Red, sun-dried	7	@	8
Do Evap., in boxes	11½	@	12
White, sun-dried	9½	@	11
Do evaporated	12½	@	13
PEARS—1892.			
Sun-dried, quarters	2½	@	3
Do sliced	4	@	5½
Evap., slic'd, in b'xes	7	@	8
Unp'led, q'rt'd, bl'ch'd	5	@	8
PEACHES—1892.			
Sun-dried, unpeeled	7	@	7½
Do do prime, bl ched	9	@	10
Do do choice, do	11	@	11½
Sun-dr., pl'd, bl'ched	10	@	11
Do do prime	14	@	—
Do do choice	—	@	15
Do do fancy	—	@	16
Evap., pee'ed, in boxes choice	18½	@	—
Do do fancy	20	@	21
PLUMS—1892.			
Pitted, sun-dr ed	10	@	10½
Do evap. boxes, choice	11	@	12
Unpitted	4	@	5
PRUNES—1892.			
Cal. French, ungraded	7½	@	8
Do graded, 60 to 100	9½	@	10
Do do 40 to 60	11	@	12
Fancy sell for more money.			
RAISINS - 1892.			
London Layers, cluster per box	1 90	@	2 00
Do choicest do	1 50	@	1 60
Do prime per bx	1 25	@	1 40
Loose Muscatels, 2-crown, pr bx	75	@	1 00
Do 3-crown do	1 10	@	1 20
Do do do faced	1 20	@	1 25
Unstem'ed Muscatels in sks pr lb	2½	@	3
Stem'ed 2-crown	2½	@	3
Stem'ed 3-crown	3½	@	4½
Se'd'l's M'sc't'l sks	4	@	5
Do do in bxs	—	@	1 00
Do Sultanas, sks	6	@	7
Do do bxs	—	@	1 40

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Fruits and Vegetables.

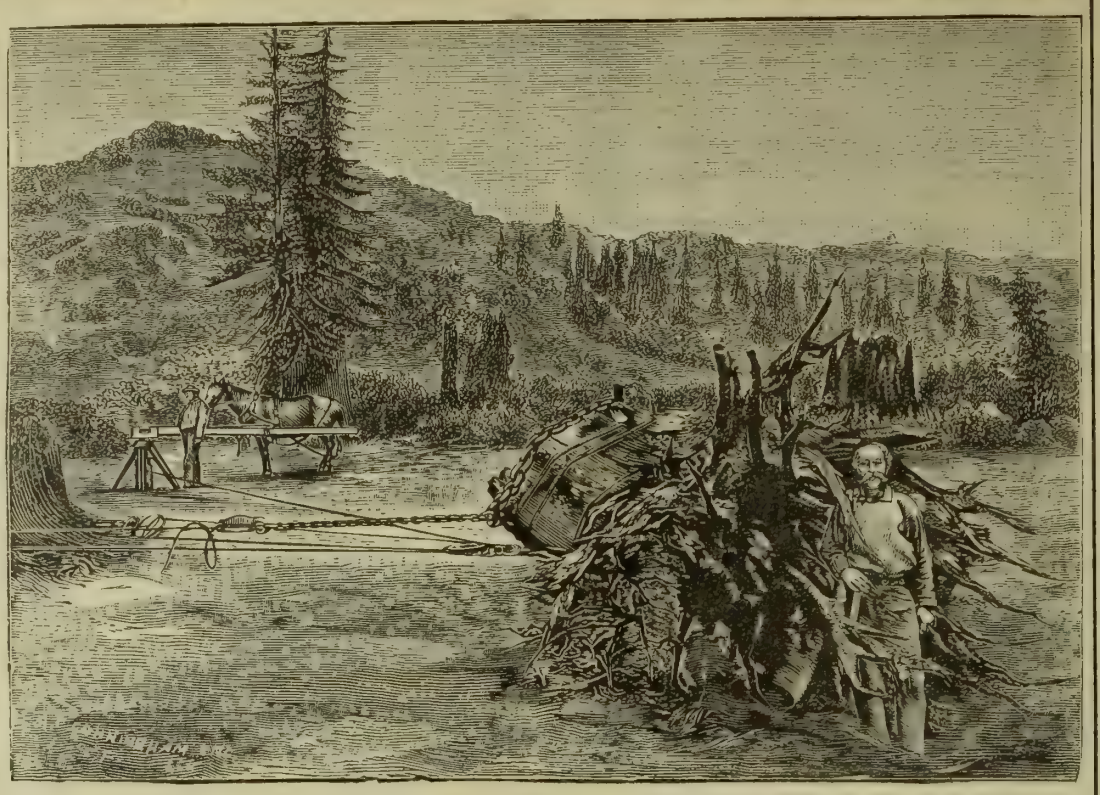
Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

DECEMBER 14, 1892.

Limes, Mex	3 00	@	4 00
Do Cal	—	@	—
Lemons, box	3 50	@	4 50
Do Sicily choice	7 00	@	8 00
Apples	40	@	65
Do Choice	75	@	1 25
Do Extra choice	1 50	@	1 75
Grapes, pr bx	15	@	85
Pears	25	@	75
do Winter Nelis	1 00	@	1 75
Persimmons	50	@	1 00
Oranges, pr box Navels, River'd	3 50	@	4 50
Do, Butte Co	—	@	—
Seedlings, River'de	2 00	@	2 75
Do, Fresno	2 75	@	3 00
Do, Butte Co	2 50	@	2 75
Extra choice fruit for special purposes sells at an advance on outside quotations			
Beets, sk	—	@	50
Carrots, sk	30	@	50
Okra, dry, lb	8	@	10
Parsnips, ctl	1 00	@	1 50
Peppers, dry, lb	7	@	8
Turnips, ctl	—	@	50
Cabbage, 100 lbs	4	@	50
Garlic, ₩ lb	1½	@	2½
Marfat Squash, ₩ ton	5	@	—
Cauliflower	75	@	1 00
Celery	50	@	75
Mushrooms, ₩ lb Do, Common	8	@	15
Do, Button	20	@	25

Land-Clearing Scene.

The engraving herewith presented shows the California Stump-Puller at work on redwood stumps on the farm of C. E. Ogburn on Russian river, near Guerneville, and being made from a photograph, is a truthful representation of the machine operating on this class of work. This machine seems to be one that creates an unavoidable demand for itself, as it would be utterly impossible for men to resort to the old method of hand-grubbing and compete with those using this machine; and from British Columbia to Arizona, wherever it has been introduced, we hear the most favorable reports, one of which is given below:



Stump-Pulling.

From the Island Co. (Wash.) Sun.

Stump-pulling on this Island, as well as in the Puget Sound country in general, is in its infancy, and we should hail with gratitude any progress made in improving machinery for removing stumps from these fertile lands. The California Stump-Puller, manufactured by George Harvey, of San Francisco, without doubt stands at the head of the list of stump-pulling machin y. One of these machines is now on this Island, owned by E. F. Hill, near Oak Harbor, on whose ranch it and its work can be seen. It is simply a capstan worked by one horse, with a wire cable five-eighths of an inch in diameter, and block, chains, and a draft-hook to unite the cable with the chains. To the uninitiated it may seem that any capstan, any cable or blocks, or any chain, would answer this purpose; but it is not so. The capstan needs special features of construction to adapt it to work of this kind. The cable-block and chains should be as light as possible, and have sufficient strength to arrange and adjust all of these things in a manner to get the best results from them, which is not the work of a day.

Stump-pulling machinery is Mr. Harvey's specialty, and though he is now ahead of all competitors, yet he is ever on the alert for any improvement. He is one of those who does not claim perfection, but is determined to crowd as close to it as possible. The work now being done on Mr. Hill's ranch shows how well this machine does its work. If the stump is not so old that the roots are rotten, all of the roors come with the stump, and the work is done very rapidly. The blocks are so constructed that to place the wire cable in them requires not a few minutes but only a few seconds, and also to make the connection between any part of the wire cable and the chain is but the work of a few seconds with Mr. Harvey's draft-hook. Mr. Hill considers that this machine will pay for itself in clearing but a very few acres of land, and many of them are needed on this Island and all over the Puget Sound country.

The Farmer and Politics.

The prosperity of a farmer to-day depends more on the methods he employs than on governmental rule. Take seeds for an example: Many farmers who are alive to their own interests in other things are careless in buying seeds. They seem to think that a seed is a seed and there it ends. If there was more knowledge about seeds, and greater care exercised in their selection, there would be richer crops and better returns.

Realizing this, D. M. Ferry & Co., the famous seed firm of Detroit, Mich., have embodied in their Illustrated Annual for 1893 much valuable information about seeds and their selection. It contains the knowledge gleaned from many years practical experience in the seed business, and the newest and best things about gardens and gardening. Such a book issued by a firm of unquestioned reliability is of the highest value to every one who plants a seed. Although the cost of printing and embellishing it with beautiful illustrations has been great, it is sent free to any one making application to the above firm.

Luck in Seeds.

"I didn't have very good luck with my seeds last year," a farmer was heard to say. This gives rise to the question: How many poor crops can be attributed to "luck" in the selection of seeds? Buying seeds is an important factor in farming and should receive the careful judgment and consideration of the farmer. It is almost always impossible to distinguish the good from the bad in seeds by sight, and the only infallible guide for the planter is the reliability of the seedsman. D. M. Ferry & Co., of Detroit, Mich., have for many years been the leading seed house of this country, and their reliability is unquestioned. They issue a book annually which contains a complete digest of the very latest gardening knowledge by the best authorities. The 1893 edition is handsomely illustrated and contains information about the selection and planting of seeds which will prove of the greatest value to every one planting a garden or farm. It is mailed free to any one making application to the firm's address.

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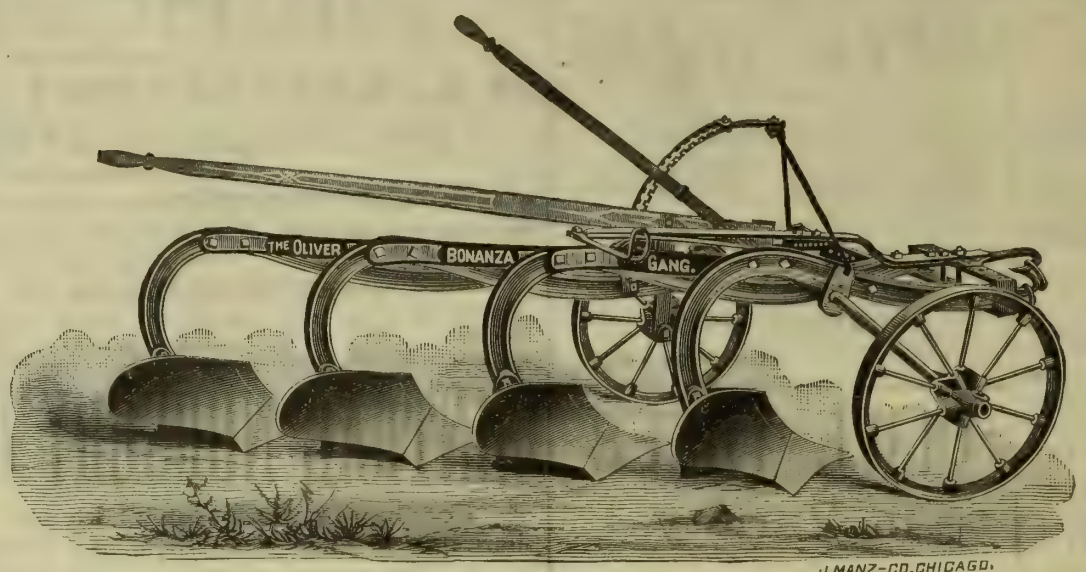
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PACIFIC RURAL PRESS

Vol. XLIV. No. 26. SAN FRANCISCO, SATURDAY, DECEMBER 24, 1892. THE DEWEY PUBLISHING CO. Office, 220 Market St

California Christmastide.

Again the holiday season comes to us arrayed in sunshine and fragrant with flowers. Not for us is the Christmas environment of other lands, and yet the difference does not mar the success of the day. Santa Claus' reindeer can make as good time with pneumatic tire-wheels as with polished runners. A burning log on the hearth is just as bright with a few degrees to lift the thermometer as though it had to thaw out the mercury. We have no jolly sleigh-rides, it is true, but still the road has its pleasures. Our engraving shows what can be done at Christmas time in the way of pleasure-riding. It is the way they did it at Pasadena last year.

Let nobody depreciate this sunbright Christmas of ours. Do not undervalue the advantages of our present country and climate and social circumstances for Christmas keeping as for other things. Cast back a pleasant, but not a regretful eye to the Christmas of the old land, at the root of whose picturesqueness lay the contrast between the snow without and the blazing hearth within. Ours need not be less merrily celebrated because we do do not need the yule log to scare away the fiends of frost and fog and rain. How many are there in the old land who now once more taste the bitterness of the season without the cheer of the festival? How many who have the snows, but not the Christmas fire—who hear the bells, but whose thoughts beat weary chime to their gladdening music. Alas for poor old Europe! With all her proud and picturesque memories, her homes of plenty and pleasure to-night will be only scattered stars on a broad map of sorrow.



A MIDWINTER HOLIDAY OUTFIT IN CALIFORNIA.

Neither let us forget that nature gives to our Christmas an infinitely closer resemblance to the ancient and original one. The shepherds watching in the fields of Bethlehem were scourged by no snowflakes—no winter blasts like those of northern Europe. Even in winter the Syrian airs are genial, except on lofty Lebanon.

"The palm-tree waves by Parphar,
Under Hermon's gladsome hill;
In Judah's clime,
This holy time,
The flowers are fragrant still.
"Damascus hath rainbow gardens,
That are blooming like the rose,
And there this hour,
The sacred bower
Is built of living boughs."

HOLDERS of sound winter apples need not be in a hurry to market their product, even though the demand is active and the price fair. Undesirable apples are coming in in great quantities and are being offered at any price. The market will soon be comparatively free from these inferior apples and then the better qualities will have no such competition.

A SAN FRANCISCO morning paper published a sensational article to the effect that war is imminent by the flour-trust on millers not in the trust. It declares that wages are being reduced, prices cut, the output curtailed, and general means being taken to lower the cost of manufacture, their purpose being to drive their competitors into the trust or out of business. The latter will probably be a very difficult thing to do, as there are several big mills against the trust. A fight among the mills is as likely as not to be of actual benefit to the producer, as long as it does not take the shape of a direct attempt to bear the wheat market.

HUMBOLDT has a canine humorist that barks at passers-by and then lays himself down and laughs. In a spirit of pure fun, some one may some day put a bullet through doggy, and then barking at people who generally mind their own business won't be so thoroughly enjoyable.

THE Folsom prison authorities Tuesday ordered the sale of 40,000 grain bags to consumers at 6¼ cents. The market price for Calcutta wheat bags on the same day was 6⅛@6¼ cents.

SONOMA COUNTY is agitating the question of organizing a Farmers' Institute, and it is likely to be done at an early date.

AN order of the Secretary of the Interior recently issued is of great importance to the horticultural industry of Southern California. It creates a reservation in San Bernardino covering about 48 townships and extending from Cajon Pass on the north to San Gorgonio Pass on the south, taking in the watershed upon the mountains, within the limit of which the cutting of Government timber will now be prohibited. The rights of those who have purchased timber land will be respected.

THROUGH a blunder of the State Land Office, several settlers on land northwest of Pomona will lose their homes and farms, according to a decision of the Department of the Interior. These settlers had bought the land of the State, which was supposed to have title, the land being in school section 36, granted the State by the Government. But it turns out that the State authorities had once given up this particular section, supposing it to be on the San Jose ranch, and selected lieu land. Afterward, the State assumed to sell the land to these settlers. However, there is nothing to prevent them securing title to their homes from the Government, if they are willing to pay the Government price.

THE Southern Pacific, the San Francisco and North Pacific, and the Pacific Coast Steamship Companies have agreed to make practically a half rate in freights and fares to the Mechanics' Institute and citrus fair in January. Preparations for the event are now going forward on a large scale.

AN unauthenticated report appears in the San Francisco press that President Harrison will, after his term of office expires, deliver occasional lectures at Stanford University. The plan is for the President to spend a part of every winter in California and to perform some of the functions of a law professor while here. There are many interesting phases of international law the President might dwell on, if he will. For instance, was his ultimatum to Chili a "bluff," or did he really, truly mean it?

THERE is talk of reviving the California State Poultry Association, and ways and means of reorganization are likely to be discussed at the forthcoming poultry meeting at Petaluma. The Sonoma county association would make an excellent nucleus for the larger organization, and it is to be hoped that the movement will be successful.

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By The Dewey Publishing Co.

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ALFRED HOLMAN.....General Manager

San Francisco, December 24, 1892.

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[NEW THIS ISSUE.]

Plows—Deere Implement Co.
Dairy Machinery—G. G. Wickson & Co.
Almond Trees—Jas. O'Hara, Brentwood, Cal.
Myer's Slip Shares—D. N. Hawley.
Regalia—Boston Regalia Co., Boston, Mass.
Olive Trees—Wm. Sickert, Redwood City, Cal.
Spray Pumps—Baker & Hamilton.
Driving Bits—Racine Malleable Iron Co., Racine, Wis.
Land Grubbers—Mohland & Co., Sigourney, Iowa.
Poultry—Miss Forbes, Napa, Cal.
Nursery Stock—California Nursery Co., Niles, Cal.
Potato Planters, Etc.—Aspinwall M'f'g. Co., Jackson, Mich.
Spray Pumps—Allison Neff & Co.
Nursery Stock—J. J. H. Gregory & Son, Marblehead, Mass.

See Advertising Columns.

The Week.

The weather has continued for the most part clear, although at times light local rains have fallen. Winds have been prevalent but not violent as a rule; only locally destructive, and then only in slight degree. The temperature has dropped below freezing at some low valley points but not, so far as we have heard, in citrus fruit districts. At present aerial affairs seem somewhat unsettled and rain may fall.

The clear days have been used to their utmost in Christmas preparations. The shops have been filled to repletion and transportation companies overtaxed. The markets show an amount and variety of Christmas cheer to satisfy the most exacting. The impulse to charity seems in the air, and even those sitting in the shadow may see a great light. Such is the true spirit of the day and of Him whose birth the Christian world commemorates.

Oroville Oranges.—We are indebted to the Oroville Citrus Association, growers and dealers in citrus fruits and trees, for a sample box of splendid Washington Navel oranges, showing all the good points of that distinguished variety. The fruit is well-ripened and delicious, perfectly bright and clean, and a speaking witness of the citrus adaptations of the Thermalito colony, where the groves and nurseries of the company are situated.

A Journal of Botany.—The Department of Botany of the State University is advancing with much spirit under the charge of Prof. E. L. Greene. The department announces the publication of a botanical journal to be entitled *Erythea*, the first issues of which will contain papers by Prof. Greene, W. L. Jepson and others. Instructor Howe will make contributions on his specialty, cryptogamic botany. It is not expected that the venture will yield a profit, but if it meets its cost it will satisfy its projectors, who will be gratified at any encouragement that may be shown them. Mr. W. L. Jepson of Berkeley is to edit the publication.

Christmas.

Whatever may be the general decision on claims made for the good old times as superior to the new, there is one matter in which the new must be conceded infinitely better than the old, and that is the popular conception of Christmas and proper observance of it. Whether the pagan orgies which from time immemorial celebrated the return of the sun from his far southern wandering had aught to do with the institution of the chief Christmas holiday, is difficult to determine and is of little moment. It seems clear, however, that the early observance of Christmastide had much of heathenish spirit and manner in it, and to that extent at least was false to the name it bore. It is not strange that the early efforts of the Christian church were directed to the displacement of revels and the substitution therefor of a reverent, religious spirit. It was wise, perhaps, that the change was sought through dramatic avenues; possibly by no other route could the people be led. The improvement was notable, and perhaps as great as the popular enlightenment could foster, and yet each century since has brought the world nearer to a true conception of the Christmas spirit and to celebrations which properly reflect that spirit. The result of this evolutionary process, is that though old terms and old manners are still current in Christmas sayings and doings, and will probably be long retained because of their picturequeness or traditional glory, the Christmas which we to-day accept and celebrate is nearer to the teachings and spirit of the Great Master than any conception which enchained the ancient mind.

It is one of the greatest charms of Christianity, and one of the great proofs of its soundness as a mode of religious belief, that it not only leads to enlightenment and disseminates enlightenment, but its truth shines out more clearly as men's minds rise to higher conceptions. The putting aside of dogmas which have been promulgated in the Christian name has been the striking off of shackles from the Christian spirit. The revision of creeds has allowed this spirit to expand until its breadth is more and more clearly seen to embrace all that humanity needs, or can hope for, for this world and the world to come. With this truer conception of the universality and sufficiency of Christianity has come a truer and wider appreciation of the significance of Christmas as the great religious holiday of the year and the higher and truer regard for the Christ-spirit as a moving force in human thought and action.

It is unquestionably true that we are coming to regard Christmas more and more for its spirit and less for its form and formalities. The Christmas spirit is the gospel of unselfishness, and of nothing else has the world always stood in such great need. Would it be difficult to prove that a more kindly and fraternal spirit prevails throughout the world than formerly? Can it not be shown that individual intercourse never approached the golden rule so closely as now? Certainly, the course of humanity seems to be moving in these beneficent lines, which are lighted by the Star of Bethlehem.

If such be the direction in which the world is moving toward a nobler humanity and toward the likeness in which the Creator made man, the approach of Christmas should awaken in all of us firmer resolves and higher aspirations. Upon many of us life's burdens rest quite heavily. Our waking hours may be charged with cumbering cares. To lives thus burdened the gladsome holidays with their merry makings and reunions should come as angels giving rest and joyful diversions. Then the glad greeting of friends and relatives should bring convincing proof that affection does not grow old. Then the loving words of a wife should teach the heart that its deepest emotions can still gild the life with light and joy. Then the merry cries of happy children, sweet as the notes of song birds, should fill the mind with thoughts of life's most precious treasures. And then, with the glory of an unselfish emotion, let thanks arise to the Giver of all these lives to love and labor for and the inmost soul will glow with gladness at the assurance that "no man liveth to himself; neither dieth to himself."

It has been often said that the greatest evil of the present day is the thirst for material advancement; the greed which piles millions upon conscience until its voice is hushed forever. An agency most potent to thwart this evil influence which saps our manhood, are the thoughts which Christmas time invites. "He who went about doing good" in the lanes and byways of Judea stands before the world, both in religious and secular literature, as the noblest example of self-sacrifice and of disinterested labor and suffering for others which the mind of man can conceive of. No heart into which can steal the faintest appreciation of His character and which can arouse itself to the extent of the slightest emotion on the subject, can fail to perceive that the too prevalent self-seeking and self-serving of the day is false, even to the human idea of the truth and nobility of manhood.

Starting with this as the central idea in the good Christmas customs and observances, it is easy to perceive that its spirit gives life and significance to them all. From the "Merry Christmas" wishings of the early dawn, when the pattering of eager feet wakes us to hear the prayers of our children for our joy, up to the hospitable spread of bounty on our board, and the glad anthem of praise which fills cathedral domes, the lesson which the day imparts is that of the joy of making others happy and in their joy to find our own. It is a noble thought. It is even nobler and higher than humanity. It is divine.

Death of Two Prominent Citizens.

It is a singular fact that the deaths of two citizens of long career and great prominence in the agricultural implement trade in this city should have occurred the same week.

Walter N. Hawley, for many years directly occupied in the management of the business of Marcus C. Hawley & Co., and of its successor the Hawley Bros. Hardware Co., died in Santa Barbara on Sunday night. He moved to Santa Barbara about six years ago and employed his capital and energy in advancing the improvements and interests of that city, where he was greatly honored and esteemed. Most of our readers probably knew him from his long and active service with his firm in this city. He was a man of genial and kindly address and of good business qualifications.

Livingston L. Baker, senior member of the firm of Baker & Hamilton of this city and Sacramento, died suddenly at his home in this city on Tuesday night. He was a pioneer, having joined with Robert M. Hamilton in the establishment of the firm in Sacramento in 1851. Mr. Hamilton survives his partner, but is an invalid, and the management of the business has devolved upon Col. Baker. In addition to the honorable position gained by him as a merchant and manufacturer, Col. Baker was a leader in many progressive enterprises and in social and political affairs. His honorable course and public services will long be remembered.

The State jute mill at San Quentin was established about ten years ago with a plant of 100 looms and a capacity of 2,500,000 bags annually. Six years ago the Legislature appropriated $160,000 for machinery to double the capacity of the San Quentin mill. The prison authorities are now putting in the plant, and by another year the capacity will be 5,000,000 bags. Several attempts have been made to introduce the manufacture of grain bags at Folsom prison, but some objections were made, mainly on questions of local conditions. The principal of these are the dryness of the atmosphere, which causes a shrinkage in the jute, and renders it brittle and liable to break. Folsom being on the line of a railroad, the freight charges on the product, water transportation not being available, would be very large, and would increase the cost to the farmer.

The protest of the wine men that they had not been allotted sufficient space at the World's Fair in which to make an exhibit has been effectual, and the commission has not only granted them larger space but made an additional appropriation for their use. This very important industry will therefore be amply represented at the great exposition.

The Carson *Appeal* gravely states that sawdust is a fine fattener, and recommends it as feed to hogs. If the *Appeal* man should by any misfortune run out of sawdust, he might try shavings. There is much testimony—such as it is—that shavings is an admirable feed, if the hogs are first hitched up with pairs of green goggles.

A modern Oregon Solomon, who has recently said that the Columbus who "discovers a method of making each hen lay a dozen more eggs per year deserves the gratitude of the agricultural world far more than the man who has a horse that breaks the record," knew pretty nearly what he was talking about.

The fact that the bottom has dropped out of the game market because of large shipments of Arizona quail, making the slaughter of California quail somewhat unprofitable, cannot be regarded as an unmixed calamity. The California bird may not hereafter be killed so ruthlessly and in such large numbers.

The experiment of feeding sheep and cattle at Chino with beet pulp is a pronounced success. Beets are brought in from the fields, chopped up, and fed with the pulp and hay; but pulp is the mainstay, and has proven very fattening.

Four fruit-driers in the vicinity of Hanford have been recently totally or partly destroyed by fire. It ought to be unnecessary to caution all fruit men to be exceedingly careful about their fires; but it seems it is not.

From an Independent Standpoint.

It is characetristic of the so-called "Political Press" that in its discussions concerning the coming senatorial election it should have much to say about candidates and nothing about qualifications as distinct from candidates. If anywhere along the line there is anxiety to secure the services of the best possible man, at all comparable with the wish to win with some particular man, we have failed to discover it. The old-fashioned rule of fixing the conditions and then seeking the man to fit them seems to be superseded by a system which finds the man and then seeks to warp the conditions to his personal measure. It is not surprising that this plan of skinning the rabbit from the wrong end results three times out of five in a badly-botched job. So long as it is allowed to stand as the practice in Senatorial elections, its consequence will be just such miscarriages as those which have half-filled our national councils with monopolists like Stanford of California, with corporation agents like Mitchell of Oregon and political corruptionists like Hill of New York.

But a sign of healthy sentiment in this relation is not wanting. Evidences of general disapproval, both of the practice and of its results, may be seen in the popularity of the movement for election of United States Senators by direct vote. The overwhelming support given to this proposition at our recent State election shows that the people of California have learned a lesson from experience. They are dissatisfied with the present method of electing Senators because it enables the wrong man to get into the Senate, and they prefer to take the matter of selection into their own hands. But the coming vacancy is to be filled in the old way and it behooves the Democratic majority in the Legislature, in choosing the man, to answer the demands of the public. What is wanted is a man whose public and private character are alike without reproach; who is in the healthful maturity of physical and mental powers; whose knowledge of the State is a result of personal observation and acquaintance with all parts of it; who is qualified by the breadth and solidity of his general knowledge to deal with questions of national policy; who has no relations and no record of past relations identifying him with the interests of the Southern Pacific Railroad Company; a man to whom the public may look for intelligent and frank expressions of judgment upon public questions as they arise—in short, a loyal Californian of clean character and connections, respectable career, personal energy and business habits. These requirements the politicians will say are severe, but we appeal to the people of California if they are too severe! A man who is not able to fill each and every count in this list of conditions is not fit to represent California and will not be acceptable to the people of California, and the Legislature will do well to bear this in mind. If such men are rare among politicians, they are common enough among the people at large and may easily be found in every county of the State if anybody will take the pains to look for them seriously. The RURAL could name a dozen such among the tillers of the soil.

What is needed by California in the United States Senate is an honest man, strong in his common sense, personal force and business habits. He does not need to have the gift of moving eloquence nor to be rich enough to maintain an elaborate social state. Whoever will take the pains to review the national councils will observe that the plain men who attend diligently to business really achieve the best results. The time when lofty eloquence was the first and chief requirement in a United States Senator has gone by, and men are now valued in the Senate, as elsewhere, for substantial merits of mind and habit rather than for magnetic and spectacular qualities. It is not the power of persuasive speech nor the influence of social station that wins success in the Senate so much as businesslike effort intelligently and persistently applied.

It is an old observation that while dissociated and even unfriendly elements may sometimes be organized for a political campaign they can never be brought into cordial and steadfast support of an administration. The winning of a notable success by such a combination is the certain prelude of controversy and disintegration. Herein lies the particular weakness of the President-elect. He was elected by a temporary combination of three distinct political elements—the Old Line Democrats, the Tammanyites and the Mugwumps—and between these several forces there are no points of political sympathy or affinity. They are wide apart in views, habits, tastes and motives and they hate each other with a holy hatred. Something like this was said in these columns immediately after the election and it was added that fusion and compromise were alike out of the question; that Mr. Cleveland would have to choose one of three lines of policy and that he would soon find himself antagonized by the elements which he would be compelled to slight. The election is not two months past and the inauguration is more than two months ahead — but the prophecy is in the beginning of its fulfillment.

Already two incidents have shown the drift of things. About two weeks ago the Reform Club, a Democratic-Mugwump association of New York, gave Mr. Cleveland a dinner and among those invited to sit at the head of the table was Speaker Crisp of the House of Representatives. Mr. Crisp understood that he would be called upon to speak and in anticipation prepared an address and supplied the Associated Press with a copy. But Mr. Crisp was not called upon and construing the omission as a snub resented it by withdrawing from the banquet. The incident roused a great stir and the papers made the most of it. Mr. Crisp when interviewed said without reserve that he felt that he had been slighted; that he understood from the terms of his invitation that he was to speak and that he should not have made the journey from Washington to New York merely to sit quietly at the feet of Mr. Cleveland. In his view the snub was not only personal to himself but a reflection on the Old Line element of the Democratic party. That he was not alone in this estimate of the matter was shown by the comments of newspapers of all shades of politics; and was most emphatically illustrated by the attitude of the House of Representatives. On his his first appearance after his return, the Speaker was greeted with an ovation designed to express the sympathy of Congress with him as against Mr. Cleveland. The snub was finally condoned by a note of apology from the president of the Reform Club; but while matters are thus nominally smoothed over, the impression remains that Mr. Cleveland is not favorable to Mr. Crisp's re-election to the speakership, and that not only Mr. Crisp, but the element which he represents, will not be in touch with the new administration. The explanation given by members of the Reform Club of the failure to call upon Mr. Crisp for a speech is that he is not in sympathy with the purposes of the Club; but Mr. Crisp's friends will never be brought to believe that he was not included in the original list of speakers, and that his name was crossed out at the request of the President-elect. Thus, straw number one shows that the wind between Mr. Cleveland and the Old Line Democracy is blowing "contrariwise."

The treatment accorded to Crisp, and through him to his element of the Democracy, is matched by Mr. Cleveland's treatment of Tammany. It is alleged that he not only failed to attend a banquet given by the Tammany Society to Mayor-elect Gilroy of New York City, but failed to reply to a note of invitation. Another indication of a breach with Tammany is Mr. Cleveland's open hostility to Murphy, the Tammany candidate for the New York Senatorship. The feeling of Tammany is shown by the comment of its chief spokesman, Bourke Cochran, on the Crisp incident. He said: "I told you all about those people. When we took up the management of the campaign in New York we refused to give them a single appointment or a chance to speak. They would have ruined everything. Yet now, when everything is over and we have won the battle, these 600 Mugwumps come forward and want to read 600,000 regular Democrats out of the party." Straw number two shows that the wind between Mr. Cleveland and the Tammany Democracy is "contrariwise."

Clearly Mr. Cleveland is confronted with positive incompatibility of the elements which brought about his election. He cannot fuse them into a new Democratic party because their differences are too radical for union. Like oil and water, they will not mix. His best policy will be to cut loose from all entanglements, decline the domination of any section or faction either inside or outside of his party, and to serve with diligence the interests of all the people without regard to politics.

The Nicaragua Canal scheme is in process of amendment and in remodeled form will be warmly urged upon Congress after the holiday recess. The amended measure is not yet complete but it will, so Senator Morgan says, amount practically to a transfer of the project from private to Government ownership. This is a consummation devoutly to be wished. If a way can be found—we have heretofore accepted the dictum of reputable lawyers that there was no way—by which the Government may acquire the interest of the company, build the canal on its own account and own and control it when completed, then by all means the project should be taken up with the least possible delay. The sentiment of the country, we believe, would be almost unanimous in support of such a proposition. But if, on the other hand, the new scheme is to have the Government put up the money while leaving the project under private control, it should not be accepted. If the Government is to supply the funds it must control their disbursement and must own the works when completed.

The more we study this canal matter, the less serious seem the obstacles in the way of absolute government ownership and the more serious seem the dangers of private ownership. We are coming to believe that the lawyers have quite unnecessarily made a bug-a-boo out of the Clayton-Bulwer treaty. Let the Government inform Great Britain that after a specific date (to be named) it will disregard the Clayton-Bulwer treaty in so far as it prohibits ownership, operation and fortification of a ship canal across Nicaragua; then let it acquire the rights of the Canal Company, paying therefor a fair price; then let it build the canal, fortify it and operate it. So far as we are able to see, this course is entirely practicable. There would be no difficulty about buying the interest of the Canal Company, and there would certainly be no trouble about raising the money to put the job through. The only obstacle is a treaty with England which ought never to have been made. The way to correct this mistake is after giving England fair notice to declare the prohibitory provisions of the Clayton-Bulwer treaty null and void. Of course it would be much better if the original blunder had never been made; but it is not in reason that it should be allowed to stand forever a bar to legitimate enterprise and to the forward march of human achievement.

We are not unmindful that this view of the matter is in a certain degree out of accord with opinions expressed in these columns some months ago. But we have devoted to the subject new study and new consideration; we are convinced that the lawyers have given to the Clayton-Bulwer treaty an importance not properly its due. In this maturer view of the matter, we cannot see any sound reason why the Government should not build and own the canal. We are frank in stating the newer judgment, believing it infinitely more important to be right than to be consistent.

Information that Mr. Blaine lies at his home in Washington sick unto death will be a matter of personal grief to very many of our readers. Perhaps no American whose career was purely civic has ever been so warmly admired by masses of his fellow citizens as has Mr. Blaine; and it is certain that his death will be more generally mourned than would be that of any other man definitely retired from public life. His ailment is waxy degeneration of the kidneys, from which he has long suffered, and the physicians say that there is no hope—that his life is slowly ebbing away. In all likelihood he will not live to see the New Year and it is even probable that he shall have passed away before these lines are read.

Dipped Raisins.

An improved method of drying raisins is in use among Fresno packers. The process consists of placing the grapes in dipping pans with perforated bottoms. These pans of grapes are then submerged in vats of boiling hot lye, the preparation consisting of one pound of concentrated lye to 15 gallons of water. The grapes are dipped in the lye for an instant only and then brought to the air to cool; this is repeated three times, the entire operation lasting only about half a minute. The dipping of the grapes into the hot liquid and almost instantly afterward exposing them to the cool air causes the grape skin to break open in many places. This exposes the inside of the grapes to the sun, besides softening the skin. Before being placed upon the trays to dry, however, the grapes are rinsed off in pure, cold water. The cost of the dipping operation is very small.

The pack put up by this method is called the California Valencias. It is said to be satisfactory.

An Improved Vine Puller.

Our Napa correspondent, "R.," sends us the following improved method of pulling vines out by horsepower, which should be read in connection with the method described last week:

A large number of grapevines will be pulled in this county this season. The most expeditious method so far used is to take the front wheels of a stout farm wagon, tie a strong chain, one end to either end of the axletree, quite near the wheels, letting the chain form quite a long loop. Hitch the team on to the tongue and drive straddling the rows of vines to be pulled. Let one man attach the chain under the heads of vines by a single twist, or even without this twist in the chain the vines can be pulled up as fast as the team can walk.

SOUTHERN California expects to send East this season 7000 carloads of oranges. The figures are a trifle large, perhaps, but anyway the prospects are first-class for a substantial increase over last season, which was considerably less than 7000.

IT is estimated that the sum of $1,000,000 was, during 1892, paid the fruitgrowers at Vacaville alone—an increase over 1891, even though the yield was smaller. The Solano growers ought to feel in a reasonably comfortable frame of mind.

The State Raisin Growers' Association.

A meeting of the executive committee of the California State Raisin Growers' Association was held at Fresno December 14th, and the question of regulation and control of the raisin market seriously discussed. Alex. Gordon advocated the establishment of a raisin exchange and the promotion of a bill to be passed through the legislature establishing standard, recognized brands for raisins; the appointment of inspectors to see that the raisins are packed according to standard, and the stamping of each box or sack of raisins with a stamp denoting the particular quality or grade of raisins contained therein; and a penalty for any person using the standard brand of raisins upon any raisins not up to the quality specified thereby.

Mr. Gordon further stated that he had been in correspondence with C. C. Wright of Modesto, the author of Wright's Irrigation bill, who had kindly offered to draft such a bill and assist with his influence its passage through the legislature.

Mr. Motherall, of Hanford, then moved that the chair appoint a committee of five, three of whom shall be growers and two packers, for the purpose of drafting a bill to be submitted to a mass meeting of growers for consideration before presentation to the legislature.

This resolution was carried and the chair appointed on that committee, growers, Messrs. Gordon and Motherall and Miss Hatch; packers, Colonel Forsythe and George B. Noble.

Mr. Gordon was requested to write to Mr. Wright and ask him to fix an early day when he could meet the committee here.

Mr. Motherall stated that Mr. King, a raisin-packer of Hanford, and the Armona Packing Company had refused to observe the prices for raisins as agreed upon with the association and the packers in the State, and that they gave as a reason that the San Francisco packers had, on the 25th of October, broken prices in the Eastern market, and they did not hear of it or were not notified by the association until the first day of November, and he asked that the secretary be requested to write a statement of the circumstances under which the raisin market was broken by the San Francisco packers on the date named.

A constitution drawn up by Wm. Harvey, secretary of the association, indicates the plan upon which the organization proposes to work. The objects of the corporation are stated to be as follows:

The membership of this association shall be limited as follows:

First. All persons who shall own, cultivate or control not less than five acres of raisin grapes shall be entitled to become members of this association, upon payment of the dues provided for.

Second. All raisin-packers, whether private or cooperative or commission, shall, upon giving the required undertaking not to market raisins for less than the given price, and upon paying the dues, be entitled to membership.

Third. All brokers dealing in California raisins shall be entitled to become members of this association upon signing the required undertaking to sustain prices and paying the dues provided for.

The duties of members are: All members of this association who are growers of raisins shall sign an undertaking which shall provide that in selecting, marketing or consigning their raisins, either with the packer or with the broker, they shall agree to sell or consign only to packers and brokers who have given the bond provided for to observe and maintain the minimum price for raisins which shall have been determined or provided for by the executive committee of this association.

All packers of raisins, who are members of this association, shall give a bond for ten thousand dollars, that they will observe the price of raisins which shall from time to time be agreed upon by the executive committee of this association, and that they will only employ such brokers as are members of the association and who shall have given the association a bond for twenty thousand dollars not to cut prices.

All brokers joining the association shall give the association a bond for ten thousand dollars that they will observe and will not sell raisins under the minimum price which is agreed upon from time to time by the executive committee of this association.

The subscription dues to raisin-growers are five cents per acre of raisin-grapes; and to cooperative raisin-packers and brokers $100 per annum.

The usual officers, elected annually, are provided for. The regular meetings shall be annual.

The property, affairs and business and concerns of the association shall be vested in an executive committee of sixty—ten from raisin districts north of Mt. Diablo, twenty from the San Joaquin valley, ten south of Tehachapi, ten selected by the packers, and ten by brokers.

In the executive committee is vested the power to fix the price at which raisins shall be offered to the jobbers.

The executive committee shall meet not less than once every three months or as often as seems necessary.

The members of each district are empowered to organize divisional committees in the districts they represent.

Stamboul Sells for $41,000.

The famous stallion Stamboul, 2:07½, was sold at auction with the Hobart stud, Tuesday, in New York for $41,000, to D. H. Harriman, a banker. The price is considered very low, considering the great merits of the animal, and much surprise is manifested that he did not bring more. Bidding was slow and spiritless.

Nancy Lee, the dam of Nancy Hanks, was next offered. The first bid on her was $3000. She finally went for $7100. A. H. Moore of Cloverdale Stock Farm was the purchaser. Nancy S., daughter of Stamboul and Nancy Lee, was bid in by George Scattergood of Philadelphia for $2800. All the other horses brought about what they were worth. Silverone, 2:19¾, brought $6000, and Silverboul, by Stamboul out of Silverware, $3400. Alta Belle, by Electioneer out of Beautiful Bells, was bought by William Simpson of this city for $4100, and Belle Electra, by Piedmont, dam Electa Belle, by J. B. Dutcher of Paulding, N. Y., for $3300.

Altogether 44 head were disposed of for $125,360, an average of $2851.

Fruit Notes From Campbell.

CAMPBELL, SANTA CLARA CO.

TO THE EDITOR:—We have tried many remedies (?) with a view to discovering one that would prevent the peach tree borer from entering the bark of our fruit trees, but thus far with only partial success. Not all those who have made experiments are prepared to report yet, not having ascertained the results. Later, the results of their efforts pro or con will be known and given to the press.

Inclosed please find a brief report of the Exchange meeting held at Campbell, Cal. on the 15th inst:

F. M. Righter was chairman of a meeting of the orchardists of Campbell last evening to hear E. F. Adams of the County Fruit Exchange set forth that institution's prospects. The fruitgrowers of Campbell naturally take great interest in the success of the Exchange from the fact that the plan originated among them and the movement was set going by their efforts in connection with the West Side growers and others. Mr. Adams, fully detailed the progress made, and showed what was yet deemed necessary to ensure success. He stated that the capital required was only the sum necessary to purchase a lot and build and equip a warehouse, and that a subscription of three dollars per acre of the area of the fruits usually dried would be ample to supply that. Every fruitgrower present took the amount asked for and several of them much more.

Mr. Adams very strongly emphasized the point that the directors of the Exchange could do a great work for the fruit interests of the country if they had behind them the strength and support of the fruitgrowers to be wielded as one force, and that the first thing for the growers to do was to learn to work harmoniously together, selecting their directors with care and judgment and then standing by them through thick and thin.

After some well-timed remaks by Col. McGlincy the meeting adopted the following and adjourned:

Resolved, That this meeting heartily indorse the plans and methods of the County Fruit Exchange, and pledge to its management the hearty support of the orchardists of this community, including our proportion of the capital necessary to transact our own business. CAMPBELLITE.

Escondido Notes.

SAN DIEGO CO., Dec. 19, 1892.

TO THE EDITOR:—The recent rain left the ground in the best possible condition for plowing, and on every hand the plows are at work and seeding is in full blast. The Escondido Land and Town Company has leased some 5000 acres to private parties to put into grain. The McCoy tract of 2300 acres is leased for the same purpose, and the small farmers are all at work throughout the valley, turning up the rich red soil at a rapid rate. A conservative estimate places the acreage to be sown to grain this season at over 30,000 acres, all within ten miles of Escondido. Other portions of the county are doing equally well, the prospects being good for a fine season and an unprecedented crop throughout the county.

The last rainfall amounted to about two inches. The raisin crop is packed and part of it shipped now, so that the ranchers can now turn their entire attention to plowing and seeding and preparing for tree-planting. The Land and Town Co. will ship five carloads in a few days, probably to Chicago. Some of the growers and packers think the market will be better in the spring, and will hold their crop till that time. Something over a hundred boxes will be put up for the World's Fair.

The prospects are good for a lively tree-planting season. If we have a wet winter, we may have as good a season as that of '91, when 175,000 trees were planted in the Escondido district. In the immediate valley the preference in tree-planting seems to be given to the lemon among citrus fruits, and to the prune and peach among the deciduous trees, though they all do well here. R. A. Thomas has as fine a specimen of the pomelo or grape fruit as can be found anywhere. The tree is loaded down with great clusters as thick as they can possibly grow. The World's Fair Society want to send the tree to Chicago.

Vegetables for Eastern Markets.

NAPA, CAL., Dec. 14, 1892.

TO THE EDITOR:—I was glad to see in your issue of Dec. 10th an allusion to what could be done with the cabbage crop by marketing it East. From all advices it is evident that there will be a famine of early vegetables at Chicago, not alone of cabbage but of potatoes, cauliflower, asparagus and a number of other early vegetables which could be grown yet, in time for spring sales, in our climate.

If our Fresno and Tulare friends, who cannot see anything but raisins for profit, would put in potatoes now, they would produce a crop worth having in April or May for Eastern shipment, which might give them some capital to help them through the glut in raisins which is sure to come with the first full crop. A word to the wise should be sufficient. California has immense advantages in every direction, but if they are not utilized, what good will they do us? Must every man ride his own hobby, his specialty, to death, or will he learn in time that there are some advantages in mixed farming and a succession of crops.

GEORGE HUSMANN.

Humboldt Cattle Movement.

TO THE EDITOR:—For some years cattle have been driven down to the logging and milling camps of Mendocino county from here, as that has always been considered a good market for beef cattle. This summer there seems to be a desire on the part of some large cattle dealers to get control of that coveted market, as far as this end of the supply line is concerned. To accomplish this, about 1000 head of beef cattle have been bought up and sold, or driven to supply other markets.

It is probable that most of the beef on the Mattole section is slated for down the coast, and as the Blocksburg and Garberville country is drained, or will be, when the Charles ranch is stocked, the balance to be taken to Eureka. The rancher has nothing to lose by the operation, and where those on the inside are to make remains to be seen. G. E. A.

California Trotters of 1892.

The number of California trotters and pacers that, during the past year, entered the 2:30 list reached the surprising and gratifying total of 275 as against 228 for the season of 1891. Of this number, 54 have made records of 2:20 and below, exceeding the number entering the same list in 1891 by 44. The *Breeder and Sportsman* compiles the list of 2:20 trotters, their records, their sires and their sires' records, where they have any, as follows:

NAME.	RECORD.	SIRE.	RECORD.
Alcona Jr	2:19	Alcona	——
Answer	2:20	Ansel	2:20
Aster	2:16	Dexter Prince	——
Azote	2:14¼	Whips	2:27½
Addie E	2:19	Algona	——
Altao	2:17¼	Altamont	2:26¾
Ah There	2:18¼	Electioneer	——
Almont Medium	2:18¾	Happy Medium	2:32½
Avena (2)	2:18½	Palo Alto	2:08¾
Bay Rum	2:20	John Sevenoaks	——
Bow Bells	2:19¾	Electioneer	——
Bernal	2:17	Electioneer	——
Bellflower (3)	2:16½	Electioneer	——
Col. McNasser	2:17½	Starlight	——
Crown Prince	2:17½	Dexter Prince	——
Col. May	2:17	May Boy	2:26
Coral	2:18½	Electioneer	——
Daly	2:15	Gen. Benton	2:34½
Directum (3)	2:11¼	Director	2:17
Deputy	2:19½	Echo	——
Duchess	2:18½	Sidney	2:19¾
Expedition (3)	2:19½	Electioneer	——
Edenia	2:17¾	Endymion	2:23¼
Elden (3)	2:19½	Nephew	2:36
Fitzsimmons	2:20	Dexter Prince	——
Flora M	2:16	Richards' Elector	——
Fleet	2:19½	Sidney (p)	2:19¾
Georgie Woodthorpe	2:19¼	Altamont	2:26¾
Hulda	2:14¾	Guy Wilkes	2:15¼
Jim Mulvenna	2:19¼	Nutwood	2:18¾
Lenmar	2:16¼	Admar	——
Lottery Ticket	2:19	Dexter Prince	——
Maggie	2:20	Dexter Prince	——
Major Lambert (3)	2:19¼	California Lambert	2:27
Mabel H	2:20	Alexander Button	2:26½
Mount Vernon	2:18	Nutwood	2:18¾
Millie Wilkes	2:19½	Guy Wilkes	2:15¼
Murtha	2:18	Stamboul	2:07½
Muta Wilkes	2:14¼	Guy Wilkes	2:15¼
Monaco (3)	2:19½	Electioneer	——
Oro Fino	2:18	Eros	2:29½
Orphina (3)	2:19	Norval	2:14¾
Regal Wilkes	2:11¾	Guy Wilkes	2:15¼
Rowena (2)	2:17	Azmoor	2:20½
Richmond Jr.	2:15	A. W. Richmond	——
Silver Bow	2:16¼	Robert McGregor	2:17½
Steve Whipple	2:14	Ham'letonian Chrisman	——
Strathway	2:19	Steinway	2:25¾
Shylock	2:16½	Tom Benton	——
Sabledale (2)	2:18½	Sable Wilkes	2:18
Susie S	2:18	Ham'letonian Mambrino	——
Tippie	2:18¾	Echo	——
Truman	2:12	Electioneer	——
Thornwood	2:19¼	Hawthorne	——

The question of the supremacy of developed and undeveloped sires is not settled by the above, because 27 are by sires with records and 27 are by sires that were not developed. This question in relation to the California performers is therefore open for debate. The pacers are not counted in the above list.

California's list far surpasses that of any other State.

THE flour-millers of California have ceased night work and have cut down wages and discharged a number of men. The men working in the mills are divided into skilled and unskilled workers, and as a matter of course their pay differs correspondingly. A practical miller's wages have for years been from $4 to $4 50 for a day's work of 12 hours. Floormen, sacksewers, drivers and laborers were paid correspondingly. The first intimation of a reduction came in the shape of an order that the sacksewers, who were paid $3 a day would only receive $2.50 hereafter. Then came a notice in many of the mills that the establishments, which had been for years running night and day without intermission, would no longer continue to operate at night, and that all men working on night shifts were discharged. This latter threw a large number of men out of work, and is the cause of much misery and malcontent. Among the shippers and dealers in produce there is no reason known why the mills should reduce wages and hours just now. There is no fall of prices and no surplus in the flour market, so that the action of the combine is considered quite arbitrary and uncalled for.

THE first of the new Spanish-American line of steamers to complete a round trip arrived recently when the Grandholm dropped anchor, fifteen days from Corinto and way ports. Her consignees are Otis, McAllister & Co., resident agents of the new company. The steamer's manifest shows a total freight of 1,122 bags of new crop coffee, divided by planters shipping from the three ports of San Jose de Guatemala, Champerico and Ocos. The new line has heavy engagements ahead of it, both up and down, and it is more than hinted that it will cut a prominent figure in the war between the Pacific Mail Steamship Company and the Panama Railroad Company.

HORTICULTURE.

California Scale for Judging Citrus Fruits.

November 18, 1892.

The State Fruit Growers' Convention held at Marysville in November, 1891, appointed a committee to formulate a scale for the judging of citrus fruits. This committee consists of J. E. Cutter of Riverside; J. R. Dobbins of San Gabriel; S. J. Stabler of Yuba City; and J. A. Clayton of San Jose.

After one year's deliberation, the committee presented its report, as follows:

PRELIMINARY CLASSIFICATION.

Season: Early, December to April; middle, February to July; late, June to December.

Grade: Large, medium, small.

Managing committee from each competing State or section to nominate varieties to any or all of above classes, with months, and, when practicable, dates for tests of its own fruit in the same. Fruit to be judged only by standards of its class. So far as is practicable, no committee to judge fruit of more than one grade (as per classification above).

Scale.—Oranges.

Divisions: Size, form, color, weight, peel, fiber, grain, seed, taste; to be considered in order named.

Counts (credits, points) to be by units and tenths thereof, expressed decimally. Possible total of same to equal 100.

1. SIZE, 0 TO 10.

Standard: Large, 126s, 3¼ inches in diameter; medium, 176s, 2 13-16 inches in diameter; small, 226s, 2 7-16 inches in diameter; tangerines, etc., 2⅜ inches in diameter.

Three-sixteenths of an inch excess of standard allowed (without discount) to "medium" and "small" fruit; three-eighths of an inch ditto to "large."

One-eighth of an inch below standard allowed (without discount) to "medium" and "small" fruit; one-fourth of an inch ditto to "large."

Thereafter, discount one point for first one-eighth of an inch excess or deficiency (additional to allowances specified), and two points for each excessive one-eighth.

2. FORM, 0 TO 5.

Standard: Round, oval, ovate, pyriform.

Discounts for lack of symmetry and for form blemishes. Navel marks not to be discounted except when of abnormal size or of bad form.

3. COLOR, 0 TO 15.

Subdivisions: Bloom, 0 to 2; of peel, 0 to 10; of flesh, 0 to 3.

Standard: Bloom to be perceptible and to be discounted according to degree of deficiency, or of injury thereto. Peel to be of rich, deep orange color, in natural condition, and to be discounted according to degree of deviation therefrom—one or more points. Rust, scale and smut to be discounted five to ten points, and fruit that gives visible evidence of having been cleaned of the same to be subject to equal penalty. Also, peel that has been rubbed or "polished," giving a gloss at the expense of breaking or pressing the oil cells, to suffer the same discount. Flesh to be rich, clear and uniform in any of the shades common to fine fruit.

Omit consideration of "Flesh Color" until after concluding Division 5, "Peel."

4. WEIGHT, 0 TO 10.

Standard: Specific gravity, 1 (equal to that of water), with buoyancy of three-fourths of an ounce allowed to "large" fruit; one-half of an ounce ditto to "medium," and one-fourth of an ounce ditto to "small," all without discount.

One point to be discounted for first one-half of an ounce of buoyancy in excess of allowance, and thereafter two points for each additional one-half of an ounce.

NOTE.—Buoyancy may be easily determined by clasping apothecaries' weight to fruit with light rubber elastics and then placing in water.

5. PEEL, 0 TO 10.

Subdivisions: Finish, 0 to 3; protective quality, 0 to 7.

Standard: Of finish, smoothness and uniformity of surface and pleasant touch. Of protective quality, firm and elastic texture, abundant, compact and unbroken oil cells; and one-eighth to three-sixteenths of an inch thickness.

Discount, one point for first one-thirty-second of an inch above maximum or below minimum, and two points for second ditto, provided that to long-picked and fully "cured" oranges the minimum shall be lowered to three-thirty-seconds of an inch; and that to fresh-picked and to slightly "cured, large" fruit the maximum shall be raised to one-fourth of an inch.

Breaking of oil cells, abrasions of peel and drying of same, to be subject to from one to ten discounts, according to degree.

(Here consider "Color of Flesh." See Division 3.)

6. FIBER, 0 TO 8.

Standard: Septa delicate and translucent; maximum diameter of core, three-sixteenths of an inch in "large" fruit and one-eighth of an inch in other.

7. GRAIN, 0 TO 4.

Standard: Fineness, firmness, compactness.

8. SEED, 0 TO 8.

Standard: Absence of.

Discount one point for each of first three seeds; thereafter, one-half point for each additional.

Each rudiment to be considered as a seed if any growth has been developed; otherwise, allowed without discount.

9. TASTE, 0 TO 30.

Subdivisions: Sweetness, 0 to 10; citrous quality, 0 to 10; aroma, 0 to 10.

Standard: Clearness and definability of elements. Sweetness rich, delicate rather than heavy. Citrous quality pronounced. Aroma pervasive and agreeable.

Deficiency or absence to be cause for discounts against any element, and excess to be like cause against sweetness, and against acid in citrous quality.

Staleness and flavors of age or decay to be discounted from the aggregate of points in this division.

Lemons.

Divisions: Size, form, color, weight, peel, fiber, grain, seed, taste.

Rules of counts and discounts as in scale for oranges.

Totals of possible counts (points), 100.

1. SIZE, 0 TO 7.

Standard: Large, 250s, 2⅜ inches in diameter; medium, 300s, 2⅛ inches in diameter; small, 360s, 1⅞ inches in diameter.

All sizes between 250s and 360s allowed.

Large fruit to be discounted one point for first one-eighth of an inch in excess, and two points for each succeeding one-eighth. Smaller to be discounted one point for 400s (1¾ inches), and four points for 450s (1½ inches).

2. FORM, 0 TO 3.

Standard: Oblong, with allowance of well-formed points at stem and tip. Symmetry required.

3. COLOR, 0 TO 10.

Standard: Bright, clear lemon.

Discounts, according to degree, for green splashes, dashes of bronze or deep shades, or for sunburn.

Rust, scale, and smut, with fruit that gives evidence of having been cleaned of the same, to be discounted five to ten counts.

Rubbing or dusting, if heavy enough to press oil from the cells, to be causes for discount.

4. WEIGHT, 0 TO 10.

Standard: Specific gravity, 1 (equal to that of water), with buoyancy of one-half of an ounce allowed to "large" lemons and one-fourth of an ounce to "medium" and "small," all without discount.

One point to be discounted for first one-half of an ounce in excess of allowance, and two for each one-half of an ounce thereafter.

5. PEEL, 0 TO 10.

Subdivisions: Finish, 0 to 3; protective quality, 0 to 7.

Standards: For finish, to be of smooth, uniform surface, and of pleasant touch. For protective quality, to be of strong, elastic, and of reasonably firm texture; of abundant, compact, and unbroken oil cells, and of thickness of three-thirty-seconds to three-sixteenths of an inch.

To be discounted, two counts for first one-thirty-second of an inch below minimum, and five counts for second ditto; and one count for first one-thirty-second of an inch above maximum, and two for each succeeding ditto; also, one to five points for bad texture, or for deficient or broken oil cells.

6. FIBER, 0 TO 8.

Standard: Septa delicate and translucent. Core not to exceed three-sixteenths of an inch in "large," and one-eighth of an inch in "medium" and "small" fruit.

7. GRAIN, 0 TO 4.

Standard: Fineness, firmness, compactness.

To be water-colored, shading to blue rather than to gray.

8. SEED, 0 TO 8.

Standard: Absence of.

One point to be discounted for each of first three seeds, and one-half point thereafter for each additional.

Rudiments to be considered as seed if any growth has been developed; otherwise, allowed without discount.

9. TASTE, 0 TO 40.

Subdivisions: Acidity, 0 to 20; aroma, 0 to 10; absence of bitterness, 0 to 10.

In interstate competitions, the standard of acidity shall be the highest per cent of strength of acid found in any specimen, determined by chemical test. In other competitions such tests may be applied as committees or competitors may require.

Aroma shall be full and of a clear quality.

Bitterness to be determined by slicing fruit (including peel) thin, covering with hot water and cooling slowly; to stand 24 hours when practicable. No sugar to be used. Should a trace of bitterness appear to the taste, discount one point; should the bitterness be fairly defined, discount two points; if pronounced, discount five points, and if strong, ten points.

AMENDMENTS TO DIRECTIONS.

In classes relating to general exhibits and to displays that do not require cutting the fruit, the provisions of the scale shall apply in "size," "form," "color," "weight," and "peel," except that "color of flesh" and "protective quality" (of "peel") shall not be considered, and "weight" may be determined by hand-testing a sufficient number of specimens, instead of by submersion.

Counts shall be allowed as per scale.

The remaining 60 counts of the scale shall be apportioned as follows, to-wit:

Size of display	0 to 20
Design	0 to 20
Arrangement	0 to 20

"Arrangement" shall be held to consist in harmonious grouping of parts and in skillful execution of the work of setting up the exhibits. The summing of all the counts (possible total, 100) granted by the judges will determine the rank of the exhibits and consequent award.

Classes that require cutting of fruit and full examination of quality shall be judged by the provisions of the scale, the judges to examine so many specimens in each as may seem necessary.

Adopted by unanimous vote. B. M. LELONG,
Secretary of State Fruitgrowers' Convention, Sixteenth Session, San Jose, November 15–18, 1892, and of State Board of Horticulture.

What Ten Acres Will Do.

Every year there is a discussion in the newspapers and much argument among fruitgrowers concerning the revenue to be had from a well-managed fruit ranch of ten acres. A perennial source of inquiry, also, among newcomers to southern California with slender purses, is as to what may be reasonably expected from ten acres of thrifty fruit-trees in the way of support for a family. We have seen few really satisfactory expositions of either side of the discussion.

L. E. Steele, who attended the meeting of the Pomological Society in Pomona recently, has given us some figures that show how good a living for his family of five people his ten acres of various fruits made in the San Gabriel valley west of Baldwin's Santa Anita ranch. "I think," he said, "my experience can be duplicated almost anywhere in southern California by the right man, and it proves the old-time argument." Mr. Steele bought his place and a water right in 1885 for $1200. He set out four acres of prunes, two acres of apricots, one acre of alfalfa, two acres to oranges and half an acre to lemons. He built a house for $1000 more. He got a living for five years from poultry, selling vegetables and strawberries and doing day labor until his property came in bearing. Since then he has taken it easier, but is still a most industrious, strong man.

Mr. Steele has kept accurate account of his ranch finances. He shows that he sold crops from his place in 1891 for $1813 and the net profit was $1725. The money came from the following sources: From alfalfa, $82; from apricots, $316; from prunes, 433; from oranges, $715; and from lemons, $267. For this year his receipts from his ten acres have thus far been $1527, and he has a crop of oranges that will probably bring him $600 more next March. His recent sales of crops have been as follows: From apricots, $448; from prunes, $875; from alfalfa $70; and rom lemons, $134. Mr. Steele and his two boys do all he work on the place, but $132 has been paid for extra abor since January 1st.—Pomona Progress.

FLORICULTURE.

Some Good Roses.

The following is the conclusion of Mr. H. G. Pratt's essay, read at the last meeting of the State Floral Society, of which the first part was in last week's RURAL:

Now as to the yellows. In these the teas are rich. Marechal Niel stands at the head. It is usually classed as a Noisette, for no reason that I can see, only that it is a climber. For a like reason Gloire de Dijon might be classed as a Noisette, while clearly that too is a tea, and a very good one, by-the-way, albeit a little perverse about growing sometimes.

Marechal Niel needs a protected place but plenty of sunshine in the morning and evening. Budded on the yellow Banksia it grows with more vigor than on its own roots, and of course gives better flowers. Both in bud and open flower Niel stands easily first amongst the yellows, though Perle des Jardins is a pretty close second. Indeed as a commercial rose no yellow compares with Perle, as it forces well and is an abundant bloomer, which qualities Marechal Niel possesses in but a slight degree comparatively.

Amazone is another good rose, a nice, clean grower and persistent bloomer in crops. The buds are really fine and much resemble those of Marie Van Houtte and are quite as freely produced. The open flower is a beautiful yellow, pinking with age. It is said not to open well near the ocean.

Coquette de Lyon is a very fine, light yellow, semidouble rose, especially good in spring. The same may be said of Isabella Sprunt. The former is best in the open or half-open flower and the latter in the bud.

Madame Falcot, a seedling from the old Safrano, is fine in bud and flower, except during hot weather, when they have but few petals. Color a deep yellow.

Safrano, to many, is the only tea rose in existence, and yet it is only one of a thousand or so. It readily develops into a tree of considerable size and is always in bloom. Like many others of the class it is prized principally for its magnificent buds. The color is apricot yellow dashed with crimson on the outer petals of the buds.

Sunset is nearly the same color as Safrano, but in bush and flower it closely resembles Perle des Jardins, from which it is a sport. It is a fine rose, but not so popular as the parent sort.

Shirley Hibberd is a poor grower, but its color—a deep orange—is taking, and many people will have it on that account.

Vallee de Chamounix is a sort in much demand. It grows well and blooms freely. The buds are golden yellow dashed with crimson, while in the open flower the center is salmon shaded with crimson, and the outer portion creamy white. In this respect it resembles Claire Carnot, but in shape it is not so graceful as that excellent sort.

Laurette Messimy is a new sort, in shape something like Chamounix but hardly so full. In fact the open flower is too loose to be of much value, but the buds—oh, ye gods!—was there anything ever created more exquisitely fair to look upon? The colors are a blending of yellow and crimson, but in a way that produces a glowing and delightful harmony not seen in any other rose. The nearest approach is the buds of Beauty of Glazenwood, when that freaky sort does its best, or perhaps we should say its prettiest.

I believe Messimy has a touch of Bengal blood in its veins, but in any event it does honor to its progenitors.

Papa Gontier is a light crimson and the most constant bloomer of all the teas. At its best, few roses are so fine. Commercially, it is very profitable, as its fine crimson buds

are always in demand beyond the supply. Picked just before opening and put into water, they will gradually develop and keep for a week in fine condition.

Princess Sagan is in color a deep maroon of "purest ray serene," and, though its petals are few, the rose lasts well when cut. Both in leaf and odor of flower its relation to the Bengals is evident, and to that class it more properly belongs than to the teas.

The hybrid teas (*Rosa Indica Odorata Hybrida*) do not comprise a large class, but in it we have the finest roses grown. At the head stands La France. Doubtless God could have made a better rose than La France, but doubtless God never did. (Pardon the parody.) None other has so many good qualities. No need to describe that which is so nearly perfect.

Duchess of Albany is a sport from La France, almost a solid red in color, but otherwise identical with its parent. It promises to be excellent and popular, but will never equal La France. Neither will Augustine Guinoiseau, or White La France, another sport. The latter is too white for a pink rose and two pink for a white, and yet it is very pretty and good.

Captain Christy is a very large rose of a pure pink, deeper in the center. The form is not so globular as La France, nor has it the incomparable sweetness of that variety, but it is exceedingly chaste and refined in appearance and of healthy but rather slow growth. Quite similar is Lady Mary Fitzwilliam, but of dwarf habit.

Viscountess Folkstone has a large peony-like flower nearly white, and is very desirable.

Camoens has a flower of soft, glowing pink, exceedingly pleasing. It is a good and constant variety.

Meteor, a very dark crimson, is the most popular forcing rose of its color and does fairly well in the open air.

Three good climbers belong to this class, to wit: Reine Marie Henriette, Chestnut Hybrid and Reine Olga de Wurtemburg. The first, at its best, is the most beautiful and a very constant bloomer; but its flowers burn in the hot sun, and, unless in a protected situation, it is apt to mildew. Chestnut Hybrid is rather shy in blooming, and the color is a deep red, not very clear. The last of the trio is a very rank, clean grower and a good bloomer for seven or eight months in the year, taking a rest in late summer and autumn. The buds are remarkably fine and the full-blown flower semidouble. The color is a clear, brilliant cherry, quite permanent. During its blooming season it is a blaze of glory, without a peer among the reds.

The Noisette roses (*Rosa Maschata Hybrida*) are nearly all climbers, and, for the most part, bloom in clusters. The best whites are Lamarque and Estella Pradel, the latter a rather formal dame, but very charming nevertheless.

W. A. Richardson has deep orange buds, the open flowers golden in the center and white on the outer rim.

Reve d'Or is apricot yellow, good in bud and flower, and very satisfactory every way.

Duchesse d'Auerstadt, a late acquisition, has deep yellow and very full flowers, but the bud before opening is not pretty. It was sent out as a climbing tea. In habit it closely resembles W. A. Richardson.

Gold of Ophir is in color a combination of copper and crimson. Small, loose flowers, but pleasing and showy.

Celine Forestier blooms with much freedom. Its petals are light yellow on the inside and white without. A full, beautiful and reliable sort.

Claire Carnot is in color a combination of salmon and crimson. The shape of the flower is globular, much like Duchess de Brabant. Excellent.

The best pink climber is Elie Beauvellain. It, like d'Auerstadt, was sent out as a tea, but seems best placed with the Noisettes.

A magnificent white climber is Madam Alfred Carriere. The flowers are a little loose, but soft and crapy and fine for cutting, keeping exceedingly well. It is not a Noisette but a hybrid with a rose of that class and a tea.

Another rose that climbs, but is difficult to classify, is Beauty of Glazenwood, known also by half a dozen other names. At its best, this rose never fails to create a sensation. Its buds of yellow, gold and crimson, faultless in form and feature, have few, if any, rivals for unalloyed beauty; but to get it at its best—there's the rub. It must have sun but not wind, and generous feed and careful treatment. It blooms but once a year.

The Cherokees, both single and double, are exceedingly useful for covering rough and unsightly places, being evergreen with dark, shining foliage. The single variety is the finest of all single, white roses. Their botanical name I do not know. *Rosa Indica Sempervirens* would seem appropriate.

The Banksias (*Rosa Banksiae*) are rampant evergreen climbers, closely related to the Cherokees, but entirely devoid of thorns, despite the proverb. The blooms are very small and come in dense clusters. The white variety has the odor of violets, but neither of the yellow sorts have much scent of any kind. They are good foster parents on which to grow Marechal Niel, Chromatella, and in fact almost any of the teas or Noisettes.

The Bengals (*Rosa Indica*) are good bedding roses, but not good for cutting. The colors are flesh and deep crimson. Madame Bosanquet and Cels Multiflora are good, light sorts, and Agrippina, Queen's Scarlet and Sanguinea the best crimsons. Queen's Scarlet (a misnomer; there is no scarlet rose) is the best of the Bengals. They are all real ever-bloomers.

The Bourbons (*Rosa Bourboniana*) embrace a few fairly good ever-blooming sorts, the best of which are Souvenir de la Malmaison, flesh colored but too double to open well; Henry Planter, rose; Hermosa, deep-pink and Louise Odier, rose colored, very double and sweet.

The Palyanthas (*Rosa Palyantha Hybrida*) form a new class of miniature roses of much interest to the rosarian. Two sorts can be safely commended to the general public, to wit: Cecile Brunner and Perle d'Or. They are almost identical except in color, the first being a La France pink and the other nearly the shade of orange found in Wm. Allen Richardson. Both are stalwart growers, and true everbloomers. The peduncles or flower stems are long, and the buds, just opening, very captivating. For commercial purposes they are among the most profitable. Everybody likes them.

H. G. PRATT.

THE VINEYARD.

Wine and Brandy Shipments.

The extent and value of the wine and brandy exports of California run up into the millions of dollars. The following tables, made up from statistics in the possession of Winfield Scott, secretary of the State Viticultural Commission, show the aggregate of domestic and foreign shipments, those by rail being domestic, by sea foreign. In the rail shipments, wine values are estimated at 40 cents per gallon, brandy $1.50 per gallon, tax paid. The sea figures are for the eleven months of 1892 ending December 1st, the rail shipments for ten months ending November 1st:

WINE SHIPMENTS BY SEA.

	Cases.	Gallons.	Value.
New York	2,758	3,832,990	$1'758,188
Central America	9,020	77,296	95,869
Tahiti	11	16,105	5,526
Mexico	1,051	72,282	44,693
British Columbia	468	15,833	10,707
Hawaii	589	106,429	75,891
China and Japan	359	41,488	17,148
England	174	92,843	32,621
Germany	200	57,999	26,596
Other European countries	5	12,038	4,684
All others	435	5,460	4,939
Totals	15,070	4,330,763	$2,076,862

BRANDY—SHIPMENTS BY SEA.

	Cases.	Gallons.	Value.
Domestic ports	44	272,296	$501,778
Germany	3	131,375	111,706
England	10	108,524	69,976
All other ports	397	8,578	12,160
Totals	454	520,773	$695,620

WINE—RAIL.

	Cases.	Gallons.	Value.
January	1,820	467,581	$187,032
February	1,763	413,522	165,409
March	3,864	588,801	235,520
April	6,102	687,192	274,877
May	2,710	651,001	260,400
June	3,613	467,275	186,910
July	2,183	357,758	143,103
August	2,141	387,383	154,953
September	2,730	612,088	244 835
October	3,004	755,444	302,177
Totals	29,930	5,388,045	$2,155,216

BRANDY—RAIL.

	Cases.	Gallons.	Value.
January	112	21,205	$ 31,807
February	233	27,530	41,295
March	324	47,319	70,978
April	175	39,607	59,410
May	261	22,968	34,452
June	177	18,345	27,617
July	127	10,884	16,327
August	109	19,461	29,191
September	268	33,740	49,610
October	321	59,627	89,440
Totals	2,107	300,686	$450,127

California Wines in France.

At the last meeting of the California State Board of Trade the argument was advanced that the protective tariff duty should be removed from French wines, as a preliminary step toward opening up a market in France for California wines. It was stated that France annually imports from Spain about 300,000,000 gallons of wine for blending and other purposes. These are mostly cheap wines, which do not enter into competition with the better grade of the French product. It was claimed that, if the barriers to free trade between this country and France were removed, the latter would purchase a considerable part of its imported product from the United States, and, therefore, from California. Spain and France are in a commercial union, by which the wines of the former are admitted nearly free of duty, a very small revenue tax only being imposed.

About a year since France changed its revenue laws, adopting a high protective tariff, with provisions for reciprocal treaties with various countries—much the same in scope and purpose as the McKinley law, with the important distinction that the duties imposed are not advalorem. The former duties on wines were as follows:

Wine, from European countries.....4 fr. 50 c. per hectoliter.
Wine, from all other countries.....4 fr. 50 c. per hectoliter.
Alcohol and distilled liquors of all kinds.....30 fr. per hectoliter.
Liqueurs.....30 fr. per hectoliter.

A hectoliter is 26½ gallons, wine measure.

Present duties are:

Alcohol and distilled liquors of all kinds.....30 fr. per hectoliter.
Liqueurs.....30 fr. per hectoliter.
Wine from countries not in commercial union with France....1 franc and 50 centimes per hectoliter for each degree of alcohol up to 11°; and for each degree above 11°, 2 francs and 65 centimes.
Wines from countries in commercial union with France or with a special treaty.....70 centimes per hectoliter per degree of alcohol up to 11°; and 2 francs and 65 centimes for each degree above 11°.
Maximum duty: 1 franc 20 centimes per degree up to 11°, and 1 franc 65 centimes for each degree above 11°, alcohol.
Minimum duty: 70 centimes per degree up to 11°, and 1 franc 65 centimes for each degree above 11°, alcohol.

It will thus be seen that a sliding scale was fixed on imported wines, the effect of which was greatly to increase the duty on vinous exports from this State. The aggregate of shipments from this State to France is, under this tariff, about 200,000 gallons per year, an almost infinitesimal total.

Negotiations are now said to be in progress for the establishment of reciprocal trade relations between the United States and France. Their exact nature is not a matter of public knowledge, but it is expected that, if concluded, California wines will be admitted on a minimum duty, and the standard French brands will have similar freedom of entry into this country; or, at least some important French product will escape the high protective tax. It is claimed that the United States will receive more than it gives, under this arrangement; that, in the American market, the French wines and the California wines have their distinct place, and that the consumption of either will not be materially effected by a change in the tariff. That is to say, the two wines are not, strictly speaking, competitors, and the French wines will not, by reason of cheapness or otherwise, drive the California wines from the field, or vice versa. Whether this be true or not, there is a serious movement to get some important modification of the rigid provisions of the French tariff against American wines, and to make similar concessions under the reciprocal provisions of the McKinley law. If the negotiations for a commercial union fail, it is likely that the agitation will be continued before a Democratic Congress, to make an absolute reduction of the tariff on wines to a revenue basis, in the expectation that response in kind will be made by France.

THE FIELD.

A Fine Bean Ranch.

A writer in the Ventura *Observer* thus describes the large bean ranch of Dixey W. Thompson, near Ventura:

One of the finest ranches in Ventura county is that owned by Dixey W. Thompson, joining the town of Ventura on the east. It contains about 2300 acres and is as productive as any that can be found in the State. Beginning at the corporate limits of the town, it extends for two or three miles along the beach, its longer axis being nearly east and west. A few hundred acres are elevated but little above the sea level and are used in part as pasture land. Then comes an abrupt escarpment, 18 or 20 feet high, where an almost level tract of some 1400 acres is reached. It has, however, a gradual ascent north toward the foothills and mountains. The Southern Pacific railway passes through the ranch, and a spur or switch offers facilities for loading cars with the products of the farm.

The soil of the ranch is a deep, rich sediment brought down in past ages from the mountains to the south and northeast, and is overlain with a rich vegetable mold. Geologically, it belongs to the quatenary age. In some places near by the soil has been penetrated for over 100 feet and the bottom not found. It is practically inexhaustible. It produces corn, barley, potatoes, fruit and many other things to perfection, but the proprietor finds beans to be the most profitable crop.

As we are writing especially for the benefit of eastern readers, who probably know little of farming or bean-raising in California, we will endeavor to briefly describe the *modus operandi* of the latter, as practiced by Mr. Thompson. Last season he planted 1350 acres to Lima beans, which required 25 tons of seed. After the early rains, which usually fall the latter part of November, the plowing or breaking up begins. This is done by six-horse teams drawing gang plows of four 10-inch shares or blades each. Eleven such teams may be seen at one time on Mr. Thompson's ranch working a total of 44 plows. Each team will break about seven acres daily, and the 11 about 80 acres. The land is cultivated through the rainy season, which usually continues from some time in January to March. About the first of May planting begins, which is done by planters drawn by four horses abreast. Each machine plants two or three rows. In the event of a rainfall after the beans are planted they are plowed up and planted anew, it being found cheaper than to clear them of weeds. But little is required in their cultivation after planting. Usually, however, the fields are gone over once or twice with cultivators to destroy any chance weeds that may have sprung up.

In September, about four months after planting, the beans are ready to harvest. This is also accomplished by the use of machinery. The cutters on this ranch are in appearance similar to the old-fashioned log sled, but with lateral knives on each side fastened in front and running back at an angle of 30 or 40 degrees. It has a wheel at the rear, which is regulated by a lever and acts as a sort of rudder. The machine is drawn by three horses abreast and will cut two rows at a time, averaging about 12 acres daily. Eight of these cutters are operated on this ranch. About 30 men follow them and with forks pile the beans into small heaps to dry. After three or four weeks they are ready for threshing.

The threshing machine used on this ranch is a large "Minnesota Chief," which is equipped with a good engine and 30 men. The beans are gathered into header wagons, with beds 10 feet wide and 16 feet long. One side of the bed is considerably higher than the other, and a large and strong net is spread over the entire bed, fastened on one side, and into which the beans are piled. This is driven to the threshing machine, where a derrick lifts up the lower side of the net and tumbles the contents onto a large platform, after which the straw and beans are fed into the machine with pitchforks. It requires eight header wagons to keep the machine busy. Fifteen hundred sacks, averaging 70 pounds each, or 150,000 pounds, are considered a good day's work.

The yield of beans for a good year is from 1600 to 2000 pounds per acre. Last year this farm yielded 30,241 sacks, or 2,049,210 pounds. This would be equal to 34,000 bushels, and was sufficient to fill 100 cars carrying 20,000

pounds each. From these figures the reader can form some idea of the capacity of Mr. Thompson's farm.

While the highest state of perfection is reached on this ranch it must not be forgotten that there has been a liberal outlay in buildings and all needed machinery. The most complete machines, as mowers, reapers, plows, harrows, pulverizers, rakes, cultivators, cutters, headers, planters, wagons, etc., have been procured. When not in use all are kept housed and preserved from rain and sun, and all corroding influences. There is conveniently located a well-equipped shop, where nearly anything in wood, iron or steel is turned out by skilled workmen.

On the ranch there are three large barns and a warehouse. The latter is for storing grain when threshed. Two of the barns have a capacity of 1000 tons of hav each. The first one the visitor will reach in going from Ventura is 74x120 feet and about 55 feet high. It contains 44 stalls for horses, with room sufficient to drive a wagon behind them the full length of the barn. The bins or feed stalls are so arranged that the coarse straw, foreign matter and debris works out at the bottom as the horse eats the better portion. The stalls are wide and everything has the appearance of commodiousness, utility and cleanliness. In these barns is the aggregated study and planning of the proprietor, extending over many years, and they are as near perfection as one is likely to find anywhere. The stables add greatly to the comfort of the horses, about 80 of which are required on the ranch. The second barn is nearly an exact duplicate of the first, though lacking some of the conveniences.

Among many other convenient and desirable things on this fine ranch is a good dairy, where a most excellent quality of butter is turned out.

The Flour Moth.

Basing its inquiries upon a recent bulletin of Prof. Johnson of Stanford University, relative to the appearance in California of the Mediterranean flour moth, a San Francisco paper declares it has already become an alarming pest, resulting in the loss of thousands of dollars to a number of large establishments, and that it will result in still greater loss before very long.

The statements are based mainly upon interviews with Prof. Johnson and a number of flour manufacturers. They state that there is barely a mill in the State which is not affected by the moth and that all efforts to eradicate it have been unsuccessful.

The moth is continually spreading spinning strands of silk in great quantity which not only gets into the flour, but also clogs the machinery so badly that mills are obliged to shut down temporarily.

Professor Johnson, who has made a careful study of the subject, says he has discovered that the moth propagates and matures more rapidly in this climate than in Canada, the eastern part of the United States and other cold countries where it has appeared. He expects that the disastrous effects of this moth will be very apparent in nearly all mills of the State before the end of another year, as it is almost impossible to drive out the pest.

Prof. Johnson strongly recommends a conference of millmen to adopt uniform measures for fighting the pest.

Products for 1892.

The Fresno *Californian* makes the following estimate of the agricultural products of the United States for 1892:

Corn	$550,000,000
Wheat	325,000,000
Oats	218,000,000
Other cereals	100,000,000
Cotton	300,000,000
Hay	750,000,000
Cornfodder	250,000,000
Special crops	167,000,000
Vegetables	160,000,000
Fruits and flowers	180,000,000
Total for crops	$3,000,000,000
Dairy products	$350,000,000
Poultry and eggs	140,000,000
Wool	75,000,000
Meat products	400,000,000
Total animal products	$965 000,000
Grand total	$3,965,000,000

The Dairy.

Rye Hay as a Winter Feed for Dairy Cows.

BECKWITH, PLUMAS COUNTY.

TO THE EDITOR:—Having received a request from a gentleman (whom I have never seen) living a distance from here, to write an article on "Rye Hay as a Winter Feed for Dairy Cows," I would solicit a space in your columns for the purpose.

When hearing farmers make the assertion (as we frequently do) that rye hay does not do for feeding dairy cows, we are apt to think that this, like various other statements, is subject to certain modifications. Having a dry ranch, which is quite irregular in the yield of natural hay, we frequently have to depend on rye and alfalfa. Having but a limited supply of the latter we save it to feed to the cows when they first come in, the rye under these circumstances being our general dependence for our dairy for from four to five months. Experience has proven to us that rye hay may be a very poor feed or a fairly good feed for dairy cows, its value depending upon the time of cutting and manner of curing. It is very poor hay, indeed, if it is allowed to stand too long, and then is left lying in the field sometime before hauling. But we have found that by cutting the rye when it is in blossom, and hauling it as soon as it is so dry that there is no danger of its heating in the barn, allowing none of it to lie and bleach in the sun, our dairy cows do well upon it; and the yearly returns from our cows are fully equal to those of our neighbors who feed the best of natural hay. Rye is a plant of such rapid growth that it might be objected to cutting it so early, when by waiting the amount of hay would materially increase; but this would be poor economy, as after blossoming the juices of the plant rapidly pass into the grain, leaving the hay very poor in quality if left standing long.

One of the essential requisites of good rye hay is that an abundance of seed be sown. A writer for an eastern agricultural journal advises sowing a bushel and a half to the acre. That would not be at all a sufficient quantity for the dry lands of California. One hundred pounds to the acre should be sown here. Rye is so rank a grower it will yield too coarse a quality of hay if sown thin upon the ground. Of course all cereals should be sown thicker on dry soil and in a dry climate than in a country subject to summer showers.

Any farmer would prefer good bunch-grass, clover and red top for his dairy cows. But there is hay and hay of many varieties and qualities, and our experience is that rye hay, properly sown, properly cut and properly cured, makes a bettter feed for cows than some natural grass hay grown on wet soil and consequently sour, or than some other grades of hay bleached in the curing. The lack of a good quality of natural hay need not deter people from dairying with fair success, if they have plenty of land to raise rye.

There are other things to be considered in this region besides the hay for feeding cows. A dry, warm, clean and comfortable shelter for them is also a necessity, as is also an unlimited supply of pure water. Wheat-bran and carrots are, either, valuable auxiliaries to be fed in connection with hay. Indeed, it seems a pity to keep cows on one single article of food throughout our long winters. The cost of raising rye is comparatively small, as it is such a persistent grower it can be volunteered repeatedly; we frequently get a third season's crop from the time of plowing—that is we volunteer it twice. Of a good season we usually cut our rye twice, getting a small crop of good hay for the second cutting. MARY P. S. ARMS.

Cooperative Creameries.

The following paper was read before the Santa Ana meeting of the Farmers' Institute by S. J. Murdock:

"The Westminster creamery was started as a private industry about one year ago last June, and was run some seven or eight months, when it was bought by 14 of the patrons and has since been run on the cooperative plan. They have since increased the number of stockholders to 17. All patrons of the creamery are equal shareholders. The total number of patrons for the month of October was 43; the total amount of milk received during that period was 109,306 pounds; the total amount paid for milk for the same time was $1367.40; the amount received for butter made in October was $1705.95, the average price paid for milk during that period was $1 per 100 pounds, and the present price is $1.42½ per hundred pounds, which is the highest ever paid for milk at the creamery, and is 16½ cents per hundred weight more than the highest price paid under private management. The individual price paid for milk is governed by the percentage of the butter-fat contained in the milk. The highest test is 5.9, that is, there are 5.9 pounds of butter in 100 pounds of milk, as tested by a Babcock tester. The lowest test is 3.35. The present price of butter is 75 cents per roll, or two pounds. The demand exceeds the supply; in fact, the manager told me that one firm in Los Angeles would take the whole output.

"Now, as to the satisfaction of the patrons. I have personally interviewed a number of them since going home from this Institute last evening, and before coming this morning, and the universal verdict was satisfaction, and not one of them was willing to go back to the home care of milk. I also interviewed the buttermaker of the creamery. He is a strong advocate of cooperative creameries, and I will here state that it has paid on the same plan, *i. e.*, cooperative.

"The prospects of the enterprise are good. New patrons are continually coming and old ones are preparing to increase their herds, and also to advance the butter qualities of their present herds. There is more inquiry as to the best feed suitable for different soils; but one of the best features of the cooperative creamery, as conducted at Westminster, is that all of the profits are fairly distributed among the producers. Now, what I mean by fairly distributed is by the system of testing each individual's milk and paying him for the same without passing through the hands of a number of middlemen.

"The price of milk is governed by the price received for the butter, and the relative amount of butter-fat contained in the milk. For instance, the person who delivered milk testing 5.9 received $1.75 per hundred for the same, while those whose milk tested but 3.35 per cent received $1.21 per hundred.

"And, again, the whole amount received is distributed among the producers. Take the amount received for butter last month—$1705.95—deduct from that $30, which is a very liberal estimate for fuel and salt, the only articles of expense which are outside of the patrons, and we find we have $1675.95, or an average of $38.50 for each patron, or $462.80 per year, which is $97 more than the average yearly income of the farmers of the United States.

"If I could give you the exact figures of a similar factory run as a corporation for corporate gain, I think there would be a different footing. The management of the Westminster creamery is not trying to make a showing for the stockholders, but for the whole number of its patrons. Their aim is to meet current expenses and pay a reasonable interest on the money invested."

Track and Farm.

Food for Sick Horses.

F. T. McMahon, veterinary surgeon to the Chicago Fire Department, communicates to the *Street Railway Review* an interesting article on the treatment of sick horses. After specifying the principal substances from which to select articles of diet for the sick horse, such as bran, carrots, oatmeal, linseed, etc., the writer continues:

Bran stands decidedly foremost as the food most generally in use for the invalid horse; it acts as a laxative, is frequently tempting to the appetite, and is easy of digestion. There is no part of the general treatment more universal than offering this substance as a change of food. Is the horse very weary, and his powers of digestion weakened in consequence? We induce him to take a warm bran mash, which comfortably distends the stomach and satisfies any craving for food, thereby enabling him readily to lie down and rest his enfeebled system until repose restores its wonted vigor. Does he show slight symptoms of cold or fever? A warm bran mash is a convenient plan of steaming, and consequently of soothing, the irritable mucous membrane of the air passages; it is a substitute for the more stimulating diet he is accustomed to, and gently promotes the activity of the digestive apparatus; it is also a convenient medium for the exhibition of certain simple remedies, to be mentioned hereafter. Is he incapacitated by lameness? A lower diet than that with which he is indulged when in full work is judicious, and bran is selected. Is it necessary to administer purgative medicine? A bran mash or two renders the bowels more susceptible of its action, and a smaller portion of the drug is therefore required to produce the desired effect, and there is, at the same time, less risk of painful spasms accompanying its operation. Bran mashes may be given hot or cold—cold are perhaps quite as grateful to the horse; but the nibbling of the hot mash in catarrhal affections is particularly beneficial, from the necessary inhalation of steam.

Of all the roots with which horses are tempted, the carrot, as a rule, is the favorite, and perhaps the most beneficial. It is said to be somewhat diuretic in its effects, and to exercise a salubrious influence on the skin. Certain it is, that a sick horse may be coaxed into eating carrots when disinclined to partake of other nourishment, and the greatest benefit results. For the ailing horse, then, carrots are most valuable as an article of diet, and a few may be given with advantage even to a horse in healthy condition.

Oatmeal is extremely nutritious, and as a food for the convalescent horse is most valuable; the bruising process the grain has undergone breaks the husk, and renders it more easily acted upon by the digestive organs. It is usually given in the form of a gruel, and in that form it is one of the most essential articles of diet for the infirmary. It is also a ready mode of supplying the tired, thirsty horse with nourishment after exertion, when he returns to the stable.

Linseed is decidedly to be included in the sick-diet roll. It is nutritious, and from its oleaginous nature, soothing to the frequently irritable mucous membrane of the alimentary canal, and hence is particularly to be recommended in the treatment of sore throats. Nor is its bland effect local only; its more general influence is particularly observable in affections of the kidneys. It may either be boiled, so as to form when cold a gelatinous mass, and then mixed with bran, or the liquid, after boiling, may be offered as a drink.

Grass, hay-tea, etc., are also very useful in the treatment of disease, and should be used in connection with other remedies.

When Horses Should Drink.

Starting for a drive with an acquaintance, I noticed that his spirited young horse was so anxious to go as to be scarcely manageable. Before we had gone a quarter of a mile he stopped at a water-trough and allowed the animal to drink unreasonably. At once all the spirit vanished; he became a tame driver, and for miles had to be urged with a whip, being as uncomfortable as he appeared and more so than slight thirst would have made him. This folly I have often seen committed by men at work in the field. Too much water (to say nothing of other drinks) would unfit them for activity during an hour or two because of depressing fullness. On a long overland carriage drive with my wife, she thought it hard not to let the horse drink largely every mile or two, but at the end of the first day she changed her opinion. Sweating profusely he could scarcely be urged out of a walk. Following days, with reasonable drink and light hay rations except at night, he proved himself a different horse. Drivers ought to remember that a horse cannot derive nourishment from food or drink while in motion, and that these things only cause misery after the momentary gratification of appetite. The strength must be accumulated or fat laid on while at rest, and it is economical of both to give the horse but little food and only a swallow or two of water frequently while performing his duty. Arabs of the desert, the world's best horsemen, never feed except at night. Their beasts are universally noted for soundness of wind and limb, fleetness and good disposition. This is not considered cruelty, but kindness, and their horses are treated with extreme humanity in every other way. Use reason with the horse, both on the road and in the stable. While he is idle don't let him eat more than two hours at mealtime. Horses that eat all the while soon become diseased or useless.—New York Tribune.

THE BEST KIND OF RECORD BREAKING.—While so much has been said about the record breaking on the turf the past season, the honest, plodding plow horse which has added a mile or two to the distance he has been able to draw a heavy load or a plow in a day has not been heard of. The owners of work horses which break their records should appreciate them at least.

SHEEP AND WOOL.

Angora Goat Breeders' Meeting.

Official Report furnished for publication in the RURAL PRESS; delay having occurred by reason of the illness of the secretary.

The eighth annual meeting of the Angora Goat Breeders' Association was called to order at Sacramento on Thursday, Sept. 15, 1892; President C. P. Bailey in the chair; Julius Weyand, secretary.

On motion, the old board of officers were reelected to serve until their successors are elected. The secretary's report was received and ordered published in the PACIFIC RURAL PRESS, appended to these minutes.

Mr. Bailey reported that in April last, while in the East, he called on the Secretary of Agriculture at Washington, D. C., in the interest of the bill to provide for the importation and maintenance of thoroughbred Angora goats; that the secretary informed him that he reported adversely to our demands, stating, however, that he would exert his influence to secure a permit from the Turkish Government to allow private enterprise to import a number of these animals to this country.

The following was adopted:

WHEREAS, H. R. Bill 6004 of the first session 52d Congress, to provide for the importation and maintenance of thoroughbred Angora goats by the Government, for distribution of the progeny to applicants from the different States at valuations of actual cost; for an accurate record of said goats and a register of their progeny, with such data containing the pedigree and other matters pertaining to said goats as shall afford information thereof for the benefit of the breeders in every section of this country, has been disapproved by the Secretary of Agriculture; and

Whereas, He favors a plan to assist private enterprise to make an importation of Angora goats from Asia Minor; therefore

Resolved, That the Hon. Secretary of Agriculture be requested to present to the Cabinet the subject of negotiating with the Turkish Government for its permit to an importation of 150 or 200 Angora goats to this country; also to withdraw his opposition to H. R. Bill 6004 if practical, otherwise to allow private parties the privilege of this importation, under rules not to deprive any breeder in the United States of membership of such syndicate; and further

Resolved, That a copy of this resolution be forwarded to the Hon. Secretary of Agriculture, the Hon. Hermann, M. C., and to members of U. S. Senate at Washington, D. C.

The following was also adopted:

WHEREAS, The directory of the World's Columbian Exposition at Chicago, for 1893, has published a list on page 35, offering premiums on Class LIII, Angora goats, in the aggregate, $360; also Class LIV, Cashmere goats, in the aggregate, $360; and

Whereas, the members of this association are well acquainted with all importations of goats, and are certain that never one single Cashmere has been brought here, but as a fact it is a habit of using that name in place of Angora by misinformed persons; therefore

Resolved, That the premiums on Cashmere should be struck off, or Angora and Cashmere should be computed and be under one head on the list to avoid contentions among exhibitors; and further

Resolved, That copies of this resolution be forwarded to W. J. Buchanan, Chief Department of Agriculture and George R. Davis, Director-General of the Columbian Exposition at Chicago, Ill.

Mr. Bailey reported that while in the East he visited several factories of mohair goods; that noteworthy were the worsted yarns, white, mixed and variegated, in spools and skeins, of the Nonantum Worsted Co. of Boston, and plushes, blue and black Thibets and variegated, black and colored, fine ladies' dress goods of the Sanford mills at Sanford, Maine; also that he has samples of mohair cheviot for gentlemen's wear, manufactured by the San Jose, Cal., Woolen Mill. JULIUS WEYAND, Sec'y.

REPORT OF THE SECRETARY.

At the seventh annual meeting on Sept. 17, 1891, the secretary's report was accepted, ordered published and its recommendation carried out, that an appeal be made to the national government to negotiate for importation of new stock from Asia Minor of the pure strains of blood. Also for the establishment of a Government breeding-farm of this class of animals, and a uniform distribution of the increase to cittzens of such States of the Union where the raising of Angora goats can be made a profitable business.

The secretary forwarded copies of the above report to all and every member of this Association, to the Secretary of Agriculture, the Chief of Bureau of Animal Industry, to the Senators and Representatives of California and Oregon, requesting them to pass a bill for relief of this industry.

On Nov. 16, 1891, the secretary mailed to breeders whose P. O. addresses were known, a circular inviting them to become members of the Association and thereby strengthen our petition, which was to follow the first steps taken. Next the secretary drafted and forwarded a memorial to Congress, setting forth the inability of private parties to import pure-blood strains of Angoras from the Ottoman Empire on account of prohibitory laws in Turkey, and petitioned for enactment of laws, providing for relief as follows:

First: Authorizing the Secretaries of State and Agriculture to negotiate with the Turkish Government for the sale of, and permit to purchase and remove from Asia Minor a flock of Angora goats, no less than 100 does, (twice that number preferable,) and no less than 25 bucks.

Second: To authorize the Secretary of Agriculture to engage suitable persons to proceed to Turkey, examine goats of the different localities, to select the very best to be found, and purchase those animals by them selected, remove to seaport and ship on the safest and best route to the United States, deliver the same to the duly-appointed agents of our Government here, with full reports of the climatic resources of Angora, and other matters of general interest to the breeders.

Third: To authorize the Secretary of Agriculture to select a suitable locality for keeping the said stock, appoint qualified persons to take care of them, keep them separate from any private property of this kind and to provide well for their increase, keep a register of the breeding and cross-breeding of said stock together with date of birth of the kids and their numbers for identification.

Fourth: To authorize from the increase of this flock, not diminishing the original number, to distribute to breeders in the different States a uniform rate, never exceeding one male and one female to one breeder.

In connection with this memorial were presented to the officials of the Agricultural Department, to the Committees of the Senate and the House, and the Members of Congress who had the matter in hand, full history, experiments, statistics and adaptability of this class of animals, and their value in general. H. R. bill, No. 6004, conforming to the petition, was presented on Feb. 15th by Mr. Hermann, and an appropriation to carry out this Act was asked for. All parties in Congress were favorable to this plan as presented, except the Hon. Secretary of Agriculture, who, as I am informed, reported adversely to us, expressing his opinion that the Government should assist private parties only in obtaining permission from the Turkish Government to export a number of goats from that country.

With private ownership of a new importation of Angora goats, a National Register is impossible, and, without such guarantees for purity of stock as we proposed in our bill before Congress can be furnished, many breeders who heretofore were disappointed with mongrels will not spend exorbitant sums of money without assurance of the purest strains of new blood, and the slaughter of entire flocks will continue as heretofore. Our industry cannot prosper unless American mohair is more uniform in quality and commands better prices.

In the correspondence between the Secretary of Agriculture and the secretary of the Association, the former expressed a desire to have an impartial report from a disinterested party on the status of the goat industry. Under date of July 7, 1892, the secretary recommended that Mr. R. Tcherassy, of Tehama county, be appointed to visit our State Fair; also investigate the industry on this coast, and to make a general report on the value of the Angora goat to this country. The Hon. J. M. Rusk, Secretary of Agriculture has not answered granting or refusing my request.

The tariff laws are in favor of our industry; encouragement is due to the breeders in this country for their enterprise; only Government influence can secure for us the much-needed new strains of blood for improving our goats. To benefit all sections alike by Government distribution imtially may be finally denied us, but yet we may find a way to establish a Register, and by doing so give new life to the business. Those persons favored by the Government may be furnished with proper certificates for each individual animal as basis for Register, and rules may be imposed for selling those purebloods at a moderate rate, never exceeding the value of $50 per head after the Register is established.

Unless the members of this Association have an interest in this movement, and also assist other breeders to derive benefits from an importation spoken of, our mission will fail.

The reports on consumption of domestic mohair cannot be fully set forth, and we know the fact that we only furnish less than one-fourth of the quantity used in our factories. We also know that we paid to England for the imported, one and one-fourth million dollars last year; therefore, with rigid enforcement of the present tariff laws the prospects for mohair production are encouraging, while a change to free trade will surely ruin this industry in this country.

The secretary calls the attention of the members to the necessity of devising plans for further action in the premises at earliest convenience. JULIUS WEYAND,
Secretary A. G. B. A.

Sheep on Califoania Farms.

SAN LUIS OBISPO CO., CAL.

TO THE EDITOR:—Having had some years' experience in the sheep and wool business, and being a constant reader of your esteemed weekly RURAL PRESS, I venture to make a few remarks, seeing this column is oftimes not represented in the RURAL nowadays, not because you have any desire to shadow it, but because items of interest are fewer and more difficult to collect than formerly. We do, though, sometimes find instructive papers, notes and comments, which are read with interest and pleasure.

This is one of the industries here that is fast declining. The immense tracts of land used almost exclusively for sheep a few years ago have become now too valuable for that purpose. Irrigation, cultivation, orchards, vineyards, and thousands of homes can to-day be seen, where nothing but sheep and cattle used to feed. This change in things finds employment for a large army of workers and permanent settlers come here to make this glorious State their home.

But while this is true, there are still places too far removed from transportation to raise grain profitably and too rough and hilly for cultivation, and there it is upon these cheap lands, together with the free range of the foothills and mountains, upon which, to a great extent, the mutton and wool of California is raised, and "the sheep that treads with a golden foot" is pushed into a corner, as it were, despised by many, who claim they not only injure the land upon which they range and tread, but tend to impede progress and are not wanted. The grain farmer does not want them, as they pack the soil so it cannot be plowed, and bring weed-seeds and rubbish on their otherwise clean farms. They are not wanted in the Sierra Nevada mountains any longer; they eat off and destroy the young trees, break down the hillsides, etc. They are not wanted on the roads, as they tread down the grades and damage the fences (which may be remarked here, to a great extent, consist, even on the county roads, of two and three barbed wires strung loosely on pickets or posts far apart, rendering it almost impossible to travel with stock with any degree of safety.

One of our farseeing members of the legislature, B. V. Sargent af Monterey, I believe, did introduce a bill adopting a standard fence for the county roads, which, if it passed, and it should have done, has never been enforced. There may be truth in some of these accusations, but where truth ends and prejudice begins, it is hard to tell.

Now, there are counties where the flock of sheep is looked upon as an indispensable adjunct to the profitable management of the farm, yielding larger returns from the amount of money invested than from a like amount put into any other stock. Not only do they get the increase, which, with proper care, often goes higher than 150 per cent, but the wool, and what is of great value to them also, the manure, as well as using their stock sheep to clean up after everything else.

In a few years from now, when large bands of sheep can no longer be profitably handled here, almost every farmer who owns his own farm and has it fenced and improved will have his flock of sheep, numbering in proportion to the size of his farm and its adaptability to their use, and will wonder how he used to get along without them. What is a few bales of wool or a few head of fine fat lambs or mutton sheep in the early spring when prices for meat are always high (and prime sheep and lambs are salable at any time). What is better than a few hundred dollars coming in in this way before the grain, hay and fruit crop is ready, when money is, in many cases, somewhat scarce, from a source requiring only a small outlay to start it, and demanding only a small part of the owner's time and attention, and the feed for which will scarcely be missed, to say nothing of the advantage of having fresh meat for family and hands at any time of the year he wishes, thus cutting down the butcher's bill, which soon runs up at prices charged.

In consequence of the result of the late elections, there may be and doubtless are many who look upon free wool (which will most likely follow) as a great detriment to the sheep industry in this country, but it is not on a basis of raising sheep for wool *alone*. I write but to point out the desirability and profit of a flock of sheep on almost every farm, be it large or small, to take the place of the large bands formerly raised, fed and fattened on the large grants, of which only a few remain open to their use, and on the public domain, which is now almost a thing of the past. California must have meat, and will have *mutton* and *lamb*, and farmers, small as well as large, will find it to their advantage to help to make up the deficiency and supply the increasing demand. The kinds to select for this purpose and the reasons why will follow at a future date. C. U. M.

[These matters are very important. We hope our correspondent will proceed.—ED. PRESS.]

POULTRY YARD.

Nest Eggs.

How long since the water vessels were scalded and the feed-trough cleaned?

It is more economical to spend time improving one or two breeds of stock rather than to attempt more and make a failure.

Left over cabbage and celery plants and garden greens should go to the shut in poultry. They are useful meat and egg producers.

Even if you know your eggs are fresh don't take them to a customer with the shells dirty. It does not help to inspire confidence in their quality.

Every hen on the farm should pay for herself within the next sixty days. If there are any loafers in the flock single them out for your Sunday dinner. They never will be worth more than now, and never relieve more. Better 50 layers than 100 loafers, and hens are loafers as well as men, though the man is usually responsible for the habit.

Begin now to cook the vegetables, such as pumpkins, cabbages, apples or onions in the evening; mix in the meal while hot and put away, covering tightly, so that it will be warm when fed before sunrise. If the hens are obliged to wait for their breakfast after getting their beds made it will have its effect upon them for the entire day. The man who isn't willing to turn out early to feed the flock must not expect to pocket large returns. It's the early riser that gets the eggs.

This question of profits in the poultry yard hinges not on breeds, but on birds. Breeds have certain characteristics, but it is the individual which pays or fails. In dealing with the question it will always be well to keep track of each bird and not rely on the fact that they are this or that breed. Any variety can be made of profit to the owner by keeping close watch of the individuals. Result must be measured with reference to each rather than to all, and in seeking for this a high average will be secured.

Nine-tenths of all the diseases which infest the poultry yard are due to neglect, and the other tenth to carelessness. A natural condition is one of health, and only when man interposes unnatural conditions does there follow disease: Some of these may be enumerated as follows: Overfeeding, impure water in foul dishes, bad air caused by the accumulations under the roosts, draughts of air caused by poor ventilation, open cracks or broken windows, filthy vermin, the result of neglect in cleansing the pens, and weakened constitutions following indiscriminate in-and-in breeding.

BLOOD ALWAYS TELLS.—Two years ago we had a lot of mixed-up chickens of all breeds, but could get no eggs in the winter. We got a Leghorn rooster, put him in with the hens and killed off the roosters we had; then we bought three sittings of Leghorn eggs and set four sittings of eggs from the Leghorn rooster and our mixed hens. This gave us about 33 chicks, some thoroughbreds and some half-breeds. The pullets began laying when about six months old. From January 1st to April 1st we sold 55 dozen of eggs at 14 to 25 cents, besides what we used for a family of three. So much for the eggs; now for the feed. In the morning we feed about two quarts of shelled corn and oats, and in the evening we feed corn. For drink they have skim or buttermilk.—The Buckeye Boy.

EXPERIMENT STATIONS.

Distribution of Seeds and Plants.

University Experiment Station Bulletin No. 98.

As has been stated in our previous bulletins announcing distributions of seeds and plants, the distribution is undertaken for the purpose of securing a popular verdict on the value and adaptability in all parts of the State of the growths which we have under observation on the grounds of the Central Station at Berkeley and of the four outlying stations in Amador, San Luis Obispo, Tulare and Los Angeles counties. With this purpose in view, our distribution contemplates the acceptance of an obligation by the applicant to faithfully experiment with the material supplied and to report success or failure. That this obligation is conscientiously discharged by a large proportion of our correspondents is shown by the full data credited to such sources in our recent reports. This distribution from the station is for the purpose of securing wide trial of growths new to the State, and does not include common trees, plants and seeds which can be had from dealers. For this reason, we do not invite applications for general supplies of garden seeds or fruit-trees. We cannot furnish them.

We cannot undertake distribution to citizens of other States except where desirable exchanges are offered.

Terms.—Our experience has demonstrated that requiring a small contribution insures the applicant's interest and relieves us from the profitless work of supplying the throng of people who always carelessly send for what costs them nothing, and who, as a rule, give no attention to the trial of the material sent them, and therefore do not report results. For this reason, applicants are requested to send the amount specified in connection with each description below to meet the expenses of packing and postage. If they desire seeds sent by express, applicants need not send the amounts specified for postage, *but all orders for* SEEDS *by express* must be accompanied by a remittance of 25 cents to pay for packing. *Express charges are paid by the recipient.* Applications may be made for one or more kinds of seeds, *but an applicant should not order more than one package of a kind.* In case any kind of seed becomes exhausted, the money sent will be returned, unless a second choice is mentioned by the sender. Postal notes are requested instead of stamps whenever practicable. Any surplus left after filling orders will, as far as possible, be returned to the senders, deducting letter postage.

NEWLY-INTRODUCED TABLE FIGS.

The search for a drying fig which shall enable us to produce an article comparable with the Smyrna fig of commerce has obscured efforts to add to our list of desirable varieties for table use. This must be regarded as unfortunate, when it is remembered that probably no fruit succeeds over a greater area of California than the fig. All parts are not suited for drying figs, but the whole State, except the higher mountain valleys and some parts of the immediate coast line, can successfully produce figs if varieties suited to local conditions be secured. To increase knowledge in this direction, large plantings of varieties new to the State were made at our outlying stations. These varieties were derived indirectly from the collection made by Dr. Hogg for the Royal Horticultural Society of England. Preliminary statements of the behavior of these varieties were made by Inspector C. H. Shinn in Bulletin 96 of this station, and a fuller review will appear in our next annual report. Some of the varieties have proved so desirable for several reasons that we now offer cuttings to those desiring to test new varieties of this fruit. Applicants may choose from the following list:

1—*Abondance Precoce.*—Small, early, prolific, good quality.

2—*Black Marseilles.*—Small, medium early, high quality.

3—*Early Violet.*—One of the earliest, small but good; commended for localities having a short season.

4—*Hirta du Japon.*—Medium size, roundish with long stalks, skin very dark, flesh opaline, quality best, very prolific.

5—*Monaco Bianco.*—Above medium size, roundish oblate, skin green, flesh dark red, juicy and exceedingly rich; a free bearer.

6—*Col. de Signora Bianco.*—Medium sized, pyriform, long, ribbed neck, skin green, changing to yellow; flesh deep red, very rich and luscious; a strong grower; late, suited for a warm region.

7—*Du Roi.*—Small, roundish, pale yellow; very fine quality.

8—*Bourjassote Blanche.*—Small, round or turbinate; dull green, inclining to tawny; flesh pale rose, sweet and rich.

9—*Bourjassote Grise.*—Medium size, roundish and flattened; dull brown or tawny, with purple patches; flesh deep red, rich and luscious; uniformly good, and a free bearer.

10—*Drap d'Or.*—Small, roundish, no neck; pale greenish yellow, shaded with brown; flesh delicate amber, thick, juicy and excellent quality.

11—*De Constantine.*—A fig of good quality, stands frost fairly.

12—*Agen.*—Medium size, roundish; skin bright green, cracking longitudinally when ripe, showing white bands; flesh deep red, very rich; a good bearer, but very late, requiring a long hot season.

We will send small bundle of named cuttings, assorted, as many varieties as are in supply, for 25c. by mail, postpaid.

ITALIAN GRAPE VARIETIES.

Two years ago we secured from Italy a collection of about 50 leading Italian grape varieties, as described in Bulletin 91 of this station. In addition to propagation for planting at our outlying stations we have rooted a similar supply for distribution. As they are new to the State we commend them for local experiments. The varieties now available are as follows:

1—*Cipro nero.*—From the island of Cyprus, where it makes the best wines, called "la Commanderia;" also a nice table grape, but ripening late.

2—*Cesanese nero.*—From the "Campagna di Roma," where it is most abundantly cultivated and gives a fine and strong wine.

3—*Paga-debito.*—A black variety from the "Puglie." Good for wine, abundant bearer.

4—*Monica.*—A black grape. Its wine is one of the best in Sardinia.

5—*Neiretta.*—This black variety is very much cultivated at the Saluzzo vineyards, Piedmont; a heavy bearer.

6—*San Gioveto.*—A Tuscan variety, which, blended with *Canajolo* and *Malvasia bianca* (without perfume), makes the majority of good Tuscan wines. According to Count Rovasenda's experiments, it would make a good blend with *Freisa* and *Barbera.*

7—*Neiretto grosso canavesse.*—From Piedmont; abundant acidity and of fairly deep color.

8—*Danugue.*—A Southern French variety, identical with the *Gros Guillaume* from Nice, possessing large berries, but of late maturity.

9—*Ocru di bove.*—Black variety from Sardinia, very large-berried, late maturity.

10—*Favorita.*—According to Count Rovasenda, is identical with the "*Vermentino di Liguria,*" a good white variety both for wine and table use.

11—*Cataratta a la Porta.*—A white Sicilian variety for wine; a heavy bearer, with large and yellow-colored berries, but matures late. The Cataratta varieties are used in making the famous Marsala wines.

12—*Bellino.*—A Piedmont black variety, fine for table use; identical with "*Imperial nero.*"

13—*Passaretta*—Cultivated in Piedmont both for wine and raisins. Their berries are very like a bird's eye.

14—*Crejidero.*—A Spanish white variety, good for table use; fine-looking, but of late maturity.

We will send bundles of rooted vines, assorted varieties, from the above, 25 cents for each package; express charges to be paid by the recipient.

FOREST AND SHADE TREES.

A New Acacia.—We have grown from seeds donated by Baron F. Von Mueller, seedlings of *Acacia aulacocarpa* or *leptophleba,* which we believe has not hitherto been distributed in California. This tree is locally known in Queensland as the "Hickory wattle." It yields a tan bark which is used in Queensland to some extent. The wood is hard, heavy, tough and dark red; useful for cabinet work We desire to ascertain the desirability of the tree in this State for ornamental or economic purposes. We will send three seedlings to each applicant: 25c per lot by express.

Lemon-scented gum (*Eucalyptus citriodora.*) This tree has already gained entrance to the State, but the frequent application to us for it induces us to offer seedlings this year. It is described by Von Mueller as a native of Queensland and generally found on sterile, stony ridges. Its adaptability is, however, seriously limited by its susceptibility to frost. It is useless to plant it on low, frosty situations, and our experience indicates that it is very much more tender than the blue gum. We would like to have it tried in thermal belts in different parts of the State. We send three plants to each applicant: 25c for each lot by express.

Black Wattle (*Acacia decurrens*).—This tree has demonstrated its adaptation to most California climates, is a rapid grower and very desirable. Those who have succeeded in sprouting the seed after immersion in boiling water, write very enthusiastically of the tree. Others have failed to secure germination and for their benefit we offer this year small trees of our own growing: three trees to each applicant, 25c for each lot by express.

A ROOT FOR TANNERS' USE.

Forest supplies of barks yielding tannin have become so reduced that commercial tanners have been led to seek other sources of supply. There is a plant native to the southwest region of the United States, the root of which has been used from time immemorial by Mexicans and Indians for tanning, and is now receiving the attention of tanners in the eastern States and in Europe. It is named "Canaigre" in the Mexican vernacular and "sour dock" by Americans. Its botanical name is *Rumex hymenosepalum.* It is reported that gatherings of the wild root have been so large during the last two years that it is difficult to obtain it in quantity, and plantations recently made in New Mexico have proved profitable, $5 per ton being paid for the green root which is worth $60 to $80 per ton dried and delivered in Europe. The yield in cultivated land is said to reach 16 tons to the acre of green root. Canaigre has been grown in our Garden of Economic Plants for a number of years, and analyses of the root fully, given in our report for 1890, show that the root is rich in tannin. The plant thrives in dry, sandy soils, and our experiments show its success also on adobe when cultivated. To those who desire to test its growth and profitability we offer seed, reminding applicants, however, that it is a relative of "sorrel" and "yellow dock" and therefore a weed which should be carefully handled, although our growth and seeding of it for several years does not disclose a disposition to rapid extension outside of its own area. We send seed in two-ounce packages for five cents each, postpaid.

A GREEN MANURE AND WINTER FORAGE PLANT.

For several years there has been request for a plant which would make a quick growth under our customary winter temperature. Several indigenous and remotely introduced clovers and other plants do this, and on ground naturally seeded with them it will perhaps be found impossible to procure better plants. For obvious reasons, however, constantly cultivated soil exhausts its natural seed supply, and there are other lands in which desirable seeds do not exist in quantity. There is, then, a wide demand for a winter-growing plant (*a*), the seed of which is in adequate commercial supply; (*b*) an annual plant, having therefore, a perishing rather than a perennial root; (*c*) a leguminous plant, because of the well-known ability of such a plant to constantly add to the supply of nitrogen compounds in the soil. A plant which seems to meet these requirements in a notable manner is the "Crimson clover" (*Trifolium incarnatum*), a plant indigenous to northern and central Europe, and therefore not in any sense a new plant. The seed was introduced for trial in our Garden of Economic Plants many years ago, and has been also in the hands of a few private experimenters. Although it made a very quick and luxuriant winter growth, its disappearance at the beginning of the dry season led those who hoped to find in it a dry-land forage plant for summer pasture to pronounce it a failure, and so, indeed, it is from that point of view. It is likely that such judgment may be reversed when the plant is estimated by its winter growth, whether it be for early pasturage or more especially upon recognition of its value in producing a heavy crop while winter moisture is abundant, for plowing under as green manure in the early spring. During the last few years Crimson clover has become very popular for such use in some of the southern States, and there is abundant testimony of its value in refreshing orchard soils, for which it should be chiefly tested in this State. It is also worthy of note as a bee-forage plant, and may serve the stockgrower as well for winter feed, for it grows thriftily under temperatures which check the growth of alfalfa. The plant should not be confused with the common red clover of the East (*Trifolium pratense*), from which it is wholly distinct.

Those who are disposed to make large trial of Crimson clover for green manuring of orchards (and we hope some will do it), can procure the seed of leading California seedsmen at a moderate price, and 20 pounds should be sown per acre as early in the winter as possible. We can distribute the seed only in small parcels, which will enable the experimenter to observe the growth of the plant and determine its fitness for larger use next year. We send 4 oz. packets, postage paid, for 5c.

A NEW FORAGE PLANT—THE FLAT PEA.

In 1891 we received from the U. S. Dept. of Agriculture a small packet of seed of a forage plant which had recently been brought prominently to notice abroad, and was apparently commended by experiments on drifting sands and in other unfavorable and arid conditions. It has been popularly named the "flat pea," and is botanically *Lathyris sylvestris.* It is a perennial legume, having much the form of growth of the "everlasting pea." Plants grown from the seed furnished us, and planted late in 1891, rapidly extended themselves and practically filled the soil of the plot with rambling rhizomes. The present season there was a dense mat of haulm or vine formed which covered the ground and reached a length of about four feet. All through the dry summer months it maintained a bright green and grew continuously. The top growth was cut away in September and fed to animals which ate it readily. The plant did not bloom, and the cutting was for the purpose of stimulating new shoots from the running roots, so that we might have plants for this year's distribution rather than wait another year for the seed. After the cutting the new growth started rapidly. Our observation thus far indicates that the plant grows vigorously throughout the dry season at least in the coast region. Its foreign reputation gives it a very permanent rooting and long service in the most arduous situations.

Analysis of the fodder made at this station gives the plant very high nutritive value.

ANALYSES OF FLAT PEA AND ALFALFA COMPARED.

	Lathyris Sylvestris. California. (Jaffa.)	*Lathyris Sylvestris.* England (Hone.)	Alfalfa Average.
Moisture	63.48	58.63	67.46
Crude protein (Mainly flesh-form'g)	8.18	7 44	5.91
Crude fat	1.63	2.05	1.15
Carbohydrates (Starch, sugar, gums, etc.)	13.77	16.58	12.02
Crude fiber	9.76	12.21	10.51
Mineral matter (ash)	3.18	3.09	2.95
Totals	100.00	100.00	100.00

The differences in composition as shown by the two analyses are, at least in part, due to the fact that we cut our sample before blooming, while the English sample was past bloom and the stems were therefore more mature.

A part at least of the root sets of the flat pea should be carefully planted in the garden or field corner where they can be watched and protected the first year. If the growth be satisfactory, the roots can be distributed here and there in waste places the following year, or the seed can be secured for the same purpose. We will send a small package of roots postpaid for 10c.

ANOTHER FORAGE PLANT.

ELLIOTT'S SIDA.—This plant (*Sida Elliottii*) was widely distributed by seed last year, but we could not meet all the demands made for the seed. In some cases, failure of the seed to germinate has been reported. For these reasons, we offer the seed again this year. The plant is a low bush commended for trial on dry pastures for grazing and not, of course, for mowing. It grows finely in our heavy clay soil, and the plat which received no irrigation whatever looks more thrifty than another plat, which was moderately watered through the summer. It sends down a long tap root, and while young is quite leafy and succulent. It seeds freely and promises to extend itself. Scatter the seed, on hilly pastures, scratching it in here and there with a rake. Mark the places so that it can be looked for afterward. Seed will be sent by mail in small packages for 3c.

CUTTINGS AND SCIONS.

Osier Willows.—Nine named Austrian varieties; sent in lots of 10 of a kind; 10c. per lot, or one dozen assorted, 20c. by mail.

Mulberries.—Cuttings of the following kinds can be had: (1) Multicaulis; (2) Alba; (3) Russian; (4) Downing's Everbearing; (5) Lhoo; (6) Nagasaki. Sent in lots of 10 of a kind; 10c. per lot, or 12 cuttings assorted, 20c. by mail.

Fruit Tree Scions.—The University orchard contains upward of 500 named varieties of fruit, and we can furnish grafting scions of apples, pears, apricots and plums in variety. State what character of fruit is desired and for what purpose.

We do not furnish rooted trees, but scions, for grafting. Send ten cents for each dozen ordered of a single kind, or 20c. if a dozen of assorted varieties is ordered.

VEGETABLES.

Perennial Bean.—A handsome, large, white bean, with a perennial root, from which climbing runners start each year. The seed was donated by Mr. Henry Melde, of Humboldt county. It is worthy of general trial. We can only send a few beans to each applicant; 3c. per packet by mail, postpaid.

Spinach.—New Zealand (*Tetragonia expansa*); described by Von Mueller as a good culinary herb and as useful for restraining drifting sands; growing even during severest heat and drouth. Seed in 1-oz. packets, 3c. We expect to send out *seeds about January 1, and* PLANTS ABOUT FEBRUARY 1.

E. J. WICKSON,
December 15, 1892. Berkeley, Cal.

The Oldest Christmas Hymn.

IN Book III of Clement of Alexandria is given (in Greek) the most ancient hymn of the Primitive Church. It is there (150 years after the Apostles) asserted to be of much earlier origin. The following version will give some imperfect idea of its spirit:

Shepherd of tender youth,
Guiding in love and truth,
Through devious ways.
Christ, our triumphant King!
We come thy name to sing,
And here our children bring
To shout thy praise.

Thou art our holy Lord!
The all-subduing Word,
Healer of strife!
Thou did'st thyself abase,
That from sin's deep disgrace
Thou mightest save our race
And give us life.

Thou art wisdom's High Priest!
Thou hast prepared the feast
Of holy love.
And in our mortal pain
None calls on Thee in vain,
Help Thou dost not disdain,
Help from above.

Ever be Thou our Guide,
Our Shepherd and our pride,
Our staff and song.
Jesus, Thou Christ of God!
By the perennial word,
Lead us where Thou hast trod,
Make our faith strong.

So now, and till we die,
Sound we thy praise on high,
And joyful sing.
Infants and the glad throng
Who to Thy Church belong,
Unite and swell the song
To Christ our King.

Baby's Christmas.

I.

PUT up the baby's stocking;
Be sure you don't forget
The dear little dimpled darling!
She ne'er saw Christmas yet,
But I told her all about it,
And she opened her big blue eyes,
And I'm sure she understood it,
She looked so funny and wise.

Chorus.—Hang up the baby's stocking;
Be sure you don't forget
The dear little dimpled darling!
She ne'er saw Christmas yet.

II.

Dear! what a tiny stocking!
It doesn't take much to hold
Such pink little toes as baby's
Away from the frost and cold.
But then for the baby's Christmas
It would never do at all;
Why, Santa wouldn't be looking
For anything half so small.

Chorus.

III.

I know what we'll do for the baby,
I've thought of the very best plan—
I'll borrow a stocking of grandma,
The largest that ever I can,
And you'll hang it by mine, dear mother,
Right here in the corner, so!
And write a letter to Santa,
And fasten it on the toe.

Chorus.

IV.

Write: "This is the baby's stocking
That hangs in the corner here;
You have never seen her, Santa,
For she only came this year;
But she's just the blessedest baby—
And now, before you go,
Just cram her stockings with goodies
From the top clear down to the toe."

Chorus.

Christmas Joy.

"BEHOLD this glory round our feet."
The Magi mused, "more bright than morn?"
And voices chanted, clear and sweet,
"To-day the Prince of Peace is born."

"What means this stir!" the shepherds said,
"That brightness through the rocky glen?"
And angels answering overhead,
Sang, "Peace on earth, good-will to men!"

'Tis eighteen hundred years and more,
Since those sweet oracles were dumb;
We wait for him, like them of yore;
Alas! He seems so slow to come.

But it is said, in words of gold,
No time or sorrow e'er shall dim,
That little children might be bold
In perfect trust to come to Him.

All around about our feet shall shine
A light like that the wise men saw,
If we our living wills incline
To that sweet Life which is the Law.

So shall we learn to understand
The simple faith of shepherds, then;
And kindly clasping hand to hand
Sing, Peace on earth, good-will to men!

—JAMES RUSSELL LOWELL.

A TALK WITH SANTA CLAUS.

BY EUGENE FIELD.



CHRISTMAS Eve Joel Baker was in a most unhappy frame of mind. He was lonesome and miserable; the chimes making merry Christmas music outside disturbed rather than soothed him; the jingle of the sleigh-bells fretted him, and the shrill whistling of the wind around the corners of the house and up and down the chimney seemed to grate harshly on his ears.

"Hump," said Joel, wearily, "Christmas is nothin' to me; there was a time when it meant a great deal, but that was long ago—fifty years is a long stretch to look back over. There is nothin' in Christmas now, nothin' for me at least; it is so long since Santa Claus remembered me that I venture to say he has forgotten that there ever was such a person as Joel Baker in all the world. It used to be different; Santa Claus used to think a great deal of me when I was a boy. Ah! Christmas nowadays ain't what it was in the good old time—no, not what it used to be."

As Joel was absorbed in his distressing thoughts, he became aware very suddenly that somebody was entering or trying to enter the room. First came a draft of very cold air, then a scraping, grating sound, then a strange shuffling, and then—yes, then, all at once, Joel saw a pair of fat legs and still fatter body, dangle down the chimney, followed presently by a long, white beard, above which appeared a jolly red nose and two bright twinkling eyes, while over the head and forehead was drawn a fur cap, white with snowflakes.

"Ha, ha," chuckled the fat, jolly stranger, emerging from the chimney and standing well to one side of the hearthstone; ha, ha, they don't have the big, wide chimneys they used to build, but they can't keep Santa Claus out! Ha, ha, ha. Though the chimney were no bigger than a gas-pipe, Santa Claus would slide down it!"

It didn't require a second glance to assure Joel that the newcomer was indeed Santa Claus. Joel knew the good old saint—oh, yes—and he had seen him once before, and although that was when Joel was a little boy, he had never forgotten how Santa Claus looked.

Nor had Santa Claus forgotten Joel, although Joel thought he had, for now Santa looked kindly at Joel and smiled and said: "Merry Christmas to you, Joel."

"Thank you, old Santa Claus," replied Joel, "but I don't believe it's goin' to be a very merry Christmas. It's been so long since I've had a merry Christmas that I don't believe I'd know how to act if I had one."

"Let's see," said Santa Claus, "it must be going on fifty years old the last time I slipped down the chimney of the old homestead and filled your stocking. Do you remember it?"

"I remember it well," answered Joel; "I had made up my mind to lie awake and see Santa Claus; I'd heard tell of you, but I never seen you, and brother Otis and I concluded we'd lie awake and watch for you to come."

Santa Claus shook his head reproachfully.

"That was very wrong," said he, "for I'm so scarey that if I'd know you boys were awake I'd never have come down the chimney at all, and then you'd have had no presents."

"But Otis couldn't keep awake," exclaimed Joel. "We talked about everythin' we could think of, till father called out to us that if we didn't stop talking he'd have to send one of us up into the attic to sleep with the hired man. So in less than five minutes Otis was sound asleep and no pinching could wake him up. But I was bound to see Santa Claus, and I don't believe anything would have put me to sleep. I heard the big clock in the sitting-room strike 11, and I had begun wonderin' if you were never going to come, when all of a sudden I heard the tinkle of the bells around your reindeer's necks. Then I heard the reindeer prancin' on the roof and the sound of your sleigh-runners cuttin' through the crust and slippin' over the shingles. I was kind o' scared and I covered my head up with the sheet and quilts, only I left a little hole so I could peek out and see what was goin' on. As soon as I saw you I got over bein' scared—for you were jolly and smilin' like, and you chuckled as you went around to each stockin' and filled it up."

"Yes, I can remember the night," said Santa Claus; "I brought you a sled, didn't I?"

"Yes, and you brought Otis one, too," replied Joel; "mine was red and had 'Yankee Doodle' painted in black letters on the side; Otis' was black and 'Snow Queen' in gilt letters."

"I remember those sleds distinctly," said Santa Claus, "for I made them specially for you boys."

"You set the sleds up against the wall," continued Joel, "and then you filled the stockin's."

"There were six of 'em, as I recollect," said Santa Claus.

"Let me see," said Joel. "There was mine, and Otis', and Elvira's, and Thankful's, and Susan Prickett's—Susan was our help, you know. No, there were only five, and as I can remember they were the biggest we could beg or borrow of Aunt Corcas, who weighed nigh onto 200 pounds. Otis and I didn't like Susan Prickett and we were hopin' you'd put a cold potato in her stockin'."

"But Susan was a good girl," remonstrated Santa Claus. "You know I put cold potatoes in the stockings of boys and girls only who are bad, and don't believe in Santa Claus."

"At any rate," said Joel, "you filled all stockin's with candy and popcorn and nuts and raisins, and I remember you said you were afraid you'd run out of popcorn balls before you get around. Then you left each of us a book. Elvira got the best one, which was 'The Garland of Friendship,' had poems in it about bleeding hearts, and so forth. Father wasn't expecting anything, but you left him a new pair of mittens, and mother got a new pair of mittens and a new fur boa to wear to meetin'."

"Of course," said Santa Claus, "I never forget father and mother."

"Well, it was as much as I could do to lay still," continued Joel, "for I'd been longin' for a sled an' the sight of that red sled with 'Yankee Doodle' painted on it just made me wild. But somehow or other, I began to get powerful sleepy all at once and I couldn't keep my eyes open. The next thing I knew, Otis was nudgin' me in the ribs. 'Get up, Joel,' says he; 'it's Christmas, an' Santa Claus has been here.'

"'Merry Christmas! Merry Christmas!' we cried, as we tumbled out o' bed. Then Elvira and Thankful came in, not more'n half-dressed, and Susan came in, too, an' we's just made Rome howl with 'Merry Chris'mas!' to each other. 'Ef you children don't make less noise in there,' cried father, 'I'll hev to send you all back to bed!' The idea of askin' boys and girls to keep quiet on Chris'mas mornin' when they've got new sleds an' 'Garlands of Frien'ship'!"

Santa Claus chuckled; his rosy cheeks fairly beamed with joy.

"Otis an' I didn't want any breakfast," said Joel. "We made up our minds that a stockin'ful of candy an' popcorn an' raisins would stay for us awhile. I do believe there wasn't buckwheat cakes enough in the township to keep us indoors that mornin'. Buckwheat cakes don't size up much 'lonside of a red sled with 'Yankee Doodle' painted onto it and a black sled named 'Snow Queen'. We didn't care how cold it was; so much the better for slidin' down hill! All the boys had new sleds—Lafe Dawson, Holbrook Bill, Gum Adams, Rube Playford, Leander Merrick, Ezra Burple—all on 'em had new sleds excep' Martin Peavey, and he said he calculated Santa Claus had skipped him this year 'cause his father broke his leg haulin' logs from the Pelham woods and been kep' indoors six weeks; but Martin had his ol' sled and he didn't hev to ask any odds of any of us neither."

"I brought Martin a sled the next Christmas," said Santa Claus.

"Like's not; but did you ever slide down hill, Santa Claus? I don't mean such hills as they hev out here in this new country, but one of those old-fashioned New England hills that was made 'specially for boys to slide down—full of bumpers an' thank-ye-mars, and almos' took our breath away. 'Merry Chris'mas to ye, little boys!' it seemed to say, and it untied our mufflers an' whirled the snow in our faces, just as if it was a boy, too, an' wanted to play with us. An ol' crow came flappin' over us from the cornfield beyond the meadow. He said 'Caw, caw,' when he saw my sled; I s'pose he'd never seen a red one before. Otis had a hard time with his sled—a black one—an' he wondered why it wouldn't go as fast as mine would.

"'Hev you scraped the paint off'n the runners?" asked Wralsey Goodnow. 'Course I hev,' said Otis; 'broke my own knife an' Lute Ingraham's a-doin' it, but it don't seem to make no diff'rence—the darned ol' thing won't go!' Then, what did Simon Buzzell say but that, like's not, it was because Otis' sled's name was 'Snow Queen.' 'Never did see a girl sled that was worth a cent, anyway,' sez Simon. Well, now, that jest about broke Otis up in business. 'It ain't a girl sled,' sez he, 'and it's name ain't Snow Queen! I'm a-goin' to call it Dan'l Webster or Oliver Optic or Sheriff Robbins, or after some other big man.' An' the boys plagued him so much about that pesky girl sled that he scratched off the name, an', as I remember, it did go better after that.

"About the only thing," continued Joel, that marred the harmony of the occasion, as the editor of the Hampshire County *Phœnix* used to say, was the ashes that Deacon Morris Frisbie sprinkled out in front of his house. He said he wasn't going to have folks breaking their necks jest on account of a lot of frivolous boys that was goin' to the gallows as fas' as they could. Oh, how we hated him, and we'd 've snowballed him, too, if we hadn't been afraid of the constable that lived next door. But the ashes didn't bother us much, and every time we slid side-saddle, we'd give the ashes a kick, and that sort o' scattered 'em,'"

The bare thought of this made Santa Claus laugh.

"Goin' on 'bout nine o'clock," said Joel, "the girls come along—Sister Elvira an' Thankful, Prudence Tucker, Belle Yocum, Sophrone Holbrook, Sis Hubbard an' Marthy Sawyer. Marthy's brother Increase wanted her to ride on his sled, but Marthy allowed that a red sled was her choice every time.

"'I don't see how I'm goin' to hold on,' said Marthy; 'seems as if I would hev my hands full keepin' my things from blowin' away.'

"'Don't you worry about yourself, Martha,' sez I, 'for if you look after your things I kind o' calc'late I'll manage not to lose you on the way.'

"Dear Marthy—seems as if I could see you now, with your tangled curls a-blowin in the wind, your eyes all bright an' sparklin an' your cheeks as red as apples. Seems, too, as if I could hear you laughin' an' callin' jest as I did as I toiled up the old New England hill that Chris'mas morning—a-calling 'Joel, Joel, Joel! Ain't you ever comin', Joel?' But the hill is long an' steep, Marthy, an' Joel ain't the boy he used to be; he's old an' gray an' feeble, but there's love an' faith in his heart, an' they kind o' keep him totterin' toward the voice he hears a-callin' 'Joel, Joel, Joel!'"

"I know—I see it all," murmured Santa Claus very softly.

"Oh, that was so long ago," sighed Joel; "so very long ago. And I've had no Christmas since—only once, when our little one—Marthy's an' mine—you remember him, Santa Claus?"

"Yes," said Santa Claus," a toddling little boy with blue eyes—"

"Like his mother," interrupted Joel; an' he was like her, too—so gentle and lovin', only we called him Joel; for that was my father's name, and it kind o' run in the fam'ly. He wa'n't more'n three years old when you came with your Christmas presents for him, Santa Claus. We had told him about you, and he used to go to the chimney every night and make a little prayer about what he wanted you to bring him. And you brought 'em, too—a stick horse, an' a picture book, an' some blocks an' a drum—they're on the shelf in the closet there, and his little Chris'mas stockin' with 'em—I've saved 'em all, an' I've taken 'em down an' held 'em in my hands, oh, so many times."

"But when I came again," said Santa Claus—

"His little bed was empty, an' I was alone. It killed his mother—Marthy was so tender-hearted; she kind o' drooped an' pined after that. So now they've been asleep side by side in the buryin' ground those thirty years.

"That's why I'm so sad like whenever Christmas comes," said Joel, after a pause. "The thinkin' of long ago makes me bitter almost. It's so different from what it used to be."

"No, Joel; oh, no," said Santa Claus; "tis the same world, and human nature is the same, and always will be. But Christmas is

for the little folks, and you, who are old and grizzled now, must know it and love it only through the gladness it brings the little ones."

"True," moaned Joel; "but how may I know and feel this gladness when I have no little stocking hanging in my chimney corner—no child to please me with his prattle? See, I am alone."

"No, you're not alone, Joel," said Santa Claus. "There are children in this great city who would love and bless you for your goodness if you but touched their hearts. Make them happy, Joel; send by me this night some little gift to the little boy in the old house yonder. He is poor and sick. A simple toy will fill his Christmas with gladness."

How sweetly Joel slept! When he awoke the sunlight streamed in through the window and seemed to bid him a Merry Christmas. How contented and happy Joel felt! It must have been the talk with Santa Claus that did it all; he had never known a sweeter sense of peace. A little girl came out of the house over the way. She had a new doll in her arms and she sang a merry little song and she laughed with joy as she skipped along the street. Aye, and at the window sat the little sick boy, and the toy Santa Claus left him seemed to have brought him strength and health, for his eyes sparkled and his cheeks glowed, and it was plain to see his heart was full of happiness.

And, oh! how the chimes did ring out, and how joyfully they sang their Christmas carol that morning! They sang of Bethlehem and the manger and the babe; they sang of love and charity, till all the Christmas air seemed full of voices:

Carol of the Christmas morn—
Carol of the Christ-child born—
Carol of the list'ning sky
Till it echoes back again
"Glory be to God on high,
Peace on earth, good-will tow'rd men."

So all this music—the carol of the chimes, the sound of children's voices, the smile of the poor little boy over the way—all this sweet music crept into Joel's heart that Christmas morning—yes, and with these sweet, holy influences came others so subtle and divine that in its silent communion with them Joel's heart cried out amen and amen to the glory of the Christmas time.

The Nativity.

THE air was still o'er Bethlehem's plain,
As if the great night held its breath,
When life eternal came to reign
Over a world of death.

All Nature felt a thrill divine
When burst that meteor on the night,
Which, pointing to the Savior's shrine,
Proclaimed the new-born Light.

Light to the shepherds! and the star
Gilded their silent midnight fold;
Light to the wise men from afar,
Bearing their gifts of gold.

Light to a realm of sin and grief;
Light to a world in all its needs;
The Light of Life, a new belief
Rising o'er fallen creeds.

Light on a tangled path of thorns,
Though leading to a martyr's throne;
A light to guide till Christ returns
In glory to his own.

There still it shines, while far abroad
The Christmas choir sings now, as then:
"Glory, glory, unto our God!
Peace and good-will to men!"

—THOMAS BUCHANAN READ.

Christmas Bells.

I HEARD the bells on Christmas day
Their old familiar carols play,
And wild and sweet
The words repeat
Of peace on earth, good-will to men!
And thought how, as the day had come,
The belfries of all Christendom
Had rolled along
The unbroken song
Of peace on earth, good-will to men!

Till ringing, singing on its way,
The world revolved from night to day,
A voice, a chime,
A chant sublime,
Of peace on earth, good-will to men!

But in despair I bowed my head—
"There is no peace on earth," I said;
For hate is strong,
And mocks the song
Of peace on earth, good-will to men.

Then pealed the bells more loud and deep,
"God is not dead nor doth he sleep!
The wrong shall fail,
The right prevail,
With peace on earth, good-will to men!"

—HENRY W. LONGFELLOW.

A PERFECT CHRISTMAS.

BY WILLIAM O. STODDARD.

CHAPTER I.

THERE was not a bigger house in all the valley than that of Grandfather Vrooman. It was old, cozy and comfortable, and it seemed to lie sound asleep, with a snow blanket all over its roof.

Nothing short of a real old-fashioned Christmas could wake up such a house as that.

Christmas was coming!

Unless Santa Claus and the Simpsons and the Hopkinses should forget the day of the month, they would all be there at waking-up time to-morrow morning.

"Jane," said Grandmother Vrooman, that afternoon, to her daughter, Mrs. Hardy, who lived with her—"Jane, I've got 'em all fixed now just where they're going to sleep, and I've made up a bed on the floor in the store-room."

"Why, mother, who's that for?"

"You wait and see, after they get here, and we've counted 'em."

"Anyhow there's cookies enough, and doughnuts."

"And the pies, Jane."

"And I'm glad Liph gathered such piles of butternuts."

"Oh, mother," exclaimed little Sue, "I gathered as many as he did, and beechnuts, and hickory nuts, and——"

"So you did, Sue; but I wonder if two turkeys 'll go round, with only one pair of chickens?"

"Mother," said Mrs. Hardy, "the plum pudding?"

"Yes, but all those children! I do hope they'll get here to-night in time for me to know where I'm going to put 'em."

At that very minute, away up the north road, two miles nearer town, there was a sort of dot on the white road. If you were far enough away from it, it looked like a black dot, and did not seem to move. The nearer you came to it the funnier it looked, and the more it seemed to be trudging along with an immense amount of small energy. Very small, indeed, for anybody close up to it would have seen that it was a five-year-old boy in a queer little suit of gray, trimmed with red. He had on a warm gray cap, and right in the middle of the front of it were worked a pair of letters—"O. A."—but there was nobody with the gray dot to explain that those two letters stood for "Orphan Asylum." No, nor to tell how easy it was for a boy of five years old, with all the head under his gray cap full of Christmas ideas, to turn the wrong corner where the roads crossed, south of the great Orphan Asylum building. That was what he had done, and he had walked on and on, wondering why the big building did not come in sight, until his small legs were getting tired, and his brave, bright little black eyes were all but ready for a crying spell.

Just as he got thoroughly discouraged he came to the edge of the woods, where there stood a wood sleigh with two horses in front of it, drawn close to the road-side, and heaped with great green boughs and branches.

"The sleigh's pretty nigh full, grandfather," sang out a clear, boyish voice beyond the fence, and a very much older one seemed to go right on talking.

"Your grandmother, Liph, she always did make the best mince pies, and she can stuff a turkey better'n any one I know."

"Grandfather, do you s'pose they'll all come?"

"Guess they will. That there spruce 'll do for the Christmas tree. Your grandmother said we must fetch a big one."

"That's a whopper. But will Joe Simpson and Bob Hopkins be bigger'n they were last summer."

"Guess they've grown a little. They'll grow this time, if they eat all their grandmother 'll want 'em to. Hello, Liph, who's that out there in the road?"

"Guess it's a boy."

"I declare if it isn't one of them little gray mites from the 'sylum Way out here! I say, bub."

"I'm Bijah."

There was a scared look in the black eyes, for they had never seen anything quite like Grandfather Vrooman, when he pushed his face out between the branches.

The trees all looked as if they had beards of snow, but none had a longer or whiter one than Liph's grandfather.

"Bijah," said he, "did you know Christmas was coming?"

"Be here to-morrow," piped the dot in gray, "and we're going to have turkey."

"You don't say! Just wait until I cut a tree down, and I'll come out and hear all about it."

"Is your name Santa Claus?"

"Did you hear that, Liph? The little chap's miles from home, and I don't believe he knows it."

"Is that your sleigh?"

"Yes, Bijah, that's my sleigh."

"Them ain't reindeers, and you're bigger'n you used to be."

"Hear that, Liph?"

Bijah had not the least doubt in the world but that he had discovered Santa Claus in the very act of getting ready for Christmas, and his black eyes were growing bigger every minute, until Liph began to climb over the fence. Then he set off on a run as fast as his legs could carry him.

"Hold on," shouted Liph. "We won't hurt you."

"Let him go," said Grandfather Vrooman. "He's on the road to our house, We'll pick him up."

"Took me for Santa Claus, I declare! Liph, this here tree'll just suit your grandmother."

It was a splendid young spruce-tree, with wide-spreading boughs at less than two feet from the snow level. Grandfather Vrooman worked his way carefully in until he could reach the trunk with saw and ax, and then there was a sharp bit of work for him and Liph to get that "Christmas tree" stowed safely on the top of the sleigh load.

"Now for home, Liph. Your grandmother'll cut into one of them new pies for you when you get there."

"Look!" shouted Liph, "that little fellow's waiting for us at the top of the hill."

The hill was not a high one, and the road led right over it, and there on the summit stood Bijah.

"I'm so tired and hungry," he said to himself, "and there comes old Santa Claus, sleigh and all."

He was getting colder, too, now he was standing still, and when Grandfather Vrooman came along the road, walking in front of the sleigh, there seemed to be something warm about him.

It was not so much his high fur hat, or his tremendous overcoat, or his long white beard, or the way he smiled, but something in the sound of his voice almost drove the frost out of Bijah's nose.

"Well, my little man, don't you want to come to my house and get some pie?"

"Yes, sir."

Bijah could not think of one other word he wanted to say, and he mustered all the courage he had not to cry when Grandfather Vrooman picked him up, as if he had been a kitten, and perched him by the side of Liph among the evergreens.

On he went, and Bijah did not answer a single one of Liph's questions for five long minutes. Then he turned his black eyes full on his driver and asked, "Do you live with Santa Claus in his own house?"

"Yes, sir-ee," responded Liph, with a great chuckle of fun; but all he had to do the rest of the way home was to spin yarns for Bijah about the way they lived at the house where all the Christmas came from. When they got there, Liph's father and the hired man and Grandfather Vrooman were ready to lift off that Christmas tree and carry it through the front door and hall, and set it up in the "dark room" at the end of the hall. That ought to have been the nicest room in the house, for it was right in the middle, but there were no windows in it. There were doors in every direction, however, and in the center of the ceiling was a "scuttle hole" more than two feet square, with a wooden lid on it.

"John," said Grandfather Vrooman to Mr. Hardy, "we'll hoist the top of the tree through the hole. You go up and open the scuttle. Hitch the top good and strong. There'll be lots of things to hang on them branches."

Liph's father hurried upstairs to open the scuttle, and that gave Grandfather Vrooman a chance to think of Bijah. "Where is he, Liph?"

"O, he's all right, grandmother's got him. She and mother caught him before he got into the house. He tried to run away, too."

Bijah's short legs had been too tired to carry him very fast, and Grandmother Vrooman and Mrs. Hardy had caught him before he got back to the gate.

The way they laughed about it gave him a great deal of courage, and he never cried when they took him by his red, little hands, one on each side, and walked him into the house.

"Jane," said grandmother, "what will we do with him? The house'll be choke, jam, packed full, and there isn't an extra bed."

"Father found him in the snow somewhere. Just like him. But what a rosy little dot he is?"

"Are you Santa Claus' wives?" asked Bijah, with a quiver of his lip in spite of himself.

How they did chuckle while they tried to answer the question! All they made clear to Bijah was that the place for him was in a big chair before the sitting-room fireplace, with a plate of mince pie in his lap, and Bush, the big house-dog, sitting beside him.

"It's Santa Claus' dog," said Bijah to himself; "but his house isn't as big as the 'sylum."

CHAPTER II.

There were fireplaces in every room on the ground floor of Grandfather Vrooman's house, and some kind of stove in more than half the rooms upstairs.

There were blazing fires on every hearth downstairs, and Liph got hold of Bijah after a while and made him and Bush go around with him to help poke them up. Bijah had never seen a fireplace before, and it was a great wonder to him, but Bush sat down in front of each fire and barked at it.

It was getting dark when they reached the great front parlor, and the fireplace there was wonderful.

"Woof, woof, woof," barked Bush.

Bijah stood still in the door while Liph went near enough to give that fire a poke, and he could hear Grandfather Vrooman away back in the sitting-room:

"Now, my dear, we'll stick him away somewhere. Put him in one of the stockings, and hang him up."

"That's me," groaned Bijah. "He's going to make a present of me to somebody. O, dear! I wish I could run away."

But he could not, for there was Liph and there was Bush, and it was growing dark.

"Now, my dear," went on grandfather, "I'll just light up, and then I'll go and meet that train. I'll bring Prue and her folks, and Pat'll meet the other, and bring Ellen and hers. Won't the old house be full this time?"

"He caught some more, somewhere," whispered Bijah to himself. "I wonder who'll get 'em? Who'll get me?"

That was an awful question, but Liph and Bush all but ran against him just then, and he heard grandmother say:

"You'll have to stick candles on the windowsills; I can't spare any lamps for upstairs."

"But, my dear, it's got to be lit up—every room of it. I want 'em to know Christmas is coming."

"That's what they were all saying at the 'sylum, this morning," thought Bijah, "and here I am, right where it's coming to."

So he was; and he and Liph and Bush watched them finish setting the supper table, till suddenly Bush gave a great bark and sprang away toward the front door. Grandfather Vrooman had hardly been gone from the house an hour; and here he was, back again.

Jingle, jingle, jingle. How the sleigh-bells did dance as that great load of young folk came down the road; and what a racket they made at the gate; and how Bush, and Liph, and grandmother, and the rest did help them!"

"He's caught 'em all," said Bijah, "but they ain't scared a bit."

No one would have thought so if they had seen Mrs. Prue Hopkins and her husband and her six children follow Grandfather Vrooman into the house.

They were hardly there, and some of them had their things on yet, when there came another great jingle, and ever so much talking and laughter, down on the other road.

"He's caught some more. Some are little and some are big. I wonder who'll get the baby?"

Bush was making himself hoarse, and had to be spoken to by Mr. Hardy, while Mrs. Simpson tried to unmix her children from the Hopkinses long enough to be sure none of them had dropped out of the sleigh, on the road.

Then Liph set to work to introduce his

cousins to Bijah, and Bush came and stood by his new friend in gray, to see that it was properly done.

"Where'd you come from?" said Joe Simpson.

"'Sylum," said Bijah. "Where'd he catch you?"

"Catch what?" said Joe, but Liph managed to choke off the chuckle he was going into and to shout out:

"Why, Joe, we found him in the road today. He thinks grandfather's old Santa Claus and this house is Christmas."

"So I am—so it is!" said Grandfather Vrooman. "We'll make him hang up his stocking with all the rest to-night."

Bijah could not feel scared at all with so many children around him, and he was used to being among a crowd of them. Still, it was hard to feel at home after supper, and he might have had a blue time of it if it hadn't been for Liph and Bush. It had somehow got into Bush's mind that the dot in gray was under his protection, and he followed Bijah from one corner to another.

All the doors in the "dark room" were open, and it was the lightest room in the house, with its big fire on the hearth and all the lamps that were taken in after supper; but there was not one thing hanging on the Christmas-tree until Grandfather Vrooman exclaimed:

"Now for stockings! It's getting late, children. I must have you all in bed before long."

"Stockings?"

They all knew what that meant, and so did Bijah, but it was wonderful how many that tree had to carry. Bob Hopkins insisted on hanging two pairs for himself, and Thad Simpson was begging his mother for a second pair when Liph Hardy came in from the kitchen with a great, long, empty grainbag.

"What in the world is that for?" asked grandmother, perfectly astonished. "Why, child, what do you mean by bringing that thing in here?"

"One big stocking for grandfather. Let's hang it up, boys. Maybe Santa Claus'll come and fill it."

There was no end of fun over Grandfather Vrooman's grainbag stocking, that was all leg and no foot, but Uncle Hiram Simpson took it and fastened it strongly to a branch in the middle of the tree. It was close to the trunk, and was almost hidden; but Liph saw Uncle Hiram wink at Aunt Ellen, and he knew there was fun of some kind that he had not thought of.

Grandmother Vrooman had been so busy with all those children from the moment they came into the house that she had almost lost her anxiety; but it came back to her now all of a sudden.

"Sakes alive! Jane," she said to Mrs. Hardy, "every last one of em's got to be in bed before we can do a thing with the stockings."

Bijah heard her, for he was just beyond the dining-room door, with a cruller in each hand, and it made him shiver all over.

"I wish I was in the 'sylum. No, I don't either, but I kind o' wish I was."

Bijah was a very small boy, and he had not seen much of the world; but his ideas were almost as clear as those of the other children and Grandmother Vrooman for the next fifteen minutes. The way the Simpson and Hopkins families got mixed up, with Liph and Sue Hardy to help them, was something wonderful. Old Bush wandered from room to room after them, wagging his tail and whining.

"Mother," exclaimed Mrs. Hardy at last "the bed you made on the floor in the store-room!"

"Just the thing for him. All the rest go in pairs. I'll put that poor little dear right in there."

So she did, and not one of her own grandchildren was tucked in warmer than was Bijah. He did not kick the bedclothes off next minute, either, and he was the only child in the house of whom that could be said. Grandfather Vrooman paid a visit of inspection all around from room to room, and Bush went with him. It took him a a good while. When he came to the store-room and looked in, Bijah's tired eyes were already closed as tight as were the fingers of the little hand on the coverlet, which was still grasping a cruller.

He was fast asleep, but Grandfather Vrooman was not; and yet when Bush looked up at him, the old man's eyes were shut, too, and there was a stir in his thick, white beard as if his lips were moving.

Things got pretty still after a while, and then there began a steady procession in and out of the "dark room," which was not dark.

Boxes went in, and bundles, and these were opened and untied, and their contents spread out and looked at and distributed. It was no wonder Grandfather Vrooman's big sleigh had been so full, and the one Pat had driven, when they brought the Hopkins and Simpson families from the north and south railway stations.

Grandfather himself went away out to the barn once for something he said he had hidden there, and while he was gone Aunt Ellen Simpson and Uncle Hiram slipped a package into the grain bag, and grandmother handed Uncle Hiram another to slip in on top of it, and Uncle John Hardy and Uncle Martin Hopkins each handed him another, and the bag was almost half full, but you could not see it from outside; and then they all winked at each other when grandfather came in with a back-load of sleds. Grandmother may have thought she knew what they were winking about, but she didn't, for Uncle Hiram whispered to Aunt Ellen:

"I'm glad its a big stocking. One'll do for both of 'em."

It was late when they all went to bed, and there was so much fire in the fireplace they were half afraid to leave it, but Grandfather Vrooman said it was of no use to try and cover it up, and the room would be warm in the morning.

When they got upstairs the children must all have been asleep, for there was not a sound from any room, and the older people went to bed on tiptoe, and they had tried hard to not so much as whisper on the stairs.

CHAPTER III.

Oh, how beautiful the country was when the gray dawn came next morning!—white and still in the dim and growing light.

So still! But the stillest place was the one Bijah woke up in. He could not guess where he was at first, but he lay a while and remembered.

"Santa Claus's house, and they're all real good. He's going to give me to somebody as soon as it's Christmas!"

He got up very quickly and looked around him. It was not dark in the storeroom, for there was a great square hole in the middle of the floor, and a glow of dull, red light came up through it which almost made Bijah feel afraid.

There was his little gray suit of clothes, cap and all, close by his bed on the floor, and he put them on faster than he ever had done it before.

"Where's my other stocking?"

He searched and searched, but it was of no use, and he said, "I can't run away in the snow with a bare foot."

He had been getting braver and braver, now he was wide awake, and he crawled forward and looked down the scuttle-hole. He knew that room in a minute, but he had to look twice before he knew the tree.

"Ever so many stockings! And they're all full. Look at those sleds! Oh, my!"

Whichever way he looked he saw something wonderful, and he began to get excited.

"I can climb down. It's just like going down stairs."

It was just about as safe and easy, with all those branches under him, and all he had to do was to sit on one and get ready to sit on the next one below him. He got about half way down, and there was the grain bag with its mouth wide open. Just beyond it on the same bough, but farther out, there hung a very small stocking indeed.

"That's mine!" exclaimed Bijah. "It's cram full, too. They've borrowed it, after all theirs were full. I want it to put on now, but I can't reach it out there."

Just then he began to hear noises upstairs, and other noises in the rooms below—shouts and stamping, and people calling to one another—and he could not make out what they were saying.

"Oh, dear! they're coming. Santa Claus is coming. What'll I do?"

Bijah was scared; but there was the wide mouth of Grandfather Vrooman's grain-bag "stocking," and almost before Bijah knew what he was doing he had slipped in.

Poor Bijah! The moment he was in he discovered that he could not climb out. He tried hard, but there was nothing on the sides of the bag for his feet to climb on. Next moment, too, he wanted to crouch down as low as he could, for all the noise seemed to be coming nearer.

So it was, indeed, and at the head of it were grandfather and grandmother and the other grown-up people, trying to keep back the boys and girls until they should all be gathered.

"Where's Bijah?" asked grandfather, after he had counted twice around, and was sure about the rest.

"Bijah!" exclaimed Liph. "Why, I looked in the storeroom; he isn't there."

"Hope the little chap didn't get scared and run away."

"Dear me—through the snow!" exclaimed grandmother.

"Of course not," said Aunt Jane. "He's around somewhere. Let's let the children in. They're all here."

"Steady, now!" said grandfather, as he swung open the door into the "dark room." "Don't touch anything till we all get in. Stand around the tree."

He himself stepped right in front of it, and he looked more like a great, tall, old Santa Claus than ever as he stood there. The children's eyes were opening wider and wider as they slipped around in a sort of very impatient circle; but grandfather's own eyes shut for a moment. It was only for a moment, but when he looked around again he said:

"Now, children, wait. Which of you can tell me what child it was that came into the world on the first Christmas morning?"

They had not been quite ready to answer a question that came so suddenly, and before any of them could speak, a clear, sweet little voice came right out of the middle of the tree:

"I know. And the shepherds found Him in a manger, and His mother was with Him. He sent down after my mother last summer."

"Bijah!" exclaimed grandfather, but grand mother was already pushing aside the boughs, and now they all could see him. Only his curly head and his little shoulders showed above the grain bag, and Uncle Hiram shouted:

"Father Vrooman, he is in your stocking! Who could have put him there?"

"I think I know," said grandfather, in a very low, husky kind of voice; but all the Simpsons and Hopkinses and Hardys broke loose at that very moment, and it took them till breakfast time to compare with each other the things they found in their stockings, and all the other wonderful fruits of that splendid Christmas tree.

Bijah was lifted out of the bag, and he got his stocking on, after it was empty. For some reason he couldn't guess why all the grown up people kissed him, and grandfather made him sit next to him at breakfast.

That was a great breakfast, and it took ever so long to eat it, but it was hardly over before grandmother followed grandfather into the hall, and they heard her say:

"Now, husband, what are you wrapping up so for, just to go to the barn?"

"Barn! Why, my dear, I'm going to town. I told Pat to have the team ready."

"To town? Why, husband—"

"Mother, there'll be stores open to day. I can buy cords of toys and candy and things. When I get to the Orphan Asylum, to tell 'em what has become of Bijah, and why he won't come back there again, I'm going to have enough to go around the rest of 'em—I am, if it takes the price of a cow."

"Give 'em something for me."

Uncle Hiram heard it, and he shouted "And for me," and Uncle John followed, and all the rest, till the children caught it up, and there was a contribution made by every stocking which had hung on that Christmas tree. They all gave just as fast as they understood what it was for, and the last one to fully understand was Bijah.

"You ain't going to take me?"

His lips quivered a little.

"No, Bijah, not unless you want to go. Wouldn't you rather stay here?"

"Course I would."

That was not all, for both his hands were out, holding up the store of things which had come to him that morning, and he added, "Take 'em."

Something was the matter again with Grandfather Vrooman's beard, but he told Bijah he would get plenty of other things in town

"Keep 'em, Bijah. Good-by, all of you. I'll be back in time for dinner. Children, you and Bush must be kind to Bijah. He came to us on Christmas morning, and he has come to stay."

Bush and the children did their part, and so did all the rest, and so did Bijah, and so it was a perfect Christmas.—Harper's Young Folks.

How to Give the Present.

SAYS Miss Thoughtful: "How shall I give my Christmas gift?" writes Ruth Ashmore in the Christmas number of *The Ladies' Home Journal*. I answer: "Do not give it, my dear, send it; or if you are in the same house with those for whom you have prepared something, put it where it may be found when you are not about. Of course, you are going to make every gift have a holiday air. That is, some of the pennies will go to buy sheets of white, yellow, brown, pink and blue tissue paper, and more pennies will go to buy some pieces of Tom Thumb ribbon to tie them up with. Use yellow ribbon on the brown, white on the yellow, blue on the pink, pink on the blue, and if you should get a scarlet paper, though I do not think it is so very pretty, make it gorgeous with gold thread."

Little Johnts' Christmas.

FER we got it up a-purpose, jes' fer little Johnts, you know;
His mother was so pore and all, and had to manage so—
Jes' bein' a war-widder, an' her pension mighty slim;
She'd take in weavin', er work out, er anything fer him.

And little Johnts was puny-like—but law! the nerve he had!
You'd want to kindo' pity him, but couldn't very bad—
His pants o' army blanket and his coat o' faded blue
Kept hintin' of his father like, and pity wouldn't do!

So we collogued together, onc't one Winter-time, 'at we—
Jes' me and mother and the girls, and Wilse, John-Jack and Free—
Would jine and get up little Johnts, by time 'at Christmus come,
Some sorto' doin's don't you know, 'at would su'prise him some?

And so, all on the quiet, she turns in and gits
Some blue janes—cuts and makes a suit; and then sets down and knits
A pair o' little galluses to go 'long with the rest—
And puts in a red flannel-back, and buckle on the vest.

The little fellow'd be'n so much around our house, you see,
And be'n such a he'p to her and all, and handy as could be,
'At mother couldn't do too much for little Johnts—no sir!
She us't to jest declare 'at he was "meat-and-drink to her."

And Piney, Lide and Madaline, they watched their chance and rid
To Fountaintown with Lijey's folks; and bought a book, they did,
O' fairy-tales with pictures in; and got a little pair
O' red top boots 'at John-Jack said he'd b'n a-pricen there.

And Lide got him a little sword, and Madaline a drum;
And shootin'-crackers—lawzy-day! and they're so dangersome!
And Piney, ever' time the rest would buy some other toy,
She'd take and turn in then and buy more candy fer the boy!

Well, thinks-says I, when they got back, your pocketbooks is dry!—
But little Johnts was there hisse'f that after noon, so I—
Well, all of us kep' mighty mum tel we got him away
By tellin' him be shure and come to-morry—Christmus Day—

And fetch his mother 'long with him! And how he scud acrost
The field, his tow head in the dusk, jes' like a streak o' frost!—
His cumfert fluttern as he run—and old Tige, don't you know,
A-jumpin high fer rabbits, and a-plowin' up the snow!

It must a be'n most ten that night afore we got to bed—
With Wilse and John-Jack he'ppin' us; and Freeman in the shed,
And Lide out with the lantern while he trimmed a Christmus tree
Out of a little scrub-oak top 'at suited to a t!

All night I dreamp o' hearin' things, a-skulking round the place—
And "Old Kriss" with his whiskers off, and freckles on his face—
And reindeers, shaped like shavin'-hosses at the cooper-shop,
A-stickin' down the chimney, with their heels out at the top.

By time 'at mother got me up 'twas plum daylight and more—
The front yard full o' neighbors, all a-crowdin' round the door,
With Johnts' mother leadin'; yes, and little Johnts hisse'f
Set up on Freeman's shoulder, like a jug up un the she'f!

Of course I can't describe it when they all got in to where
We'd conjered up the Christmus-tree and all the fixin's there—
Fer all the shouts o' laughture—clappin' hands and crackin jokes,
Was heap o' kissin' goin' on amongst the woman folks;—

Fer lo-behold ye! there they had the youngun! And his chin
A-wobblin'-like;—and, shore enough at last he started in—
And—sich unother bellerin', in all my mortal days
I never heered, er 'spect to hear, in woe's appointed ways!

And mother grabs him up and says: "It's more' he can bear—
It's all too suddent for the child, and too su'prisin'!—There!"
"Oh, no it ain't"—sobbed little Johnts—"I ain't su'prised—but I'm
A-cryin' 'cause I watched you all and knowed it all the time!"

—JAMES WHITCOMB RILEY.

What Came to Mr. X.

Fresno Expositor.

FROM report, we understand that Mr. and Mrs. X are very respectable people and residents of our charming city. They have been married for some dozen years, and but for one thing their lives would have passed along as smoothly as a sea of glass. That obstacle to their happiness which stood ever before them, like a rock in the sea of matrimony, and threatened their connubial craft, was the fact that they had never been blessed with children. Each severely excused himself or herself, and accused the other of being at fault, and so acrimonious had the dispute become that relatives and friends heard of it more than once.

They were not only highly respectable people, but were earnest and active church members as well. During the present season the good ladies of the church have been making extra efforts to embellish the interior of the edifice for Christmas, and Mrs. X determined to adorn one of the windows for the occasion. Just about this time Mr. X went to San Francisco to spend a fortnight, visiting with the family of his brother, and after being there a few days received a letter from his spouse requesting him to procure a handsome ivorine card the size of the window and have it elegantly embellished with an appropriate text of scripture.

Woman-like, she had avoided all particulars, and after visiting the proper places and finding that he would be able to fill the order, Mr. X telegraphed to his wife as follows:

"Send text wanted and size of window."

The next day he returned to his brother's domicile at the regulation lunch hour of high 12, only to find the whole house in a terrific uproar. His brother extended most hearty congratulations, his sister-in-law even went so far as to embrace and kiss him—a familiarity she had not indulged in for years.

"What is the occasion of all this massive demonstration?" he asked, as soon as he could get an opportunity.

"Why, you have got a baby at your house at last," responded fourteen voices in chorus.

"What yer givin' us—taffy?" slangily interposed Mr. X.

"Naw; nothin' but straight goods," answered the sister-in-law, in the same strain, as she again embraced him.

"Impossible; not a sign of such good luck in sight when I left last week."

"Well, just read this," said the sister-in-law, handing him a familiar bit of yellow paper, such as messages are written upon. He took it, unfolded it carefully, and his astonished eyes fell upon the following:

FRESNO (Cal.), Dec. 14.—*Mr. X. care of Mrs. T., 14,897 Valencia street, San Francisco.*—Unto us a child is born, nine feet long and four feet broad. MRS. X,

Charges paid.

Burdette on Christmas.

TO me it seems—and it isn't my fault that the sunset is fairer and lovelier than the sunrise—that there was something more Christmasy about Christmas when I was a boy. Its pleasures were simpler, its gifts were heartier. At least, I cannot remember to have read, save in these later years, articles in family journals and magazines bewailing the burden of toil and worry and expense in the planning and making, or purchasing of Christmas presents. "Krismus gifs" we called them when I was a boy. It didn't and doesn't have much refinement of culture in the spelling and the sound thereof. But the people who made them didn't rush into the papers to tell how much it cost them, and how tired to death it made them, and how glad they were that it was all over for another year. But last year and the year before I read such articles in print. So did you. Wherefore it seems to me that we killed Kris Kringle a full century too soon. We have more currants in our Christmas cake under the reign of Santa Claus, it is true. But we have also more flies in it.—ROBERT J. BURDETTE.

CONDUCT IN COMPANY. — Whispering and giggling in company betray lack of dignity and self-respect. Significant glances which have any possible meaning are against all the canons of good society, whilst differences of opinion should be received with patience and courtesy, for loud and overbearing contradiction does not belong to the code of good laws and good manners.

Ole Bull's Christmas Present.

AS a tall, dignified-looking gentleman was walking leisurely along one of the by-streets of London, Christmas Eve, his attention was attracted to a little boy who was looking in at a shop-window in which were displayed various articles for sale. As the gentleman, approached the little boy, he saw that his gaze was fixed upon a violin that hung in the window. Upon coming nearer he heard him singing a familiar melody in a sweet voice, which he accompanied with movements of his arms and fingers as if he were playing the violin. He stopped to listen, quite charmed at the innocent, childish spectacle. Just then the little boy looked up.

"Do you think you could play as well upon that violin, as you can sing, my little fellow?"

"I don't know, sir, but I would like to try," the boy replied.

"Come with me," said the gentleman, and together they went into the shop. "How much for that violin?" he asked.

"Five pounds."

"Too much by half," said the gentleman.

After being shown five or six other violins, which he rejected after merely glancing at them (the little boy's big blue eyes looking more and more wistful all the time), the shopkeeper handed out a dingy, antiquated-looking violin, with the remark, "Here's an old fiddle that I got of a sailor. It needs fixing up a bit, but you can have it just as it is for £1, 10s." The gentleman scrutinized it closely, inside and out, remarked that it was very much out of repair, but said that he would give just £1 for it, which the shopkeeper, after some hesitation, accepted, and the money was paid him.

"Put on a string in place of this broken one," said the gentleman; "and furnish me a good bow—I will pay extra for it."

While this was being done, the gentleman looked down at the little, pale, wondering face upturned to his, and said, "What is your name?"

The boy quickly responded, "Leo! and my father rings the chimes—if you hark, you can hear 'em now!" The gentleman listened for a moment or two, and as the sound of the grand old bells died away the shopman handed him the violin and bow ready for use. After tuning the instrument carefully, he unbuttoned his fur-trimmed traveling coat, and placing the violin under his chin, began softly and sweetly to play the tune which the Christmas bells had just rung out. For some minutes he continued to play, weaving the air into every conceivable kind of variation, and ended by playing the melody once more accompanied with harmonics and brilliant arpeggios. After the violin and bow had been placed in the box, he handed it to the bewildered boy, and patting him on his curly head, remarked as he buttoned up his great overcoat: "Carry the violin home with you and take good care of it; it is worth £100 at least. Learn to play the tune I heard you singing outside the window, and as many more as you can. Tell your father to get you a good teacher. You may keep the violin; *it is a Christmas present from Ole Bull.*" He opened the door for his little protege, and passed out into the crowd just as the Christmas bells rang out again their merry chime.—Our Dumb Animals.

The Brakeman's Christmas Story.

FUNNY things occurred down at our house Christmas, said the brakeman. "I'm away almost every night in the year, but Christmas night I got a lay-off and staid home with the wife and babies. Next door to us lives one of the stingiest old codgers that ever was. Wheeler is his name, and everybody calls him Stingy Wheeler. He is an old chap who has no children and no friends, and who is said to be worth a good deal of money. I've had a good deal of sickness in my house this winter, and times have been right hard with us. It was mighty little Christmas we had, I can tell you.

"'Well, there's one thing we can say, Henry,' said my wife to me, 'and that is that our house is not hard to warm. It beats all the way coal does last us here. That half-ton you got a month ago isn't nearly all gone yet.'

"'That's the way coal lasts when there's nobody to steal it, as we had where we lived last,' I replied. 'Now there's only one man in this neighborhood I'd suspect of stealing coal, and that's Stingy Wheeler. I wouldn't trust that old codger very far.'

"'Neither would I,' said may wife.

"'That night, after we had got in bed, my wife woke me, saying she was sure she heard some one in the coalhouse.'

"'I believe it's old Wheeler,' I said.

"'So do I,' my wife replied; 'but be careful, Henry, and don't get into any trouble with the old skinflint,' she added, as I hastily dressed myself.

"Softly I tiptoed out to the coalhouse, and sure enough there was a man there, hard at work with a shovel. It was Stingy Wheeler, and he was throwing coal from his bin into mine!'—Chicago Herald.



OLD SANTA CLAUS AT WORK.

A Christmas Dinner.

BY HELEN CAMPBELL.

NOT a dinner of seven or eight courses, to be expected when a chef is employed, and sighed for by many who have not yet attained to the million or so entitling the owner to a chef and all other troublesome luxuries. A dinner of this nature it is quite worth while to eat occasionally, if only to ensure gratitude that it need not be done every day. For these fascinating dishes, succeeding one another in such order that the appetite is awakened involuntarily, even when really satisfied, mean overfeeding, and the result of overfeeding is a succession of diseases, classed as "mysterious dispensations," but quite comprehensible to the physician. The modern dinner, in Sir Henry Thompson's suggestive little book, "Food and Feeding," is made responsible for most of the dyspepsia and kindred diseases owned by the Americans in general, and, refusing to be a party in any transaction which shall assist in such result, I make a bill of fare sufficiently festive in character to fit Christmas or any winter's holiday occasion, yet not so crowded as to mean overwork for the housekeeper who may be forced to act as her own chef. This state of things is by no means so uncommon as is often asserted, for in spite of enormous fortunes, the mass of people must still count as "middle class," and must in spite of themselves retain acquaintance with the kitchen and its necessities. And if this preamble is regarded as unpleasantly superfluous, pass on to the menu, which holds nothing that is not practicable for the busy housekeeper, and which is minute enough in its directions to insure success for even an inexperienced one.

MENU.

Tomato soup without meat.
Roast turkey, giblet gravy.
Mashed potatoes. Canned corn pudding.
Cranberry jelly. Beets sliced.
Salad, mayonnaise of salmon.
Cheese. Water crackers.
Sweet potato pudding, creamy sauce.
Fruit. Nuts. Raisins.
Coffee.

For a Christmas Dessert.

CHRISTMAS CAKE.—Cream one pound of butter and sugar together, sift in one pound of flour, beat ten eggs separately and mix in. Blanch two pounds of almonds, seed one pound of raisins, and chop half a pound of citron. Grease a large cake pan, put in a layer of the cake batter, then a layer of raisins, almonds and citron; continue until the pan is full, putting the batter on top. Bake in a moderate oven two hours. When cold, ice in fancy designs and ornament with a wreath of holly.

CHRISTMAS PUDDING.—Wash and dry a pound of currants, stone a pound of raisins. Mix together dry a quarter of a pound of sifted flour, a quarter of a pound of stale bread crumbs, a quarter of a pound of brown sugar, a pound of finely chopped suet, and half a pound of cut candied orange peel, grate in half a nutmeg and one lemon. Beat five eggs, to which add a teacup of molasses, pour over the other ingredients and mix thoroughly. Pack in well greased mold and boil ten hours. Serve with hard sauce.

SANTA CLAUS CAKE. — Three cups of sugar, half a cup of butter, the whites of eight eggs, one pint of sifted flour, two teaspoonfuls of baking powder, and a tablespoonful of rose water. Rub the butter and and sugar to a cream, add the flour and baking powder, mix in a smooth batter, add a small teacup of sweet milk, and the flavoring, lastly stir in the stiffly beaten whites of the eggs. Bake in jelly cake pans. For filling make an icing of the beaten whites of four eggs, three cups of sugar flavored with vanilla—divide in half—in one portion mix a teacup of chopped almonds, in the other the same of finely chopped figs. Spread alternately on the layers of cake. Ice the top in fancy icing, and put in the center a little colored sugar figure of Santa Claus (which can be bought at the confectioner's).

SCALLOPED POTATOES.—Mince fine cold potatoes, put in a biscuit pan, sprinkle with bread crumbs, salt and pepper and bits of butter, and bake.

ROYAL



BAKING POWDER

Absolutely Pure.

A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

ROYAL BAKING POWDER CO., 106 Wall St., N. Y.

PATRONS OF HUSBANDRY.

Work of the Agricultural Department.

The Patrons of Husbandry throughout the country look with no little pride and satisfaction upon what has been accomplished by the Agricultural Department at Washington—the very existence of which is due to their persistent efforts. Secretary Rusk, in his late report, says that our domestic export trade of the past year aggregates the enormous sum of one thousand millions of dollars—80 per cent of which is made up exclusively of agricultural products. This large export of agricultural products is what is making this country the creditor of the world to the extent of two hundred millions in the excess of our exports over imports, and relieving our home markets of a surplus product which must otherwise have a tendency to reduce farm produce to a point below the cost of production. This favorable condition is largely due to the untiring work of the Agricultural Department in seeking for new markets abroad and in enlarging those already existing. It is altogether through the efforts of this department that we have an already large and fast-growing market for our surplus corn in Germany. An agent was sent over to instruct the people in the use of corn food. Mills were built to prepare the meal and instruction given in preparing it for the table. The result of these efforts has been a very large increase in the magnitude of the sales as well as in the price realized for the corn in that market. Similar work has also been done in removing the prejudice against American meats—especially in that of pork. The indications are that the increased takings of American meats in Europe this year will exceed those of last year fully 62 per cent, and about 20 per cent in prices. Successful efforts have also been made in advancing the price of cotton in Europe by reducing the area of production in this country and substituting therefor more mixed products on the cotton farm. Similar advice is also given by the department to the grain growers. Much attention has also been given to increasing our sugar product.

In further advancing the grain trade Secretary Rusk also points out that there are many reasons making a national standard of grain highly desirable, and concludes that some system of national inspection and grading must be established, in the interest of the grain growers, under the control of the Secretary of Agriculture.

The Secretary declares that the work of the department hitherto has been but foundation work, and says that since he has been in charge of it he has sought at all times, while preparing the foundation, to bear in mind the plans for an ultimate superstructure of which every American farmer and citizen will feel proud, and that he will be quite satisfied if, in the future, his share of credit in the history of the department will be that he was instrumental in laying a broad and lasting foundation. He shows how much the department has gained in the confidence of the farmers, and points out that every gain in this confidence imposes additional responsibilities upon the head of the department.

It should not be forgotten in this connection that the establishment of an Agricultural Department of the Government, and its final advancement to a full position in the Cabinet, has been almost exclusively due to the efforts of the Grange. This work, moreover, was accomplished in the face of the strongest opposition and the most persistent ridicule. The result has been of far greater value to the country than was hoped for by the most sanguine of its promoters, and in this, as in many other ways, the Granges of the country have done a most noble and patriotic work.

From Worthy Master Davis.

SANTA ROSA, Dec. 19, 1892.

Who will organize the first Grange during the new year, and where?

The sixth degree certificates have not yet been received from the National Grange. Patrons who received the sixth degree at San Jose need not be uneasy. The certificates will come in due time. Brother Trimble has had his hands full during the past two months, but he will come out all right in due time.

We hope the ladies of the farm will engage largely in the poultry business. There were more than 200,000 dozen eggs shipped to California in 1892. This State is the natural home of the fowl; let us see to it that we produce our own eggs. There is plenty of money in the poultry yard.

Do you want the Railroad Commission abolished? That subject will be before the Legislature. Inform your representative how you want him to vote on that matter.

Where will the next session of the California State Grange be held? Nominations are in order. The executive committee has one or two bids. Are others going to compete? If so, better file a claim now.

We want to establish the Grange in a good many local neighborhoods this spring. Won't some progressive farmer, fruitgrower or stockraiser send for blanks, constitution and charter outfit, and then go to work getting the charter list? Have a subordinate Grange in your section; it will be the means of imparting much pleasure and valuable information. All persons engaged in agriculture, 14 years of age, are eligible to membership. The Grange is a grand school, both for old and young. To all who want opportunities for self-improvement and to do good, the Grange opens a big field. The Grange is national, and therefore is strong in its organization, yet it is local in its application of benefits.

The Legislature will soon be in session. Keep an eye to the bills that are introduced. See how many of them are in the interests of the producing and industrial classes. See how your senator and your assemblyman vote. Tell him by petition and by personal letter how you *think* he should vote, so that the greatest good to the greatest number will be the result. That rule should govern all. The theory of a republican form of government is, "the majority shall rule." Let us *know* what the wish of the majority is, and then set about carrying out that wish.

A few copies of the journal of proceedings of the California State Grange session of 1892 are just received from the printer, Bro. Watson of the *Orchard and Farm*.

Report the election of officers to the RURAL PRESS, also the date of installation and name of installing officer.

Give us new thoughts with the new year.

Merry Christmas to all.

The National Grange proposes to have a roll-book for each State in the Union, so that Patrons visiting the World's Fair will enroll their names in the State roster. This book will give the name of the Patron, the Grange, his temporary stopping place at Chicago, the hours when at the rooms, etc., so that one Patron may, without too much trouble, find a brother or sister from any State. Grange literature is to be supplied, in the hope of introducing the Order to a great many farmers, who now know little or nothing of it. Editors and publishers of agricultural journals will find no better way of reaching thousands of advertisers and readers than by sending copies of their publications to "Grange Headquarters, World's Fair, Chicago, Ill."

The annual word for 1893 is ready for those Subordinates whose dues are paid to January 1, 1893. Members must be square with their own Grange before the master can impart the word.

The 26th session of the National Grange, Patrons of Husbandry, did not concur in the money-borrowing schemes that some of its prominent members proposed. There are not a few of the members of that body who are opposed to any plan of raising money whereby the Government is made a party to the mortgage contract. A good many Patrons think the rates of interest are too high, but many of those same Patrons are afraid that the plans proposed will only aid in landing the burdened farmer from the frying-pan into the fire. These same cautious farmers—and their name is legion—think it much better and safer to owe their debt to an individual, or even to a bank, than to a Government, to a body without soul, life or death. They fear the Government will be more exacting than is the private individual or corporation. In this they may be right.

E. W. D.

From Mr. Geo. Ohleyer.

YUBA CITY, Dec. 19, 1892.

TO THE EDITOR:—The waning year is chiefly valuable as supplying a milestone from which to view the past rather than to furnish an implement by which we may unvail the future, or words that shall form our good resolutions for the approaching year. Of the past we know something; of the future, nothing; and the best we can do is to drive ahead as if there were no end, yet prepared for any emergency.

The central portion of the Sacramento valley has a history that will be written in prose and verse for generations to come. In the heart of this region lies the now-famous little county of Sutter, whose men are as brave, loyal and enterprising as any living, and whose women as handsome and true as the best upon earth.

Out of such material is composed the several Granges of the county of which Yuba City Grange is the pioneer, having been organized nearly twenty years ago. This Grange felt called upon to inaugurate and sustain many reforms during its existence, and always flourished most when confronting a foe worthy of its steel. It is not my purpose to speak of these matters at length or in detail, only referring to them as showing that, through severe training, it became as natural for the people to flock together for offensive and defensive purposes as it was for them to retire after a hard day's work.

SUTTER COUNTY

Is a community of small farms and small fortunes, hence the people, to make their numbers powerful, formed themselves into cooperative associations for the construction of grain warehouses on river or rail; for the maintenance of a public press in their interest; for the construction of a fruit cannery and the creation of a market for the luscious fruits of the county; and last but not least, the creation of adequate educational facilities at home for our youths.

Many, if not all, of these thoughts were first uttered in the Grange and the fruits thereof are abundant and permanent.

Our latest agitation is for a Grange hall. The matter is in the hands of a thoroughgoing and competent committee and the indications point to the erection of a commodious hall during the approaching year. The recent

POLITICAL DISTURBANCE

Has been almost forgotten and the result seems to be satisfactory to everybody.

No one in this section had the slightest suspicion that any of the so-called side tickets had the least chance of success, hence but few votes were "thrown away" on them, as the average voter would say. Most of those with whom I have conversed, and of all parties, say they are more than willing and even anxious that the victors shall have entire control of the Government this time, to the end that the responsibility of success or failure may be fixed beyond doubt,

THE RAILROAD QUESTION

Cuts but a small figure in our county. This is because the county is bordered and severed by navigable rivers, rendering the people independent of them, and so long as they can maintain their navigability they will enjoy the services of the best of freight regulators.

In this effort they have now the willing and powerful aid of the general Government. Nevertheless, our county's fertile farms, orchards, vineyards; flocks and herds have attracted the iron horse and he is daily drawing heavy trains through the county lengthwise from and toward the seaboard, and every resident can go from his home to the ocean metropolis and return the same day, none residing beyond the sound of the moving steam whistle.

Of one thing we are properly solicitous, and that is, shall the coming legislature be in the interest of the people or of the boodlers? Have the several parties exercised more care than in recent years in the selection of their servants, and what has the Grange done toward purifying the body politic? are questions we may propound to ourselves.

AGRICULTURE AND COMMERCE

Are by far the leading interests of our State, and yet at times one is led to believe both are tied down like a lion, knowing not or choosing not to exert their strength.

Two years ago it was said that ten men in each house of the Legislature, having the balance of power, governed the body, defeating many desirable measures and enacting undesirable ones. Should not the weightier interests profit by this lesson and demand a union of their immediate representatives for good works?

A small number, doubtless, of Patrons of Husbandry have secured seats in that body; these could furnish the nucleus around which other agriculturists and their friends could assemble and unite on all nonpolitical measures for their mutual benefit, and thus form a balance of power that would be respected for their strength, if not for their laudable principles.

GEO. OHLEYER.

A Grange Wedding.

SACRAMENTO, Dec. 17, 1892.

On Dec. 14th about two hundred guests assembled at Grangers' Hall to witness the marriage ceremony of De Witt S. Slosson, a well-known young farmer, and Miss Clara E., only daughter of Geo. W. Hack, Grange Lecturer of this county. The young couple set sail upon the sea of matrimony with the best wishes of all who know them. They encountered a heavy storm at the beginning of their journey, but it was of rice showered upon them by kindly hands. This is the seventh wedding within ten years where both the contracting parties were members of Sacramento Grange.

On Dec. 10th, to the house of Edwin Thistle (well known to readers of the PRESS), was born a son and heir.

Members of Sacramento Grange and their families will remember that the social occurs on New Year's Eve. Each member is privileged to invite one friend. Members of other Granges are cordially invited to be present.

MRS. A. M. WILLIAMS,
Chairman of Committee.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

GRANGE ELECTIONS.

[Secretaries are requested to send us as early reports as possible for publication under this head.]

GRIMES GRANGE.—Election Dec. 15; officers chosen: H. D. Strother, M.; F. Schillig, O.; Mrs. W. W. Kilgore, L.; G. Beckley, S.; J. J. Morriss, A. S.; Mrs. T. D. Watson, C.; Mrs. C. Gleason, T.; J. H. Balsdon, Sec.; W. W. Kilgore, G. K.; Leone Kilgore, L. A. S. Date of installation, Feb. —, 1893.

LIVE OAK GRANGE.—Election Dec. 10; officers chosen: D. Fisher, M.; Jas. Hedger, O.; Mrs. Denny, L.; Miss Mould, S.; W. R. Johnson, A. S.; Mrs. Wilkinson, C.; Wm. Mould, T.; Mrs. Ella Hedger, Sec.; B. F. Hedger, G. K.; Mrs. Porter, Ceres; Miss Marian Rothney, P.; Miss Jennie Luther, F.; Miss Maud Brenton, L. A. S.; A. E. Davis, Trustee; Mrs. Ada Hedger, Organist. Date of installation, January 14, 1893.

MAGNOLIA GRANGE.—Election Dec. 10; officers chosen: Jackson Cunningham, M.; J. W. Gautier, O.; W. H. Cunningham, L.; Lee Bilderback, S.; Edwin Lloyd, A. S.; Mrs. Robt. Elder, C.; May F. Gautier, T.; C. D. Bilderback, Sec.; Robt. Elder, G. K.; Mrs. Annie Cunningham, Ceres; Mrs. J. R. Nickeson, P.; Birdie Bilderback, F.; Bessie Still, L. A. S.; J. R. Nickeson, Trustee. Date of installation, January 14, 1893.

NEW HOPE GRANGE.—Election Dec. 7; officers chosen: W. E. Journeay, M.; Mrs. O. Short, O.; Geo. H. Barber, L.; P. A. Kise, S.; O. Tubbs; A. S.; Mrs. Geo. Carleton, C.; A. Thornton, T.; Geo. Connor, Sec.; W. W. Fogg, G. K.; Mrs. A. Bryant, Ceres; Mrs. P. A. Kise, P., Mrs. W. E. Journeay, F.; Mrs. Geo. Connor, L. A. S. Date of installation, Jan. 7, 1893.

PETALUMA GRANGE.—Election Dec. 10; officers chosen: C. D. Grover, M.; D. Walls, O.; T. Skillman, L.; Mrs. D. M. Winans, S.; M. D. Hopkins, A. S.; Mrs. D. S. Dickson, C.; A. S. Hall, T.; D. G. Heald, Sec.; J. Rodenhurst, G. K.; Mrs. C. D. Grover, Ceres; Mrs. T. Skillman, P.; Miss Sarah Heald, F.; Miss Mary Kelsey, L. A. S.; E. L. Charles, Calvin Todd, Trustees. Date of installation, Jan. 14, 1893.

PESCADERO GRANGE.—Election Dec. 17; officers chosen: I. C. Steele, M.; Laura Weeks, O.; Geo. G. Smith, L.; J. H. Creed, S.; Isa Steele, A. S.; Chas. F. Wilson, C.; B. V. Weeks, T.; A. M. Piper, Sec.; Harry Piper, G. K.; Jessie Leighton, Ceres; Nettie Adair, P; Bertha Seeley, F.; Lizzie Chrisman, L. A. S. Date of installation, first Saturday in January, 1893.

SACRAMENTO GRANGE.—Election Dec. 10; officers chosen: E. Greer, M.; P. B. Green, O.; Mrs. A. M. Williams, L.; Geo. L. Hamilton, S.; D. Flint, A. S.; Geo. Rich, C.; H. W. Johnson, T.; Elmer G. McMullen, Sec.; S. H. Jackman, G K.; Mrs. E. Greer, Ceres; Miss Nettie Teeple, P.; Miss Delma Green, F.; Mrs. D. Flint, L. A. S.; Geo. C. McMullen, Trustee. Date of installation, Jan. 14, 1893.

STOCKTON GRANGE.—Election Dec. 10; officers chosen: Marion T. Noyes, M.; Jno. L. Beecher Jr., O.; Mrs. Irene E. Leadbetter, L.; Nathan H. Root, S.; Theodore S. Cole, A. S.; Mrs. W. D. Ashley, C.; Jos. Adams, T.; Nathan T. Root, Sec.; Norman E. Alling, G. K.; Mrs. Cora Beecher, Ceres; Miss Flora Harelson, P.; Miss Anita Leadbetter, F.; Miss Bessie M. Alling, L. A. S.; Thos. E. Ketcham, Trustee. Date of installation, January 7, 1893.

TEMESCAL GRANGE.—Election Dec. 17; officers chosen: Walter Renwick, M.; Maurice Woodhams, O.; Mrs. Sarah H. Dewey, L.; Mr. Stevens, S.; Alfred H. Dewey, A. S.; Mrs. Sarah A. Whidden, C.; L. Frink, T.; Mrs. Nellie G. Babcock, Sec.; Mrs. M. A. Renwick, G. K.; Mrs. Kate McGrew, Ceres; Miss Sarah A. Winchester, P.; Miss Stella Lufkin, F.; Mrs. Stevens, L. A. S.; A. T. Dewey, Trustee; Miss Anita M. Dewey, Organist. Date of installation, Jan. 7, 1892.

WASHINGTON GRANGE.—Election Dec. 17; officers chosen: Nelson Dill, M.; Miss Frankie Howard, O.; James Richey, L.; Lyman Nixon, S.; Jeff Giles, A. S.; C. B. Taft, C.; Charles Blyther, T.; Sam C. Watters, Sec.; Chas. Child, G. K.; Miss Mamie Taft, Ceres; Miss Carrie McIntire, P.; Miss Laura Nixon, F.; Mrs. Rosie Giles, L. A. S.; Will McIntire, Trnstee. Date of installation, January 13, 1893.

TULARE GRANGE.

We had the pleasure of visiting this good old Grange last Saturday. E. C. Shoemaker, W. M., presided. Overseer Tuohy, chairman of the committee of conference with the Alliance and Board of Trade, as to

(*Continued on Page* 546.)

INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

Drought is out of the question.

The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

KERN COUNTY LAND COMPANY.

S. W. FERGUSSON,
Bakersfield, - - - California.

"ASPINWALL"

POTATO-PLANTER

PLANTS Corn, Beans, Ensilage, Etc., Etc.



DISTRIBUTES FERTILIZERS.

Absolutely Guaranteed.

It Marks. It Furrows. It Drops. It Covers.

ALL IN ONE OPERATION.

POTATO CUTTER

A Boy Can Operate It.

Cuts Potatoes for Seed Faster than Eight Men Can by Hand.

Will Pay for Itself In One Day.

FULLY WARRANTED.



Simple In Construction.

It consists of a series of knives secured in an opening of the table. The potato is placed in a pair of hinged jaws above the knives, and by a plunger the potato is cut at a single stroke and the eyes divided in a most satisfactory manner. The screen below frees the seed from dirt or chips and more thoroughly prepares the cuttings for planting.

CORN & BEAN DRILL

THE BEST AND CHEAPEST RIDING PLANTER IN AMERICA.

The price places it within the reach of all.

Thoroughly practical.

Plants 10 to 12 acres per day.

EXTRA SLIDES for planting PEAS, BEANS, etc. with every machine.



Furnished plain or with fertilizer attachment. Capacity of distributing from two hundred to one thousand pounds per acre.

Catalogue of potato and corn planting machinery FREE. Address

ASPINWALL MANUFACTURING CO., Jackson, Mich., U. S. A.



AN OLD STYLE PULVERIZER.

Especially adapted to pulverizing "bottoms"—one man and a small boy can operate it.

THE LATEST STYLE

PULVERIZER!

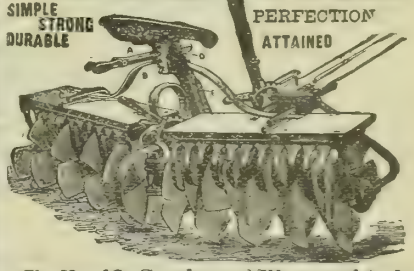
— THE —

PACIFIC SPADER!

Operated by one small Boy. No Man required.

SOMETHING NEW! FINEST IMPLEMENT IN THE MARKET

SIMPLE STRONG DURABLE PERFECTION ATTAINED



The **Pacific Spader** and **Vineyard Cultivator.** Does more work in one stroke than a Disc Harrow in ten. Sizes, 5½ to 12 feet.

TRUMAN, HOOKER & CO.

SAN FRANCISCO and FRESNO.

— SIZES. —

No. 5D—	5½-foot	Spader	16-inch	Blades
No. 6D—	7	" "	16 "	"
No. 10D—	5½	" "	20 "	"
No. 14D—	7	" "	20 "	"
No. 16D—	8	" "	20 "	"
No. 20D—	10	" "	20 "	"
No. 24D—	12	" "	20 "	"

Linden, Cal., Nov. 26, 1892.

Messrs. Truman, Hooker & Co.,
San Francisco, Cal.

Gentlemen:-I was induced by your agent, Mr. I. O. Fowler, to purchase one of your PACIFIC SPADERS, which I have tested on some very hard land and must say it does its work to perfection. I will say to all who contemplate purchasing a Cultivator to take the Pacific Spader every time. I remain

Yours very truly,

C. V. Webb.

LADIES! A valuable book on Good Health will be sent free at your request. Address, Bicura Company, 220 Sansome St, San Francisco.

PILES disappear when Oleate of Bicura is used. Sent by post.

PACIFIC RURAL PRESS! Is the Largest Illustrated and Leading Agricultural and Horticultural Weekly of the West. Established 1870. Trial Subscriptions, 50c for 3 mos. or $2.40 a year (till further notice). DEWEY PUBLISHING CO., 220 Market Street, San Francisco.

WADE & WADE, Analytical Chemists and Assayers. Established 1887 — 109½ COMMERCIAL ST., Los Angeles, Cal. We have fitted up the best laboratory in Southern California and are prepared to make Assays and Analyses of all Metals, Minerals, Ores, Waters, Fertilizers, Etc. ASSAYING TAUGHT.

AGRICULTURAL NOTES.

CALIFORNIA.

Lassen.

H. W. MYERS claims to have killed six jack-rabbits in five shots with a rifle.

Fresno.

FRESNO COUNTY will exhibit 5000 oranges and 1000 lemons at the World's Fair—about 45 boxes.

Colusa.

WILD-GEESE are said to be so numerous in Colusa county that the people there are talking of starting a goose cannery in order to make it profitable to kill them, and strangely enough the thing is not regarded as a wild-goose speculation.

Orange.

MONEY IN WALNUTS.—Anaheim *Journal*: The walnut crop from R. H. Gilman's orchard, in North Anaheim, has been all packed and delivered at the depot, and Mr. Gilman will receive a check to the amount of $4000 for it.

Placer.

THIS YEAR'S ORANGES. — *Republican*: The Auburn Orange Company began to market their fruit on Monday last. The oranges are of fine size and highly colored. This year's crop is estimated at 1000 boxes.

San Diego.

BIG LEMON ORCHARD.—Otay *Press*: It has been decided by the owners of the Chula Vista ranch to plant 1000 acres to lemon trees this season, which will make this the largest lemon orchard in the world.

Shasta.

A HAPPY VALLEY correspondent of the *Free Press* says: S. C. Dick received the highest price for his last shipment of green fruit of any one in the valley, and we think in the county for this year—7½ cents per pound net. Will it not pay to raise fruit?

Yolo.

SALE OF NURSERY TREES.—Woodland *Democrat*: The nursery business is assuming large proportions around Davisville, and our trees find a ready sale all over the coast. Something over a million have been sold for delivery during the present season, and stocks are almost exhausted, while the demand is still active.

Tuolumne.

PREDATORY EAGLES.—*Democrat*: A pair of black eagles that have built their nest and reared their young upon a craggy promontory of the Tuolumne river for many years, are about to be proceeded against as pirates by the ranchers of Jacksonville, they being unwilling to stand the depredation of the feathered pests any longer.

Sacramento.

LARGE BEEVES.—*News*: Odell & Herzog yesterday shipped three mammoth beef steers to the Bay for the San Franciscans Christmas roast. The animals were driven upon the scales before shipping and tipped the beam at 2,700, 2460 and 1900 pounds respectively. The big "beefers" were raised by Joe Platt, the well-known Cosumnes river farmer, and were fed on alfalfa and corn. Mr. Platt received $100 per head for the steers, and says it pays better to raise Christmas beeves than turkeys.

Nevada.

MANY WILD PIGEONS.—Grass Valley *Telegraph*: We see by the papers that there are millions of wild pigeons up in some portions of the northern part of the State, and men, women and children are killing them by the hundreds. We are informed that the wild pigeon crop in this part of the country is larger this year than ever before. An old hunter told us to-day that he saw an immense flock Saturday and he killed several of them. They were fine, fat birds and are splendid eating.

Kern.

EXCITEMENT AT BAKERSFIELD. — *Californian:* There is great excitement in town over the decision of the Supreme Court giving back to the Government a large body of land granted to the railroads. It is well not to be too hasty about making filings on railroad land in the western part of the county, for, from the statement of Southern Pacific Land Agent Madden, no land is affected in Kern or Tulare counties. The total amount affected is about 755,000 acres in Los Angeles and San Bernardino counties; 4912 acres embraced in four cases, and about 750,000 acres in the overlapping grants.

San Joaquin.

AGRICULTURAL ASSOCIATION. — *Mail*: At a meeting of the board of directors of the San Joaquin Valley Agricultural Association, Arthur Ashley, the attorney, was elected secretary, vice J. M. LaRue, the veteran secretary, who has been elected as a member of the Assembly and whose time will be taken up with legislative matters at a period when it will be most needed by the association. The former president and treasurer of the association were reelected. The salary of the secretary was fixed at $500 a year and that of the treasurer at $5 a year, without bonds.

Ventura.

BIG PRUNE RANCH.—*Free Press:* One of the largest individual plantings thus far known is that of J. H. Spear, near Bardsdale, who will set out some 5000 or 6000 prunes and apricots. Within the next few years, it is safe to say, all the land this side of the river, and much of it on the other side, will all be in bearing orchards of one description or another.

HONEY LAND GETTING SCARCE.—*Press:* It is probable that there will not be the amount of honey raised in this county in future as in the years of the past. The reason alleged is that every available acre of tillable land is being cleared, plowed and planted, and this drives the thousands of sheep throughout the valley into the mountains and canyons, and consequently bee-feed is destroyed. Sheep thrive on white sage, and it is from the blossom of this wild herb that California honey has received its superiority and increased value.

Sonoma.

THE FIRST SHIPMENT.—*Republican*: Kopf & Donovan shipped 500 boxes of eggs to Seattle one day this week—the first large consignment to go from Santa Rosa to that place.

CONDENSER CLOSES DOWN.— *Tribune*: The must condenser at Geyserville finished its season's operations last week. This year's run was very heavy and covered a large period of time. There were between 1500 and 2000 tons of grapes consumed by the must-condenser the past season.

PHYLLOXERA RAGING.—*Tribune*: Phylloxera is ravaging the grapevines in the vicinity of Geyserville. It first made its appearance in the vineyard of Leander Ellis, and knowing the disease to be insuppressible, he began at once to dig up the vines. It has since been spreading to neighboring vineyards at an alarming rate, and fears of tremendous damage are entertained.

Butte.

GREAT CROP OF ALMONDS.—Biggs *Argus*: The great crop of almonds on 325 acres of trees of Hatch & Rock this year produced about 66 tons of fruit, which will bring the company over $10,000. Alexander Hammon offered the Rio Bonito Colony Company $175 an acre for 40 acres in orchard on the lower part of the tract. Twenty acres of peaches on Rio Bonito, the trees four years old, brought the owners this year $2700, or $135 an acre.

ONE STORY TREES.—Oroville *Register:* H. L. Hyman, a nurseryman for the past 25 years, has been examining the pruning of fruit-trees in this vicinity, and has in mind the planting of an extensive nursery near this town. He says it is a mistake to allow the young trees to run up high, as is the practice in the East, before they are pruned. There the object is to give warmth to the ground in summer, here to keep the ground as cool and moist as possible about the roots of the tree. Train a tree high here and the ground becomes heated and parched during the hot summers, the sun scalds the bark, the sap sours and the borers injure the tree.

Santa Clara.

DYING OF GLANDERS.—*Mercury*: A. W. Kingsbury, who was taken with the glanders several weeks ago from a diseased horse, is at death's door. The roof of the unfortunate man's mouth has been eaten away, and his sight is gone. His limbs are double their natural size.

VALUABLE LANDS.—First-class prune and apricot land in the Santa Clara valley is worth from $150 to $300 per acre, unimproved, and the bearing orchards are worth $800 to $1500 per acre. This is about equal to the value of citrus land and orchards in the best southern sections of the State.

SANTA CLARA DAIRIES.—"Omar," in the *Mercury*, gives the following as indicating the extent of the Gilroy dairies: J. C. Zuck has 75 cows; A. W. Furlong, 120; A. Forni, 150; G. E. Rea, 200; S. Rea, 80; J. P. Sargent, 100; A. Watson, 50; J. H. Ellis, 125; M. F. Holsclaw, 25; Dexter Bros., 40; R. Eschenberg, 70; E. Maze, 48; A. Wilson, 75; J. Murdock, 40; making a total of nearly 1200 cows used for dairy purposes. Add several thousand head of beef-stock at Miller's, Dunne's and other places, and it will be seen that Gilroy is some on horned cattle.

Monterey.

CHINO NOTES.—*Pajaronian*: Down in Santa Ana they are blowing about an immense beet that it is proposed to exhibit at the World's Fair. It is expected to weigh 300 pounds. The Pajaro sugar-beet has not had time to reach that size, owing to beet-factory demands, but it does not take much of a load of Pajaro beets to make 300 pounds of sugar. * * * A talk with some of the citrus-fruit growers of the valley develops the fact that the present wind-storm is not doing serious damage to either oranges or lemons, and that very few have been blown off the trees. * * * Strawberries growing, in full bloom and ripening in the open air, at this time of year, is a rare sight to newcomers. In this incomparable section the sight may be enjoyed, not only now, but at almost any time during the winter. * * * The daily beet receipts at the factory are averaging about 500 tons. The major part thereof is from the Moro Cojo and Cooper ranches. It will take about three weeks of clear weather to get out the beet crop on these ranches. The last of the crop of this valley is expected to be in the bins before Saturday.

Los Angeles.

NEW OLIVE-OIL MILL.—The Howland olive-oil mill at Pomona is nearly completed, and the manufacture of oil will commence in a week or two. Some of the machinery was imported from Europe, and the capacity of the mill is greater than that of the similar establishments at Elwood Cooper's ranch and National City.

SEED BARLEY.—Santa Ana *Blade:* The tons of seed barley now being hauled to the San Joaquin ranch will be sown as fast as the ground can be put in condition for it. It is said that the number of men and teams at work there at present present a sight worthy to be looked upon. They are scattered over 25,000 acres of level country, which is as fine barley land as there is in the State.

GOOD LEMON YIELD.—A gentleman of Garvanza has two acres of lemon-trees only, from which he will get about 230 boxes of lemons in all, including 40 boxes recently sold. He sent a specimen into the Chamber of Commerce, and they cannot be surpassed for beauty. Lemons command $5 per box on the trees, and that means $1150 for the two acres. Meanwhile the space between the trees has furnished garden vegetables for the family.

San Bernardino.

OVERLOADED TREES.—*Observer*: Without the assistance of props many of our orange-groves would go to pieces. Nature never intended that an orange-tree should bear such burdens of fruit as our mature orange-trees are now bearing. Though one of the toughest of woods, the branches would split from the trunks of the trees were they not supported as they are. It would be a good idea to relieve, as soon as possible, the overburdened trees of some of their surplus fruit.

WHAT IS THE ORANGE CROP?—*Record*: The *Observer's* estimate of Ontario's orange crop at 130 to 150 carloads is being widely quoted and is calculated to injure rather than benefit the place. The actual shipments will probably not be much more than half those figures, and the discrepancy is sure to cause unfavorable comment. It is safer to keep within bounds in estimates of that kind. The highest figures we have heard mentioned by our fruitgrowers and local shippers are 100 carloads and our estimate is 75 or 80. Last year we shipped 42, and if we can double that, it is good enough. In 1893 we ought to get up toward the 150 notch.

GREAT TOMATO TREE.—*Orange Belt*: A novelty in the tomato line can be seen at Rose Cottage, the home of Henry Thomas. It is a tree that is now 19 feet high, raised from seed planted last April. It is 11 feet in diameter, 12 feet from the ground, and has 70 branches, with very dark green foliage. It seems to be a continuous bearer, and on December 3d the owner gathered 219 tomatoes from the one tree at a single picking. The fruit is of medium size, a rich crimson color, very few seeds, perfectly smooth, breaks open like an apple, though without any core, and is of delicious flavor. It is still growing, and already makes an excellent shade tree for the entire south side of the house.

Tulare.

MORE TO FOLLOW.—*Journal:* The large drier of the Lucerne vineyard, four miles northwest of Hanford, ceased work last Saturday for the season. Eighty carloads, or 800 tons, of raisins have been shipped from this one young vineyard this season, and still there's more to follow.

HOW HE SAVED MONEY. — A *Globe* correspondent of the Tulare Valley *Citizen* says: "A. F. Thompson could only get an offer of $20 for a very large, fat cow, of the butchers. He killed the cow, and after selling $48 worth of beef at a low price to his neighbors, he had 200 pounds for his own use."

MORE THAN ANY OTHER.—*Times*: At the Fruit Growers' Convention held at San Jose, the county of Tulare had more representative fruit-growers in attendance than any other county in the State excepting Santa Clara, the county in which San Jose is situated. This speaks well for Tulare as a fruit-growing county.

DON'T EAT GRAPE SEEDS.—A little son of Mrs. H. A. McCormack of Hanford was taken dangerously ill recently as the result of eating raisin-grape seeds. The little fellow was taken to Oakland, where a surgical operation was performed and the seeds removed. The lad is now recovering, and will soon be well. This should be a warning to parents who permit their children to eat raisin-grapes, skins and seeds.....Charles King of Hanford has shipped 600 tons of raisins this season.

PLANTING.—*Register*: Here in Tulare, having had something of a breathing spell since harvest, now that the rains have come, the big teams are out in the fields again putting in the new crop, and so far as our information goes, the season's planting will be greater than it was last year. But little has been put in dry. That pernicious foxtail has gotten into the fields so that it must be suffered to start before the plowing is done, or it may take the wheat and will certainly damage it.....The *Sentinel* states that there are vineyardists in the upper part of the county who will dig up their grapevines and plant prunes.

WASHINGTON.

SCALE BUGS. — Most of the young trees brought to Washington State from the East are infested with the scale-bug and wooly-aphis. Inspector Jessee condemned several thousand trees from Nebraska at Walla Walla last week.

STOCK FEEDING.—A new industry is developing at Yakima, Wash., that of stock-feeding. During the months of November alone 78 cars of cattle, or about 1700 head, were shipped in there to be held for a month or six weeks for fattening upon alfalfa. They will then be shipped to the Sound markets. This has been a regular proceeding with shippers, for several months, and the number of head arriving is constantly increasing.

LARGE TURNIPS.—The State of Washington reports the largest turnips probably that ever were grown in the West. According to the Wenatchee *Graphic*, A. P. Kiser, who owns a farm on Beaver creek, eight miles east of that city, has on exhibition some turnips weighing 15 pounds up to 21 pounds each. The largest one, weighing 21 pounds, measures four feet in circumference. The farm on which these large turnips, as well as other equally large vegetables, were grown is on a high bench at least 1500 feet above the Columbia river. The land was not irrigated, and produces every season an average of about 25 bushels of wheat per acre. A number of orchards have been planted by the small colony of about 40 farmers, and the fruits, especially apples, do well.

NEVADA.

ALFALFA.—All the alfalfa at Lovelock has been disposed of to the stockmen. There was an immense stock of hay this season, but not more than enough to supply the demand. The price paid was $4.50 per ton in the stack.

THE GOPHER PEST.—*Evening Chronicle*: A decision from Judge Rising of the District Court was received in Dayton last Saturday, which settles the fact that the plague which Lyon county had last May was a gopher plague and not a ground-squirrel plague. Ranchers in the Carson and Mason valleys seeing their crops destroyed by the pests, made big wages by killing the strange animals at a cent and a half per head, the State law providing such bounty for gophers. The first bill presented against the county was for $200. The County Commissioners refused payment, alleging that the animals were squirrels. A long trial was held during the summer, at which a number of zoological experts testified before Justice of the Peace J. S. Craig of Mason valley. The judge decided that the pests were ground squirrels and not gophers, and the plaintiffs had no right to receive a bounty. The case was appealed to the District Court. The court has had the case under advisement for three months, and now gives a learned decision that the animals were gophers. The test case for $200 is but an entering wedge. There are numerous claimants now ready to file their bills, and the result will be that the Lyon county treasury will soon get some heavy drafts from an unexpected quarter.

Chicago's Population.

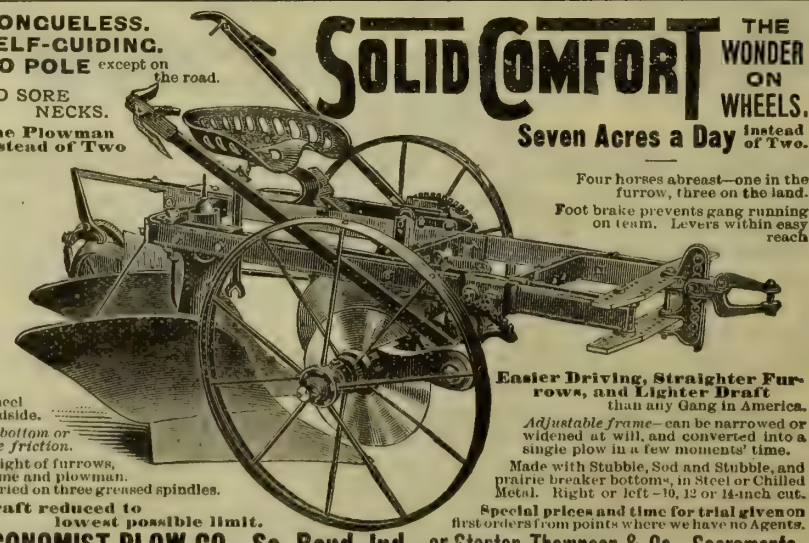
There is probably no city of importance in the world that can show such rapid and wonderful growth as Chicago since its destruction by fire. To-day its population is about 1,200,000. Mr. Peter Van Schaack, one of the leading merchants of that city said in conversation, that a large number of his personal friends, as well as scores of representative men throughout the Northwest with whom he had conversed upon the subject, had found St. Jacobs Oil a pain-curing and healing remedy of the most extraordinary efficacy. It is the Great Remedy for Rheumatism, Neuralgia, Sciatica, Backache, Bruises, Burns, Swellings etc.

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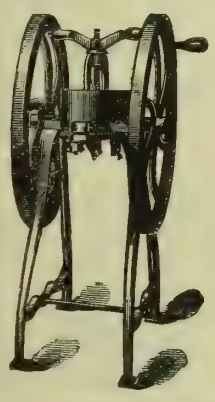
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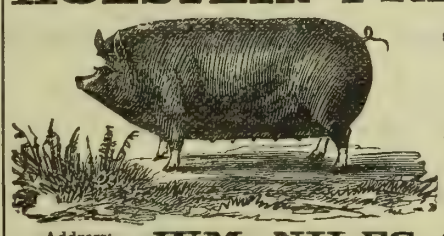
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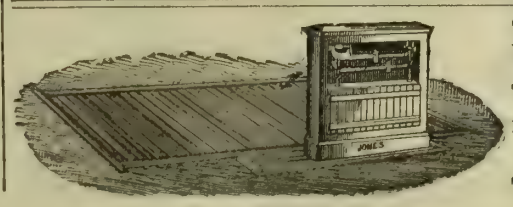
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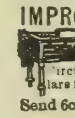
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Silk from Wood Pulp.

United States Consul Francis B. Loomis, at St. Etienne, in a report to his Government, gives some interesting facts regarding the proposed manufacture of silk from wood pulp. It appears that the reported failure of the silk crop or output in France, Italy and Syria has again directed the attention of some of the most important manufacturers of St. Etienne to the process invented by Count Chardonner for the manufacture of silk from wood pulp by a method similar in principle to that employed for converting wood into paper. A few years ago the new invention was exploited, and the rights to its exclusive use were sold to companies in Germany, France and England. Large works were built at Besancon, and preparations for manufacturing silk from wood were projected and made on a somewhat extravagant scale. Some remarkable specimens of silk made by this process were shown, but it was found that the fabric so manufactured could not be woven successfully in large pieces, and that it was of so highly inflammable a nature as to be a source of great danger. The experiments were then dropped, and nothing was heard of the matter until a few months ago, when a company was organized to develop the process of Count Chardonner and make it a thoroughly practical one.

This company is quietly at work now, and is making a large number of experiments, which, Mr. Loomis is informed by those in a position to know, are likely to lead to some important and satisfactory results. It is believed that in a short time the company will be able to offer to the trade a substitute for silk which will possess all the essential qualities of silk, and which can be sold for less than half the cost of the genuine article. This company has secured the revision to itself of the exclusive rights to the process, which had been sold, and if its experiments meet with the success that is anticipated, it will be in a position to make its own terms on every side. Consul Loomis has secured interesting samples of ribbons made from wood pulp or cellulose silk, which he sent with his report to the department. Up to the present moment these experiments are more interesting than important, and the silkworm rests secure in its work and its career, but nobody can tell at this early stage of development the wonderful things that the future has in store for wood pulp.

Wages in Europe.

Blacksmiths receive $9.62 per week in England, $4 in Germany, $5.81 in France, $5.38 in Belgium, $3.18 in Austria. Carpenters receive $9.75 in England, $4.11 in Germany, $6.20 in France, $4.07 in Belgium, $5.10 in Austria. Cabinet makers receive $6 22 per week in England, $4.25 in Germany, $6.14 in France, $5.66 in Belgium and $4.40 in Austria. Machinists receive $9 per week in England and $4 60 in Germany—no figures at hand for France, Belgium and Austria. Painters receive $8.92 per week in England and $4.82 in Germany—no figures as to other countries. Laborers, $5.29 per week in England, $3.11 in Germany, $3.93 in France, $3.77 in Belgium and $3 in Austria. Printers are paid 20 cents per 1000 ems in England, and receive $6.64 per week in France, $5 94 in Belgium and $3.95 in Austria; bricklayers, $7.75 per week in England, $4.21 in Germany, $5.74 in France, $4 56 in Belgium and $3.55 in Austria; masons, $8 per week in England, $4 07 in Germany, $5.33 in France, $5.22 in Belgium and $3 73 in Austria; farm laborers, $3 per week in England, $3 06 in Germany, $3.10 in France, $2.72 in Belgium and $3.50 in Austria; coopers, $6 in England, $3 97 in Germany, $5.58 in France, $5.17 in Belgium and $3 64 in Austria; shoemakers, $6 per week in England, $2.95 in Germany and $2.90 in France.—Report of the Bureau of Labor Statistics.

A RAIN GAUGE.—A recent suggestion for the construction of a rain-gauge is that the copper body should be deeply corrugated so that the contained water may be permitted to freeze solid without incurring the risk of fracturing the vessel. It is thought that if the lower part of the rain-gauge were kept immersed in a freezing mixture with the object of solidifying the rain-water as collected, the risks of error due to irregularities in the rate of evaporation would be greatly reduced. For the purpose of measurement the ice would be thawed in a warm room, and the volume of the resulting water would be measured at the temperature of maximum density.

IT is said the wood on the north side of a tree will not warp as much as that on the south side; and that if trees are sawn in planes that run east and west, as the tree stood, they will warp less than if cut in the opposite direction. However this may be, it is certain that the tendency to warp when sawn into boards is much greater in green than in dry wood, and the convex side of the curve is always towards the heart. This warping, due to unequal shrinkage, and to the more open texture of the external portion of the tree, is not found to occur in the middle plank or board of the log, excepting as it may, in slight degree, reduce the breadth.—Canada Lumberman.

Artificial Eyes.

The *Optician* says: The porcelain eye, by its truly wonderful likeness to the human eye in color, size and conformation, is a mark of the advance in opthalmological science. If the removal of eyes in olden time was done in a rude way, as by putting lime between the eyelids, or puncturing the ball with a nail, no less primitive in its way was the artificial reproduction of the eye. The first artificial eye consisted simply of a metal shell painted or enameled over, figuring the sclerotic and iris and leaving the cornea absent. It was not until the seventeenth century that a Dutchman made an artificial eye of enamel, and combining this with glass, succeeded in representing the cornea. However, the eyes were simple oval shells, like the half of a bird's egg, and could be worn in either orbit, there being no right or left. How different now! Not only have we rights and lefts, but the resemblance to the natural eye is so great that it often takes an expert to detect it; and how completely the public in general can be deceived by it is illustrated by an incidental case occurring in the practice of the late Dr. Williams, of Cincinnati. A sharp-witted Irishman who had his eye removed by the doctor did not wish to let his neighbors know that he was wearing an artificial eye, so when he returned home he told them the old one had been taken out, scraped and put back. Not only did he deceive his neighbors, but the county papers took it up and made so much noise that the good doctor became indignant and exposed the patient's story, whereupon the Irishman, when next seeing the doctor, said: "Doctor, you see what a good thing I was making for you, and you went and spoiled it all." And the belief, says Dr. A. E. Davis, of New York, to whom we are indebted for these details, that an eye can be taken out, scraped and put back again, is not confined to the grossly ignorant, as shown by one case reported in this paper; hence it may be well to disabuse their minds upon this point before the operation is done. Artificial eyes should be removed each night, washed and kept in a dry place, and not in a glass of water during the night, as is usually done. Two years is about the limit of time of service of an artificial eye, when it becomes rough and has to be renewed. However, another medical man reports one case where a woman, for fear she would not be able to replace the eye if removed, wore it continuously, without once removing it, for 15 years.

THE HIGHEST CHIMNEY ON THE CONTINENT.—The highest chimney in Germany and probably on the Continent has just been built at Stolberg, near Aix-la-Chapelle. It is 407 feet high, and it stands, moreover, on an eminence which rises some 270 feet above the surrounding plain. The inside diameter of the stalk is, at the bottom, 16 feet 8 inches; at the top, nearly 10 feet. The chimney, provision for the ascent of which has been made by fixing iron stips in the masonry, has occupied six months in erection, and the work was carried out wholly without accident.

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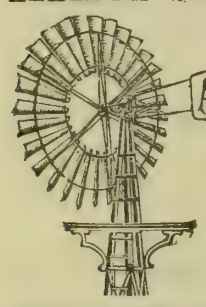
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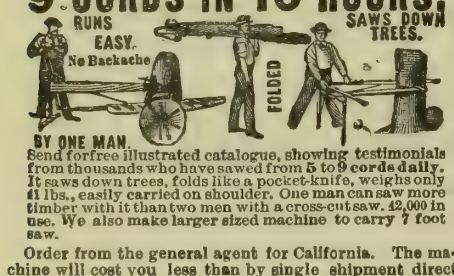
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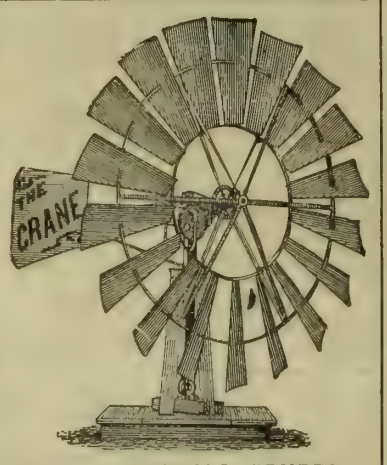
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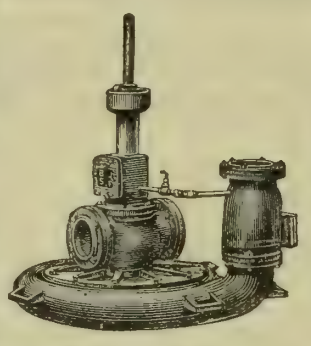
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No. 330 California Street,

Telephone No. 1746. SAN FRANCISCO, CAL.

S. F. Market Report

Market Review.

SAN FRANCISCO, Dec. 21, 1892.

The end of another week finds the wheat market in a condition more distressed, if possible, even than a week since. There is very little in the situation either at home or abroad to encourage the producer or to give out present hope of prices materially advanced. There seems to be no diminution of the visible supply, but, on the contrary, estimates of stock on hand in the United States are higher than they were a week since. Dealers say they expect forced sales of wheat in January and February in the local market, because banks which have been attempting to help farmers over the depressed season to better times will be apt to call in their loans January 1st, and holders therefore must sell. This is rather a pessimistic view of the situation, it is true, and, even if true, it does not seem likely that it can have material effect on the market, which can hardly be in worse condition.

A new feature of the week in the wheat market has been the loading of four British ships on owners' account. The owners, tired of waiting for charters, believe they would better give their vessels employment, even at a risk, rather than to allow them to run the chance of remaining idle until next season. It is not probable that a similar movement among owners of idle vessels will become general.

Barley is in much the same condition as wheat, so far as sellers are concerned. The market is still very weak. There is strong expectation that overland freights on this staple will be reduced in January, and, if so, a new market will be opened up for the surplus. It is based only on a rumor, however, and has so far had no visible effect on the market.

Live Stock.

In live stock there has been first rate demand during the week and prices are firm. Supplies are good and the market is altogether in good shape.

Vegetables.

New green peas have made their appearance from Los Angeles and are selling at 8c and 10c per pound. Marrowfat squash are scarce and command higher prices. There is very little asparagus in the market. Fresh vegetables of nearly all kinds are in light quantity and when in good condition bring good prices.

Poultry.

There is notable activity in the poultry market, so far as it concerns turkeys. A heavy demand is noted owing to the holiday season, and prices are stiff. An advance was made yesterday to 22 cents per pound for choice dressed, and, unless receipts are very much heavier than is now anticipated, quotations are likely to be higher before the week is out. As a matter of course, the demand will drop off next week, and receipts will go down heavily also, so prices may remain high for a time. Advices from the interior are that there is less supply of turkeys than at this time of year for several seasons. Prices are materially higher than one year since. Chickens are completely overlooked by buyers. Ducks and geese are in fair demand.

The wild small game market is in anything but good condition. Arizona quail have driven the California birds to the wall, and the latter go begging at 75 cents per dozen. Sales were made to-day as low as 50 cents. California hunters complain that they cannot compete with Arizona, inasmuch as they are prevented by law from trapping, by which method the Arizona game is altogether captured. Mallard ducks are lower, and nearly the whole range of prices in other game is below what it was a week since.

Fruit.

There is very little to be said about dried fruits. There has been no material change in quotations during the week past, and there is likely to be no special movement until after the holidays.

Offers for figs are slightly better, the top quotation for black sun-dried now being 6 cents.

Receipts of raisins are light, and the demand is not by any means active. Dealers do not expect that there will be any change in present conditions until after the holidays.

The holiday trade has had no especial effect upon fresh fruit, though quotations in Mexican limes and choice Sicily lemons rule higher; while domestic lemons have taken a drop, being quoted at $3.00 to $3.50 per box. Grapes are almost out of the market. The late severe weather has had a bad effect, and the season will very soon be at an end. Oranges are beginning to come in with some freedom, though there is as yet small demand for them; and there probably will not be until full-ripe ones come in. The quality is certain to improve from now on, and it cannot be long until the demand for sweet oranges can be readily supplied. Meanwhile imported Japanese oranges find easy sale, being preferred at this time by many to the California product.

Apples are firm for choice varieties, though the market is being flooded with inferior product. Producers are anxious to dispose of holdings of the poor grades at any price. The prospects are that the markets will before long be rid of these cheap varieties, and that choice will range still higher in prices.

Nuts.

There is a fair Christmas demand for walnuts, peanuts, almonds and chestnuts, though there is no change in quotations.

Dairy Produce.

There is nothing unusual to be said of dairy products. Some improvement is noted in the demand for cheese, the price for gilt-edged and Young America having advanced one cent. Eggs and butter rule nearly the same, with a steady demand for choice varieties. Cold storage eggs are higher, with excellent demand.

Miscellaneous.

There is marked improvement in smoked meats. Advices from the East are to the effect that the supply is only about one-half what it was a year ago. The result is noticeable improvement in the local situation, with a fine chance that prices will rule still higher.

Buying prices for hops range from 17 for fair to 19 cents for choice. Dealers say they expect no better prices during the coming year; but their opinion need not now be taken as an infallible criterion.

Potatoes have taken a jump, even under rather free receipts from Oregon. About 3800 sacks arrived by steamer Monday. Burbank seedlings now bring from 75 to 85 cents, and Oregon from $1.10 to $1.25. Quotations one week since for the latter were 80c@$1.10. Garnet Chilies are altogether out of the market.

Spring wools are out of the market, and quotations are nominal. There are on hand about 2,000,000 pounds wool to be carried over to the new year, divided as follows: Choice spring, 100,000 pounds; Oregon, 250,000 pounds; low grade, 1,650,000. These it is expected will be closed out in small lots before the spring clip. Just at this time—between spring and fall—there is little of interest that can be said about the past or new clips.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Dec. 20, '92, were as follows:

Flour, qr. sks	168,316	Chicory, bbls	169
Wheat, ctls	109,510	Hops, bdls	113
Barley, "	13,328	Wool, bdls	248
Rye, "	1,499	Hay, ton	2,137
Oats, "	13,328	Straw, "	116
Corn, "	5,112	Wine, gals	255,150
*Butter, "	484	Brandy, "	47,715
do bxs	260	Raisins, bxs	12,458
do bbls	...	Honey, cs	40
do kegs	42	Peanuts, sks	132
do tubs	...	Walnuts "	...
do ½ bxs	...	Almonds "	118
†Cheese, ctls	551	Mustard "	....
do bxs	65	Flax "	....
Eggs, doz	13,400	Popcorn "	....
Beans, sks	31,202	Broom corn, bbls	....
Potatoes, sks	42,426	Leather, rolls	564
Onions, "	3,964	Tallow, ctls	209
Bran, sks	16,615	Hides	2,708
Buckwheat "	42	Pelts	1,025
Middlings "	3,869		

The Tonnage Movement.

During the first 11 months of 1892 the deep-water arrivals at this port comprised 911 vessels (sail and steam), with an aggregate tonnage of 1,149,402 tons. The departures during the same time were 840 vessels, representing 1,080,176 registered tons. The combined movement, inward and outward, shows a total of 1751 vessels, and an aggregate tonnage of 2,229,578 tons, as follows:

Class.	No.	Tons.
Sail	1,189	1,334,093
Steam	562	895,495
Totals	1,751	2,229,578

Every maritime nation is represented in the tonnage movement of the port. Combining the arrivals and departures for the past 11 months (sail and steam), we have the following comparison for American and British vessels:

Nationalities.	No.	Tons.
American	1,066	1,122,476
British	505	870,599
Gain for American	560	251,877

While this is apparently a very favorable showing, it should be stated that many of these American vessels are of small class, making numerous trips between San Francisco and the Pacific islands, etc., while a large number were engaged in the Cape Horn trade, coastwise business and the fisheries.

German, Norwegian, Hawaiian and Nicaraguan vessels have otherwise figured most prominently in the commerce of this port.

Receipts of Domestic Produce.

The following are the receipts of the principal items of California produce at San Francisco from the beginning of the harvest year to date, compared with the corresponding period in the previous harvest year:

	July 1, '91, to Dec. 19, '91.	July 1, '92, to Dec. 17, '92.
Flour, qr. sks	2,697,211	2,833,004
Wheat, ctls	8,363,956	5,847,206
Barley, ctls	1,841,825	1,964,217
Oats, ctls	106,912	200,821
Potatoes, sks	528,039	629,419
Corn, ctls	184,486	137,505
Rye, sks	102,788	57,440
Buckwheat, sks	1,425	3,153
Beans, sks	254,524	378,999
Bran, sks	291,692	292,561
Hay, tons	75,985	71,513
Wool, bales	34,836	37,805
Hides, No.	75,652	81,142
Raisins, bxs	110,345	131,873
Quicksilver' flasks	6,587	10,615
Hops, bales	8,512	6,034

The receipts of certain articles of produce from Oregon, Washington and other distant points, for the same period, compare as follows:

	July 1, '91 to Dec 19, '81.	July 1, '92 to Dec. 17, '92.
Flour, sks	243,360	168,827
Wheat, ctls	853,184	373,993
Barley, ctls	23,643	234
Oats, ctls	266,882	168,810
Wool, bales	5,626	3,301
Bran, sks	32,189	62,718
Hops, bales	336	260
Hides, No.	46,146	41,416
Rye, sks	2,839	53
Potatoes, sks	18,434	23,412

Wheat In the Country.

The "visible" supply of wheat in this country east of the Rocky mountains is placed at 78,321,000 bushels, or 2,750,000 more than estimated a week ago.

The Barley Trade.

The exports of Barley from San Francisco by sea in November last were as follows:

To—	Ctls.	Value.
United Kingdom	78,173	$88,781
New York	41.201	43,533
Hawaiian Islands	15,399	14.061
Tahiti	241	269
Mexico	200	181
Totals	135,214	$146,875
Previously	1,067,655	1,135,644
Since Jan. 1	1,202,869	$1,282,469

The shipments by sea and overland compare as follows:

Eleven months—	By Sea.	By Rail.	Totals.
1892, ctls	1,202,869	4,880	1,207,749
1891	864,637	.....	864,637
1890	316,150	12,952	329.102
1889	817,999	158,201	976 200
1888	913,871	654,722	1,568,593

This year the exports have been unusually large, being only exceeded in 1888. Since 1889 very little has been shipped East by rail.

During the 11 months ending November 30, 1892, the total shipments by sea were as follows:

To—	Centals.	Value.
England	747,419	$812,697
New York	317,498	325,943
Hawaiian Islands	127,832	132,550
Australia	2,508	3,100
Society Islands	2,623	2,808
Mexico	2,292	2,273
Central America	1,722	1,995
British Columbia	855	1,079
Marquesas Islands	116	125
Japan	4	4
Totals	1,202,869	$1,282,469

Being 338,232 centals more than sent by sea during the corresponding period in 1891.

Sugar Bounty.

The descriptions of sugar entitled to bounty in the United States for the fiscal year ending June 30, 1892, were as follows:

	Pounds.	Bounty.
Cane	364,829,411	$7,077,316
Beet	12,004,848	240,098
Sorghum	1,136 086	22,197
Maple	144,882	2,465
Totals	378,115,227	$7,342,076

Louisiana got $6,882,589 of the above bounty, Texas $176 301 and California $163,500. It is estimated that $8,400,000 will be required to pay the bounty on the sugar produced in this country during the current fiscal year.

Markets by Telegraph.

British Grain Trade.

LONDON, Dec. 19.—The *Mark Lane Express* says: English wheats advanced 5d during the week, owing to the comparatively good price offered by London millers. American wheats have fallen 6d, and a further decline was only checked by the firmness of the New York market. Prices ruling indicate that only the higher grades of American flour can now be profitably exported. Large Russian shipments are continued.

The Grain Outlook.

An exchange, speaking of the grain receipts at Chicago, says the year 1892 is going to be the banner year and will beat all previous records. In 1891 the receipts of grain there were 197,484,866 bushels. From January 1st to November 30th, this year, the receipts amounted to 212,016,105 bushels. "If we allow only 10,000,000 bushels for December (and they are likely to be nearer twenty than ten millions) there will be an increase for the year of nearly 25,000,000 bushels. To give an idea of the growth of that traffic we may state that in 1890 grain receipts were 176,954,138 bushels; in 1889, 163,715,801 bushels, and in 1888, 154,986,942 bushels, which shows a very healthy increase."

One cause of the uneasiness in the grain trade, it is stated, is found in the manner in which wheat is being pushed forward to terminal centers and to the seaboard, while the exportations are not in volume proportioned to its accumulation.

A prominent Chicago operator is reported as saying that he is a bear on wheat for the following reasons:

"The foreign demand has been filled up, the stocks everywhere are very large and the receipts in the the northwest are heavy, with indications of their continuing for thirty days. The speculators in the northwest are bearish, as stocks there are larger than a week ago and wheat is still coming in. The crowd in the northwest takes a different view of the situation from the speculators here, the latter being bullish. The elevator people, who are carrying the cash wheat, are hedged, having sold against their cash holdings for May, and do not care much how prices go for the next four months. The situation reminds me of 1886, when I sold wheat for May about this time of the year for 88 cents and bought it back in April at 72 cents."

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May.
Thursday	5s 7½d	5s 07½d	5s 08½d	5s 09½d	5s 10½d	5s 11½d
Friday	5s 07½d	5s 07½d	5s 08½d	5s 09½d	5s 10½d	5s 11½d
Saturday	5s 06½d	5s 07½d	5s 08½d	5s 09½d	5s 10 d	5s 11 d
Monday	5s 06½d	5s 07½d	5s 08½d	5s 09½d	6s 10½d	5s 11½d
Tuesday	5s 06½d	5s 07 d	5s 08½d	5s 09½d	5s 10 d	5s 11½d

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for the past week:

	O. C.	P. S.	N. D.	Market for P. S
Thursday	30s6d	31s0d	30s6d	Slow
Friday	30s6d	31s0d	30s6d	Quiet
Saturday	30s3d	30s9d	30s3d	Neglected
Monday	30s3d	30s6d	30s3d	Very little demand
Tuesday	30s3d	30s3d	30s0d	Weaker

To-day s cablegram is as follows

LIVERPOOL, Dec. 21.—Wheat, slow. California spot lots, 6s 2½d; off coast, 30s; just shipped, 30s 3d; nearly due, 30s; cargoes off coast, slow; on passage, inactive; French country markets, very quiet.

San Francisco.

WHEAT.

	Buyer Dec	Jan.	May
Thursday, highest	1 26⅝	....	1 31⅝
" lowest	1 26½	....	1 30
Friday, highest	1 25½	....	1 30
" lowest	1 25½	....	1 29⅞
Saturday, highest	1 25⅞	....	1 30⅜
" lowest	1 25⅝	....	1 29⅞
Monday, highest	1 26⅜	1 26⅝	1 30⅜
" lowest	1 25½	1 26⅛	1 30
Tuesday, highest	1 26⅛	....	1 30½
" lowest	1 26	....	1 30¼

The following are to-day's recorded sales on Call:

Wheat - Morning—Informal—May, 100 tons, $1.30½ per ctl. Regular Session—Buyer Decembe, 100 tons, $1.25⅝; 100, $1.25½. May, 100 tons, $1 30; 1200, $1.30½ per ctl. Afternoon—May, 500 tons, $1.30⅜. Buyer December, 100 tons, $1.25⅝ per ctl.

BARLEY.

	Dec.	Jan.	May
Thursday, highest	*81	84½	85⅝
" lowest	81	83½	83⅝
Friday, highest	80	79	83½
" lowest	80	78½	82½
Saturday, highest	....	....	82½
" lowest	....	....	82½
Monday, highest	78½	79½	*83½
" lowest	78	78½	*82¼
Tuesday, highest	*77½	....	83
" lowest	*77½	....	82½

*Buyer option.

The following are to-day's recorded sales on Call:

Barley—Regular Session—May, 200 tons, 82⅜c; 200, 82½c; 100, 82½c per ctl. Afternoon—May, 600 tons, 82c; 100, 81½c; 200, 81¼c; 100, 81⅞c; 100, 81¾c per ctl.

Eastern Markets.

The following shows the closing prices per cental of wheat for the past week at

NEW YORK.

Day.	Dec.	Jan.	March.	May.
Thursday	126½	128	132	135½
Friday	124½	125	130	133½
Saturday	124½	125	....	132½
Monday	124½	125½	127½	136½
Tuesday	124½	124⅝	129½	132⅝

The following is to-day's telegram—per bushel:

NEW YORK, Dec. 21.—Wheat, 47¾c for January, 77c for March, 79½c for May, 79½c for June and 80c for July.

CHICAGO.

Day.	Dec.	Jan.	May.	July
Thursday	118⅜	120	129	127
Friday	117	....	127½	125½
Saturday	117	118	127½	125
Monday	115½	116⅞	127½	....
Tuesday	116½	117½	127½	124½

The following is to-day's telegram—per bushel:

CHICAGO, Dec. 21.—Wheat, 76¾c for May.

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

DECEMBER 14, 1892.

Limes, Mex	3 00 @ 4 50	purposes sells at an advance on outside quotations	
Do Cal	— @ —		
Lemons, box	3 00 @ 3 50	Beets, sk	— @ 75
Do Sicily choice	5 50 @ 6 00	Carrots, sk	30 @ 50
Apples	40 @ 65	Okra, dry, lb	8 @ 10
Do Choice	75 @ 1 25	Parsnips, ctl	1 00 @ 1 50
Do Extra choice	1 50 @ 1 75	Peppers, dry, lb	7 @ 8
Grapes, pr bx	15 @ 85	Turnips, ctl	— @ 70
Pears	25 @ 75	Cabbage, 100 lbs	75 @ 80
do Winter Nelis	1 00 @ 1 75	Garlic, ⅌ lb	1½@ 2½
Persimmons	50 @ 1 00	Marfat Squash, ⅌ ton	5 00 @10 00
Oranges, pr bx-		Cauliflower	75 @ 1 00
Navels, River'de	3 50 @ 4 50	Celery	50 @ 75
Do, Butte Co	— @ —	Mushrooms, ⅌ lb	
Seedl'g, River'de	2 00 @ 2 75	Do, Common	8 @ 15
Do, Fresno	2 75 @ 3 00	Extra choice fruit for special Do, Butte	20 @ 25
Do, Butte Co	2 50 @ 2 75		

General Produce.

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

DECEMBER 21, 1892.

BEANS AND PEAS.

Bayo, ctl	2 20 @ 2 30
Butter	2 40 @ 3 00
Pea	2 45 @ 2 60
Red	2 40 @ 2 50
Pink	2 00 @ 2 05
Small White	2 45 @ 2 55
Large White	2 25 @ 2 35
Lima	2 75 @ 3 00
Fld Peas, blk eye	1 60 @ —
Do green	1 75 @ 2 00
Do Niles	1 60 @ 1 75
Split	4 50 @ 5 50

BUTTER.

Cal., poor to fair, lb	15 @ —
Do g'd to choice	22½@ —
Do Giltedged	— @ 32½
Do Creamery	27½@ —
Do do Giltedge	— @ 35
Eastern, ladle	12½@ —
Cal. Pickled	20 @ —
Cal. Keg	20 @ —
East'rn Cr'am'y	25 @ 27½

CHEESE.

Cal. choice cream	9½@ —
Do fair to good	8 @ —
Do Giltedged	— @ 12½
Do Skim	5 @ 6½
Young America	— @ 12½

EGGS.

Cal. "as is," doz	20 @ —
Do shaky	15 @ —
Do candled	30 @ —
Do choice	32½@ —
Do fresh laid	— @ 35
Do do s'led white	— @ 37½
Eastern cold-storage	23 @ —
Do fresh	25 @ —
Do selected	— @ 32½

Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.

FEED.

Bran, ton	13 00@ 14 00
Feedmeal	25 00@ 26 00
Gr'd Barley	19 00@ 19 50
Middlings	— @ 21 00
Oil Cake Meal	— @ 35 00
Manhatan Horse Food (Red Ball Brand) in 100-lb. Cabinets	— @ 8 00

HAY.

Compressed	7 00 @10 00
Wheat, per ton	9 00@ —
Do choice	— @ 13 50
Wheat and oats	8 00@ 11 50
Wild Oats	7 00@ 9 00
Cultivated do	6 00@ 9 00
Barley	6 00@ 9 00
Alfalfa	8 00@ 10 50
Clover	8 00@ 10 00
Straw, bale	35@ 50

GRAIN, ETC.

Barley, feed, ctl	70@ 77½
Do good	78¾@ —
Do choice	80 @ —
Do brewing	97 @ 98
Do do choice	93½@ —
Do do Giltedge	97½@ —
Do Chevalier	80 @ —
Do do Giltedge	1 15 @ —
Buckwheat	2 25 @ —
Corn, white	1 07½@ 1 10
Yellow, large	1 00 @ —
Do small	1 07½@ 1 10
Oats, milling	1 35 @ 1 37½
Feed, choice	1 37½@ —
Do good	1 30 @ —
Do fair	1 25 @ —
Do common	1 12½@ —
Surprise	1 40 @ —
Black feed	1 05 @ 1 15
Do seed	1 17½@ 1 30
Gray	1 30 @ —
Rye	1 12½@ 1 17½
*Wheat, milling	
Giltedged	1 27½@ 1 32½
Do choice	1 26½@ —
Do fair to good	1 25½@ —
Shipping, choice	1 26½@ —
Do good	1 25 @ —
Do fair	1 22½@ —
Common	1 20 @ —
Sonora	1 20 @ 1 30

HOPS.

1892, fair	17 @ —
Good	18 @ —
Choice	19 @ —

FLOUR.

Extra, city mills	3 90 @ —
Do country m'ls	3 90 @ —
Superfine	2 50 @ 3 00

NUTS—JOBBING.

Walnuts, hard shell, Cal. lb	6 @ 8
Do soft shell	8 @ 9½
Do paper-shell	10 @ 12
Almonds, s'ft sh'l	12 @ 13½
Paper shell	13 @ 15
Hard shell	6 @ —
Brazil	10 @ —
Pecans, small	8 @ 10
Do large	14 @ 16
Peanuts	3½@ 4
Filberts	10 @ 12
Hickory	7 @ 8
Chestnuts	13 @ 14

ONIONS.

Silverskin	75 @ 90

POTATOES.

River Reds	45 @ 55
Early Rose, ctl	55 @ 65
Peerless	60 @ 70
Burbank Seed's	75 @ 85
Do do Salinas	90 @ 1 30
Do do Oregon	1 10 @ 1 25
Sweet	50 @ 75

Extra choice sell for more money.

POULTRY.

Hens, doz	5 00 @ 6 00
Roosters, old	5 00 @ 6 00
Do young	5 00 @ 5 50
Broilers, small	2 00 @ 3 00
Do large	3 00 @ 4 00
Fryers	3 50 @ 4 00
Ducks	4 50 @ 5 00
Do large	5 50 @ 6 50
Do extra large	6 50 @ 8 00
Geese, pair	1 50 @ 2 25
Turkeys, gobl'r	18 @ 19
Turkeys, hens	18 @ 19
Do dressed	20 @ 22

All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.

Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50

GAME.

Quail, per doz	50 @ 75
Ducks	— @ —
Do Mal'd ⅌ doz	3 00 @ 3 50
Do Sprig	2 00 @ 2 25
Do Teal	1 50 @ —
Do Widgeon	1 50 @ —
Do small	1 25 @ —
Geese	3 00 @ —
Do gray ⅌ doz	2 00 @ 3 00
Do White	1 00 @ 1 50
Do Brant	1 25 @ 1 75
Snipe	2 00 @ —
Do English, doz	1 50 @ 2 00
Do Jack, per doz	75 @ 1 25
Hare, per doz	1 25 @ —
Rabbits, large	1 25 @ 1 50
Do small	1 00 @ 1 25

PROVISIONS.

Cal. bacon, heavy, per lb	12 @ —
Medium	13 @ —
Light	14 @ —
Lard	9½@ 12½
Cal sm'k'd beef	11a@ —
Hams, Cal salt'd	14½@ —
Do Eastern	14 @ —

SEEDS.

Alfalfa	9½@ 10
Clover, Red	15 @ —
White	30 @ —
Flaxseed	2 25 @ —
Hemp	4½@ —
Mustard, yellow	7 @ —
Do brown	4½@ —

WOOL.

FALL, 1892.

S Joaquin, plain	6½@ 10
Do mountain	8 @ 11
Do lamb	8 @ 10
Northern Choice	14 @ —
Do Defective	11 @ —
Do Lamb	10 @ 14

HONEY—1892 CROP.

White comb, 2-lb frame	9½@ 12½
Do do 1-lb frame	11½@ 14½
White extracted	7½@ —
Amber do	6½@ —
Dark do	6½@ —
Beeswax, lb	23 @ 25

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES—1892.

Sun-dried, ¼'s	4½@—
Do sliced	4½@ 5
Evap. bl., ring, 50-lb. bx	8 @ 9
Fancy, higher.	

APRICOTS—1892.

Do bleached	13½@—
Do do fancy	15 @16
Evap. choice, in boxes	15 @16
Do fancy, do	15½@17

FIGS—1892.

Sun-dried, black	4 @—6
Do white	3½@—

GRAPES—1892.

Sun-dried, stemless	2½@ 3
Do unstemmed	1½@ 2

NECTARINES—1892.

Red, sun-dried	7 @ 8
Do Evap., in boxes	11½@12
White, sun-dried	9½@11
Do evaporated	12½@13

PEARS—1892.

Sun-dried, quarters	2½@ 3
Do sliced	4 @ 5½
Evap., slic'd, in b'xes	7 @ 8
Unp'led, q'rt'd, bl'ch'd	5 @ 8

PEACHES—1892.

Sun-dried, unpeeled	7 @ 7½
Do do prime, bl'ched	9 @10
Do do choice, do	11 @11½
Sun-dr., pl'd, bl'ched	10 @11
Do do prime	14 @—
Do do choice	— @15
Do do fancy	— @16
Evap., peeled, in boxes choice	18½@—
Do do fancy	20 @21

PLUMS—1892.

Pitted, sun-dried	10 @10½
Do evap. boxes, choice	11 @12
Unpitted	4 @ 5

PRUNES—1892.

Cal. French, ungraded	7½@ 8
Do graded, 60 to 100	9½@10
Do do 40 to 60	11 @12
Fancy sell for more money.	

RAISINS—1892.

London Layers, cluster per box	1 90 @2 00
Do choicest do	1 50 @1 60
Do prime pr bx	1 25 @1 40
Loose Muscatels, 2-crown, pr bx	75 @1 00
Do 3-crown do	1 10 @1 20
Do do do faced	1 20 @1 25
Unstem'ed Muscatels in sks pr lb	2½@ 3
Stem'ed 2-crown	2½@ 3
Stem'ed 3-crown	3½@ 4½
Se'd'l's M'sc't'l sks	4 @ 5
Do do in bxs	— @1 00
Do do Sultanas, sks	6 @ 7
Do do bxs	— @1 40

Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.

Live Stock.

BEEF.

Stall fed	6½@—
Grass fed, extra	6½@—
First quality	5½@—
Second quality	4½@—
Third quality	4 @—
Bulls and thin Cows	2 @—

VEAL.

Range, heavy	5 @6
Do light	6 @8
Dairy	7½@8½

MUTTON.

Wethers	6½@—
Ewes	6 @—
Do Spring	7½@ 8

HOGS.

Light, ⅌ lb, cents	5½@—
Medium	5½@—
Heavy	5½@—
Soft	5 @—
Feeders	5 @—
Stock Hogs	5½@—
Dressed	8 @ 8½

WONDER SPRAY PUMPS. SPLENDID for small farms. Price, delivered, only $6.00. Write for circulars. BAKER & HAMILTON, S. F.

The Secretary's Column.

(*Continued from page* 538.)

their joining with the Grange in reviving the Farmers' Institute, reported that little or no encouragement had been met with. The former institute meetings, which were started by Tulare Grange and afterward championed by the Grange and Alliance, and the cause of utter failure, after having held two or more successful meetings, was well discussed by Bros. Tuohy, Forrer (of the U. S. Experimental Station), Mackie, Moore, Maples, Chapin, Sister Ingraham and others. Suggestions being called for, we stated our belief that the interest shown by those present was sufficient evidence that a good Farmers' Institute could be held semiannually at least, and entirely under the auspices of the Grange. The committee of five was continued and an appropriation of $20 was voted to provide for the expenses of holding the first meeting. This, no doubt, will secure the permanent establishment of a well and successfully conducted Farmers' Institute in Tulare county.

Under "Good of the Order," was urged the importance of Patrons conferring with agricultural and other members of the legislature favorable to legislation for farming interests and all true reform. It is anticipated that at least two legislative members from Tulare county will be found on the right side. Among absent veteran Patrons, we missed pleasant "Maples" and others of "Merritt" by name as well as by nature, whom we are always glad to greet. Although the attendance was small, the well-known live spirit of Tulare Grange was manifest.

In Tulare Grange, last Saturday, a letter of regret was read from Sister E. Z. Roache speaking encouraging words for the future of the work, and appreciatively of Tulare Grange and its W. M.

EXECUTIVE MEETING.

No date has yet been fixed for the Executive Committee meeting; it will be held soon, however. Selecting the location for the next S. G. will be considered; also subjects recommended by the S. G. for legislation at the coming session of the legislature. The Committee desire that Patrons throughout the State shall confer urgently with the members of the legislature from their district in regard to legislation needed in local and farming interests and reforms for the good of the commonwealth.

Among the names stated to be in favor of good legislation and worthy of conference for the purpose of forwarding the work of good legislation are P. R. Adams of Santa Cruz county; C. S. Cargill of Watsonville Grange; C. F. Bennett, Assemblyman from Tustin, Orange county; C. A. Barlow of San Luis Obispo county; W. Vann, Assemblyman from Colusa county; Senator B. F. Langford and Assemblyman Hutson, San Joaquin county; Senator D. A. Ostrom, Wheatland; Eben R. Owen, Assemblyman, of Elk Grove. These are only a few, we apprehend, of many that can be depended upon for square legislative action.

JOINT INSTALLATION.—Temescal Grange has invited Eden Grange to join in the installation of officers at Oakland, Jan. 7th, at 10 o'clock. Bros. Goodenough and Perkins have been selected for installing officers. The usual harvest feast, some good talk and lots of Grange sociability will be enjoyed by members and also by visiting Patrons, it is hoped.

SANTA ROSA GRANGE.—State Master Davis and his wife, who were present, report a large attendance and a good meeting upon Grange election day at Santa Rosa. Chas. Gamble was elected W. M.; George Rogers, W. O., and S. T. Coulter, W. L.

STATE GRANGE PROCEEDINGS.—Copies of the proceedings of 1892 have been forwarded to the subordinate masters, secretaries, State officers of California and masters and secretaries of other State Granges. Should any have failed to receive copies, please notify this office. Granges or members who wish further copies will be supplied upon sending two cents for postage. The volume comprises 128 pages and contains a good deal of interesting and important matter, including its literary and memorial departments, masters' reports of subordinate Granges, and other departments. We would recommend by masters its careful examination relative to resolutions and recommendations adopted by the S. G. These, with other appropriate selections, might well be read from time to time at Grange sessions.

SISTER C. E. KINNEY is spending some weeks with Flora M. Kimball, P. M. of National City Grange.

WATERLOO GRANGE.—Resolutions of respect to the memory of Martha Hancock were adopted recently by Waterloo Grange. She died Nov. 24th, in her 52d year. Committee—D. W. Keiver, S. Light, Lizzie Anderson.

WORTHY OVERSEER ROACHE and wife are planning for some revival work in Watsonville and vicinity. So are many Patrons, we believe, in other quarters.

THE sixth degree certificates have not been received as soon as anticipated. We hope to report their arrival soon.

INCREASED ACTIVITY. — Reports from quite a number of subordinate Granges have been received during the last week. Many elections of officers have been held and installation meetings appointed for next month. Let us have an onward movement along the whole line throughout the coming year.

Complimentary Samples.

Persons receiving this paper marked are requested to examine its contents, terms of subscription, and give it their own patronage, and as far as practicable, aid in circulating the journal, and making its value more widely known to others, and extending its influence in the cause it faithfully serves. Subscription, paid in advance, 5 mos., $1 10 mos., $2; 15 mos., $3. Extra copies mailed for 10 cents, if ordered soon enough. If already a subscriber, please show the paper to others.

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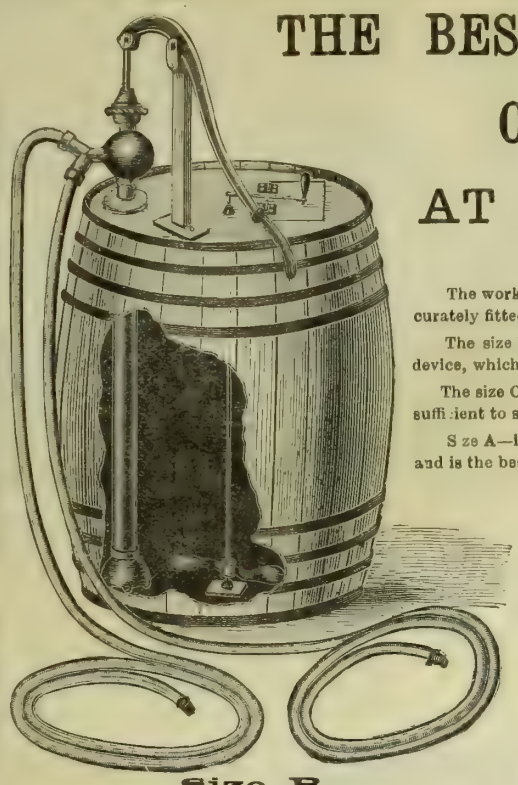
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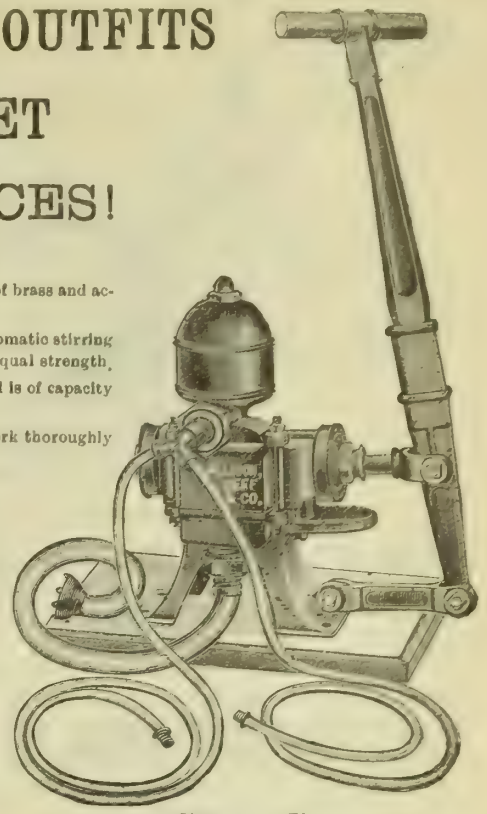
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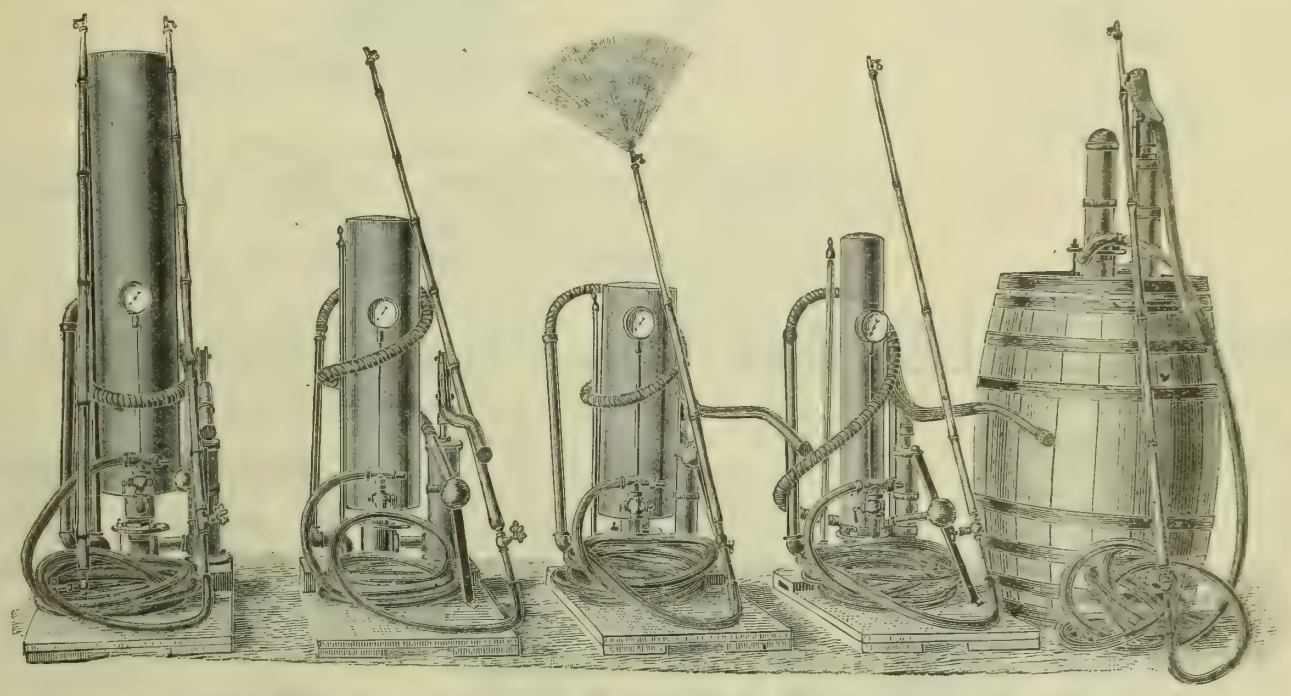

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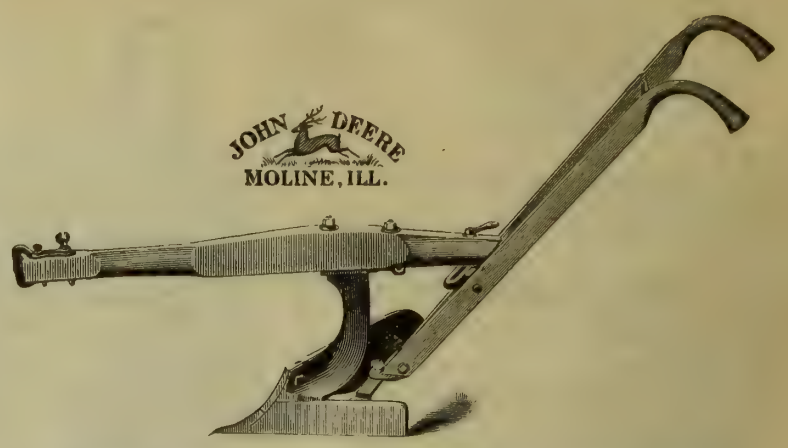
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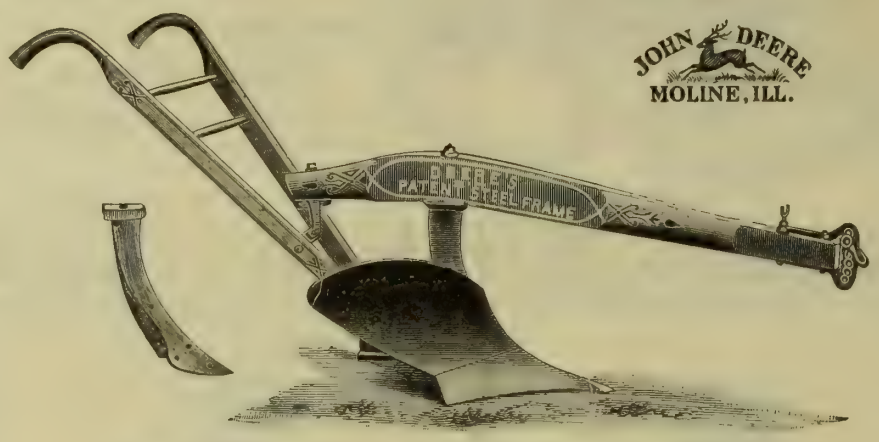


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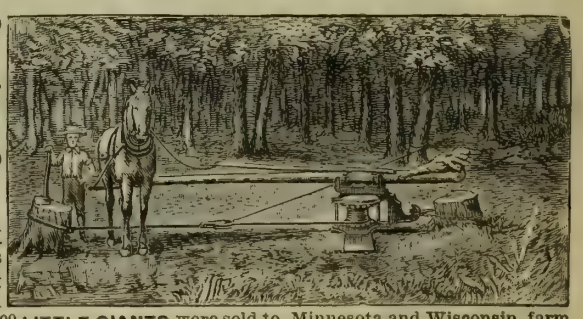
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PACIFIC RURAL PRESS

Vol. XLIV. No. 27. SAN FRANCISCO, SATURDAY, DECEMBER 31, 1892.

THE DEWEY PUBLISHING CO.
Office, 220 Market St.

Fine St. Bernard Dogs.

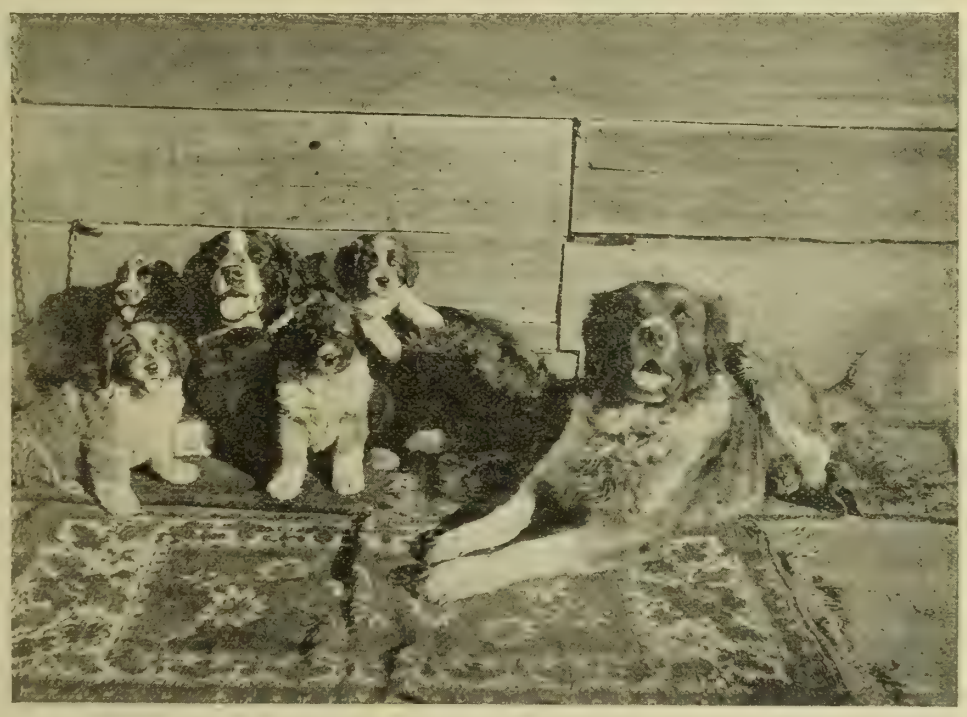
The accompanying very handsome group of St. Bernard dog and puppies belongs to the kennel of Capt. Poole, of San Francisco. The sire, Gillot P., won second prize at the recent bench show in San Francisco, and he is considered one of the finest dogs on the Pacific Coast. The mother, Victoria, also won second in her class at the same show. The four puppies bear unmistakable marks of fine blood, and evidently possess splendid bone and substance.

An air of romance and adventure surrounds the St. Bernard. He is known as one of the best and noblest four-footed friends man has been blessed with. The name St. Bernard arises from the locality in the Alps mountains where these dogs have been the humble agents of many heroic deeds. St. Bernard is a famous mountain pass in the Pennine Alps, attaining an elevation of more than 8,000 feet above the sea-level. On the summit stands a monastery of St. Augustine monks, who with these dogs have rescued many hundred travelers from death by exposure to cold, or burial in the snow.

The monastery, or *hospice*, is a great resort of travelers across the mountains. As many as 500 or 600 persons are said to have taken advantage of the hospitality of the monks in one day, and it is calculated that 8,000 or 9,000 are annually indebted to their kindness.

The pass, which was traversed in early times by the Romans, by Charlemagne, and Frederick Barbarossa, is celebrated for the passage of 20,000 French troops under Napoleon in 1800.

School-book pictures of the St. Augustine monks and the St. Bernard dogs in the act of rescuing some unfortunate creature from the snow are familiar to all.



A GROUP OF ST. BERNARDS.

A GIGANTIC scheme to irrigate desert portions of San Diego and San Bernardino counties by water from the Colorado river is on foot, under direction of a Belgian company with $10,000,000 capital. A part of the plan is to colonize the irrigated land with Belgian and other farmers. One of the proposed items of development is an orange orchard of 4000 acres. Parts of Arizona and Mexico are also to be irrigated if there is sufficient surplus of water in the Colorado available.

THE various counties in the northern part of the State manifest a degree of interest in the coming citrus fair in San Francisco that insures the complete success of that project. The exhibits will be large and elaborate. Butte county being the leading one in the production of oranges, will have 4800 square feet; Placer, 3000 square feet; Yuba 1600 square feet; Sacramento, 1200 square feet; Tulare, 600 square feet. Several smaller displays will be made by other counties, which will take up from 200 to 500 square feet each.

THEY have started a curious social game in Southern California. It is called the "peanut hunt," and is used for entertainment where cards and dancing are not desired. The hostess hides peanuts in all sorts of queer places about the room, sometimes putting two or three nuts in the same place. Then she provides each of her guests with a little basket, tied with gay ribbons, and the "hunt" begins. After a certain time the "finds" are compared. The one who has the largest number wins the first prize—the "booby prize" being awarded to the one having fewest.

GRAPEGROWERS and winemakers are being urged to hold back their product from the market until better prices are forthcoming for wines and brandies. It is represented that this year's production of wine in California will not be over 12,000,000 gallons, against from 17,000,000 to 18,000,000 in former years, and the consequence will unavoidably be an advance in values.

A LOCAL paper estimates that there yet remain unsold in the Salinas valley 13,627 bushels of wheat and 26,538 of barley. If the owners can only hold it in the warehouse long enough, their patience will no doubt be rewarded by better prices—a somewhat superfluous prediction, it is true. When things are at their worst, they must improve.

A LULL in tree-planting is noted in the southern part of the State. The disposition is to wait results upon orchards already put out. The cessation pertains more particularly to prunes than to any other fruit. Oranges, lemons, peaches and apricots seem to be well represented in the young orchards.

PETALUMA is to have a starch factory, and the potato raisers in that vicinity are congratulating themselves that they will have no trouble in disposing of their product. Producers of that particular vegetable, however, have little reason to complain of prices this year, starch factory or no starch factory.

CALIFORNIA prunes have driven the foreign product out of our local market, and are making great headway throughout the United States. There are substantial reasons to believe that the market will be doubled in five years. It is not yet time to tremble through fear of overproduction.

NEW YORK has received thus far for the season 539,000 boxes of California raisins. The total includes bags reduced to boxes. About two-thirds of this quantity went to New England. The market is ruling weak and cheap. The best bags will not exceed 3 cents a pound, while plenty of damp but useful stock runs down to 3 cents. Boxes of loose raisins are worth from $1.20 to $1.35 and clusters or layers from $1.80 to $2.00 for the finest brands.

THE English syndicate which was attempting to develop the northern half of California, it is reported, has abandoned its enterprise, and will surrender its concession by the Mexican government of 18,000,000 acres of land. Grass is growing over the projected and partly built railroad from San Quentin to Yuma. This is what is known as the Ensenada scheme.

IN the past eight years $6,000,000 has been spent in irrigation enterprises in Arizona, and the result is the rescue of many hundred thousands acres of fertile land from an arid waste. It was possibly of Arizona that the poet said "the desert shall blossom as the rose."

A 1700-POUND heifer has just been sold in Humboldt county, and people up there say that is a pretty big heifer. It is, but there are some calves in California which think they weigh a ton. They are two-legged, and are principally engaged in declaring that agriculture, horticulture, and every other productive pursuit is going to the demnition bow-wows.

THE San Francisco *Examiner* unkindly calls the proposed cooperative association of growers, packers and brokers a "big raisin trust." There are trusts and trusts, and some trusts are not like other trusts. For instance, this raisin "trust" has no design of squeezing the consumer or jobber. Its object is simply to prevent being squeezed.

RIVERSIDE orangegrowers, packers and shippers have organized to "maintain the price" of this season's orange yield. It is not always easy to hold up prices of any commodity. But organization can sometimes have an important influence on supply and demand.

THE total hay export this year from Hollister and vicinity was 27,375 tons.

THE Sonoma county hop crop for 1892 was 8500 bales. Of this output 3000 bales were contracted before harvest at 15 to 17 cents. Fifteen hundred bales were sold at spot cash from 18 to 20 cents, and there yet remain unsold 2500 bales. The yield was expected to be 10,500 bales, instead of 8500.

URBAN growers of oranges in Northern California are suffering from nocturnal visits by predatory bands of youths. One cannot but feel sometimes that the obsolete bastinado had wholesome merits when applied vigorously to such petty pirates.

THEY are still picking grapes in Colusa county, or were a few days since. They are described by the *Herald* as large and plump, and just as fine as could be found anywhere a month ago. Doubtless the late storm ended the grape season definitely.

THE Redlands *Citrograph* denies the existence of "dry rot" in the orange crop, and says there is no cause for uneasiness. A black spot caused by bruises or otherwise occasionally appears in the orange. That is all.

COYOTE scalps are coming into Fresno by sackfuls. The $5 bounty proves irresistible to hunters, and the poor beasts are hurled into the coyote hereafter by hundreds.

PACIFIC RURAL PRESS.

By The Dewey Publishing Co.

Office, 220 *Market St.; Elevator*, 12 *Front St., San Francisco., Cal.*

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Any subscriber sending an inquiry on any subject to the Rural Press, with a postage stamp, will receive a reply, either through the columns of the paper or by personal letter. The answer will be given as promptly as practicable.

ALFRED HOLMAN.....General Manager

San Francisco, December 31, 1892.

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BUSINESS ANNOUNCEMENTS.

[NEW THIS ISSUE.]

Squirrel and Gopher Exterminator—J. H. Wheeler, Melrose.
Squirrel and Gopher Exterminator—Wakelee & Co.
Shire Horses—Parsons and Griffith, Geyserville.
Seeds, Plants, Etc.—Sherwood Hall Nursery Co.
Dividend Notice—San Francisco Savings Union.
Dividend Notice—German Savings and Loan Society.
Poland-China Hogs—H. J. Philpott, Niles.
Black Percheron Stallions—L. V. Willits, Watsonville.
Seeds—Mesa Seed Co., Salt Lake City, Utah.

See Advertising Columns.

The Week.

Californians had a wet Christmas, but as a rule they did not grumble. The storm, which began on December 22d, attained great proportions and covered the whole area of the State. It continued four or five days with intermitting severity, but was for the most part a warm storm in California valleys. The wind attained considerable velocity, but was not particularly destructive. The precipitation was very heavy in some localities, and some damage has resulted from swollen streams and broken levees. As we write on Wednesday the weather seems clearing.

The holiday season in the city is progressing as favorably as possible under dripping skies and flooded streets. Christmas was generally and happily celebrated, both in public and household events. New Years is just at hand, and we take occasion to extend to all our readers our best wishes for a new year of happiness and prosperity unparalleled.

Index to Volume XLIV.

As this issue closes the current half-year volume of the Rural, we devote the last page to a carefully-prepared index of the issues since July 1. A glance at the index will show how broad and varied has been the range of subjects considered, and how thoroughly they relate to the specialty which we serve. The reader of the Rural who files away the current issues and upon the receipt of the index fastens the 26 numbers together or has them bound in a volume, has a source of information which will be of continual interest and value. The index, of course, makes it possible to turn at once to all the phases of treatment which the subject has received in our columns. In the indexing we have given most attention to matters of practical importance as data of this nature are most likely to be sought for reference.

The hop surplus on hand in the State is thus estimated by the Santa Rosa *Democrat:*

	Bales.
Sonoma county	2600
Mendocino county	1041
[illegible]	2000
Sacramento and vicinity	8000
	13,641

For The New Year.

Never before perhaps has the Californian approached the border line between the old and the new with a stronger light of confidence upon his pathway than now guides his steps. Natural conditions could not have been better arranged if all the forces of the material universe had purposely combined to favor California. The autumn was unsurpassed; not a condition working injury and at the same time not one to foster foreboding for the future. The croaker and the growler could not catch a pretext in earth or air or sky and were silent, The opening of winter had the two superlative qualities of lateness and mildness; even the wind, without which no storm of moment can be had, was warm as well as strong. The downpour was generous,and no intervals of drouth and killing frost intruded in regions where frost is feared. Work was well along, and never before did the California farmer listen with more comfort and content to the long roll of the raindrops on his roof. It is true that there may still be conditions locally adverse. January has possibilities of low temperatures, and all the winter may menace the low lands with flood and the hillsides with washes, but there is far more reason to forget such reflections than to anticipate them. The shaping of the season thus far warrants the expectation of one of the most comfortable winters and one of the most auspicious for full production of field, fruit and garden crops that the State has ever enjoyed.

Such being the natural endowment of the season, it is gratifying to note that in the human factors of the industrial equation there are similar signs of promise. Upon the whole, the productive enterprises are in good shape and are disclosing signs of progress which augur satisfactory development. Even in directions in which there has been reason for doubt and distrust there is now appearing promise of triumph over obstacles and ultimate reward. The State is unquestionably advancing, not in boom spirts but steadily and quietly. Our industries are growing well, as the year's statistics, when available, will show; but greater advancement than that of centals, gallons or carloads, is to be found in the fact that our people are learning how to shape their efforts to secure the best results. This fact has become more apparent in the last year's experience than in all the years which have preceded. It is this which gives the greatest promise for the future and constitutes the surest foundation for the coming greatness of the State.

Our fruit industries comprise the greatest factor in our present prosperity, and in them, too, seems to be the chief expectation of advancement. Never before did such quantities of fruit, both green and dried, go forth from California as during 1892. Values, on the whole, were good and the demand satisfactory, and yet it is clear to all that the grower did not nearly realize his share of the gross returns, nor does it appear that the amount delivered to distant consumers was more than a fraction of the quantities which can be thus disposed of. The better marketing of fruit and the better distribution of it are then deeply involved in the prosperity of the industry as they have been since the beginning, but the movements among producers this year, centering at Fresno and in the Santa Clara valley show that something is about to be realized from the discussion which has prevailed. It is apparent that the California producer must master the situation, and he never showed such signs of mastery as now. This we hold to be one of the most hopeful signs for the future, and it affords encouragement to the extension of our fruit-producing lines. With this in view, we feel surer of the outcome of the vast plantations which will be made this year of all kinds of tree fruits than would otherwise be possible.

Live stock enterprises also promise well for the future. The continued rich returns for the produce of our racing studs brings greater funds to our breeders, and, what is perhaps more promising, the activity is drawing the attention of the whole country to the desirability of better stock. The time of the fancy values may pass away, but the elevation of the whole range of prices for better animals will be enduring. Similar views must be held with regard to the cheapening of the best blood of horned cattle. It is no longer a fancy commodity; it is a staple and it takes the prices of a staple, with narrow margins but a safety and solidity which signifies that it has become a popular dependence. Every one of the innumerable indications of progress in dairy practice is also significant. Producers are sending out marketable commodities at a lower cost rate and in greater quantities than ever before. This, too, is an unmistakable indication of advancement.

We are aware that the western mind is trained to look for signs of prosperity in times of unusual movement and in ebullitions of activity, but these are not the best indications. To us the present growth of California, with its quiet and steady gain of population and capital from without and with its interior development mainly based upon the results of experience and the rewards of production, is the most hopeful of its history. With such a gait the State will go forward into a new year with everything propitious and with assurance of a good years' progress. Those who have idle funds for wise investment should not stay their hands. It promises to be a good year for the enlistment of both capital and strength in well directed progressive effort.

Better Outlook for Vineyard Products.

Mr. Clarence J. Wetmore, executive officer of the State Viticultural Commission, has been gathering statistics of the California wine output for 1892–93. They are yet incomplete, but enough is known to warrant the statement that the total product will fall far short of the total for 1891–92, and will not exceed 12,000,000 gallons. The total last year was about 16,000,000 gallons. Roughly estimated, the product in gallons for the present season will be as follows, comparison being made with the outputs for 1890 and 1891:

County.	1892.	1891.	1890.
Napa .....gallons.	2,200,000	4,000,000	6,500 000
Sonoma	2,750,000	2,750,000	3,500,000
Alameda	1,100,000	1,250,000	1,500,000
Santa Clara	2,250 000	4,500,000	4,000,000
Santa Cruz	250,000	250,000	250,000
Fresno	1,000,000	1,000,000	1,000,000
Los Angeles	500,000	500,000	600,000
San Joaquin	500,000	500,000	500,000
All other	1,000,000	1,000,000	1,000,000
Total	11,600,000	15,750,000	18,850,000

The reduction in the output has been due to familiar reasons—heat, bad weather in the time of flowering, producing *coulure*, restriction in the acreage; and phylloxera. Some growers have dried their grapes, owing to the poor condition of the wine market. It is far from the truth to infer from these conditions that viticulture has fallen into chronic decay, or that it will cease to be a leading industry of the State. The reduction in production in 1892 has been due to unusual and unprecedented reasons, all of which can scarcely prevail at one time in the future. It is true that poor prices have generally prevailed since 1885, and that growers and producers have met a considerable degree of discouragement from that source. The phylloxera has appeared and by its ravages destroyed large parts of a number of vineyards. But these conditions are not necessarily permanent, and are not such that they may not be materially improved by increase of consumption, reduction of competition, and safer and more intelligent methods of growing grapes, care of the vine, and protection from disease. There is a market ordinarily in the United States for about 18,000,000 gallons of wine, of which perhaps 4,000,000 are supplied by France. The shortage in this year's California product appears certain to improve prices over the figures of the past several years. The market has at this time a better tone than for many months, and quotations are now higher than one year since. There is in San Francisco and other cellars a very large aggregate of empty cooperage, indicating that stocks are running down, and that dealers must shortly seek to replenish. When the buyer, and not the seller, is the seeker in the market a wholesome condition and an active demand are certain to ensue.

It seems to be good policy, therefore, for the producer to be in no hurry and not to force sales at this time. Of course there are some, perhaps many, whom stress of circumstances will not permit to delay disposition of their holdings at this time. But a survey of the situation discloses that winemakers generally are holding back, believing a few months will bring a marked advance in prices and a strong inquiry for wines.

The signs of the times point to a revival of the industry. Many wine men in San Francisco think twenty cents per gallon will be easily secured before the next vintage.

Improvement in the market this season will be of marked and permanent benefit to the entire industry. With low prices obtaining through a series of years, there has been no sufficient inducement for growers to take adequate measures in fighting phylloxera. The viticultural commission has information that in Napa county there has been a decrease in average of 2000 acres—from 18,000 to 16,000—due to this cause alone. It is estimated that if no attempt were made to check the phylloxera, in six years the vines would be wholly ruined, and the industry totally prostrated. The planting of resistant vines has been the only successful means so far discovered of checkmating the operations of the destructive louse. At the present time it cannot be said that the movement for protection of the industry by this means has reached extensive proportions. The chief reason for the apparent neglect and indifference of growers is the cost—an average of perhaps $150 per acre. Paying prices means positive betterment of the financial condition of growers and wine-makers, and consequent ability to expel the diseased vines from their vineyards, and replace them with vermin-proof resistant vines. The general outlook for the wine industry, therefore, seems to us to be more healthy and encouraging than for several years past.

From an Independent Standpoint.

Of the 120 members who compose the State Legislature soon to meet at Sacramento, something more than half represent rural constituencies; and it would be a natural inference that the interests of the farm, the orchard, the vineyard—the whole range of rural pursuits—and of those who follow them, would be carefully looked after. If the merchant class had a clear majority, the interests of trade would be secure; and the principle would hold good with reference to every other class and its particular interests. But there is one exception; in the case of the farmer the rule fails. Year after year he asks for simple justice, but his appeals are neglected; while demands on the part of those who feed upon agriculture are promptly answered. There has not been in California, since the earliest times, a Legislature in which the representatives of country constituencies were not superior in numbers; and yet, there has never been a session in which rural interests have had equal consideration as compared with other subjects of legislation.

Many things combine to maintain this unnatural and unfair status; but the chief cause lies in the organization of legislatures upon political lines and the co-relative fact of their domination by political managers. By the first means—by the single stroke of political organization—the rural force in each legislature is divided, cut squarely in two; and by the second, the divided parts are pitted against each other. Instead of working in union for ends which both want, or should want, the country members are led by politicians first into division and then into combat; and the unvarying consequence is a reenactment of the folly of the old fable, where dogs fight over a bone while the fox trots gaily away with it. So long as representatives of the country allow themselves to be organized into opposing elements, just so long will they play into the hands of their enemies. It is in the nature of things that the interests of transportation, trade and the like should control the political organizations; and the real opportunity of the agricultural interest in the legislature is to remain outside of such organizations free to join forces at such times and in such ways as the calls of justice may give occasion.

In the Legislature soon to assemble the representatives of rural constituencies may, if they choose, hold the balance of power; and, if they will deal wisely with this weapon of strength, they may promote such legislation as they want, defeat such as they oppose—in short, they can, if they will, regulate the doings of the session in all respects relative to the interests of those who elected them. At the very beginning of the session they ought to come together and agree upon a line of policy; and the first article of their covenant should be a pledge to remain free from the domination of the political bosses. It is not recommended that a Republican shall give up his Republicanism, a Democrat his Democracy, or a Populist his scheme of reforms; let each man stand true to the political creed upon which he was elected; that is right, and good faith demands it. But it is one thing to stand firm in support of political principles and quite another to fall under the domination of partisan bosses. It is against the latter that we urge an independent stand. It is the pitfall into which the rural legislator usually tumbles headlong, and from which he emerges bound hand and foot; compelled to look on inactive and silent while the interests for which he ought to stand, for which he is bound in honor to stand, are sacrificed or abandoned.

A combination of rural representatives, such as we propose, could prevent the election of an unfit man to the U. S. Senate. We do not need to tell the public that unfit men are in the race, and that they have strong backing. So powerful, indeed, are the interests that seek to add another to the list of corporation agents at Washington, that there is scarcely a chance of putting in a proper man unless the rural element shall unite in support of the broader and higher interests of the State, and stand in resolute opposition to the sinister forces of "politics" allied with corporation capital. Such union can be brought about without sacrifice of political principle or party loyalty; and if made in the right spirit it will save California the damage and the discredit of another shameless prostitution of the senatorial office. It would not be practicable and not desirable for the rural representatives to force upon the legislature a particular man for the Senate; but it would be practicable and entirely reasonable for them to stand in resolute and united opposition to an unfit man. If they fail to do it, they will be derelict to duty.

In reply to an estimate of qualifications for the Senatorship, printed in these columns last week, we are told that there are no men up to the standard; and one correspondent smartly remarks that "the RURAL will have to go to Utopia for its candidate." Now the RURAL will have no candidate, but it flatters itself that it knows what the people of California want—at least it knows what they do *not* want. They do not want a man deficient in character either public or private; a man lacking knowledge of the State or any part of it; a man not sufficiently intelligent to have both knowledge and convictions upon general national questions; a man connected with corporation interests; a man wanting personal energy or business habits; a man who is a mere speechmaker and wind-bag; or a man so allied to political or business interests as to be limited in freedom of view or license of action. And we maintain that such men are common; that there is from one to ten in every county of California. But, we are free to admit, such men are not common in what has appointed itself a *political class*. Indeed, if there is a single man in the whole list of those who may be called "politicians" who fills the bill as we have stated it he has thus far escaped our notice. But if the Legislature will look beyond this political class; if it will search the countryside and the village business group; or seek among the sober, reputable element of our cities (for we are not so narrow as to insist that the Senator must come from the country) it will find not one man but many capable of representing California in the Senate with ability and dignity.

There is a scheme on foot to throw over the Australian balloting system under which California voted at the late election, and either to return to our old system or take up another which will be offered to the legislature in ready-made form. The proposition will ostensibly come from some rural county, (since there are always country members foolish enough to serve as stool pigeons) and it will be alleged that the movement for change is of rural origin; but, as a matter of fact, it is a scheme devised and hatched by city politicians, and its purpose is to do away with regulations designed to prevent thugs and bosses from controlling elections. The boss who "handles" mercenary voters naturally objects to a system which seeks to prevent him from seeing to the "delivery of the goods". It will be urged against the new system that it is cumbersome; that it puts illiterate voters at disadvantage; that it is too costly—and what else we do not know; and a good many influences which appear to be respectable will support the appeal for change. Let not the legislature be deceived; let it be borne in mind that any system that will protect the liberty of the voter must be elaborate; that voters, generally, found little difficulty in getting in their ballots at the late election; that another time the expense will be very much less; and that it is better to have an expensive system of balloting than to submit to the results of fraud at the polls. A simpler system would, no doubt, be more convenient in the country where there is, comparatively speaking, no attempt at fraud; but in the cities and particularly in San Francisco where there is always an effort to influence the election by corrupt practices, safeguards against illegal voting are absolutely necessary. The best evidence that the "shoe pinched" last November is in the frantic effort of the bosses and those who co-operated with them to overthrow the Australian system. It should be borne in mind in dealing with this question that the people of the State at large have equal interest with the people of the cities in making elections in the cities fair and straight.

About a month ago, Mr. Philip Armour of Chicago, gave three millions of dollars for the foundation of a manual training school. His plans provided for an establishment fully endowed and equipped to support an attendance of four thousand students. A gift so magnificent for a purpose so good was almost unprecedented; and it was perhaps natural that the newspapers of Chicago and elsewhere should go to extravagant lengths in their compliments to Mr. Armour. He was called by every good title known to eulogy, and it was declared that his name would go down to posterity as one of the greatest benefactors of mankind. While the echoes of public approbation are still in the air, Mr. J. D. Rockefeller steps up and to-day (Dec. 27th) gives to the Chicago university a pledge for one million dollars to be delivered in Dec. 1893; this gift being Mr. R's fourth donation to the same institution, the grand total of his beneficence being in the neighborhood of four millions—one million ahead of Mr. Armour. The news of Mr. Rockefeller's gift is accompanied with the usual laudation of the giver; and if we may believe all that is intimated, he and Armour will go arm-in-arm down the "grand aisle of the centuries" as illustrious examples of God-like nobility.

How did Messrs. Armour and Rockefeller acquire this money? Something over twenty years ago the former saw a chance to squirm into a position between the meat producer and the meat consumer in the Chicago market. His plan was not to add to the production or to widen the market—simply to stand between the seller and the buyer and demand toll. By dint of unscrupulous intrigue he accomplished his purpose, and in time no producer in the whole West could sell beef except to Armour or his allies at prices of their own fixing; and no retail butcher could buy his supplies except from the same "combine" at such prices as they chose to exact. Under the system which Mr. Armour brought to perfection and which still operates under his guidance, the price of beef cattle fell to the minimum and is held there; while the price of butchers' meat rose to the maximum and is held there. Armour and his allies have accomplished this; and what the producer loses on one hand and what the consumer loses on the other goes into their pockets. Mr. Armour has grown vastly rich and it is for him an easy matter to give four or five per cent of his wealth to a benevolent purpose; indeed, a profitable thing since it silences many who condemn his methods and gives him new license under the cover of a charitable and moral whitewash to continue his predatory course. Rockefeller's career is the Armour career over again with the basis of operations transferred from beef to coal oil. The Standard Oil Company, of which Rockefeller has been (and is still) the leading spirit, has on one hand cut down the earnings of the oil producers and on the other held the price of oil to the consumer above its normal level. Its success has involved the subsidization of railroad companies, the mercenary manipulation of politics and the cruel destruction of business rivals. Mr. Rockefeller has grown enormously rich; is said to be one hundred and sixty times a millionaire. To him the gift of one million or four is of small consequence; it limits him in no comfort, convenience or indulgence; it is even profitable since it diverts public notice from the nefarious practices of his "business."

These men have produced nothing; they have really earned nothing; their wealth has been drawn from the industry of others. They have been mere leeches to suck up and enriching themselves with the spoils of other men's labor. To these men—to all men of their kind—we deny the credit and honor of philanthropy, no matter how much they may give or to what purpose! There can be no genuine generosity in men who make the necessaries of life dear, that they may pile up useless millions. They have the hearts of brigands and pirates, and their so-called generosity is either the lavishness of soldiers of fortune or a shrewd investment in public good-will. These falsely-called benefactions are in effect a public damage, since, invariably, they raise up a horde of unthinking and sentimental apologists to deaden the moral perceptions of the public by glossing over iniquities. Better far is it for the moral health of the country that such men should die as they have lived, like Gould, than to gild their infamies with a thin veeneer of public benevolence.

The Nicaragua Canal.

MERCED, Dec. 26, 1892.

TO THE EDITOR:—In the issue of the RURAL PRESS of December 24th, attention is directed to a remodeling by amendment of the scheme of the Nicaragua Maritime Canal Company, with which palliative the bill is to be urged for passage after the holidays. "The amended measure is not yet complete, but it will, so Senator Morgan says, amount *practically* to a transfer of the project from private to Government ownership."

In quoting from the RURAL, I have italicized the word "practically" because it disguises the real object of the promoters, which is, to state it without circumlocution, a device whereby the canal may be constructed upon the credit of the United States for the benefit of the Canal Company.

It will be remembered that as an inducement for obtaining a charter, the promoters of the scheme protested that no request for pecuniary aid for the prosecution of the work would ever be made to Congress, and the position now taken is that the company is not asking for an appropriation for that purpose, but only for a guarantee in order to obtain a loan of $100,000,000. The indignation which would be provoked by such mendacity as a request for an appropriation of that amount is the only thing that has prevented a suggestion of it; hence the subterfuge of a guarantee, the bonds of the company without it not being efficaciously marketable.

The proposition now is that the United States and the Nicaragua Maritime Canal Company shall cooperate in cutting the canal; that the impecunious company shall borrow the necessary capital to complete the work but just begun—that it shall transfer to the United States seventy per cent of said bonds, whether as collateral security or to be vested in possession is not yet known; that it shall have a paramount control in the directorship, and that in consideration of the premises the United States shall guarantee the payment of the bonds.

Has Congress the power to guarantee the payment of a debt contracted by an individual or corporation? Indubitably not. "The Congress shall have power to borrow money on the credit of the United States." Cons. U. S., Art. 1, Sec. 8.]

The Constitution has delegated the power to borrow money for the use and benefit of the United States, but has not delegated to Congress power to loan the money of the people to an individual or corporation or to guarantee the payment of a loan made by either, and it is incredible that any Senator or Representative, not corruptly interested, should be insensible to the fraud upon the people of the United States couched in the supplemented phraseology of the bill.

Notwithstanding the incontrovertibility of its unconstitutionality, and its amazing audacity in view of the late political cataclysm, it is not impossible that the measure may squeeze its way through provided enough Democrats can be either hoodwinked or influenced to favor it by the methods usually adopted with legislators of doubtful honor and pliant consciences. The imminent danger that the company may obtain the legislation it seeks so zealously just now, is that the bill is under manipulation by some Democratic members whose unquestioned legal attainments forbid the suspicion that they are ignorant of its brazen illegality.

Prior to the war for secession which demoralized all classes, and notably the politicians, a Southern Democratic statesman would rather have been charged with larceny than with having a private interest in an Act of Congress the effect of which was to plunder the

people for the benefit of any individual or corporation fired with the ambition and greed to tax the commerce of the world, and resorting to shameless and inexcusably illegal means to compass the selfish object.

Throughout the whole history of federal legislation, no scheme has been more audaciously presumptuous than that of the adventurers who have proposed to execute one of the most costly enterprises of modern times—most important to the United States, and of essential import to every other nation, and this too without, comparatively, a dollar for its prosecution, relying first for success upon their financial ability to convert their bonds by placing them upon the markets of the world and, failing therein, resorting to address, personal influence, inflated public sentiment and coalition with public servants to obtain the autograph of our Uncle Samuel as security for $100,000,000, though his experience in other confidence games in which he was forbidden by his Constitution to indulge should have taught him he must again pay the penalty of his credulity.

As a business scheme, the joint ownership and directorship is an absurdity; as a cooperative project it is an insult to the people of these States, as it presupposes inability on the part of the United States to complete, except under dual ownership and control, a design conceived by them half a century ago, subsequently demonstrated to be feasible by the survey of their engineers, and intended not only to facilitate the commerce of this country, but to be a benefaction, through judicious taxation of tonnage, to all the peoples of the earth. Considered as a constitutional and lawful act, every phase of the Nicaragua imbroglio has been an impeachment of the statesmanship of the Democratic party.

Why has not the constitutionality of the charter and every amendment to the pending bill been challenged? Neither the excuse of ignorance nor of inadvertence will avail. Against the unconstitutionality of the grant the evidence is complete.

August 18.—In Convention. Mr. Madison submitted, in order to be referred to the committee of detail, a series of powers, one of which was "A power to grant charters of corporation in cases where the public good may require them, and the authority of a single State may be incompetent. Mr. Pinckney, on same day, also submitted a number, among which was "A power to grant charters of incorporation." August 22.—Mr. Rutledge, from the committee to whom were referred the propositions of Mr. Madison and Mr. Pinckney, reported in favor of some of the propositions, but not for a grant of charters of incorporation.

In Convention. September 14, 1787. Dr. Franklin moved to add after the words "post roads," Article I, Section 8, a power to provide for cutting canals where deemed necessary. Mr. Wilson seconded the motion. Mr. Madison suggested an enlargement of the motion into "A power to grant charters of incorporation where the interests of the United States might require, and the legislative provisions of the individual States may be incompetent." Mr. Randolph seconded the proposition. Mr. King: The States will be prejudiced and divided into parties by it. In Philadelphia and New York it will be referred to the establishment of a bank, which has been a subject of contention in those cities. In other places it will be referred to mercantile monopolies. Col. Mason was for limiting the power to the single case of canals. He was afraid of monopolies of every sort. The motion being so modified as to admit a distinct question, specifying and limited to the case of canals—Pennsylvania, Virginia, Georgia, aye—3; New Hampshire, Massachusetts, Connecticut, New Jersey, Delaware, Maryland, North Carolina, South Carolina, no—8. Madison Papers, pp. 462, 543, 544. Journal of Constitution, pp. 256, 310.

Here, then, we have a company with a fictitious charter proposing to make the United States a party to its scheme through a guarantee of an estimated indebtedness of $100,000,000, and in consideration of the guarantee offers to transfer certain stock and a designated share of control in the operation of the enterprise. Even if the grant of incorporation were valid, the United States, for want of constitutional power, could take nothing by the proposed transfer. Here is the proof: "The Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States."

The only property which Congress has the power to dispose of or make needful rules or regulations respecting is the territory or other property belonging to the United States. This imaginary corporation is to operate on territory belonging to foreign nations and Congress is limited by the Constitution to the disposal and regulation of property belonging exclusively to the United States. As the property, according to the amended bill, is to be jointly held by the United States, by the Company and by Nicaragua and Costa Rica, Congress can neither dispose of it nor make any regulation concerning it; hence the conferring of a directorship would be nugatory, and the transfer of a share of the bonds would be a void act for want of constitutional power to acquire property which is to be held jointly with another. As Congress can neither loan money nor guarantee a loan made by any person, individual or corporate, the company must either prosecute the enterprise with its own funds or transfer *all* its title and interest to the United States for a valuable consideration.

What in the name of all the gods at once is the matter with the politicians at Washington? Have the heretofore successful plottings against the Constitution fascinated them? Why, this amended bill is simply an application of the parable of the devil taking the Savior up on a high mountain!

What was the meaning of the late election? If it had any worthy of consideration, it was that federal legislation must hereafter be in the interest of the people and not merely for those who can purchase it; that the conspiracy between Congress and the bankers and bondholders, the traffic between it and the manufacturers, the alliance between it and corporations, and the pandering for votes by the enrollment of supposititious pensioners and the constant violations of the Constitution would no longer be tolerated.

No federal system has ever been devised so perfectly adapted to the government of a free people; so patriotic in conception; so perspicuous in purpose; so clear in expression—and, in conjunction with the debates in the Convention (fortunately preserved for us)—so definite as to the boundaries of its powers.

The present is the time in which, and the guarantee of the bonds of the Nicaragua Canal Company the object against which, the friends of the Constitution should make a determined stand. If the Democratic party at every opportunity justifies, by its defense of the oracle of the people, the flattering preference for an administration of the federal Government by it, and divines truly the cause for the change, its term of service will continue until the revolt from the infamous legislation which was no longer endurable, shall have become a tradition.

With the sentiment of the people overwhelmingly in favor of the ownership, directorship and controllership of the canal by the United States, the abrogation of the Clayton-Bulwer treaty is a foregone conclusion. The Nicaragua treaty made with the United States, which granted a strip of territory three miles wide on each side of the canal, with perpetual right of way across its territory, together with other generous and valuable inducements, which treaty was inconsiderately withdrawn by Mr. Cleveland, should be returned to the Senate at his earliest opportunity. Its revival is demanded by every consideration which should actuate a patriot and statesman. The reimbursement of the Maritime Company for all expenditures, and with interest, is not to be controverted.

This being done, and the interocean waterway completed and opened to commerce under the just and beneficent control of the people of the United States, every nation will participate in the common benefit. Upon the western coast, in every hamlet and mart of trade its revivifying power will be felt. So potent will be its transforming influence that even the desert lands will be converted into fertile fields, embellished with groves of fruit and adorned with flowers and happy homes. What wonder, then, considering this inspiring subject, that, with fuller evidence, a less clouded view, and maturer judgment, the RURAL had cause to reverse its opinion as to the proper operation and ownership of the Nicaragua canal? The desire to be right rather than consistent, as exemplified in this instance, will tend to evoke greater confidence in the RURAL PRESS and secure for it a more extended patronage.

Truly, Mr. Editor, I can say that I know of one who admires your candor and commends your better service. M. N. M.

A Letter from Tahiti.

PAPEARI, TAHITI, Nov. 9, 1892.

TO THE EDITOR: It is spring with us here. All vegetation is in the prime of its annual growth. Fruit trees of all kinds are laden with their rapidly growing fruits. Summer will soon be here and with it the harvest of the orange will commence. Orange trees are well laden with fruit, the oranges being of three different sizes. The first will be harvested in December or early January, and the picking will continue until August.

In manyof the islands a little south and also westward, oranges are now ripe. The seasons on the different islands differ very much, although they may be separated but by a few degrees. I shall endeavor to collect exact data as to time of ripening of the fruit upon this and surrounding groups.

All shipment of oranges from Tahiti to California is considered by the shippers to be over; and unless California should suffer the complete loss of a crop, the exportation from here to her markets will be an enterprise entirely of the past. The exportation to New Zealand will continue until Australia comes to the front and supplies the market.

The once-beautiful cocoanut groves of Tahiti are seemingly a complete ruin. A palm scale, introduced here, has swept the groves like a hot blast of fire. What the future holds in store for this beautiful tree is hard to tell, but they are in a sorry condition now. ELMO R. MESERVE.

A Novel Gopher Killing Method.

VACAVILLE, Dec. 27, 1892.

TO THE EDITOR:—I send you to-day a novel recipe for killing gophers. It is this: Catch an old male gopher. Tie a string to one hind leg to carry him by and start out. Find a gopher hole. Open it with a spade or other convenient instrument. Put your old gopher down near the mouth of the hole and go to whipping him. He will soon begin to squeal. Out will come another gopher, on the fight. Knock him on the head. Pick up your "bait" gopher, go on and repeat the operation.

This novel method of killing gophers is practiced by some little boys in this vicinity, who kill a great many in that way, and make money by it, too.

The theory is this: The gopher is a terrible thing to fight—especially the old males, and when they hear the old "bait" gopher squealing at the mouth of the hole, they are sure to run out and pitch on to him, when they are easily killed. W. W. SMITH.

The Game Law.

When the game law was amended the law used was so ambiguous that a great many construed it to mean that game used for food could be killed at any season of the year. Of course it was never intended that such a license should be granted.

Crittenden Robinson, president of the Sportsmen's Association, addressed an inquiry to the Attorney-General and received in reply the following:

"Yours of the 26th ult received. I agree with you in the construction of game laws: Section 626 Penal Code, Statutes of 1891, page 472. The killing of game is not *mata in se* or wrong of itself, but is wrong only when, for the public good, it is prohibited by statute. The best of citizens, through lack of acquaintance with law, are liable to violate it.

"Under the eighth paragraph of the statute, it is a misdemeanor to kill any of the birds or other animals therein mentioned *at any time of the year*, whether during the open or closed season, 'unless the carcass of such animal or bird is used or preserved by the person taking or slaying it, or is sold for food.'

"This was enacted to prevent the wanton and wasteful destruction of game by persons who are not in pursuit of food either for themselves or for others, but who kill for mere amusement or for the hides of animals. The law is a good one and should be rigidly enforced, for game is becoming scarce in the State, and the food supply of a country cannot be too great. I do not think any one in this office ever meant to express views differing from these."

Why are Ducks Scarce.

The Lincoln *News Messenger* ventured to suggest that the prevalent scarcity of wild ducks and geese this season is due in large part to the fact that carp have denuded the lakes, ponds and sloughs of plant life, and the Wheatland *Four Corners* responds in the following humorous and sarcastic vein:

"The *News-Messenger* is no doubt right in the theory for we have heard the residents along Plumas lake and Feather river complain of the carp. In some places they are as thick as mudhens, and have a similar habit of making regular rounds upon the grain and pumpkin fields not farther distant than fifty miles from water. The carp is a carniverous fish. We have known fishermen who have lost the soles of their shoes and even now and then sacrificed a leg in answer of the carp's jaw, when they have been so negligent as to angle with their pedal extremities in juxtaposition to the water. Thousands of our hunting dogs of the choicest breeds have hung their scalp on the watery girdle of the carp. In connection with game, the carp has not been satisfied in robbing the fowls of daily bread by mowing the fields for miles around, but have taken extreme delight and solid comfort in grasping the ducks by the right hand as they swam upon the water, and invite them into the carps' parlor at the bottom of the stream. No doubt the carp is a great factor in the game question and should they not receive congressional appropriation shortly, they will come into greater prominence."

THE season of "orange festivals" has begun in California. A number of very pretty entertainments have already been held in several parts of the state.

The Raisin Situation.

William Harvey, secretary of the State Raisin Growers' Association, when asked by the Fresno *Expositor* what the present raisin situation is, said:

"Many of the growers have received cash returns for all raisins delivered at the packing houses before November 1st. The average price received, after deducting all expenses, nets the grower from 4⅞ to 5¼ cents per pound. This satisfactory result is due entirely to the association.

"The growers who have not done so well as this are those who lost control of their raisins by taking advances on them.

"Those who received these prices were always ready to say to the brokers who insisted on cutting prices, 'No, the raisins are ours and we will not sell them for less than combination prices. We will hold them first.'

"One of the difficulties which the raisin market has had to face is that there has not been capital enough in Fresno to hold the raisins till the consumption in the East should create a demand.

"Brokers in San Francisco and in the East have in many cases advanced the grower the freight, and often more, and in exchange for this favor, taken control of the raisins.

"In some cases many carloads have been sent to one city, and thus a glut of the market has resulted, and the brokers who had advanced money on the raisins were mostly concerned in getting their money out of them.

"The result of this can be easily understood. The raisins are often sacrificed.

"One-half of the pack of the State this year, equal to 1000 carloads, was sent East, and was sold before November 1st at what merchants said was combination prices.

"The second half, or 1000 carloads, was sent to large cities, and in many instances the price has not been satisfactory.

"Overproduction of raisins is a myth. It is in no way responsible for the present low prices. Judicious marketing will remedy any evil in this direction.

"One great difficulty has been that the market has had to face several small growers who sell their crops for what they can get, and often this is one, one and one-half or two cents a pound. These raisins have been forced into the market in competition with others who have insisted on combination prices.

"This has, in some cases, resulted disastrously. The brokers were not willing to hold the umbrella over these small growers who were thus slaughtering prices, and the prices have been broken, and in some instances raisins have been sold very low."

Thinking it would be a good item of news to publish the names of a hundred or more growers who had received 4½ cents or more for their raisins this year, the reporter asked Mr Harvey for such a list. He said he had not the list made out, but would prepare for publication a good list of growers of this county who had received these prices.

The Orange Crop.

From every part of the orange region of Sonthern California there comes a report of a large yield of citrus fruit now hastening to the ripening. A Pomona man, who was sent out by Chicago fruit dealers to make a careful estimate of the prospective crop, tells us that but once before has he ever seen orange trees so generally well filled with fruit, and that in Pomona, Ontario, at Santa Anita, and near San Gabriel, he found the most enormous crops of oranges, tree for tree, he ever saw. At Riverside and Redlands every fruitgrower reports the trees heavy with fruit, and the same statements come from Santa Ana valley.

Unless some climatic calamity, now unforseen, occurs between this time and next March, there will be literally hundreds of thousands of dollars to flow into the hands of the orangegrowers of Southern California. We shall have the best market for our citrus fruits for several years. The buyers are offering, even as early as this in the season, $1.20 and $1.35 a box for Seedlings and $2 50 for Navels, with the prospect of an unprecedentedly large yield, too. We all remember prosperous orange seasons when the market has opened on $1 a box for Seedlings and $2 for Navels, and when March came the price rose to $1.50 for Seedlings and $3 for Navels.

The prospect for the orangegrowers is bright indeed and (that is, barring climatic conditions) for a royal season of prosperity—unusually good prices for fruit and and a great crop. Who could ask for more?—Pomona Progress.

Weather for January.

The local weather bureau gives out the following facts relative to weather during the month of January, from data compiled by observation covering a range of twenty-one years: Mean or normal temperature, 50.4°. The warmest January was that of 1873 and 1877, with an average of 54.6.° The coldest January was that of 1890, with an average of 46.2°. The highest temperature during any January was 73° on the 6th, 1887. The lowest temperature during any January was 29° on the 15th, 1888. Precipitation of rain and melted snow: Average for the month, 4.67 inches. The greatest monthly precipitation was 11.97 inches in 1878. The least monthly precipitation was 0.98 inches in 1891. The greatest amount of precipitation recorded in any 24 consecutive hours was 4.67 inches on the 29th, 1881. The greatest amount of snowfall recorded in 24 consecutive hours (record extending to winter of 1884-5 only) was 3.7 inches on February 5th, 1887.

GLEANINGS IN OLIVE CULTURE.—Under this title Mr John S. Calkins, of Pomona, has issued a neat eight-page circular on olive propagation, planting and culture, olive as a street tree, etc. The circular will be sent free to all applicants.

HORTICULTURE.

Echoes of the Fruitgrowers' Convention.

MONTEREY, Dec. 15.

TO THE EDITOR:—As your reporter failed to give me a single line in his report I must needs report myself, as I wish certain suggestions I made in the convention to go on record. I think the discussion on "Transportation of Fruits" was the first subject that brought "Berwick of Monterey" to his feet.

He wanted, *and he wants*, to make every fruitgrower and farmer of this State realize the importance to Californian agriculture of the Nicaragua Canal. He pointed out that it would, when built, save our products 5000 miles of torrid zone transport. There would be one journey of say 2500 miles through tropical heat instead of two different spells each of 3500 odd miles. The eastward bound ship-freight would reach its destination in four weeks, instead of four months, etc., etc.; so he proposed the resolution, which was afterward carried, favoring the construction of that canal by the U. S. Government direct, and instructing the Secretary of the State Board to urge immediate action to that end on our Congressmen and Senators.

The railroad resolutions were also offered by him. One of these propounded the proposition that it was for the best interests of this nation that our Government should spend money in transcontinental railroads rather than in increasing our supernumerary ironclads. Berwick of Monterey believed with George Washington that "overgrown military (or naval) establishments are inimical to liberty, and are particularly hostile to republican liberty." Every additional ironclad was an additional chance of foreign embroilment, as the Chilean episode proved. Wherever Jack went ashore "Barbary Coast" allurements were apt to get him into trouble, and might involve this great nation. What was the matter, anyhow, with Government ownership of railroads? The railroad system, great as it is, is only an extension and improvement of our common road system. There are more common roads to-day than there are railroads; and the Government owns and keeps in repair (or out of repair) all our highways and byways. Then why not our railways? But Mr. Aiken and the resolution committee would have none of Berwick's radical ideas, and the convention, something doubtfully, backed the committee.

WASH OR NO WASH.

Bug kill bug, or wash kill bug, was warmly agitated. Berwick believed that while we were awaiting the coming bug our orchards were being ruined by the present bug. He had been round Pajaro lately and seen the apple trees sorely afflicted by woolly aphis and some leaf louse. While we were fiddling, Rome was burning! So he used sprays. He believed strongly in hygiene for the orchardist and for the orchard as well; so he uses washes to keep his trees clean and healthy, free from moss and lichens and aught detrimental.

CALIFORNIA'S FRUIT DROPSY.

Some who held up to the convention the old bogey of overproduction, spoke of it as an impending dropsy.

Berwick of Monterey thought the best way of warding off dropsy was to keep up a good circulation. Build two or three Government transcontinental railroads and circulate your fruit product rapidly and cheaply and there will be no dropsy. We have just passed, said he, what has been called a campaign of political education; we want now a campaign of fruit-eating education. There are millions and millions of money annually worse than wasted on patent medicines; teach our people to eat good, wholesome fruit, instead of worrying their insides with patent pills and potions, and you will have a happier and healthier race of Americans and no fruit dropsy in California. Teach them to eat fruit as the Berwick family do—about a pound each every day of their lives—and there will be no overproduction.

LOW HEADS FOR TREES.

B. of M. believed in low pruning. He was asked for any law of nature to support his theory. Knowing at the moment of no law of nature he at least knew of a law of grace, the law of humility, the low head. "God resisteth the proud but giveth grace to the humble." The high-headed tree is very apt to break down, is inaccessible and inconvenient. Systems were proved by results. B. tried to please his trees and his trees reciprocated and pleased him. He had taken 42 boxes of apples from a single low-headed tree.

USING COUNTY FAIRS AS FRUIT EXCHANGES.

Another resolution handed to the committee by the same B. was to the effect that our county fairs would be of more practical benefit if the old European usage were adopted—of making them meeting places of buyers and sellers of local products, such as dried fruits and dairy products, etc., rather than allow them to become perambulatory centers of gambling and vice. Fairs are still used in older countries for this advantageous meeting of traders and producers! Why not in California?

NORMAL SCHOOL VISIT.

Quite a number of the fruitgrowers visited the State Normal School and listened to the morning's prayerful and patriotic music feelingly rendered, subsequent to which Prof. Childs asked if any fruitgrower would address the school, and meeting no response, singled out Berwick of Monterey and called on him. He, rising to the occasion, expressed the pleasure he always felt in meeting young California. He had great respect for youth, alike in its past, present and future tense. "In the past as something that once was mine; in the present lovely and pleasant as I see it before me; in the future as a thing that we old fellows hope to regain and enjoy eternally." He begged the young folks not to leave school thanking God their education was finished, but glad that it was just beginning. He knew no enjoyment in life greater than the reception of a new idea. That was why the fruitgrowers had met in convention—old as they were—to try and learn something each from the other. There were not only things to learn in life, but, unfortunately, things to unlearn. So they must not be discouraged if they had to change their opinions. He would offer them a verse of Holmes' as a motto:

> "Yet in opinions look not always back,
> Your wake is nothing, mind the coming track!
> Leave what you've done for what you have to do!
> Don't be consistent; but be simply true!"

That was the one thing needful; to be ready to follow the truth regardless of where it might lead. It can never lead amiss. EDWARD BERWICK.

FORESTRY.

National Forestry.

LAMANDA PARK, LOS ANGELES CO.

TO THE EDITOR:—National forestry is based upon two grounds—first, the advantage of maintaining forest production by the control of forests by an undying corporation like the State. Under this head come the prevention of waste, the prevention of fire, the regulation of ripe timber-cutting and provision for the reproduction of the most useful forest growths. A forest management with this object alone would also have to arrange for the exploitation of all the resources of forest lands, other than forest products themselves. These interests would comprise water developments, reservoirs, mines, quarries, game, fish, travelers for health or pleasure, and, in places, pasture.

The object of regulating these last uses of forest lands would not be to curtail or vex them, but to prevent useless waste and destruction of the forests by carelessness and fire.

The reason that national forest management is advantageous to secure a continued supply of lumber and other forest products, is that private or even State management cannot give a uniform system or a uniform protection, nor consider the forests from any better point than a narrow and purely individual or local one.

Thus, in individual or State ownership, a good system adjoining an indifferent or a bad one would be constantly subjected to the dangers of trespass, depredation and fire growing out of the bad one. So, also, a system in regard to some particular forest product, like tar, might be good policy, give returns and maintain product, if uniform and general, while it might, and probably would, be both costly and useless if individual or local.

Besides this, a national system would necessarily consider the forest from a wide and general view as to locality, product and time.

As to locality, a national system would consider, for instance, the interests of Dakota, Nebraska, Missouri and all the States upon the water system heading in Dakota. An individual system would not consider such interests at all. A Dakota system would only consider Dakota and pay no heed to the other States.

As to product, an individual system could only consider individual interest; a State system could only consider State interest. In neither case could national and general interests be provided for.

As to time: The most important forest product, lumber, requires a very long period of time to come to its highest economic value. One, two and often three or more generations must be born and die before a forest comes to maturity. This fact makes it plain that no individual system can ever adequately provide for the reproduction of forests. To secure the reprodnction of the most valuable timber requires scientific management covering many years of intelligent and watchful care.

That this care pays handsomely we know from the returns of national forest management in Europe, but individual interests, especially in this country, even if capable of a uniform and broad policy, can never be expected to expend care and money for rewards to be enjoyed only by generations yet unborn.

While the first ground for a national forest management is important, the second is essential.

The second ground for a national forest system is based on the demonstrated necessity for the maintenance of a certain forest area to secure the highest agricultural product from any given territory, and, second, on the demonstrated necessity for a certain forest covering on watersheds. The first base is due to the influence of forests on winds, frosts, climatic extremes, and on their probable effect on the character and distribution, if not on the quantity, of the rainfall. The second base is due to the influence of forests on the delivery of rainfall into springs and streams. As any watershed is forested, so is the delivery of its rainfall affected. If it be adequately forested, the rainfall will be detained and seep into the ground to appear in the springs and streams in a perennial and even delivery. If it be denuded and bare, the delivery of the rainfall will be short in time and floodlike in character. The watercourses in such districts always are of torrential character. The rainfall tends to become diluvial in character and its delivery is so in fact. The water delivery is alternately dangerous in its excess, in its detritus-carrying and detritus-dumping, and in its erosive power, while the sudden flood flow of the rains precludes the possibility of a perennial supply. The water is gone and the stream bed is now a raging torrent, and now a dry and arid waste. Irrigation, domestic water and the value of streams for navigation are all diminished or destroyed by an undue denudation of the watersheds.

Iteration has worn through the shell of prejudice and indifference, and, reenforced by actual recent and recurring experience, has made California a community demanding immediate forest protection for its watersheds.

We favor the Paddock forest bill. At the same time we would have preferred our own bill introduced long years ago, which provided for the withdrawal of all Government lands in forest and for a system of management of the same. The Paddock bill is probably a more practicable measure. It provides for the management and care of forest reservations made and to be made. It consequently looks to a policy of initiative and growth and avoids the difficulty of creating suddenly a large forest force and changing all at once the entire neglect of, and freedom for depredation and waste in, the Government forest lands. On the other hand, every day that passes reduces the Government forest holdings and increases the waste due to carelessness and fire. The situation reminds one of the Roman legend of the Sibylline books.

Whatever defects the Paddock bill may have, it is good—doubtless the best we can now expect—and should be heartily supported.

Granges, Farmers' Alliance units, irrigation communities and all those on streams that would have their flood action dangerously increased by undue forest denudation, should send petitions to Congress *now*, praying for the passage of Senator Paddock's forest bill, S. 2763, favorably reported and on the Senate calendar. ABBOT KINNEY.

THE STOCK YARD.

Tuberculosis in Cattle.

Written for the RURAL PRESS.

The two greatest scourges the dairyman has to contend with are abortion and tuberculosis, the latter being equal to consumption in human beings. Both milk and meat from tuberculous animals are very properly considered unfit for human food, though, possibly the danger has been overrated.

Steers are at all times comparatively free from the disease, so that the danger of human beings contracting consumption from the use of meat from that class of cattle is reduced to a minimum.

In regard to the danger arising from using the milk of consumptive cows, there is great difference of opinion, some holding that its use is dangerous in any and all stages of the disease of the cow, while others contend that it is only when the udder becomes affected with tubercles that there is danger in using the milk. An account of some experiments given in the report of the Secretary of Agriculture for 1891, goes far to sustain the correctness of the opinion maintained by the latter class.

Two Jersey cows (Nos. 155 and 156) which were markedly affected with tuberculosis, were received by the department on the 28th of February, 1891. The following is an outline of the experiment made with the use of milk from the two cows, and the result: "March 18th, two guinea pigs were inoculated with the milk of each cow. At the same time two young pigs were being fed with the milk daily. April 4th, four fresh pigs were inoculated, two with the milk of each cow. Cow No. 156 died June 5th, with extensive generalized tuberculosis. The udder was carefully examined, but no tuberculous deposits could be detected. The four guinea pigs were killed after a period ranging from one and one-half to four months after inoculation, but no trace of tuberculosis could be seen in any of them. Cow No. 155 died June 24th. The tuberculosis changes were equally advanced, the udder intact. The four guinea pigs inoculated with milk from this animal were also free from tuberculosis. On June 22d, two days before the death of this cow, two guinea pigs were inoculated with the milk, which had by this time nearly given out. Both guinea pigs were killed Oct 10th. In one of these, tuberculosis was present, but in a slight degree only. The animal had grown fat and had failed to show the disease during life. The two pigs which had received the milk daily were killed, but no tuberculosis lesions detected."

It thus appears that two pigs were fed on milk from consumptive cows for a period of about seven months, without any ill effects. The only case of injury was to one of the guinea pigs, in a very slight degree, inoculated some days before the death of one of the cows, when the secretion of milk had almost ceased; a few tubercle bacilli were present in this milk. The cow from which this milk was obtained, at the time was probably in such an emaciated condition that no conscientious dairyman would ever think of using milk from a cow in such a state. The greatest, and almost the only danger, then, appears to be in the use of milk from an affected udder. But there is danger also in not knowing when the udder is affected, which will almost always be the case long before there is a visible enlargement of the milk vessels. So insidious in its nature is the disease that the cow is often very far gone before the owner suspects that there is anything wrong.

Cows that are fed on stimulating, or unwholesome food are most liable to be attacked. The system of forcing, as it were, cows to give larger quantities of milk than they are by nature and constitution adapted for, has a tendency to weaken the natural disease-resisting powers, consequently herds so treated are most likely to have the largest percentage of prematurely worn-out cows, and such as are most liable to succumb to contagious diseases of any kind. Consumption is now generally considered as coming under that head, consequently every dairyman who is alive to his own interests will see it to be his duty to get rid of all suspicious cows immediately upon the first indications of disease. To do so will inure to his own benefit. There is no known cure for the disease. It was at one time hoped that the effect of the Koch lymph, or tuberculin would be curative, but we believe experience does not confirm it as a fact. However, as a test for tuberculosis it is likely to prove valuable.

The great difficulty has heretofore been in diagnosing the disease and detecting it in its early stages. There is now practical evidence to show that the use of "tuberculin" may overcome that difficulty. Bulletin No. 21 Pennsylvania Agricultural Experiment Station, by Dr. H. P. Armsby, affords proof of this.

Passing over the tests made at the station by Dr. Pear-

son of the University of Pennsylvania, which showed, by the Koch test, two of the cows, Gertrude and Carmina, to be affected, we give the report of the test by physical examination as compared with the Koch test:

At this point Hon. Thomas J. Edge, Secretary of the State Board of Agriculture, suggested that the opportunity be utilized to make a comparison between this new method for the detection of the disease and the older and more common method by physical examination, and offered for this purpose the services of the veterinarian of the board, Dr. F. Bridge of Philadelphia. In view of the interest attaching to the subject this offer was gladly embraced, and Dr. Bridge accordingly came to the station on July 29, and, without previous knowledge of which animals were indicated by the Koch test as tuberculous, made a careful examination of the herd. Two cows—Lavender and Carmina—were pronounced tuberculous, and two others—Cowslip and Rosella—as very probably so, and it was recommended that all four be slaughtered. All the other animals of the herd were pronounced free from tuberculosis.

The following comparison shows the results of the two methods of examination:

Name of Cow.	*Koch Test.*	*Physical Examination.*
Carmina,	Tuberculous,	Tuberculous.
Gertrude,	Tuberculous,	Not tuberculous.
Lavender,	Not tuberculous,	Tuberculous.
Cowslip	Not tuberculous,	Probably tuberculous.
Rosella,	Not tuberculous,	Probably tuberculous.

It will be seen that the two methods agreed in only one case out of the five.

All five animals were slaughtered on the afternoon of the same day, the post-mortem examinations being conducted by Drs. Bridge and Pearson with the following results:

"*Carmina.*"—Bronchial glands of the left side as large as walnuts, cheesy and calcareous. On middle lobe of right lung a tubercular abscess the size of a walnut and several tubercules the size of small peas were found; a well-developed case of tuberculosis.

"*Gertrude.*"—Bronchial glands of right lung as large as hickory nuts and containing cheesy deposits. Tubercular mass the size of a hickory nut found in upper end of posterior portion of right lung; hepatized area 3x2 inches on top of posterior lobe of right lung and containing cheesy abscesses or tubercules from the size of a pea to the size of hickory nuts. Numerous tubercules the size of a pea, surrounded by thick, fibrous capsules, cheesy at the center and surrounded by red zones, found scattered through the omentum; a well-developed and clear case of tuberculosis.

"*Lavender.*"—Has severe bronchitis of right lung; also pleurisy; great thickening of the pleura; fibrous masses attached to the costal pleura; no tuberculosis.

"*Cowslip.*"—Severe acute bronchitis in anterior lobe of right lung; no tuberculosis.

"*Rosella.*"—Bronchitis and pneumouia; no tuberculosis.

In brief it was found:

1. That both animals which gave a temperature reaction with the Koch test were tuberculous.

2. That no one of the animals slaughtered which failed to give such a reaction was tuberculous.

3. That all the non-tuberculosis animals slaughtered had some lung lesion which deceived an experienced veterinarian into the belief that they were tuberculous.

The results of the test are strongly confirmatory of the value of the Koch test as a means of diagnosis.

From the above it will be seen that diagnosing tuberculosis by the Koch test is reliable when in scientific hands. It is, however, to a certain extent in the experimental stage. Should future experiments agree in proving it to be a sure test, there is no reason why the disease should not be completely held in check, if not stamped out, whenever a law has been passed declaring it to be a contagious disease to be treated as for instance pleuro pneumonia has been.

THE DAIRY.

A Model Dairy Ranch.

A writer in the *Sutter County Farmer* visited, and thus describes, the model dairy ranch of Mr. Lafranchi, two miles east of Sebastopol:

The buildings are far better than the average, and consist of a good dwelling-house, near it a new kitchen and dining-room, every window of which has wire fly-screens. The granary and wagon-house are conveniently divided, and the very large barn is also very carefully planned in this respect. Even the feeding-sheds for the calves are kept in good repair. The milk and butter-houses are located in the shade of two large trees between the house and the barn, and being located on the highest ground and in the shade, are very cool in the summer. The west part of the ranch, like a great portion of the soil in the Sebastopol vicinity, is a light, sandy loam, while the eastern portion is a heavier loam and adobe. Hay is the main crop, very little grain, if any, being grown. For hay he seeds with black oats and thinks there is as much money in hay, take it one year after another, as in grain, with much less trouble.

Now we come to the part in which we were most interested. We were first shown the dairy, which will number 74 cows the coming season. Among the fresh cows we were surprised to find no full-blood stock, and when asked in regard to it, Mr. Lafranchi said he "selected for milk and not for blood." We examined nearly every cow and found every sign of good milkers. The cows were in good condition and easy to milk. Instead of leaving them out to suffer from the storms, they are kept in the barn, where a bountiful supply of good hay is before them. Here is where the maxim, "Feed your cows if you expect them to feed you," is fully demonstrated.

Mr. Lafranchi says if he were going to select blooded stock for milking qualities he would, from his experience, prefer the Jersey and Durham cross, and we find him not alone in this selection.

When asked if he could make money in the dairying business, Mr. Lafranchi said he was doing very well in the business and is satisfied wtth it.

Our next visit was to the butter-making department—first the milkroom. Here we found a large, clean room, on one side of which were the milk-racks, constructed as follows: A board of suitable width is placed at each end and others at every few feet the entire length of the rack. Into the edges of these pieces (which are placed on end) are set narrow strips on which the pans rest, thus giving the air a chance to reach the most possible surface of the pans. This plan is the one adopted both West and East, and has been found preferable where the cream is raised in pans.

The milk is strained into a large, galvanized iron tank, and from there, by means of a faucet, is drawn off into the pans. By this method, all specks are kept out of the milk, which method has a decided advantage over the practice of straining into the pans direct from the pail in which the milking was done, as it is impossible in this way to avoid specks of dirt getting into the milk, which is always detrimental to fine-flavored butter. A stove in the room keeps the temperature even, and from experiments, Mr. Lafranchi has found he gets the most cream from his milk with the temperature at about 60 or 61 degrees, by an accurate thermometer which hangs in the milkroom, which room is devoted to milk only.

Adjoining the milkroom is the butter department. In this room is the 60-gallon Petaluma churn, manufactured by the Petaluma planing-mill. It is simply an oblong box hung on centers at the ends, which is revolved by horse-power, and the falling of the cream produces the butter. There are no breakers inside. A churn of this kind requires careful attention, as, it being square, more care to cleanse the corners thoroughly must be observed. After washing and scalding the churn, Mr. Lafranchi again rinses it in briny water, thus insuring sweetness. He says 15 minutes is the usual time required to churn the cream into butter.

The butter is washed in the churn and salted with the best Liverpool salt, which is sifted before being put into the butter, thereby not only freeing the salt from any dirt, but also keeping out lumps which too often are found in even well-known brands of butter. Mr. Lafranchi has an abundance of pure water to use in his butter-making, and so careful is he in this respect that only galvanized iron pipes are laid for conducting water used in the butter-making process.

Passing into a third room, we found ourselves in the storeroom, which is quite empty now. Mr. Lafranchi ships no butter, he finding a ready sale for it in Santa Rosa, selling mostly to the stores and hotels, and supplying a few private parties who have been his customers for years. The buttermilk and skimmilk is fed to the calves and hogs and thus utilized to good advantage. He expects to keep 50 hogs of the Poland China breed this summer, and says he is satisfied they are the most profitable hogs a farmer can raise.

Creamery Interests.

The following paper on the "Creamery Interests of Southern California" was read at the late meeting of the Santa Ana Farmers' Institute by C. H. Sessions, of Los Angeles, proprietor of the Lynwood dairy:

LADIES AND GENTLEMEN: The creamery in the East has become a permanent institution. Farms that had been almost ruined by continual grain growing, and with large mortgages staring their owners in the face, have been redeemed by dairying. Statistics prove that the number of farm mortgages in creamery districts are gradually being reduced.

The creamery industry in Southern California is still quite young, but lately the business has taken a start, which shows that it is becoming popular. In this end of the State I think there are five regular public creameries, and as many large dairies fitted up as creameries, that buy milk from farmers near by. The most of those doing business are located in the neighborhood of Santa Ana and Compton. With your natural advantages of feed and artesian water, this is one of the best dairy regions in Southern California.

Where a section is so far from the city that there is no demand for milk or hay, the creamery is the best means of profitably utilizing these products.

A creamery to be successful should be located in a good dairy section where there are cows enough to furnish a large quantity of milk regularly throughout the year.

One or two men with the improved machinery can handle a large quantity of milk as cheaply as a small quantity, so far as the labor goes, while the extra expense of fuel after the separator is once started is comparatively small. When the milk is handled in a small way by the women of the farm with the crude appliances found on most farms there is a great deal of labor connected with it, such as the setting of the milk, the skimming, the hand churning, the hand working, concluding only with the washing of the pans and other utensils.

There is often not cream enough to churn every day, and when several days messes are mixed, some of it is too ripe and some not ripe enough, and consequently the butter cannot be uniform in quality.

The butter from, say a dozen farms, goes to the country merchant who fills a case with the rolls, some being thick and short while others are long and narrow, weighing from 26 to 32 ounces each, and varying in color, and some of it having been kept too long waiting for shipment to the city. I have seen such cases opened and you can imagine how they look. It cannot be sold to fine trade at a good price, but must be jobbed off to a hotel or restaurant for cooking purposes at any price it will bring, which is usually pretty low, and the farmer suffers accordingly.

On the other hand, where the farmers take their milk to the creameries it relieves the women of this great amount of work, with its discouraging returns. The cream is separated by machinery at the rate of 2000 pounds or more of milk per hour, properly ripened, and then brought to the required temperature before churning.

The cream being uniform the amount of color and salt is always the same, the butter is not overworked to spoil the grain, and when the cases are opened in the city the buyer finds the contents the same, one shipment after another, and when the consumer calls for a certain brand he knows exactly what he will get.

On account of this uniformity, creamery butter in all markets is quoted higher than dairy, therefore the dividends paid by the creamery will be equal to, if not greater than those received by the farmer, and save the women folks all the hard work.

The creamery cannot make a fine quality of butter unless the farmer is as careful in producing the milk as the creamery man is in making the butter.

The cows should be fed on good, wholesome feed. While a little green feed is good, there should be some hay fed to prevent a soft and salvy butter. The best butter-maker cannot make good butter from milk tainted by feed, water stable odors from careless milking, buckets and cans rinsed out, instead of being thoroughly washed and aired in the sun.

The creamery on my own place is equipped with everything necessary for handling several thousand pounds of milk daily, but at present my principal business is selling milk in the city.

After filling the milk orders, I separate the balance of the milk, sending such cream as is ordered to the city, and the balance is made into butter.

In addition to the milk produced by my own dairy, I am buying all I can from the farmers in the vicinity.

It was formerly the rule to buy milk by weight, paying everyone the same price regardless of quality, which was placing a premium on poor milk, made so by cows giving a large quantity of low-grade milk, or by smuggling in a little water, and discouraging those farmers who delighted in keeping Jersey or other cows giving a high-grade milk.

Lately the Eastern creameries have been paying for milk according to the butter value, as found by Dr. Babcock's simple test, and it has been very successful.

A breeder of Guernseys wrote me a short time ago that since the creameries had begun paying according to the butter value there had been an increased demand for butter-making breeds, showing that the farmer will keep better stock if he can get more for milk.

For several months I have been paying by the Babcock test, and it may be interesting to you to know how the quality of milk varies.

For May the tests run from 3.2 to 3 9 per cent butter fat; June, 3.3 to 4; July, 3.6 to 4.1; August, 3.6 to 4 2; September, 3.6 to 4.2; October, 3.6 to 4.3.

In conclusion, let me say to the ladies, ask your husbands to arrange with the nearest creamery to take your milk; it will save you much hard work and give you more time for your other household duties.

And now to the gentlemen. You have on your farms all the latest labor-saving machinery for working the farm, but you have done little or nothing to save your wife's work. Begin as soon as possible to carry your milk to the creamery, the greatest labor-saving machine the women have, and you will find the returns greater than when made up at home.

During the summer you can take your wife to the seashore or mountains for a vacation, while the boys stay at home and carry the milk to the creamery, which you cannot do if your wife makes the butter. Try it and see if it is not a success.

Dairy Results in California.

A. N. H. of Humboldt, Cal., writes to *Hoard's Dairyman* as to dairy results in California:

"I have been a constant reader of *Hoard's Dairyman* for four years, and would not think of doing a dairy business without it. I have a small farm of 40 acres, and keep 40 head of live stock the year round. Twenty-eight of them are milch cows. Have milked 24 steadily since April; five are heifers. Our creamery started April 6th. From that date until October 31, I sold 116,420 pounds of milk, for which I received $1153. I don't think that was bad for a beginning. I am now getting 400 pounds of milk per day from 20 cows, and am feeding a grain ration of bran, corn and oats; two-thirds corn and one-third bran and oats; 10 pounds per cow, fed twice daily, and all the clover-hay they can eat. Bran costs $17 per ton; cornmeal $28, and oats $28. I use the Babcock test and am well satisfied, for I have sent five cows to the butcher.

"I did not intend to tell what I had done, but rather to ask advice. I have lost three of my best cows from milk fever in the last four years. All are taken alike shortly after calving, get down and never get up. I lost one last week, taken in the morning and died at noon. I gave 20 drops of tincture of aconite every two hours, bled her in the jugular vein, and also bled her in each milk vein, taking two gallons of blood. Did I do right? Please tell me how to prevent it. Should I milk a big milker before calving? Should I feed a cow that is fat, grain before she calves?"

To this the *Dairyman* adds the following:

"Answering A. N. H. we can say that we know of no cure for milk fever which can be relied on. At times all remedies fail, and at other, cows recover without remedies. It is a dread disease. The best advice we can give is to take especial care with other cows and put them on a relaxing diet two weeks before calving. Get the bowels well emptied out. The last week give the cow a box stall by herself, if possible. Keep her perfectly quiet and free from all nervous excitement. Milk fever is essentially a nervous disease. Avoid cold water and cold-air drafts for four days after calving. Keep the bedding dry and look out for anything that will promote a chill. Leave the calf by her side. It will quiet her, and do not milk the udder out clean the first four days. After that time danger is not usually to be expected. We never heard of bleeding the cow in the milk veins. Am afraid your treatment was too heroic."

POULTRY YARD.

Poultry Notes.

The difference between an egg laid by a plump, healthy hen, fed with good, fresh feed daily, and an egg laid by a thin, poorly-fed hen is as great as the difference between good beef and poor. A fowl fed on garbage and weak slop, with very little grain of any kind, may lay eggs, to be sure; but when those eggs are broken to be used for cake, they will spread in a weak, watery way over your dish, look a milky white instead of having a rich, slightly yellow tinge. A "rich egg" retains its shape and yields to the beating of the knife with more resistance and gives you the conviction that you are really beating something thicker than water.—Rural World.

The *Rural New Yorker* tells of Miss Lucy Tucker, a Rhode Island girl, 15 years old, who has raised 400 turkeys this year from 35 hens and two gobblers. Her fowls are fattened and dressed so well that the dealer pays her extra prices for them, so that her average return for them is $3 each. Her expenses are about $300, the rest profit. The young turkeys are fed three times a day on Rhode Island cornmeal mixed with sour milk until two months old, then twice a day until about three months old, then whole corn until fattened. The hens make their nests at a distance from the house by the side of stone walls and in clumps of bushes in all parts of the farm, which comprises 380 acres.

It is reported that a lady near Newport, R. I., raised and sold 230 goslings from seven geese. Mr. Wm. Rankin, in the *American Agriculturist*, tells of having one pair three years ago, and the goose laid 51 eggs. He hatched out 38 goslings and reared 35, which he fattened, killed and shipped, receiving a return of $81.47, or about $2.32 each. He got 25 cents a pound for his first shipment, 22 cents for the next lot and 18 cents for the rest. If the Newport lady obtained as good prices, it was a snug little income.

If the poultry-keeper would keep an exact account of all the eggs and poultry used and sold, and an account of the food given, he would soon find out that it pays to keep them. But the money for eggs comes in by pennies and the grain money goes out by dollars, which often makes it look the larger.

The Value of Hens.

The following very sensible and timely remarks are from the Oroville *Register:*

Farmers complain of hard times and lack of money, yet they permit the people of San Francisco to send nearly $100,000 out of the State in a short time to purchase Eastern eggs. The Californian has for so many years obtained big prices for his products and been in a position to buy what he pleased, that he cannot yet bring himself down to the little things such as eggs and poultry, milk and butter, "garden truck" and the growing of berries to help out farm expenses. A little figuring may prove an eye-opener to some. It costs as much to keep one cow as it does 100 hens, yet the cow will not return one-half the profits in the same time that the hens will. If a farmer will take the the same trouble with his poultry that he does with his cows, pigs and sheep, he will find the fowls will pay better than any live stock on the ranch. It's the neglect of hens that makes them at times appear unprofitable, but the cow that is dry is well taken care of, and the hen that does not lay for a few weeks should be fed just as well as though she were returning to her owner good interest on her value every day in the week. Look well to your poultry, keep the hen-houses clean, see that the hens have plenty of the right kind of food, get the best breeds, study up what the best poultry-raisers say, buy the best poultry journals and read them with care, and in a few months you will find that your hens are helping you to cut down expenses and to pay your bills.

To Make Hens Lay.

The *Ohio Farmer* has the following: Put two or more quarts of water into a kettle and one large seed pepper or two small ones; then put the kettle over the fire. When the water boils, stir in coarse Indian meal until you have a thick mush. Let it cook an hour or so; feed hot. Horse-radish may be chopped fine and stirred into mush as prepared in the above directions, with the result that we are getting from five to ten eggs per day, whereas, previous to feeding, we had not had eggs for a long time. We heard a good deal of complaint from other people about not getting eggs. To such we would warmly recommend cooked feed fed hot. Boiled apple skins seasoned with red pepper, or boiled potatoes seasoned with horse-radish, are good for feed; much better than uncooked food. Corn, when fed to hens by itself, has a tendency to fatten rather than produce the more profitable egg-laying.

A spoonful of sulphur stirred with their feed occasionally will rid them of vermin and tone up their systems.

Fattening Chickens.

Old fowls may get very fat while running at large, but chickens not fully mature must be closely confined and bountifully fed with meal in order to wax fat.

It is well to wet the meal with boiling water and feed it warm. Two parts corn to one part oats, ground together and mixed with milk fattens chickens. This feed cannot be excelled.

A suitable coop should be provided, the bottom made of bars and raised high enough to permit scattering dry earth under or clearing away the excrements. Every precaution should be taken to avoid a filthy condition. The top and two of the sides may be also made of bars, thus giving free circulation of air, and affording means of making the room smaller by putting in a cross partition between the bars, making the size right to accommodate a small number of chickens. There should be just as many chickens in a coop as may stand or roost; not as crowded as a centennial horse-car, but full. On the two sides made of bars, one opposite the other, troughs should be arranged for feeding on the outside.

In cooping chickens for fattening, they should be assorted, putting those of like condition together. Some may become fat in two weeks; others must be fed longer. When they are fat they should be slaughtered, not kept along as you might keep pigs. When you get the chickens to the right condition they may be called ripe, and further feeding is mostly loss.

THE VINEYARD.

Resistant Vines a Success.

Writing of resistant vines, A. H. Grassman, of Mountain View, says in the Napa *Register:*

Resistant vines are a success, providing the work is done in a practical manner with the best variety which resists. After experimenting with many varieties since 1877, I have found the Vitis Riparia the best. The Vitis Rupestria is also resistant. The Lenoir will do in some soils, but it is not resistant, but it will hold out longer than any other resistant vine which I have experimented with except the Riparia and Rupestus. I prefer the Riparia above all others, because it is the most resistant and easier to propagate. It will grow in most any soil and take the graft readily, providing the grafting is done in a practical manner. I will give a few points in regard to the work, though it is impossible to write of the best way it should be done. It takes a great deal of experiment to do it correctly. First, the Riparia cutting is the best from the stock and not from suckers. The best method I have found is to propagate the cuttings in the nursery and then a year or two after to plant them out in the vineyard. Cuttings planted directly in the vineyard are not as good as one or two-year old rooted vines.

I have found that it is best to graft after growing in the vineyard two or three years. They have then more and stronger roots, and the grafts grow more vigorous. Some vineyardists graft after one year growing in the vineyard, but they are not as much of a success as if they were left to grow two or three years in the vineyard.

The best time to graft is in March and April, but only in dry weather. Grafting in wet soil is not advisable. As to grafting, this could be only done by being with the grafter and showing him, providing he has got patience and is willing to learn. Everything must be looked after correctly. The grafts must be well prepared and well taken care of till grafting time. The cultivation between the grafts must be only done by an experienced hand. The best way to prepare the scions is to cut them about the middle of January. The nearer the buds are together the better, but be sure they are not from suckers. Put them in sand in the cellar. The best time to cut off the roots from the grafts is in the fall. They should be suckered the first season. They should not be touched till the fall.

Some have adopted the method of cutting off the roots from the grafts in the spring, but I have found it not good. They bleed too much in the spring and the vine is too much disturbed.

One thing I must say: I have examined several resistant vineyards, as well as my own, in Napa county and Sonoma county. I found that some grafted vines did not grow as healthy as others. I soon found out by examination that the grafting was done very poorly. I simply say this: Before any one undertakes to have a resistant vineyard, he should do it practically and not cry afterward it is not a success.

If one wants to give resistant vines a fair test, let him plant a Riparia-rooted vine close to the phylloxera-infected vine. The result will be the sick vine will gradally die and the Riparia vine will grow flourishing.

Stock Notes.

A first-class animal of any kind can always find a market.

Smooth beef will bring better prices than rough, coarse cattle.

By having early-maturing cattle the output may be readily increased.

With cattle, it is the steady, continuous growth that pays nowadays.

There is certainly no profit in keeping cattle and half starving them.

Put your money and feed into young, thrifty cattle rather than old ones.

A safe rule is always to stick to the breed that you have done well with.

There is no advantage in feeding for excessive weight with fattening steers.

Good breeding, aided by good feeding, is necessary for securing early maturity.

Another important item in successful feeding is to supply the right kind of food.

Lower prices for beef cattle should always be a spur toward keeping improved stock.

The lack of system in feeding is the cause of more injury to stock than contagious diseases.

Never keep roughness before the cattle all of the time; feed what they will eat up clean.

Many farmers keep cows that the only return they give is the value of the calf at weaning time.

ARCHITECT Page Brown has submitted to the State Harbor Commissioners further plans for the new depot building at the foot of Market street, and in a few days the board will settle definitely on a general plan.

TRACK AND FARM.

The Great Hobart Sale.

The great sale in New York of the California Hobart stud lasted two days and netted $216,410 for 74 horses, Stamboul going for $41,000. The result was something of a disappointment, as higher prices were expected. The best sales were:

Stamboul, 2:07½, 1882, b. s., by Sultan-Fleetwing, by Hambletonian; sold to E. H. Harriman, New York city, $41,000.

Nancy Lee, blk., 14, by Dictator-Sophy, by Edwin Forrest; sold to A. H. Moore, Cloverdale Stock Farm, Pa., $7500.

Nancy S., b. f., 1, by Stamboul-Nancy Lee, by Dictator; sold to George Scattergood, Philadelphia, $2800.

Leda S., b. f., weanling, by Stamboul-Nancy Lee, by Dictator; sold to F. P. Clark, New Haven, Conn., $1700.

Naval, b. m., by Dictator-Belle Branfield, by Cripple; sold to Dr. G. H. Bailey, Portland, Me., $1425.

Oasaka, b. f., weanling, by Stamboul-Nava, by Dictator; sold to J. H. Schultz, Brooklyn, $1200.

Astrione, blk. m., 9, by Alcyone-Jesse Pepper, by Mambrino Chief; sold to H. S. Henry, Morrisville, $5300.

Demars, b. c., by Stamboul-Astrione, by Alcyone; sold to F. D. Creamer, Brooklyn, $1800.

Ora Bella, b. f., weanling, by Stamboul-Astrione; sold to George Jacobs, New York, $1200.

Silverone, 2:19¾, b. m., 10, by Astrione-Silverlock, by Mambrino Prince; sold to B. Thayer, Boston, $6000.

Silverbowl, b. c., 1, by Stamboul-Silverone; sold to H. E. Sohns, New York, $3400.

Albuta, b. c., weanling, by Stamboul-Silverone; sold to James Golden, Boston, $1500.

Eugenia, 2:19¼, pacing, blk. m., 7, by Alcantara-Lady Conkling, by Strathmore; sold to L. J. Phillips, Mass., $1300.

Madras, b. c., 12, by Alcazar-Eugenia; sold to Geo. L. Benus, New York, $1000.

Adolph S., b. c., weanling, by Stamboul-Eugenia; sold to John L. Roper, Norfolk $710.

Alta Belle, br. m., 11, by Electioneer-Beautiful Bells, by the Moor.

Belle Electra, b. m., 4, by Piedmont-Alta Belle, by Electioneer; sold to J. B Dutcher, Paulding, N. Y., $3300.

Peralta, b. c., weanling, by Stamboul-Belle Electra; sold to A. B. Forbes, Springfield, $1600.

Kittie Wilkes, b. m., by George Wilkes-Snipnose, by American Clay; sold to A. J. Welch, Hartford, $552.

Etta, b. f., by Stamboul-Kitty Wilkes; sold to Uhlein Bros., Milwaukee, $1500.

Meta Rose, b. f., 1, by Stamboul-Kitty Wilkes; sold to P. C. Eastman, city, $2100.

George Norval, b. c., 3, by Norval-Wilkes; sold to G. J. Harley, Greatneck, L. I., $1100.

Ardea, blk. f., weanling, by Electricity-Kitty Wilkes; sold to S. Hyde, Fall River, $650.

Kitty Sultan, blk. m., 5, by Sultan-Kitty Wilkes; sold to G. O. Wilson, Baltimore, $550.

Alta Vela, b. f., 1, by Palo Alto-Kitty Sultan; sold to Henry Pierce, San Francisco, $1525.

Al Maden, ch. c., weanling, by Palo Alto-Kitty Sultan; sold to Dr. F. L. Gerald, Laconia, N. H., $1025.

Prospect Maid, 2:23¼, br. m., 18 by George Wilkes-Neilson, by Mambrino Pilot; sold to Chas. Robinson, city, $1075.

Anheuser, b. c., weanling, by Stamboul-Prospect Maid; sold to E. C. Boardman, city, $1700.

Trinket, 2:14, b. m., 17, by Princeps-Ouida, by Hambletonian; sold to Charles Robinson, city, $2300.

My Trinket, b. f., 2, by Stamboul-Trinket; sold to J. H. Schultz, Parkville Farm, $4000.

Queen, b. m., 15, by Hambletonian-Charlotte Hambleton, by Rysdyks Hambletonian; sold to C. R. Maltby, Plainfield, N. J., $525.

Vinita, b. m., 3, by Stamboul-Queen; sold to Robert Steel, Philadelphia, $900.

Mozart Bee, 1, by Stamboul-Modjeska, by Enfield; sold to J. H. Schultz, $2000.

Anikine, b. f., weanling, by Stamboul-Modjeska; sold to E. P. Harriman, New York city, $950.

Wintona, b. m., 3, by Winton-Ball, by Homer; sold to E. K. Trimble, Macon, Ga., $1050.

Ellora, b. f., weanling, by Stamboul-Wintona; sold to H. R. P. Weston, West Farms, N. Y., $850.

Four Corners, 2:20¼, ch. m., 12, by Mambrino-Laura Winn, by Abdallah; sold to E. A. Morris, Stockbridge, Mass., $250.

Corner Belle, b. m., 2, by Bell Boy-Four Corners; sold to J. B. Dutcher & Son, Pawling, N. Y., $3075.

Orme, b. c., weanling, by Stamboul-Four Corners; sold to E. P. Harriman, $700.

Carlotta Wilkes, b. m., 4, by Charley Wilkes-Aspasia, by Alcantara; sold to Henry Pierce, San Francisco, $825.

Kophta, blk. f., 2, by Simmons-Jessamine, by Mambrino Boy; sold to J. H. Ruppert, Hudson County Stock Farm, Poughkeepsie, N. Y., $3600.

Barebin, b. c., 1, by Stamboul-Jessamine; sold to T. R. Proctor, Utica, N. Y., $1500.

Mabel W., b. m., 4, by Nephew-Lizzie H., by Whipple's Hambletonian; sold to J. H. Walker, Worcester, Mass., $700.

Glenview Belle, 2:20¼, b. m., 1886, by Nutwood-Melrose, by Geo. Wilkes; sold to Bayard Thayer, Boston, Mass., $6600.

Trousseau, 2:28½, ch. m., 1878, by Nutwood; sold to J. H. Outhwaite, San Francisco, $3100.

Dainty Belle, b. f., 1890, by Bell Boy-Trousseau; sold to Charles D. Robinson, New York, $4200.

La Honda, b. f., 1892, by Red Wilkes-Trousseau; sold to J. H. Outhwaite, $2800.

By-By, b. m., 1885, by Nutwood-Rapidan, by Dictator; sold to Henry Pierce, San Francisco, $10,000.

Nola, ch. m., 1886, by Nutwood-Belle Byron, by Claus Almont; sold to Henry Pierce, $2600.

Alma Mater, ch. m., 1872, by Herr's Mambrino Patchen-Estelle (thoroughbred), by Imp. Australian; sold to Henry Pierce, $4100.

Alamboul, b. c. 1892, by Stamboul-Alma Mater; sold to A. N. Kingsley, Ashulst, N. H., $3975.

Alma filly, b. f., 1891, by Stamboul-Alma Mater; sold to J. B. Dutcher & Sons, Pawling, N. Y., $4100.

Almata, 2:32¾, ch. m., 1879, by Almont-Alma Mater; sold to Wm. Simpson, New York city, $4800.

Alameda, ch. f., 1892, by Baron Wilkes-Almata, by Almont; sold to J. H. Schultz, Parkville Farm, $5000.

Bonbon, 2:26, b. m., 1885, by Simmons-Bonnie Wilkes, by George Wilkes; sold to Henry Pierce, $7000.

De Oro, b. c., 1890, by Stamboul-Bonbon; sold to H. B. Beach, Meriden, Conn., $2600.

Stamboul, b. c., 1891, by Stamboul-Bonbon; sold to E Platt, New York city, $2200.

La Bonton, br. f., 1892, by Stamboul-Bonbon; sold to Uhlein Bros., Milwaukee, Wis., $2600.

Biscara, b. m., 1887, by Director-Bicara, by Harold; sold to Henry Pierce, $8250.

Redowa, br. f., 1889, by Red Wilkes-Patchen Girl, by Herr's Mambrino Patchen; sold to J. Malcolm Forbes, Boston, $3000.

The Home Circle.

The New Year Minuet.

It was danced in the hall by the fire's red glow,
For the palms hid the lamps at the side,
And each form was outlined in the floor below,
While the shadows were spread far and wide.
But the shadows were misty—a softened gray—
In accord with the slow melody.
The light of the fire drove the dark lines away,
While it lent all a sweet mystery.

Both dancers were courtly and figures of grace,
Yet the maid held my fancy alone;
The glow gave a blush to her beautiful face;
In her dark eyes a fairer light shone.
And then, as she curtsied, so stately, so slow,
With the grace of an age that is past.
It seemed like a dream of the long, long ago—
Like a dream that I knew could not last.

So stately, so slow, was each step that she made,
And so graceful the head that she bent:
The old-fashioned fan, that at times cast a shade,
Such an air of true elegance lent.
The place of the dance gave a place to my thought,
And I dreamed of the days that are dead;
The spell of the dance was by sorcery wrought,
And the hurrying modern days fled.

It was peace—the sweet rest of the olden day
When all idols were not overthrown;
When romance still lived, and as king, Love held sway,
Before Mammon to ruler had grown.
And all those who watched were bewitched by the dance,
And they dreamed till the measure was o'er—
To-day was forgot in the short backward glance
And the charms of the day gone before.

FLAVEL SCOTT MINES in the *Ladies' Home Journal.*

The New "Idee."

The "institoot" folks have been up here and turned things upside down,
Preaching up such new-fangled things they've nearly crazed the town—
Analysis and chemicals and lots of other trash,
As how we'd got to learn by heart and they'd fetch us in the cash;
'N lots of other things they told ez they styled the new "idee,"
But I hain't no larnin', there's the stick, 'n' of course it ain't for me.

They told us to make siloes, en how the things were made;
How to improve our cattle, both thoroughbred and grade;
All other kinds were scrubs, they said, an' didn't pay their salt,
'N' many other queer notions in their new idee.
But of course, I haven't larnin' and so it ain't for me.

They talked about leguminous plants that partly fed on air,
'N' how if we raised 'm to plow in, we'd have home manure to spare,
They said as how there's potash growing in the hay,
'N' ammonia in the manure pile, 'n' its flying all away.
The greatest lot of notions they had in their new "idee,"
But of course I didn't have larnin', and so it ain't for me.

Nitrogen, carbobyates, albuminoids en sich
You'd got to buy or beg or steal, or you never could get rich;
Feed carbondrates to the critters—now what do you think of that?
Put thingumbobs in the milk to find the butter fat;
I tell you what, it beat the world, these feller's new idee,
But not being a college chap myself, of course it ain't for me.

—Country Gentleman.

The World.

The world is well lost when the world is wrong,
No matter how men deride you;
For if you are patient and firm and strong
You will find in time (though the time be long)
That the world wheels 'round beside you.

If you dare to sail first o'er a new thought track,
For awhile it will scourge and score you;
Then, coming abreast with a skillful tack,
It will clasp your hand and slap your back,
And vow it was there before you.

Aye, many an error the old world makes,
And many a sleepy blunder;
But ever and always at last it wakes,
With pitiless scorn for another's mistakes,
And the fools who have followed go under.

The world means well, though it wander and stray
From the straight, short cut to duty;
So go ahead in that path, I say,
For after awhile it will come your way,
Bringing its pleasure and beauty.

—ELLA WHEELER WILCOX.

NO MATTER WHAT YOUR YEARS.—My advice to all is: Lay out your plans for a prolonged lifetime, while you are particular to be prepared to go at any time the Lord may call. Some of the best work the world has ever seen was done after the time when most people think they must stop. Izaak Walton wrote some of his best biographies after he was 85. Christopher Wren kept on with architecture until he was 86. Cato learned the Greek language at 80. Hobbes, at 87 years of age, translated the "Iliad." Fontenelle wrote vigorously at 99 years Monaldesco penned the history of his time [illegible] years of age.—Talmage.

It Was Due to the Track.

They were talking about horses and more particularly about Nancy Hanks' wonderful record or 2:04. Every one seemed to be more or less impressed with the marvelousness of this record except old Mr. Scaggs, a retired farmer. "She's fast, yes," he said, "but I once owned a mare up on the farm as could beat her. That mare was lightning on legs. Polly was her name—named after Mrs. Scaggs' mother, and a finer woman you never met. She could bake all around any other woman in the country, an' when it came to me bein' sick she'd nurse me tenderlier than as if I wasn't a son-in-law at all, but her own boy. My, how she could trot!"

"Your mother-in law?"

"No, the hoss," snapped Scaggs, with fire in his eye. "I'm talking about the hoss. I bought her when she was eight years old from old Mrs. Tompkins. She wasn't much on looks, Mrs. Tompkins wasn't but she was business all through. When her husband died she took charge of the grocery an' added a millinery department to it, 'nd by Jove! inside of a year she was able to close up the grocery 'nd do nothin' but make hats. Tompkins used to hitch her up to the delivery wagon, you know, but of course—"

"You don't mean to say that any man was ever mean enough to hitch his wife up to a grocery wagon and make her haul the packages about town?" queried the inquisitive member of the party.

"Ain't said nothin' o' the kind," retorted Scaggs. "Don't you get too funny. I'm talkin' about the hoss. I was goin' on to tell ye how when old Mrs. Tompkins got makin' $2 hats for the women folks and sellin' 'em to 'em for $10 she gave up the grocery business, 'nd so didn t have any use for the hoss old Tompkins had used for drivin' his delivery wagon. It happened I wanted a hoss 'bout that time 'nd so I called on old Mrs. Tompkins to talk it over. She was only eight years old at the time and hadn't much style about her, though she was calculated to be faster'n anything else in town. I as't old Mrs. Tompkins what she'd take an' she says $24."

"That's pretty high for an eight-year-old," says I. "I'll give ye $1.50 a year for the hoss. That's $12."

"Make it two and she's yours," said old Mrs. Tompkins.

"Throw in a hat for my wife," says I, "'nd it goes."

"Done," says she.

"So I bridled her, paid the money, 'nd led her home. A few days later some o' the boys, knowin' as I had sportin' blood, came and ast me to to let Polly trot on the mile track for the record. My wife didn't want me to at first because she was a little off her feed 'nd didn't approve of racing anyhow, but when the boys offered a purse of $10 if she could beat 2:10 she let up. So I said all right, 'nd we set a date."

"Well, what was the result?" asked the inquisitive youth.

"Two-four for the mile," said Scaggs.

"Two-four?" cried the whole circle at once.

"Yep," said Scaggs. "But it was the track as helped her. There was somethin' in the track as had ought to be give some o' the credit, for the old mare couldn't beat morn' four minutes at the county fair grounds."

"What was the special quality of the track, Scaggs?" asked one of the party.

"Wall," said Scaggs, slowly, "as far as I could make out, a mile on our track warnt' more'n half a mile on any other."—Harper's Magazine.

CHURNING IN PALESTINE.—W. A. Croffut, a veteran newspaper man, has been taking a vacation to see the sights across the ocean, and thus writes about one incident: "One of the oddest things encountered in Palestine is a woman at the churn. The churn of this region was once animated, having been a goat in its better days. Now, the goat has vanished from it, flesh and bone for the table of the epicure, and the good wife hangs up to a spike on the ceiling his skin by the neck and pours into the uncanny vessel her wooden trays of milk. Then she churns by seizing the ghastly thing by the dropsical hind legs and swinging it half round her and back again in tiresome oscillation, as monotonous as any old wooden churn in a Yankee kitchen. When the butter "sets," she rests her weary arms and rejoices, and then she carefully unties the hind foot which has served for a handle, and draws out the buttermilk, afterward removing the butter by way of the slitted brisket. This seems to be the universal churn of the Orient. Whose milk is it? A goat's, probably. A sheep's, perhaps. A camel's, occasionally. I am tired of goat's cheese, sheep's milk and camel's butter, and when I get home shall hug the first cow I see.

A New Year's Wish.

At midnight on New Year's eve an old man stood at the window, and with eyes full of despondency looked up to an immovable, ever-blooming heaven, and out upon the still, pure, white earth, upon which no one was so unhappy, so sleepless, as he. His grave was near him, covered with the snow of age, no longer the green mantle of youth, and he brought out of his whole long life nought but erring, sinfulness and sickness, a wasted body, a desolate soul, a breast full of poison, an old age of sorrow, pain and repentance.

The sweet days of his youth come before him to-night as apparitions and carry him back again to that morning when his father set him upon the perilous highway of life, the ecliptic of virtue, on whose right lay the quiet land of light and harvest, blessed by the angels; on the left the mole-tracks of vice and crime led to the dark pit of dripping poison, darting serpents and black, stifling vapors.

Ah! the serpents hung at his breast, the poison drops were on his tongue ere he knew where he was.

Senseless, and with his unutterable grief, he called to heaven: "Give me my youth again! O father! set me again on life's road that I may choose the proper coutse!"

But his father and his youth were long passed from him. He saw the will-o'-the-wisps dancing and sinking in the God's-acre, and cried: "They are my misspent days!" He saw a star fall from the heavens, and his bleeding heart murmured, "It is I!" and the serpent's teeth sank deeper into the wounds they had made.

In his wild imagination he saw himself flying through the night air, over the roofs of the houses; an old windmill raised its long, gaunt arms as though to strike him down; a shroud in the deserted deadhouse took to itself form and shape.

In the midst of the conflict came suddenly the sound of New Year's music from a turret, like distant church-song, and he was gently moved. He glanced around the horizon and over the wide earth, and he thought of the friends of his youth, of those who were better and happier than he—teachers among men, fathers of happy children, blessed people—and he said, fervently: "O, I could, too, like you, slumber with dry eyes if I had but wanted! Ah, I could be happy, happy, dearest parents, had I heeded your New Year's wishes and advice!"

Again, in his feverish longing for the return of youth, came the vision of the shroud in the deadhouse. He saw the spirit of the new year enter it, and in his superstition saw it take his form—a child.

He could see no more. He lowered his eyes and the hot tears flowed. He moaned softly, disconsolately: "Return again, O, my youth again!"

And youth came to him again, for that night he had a wonderful dream. He was still a child; but his erring had been no dream, and he thanked God that he was not yet too old to reenter the ecliptic and choose the road that leads to the Land of Harvest. Talmage.

Her Horse Sense.

She was an independent sort of a girl, recently in possession of quite a fortune, and she concluded a horse was a necessity in her new establishment, so she sent for a dealer and had a talk with him. What she didn't know about horses would fill a livery stable, but she tried to make the dealer believe she was a judge and told him to bring her something to look at. The dealer came and she went out to pass judgment. She walked all around the animal, critically, as professionals do.

"Is he well trained?" she inquired with the air of a jockey.

"Certainly, miss," replied the dealer. She is well gaited and fine in harness."

"Um—um," said the girl, "is she all right in the botts?"

"Yes, miss," gasped the dealer, "but you see I've only got shoes on her fore feet."

He said that because, really, he didn't know what else to say.

The girl laughed merrily.

"I noticed that, but you couldn't very well have them on her five feet, could you?" she gurgled.

"I mean, miss," stammered the dealer, "that she is shod only on the fore feet."

"I understand," she said seriously, "but that can be cured without any difficulty, cant it?"

"Very easily indeed, miss," assented the dealer with a great sense of relief.

"She seems to be all right in the fore shoulders, but her hind shoulders don't seem to be quite right suggested the girl.

"There's nothing the matter with her there," asserted the dealer. "She is perfectly sound."

"There is no danger of her withers being spavined, is there?" she inquired carefully. "I've seen horses like that and they always make me nervous."

"No danger in the world, miss," the dealer assured her.

"How old is she?" inquired the girl.

By this time the dealer knew his man, and was confident.

"Being a lady, miss," he smiled, "I'd rather not tell her age."

"How considerate of you," she said earnestly, "I'll take her."—The Horseman.

"Puck's" Christmas Story.

It was the 24th of December. From a force of circumstances that render it impossible to be otherwise according to the almanac, it was also Christmas Eve. The wind rushed and tore around the corner like an Alderman seeking votes on election day. The snow was falling fast and the thermometer hovered in the neighborhood of zero, now above, then below, like a moth around an electric light. These few facts show conclusively that it was a typical Christmas Eve. Why typical I cannot say, for I have sat beneath the trees on the 24th of December, sans coat and hat, feeling comfortable but that was some degrees farther south than New York. At any rate it was called a typical Christmas Eve.

Inside his private office sat John Smith, the millionaire leather dealer of the "Swamp," pouring over his accounts. It was 7 o'clock, and all the clerks had gone home, leaving the proprietor alone. By the way did you ever meet a man by the name of Ebenzer Scrooge? Of course not, nobody else ever did, either—but John Smith. You know lots of John Smiths. A man does not need to have a name like a rusty saw to be mean. From this you will infer that Mr. John Smith was mean; so he was—this particular one. The amalgamated meaness of Scrooge and Marley did not begin to compare with the close-fistedness of this John Smith; consequently he was rich. I am not mean neither are you; but are we rich? Such subjects are painful on Christmas Eve—we will go on with the story.

Outside the office three small gamins were engaged in pelting an equally small girl with snowballs; suddenly they stopped. "Say, Jinny," cried one of the sterner sex, "try de ole man on de Santy Claus racket!" and they hid in the darkness of a doorwwy.

The little girl crept to the door, tried the door and entered. Oh, how warm it was! I merely introduce the last phrase to convince people that this is a genuine Christmas story. A slight cough roused the capitalist, and looking up he saw a red, pinched little face gazing wistfully at him. (The redness of the face was due to the application of snow in the hands of the small boy.)

"Well?" (the millionaire was impatient, as three cents were unaccounted on the balance sheet).

"Please, sir," and the voice grew plaintive in its question, "are you Santa Claus?"

"Bah!" said Scrooge (I mean John Smith); "humbug?"

Please, sir," and the little questioner grew earnest, "wont' yer gimme a quarter?"

The bearded capitalist arose. "Get!" he shouted, and pointed to the doorway.

Obedient to the command, the little figure got—outside the door—and regaining her companions the tale was told and they got—what?"

Fifteen minutes later the three cents had been found, the safe door closed and the merchant, well wrapped in his ulster, stepped outside the door.

Whizz-whizz-bang-bang—four snowballs flew with unerring aim at the face and high hat of Mr. John Smith.

"Get!" cried four voices, and the snow-covered, angry capitalist picked up his hat and got as fast as his legs could carry him.

This, dear reader is a realistic Christmas story, a Christmas of to-day, of eighteen hundred and ninety-two.—Puck.

AN EXAMPLE.—Kind old gentleman (assisting boy to get heavily loaded barrow up the gutter)—"I don't see how you manage to get that barrow up the gutter alone." Bright youth—"I don't. Dere's always some jay a-standin' around as takes it up for me."

WHAT cowards women are. It will about frighten them out of their wits to look at a gun or a pistol. But a man will take up a gun, cock it, peer into the muzzle and die a hero's death. There can be no question as to man's superiority to woman.—Boston Transcript.

Red Letter Days.

Written for the RURAL PRESS by MAUDE PEASLEE.

Among the many gifts received by favored ones at the present holiday season, is the calendar in its various forms.

A very pretty way of using them is to indicate on them in red ink the comparative amount of pleasure or happiness enjoyed on each day. This may be accomplished by making red dots or crosses to indicate the bits of happiness as they occur, or in case of an especially joyous day the whole date may be encircled with a red line.

This plan could be pursued with any kind of a calendar, but one with sufficient blank space could serve as a diary of pleasant events.

We are all too prone to forget our blessings, and in this way we would be brought to notice the bright moments that would otherwise be lost in the shadow. Even if New Year's Day has passed, it is not too late to commence this excellent practice.

SLEEPING AND NAPPING.—Another thing about which I am what might be called a "crank" is sleep. I believe in sleep and resort to it a great deal. I go to bed as early as I can each day, and get up when I am rested, but not before. Generally, this is at six o'clock each morning. But I do not believe in the old theory of "early to bed and early to rise" being applicable to our time at all. In the first place, because a man cannot get early to bed, and if he retires at 11 or 12 o'clock at night, as the demands of social life may sometimes compel him, it is very foolish for him to get up at six. A man should sleep until he is rested. One habit I have formed is that of dropping off into short naps. Even if I can only secure a nap of five minutes' duration, I find it refreshes me. When on the cars I sleep every chance I get. I believe if our business men could in some way work in a 15 minutes' nap in the middle of the day, it would mean years of life to thousands of them. For an active man, a man active with the brain, there is no tonic so good, so beneficial or exhilarating as sleep. Thank God for sleep, I say. It is one of the sweetest boons ever vouchsafed to man. It has done much for me, and I wish it might do as much for thousands of busy men whom I constantly meet.—Dr. Talmage.

TOBACCO IN PUBLIC.—With regard to etiquette in the use of tobacco in public places there is not much to say—smoke is as free as air. This is in accordance with the universal European custom. Men smoke in restaurants, cafés and at most of the hotel tables. Women do not smoke publicly. Whether or not they smoke in private is a matter for each man's experience. I have never seen a French lady smoke. Once, in Dresden, I saw a married lady puff a cigarette after dinner in a fashionable restaurant; and once I saw two English girls, seemingly of the upper middle class, smoking cigarettes in a railroad carriage, where they were alone. Here my knowledge ends. The demoiselles of the Moulin Rouge and the Casino are not permitted to smoke in those temples of light amusement, and the girls of the Boulevard do not smoke in the cafés. At the Café Anglais, which is still nearly as chic as ever, smoking is not permitted until after eight P. M. But rules like these are resented and scarcely ever enforced.—Paris Cor. Washington Star.

THE WHITE HOUSE.—The President's house at Washington completed its first century this year, its corner stone having been laid on October 13, 1792. The architect was James Hoban, who, it is said, used the mansion of the Duke of Leinster, at Dublin, as his model. Although the corner stone was laid in 1792, the White House was not finished until eight years later, when it was first occupied by President Adams. Maryland and Virginia contributed a large share of the money used in erecting the Executive Mansion—the former giving $72,000 and the latter $120,000. When British troops seized Washington, in August, 1814, and burned the interior of the Capitol, they also set fire to the President's house. The walls, which were of dark freestone, were so discolored by flames and smoke, that when Congress, in 1815, authorized the restoration of the building, it was painted white, and has since been popularly known as the White House.—Harper's Young People.

AN AGREEMENT WITH A DIFFERENCE.—"Do you believe in transmigration of souls, Joe?" "What's that, sir?" "Why, for instance, that the cow has had a prior existence in another form—perhaps been a being like myself." "Oh, no doubt the cows been a calf!"

YOUNG FOLKS' COLUMN.

Tommy's School.

"Geography's a nuisance, and arithmetic's a bore!"
Said Tommy with a frown upon his face.
'I hate the sight of grammars, and my Latin makes me roar,
It's always sure to get me in disgrace.
When I'm a man," he added, as he threw his school-books down,
"I'll have a school that boys will think is fine!
They need not know an adjective or an adverb from a noun,
Nor whether Cæsar bridged the Po or Rhine.

"I don't care if they think that George the Third was King of Spain,
When those old fogies lived so long ago,
Or if they all should answer that the Volga is in Maine,
What difference would it make I'd like to know?
But instead of useless things I,ll teach 'em how to coast and skate;
They all shall learn to row and sail a boat,
And how to fire a pistol, and shoot a rifle straight,
And how to swim, and how to dive and float.

"We'll play at tennis and at cricket all the livelong day;
And then there's polo, and—Oh, yes, foot-ball;
And base-ball they shall every single one learn how to play,
For that's the most important thing of all.
I tell you," finished Thomas, "I'll have one of just that kind;
Then all the boys, you see, will want to go,
They will not run away and say my school's an 'awful grind,'
Or call the lessons dull and hard I know."

—St. Nicholas.

Lucy's Tramp.

Written for the RURAL PRESS by C. P. NETTLETON.

"Yes, dear, it is always more blessed to give than to receive. I want my little girl to always be as unselfish as she was to-day." And Mrs. Alling leaned tenderly over and kissed little Lucy good night.

They were people in very moderate circumstances, but very unselfish. No one had ever applied to them for aid in vain when they could give it; indeed, their neighbors said that they encouraged vagrancy altogether too much. Still, they had their principles and did not propose to change them against their own judgment. To-day Lucy had given the money she had been saving for her mother's birthday, in February, to a poor old Spanish woman who had begged for "only 10 cents." She had told her mother afterward about it, weeping bitterly, womanlike, in the reaction that was sure to come to one of her sensitive nature but was wholly comforted by being tenderly praised. Now, as her mother left her alone to go to sleep, she thought over the occurrence of the day and decided in her wise little head that what her mother had said about its being more blessed to give than to receive was quite true. She was nine years old now, she thought, and must of course remember very clearly all her mother said, so that she herself could grow up like her.

This was two days before New Year's Day. That night her father returned from a trip to San Francisco. He had at last received the money from the sale of a town-lot somewhere in the East and was happy, as it had come just in time to pay off the mortgage of five hundred dollars on his home, and leave one hundred for luxuries. He was a mechanic and received good wages, but had lost most of his possessions except the little house he lived in and the lot it stood on.

Next day, the last day of the year, Lucy came running in from outdoors, quite excited.

"O, mamma," she exclaimed, "can't I give something to that poor man out there? He's just as hungry as he can be, and *so* handsome! I've told him to come here to-morrow and get his New Year's dinner, but he'll die before then if we don't look out. Can't I take him a pie; one of those big mince ones you made?"

"Why, Lucy, if he is so hungry as all that I guess we can find something better than a mince pie. Run and cut some bread and part of that meat we had for lunch. You can take a piece of pie, too, dear, but not a whole one."

"And, mamma, he can come to dinner to-morrow, can't he?"

"I think not, Lucy; that's going a step too far."

Poor little Lucy could only gasp out: "But, mamma, I've *promised* him!" Her mother had always told her that a promise was sacred, and now for her to say that her little girl would have to break one was too much. She was almost too shocked to cry, as she wanted to.

Mrs. Alling looked down at her with a half-amused and half-annoyed expression on her face.

"So you have promised him he could come, and now ask if he may! But it's all right, dear," she hastily added, as Lucy saw the mistake she had made and began to cry, from shame as much as disappointment. "I think we can get along this once. Tell him to come at four o'clock, if you like."

Lucy hurried away to get the bread and meat for the man, who stood at the gate with a half-decided manner. Evidently he thought the little girl was gone a long time. He was not a rough-looking tramp, and, indeed, looked more respectable than Mr. Alling usually did when he returned from his work.

At four o'clock sharp the next day he came again, and Mrs. Alling was not so disgusted at having a tramp-stranger at the table as she had expected to be. He was decently dressed, young, and had taken some pains to prepare himself for what must have been an unusual experience. He was quite well-informed, somewhat witty, and not an unpleasant guest in any way.

After dinner, Mr. Alling invited him to remain a while only to talk. The man, who gave his name as Hutchins, had complained of not being able to find any work that he could do. He said he was a graduate of Oberlin, had held a good position in Cincinnati, and been in several employments, but dropped all with the expectation of doing a great deal better in California. Instead of that, he had had to walk the streets. Mr. Alling was quite interested in him, and promised to do all he could to find work for him. He seemed quite grateful and pleased.

There were a few minutes when no one was in the room with him, and this was evidently the time when he took the money. He left at an early hour, and when Mr. Alling went to take a farewell glance and see that all was safe for the night, he found the money gone. It was a sore blow, as he would have to borrow the sum, large to him, of five hundred dollars, or lose his home. He went at once and gave the alarm, but felt that it was useless, as it was.

They tried to keep it from Lucy, but she found it out and was inconsolable. Her parents did not blame her, but she felt that she had done a most unforgivable thing to ask him to dinner.

The criminal was not found. He was, indeed, a sharp young fellow, and as one man said, "Probably he knew what he was about when he played that tramp racket!" He was traced from their town to another place, but there managed to elude pursuit, and at last the search was given up.

One year went by. The Allings had not prospered as much as usual, and were now in more trouble than ever. They had not been able to pay up that "death grip" the interest had counted up, and worse than all, they saw no hope of a change for the better.

Lucy no longer showed the least desire to feed a tramp or do anything good with her money except to put it in the plate Sundays. She thought she could safely do that!

A few days before this New Years, Mr. Alling brought home one night a package from the express office—a most unusual thing. He felt very blue that day, and was almost cross to Lucy and her mother when they begged him to open it at once. It bore the Adam's Express label with the New York mark on it, and the charges had been prepaid. Mr. Alling was more interested than he cared to show, and told them they could get the hammer and open it.

They did so, only to find another and smaller box inside. When this was opened the first thing they saw was a letter and the second was something they did not at first recognize. They took up the letter and called Mr. Alling from his dinner to look at the contents of the box. He came over to where they stood and looked down in amazement at the box.

"Why, great heavens!" he cried, "don't you know twenty-dollar gold pieces, even if they are packed on end close together?" and with a swift motion he took the heavy little box in his hands and turned it downside up on the table.

He was right. A small sized mountain of the shining gold pieces rolled out over the table.

"Lucy, lock the door," he said, when he could speak.

Then they stood staring at this strange thing that had come to them. Finally Mrs. Alling thought of the letter she had held in her hand all the time, but before she could read it her husband began counting the money so carelessly rolling over the table.

"One hundred and fifty," he said at last; three thousand dollars! I wonder what—why—can this be meant for us?"

Then they read the letter, first looking at the signature, which gave them no clue to the sender. It read as follows:

NEW YORK, Dec. 21, 1891.

My Dear Mr. Alling:—It is with great pleasure that I now send you the money that I so basely stole from you one year ago, with the addition of a little besides, to compensate you for the trouble or sorrow you may have suffered from its loss.

I can offer no excuse for my act, save that I was in great straits at the time. I thought then this was sufficient to excuse me, but it was not. Forgive me, I beg of you.

Do not try to discover who I am, as you will fail. I have sent it in cash so as to cover my trail that way, and you cannot serve any good end by spending it foolishly.

I am now rich, thanks to the start I got from that small sum. I suppose I shall lose my prosperity some time—an evil beginning usually ends evilly—and so I hasten to balance accounts between us while I am able.

I wish you would put aside one thousand dollars of the three I send for your little girl, who was so kind to me; this is the only favor I can ask.

Most truly yours,
"A KNAVE."

"Well, Lucy," remarked Mr. Alling, as he separated one thousand from the rest, "you have been well repaid for your kindness, but I don't think I would advise you to try that experiment again!"

And Lucy thought the same.

DOMESTIC ECONOMY.

SUGAR WAFERS.—Take sugar the weight of two eggs and flour the weight of one egg. Stir the three eggs and the sugar for a quarter of a an hour; add the flour and half a teaspoonful of minced orange peel or candied orange flowers, and put little heaps of it on a very thinly buttered sheet iron pan three inches apart. Dust them over with granulated sugar, and bake in a moderately hot oven. After they are done, remove them while hot, and bend them over a rounded stick in the shape of a scroll, or shape them like cornucopias, and fill them with whipped cream.

GRAPE PRESERVES.—Select large, well-ripened fruit, pick from the stems, carefully rejecting overripe and mouldy ones. Pulp the fruit, placing the skins in one vessel and the pulp in another. Boil the latter, without adding any water, for 15 minutes, then rub through a wire sieve. During this operation cook the skins until tender, after adding a little water. Add the pulp to the skins and measure, allowing three-fourths of a pound of sugar to each pint, and boil together, stirring constantly, for 15 to 20 minutes.

TAPIOCA CREAM.—Soak three tablespoonfuls of tapioca in cold water over night. Boil one pint of milk and add the tapioca, letting it cook three quarters of an hour. Add the yolks of two eggs and half a cup of sugar. When thoroughly cooked and creamy, take from the stove and flavor. Beat the two whites stiff and add half a pint of whipped cream, sweeten and flavor, and pour over the tapioca cream.

POTATO SALAD.—Boil six potatoes until very soft; peel and mash them while hot. Season to taste with salt, pepper and spice. Add one tablespoonful of butter. Boil two eggs, and dissolve the yolks in two table spoonfuls of vinegar. Pour it over the potatoes and mix well. Put them on a plate. Slice the whites of the eggs in circles, and place them over the potatoes.

PARSNIPS STEWED.—Put on a piece of pickled pork and boil until it is about half done or a little more. Then scrape and wash your parsnips, put them on in as little water as will keep them from burning, then add the pork; when the parsnips are soft dish them.



A cream of tartar baking powder. Highest of all in leavening strength.—*Latest U. S. Government Food Report.*

ROYAL BAKING POWDER CO., 106 Wall St., N. Y.

PATRONS OF HUSBANDRY.

In Union There is Strength.

The maxim which forms the head of this writing is so self-evident that it needs no argument to sustain it. It is a truth which meets us at every point of human effort. The advantages which accrue from unity of action have been much more largely utilized, especially in business matters, during the last few years than ever before. Indeed, the present may be considered an era of business combinations, as well as united effort in all the walks of life. While such action, as a general thing, is commendable, it is also a privilege which can be, and often is, greatly abused. As, for example, the opportunities presented in the middle portion of the present century for the multiplication and union of railroad interests in consequence of the general dislocation of former modes of travel and transportation, presented a rare opportunity to men of exceptional sagacity to combine their capital and monopolize for private gain alone the general transportation business of the country. The increase and improvements in machinery; the application of steam to ocean navigation; the wonderful mineral discoveries in California and other portions of the globe, still further added to the opportunities for the concentration of capital. In short, a new era suddenly dawned upon the business world, and men were everywhere dazzled by the splendid prizes which were thus opened up before them.

At the beginning of the century there were probably not more than two or three millionaires in the country. The first in America lived in Salem, Mass. He was a single millionaire and made his money in legitimate commercial enterprise with the Orient. The next was the great New York merchant who laid the foundation of his fortune mainly by an honest traffic in dry goods. Stewart was the first to astonish the country by a great show of wealth—some five millions—in the early thirties. The newspapers of the day were filled with curious calculations and estimates which such enormous wealth suggested at that early day. Girard, of Philadelphia, was another instance. But little more was heard of millionaires in this country until the opportunities above referred to were presented.

We have now entered upon still another era—an era of millionaires. The country is full of them. As late as 1850 it is doubtful if there were one dozen men in the United States who could clean up one million of dollars each. At this date, according to a table recently prepared by the N. Y. *Tribune*, there are over 2000 Americans who are worth $1,000,000 or upward, 200 of whom are worth from $20,000,000 to $100,000,000 millions, and 400 others from ten to twenty millions; while 31,000 men own one-half the entire wealth of the country! Such an enormous centralization of wealth was never before known in the entire history of the world. Does any one believe that such rapid accumulation of property in so few hands could have been effected by anything like fair means? It has beeen accomplished only by piratical business combinations of corporations and trusts, and by unfair stock-jobbing.

At the beginning of this century many who passed as "respectable men" "retired from business" on from two to five hundred thousand dollars, which were then considered enormous fortunes. Those men, when asked by what means they had accumulated such fortunes, replied, with jovial expression of countenance: "O, wool and ivory," which everybody understood to mean piracy and the slave trade. Such admission, at that time, fixed no special odium or disgrace upon the "operators." But how would such people be regarded at the present time? And we venture the assertion, in view of the present drift of public opinion, that the time is not far distant when it will be considered quite as disgraceful to confess to having amassed ten or twenty millions or more by such means as our present millionaires are employing—means which tend directly to impoverish the masses—as it would be to confess at the present day to have amassed millions by piracy and the slave trade.

We are passing through a period when the public mind and public conscience are being educated up to a higher plane of morality than existed when the slave trade was considered honorable, and when piratical expeditions were easily made to pass for daring commercial ventures in unknown or distant seas. The adventurers of to-day, unlike their predecessors, are making covert raids upon their very neighbors, and so adroitly have these raids been conducted, and so quickly and enormously great have been the fortunes amassed, that the public has become, in a measure, dazed at the results; but the enormity of the wrong has at last been fully shown and realized and measures are rapidly being taken to meet the emergency.

The problem of how to deal with it has been made plain by the enemy himself—united and concentrated effort. Such effort is sure to win, especially when a vastly greater aggregation of numbers is found on the side of right and justice. This is an age of system and machinery, and the education of the day has been sufficient to imbue the masses with practical capacity and executive skill fully equal to meet the emergency in which they find themselves placed. The federation of labor, as exemplified in the Grange, in the Farmers' Alliance and in the various labor unions, has already come to the front in a solid phalanx for united action. The result of the late election gives abundant evidence that the masses mean business. Already their organizations hold the balance of power in nearly half the States of the Union, full power in several State legislatures and the balance of power in several others. Twenty years ago the only full representative of labor in the Congress of the United States was a member from the State of Georgia, and he battled manfully and alone for the interests of labor until he died at his post. To-day there are no less than 65 farmers in the House and six in the Senate. We have also a farmer in the Cabinet. A large proportion, if not a majority of these men are members of the Grange.

To-day organized labor has the eye and ear of the community and the sympathy and proffered help of a large proportion of our lawmakers, as it never had before. Present indications warrant the belief that inside of the next five years "the privileged classes" which now "hold the fort" in our National and State legislatures and treat only with disdain the vast body of laborers and men of moderate means, will change sides with the wage earners and be no longer able to dictate to the lawmakers.

The farmers, by right of numbers and the importance of their calling, have taken the lead in this great movement of the masses, and they propose to keep it and to guide the same into right and proper channels. They will neither themselves antagonize nor allow others to antagonize the just rights of capital. They recognize the fact that labor can accomplish very little without the aid and cooperation of capital. They simply seek to draw the line, where the line should be drawn, between enterprise which is legitimate and for the good of all, and that which tends only to concentrate capital and aggrandize the few. They recognize that wealth won by foresight and honest industry is worthily acquired and should be peacefully enjoyed: but the idea is everywhere growing that the means and possibilities by which multimillionaires have heretofore been made should be absolutely stopped. How that may be done without infringing on natural and vested rights is just now a problem of anxious consideration. But sooner or later it will be solved without any hindrance to the wheels of progress or any material disturbance to our existing financial and social conditions.

The Secretary's Column.

By A. T. DEWEY, Secretary State Grange of California.

JOHN TUOHY, W. M. of Tulare Grange, has a splendid home in Tulare City, and is well rated among the leading and substantial farmers of the county.

THE State Grange Report for 1892 was printed by Mr. H. Lick, by contract, and the first copies furnished the W. M. of S. G. were mailed by the Secretary.

WORK IN SEASON.—Between now and June will be the best season of the year to forward Grange work in this State. No time should be lost in running the first furrows of the season's labor. Start the work along!

WANTS THE STATE GRANGE.—Sister Perry writes from Merced mentioning some strong inducements on behalf of that city and county seat for locating the next session of the S. G. within its hospitable midst.

ALBERT G. WOODS, Treasurer of Tulare Grange, is residing with his family in Tulare. His teams are active in plowing and cultivating grain and alfafa near town. He has recently contracted to prepare for irrigating, seeding and cultivating for several seasons 80 to 100 acres on A. T. Dewey's NW quarter of section 22, one mile south of Tulare City limits.

QUARTERLY REPORTS.—Notwithstanding the recent stormy days for meeting, the following Granges have already sent in returns for the last quarter of 1892: Roseville, Pescadero, New Hope, American River, Bennett Valley, Selma, Tulare, Lockeford, Two Rock. Washington, Yuba City. It is hoped all other Granges will soon square the record of the old year and begin the new with bright and encouraging prospects.

EIGHTEEN HUNDRED AND NINETY-THREE.

During this week the election of officers in Subordinate Granges should be completed. We hope all will have chosen wisely preparatory for a good year's work. Installations will be in order after January 1st. Too much importance cannot be placed upon having a large attendance and an interesting session at the initial meeting of 1893. Let the experiences of the past and the rewards of the future inspire the brothers and sisters throughout our Grange field to labor more earnestly and diligently, and even heroically, than ever before. Hours spent in the Grange will certainly remain as among the brightest in enduring memory.

A GRANGE COLLECTION.

Why cannot the Patrons of California unite in making a unique and interesting collection of imperishable and rare products of the soil, natural wonders, curious, etc., at the World's Fair? We believe the Patrons of our State could easily lead those of all others in a display that would attract the attention and please the people of all nations and classes. A successful exhibit of the kind would gain the Patrons of California more friends and acquaintances of a desirable sort from abroad than any other available enterprise we can think of. It would help the farmers' Order and the State at large. Who will send further suggestions on this subject? Let it be discussed in the Granges. Who will volunteer to help in getting up such an exhibit?

WHO WILL WORK AND PERSEVERE?

The subject of a farm to farm canvas for the establishment of new Granges and the revival of old ones will be discussed by the Executive Committee at Sacramento next week. Now, what brothers and sisters will devote a season to the building up of the Order by a friendly canvas in some location where such work ought to be undertaken? Who can spend one week, one month, or more in so good a cause if well paid for time and expenses in event of success.

Write at once to the Worthy Master or Secretary what work in your own or neighboring sections you think ought to be done. What you believe you can do. What you are willing to do. What you think some one else can and will do if asked. The Committee, no doubt, wants all the information you can give and with as little delay as possible.

EXECUTIVE COMMITTEE MEETING

The Executive Committee met at the office of the Secretary, December 23d, A. M. Bros. B. F. Walton, Cyrus Jones and A. T. Dewey, Secretary, were present. Owing to the severe storm Worthy Master Davis failed to appear.

The Secretary was requested to suggest the purchase of the revised edition of the Constitution and By-Laws in sufficient numbers by each Subordinate Grange to supply its old members and each new member upon being initiated with a copy.

Among the bills allowed were those of H. Lick for printing 600 copies of the Annual Proceedings of 1892, $100; and Jos. Winterburn & Co., for printing 1000 and binding 500 copies of the By-Laws and Constitution, $52.50.

The Secretary announced having sent Masters and Secretaries of Subordinate Granges the Annual Proceedings and recommended another copy be forwarded to the Lecturers, which recommendation was favored by the Committee.

Letters furnishing the names of members-elect of the legislature considered friendly to farming interests were read by the Secretary. The matter of legislation and appointment of a committee was considered. In absence of the W. M. the matter was referred to the next meeting.

The Secretary was requested to revise the proposed amendment No. 2 to the Constitution recently published in the RURAL PRESS.

The meeting adjourned to meet at Sacramento, at 1 o'clock P. M., Wednesday, January 4, 1893, but a recent letter from Worthy Master Davis, requesting that the meeting be held on the 5th, may change the date.

GRANGE ELECTIONS.

[Secretaries are requested to send us as early report as possible for publication under this head.]

DANVILLE GRANGE.—Election Dec. 17; officers chosen: F. B. More, M.; S. F. Ramage, O.; D. N. Sherburn, L.; Geo. Hall, S.; Perry Baldwin, A. S.; J. C. Burgess, C.; Chas. Wood, T.; Miss Mira C. More, Sec.; W. Z. Stone, G. K.; Miss S. E. Wood, Ceres; Miss Ethel Opydke, P.; Miss Sarah Stone, F.; Mrs. Allie Gould, L. A. S.; S. F. Ramage, Trustee. Date of Installation, Jan. 7, 1893.

ROSEVILLE GRANGE.—Election Dec. 17; officers chosen: E. C. Bedell, M.; S. Pilcher, O.; J. H. Gould, L.; C. B. Keys, S.; Willey Pilcher, A. S.; Mrs. Powell, C.; A. Bedell, T.; S. S. Gladney, Sec.; A. E. Farnham, G. K.; Jenny Bedell, Ceres; Mrs. C. B. Keys, P.; Carra Farnham, F.; Jennie Gould, L. A. S.; A. E. Farnham, Trustee. Date of installation, Jan. 7, 1893.

SELMA GRANGE.—Election Dec. 17; officers chosen: Pro. G. D. Hinds, M.; A. A. Whitten, O.; Mrs. J. K. Roadhouse, L.; Anthor Ross, S.; Wm. E. Brown, A. S.; Rebecca Meegee, C.; S B. Holton, T.; J. J. Roadhouse, Sec.; J. M. Hamilton, G. K.; Mrs. S. B. Holton, Ceres; Mrs. S. B. Orr, P.; Miss O. E. Shaw, F.; Miss Jessie Ross, L. A. S.; C. C. Scott, Trustee. Date of installation, Jan. 7, 1893.

AMERICAN RIVER GRANGE.—Election Dec. 10; officers chosen: A. A. Harris, M.; Joseph Cornell, O.; David N. Taylor, L; Carl Jensen, S.; George Criswell, A. S.; Mrs. M. Lauridsen, C.; Miss Cicely Cornell, T.; Miss Etta Cornell, Sec.; S. M. Warnock, G. K.; Mrs. M. Studarus, Ceres; Mrs. Daura Hansen, P.; Mrs. Annie Hanson, F.; Miss Edith Taylor, L. A. S.; Jas. Cornell, Sr., Trustee; Mrs. Maggie Studarus, Organist. Date of installation, Jan. 14, 1893.

GRASS VALLEY GRANGE.—Election Dec. 17; officers chosen: Alexander Henderson, M.; Mark Thornton, O.; Mrs. O. L. Twitchell, L.; A. G. Peterson, S.; Wallace Alderman, A. S.; Mrs. Mary Peterson, C.; A. Matteson, T.; O. L. Twitchell, Sec.; W. F. Rowe, G. K.; Mrs. L. Matteson, Ceres; Mrs. L. J. Thompson, P.; Mrs. Wm. Rowe, F.; Miss Lillie Alderman, L. A. S.; A. G. Peterson, Trustee. Date of installation, the first meeting in January, 1893.

BENNETT VALLEY GRANGE.—Election Dec. 17; officers chosen: John Burnham, M.; Peter Hanson, O.; Mrs. Emma Burnham, L.; M. S. Whitaker, S.; J. F. Craven, A. S.; Mrs. H. L. Carr, C.; J. P. Whitaker, T.; Mrs. Anna Whitaker, Sec.; L. H. Hedrick, G. K.; Mrs. M. Benjamin, Ceres; Mrs. E. Hedrick, P.; Miss Lucy Scheibel, F.; Mrs. S. A. Hanson, L. A. S.; D. M. Hedrick, Trustee. Date of installation, Jan. 7, 1893.

LOCKEFORD GRANGE.—Election Dec. 17; officers chosen: Mr. J. M. White, M.; Mrs. J. W. Montgomery, O.; Mrs. C. F. Wakefield, L.; Mr. F. E. McIntire, S.; Mr. W. H. Irvine, A. S.; Mr. S. M. McCloud, C.; Mr. George A. Foster, T.; Mrs. S. L. Locke, Sec.; Mrs. A. E. Wakefield, G. K.; Miss Mertice Locke, Ceres; Miss Orris Hatch, P.; Miss Maud Foster, F.; Mrs. L. J. Locke, L. A. S. Date of installation, Feb. 4, 1893.

SANTA ROSA GRANGE.—Election Dec. 10; officers chosen: Chas. Gamble, M.; George Rogers, O.; S. T. Coulter, L.; Fred L. Saxton, S.; Paul Coulter, A. S.; E. Lida Coulter, C.; John Strong, T.; Glenn Murdock, Sec.; Julius Ort, Jr., G. K.; Alice Peerman, Ceres; Edith C. Saxton, P.; Maud Hawkins, F.; Maud Hendrickson, L. A. S.; Mrs. C. D. Bonner, Trustee. Date of installation, Jan. 14, 1893.

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INFORMATION FOR SETTLERS!

The members of the Kern County Land Company have a national reputation for wealth, business and financial ability. These facts set the matter of reliability at rest. The company's capital stock is $10,000,000.

They have 400,000 acres of arable, irrigable lands upon which the sun shines almost constantly; and their enormous irrigation system renders them independent of the annual rainfall.

A clear title; rotation, variety and certainty of crops; easy terms; availability to persons in moderate circumstances; ground ready for the plow—no stones nor thistles; good society; schools; churches, etc., are a few notable attractions of this region of country.

Kern is the largest county in the San Joaquin Valley. It has the finest climate for curing and drying fruits, etc.

The 400,000-acre territory of the Kern County Land Company is the pick of the county.

Its area is 5,184,000 acres.

Has the largest irrigation system in America.

The home of the peach, French prune, pear and raisin grape.

Planting and harvesting can be carried on every month in the year.

No rocks, hills or stumps on the land.

A failure of crops is unknown on irrigated lands.

Kern county fruits take the first prize at the State Fair.

Land can be made to pay for itself in less than three years.

Grows more alfalfa than any other county in California.

FOR FURTHER PARTICULARS ADDRESS

The advantages of good soil and plenty of sun, which occur in the Kern Valley, would have been of little avail but for the third and all-important one of an abundance of water from never-failing sources.

Through 300 miles of main canals, and 1,100 miles of laterals, the great Kern river furnishes enough moisture to slake the thirst of the 400,000 acres already referred to.

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The system has been constructed in the most careful and scientific manner. Some of the canals are 125 feet wide and six feet deep.

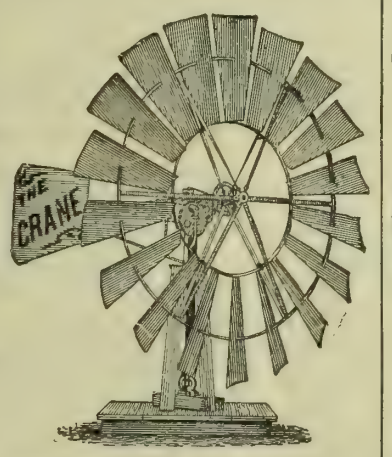
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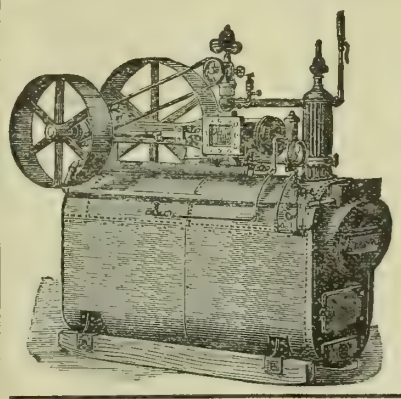
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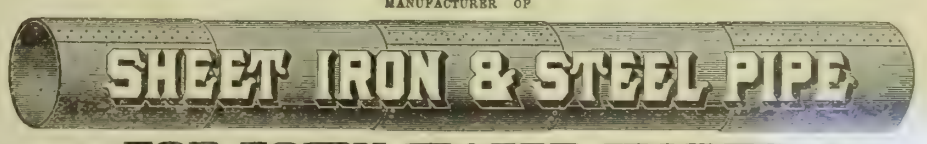
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AGRICULTURAL NOTES.

CALIFORNIA.

Butte.

Oroville *Register*: The California Fruit Co. shipped 600 boxes of oranges from here lately, and about 150 boxes went in small lots. The Citrus Association shipped 300 boxes and at least 100 boxes more in small lots, so that up to the present time something like 1150 boxes have been shipped.

Yolo *Mail*: The other day a resident of Bangor was cutting some trees for firewood, and on a pine-tree of considerable size he noticed a peculiar scar or an old cut. Having heard of the early-day custom of making a safe of the trunks of trees, he carefully cut into this pine and was rewarded by finding an old cap-box full of golddust which brought $50. People are now prospecting for gold among the trees.

Oroville *Mercury*: Tom Kelly and Howard Taber have been engaged the past few days in repairing the tin roof on Perkins & Wise's building at the corner of Montgomery and Myers streets. Yesterday, Taber approached the northern corner of the building, when he was driven away and badly stung about the face by a lot of honey bees. Investigation showed that a swarm of the insects had taken up their abode in one of the ornamental pillars on the roof, and, it being empty, had stored away a large amount of honey. The workmen will have to drive the swarm out before the work of repair can be completed.

The Chico *Chronicle-Record* gives the following account of how a lady in that city caught the chap who was stealing the oranges: "For some time it has been the practice with many persons about Chico to swipe the oranges from the trees in the dooryards about Chico. Some of our people have become very tired of this custom and have determined to put a stop to it. Mrs. F. C. Williams borrowed a steel bear trap, and set it under the orange-tree in front of her residence, Monday night. Yesterday morning she found a specimen of the genus hobo with his foot between the jaws of the trap. After extracting from him a promise that he would sin no more in like manner, Mrs. Williams sprung the jaws of the trap and allowed his trampship to depart; but he walked rather limping as he made his way from the scene of his latest adventures. It is safe to assume that he will not steal any more oranges from Fred Williams' tree."

Mercury: Perhaps the most striking example of what can be done with little money and work in this foothill section is the Drescher tract. About five years ago Mr. Drescher purchased from J. D. Braselton one thousand acres of land which had been given up to grazing purposes. The assessed value of the land then was $3 and $4 an acre. He immediately put out 90 acres to budded orange trees and has since increased the grove to 130 acres. It is to-day a magnificent grove, and Mr. Tucker estimates that it would readily sell for $400 an acre—a total value for these 130 acres of at least $50,000, and he has still unimproved over 700 acres of land that is just as suitable for fruit-growing. Part of the grove is just coming into bearing, and will produce probably 150 boxes of oranges. Phil Persons, who has taken special interest in the matter, says that there are 25 carloads of oranges in Oroville and vicinity. He includes the Thermalito, Palermo and Wyandotte country.

Calaveras.

Mr. John Villinger of Covina, Los Angeles county, informed the *Farmer* that he intended planting 60 acres to orange-trees in Calaveras county next year. He said he believed oranges could be grown as successfully there as in southern California, and on land that can be bought for from $15 to $25 an acre.

Fresno.

Eaton Cor. Fresno *Expositor*: Tom Ponton is fattening 20 hungry American hogs on pumpkins grown on two acres of land. The colonists have stacked their trays, and are now grinding their shears in preparation for the pruning campaign.

A sentiment has obtained against pasturing bands of sheep in vineyards. Many assert that they produce an evil effect on the vines, and all know that they fill the land with cockleburs. The Mooney Bros. evidently believe in the old adage that says something about "better late than never." They have built a drier and are now filling it with raisins, and will probably have it in full blast by Christmas. Owls and skunks are becoming rather numerous, and nightly hold high carnival among fresh-laid eggs and later-day chickens.

Humboldt.

YOUNG LADY KILLS A WILD CAT—One of our fair young ladies, Miss Levina Hamilton, says the Dyerville correspondent of the *Oracle*, has made a record which for bravery and marksmanship is to be envied by all, in killing a large wildcat, the particulars of which are as follows: His catship had frequently made raids on the young porkers of the place of her father, and during the absence of the men folks Miss Hamilton determined to put a stop to his audacious conduct. So, armed with a Winchester rifle and accompanied by the trusty house dog, she sallied forth in search of his catship. The dog soon found the trail and in a short time ran the cat up a tree, and when Miss Hamilton arrived on the spot she discovered the cat near the top of the tree. She, without fear, brought her gun into position, and taking deliberate aim, fired, and down came a monster cat of the lynx species.

Kern.

It has required the services of 2480 cars to carry the freight shipped from Kern county for the eleven months ending December 1, 1892.

Lassen.

Bieber *Tribune*: Jonn Silva started for Nevada last week with a band of about sixteen hundred sheep. Snow commenced falling when he left Hayden Hill, and when he reached the upper part of Said valley he could go no further, the snow being about five feet deep. The Susanville mail carrier passed where he was last Thursday, and reports that the sheep were bunching up on each other, were without feed, and that Mr. Silva's loss will be great.

Los Angeles.

During the last three months, from within a radius of five miles from Whittier, Los Angeles county, 2,000,000 pounds of English walnuts have been shipped, yielding an average of 8 cents.

A report comes from Covina that Geo. Rhorer has been offered $80 000 for the eighty-acre orange grove that he purchased of M Baldridge in a trade for his home place east of town last spring.

Pomona *Progress*: An olive grower who has three acres of five-year-old olive trees east of town, says he has sold the crop, estimated at four tons, for $100 per ton. Such returns ought to be satisfactory for trees of that age.

A couple of gentlemen from Indianapolis, who represent Eastern capitalists, are in Los Angeles working up a big scheme to buy large tracts of land in the six counties of southern California, and to bring people in from the East who will be producers and permanent residents.

Covina *Argus:* If some unforeseen calamity does not befall the orange crop of Covina, it will be a very heavy one considering the age of the trees. The four or five-year-old orchards are very heavily loaded, in fact the trees have too many on them and the branches have to be propped up to keep the fruit from doing the tree damage.

PRUNES BRING WEALTH—Pomona *Progress*: Still another report of profit in growing prunes in Pomona valley has come to us, and it is one of the very best we have had this season. From 175 trees on two acres on the Wheatley place, south of town, there were gathered last month 29,700 pounds of fruit. These were dried, in the proportion of two and one-half pounds of green for one of dried. The dried product amounted to 11,430, and it sold for 9 cents a pound. The returns from the little orchard for the year were, therefore, $1,028.70. The clear profit from the property after paying off every expense upon it for the past twelve months and for the extra work of drying the crop and putting it in sacks for the market was $987 or $493 an acre. The trees are seven years old, and have not been irrigated for two years. In 1890, when the orchard was but five years old, the same trees yielded a crop that sold for $460. The orchard has thus far paid far more than its total cost to date.

A LESSON IN CONTENTMENT.—Pomona *Progress:* A Pomona ranchman who had been annoyed by a rat which constantly made way with chicken feed in the barn, set a trap for the marauder about a month ago. The trap was a new fangled wire affair, baited with a nice piece of toasted cheese, but the rat was too cunning, so an old-fashioned steel-pronged trap was buried under the chaff in the well-worn path from under the hay, and the new trap pushed aside. The old rat was caught the first night and killed, and no one thought of the other trap for three weeks. When the farmers's boy went to look for it, a mass of stuff in the centre attracted his attention, and, on examination, it was found that a couple of half-grown rats had found their way into it, and had settled down to make the best of the situation. They had drawn in through the spaces at least two quarts of chaff and bits of hay and had gone to housekeeping. They looked surprised at being disturbed, and the farmer is now exhibiting them as specimens of contentment under grave difficulties.

Marin.

Farmers about San Rafael, especially in the lowlands near the coast, are complaining of a weed that has germinated of late from the rich soil, which the cows eat and and which gives a peculiar taste to the milk, so much so that in some districts the milk is unpalatable. It also affects the butter made from the same.

Monterey.

Pajaronian: The Moro Cojo beet crop is a record-breaker, and the yield promises to eclipse anything in the history of beet growing in this country. The large tract that has been turning off beets for the past two weeks has been running 30 tons to the acre as steadily as clockwork, and is good for that average for the balance of the season.

Nevada.

Colusa *Sun*: A rattlesnake will not cross a hair rope. Experienced campers, when they fear the rattlesnakes are around, encircle their camp with a hair lariat or two and feel secure. The Grass Valley *Telegraph* adds: Do you know the reason? The hair rope has ends of hairs sticking out all over it, and when the snake endeavors to cross, those stiff hair-ends get between the scales of the snake and tickle him almost to death. He can stand an inch or so of the tickle, but does not want to go his whole length, and so he turns away. This is a fact.

Orange.

Santa Ana *Blade*: Ripe oranges are rapidly appearing in the market, and the orange crop of the valley in a short time will be ready for shipment. The present crop is very heavy and unusually fine.

The directors of the Anaheim Beet Sugar Co-operative Company have selected a lot for the building and ordered 25 tons of beet-seed. The factory is to cost $375,000. The capital is assured, and the stock is practically all taken. The capital is partly local and partly foreign. Orange county is raising celery and shipping it to the East by the carload.

The Anaheim *Gazette* says: "Mr. Gilman's walnut crop has been packed and delivered at the depot, and he will receive a check for $4000 for it. Mr. Gilman some months ago sold his orange crop for upward of $13,000, and in all respects is doing quite well."

Orange *News*: A successful rancher told us a few days ago that one of the cheapest and best fertilizers he has yet discovered is peavines. His plan is to take a few pickings of peas from the vines and then plow under. Crops raised on the land so fertilized give very plain evidence of the benefit derived from the treatment."

The Santa Ana *Blade* gives the following advice: Plant orange orchards if you wish a profitable yield in time; plant a vineyard if you want quick returns and desire to grow rich in the near future; plant barley, potatoes, corn, pumpkins, beans, etc., if you want prolific crops and wish to secure a good living. You will come out all right on any one of the ventures.

Santa Ana *Blade*: There is liable to be a boom in the raising of citron, a fruit almost unknown in this section, but which, when crystallized, sells readily for 50 cents per pound. That grown in Southern California and crystallized at Los Angeles, commands a much higher price than the imported article, and the raising of it will prove very profitable.

Sacramento.

Record-Union: There was a Christmas turkey suit in Justice Henry's court Friday. It appears that a farmer named Thomas Mahan held a note against a neighbor named Pony Brown for $110, and had heard that Pony had bragged that he did not intend to pay the money he owed. Here was where Pony overlooked his hand, as the card experts would say. He started for this city early yesterday morning with a load of Christmas turkeys—some 136 or more—intending to dispose of them for quite a snug little sum. Mahan heard of his debtor's intended voyage, and resolved to do a little "bizness" himself. So he harnessed his horse and galloped to town ahead of Brown. He hunted up S. J. Holsinger, the attorney, and told him about the note. The attorney hied himself to Justice Henry, got out an attachment, and when Brown arrived had it served upon him. Turkeys were selling at 17 cents a pound just before Brown arrived, but the marketmen had been relying upon his invoice to supply the demands upon them; but when it was found that his stock had been captured, and that there were telephonic demands upon this city from San Francisco for more turkeys, the rate went up to 23 cents per pound. Considerable pressure was brought to bear upon Brown, and he finally agreed to pay the money due Mahan, in order to release the turkeys.

San Bernardino.

The sentiment for county division in San Bernardino county is being kept active by mass meetings and public discussions. Riverside is the name proposed for the new county.

Riverside *Press*: C. B. Shrock brought to our office a peculiar-looking orange—a freak of nature. One-half of the orange is yellow, the other half green, the line of joining as distinct and sharp as though made with a knife. The orange is a Navel, large size and perfectly formed.

Some of the finest tomatoes we have ever seen were brought into this office, says the Riverside *Press*, by John Hall. They are very large, weighing over 20 ounces each, meaty and nice flavor. They are called French's early and are just ripening. The frost the last few nights has not injured Mr. Hall's vines.

Sugar beet growing is going to take on very large proportions on the Chino ranch the coming season. A disposition is manifest among the farmers to plant to beets every acre that can be had for the purpose; and did the capacity of the factory warrant a larger acreage, it would undoubtedly be planted.

Orange Belt: Arthur L. Hooper of Los Angeles reports the following yield of a three-acre orchard planted to the Lemon and the Orange Cling and the Salway: The second year from planting the returns from his peach crop were $40. The returns for corn and barley raised between the rows of trees were $165. The third year the returns from the peach crop were $400. The returns for the fourth year were $260. The returns of this, the fifth year, $750. These returns are all net, as the crop of barley raised between the trees amply paid for all cultivation, irrigation, and gathering the crop.

San Luis Obispo.

Reasoner: A project is on foot by the San Luis Obispo Alliance to build a flouring mill at this place. It would seem that there is a good field here for such an enterprise.

Solano.

New Era: Suisun bay is full of mallard, widgeon, sprig and teal ducks. The canvasback are very scarce, both in the tules and the bay, and it looks as if they have ceased to visit this section. Gray and white geese are plentiful.

Santa Clara.

San Jose *Mercury*: Nearly 75,000,000 pounds of freight have been shipped to Eastern cities from San Jose during the present year from January to the first of December, and 20,979,240 pounds of this shipment was dried fruit. The canned-fruit shipment has reached the enormous total of 20,711,785 pounds. The dried-prune shipment of 16,972,830 pounds was the second heaviest shipment, and green fruit takes third place with 15,656,675 pounds to its credit. At the end of the year the grand total will probably be between 90,000,000 and 100,000,000 pounds. The different items will increase, but the consignments will be in about the same order as in the appended statement. The grand total for 1891 was 63,404,260 pounds, according to the figures at the broad-gauge depot, and the figures given below, to December 1st.

Sonoma.

Santa Rosa *Democrat*: "What! A dollar for skinning that cow? Why, I only got 50 cents for the hide." O. H. Hoag, loquator; time, 5 P. M. "I can't help that. One dollar is my price for skinning a cow." "All right," said Obe, handing over two halves; "but that beats me for bad luck. My cow, worth $50, got sick. I paid $10 for a veterinary surgeon, $5 for medicine, and yet the cow died. I thought I'd save something and had my fine Jersey skinned. I got four bits for the hide, and here's a bill of $1 for taking it off. It's a cold day anyway, and I never feel well when the north wind blows, and blankety-blank the McKinley bill, which brought all this turmoil on the country."

Sutter.

The Board of Supervisors of Sutter county have placed a bounty of $7.50 on every coyote scalp taken in that county. This together with the $5 additional bounty offered by the State makes coyote-hunting profitable business in that section.

Sutter County *Farmer*: The nurserymen are digging their trees and vines preparatory for delivery for planting. Usually the taking up of nursery stock is quite a job, but a system of plowing them up is now used. Granville Stabler has been operating a tree plow or digger in the nurseries in this vicinity, which consists of a large steel hoop or shear which is pulled along the rows by eight or ten horses, and the roots of the trees are cut off several feet below the surface of the ground and the soil loosened so that the trees can be readily pulled up by hand.

Tulare.

Visalia *Delta*: J. J. Cairns of Lindsay intends to plant 20,000 acres to wheat this winter. Mr. Cairns is one of the largest wheatgrowers in this State.

Tulare *Register*: Brown Wilkes, a three-year-old and the first colt sired by J. N. Anderson's Bay Wilkes, was recently sold to Mr. Worley of this county for $1000. The colt is now being trained at the Tulare track by Mr. Anderson.

Ventura.

Ventura *Free Press*: Leading honey men in this section look upon the prospects for a good season as very flattering. Early rains have brought out flowers, and the coming spring and early summer will abound with bee-food.

Yolo.

Weekly Mail: Duck shooting is reported to be about the most disappointing sport in which a young man can engage at the present time. For many years game has not been so scarce as this season. It is said that the ubiquitous carp and catfish eat the duck feed and the birds of sport are compelled to hunt for pastures new.

W. P. Merrill, of the firm of Merrill & Nelson, who are charged with selling 151 tons of wheat stored with them at their Knights Landing warehouse, was examined at Woodland night before last to determine his sanity. He was found to be suffering from acute dementia and was committed to the Napa Asylum. The officers are making every effort to capture Nelson, whose whereabouts still remains a mystery.

Yuba.

The flour mills of Chico, Gridley, Satena and Wheatland are to be dismantled and the Buckeye Mill Company of Marysville is to supply the needed flour. The *Four Corners* says that the people of Wheatland are not going to stand this business, and are to put up a fine mill.

OREGON.

Several farmers in Douglass county, have lifted heavy mortgages from their farms by the profits on their prune orchards.

A coyote was killed the other night while leisurely making his way along one of the principal streets of Pendleton, Or. Although a comparatively new town, it is some time since one of these animals was seen in Pendleton's streets.

An immense hop-field is being planted on Burdock's ranch, about one mile west of Coyote Station on the Columbia River. One thousand acres of tillable land lying between the bluff and the Colorado River will be utilized in the undertaking.

Salem Statesman: The future of the hop market is one of those problems "past finding out." While we do not now expect to see a recovery from the present decline, yet we do not look for any break on the choice growths suitable for export. The low grades to which there has as yet been no fixed market value, it is difficult to even guess what they will go off at; as yet we have failed to draw an offer on them. We estimate that about one-half, or, in round numbers, 20,000 bales of the California crop, one-fourth, or about 5,000 bales of the Oregon crop, and one-seventh, or, in round numbers, 3,000 bales of the Washington crop have gone forward from the coast.

WASHINGTON.

Patents have been granted to women for more than 3,000 acres of land in four townships alone in the Big Bend country, Washington, and four or five more are still holding their claims until such time as they can prove up on them. Some of these ranches are under cultivation, and bring in a comfortable revenue to their plucky owners.

Fire destroyed the elevator of the Pacific Coast Elevator Company at Fairfield, Spokane county, Washington, Wednesday evening. Sixty thousand bushels of wheat were consumed. The loss is estimated between $60,000 and $70,000.

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Seeds, Plants, Etc., Continued on Page 567.

How Needles Are Made.

Needles are manufactured out of superior quality of cast-steel wire cut into lengths to make two at a time. Pieces are straightened upon an iron table by means of an instrument termed a "rubbing knife." The wire is then pointed by automatic machinery provided with a fan or shaft to carry away the steel and grindstone dust, which is very injurious to inhale. In former days the lives of workmen employed in the needle trade were considerably shortened by breathing air charged with particles. Indeed, the following is a narrative told by a doctor in the district of the industry concerning a patient, a hand needle-pointer by trade, who complained that he felt a hard ball of something in his trachea, which rose and fell between his chest and throat. The doctor ridiculed the idea and told him it was nonsense, but the man still persisted it was there, and asked him if he died to examine him. After the poor fellow's death a post mortem examination was made and resulted in a solid mass of steel and stone dust about the size of a bird's egg being found, as he had said, in his throat, and the lungs were so encrusted with steel that a knife would scarcely pierce them. It was therefore truly a blessing to these busy workmen when this deadly process was done away with, and in its stead a healthy one substituted.

After the operation of pointing, the wires are stamped and then pierced to form the eyes. As the diameters of the wires used in this industry are usually very small *e. g.* .03 of an inch, it will be readily apparent that the above process involves considerable accuracy and skill. The "burrs" produced by stamping are afterward removed by means of flat grindstones called filing machines. A "spit" of these double needles is next placed between a hand vise, termed "clams," and divided into single ones, requiring only to have their heads "rounded" by filing to furnish the complete articles.

A finished needle, however, must have a hard and elastic temper, whereas these, in their present state, are softer than the wire out of which they were made. Therefore, after the needles have been burnished in the eyes, they are hardened by heating in an oven, and subsequently cooled by plunging them into oil. This rapid cooling of the steel makes it as brittle as glass. The needles will now almost break upon touching them, indeed, in this condition they would be as useless as in the soft state. To reduce them to a perfect state of elasticity, temperature has to be again raised about 600 degrees, and then by allowing them to cool gradually the required degree of elasticity is obtained. During the process of hardening, the fire makes many of the needles crooked and these have to be picked out and straightened by a small hammer, one at a time, on an anvil. The heads are afterward softened by the application of heat for facilitating burnishing. The process of scouring the needles bright takes about a week. They are mixed with oil, soft soap and emery powder, wrapped in loose canvas, and placed in a kind of mangle worked by mechanical power. This scouring process done, the needles are washed in hot water and dried in sawdust.

The points, slightly blunted by passing through the various processes described, are now set upon a small revolving grindstone and the eyes reburnished. The next operation is that of polishing the needles, and which is performed by a rapidly rotating wheel covered with prepared leather. The needles are caused to pass many times over the leather in order to thoroughly polish them. Finally they are counted and stuck by women into cloth, wrapped in paper, and labeled for the market. — Chicago Journal of Commerce.

Structure of the Eye.

That the structure of the eye suggests comparison with a photographic camera is an exceedingly trite observation. The "sensitiveness," as it were, of the retinal "plate" is determined, other things being equal, by what is commonly called acuteness of vision. And it may be remarked, in this connection, that there must be a definite "length of exposure" necessary for the impressment of the retinal image upon the mind. The true optical exposure may, of course, be an exceedingly short one, but there is the retinal—probably retinal, but possibly, in part, cerebral—persistence of action analogous to phosphorescence, to be reckoned with, and we should like to know to what extent the effect of this upon the brain is cumulative.

Every one knows by experience that it is impossible for the mind to obtain a passing glimpse even of one out of a train of very rapidly successive images upon the retina. But it is also known, as we have just remarked, that a most exceedingly short retinal exposure is sufficient, provided that the subsequent "persistence" is not interfered with. A simple experiment to estimate the relative importance of optical exposure and of "persistence," in regard to the production of cerebral action, would be to suddenly extinguish the light while observing a zoetropic succession of images.

It is complained, and we think with reason, that the properties of the retina, regarded as a photographic surface, have not been sufficiently investigated, and that the records of such experiments, as have been tried, are not very accessible. The question whether the excitation, active or merely persistent, of one color sense is favorable or otherwise to the sensitiveness of the other color senses, has been recently asked. So, too, the question how the period of persistence varies with the quantity and quality of light; what facts can be discovered by photographic retinoscopy; whether problems relating to the color senses, and the extent to which "persistence" is accompanied by surface phosphorescence, could not be most accurately determined by photographing retinal images? The suggestion to study the eye photographically is, in our opinion, worthy of attention. Actinic illumination or images would have the advantage of not irritating the eye or causing contraction of the pupil. The only doubt we entertain is as to the sufficient transparency to actinism of the substance of the eye.—Optician.

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Mt. Pleasant, Texas, June 20, 1888.

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BRUISES.

Pittsburg, Pa., 302 Wylie Ave., Jan. 29, '87

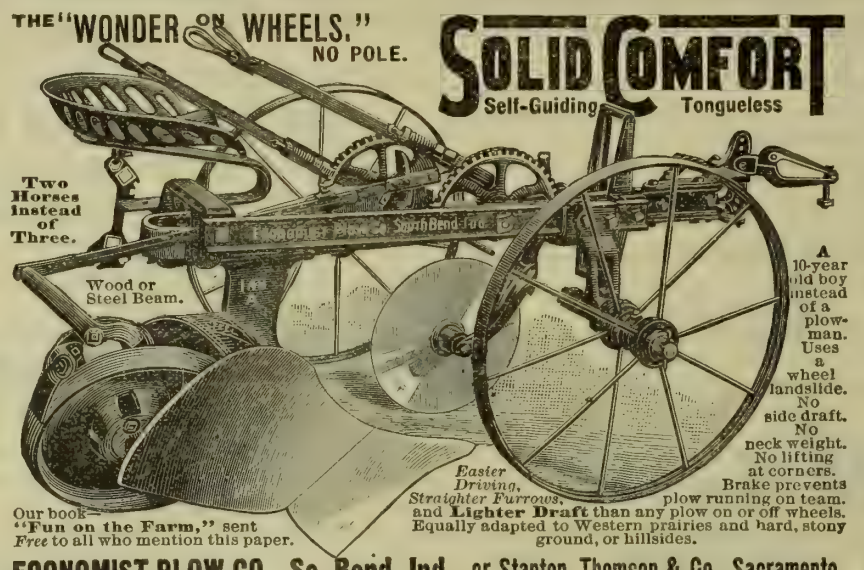
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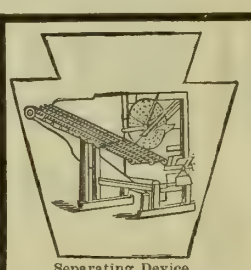
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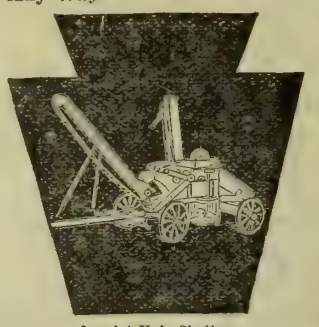
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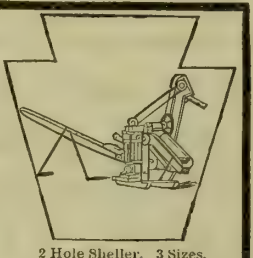

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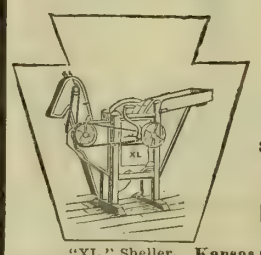

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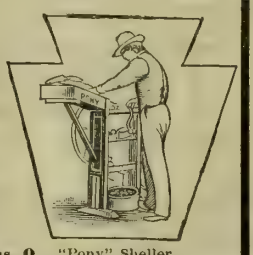
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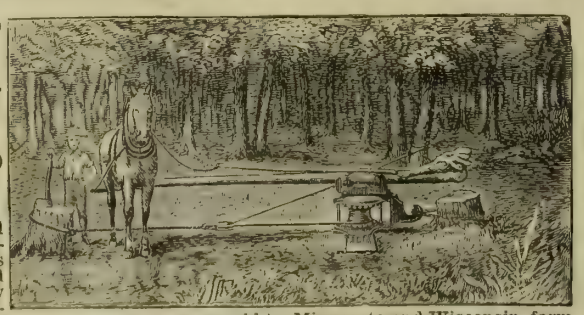

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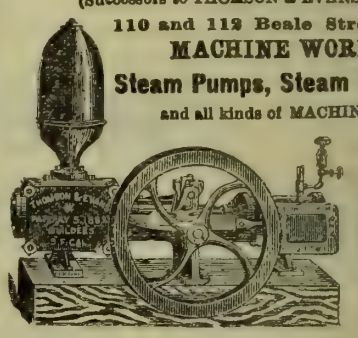
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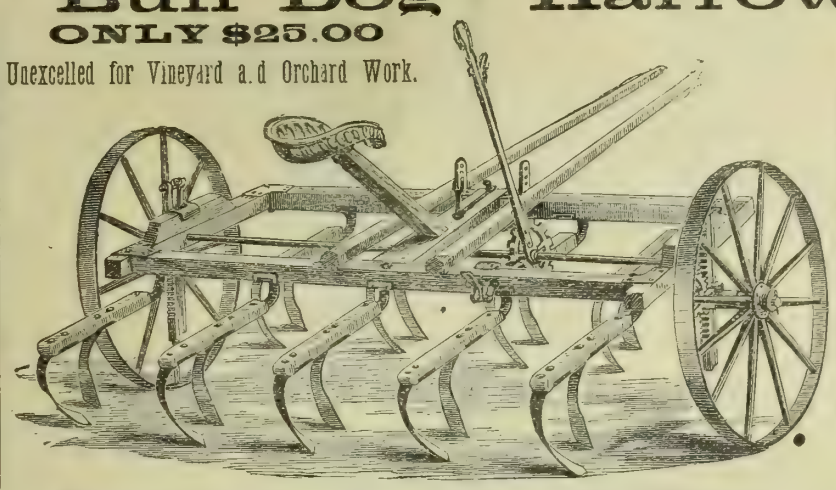
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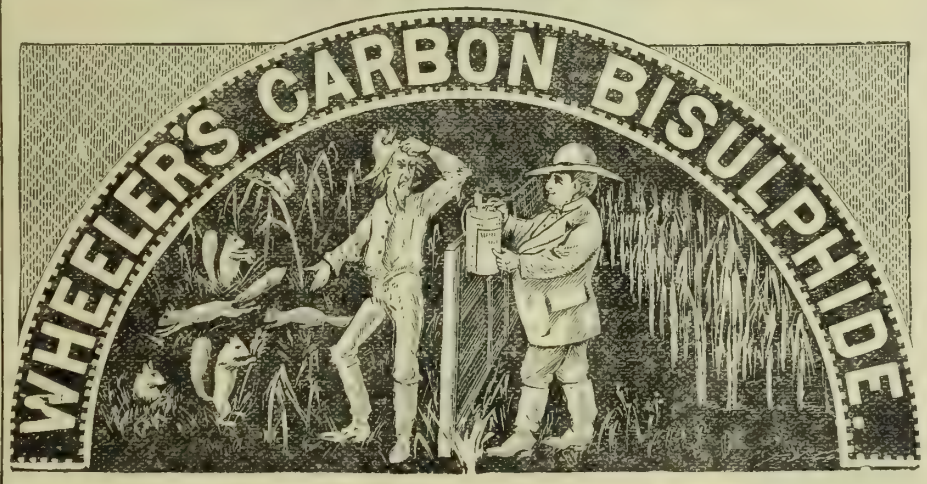
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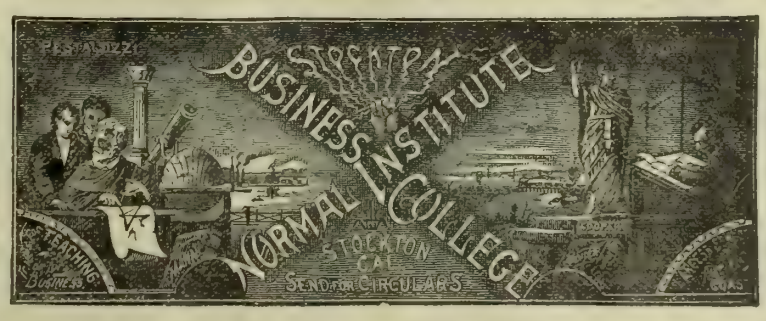
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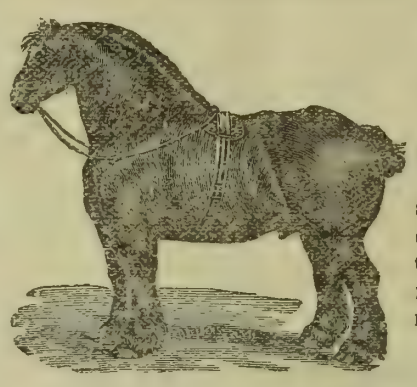
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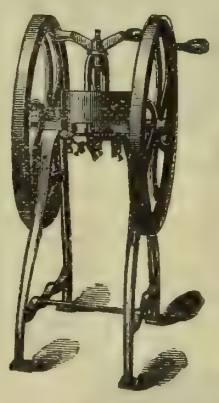
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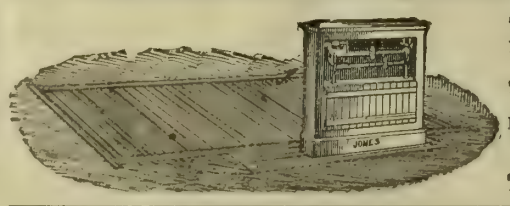
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S. F. Market Report

Market Review.

SAN FRANCISCO, Dec. 28, 1892

Jobbers and merchants suffered severely from the bad weather that ushered in the Christmas holidays. Both had made large preparations for ample Christmas trade, and both were, to a considerable degree, disappointed. Customers were kept indoors by the violence of the storm, and those who handled perishable goods especially were severe sufferers in consequence. Jobbers say they have not experienced so unprofitable a Christmas in many years. If the storm had held off a few days, stocks might have been cleaned up, and happiness would therefore have been their portion.

THE WHEAT SITUATION.

It is a matter of regret to the RURAL PRESS that it is not able to give, at this Christmas season, cheering news to its thousands of agricultural readers of substantial improvement in the wheat situation. A slight sympton of strength manifested itself yesterday, and quotations experienced a small advance, but advices today are not more encouraging than they have been for some time in the past. The market is very weak, and it is difficult and unsafe to predict when it will improve. There is some comfort in the reflection that things cannot well be worse, and that when a movement does begin, it must be upward. The general situation is summed up by Starr & Co. in a circular letter as follows:

The United States wheat crop is now the principal influence affecting wheat prices. It is almost certain that not over 50,000,000 bushels of the abnormally large United States 1891 crop, estimated to be 613,000,000 bushels was carried over into the crop of 1892. Notwithstanding the fact that the crop of 1892 is so much below that of 1891, and that the exports so far in 1892 have been within ten per cent of the same time last year, the quantity of wheat on passage to Europe from the United States is now just about the same as one year ago, but then France required about 70,000,000 bushels more than she does this year, Great Britain's wants being about the same in both years. Stocks in the United Kingdom are now about 260,000 short tons in excess of the same time last year, while the visible supply of wheat in the eastern States, which on December 14th 1891, with their abnormally large crop, was 42,250,000 bushels, was on the 19th inst. up to the enormous figure of 78,350,000 bushels, which is regarded as being only four to six weeks distance from Europe

The excess wheat of 1892 over that of 1891 is therefore,

	Short Tons.
Excess of U. K. stocks	260,000
Smaller wants of France	2,000 000
U. S. visible supply excess	1,060,000
Total excess	3,320,000

Owing to the continued decline in the price of silver, and the consequent drop in rates of exchange, the British wheat importer can obtain now for £1 sterling, just double the quantity of wheat from India and Russia than he could 15 or 20 years ago. This greatly reduces European prices of American wheat.

Notwithstanding a very material shortage in the crop of United States 1892 from 1891, there is now an excess in the visible supply of 3,320,000 short tons, or about 112,000,000 bushels of wheat over the previous year. It is clear that there can be no permanent increase in prices until there is a prospect of reduction of this enormous surplus. Where the excess is in a fair way to be materially reduced or removed, prices will experience a substantial advance. There seems to be no immediate likelihood of such reduction. Russia, notwithstanding its recent famine, is now a heavy exporter. In one week recently, 150,000 tons of wheat were shipped.

Barley.

There is a comparatively easy feeling in the barley trade, though prices have undergone no marked advance. Dealers do not hesitate to affirm that the time will soon be at hand when sellers may expect and receive better prices.

There is nothing doing in oats, though a favorable turn is looked for after the new year.

A comfortable tone prevails in the hay trade. Quotations are unchanged.

Smoked and Salted Meats.

A very stiff feeling is noted in salted and smoked meats, and there are sound reasons to expect further advances in the near future. Prices are already higher all along the line of Eastern meats. The chief cause is the almost unprecedented shortage in the East and the consequent inactivity of packers. The movement here is confined largely to Eastern products, local meats having as yet experienced no special improvement. Receipts of California meats are light. It seems inevitable that the California meats must engage in the general improvement in prices.

Potatoes.

Potatoes have experienced a general advance, except sweets. The causes lie in small receipts and the advance of the season. Heavier imports from Oregon are expected after the new year, and they may have a tendency to interfere with the upward movement.

Onions are higher. Receipts are small.

Poultry.

The bottom has dropped completely out of the poultry market, just as the RURAL PRESS anticipated. The holiday demand was unexpectedly light, being reduced largely by the storm. Turkeys were quoted as high as 24 cents for choice dressed, but to-day the minimum quotation is 12½ cents, with a range up to 18, according to quality. Hens drag. Ducks and geese are in poor demand.

The wild-game market is in sorry condition. Receipts are in very poor shape, owing to the storm. Quotations are nominal, dealers getting rid of stocks for anything offered.

Dairy Produce.

Butter is in fair demand and the market shows a firmer tone. Choice qualities hold their own as regards prices, though consumers show a preference for packed and Eastern. The only advance to be noted is in the latter.

Cheese is in good tone, and prices for choice have shown an upward tendency. Quotations, however, remain the same. Offerings are small and the demand fair.

For eggs prices rule higher for choice, fresh, and selected. The demand is at present very good, though it may be less strong after the new year.

Fruit.

Oranges are beginning to arrive in large quantities and the quality shows constant improvement. Butte county oranges of superior sweetness are in the market. Consumers, however, yet prefer the Japanese orange, because of its uniform ripeness and lower cost. Prices range somewhat lower, under large receipts. The market is considered in good condition. Of Californians, seedlings are preferred to Navels, prices being lower.

California lemons are at a disadvantage under large imports of Sicilies, six carloads of the latter having arrived recently. Prices have dropped.

Of apples and pears the market is very well supplied.

In dried fruits trade is fair only. Peaches, prunes and apricots are firm. Receipts of raisins are slim, though the market is yet in favor of buyers.

Vegetables.

New vegetables have appeared in the market, including peas, tomatoes and cucumbers. Cubumbers are greenhouse, and are quoted at $3 per dozen. Receipts generally are light, and the holiday demand normal. Dealers expect soon to have fresh vegetgbles of nearly all kinds the year round. The production of vegetables in Southern California is on the increase and competition will insure better methods of cultivation and a more constant effort to send supplies of all kinds at all seasons, the climate and soil there making such efforts practicable.

Live Stock.

Steady demand for fresh meats maintains uniform prices. Supplies are fair.

Miscellaneous.

There is nothing to report in wool or hops.

The holiday demand for nuts has lapsed, and trade is stagnant.

For flour there is a uniform local demand. Not much is being done in shipping. Prices are low.

Recapitulation.

The following is a recapitulation of the wine exports for 11 months:

	Gallons.	Cases.	Value.
By rail	5,536,200	.....	$2,214,480
By sea	4,341,112	12,677	1,844,029
Totals	9,877,312	12,677	$4,058,509
1891	9,476,977	8 834	3,961,702
Increase	400,335	3,843	$96,807

In the above recapitulation, shipments from Los Angeles and Colton are omitted in each year. Including these terminals, the total shipments during the first 11 months of 1891 were 9 775 209 gallons by sea and rail (including cases), and 8,297,937 gallons in 1890.

Overland Exports California Fruit.

The shipments of California fruit overland for November and for the first 11 months of the year compare as follows in tons of 200 pounds:

	For. November.	Jan. 1 to Nov. 30
Canned goods, tons	2,847	34,796
Dried fruit	2,770	23 817
Ripe fruit	1,410	47,799
Raisins	7,371	17,847
Totals	14,398	124,259
In 1891	17 601	119,188

Since February 1st the section of the State south of Bakersfield has been omitted from these returns. In November last year these shipments from the southern section embraced 60 tons canned goods, 123 tons dried fruit, 44 tons ripe fruit, and 517 tons raisins, and during the first 11 months of the year the same section contributed 901 tons canned goods, 811 tons dried fruit, 3768 tons ripe fruit, 12,046 tons citrus fruit, and 781 tons raisins, making a grand total of 18,216 tons.

The English Wheat Crop.

LIVERPOOL, Dec. 24.—English wheat crop (official), 58,560,000 bushels; crop of United Kingdom, 60,810,000 bushels. This is 4,000 000 bushels less than expected, and quality poor.

Sugar Shipments.

The sugar shipments by sea and overland during the past 11 months were as follows:

Months.	By Sea	By Rail.	Totals.
January, lbs	112,480	6 194.000	6.306.480
February	1,809,276	14 668,000	16,477 256
March	631 339	13 346 000	13 977,339
April	183 451	12,200,000	12,383 451
May	84,378	16.172,000	16 256,878
June	161 428	18 696,000	18,857,428
July	86 802	18,122,000	18,208,802
August	108,522	15 488 000	15,596,522
September	70,218	6.336 000	6,406.218
October	90,004	4,654,000	4,744 004
November	109,855	1,856 000	1,965,855
Totals	3,417,733	127 732,000	131,179,733

The total shipments by sea and rail during the first 11 months of 1891 were 113 777,785 pounds, against 93,505,893 in 1890 and 119,945,599 in 1889.

Local Tonnage Statistics.

The following is a summary of the engaged and disengaged tonnage here and on the way to this and neighboring ports yesterday morning:

FREE AND CHARTERED.

	1892.	1891.
Chartered for grain	34.333	92,455
Miscellaneous charters	9 989	19 273
Disengaged	140,809	38.870
Totals	185,131	150,598
At neighboring ports—		
Total tons for 1892		23,550
Total tons for 1891		51,295

TONNAGE ON THE WAY.

	1892.	1891.
To San Francisco	271 747	282.392
To San Pedro	6,511	5,612
To San Diego	11,573	21,008
Totals	289,831	309,012

The disengaged list consists of 75 vessels, of which 18 are American, two are Nicaraguan, two are German, two are Italian, one is Norwegian, one is Danish and 49 are British.

The list of vessels in port chartered for grain numbers 22, of which 17 are British, one is Swedish, two are Italian, one is German and one is Norwegian.

Miscellaneous charters include one for Hawaiian Islands, one for United Kingdom via British Columbia, one for New York via Japan, one for United Kingdom via Puget Sound and one for New York direct.

The vessels chartered to load wheat have a total carrying capacity of about 54,900 tons. At this time last year the tonnage under engagement for grain-loading amounted to 92,455 tons, with a carrying capacity of about 147,935.

Produce Receipts.

Receipts of produce from all sources at this port for 7 days ending Dec. 27, '92, were as follows:

Flour, qr. sks	269,988	Chicory, bbls	95
Wheat, ctls	30,037	Hops, bdls	20
Barley, "	6,292	Wool, bdls	101
Rye, "		Hay, ton	710
Oats, "	19,677	Straw, "	20
Corn, "		Wine, gals	189,760
*Butter, "	367	Brandy, "	37,600
do bbls		Raisins, bxs	8,140
do kegs		Honey, cs	
do tubs		Peanuts, sks	
do ½ bxs		Walnuts "	
†Cheese, ctls	446	Almonds "	150
do bxs		Mustard "	
Eggs, doz	24,960	Flax "	
Beans, sks	562	Popcorn "	
Potatoes, sks	14,924	Broom corn, bbls	
Onions, "	1,532	Leather, rolls	383
Bran, " sks	6,345	Tallow, ctls	61
Buckwheat "		Hides	1,878
Middlings "	883.	Pelts	769

Grain Futures.

Liverpool.

The following are the closing prices paid for wheat options per ctl. for the past week:

	Dec.	Jan.	Feb.	Mar.	April.	May.
Thursday	5s 6 d	5s6 6½d	5s6 7½d	5s 9 d	5s9 3½d	5s1 ¼d
Friday	5s6 7½d	5s6 7½d	5s6 9½d	5s10½d	6s0 ¼d	.....
Saturday	.....	.....	.....	.....	.....	.....
Monday	.....	.....	.....	.....	.....	.....
Tuesday	5s6 8½d	5s6 8½d	5s6 10½d	5s11½d	6s0 ½d	.....

The following are the prices for California cargoes for off coast, nearly due and prompt shipments for he past week:

	O. C.	P. S.	N. D.	Market for P. S
Thursday	29s6d	30s0d	30s 0 d	Stagnant
Friday	30s d	30s0d	30s 0d	
Saturday	30s d	30s0d	30s3d	Holiday
Monday	.....	.....	.....	Holiday
Tuesday	.....	.....	.....	Nothing offering

To-day's cablegram is as follows:

LIVERPOOL, Dec. 28.—Wheat—Firmly held. California spot lots, 6s 2½d; off coast, 30s 6d: just shipped, 31s 9d; nearly due, 30s 6d; cargoes off coast, nothing offering; on passage, firmer and held higher; Mark Lane wheat, steadier; weather in England, frost continues.

San Francisco.

WHEAT.

	Buyer Dec	Jan.	May
Thursday, high st	1 26½	....	1 31½
" lowest	1 26½	....	1 30½
Friday, highest	1 26⅝	....	1 31⅝
" lowest	1 26⅝	....	1 31⅝
Saturday, highest	....	....	....
" lowest	....	....	....
Monday, highest	....	....	....
" lowest	....	....	....
Tuesday, highest	1 27½	....	1 32
" lowest	1 27½	....	1 31⅞

The following are to-day's recorded sales on Call:

Wheat—Morning—Informal: May—400 tons, $1.32; 100, $1.31⅞ per ctl. Regular Session: May—800 tons, $1 32; 1500, $1.31½. Buyer December—300 tons, $1 27½, 200, $1 27½ per ctl. Afternoon; May—800 tons, $1.32½; 100, $1.31½ per ctl.

BARLEY.

	Dec.	Jan.	May
Thursday, highest	*78¼	....	82½
" lowest	....	....	81½
†Friday, highest	77½	79	82½
" lowest	77½	78½	82½
Saturday, highest	....	....	....
" lowest	....	....	....
Monday, highest	....	....	....
" lowest	....	....	....
Tuesday, highest	78½	....	83½
" lowest	78½	....	83

*Sample market.

†Spot brewing sold Friday for at 97½.

The following are to-day's recorded sales on Call:

Barley—Regular Session: May—100 tons, 82½c; 500, 82⅝c; 300, 82½c; 200, 82⅜c per ctl. Afternoon: May—200 tons, 82c Spot, season's storage paid—100 tons, 78⅜c; 100, 78¼c per ctl.

Eastern Markets.

The following shows the closing prices per bushel of wheat for the past week at

New York.

Day.	Dec.	Jan.	March.	May.
Thursday	75½	75⅝	79⅜	80⅞
Friday	75⅝	76	78½	80⅝
Saturday	....	....	....	....
Monday	....	....	....	....
Tuesday	....	77⅛	79⅝	81⅞

The following is to-day's telegram—per bushel:

NEW YORK, Dec. 28.—Wheat—76¾c for January; 79⅜c for March; 81⅞c for May; and 83c for July.

Chicago.

Day.	Dec.	Jan.	May.	July
Thursday	71⅜	71½	77⅞	75⅝
Friday	71⅝	71¾	77⅞	75½
Saturday	....	....	....	....
Monday	....	....	....	....
Tuesday	71½	....	78½	....

The following is to-day's telegram—per bushel:

CHICAGO, Dec. 28.—Wheat—77⅛c for May.

Markets by Telegraph.

Great Shortage in Pork.

CHICAGO, December 25.—The packing house business has reached a dullness not paralleled for many years. Five thousand men have been discharged and the plants of the big packers have been working less than half their capacity since December 1st. This unusual condition of things has been brought about by an unusual shortage in hog receipts, and unless the supply is speedily increased further reductions in the operating forces will be made necessary. The statistics for November show a shortage in hog receipts of 1,540,000 as compared with November, 1891. Chicago for the same period this year packed 780,000 against 1,470,000 last year.

The leading packers admit that there does not seem to be any hope of immediate relief, as the shortage is daily becoming greater. Some of them go so far as to assert that no relief can come until next spring's consignments of hogs are marketed. Usually at this time of the year the packing-houses are running to their full capacity, but now the remarkable scarcity of hogs and the big prices asked for stock in the market makes the packing of pork decidedly costly and unprofitable.

The shortage is attributed to various causes. Robert Strahorn, who has been in the business over thirty years, and who is amply qualified by experience to speak on the matter, said:

"The heavy spring rains played a prominent part in the matter. The continued wet weather killed off the spring crop of pigs that would have been marketable now. Then the low prices of the product early in the spring made the farmer careless, and instead of keeping their hogs as they usually do, until the holidays, they fattened them on corn early and sent them to market. There is and will be a demand for fresh pork here and a demand from Europe for pickled meats, taking all the receipts and leaving little for the packers to put in their own cellars."

California Products at Chicago.

CHICAGO, December 27.—California green fruits.—There is nothing on the market but Pears: they sell fairly as follows: Winter Neils, ℔ box, $3; Easter Beurre, $2.50; Glout Morceau, $3.50@4. Japanese Persimmons, trays, 14 @ 18lb, 75c @ $1. California Oranges, Seedlings, ℔ box, $2.50; Navels, $4.

Pitted California Dried Fruits—The market is ruling quiet and slow, for just at this season there is not much demand. The market, however, is steady for Prunes and Apricots owing to meager offerings, but Raisins are still plenty and dull, and Nectarines are slow, for the demand is never anything but tame for these. We quote: Raisins—London layers, 3-crown ℔ box, $1 60; do 3-crown fancy, $1 75@1 85; loose Muscatels, 3-crown, $1@1 25; 4-crown, sks. ℔ lb, 4c@6c; 3-crown, 4@4½c; 2-crown, 3½@3¾c; seedless, sks, 4@4¼c. Prunes—40 to 50 to the lb. in sacks, 14c; 50 to 60, 12½c; 60 to 70. 12c; 70 to 80, 11½c; 80 to 90, 11c; 90 to 100, 10¼c; 100 to 120, 9¾c. Apricots—New, choice to fancy, sks, 15@16c; fair to good, 14@14½c. Peaches—Peeled; 25-lb boxes, 20@22c; peeled, sacks, 19@20c; unpeeled, 10c. Nectarines—red, sacks, ℔ lb, 9c@11½c; white; 10@12c.

Live Stock.

BEEF.		MUTTON.	
Stall fed	6½@—	Wethers	6½@—
Grass fed, extra	6½@—	Ewes	6 @—
First quality	5½@—	Do Spring	7½@ 8
Second quality	4½@—	HOGS.	
Third quality	4 @—	Light, ℔ lb, cents	5½@—
Bulls and thin Cows	2 @—	Medium	5½@—
VEAL.		Heavy	5½@—
Range, heavy	5 @6	Soft	5 @—
Do light	6 @8	Feeders	5 @—
Dairy	7½@8½	Stock Hogs	5½@—
		Dressed	8 @ 8½

General Produce

Extra choice in good packages fetch an advance on top quotations, while very poor grades sell less than the lower quotations.

DECEMBER 28, 1892.

BEANS AND PEAS.		Do country mlls	3 00 @ —
Bayo, ctl	2 40 @ 2 50	Superfine	2 50 @ 3 00
Butter	2 75 @ 3 00	NUTS—JOBBING.	
Pea	2 50 @ 2 75	Walnuts, hard shell, Cal. lb	6 @ 8
Red	2 50 @ 2 75	Do soft shell	8 @ 9½
Pink	2 00 @ 2 25	Do paper-shell	10 @ 12
Small White	2 60 @ 2 75	Almonds, ft sh'l	12 @ 13
Large White	2 35 @ 2 50	Paper shell	13 @ 15
Lima	2 90 @ 3 00	Hard shell	6 @ —
Fld Peas, blk eye	1 10 @ 1 65	Brazil	10 @ —
Do green	2 00 @ 2 25	Pecans, small	8 @ 10
Split	4 50 @ 5 50	Do large	14 @ 16
BUTTER.		Peanuts	3½@ 4
Cal., poor to fair, lb	15 @ —	Filberts	10 @ 12
Do g'd to choice	22½@ 30	Hickory	7 @ 8
Do Giltedged	— @ 32½	Chestnuts	13 @ 14
Do Creamery	27½ @ —	ONIONS.	
Do do Giltedge	— @ 35	Silverskin	1 00 @ 1 10
Eastern, lade	18½@ —	POTATOES.	
Cal. Pickled	20 @ —	River Reds	45 @ 55
Cal. Keg	20 @ —	Early Rose, ctl	65 @ 75
East'n Creamery	24 @ 25	Peerless	80 @ 90
CHEESE.		Burbank Seed's	75 @ 85
Cal. choice cream	9½@ —	Do do Salinas	1 15 @ 1 25
Do fair to good	8 @ —	Do do Oregon	1 15 @ 1 25
Do Giltedged	— @ 12½	Sweet	50 @ 75
Do Skim	5 @ 6½	Extra choice sell for more money	
Young America	— @ 13½	POULTRY.	
EGGS.		Hens, doz	5 00 @ 6 00
Cal. "as is," doz	20 @ —	Roosters, old	5 00 @ 6 00
Do shaky	15 @ —	Do young	5 00 @ 5 50
Do candled	30 @ —	Broilers, small	2 00 @ 3 00
Do choice	32½@ —	Do large	3 00 @ 4 00
Do fresh laid	— @ 35	Fryers	3 50 @ 4 00
Do do sl'd white	— @ 37½	Ducks	4 50 @ 5 00
Eastern cold-storage	25 @ —	Do large	5 50 @ 6 00
Do fresh	28½@ —	Do extra large	6 50 @ 7 00
Do selected	— @ 32½	Geese, pair	1 50 @ 2 25
Outside prices for selected large eggs and inside prices for mixed sizes—small eggs are hard to sell.		Turkeys, gobl'r	12 @ 17
		Turkeys, hens	12 @ 17
		Do dressed	12½@ 18
		All kinds of poultry, if poor or small, sell at less than quoted; if large and in good condition, they sell for more than quoted.	
FEED.			
Bran, ton	13 00@ 14 00		
Feedmeal	25 00@ 26 00		
Gr'd Barley	19 00@ 19 50		
Middlings	— @ 21 00		
Oil Cake Meal	— @ 35 00		
Manhattan Horse Food (Red Ball Brand) in 100-lb. Cabinets	@ 8 00		
HAY.			
Compressed	7 00 @10 00		
Wheat, per ton	9 00@ —		
Do choice	— @ 13 50		
Wheat and oats	8 00@ 11 50		
Wild Oats	7 00@ 9 00		
Cultivated do	6 00@ 9 00		
Barley	6 00@ 9 00		
Alfalfa	8 00@ 10 50		
Clover	8 00@ 10 00		
Straw, bale	35@ 50		
GRAIN, ETC.			
Barley, feed, ctl	7½@ 77½		
Do good	78½@— —		
Do choice	80 @— —		
Do brewing	90 @ 93		
Do do choice	93½@— —		
Do do Giltedge	97½@— —		
Do Chevalier	80 @— —		
Do do Giltedge	1 15 @— —		
Buckwheat	2 25 @— —		
Corn, white	1 07½@ 1 10		
Yellow, large	1 00 @— —		
Do small	1 07½@ 1 10		
Oats, milling	1 35 @ 1 37½		
Feed, choice	1 37½@— —		
Do good	1 30 @— —		
Do fair	1 25 @— —		
Do common	1 12½@— —		
Surprise	1 40 @— —		
Black feed	1 05 @ 1 15		
Do seed	1 17½@ 1 30		
Gray	1 30 @— —		
Rye	1 12½@ 1 17½		
*Wheat, milling			
Gi tedged	1 27½@ 1 37½		
Do choice	1 26½@— —		
Do fair to good	1 25½@— —		
Shipping, choice	1 26½@— —		
Do good	1 25 @— —		
Do fair	1 22½@— —		
Common	1 20 @— —		
Sonora	1 20 @ 1 30		
HOPS.			
1892, fair	17 @ —		
Good	18 @ —		
Choice	19 @ —		
FLOUR.			
Extra, city mills	3 90 @ —		

Do do fancy	— @16	Manhattan Egg Food (Red Ball Brand) in 100-lb. Cabinets	— @11 50
Evap., peeled, in boxes choice	18½@—	GAME	
Do do fancy	20 @21	Quail, per doz	50 @ 75
PLUMS—1892.		Ducks	— @ —
Pitted, sun-dr.ed	10 @10½	Do Mall'd ℔ doz	3 00 @ 3 50
Do evap. boxes, choice	11 @ 12	Do Sprig	2 00 @ 2 25
Unpitted	4 @ 5	Do Teal	1 50 @ —
PRUNES—1892.		Do Widgeon	1 50 @ —
Cal. French, ungraded	7½@ 8	Do small	1 25 @ —
Do graded, 60 to 100	9½@10	Geese	3 00 @ —
Do do 40 to 60	11 @12	Do gray ℔ doz	2 00 @ 3 00
Fancy sell for more money.		Do White	1 00 @ 1 50
RAISINS—1892.		Do Brant	1 25 @ 1 75
London Layers, cluster per box	1 90 @2 00	Snipe	2 00 @ —
Do choicest do	1 50 @1 60	Do English, doz	1 50 @ 2 00
Do prime pr bx	1 25 @1 40	Do Jack, per doz	75 @ 1 25
Loose Muscatels, 2-crown, pr bx	75 @1 00	Hare, per doz	1 25 @ —
Do 3-crown do	1 10 @1 20	Rabbits, large	1 25 @ 1 50
Do do do faced	1 20 @1 25	Do small	1 00 @ 1 25
Unstem'd Muscatels in sks pr lb.	2½@ 3	PROVISIONS.	
Stem'd 2-crown	2½@ 3	Cal. bacon, heavy, per lb	12 @ —
Stem'd 3-crown	3½@ 4½	Medium	12 @ —
Se'dl's Misc'l sks	4 @ 5	Light	14 @ —
Do do in bxs	— @1 00	Lard	10½@ 14
Do Sultanas, sks	6 @ 7	Cal sm'k'd beef	11 @ —
Do do bxs	— @1 40	Hams, Cal salt'd	13½@ —
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.		Do Eastern	15 @ —
		SEEDS.	
		Alfalfa	9½@ 10
		Clover, Red	15 @ —
		White	30 @ —
		Flaxseed	2 25 @ —
		Hemp	4½@ —
		Mustard, yellow	7 @ —
		Do brown	4½@ —
		WOOL.	
		FALL, 1892.	
		S Joaquin, plain	6½@ 10
		Do mountain	8 @ 11
		Do lamb	8 @ 10
		Northern Choice	14 @ —
		Do Defective	12 @ —
		Do Lamb	10 @ 14
		HONEY—1892 CROP.	
		White comb, 2-lb frame	9½@ 12½
		Do do 1-lb frame	11½@ 14½
		White extracted	7½@ —
		Amber do	6½@ —
		Dark do	6½@ —
		Beeswax, lb	23 @ 25

Dried Fruits.

The quotations given below are for average prices received by commission merchants for consignments by growers. Something very fancy fetches an advance on the highest quotations, while poor sells slightly below the lowest quotations. Prices, unless otherwise specified are for fruit in sacks; add for 50-lb. boxes ½c per lb. and for 25-lb. boxes ¾ to 1c per lb.

APPLES—1892.	
Sun-dried, ¼'s	4½@—
Do sliced	4½@ 5
Evap. bl., rich, 50-lb. bx	8 @ 9
Fancy, higher.	
APRICOTS—1892.	
Do bleached	15½@—
Do do fancy	15 @16
Evap. choice, in boxes	15 @16
Do fancy, do	15½@17
FIGS—1892.	
Sun-dried, black	4 @—6
Do white	3½@—
GRAPES—1892.	
Sun-dried, stemless	2½@ 3
Do unstemmed	1½@ 2
NECTARINES—1892.	
Red, sun-dried	7 @ 8
Do Evap., in boxes	11½@12
White, sun-dried	9½@11
Do evaporated	12½@13
PEARS—1892.	
Sun-dried, quarters	2½@ 3
Do sliced	4 @ 5½
Evap., slic'd, in b'xes	7 @ 8
Unp'led, q'rt'd, bl'ch'd	5 @ 8
PEACHES—1892.	
Sun-dried, unpeeled	7 @ 7½
Do do prime, bl'ched	9 @10
Do do choice, do	11 @11½
Sun-dr., pl'd, bl'ched	10 @11
Do do prime	14 @—
Do do choice	— @15

Do do fancy	— @16
Evap., peeled, in boxes choice	18½@—
Do do fancy	20 @21
PLUMS—1892.	
Pitted, sun-dr.ed	10 @10½
Do evap. boxes, choice	11 @ 12
Unpitted	4 @ 5
PRUNES—1892.	
Cal. French, ungraded	7½@ 8
Do graded, 60 to 100	9½@10
Do do 40 to 60	11 @12
Fancy sell for more money.	
RAISINS—1892.	
London Layers, cluster per box	1 90 @2 00
Do choicest do	1 50 @1 60
Do prime pr bx	1 25 @1 40
Loose Muscatels, 2-crown, pr bx	75 @1 00
Do 3-crown do	1 10 @1 20
Do do do faced	1 20 @1 25
Unstem'ed Muscatels in sks pr lb.	2½@ 3
Stem'ed 2-crown	2½@ 3
Stem'ed 3-crown	3½@ 4½
Se'dl's Misc'l sks	4 @ 5
Do do in bxs	— @1 00
Do Sultanas, sks	6 @ 7
Do do bxs	— @1 40
Halves, quarters and eighths 25, 50 and 75 cents higher respectively than whole boxes.	

Fruits and Vegetables.

Choice selected, in good packages, fetch an advance on the quotations, while very poor grades sell less than the lower quotations.

DECEMBER 28, 1892.

Limes, Mex	3 00 @ 4 50	purposes sells at an advance on outside quotations	
Do Cal	— @ —	Beets, sk	— @ 75
Lemons, box	2 50 @ 3 00	Carrots, sk	30 @ 50
Do Sicily choice	5 50 @ 6 00	Okra, dry, lb	8 @ 10
Apples	35 @ 65	Parsnips, ctl	1 00 @ 1 50
Do Choice	75 @ 1 25	Peppers, dry, lb	7 @ 8
Do Extra choice	1 50 @ 1 75	Turnips, ctl	— @ 70
Grapes, pr bx	15 @ 85	Cabbage, 100 lbs	75 @ 80
Pears	25 @ 1 00	Garlic, ℔ lb	1½@ 2½
do Winter Nelis	1 00 @ 1 50	Mar'fat Squash, ℔ ton	5 00 @10 00
Persimmons	50 @ 1 00	Cauliflower	75 @ 1 00
Oranges, pr bx—		Celery	50 @ 75
Navels, River'de	3 00 @ 3 50	Mushrooms, ℔ lb	
Do, Butte Co	3 00 @ 3 50	Do, Common	8 @ 15
Seed'g, River'de	2 00 @ 2 25	Do, Button	20 @ 25
Do, Fresno	2 00 @ 2 50	Tomatoes, box	1 00 @ 1 25
Do, Butte Co	2 00 @ 2 25		
Extra choice fruit for special			

The Science of Smelling.

Prof. De Volson Wood, of the Stevens' Institute Hoboken, N. J., contributes the following to *Science:* The greater part of the science of seeing is contained in the science of optics, and this is founded upon the theory of undulations of the ether and the way in which they are modified by the media through which they pass. The form of the surface, whether plane or curved, as well as the density of the medium, produces marked effects.

Similarly, the greater part of the science of hearing is contained in the science of acoustics, and this also treats of undulations, or waves propagated in air or other gases. It is not believed in either case that solid particles pass from a source to the sensitive nerves to produce the particular sensation.

Why should there not be a science of smelling? The principal part of such a science would consist of an investigation of the mechanical properties of odors, and might briefly be called "Odorology." Is it not highly probable that odors are also propagated by undulations of an ether? And yet we are familiar with the statements made by writers, such as "A grain of musk will keep a room scented for many years. During the whole of the time it must be slowly evaporating, giving out its particles to the currents of air to be wafted presently out of doors; yet in all this time the musk seems to lose but little of its weight." "The acute sense of smell of the dog is well-known; for he can detect the track of his master long after the tracks have been made, which shows that some slight characteristic matter is left at each footfall."

Those who thus speak impart the idea that odor is material. I prefer to think of it as a property of matter, which produces its own peculiar undulations; and that the sensation of odor is produced by these undulations in the olfactories. Musk retains this property for a very long time, while some bodies lose it rapidly. The man may leave some characteristic matter on the ground at each footstep, but it is not necessary that particles of that matter shall pass from the ground into the nose of the dog in order that he may track his master. It is only necessary that that matter shall possess the property of sending forth certain undulations. Indeed, it is not difficult to conceive that the ground itself has imparted to it the property of sending forth the desired undulations.

These facts being assumed, investigations might be made to determine the velocity with which odors are propagated, and whether they are subject to reflection, refraction, and interference, and other properties common to sound and light; also whether the different odors are due to different wave-lengths, and if the strength and intensity of the odor is due to the amplitude of the wave, as in light and sound. The physiological qualities of the olfactories by which they enable one to detect odors of different qualities and intensities, furnish a field for the most delicate and refined investigation.

WASTING TIMBER.—Eastern lumbermen visiting this coast express actual sorrow at the great waste evident here in the manufacture of lumber. In their own districts they have been for years reducing the amount of waste and utilizing the odds and ends. Comparing the amount wasted here with that in the East, they have no waste; still, they think they do, and are constantly devising plans to work up what is now wasted. An Eastern writer figures the loss from log to lumber in the white-pine mills from one-quarter to one-half of its cubic contents. He says that in the California mills the waste is from 60 to 62 per cent. No figures are given for the mills of Oregon and Washington, but they are in it on the waste question, and must continue to be until a denser population calls for the small articles that can be manufactured from what is now thrown away.—West Coast Lumberman.

Facts Concerning Dynamite.

Very few people have a correct idea of what dynamite is, of what it is made, and the uses to which it is put. To the French belongs the honor of its discovery and its practical use. Nitroglycerin is the force of all high explosives. Dynamite is the name most usually given to these explosives, though other names are sometimes used.

Dynamite is simply nitroglycerin mixed with various ingredients. Nitroglycerin is made by mixing sulphuric and nitric acid with sweet glycerin, the same that is used by the ladies to prevent chapped hands. Mixing the acids and glycerine is where the danger lies in the making of nitroglycerin. The mixing tank, or agitator, as it is called by dynamite makers, is a large steel tank, filled inside with many coils of lead pipe, through which, while the mixing is in progress, a constant flow of ice water is maintained. This flow of ice water is used to keep the temperature of the mix below 85 degrees, as above that point it would explode, and a hole in the ground would mark where the factory had been. The nitroglycerin is stored in large earthenware tanks, which are usually sunk in the ground to guard against blows or severe concussion.

The other ingredients for making dynamite are: nitrate of soda, which is found only in Chili, carbonate of magnesia, and wood pulp. Dynamite is put in paper shells, usually one and quarter inches in diameter and eight inches in length, and weighs about one-half pound to each shell or cartridge. It has largely taken the place of black powder for blasting, as it is many hundreds of times stronger, and consequently more economical. It is used in mining all kinds of ores, coal and rock, submarine blasting and railroad-building. Without its aid many railroads, especially those crossing the Rocky mountains, could not have been constructed, and Hell Gate in New York Harbor could not have been destroyed.

Dynamite will not explode from any ordinary fall or jar; it will burn without explosion and freezes at 42 degrees, 10 degrees above ordinary freezing point. The bomb of the anarchist is made of metal or glass and filled with pure nitroglycerin, arranged so as to explode by severe contact with any hard object. These bombs are, of course, never made by a reputable dynamite factory. Five or six millions of dollars are invested in the manufacture of dynamite in the United States, and its use is constantly on the increase. The fumes of nitroglycerin produce intense headache, which can be cured by taking a very small dose of it internally.—Exchange.

DIVIDEND NOTICE

GERMAN SAVINGS AND LOAN SOCIETY, 526 California Street. For the half year ending Dec. 31, 1892, a dividend has been declared at the rate of five and one-tenth (5 1-10) per cent per annum on Term Deposits, and four and one-quarter (4 1-4) per cent per annum on Ordinary Deposits, payable on and after Tuesday, Jan 3, 1893.

GEO. TOURNY, Secretary

L. V. WILLITS, Watsonville, Cal., Black Percherons. Registered Stallions for sale.



AN OLD STYLE PULVERIZER.

Especially adapted to pulverizing "bottoms"—one man and a small boy can operate it.

THE LATEST STYLE
PULVERIZER!
—THE—
PACIFIC SPADER!
Operated by one small Boy. No Man required.

SOMETHING NEW!
FINEST IMPLEMENT IN THE MARKET
SIMPLE STRONG DURABLE
PERFECTION ATTAINED



The **Pacific Spader** and **Vineyard Cultivator.** Does more work in one stroke than a Disc Harrow in ten. Sizes, 5½ to 12 feet.

TRUMAN, HOOKER & CO.
SAN FRANCISCO and FRESNO.

	SIZES.	
No 5D—	5½-foot Spader	16-inch Blades
No. 6D—	7 " "	16 " "
No. 10D—	5½ " "	20 " "
No. 14D—	7 " "	20 " "
No. 16D—	8 " "	20 " "
No. 20D—	10 " "	20 " "
No. 24D—	12 " "	20 " "

Linden, Cal., Nov. 26, 1892.

Messrs. Truman, Hooker & Co.,
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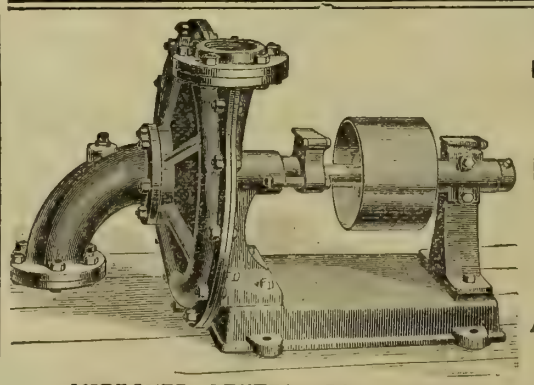
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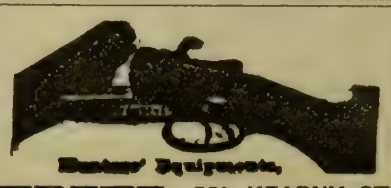
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Cholera and Ozone.

The fact that electricity enables ozone to be generated cheaply and on a large scale, says the *Electrical World*, may have a most important bearing in the future as a sanitary measure, more particularly, however, in relation to cholera epidemics. That some connection exists between the spread of cholera and the scarcity of ozone in the atmosphere there appears to be little doubt, from observations begun as early as 1884 and continued ever since. There is a normal amount of ozone in the atmosphere, and it appears from these observations that at places where the cholera existed the amount of ozone in the atmosphere was below this normal, sometimes even to a very marked degree. Moreover, an increase in the epidemic in certain localities seemed to go hand in hand with a diminution of the amount of ozone in the air. During the early part of the 1884 epidemic in Paris and Marseilles the quantity of ozone in the air was found to be decidedly below the normal. This itself would point to some connection between the two, but an additional fact of great importance is that tests made at the same time in other places which were free from the epidemic showed the presence of a normal amount of ozone. Tests made since by numerous observers appear to have confirmed this coincidence. The fact that some relation may exist between the two would not be surprising, as cholera, we believe, is now recognized as a germ disease, and ozone is well known to be a very effective germicide. It is, moreover, an excellent means to use, because if properly made it is not in the least injurious to human beings. When made by chemical processes or from oxygen, it may be injurious, but this is owing to impurities or to the presence of untransformed oxygen. If, however, it is made of air ozonized by means of electricity it has been found to be quite uninjurious. Mr. P. de Puyt recently made some very interesting and instructive compilations regarding this matter, and urges very strongly the use of ozonized air, not only as a destroyer of germs in hospitals, lazarettos, schools, public houses, and other places, but also as a preventive in the case of a threatened epidemic. Eleven to twelve centigrammes per litre of air, which is easily produced by electrical means, and was formerly claimed to be a dangerously large quantity, he says has been found to be perfectly harmless even for infants, if made by electrical means. He also compiled the following interesting figures: During the month of July, 1884, while the cholera epidemic was at its worst in Marseilles, the mean quantity of ozone in the air was .86 as compared to 2.17 during 1883. In Paris even greater difference was found. During the maximum period of the epidemic in November, 1884, it was .44 as compared to 1.82 for the same period in 1883. Moreover, during the two weeks when the mortality was greatest the amount of ozone in the air was as low as .27 as compared to 2.0 for the same period in 1883. Furthermore, during several days when the air was charged electrically, more than was usual, the epidemic was found to diminish in its severity. Such coincidences are certainly very striking and warrant the most careful attention and study on the part of physicians and boards of health. There is time now before the threatened cholera epidemic in this country next summer to institute experiments and make preparation.

SPONTANEOUS COMBUSTION. — Among the results brought to light through chemical investigations of the sources of spontaneous combustion, says the *United States Miller*, is the fact that sawdust should never be used to collect drippings or leakages. Dry vegetable or animal oil is found to inevitably take fire when saturating cotton waste at 180 degrees Fahrenheit, and spontaneous combustion occurs more quickly when the cotton is soaked with its own weight of oil. Danger is involved in patent "driers," from leakage into sawdust, etc.; oily waste of any kind, or waste cloths of silk or cotton, saturated with oil, varnish or turpentine, also linseed-oil drippings into a sponge; glycerin or oil of any kind leaking into sawdust; bituminous coal in large heaps of pit coal, hastened by wet, and especially when pyrites are present in the coal—the larger, the greater the liability. Oil on flour, or water on flour, is productive of spontaneous combustion. In fact, all organic structures, being largely composed of carbon and hydrogen, are readily excited, because of the affinity of the hydrogen for oxygen.

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